

Section	Page
Batteries and Electrical Parts	5
Cat Battery Specifications	6
Assembly Numbers Cell and Terminal Layouts	13
BCI Group Sizes and Overall Dimensions	18
Battery Safety	22
Battery Care and Maintenance	25
Electrical Parts	32
Bearings	43
Cat Bearings	44
Ball Bearings	45
Cylindrical Roller Bearings	46
Tapered Roller Bearings	47
Needle Roller Bearings	49
Self-Aligning Bearings	50
Classic	51
Classic™ Parts	52
Classic Engine Parts	53
Classic Drive Train Parts	64
Classic Hydraulic Parts	75
Classic Miscellaneous Parts	78
Classic Undercarriage Parts	88
Cylinder Seals	91
Identification	92
Seal Selection for Other Than Cat Equipment	106
Press-In Wiper Seals	107
Snap-In Wiper Seals	114
U-Cup Rod Seals	117
Buffer Seals	124
Head Wear Rings	129
Metal Bearing Head Wear Rings	132
Head Seals	133
Piston Seals	136
Piston Wear Rings	144
U-Cup Seal Assemblies / Chevron Packing Replacement	154
Snubber Seals	155
Troubleshooting	156
Installation	157
Engine Parts	161
Spark Plugs	162
Exhaust	163
Belts	174
Equipment Fluids	189
Oils - Diesel Engine Oil	190
Oils - Natural Gas Engine Oil	198
Oils - Hydraulic Oil	203
Oils - Transmission and Drive Train Oil	207
Oils - Final Drive and Axle Oil	212
Oils - Gear Oil	214
Oils - Special Application Oils	217
Oils - Additives	220
Coolants	221

Greases.....	231
Filters.....	237
Filters Overview.....	238
Engine Oil Filters.....	240
Fuel Filters.....	242
Fuel Water Separators.....	243
Hydraulic Filters.....	245
Air Filters.....	247
Filter Efficiency Options.....	251
Ground Engaging Tools.....	255
Backhoe Loaders.....	256
Bulldozers/Compactors.....	265
Rippers/Scarifiers - Ripper/Scarifier Tips.....	296
Large Rippers.....	296
Compact Construction Equipment.....	302
Excavators.....	319
Loaders.....	336
Motor Graders.....	390
Paving Products - Paving Product Bits, Tools and Holders.....	402
Scrapers.....	404
Hand Tools and Shop Supplies.....	415
The Tools and Supplies You Need For the Jobs You Do.....	416
Hardware.....	417
Bolts.....	418
Nuts.....	449
Washers.....	459
Screws.....	461
Link Brackets.....	467
Rivets.....	468
Pins.....	470
Rod Ends.....	473
Woodruff Keys.....	476
Snap Rings.....	477
Hose Clamps.....	481
Springs.....	484
Kits.....	489
Check-a-Thread.....	490
Operator Environment.....	491
Cat Cabin Air Quality System.....	492
Cat Work Lights, Signal Lights, Strobes and Bulbs.....	496
Cat Radio and Accessories.....	510
Radio Installation Kits.....	514
Cameras.....	518
O-Rings.....	523
Cat O-Rings.....	524
O-Ring Seal Kits.....	558
Tires.....	567
Cat Flexport™ Tires.....	568
Cat Pneumatic Tires.....	575
Undercarriage.....	579
Product Information.....	580
Conversion Guide.....	601
Literature Reference.....	613



Total Support from One Source and Your Cat® Dealer

Welcome to the newest edition of the One Safe Source catalog. Inside you'll find part numbers, descriptions, specifications and more for thousands of genuine Cat® parts — all manufactured to strict, original equipment specifications.

You can count on these reliable, durable Cat parts to deliver top performance and long life in your applications — and you can count on us to provide the right parts and service solutions, when and where you need them.

We carry most of the parts featured in this catalog for your immediate, off-the-shelf convenience. And thanks to Caterpillar's worldwide distribution system, we can deliver most other parts you need within 24 hours. If you can't find what you're looking for, just ask. Our highly trained experts understand the complete lineup of Cat parts, — original, Classic and Reman — can answer any questions, and make recommendations for your needs.

This catalog contains only high-volume parts. If you are looking for something different, we may have what you need in stock or can order it for you quickly.

Whether you're maintaining one Cat machine or many, you can turn to us for the parts, comprehensive service options and total support that will keep you up and running and maximizing your equipment investments.

Part numbers and specifications are subject to change without notice. To ensure you receive the correct parts, please provide the model and serial numbers of the machines or engines on which they will be used.

Some of the products listed in this catalog are not available in certain parts of the world. Please check with us for more information.



BATTERIES AND ELECTRICAL PARTS

Cat Battery Specifications

General Information

Premium High Output - Maximum Vibration Resistance

- Vibration Resistance...five times the Industry Standard
- Exclusive “flat top” BCI group 4D & 8D batteries are Maintenance Free and have the industries highest cold cranking amps (CCA)
- Popular BCI group 31 Maintenance Free battereis with industry leading cold cranking amps...up to 1000 (CCA), for electric power, machine or on-highway truck and bus applications. Deep cycle models are available for truck, marine and recreational usage

Specifications for Cat Premium High Output Batteries-Available Worldwide

BCI Group Size	Part No.	CCA ≈	RC Mins †	Volts	Amp Hr. Capacity @ 20 Hrs.	Construction Notes	Accessibility - Fluid Level Check Hours	BCI Overall Dimensions			Nominal Weight		Nominal Acid to Fill Qt (liter)
								Length In (mm)	Width In (mm)	Height In (mm)	Wet Lb (kg)	Dry Lb(kg)	
8D	153-5720	1500	465	12	210	C/MFA	A - 1000	20.5 (520)	10.8 (275)	9.8 (248)	132 (59.9)	-	-
8D	101-4000	1400	400	12	190	LAC+	A - 1000	20.8 (527)	11.0 (278)	9.8 (248)	132 (59.9)	86 (39.0)	18.0 (17.0)
4D	153-5710	1400	425	12	200	C/MFA	A - 1000	20.5 (520)	8.6 (218)	9.8 (248)	119 (54.0)	-	-
4D	9X-9730	1300	400	12	190	LAC+	A - 1000	20.8 (527)	8.6 (218)	9.8 (248)	120 (54.0)	81 (36.8)	14.8 (14.0)
4D	153-5700	1125	305	12	145	C/MFA	A - 1000	20.5 (520)	8.6 (218)	9.8 (248)	101 (45.8)	-	-
4D	9X-9720	1000	275	12	140	LAC+	A - 1000	20.8 (527)	8.6 (218)	9.8 (248)	102 (45.8)	59 (26.8)	15.9 (15.0)
31	175-4390	1000	180	12	90	C/MFA/S	A - 1000	12.9 (329)	6.8 (172)	9.3 (236)	60 (27.2)	-	-
31	175-4370	825	190	12	100	C/MFA/S**	A - 1000	12.9 (329)	6.8 (172)	9.3 (236)	61 (27.2)	-	-
31	175-4360	710	185	12	100	C/MFA/S***	A - 1000	12.9 (329)	6.8 (172)	9.3 (236)	62 (28.1)	-	-
31/30H	115-2422	1000	170	12	90	C/MFA	A - 1000	12.9 (329)	6.8 (172)	9.5 (241)	63 (28.6)	-	-
31/30H	115-2421	950	170	12	90	C/MFA+	A - 1000	12.9 (329)	6.8 (172)	9.5 (241)	64 (29.1)	44 (20.0)	6.6 (6.2)
31/30H	9X-3404 ^(l)	950	165	12	95/100	C/MF	NA	13.0 (331)	6.8 (172)	9.5 (241)	58 (26.3)	-	-
31/30H	3T-5760	750	165	12	95/100	C/MF	AV - 1000	13.0 (331)	6.8 (172)	9.5 (241)	56 (25.4)	-	-
65	230-6368	880	140	12	70	C/MF	NA	11.9 (304)	7.5 (191)	7.5 (191)	46 (20.9)	-	-
24	153-5656	650	110	12	52	C/MF	NA	11.0 (279)	6.9 (174)	9.0 (229)	39 (17.7)	-	-

Construction Notes:

Batteries use SAE taper post design and are shipped wet except as:

LAC = Low Maintenance - Hybrid Construction

C = Calcium Lead Alloy Grid Design

MF = Maintenance Free Non-Accessible

MFA = Maintenance Free Accessible

A = Accessible

NA = Non-Accessible

AV = Accessibility Varies - Accessibility varies depending on supplier used. If it has caps, it is accessible and fluid levels should be checked.

S = Stud Terminals

+ = Shipped Dry Only

* = Side Terminals Only

** = Starting and Deep Cycle Battery

*** = Deep Cycle and Starting Battery

≈ = Cold Cranking Amps for 30 seconds at 0° F (-18° C)

† = Reserve Capacity Minutes minimum of 25 amp output at 80° F (27° C)

SDT = Dual, Top mounted Terminals - Stud and SAE Post. Marine Deep Cycle/ Starting Battery

Rugged Design-Built Tough-Reliable Starting

- Positive and negative plates are anchored to container bottom and locked at the top of celnelement for maximum vibration resistance.
- Heavy-duty forged terminal post bushings provide maximum strength and resistance to acid seepage.
- Hefty full-frame grids, no sharp edges, optimum acid/paste combination provides better charge acceptance after deep discharge.
- Manifold vented cover with built-in Flame Arrestor...a safety feature that directs corrosive gases away from the battery and hold-downs.
- Thick, robust container resists rugged treatment typical of heavy-duty commercial use. Embossed part number & descriptors for easy serviceability.

Cat Battery Specifications

Cat General Service Batteries - Available Worldwide (Except Brazil)

Quality Batteries for a Wide Range of Applications

Ideal for Automotive, Light Truck, Bus, Marine, Industrial, Agricultural, Stationary Power and Recreational Usage.

- Maintenance Free and low maintenance... accessible or sealed
- Deep Cycle and Valve Regulated (VRLA) Gelled or Absorbed Glass Mat (AGM) batteries
- Hefty full frame grids, no sharp edges. Optimum acid/paste combination provides better charge acceptance after deep discharge
- Commercial batteries have Anchor Lock elements for vibration resistance
- Flame Arrestor Safety Vents to direct corrosive gases away from the battery and hold-downs

Wet Batteries

BCI Group Size	Part No.	CCA ≈	RC Mins †	Volts	Amp Hr. Capacity @ 20 Hrs.	Construction Notes	BCI Overall Dimensions			Nominal Weight
							Length In (mm)	Width In (mm)	Height In (mm)	Wet Lb (kg)
Truck/Agricultural/Industrial										
1	8C-3617	640	130	6	100	C/MF	9.0 (229)	6.9 (175)	8.8 (222)	30 (13.6)
2	8C-3629	780	200	6	90	LA	10.4 (264)	6.9 (175)	8.8 (222)	36.5 (16.6)
3EE	8C-3620	400	95	12	54	LA	19.3 (489)	4.3 (108)	9.0 (229)	42 (19.1)
3EH	8C-3632	875	250	6	115	LA	19.3 (489)	4.3 (108)	10.0 (254)	47.5 (21.5)
4	8C-3633	975	250	6	125	C/MF	12.5 (318)	6.9 (175)	9.5 (241)	47 (21.3)
4DLT	8C-3622	850	240	12	100	LA	20.0 (508)	8.1 (206)	8.1 (206)	80 (36.3)
8D	8C-3624	1400	430	12	190	LA	20.8 (527)	11.0 (279)	10.0 (254)	130 (59.0)
24F	3T-5858	675	115	12	55	C/MF	10.8 (273)	6.8 (171)	9.0 (229)	40 (18.1)
27	8C-3601	710	120	12	65	C/MF	12.0 (305)	6.8 (171)	9.0 (229)	45.5 (20.6)
27F	8C-3602	710	120	12	65	C/MF	12.4 (314)	6.8 (171)	9.0 (229)	45.5 (20.6)
31	8C-3628	760	170	12	80	C/MF/S	13.0 (330)	6.8 (171)	9.5 (241)	54.5 (24.7)
31	430-5996	1000	190	12	100	C/MF	13.0 (330)	6.8 (171)	9.5 (241)	58 (26.3)
C11(DIN)	369-9955	270	43	12	30	C	7.36 (187)	5.04 (128)	6.50 (165)	17.86 (8.1)
T4 (DIN)	356-6211	380	66	12	44	C	8.27 (210)	6.89 (175)	6.89 (175)	16.09 (7.3)
Bus - Special Terminal										
8D	250-0473	1400	430	12	190	C/MFA/TB	20.8 (527)	11.0 (279)	10.0 (254)	130 (59.0)
Automotive/Light Truck & SUV										
22F	3T-5859	425	65	12	35	C/MF	9.4 (238)	6.8 (171)	8.3 (210)	29.5 (13.4)
24	3T-5857	675	115	12	55	C/MF	10.8 (273)	6.8 (171)	9.0 (229)	40 (18.1)
25	250-0488	625	95	12	45	C/MF	9.8 (248)	6.9 (175)	8.9 (225)	35.5 (16.1)
26	8C-3600	540	80	12	45	C/MF	8.8 (222)	6.8 (171)	8.0 (203)	29.5 (13.4)
26R	369-9958	540	80	12	45	C/MF	8.8 (222)	6.8 (171)	8.0 (203)	29.5 (13.4)
34/78	250-0486	690	110	12	60	C/MF/DT	10.8 (273)	6.8 (171)	8.0 (203) !	36.5 (16.6)
35	250-0487	625	95	12	45	C/MF	9.8 (248)	6.9 (175)	8.9 (225)	35.5 (16.1)
41	8C-3605	650	100	12	64	C/MF	11.6 (293)	6.9 (175)	6.9 (175)	38 (17.2)
42	250-0490	475	70	12	40	C/MF	9.6 (242)	6.9 (175)	6.9 (175)	29 (13.2)
48	430-5993	730	120	12	65	C/MF	11.0 (278)	6.9 (175)	7.5 (190)	42 (19.1)
49	307-0751	900	185	12	100	C/MF	14.0 (354)	6.9 (175)	7.5 (190)	54.5 (24.7)
55/56/62	8C-3611	570	90	12	52	C/MF/DT	8.8 (222)	6.0 (152)	8.50 (216)	32 (14.5)
58	8C-3612	580	85	12	53	C/MF	10.0 (254)	7.3 (184)	7.0 (178)	31.5 (14.3)
65	250-0484	675	130	12	55	C/MF	12.0 (305)	7.4 (187)	7.7 (194)	41 (18.6)
75	7X-6100	690	90	12	60	C/MF *	9.8 (248)	7.0 (178)	7.3 (184)	34.5 (15.6)
75/86	250-0489	540	85	12	47	C/MF/DT	9.8 (248)	7.0 (178)	8.1 (206) !	32 (14.5)
78	369-9957	690	110	12	58	C	10.8 (273)	6.9 (175)	7.3 (184)	36.5 (16.6)

Cat Battery Specifications

Cat General Service Batteries - Available Worldwide (Except Brazil) (Cont'd.)

Wet Batteries (Cont'd.)

BCI Group Size	Part No.	CCA ≈	RC Mins †	Volts	Amp Hr. Capacity @ 20 Hrs.	Construction Notes	BCI Overall Dimensions			Nominal Weight	
							Length In (mm)	Width In (mm)	Height In (mm)	Wet Lb (kg)	
90	430-6000	600	90	12	40	C/MF	9.5 (242)	6.9 (175)	6.9 (175)	32.5 (14.7)	
91	430-6001	700	100	12	50	C/MF	11.0 (278)	6.9 (175)	6.9 (175)	38.5 (17.5)	
92	430-6002	650	130	12	70	C/MF	12.5 (317)	6.9 (175)	6.9 (175)	37 (16.8)	
93	430-6003	800	130	12	80	C/MF	14.0 (354)	6.9 (175)	6.9 (175)	46.5 (21.1)	
94R	430-6005	765	135	12	80	C/MF	12.4 (315)	6.9 (175)	7.5 (190)	47.5 (21.6)	
95R	430-6006	850	190	12	100	C/MF	15.5 (394)	6.9 (175)	7.5 (190)	62.5 (28.4)	
96R	430-6007	600	90	12	40	C/MF	9.6 (242)	6.9 (175)	6.9 (175)	32.5 (14.8)	
97R	430-6008	600	95	12	60	C/MF	9.6 (242)	6.9 (175)	7.5 (190)	37.5 (17.0)	
101	430-6009	650	110	12	-	C/MF/ *	10.3 (260)	7.1 (179)	6.7 (170)	36 (16.3)	
121R	430-6010	540	80	12	50	C/MF	8.3 (210)	7.0 (177)	8.1 (206)	30 (13.6)	
124R	430-6011	670	100	12	60	C/MF	10.3 (260)	6.9 (175)	8.4 (212)	38 (17.2)	
151R	430-6012	335	55	12	-	C/MF	7.24 (184)	5.0 (125)	8.8 (222)	19 (8.6)	
Marine-Deep Cycle Capability											
24M	8C-3638	675	115	12	55	C/MF/DT/~#	10.8 (273)	6.8 (171)	9.4 (238)	40 (18.1)	
24DC	430-5992	500	130	12	75	LA/DT/@	10.8 (273)	6.8 (171)	9.4 (238)	45 (20.4)	
24DP	430-5991	550	120	12	65	LAC/DT	10.8 (273)	6.8 (171)	9.4 (238)	42 (19.1)	
27M	8C-3639	650	150	12	80	@/S/DT#	12.5 (318)	6.8 (171)	9.4 (238)	49 (22.2)	
Lawn & Garden											
U1	8C-3636	230	-	12	25	C/MF	7.8 (197)	5.2 (130)	7.3 (184)	15.5 (7.0)	
Golf Cart/Scissor & High Lifts											
GC-2	8C-3641	132§	-	6	235	@ OP	10.3 (260)	7.2 (181)	10.9 (276)	68 (30.8)	
Dual Terminal Batteries											
34/78	127-0826	850	115	12	66	C/MF/DT	10.8 (273)	6.8 (175)	8.0 (203) !	41 (18.6)	
34/78	250-0486	690	110	12	60	ST/MF/DT	10.8 (273)	6.8 (175)	8.0 (203) !	36.5 (16.6)	
75/86	250-0489	540	85	12	47	C/MF/DT	9.8 (248)	7.0 (178)	8.1 (206) !	32 (14.5)	

Construction Notes:

Batteries use SAE taper post design and are shipped wet except as:

LA = Low Maintenance - Low Antimony Grids
 LAC = Low Maintenance - Hybrid Construction
 C = Calcium Lead Alloy Grid Design
 ST = Silver (AG) Calcium alloy grids- severe service-high temperature
 MF = Maintenance Free Non-Accessible
 MFA = Maintenance Free Accessible
 S = Stud Terminals
 DT = Dual Terminal
 TB = Transit Bus one piece end terminal. Right end of battery. Positive Stud:
 1/2"-13 steel, Negative Stud: 3/8" -16 steel

OP = Offset Post with Horizontal Hole Stainless Steel 5/16" Bolt & Hex Nut
 * = Side Terminals
 ≈ = Cold Cranking Amps for 30 seconds at 0° F (-18° C)
 † = Reserve Capacity Minutes minimum of 25 amp output at 80° F (27° C)
 ! = For height with removable adapter, add 7/8" (22mm)
 @ = Deep Cycle - Antimony Grids
 ~ = Marine Starting
 + = Shipped Dry Only
 § = 75 amps @ 80° F
 # = Wing nut for 8C-3638 & 8C-3639 is part number 3B-0723

Dry Batteries

BCI Group Size	Part No.	CCA ≈	RC Mins †	Volts	Amp Hr. Capacity @ 20 Hrs.	Const. Notes	BCI Overall Dimensions			Nominal Weight		Nominal Acid to Fill Qt (liter)
							Length In (mm)	Width In (mm)	Height in (mm)	Wet Lb (kg)	Dry Lb (kg)	
Marine / Recreational												
8V	8C-3640	980	350	8	175	LA +	20.8 (527)	7.3 (184)	10.7 (270)	90.5 (41.1)	59.5 (27.0)	12 (10.9)

Cat Battery Specifications

Cat General Service Batteries - Available Worldwide (Except Brazil) (Cont'd.)

Construction Notes:

Batteries use SAE taper post design and are shipped wet except as:

LA = Low Maintenance - Low Antimony Grids
 LAC = Low Maintenance - Hybrid Construction
 C = Calcium Lead Alloy Grid Design
 MF = Maintenance Free Non-Accessible
 MFA = Maintenance Free Accessible
 S = Stud Terminals
 DT = Dual Terminal
 TB = Transit Bus one piece end terminal. Right end of battery. Positive Stud:
 1/2"-13 steel, Negative Stud: 3/8" -16 steel
 OP = Offset Post with Horizontal Hole Stainless Steel 5/16" Bolt & Hex Nut

* = Side Terminals
 ≈ = Cold Cranking Amps for 30 seconds at 0° F (-18° C)
 † = Reserve Capacity Minutes minimum of 25 amp output at 80° F (27° C)
 ! = For height with removable adapter, add 7/8" (22mm)
 @ = Deep Cycle - Antimony Grids
 ~ = Marine Starting
 + = Shipped Dry Only
 § = Rating to 5.25 volts at 75 amps @ 80° F
 # = Wing nut for 8C-3638 & 8C-3639 is part number 3B-0723

Valve Regulated Lead Acid (VRLA) Batteries

BCI Group Size	Part No.	CCA ≈	RC Mins †	Volts	Amp Hr. Capacity @ 20 Hrs.	Construction Notes	BCI Overall Dimensions			Nominal Weight Wet Lb (kg)
							Length In (mm)	Width In (mm)	Height In (mm)	
Gelled (GEL) Electrolyte, Marine/Recreational, Deep Cycle Capability										
4D	152-8006	970	375	12	183	MF-G/VRLA	20.8 (527)	8.5 (216)	10.0 (254)	127 (57.6)
8D	152-7242	1150	475	12	225	MF-G/VRLA	20.8 (527)	11.0 (279)	10.0 (254)	157 (71.2)

Construction Notes:

MF-G/VRLA = Maintenance Free Non-Accessible -Gel Battery. Valve-Regulated Lead Acid (VRLA) battery with gelled electrolyte
 ≈ = Cold Cranking Amps for 30 seconds at 0° F (-18° C)
 † = Reserve Capacity Minutes minimum of 25 amp output at 80° F (27° C)

Absorbed Glass Mat (AGM) Batteries

BCI Group Size	Part No.	CCA ≈	RC Mins †	Volts	Amp Hr. Capacity @ 20 Hrs.	Construction Notes	BCI Overall Dimensions			Nominal Weight Wet Lb (kg)
							Length In (mm)	Width In (mm)	Height In (mm)	
Truck/Agricultural/Industrial										
31	430-5994	800	200	12	105	MF-AGM/VRLA/S	13.0 (330)	6.8 (171)	9.5 (241)	69 (31.3)
31	430-5995	925	190	12	100	MF-AGM/VRLA/S	13.0 (330)	6.8 (171)	9.5 (241)	63 (28.6)
Automotive/Light Truck & SUV										
34/78	430-5997	775	120	12	55	MF-AGM/VRLA/DT	10.8 (273)	6.9 (175)	8.0 (203)	42.5 (19.3)
34M	430-5999	775	120	12	55	MF-AGM/VRLA/DT	10.8 (273)	6.9 (175)	8.0 (203)	41.5 (18.9)
65	430-5998	775	150	12	75	MF-AGM/VRLA	12.0 (305)	7.4 (187)	7.7 (194)	46 (20.9)
94R	430-6004	800	140	12	80	MF-AGM/VRLA	12.4 (315)	6.9 (175)	7.5 (190)	51.5 (23.4)

Cat Battery Specifications

Absorbed Glass Mat (AGM) Batteries (Cont'd.)

BCI Group Size	Part No.	A	B	Volts	Const. Notes	TERM.	BCI Overall Dimensions				Nominal Weight Wet Lb (kg)	
							Length In (mm)	Width In (mm)	Terminal Height In (mm)	Container Height In (mm)		
High-rate Uninterruptible Power Supplies (UPS) or Standby Applications												
4D	250-0483	624	318	12	MF-AGM/VRLA	TA/2/ρ	21.8 (552)	8.3 (210)	9.4 (237)	8.8 (222)	130 (59.0)	
24	250-0476	253	127	12	MF-AGM/VRLA	TA/1/ρ	10.2 (259)	6.8 (173)	9.2 (232)	8.2 (206)	53 (24.0)	
27	250-0477	314	156	12	MF-AGM/VRLA	TA/1/ρ	12.8 (323)	6.8 (173)	8.7 (220)	8.2 (206)	64 (29.0)	
31	250-0478	377	192	12	MF-AGM/VRLA	TA/1/ρ	13.0 (329)	6.7 (171)	8.8 (222)	8.6 (218)	68.5 (31.1)	
31	250-0479	475	238	12	MF-AGM/VRLA	TA/1/ρ	13.5 (342)	6.8 (172)	11.3 (286)	11.1 (281)	99 (44.9)	
31	369-9959 ⁽¹⁾	550	271	12	MF-AGM/VRLA	TA/1/ρ	13.5 (342)	6.8 (172)	11.2 (285)	11.1 (281)	107 (48.5)	
45	250-0475	168	85.4	12	MF-AGM/VRLA	TA/1/ρ	8.9 (225)	5.3 (135)	8.7 (221)	8.2 (207)	40 (18.1)	
U1	250-0474	119	60	12	MF-AGM/VRLA	TA/1/α	7.8 (196)	5.2 (132)	7.2 (182)	6.2 (157)	24 (10.9)	
∞	369-9960 ⁽¹⁾	370	187	12	MF-AGM/VRLA	FA/3/ρ	19.5 (494)	4.4 (110)	8.9 (227)	9.1 (231)	80 (36.3)	
∞	369-9961 ⁽¹⁾	550	274	12	MF-AGM/VRLA	FA/3/ρ	21.9 (555)	5.0 (127)	11.2 (283)	11.7 (297)	120 (54.4)	
∞	369-9962 ⁽¹⁾	750	367	12	MF-AGM/VRLA	FA/3/ρ	24.0 (610)	4.9 (125)	12.3 (311)	12.8 (324)	150 (68.1)	

Construction Notes:

A = Power Watts per Cell for 15 minutes to 1.67 Volts Per Cell @ 77° F (25° C)
 B = Discharge Rating in Amperes for 15 minutes to end voltage of 1.75 V.P.C. @ 77°F (25°C)
 MF-AGM/VRLA = Maintenance Free Non-Accessible - Absorbed Glass Mat (AGM) Battery.
 ∞ = Unique container size. Does not use a standard BCI grouping
 ≈ = Cold Cranking Amps for 30 seconds at 0° F (-18° C)
 † = Reserve Capacity Minutes minimum of 25 amp output at 80° F (27° C)

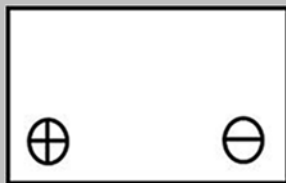
S = Stud Terminals
 DT = Dual Terminal
 TA - Top Access
 FA - Front Access
 α = In line lead terminal with brass female inserts .490" diameter head with a 1/4-20unc x .700 deep thread
 ρ = In line lead terminal with brass female inserts .625" diameter head with a 1/4-20unc x .750 deep thread

AGM batteries have a longer production lead time than regular lead-acid type batteries

Important: Alternator and charger instructions: for 12-volt AGM Batteries charge to 14.4 volts but no more than 14.6 volts at 68° F (20° C)

Valve Regulated AGM Batteries-Terminal Locations

Location Type - 1



Location Type - 2



Location Type - 3



VRLA batteries are a UL Recognized Component and are I.C.C.O., I.M.D.E., I.A.T.A., and D.O.T. Air Transportable Approved

1 Available in the United States and South America (Except Brazil).

Cat Battery Specifications

Cat General Service Batteries - Limited Availability

Europe, Africa, Middle East, Asia

DIN Group Size	Part No.	Amp Hr Capacity @ 20 Hrs	RC Mins †	BCI CCA ≈	DIN CCA ^	EN CCA ±	Volts	Const. Notes	BCI Overall Dimensions			Nominal Weight Wet Lb (kg)
									Length In (mm)	Width In (mm)	Height In (mm)	
78	369-9957	58	110	690	-	-	12	-	10.75 (273)	6.89 (175)	7.24 (184)	36.51 (16.6)
C11	369-9955	30	43	270	150	250	12	C	7.36 (187)	5.04 (128)	6.50 (165)	17.86 (8.1)
T4	369-9956	44	66	400	225	-	12	C	8.27 (210)	6.89 (175)	6.89 (175)	16.09 (7.3)
T4	356-6211	44	66	380	250	350	12	C	8.27 (210)	6.89 (175)	6.89 (175)	16.09 (7.3)
T5	356-6212	55	85	450	290	420	12	C	9.49 (241)	6.89 (175)	6.89 (175)	18.52 (8.4)
T6	356-6213	66	105	550	315	520	12	C	10.94 (278)	6.89 (175)	6.89 (175)	21.83 (9.9)
T7	356-6214	80	133	625	420	570	12	C	12.40 (315)	6.89 (175)	6.89 (175)	26.68 (12.1)
T8	356-6215	88	150	770	420	715	12	C	13.58 (345)	6.89 (175)	6.89 (175)	30.20 (13.7)

Construction Notes:

Batteries have taper post design and are shipped wet except as:

≈ = Cold Cranking Amps at 0° F (-18° C), discharge rate of 30 seconds, meeting 7.2V or above cut-off

^ = Cold Cranking Amps at 0° F (-18° C), discharge rate of 30 seconds, meeting 9V or above cut-off

± = Cold Cranking Amps at 0° F (-18° C), discharge rate of 90 seconds, meeting 6V or above cut-off

† = Reserve Capacity Minutes minimum of 25 amp output at 80° F (27° C)

C = Calcium Lead Alloy Grid Design

Brazil Only

DIN Group Size	Part No.	Amp Hr Capacity @ 20 Hrs	RC Mins †	BCI CCA ≈	DIN CCA ^	EN CCA ±	Volts	Const. Notes	BCI Overall Dimensions			Nominal Weight Wet Lb (kg)
									Length In (mm)	Width In (mm)	Height In (mm)	
4D	102-0400	150	270	950	535	-	12	SC	20.08 (510)	8.39 (213)	9.06 (230)	95.68 (43.4)
4D	242-0824	135	240	750	420	-	12	C	20.08 (510)	8.39 (213)	9.06 (230)	87.74 (39.8)
4D	242-0825	170	330	1000	560	-	12	C	20.08 (510)	8.39 (213)	9.06 (230)	101.85 (46.2)
4D	242-0829	330	170	700	395	-	12	C	20.08 (510)	8.39 (213)	9.06 (230)	101.41 (46)
31	242-0831	165	100	600	335	-	12	C	12.99 (330)	6.77 (172)	9.41 (239)	60.19 (27.3)
H7	242-0828	170	90	725	380	-	12	C	12.32 (313)	6.89 (175)	6.89 (175)	51.93 (23.1)
T5	242-0827	55	90	425	250	-	12	C	9.53 (242)	6.89 (175)	6.89 (175)	30.64 (13.9)
T5	242-0826	55	90	425	250	-	12	C	9.53 (242)	6.89 (175)	6.89 (175)	30.64 (13.9)
T6	112-9564	65	110	620	345	-	12	SC	10.94 (278)	6.89 (175)	6.89 (175)	39.24 (17.8)

Construction Notes:

Batteries have taper post design and are shipped wet except as:

≈ = Cold Cranking Amps for 30 seconds at 0° F (-18° C)

^ = Cold Cranking Amps at 0° F (-18° C), discharge rate of 30 seconds, meeting 9V or above cut-off

† = Reserve Capacity Minutes minimum of 25 amp output at 80° F (27° C)

C = Calcium Lead Alloy Grid Design

SC = Silver (Ag) Calcium Alloy Grids for resistance to high under hood temperatures.

Terminals:

- Lead terminal. L Shaped. Terminals have square holes.
 - Lead terminal and brass inserts. 1/4 - 20 x .25 Deep Female Thread.
 - Lead terminal with brass inserts. 1/4 - 20 x .25 Deep Female Thread
 - Lead terminal with brass inserts. 1/4 - 20 x Female Thread.
- Ratings conform to IEEE-485 Standards.



1 - BCI Group U1



2 - BCI Groups 45, 24, 27



3 - BCI Group 31



4 - BCI Group 4D

Cat Battery Specifications

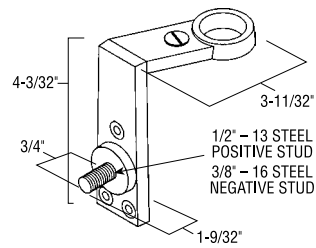
Cat General Service Batteries - Limited Availability (Cont'd.)

Terminal layout for 250-0473 8D Transit Bus Battery ⁽¹⁾

One piece end terminal. Right end of Battery.

1/2" - 13 Steel Positive Stud

3/8" - 16 Steel Negative Stud



Battery Accessories:

- Group 31 – Charging Posts for Stud Terminals - Part # 4C-5637
- Screw-in Charging Posts for Side Terminals - Part # 4C-5638
- Wing Nut for Part # 175-4390/175-4370/175-4360/8C-3628 - Part #2B-9498
- Wing Nut for Part #8C-3638 & 8C-3639 Marine Batteries - Part #3B-0723
- Battery Voltmeter - Part # 4C-6600
- Battery Load Tester - Part # 4C-4911
- Booster Cable 12' (3.66 m) - Part # 4C-4933
- Booster Cable 20' (6.00 m) - Part # 4C-4937

NOTE

Ratings and Part Numbers are subject to change without notice.

Assembly Numbers Cell and Terminal Layouts

6-VOLT ASSEMBLIES – TERMINAL POSITIONS & CELL LAYOUTS

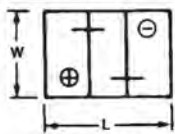


FIG. 1 (2L, 2N)

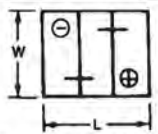


FIG. 2 (1, 2, 3, 3D, 4, 5D, 7D, 9D, 19L, GC2, GC2H)

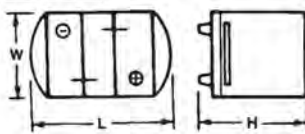


FIG. 2B (17HF)

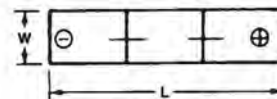


FIG. 5 (2E, 3EH, 4EH)

12-VOLT ASSEMBLIES – TERMINAL POSITIONS & CELL LAYOUTS

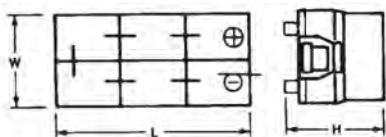


FIG. 8 (4B³, 4D, 6D, 8D³)

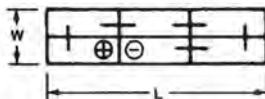


FIG. 9 (3EE, 3ET)

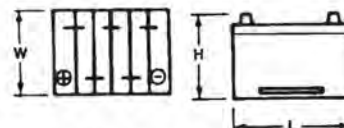


FIG. 10 (12T, 20H, 21, 24, 24H, 24T, 25, 26, 27, 27H, 29H, 30H, 34, 50, 51, 52, 86, U1⁴, U2⁴)

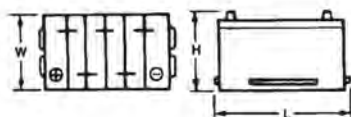


FIG. 10F (16TF, 45, 46)

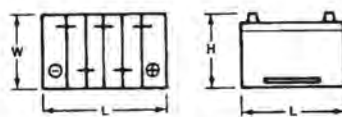


FIG. 11 (21R, 22NL¹, 22R, 24/24F, 24R, 26R, 27R, 29HR, 30HR, 32N, 34R, 35, 51R, 85, LM, U1R⁴)

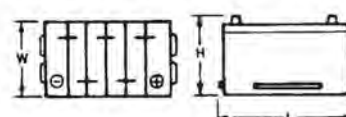


FIG. 11F (22F, 22HF, 22NF, 24F, 27F, 27HF, 29NF, 33)

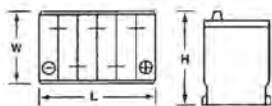


FIG. 11H (121R, 124R)

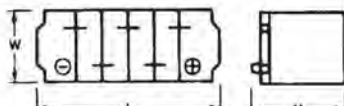


FIG. 11L (17TF, 23)

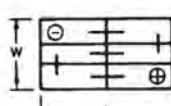


FIG. 12 (60)



FIG. 13 (66)



FIG. 14 (53)

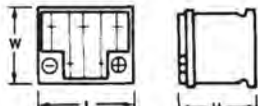


FIG. 15 (39, 40R, 41, 42, 43, 44, 96R, 97R, 98R)

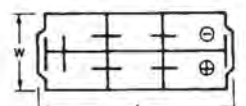


FIG. 16L (4DLT)

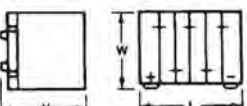


FIG. 17 (70, 71, 72, 73, 74, 75, 76, 77, 78, 101)

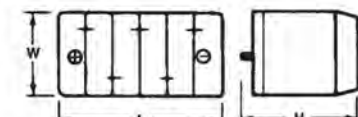


FIG. 18 (28, 31²)

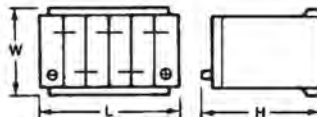


FIG. 19 (36R, 54, 55, 56, 58R)

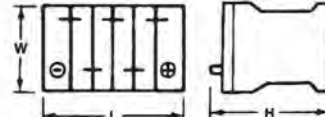


FIG. 20 (61, 62, 63, 64)

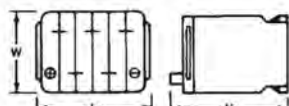


FIG. 21 (59, 65)

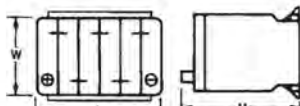


FIG. 22 (57)

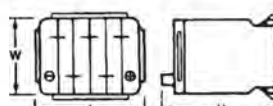


FIG. 23 (58R)

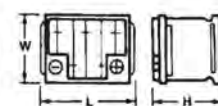


FIG. 24 (47, 48, 49, 90, 91, 92, 93, 94R, 95R, 99R)

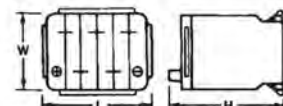


FIG. 25 (58)

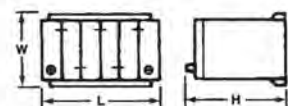


FIG. 26 (58)

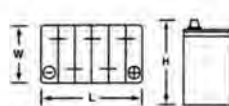


FIG. 28 (151R)

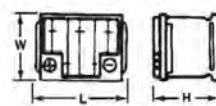


FIG. 34 (99)

Footnotes for Cell Layout Section

¹ Pencil posts supplied as O.E.

² SAE or 3/8" stud posts.

³ SAE or special "bus" side terminals

⁴ Special lawn mower "L" terminals.

* Source: Battery Council Int'l



FIG. 35 (79, 100)

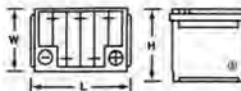






FIG. 39 (67R)

Cat Battery Specifications

CAST LEAD BATTERY TERMINALS

CAST LEAD (Preferred)			
			
Straight	Inline	Flag	Vertical

Cast Lead Battery Terminals				
Part Number	Size	Polarity	Comments	Boot/Cover
Straight				
304-5664	2	Positive	Nut Right	–
363-4083	2	Negative	Nut Right	–
7X-1593	4	Negative	Nut Right	–
7X-1594	4	Positive	Nut Right	–
9W-3962	0	Negative	Nut Right	7N-5274
9W-3961	0	Positive	Nut Right	8N-1725
363-8981	00	Positive	Straight - Stud Bolt (Right)	352-4708
288-6202	00	Negative	Nut Left	7T-9988
9W-3459	00	Negative	Nut Right	7T-9988
350-8702	00	Negative	Straight - Stud Bolt (Right)	352-4707
352-4705	00	Negative	Straight - Stud Bolt (Left)	352-4709
288-6201	00	Positive	Nut Left	7T-9987
9W-3460	00	Positive	Nut Right	7T-9987
141-6647	00	Positive	Straight - Stud Bolt (Left)	7T-9987
352-4704	00	Positive	Straight - Stud Bolt (Right)	352-4709
235-1300	000	Negative	Nut Right	7T-9988
345-9746	000	Negative	Straight - Stud Bolt (Left)	221-3352
235-1298	000	Positive	Nut Right	7T-9987
187-8911	0000	Negative	Nut Right	7T-9988
187-8910	0000	Positive	Nut Right	7T-9987
235-8106	00 & 12	Negative	Straight & Straight (Nut Right)	7N-5274
235-8105	00 & 12	Positive	Straight & Straight (Nut Right)	8N-1725
221-3351	0000 & 2	Negative	Straight & Straight (Nut Right)	221-3352
141-2640	0000 & 2	Positive	Straight & Straight (Nut Right)	141-2316
Inline				
Part Number	Size	Polarity	Comments	Boot/Cover
6T-7420	00	Negative	Nut Left	7T-4925
6T-7418	00	Positive	Nut Left	7T-4924
8C-4282	000	Negative	Nut Right	7T-4925
8C-4281	000	Positive	Nut Right	7T-4924
9X-6765	0000	Negative	Nut Left	7T-4925

Cat Battery Specifications

CAST LEAD BATTERY TERMINALS (Cont'd.)

Cast Lead Battery Terminals				
Part Number	Size	Polarity	Comments	Boot/Cover
9X-6765	0000	Positive	Nut Left	7T-4924
Flag				
Part Number	Size	Polarity	Comments	Boot/Cover
9W-3417	00	Negative	RH (Nut Left)	9G-0005
9W-3723	00	Negative	LH (Nut Right)	9G-0003
9W-3416	00	Positive	RH (Nut Left)	9G-0004
9W-3722	00	Positive	LH (Nut Right)	9G-0002
364-3765	00 & 00	Positive	LH & LH (Nut Left)	206-6395
295-9787	00 & 00	Positive	RH & RH (Nut Left)	295-9838
226-1935	000	Negative	LH (Nut Left)	9G-0003
8C-4601	000	Negative	RH (Nut Right)	9G-0005
8C-4600	000	Positive	LH (Nut Left)	9G-0002
9X-0415	000	Positive	RH (Nut Left)	9G-0004
167-1275	0000	Negative	LH (Nut Right)	9G-0003
9X-6759	0000	Negative	RH (Nut Left)	9X-5583
9X-1369	0000	Positive	RH (Nut Left)	9X-5632
Vertical				
Part Number	Size	Polarity	Comments	Boot/Cover
249-9042	00	Negative	Nut Left	249-9066
371-2583	00	Negative	Stud Bolt (Left)	—
290-1219	00	Positive	Nut Left	290-2077
Specialized				
Part Number	Size	Polarity	Comments	Boot/Cover
197-9044	00 & 00	Negative	LH & Vertical (Nut Right)	197-9045
352-4706	00 & 00	Negative	LH & Vertical - Stud Bolt (Left)	352-4710
311-2835	00 & 00	Positive	RH & Vertical (Nut Right)	311-2736
373-4028	00 & 00	Positive	RH & Vertical - Stud Bolt (Right)	373-4029
197-7800	00, 00 & 2	Positive	RH, Vertical & Vertical (Nut Right)	197-7801
245-6038	0000 & 2	Negative	LH & LH (Nut Left)	249-9056
206-6394	0000 & 2	Positive	LH & LH (Nut Right)	206-6395
364-2510	Various	Negative	See Drawing (Nut Right)	363-9054
229-9855	00	Negative	Straight - Vertical Stud (Nut Right)	229-9856
247-1337	00	Positive	Straight - Vertical Stud (Nut Right)	247-1336
235-8634	00	Positive	LH - Studs Top & LH (Nut Right)	235-8636
152-6566	0000	Negative	Inline-Vertical Stud (Nut Left)	—
152-6565	0000	Positive	Inline-Vertical Stud (Nut Left)	—

Cat Battery Specifications

CRIMP BATTERY TERMINALS

Straight				
Part Number	Size	Polarity	Boot/Cover	
264-6151	2	Positive	-	
264-6153	2	Negative	-	
158-4610	4	Negative	-	
7X-1591	4	Positive	-	
7X-1169	0	Negative	7N-5274	
8T-9758	0	Positive	8N-1725	
3S-6050	00	Negative	7T-9988	
3S-6049	00	Positive	7T-9987	
9S-6333	000	Negative	7T-9988	
3S-6051	000	Positive	7T-9987	
189-0158	0000	Negative	7T-9988	
188-0157	0000	Positive	7T-9987	
Inline				
Part Number	Size	Polarity	Boot/Cover	
9S-5752	0	Positive	-	
9S-5753	0	Negative	-	
9S-5755	00	Negative	7T-4925	
9S-5754	00	Positive	7T-4924	
5M-9205	00	Negative	7T-4925	
5M-9204	00	Positive	7T-4924	
8C-4660	000	Negative	7T-4925	
8C-4659	000	Positive	7T-4924	
9X-6763	0000	Negative	7T-4925	
9X-6766	0000	Positive	7T-4924	
Flag				
Part Number	Size	Polarity	Comments	Boot/Cover
8C-5918	00	Negative	RH	9G-0005
8T-9757	00	Negative	LH	9G-0003
8C-5917	00	Positive	RH	9G-0004
8T-9756	00	Positive	LH	9G-0002
226-3826	000	Negative	LH	9G-0003
8C-4603	000	Negative	RH	9G-0005
8C-4613	000	Positive	LH	9G-0002
9X-1402	000	Positive	RH	9G-0004
167-1276	0000	Negative	LH	9X-5583
9X-6760	0000	Negative	RH	9X-5583
9X-4504	0000	Positive	RH	9X-5632

Cat Battery Specifications

CABLE RING TERMINALS

		
STRAIGHT	90 DEGREE	FLAG

1/0 AWG

STUD OR BOLT SIZE		Angle of Inclination	PREFERRED		BOOTS/COVER		
English Stud	Metric Stud		Base	Heat Shrink Sealed	Red	Black	
1/4	M6	–	030-1709		301-0091	9G-8909	
1/4	M6	FLAG	240-1615		229-2698	260-2998	
1/4	M6	90°	197-6800		276-1786	299-9092	
5/16	M8	–	030-1708		301-0091	9G-8909	
5/16	M8	FLAG	375-2144		229-2698	260-2998	
5/16	M8	45°	451-4528		299-6082	299-6083	
5/16	M8	90°	195-3253		276-1786	299-9092	
3/8	M10	–	317-3356		317-3357	6T-0465	8N-0869
1/2	M12	–	1M-4986			301-0091	9G-8909
1/2	M12	90°	189-1899			276-1786	299-9092

2/0 AWG

STUD OR BOLT SIZE		Angle of Inclination	PREFERRED			BOOTS/COVER		
English Stud	Metric Stud		Base	Heat Shrink Sealed	Heat Shrink	Red	Black	
1/4	M6	–	030-1709	348-2309		301-0091	9G-8909	
1/4	M6	FLAG	276-4118					
1/4	M6	45°	348-4169	348-8932		299-6082	299-6083	
1/4	M6	90°	283-8657			9X-5699	9X-9120	
5/16	M8	–	030-1705			301-0091	9G-8909	
5/16	M8	–	275-8665			229-2698	260-2998	
5/16	M8	45°	384-1357			299-6082	299-6083	
5/16	M8	90°	311-3475			311-3476	276-1786	299-9092
3/8	M10	–	1S-7252				301-0091	9G-8909
3/8	M10	FLAG	4D-1248				229-2698	260-2998
3/8	M10	45°	276-7278		348-2315		299-6082	299-6083
3/8	M10	90°	315-0180	315-0181	276-1786		299-9092	
1/2	M12	–	1S-7251		301-0091	9G-8909		
1/2	M12	FLAG	229-2696		229-2698	260-2998		
1/2	M12	45°	274-9183		299-6082	299-6083		
1/2	M12	90°	208-4617		276-1786	299-9092		

Cat Battery Specifications

CABLE RING TERMINALS (Cont'd.)

3/0 AWG

STUD OR BOLT SIZE		Angle of Inclination	PREFERRED		BOOTS/COVER	
English Stud	Metric Stud		Base		Red	Black
5/16	M8		031-9292		9X-4519	294-2319
3/8	M10		035-0425		9X-4519	294-2319
3/8	M10	45°	441-0393		198-9562	330-4419
3/8	M10	90°	239-0634		194-4046	299-9092
1/2	M12		5P-2600		9X-4519	294-2319
1/2	M12	45°	390-0853		198-9562	330-4419
1/2	M12	90°	262-9668		194-4046	299-9092

4/0 AWG

STUD OR BOLT SIZE		Angle of Inclination	PREFERRED		BOOTS/COVER	
English Stud	Metric Stud		Base	Heat Shrink Sealed	Red	Black
5/16	M8	45°	031-9294		9X-4519	294-2319
5/16	M8		363-8980		198-9562	330-4419
3/8	M10		031-9295	348-2310	9X-4519	249-2319
3/8	M10	45°	197-5874	348-2312	198-9562	330-4419
3/8	M10	90°	288-4232	348-2316	348-7341	348-9152
1/2	M12		3L-7634	348-2317	9X-4519	294-2319
1/2	M12	FLAG	321-1010		229-2698	
1/2	M12	45°	189-6464	348-2311	198-9562	330-4419
1/2	M12	90°	261-1730	348-2314	348-7341	299-9092

BCI Group Sizes and Overall Dimensions

BCI GRP. NO.	BCI FIG. NO.	Volts	Maximum Overall Dimensions Inches and (mm)			BCI GRP. NO.	BCI FIG. NO.	Volts	Maximum Overall Dimensions Inches and (mm)		
			L	W	H				L	W	H
1	2	6	9 1/8 (232)	7 1/8 (181)	9 3/8 (238)	5D	2	6	13 3/4 (349)	7 1/8 (181)	9 3/8 (238)
2	2	6	10 3/8 (264)	7 1/8 (181)	9 3/8 (238)	6D	8	12	20 3/4 (527)	10 (254)	10 1/4 (260)
2E	5	6	19 3/8 (492)	4 1/8 (105)	9 1/8 (232)	7D	2	6	16 1/4 (413)	7 1/8 (181)	9 3/8 (238)
2N	1	6	10 (254)	5 9/16 (141)	8 15/16 (227)	8D	8	12	20 3/4 (527)	11 1/8 (283)	9 13/16 (249)
3	2	6	11 3/4 (298)	7 1/8 (181)	9 3/8 (238)	12T	10	12	7 1/16 (179)	6 15/16 (177)	7 15/16 (202)
3D	2	6	20 3/8 (518)	8 3/4 (222)	10 (254)	16TF	10F	12	16 9/16 (421)	7 1/8 (181)	11 1/8 (283)
3EE	9	12	19 5/16 (491)	4 3/8 (111)	8 7/8 (225)	17HF	2B	6	7 3/8 (187)	6 7/8 (175)	9 (229)
3EH	5	6	19 5/16 (491)	4 3/8 (111)	9 13/16 (249)	17TF	11L	12	17 1/16 (433)	6 15/16 (177)	7 15/16 (202)
3ET	9	12	19 5/16 (491)	4 3/8 (111)	9 13/16 (249)	19L	2	6	8 1/2 (216)	7 (178)	7 1/2 (191)
4	2	6	13 1/8 (334)	7 1/8 (181)	9 3/8 (238)	21	10	12	8 3/16 (208)	6 13/16 (173)	8 3/4 (222)
4B	8	12	21 1/4 (540)	11 1/8 (283)	10 7/8 (276)	21R	11	12	8 3/16 (208)	6 13/16 (173)	8 3/4 (222)
4D	8	12	20 3/4 (527)	8 3/4 (222)	9 13/16 (249)	22F	11F	12	9 1/2 (241)	6 7/8 (175)	8 5/16 (211)
4DLT	16L	12	20 (508)	8 3/16 (208)	7 15/16 (202)	22HF	11F	12	9 1/2 (241)	6 7/8 (175)	9 (229)
4EH	5	6	19 5/16 (491)	5 (127)	9 13/16 (249)	22NF	11F	12	9 7/16 (240)	5 1/2 (140)	8 15/16 (227)

Cat Battery Specifications

BCI Group Sizes and Overall Dimensions (Cont'd.)

BCI GRP. NO.	BCI FIG. NO.	Volts	Maximum Overall Dimensions Inches and (mm)		
			L	W	H
22R	11	12	9 (229)	6 7/8 (175)	8 5/16 (211)
24	10	12	10 1/4 (260)	6 13/16 (173)	8 7/8 (225)
24F	11F	12	10 3/4 (273)	6 13/16 (173)	9 (229)
24H	10	12	10 1/4 (260)	6 13/16 (173)	9 3/8 (238)
24R	11	12	10 1/4 (260)	6 13/16 (173)	9 3/8 (238)
24T	10	12	10 1/4 (260)	6 13/16 (173)	9 3/4 (248)
25	10	12	9 1/16 (230)	6 7/8 (175)	8 7/8 (225)
26	10	12	8 3/16 (208)	6 13/16 (173)	7 3/4 (197)
26R	11	12	8 3/16 (208)	6 13/16 (173)	7 3/4 (197)
27	10	12	12 1/16 (306)	6 13/16 (173)	8 7/8 (225)
27F	11F	12	12 1/2 (318)	6 13/16 (173)	8 15/16 (227)
27H	10	12	11 3/4 (298)	6 13/16 (173)	9 1/4 (235)
27R	11	12	12 1/16 (306)	6 13/16 (173)	8 7/8 (225)
28	18	12	10 1/4 (260)	6 13/16 (173)	9 7/16 (240)
29H	10	12	13 1/8 (334)	6 11/16 (170)	9 1/8 (232)
29NF	11F	12	13 (330)	5 1/2 (140)	8 15/16 (227)
30H	10	12	13 1/2 (343)	6 13/16 (173)	9 1/4 (235)
31	18	12	13 (330)	6 13/16 (173)	9 7/16 (240)
33	11F	12	13 5/16 (338)	6 13/16 (173)	9 3/8 (238)
34	10	12	10 1/4 (260)	6 13/16 (173)	7 7/8 (200)
34R	11	12	10 1/4 (260)	6 13/16 (173)	7 7/8 (200)
35	11	12	9 1/16 (230)	6 7/8 (175)	8 7/8 (225)
36R	19	12	10 3/8 (263)	7 3/16 (183)	8 1/8 (206)
39	15	12	8 1/8 (206)	6 7/8 (175)	7 (178)
40R	15	12	10 15/16 (278)	6 7/8 (175)	6 7/8 (175)
41	15	12	11 9/16 (293)	6 7/8 (175)	6 7/8 (175)
42	15	12	9 1/2 (241)	6 7/8 (175)	6 7/8 (175)
43	15	12	13 1/8 (334)	6 7/8 (175)	8 1/16 (205)
45	10F	12	9 7/16 (240)	5 1/2 (140)	8 15/16 (227)
46	40F	12	10 3/4 (273)	6 13/16 (173)	9 (229)
47	24	12	9 1/2 (242)	6 7/8 (175)	7 1/2 (190)
48	24	12	10 15/16 (278)	6 7/8 (175)	7 1/2 (190)
49	24	12	13 7/8 (353)	6 7/8 (175)	7 1/2 (190)
50	10	12	13 1/2 (343)	5 (127)	10 (254)
51	10	12	9 3/8 (238)	5 1/16 (129)	8 3/4 (223)
51R	11	12	9 3/8 (238)	5 1/16 (129)	8 3/4 (223)
52	10	12	7 5/16 (186)	5 13/16 (147)	8 1/4 (210)
53	14	12	13 (330)	4 11/16 (119)	8 1/4 (210)
54	19	12	7 5/16 (186)	6 1/16 (154)	8 3/8 (212)
55	19	12	8 9/16 (218)	6 1/16 (154)	8 3/8 (212)
56	19	12	10 (254)	6 1/16 (154)	8 3/8 (212)
57	22	12	8 1/16 (205)	7 3/16 (183)	6 15/16 (177)
58	26	12	10 1/16 (255)	7 3/16 (183)	6 15/16 (177)
58R	19	12	10 1/16 (255)	7 3/16 (183)	6 15/16 (177)
59	21	12	10 1/16 (255)	7 11/16 (195)	7 3/4 (196)
60	12	12	13 1/16 (332)	6 5/16 (160)	8 7/8 (225)
61	20	12	7 9/16 (192)	6 3/8 (162)	8 7/8 (225)
62	20	12	8 7/8 (225)	6 3/8 (162)	8 7/8 (225)
63	20	12	10 3/16 (258)	6 3/8 (162)	8 7/8 (225)
64	20	12	11 5/8 (296)	6 3/8 (162)	8 7/8 (225)
65	21	12	12 1/16 (306)	7 9/16 (192)	7 9/16 (192)
66	13	12	12 1/16 (306)	7 9/16 (192)	7 5/8 (194)
67R	39	12	9 1/8 (231)	6 15/16 (175)	6 15/16 (175)
70	17	12	8 3/16 (208)	7 1/16 (180)	7 11/16 (196) ⁽¹⁾
71	17	12	8 3/16 (208)	7 1/16 (179)	8 1/2 (216)
72	17	12	9 1/16 (230)	7 1/16 (179)	8 1/4 (210)
73	17	12	9 1/16 (230)	7 1/16 (179)	8 1/2 (216)
74	17	12	10 1/4 (260)	7 1/4 (184)	8 3/4 (222)
75	17	12	9 1/16 (230)	7 1/16 (180)	7 11/16 (196) ⁽¹⁾
76	17	12	13 1/8 (334)	7 1/16 (180)	8 1/2 (216) ⁽¹⁾
78	17	12	10 1/4 (260)	7 1/16 (180)	7 11/16 (196) ⁽¹⁾
79	35	12	12 1/16 (307)	7 1/16 (180)	7 3/8 (188)
85	11	12	9 1/16 (230)	6 13/16 (173)	8 (203)
86	10	12	9 1/16 (230)	6 13/16 (173)	8 (203)
90	24	12	9 1/2 (242)	6 7/8 (175)	6 7/8 (175)
91	24	12	10 15/18 (278)	6 7/8 (175)	6 7/8 (175)
92	24	12	12 3/8 (315)	6 7/8 (175)	6 7/8 (175)
93	24	12	13 7/8 (353)	6 7/9 (175)	6 7/8 (175)
94R	24	12	12 3/8 (315)	6 7/8 (175)	7 1/2 (190)
95R	24	12	15 1/2 (394)	6 7/8 (175)	7 1/2 (190)
96R	15	12	9 1/2 (242)	6 13/16 (252)	6 7/8 (175)
97R	15	12	9 15/18 (252)	6 7/8 (175)	7 1/2 (190)
98R	15	12	11 1/8 (283)	6 7/8 (175)	7 1/2 (190)
99R	24	12	8 5/16 (210)	6 7/8 (175)	6 7/8 (175)
100	35	12	10 1/4 (260)	7 1/16 (179)	7 3/8 (188)
101	17	12	10 1/4 (260)	7 1/16 (179)	6 11/16 (170)
121R	11H	12	8 1/4 (222)	7 (178)	8 1/2 (216)
124R	11H	12	10 3/4 (274)	7 (178)	8 5/8 (194)
151R	28	12	7 7/16 (188)	4 15/16 (125)	8 7/8 (225)
GC2	2	6	10 3/8 (264)	7 3/16 (183)	10 5/8 (270) ⁽¹⁾
U1	10	12	7 3/4 (197)	5 3/16 (132)	7 5/16 (186)
U1R	11	12	7 3/4 (197)	5 3/16 (132)	7 5/16 (186)
U2	10	12	6 5/16 (160)	5 3/16 (160)	7 1/8 (181)

Cat Battery Specifications

BCI / JIS Reference Chart

BEST FIT ESTIMATE – BCI GROUP SIZE

BCI Group No.	BCI Assembly Figure	Maximum JIS Dimensions (mm)			JIS Reference Size Number Information	
		Length	Width	Height	JIS Type Description	Conventional
21	10	202	173	225	50D20R	N50S
21R	11	202	173	225	50D20L	N50SL
24	10	260	173	225	48D26R, 55D26R, 65D26R, 75D26R, 80D26R	N50, N50Z, NS70
24R	11	260	173	225	48D26L, 55D26L, 65D26L, 75D26L, 80D26L	N50L, N50ZL, NS70L
25	10	232	173	225	55D23R, 65D23R, 70D23L, 75D23R	
27	10	306	173	225	65D31R, 75D31R, 95D23R	N70, N70B, NX120
27R	11	306	173	225	65D31L, 75D31L, 95D31L	N70L, N70ZL, NX120-7L
29H ⁽¹⁾	10	410	176	234	95E41R, 105E41R, 115E41R, 130E41R, 95E41L, 105E41L, 115E41L, 130E41L	N100
35	11	232	173	225	55D23L, 65D23L, 70D23L, 75D23L	
51 ⁽¹⁾	10	238	135	227	46B24R, 50B24R, 55B24R, 32C24R	N40, NS60
51R ⁽¹⁾	11	238	129	227	46B24L, 50B24L, 55B24L, 32C24L	N40L, NS60L
151R	28	188	125	225	44B19L (S)	
4D	8	505 508	182 222	257 257	15F51, ⁽¹⁾ 145F51, ⁽¹⁾ 150F51, ⁽¹⁾ 170F51, ⁽¹⁾ 14G51, 165G51, 180G51, 195G51	N120, ⁽¹⁾ NS150, ⁽¹⁾
8D	8	521	278	270	180H52, 245H52	N200
N/A ⁽¹⁾	11	194	126	224	S34B20L – Toyota Prius: Remote Venting	
N/A	10	165	124	218	S34B24R – Honda Insight	
N/A	11	248	127	190	46A24L – Mazda Miata: Remote Venting	
N/A	—	167	127	227	28B17L, 34B17L, 28B17R, 34B17R	
N/A	—	187	127	227	34B19L, 34B19R	
N/A	—	197	129	227	38B20L, 38B20R	
N/A	—	187	127	184	26A19L, 26A19R	
N/A	—	187	127	187	26A19L, 26A19R, 28A19R, 32A19R	
N/A	—	167	127	227	26B17L, 26B17R	
N/A	—	187	127	227	28B19L, 28B19R	
N/A	—	197	129	227	36B20L, 36B20R	

JIS Number Interpretation:

Example – 55D23R

- 55 – Performance
- D – Classification by battery width x container height
- 23 – Approximate battery length in mm when multiplied by 10.
- R – Last letter designated polarity: R = standard (LHF), L= Reversed (RHF)- Left Hand Positive Termination

The information contained in this chart is deemed accurate and appropriate at the time of its publication. It represents our “best fit estimate” of the BCI group size to the JIS dimensional reference size. BCI provides this information as a service to the subscribers of the Data Book. While BCI strives for accuracy, it makes no promises or warranties regarding the accuracy or usefulness of this information and expressly disclaim any liability related to the use or reliability of the information contained in this chart. BCI, its officer, directors, employees, agents and its member affiliates cannot be held liable for the accuracy or use of this data.

BCI / DIN / EN Reference Chart

EUROPEAN REFERENCE INFORMATION

BCI Group Number	BCI Assembly Figure	Maximum Dimensions (mm)			Holddown	Lifting Ledge	Positive Terminal Location	DIN Code		EN Codes
		Length	Width	Height						
40R	15	278	175	175	B1	No	Right	T6	LB3	66LB
41	15	293	175	175	B4	No	Right	T65	N/A	54LB
42	15	242	175	175	B4	No	Right	T5	LB2	45LB

Cat Battery Specifications

BCI / DIN / EN Reference Chart (Cont'd.)

EUROPEAN REFERENCE INFORMATION (Cont'd.)

BCI Group Number	BCI Assembly Figure	Maximum Dimensions (mm)			Holddown	Lifting Ledge	Positive Terminal Location	DIN Code		EN Codes
		Length	Width	Height						
47	24	242	175	190	B3	Yes	Right	H5	L2	55L2
48	24	278	175	190	B3	Yes	Right	H6	L3	66L3
49	24	354	175	190	B3	Yes	Right	H8	L5	99L5
90	24	242	175	175	B3	Yes	Right	T5	LB2	45LB
91	24	278	175	175	B3	Yes	Right	T6	LB3	66LB
92	24	315	175	175	B3	Yes	Right	T7	LB4	77LB
93	24	354	175	175	B3	Yes	Right	T8	LB5	88LB
94R	24	315	175	190	B3	Yes	Right	H7	L5	77L4
95R	24	394	175	190	B3	Yes	Right	H9	L6	
97R	15	252	175	190	B4	No	Right	H5	L2	55L2
98R	15	283	175	190	B4	No	Right	H6	L3	66L3
99	34	207	175	175	B1	Yes	Left	T4	LB1	36LB
99R	24	210	175	175	B3	Yes	Right	T4	LB1	36LR
N/A	N/A	175	175	190	B3	Yes	Right	H3	L0	32L0
N/A	N/A	207	175	190	B3	Yes	Right	H4	L1	45L1

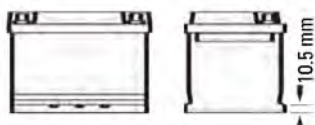
CAUTION

These are common holddown types but others may be used.

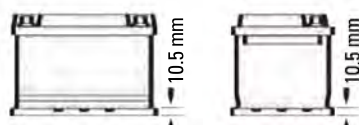
Holddown descriptions:

B1 = 10.5 mm high with 3 or 5 notches.

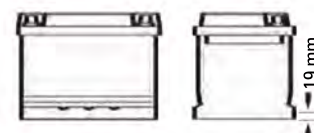
B3 = 10.5 mm high on sides with 3 or 4 notches on sides and 3 notches on side only.



B1
Base holddown 10.5 mm
(on long sides)



B3
Base holddown 10.5 mm
(on long and short sides)



B4
Base holddown 19 mm
(on long sides)

This chart is provided for reference purposes only and is deemed accurate as of the printing of the Data book. BCI, its members, officers, directors agents and employees expressly deny any responsibility for the accuracy of the information provided. BCI disclaims any warranty, expressed or implied, for its accuracy. BCI also denies any liability for damages as a consequence of using this information.

Conversion Chart

SAE	EN	IEC	DIN
155	145	100	90
200	180	130	110
250	230	160	140
300	280	195	170
350	330	225	200
400	360	260	225
450	420	290	255
500	480	325	280
550	520	355	310
600	540	390	335
650	600	420	365
700	640	450	395

JIS	SAE
26A17	225
26A19	201
28A19	248
32A19	294
26B17	225
28B17	246
34B17	279
28B19	247
34B19	272
36B20	274
38B20	332
46B24	325

JIS	SAE
55D26	348
65D26	413
75D26	490
80D26	582
65D31	389
75D31	447
95D31	622
95E41	512
105E41	577
115E41	651
130E41	799
115F51	638

Cat Battery Specifications

Conversion Chart (Cont'd.)

SAE	EN	IEC	DIN
750	680	485	420
800	760	515	450
850	790	550	480
900	860	580	505
950	900	615	535
1000	940	645	560
1050	1000	680	590
1100	1040	710	620
1150	1080	745	645
1200	1150	775	675
1250	1170	810	700
1300	1220	840	730
1350	1270	870	760
1400	1320	905	790
1450	1360	935	815
1500	1410	975	820
1540	1450	1000	870

JIS	SAE
50B24	390
55B24	433
32C24	238
50D20	306
55D23	356
65D23	420
70D23	490
75D23	520
48D26	278

JIS	SAE
145F51	780
150F51	916
170F51	1045
145G51	754
165G51	933
180G51	1090
195G51	1146
190H52	624
245H52	1532

Battery Safety

DANGER/POISON

SHIELD EYES. EXPLOSIVE GASES CAN CAUSE BLINDNESS OR INJURY.

NO SPARKS, FLAMES, SMOKING

SULFURIC ACID CAN CAUSE BLINDNESS OR SEVERE BURNS.

FLUSH EYES IMMEDIATELY WITH WATER. GET MEDICAL HELP FAST.

KEEP OUT OF THE REACH OF CHILDREN. DO NOT TIP. KEEP VENT CAPS TIGHT AND LEVEL. DO NOT OPEN FLUSH COVER BATTERIES.

DANGER
EXPLOSIVE GASES

POISON
CAUSES SEVERE BURNS

Cigarettes, flames or sparks could cause battery to explode. Always shield eyes and face from battery. Do not charge or use booster cables or adjust post connections without proper instruction and training.

KEEP VENT CAPS TIGHT AND LEVEL.

Contains sulfuric acid. Avoid contact with skin, eyes or clothing. In event of accident flush with water and call a physician immediately.

KEEP OUT OF REACH OF CHILDREN.

CALIFORNIA PROPOSITION 65 WARNING

Batteries, battery posts, terminals and related accessories contain lead and lead compounds, and other chemicals known to the state of California to cause cancer and birth defects or other reproductive harm.

Wash hands after handling.

DO NOT INHALE SULFURIC ACID MIST

DANGER OF EXPLODING BATTERIES

Batteries contain sulfuric acid and produce explosive mixtures of hydrogen and oxygen. Because self-discharge action generates hydrogen gas even when the battery is not in operation, make sure batteries are stored and worked on in a well-ventilated area. **ALWAYS wear safety glasses and a face shield** when working on or near batteries.

When working with batteries:

- **Always wear proper eye, face and hand protection.**
- Keep all sparks, flames and cigarettes away from the battery.
- Do not attempt to open a flush cover battery.
- **Never lean over battery** while boosting, testing or charging.
- Cover vent caps with a damp cloth and hand protection to minimize gas seepage.
- Make sure work area is well ventilated.
- **Do not remove or damage vent caps**
- **Do not breathe acid mist.**

Battery Safety (Cont'd.)

SAFE BATTERY INSTALLATION

To assure safe installation and proper operation, follow these installation procedures:

- **Always wear proper eye, face and hand protection.**
- **Disconnect ground cable first** (this is usually the negative cable; however, older vehicles may have a positive ground).
- Remove old battery – note position of positive (+) terminal and negative (–) terminal.
Mark the cables for correct connection to new battery.
- Clean terminals and cable connections with a wire brush.
Broken connections or frayed or cut cables should be replaced.
- Install the new battery in the same position as the old one.
Be sure to secure it with the hold-down assembly.
- Make sure the terminals do not touch any metal mounting, engine or body parts.
- Connect cables tightly. **Connect ground cable last to avoid sparks and explosion.**

SAFE CHARGING

Before beginning the charging operation, read and follow the instructions that come with the charger. **Never attempt to charge a battery without first reviewing the instructions for the charger being used.** In addition to the charger manufacturer's instructions, these general precautions should be followed:

- Always charge batteries in a well-ventilated area and **wear proper eye protection.**
- Turn the charger and timer "OFF" before connecting the leads to the battery **to avoid dangerous sparks.**
- To avoid an explosion, never try to charge a visibly damaged or frozen battery.
- Connect the charger leads to the battery; red positive (+) lead to the positive (+) terminal and black negative (–) lead to the negative (–) terminal. If the battery is still in the vehicle, connect the negative lead to the engine block, away from the battery, to serve as a ground. (If the vehicle is positive grounded, connect the positive lead to the engine block.)
- Make sure that the leads to the connections are tight
- Set the timer, turn the charger on and slowly increase the charging rate until the desired ampere value is reached.
- If the battery becomes hot or if violent gassing or spewing of electrolyte occurs, reduce the charging rate or temporarily halt the charger.
- Always turn the charger "OFF" before removing charger leads from the battery **to avoid dangerous sparks.**

HANDLING BATTERY ACID

Battery acid, or electrolyte, is a solution of sulfuric acid and water that can destroy clothing and burn the skin. Use extreme caution when handling electrolyte and keep an acid neutralizing solution - such as baking soda or household ammonia mixed with water - readily available. When handling batteries:

Cat Battery Specifications

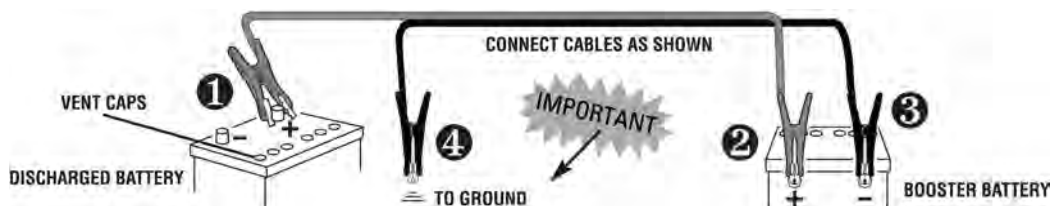
Battery Safety (Cont'd.)

- **Always wear proper eye, face and hand protection.**
- If the electrolyte is splashed into an eye, immediately force the eye open and flood it with clean, cool water for at least 15 minutes. Get prompt medical attention.
- If electrolyte is taken internally, drink large quantities of water or milk. **DO NOT** induce vomiting. Call a physician immediately.
- Neutralize with baking soda any electrolyte that spills on a vehicle or in the work area. After neutralizing, rinse contaminated area clean with water.

Mixing acid can be very dangerous! Do not attempt without proper training. To prepare electrolyte of a specific gravity, always pour the concentrated acid slowly into the water; **DO NOT pour water into the acid.** Always stir the water while adding small amounts of acid. If noticeable heat develops, allow the solution to cool before continuing to add acid.

SAFE BOOSTER CABLE OPERATION

When jump starting, **always wear proper eye protection and never lean over battery.** Do not jump start a damaged battery, inspect both batteries before connecting booster cable. **Be sure vent caps are tight and level,** place a damp cloth over the vent caps of both batteries. Make certain that the vehicles and cable ends are not touching and both ignition switches are turned to the "OFF" position:



**Jump Starting Diagram
PROTECT YOUR EYES!
IMPORTANT! Connect to a ground,
away from the battery...away from
moving fan and gas lines.**

1. Connect positive (+) booster cable to positive (+) terminal of discharged battery.
2. Connect other end of positive (+) cable to positive (+) terminal of assisting battery.
3. Connect negative (-) cable to negative (-) terminal of assisting battery.
4. **MAKE FINAL CONNECTION OF NEGATIVE (-) CABLE TO ENGINE BLOCK OF STALLED VEHICLE, AWAY FROM BATTERY.**
5. Start vehicle and remove cables in REVERSE order of connections.

Battery Care and Maintenance

Always Wear Eye Protection When Working Around Batteries!

Basic Rules for Battery Care & Maintenance

Safety Precautions



California Proposition 65 Warning: Batteries, battery posts, terminals and related accessories contain lead and lead compounds, and other chemicals known to the state of California to cause cancer, birth defects or other reproductive harm. **Wash hands after handling!**

Warning: Follow all safety instructions when handling batteries! Always wear safety glasses and a face shield when working on or near batteries.

All batteries generate explosive hydrogen gas. Keep sparks, flames and cigarettes away from batteries at all times. Do not connect or disconnect “live” circuits. To avoid creating sparks, always turn charging and testing equipment off before attaching or removing clamps.

ALWAYS DISCONNECT GROUNDED CABLE FIRST AND CONNECT IT LAST TO PREVENT DANGEROUS SPARKS.

Perform all work in a well ventilated area. Never lean directly over a battery while boosting, testing or charging it. **PROTECT YOUR EYES!**

Batteries contain corrosive sulfuric acid that can destroy clothing and burn the skin. Neutralize acid spills with a paste made of baking soda and water or large quantities of water. **BE CAREFUL!**

In-Vehicle Service and Testing

Follow safety precautions:

Wear Proper Eye Protection!

Prior to any testing, visually inspect the battery. Look for:

- Cracked or broken case or cover
- Loose cable connections
- Leaking case-to-cover seal
- Corrosion
- Damaged or leaking terminals

Neutralize any corrosion with a baking soda/water paste or battery cleaner spray. Scrape or brush off the residue and wash the area with clean water. Following your visual inspection, check the battery’s state of charge with a voltmeter.

You must boost charge a weak battery before load testing. (See charging chart under “Charging Tips” section.) If fully charged, perform a load test. **PROTECT YOUR EYES!**

Battery Care and Maintenance

(Cont'd.)

Dry Charge Activation

Important... **WEAR PROPER EYE PROTECTION!**

1. Fill each cell to proper level with battery-grade sulfuric acid of 1.265 specific gravity. Battery and acid must be at a temperature of 60°F to 100°F (16°C to 38°C) at time of filling.
2. Boost charge 12V batteries at 15 amps until specific gravity is 1.250 or higher and the electrolyte temperature is at least 60°F (15.5°C). BOTH CONDITIONS MUST BE MET. (Boost charge 6V and 12V heavy-duty batteries at 30 amps.) If violent gassing or spewing occurs, reduce charge rate.
3. After charging, check electrolyte levels. If required, add additional electrolyte to bring all levels to the bottom of the vent wells. DO NOT OVERFILL. If the battery requires top-off while in service, add distilled water...DO NOT ADD ACID.

Safe Installation

Follow safety precautions:

Wear Proper Eye Protection!

1. Before removing old battery, mark the positive (+) and negative (-) cables for proper connection to the new battery.
2. Always disconnect the ground cable first [usually negative (-)] to avoid any sparking around battery. Then disconnect the positive (+) cable and carefully remove the old battery.
3. Clean and inspect. If necessary, repaint or replace the tray, hold-down and/or battery cables. Cable ends must be clean and corrosion free. Cable must not be frayed or bare.
4. Put corrosion protection washers on battery terminals. Install new battery in same position as old one and tighten hold-down. Be sure terminals will clear hood, fender, box lid, etc. to avoid vehicle damage and/or explosion.
5. Connect positive (+) cable first. Connect ground cable last. If side terminal connection, use a special side terminal torque tool to tighten side terminal cables to avoid damage. Never overtighten or hammer cables onto terminals.
6. Coat terminals and cable connection with a corrosion protection spray.

Check the Charging System

The voltage regulator should be checked every 10,000 miles or every time you change oil. It should be checked immediately if the battery is hot to the touch, if electrolyte is bubbling or spewing from the vents, if your hydrometer reading is below 1.225 or above 1.300, or if the open circuit voltage is below 12.4 volts or above 12.9 volts. Overcharging is evident by excessive water consumption and/or spewing or bubbling of electrolyte out of the vents. Undercharging is evident by slow cranking or lights dimming at idle.

Load Testing

Follow safety precautions:

Wear Proper Eye Protection!

First perform an open circuit voltage test, then an adjustable load test. A load test is the best way to determine if the battery is delivering adequate electrical performance. Make sure your variable load tester is working properly.

1. **You can't load test a discharged battery.** If the voltage is below 12.4, be sure to completely charge it before continuing. Refer to the charging chart under "Charging Tips" section for important information.
2. To avoid sparking and explosive gasses, be sure load tester is OFF and battery is disconnected before hook-up. Use computer memory saver to retain the vehicle's electronic memory while the battery is disconnected.

Battery Care and Maintenance

(Cont'd.)

3. Connect the positive (+) tester clamp to the positive (+) battery terminal. Then connect the negative (-) tester clamp to the negative (-) battery terminal. Always protect your eyes.
4. Set the tester for one-half the battery's 0°F cold crank rating and apply the load for 15 seconds. (If the CCA rating is unknown, use 1/2 of the minimum O.E. battery CCA requirement of the vehicle.)
5. Estimate the internal temperature of the battery to the nearest 10°F. Apply the load for 15 seconds. Note the voltage at 15 seconds with the load on and immediately shut the load off. A reading at least equal to the value from the chart below indicates a good battery.
6. If the battery did not meet the required voltage and if it was not charged in Step 1, completely recharge the battery and repeat the test. If it still fails to meet requirements, replace the battery.

Battery Temperature	12-Volt Battery	6-Volt Battery
70°F (21°C) or above	9.60	4.80
60°F (16°C)	9.50	4.75
50°F (10°C)	9.40	4.70
40°F (4°C)	9.30	4.65
30°F (1°C)	9.10	4.55
20°F (6°C)	8.90	4.45
10°F (12°C)	8.70	4.35
0°F (18°C)	8.50	4.25

Conductance Testing

Follow safety precautions:

Wear Proper Eye Protection!

Conductance uses the battery's response to a very small signal in an attempt to predict the effects of a much larger current. Conductance testing is ineffective on a discharged battery. If the battery is known to be discharged or if the tester tells the operator to charge before testing again, the battery must be completely recharged.

1. It may not be required to turn a conductance tester off or on. If off, you must turn on immediately when connected to a battery. Most will turn off automatically if ignored long enough. Some have no battery of their own and get all their power from the battery being tested.
2. Connect the positive (+) tester clamp to the positive (+) battery terminal. Then connect the negative (-) tester clamp to the negative (-) battery terminal. If the battery has more than one pair of terminals (e.g. top posts and side terminals) always perform the testing on the terminals that are used in the vehicle. Use the proper charging adapters for stud or side terminal batteries. Never connect tester to a bolt or stud.
3. Turn on if needed. Enter the requested information. Be sure to distinguish between a CCA rating and a CA or MCA rating. If no rating is available, use the minimum O.E. battery CCA requirement of the vehicle.
4. If the tester says to replace a battery that was tested in the vehicle, repeat the testing after removing the cables and cleaning the posts.

Check the State of Charge

There are two styles of battery...**non-accessible maintenance-free types and accessible maintainable types with removable vent caps.**

Before adding water to a **maintainable battery**, take an open circuit voltage reading and/or hydrometer reading of one cell. Use a different cell each time. If the readings are below 75%, charge the battery. If the electrolyte level is too low to read with a hydrometer, add water and take the hydrometer reading the following day, after the vehicle

Battery Care and Maintenance

(Cont'd.)

has been driven and the water has had an opportunity to mix. Check electrolyte levels in all cells. If necessary, add only clear, odorless drinking water to bring the liquid level to the level indicator or to 1/2" (13 mm) above the top of the separators. Distilled water is preferred, especially if the water in your area has high iron. **Do not overfill any cells.** Excess electrolyte may be forced from an overfilled cell and cause corrosion on adjacent metal parts, reduce performance, and shorten life. In cold weather, do not fill cells with water and let stand without running engine or driving the vehicle long enough to allow water to mix with acid. Otherwise, freezing might occur and the battery may crack or explode.

Maintenance-free, **non-accessible batteries** are designed to eliminate the need to add water. Yet the volume of electrolyte above plates may eventually become depleted due to abnormal conditions such as high heat or improper regulator setting. Use a voltmeter to check the state of charge. See chart under "CHARGING TIPS" to determine if charging is necessary. **DO NOT OPEN FLUSH COVER BATTERIES! If opened, serious personal injury can result and warranty will be voided.**

Charging Tips

Follow safety precautions:

Wear Proper Eye Protection!

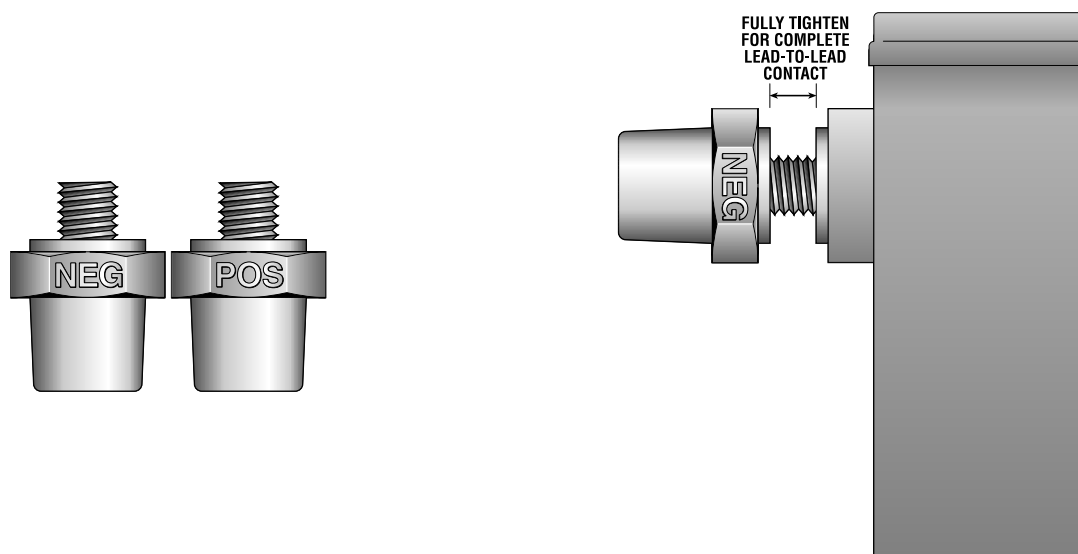
- To avoid a battery explosion, never attempt to charge a frozen battery. Allow it to warm up to room temperature before placing on charge.
- **Warning:** Gel and AGM (Absorbed Glass Mat) batteries require a voltage-limited charger. Charging a Gel or AGM battery on a typical shop charger – even one time– may greatly shorten its life.
- **Important:** Never overcharge batteries. Excessive charging will shorten battery life.
- Prior to charging, read the manufacturer's instructions for proper charger hook-up and use.
- Turn charger off prior to hook-up to avoid dangerous sparks. **PROTECT YOUR EYES!**
- **Warning:** If the electrolyte is accessible, verify that plates are covered before beginning to charge. At the end of charge, add distilled water as needed to bring levels to the proper height. If water is added, charge for an additional 30 minutes to mix. If electrolyte levels are low, but battery is not accessible, remove battery from service.
- The maximum charge rate in amperes should be no more than 1/3 of the battery's reserve capacity minute rating. If the terminal voltage exceeds 16.0 volts while charging, reduce the charge rate.
- Continue charging and reduce the rate as needed until a two-hour period results in no increase in voltage or decrease in current.
- If violent gassing or spewing of electrolyte occurs, or the battery case feels hot to the touch, temporarily reduce or halt charging.

Voltage		State of Charge	Approx. Battery Charging Time ⁽¹⁾ to Full Charge at 80°F / 27°C			
Standard Battery			Maximum Rate At			
6 V	12 V		50 Amps	30 Amps	20 Amps	10 Amps
6.3	12.6	100%	— Full Charge —			
6.2	12.4	75%	20 min.	35 min.	48 min.	90 min.
6.1	12.2	50%	45 min.	75 min.	95 min.	180 min.
6.0	12.0	25%	65 min.	115 min.	145 min.	280 min.
5.9	11.8	0%	85 min.	150 min.	195 min.	370 min.

¹ Charging time depends upon battery capacity, condition, age, temperature and efficiency of charger.

Battery Care and Maintenance

(Cont'd.)



Side Terminal Charging Posts

Side Terminal Charging Posts should be used to ensure the best testing and charging results for side terminal batteries. The charging posts will provide a flush lead-to-lead contact. Be sure to tighten the charging post until it is snug and secure. This will allow a strong current to pass from the charging post to the battery terminal.



Battery Bolts



Bolt Extenders

DO NOT USE Battery Bolt Extenders or Battery Bolts for testing or charging batteries. They do not provide the necessary lead-to-lead contact, and can reduce your cold cranking amperage (CCA) and state of charge readings. Batteries should be boost charged if the open circuit volt-age (voltmeter) reading is below 12.4 volts. See charging chart below.

Rotate Battery Stock

Use oldest batteries first. Batteries require periodic stock rotation and routine charging. Always rotate stock using the FIFO (First In, First Out) method...NOT FISH (First In, Still Here).

Shipping Date Code	
Month	Year
A – January	2 – 2012
B – February	3 – 2013
C – March	4 – 2014
D – April	5 – 2015
E – May	6 – 2016

Battery Care and Maintenance

(Cont'd.)

Shipping Date Code	
Month	Year
F – June	7 – 2017
G – July	8 – 2018
H – August	9 – 2019
J – September	0 – 2020
K – October	1 – 2021
L – November	2 – 2022
M – December	3 – 2023

Example: L0 – Battery shipped November 2010

Always use oldest batteries first.

REMEMBER...WET OR DRY, ALWAYS ROTATE YOUR STOCK!

Battery Storage Tips

Batteries should be stored in a cool, dry area in an upright position. Never stack batteries directly on top of each other unless they're in cartons. Do not stack more than 3 high (2 high if battery type is heavy commercial).

Test wet batteries every 4–6 months and recharge if necessary. Always test and charge if necessary before installation.

(See "Charging Tips" sections.)

Sell Plenty of Power

Sell cranking amps...Not months of warranty!

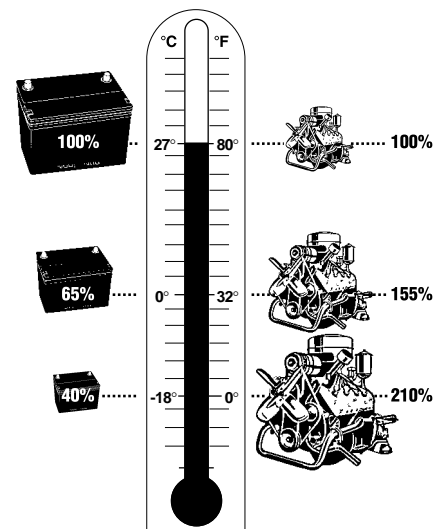
Always sell your customers a battery that has enough cranking power and reserve capacity to get the job done. Consider the vehicle manufacturer's recommended capacity to be a minimum-capacity guideline. A vehicle that has a lot of electrical accessories such as on-board computers, air conditioning, two way radios, etc. will need a more powerful battery for optimum performance.

Along with electrical accessories, temperature also has an effect on battery performance. Vehicles operated in extremely cold climates will need a battery rated well above the O.E. recommendation. Likewise, vehicles operated in hot climates will not need extremely high CCA ratings.

Point these facts out to your customers and sell up to the higher grade levels if necessary.

Remember, you can't sell a battery with too much power in colder climates!

Temperature has a dramatic effect on a battery's ability to crank an engine. Not only does cold rob batteries of power, it also stiffens motor oil making engines harder to start. And heat can damage batteries by causing internal components to wear out quickly while also making engines difficult to start.



(Cont'd.)

Jump Starting

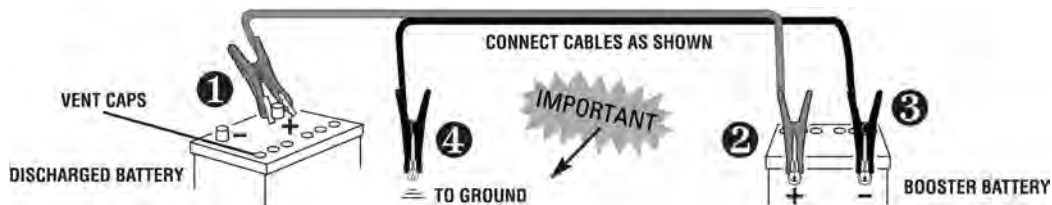
Refer to owner's manual for manufacturer's recommended procedure.

Shield eyes and face at all times...Never lean directly over battery when testing, jump starting or performing other maintenance.

Be sure vent caps are tight and level. Place a damp rag over the vent caps of both batteries. Be sure vehicles do not touch each other.

1. Connect one end of positive (+) booster cable to positive (+) terminal of **discharged battery**, wired to starter or solenoid.
2. Connect other end of positive (+) booster cable to positive (+) terminal of **booster battery**.
3. Connect one end of negative (-) booster cable to negative (-) terminal of **booster battery**, wired to ground.
4. Complete hook-up by connecting other end of negative (-) booster cable to engine block of stalled vehicle — **as far away from battery as possible...AWAY FROM MOVING FAN AND GAS LINES.**
5. Start both vehicles and remove cables in reverse order of connection. Discard the rags.

See diagram below for proper hookup.



Jump Starting Diagram **PROTECT YOUR EYES!**

IMPORTANT! Connect to a ground, away from battery...away from moving fan and gas lines.

** Source: Battery Council International*

Electrical Parts

Battery Accessories

Note: Ratings and Part Numbers are subject to change without notice

Part Number	Description
295-2618	Pocket Multimeter

Wing Nuts

Part Number	Description	Where Used
2B-9498	Wing Nut	For use with 175-4390, 175-4370, 175-4360, and 8C-3628
3B-0723	Wing Nut	For use with 8C-3638, 8C-3639 and Marine Batteries

177-2330 Digital Battery Analyzer

SMCS Code: 1401-081, 0785

Model: All

Warranty: One Year

- Replaces 127-8078 Battery Analyzer
- Used to quickly and accurately test condition of 6 and 12 volt batteries (even discharged to as low as 4 volt)
- Check for full state charge, condition of battery, and battery voltage in 20 seconds
- Test batteries in machine or vehicle without disconnecting battery cables
- Battery does not have to be fully charged at time of testing
- Saves time and money by allowing dealers to test condition of a battery while customer is present (works great for warranty claims)
- Eliminates need to charge and discharge a battery to test its condition
- Compensates for cold temperatures when testing batteries in extreme conditions
- Power-down feature prolongs battery life in analyzer
- Analyzer has reverse polarity and is protected to 17 volts maximum

References

NEHS0764, Tool Operating Manual, Using the 177-2330 Battery Analyzer

Battery rating range:	
Cold cranking amps (CCA)	50 - 4000
Cranking amps (CA)	65 - 5000
Ampere hours (A h)	6 - 500
DC voltmeter range	1.0 - 14 V
Voltmeter accuracy	±0.1 V
Power source	9 V battery or test battery
Test time	20 seconds
Analyzer cable length	815 mm (32 in)
Overall size	210 x 140 x 38 mm (8.25 x 5.5 x 1.5 in)

177-2330 Digital Battery Analyzer (Cont'd.)

Battery rating range:	
Weight	0.68 kg (1.5 lb)
Operating temperature range	0° to 50° C (32° to 120° F)
Storage temperature range	-20° to 70° C (0° to 160° F)
Over voltage protection	Up to 18 V
Part Number	Description
177-2330	Digital Battery Analyzer

4C-4911 Battery Load Tester



SMCS Code: 1401-081, 0785

Model: All Models

Warranty: One Year

- Used to test 6, 8 and 12 volt heavy equipment and automotive batteries
- Has built-in LCD digital voltmeter and ammeter
- Load adjustment knob for current drawn from battery to be adjusted up to maximum of 1000 amperes
- Cooled by internal fan automatically activated when load applied to prevent carbon pile overheating
- Large, 15 mm (0.59 in) high display digits are easier to read

Reference

SEHS9249, Special Instruction

Load test	6, 8 and 12 V batteries
Load current	0 - 1000 A (carbon pile)
Duty cycle	Continuous, limited only by cable and clamp heating
Operating temperature	0° - 50° C (32° ± 122° F)
Voltmeter accuracy	0.1% of full scale ± 1 digit
Ammeter accuracy	±3% of reading ± 1 digit
Size	33 x 33 x 30 cm (13 x 13 x 12 in)
Weight	12.428 kg (27.375 lb)

Part Number	Description
4C-4911	Battery Load Tester

Electrical Parts

271-8590 24-Volt Analyzer Group

Model: All

Warranty: Manufacturer's

European Union compliant, CE marked

- Used to perform battery, electrical system, and diode tests
- Used with 225-8266 Amp Probe and 271-8585 Printer
- Used on 12 and 24 volt electrical systems (digital circuitry accurately controls testing — requires minimal interaction)
- Hand-held
- Large, backlit display requires less scrolling, provides more information
- Long 4.6 m (15.0 ft) cables allow operator to perform tests from cab of machine
- Step-by-step instructions quickly and easily guide technician through tests
- Tests flooded lead acid and absorbed glass mat (AGM) batteries with 50 to 4000 Cold Cranking Amp (CCA), Cranking Amp (CA), Amp Hours (A-HR), Japanese Industrial Standard (JIS), or German-Deutsche Industry Norm (DIN) capacity ratings
- Tests battery pack configurations, through algorithm design: - single battery, 6- or 12-volt - 2 batteries in series, 24-volt - 2, 3, or 4 batteries in parallel, 12-volt - 2 banks in parallel, each bank with batteries in series, 24-volt
- Internal resistance loads are applied for all configurations
- Amp clamp connections allow use of optional amp clamp cables for current drain and starting/charging tests
- Features infrared communications compatibility for optional wireless printer with user defined header and footer for custom printouts
- PC interface port allows unit updates as new software is released — download software for new battery types, system updates, and features
- Ergonomically designed over-molded surround with soft-touch keys for easy operation while wearing gloves during cold weather
- Security cable connection tethers tool in order to prevent drops or for security purposes
- Includes 24-volt analyzer, test cables, battery terminal adapters, manual, and case with foam insert

Repair Information

The unit is warrantied by the manufacturer for 3 years from the date of receipt. Cables are warrantied for 90 days from the date of receipt. If the unit needs servicing, contact the manufacturer's repair facility.

SPX Service Repair

755 Eisenhower Drive

Owatonna, MN 55060

Attn: Repair Department

Phone: 800-344-4013

Visit the SPX Repair Track web link to complete and submit the form for proper authorization: <https://repairtrack.spx.com>

Reference

NEHS0973, Tool Operating Manual, 271-8590 Analyzer Group (24 Volt)

Item	Description
Battery tests	Flooded lead acid (FLA) absorbed glass mat (AGM)
Cold cranking amp range	50 - 4000 CCA / 24 V

271-8590 24-Volt Analyzer Group (Cont'd.)

Item	Description
Battery voltage	Single, series, or parallel to 24 V
Electrical system tests	12 and 24 V, starting/charging/diode test
Scales	CCA, CA, AHR, MCA, JIS, DIN
PC interface	For field software updates
IR compatible	For optional infrared wireless printer
Amp clamp ports	For optional amp clamp connections
Display	Backlit 4 x 20 character display



Part Number	Description
271-8590	24-Volt Analyzer Group
Replacement Parts	
271-8587	Test cables, 4.6 m (15 ft)
271-8589	Analyzer Only
281-1947	Rechargeable Battery
281-1950	Carrying Case with Foam Insert
Optional Accessories	
184-7679	Paper - Roll
225-8266	Clamp On Ammeter (400, 1200 A ranges)
271-8585	Optional Printer Group
281-1948	Printer Serial Cable

245-5829 Battery and Coolant Refractometer



- Used to measure freezing point of coolants plus battery charge condition.
- Refractometer uses a prism and lens with simple focus adjustment to provide accurate and repeatable measurements on easy to read scales.
- Easy to operate.
- Automatic temperature compensation (ATC).
- Requires only 2 to 3 drops of solution.
- Carrying case and calibration screwdriver included.
- Reads degrees Centigrade and Fahrenheit.

Range	Resolution
-60 to 32°F propylene glycol freeze point	10°F
-50 to 0°C ethylene glycol freeze point	5°C
1.15 to 1.30 specific gravity of battery acid	0.01

Product	Part Number
Battery and Coolant Refractometer	245-5829

Electrical Parts

Battery Post Set



4C-5637

Part Number	Description
4C-5637	10 mm (3/8 in) Female for Stud Type Batteries
4C-5638	10 mm (3/8 in) Male for Side Terminal Batteries



4C-5638

Booster Cables



- Professional quality
- Ensure quick and efficient connections
- Designed for convenience and safety
- Replacement clamps available

Part Number	Length	Gauge	Gauge (circular mil)	Jacket	Clamp Rating	Side Terminal Adapters	Approx. Individual Weight
Heavy Duty and Super Heavy Duty Cables							
4C-4934 ⁽¹⁾	4 m (12 ft)	5 AWG	32,900	T-94 ⁽²⁾	500 A	Yes	3.6 kg (7.94 lb)
4C-4938	5 m (15 ft)	1/0 AWG	106,400	T-94 ⁽²⁾	800 A	No	7.3 kg (16.09 lb)
Booster Cables							
300-5899	6 m (20 ft)	2 AWG	62,450	T-94 ⁽²⁾	600P	No	6.4 kg (14.11 lb)
4C-4933	4 m (12 ft)	4 AWG	37,360	T-94 ⁽²⁾	500E	No	2.7 kg (5.95 lb)
4C-4935	5 m (16 ft)	4 AWG	37,360	T-94 ⁽²⁾	500E	No	3.6 kg (7.94 lb)
4C-4936	6 m (20 ft)	4 AWG	37,360	T-94 ⁽²⁾	500E	No	4.1 kg (9.04 lb)

1 Equipped with stop/go light — red L.E.D.s warn operator if polarity is reversed

2 T-94: fl exible to 4° C (-40° F)

Portable Chargers



Warranty: Manufacturer, Mixed⁽³⁾

4C-4924

- Chargers all standard and maintenance free 6/12 Volt Batteries with 4 charging positions
- Fully portable
- Fan cooling mechanism prevents overheating enhancing unit's life span significantly
- Certified for outdoor use in any weather
- Cautions against incorrect polarity with patented "stop-go-light" technology
- 500 Amp clamps are covered with vinyl insulation; will not arc or spark

200-6319

- Analyzes battery condition and automatically selects proper charging technique
- Voltage controlled charging
- Suitable for flooded batteries including GEL and AGM
- Utilizes three color LEDS to monitor charging status
- Program for deep discharge recovery of flooded batteries
- Capable of charging both small and large batteries
- Switch for selecting battery type
- Maintains battery charge, can be left connected to battery

Part Number	Battery Voltage	AC Input	Continuous Rating	Amps Boost Rating	Cranking Assist Rating	Timer	Weight	AC Cord	DC Leads	Clamp Rating	Shipping Dimensions (H x W x D)
4C-4924 Specifications											
4C-4924 ⁽¹⁾	6/12 Volt	120VAC, 12.9A, 60Hz	70/60 Amp	420 Amp	230 Amp	90 min Auto	17 kg (38 lb)	(6 1/2 ft) 2 m	7 ft 4/AWG	500 Amp	—
200-6319 Specifications											
200-6319 ⁽¹⁾	12 Volt	120VAC, 2.2A, 60Hz	10 Amp	—	—	—	5 kg (11 lb)	(6 ft) 1.8 m	6 ft 16/AWG	50 Amp	10 in x 9 in x 9 in

Battery Post Brush

Warranty: Caterpillar Standard Warranty, 6 Months



- Stiff wire bristles thoroughly clean posts

Part Number	Description
1U-9921	Battery Post Brush

Electrical Parts

140-9944 Terminal Kit



SMCS Code: 1400-023, 0700

Model: All Cat Engines

Warranty: Six Months

- Replaces discontinued 1P-2305 Terminal Kit
- Used to repair wiring harness terminal ends which have become damaged or unserviceable
- Hand crimping tool has built-in dies for crimping insulated and non-insulated terminals, cutting edges for cutting wire, notches for stripping 10 to 22 gauge wire, shears for cutting up to 4.7 mm (0.18 in) diameter bolts, 2-thread chasers for screws with 24 and 32 threads-per-inch screws, and a scale for measuring screw length
- Splice connectors have hot-melt adhesive and shrink ends that when heated will provide an environmental seal around wire

Qty. Shipped	Part No.	Description	Replacement Qty.
1	140-9944	Terminal Kit	1
Terminal and Wire Splice Service/Repair Parts			
1	9S-9150	Terminal Crimp Tool	1
10	2L-8058	Terminal (8 Gauge 1/4 in Stud)	10
10	2L-8066	Terminal (12 - 10 Gauge No. 10 Stud)	10
10	2L-8067	Terminal (12 - 10 Gauge 1/4 in Stud)	10
10	2L-8069	Terminal (12 - 10 Gauge 3/8 in Stud)	10
10	2L-8071	Terminal (12 - 10 Gauge 1/2 in Stud)	10
10	4S-1988	Terminal (Blade, Crimp Type)	50
15	136-4876	Wire Splice (12 - 10 Gauge)	1
15	136-4877	Wire Splice (16 - 14 Gauge)	1
15	136-4878	Wire Splice (22 - 18 Gauge)	1
15	2L-8077	Terminal (16 - 14 Gauge 1/4 in Stud)	15
15	2L-8079	Terminal (16 - 14 Gauge 3/8 in Stud)	15
20	2L-8075	Terminal (16 - 14 Gauge No. 8 Stud)	20
20	2L-8076	Terminal (16 - 14 Gauge No. 10 Stud)	20
30	5P-4571	Terminal (16 - 14 Gauge)	20

175-3700 DT Connector Service Kit, 147-6456 Wedge Removal Tool



SMCS Code: 1408-023

Model: All Models with Electronic Controls

Warranty: One Year

- Used to maintain and repair Deutsch "DT" style connectors on electronic engine control harnesses
- 175-3700 DT Connector Service Kit — connector/contact assortment for owners of discontinued 4C-3406 Connector Service Kits which have 1U-5804 Crimp Tool
- 147-6456 Wedge Removal Tool included in kits — also available separately

Reference

SEHS9615, Special Instruction — A black plug and connector body has been released to improve sealing. Please refer to SEHS9615 for a more detailed explanation of interchangeability.

NOTE:

1U-5804 Crimp Tool is not included but can be ordered separately.

Item	Part Number	Description
1	175-3700	Connector Service Kit (less crimp tool)
2	147-6456	Wedge Removal Tool (included in kit)
3	152-7997	Utility Box

9U-7560 Field Soldering Iron Group, 9U-7561 Field Soldering Iron

SMCS Code: 0709

Model: All Models

Warranty: One Year

- Used to solder electrical connections in the field — light-weight and easy to use
- Used with 4C-9024 Battery Pack Group
- Tip is temperature regulated (provides better control for outdoor usage)
- In-line fuse prevents damage and/or overload
- Plugs into any 12V vehicle cigarette lighter plug
- Optional 4C-9024 Portable Battery Pack will power 9U-7561 for 3 hours continuously

Reference

NEHS0601, Tool Operating Manual



Voltage requirement	12 VDC
Wattage	42 Watts
Tip temperature	370° C (700° F)
Length	190 mm (7.5 in)
Cord length	3.5 m (11.50 ft)
NEEG2588	Soldering Iron Label
NEEG2587	Case Label

Electrical Parts

9U-7560 Field Soldering Iron Group, 9U-7561 Field Soldering Iron (Cont'd.)

Item	Part Number	Description
1	9U-7561	Soldering Iron
2	9U-7562	Solder, 0.5 kg (1 lb) Spool
3	6V-3073	Case - Plastic
—	9U-7560	Field Soldering Iron Group
Service/Repair Parts (Sold Separately)		
—	2S-6024	Fuse or 333672 Fuse, 5 amp
—	6V-6024	Foam Block
—	9U-7563	Tip, Soldering Iron Replacement

5P-7277 Voltage Tester



SMCS Code: 1400-038, 1400-081, 1450-081, 1700-081, 1800-081, 3168-035, 5050-081, 7300-081, 7400-081, 7451-038
 Model: 215, 428, 621E, 627E, 768C, 769C, 793 All models
 Warranty: One Year

- Used to make quick checks for presence of voltage
- Indispensable for checking out circuits, relays, bulbs, wires, and switches
- Designed for voltage range from 12 to 36 volts
- Bulb lights brightly when connected to 36 volts and gets progressively dimmer with lower voltages
- Encased in rugged, high-impact plastic housing which is grease and chemical resistant
- Standard 8D-1429 Bulb required for replacement

Part Number	Description
5P-7277	Voltage Tester

8T-0500 Continuity Testing Light



SMCS Code: 1000-017, 1000-025, 1250-025, 1250-036, 1355-081, 1400-038, 3071-017, 3100-017, 3156-010, 3156-012, 3200-038, 3224-025, 4208-010, 5050-038, 7400-036, 7451-038, 7401-045

Model: All Models

Warranty: One Year

- Used to test non-energized circuits; lamp comes on brightly when connected across low resistance circuit; no light appears if resistance of circuit exceeds 10 ohms
- Designed for rugged field use
- Comes with light bulb and 2 "N" size batteries (1.5 volts) and instruction decals

Reference

NEHS0543, Special Instruction, Checking Diodes

Part Number	Description
8T-0500	Light - Continuity Testing
Service/Repair Parts	
4C-8363	Battery, Size N, 1.5 V
6V-3061	Bulb



BEARINGS

Bearings

Cat Bearings

Cat bearings are designed for specific applications based on load, operating speed, temperature range, size, and past performance. They're also "matched" to last as long as other Cat drive train components, reducing the number of repairs required, downtime occurrences and operating costs.

Some Cat bearings have key quality differences most other bearings do not, including:

- **Special material technology**
 - Caterpillar spends significant amounts of time and money on research and development to ensure every Cat bearing meets specific design and application requirements. This commitment has led to new technologies like Cat debris resistant and textured bearings available exclusively through Cat Dealers.
- **Cat specifications**
 - Cat bearings are designed for specific applications and functions based on the loads, operating speeds, temperature ranges, and sizes of the Cat machines in which they operate information other bearing manufacturers don't have. Cat bearings designed and manufactured for Cat machines perform better and last longer.
- **Case-hardened heat treatment**
 - Cat bearings are manufactured using proprietary heat treat processes to ensure maximum life. Cat roller element bearings, for example, are case carburized a highly specialized process that puts a hard shell around the bearing material, provides a tough bearing core, and extends wear life.
- **Optimum surface finish**
 - Cat bearings feature appropriate surface finishes to reduce rolling resistance and ensure proper oil film thickness. The result is longer bearing life matched to the life of other drive train components, reducing repair costs and downtime.
- **Precise tolerances**
 - Cat bearings are designed to ensure proper alignment and precise fit, eliminating the chance of premature gear failure due to inexact tolerance's resulting in increased machine availability and lower costs.

Ball Bearing Parts List

Part	Part Description	OD Dia	ID	Height
8T-0231	BEARING-SPL BALL	–	–	–
154-3032	BEARING-BALL	280	130	58
296-6220	BEARING-SPL BALL	310	240	33
6Y-3484	BEARING-SPL BALL	159	114	22
8H-9789	BEARING-BALL	72	35	17
3L-1824	BEARING-BALL	200	110	38
333-2914	BEARING-SPL BALL	330	260	35
196-4873	BEARING-SPL BALL	380	290	40
108-1761	BEARING-BALL	240	110	50
3L-1425	BEARING-BALL	80	35	21
4F-2129	BEARING-BALL	178	127	25
304-9651	BEARING-SPL BALL	145	95	24
5P-5045	BEARING-SPL BALL	178	127	25
148-6559	BEARING-SPL BALL	191	140	25
1B-3867	BEARING-BALL	62	30	16
6B-1124	BEARING-BALL	52	25	15
142-8260	BEARING-SPL BALL	250	140	84
7T-8816	BEARING-SPL BALL	121	83	19
119-5727	BEARING-SPL BALL	140	65	33
212-5023	BEARING-SPL BALL	159	114	22
105-2036	BEARING-SPL BALL	215	100	47
106-7799	BEARING-BALL	127	89	19
8E-5247	BEARING-BALL	130	60	31
6V-9191	BEARING-BALL	130	75	25
1T-0210	BEARING-BALL	110	50	27

Cylindrical Roller Bearings

Cylindrical Roller Bearing Parts List

Part	Part Description	OD Dia	ID	Height
436-2594	BEARING-ROLLER	–	–	–
436-2593	BEARING-ROLLER	–	–	–
436-2595	BEARING-ROLLER	–	–	–
8E-7945	BEARING-INNER	161	102	60
436-2596	BEARING-ROLLER	–	–	–
7T-1664	CAGE ROLLER	–	–	–
126-9340	BEARING-ROLLER	215	100	73
6Y-9885	BEARING-RLR AS	112	78	36
6Y-4119	BEARING-RLR AS	129	89	40
5P-6408	BEARING-INNER	215	170	28
096-4339	BEARING AS	200	110	38
131-3919	BEARING-ROLLER	98	60	22
5P-3488	RACE&ROLLER AS	180	140	24
4D-3151	BEARING AS-RLR	86	59	34

Tapered Roller Bearings

Tapered Roller Bearing Parts List

Part	Part Description	OD Dia	ID	Height	Part	Part Description	OD Dia	ID	Height
212-5030	BEARING-CONE	–	416	127	124-0503	CONE-SPL TAPERED	–	89	56
196-0423	CONE-SPL TAPERED	–	425	149	9W-7093	BEARING-CONE	–	270	75
216-3507	CONE-SPL TAPERED	–	560	156	289-2131	BEARING-CONE	–	270	75
175-3770	CUP	591	–	102	148-1546	BEARING-CONE	–	210	64
196-2774	BRG AS.-SPL TP R	–	–	–	6B-4852	CONE-ROLLER BRG	–	140	57
9W-7095	BEARING-CONE	–	232	71	5P-1370	BEARING AS	137	83	70
175-3769	CONE	–	416	127	6I-8849	CONE-RLR BEARING	–	67	38
170-0497	CUP-SPL TAPERED	813	–	121	282-3848	BEARING-CUP	622	–	94
196-0424	CUP-SPL TAPERED	641	–	126	111-0898	CUP-RLR BRG	514	–	64
201-7718	BRG AS.-SPL TR	679	479	129	290-3830	CUP-SPL TAPERED	448	–	68
198-3173	BEARING AS	149	78	98	126-5859	CONE-SPL TAPERED	–	330	48
212-5027	BEARING-CONE	–	318	102	126-0588	CONE-SPL TAPERED	–	235	49
5P-1948	CONE-SPL TAPERED	–	235	113	143-4512	CONE-TAPERED	–	237	65
212-5026	BEARING-CONE	–	346	102	8S-9075	BEARING-CONE	–	110	35
174-3040	BEARING AS.	137	78	97	7M-5334	CONE-ROLLER BRG	–	175	48
174-4504	BEARING-CUP	508	–	83	1P-9593	CONE-RLR BRG	–	190	44
196-7795	BRG AS. SP TR	635	489	84	2R-0524	CONE-BEARING	–	330	48
212-5024	CONE-SPL TAPERED	–	289	78	138-8636	BEARING-CONE	–	235	113
434-5017	BEARING-CONE	–	457	121	183-9520	CONE- SP T R BRG	–	260	80
5P-1949	CUP-RLR BEARING	384	–	90	5P-9769	CONE-RLR BEARING	–	108	67
290-3829	BEARING-CONE	–	318	86	5P-4540	BEARING-CUP	337	–	73
174-5296	CUP-SPL TAPERED	591	–	83	1J-4757	CONE-BEARING	–	89	55
5D-6298	CUP-SPL TAPERED	318	–	46	174-5297	BEARING AS-SPL	–	–	–
174-3045	BEARING AS.	197	102	136	5P-2525	BEARING-CUP	213	–	54
4D-7534	BEARING AS-RLR	105	54	71	126-0587	BEARING-CONE	–	232	65
279-0344	BEARING AS	380	290	40	173-0593	CONE	–	178	30
5D-6297	CONE-SPL TAPERED	–	210	64	3D-0294	CONE-ROLLER BRG	–	203	58
5D-6296	CONE-SPL TAPERED	–	203	64	6V-8281	CUP-RLR BRG	337	–	51
111-0897	CONE - RLR BRG	–	386	83	5P-3723	CONE-RLR BEARING	–	90	40
212-5028	CONE-SPL TAPERED	–	384	105	4D-4325	CUP-SPL TAPERED	346	–	51
4D-4324	CONE-SPL TAPERED	–	248	64	5F-2465	CUP-ROLLER BRG	248	–	38
9W-7096	CUP-ROLLER BRG	359	–	54	171-8706	CONE-TAPERED RLR	–	432	60
212-5029	CONE-SPL TAPERED	–	381	105	119-4132	BEARING AS.-SPL	260	178	108
2P-8988	CONE-RLR BRG	–	200	62	1M-6573	CUP-ROLLER BRG	216	–	35
9M-2744	CONE-SPL TAPERED	–	140	48	1J-2860	CUP-SPL TAPERED	162	–	43
9D-0994	CUP-SPL TAPERED	381	–	57	2J-2152	CUP-ROLLER BRG	254	–	48
139-6871	BEARING-CONE	–	290	83	2P-8989	CUP-RLR BEARING	300	–	51
5P-0505	CONE-SPL TAPERED	–	248	75	2P-1824	CONE-RLR BRG	–	170	45
6V-2702	CONE-RLR BEARING	–	152	75	165-2135	CONE-SPL TAPERED	–	140	67
120-0295	CUP-ROLLER BRG	406	–	60	106-9823	CONE-ROLLER BRG	–	235	113
139-6870	BEARING-CONE	–	300	83	2D-6511	CUP-ROLLER BRG	283	–	37
1B-6577	CONE-SPL TAPERED	–	152	67	124-0504	CUP-SPL TAPERED	168	–	41
2J-7137	CUP-SPL TAPERED	268	–	57	6V-0664	CONE-RLR BRG	–	175	48
2P-8353	CONE-SPL TAPERED	–	206	46	8H-0901	CUP-SPL TAP ROLL	225	–	33
436-4013	BEARING-CONE	–	191	95	2N-2189	CONE-ROLLER BRG	–	152	47
9W-1547	BEARING-CUP	422	–	64	209-4232	BEARING-CONE	–	–	–
177-4143	CONE-SPL TAPERED	–	318	86	5P-4539	CONE-RLR BRG	–	191	95
8H-0902	CONE-ROLLER BRG	–	165	40	132-6597	CONE-SPL	–	102	58

Tapered Roller Bearings

Tapered Roller Bearing Parts List (Cont'd.)

Part	Part Description	OD Dia	ID	Height	Part	Part Description	OD Dia	ID	Height
343-6237	BEARING	93	51	30	5F-1248	CONE-ROLLER BRG	–	133	46
126-8181	CONE-SPL TAPERED	–	152	67	8E-5127	BEARING-CONE	–	318	86
3N-4968	CONE-RLR BEARING	–	35	29	2R-0525	CUP-ROLLER BRG	416	–	35
215-8200	BEARING AS	–	–	–	6Y-2546	CONE-ROLLER BRG	–	121	46
1B-4043	CONE-ROLLER BRG	–	105	48	8T-0072	BEARING-CONE	–	146	29
107-7088	CONE-RLR BEARING	–	200	58	5M-6592	CUP-ROLLER BRG	229	–	44
107-7089	CUP-ROLLER BRG	292	–	46	423-1989	BEARING-CONE	–	89	55
2D-9457	CONE-SPL TAPERED	–	133	40	177-4147	CONE-SPL TAPERED	–	384	105
126-8182	CUP-SPL TAPERED	254	–	48	6V-0460	CUP-RLR BRG	311	–	64
3P-8681	CONE-SPL TAPERED	–	25	15	163-6082	CONE-TAPERED RLR	–	432	46
177-4144	CUP-SPL TAPERED	448	–	68	6Y-2538	CONE-ROLLER BRG	–	110	46
240-8240	BEARING AS	318	210	67	245-3907	CONE-SPL TAPERED	–	457	84
124-9539	CUP-SPL TAPERED	273	–	54	112-7317	BEARING AS	213	114	121
6V-0459	CONE-RLR BRG	–	175	83	124-9537	CONE-SPL TAPERED	–	121	83
1L-7518	CONE-SPL TAPERED	–	121	48	6Y-7651	CONE-SPL RLR BRG	–	64	22
2K-5066	CONE-ROLLER BRG	–	146	29	6D-1734	CUP-ROLLER BRG	76	–	23
6V-1882	CONE-RLR BRG	–	137	40	6B-3223	CUP-BEARING	152	–	30
251-6482	BEARING AS-SPL	206	121	48	8S-9076	CUP-BEARING	165	–	27
8E-7926	CONE-SPL TAPERED	–	102	58	177-4149	CUP-SPL TAPERED	546	–	83
183-9519	CUP-SPL TAPERED	422	–	67	9K-1172	CONE-RLR BEARING	–	124	38
362-5414	BEARING-CONE	–	67	41	6V-7423	BEARING AS-RLR	130	85	66
3D-9133	CUP-ROLLER BRG	314	–	37	164-9920	CONE-SPL TAPERED	–	85	29
4B-9373	CONE-ROLLER BRG	–	114	41	5P-9344	BEARING AS-RLR	200	143	88
124-0501	CONE-SPL TAPERED	–	133	46	030-0060	BEARING-CUP	130	–	24
1P-9594	BEARING-CUP	260	–	37	1P-4693	BEARING-CUP	150	–	27
2J-7138	CONE-ROLLER BRG	–	146	75	9U-9662	BEARING-CONE	–	356	60
030-0061	BEARING-CONE	–	85	29	6M-1637	CONE-ROLLER BRG	–	102	49
178-4640	CONE-SPL TAPERED	–	90	44	2P-1823	CUP-RLR BRG	240	–	37
6V-0663	CONE-RLR BRG	–	178	30	7D-8636	CONE-BEARING	–	75	30
133-5098	CONE-SPL TAPERED	–	114	67	106-9822	CONE-ROLLER BRG	–	270	75
4F-2041	CUP-ROLLER BRG	191	–	33	177-4145	CONE-SPL TAPERED	–	346	95
124-9536	CONE-SPL TAPERED	–	114	49	5P-8043	BEARING-CONE	–	146	75
120-0293	CONE-ROLLER BRG	–	289	78	6Y-7652	CUP-RLR BRG	110	–	19
166-6930	CONE-SPL TAPERED	–	51	30	2K-5065	CONE-ROLLER BRG	–	117	32
4W-1204	CONE-SPL RLR BRG	–	35	18	7T-9527	CUP-RLR BRG	95	–	37
4B-7270	CONE-BEARING	–	95	36	6V-7725	BEARING AS-RLR	130	80	78
7T-9526	CONE-RLR BRG	–	49	44	6D-7690	CUP-ROLLER BRG	147	–	33
126-5860	CUP-SPL TAPERED	416	–	37	173-0594	CUP	227	–	23
1P-7835	CONE-BEARING	–	90	44	132-6598	CUP-SPL	191	–	46

Needle Roller Bearings

Needle Roller Bearing Parts List

Part	Part Description	OD Dia	ID	Height
111-8922	BEARING - NEEDLE	202	128	19
310-6158	BEARING	66	47	48
310-6157	BEARING	76	54	48
1P-3958	BEARING-NEEDLE	66	47	38
5M-7925	BEARING-NEEDLE	58	42	32
1T-1566	BEARING-THRUST	174	115	13
1T-0786	BEARING-THRUST	140	105	10
115-8398	BEARING - NEEDLE	192	153	10
199-4583	BEARING AS	86	66	28
5M-6126	BEARING-NEEDLE	43	35	32
6I-8575	RACE-THRUST	203	129	13
1T-0655	BEARING-THRUST	432	89	10
224-2323	BEARING-NEEDLE	249	190	10
5P-6254	BEARING	58	42	38
5M-0578	BEARING-NEEDLE	52	42	25
1T-1754	ROLLER-FREEWHEEL	13		
274-5106	BEARING-SPL CAGE	96	69	61
142-8262	BEARING-NEEDLE	260	150	29
6I-9809	BEARING-NEEDLE	66	47	38
1S-9110	BEARING-NEEDLE	66	47	27
274-7469	BEARING-NEEDLE	66	47	38
192-9969	BEARING	80	57	61
219-8783	KIT-ROLLER BRG	-	-	-
9U-8242	BEARING-SPL	52	39	32

Self-Aligning Bearings

Self-Aligning Bearing Parts List

Part	Part Description	OD Dia	ID	Height	Part	Part Description	OD Dia	ID	Height
188-8697	BEARING-ALIGN	203	127	–	158-7749	BEARING-ALIGNING	–	–	–
7J-3297	BEARING-ALIGNING	130	70	–	164-9309	BEARING-SPL SELF	105	70	–
8J-8906	BEARING	159	83	–	296-4292	BEARING GP -A	–	–	–
6V-0444	BEARING-SPHER	203	127	–	155-3537	BEARING	120	70	–
6V-7959	RACE-SELF ALIGN	–	–	–	6V-5002	BEARING-ALIGNING	81	51	–
299-3203	BEARING-SPECIAL	222	140	–	6I-8531	BEARING-BALL	–	–	64
191-4427	BEARING-ALIGN	279	171	–	9D-2319	RACE-SELF ALIGN	–	–	–
6V-3249	BEARING-ALIGNING	159	102	–	150-1890	BEARING	230	160	–
150-1889	BEARING	260	180	–	116-8052	BRG-SPHER SLEEVE	–	–	–
8J-3783	BEARING-ALIGN	168	102	–	4D-0298	BEARING-ALIGNING	62	38	–
152-7554	BEARING	159	102	–	095-1022	BEARING	200	95	67
9U-9558	BEARING	187	114	–	5J-1446	BEARING-ALIGNING	90	57	–
197-6440	BEARING-ALIGN	159	76	–	197-6439	BEARING-SPL SELF	140	76	–
296-4301	BEARING AS	–	–	–	343-7794	BEARING-ALIGNING	149	89	–
117-4013	BEARING-ALIGN	111	70	–	117-3006	BEARING	149	95	–
6Y-9380	BEARING-ALIGN	210	140	–	332-1648	BEARING-ALIGN	121	76	–
106-9343	BEARING-SPHER	222	140	–	237-4156	BEARING-ALIGNING	100	64	–
380-7677	BEARING-ALIGNING	159	89	–	322-5876	BEARING-ALIGNING	260	160	–
159-3945	BEARING	160	75	55	9J-9812	BEARING	71	38	–
7J-1309	BEARING-ALIGNING	100	64	–	344-6089	BEARING	–	–	–
6Y-9379	BEARING-ALIGNING	178	114	–	274-9256	RACE	–	–	–
5J-9451	BEARING	130	83	–	199-4221	RACE	–	–	–
4D-4431	BEARING-ALIGNING	71	44	–	341-0966	BEARING-SPHER	–	–	–
380-7675	BEARING-ALIGNING	130	82	–	8F-3170	BEARING-ROLLER	120	65	46
154-8546	BEARING	260	160	–	9U-8693	BRG-SPHER ROLLER	230	130	64
107-8126	BRG-SELF ALIGN	121	76	–	7J-3216	BEARING	111	70	–
095-1806	BEARING	215	120	76	6Y-4689	BEARING-ALIGNING	159	102	–
9M-1328	BEARING-ALIGNING	81	51	–	134-3250	BEARING	197	127	–
301-6946	BEARING-ALIGN	149	100	–	2D-8652	BEARING-ALIGNING	51	32	–
8G-4189	BEARING-ALIGNING	90	60	–	101-9030	BEARING-FLANGE	–	–	–
7I-7619	BRG-SPHER ROLLER	300	140	102	380-7673	BEARING-ALIGNING	111	70	–
6G-8209	RACE-SELF ALIGN	–	–	–	136-2904	BEARING	180	110	56
136-2940	BEARING	260	120	86	160-0305	BEARING-ALIGNING	105	60	–
6J-1144	BEARING	111	57	–	6V-5003	BEARING-ALIGNING	90	57	–
066-5815	BEARING-ALIGNING	90	57	–	7D-3182	RACE-SELF ALIGN	–	–	–



CLASSIC PARTS

Classic™ Parts

Cat Classic Parts

Cat Classic Parts: The right durability at the right price for your mid-late lifecycle, lower usage, lighter application, machines. Cat products have long, productive lives. As the utilization of the equipment changes, maintenance costs often need to be re-evaluated, taking the remaining market value into consideration. Cat Classic Parts are lower-cost, genuine Cat parts that provide acceptable service life for Cat equipment in light-duty applications. Not all Cat premium parts have a Classic option. The Classic Parts line generally contains parts that have a greater impact on the overall repair costs. Together with Cat premium and remanufactured parts, Cat Classic Parts help Caterpillar offer value-priced repair alternatives over the entire product life cycle.

ALL YOUR OPTIONS.



Original Reman/Exchange Classic™ Parts Quality Used

ONE LOCATION.



DEALER CAT

Benefits



- Lower owning and operating costs for Cat equipment in light duty applications
- Standard Cat parts warranty
- One stop shopping for all parts needs
- Quality controlled parts: Cat Classic parts approved by Caterpillar engineers, ensuring the part will meet form, fit, or function. Quality control procedures in place at parts locations to ensure highest quality parts are delivered
- Parts provided from the name you can trust - Cat

Classic Engine Parts

Premium Part Number	Part Name	Classic Part Number	Premium Part Number	Part Name	Classic Part Number	Premium Part Number	Part Name	Classic Part Number
100-2930	Gasket Kit - F	393-1026	109-6928	Gasket Kit	436-8413	122-8900	Kit - Gasket(F)	437-3230
100-2937	Kit - Gasket (OCL)	436-8417	109-9323	Muffler As	369-9491	123-6592	Gasket Kit	437-4571
100-2941	Gasket Kit	393-1020	109-9463	Muffler As	360-7864	123-6597	Gasket Kit	436-8421
100-2951	Gasket Kit SCH	447-8649	110-1337	Ring Kit-PSTN	377-5834	124-3012	Gasket Kit	437-3229
100-2953	Gasket Kit SCH	393-1025	110-5096	Head As-Cyl	394-0915	124-3237	Pre-Cleaner As	432-4220
100-4594	Muffler As	360-7862	111-1757	Gasket Kit - SCH	436-8395	124-3684	Gasket Kit-SCH	437-8646
100-5953	Gasket Kit - F	437-4573	111-2645	Valve-Pump Byp	441-1561	124-7566	Kit - Gasket-ACL	437-4570
100-6298	Camshaft As	398-2958	111-8015	Gasket As-Head	279-4977	124-7569	Gasket Kit	393-1041
100-6920	Adapter-Nozzle	380-1552	112-1665	Muffler As.	435-4847	124-7570	Kit - Gasket-ACL	437-4569
100-7408	Camshaft As	378-4000	112-3249	Muffler As	247-2661	124-7609	Gear-Pump Idler	428-8504
100-7860	Valve-Inlet	270-4360	112-5088	Muffler As.	396-9943	125-2728	Core As	395-1302
101-0155	Pipe As-Exhaust	399-4427	112-5089	Muffler As-NA	390-0982	125-2950	Gear As	301-4762
101-1530	Bearing-Main	419-6382	112-5538	Kit - Gasket-SCH	436-8412	126-0734	Muffler As	397-5052
101-1816	Bridge As-Intake	374-4689	112-7750	Manifold-Exhaust	390-0919	126-5056	Shield As-Man LH	369-9492
101-1817	Bridge As-Exh	374-4690	112-7751	Manifold-Exhaust	390-0917	126-5057	Shield As-Man LH	369-9493
101-1818	Bridge As-Exh	374-4691	112-7993	Gasket Kit	437-3231	126-5875	Flywheel As.	374-4694
101-3125	Gasket	420-8567	113-4610	Gasket Kit	436-8410	126-7134	Pipe As-Exhaust	451-9032
101-3374	Gear-Camshaft Dr	376-9069	113-6200	Gasket	438-2020	126-8557	Pulley	433-2027
101-7354	Manifold-Exhaust	386-3060	114-0915	Shield As	394-0887	127-1517	Gasket Kit - F	437-4568
101-8644	Kit - Gasket (OCL)	436-8416	114-1398	Gauge-Oil Level	394-9815	127-1518	Gasket Kit - F	437-4567
101-8740	Muffler As	360-7878	114-4787	Kit - Gasket (OCL)	388-0657	127-2194	Gasket Kit-SCH	437-8645
101-9640	Gear-Air Compr	398-2966	115-2367	Valve-Exhaust	384-8700	127-3467	Manifold-Exhaust	394-9827
102-1561	Lifter As-Valve	311-9402	115-2368	Valve-Inlet	384-8704	127-4525	Gage As	386-3043
102-3927	Muffler As	420-6219	115-2989	Manifold-Exhaust	434-9635	127-4953	Gasket Kit-SCH	437-8676
102-8501	Manifold-Exhaust	377-5853	115-3657	Kit - Gasket-OCL	437-4572	127-5022	Gasket Kit-SCH	437-8643
102-8503	Manifold-Exhaust	392-4513	115-4204	Pulley As-Idler	301-5219	127-5537	Core As-OCLR	325-6045
102-8608	Manifold-Exhaust	376-9062	115-4237	Pulley-Idler	374-4693	127-6356	Cover As.-Pump	420-8566
103-0887	Pulley-Idler	449-9546	115-4517	Core As-OCLR	421-7281	127-6974	Gasket Kit	393-3638
104-1706	Valve-Regulating	432-8281	115-9398	Arm-Valve Rocker	433-0448	127-8592	Muffler As	347-0463
104-3014	Gasket Kit	388-0656	115-9399	Arm-Valve Rocker	433-0447	127-8594	Muffler As-Turbo	390-0981
104-5283	Manifold-Exhaust	394-9831	115-9400	Arm As-UI Rocker	433-0446	128-1009	Muffler As	435-6047
104-9635	Kit - Gasket-SCH	436-8415	115-9403	Shaft As	434-7259	128-2922	Kit - Gasket (WP)	386-3814
105-1738	Manifold-Exhaust	374-4692	116-1102	Sleeve-Injector	451-9024	128-3132	Gasket Kit	437-4566
105-8651	Core As-OCLR	434-9521	116-7885	Pan-Oil (Front)	379-0173	129-3068	Rebuild Kit-Pump	363-7455
106-2822	Gasket Kit	436-8376	117-0456	Crankshaft As	394-2587	129-3069	Rebuild Kit-Pump	363-7456
106-8711	Elbow-Exhaust	383-3709	117-5200	Spider As-Fan	428-8686	129-9907	Impeller-Pump	383-1589
107-0621	Kit - Gasket-SCH	436-8414	117-7899	Gasket Kit - SCH	436-8409	130-1455	Gasket Kit	437-4604
107-7473	Muffler As.	385-7223	117-7901	Kit - Gasket (F)	436-8397	130-1521	Gasket Kit - SCH	393-1030
107-7708	Bearing-Main	419-6381	117-9712	Shaft - Dr Idler	425-7754	130-6856	Pre-Cleaner As	361-1717
107-7750	Pulley	382-6896	118-2089	Pulley	434-2449	131-8674	Gear As-Drive	394-0911
107-8106	Manifold-Exh	374-7487	118-8458	Spider As-Fan	395-1306	132-7923	Gasket Kit-SCH	437-8642
107-8107	Manifold-Exh	398-2926	118-9906	Muffler As	360-7865	133-3359	Manifold-Exhaust	419-4730
107-8108	Manifold-Exh	385-6141	119-2940	Gasket	378-4002	133-3545	Tightener-Belt	434-1407
107-8109	Manifold-Exh	374-7488	119-6772	Valve-Exhaust	384-8699	133-3565	Tube As-Exhaust	374-4695
107-8112	Manifold-Exh	376-9063	120-0300	Fan As-Radiator	419-4648	133-3566	Tube As-Exhaust	378-4003
108-2102	Bonnet-Valve	455-3274	121-5455	Tube As-Exhaust	449-4735	133-3919	Gasket Kit-SCH	393-1031
108-5603	Screw-Adj Arm	379-0166	121-5457	Tube As-Exhaust	419-4670	133-4995	Gasket-Cyl Head	434-2445
108-5680	Gage-Oil Level	378-4001	121-5459	Tube As.-Exhaust	420-6397	133-6597	Pipe- Extension	420-6220
108-6630	Pump Gp-F Inj - B	432-8276	121-5461	Tube As-Exhaust	419-4666	133-8991	Line As-Fuel Inj	378-4004
108-6631	Plunger & BBL As	419-4744	121-7746	Pre-Cleaner As	360-2311	133-8992	Line As-Fuel Inj	378-4005
108-6633	Pump Gp-Fuel Inj	420-6215	122-0321	Valve-Exhaust	384-8698	133-8993	Line As-Fuel Inj	378-4006
109-4848	Pulley-C Shaft	416-5507	122-0322	Valve-Inlet	384-8703	133-8994	Line As-Fuel Inj	378-4007

Classic Engine Parts

Premium Part Number	Part Name	Classic Part Number
133-8995	Line As-Fuel Inj	378-4008
133-8996	Line As-Fuel Inj	378-4009
133-9016	Pulley	421-7191
134-3036	Gasket Kit	393-3629
134-3038	Gasket Kit	437-3228
134-3068	Kit - Gasket(F)	393-3636
134-4200	Manifold-Exhaust	443-2060
134-9807	Gasket Kit	437-3214
135-0239	Gasket Kit	437-4606
135-2151	Tensioner	419-4735
135-2376	Gasket Kit-LOWER	393-3634
135-2707	Kit - Gasket (BSC)	392-4506
135-3225	Shaft As	399-8582
135-4928	Shaft-Water Pump	386-3813
135-7989	Gasket Kit	393-3633
135-8167	Pipe-Extension	395-1305
136-0819	Valve-Exhaust	384-8697
137-1339	Pump Gp-Water -B	434-6112
137-1970	Impeller-Pump	380-1553
137-4097	Muffler As.	360-7866
137-6500	Rotocoil As.	397-5053
137-6995	Muffler As	360-7868
138-1987	Gasket Kit - F	437-3238
138-4037	Kit - Gasket (ACL)	438-1797
138-4039	Kit - Gasket (F)	437-3224
138-4338	Kit - Gasket - T	393-1032
138-6743	Gasket Kit	437-3223
138-6744	Rebuild Kit-Pump	363-7457
138-7025	Kit - Gasket (F)	437-3222
138-9381	Plate-Spacer	424-7052
139-4750	Kit - Gasket - F	437-3221
139-4758	Gasket Kit	436-8405
139-8963	Kit - Gasket - MCH	436-8404
140-1093	Gasket Kit - SCH	436-8394
140-2246	Gasket Kit	383-3710
140-2731	Kit - Gasket (CL)	436-8403
140-2739	Kit - Gasket - ACL	437-3220
140-2746	Kit - Gasket - MCH	437-3219
140-2749	Gasket Kit	393-1033
140-2859	Kit - Gasket - MCH	437-3218
140-9631	Kit - Gasket (F)	437-3217
140-9898	Gasket Kit	437-3216
140-9902	Gasket Kit	393-0916
141-0338	Kit - Gasket (ACL)	437-3215
141-0340	Kit - Gasket (F)	436-8402
141-0345	Gasket Kit	437-3227
141-0348	Gasket Kit	437-4579
141-1021	Gasket Kit	437-4615
141-1028	Kit - Gasket(SCH)	435-2576
141-1936	Kit - Gasket(F)	437-4614
141-1939	Gasket Kit	437-4613
141-1942	Gasket Kit	437-4612

Premium Part Number	Part Name	Classic Part Number
141-4109	Core As-OCLR	416-5518
141-4617	Kit - Gasket(ACL)	393-0917
141-4974	Gasket Kit	388-0658
141-5787	Kit - Gasket(OCL)	437-4611
141-7274	Gasket Kit	418-1951
141-7277	Kit - Gasket-FS	437-4610
141-7955	Gasket Kit	437-4609
141-9792	Gasket Kit - OCL	393-3632
142-0226	Kit - Gasket-FS	393-1034
142-0227	Gasket Kit	437-4608
142-0228	Gasket Kit - SCH	393-1035
142-0404	Kit - Gasket-FS	437-4607
142-1662	Kit - Gasket(F)	392-4511
142-1699	Gasket Kit	392-4507
142-2221	Gasket Kit - SCH	437-8127
142-2535	Gasket Kit	437-4593
142-3035	Kit - Gasket (WLG)	393-0926
142-5093	Gasket Kit	437-4605
142-7526	Gasket Kit	393-0918
142-8811	Muffler As	360-2297
142-8845	Muffler As	360-9619
143-0905	Gasket Kit	437-4617
143-1314	Kit - Gasket-T	437-4603
143-2605	Kit - Gasket-MCH	393-0915
143-5428	Gasket Kit	437-8115
143-5430	Gasket Kit	437-4602
143-5447	Gasket Kit - F	393-1036
144-0482	Gasket	420-8547
144-0502	Ring Kit-Piston	395-1312
144-0503	Piston & Ring Kt	380-1554
144-0744	Compressor Gp -B	435-6046
145-0162	Bearing-Main	419-6380
145-0163	Bearing-Main	419-6336
145-0164	Bearing-Main	419-6376
145-0165	Bearing-Main	419-6388
145-2867	Kit - Gasket (WP)	449-9830
145-4585	Muffler As	360-9627
145-6726	Gasket Kit	437-4600
145-8503	Shaft As-Idler	426-0035
146-4229	Gasket Kit - SCH	437-4599
146-9733	Muffler As	435-6045
147-3781	Kit - Gasket (WP)	422-2484
147-6170	Gasket Kit	437-4598
147-9670	Fan As-REV	435-9912
148-2125	Liner-Cylinder	458-0154
148-7455	Valve - Exhaust	270-4361
148-8269	Gasket Kit - CL	437-4597
148-8861	Gasket Kit	437-4596
148-9810	Gasket Kit	393-3631
149-0625	Kit - Gasket(F)	437-4595
149-0629	Gasket Kit - SCH	437-4594
149-2752	Muffler	360-9628

Premium Part Number	Part Name	Classic Part Number
149-4912	Gasket Kit - SCH	437-4616
150-1914	Manifold-Exh	434-6111
150-1916	Manifold-Exh	395-1322
150-3416	Muffler	360-9620
150-4637	Pan-Oil	377-5843
150-8459	Kit - Gasket(F)	438-1798
150-8685	Gasket Kit	392-4503
151-5911	Manifold As.-Exh	441-5604
152-3952	Impeller-Pump	374-4696
152-5705	Gasket	447-0830
153-7023	Valve-Inlet	391-1106
153-7024	Valve-Exhaust	391-1107
154-1642	Gasket Kit - SCL	437-8117
154-8030	Gasket	394-0894
155-1378	Gasket Kit - SCH	437-8152
155-1379	Gasket Kit - SCH	386-3815
155-2819	Ejector As-Exh	325-6078
155-5619	Gasket	382-5054
155-6637	Gear-Oil Drive	425-9189
156-6237	Elbow As	396-1567
157-2828	Muffler As	360-9621
159-3021	Gasket	377-5845
159-3263	Muffler As	430-7623
159-9742	Kit - Gasket(F)	437-1996
160-8178	Rod As-Conn	379-8869
160-9874	Kit - Gasket-SCL	386-3048
161-3411	Gasket	394-0896
161-4111	Pump Gp-XX 1 GR	374-7502
161-7128	Spring As.	419-4726
162-3904	Pump As-F Prm	391-1102
162-4012	Gasket Kit - F	437-8126
163-1387	Gear-Flywheel	374-4697
163-3103	Manifold-Exh	430-8992
163-4063	Core As-Rdtr	391-9826
163-4109	Manifold-Exhaust	433-9857
163-5316	Kit - Gasket(F)	437-2018
163-5636	Kit - Gasket(OCL)	437-2017
163-5723	Gasket Kit - SCH	437-8641
164-2138	Gasket Kit - SCH	437-2016
164-6574	Kit - Gasket-ACL	437-2015
165-4262	Body As-Piston	270-4351
165-4262	Body As-Piston	270-4353
165-7573	Kit - Gasket (FS)	438-0141
165-9864	Gasket Kit-SCH	388-0659
166-9142	Gasket	420-8546
167-8123	Damper As	299-2006
167-8126	Damper As	382-8019
170-0556	Kit-Rebuild-Pump	383-3712
170-0558	Kit-Rebuild-Pump	390-1001
170-0560	Rebuild Kit-Pump	363-7458
170-0564	Rebuild Kit-Pump	380-7576
170-0566	Kit-Rebuild-Pump	377-5835

Classic Engine Parts

Premium Part Number	Part Name	Classic Part Number	Premium Part Number	Part Name	Classic Part Number	Premium Part Number	Part Name	Classic Part Number
170-0570	Rebuild Kit-Pump	380-7577	200-3199	Muffler As-Eject	396-1565	222-8662	Kit - Gasket(F)	437-8134
170-4860	Bonnet-Oil Clr	430-5359	200-3200	Muffler As-Eject	418-9586	222-9154	Kit - Gasket	437-8133
170-7501	Kit - Gasket(OCL)	437-2014	201-5243	Kit - Gasket(F)	437-2019	223-1102	Kit - Gasket-F	437-8132
170-7502	Shaft-Dr Idler	374-7484	202-3572	Shaft As-Drive	426-0037	223-3343	Kit - Gasket-ACL	437-8131
170-8541	Core As-Rdtr	379-0180	204-4458	Gasket Kit - ACL	437-8151	223-3344	Kit - Gasket(OCL)	437-2040
171-8780	Kit - Gasket (OCL)	437-2013	204-4462	Gasket Kit - SCH	437-2005	223-3345	Kit - Gasket-SCH	437-8130
172-5185	Shaft-Water Pump	325-6201	207-1332	Bellows As	444-0569	223-7811	Kit - Gasket(SCH)	437-8636
172-5188	Shaft-Water Pump	325-6202	208-0421	Muffler As	360-9624	223-8228	Kit - Gasket(SCH)	437-8142
172-5189	Impeller-Pump	295-5687	208-6161	Gasket Kit - F	437-8150	224-3973	Kit - Gasket-RS	437-8123
172-5190	Impeller-Pump	325-6111	208-6163	Kit - Gasket-SCH	437-2004	224-4323	Kit - Gasket-RS	393-3627
172-6712	Impeller-Pump	325-6112	208-6165	Kit - Gasket-MCH	437-8149	224-6638	Bearing-Rod	419-6371
172-7760	Pump Gp-Water -B	380-7574	210-7443	Gasket Kit - SCH	437-8125	226-2018	Kit - Gasket-ACL	393-0921
172-7763	Pump Gp-Water -B	374-7499	211-0592	Bearing - Main	419-6368	229-1490	Sleeve-Injector	393-3659
172-7765	Pump Gp-Water -B	394-9835	212-4893	Bearing-Thrust	419-6372	229-5153	Bearing-Thrust	419-6370
172-7766	Pump Gp-Water -B	374-4698	213-3193	Rod As-Conn	379-8870	229-5154	Bearing-Thrust	419-6369
172-7767	Pump Gp-Water -B	296-1365	213-3294	Gage As-O Level	398-2930	231-0649	Kit - Gasket (SCH)	437-8673
172-7771	Pump Gp-Water -B	419-4646	213-6732	Muffler As-LH	363-7099	231-1591	Muffler As.	360-9625
172-7772	Pump Gp-Water -B	438-2009	213-6733	Muffler As-RH	363-7098	232-1841	Kit - Gasket (FS)	387-2922
172-7775	Pump Gp-Water -B	398-2942	213-8467	Kit - Gasket(WLG)	438-0143	232-2600	Kit - Gasket-FS	437-8672
172-7776	Pump Gp-Water -B	395-1314	213-8621	Kit - Gasket-WP	437-2003	232-2672	Kit - Gasket-FS	393-0922
174-0739	Gasket Kit - F	437-2012	214-6045	Bellows As	435-4846	232-2922	Kit - Gasket-RS	437-8671
174-5385	Gasket Kit - OCL	393-1037	215-7140	Kit - Gasket(MCH)	437-2002	232-3233	Bearing-Main	376-9085
176-4168	Bridge As-Valve	419-4727	215-7144	Kit - Gasket(SCH)	437-8148	232-3675	Kit - Gasket-RS	437-8670
176-4172	Bridge As-Valve	457-4600	216-4499	Kit - Gasket-SCH	437-8147	232-3679	Kit - Gasket (RS)	437-2039
176-6997	Shaft	399-8573	216-4530	Kit - Gasket-MCH	437-8146	232-4504	Kit - Gasket-FS	437-2038
176-6998	Impeller-Wtr Pmp	425-9367	216-4592	Gasket Kit - OCL	437-8145	232-4649	Kit - Gasket-RS	437-8669
176-8167	Kit - Gasket-ACL	437-2011	216-4781	Gasket Kit	437-8144	232-4658	Kit - Gasket-FS	437-2037
176-8182	Kit - Gasket(SCL)	437-2010	216-5582	Bearing-Sleeve	390-0914	232-6148	Kit - Gasket(RS)	437-2036
180-6645	Shaft As.	396-1566	217-0578	Bearing-Rod	419-4669	232-6167	Kit - Gasket(FS)	437-2035
185-2831	Line As	380-1516	217-0586	Bearing-Rod	419-7266	232-6173	Kit - Gasket-FS	393-0923
186-2001	Rotocoil As	397-5055	217-7884	Gasket Kit - WP	437-8143	232-6574	Kit - Gasket-RS	437-2034
187-0605	Gasket Kit - CL	382-5055	217-8938	Tightening-Belt	419-4735	232-6599	Kit - Gasket (MCH)	437-2033
187-3307	Gasket As-Cyl	438-2022	218-4389	Kit - Gasket(SCH)	437-8124	232-6642	Kit - Gasket (SCH)	437-2020
187-8979	Gear As	393-3656	219-3501	Kit - Gasket	437-8129	233-6728	Kit - Gasket-FS	437-2032
189-1814	Kit - Gasket(OCL)	437-2009	219-6544	Kit - Gasket-ACL	437-2001	233-6984	Kit - Gasket(FS)	437-2045
190-0649	Tightener-Belt	434-1407	219-6556	Kit - Gasket(F)	437-8141	233-7083	Kit - Gasket-FS	387-2919
190-3832	Core As-OCLR	438-3251	219-6560	Kit - Gasket(F)	437-8153	233-8668	Kit - Gasket-MCH	437-2030
190-9861	Kit-Gskt-ACL	386-3812	219-6578	Kit - Gasket-MCH	437-8139	233-8669	Kit - Gasket-MCH	393-1038
191-7941	Line As-Fuel Inj	378-4011	219-6610	Kit - Gasket	437-8138	233-8681	Kit - Gasket-MCH	393-0920
191-7942	Line As-Fuel Inj	374-4699	219-7628	Kit - Gasket-MCH	437-8137	233-8683	Kit - Gasket-MCH	393-1039
191-7943	Line As-Fuel Inj	374-4700	219-7629	Kit - Gasket-SCH	437-8136	233-9198	Kit - Gasket-SCH	437-2029
191-7944	Line As-Fuel Inj	374-4701	219-7630	Kit - Gasket	437-2000	233-9200	Kit - Gasket-SCH	393-0927
191-7945	Line As-Fuel Inj	378-4012	219-7975	Kit - Gasket(SCH)	437-1999	233-9203	Kit - Gasket-SCH	437-2028
191-7946	Line As-Fuel Inj	378-4013	220-3779	Kit - Gasket(F)	437-1998	233-9245	Kit - Gasket-SCH	437-2027
192-0478	Kit - Gasket (SCH)	437-1995	221-0859	Kit - Gasket-T	437-8135	233-9456	Kit - Gasket-SCH	422-7510
193-3322	Gasket Kit - OCL	437-2007	221-3371	Kit - Gasket-MCH	437-2031	233-9464	Kit - Gasket(SCH)	393-0925
196-0028	Gear As-Idler	364-5259	221-3372	Kit - Gasket-SCH	437-2006	233-9466	Kit - Gasket-SCH	437-2026
196-0029	Gear As-Idler	374-4674	221-9356	Flywheel As	435-2575	233-9473	Kit - Gasket-SCH	437-2025
197-9251	Pin As.-Piston	454-6110	222-0458	Muffler As	393-0929	233-9474	Kit - Gasket (SCH)	437-2024
199-5067	Muffler As	360-7894	222-1177	Kit - Gasket-SCH	437-2008	233-9480	Kit - Gasket-SCH	437-2023
			222-7974	Kit - Gasket	437-2044	234-1628	Kit - Gasket-RS	437-2022
			222-7987	Kit - Gasket	437-2043	234-1630	Kit - Gasket(RS)	393-1040

Classic Engine Parts

Premium Part Number	Part Name	Classic Part Number
234-1874	Kit - Gasket-FS	437-8668
234-1900	Kit - Gasket(FS)	437-8667
234-1914	Kit - Gasket(FS)	437-2021
234-1929	Kit - Gasket-RS	393-1022
234-1983	Kit - Gasket-FS	393-0924
234-1985	Kit - Gasket-FS	437-8666
234-7988	Kit - Gasket-SCH	387-2925
234-7989	Kit - Gasket-SCH	437-8122
234-7991	Kit - Gasket-MCH	437-8121
234-7994	Kit - Gasket-SCH	437-8120
234-7996	Kit - Gasket-SCH	437-8665
234-7998	Kit - Gasket-MCH	437-8640
234-7999	Kit - Gasket-SCH	437-8119
234-8001	Kit - Gasket-MCH	437-8118
234-8002	Kit - Gasket-SCH	386-3817
234-8009	Kit - Gasket-SCH	382-5056
234-8011	Kit - Gasket-SCH	437-8664
234-8013	Kit - Gasket-SCH	437-8650
234-8014	Kit - Gasket-SCH	437-8662
234-8015	Kit - Gasket-SCH	437-8674
234-8016	Kit - Gasket-SCH	393-0919
234-8019	Kit - Gasket-SCH	437-8639
234-8020	Kit - Gasket-SCH	437-8660
236-4413	Pump Gp-Water -B	434-6110
236-8883	Kit - Gasket-OCL	437-8659
237-6367	Kit - Gasket-SCH	437-8625
239-4290	Kit - Gasket-SCH	435-2574
242-9834	Kit - Gasket-MCH	387-2923
242-9847	Kit - Gasket-MCH	438-0129
242-9857	Kit - Gasket-MCH	437-8637
243-4690	Kit - Gasket (OCL)	437-8658
243-4780	Kit - Gasket(CL)	437-8657
244-1400	Kit - Gasket-SCH	437-8656
246-3130	Shaft-Water Pump	392-4508
251-1224	Kit - Gasket-MCH	437-8655
252-1152	Muffler As.	395-1307
252-7955	Kit - Gasket(CL)	437-8654
253-1752	Plate-Thrust	379-0170
254-5676	Kit - Gasket-SCH	437-8649
255-2899	Pipe As-Tail	301-5246
255-6863	Gasket	450-5024
256-9653	Flywheel As.	425-3444
262-5009	Kit - Gasket(SCH)	437-8635
262-5080	Kit - Gasket-SCH	437-8634
262-7133	Kit - Gasket(SCH)	437-8633
264-6898	Kit - Gasket-SCH	382-5069
265-9183	Kit - Gasket(SCH)	437-8632
265-9185	Kit - Gasket(OCL)	437-8631
265-9186	Kit - Gasket(SCH)	437-8630
266-2540	Kit - Gasket(SCH)	437-8629
266-4561	Kit - Gasket-CL	437-8628
266-5907	Kit - Gasket-CL	438-0155

Premium Part Number	Part Name	Classic Part Number
266-6621	Kit - Gasket(CL)	438-0154
268-2932	Kit - Gasket-SCH	438-0153
271-5658	Crankshaft As.	368-5912
272-1956	Gasket	419-4710
272-4673	Muffler	301-7974
277-7089	Shaft As	380-7578
278-1365	Arm As-UI RKR	433-7507
278-8781	Kit - Gasket(SCH)	437-8653
281-2813	Kit - Gasket-SCH	387-2921
282-2065	Kit - Gasket-T	438-0184
283-5666	Gasket-Cyl Head	388-6565
283-6443	Kit - Gasket-T	437-8652
286-2494	Kit - Gasket-SCH	387-2920
287-8465	Kit - Gasket-FS	437-8627
288-6375	Kit - Gasket(FS)	437-8104
289-4093	Kit - Gasket-SCH	438-0152
289-4884	Kit - Gasket-MCH	437-8651
289-5160	Kit - Gasket-SCH	437-8663
289-5181	Kit - Gasket-MCH	438-0151
289-6232	Kit - Gasket(SCH)	437-8661
289-9183	Kit - Gasket-SCH	438-0150
290-0187	Kit - Gasket-SCH	437-8116
290-2060	Kit - Gasket-SCH	438-0149
291-9117	Kit - Gasket (SCH)	438-0148
292-2500	Kit - Gasket-MCH	438-0147
293-1009	Kit - Gasket(MCH)	438-0146
293-3018	Kit - Gasket(SCH)	438-0145
293-3041	Kit - Gasket-MCH	438-0144
293-6012	Kit - Gasket-MCH	438-0128
293-6013	Kit - Gasket-SCH	438-0142
297-1742	Kit - Gasket-SCH	438-0156
300-9500	Kit - Gasket-SCH	387-2914
305-2669	Kit - Gasket (CL)	438-0183
307-1303	Muffler As.	361-6574
312-5931	Kit - Gasket(SCH)	438-0140
313-4914	Kit - Gasket(T)	438-0182
315-6671	Kit - Gasket(OP)	438-0139
316-4396	Kit - Gasket(SCH)	393-3661
318-9013	Kit - Gasket(SCH)	437-8128
319-0848	Kit - Gasket(T)	438-0138
319-3607	Kit - Gasket(RS)	438-0137
319-8126	Kit - Gasket(SCH)	438-0136
321-5746	Bearing-Main	419-6367
322-2929	Kit - Gasket(SCH)	438-0135
323-4174	Kit - Gasket(SCH)	438-0134
325-2721	Kit - Gasket(T)	393-3662
328-4240	Arm As-V Rocker	433-0443
328-5572	Bearing-Rod	419-6349
328-5573	Bearing-Conn Rod	419-6387
328-5574	Bearing-Rod	419-7266
334-8389	Crankshaft As	242-3439

Premium Part Number	Part Name	Classic Part Number
337-0872	Crankshaft As	242-3440
341-2430	Damper As-CShft	299-2005
347-8681	Kit - Gasket(FS)	438-0133
347-8682	Kit - Gasket(OCL)	438-0132
347-8683	Kit - Gasket(RS)	438-0131
347-8684	Kit - Gasket(SCH)	438-0130
347-8688	Kit - Gasket(SCH)	438-0170
352-0200	Pump Gp-Water -B	434-6109
352-0209	Pump Gp-Water -B	375-4336
352-2077	Pump Gp-Water -B	434-6108
352-2151	Pump Gp-Water -B	434-6107
352-2153	Pump As-Water	433-0444
352-2157	Pump Gp-Water -B	433-0441
352-2160	Pump Gp-Water -B	433-0789
352-2163	Pump As-Water	434-6106
355-0763	Kit - Gasket(SCH)	438-0181
391-8229	Kit - Gasket-FS	398-2955
391-8256	Kit - Gasket-SCH	447-8653
441-9566	Gear-Flywheel	374-4703
460-5395	Kit - Gasket (SCH)	436-8395
468-8667	Kit-Brg-Main	376-9085
0R-8169	Compressor Gp	386-2063
1A-0744	Screw-Rocker Adj	379-0167
1M-5270	Pipe-Extension	367-6065
1M-7250	Bowl	360-2296
1N-2936	Muffler As	298-2782
1N-2946	Extension-Exh	367-6064
1N-3165	Plunger-RLF V	373-1883
1N-3300	Shield As	374-4702
1N-3574	Block Gp-Cyl	460-8298
1N-3576	Block Gp-Cyl	279-4978
1N-3706	Pipe-Extension	434-6497
1N-3821	Bearing-Conn Rod	376-9076
1N-3822	Bearing-Conn Rod	376-9077
1N-4317	Bearing-Main	419-7253
1N-4336	Bearing-Conn Rod	419-6329
1N-4337	Bearing-Conn Rod	419-6328
1P-0005	Pump Gp-Fuel Tfr	256-4756
1P-0009	Rod As-Conn	311-9450
1P-1216	Manifold-Exhaust	261-0902
1P-1367	Plunger-Valve	432-8913
1P-1721	Gear-Balance	298-2769
1P-1722	Gear-Balance	298-2770
1P-4303	Head As-Cylinder	242-3434
1P-6400	Plunger As-Pump	383-1568
1P-7125	Governor As	383-3672
1P-7936	Spider As-Fan	383-3673
1P-8554	Coupling-Exhaust	325-6052
1P-9945	Bracket As-Fan	296-1344
1S-1967	Chamber As	247-3291

Classic Engine Parts

Premium Part Number	Part Name	Classic Part Number	Premium Part Number	Part Name	Classic Part Number	Premium Part Number	Part Name	Classic Part Number
1S-1970	Chamber As	247-3292	1W-6987	Valve As-Check	420-6221	2P-1170	Shaft As-Gear	296-1367
1S-3062	Director-Water	418-9572	1W-7035	Kit-Pump (RBD)	421-1553	2P-1438	Pipe-Exh Ext	325-6157
1S-3926	Manifold-Exhaust	430-7622	1W-7072	Rebuild Kt-Pump	428-6657	2P-1757	Hub-Fan Pulley	296-1357
1S-7057	Gasket	420-6384	1W-7073	Rebuild Kt-Pump	383-3677	2P-1781	Spacer-Oil Pump	325-6214
1S-8607	Baffle	380-7540	1W-7074	Kit-Rebuild-Pump	419-4712	2P-2406	Pulley	264-5870
1T-0436	Gear-Pump Drive	247-3367	1W-7080	Kit-Pump (RBD)	392-4515	2P-2407	Pulley	383-3684
1W-0156	Core As-OCLR	416-5525	1W-7082	Rebuild Kt-Pump	383-3681	2P-2656	Line As-Fuel Inj	430-9650
1W-0311	Bearing-Main	376-9078	1W-7238	Shaft As-Pump Dr	379-0164	2P-2744	Muffler As.	247-2664
1W-0312	Bearing-Main	376-9079	1W-7239	Shaft As-Idler	379-0163	2P-2784	Ejector As-Exh	367-6063
1W-0370	Muffler As.	360-7869	1W-7940	Spider As-Fan	295-5443	2P-2788	Adapter-Fan	390-0984
1W-0458	Shield As-Turbo	367-6082	1W-8539	Bearing-Conn Rod	419-7251	2P-3839	Crankshaft As	398-2968
1W-0466	Shield As-Turbo	369-9495	1W-8606	Valve-Inlet	443-1204	2P-4611	Pipe-Exhaust	365-8821
1W-0568	Pump Gp-F Tfr	377-5859	1W-9171	Bonnet-Valve	374-4707	2P-5081	Muffler As	360-7872
1W-0777	Muffler As	247-2662	1W-9191	Line As-Fuel Inj	311-9403	2P-5608	Pipe-Extension	367-6066
1W-1064	Gear-Flywheel	374-4703	1W-9201	Line As-Fuel Inj	311-9411	2P-5609	Muffler As.	247-2665
1W-1219	Trunnion As	314-8724	1W-9202	Line As-Fuel Inj	311-9412	2P-6128	Pulley	264-5872
1W-1661	Bearing-Main	376-9080	1W-9203	Line As-Fuel Inj	311-9413	2P-6245	Shaft As-Pump	325-6197
1W-1662	Bearing-Main	382-6900	1W-9204	Line As-Fuel Inj	311-9414	2P-6255	Muffler As.	247-2666
1W-1669	Piston	325-6158	1W-9205	Line As-Fuel Inj	311-9415	2P-7828	Pan-Oil	314-8691
1W-1695	Pump Gp-F Tfr	279-4980	1W-9206	Line As-Fuel Inj	311-9416	2P-7830	Pump Gp	314-8533
1W-1698	Housing-Tfr Pump	296-1356	1W-9207	Line As-Fuel Inj	311-9417	2P-8907	Spider As-Fan	330-9289
1W-1700	Pump Gp-F Tfr	377-5846	1W-9208	Line As-Fuel Inj	311-9418	2P-8912	Elbow-Exhaust	398-2957
1W-1766	Muffler As.	298-2783	1W-9209	Line As-Fuel Inj	311-9419	2S-1273	Chamber As	319-3434
1W-1822	Valve-Exhaust	443-1205	1W-9210	Line As-Fuel Inj	311-9420	2S-2430	Thrower-Chsft 0	380-7543
1W-1877	Gear As-Idler	426-0027	1W-9211	Line As-Fuel Inj	311-9421	2S-3486	Gasket Kt-V G	438-0179
1W-2489	Muffler As	360-7870	1W-9212	Line As-Fuel Inj	311-9422	2S-4015	Plunger As-Valve	311-9438
1W-2491	Muffler As-Eject	360-7871	1W-9229	Muffler As	302-4282	2S-5551	Coupling-Exhaust	398-2934
1W-2572	Muffler As.	247-2663	1W-9302	Gear-Crankshaft	386-3059	2S-6739	Pulley-Tightener	298-2794
1W-3062	Retainer As	311-9445	1W-9490	Pulley-Alt	394-0885	2S-7264	Pump As-Fuel Inj	395-1318
1W-4369	Pulley-Alt	296-1340	1W-9519	Muffler As	397-5043	2S-8884	Ring-Piston	465-8995
1W-4402	Gear-Camshaft	279-4981	1W-9771	Crankshaft As	368-5913	2S-8961	Pulley-Tightener	264-5875
1W-4407	Hub-Fan Pulley	296-1358	1W-9812	Gear-Crankshaft	380-1513	2V-6327	Support As-Front	391-9832
1W-4623	Muffler As	360-9622	1W-9812	Gear-Crankshaft	380-1513	2W-0994	Body As-Preclnr	367-6084
1W-4737	Gear-CShft	295-5688	1W-9832	Muffler As	416-5493	2W-1223	Pump Gp-Water	385-7197
1W-4740	Gear As-Drive	295-5689	2A-4429	Lock-Retainer	379-0174	2W-1225	Pump Gp-Water	380-7532
1W-5009	Crankshaft As	398-2969	2G-6285	Valve Kt	383-1570	2W-1748	Elbow-Exhaust	447-0821
1W-5036	Bracket As-Fan	425-1210	2H-2330	Bearing-Sleeve	452-9554	2W-2621	Valve-Inlet	247-6892
1W-5105	Ring Gp-Piston	311-9446	2H-3069	Lifter As-Valve	387-2927	2W-3391	Body As-F Inj V	383-3687
1W-5300	Rotocoil As	443-2659	2H-5080	Gasket Kt-V GR	438-0180	2W-3428	Muffler As	298-2784
1W-5910	Tappet As-Guide	383-1569	2L-6744	Plunger	426-0030	2W-3597	Muffler As	397-5044
1W-5912	Tappet As-Guide	325-6223	2N-1572	Muffler As-Exh	361-6575	2W-3875	Gear-Oil Pump Dr	399-8548
1W-5920	Bearing-Camshaft	421-1558	2N-1599	Gear	378-3970	2W-4087	Gear As-Idler	418-9582
1W-6183	Shield As-Manf	367-6083	2N-3236	Gasket-Man Exh	415-1900	2W-4437	Gear As-Idler	388-0556
1W-6184	Shield As	416-5524	2N-5693	Gasket-Aftclr	438-2019	2W-5240	Pipe-Pump Outlet	376-9055
1W-6185	Shield As	374-4704	2N-5842	Screw-Bridge Adj	418-1934	2W-5536	Core As-Radiator	380-7554
1W-6186	Shield As	374-4705	2P-0220	Gasket-Pump	398-2927	2W-5539	Core As-Rad	374-7492
1W-6209	Crankshaft As	463-7668	2P-0483	Chamber As	256-4760	2W-5540	Core As-Radiator	363-7452
1W-6356	Gasket	438-1795	2P-0484	Chamber As	247-3296	2W-6280	Bracket As-Fan	431-5271
1W-6440	Gasket-Cyl Head	449-9548	2P-1126	Pulley-CShft	264-5868	2W-6632	Core As-Rad	391-1096
1W-6473	Compressor Gp -B	448-9150	2P-1129	Pulley-Tightener	264-5869	2W-6757	Trunnion As	295-5678
1W-6541	Plunger As	325-6173	2P-1131	Arm As-Tightener	430-8132	2W-6965	Coupling	416-5490

Classic Engine Parts

Premium Part Number	Part Name	Classic Part Number
2W-6967	Elbow As	420-6385
2W-7213	Bearing-Sleeve	419-4667
2W-7255	Shaft-Water Pump	325-6203
2W-7455	Gear As	396-9957
2W-7458	Crankshaft As	242-3439
2W-7590	Cooler As-Oil	378-3971
2W-7610	Gear-HYD Pump Dr	418-1940
2W-7614	Gear-Crankshaft	425-7752
2W-7678	Gear-Water Pump	325-6088
2W-7774	Ejector As-Exh	393-0914
2W-7933	Core As-O Clr	374-4708
2W-7980	Camshaft As	378-3972
2W-8038	Gear-Camshaft	425-7751
2W-8271	Arm As-Rocker	432-8912
2W-8437	Muffler As	385-7198
2W-8493	Pulley-Fan	430-5361
2W-8494	Pulley-Alt	295-5692
2W-9978	Core As-OCLR	279-4983
3B-1142	Retainer-Spring	391-1099
3B-6217	Muffler As	247-2671
3B-6218	Muffler As	247-2672
3E-3322	Gasket Kit - F	437-8114
3E-3332	Kit - Gasket(OCL)	437-8113
3E-3339	Gasket Kit	393-3614
3E-4325	Kit - Gasket (F)	437-8112
3E-4326	Gasket Kit	437-8111
3E-4329	Kit - Gasket(OCL)	437-8110
3E-6772	Seal-Water	382-8017
3E-7461	Gasket Kit-SCH	437-4575
3E-7466	Gasket Kit	393-3615
3E-7473	Gasket Kit	393-3616
3E-7496	Gasket Kit - SCH	437-8105
3E-8905	Gasket Kit	393-3617
3H-0881	Ring-Piston	465-8998
3H-5867	Retainer-Spring	390-0992
3K-3124	Muffler-Trap	247-2673
3N-2078	Pump Gp-Fuel Tfr	311-9444
3N-3017	Adapter As	433-2031
3N-3368	Pipe-Exhaust	311-9434
3N-7326	Thrower-CShft O	311-9458
3N-7327	Thrower-CShft O	311-9459
3N-7702	Shaft-Pump Idler	428-7201
3P-0114	Elbow-Exhaust	314-8516
3P-0165	Pulley-Fan Drive	298-2775
3R-5327	Pipe-Extension	383-1571
3S-1467	Pump Gp-F Inj - B	452-9555
3S-1723	Kit - Gasket (WP)	438-0178
3S-2252	Manifold-Exhaust	261-0887
3S-3875	Screen-Suction	435-4849
3S-7517	Pulley-Belt Adj	264-5876
3W-7770	Tube As	385-7227

Premium Part Number	Part Name	Classic Part Number
3Y-9984	Manifold-Exhaust	325-6123
4H-7496	Plate-Pump Seal	420-6217
4L-3437	Gasket	420-8572
4L-3756	Bearing-Thrust	311-9366
4L-4653	Plate-Thrust	311-9440
4L-6706	Gasket	421-1028
4M-0410	Gear-Oil Pump Dr	428-6660
4M-4431	Shaft-Pump Dr	390-0994
4M-9214	Shaft-Pump Drive	314-8543
4M-9215	Gear-Pump Idler	311-9391
4M-9216	Gear-Pump Drive	311-9390
4N-0209	Bonnet-Valve	378-3973
4N-0406	Gear-Tfr Pump	373-1903
4N-0429	Gear-Tfr Pump	373-1915
4N-0685	Bearing-Sleeve	379-0191
4N-0733	Pump Gp-XX 1 GR	374-7502
4N-1106	Shaft As-Rocker	377-5837
4N-1116	Shaft As-Pump	374-7473
4N-1119	Gear-Tfr Pump	373-1884
4N-1157	Coupling-Exhaust	379-0177
4N-1320	Gasket-Adapter	398-2928
4N-1675	Manifold-Exhaust	443-2015
4N-1767	Valve-Bypass	419-4716
4N-1849	Pipe-Air	421-7143
4N-2484	Bonnet-Valve	455-3272
4N-2514	Gear-Flywheel	421-7283
4N-2572	Spider As.	451-9027
4N-2690	Shaft As	386-3053
4N-2697	Pulley-Tightener	376-9056
4N-3092	Spider As-Fan	363-7465
4N-3281	Line As-Fuel Inj	247-3362
4N-3282	Line As-Fuel Inj	247-3363
4N-3283	Line As-Fuel Inj	247-3364
4N-3284	Line As-Fuel Inj	247-3365
4N-3339	Spider As.	419-0891
4N-3664	Guide-Valve	314-8524
4N-3714	Chamber As	363-7450
4N-3875	Ring-Piston	465-8997
4N-3927	Compressor As	435-6051
4N-4534	Pulley-Crkshft	374-4709
4N-4577	Muffler As.	308-9877
4N-4668	Breather-Engine	396-7271
4N-4679	Pulley-Fan	394-9837
4N-4782	Pulley	325-6176
4N-4864	Pump Gp-F Tfr	242-3442
4N-4878	Pump Gp-F Tfr	390-0995
4N-4880	Pump Gp-F Tfr	256-4758
4N-5184	Muffler As	360-7874
4N-5191	Muffler As	298-2785
4N-5390	Pulley-Alt Drive	264-5879

Premium Part Number	Part Name	Classic Part Number
4N-5614	Arm As-Rocker	374-4710
4N-5958	Tube-Exhaust Ext	385-3811
4N-6302	Belt Set-Vee	314-8495
4N-6658	Bearing-Sleeve	373-1885
4N-7692	Crankshaft As	269-8764
4N-7693	Crankshaft As	269-8763
4N-7982	Pulley	264-5880
4N-8344	Spider As-Fan	416-5520
4N-8434	Spider As-Fan	451-9030
4N-8472	Housing-Aftclr	419-0887
4N-8591	Coupling-Exhaust	325-6053
4N-8809	Chamber As	247-3297
4N-8814	Line As-F Inj	247-3366
4N-8942	Muffler As	298-2786
4N-9213	Elbow-Exhaust	330-9270
4N-9325	Pulley-Alt Drive	419-4657
4N-9941	Line As-Fuel Inj	380-1562
4N-9942	Line As-Fuel Inj	380-1563
4N-9943	Line As-Fuel Inj	380-1572
4N-9944	Line As-Fuel Inj	380-1565
4P-0660	Muffler As	298-2787
4P-0854	Core As-Oil Clr	419-0890
4P-0893	Core As-Radiator	376-9057
4P-0897	Core As-Radiator	376-9058
4P-1463	Muffler As	360-7876
4P-3546	Valve As-Relief	325-6236
4P-3683	Pump Gp-Water -B	374-7498
4P-3754	Core As-OCLR	438-2016
4P-4010	Muffler As	298-2788
4P-4757	Muffler As	360-7877
4P-5433	Compressor As	419-4728
4P-5435	Compressor As	396-9942
4P-5884	Core As-OCLR	435-0196
4P-6548	Muffler As	360-7878
4P-6589	Pipe As	382-6898
4P-6649	Muffler As	416-5527
4P-7051	Pulley-Alt	376-9064
4P-7731	Core Gp-O Clr	385-7228
4P-7790	Shaft As-Arm	457-4596
4P-7801	Line As-Fuel Inj	373-1888
4P-7802	Line As-Fuel Inj	373-1889
4P-7803	Line As-Fuel Inj	373-1890
4P-7804	Line As-Fuel Inj	373-1891
4P-7805	Line As-Fuel Inj	373-1892
4P-7806	Line As-Fuel Inj	373-1893
4P-7807	Line As-Fuel Inj	373-1894
4P-7808	Line As-Fuel Inj	373-1895
4P-7809	Line As-Fuel Inj	373-1896
4P-7810	Line As-Fuel Inj	373-1897
4P-7811	Line As-Fuel Inj	373-1898

Classic Engine Parts

Premium Part Number	Part Name	Classic Part Number	Premium Part Number	Part Name	Classic Part Number	Premium Part Number	Part Name	Classic Part Number
4P-7812	Line As-Fuel Inj	373-1899	4W-8485	Muffler As	430-4472	5S-1684	Gasket Kt-V GR	393-5224
4P-7827	Gear-Crankshaft	380-7533	4W-9480	Rod As-PSTN &	378-3976	5S-1757	Insert-Seat	311-9401
4P-8279	Manifold-Exhaust	430-8041	4W-9492	Repair Kt-Major	375-2261	5S-1822	Chamber As	248-5406
4P-8280	Manifold-Exhaust	430-7236	4W-9771	Gear-Crankshaft	302-2674	5S-1833	Chamber As	247-3298
4P-8577	Rod As-Injector	455-5513	4W-9822	Core Gp-O Clr	374-4711	5S-5917	Screw-Rocker Adj	380-7537
4P-8915	Gasket-Cyl Head	377-5838	4W-9989	Gear As-Idler	302-2677	5S-5918	Rod-Valve Push	394-0903
4P-9381	Line As-Fuel Inj	279-4984	4Y-2817	Ejector As	295-6423	5S-6795	Chamber As	242-3437
4P-9382	Line As-Fuel Inj	279-4985	4Y-4951	Muffler As	419-0889	5S-9080	Pulley-Alt Drive	264-5883
4P-9383	Line As-Fuel Inj	279-4988	5B-9169	Plug-Drain	419-4736	6B-6224	Ferrule	419-4738
4P-9384	Line As-Fuel Inj	279-4989	5H-7071	Director-Water	388-0555	6C-3617	Support-Trunnion	374-4712
4P-9385	Line As-Fuel Inj	279-4986	5I-7619	Pulley	301-4772	6E-4985	Cover-Filter	424-2015
4P-9386	Line As-Fuel Inj	279-4987	5I-7707	Pipe	438-2011	6G-0078	Breather	435-4789
4P-9395	Line As-Fuel Inj	383-3690	5I-7708	Pipe	438-2014	6H-5843	Thrower-Chsft O	393-3612
4P-9396	Line As-Fuel Inj	383-3691	5I-7710	Pipe	438-2013	6H-5845	Baffle-Oil	390-0926
4P-9961	Line As-Fuel Inj	325-6115	5I-7711	Pipe	438-2012	6I-0031	Line As-Fuel Inj	374-4713
4P-9962	Line As-Fuel Inj	325-6116	5I-7914	Muffler	435-4791	6I-0032	Line As-Fuel Inj	374-4714
4P-9963	Line As-Fuel Inj	298-2777	5I-7959	Pulley As	301-5256	6I-0033	Line As-Fuel Inj	374-4715
4P-9964	Line As-Fuel Inj	298-2778	5L-2093	Gasket	393-3619	6I-0034	Line As-Fuel Inj	375-2262
4S-7793	Thrower-CShft O	367-6085	5L-7520	Elbow-Exhaust	419-4711	6I-0035	Line As-Fuel Inj	374-4716
4S-8472	Hood As-Preclnr	296-1355	5L-7634	Elbow-Turbo Exh	380-1555	6I-0036	Line As-Fuel Inj	374-4717
4S-8855	Coupling-Exhaust	369-9488	5L-8856	Coupling-Exhaust	311-9379	6I-0037	Line As-Fuel Inj	374-4718
4W-0255	Spider As-Fan	382-5052	5L-9371	Connector-Inlet	311-9375	6I-0038	Line As-Fuel Inj	374-4719
4W-0419	Core As-OCLR	379-0182	5L-9738	Coupling-Exhaust	311-9380	6I-1032	Line As-Fuel Inj	390-0931
4W-0456	Muffler As-Eject	360-7879	5M-2824	Coupling-Exhaust	431-5270	6I-1035	Line As-Fuel Inj	390-0921
4W-2061	Pan As-Oil Sump	416-5519	5M-3560	Bearing-Sleeve	392-4521	6I-1036	Line As-Fuel Inj	390-0922
4W-2446	Damper As	279-4990	5M-5822	Gear-Pump Drive	247-4120	6I-1038	Line As-Fuel Inj	390-0923
4W-2472	Spring-Valve	380-7550	5M-5856	Pipe-Extension	373-1913	6I-1099	Manifold-Exh	424-6366
4W-2474	Rotocoil As	388-6571	5N-4378	Shaft As-Pump	311-9456	6I-1240	Governor As	380-7538
4W-2541	Shaft-Gov Cont	399-8580	5N-8501	Head As-Cyl	256-4762	6I-1327	Bonnet-Valve	455-3273
4W-2566	Adapter-Seal	383-1573	5N-8657	Manifold-Exhaust	261-0886	6I-1345	Shaft As-O Pump	374-7475
4W-2567	Adapter-Seal	383-1574	5N-8879	Manifold-Exhaust	261-0898	6I-1346	Pump Gp-BEO 2 GR	295-5674
4W-3632	Muffler As	385-7224	5N-9055	Manifold-Exhaust	261-0890	6I-1363	Spider As	380-1517
4W-5053	Muffler As	360-7881	5P-8053	Kit - Gasket-SCH	415-1901	6I-1364	Spider As	391-9824
4W-5363	Core Gp-O Clr	380-7531	5P-8054	Gasket Kit	437-8109	6I-1453	Crankshaft As	368-5916
4W-5477	Pump Gp-F Tfr	380-1512	5P-8366	Gasket Kit - SCH	387-2911	6I-1647	Arm Gp-V Rocker	433-0451
4W-5549	Core As-OCLR	311-9376	5P-8545	Gasket Kit	437-8626	6I-1650	Arm Gp-V Rocker	433-0450
4W-5550	Core As-OCLR	311-9377	5P-8768	Kit - Gasket	393-1024	6I-2408	Muffler As.	378-3978
4W-5693	Bearing-Con Rod	419-6324	5P-8772	Gasket Kit	383-1575	6I-2409	Pipe	383-3693
4W-5698	Bearing-Main	419-6323	5P-8789	Gasket Kt	393-3620	6I-2726	Bearing-Sleeve	419-4757
4W-5699	Bearing-Main	419-6307	5P-8950	Gasket Kit	393-3621	6I-2981	Plate-Block	374-7495
4W-5700	Bearing-Main	419-6320	5P-8970	Gasket Kt-Liner	383-1576	6I-3066	Gasket-Cyl Head	380-1518
4W-5701	Bearing-Main	419-6333	5P-8974	Gasket Kit - WP	387-2912	6I-3662	Muffler As	360-7882
4W-5702	Bearing-Con Rod	419-6318	5P-9237	Gasket Kit	438-0174	6I-4024	Gasket-Plate	377-5839
4W-5703	Bearing-Con Rod	419-7255	5P-9552	Gasket Kt	393-3623	6I-4613	Plate-Spacer	380-7405
4W-5719	Adapter As	373-1906	5P-9553	Gasket Kit - WP	393-3624	6I-4689	Gasket-Cyl Head	377-5840
4W-5733	Adapter As-Valve	378-3975	5P-9561	Gasket Kt-V G	437-8106	6I-6425	Muffler As	386-3045
4W-5998	Rod-Valve Push	379-0168	5P-9568	Gasket Kit	393-3625	6L-2279	Plug-PTF	419-4739
4W-6805	Flywheel As	421-3325	5P-9814	Gasket Kt-VG	393-3635	6L-4714	Panel-ACL Filter	314-8532
4W-7188	Core As-OCLR	374-7501	5P-9840	Kit - Gasket-SCH	437-8140	6L-4716	Gasket-Exhaust	398-2951
4W-7382	Core As-OCLR	380-1514	5P-9841	Gasket Kit - VG	393-3626	6L-6481	Elbow-Air Inlet	311-9385
			5P-9972	Gasket Kit	393-5207	6L-8968	Coupling-Exhaust	311-9381
			5S-1220	Lifter As-Valve	387-2926			

Classic Engine Parts

Premium Part Number	Part Name	Classic Part Number
6N-0425	Coupling-Exhaust	394-9836
6N-0597	Pulley-Fan	420-6391
6N-0622	Elbow-Exhaust	380-7534
6N-0714	Pulley-Alt	264-5884
6N-0731	Muffler As-Exh	382-8018
6N-0957	Core As-Radiator	398-2938
6N-1036	Gear-Oil Pump	279-4991
6N-1186	Pulley-Belt	448-2424
6N-1218	Core As-Radiator	379-0181
6N-1553	Coupling-Exhaust	295-6422
6N-1813	Pump Gp-BFT 1 GR	330-9279
6N-1878	Muffler As	360-7883
6N-1931	Plunger	379-0171
6N-1965	Line As-F Inj	250-7535
6N-1966	Line As-F Inj	250-7536
6N-2460	Pump Gp-Eng Oil	395-1316
6N-2687	Spider As.-Fan	385-7199
6N-2789	Pulley	264-5886
6N-2820	Pump Gp-Eng Oil	415-1903
6N-3641	Pulley-Tightener	380-7536
6N-3964	Muffler As	360-7884
6N-4184	Muffler As	385-7226
6N-4597	Coupling-Exhaust	369-9489
6N-5300	Pulley-CShaft	378-3979
6N-5354	Pipe-Extension	430-8130
6N-5392	Manifold-Exhaust	394-0905
6N-5435	Ejector As-Exh	443-2663
6N-5437	Muffler As.	247-2674
6N-5967	Elbow	394-9825
6N-5978	Coupling-Exhaust	369-9487
6N-5987	Shaft-Water Pump	390-0998
6N-6015	Pump Gp-Water	453-6502
6N-6490	Bracket As-Fan	420-8569
6N-6721	Coupling	377-5830
6N-6969	Chamber As	247-3299
6N-7154	Rotocoil As	380-7556
6N-7175	Rotocoil As	382-8042
6N-7263	Gasket-Cyl Head	380-7386
6N-7295	Manifold-Exhaust	261-0903
6N-7653	Gage As-O Level	428-7206
6N-7695	Cover-Oil Pump	441-1564
6N-8645	Ejector As	388-0560
6N-8992	Adapter-Fan	394-9810
6N-9133	Gasket-Plate	398-2959
6N-9211	Core As-O Clr	435-6049
6N-9653	Core As-Oil Clr	386-3056
6N-9654	Core As-Oil Clr	435-4787
6P-2090	Base-XMSN O Fil	397-5049
6S-3975	Trunnion	396-9940
6V-0214	Kit - Gasket-MCH	437-4590

Premium Part Number	Part Name	Classic Part Number
6V-0216	Kit - Gasket-SCH	437-4589
6V-0220	Kit - Gasket(CL)	437-4588
6V-0229	Gasket Kit	437-4587
6V-0233	Kit - Gasket-T	437-4586
6V-0235	Gasket Kit	437-4585
6V-0237	Kit - Gasket-Exp	437-4584
6V-0241	Gasket Kit - F	393-3628
6V-0600	Gasket Kit	437-4583
6V-0611	Kit - Gasket-FS	437-4581
6V-1168	Gasket Kit	437-4565
6V-1181	Gasket Kit	437-4578
6V-1339	Gasket Kit	388-0651
6V-1395	Gasket Kt-VG	438-0173
6V-1785	Kit - Gasket-MCH	437-3190
6V-2209	Gasket Kit	419-4732
6V-2237	Gasket Kit	437-3212
6V-2246	Gasket Kit	391-1091
6V-2466	Kit - Gasket-FS	437-3211
6V-2502	Gasket Kit	437-3210
6V-2523	Gasket Kit	437-3209
6V-2527	Gasket Kit	387-2918
6V-2529	Gasket Kit	437-3208
6V-2539	Gasket Kit	437-3207
6V-2543	Gasket Kit	437-3206
6V-2544	Gasket Kit	437-3205
6V-2545	Gasket Kit - F	437-3204
6V-2546	Gasket Kit - F	437-3203
6V-2547	Gasket Kit - F	437-3189
6V-2580	Gasket Kt-V G	393-3637
6V-2909	Gasket Kit - F	388-0652
6V-2936	Gasket Kt-V G	387-2915
6V-2981	Gasket Kit - VG	437-3201
6V-2983	Gasket Kt	437-3213
6V-2998	Gasket Kit	437-3199
6V-3709	Gasket Kit	393-5223
6V-3736	Gasket Kt-Instl	438-0157
6V-3737	Gasket Kt-Lines	438-0171
6V-3743	Kit - Gasket Pump	438-0169
6V-3749	Gasket Kt	387-2916
6V-3751	Gasket Kt-V G	393-5222
6V-4540	Gasket Kit - WP	393-1021
6V-4714	Kit - Gasket (CL)	437-3197
6V-4785	Gasket Kit - FS	388-0661
6V-5426	Kit - Gasket-WP	438-0167
6V-5428	Kit - Gasket-OCL	386-3044
6V-5465	Gasket Kt	438-0166
6V-5467	Gasket Kt-F Sys	387-2924
6V-5468	Kit - Gasket	438-0165
6V-5495	Gasket Kt-Exp TK	393-5211
6V-5905	Gasket Kit	437-3195
6V-5918	Gasket Kit	437-3194
6V-5919	Gasket Kit	437-3193
6V-5920	Gasket Kit - F	388-0653

Premium Part Number	Part Name	Classic Part Number
6V-5976	Gasket Kit	393-5200
6V-6371	Gasket Kit	438-0164
6V-6375	Gasket Kt-Lines	438-0162
6V-6384	Kit - Gasket-WP	387-2917
6V-6385	Kit - Gasket (WP)	438-0161
6V-6894	Rebuild Kt-Pump	383-3696
6V-6896	Rebuild Kit	390-1006
6V-7266	Gasket Kt-Head	393-5212
6V-7459	Gasket Kit	391-1095
6V-7479	Gasket Kt-Cyl HD	438-0160
6V-8041	Gasket Kit	437-3191
6V-9221	Gasket Kit	391-1092
6V-9228	Gasket Kt-Cyl HD	438-0159
6V-9255	Gasket Kt	387-2913
6V-9259	Gasket Kt	393-5213
6V-9698	Gasket Kt-Pump	388-0647
6V-9725	Kit - Gasket (F)	437-3200
6V-9729	Gasket Kit - F	393-5195
6V-9736	Kit - Gasket (F)	437-3202
6V-9921	Gasket Kit	437-3236
7C-0145	Core As-OCLR	374-4720
7C-0307	Gasket	399-8571
7C-1067	Impeller-Pump	378-3980
7C-1068	Impeller-Pump	378-3981
7C-1371	Coupling-Exhaust	369-9490
7C-3039	Core As-OCLR	363-7451
7C-3729	Pulley	376-9066
7C-3862	Camshaft	458-0151
7C-3938	Pulley-Alt	433-2030
7C-5665	Elbow-90 Deg	399-8547
7C-5851	Muffler As	298-2790
7C-6398	Muffler As	360-7885
7C-6450	Pipe Gp-Ext	377-5862
7C-6628	Pulley-Alt	396-9894
7C-6976	Bearing-Conn Rod	419-6317
7C-6977	Bearing-Conn Rod	419-6316
7C-7344	Muffler As	360-7886
7C-7955	Gasket-Cover	382-6899
7C-8365	Drive Gp-Fan BSC	433-2025
7C-9222	Adapter-Inlet	430-7619
7E-0558	Bearing-Rod	419-7256
7E-0559	Bearing-Rod	419-7257
7E-0853	Muffler As	360-7887
7E-2888	Gear-Fuel Pump	397-5062
7E-2944	Muffler As	360-7888
7E-3205	Manifold-Inlet	376-9060
7E-3509	Pipe As-EX Ext	373-1907
7E-3557	Spider As-Fan	430-4471
7E-3909	Tube-Exhaust	398-8339
7E-4728	Rod As-Conn	379-8863
7E-5663	Muffler As	247-2667

Classic Engine Parts

Premium Part Number	Part Name	Classic Part Number	Premium Part Number	Part Name	Classic Part Number	Premium Part Number	Part Name	Classic Part Number
7E-5816	Shaft-Fan	399-8552	7N-3536	Gear-Fuel	279-4993	7W-0205	Core As-OCLR	379-0183
7E-5996	Rod As-Conn	379-8864	7N-4170	Pump Gp-Eng Oil	379-0169	7W-0450	Gear-Water Pump	279-4997
7E-6794	Arm As-Injector	433-0449	7N-4515	Body As-Piston	311-9346	7W-0507	Gear-Oil Pump Dr	279-4998
7E-7894	Bearing-Rod	419-7260	7N-4618	Ejector As-Exh	397-5060	7W-0508	Gear-FP Drive	296-1351
7E-8830	Bracket As-Fan	383-3697	7N-4674	Muffler As.	373-1910	7W-0561	Pump Gp-F Inj - B	432-8278
7E-8926	Head Kt-Cyl	377-5847	7N-5089	Gasket	394-0890	7W-0675	Core As-OCLR	434-4016
7E-9595	Core As-Radiator	396-9926	7N-5218	Manifold-Exhaust	435-4786	7W-1713	Core Gp-O Clr	438-2010
7E-9918	Repair Kit-Major	388-0655	7N-5219	Manifold-Exhaust	425-2362	7W-2059	Gasket-Cyl HD	380-1548
7E-9980	Camshaft	377-5851	7N-5449	Spool-Press RLF	434-2450	7W-2136	Bearing-Conn Rod	419-7281
7G-7681	Shaft As	307-1530	7N-5503	Gear-CSHft RR	233-2182	7W-2138	Bearing-Main	419-7250
7L-0103	Impeller-Pump	398-2967	7N-5511	Gear As-Idler	233-2180	7W-2164	Core As-OCLR	299-1996
7L-0104	Impeller-Pump	311-9395	7N-5539	Muffler As	360-7891	7W-3773	Pulley-CShaft	383-1583
7L-2041	Shaft-Water Pump	428-7200	7N-5810	Gear As-Idler	233-2179	7W-4070	Gear-Camshaft	380-1551
7L-4302	Gasket	420-8570	7N-5815	Gear-CSHft RR	233-2181	7W-4137	Shaft As.	378-3986
7L-8240	Bellows	419-4741	7N-5910	Impeller-Pump	314-8686	7W-4473	Manifold-EX	443-2095
7M-4046	Bearing-Sleeve	394-8206	7N-6677	Core As-O Clr	299-1995	7W-5095	Gear-Flywheel	425-9190
7M-4204	Manifold-Exhaust	261-0901	7N-7091	Line As-Fuel Inj	396-9938	7W-5164	Gasket	420-8568
7M-4358	Manifold-Exhaust	261-0907	7N-7092	Line As-Fuel Inj	396-9937	7W-5194	Muffler As.	346-5682
7M-4603	Body-Fuel Valve	311-9348	7N-7386	Gasket-Cyl Head	392-4519	7W-5426	Camshaft As.	378-3987
7M-4926	Retainer-Piston	314-8538	7N-7435	Kit-Major Repair	374-4724	7W-5435	Adapter-Nozzle	374-7493
7M-5692	Impeller-Pump	433-0791	7N-7628	Gasket	419-1811	7W-5524	Ejector As-Exh	397-5056
7M-7358	Valve-Inlet	298-2774	7N-7639	Rotator-Valve	383-1582	7W-5687	Hub-CSHft	314-8684
7M-7817	Valve-Inlet	311-9474	7N-7765	Governor As	377-5841	7W-5692	Pulley-CShaft	386-3041
7N-0061	Muffler As	360-7889	7N-7998	Plate-Block	374-7496	7W-5696	Hub-CSHft	424-5887
7N-0110	Core As-Oil Clr	319-3435	7N-8018	Seal-Water	418-1964	7W-5698	Pulley-CShaft	295-5679
7N-0113	Core As-OCLR	388-0564	7N-8021	Plate-Block	374-7497	7W-5699	Pulley-CShaft	378-3988
7N-0128	Core As-Oil Clr	299-1994	7N-8022	Gasket-Cyl Head	378-3985	7W-5733	Gasket	421-7333
7N-0165	Core As-O Clr	295-5670	7N-8117	Muffler As	247-2668	7W-5838	Ejector As-EX	443-2660
7N-0619	Pulley-Fan	383-1581	7N-8371	Line As-Fuel Inj	373-1901	7W-5844	Bearing-Conn Rod	419-4650
7N-0691	Elbow-Water Rght	378-3983	7N-8629	Coupling-Elbow	419-4664	7W-5928	Pump Gp-F Inj - B	432-8277
7N-1152	Pulley-Fan	333-4951	7N-8828	Pulley	420-6395	7W-5929	Plunger & BBL As	391-9895
7N-1183	Plunger As-Fuel	419-4742	7N-8876	Head Gp-Cyl -A	269-5290	7W-6459	Core As-OCLR	395-1313
7N-1220	Plunger As-Pump	419-4743	7N-8923	Muffler As	416-5499	7W-7181	Muffler As-RH	360-7906
7N-1275	Pulley-Fan	380-7535	7N-8957	Gear-Crankshaft	422-2652	7W-7182	Muffler As-LH	360-7907
7N-1393	Muffler As	374-7477	7N-9145	Gear-Flywheel	279-4994	7W-8064	Valve-Inlet	384-8705
7N-1572	Cover-Water Pump	377-5854	7N-9146	Gear-Fly Starter	279-4995	7W-8584	Manifold-Exhaust	396-9932
7N-1760	Ejector As	373-1914	7N-9647	Muffler As	386-3050	7W-9027	Base-Oil Cooler	399-8545
7N-2063	Shaft As-Pump	386-3055	7N-9674	Muffler As	360-7892	7W-9707	Muffler As-Eject	360-9626
7N-2834	Kit-Repair	374-4723	7N-9805	Pin-Piston	295-6438	7X-2396	Gasket Kit	393-5194
7N-2871	Line As-Fuel Inj	319-8172	7N-9810	Pin-Piston	311-9432	7X-2397	Gasket Kit	393-5193
7N-2872	Line As-Fuel Inj	319-8173	7S-3161	Lifter-Valve	279-4996	7X-2522	Gasket Kit	437-8648
7N-2874	Line As-Fuel Inj	298-2779	7S-4097	Adapter-Exh Man	383-3700	7X-2754	Gasket Kit - F	437-3235
7N-2875	Line As-Fuel Inj	298-2780	7S-4411	Cap As-Rain	373-1912	7X-2846	Gasket Kit	437-8647
7N-2876	Line As-Fuel Inj	298-2781	7S-5003	Cap As-Rain	379-0184	7X-7954	Gasket Kit	393-5204
7N-2949	Pulley	264-5887	7S-5787	Chamber As	247-3300	7X-7975	Gasket Kit	437-3233
7N-3349	Shaft As-Drive	394-0889	7S-7070	Head As-Cylinder	325-6107	7Y-1315	Pipe As-Tail	385-7209
7N-3350	Gear As-Pump Dr	319-3437	7S-7681	Pipe-Exh Ext	385-7213	7Y-1508	Muffler As	395-1303
7N-3352	Plate-Spacer	386-3062	7S-8443	Muffler	247-2675	7Y-1513	Pipe As-Exhaust	301-5249
7N-3486	Manifold-Exhaust	261-0899	7S-8736	Pipe-Ext Exhaust	382-5066	7Y-1978	Muffler As	360-7893
7N-3521	Core As-O Clr	383-3699	7W-0140	Gear-Drive	399-8546	7Y-2040	Muffler As	301-7975
			7W-0182	Plunger & BBL As	391-9893	8A-2251	Liner-Cylinder	376-9068

Classic Engine Parts

Premium Part Number	Part Name	Classic Part Number
8A-2305	Repair Kt-Major	386-3042
8C-0580	Gasket Kit - T	393-1023
8C-3467	Gasket Kit - F	437-4574
8C-4402	Gasket Kit - F	436-8393
8C-4455	Gasket Kit	436-8392
8C-4456	Gasket Kit - SCH	393-1029
8C-5704	Gasket Kit - SCH	393-1027
8C-6553	Gasket Kit	436-8390
8C-8714	Kit - Gasket-CL	436-8389
8C-8741	Kit - Gasket-(RS)	438-0172
8F-5104	Screen As-SE Pan	314-8539
8F-8523	Bearing-Sleeve	383-3701
8H-1994	Valve-Exhaust	443-1206
8H-2810	Case As-Filter	314-8512
8L-3972	Baffle	311-9345
8L-4529	Pulley-Alt	264-5889
8L-5769	Shaft-Fan	439-1137
8L-8867	Pulley	434-1409
8M-0874	Plunger As-Valve	311-9439
8N-0002	Trunnion As	314-8728
8N-0081	Trunnion	393-5196
8N-0560	Gear-O Pump Dr	378-3990
8N-0561	Gear-Pump Idler	373-1886
8N-0701	Bearing-Sleeve	419-4745
8N-0784	Manifold-Mount	393-1044
8N-0875	Valve-Exhaust	247-6893
8N-1184	Elbow-Exhaust	392-4497
8N-1187	Head Gp-Cyl -A	242-3435
8N-1188	Head Gp-Cyl -A	241-3381
8N-1188	Head Gp-Cyl -A	242-3436
8N-1594	Shield As	378-3991
8N-1616	Shield As	377-5856
8N-1619	Shield As	377-5857
8N-1620	Shield As-Manf	374-4725
8N-1622	Shield As-Manf	374-4726
8N-1628	Shaft As-F Pump	383-3703
8N-1721	Rod As-Conn	269-5291
8N-1726	Rod As-Conn	379-8866
8N-1849	Bearing-Conn Rod	379-0196
8N-1984	Rod As-Conn	242-3441
8N-2051	Compressor Gp -B	386-2063
8N-2258	Shield As-Bottom	421-1562
8N-2275	Bearing-Sleeve	311-9365
8N-2368	Shield As	449-9547
8N-2516	Bonnet-Valve	377-5858
8N-3181	Piston Gp-BASIC	250-6555
8N-3182	Body As-Piston	250-6564
8N-3183	Piston Gp-BASIC	250-6556
8N-3248	Gasket As	415-1893
8N-3251	Shaft As-RKR Arm	314-8711
8N-3304	Pulley-Tightener	419-4708

Premium Part Number	Part Name	Classic Part Number
8N-3312	Shaft As-RKR Arm	325-6200
8N-3325	Arm Gp-V Rocker	314-8623
8N-3327	Arm Gp-V Rocker	314-8624
8N-3451	Line As-Fuel Inj	390-0927
8N-3452	Line As-Fuel Inj	390-0928
8N-3453	Line As-Fuel Inj	390-0940
8N-3454	Line As-Fuel Inj	390-0930
8N-3455	Line As-Fuel Inj	390-0920
8N-3539	Plunger As-Pump	377-5861
8N-3666	Repair Kt-Major	377-5842
8N-3723	Valve-Exhaust	311-9472
8N-3753	Rod As-Conn	379-8867
8N-4110	Bearing-Sleeve	394-8207
8N-4445	Pipe-Exhaust Ext	386-3061
8N-4810	Gasket-Cyl Head	437-2046
8N-4975	Muffler As.	443-2661
8N-5385	Manifold-Exhaust	391-9835
8N-5387	Elbow-Exh Ext	373-1908
8N-5388	Muffler As	360-7895
8N-5779	Coupling-Exhaust	325-6047
8N-5884	Pulley-Fan Drive	416-5500
8N-5929	Cover-Water Pump	296-1349
8N-6004	Head As-Cyl	247-3369
8N-6308	Bearing-Conn Rod	419-7267
8N-6796	Head Gp-Cyl -A	269-5290
8N-7764	Bearing-Main	419-6310
8N-7765	Bearing-Main	419-7269
8N-7766	Bearing-Main	419-7270
8N-7771	Bearing-Conn Rod	419-7272
8N-7773	Bearing-Conn Rod	419-7274
8N-7782	Rotocoil As	383-1585
8N-7923	Bearing-Main	419-7275
8N-7924	Bearing-Main	419-7276
8N-7933	Bearing-Conn Rod	419-7280
8N-7934	Bearing-Conn Rod	419-6308
8N-8196	Adapter-Exh Manf	377-5852
8N-8220	Bearing-Conn Rod	377-5860
8N-8221	Bearing-Conn Rod	419-6377
8N-8222	Bearing-Conn Rod	419-6322
8N-8223	Bearing-Conn Rod	419-6386
8N-8225	Bearing-Main	419-6385
8N-8226	Bearing-Main	376-9081
8N-8227	Bearing-Main	376-9082
8N-8228	Bearing-Main	376-9083
8N-8229	Bearing-Main	376-9084
8N-8983	Hub-Fan Pulley	421-7227
8N-9489	Chamber As	247-3301
8N-9523	Elbow	425-2566
8N-9622	Bracket As-Fan	433-2024

Premium Part Number	Part Name	Classic Part Number
8N-9733	Line As-F Inj	319-8174
8R-1015	Support-Trunnion	374-4712
8S-0248	Breather As	325-6033
8S-0493	Shaft As-Pump	325-6198
8S-0905	Muffler As	302-2690
8S-1522	Chamber As	390-1004
8S-1523	Chamber As	388-0565
8S-1892	Gasket Kt-WP	436-8398
8S-2389	Body-Fuel Valve	377-5831
8S-2809	Muffler	247-2677
8S-3617	Chamber As	247-3302
8S-3653	Bonnet-Valve	374-4728
8S-3656	Plunger As-Pump	419-4750
8S-3970	Chamber As	242-3438
8S-3995	Gage As-Level	430-8042
8S-4996	Muffler	390-0909
8S-5438	Muffler As	360-7896
8S-6782	Adapter-Exhaust	383-1586
8S-7716	Manifold-Exhaust	295-0415
8S-7717	Manifold-Exhaust	261-0894
8S-7718	Manifold-Exhaust	295-0416
8S-9686	Gasket Kit	393-5215
8S-9698	Gasket Kit	393-5221
8T-1606	Kit - Gasket-SCH	386-3046
8T-1622	Gasket Kit - SCH	436-8388
8T-1630	Kit - Gasket-F	436-8387
8T-1631	Kit - Gasket-MCH	436-8375
8T-2455	Gasket Kit	436-8396
8T-2466	Gasket Kit	393-5199
8T-2470	Gasket Kit	393-5219
8T-2489	Gasket Kit - SCH	436-8408
8T-2499	Kit - Gasket-SCH	436-8383
8T-2500	Kit - Gasket	393-1028
8T-3383	Kit - Gasket-MCH	447-8648
8T-4870	Gasket Kit	436-8378
8T-6479	Gasket Kit	436-8377
8T-6485	Gasket Kit	436-8406
8T-6487	Kit - Gasket-SCH	436-8384
8T-9486	Gasket Kt	393-5197
8W-0328	Cylinder-Damper	419-4715
9B-1320	Valve-Check	377-5832
9H-2256	Pump Gp-F Prm	311-9443
9H-5797	Plunger As-Pump	391-9891
9H-6236	Rod As	390-0999
9L-5519	Manifold-Exhaust	392-4500
9L-5520	Manifold-Exhaust	383-1587
9L-5521	Manifold-Exhaust	396-9895
9L-5836	Coupling-Exhaust	385-7212
9L-5839	Coupling-Exhaust	374-7480
9L-7682	Valve-Inlet	385-9266
9M-4955	Pump Gp-F Tfr	242-3443
9M-5350	Spring-Valve	380-7573

Classic Engine Parts

Premium Part Number	Part Name	Classic Part Number	Premium Part Number	Part Name	Classic Part Number	Premium Part Number	Part Name	Classic Part Number
9N-0316	Bracket-Pulley	434-1993	9S-5746	Ferrule-Seal	392-4493	9Y-0238	Line As-F Inj	390-0939
9N-0773	Pulley As-Idler	398-8340	9S-6129	Pulley-Alt Drive	264-5891	9Y-1403	Muffler As	393-0930
9N-1161	Line As-Fuel Inj	383-3705	9S-6147	Body As	369-9499	9Y-1798	Seal-Water	379-0165
9N-3345	Pulley As-Idler	398-8341	9S-6743	Chamber As	247-3303	9Y-1917	Pulley-Fan	395-1311
9N-3668	Base As-Coolant	419-4718	9S-7079	Muffler As	247-2669	9Y-2148	Tube As-Exhaust	378-3995
9N-3970	Line As-Fuel Inj	390-1005	9S-7148	Cap As-Rain	378-3994	9Y-2149	Tube As-Exh	374-7481
9N-5246	Bearing-Camshaft	384-4772	9S-7534	Pipe-Exh Ext	398-2950	9Y-2150	Tube As-Exhaust	374-4729
9N-5251	Piston Gp-BSC	250-6557	9S-7788	Ring-Piston	461-5124	9Y-2151	Tube As-Exhaust	374-7482
9N-5403	Body As-Piston	250-6558	9S-8597	Spring	399-8561	9Y-2988	Breather As	361-1716
9N-5529	Body-F Inj Valve	378-3993	9S-8679	Chamber As	325-6042	9Y-2991	Bearing-Sleeve	377-5833
9N-5769	Cover-Housing	325-6050	9S-9328	Muffler	395-1308	9Y-2992	Bearing-Sleeve	325-6032
9N-5786	Lifter-Valve	457-6607	9S-9696	Spider As-Fan	383-3707	9Y-3317	Core As-Radiator	378-3996
9N-5920	Bearing-Conn Rod	419-6383	9X-2192	Gasket Kit-SCH	393-5189	9Y-3318	Core As-Radiator	374-7491
9N-6221	Crankshaft As	368-5914	9X-6560	Gasket Kit	382-5073	9Y-3969	Line As-Fuel Inj	378-3998
9N-6500	Rod-Valve Push	383-3706	9Y-0231	Line As-F Inj	390-0932	9Y-4668	Muffler As	373-1911
9S-1195	Pump As-Oil	390-1000	9Y-0232	Line As-F Inj	390-0933	9Y-5168	Manifold-Exhaust	374-7483
9S-1267	Ejector As-Exh	397-5059	9Y-0233	Line As-F Inj	390-0934	9Y-6054	Rod As-Conn	379-8868
9S-1768	Pipe-Ext Exhaust	380-7544	9Y-0234	Line As-F Inj	390-0935	9Y-7735	Bearing-Rod	419-4665
9S-2354	Manifold-Exhaust	261-0888	9Y-0235	Line As-F Inj	390-0936	9Y-8534	Support-SHFT	463-7671
9S-2355	Manifold-Exhaust	261-0891	9Y-0236	Line As-F Inj	390-0937	9Y-9431	Pre-Cleaner As	361-1718
9S-2356	Manifold-Exhaust	261-0905	9Y-0237	Line As-F Inj	390-0938	9Y-9497	Bearing-Conn Rod	441-1563

Classic Drive Train Parts

Premium Part Number	Part Name	Classic Part Number	Premium Part Number	Part Name	Classic Part Number	Premium Part Number	Part Name	Classic Part Number
OR-1628	Hub-Gear	219-2977	1P-3958	Bearing-Spl	434-6114	1T-0655	Bearing-Thrust	377-7409
OR-1635	Hub-Gear	222-1763	1P-4110	Disc-Friction	433-9858	1T-0660	Impeller-Conv	388-6595
OR-1642	Hub-Gear	219-2976	1P-4147	Bearing-Rlr As	417-4507	1T-0679	Roller-Freewheel	384-4797
OR-1643	Hub-Gear	219-2975	1P-4693	Cup-Rlr Bearing	377-7398	1T-0686	Race-Brg Thrust	380-7464
OR-1648	Hub-Gear	221-1056	1P-4694	Cone-Roller Brg	380-7504	1T-0699	Impeller-Conv	235-1808
OR-1651	Hub-Gear	211-2135	1P-4695	Cup-Rlr Bearing	374-1842	1T-0737	Race-Spl Thrust	384-4798
OR-5013	Plate-Clutch	388-0586	1P-4696	Cone-Rlr Bearing	374-1843	1T-0762	Race-Thrust	384-4803
1A-3987	Disc-Ster Cl Dr	230-7119	1P-7522	Yoke As	382-6893	1T-0781	Impeller	380-7488
1B-3922	Cup-Roller Brg	416-2158	1P-7590	Support As-FR	213-4400	1T-0782	Turbine-Conv	377-7410
1B-3924	Cone-Roller Brg	422-6482	1P-7834	Cup-Bearing	380-7500	1T-0787	Plate-Freewheel	430-8131
1B-3934	Cup-Roller Brg	392-4487	1P-7835	Cone-Bearing	377-7399	1T-0807	Race-Thrust Brg	453-3651
1B-3937	Cup-Roller Brg	377-7394	1P-7895	Cone-Roller Brg	396-4145	1T-0861	Impeller-Conv	421-1715
1B-3941	Cone-Roller Brg	422-6486	1P-8835	Shaft As	215-1672	1T-0876	Hub-Turbine	397-5058
1B-3978	Cup-Roller Brg	399-4437	1P-9593	Cone-Rlr Brg	377-7400	1T-0930	TC Gp-Basic	388-6566
1B-4038	Cup-Roller Brg	423-6988	1P-9594	Bearing-Cup	377-7401	1T-1016	Carrier-Guide	388-6584
1B-4043	Cone-Roller Brg	377-7395	1S-0057	Plate-Clutch	377-7404	1T-1033	Plate-Cl Backing	431-4136
1B-4102	Bearing-Ball	399-4426	1S-3743	Bearing-Ball	384-4786	1T-1051	Impeller-Conv	388-6598
1B-5675	Bearing	377-7396	1S-7056	Bearing-Ball	422-6483	1T-1053	Turbine As - Conv	377-7412
1B-6577	Cone-Spl Tapered	374-1839	1S-8754	Joint Gp-Univ	308-9873	1T-1078	Bearing-Thrust	384-4802
1H-4493	Cone-Spl Tapered	386-4939	1S-8764	Ring-Fly Clu Adj	226-8014	1T-1079	Hub-Impeller	416-2152
1H-5338	Cup-Roller Brg	374-8345	1S-9110	Bearing-Needle	420-2497	1T-1278	Bearing-Thrust	370-8370
1H-8937	Drum-Cl Brake	226-7993	1S-9670	Univ Jt As	443-2017	1T-1281	Retainer-Brg	390-0924
1J-2860	Cup-Spl Tapered	374-8347	1T-0020	Wheel-Turbine	297-4862	1T-1282	Race-Brg Thrust	373-1755
1J-4757	Cone-Bearing	374-1840	1T-0022	Wheel-Impeller	430-8040	1T-1331	Stat or- Converter	229-8237
1L-7205	Bearing-Ball	416-2167	1T-0043	Bearing-Ball	390-5294	1T-1333	Carrier As	445-9250
1L-7319	Cup-Roller Brg	380-7499	1T-0051	Wheel-Impeller	388-6582	1T-1348	Support As-Carr	419-4049
1M-0176	Flange-Drum	223-4810	1T-0079	Wheel-Turbine	382-6894	1T-1386	Yoke-Univ Joint	325-6239
1M-1947	Support As	226-6096	1T-0210	Bearing-Ball	417-4498	1T-1389	Carrier-Bearing	247-4124
1M-1994	Bearing As-Rlr	399-6066	1T-0221	Wheel-Turbine	390-5268	1T-1399	Impeller-Conv	391-9829
1M-4095	Bearing-Inner	417-9486	1T-0231	Retainer-Bearing	319-3471	1T-1401	Ring-Seal	384-4799
1M-4167	Shaft-Planet	219-9700	1T-0237	Flange As-Output	239-7929	1T-1428	Retainer-Brg	300-2587
1M-6573	Cup-Roller Brg	399-4438	1T-0256	Gear-Pump Drive	239-7930	1T-1446	Impeller-Conv	377-7413
1M-7912	Cone-Roller Brg	380-7503	1T-0299	Cup-Roller Brg	422-6494	1T-1494	Impeller-Conv	388-6564
1M-8736	Cup-Roller Brg	423-7759	1T-0334	Bearing-Ball	380-1476	1T-1562	Wheel As-Guide	388-6580
1M-8776	Bearing-Roller	417-4516	1T-0364	Flange-Joint	388-6567	1T-1607	Spider As	434-9637
1M-8923	Race-Brg Outer	440-3117	1T-0365	Flange-Joint	434-1861	1T-1647	Impeller-Conv	377-7415
1M-9177	Plate-Cl Press	226-6112	1T-0406	Wheel-Impeller	384-3854	1T-1691	Impeller-Conv	297-4863
1M-9444	Retainer-Spring	299-2046	1T-0421	Flange As-Output	295-5442	1T-1701	Carrier-Stat or	384-3853
1P-0579	Housing As	219-9678	1T-0437	Housing-Rotating	295-5685	1T-1804	Stat or As - Conv	388-0572
1P-0623	Bearing	420-3224	1T-0438	Retainer-Bearing	295-0410	1T-1805	Turbine-Conv	380-1490
1P-1897	Gear-Final Drive	215-1670	1T-0441	Bearing-Ball	449-4738	1T-1880	Carrier-Ring	295-0408
1P-1943	Gear-Idler & First	446-3067	1T-0443	Carrier As-Guide	247-3368	1T-1981	Stat or As - Conv	377-7416
1P-2636	Cup-Roller Brg	396-4147	1T-0521	Retainer-Bearing	325-6180	1T-1987	Housing-Rotating	297-4864
1P-2662	Cone-Roller Brg	374-1851	1T-0555	Carrier-Gde Whl	384-3853	1T-1988	Shaft-Output	428-6656
1P-2694	Cone-Rlr Brg	374-1841	1T-0589	Cup-Roller Brg	386-4942	1T-1991	Stat or As - Conv	380-1482
1P-2695	Cup-Rlr Brg	374-8344	1T-0595	Carrier-Wheel	239-7939	1T-1993	Wheel-Turbine	235-0920
1P-2696	Cone-Bearing	374-1834	1T-0610	Bearing-Ball	396-4136	1T-2041	Carrier As	396-9893
1P-3934	Cup-Roller Brg	420-6535	1T-0611	Converter As-Tor	235-1804	1T-2050	Carrier As-Stat	325-6040
1P-3935	Cone-Roller Brg	377-7397	1T-0633	Impeller-Conv	390-5266	1T-2052	Stat or As.	295-5683
						1U-0145	Bearing-Thrust	417-9482

Classic Drive Train Parts

Premium Part Number	Part Name	Classic Part Number	Premium Part Number	Part Name	Classic Part Number	Premium Part Number	Part Name	Classic Part Number
1V-0188	Disc	386-4943	2L-4444	Bearing	419-6029	2S-3443	Drum-Steer Cl	230-7113
1V-5724	Diff Gp -A	260-0776	2L-5271	Bearing-Ball	371-4305	2S-3803	Gear	226-6106
1V-8280	Plate	382-6889	2M-1086	Plate As-Press	226-8023	2S-3804	Gear-Sliding	226-6107
1V-8604	Gear-Ring	308-9853	2M-1149	Race-Brg Outer	418-9615	2S-3946	Gear-Final Drive	215-1678
1V-8606	Gear-Sun	308-9860	2M-4668	Retainer-Guard	297-4867	2S-4357	Pinion-Fdr	217-7706
1W-4506	Adapter-Seal	372-7515	2M-5685	Bearing	380-7469	2S-4365	Retainer As	216-3554
2A-4576	Cup-Roller Brg	386-4944	2M-6984	Drum-Cl Driven	239-7946	2S-4900	Shaft As	384-4792
2A-4577	Cone-Roller Brg	374-1836	2M-8714	Cone-Roller Brg	420-2492	2S-5735	Plate-Clutch	398-2964
2B-8824	Drum	216-7817	2M-8912	Disc-Ster Cl Dr	393-3649	2S-6344	Gear-Final Drive	297-7173
2D-1345	Drum-Brake	228-9430	2N-2139	Cone-Roller Brg	415-1911	2S-6401	Cup-Roller Brg	380-7497
2D-2566	Ring-Lock	416-2123	2N-3253	Cup-Roller Brg	420-2493	2S-7062	Shaft-Sprocket	219-9673
2D-2654	Ring-Lock	380-1488	2N-3254	Cone-Roller Brg	380-7501	2S-7527	Flange-Drum	213-8163
2D-2978	Spider & Brg As	399-4424	2P-1370	Cup-Rlr Brg	384-5921	2S-7596	Retainer	215-1679
2D-3188	Yoke	365-8822	2P-1373	Cup-Rlr Brg	382-5075	2S-7603	Drum-Steer Cl Dr	213-6951
2D-5658	Bearing-Ball	301-4628	2P-1374	Cone-Rlr Brg	374-1844	2S-7917	Gear-Pump Dr	247-4119
2D-6421	Bearing-Outer	417-4510	2P-1503	Gear-First	213-8637	2V-1074	Shaft-Planet	364-5262
2D-6511	Cup-Roller Brg	377-7417	2P-1604	Piston-Ster Cl	219-9694	2V-3687	Gear-Diff Bevel	308-9849
2D-6516	Bearing As-Rlr	435-2572	2P-1605	Pilot-Cl Piston	219-9695	2V-4148	Shaft-Planet	388-6579
2D-9191	Cone-Roller Brg	374-1837	2P-2811	Race-Spl Rlr Brg	417-4528	2V-4374	Joint Gp-Slip	308-9872
2D-9453	Cone-Roller Brg	380-7508	2P-2922	Gear-Transfer	219-9679	2V-4734	Gear-Diff Ring	417-9474
2D-9454	Cup-Roller Brg	415-1914	2P-2923	Gear-Transfer	219-9680	2V-5608	Shaft-Pin(Bevel)	446-3056
2D-9455	Cone-Roller Brg	415-1915	2P-3422	Gear-First Red	213-8451	2V-5709	Shaft-Axle	299-2056
2D-9457	Cone-Spl Tapered	377-7418	2P-3423	Pinion-Sec Redc	216-3553	2V-5714	Gear-Ring	288-8716
2F-5721	Bearing-Ball	311-9354	2P-3424	Gear-First Red	215-1675	2V-5722	Carrier-Planet	297-7164
2F-7576	Shaft-Sprocket	226-6071	2P-3425	Pinion-Sec Red	217-7697	2V-6220	Shaft-Planet	221-9073
2F-8509	Cone-Roller Brg	399-4434	2P-3598	Shaft-Output	215-1676	2V-6221	Shaft-Planet	221-9108
2G-1085	Housing As-Diff	393-0928	2P-3669	Pinion-Bevel	215-1677	2V-7170	Yoke	308-9948
2G-5768	Gear-Bevel	388-0646	2P-4363	Housing-Clutch	391-9833	2V-7990	TUBE As	373-5382
2G-6336	Hub-Brake	282-6551	2P-4364	Housing As-Cl	396-9928	3B-3967	Race-Roller Brg	386-4947
2G-6339	Hub-Brake	430-7621	2P-4370	Plate-Clutch	325-6166	3B-4124	Cup-Spl Tapered	422-6481
2G-6375	Shaft-Drive	275-5282	2P-4404	Housing As-Cl	226-8027	3B-8845	Bearing-Inner	417-4509
2G-6377	Sprocket	275-5286	2P-4429	Shaft As-Planet	384-4828	3D-5315	Pinion-Dif Bevel	308-9856
2H-3517	Bearing-Inner	417-4505	2P-4431	Gear-Ring	394-9832	3D-9126	Cup-Roller Brg	399-4435
2H-3712	Bearing-Ball	392-4488	2P-4432	Gear-Ring	418-9583	3D-9132	Cone-Roller Brg	453-3652
2H-4338	Plate-Pressure	226-8010	2P-4433	Gear-Ring	384-4787	3D-9133	Cup-Roller Brg	418-9601
2H-4482	Collar	229-8218	2P-4440	Gear	434-4386	3E-4880	Coupling As	417-9465
2H-6489	Race-Brg Outer	374-8350	2P-4470	Turbine-Conv	390-0910	3F-1972	Retainer As	226-7988
2H-6936	Disc-Steer Cl Dr	380-7471	2P-4510	Piston-Clutch	275-5293	3F-3049	Cone-Roller Brg	418-9600
2H-9192	Bearing-Ball	394-8236	2P-5680	Turbine-Conv	308-9942	3F-6492	Ballstud	388-0588
2J-2152	Cup-Roller Brg	374-1852	2P-5769	Coupling	394-9812	3G-3521	Bearing	380-7513
2J-5233	Bearing-Thrust	388-0578	2P-5861	Housing As-Rot	430-8128	3G-5337	Bearing-Spher	418-9602
2K-3632	Yoke As	297-4866	2P-7032	Spacer-Bearing	396-4138	3H-1996	Bearing-Ball	380-1498
2K-5065	Cone-Roller Brg	416-2157	2P-8986	Cup-Rlr Bearing	415-1912	3J-3493	Ballstud	256-4832
2K-5066	Cone-Roller Brg	396-4142	2P-8987	Cone-Rlr Bearing	374-1845	3K-0526	Bearing-Ball	386-4949
2K-5069	Cup-Roller Brg	374-8346	2P-9037	Drum-Ster Clutch	219-9696	3K-2230	Gear-Planet	219-9658
2K-5103	Cone-Roller Brg	380-7505	2P-9038	Drum-Cl Driven	216-7821	3K-4290	Rod End	374-1823
2K-5254	Bearing-Outer	377-7419	2P-9314	Disc As-Clutch	384-4791	3K-7020	Gear-Planet	221-9074
2K-5804	Rod End-Spher	416-2151	2P-9660	Gear	226-5995	3K-7110	Gear-Planet	253-1435
2K-8753	Pinion-Bevel	253-1432	2R-0524	Cone-Bearing	422-6484	3L-1425	Bearing-Ball	311-9356
2K-9295	Cone-Spl Tapered	422-6480	2S-0479	Bearing-Cone	380-7506	3L-9409	Cup-Roller Brg	399-4436
			2S-1477	Holder As-Cage	226-7985	3L-9410	Cone-Spl Tapered	391-9899

Classic Drive Train Parts

Premium Part Number	Part Name	Classic Part Number
3N-6411	Cup-Rlr Bearing	423-7759
3N-8463	Bearing-Roller	394-9193
3P-0296	Gear	416-2149
3P-0297	Shaft As	275-5297
3P-0298	Carrier-Input	384-5922
3P-0329	Drum As-Gear	380-7484
3P-0726	Shaft As	275-5298
3P-0786	Coupling	433-0440
3P-0801	Plate-Clutch	383-2119
3P-0894	Shaft As-Planet	302-3446
3P-0895	Bearing-Spl Ball	394-9184
3P-0951	Bearing-Spl Ball	416-2159
3P-1210	Cone-Roller Brg	399-4433
3P-1609	Carrier-Planet	302-4292
3P-1651	Piston As	302-4296
3P-1686	Plate-Clutch	388-0586
3P-1687	Plate-Clutch	428-6658
3P-1691	Housing As	432-5219
3P-1697	Coupling	390-0911
3P-2414	Housing-Clutch	391-9831
3P-2415	Carrier-Planet	396-0653
3P-2564	Race-Brg Outer	417-9480
3P-2582	Bearing-Spl Ball	417-9478
3P-2685	Piston-Clutch	308-9908
3P-2759	Carrier-Planet	394-9820
3P-2761	Housing-Clutch	430-8994
3P-2822	Retainer	422-3509
3P-2852	Clutch-Hub	301-4902
3P-2854	Shaft As-Clutch	416-2127
3P-2855	Plate-Clutch	377-7422
3P-2863	Gear-Idler	399-6044
3P-2871	Case-Final Drive	398-2939
3P-2872	Case-Final Drive	390-5296
3P-2983	Gear-Sun	417-9468
3P-3059	Gear-Sun	308-9861
3P-3208	Flange-Joint	301-4647
3P-3241	Plate-Pressure	325-6167
3P-3242	Shaft-Planet	308-9923
3P-3245	Shaft-Planet	308-9924
3P-3246	Shaft-Planet	308-9925
3P-3735	Housing As	391-9830
3P-3738	Housing As	385-7196
3P-3739	Carrier As	431-4032
3P-4265	Piston-Clutch	397-5063
3P-5349	Piston As	275-5292
3P-5672	Yoke	223-6313
3P-5736	Hub-Gear	219-2975
3P-5737	Shaft As-Clutch	275-5273
3P-5754	Hub-Gear	219-2976
3P-5955	Disc-Friction	428-7205
3P-6318	Flange-Drum	213-8165
3P-6584	Hub-Gear	221-1056

Premium Part Number	Part Name	Classic Part Number
3P-7042	Housing-Clutch	390-0912
3P-7489	Plate-Clutch	377-7423
3P-7640	Gear-Ctrshft	325-6093
3P-7641	Gear-Ctrshft	325-6094
3P-7643	Gear-Pinion Shft	302-2669
3P-8393	Plate-Clutch	388-0592
3P-9366	Piston-Clutch	391-9861
3P-9394	Shaft-Planet	215-1680
3S-0040	Plate-Clutch	384-4796
3S-0044	Plate-Clutch	377-7424
3S-1167	Gear-Planet	221-9101
3S-1404	Bearing-Outer	417-4508
3S-1691	Disc-Steer Cl Dr	302-2705
3S-4646	Bearing-Roller	419-2302
3S-7153	Gear-Sliding	227-0024
3S-7504	Gear-Idler	226-6084
3S-7987	Shaft-Planet	226-6074
3S-8055	Bearing-Inner	433-7506
3S-8634	Hub-Gear	219-2977
3S-9669	Bearing	416-2168
3S-9919	Shaft As	239-7959
3T-1407	Disc-Friction	392-4516
3T-1898	Drum	219-9674
3T-1899	Drum	219-9690
3T-1921	Drum-Cl Inner	229-8227
3T-2139	Housing As-Cl	394-2583
3T-2145	Carrier As	325-6041
3T-4008	Gear-Planet	295-5444
3T-4011	Shaft As-Planet	295-5698
3T-4384	Housing As-Cl	435-2573
3T-4568	Shaft-Planet	314-8712
3T-4824	Gear-Planet	295-5699
3T-5021	Carrier-Planet	295-5700
3T-5100	Hub-Impeller	451-9022
3T-5102	Impeller-Conv	416-2125
3T-5200	Carrier-Planet	295-5701
3T-5419	Impeller-Conv	416-2144
3T-5929	Gear	288-8718
3T-6175	Gear-Transfer	398-8351
3T-6176	Gear-Transfer	398-8350
3T-8904	Yoke As	443-2056
3T-9960	Disc-Friction	417-9487
3V-0593	Rim As	418-9568
3V-4046	Plate-Pressure	380-7470
3V-5148	Pinion-Swing Gr	231-0251
3V-5317	Gear	231-0010
3V-7065	Plate	380-1487
3W-5159	Plate-Parking Bk	391-9904
3W-5501	Gear-Planet	288-8719
3W-6551	Shaft	295-5702
3W-6555	Shaft	295-5703
3W-8570	Bearing	416-2136

Premium Part Number	Part Name	Classic Part Number
4B-7255	Cone-Bearing	386-4951
4B-7270	Cone-Bearing	399-4439
4B-9373	Cone-Roller Brg	399-4440
4B-9374	Bearing-Cup	380-7494
4D-2156	Bearing As-Rlr	422-6485
4D-2619	Bearing	417-4494
4D-3882	Cone-Roller Brg	399-6060
4D-4065	Rod End-Spher	374-1824
4D-4324	Cone-Spl Tapered	420-6534
4D-4325	Cup-Spl Tapered	420-6533
4D-6664	Coupling-Shaft	243-0338
4D-6926	Segment-Control	228-9455
4D-7534	Bearing As-Rlr	441-5602
4E-0403	Gear-Planet	260-0781
4E-0752	Joint Gp-Univ	435-0197
4E-2138	Gear-Sun	399-4401
4E-2165	Gear-Sun	376-9070
4E-2166	Carrier-Planet	373-5383
4E-2168	Piston	375-2623
4E-3604	Joint Gp-Univ	421-5542
4E-3751	Yoke As	451-0750
4E-7717	Shaft-Sprocket	432-6606
4E-8534	Retainer-Seal	300-2588
4E-8535	Retainer-Seal	300-2589
4E-9426	Collar	231-0000
4E-9658	Joint Gp-Slip	452-9553
4F-2041	Cup-Roller Brg	418-9609
4F-2393	Bearing-Ball	380-1499
4H-4021	Plate As-Loading	229-8219
4J-1999	Ballstud	314-8625
4K-0255	Retainer As	226-6102
4K-1328	Drum-Ster Cl Dr	216-7840
4K-6212	Shaft-Bev Pinion	223-4806
4K-6736	Drum-Brake	223-6320
4K-7269	Support-Trun-Frt	299-2067
4K-7270	Support-Trunnion	373-5384
4K-7420	Retainer	297-7234
4K-7467	Bearing As-Rlr	380-1500
4K-7556	Yoke	385-6118
4K-9598	Retainer	297-7235
4M-3915	Bearing-Caged	377-7427
4M-5226	Bearing-Ball	399-6061
4M-5858	Bearing-Spl Ball	417-4495
4M-6107	Bearing-Roller	380-7507
4N-0432	Bearing-Ball	417-4499
4S-5891	Plate-Clutch	388-0575
4S-5943	Piston-Clutch	221-9112
4S-6189	Pinion-Reverse	226-6077
4S-6707	Piston-Clutch	215-1686
4S-8005	Pinion-Fdr	226-6076

Classic Drive Train Parts

Premium Part Number	Part Name	Classic Part Number	Premium Part Number	Part Name	Classic Part Number	Premium Part Number	Part Name	Classic Part Number
4S-8530	Shaft-Planet	221-9111	5C-8584	Gear-Planet	231-0006	5M-6208	Gear-Ring	247-4121
4S-8534	Shaft As-Planet	221-9116	5D-2989	Bearing	380-7511	5M-6210	Shaft-Planet	219-9683
4S-8538	Bearing-Spl Ball	417-4502	5D-4799	Bearing-Roller	416-2160	5M-6211	Shaft-Planet	219-9684
4S-8670	Shaft-Planet	300-2590	5D-6296	Cone-Spl Tapered	399-6062	5M-6636	Support-Frame	235-8007
4S-8687	Piston-Clutch	226-8008	5D-6298	Cup-Spl Tapered	399-6063	5M-6651	Hub-Gear	211-2135
4S-8708	Housing-Clutch	216-3557	5D-6657	Race-Spl	417-4530	5M-6670	Shaft-Sprocket	216-7847
4S-9325	Race-Spl Rlr Brg	418-9590	5D-6659	Bearing	417-4511	5M-7342	Flange-Shaft	215-1696
4S-9326	Bearing	417-4506	5D-7449	Cup-Spl Tapered	416-2161	5M-7344	Gear-Fifth	213-8741
4S-9782	Race & Roller As	385-3779	5D-8153	Shaft-Drive	421-8180	5M-7841	Gear-Ring	214-0525
4S-9783	Race-Rlr Bearing	418-9589	5D-9675	Spider	394-9203	5M-7869	Gear-Ring	214-0530
4T-1684	Bearing	377-7428	5D-9906	Shaft-Axle	228-9413	5M-7875	Carrier-Front	213-4495
4T-5495	Ballstud	314-8626	5F-1248	Cone-Roller Brg	399-4441	5M-7882	Joint Gp-Univ	297-7210
4V-0092	Hub As	396-9934	5F-2465	Cup-Roller Brg	447-8060	5M-7923	Shaft-Output	215-1697
4V-0093	Gear-Planet	394-9826	5F-2830	Bearing-Needle	384-5925	5M-7925	Bearing-Roller	419-7774
4V-0094	Shaft-Planet	380-1486	5F-8651	Bearing-Ball	420-3223	5M-7936	Bearing-Outer	386-4953
4V-2057	Bearing-Spher	419-6019	5G-5846	Pinion	418-9585	5M-9644	Bearing-Outer	384-5929
4V-2518	Shaft	297-7243	5G-8708	Drum	384-4794	5N-1932	Shaft-Clutch	425-0216
4V-2744	Gear	224-1303	5H-0047	Disc-CI Drive	388-0576	5P-0403	Bearing-Roller	420-6542
4V-3396	Hub-Gear	222-1763	5H-5500	Collar-Fly CI	302-2704	5P-1370	Bearing As-Rlr	416-2164
4V-3842	Support-Trunnion	396-9935	5J-6424	Bearing-Aligning	416-2135	5P-1949	Cup-Rlr Bearing	415-1916
4V-4483	Plate-Lock	396-9933	5J-9348	Bearing As	416-2162	5P-2448	Bearing-Ball	399-6064
4V-4852	Piston	433-0452	5J-9451	Bearing	374-8338	5P-2503	Cup-Rlr Bearing	384-5930
4V-5100	Support-Trunnion	299-2068	5K-1068	Retainer-Seal	260-0786	5P-2504	Cone-Rlr Bearing	420-6541
4V-5213	Spindle	299-2060	5K-2294	Bearing	396-9912	5P-2526	Cup-Rlr Bearing	380-7498
4V-5388	Shaft-Bev Pinion	297-7244	5K-3171	Plate-Coupling	417-9475	5P-3489	Race-Brg Outer	396-9905
4V-5392	Spider	377-7430	5K-3929	Bearing As-Rlr	416-2163	5P-3490	Cone-Rlr Bearing	380-7518
4V-5393	Gear-Bevel	297-7189	5K-3967	Yoke As	308-9946	5P-3930	Bearing As-Rlr	419-6022
4V-5394	Gear-Diff	297-7177	5K-8591	Bearing-Outer	380-7502	5P-4992	Bearing-Ball	380-1507
4V-6527	Disc	376-9050	5L-2030	Cone-Roller Brg	418-9614	5P-5044	Race-Brg Outer	417-9479
4V-7082	Joint Gp-Slip	367-6068	5L-2031	Cup-Roller Brg	384-5927	5P-5045	Bearing-Spl Ball	415-1917
4V-7543	Retainer	281-1699	5L-5772	Race & Roller As	394-9200	5P-5066	Bearing-Outer	416-2165
4V-7545	Gear-Ring	394-9823	5L-6326	Bearing-Ball	420-3222	5P-5067	Race-Spl Rlr Brg	396-4137
4V-7725	Piston	394-2581	5L-9656	Cone-Bearing	399-4448	5P-5167	Race-Brg Outer	417-4529
4V-8534	Shaft-Planet	281-1700	5M-0549	Gear-Trans	215-1689	5P-5354	Cup-Rlr Bearing	399-4445
4V-8535	Hub As	423-9669	5M-0578	Bearing	419-7775	5P-5410	Bearing-Spl Ball	396-4134
4V-8538	Gear-Ring	288-8720	5M-1988	Piston-Steer CI	219-9691	5P-5411	Race-Brg Outer	417-9481
4V-8611	Yoke As	418-9567	5M-1990	Pilot-CI Piston	229-8233	5P-6254	Bearing	420-2495
4V-9577	Shaft-Planet	231-0001	5M-2051	Bearing-Caged	380-7467	5P-7487	Bearing-Aligning	434-3300
4W-1203	Cup-Rlr Brg	418-9603	5M-2054	Bearing	380-7510	5P-7802	Bearing-Aligning	420-2496
4Y-0709	Disc-Friction	377-7431	5M-3499	Shaft-Planet	319-3475	5P-7807	Bearing-Ball	314-8502
5A-4003	Shaft-Sprocket	229-8228	5M-3941	Shaft-Planet	215-1691	5P-8043	Bearing-Cone	423-6989
5A-5740	Gear-Sliding	229-8229	5M-3942	Shaft-Planet	215-1692	5P-8876	Cup-Rlr Bearing	416-2170
5A-7840	Shaft-Tr Sprkt	215-1687	5M-3996	Gear-Ring	214-0527	5P-9176	Bearing	396-4141
5A-9551	Gear-FinalDrive	226-7979	5M-4427	Gear-Sun	214-0529	5P-9177	Race-Brg Inner	396-4139
5C-0857	Plate-Mating	376-3624	5M-5018	Bearing-Roller	380-7509	5P-9301	Bearing-Spl Ball	417-4496
5C-1834	Gear	231-0002	5M-5073	Joint Gp-Univ	325-6113	5P-9439	Bearing-Spl Ball	371-4306
5C-3712	Gear	231-0003	5M-6120	Gear-Sun	213-8740	5P-9505	Cone-Roller Brg	420-6540
5C-3714	Gear	231-0222	5M-6126	Bearing	377-7433	5P-9514	Bearing-Ball	417-9467
5C-3715	Gear	231-0223	5M-6198	Shaft-Planet	215-1694	5P-9531	Cone-Rlr Bearing	386-4956
5C-3717	Gear	231-0225	5M-6199	Shaft As-Planet	215-1694			

Classic Drive Train Parts

Premium Part Number	Part Name	Classic Part Number	Premium Part Number	Part Name	Classic Part Number	Premium Part Number	Part Name	Classic Part Number
5P-9538	Bearing-Roller	421-8183	6I-8132	Pinion	226-6080	6S-3203	Drum-Ster Cl	388-0590
5P-9769	Cone-Rlr Bearing	422-6486	6I-8500	Plate-Clutch	377-7436	6S-3397	Shaft-Ster Cl	388-6593
5P-9962	Bearing-Aligning	399-4397	6I-8510	Housing As - Clu	373-5387	6S-3398	Drum-Cl Driving	390-5279
5S-0192	Pinion-Fdr	215-1698	6I-8642	Race-Brg Outer	396-9898	6S-3976	Bearing	388-0589
5S-0464	Gear-First Red	216-7852	6I-8849	Cone-Rlr Bearing	415-1919	6S-6009	Yoke-Univ Joint	446-3070
5S-4442	Bearing-Spl Ball	419-6025	6I-8860	Cup-Roller Brg	380-7495	6S-6031	Cup-Rlr Brg	415-1920
5S-4863	Holder As-Cage	215-1732	6I-9103	Bearing-Outer	421-8182	6S-6032	Cone-Rlr Brg	415-1921
5S-6531	Holder As-Cage	214-2078	6I-9507	Piston-Clutch	417-9470	6S-6902	Spider & Brg As	390-5280
5S-6978	Shaft-Planet	221-9103	6I-9508	Piston-Clutch	390-5274	6T-0064	Shaft-Planet	295-6442
5S-7010	Shaft-Planet	221-9104	6I-9509	Plate	398-2960	6T-0239	Piston	418-9591
5S-7877	Bearing-Spl Ball	392-4491	6I-9808	Bearing-Ball	417-9484	6T-0243	Plate-Thrust	325-6169
5S-7894	Flange As	216-7854	6K-2034	Shaft	297-7249	6T-1705	Shaft-Pump Drive	283-5201
5S-8767	Gear-First	226-6085	6K-2707	Plate-Lock	319-3470	6T-1996	Plate-Clutch	368-0117
5T-0975	Camshaft-Brake	422-4935	6K-3674	Shaft-Bev Pinion	253-1427	6T-2975	Retainer	420-3219
5T-0999	Camshaft-Brake	422-4934	6K-4442	Rod End-Special	373-5388	6T-3080	Plate-Cl & Brake	325-6170
5T-1362	Univ Joint As-5C	325-6011	6K-4597	Yoke As	446-3069	6T-3324	Housing As-Cl	391-9827
5T-5157	Camshaft-LH	394-9189	6K-4599	Yoke As	385-6111	6T-3726	Carrier As	390-5269
5T-5158	Camshaft-RH	394-9190	6K-4600	Yoke	226-5993	6T-4481	Shaft-Planet	221-7946
5T-5682	DriveR	418-9579	6K-4617	Shaft-Sprocket	221-7951	6T-5383	Gear-Ring	375-2624
5T-8739	Spider Gp-Brg&	373-5386	6K-5528	Cup-Roller Brg	447-8059	6T-6779	Housing As-Clu	398-2962
5V-1168	Spider & Brg As	377-7435	6K-5625	Gear-Bevel	253-1438	6T-7882	Gear-Planet	296-1352
5V-1274	Spider	385-6110	6K-5745	Retainer-Bearing	330-9281	6T-8250	Retainer	319-3473
5V-4573	Disc	388-0591	6K-5746	Bearing-Roller	417-4503	6T-8886	Disc-Ster Cl	380-7517
5V-5917	Pinion-Diff	297-7224	6K-7356	Yoke As	330-9296	6V-0327	Cup-Rlr Brg	399-4444
5V-6125	Diaphragm	384-5931	6K-8088	Bearing-Roller	399-4428	6V-0328	Cone-Rlr Brg	399-4442
5V-6327	Yoke-Flange Bk	391-1086	6K-8275	Cone-Roller Brg	399-6070	6V-0329	Cone-Rlr Brg	396-4142
5V-6328	Yoke As	451-9035	6L-3353	Rod End-Special	416-2134	6V-0330	Cup-Rlr Brg	422-6487
5V-7222	Gear-Final Drive	231-0237	6P-0169	Hub-Fly Clutch	297-7204	6V-0347	Cone-Spl Tapered	420-6537
6B-3223	Cup-Bearing	399-6065	6P-0236	Guide-Lever	422-6475	6V-0456	Bearing As-Rlr	435-4041
6B-5163	Bearing	417-4514	6P-0549	Guard -Fdr Wear	223-4812	6V-0538	Bearing-Spl Ball	398-2935
6B-7178	Fork-Band Adj	299-2009	6P-0593	Bearing-Roller	386-4959	6V-0662	Cup-Rlr Brg	420-6539
6C-0739	Carrier As	231-0012	6P-0748	Carrier-Planet	373-5389	6V-0664	Cone-Rlr Brg	423-6990
6C-3500	Shaft-Bev Pinion	384-4788	6P-2233	Gear-Planet	281-1690	6V-0832	Cone-Rlr Bearing	453-3654
6C-5062	Pinion	231-0016	6P-2234	Gear-Planet	380-1479	6V-1013	Bearing	396-4140
6D-0738	Pinion-Dif Bevel	394-9840	6P-2473	Gear-Ring	449-9834	6V-1014	Race-Spl Rlr Brg	416-2173
6D-1734	Cup-Roller Brg	416-2171	6P-2776	Gear-Final Drive	217-7718	6V-1033	Rod End-Spher	375-5444
6D-2348	Disc-Friction	380-7489	6P-2923	Yoke As	382-6891	6V-1781	Bearing-Spl Ball	380-1508
6D-4671	Ballstud	420-6530	6P-3593	Support	229-8231	6V-2202	Bearing-Spl Ball	380-1574
6F-2956	Cup-Spl Tapered	420-6538	6P-3597	Retainer	222-1770	6V-4350	Race-Spl Rlr Brg	384-5933
6G-0387	Disc	394-2579	6P-3735	Shaft-Planet	368-0103	6V-4582	Bearing-Ball	380-1504
6G-0389	Spider	384-4800	6P-3904	Retainer-Bearing	396-0644	6V-5003	Bearing-Aligning	420-2498
6G-0400	Shaft-Drive	399-4403	6P-5404	Plate-Cl & Brake	325-6168	6V-5413	Gasket Kit	390-5291
6G-2707	Shaft-Axle	422-2650	6P-6739	Shaft-Planet	308-9929	6V-5414	Gasket Kit	434-7289
6G-2749	Camshaft	422-4933	6P-7742	Shaft-Planet	281-1695	6V-7476	Kit-DT Gasket	390-5282
6G-2750	Camshaft	422-4927	6P-7743	Shaft-Planet	281-1696	6W-1958	Element	390-5284
6G-5704	Piston	394-9838	6P-7968	Plate-Clutch	416-2133	6W-2899	Shaft-Pinion	446-3057
6G-7213	Carrier-Planet	396-9936	6P-8003	Gear-Planet	281-1689	6W-3662	Ring-Drive	446-3079
6H-2577	Spider Gp-Brg&	333-4954	6P-8005	Gear-Planet	281-1691	6W-4281	Yoke-Flange	308-9949
6H-3566	Cone-Bearing	415-1918	6S-2828	Cup-Roller Brg	384-5932	6W-4751	Yoke As	398-8337
6H-3957	Bearing-Ball	311-9358	6S-3051	Cup-Rlr Brg	415-1928	6W-4755	Joint Gp-Univ	396-9924
6I-3907	Adapter-Pilot	398-8348	6S-3158	Yoke	380-1478			

Classic Drive Train Parts

Premium Part Number	Part Name	Classic Part Number	Premium Part Number	Part Name	Classic Part Number	Premium Part Number	Part Name	Classic Part Number
6W-4789	Shaft Gp-Drive-D	452-0444	7D-8348	Cup-Rlr Brg	384-5939	7G-7218	Carrier-Planet	283-5205
6W-7290	Shaft-Planet	308-9930	7D-8349	Cone-Rlr Brg	419-6074	7G-7610	Gear-Ring	375-2625
6Y-0579	Coupling	434-9636	7D-8354	Sprocket	398-8335	7G-7611	Gear-Ring	398-2925
6Y-0926	Gear-Planet	295-6427	7D-8434	Disc	377-7443	7G-7724	Piston-Clutch	283-5206
6Y-0984	Gear-Ring	295-6428	7D-8437	Cone-Roller Brg	380-1502	7G-9555	Univ Joint As	314-8721
6Y-1031	Cone-Rlr Bearing	434-5098	7D-8636	Cone-Bearing	418-9606	7H-1318	Coupling-Ster Cl	226-8002
6Y-1032	Cup-Rlr Bearing	434-5097	7D-8637	Cup-Bearing	418-9607	7H-4566	Cup-Roller Brg	399-6068
6Y-1084	Impeller-Conv	380-1477	7D-9267	Yoke	330-9297	7H-6967	Bearing-Ball	422-6489
6Y-1089	Turbine-Conv	385-6112	7F-2742	Bearing-Ball	422-6488	7H-7628	Bearing	453-3655
6Y-1090	Stat or-Converter	385-6113	7F-7780	Pin-Anchor	384-4825	7I-4187	Yoke-1550	380-1510
6Y-1320	Plate-Clutch	384-5935	7G-0437	Plate-Clutch	417-9466	7I-5399	Shaft	421-8178
6Y-1603	Housing-Clutch	438-1818	7G-2037	Joint Gp-Univ	226-8017	7J-1309	Bearing-Aligning	360-2275
6Y-2027	Disc-Friction	377-7441	7G-2474	Gear-Planet	300-2577	7J-3216	Bearing	368-0104
6Y-2539	Cone-Roller Brg	464-4050	7G-2475	Gear-Planet	223-4815	7J-4083	Piston	396-9907
6Y-2540	Cup-Roller Brg	434-8985	7G-2476	Gear-Planet	223-4816	7J-5242	Spider & Brg As	450-7548
6Y-2689	Coupler	422-3508	7G-2480	Gear-Planet	226-6091	7J-8210	Cone-Roller Brg	423-6987
6Y-3151	Stat or-Converter	388-6562	7G-2481	Gear-Planet	226-6092	7J-8893	Cone-Roller Brg	374-1846
6Y-3484	Bearing-Spl Ball	416-2166	7G-2487	Gear-Planet	221-9092	7K-0449	Yoke As	297-7271
6Y-3955	Bearing-Ball	417-9485	7G-2492	Gear-Planet	239-7933	7K-0450	Yoke As	297-7272
6Y-4457	Bearing-Aligning	420-2504	7G-2494	Gear-Planet	422-2490	7K-2135	Bearing-Roller	417-4492
6Y-4573	Carrier As	421-7243	7G-2496	Gear-Planet	446-3071	7K-3527	Shaft As-Joint	448-9153
6Y-4689	Bearing-Aligning	420-6532	7G-2500	Gear-Planet	296-1350	7K-3913	Rim As	398-2952
6Y-4819	Carrier-Planet	296-1348	7G-2516	Gear-Planet	283-5203	7K-4458	Gear-Final Drive	226-6093
6Y-5348	Disc-Friction	384-4827	7G-2517	Gear-Planet	213-8747	7K-4512	Pinion-Fdr	226-6081
6Y-5692	Plate-Brake	380-7492	7G-2521	Gear-Planet	213-8749	7K-4770	Pinion	226-6082
6Y-5913	Disc-Friction	391-9836	7G-2824	Piston	295-6439	7K-5448	Cup-Bearing	415-1922
6Y-5914	Disc-Friction	390-5265	7G-2828	Plate-Clutch	325-6171	7K-6432	Retainer-Bearing	398-2933
6Y-5915	Disc-Friction	384-5936	7G-3451	Gear-Planet	297-7188	7K-7237	Gear-Planet	231-0009
6Y-5916	Disc-Friction	377-7442	7G-3452	Gear-Planet	275-5290	7K-8237	Drum	226-6100
6Y-6832	Bearing-Rlr As	421-8181	7G-3453	Gear-Planet	377-7444	7K-8238	Flange	213-8166
6Y-7652	Cup-Rlr Brg	399-6067	7G-3454	Gear-Planet	300-2578	7K-8877	Cone-Bearing	374-1847
6Y-7909	Disc-Friction	374-4676	7G-3455	Gear-Planet	300-2582	7L-7508	Bearing-Ball	420-6536
6Y-7914	Disc-Friction	390-5264	7G-3456	Gear-Planet	300-2583	7M-0859	Fork As-Shift	297-7172
6Y-7916	Disc-Friction	428-7204	7G-3457	Gear-Planet	308-9857	7M-1154	Bearing-Spl	417-4515
6Y-7920	Disc-Friction	388-0587	7G-3461	Gear-Planet	275-5291	7M-1889	Guard As	213-9108
6Y-7929	Disc-Friction	456-0555	7G-3707	Piston-Clutch	302-2691	7M-1890	Guard As-FD Wear	213-9109
6Y-7934	Disc-Friction	384-5937	7G-4306	Plate-Center	297-7229	7M-5334	Cone-Roller Brg	420-2505
6Y-7935	Disc-Friction	383-2121	7G-4758	Gear-Planet	288-8723	7M-7219	Bearing-Thrust	384-4816
6Y-7946	Disc-Friction	384-4801	7G-4990	Case-XMSN	388-6561	7N-5825	Gear-PTO Drive	215-1759
6Y-7956	Disc-Friction	374-4677	7G-5444	Carrier-Planet	297-7165	7N-7166	Race-Brg Thrust	417-4531
6Y-7965	Disc-Friction	392-4518	7G-5572	Gear-Sun	300-2580	7P-2372	Joint As	367-6072
6Y-8675	Housing As	418-9584	7G-5589	Gear-Ring	281-1692	7P-6531	Shaft-Sun Gear	430-5352
6Y-9885	Bearing-Rlr As	396-9906	7G-5593	Gear-Sun	300-2581	7P-8076	Gear-Planet	390-5263
7B-5088	Drum-Steer Cl Dr	223-4813	7G-5614	Shaft-Planet	281-1697	7P-9568	Gear-Planet	446-3072
7B-7515	Bearing-Ball	399-6059	7G-5746	Housing-Clutch	392-4520	7S-3002	Bearing-Spl Ball	386-4961
7D-4523	Coupling	245-5817	7G-5749	Piston-Clutch	416-2132	7S-4000	Piston	416-2143
7D-6524	Shaft-Axle	228-8917	7G-5780	Shaft-Planet	325-6196	7S-4497	Gear-Cplg & Sun	444-1842
7D-7259	Bearing-Roller	394-9201	7G-5783	Gear-Planet	288-8724	7S-4523	Gear-Ring	419-8799
7D-7442	Hub-Fd Gear	228-8918	7G-5784	Gear-Planet	288-8725	7S-4534	Bearing-Caged	417-9497
7D-7607	Gear-Dif Bevel	388-0595	7G-6062	Gear-Ring	302-2678	7S-6839	Hub-Clutch	399-4407
7D-7889	Gear-Ring	275-5276	7G-7013	Coupling-Pump Dr	295-5450	7S-6964	Gear-Ring	214-0532
			7G-7014	Flange-Stub	396-9925			

Classic Drive Train Parts

Premium Part Number	Part Name	Classic Part Number
7S-7625	Support As	226-6095
7S-7973	Guard -Fd Wear	213-9110
7S-7975	Guard -Fd Wear	239-7966
7S-8576	Bearing As	435-4848
7S-8577	Shaft-Planet	420-6529
7S-8631	Shaft As	275-5296
7T-0119	Support As	299-2066
7T-0341	Support	425-9191
7T-1285	Gear-Planet	297-7190
7T-2336	Disc-Friction	433-7096
7T-3038	Gear-Reverse	445-1097
7T-3039	Gear	445-1095
7T-3173	Piston-Clutch	346-5680
7T-3194	Yoke	346-5681
7T-3343	Plate-Clutch	297-7231
7T-3365	Carrier-Planet	388-6563
7T-3370	Yoke As	302-2702
7T-3566	Piston	394-9191
7T-3676	Hub-Reaction	388-6578
7T-4053	Shaft As-Output	398-2940
7T-4752	Turbine-Conv	416-2148
7T-4753	Stat or-Converter	384-5945
7T-4754	Impeller-Conv	385-7231
7T-5426	Cone-Roller Brg	453-3657
7T-6652	Cone-Rlr Bearing	416-2124
7T-7621	Bearing As-Rlr	384-4823
7T-8136	Shaft-Planet	314-8714
7T-8174	Gear-Planet	388-0583
7T-8336	Hub	418-9580
7T-8337	Shaft	416-2138
7T-8816	Bearing-Spl Ball	420-2491
7T-9272	Gear-Sun	296-1354
7T-9370	Gear-Sun	283-5207
7T-9542	Gear-Ring	384-4822
7T-9647	Piston-Clutch	275-5294
7T-9931	Countershaft	215-1760
7T-9989	Housing As-CI	380-1509
7V-5645	Rod-Indicator	397-5061
7V-5979	Gear	231-0238
7V-6790	Shaft-Bev Pinion	308-9922
7V-8640	Spindle	424-4945
7Y-0213	Gear-Planet	301-4760
7Y-0219	Gear-Coupling	376-7652
7Y-0221	Gear-Planet	301-4758
7Y-0223	Shaft-Planet	301-4625
7Y-0224	Gear-Planet	301-4759
7Y-0225	Shaft-Planet	301-4571
7Y-0228	Carrier As	301-5239
7Y-0238	Gear-Sun	301-4689
7Y-0242	Carrier	301-4637
7Y-0249	Gear-Sun	301-4694
7Y-0912	Bearing-Rlr As	417-4513

Premium Part Number	Part Name	Classic Part Number
7Y-1100	Bearing-Roller	394-8226
7Y-1215	Coupling	422-3512
7Y-1427	Gear-Sun	288-8727
7Y-1428	Gear-Planet	288-8728
7Y-1430	Gear-Sun	314-8671
7Y-1431	Gear-Planet	288-8729
7Y-1432	Carrier-Planet	314-8659
7Y-1461	Coupling	301-4649
7Y-1563	Gear Gp-Brg & BSC	385-3776
7Y-1644	Gear-Planet	301-3406
7Y-1768	Gear-Ring	450-9167
7Y-1774	Carrier-Planet	376-7654
7Y-1775	Shaft-Pinion	314-8718
7Y-4269	Bearing As-Rlr	419-2308
7Y-4270	Bearing As-Rlr	388-6577
8B-5965	Race & Roller As	417-4512
8B-5972	Bearing-Ball	314-8503
8B-8439	Bearing-Ball	399-6069
8C-3111	Rod End-Spher	392-4523
8C-8555	Gasket Kit	434-7278
8D-1648	Disc	367-6070
8D-1669	Gear-Sun	418-9596
8D-1671	Gear-Planet	416-2155
8D-1817	Cup-Roller Brg	434-3296
8D-2256	Cone-Roller Brg	374-1848
8D-2277	Gear	399-4431
8D-2423	Shaft-Drive	394-8221
8D-2452	Gear-Sun	394-8233
8D-2459	Gear-Planet	390-5293
8D-2519	Shaft-Planet	300-2591
8D-2528	Shaft-Drive	394-9829
8D-3442	Gear-Bevel	433-2026
8D-3591	Carrier-Planet	301-4769
8D-3669	Gear-Diff Ring	418-9581
8D-3743	Sprocket	391-9876
8D-3877	Gear-Sun	275-5278
8D-4027	Housing-Diff	380-7522
8D-4278	Spacer	435-6048
8D-4402	Yoke	365-8823
8D-4942	Housing As	392-4514
8D-5048	Yoke As	415-1899
8D-5059	Diff Gp -A	388-6572
8D-5344	Gear-Worm	243-0341
8D-6138	Camshaft	394-9187
8D-6139	Camshaft	394-9188
8D-7427	Shaft-Dr Pinion	282-6568
8D-7693	Housing	384-4830
8D-7719	Spider & Brg As	384-5946
8D-8159	Retainer	419-8661
8D-8233	Retainer	399-4429
8D-8587	Gear-Transfer	398-8352

Premium Part Number	Part Name	Classic Part Number
8D-8634	Gear-Planet	275-5275
8D-8639	Gear-Ring	275-5277
8D-9457	Gear-Diff	430-9000
8D-9973	Housing	391-9825
8E-2043	Yoke As	385-6115
8E-2058	Bearing	384-5949
8E-2890	Gear	422-2489
8E-3726	Stat or-Converter	394-0907
8E-4024	Carrier-Planet	398-8333
8E-4526	Disc-Friction	417-9495
8E-4589	Carrier As	416-2122
8E-4954	Housing As-CI	391-9823
8E-5001	Shaft As.	434-2400
8E-5284	Bearing	388-0582
8E-5993	Gear As-Idler	215-1903
8E-7455	Gear-Planet	221-7947
8E-7456	Gear-Planet	221-7948
8E-7569	Case-XMSN	394-0899
8E-9740	Gear-Output Tfr	432-8905
8E-9741	Gear-Output Tfr	391-1088
8F-3170	Bearing-Roller	417-4504
8F-7278	Diaphragm	392-4485
8G-0890	Bearing-Align	374-8340
8G-4189	Bearing-Aligning	295-6411
8G-4259	Bearing-Aligning	374-8341
8G-4510	Plate-Clutch	383-2113
8H-0901	Cup-Spl Tap Roll	399-4444
8H-0902	Cone-Roller Brg	399-4442
8H-1174	Drum-Ster Cl Dr	226-6101
8H-2434	Drum-Ster Cl Dr	216-7862
8H-4320	Bearing-Ball	419-2301
8H-5352	Bearing-Ball	453-3658
8H-9789	Bearing-Ball	374-8342
8J-4411	Bearing-Aligning	384-4815
8J-5392	Ballstud	364-5264
8J-6322	Cup-Roller Brg	399-4447
8J-6861	Bearing As	384-5950
8J-7978	Bearing-Spher	388-0581
8K-0509	Plate-Mating	382-5053
8K-2518	Joint As	231-0267
8K-5999	Gear-Sun	253-1440
8K-6282	Gear-Sun	281-1698
8K-6283	Gear-Sun	221-9077
8K-6321	Gear-Sun	253-1441
8K-9661	Gear-Bevel	213-8218
8M-8068	Bearing-Spl Ball	417-4500
8M-8623	Gear-Sun	213-8755
8M-8628	Flange-Joint	217-9776
8M-8644	Housing-Clutch	215-1782
8M-8646	Plate As-Center	216-3583
8M-8650	Piston-Clutch	217-9778

Classic Drive Train Parts

Premium Part Number	Part Name	Classic Part Number
8M-8677	Carrier-Planet	213-4449
8N-1365	Gear-Drive	394-8222
8P-0514	Yoke As	308-9947
8P-0605	Gear-First Red	213-8453
8P-0606	Pinion-Sec Red	215-1783
8P-0953	Turbine-Conv	297-7269
8P-0961	Impeller-Conv	433-9204
8P-1182	Shaft	227-4771
8P-1183	Gear-Bevel	226-7980
8P-1325	Hub-Ster Cl Dr	226-8005
8P-1326	Pilot-Cl Piston	226-6097
8P-1327	Pinion-Fdr	226-8000
8P-1656	Plate-Clutch	367-6071
8P-1774	Pinion-Fdr	226-8001
8P-1892	Piston	283-5208
8P-1916	Gear-Planet	283-5209
8P-1918	Gear-Planet	283-5210
8P-1919	Gear-Planet	300-2579
8P-1964	Plate-Clutch	377-7445
8P-2042	Shaft-Planet	283-5211
8P-2051	Plate-Clutch	385-6116
8P-3512	Piston-Clutch	416-2131
8P-4047	Shaft-Planet	373-5390
8P-4520	Piston-Clutch	394-0908
8P-4537	Pinion-Reduction	216-7867
8P-5229	Carrier-Stat or	395-1309
8P-5961	Gear-Ring	385-6137
8P-6083	Yoke-U Joint	446-3073
8P-6803	Shaft As	215-1842
8P-7396	Hub-Planet Gear	239-7967
8P-7788	Retainer-Cl Pstn	417-9476
8P-8559	Yoke-6C	443-2016
8P-8567	Carrier-Stat or	450-5586
8P-8570	Pilot As-Cl Pstn	226-6097
8P-8677	Hub-Impeller	297-7205
8P-9507	Piston-Clutch	283-5212
8R-0942	Plate-Reaction	380-1484
8R-1465	Rim As	417-9501
8R-1891	Gear-Ring	450-7547
8R-2193	Piston	376-9051
8R-2196	Plate-Reaction	375-2626
8R-2199	Gear-Planet	421-7986
8R-2533	Piston	377-7446
8R-2535	Plate-Reaction	377-7447
8R-3252	Shaft-Planet	297-7259
8R-4568	Piston	385-6108
8R-4821	Carrier-Planet	308-9837
8R-6631	Hub	443-2057
8R-6830	Joint Gp-Slip	388-0567
8R-8335	Gear-Bevel	368-0105
8R-9306	Pinion-Diff Bev	388-0569
8R-9750	Gear-Planet	391-9869
8S-3487	Gear As-Ring	221-7949

Premium Part Number	Part Name	Classic Part Number
8S-3517	Bearing-Spl Ball	417-4501
8S-3554	Yoke	448-9154
8S-6370	Yoke	431-2155
8S-9075	Bearing-Cone	418-9612
8S-9076	Cup-Bearing	418-9613
8S-9151	Cup-Spl Tapered	374-8348
8T-0072	Cone-Rlr Brg	377-7448
8T-0209	Race-Spl Rlr Brg	384-5951
8T-1177	Bearing-Rlr	419-1862
8T-1643	Kit-DT Gasket	388-6575
8T-7047	Gasket Kit	384-5952
8V-1537	Gear-Sun	446-3061
8V-1540	Univ Jt As	388-6574
8V-3134	Pinion-Bevel	260-0788
8V-3550	Rim As	417-9477
8V-6382	Hub As	308-9868
8V-6390	Drum-Brake	377-7449
8V-6435	Spider & Brg Kit	377-7451
8V-6825	Joint Gp-Slip	453-0972
8W-0376	Shaft	394-9194
8W-2307	Shaft-Planet	275-5284
8W-2308	Shaft-Planet	275-5285
8W-2309	Shaft-Planet	392-4504
8W-3881	Bearing	394-8224
8W-4652	Housing-Spindle	385-7215
8W-4653	Housing-Spindle	385-7214
8W-7452	Housing	416-2141
8W-8138	Shaft	377-7453
8W-8286	Sprocket	299-2061
8W-8289	Sprocket	282-6629
8W-8317	Sprocket	275-5287
8W-8319	Sprocket	380-7482
8W-8462	Joint Gp-Univ	421-7829
8W-8628	Spindle-FR Axle	282-6571
8W-9566	Flange As	376-9073
8W-9587	Flange As	373-5394
8W-9728	Gear	399-6045
8X-3434	ARM As-Leaning	438-1816
8X-3435	ARM As-Leaning	438-1814
8X-6738	Shaft-Planet	394-8225
8Y-0809	Spider Gp-Brg&	417-4526
9C-2249	Yoke As	382-6890
9C-3095	Spider Gp-Brg&	394-8219
9C-3530	Joint Gp-Univ	449-9832
9C-3848	Bearing	417-4493
9C-4080	Yoke-Brake	302-2703
9C-4096	Yoke-Bk Flange	369-9496
9C-5687	Separator	377-7456
9C-5852	Hub As	297-7208
9C-6015	Pinion-Diff Bev	297-7225

Premium Part Number	Part Name	Classic Part Number
9C-6317	Shaft-Planet	373-5397
9C-6329	Plate-Reaction	377-7457
9C-6335	Gear-Planet	319-3439
9C-8074	Gear-Planet	308-9858
9C-8075	Gear-Sun	308-9864
9C-8205	Gear-Bevel	319-8175
9C-8218	Shaft-Bev Pinion	302-2697
9C-8278	Case As-Diff	423-6984
9C-8418	Plate-Reaction	385-6129
9C-8669	Shaft-Bev Pinion	368-0107
9C-8772	Piston	376-9052
9C-9748	Gear-Diff Bevel	302-2671
9D-0120	Gear-Planet	288-8737
9D-1491	Coupling	416-2121
9D-2174	Spacer	421-7832
9D-2716	Spindle-Wheel	228-9463
9D-3242	Cone-Roller Brg	453-3659
9D-4413	Shaft-Axle	421-7983
9D-5741	Worm-Circle Dr	297-7270
9D-5746	Gear-Worm	299-2011
9F-3212	Bearing-Ball	384-5953
9F-8074	Bearing-Outer	452-3180
9G-0280	Piston	283-5213
9G-0284	Housing-Clutch	283-5214
9G-0285	Piston	283-5215
9G-0289	Shaft-Planet	283-5216
9G-0290	Hub-Clutch	283-5217
9G-1231	Plate	297-7232
9G-1488	Housing-Clutch	430-7620
9G-1491	Carrier-Planet	281-1685
9G-1919	Gear-Planet	371-4307
9G-2413	Shaft-Output	297-7255
9G-5525	Shaft-Planet	419-8662
9G-5842	Gear-Transfer	394-0913
9G-6774	Gear-Transfer	398-8343
9G-8117	Housing As-Cl	302-2686
9G-8638	Gear-Planet	295-6425
9G-8931	Yoke As	446-3074
9G-9174	Gear-Sun	295-6430
9G-9183	Shaft	295-0417
9G-9764	Yoke As	319-3478
9H-5233	Piston-Clutch	219-9708
9J-3206	Bearing-Spher	360-2275
9J-9812	Bearing	434-7258
9K-1171	Cup-Rlr Bearing	430-3339
9K-1193	Gear-Sun	221-9099
9K-1773	Gear-Ring	221-9100
9K-3413	Gear-Bevel	223-4807
9K-3969	Spider & Brg As	432-8275
9K-3970	Spider & Brg As	453-3660
9K-5780	Rim As	388-6597
9K-8757	Rod End-Special	311-9361

Classic Drive Train Parts

Premium Part Number	Part Name	Classic Part Number
9K-9156	Retainer As	297-7236
9L-2685	Rod End	419-1866
9M-0701	Piston-Steer Cl	219-9692
9M-1328	Bearing-Aligning	325-6018
9M-1500	Shaft-Planet	219-9685
9M-1995	Gear-Sun	213-8756
9M-1996	Shaft-Planet	215-1875
9M-1997	Bearing-Ball	384-5954
9M-2038	Gear-Tfr Driven	215-1876
9M-2039	Gear-Tfr Driving	219-9672
9M-2042	Race-Roller Brg	417-9500
9M-2045	Pinion-Bevel	215-1878
9M-2049	Gear-Ring	214-0533
9M-2744	Cone-Spl Tapered	380-1480
9M-3914	Bearing-Aligning	420-2501
9M-5045	Guard As-Wear	213-9111
9M-8117	Shaft-Fly Clutch	226-6073
9M-8119	Retainer-Inlet	226-8022
9N-1545	Race-Thrust	394-9205
9N-4460	Housing As-Cl	297-7203
9P-0566	Case-Fdr	419-1861
9P-3436	Holder As-Cage	216-7875
9P-3663	Carrier-Planet	213-6939
9P-3731	Carrier-Planet	301-4767
9P-3757	Gear	394-9196
9P-3758	Gear-Planet	419-8805
9P-5363	Piston-Clutch	219-9687
9P-5379	Housing-Clutch	215-1904
9P-5531	Gear-Sun	417-9499
9P-6592	Gear-Planet	215-1915
9P-6800	Piston-Clutch	380-1505
9P-6903	Plate	368-0108
9P-7101	Plate-Clutch	368-0122
9P-7757	Gear-Sun	283-5218
9P-8283	Plate-Clutch	296-1364
9P-8516	Gear-Ring	373-5398
9P-8517	Case-XMSN	394-0909
9P-8521	Gear-Ring	296-1353
9P-8623	Shaft-Planet	314-8719
9P-8624	Shaft-Planet	295-5446
9P-8626	Gear-Sun	283-5219
9P-9000	Shaft-Ster Cl	217-7738
9P-9031	Gear-Sun	283-5220
9P-9222	Shaft-Planet	417-9473
9P-9360	Gear-First Red	213-8454
9P-9361	Gear-Final Drive	223-4809
9P-9362	Pinion-Fdr	215-1944
9P-9363	Pinion-Reduction	219-9677
9P-9507	Race-Thrust	371-4309
9P-9517	Stat or-Converter	297-7262
9R-0313	Hub As	388-6591
9R-1572	Wheel As-Front	388-6604

Premium Part Number	Part Name	Classic Part Number
9R-2410	Retainer As.	346-5688
9R-2419	Kit-Bearing	383-2137
9R-2424	Gear-Planet Sun	346-5690
9R-2476	Disc-Bk Rear	346-5691
9R-2477	Disc As	346-5692
9R-2480	Case As	394-0881
9R-2487	Gear	394-9186
9R-2491	Spider	346-5693
9R-2601	Rod Gp-Tie	385-6133
9R-2842	Rod-Tie	385-6134
9R-2843	Rod-Tie	385-6135
9R-2846	Pin	346-5694
9R-2857	Rod-Piston	418-9588
9R-3527	Carrier-Planet	396-9892
9R-4067	Joint Gp-Univ	373-5399
9R-6950	Pinion-Planetary	391-9872
9R-8199	Joint-Double	384-4813
9R-8714	Fork	390-0929
9R-8715	Spider As-Brg&	346-5716
9R-8718	Yoke As	364-5258
9R-9190	Rod Gp-Tie	346-5718
9R-9400	Case As	346-5719
9R-9403	Pinion	347-0477
9S-3581	Cup-Roller Brg	415-1923
9S-3582	Cone-Roller Brg	396-4144
9S-4829	Race-Brg Inner	423-9668
9S-5211	Plate-Clutch	380-1493
9S-5265	Shaft As	215-1945
9S-5267	Carrier As	392-4512
9S-5279	Bearing-Inner	453-3661
9S-6875	Pinion-Final Dr	217-7705
9S-6917	Gear-Cplg Ring	446-3075
9S-7949	Cup-Roller Brg	420-6531
9S-8789	Plate-Clutch	302-2712
9U-0465	Shaft-Pinion	394-0904
9U-0466	Gear-Bevel	418-9587
9U-0654	Coupling	297-7167
9U-0971	Gear-Sun	368-0124
9U-0975	Hub As	390-5259
9U-1179	Joint Gp-Univ	421-7828
9U-2400	Housing As	231-0249
9U-2787	Gear-Planet	367-6093
9U-3124	Gear-Planet	288-8806
9U-3125	Gear-Sun	288-8807
9U-3665	Joint Gp-Univ -A	398-8342
9U-3670	Yoke As	432-4221
9U-9657	Bearing-Spl Ball	371-4308
9V-1290	Wheel	396-9946
9V-5160	Plunger Kt-Adj	385-7218
9V-5173	Joint Gp-Univ	451-9019
9V-5174	Joint Gp-Univ	375-2628

Premium Part Number	Part Name	Classic Part Number
9V-6165	Plate-Outer	377-7460
9V-6526	Ring-Retaining	422-2485
9V-7710	Univ Joint As	394-8234
9V-9833	Gear-Bevel	394-8243
9V-9840	Spider	417-9498
9W-0517	Carrier-Planet	281-1686
9W-0550	Shaft-XMSN Upper	226-6000
9W-0551	Shaft-Pinion	388-6592
9W-0552	Shaft-Pinion	226-6001
9W-1566	Impeller-Conv	390-5270
9W-1567	Impeller-Conv	391-9880
9W-1572	Shaft-XMSN Input	419-1864
9W-2344	Coupling-Pump Dr	314-8666
9W-2977	Hub As	423-6985
9W-3607	Shaft As-Input	440-3115
9W-4162	Bearing	396-9899
9W-4163	Race-Rlr Bearing	394-9202
9W-4175	Shaft-XMSN Input	394-8241
9W-4662	Disc-Friction	428-7203
9W-4702	Stat or-Converter	308-9939
9W-4949	Carrier-Planet	281-1687
9W-4950	Gear-Sun	281-1688
9W-4957	Carrier-Planet	390-0913
9W-5768	Gear-Ring	380-7474
9W-5936	Hub	430-7617
9W-6044	Shaft-Planet	384-5957
9W-6046	Carrier As	388-0645
9W-6099	Piston-Clutch	391-9828
9W-6433	Impeller-Conv	308-9871
9W-6434	Hub-Impeller	443-2018
9W-6435	Flange-Drive	308-9846
9W-7019	Disc-Friction	377-7461
9W-7040	Piston-Clutch	377-7462
9W-7458	Piston-Clutch	391-9862
9W-7481	Gear-Planet	295-6431
9W-7925	Cone-Roller Brg	422-6491
9W-7926	Cup-Roller Brg	421-2554
9W-8270	Gear-Ring	308-9859
9W-8384	Hub-Turbine	297-7207
9W-8437	Gear-Sun	450-7550
002-1212	Cup-Roller Brg	399-4446
005-0469	Cup-Rlr Bearing	418-9610
005-0471	Cone-Spl Tapered	415-1924
005-4834	Cone-Rlr Bearing	422-6490
005-8639	Bearing-Aligning	415-1925
030-0060	Bearing-Cup	415-1926
030-0061	Bearing-Cone	418-9605
030-1957	Cone-Bearing	420-2502
054-2213	Spider & Brg As	347-0464
054-6549	Pinion-Planetary	347-0478

Classic Drive Train Parts

Premium Part Number	Part Name	Classic Part Number	Premium Part Number	Part Name	Classic Part Number	Premium Part Number	Part Name	Classic Part Number
054-7091	Bearing-Rlr As	384-5959	110-2665	Shaft-Planet	391-9871	130-8412	Piston-Clutch	394-0910
055-1260	Housing Bk-Outer	347-0479	110-7053	Gear-Planet	394-9198	131-3736	Socket Gp-Basic	325-6211
055-1986	Seal-Lip Type	347-0465	110-7056	Gear-Planet	374-3497	131-3737	Socket As	282-6626
094-1509	Shaft-Planet	360-2273	110-7059	Carrier-Planet	301-4636	131-3738	Socket As	282-6627
096-4002	Bearing	420-3221	110-7209	Carrier As	301-5237	131-6091	Gear-Sliding	385-7201
100-3596	Piston	380-1511	110-7216	Gear-Sun	391-9877	131-8246	Yoke As (8.5C)	430-5362
100-3597	Plate-Reaction	380-1501	110-7228	Carrier-Planet	390-0918	131-8248	Yoke As	434-6113
100-3650	Support-Trunnion	394-2580	110-7232	Gear-Sun	417-9472	132-2463	Joint Gp-Slip	432-6605
100-3651	Support-Trunnion	445-7699	110-7233	Gear-Planet	399-4420	132-6597	Cone-Spl	422-6477
100-5927	Joint Gp-Univ -A	390-5260	110-7243	Carrier As	384-5961	133-8890	Race	399-4423
101-1503	Shaft	394-9199	110-8368	Bearing-Cup	416-2172	134-0039	Housing-Piston	432-4217
101-1504	Shaft	373-5379	111-3895	Yoke	421-3080	134-3056	Guard -Duo-Cone	421-7831
101-5141	Disc-Friction	380-7473	112-2255	Gear-Bevel	446-3076	135-6160	Shaft-Sun Gear	394-8239
101-5144	Disc-Friction	380-7516	112-5495	Joint Gp-Univ	297-4858	136-7813	Bearing-Race	460-8296
101-7517	Housing	391-1094	112-5585	Shaft-Planet	308-9932	138-2317	Wheel	396-9948
101-7689	Yoke As	422-7245	112-7308	Carrier-Planet	419-8803	139-0683	Gasket Kit	390-5290
102-4563	Gear-Transfer	399-4430	112-7309	Shaft-Planet	380-7521	139-6849	Gasket Kit	388-6586
103-1713	Yoke-Bk-Flange	382-6892	112-8041	Carrier-Planet	295-5681	139-6850	Gasket Kit	384-4809
103-5961	Wheel	398-2963	112-8042	Carrier-Planet	390-0916	139-9170	Gasket Kit	447-0825
104-3133	Carrier-Planet	435-2897	113-1149	Shaft As-AWD	418-9574	139-9172	Gasket Kit	384-5964
105-0017	Cylinder	416-2130	113-1150	Shaft As-Main	433-6670	139-9173	Gasket Kit	434-7261
105-2125	Joint Gp-Slip	398-2937	114-1383	Shaft-Planet	398-8349	139-9175	Gasket Kit	377-7464
105-2485	Gear-Tfr Output	398-2932	116-8533	Yoke As	451-9031	139-9176	Gasket Kit	390-5283
105-2486	Gear-Transfer	391-9882	116-8537	Shaft Gp-Drive-D	418-9570	139-9177	Gasket Kit	377-7465
105-2487	Gear-Tfr Output	391-9881	116-8539	Spider & Brg Kit	399-4399	139-9178	Gasket Kit	434-7262
105-7535	Bearing-Dbl Row	417-9496	117-0019	Disc-Friction	417-9492	139-9179	Gasket Kit	390-5289
105-8586	Pinion As	375-2630	118-7805	Pinion-Bevel	394-9197	140-2382	Gasket Kit	390-5285
105-8724	Hub	418-9598	119-5727	Bearing-Spl Ball	417-9491	140-2383	Gasket Kit	396-9927
105-8727	Shaft-Axle	423-6986	119-7042	Shaft	347-0480	141-6136	Socket Gp	333-4953
105-8735	Gear-Diff Bevel	416-2154	119-7047	Seal	347-0481	141-6137	Socket Gp	325-6212
106-0714	Shaft	364-5260	119-7053	Flange	417-9471	141-6138	Socket Gp	325-6213
106-7098	Flange AsSM	390-5271	121-7583	Gear-Planet	364-5257	143-7356	Bearing As	380-1483
106-7099	Carrier-Planet	388-6585	121-7627	Bearing-Roller	453-3653	144-1150	Gasket Kit	391-9879
106-7131	Shaft	288-8714	121-7632	Disc-Clutch	394-9195	147-1007	Kit-DT Gasket	388-6587
106-7798	Bearing-Ball	417-9494	122-1881	Plate-Clutch	347-0475	147-1010	Gasket Kit	390-5278
106-7799	Bearing-Ball	396-9947	122-6787	Yoke As	416-2139	147-1012	Gasket Kit	434-7263
107-5005	Joint Gp-Univ	396-9929	124-0501	Cone-Spl Tapered	399-4441	147-1206	Gear Planet	418-9597
107-5006	Joint Gp-Univ	416-2137	124-0502	Cup-Spl Tapered	416-2161	147-1740	Gear-Planet	377-7466
107-5007	Joint Gp-Slip	416-2145	124-0503	Cone-Spl Tapered	418-9604	147-1900	Gasket Kit	447-0826
107-5610	Yoke	398-8334	126-2522	Cone-Spl Tapered	377-7397	147-3309	Spindle	282-6628
107-9172	Piston	375-2622	126-7130	Shaft As	275-5300	147-3310	Spindle-Wheel	383-2111
108-1760	Bearing-Ball	417-9493	126-8181	Cone-Spl Tapered	434-3295	147-3400	Spindle	282-6549
108-7754	Housing As.	433-9856	127-3365	Joint Gp-Slip	367-6067	148-0885	Stat or-Converter	379-0161
108-7930	Bearing As	377-7463	127-5970	Gear-Planet	301-3398	148-4634	Shaft-Planet	360-2274
108-8250	Carrier-Seal	421-7830	128-3935	Bearing-Race	396-9897	148-9288	Case As-Diff	380-1496
109-5562	Shaft-Pin (Bev)	275-5272	128-4128	Rod Gp-Tie	385-6136	149-2914	Pinion-Dif Bevel	396-9950
109-7687	Bearing-Ball	420-3220	129-2381	Gear-Planet	275-5274	149-5985	Stat or-Converter	419-1865
110-0013	Cup-Rlr Brg	384-5960	129-3046	Carrier-Planet	393-1015	151-4836	Diff Gp -A	416-2120
110-0551	Hub As	416-2146	129-4299	Gear-Planet	446-3077	154-2689	Spider	463-7670
110-0840	Track Rod As.	391-1097	130-3013	Shaft As	391-9865	154-5676	Gasket Kit	447-0827
110-1488	Gear-Ring	394-0882	130-3014	Shaft As	391-9864	154-5679	Kit-DT Gasket	390-5277
			130-6879	Seal	347-0482	154-5682	Gasket Kit	434-7264

Classic Drive Train Parts

Premium Part Number	Part Name	Classic Part Number
154-5683	Kit-DT Gasket	420-6528
154-5685	Kit-DT Gasket	396-0649
155-6048	Kit-DT Gasket	434-7272
155-6057	Kit-Gasket-Trans	388-6588
155-6648	Cone Spl ROL Brg	418-9599
155-8688	Gasket Kit	434-7273
155-8690	Gasket Kit	434-7274
155-8691	Kit-DT Gasket	396-0650
155-8694	Gasket Kit	451-1503
155-8696	Kit-DT Gasket	396-9944
155-8698	Gasket Kit	394-0914
156-8206	Kit-DT Gasket	451-3112
156-8208	Kit-Gasket-Trans	434-7275
156-8578	Shaft	417-9490
157-5075	Gear-Planet	394-9821
158-1433	Gasket Kit	393-1003
158-1438	Kit-DT Gasket	434-7276
158-1439	Kit-DT Gasket	434-7290
158-1441	Kit-DT Gasket	394-9207
159-1845	Yoke As (1480)	380-1494
159-1847	Yoke As (1610)	373-5381
159-8169	Gear-Planet	391-9870
160-0305	Bearing-Aligning	396-9945
160-1400	Yoke (1710)	319-3479
161-9082	Gasket Kit	434-7277
162-0191	Gear-Planet	418-9593
162-0195	Carrier-Planet	435-4784
162-0268	Hub As	426-3475
162-0270	Carrier-Planet	394-9819
163-7280	Gasket Kit	434-7260
164-4891	Plate As.	391-1093
165-5634	Shaft As.-Output	421-7067
166-2142	Hub Gp-Shaft	394-8238
166-6757	Yoke	446-3078
166-6930	Cone-Spl Tapered	399-4443
167-0622	Gasket Kit	434-7279
168-8453	Bearing-Spl Ball	417-4497
169-5804	Yoke As	444-0574
170-8714	Disc-Friction	456-9193
171-3942	Yoke	398-2931
171-6696	Diaphragm	384-4811
173-0888	Univ Jt As	394-0898
174-3405	Yoke As	398-2929
174-6829	Gasket Kit	394-8237
174-6836	Gasket Kit - TOF	434-7280

Premium Part Number	Part Name	Classic Part Number
176-9273	Piston	297-4860
177-4132	Kit-DT Gasket	394-8227
177-7886	Cone	418-9605
178-8608	Cone	422-6479
179-1970	Yoke As.	376-9053
186-4117	Carrier As	394-8235
186-4118	Gear-Planet	347-0483
186-4439	Gear-Planet	380-1485
186-4440	Shaft-Planet	364-5261
188-2886	Gasket Kit	434-7281
188-2887	Kit-DT Gasket	394-8244
196-3986	Gasket Kit	390-5275
196-6845	Yoke As	451-9034
199-0760	Bearing-Roller	465-8981
199-4582	Bearing-Needle	388-6589
202-2380	Shaft As.-Input	399-4432
203-9726	Gasket Kit	434-7282
205-1098	Gasket Kit	434-7283
206-5794	Gear-Sun	394-8233
206-6405	Bearing-Spl Ball	420-2503
207-2015	Gasket Kit	447-0828
207-2016	Gasket Kit	434-7284
207-8176	Cover-XMSN	420-3218
208-7534	Case As-Diff	388-6590
208-8796	Retainer	417-9489
209-9886	Tie Rod As	396-9901
210-2154	Kit-Gasket-Trans	394-8232
210-2155	Kit-Gasket-Trans	434-7285
210-7305	Shaft	396-9952
213-1304	Kit-DT Gasket	394-8231
213-1305	Kit-DT Gasket	394-8230
213-8734	Cover-Transfer	420-3217
216-5359	Kit-DT Gasket	451-1504
216-5361	Kit - Gasket	383-2109
216-7957	U-Joint	367-6069
220-4554	Kit-DT Gasket	417-9469
220-4556	Kit - Gasket	391-9878
221-6946	Kit-DT Gasket	394-9208
221-6947	Kit - Gasket	394-9209
221-6949	Kit-DT Gasket	419-8663
221-6985	Retainer	399-4406
221-9755	Gear-Planet	390-5293
222-0862	Housing	419-1860
223-1101	Kit-DT Gasket	451-1505
226-0930	Gear-Transfer	394-0888
229-2949	Rod As.- Track	347-0486

Premium Part Number	Part Name	Classic Part Number
229-2950	Rod As.- Track	347-0487
233-9748	Disc-Friction	417-9502
236-8675	Disc-Friction	428-7202
237-2859	Bearing-Rlr	368-0125
239-9956	Brake Disc	347-0485
241-1397	Kit-DT Gasket	434-7286
241-1399	Kit-DT Gasket	394-9211
243-0723	Kit-DT Gasket	391-9886
243-0725	Kit-DT Gasket	396-9953
243-0726	Kit-DT Gasket	394-9210
243-0727	Kit-DT Gasket	451-1506
243-0728	Kit-DT Gasket	394-9206
243-0729	Kit-DT Gasket	434-7287
243-0731	Kit-DT Gasket	451-1507
247-7143	Yoke	451-9025
252-5650	Rim As	397-5067
257-0424	Shaft	421-8170
262-4335	Kit - DT Gasket	434-7288
262-4338	Kit - DT Gasket	451-1508
262-4339	Kit-DT Gasket	451-1509
264-2769	Bearing As.-Spl	419-8664
273-3160	Ballstud	396-9954
274-4553	Disc-Clutch	416-2153
278-0223	Housing-Brake	456-0554
282-4348	Kit-DT Gasket	419-8665
282-6648	Kit-DT Gasket	396-9955
288-2551	Kit-DT Gasket	396-9958
288-2552	Kit-Gasket-TXG	391-9884
292-5516	Kit-DT Gasket	391-9885
297-6870	Kit-DT Gasket	451-1510
297-6872	Kit-DT Gasket	394-8228
312-0782	Worm-Circ Drv	282-6623
319-5239	Wheel	396-9956
321-5714	Piston-Clutch	281-1693
328-4374	Disc-Friction	384-5966
328-4375	Disc-Friction	443-1922
331-8538	Seal-Wheel	391-9874
334-1032	Disc-Friction	440-3116
334-1033	Disc-Friction	394-8242
336-4979	Kit-Gasket(DT)	451-1511
352-1053	Kit-DT Gasket	447-0829
358-9117	Gear-Planet	380-7490
368-0297	Plate-Clutch	377-7420
392-6301	Kit-Spider & Brg	390-0915

Classic Hydraulic Parts

Premium Part Number	Part Name	Classic Part Number	Premium Part Number	Part Name	Classic Part Number	Premium Part Number	Part Name	Classic Part Number
1H-8382	Gear-Oil Pump Dr	226-6103	3G-4602	Pump Gp-Vn-Bsc-B	439-1131	3T-5355	Flange	386-3052
1N-3958	Elbow	325-6087	3G-4752	Cyl Gp-035-060-Y	390-0987	3T-5672	Gear As-Pump	295-5447
1P-2187	Pump Gp-Gr 1 Bsc	299-2044	3G-5192	Cyl Gp-0126 1128	399-8577	3T-5674	Gear As-Pump	295-5449
1P-4145	Valve Gp-Press	247-4436	3G-5223	Cyl Gp-0083-1016	399-8557	3T-7398	Guide As	419-4647
1P-4231	Pump Gp-Gear	226-0156	3G-5224	Cyl Gp-0083-0459	425-9375	3T-8359	Pump Gp-Gr 1 Bsc	295-5445
1P-6752	Pump Gp-Gr 1 Bsc	226-0161	3G-5264	Cylinder As.	393-1018	3W-8160	Piston As	393-1051
1U-0408	Cyl Gp-0165 1549	415-1898	3G-5492	Rod As	377-5836	4D-0487	Valve As-Check	375-4334
1U-1625	Pump Gp-Gr A	421-1555	3G-5497	Cyl Gp-0210 0535	394-9822	4D-4661	Pump Gp-Vn Bsc-A	422-8162
1U-1997	Rod As	419-4652	3G-5502	Cylinder As	390-0988	4I-1524	Cylinder As	394-8216
1U-2135	Cyl Gp-0121 0955	395-1304	3G-5707	Cyl Gp-0210 0188	399-8556	4I-3954	Tube As	301-4779
1U-2665	Cartridge Gp	422-8108	3G-5750	Bearing-Plate	419-4734	4I-3957	Tube As	301-4801
1U-2666	Cartridge Gp	422-8115	3G-6846	Pump Gp-Vn Bsc-A	422-8165	4J-4497	Cylinder Gp-RH	399-8585
1U-2667	Cartridge Gp	422-8116	3G-6856	Pump Gp-Gr A	421-1556	4J-4498	Cylinder Gp-LH	425-9374
1U-2668	Cartridge Gp	422-8117	3G-6910	Bearing-Plate	419-4733	4M-1001	Pump Gp-FD Oil	226-0166
1U-2669	Cartridge Gp	422-8118	3G-7412	Pump Gp-Vn Bsc-B	422-8167	4N-0913	Screen As-Bell	374-7489
1U-2738	Piston Assembly	367-6074	3G-7600	Cyl Gp-076 314 U	422-4936	4P-7688	Valve As-Check	420-6216
1U-3522	Rod As	390-5281	3G-7637	Pump Gp-Vn Bsc-A	422-8148	4S-8660	Pump Gp-Trans	226-0167
1U-3953	Cartridge Gp	426-0024	3G-7638	Pump Gp-Vn Bsc-B	422-8174	4T-0406	Rod As	394-8215
1U-3969	Pump Gp-Vn Bsc-B	422-8150	3G-7639	Pump Gp-Vn Bsc-B	422-8173	4T-0416	Cartridge Gp	422-8138
1U-4851	Cyl Gp-0102 1360	422-4560	3G-7640	Pump Gp-Vn Bsc-B	422-8172	4T-0417	Cartridge Gp	422-8109
1V-6913	Tube As	435-4793	3G-7651	Cartridge Gp	422-8121	4T-0422	Cartridge Gp	422-8129
2G-1034	Valve-Safety	380-7555	3G-7652	Cartridge Gp	426-0026	4T-0509	Pump Gp-Vn Bsc-B	422-8159
2N-7242	Tube As	444-5677	3G-7653	Cartridge Gp	422-8099	4T-1893	Cartridge Gp	422-8110
2P-1739	Tube As-Pump	325-6229	3G-7654	Cartridge Gp	422-8100	4T-2626	Cartridge Gp	422-8111
2P-1751	Bell As-Suction	430-7624	3G-7655	Cartridge Gp	422-8119	4T-3196	Cartridge Gp	422-8112
2P-2519	Tube As-Inlet	325-6230	3G-7657	Cartridge Gp	422-8101	4T-4073	Valve Gp-SHTL -B	439-1138
2P-2697	Tube As-Air Vent	382-6901	3G-7658	Cartridge Gp	426-0427	4T-6869	Cartridge Gp	422-8104
2P-2719	Pipe-Oil Filler	363-7454	3G-7659	Cartridge Gp	422-8102	4T-7819	Cyl Gp-051 127 Y	426-0028
2P-3645	Pump Gp-Gr 2 Bsc	450-2389	3G-7660	Cartridge Gp	422-8103	4T-9290	Cyl Gp-0152 0495	399-8579
2P-3767	Tube-Disposal	377-5850	3G-7661	Cartridge Gp	422-8113	4W-9773	Gear-Hyd Pump Dr	380-7549
2P-5774	Gear As-Oil Pump	428-6659	3G-7662	Cartridge Gp	422-8105	5D-0470	Valve Gp-QREL	314-8549
2P-9313	Pump Gp-Gr 1 Bsc	418-1966	3G-7663	Cartridge Gp	422-8120	5H-1719	Pump Gp-FD Oil	226-0168
2S-5100	Valve-Ball	386-3049	3G-7664	Cartridge Gp	422-8130	5I-8628	Plate-Valve	301-4771
2S-7873	Pump Gp	226-0162	3G-7666	Cartridge Gp	422-8098	5J-0778	Cyl Gp-184 597 Y	399-8544
2W-6030	Tube	314-8729	3G-7667	Cartridge Gp	422-8107	5J-2449	Cylinder Gp-Bowl	419-8800
3G-1239	Pump Gp-Vn Bsc-B	439-1135	3G-8621	Cyl Gp-092 299 Y	399-8554	5J-2450	Cylinder Gp-Bowl	430-5965
3G-1305	Cyl Gp-159 586 Y	430-5966	3G-8746	Rod As	394-8217	5J-2453	Rod As.	394-8214
3G-1853	Cyl Gp-076 406 Y	415-1895	3G-9891	Pump Gp-Gr A	399-8541	5J-2528	PLUNGER	391-1318
3G-2717	Cartridge Gp	439-1132	3J-9325	Piston	390-0993	5L-9370	Elbow-MAN Inlet	311-9388
3G-2720	Cartridge Gp-RR	448-5051	3N-6841	Tube As-Inlet RH	311-9464	5M-6212	Tube	390-0996
3G-2749	Cartridge Gp-RR	422-8125	3P-0203	Pump Gp-Gr Basic	418-1965	5M-6709	Check As-Ball	380-7542
3G-2751	Cartridge Gp-RR	422-8126	3P-0204	Pump Gp-Gr Basic	421-2550	5M-7864	Pump Gp-Scavenge	226-0169
3G-2752	Cartridge Gp-RR	422-8127	3P-6814	Pump Gp-Gr 1	226-0163	5N-1841	Flange-Pipe	426-0029
3G-2806	Cartridge Gp	422-8128	3P-6816	Pump Gp-Gr 1	226-0164	5S-1601	Pump Gp-Gr 2 Bsc	386-3054
3G-2834	Cartridge Gp-RR	426-0025	3S-2616	Pump Gp-Trans	226-0165	5T-0925	Actuator Gp-BK	379-0198
3G-2835	Cartridge Gp-RR	422-8106	3S-5017	Elbow-Exhaust	369-9498	5U-0557	Pump Gp-Vn Bsc-B	422-8175
3G-2837	Cartridge Gp-RR	422-8123	3T-0300	Pump Gp-Gr 2 Bsc	421-1557	6C-0570	Pump Gp-Mtrg Bsc	374-5380
3G-2858	Pump Gp-Gr A	424-7054	3T-1445	Pump Gp-Gr 3	386-3051	6E-0775	Head	425-9373
3G-4601	Pump Gp-Vn-Bsc-B	422-8139	3T-1446	Pump Gp-Gr 3 Bsc	325-6178	6E-2190	Rod As	394-8213
						6E-2387	Cartridge Gp	422-8132

Classic Hydraulic Parts

Premium Part Number	Part Name	Classic Part Number
6E-2396	Cartridge Gp	422-8122
6E-2928	Pump Gp-Vn Bsc-A	426-1701
6E-2929	Pump Gp-Vn Bsc-A	422-8157
6E-2930	Pump Gp-Vn Bsc-B	422-8158
6E-2931	Pump Gp-Vn Bsc-B	422-8161
6E-2932	Pump Gp-Vn Bsc-B	422-8155
6E-4258	Cartridge	422-8133
6E-4730	Pump Gp-Vn Bsc-B	426-1925
6E-4892	Cyl Gp-089 478 Y	394-9828
6E-5028	Rod As	425-9372
6E-5831	Pump Gp-Vn Bsc-A	426-1699
6E-6153	Plate-Port	346-5678
6E-6163	Shaft	346-5679
6E-6416	Cylinder As	425-9371
6E-6474	Cartridge Gp	422-8135
6E-6476	Pump Gp-Vn Bsc-A	422-8163
6E-6482	Pump Gp-Vn Bsc-B	422-8164
6E-6483	Pump Gp-Vn Bsc-B	422-8176
6G-8425	Valve Gp-Cont -K	367-6086
6N-3025	Tube As	419-4656
6P-7357	Gear As-Pump	388-0561
6P-7358	Pump Gp-Gr 1 Bsc	308-9913
6T-0016	Pump Gp-Gr 4 Bsc	418-1957
6T-2293	Piston-Load	426-0040
6T-3651	Pump Gp-Gr 1 Bsc	345-1978
6W-9677	Tube As-RH	388-6569
6W-9678	Tube As-LH	388-6570
7C-2880	Bell As-Suction	380-1520
7C-3760	Tube As-O Drain	375-5443
7C-5403	Tube As	374-4673
7E-3455	Tube As	374-4721
7E-5287	Elbow As-Ex	430-4470
7G-2262	Pump Gp-Gr 2 Bsc	421-1552
7G-3815	Pump Gp-Gr 2 Bsc	226-0171
7G-7431	Piston-Selector	432-8911
7I-7180	Piston	421-7142
7I-7181	Piston	393-5217
7J-0583	Pump Gp-Vn Bsc-A	426-1698
7J-3338	Rod As	394-0906
7J-3351	Head	380-1515
7J-6461	Crown	325-6054
7J-8295	Head	388-0566
7K-8890	Tube As	391-1098
7M-1296	Valve-Relief	390-0990
7N-5645	Tube As-Outlet	378-3984
7N-5819	Gear-Hyd Pump Dr	215-1758
7P-7245	Valve	386-3811
7S-2983	Pump Gp	450-2390
7S-4629	Pump Gp-Trans	226-0158
7S-6976	Body As-Pump	419-4649

Premium Part Number	Part Name	Classic Part Number
7S-7400	Pump Gp	226-0173
7S-7602	Pump Gp-CL Oil	226-0174
7S-8660	Pump Gp-Trans	226-0175
7W-1058	Tube As-Supply	393-3613
7W-9020	Bell As-Pump Suc	378-3989
7Y-0207	Cylinder	383-1584
7Y-5108	Rod As	394-0912
8D-2878	Ring-Wear	330-9282
8D-3949	Ring-Wear	330-9283
8D-4009	Tube As	392-4496
8J-0546	Cyl Gp-076 276 Y	430-8116
8J-1624	Valve As	390-0997
8J-2022	Piston As-Pump	367-6073
8J-4492	Stem	383-3702
8J-6296	Shaft	419-6072
8J-6868	Cyl Gp-040 405 X	430-5964
8J-8590	Cyl Gp-076 274 Y	430-5963
8J-8809	Pump Gp-Gr -A	419-4653
8M-3368	Valve-Check	388-6599
8N-0935	Gear-Pump Drive	399-8569
8N-2104	Bell As-Suction	380-1521
8N-7315	Tube As-Outlet	325-6232
8N-9402	Coupling	325-6048
8P-3377	Tube As	392-4498
8P-7790	Valve Gp-Press	247-4437
8S-6380	Tube As	452-0446
8X-4741	Insert	375-4335
9C-6281	Tube As	398-2953
9D-2252	Insert	385-6139
9D-2754	Insert	333-4948
9D-2756	Insert	333-4949
9G-1499	Gear-Pump (Oil)	295-6424
9G-3056	Pump Gp-Gr 4A	421-1563
9G-7411	Gear-Pump (Oil)	297-7182
9G-7412	Gear As-Pump	297-7183
9G-9543	Gear-Pump (Oil)	295-6426
9J-2007	Piston As	419-4714
9J-3466	Cyl Gp-028 121 Y	393-0913
9J-5048	Pump Gp-Vn Bsc-A	422-8166
9J-5049	Pump Gp-Vn Bsc-B	422-8156
9J-5050	Pump Gp-Vn Bsc-B	422-8168
9J-5053	Pump Gp-Vn Bsc-B	422-8169
9J-5058	Pump Gp-Vn Bsc-B	422-8170
9J-5061	Pump Gp-Vn Bsc-B	422-8171
9J-5070	Pump Gp-Vn Bsc-B	422-8140
9J-5080	Pump Gp-Vn Bsc-A	422-8141
9J-5082	Pump Gp-Vn Bsc-A	422-8142
9J-5083	Pump Gp-Vn Bsc-A	422-8143
9J-6556	Rod As	394-8212
9J-7891	Cartridge Gp-RR	422-8134

Premium Part Number	Part Name	Classic Part Number
9J-8006	Piston	449-4736
9J-8165	Cyl Gp-050 288 Y	398-2941
9J-8166	Cylinder As	394-9834
9M-8281	Gear As-Pump	325-6089
9P-2201	Valve Gp-RLF -A	386-3816
9P-2653	Pump Gp-Gr 1 Bsc	386-3057
9P-7917	Valve Gp-Cont -C	385-3810
9P-9610	Pump Gp-Gr 1 Bsc	283-5221
9R-0080	Coupling	346-5683
9S-0440	Tube As	392-4499
9S-6590	Pump Gp-CL Oil	226-0176
9T-0142	Cyl Gp-0184-0281	394-9830
9T-0486	Pump Gp-Vn Bsc-A	422-8144
9T-1697	Cartridge Gp-	422-8137
9T-2200	Cartridgr Gp	422-8114
9T-2387	Rod As	393-5218
9T-2472	Cyl Gp-76 1017 U	396-9930
9T-2852	Cylinder As-LH	423-7869
9T-2860	Cyl Gp-0133-1535	395-1310
9T-3055	Cylinder As	430-5962
9T-3866	Pump Gp-Vn Bsc-A	422-8145
9T-3884	Piston As	393-3639
9T-3948	Rod As	393-0940
9T-4761	Head	325-6108
9T-4762	Head	325-6109
9T-5096	Flexplate	455-3271
9T-5336	Cartridge Gp	422-8131
9T-5360	Plate-Pressure	424-4941
9T-5729	Cyl Gp-0038 0158	422-2486
9T-6123	Pump Gp-Vn Bsc-B	422-8147
9T-6577	Pump Gp-Gr B	419-0873
9T-6906	Gear-Idler	419-4662
9T-7414	Pump Gp-Gr B	421-1564
9T-7676	Cartridge Gp	422-8136
9T-7916	Pump Gp-Vn Bsc-B	426-1697
9T-8944	Cyl Gp-102 356 Y	393-3665
9U-9162	Tube As	451-9023
9V-4333	Gear-Oil Pump IP	226-6105
9V-8693	Actuator Gp-BK	375-2629
9W-3271	Body As-Oil Pump	430-4553
9Y-5295	Tube-Gov Conn	419-4756
094-1850	Bearing-Trunnion	419-4747
100-3414	Pump Gp-Vn Bsc-A	422-8149
100-4529	Piston As	424-6368
100-6174	Cyl Gp-0089 0421	425-9368
100-8010	Valve	423-5583
102-8112	Cylinder	360-2276
105-2094	Cyl Gp-0076 1194	423-7868
105-2095	Rod As	421-1565

Classic Hydraulic Parts

Premium Part Number	Part Name	Classic Part Number
105-2155	Pump Gp-Vn Bsc-A	422-8151
105-3196	Motor Gp-Grtr	282-6547
107-3950	Head	383-1588
111-8181	Cyl Gp-197 864 Y	390-0986
112-1773	Piston	347-0462
112-5003	Cyl Gp-159 582 Y	393-3654
114-1071	Piston	388-6583
114-4680	Gear As-Pump	374-7485
115-0637	Pump Gp-Gr 1	226-0160
119-1852	Cyl Gp 0102 0755	430-5960
123-2111	Piston	462-5714
123-3472	Pump Gp-Gr 1 Bsc	345-1978
123-8509	Pump Gp-Vn Bsc	422-8152
124-2726	Head	377-5855
125-0024	Cyl Gp 0152 0800	399-8566
125-0025	Rod As	394-8208
126-5984	Ring-Backup	419-4654
127-8932	Cylinder As	422-4937
128-7228	Pump Gp-Vn Bsc-A	422-8153
129-4259	Cyl Gp 0102 1437	393-3655
134-2659	Rod As	388-6568
135-7393	Head	382-6895
140-8435	Flange	451-9015

Premium Part Number	Part Name	Classic Part Number
141-2919	Rod As	399-8567
144-9072	Cylinder As	394-8209
148-2593	Head	383-1591
151-5349	Head	383-1592
152-6485	Cyl Gp-102 472 Y	390-0985
155-5091	Cartridge Gp	422-8124
156-0738	Rod As	394-8210
157-0956	Pump Gp-Vn Bsc-B	422-8154
163-3127	Sleeve	419-4668
164-7174	Cyl Gp-0076-1067	423-7865
165-2495	Cyl Gp-0064-0292	399-8562
165-2496	Cyl Gp-0064-0292	399-8568
166-6352	Tube As.	432-4223
169-9527	Cyl Gp-0076-0352	430-5959
170-5212	Rod As	399-8575
172-2349	Cylinder As (LH)	430-5958
173-1926	Cyl Gp-0102-0541	399-8576
173-1927	Cyl Gp-0102-0541	426-0036
174-7432	Head	388-0660
176-3900	Accumlator	416-5513
179-3044	Cylinder	385-6138
184-9843	Head	347-0461
188-4211	Cylinder As	425-9366
189-3041	Rod As	394-9811

Premium Part Number	Part Name	Classic Part Number
191-3118	Cyl Gp-0170 1680	399-8560
191-4610	Pump Gp-Vane	422-8160
191-7725	Cyl Gp-0076-1067	423-7867
191-7727	Cylinder As.	430-5957
192-6445	Cyl Gp-235 535 Y	393-3651
192-6446	Cyl Gp-235 535 Y	393-3657
192-6447	Head	425-9365
192-6448	Rod As	428-7630
206-0502	Cylinder As.	423-7866
206-0503	Cyl Gp-0114-0695	426-0038
223-3095	Gauge As	360-2295
225-4529	Cyl Gp-0160 1356	393-3658
235-9832	Head	419-4658
246-8883	Rod As	425-9364
247-8853	Cyl Gp-0150 1156	399-8583
247-8856	Rod As	395-1317
269-0381	Cyl Gp-100 254 X	393-3660
278-1972	Cylinder As.	394-9813
286-8903	Cyl Gp-Basic	425-9363
289-7886	Rod As	422-7246
328-4266	Cylinder As.	393-3664
328-4267	Cyl Gp-140 114 Y	393-3653
357-7540	Valve-Fill	360-2292

Classic Miscellaneous Parts

Premium Part Number	Part Name	Classic Part Number
1A-2846	Cap As-Filler	311-9368
1A-9252	Rod End-Yoke	377-5849
1H-4106	Pin As-Drawbar	325-6126
1H-4478	Pin	330-9272
1J-0774	Bracket	369-9485
1J-2087	Bushing	421-9041
1J-6744	Bearing	361-1705
1J-6746	Pin	256-4817
1J-6747	Pin	367-6078
1J-6749	Screw-Adj	256-4824
1K-8041	Bearing-Sleeve	330-9257
1M-0090	Gasket-Manifold	445-7701
1M-1930	Cage-Pinion Brg	217-7727
1M-3917	Shaft	386-4915
1N-3113	Support-Elbow	433-8185
1P-5480	Cover As.-End	299-1998
1P-7115	Mount As	418-1936
1P-7295	Shaft-Acc Drive	431-5261
1P-9989	Pipe-Head Outlet	363-7453
1S-1888	Bracket-Lamp	297-7147
1S-2233	Bearing-Sleeve	379-0188
1S-2269	Sleeve	226-2720
1S-5315	Cap As-Brace Brg	226-4848
1S-9209	Shaft-Tightener	374-6499
1T-0224	Carrier-Ring	239-7928
1T-0278	Bearing-Sleeve	394-0213
1T-0447	Carrier-Ring	295-0409
1T-0576	Bearing-Sleeve	379-0186
1T-0766	Bearing-Sleeve	383-2107
1T-0767	Bearing-Sleeve	383-2108
1T-0902	Bearing-Sleeve	389-6326
1T-0969	Bearing-Sleeve	453-6497
1T-1534	Carrier-Ring	386-4916
1T-1790	Carrier As	296-1347
1T-1940	Housing As	396-0646
1T-2069	Carrier-Bearing	439-4543
1T-2077	Retainer-Bearing	380-7408
1U-0725	Retainer	314-8707
1U-0738	Bearing-Sleeve	333-4942
1U-0872	Pin	325-6136
1U-0873	Pin	325-6137
1U-0990	Pin	325-6138
1U-1204	Trunnion	325-6224
1U-4103	Trunnion	295-5680
1U-4661	Lever Gp	396-7267
1V-1080	Housing-Brg Spt	260-0775
1V-3995	Pin	319-3449
1V-4838	Link As-Spring	308-9874
1V-5736	Bearing-Sleeve	379-0187
1V-6342	Gear As	308-9847

Premium Part Number	Part Name	Classic Part Number
1V-6934	Bearing-Sleeve	364-5265
1V-8240	Bearing-Sleeve	308-9807
1V-8241	Bearing-Sleeve	308-9808
1V-8242	Bearing-Sleeve	308-9809
1V-8439	Pin As	308-9881
1V-8849	Collar	308-9838
1V-8850	Pin	308-9891
1V-8851	Cap	308-9833
1V-8852	Cap	308-9834
1V-8947	Pin As	308-9882
1V-8949	Pin As	308-9883
1V-8953	Pin	308-9892
1V-8954	Pin As	361-1696
1V-9143	Bearing-Sleeve	308-9810
1V-9148	Bearing-Sleeve	308-9811
1V-9208	Link As-Rear	299-2020
1W-2870	Shaft As-Balance	314-8715
1W-2871	Shaft As-Balance	314-8716
1W-3397	Plate	391-9810
1W-4738	Bearing-Sleeve	325-6020
1W-4746	Retainer-Gear	295-5690
1W-6005	Bearing-Sleeve	417-4521
2A-7089	Bearing-Sleeve	380-7382
2B-0941	Spacer	418-1955
2D-5383	Gasket	445-7709
2D-5961	Pin-Axle Pivot	228-9438
2D-6341	Pin	330-9273
2D-9130	Washer-Thrust	308-9943
2D-9459	Cage-Bearing	431-5257
2F-0025	Tube	325-6233
2G-2411	Ballstud As	387-2899
2G-2858	Cap-Pivot	243-0345
2G-4011	Collar	330-9269
2G-5838	Shaft	425-6452
2G-6157	Pin	282-6550
2G-7309	Shaft	393-3682
2G-7387	Bearing-Sleeve	330-9258
2G-7388	Bearing-Sleeve	330-9259
2G-7464	Insert-Bolt	386-4918
2G-7759	Cage As	399-8574
2G-8083	Pin	393-3666
2G-8084	Pin	392-4531
2G-8238	Yoke As	282-6631
2G-8608	Bearing-Sleeve	385-3783
2G-8609	Pin	319-3450
2G-8610	Pin	389-6316
2G-8613	Pin	282-6553
2G-8616	Pin	282-6554
2G-8617	Pin	282-6555
2G-8620	Pin	282-6556
2G-8621	Pin	282-6557

Premium Part Number	Part Name	Classic Part Number
2G-8623	Pin	393-3675
2G-8625	Pin	282-6558
2G-8628	Pin	282-6559
2G-8629	Pin	282-6560
2G-8630	Pin	389-6304
2G-8631	Bearing-Sleeve	391-9811
2G-8633	Pin	282-6561
2G-8639	Bearing-Sleeve	380-7560
2G-8735	Pin	391-1105
2G-8736	Bearing-Sleeve	299-1959
2G-8739	Retainer	389-6314
2G-8769	Pin	282-6562
2G-9097	Cap	418-1926
2G-9098	Cap	300-2573
2H-4386	Plate-Ring Lock	431-5259
2H-4438	Stud-CL Spring	431-5260
2H-5046	Link-Fly CL Cam	299-2024
2H-5047	Roller	385-7204
2H-5048	Link	389-6334
2J-1227	Retainer	440-0850
2J-5596	Pin-Pivot	297-7211
2J-5649	Pin-Cylinder	256-4782
2J-8489	Bearing-Sleeve	295-5691
2K-0227	Bearing-Sleeve	384-4780
2K-0535	Nut	299-2026
2K-0714	Plate-Thrust	299-2040
2K-4442	Bearing-Sleeve	308-9812
2K-4502	Bearing-Sleeve	299-1986
2K-4507	Bearing-Sleeve	325-6021
2K-4513	Bearing-Sleeve	308-9814
2K-5073	Bushing	299-1989
2K-6413	Pin	360-2270
2L-4238	Mount -Flexible	385-7222
2M-0398	Sleeve-Bolt	226-0235
2M-4208	Spacer-Timing	417-4533
2M-4209	Spacer-Timing	417-4532
2M-6960	Cage-Gear Brg	239-7971
2M-8340	Rod End-Yoke	374-4678
2N-3386	Support-Shield	419-1863
2P-1005	Bearing-Sleeve	296-1342
2P-1738	Plate As-Oil Pan	325-6164
2P-4426	Shaft As-Planet	384-3478
2P-4698	Bearing-Sleeve	389-6318
2P-4701	Shaft As-Gear	297-7257
2P-9632	Damper As	299-2004
2P-9672	Cage-Pinion Brg	226-7972
2S-3188	Plate	299-2041
2S-3913	Cage-Gear Brg	217-7722
2S-3966	Ring-Seal	297-7237
2S-6097	Tang	375-9979

Classic Miscellaneous Parts

Premium Part Number	Part Name	Classic Part Number	Premium Part Number	Part Name	Classic Part Number	Premium Part Number	Part Name	Classic Part Number
2S-6150	Cover-Pulley	428-8817	3G-6098	Pin As	383-2124	3P-0395	Cage-Carrier Brg	217-7723
2S-6196	Shaft-Pulley	438-9541	3G-6313	Bearing	325-6007	3P-2865	Shaft As-Idler	393-1056
2S-7931	Bearing-Sleeve	387-2904	3G-7482	Sleeve	425-3455	3P-3103	Carrier-Ring	385-7203
2T-0374	Pin	418-1952	3G-7752	Pin As	384-4779	3P-3424	Shaft	416-5526
2T-1581	Bearing-Sleeve	399-6051	3G-8136	Retainer	425-3585	3P-3429	Cage-Bearing	452-0430
2T-3885	Housing	448-4967	3G-8245	Bearing-Sleeve	399-8586	3P-3505	Shaft-Brake	384-3477
2T-3890	Shaft As-Stub	425-9376	3G-8900	Pin	325-6140	3P-3623	Lock-Adj Nut	226-7989
2V-0447	Bearing-Sleeve	380-7559	3G-8917	Pin	325-6141	3P-4142	Plate As	299-2039
2V-0705	Pin As	241-2524	3G-8932	Pin	325-6143	3P-4143	Suspension As	393-3644
2V-0706	Bearing-Sleeve	388-0637	3G-9303	Pin	367-6079	3P-8186	Housing-Screen	390-5261
2V-0707	Bearing-Sleeve	360-2328	3H-7161	Pin	256-4819	3P-8845	Bearing-Inner	416-5491
2V-1256	Bearing-Sleeve	422-9529	3H-7164	Pin-Pivot	256-4820	3R-8530	Boss	425-3454
2V-1722	Pin As	241-2525	3H-8726	Mount As	385-7208	3S-1262	Retainer	308-9915
2V-4331	Collar	387-2910	3J-2333	Bearing-Sleeve	422-9525	3S-1292	Bearing-Sleeve	425-8226
2V-4332	Collar	299-1993	3J-2373	Bearing-Sleeve	380-7562	3S-6989	Nut-Spanner	219-9701
2V-4405	Housing-Brg Spt	396-0648	3J-2443	Bearing	383-2125	3S-7308	Cage-Pinion Brg	219-9702
2V-4700	Pin	308-9894	3J-2682	Bracket	296-1345	3S-9466	Bearing-Sleeve	314-8509
2V-5656	Ring-Snap	374-1454	3J-2903	Cover	422-6922	3T-0996	Bearing-Sleeve	295-5695
2V-5715	Bushing	299-1987	3J-3953	Bearing-Sleeve	384-4778	3T-0997	Bearing-Sleeve	307-1524
2V-6129	Cover	390-5295	3J-4284	Cap-Brg	314-8656	3T-1162	Sleeve-Wear	325-6209
2V-6371	Cover As	398-8338	3J-4778	Roller As	394-2582	3T-2094	Bearing-Sleeve	388-0638
2V-7092	Plate-Retainer	374-6510	3J-5190	Cap-Brg	256-4837	3T-2095	Bearing-Sleeve	384-3459
2W-6250	Support	422-7897	3J-5432	Pin-Pivot	361-1711	3T-4308	Bearing-Sleeve	296-1341
2W-7176	Shaft-FP & Gov Dr	432-8906	3J-6043	Trunnion	319-3477	3T-5294	Spacer	325-6216
2W-7177	Shaft-FP & Gov Dr	433-9215	3J-6167	Bearing-Sleeve	299-1960	3T-9496	Plate-Retainer	299-2042
2W-9094	Adapter-Exhaust	299-2534	3J-6412	Bearing-Sleeve	386-4920	3V-2281	Link As	299-2023
3B-1464	Cap-Bearing	226-0206	3J-6442	Bearing-Sleeve	299-1961	3V-2337	Pin As	319-3440
3D-4343	Chain-Tandem Dr	394-0214	3J-6484	Bearing-Sleeve	380-7383	3V-3855	Housing-Brg Spt	375-9980
3D-4718	Bearing-Sleeve	245-5795	3J-6502	Pin	319-3453	3V-5762	Support As	389-6310
3E-4903	Mount As	396-7274	3J-6558	Brace As	416-5522	3V-6515	Link As	394-0186
3E-4924	Mounting As	391-9812	3J-6559	Cap-Bearing	296-1346	3V-6648	Pin As	308-9884
3F-4971	Pin	295-5693	3J-6560	Screw-Adj	297-7240	3V-6697	Housing	424-4944
3F-6149	Pin	299-2033	3J-6561	Screw-Adj	297-7241	3V-7427	Housing As	297-7197
3F-6185	Pin	295-5694	3J-6570	Support-Bearing	299-2069	3W-0241	Pin As	393-3676
3F-6523	Pin-Clevis	256-4818	3J-6573	Screw-Adjusting	302-2714	3W-0630	Pin	307-1525
3F-6612	Cap-Ball Joint	297-7155	3J-6575	Trunnion	297-7265	3W-0640	Piston	325-6160
3G-0027	Pin As	388-6601	3J-6577	Pin-Brace	367-6077	3W-2196	Housing As	396-0661
3G-0034	Trunnion	361-1712	3J-7798	Bracket	385-3791	3W-2197	Plate As	416-5511
3G-0222	Bearing-Sleeve	374-6512	3J-8688	Bearing-Sleeve	380-1561	3W-2214	Housing As	418-1947
3G-0910	Cap-Bearing	325-6037	3J-9097	Retainer	397-5045	3W-2215	Plate As	396-0655
3G-2580	Bearing-Sleeve	422-9526	3J-9133	Bearing-Sleeve	361-1691	3W-2420	Bearing	417-4517
3G-2665	Cover	308-9842	3J-9511	Bearing-Sleeve	385-3782	3W-4363	Pin As	375-2634
3G-2797	Bearing-Sleeve	360-2329	3K-0963	Pin-Lock	308-9895	3W-7559	Pin As	419-4731
3G-3346	Bushing	385-3786	3K-2511	Dowel-Reaction	383-2126	3W-8177	Retainer	428-7634
3G-3347	Bushing	385-3792	3K-9604	Cage-Bearing	396-0654	3W-8238	Cap	425-3448
3G-4292	Bearing	425-6439	3K-9608	Guard-Dirt	374-1447	3W-8239	Sleeve-Wear	360-2342
3G-4704	Bearing-Sleeve	379-0185	3N-1968	Mount -Shock	397-5046	3W-8240	Bearing-Sleeve	425-6438
3G-5285	Bearing-Sleeve	360-2312	3N-3786	Rod-Thrt Cont	397-5051	3W-8355	Pin As	425-2565
3G-5999	Bearing-Sleeve	391-9813	3N-4892	Lever-Gov Cont	439-4542	3W-8398	Bearing-Sleeve	379-0189
3G-6058	Pin As	389-6306	3N-5869	Support-Elbow	375-9973	3W-8406	Cap	416-5534
			3N-9160	Ring-CShft Seal	311-9447			

Classic Miscellaneous Parts

Premium Part Number	Part Name	Classic Part Number
3W-8409	Bearing	398-8336
3W-8572	Pin As	393-3672
3Y-2768	Ring	439-4544
4B-1455	Cap As-Filler	361-1719
4B-7064	Shaft-Worm	245-5803
4C-1335	Washer-Thrust	399-4425
4D-2229	Cage-Bearing	229-1598
4D-6698	Bearing-TD Hsg	228-9405
4E-0079	Cage-Bearing	434-4387
4E-1011	Pin As	430-9676
4E-1035	Pin	241-2553
4E-1065	Pin As	241-2538
4E-2250	Housing	399-6043
4E-3196	Pin As	361-1697
4E-3197	Pin As	374-6507
4E-3456	Lever As	367-6081
4E-3997	Housing-Pinion	374-6498
4E-4524	Pin As	380-7392
4E-5213	Cover As	299-2000
4E-7608	Bearing-Sleeve	388-0639
4F-1121	Bracket	299-1981
4F-1252	Pin	295-5704
4H-9040	Nut	226-7996
4H-9640	Bearing-Sleeve	386-4921
4I-0453	Bearing-Sleeve	360-2331
4I-0465	Pin	372-7511
4I-0704	Bearing-Sleeve	360-2332
4I-4617	Pin As	424-6367
4I-4619	Pin As	425-2564
4I-4665	Bearing-Sleeve	364-5267
4I-4666	Bearing-Sleeve	388-0640
4I-4805	Pin	365-8828
4I-4806	Pin	364-5268
4I-4807	Pin	383-2139
4I-5015	Pin	365-8829
4I-5016	Pin	396-7272
4I-6897	Bearing-Sleeve	372-7509
4J-0121	Cap-Bearing	360-2344
4J-1612	Pin	308-9896
4J-1614	Pin-Pivot	297-7214
4J-1616	Bracket	299-1982
4J-1641	Trunnion	314-8725
4J-2379	Bearing-Sleeve	393-1014
4J-2414	Trunnion	296-1370
4J-2585	Pin	299-2034
4J-2592	Brace As	418-1928
4J-2847	Trunnion As	297-7267
4J-3583	Screw-Adjusting	297-7242
4J-3589	Cap-Ball Joint	297-7157
4J-3590	Bearing	297-7139
4J-5241	Retainer	434-1415

Premium Part Number	Part Name	Classic Part Number
4J-5693	Bearing-Sleeve	385-3790
4J-5694	Bearing-Sleeve	379-0190
4J-5695	Bearing-Sleeve	386-4922
4J-6167	Bearing-Sleeve	325-6009
4J-6326	Bearing-Half	376-3630
4J-6374	Bearing-Sleeve	295-6407
4J-7650	Retainer As	440-0851
4K-0299	Bearing-Sleeve	308-9816
4K-0300	Bearing-Sleeve	308-9817
4K-1102	Bearing-Sleeve	325-6010
4K-3004	Bearing-Trun Sup	314-8632
4K-3128	Bearing-Sleeve	314-8633
4K-3150	Pin	385-3788
4K-4780	Strip As-Wear	299-2063
4K-4894	Cage-Bearing	453-0968
4K-6558	Pin-Lower	302-2710
4K-6760	Cap-Lower	300-2574
4K-6761	Cap-Upper	300-2575
4K-7287	Support As-Rear	383-2116
4K-8225	Pin-Cylinder	297-7215
4K-8561	Pin	299-2036
4K-8734	Bearing-Sleeve	299-1962
4L-8473	Plate-Wear	419-0883
4M-1641	Dowel-Reaction	386-4952
4M-9183	Bearing-Sleeve	386-4924
4N-0342	Plate-Cam Thrust	375-9974
4N-0362	Cover As-Rgltr	419-4722
4N-0614	Cap-Crankshaft	448-9156
4N-1010	Support-Elbow	416-5509
4N-1015	Bearing-Sleeve	417-4525
4N-1098	Shaft As	374-1455
4N-1186	Bearing-Sleeve	417-4519
4N-2954	Sleeve-Camshaft	299-2059
4N-4161	Mount As	374-1448
4N-4519	Quadrant-Control	444-0572
4N-4520	Guide	388-6600
4N-4539	Sleeve	314-8720
4N-4942	Rod-Eye	421-8919
4N-5572	Gasket	433-8192
4N-5857	Cap-Bearing	376-9086
4N-5858	Cap-CShft Brg	448-9157
4N-6257	Adapter	415-1904
4N-6413	Support-Alt	433-9855
4N-7977	Shaft As-Balance	314-8709
4N-7978	Shaft As-Balance	314-8710
4N-8204	Mount As	374-1449
4P-2383	Adapter-Inlet	438-1812
4P-9942	Seal-End Tank	385-7217
4P-9943	Seal-End Tank	385-7216
4Q-1346	Link As-Bearing	425-3649

Premium Part Number	Part Name	Classic Part Number
4S-5367	Bushing As	375-9986
4S-6559	Tube	325-6234
4S-8718	Cage-Carrier Brg	217-7724
4S-9062	Cap-FD Bearing	226-0204
4T-0202	Pin As	325-6130
4T-0231	Retainer	376-3641
4T-0589	Slider	434-1411
4T-0732	Bracket	314-8627
4T-0998	Lever	314-8687
4T-1504	Trunnion	314-8727
4T-6151	Trunnion	295-5671
4T-7534	Pin	433-9209
4T-7640	Shaft As	393-3643
4T-9311	Housing	396-0652
4V-0015	Plate-Lock	282-6563
4V-0189	Pin	374-6504
4V-0381	Bearing-Sleeve	299-1963
4V-2120	Pin	365-8830
4V-2588	Pin As	435-6050
4V-2723	Pin	419-6016
4V-2872	Bearing-Sleeve	380-7558
4V-2873	Bearing-Sleeve	379-0192
4V-2881	Link As-Bearing	384-3464
4V-2883	Bearing-Sleeve	379-0193
4V-3044	Plate-Lock	308-9911
4V-3603	Pin As	319-3441
4V-3619	Pin As	380-7393
4V-3623	Pin As	375-9967
4V-3625	Pin As	418-1944
4V-3680	Bellcrank	308-9802
4V-5099	Cover	418-1929
4V-5400	Housing-Brg Spt	385-7202
4V-5454	Link	299-2025
4V-6421	Pin As	319-3442
4V-7099	Pin As	361-1698
4V-7105	Pin As	361-1699
4V-8518	Link As-Brg&	374-1450
4V-8519	Bearing-Sleeve	307-1526
4V-8520	Bearing-Sleeve	307-1527
4V-8629	Bearing-Sleeve	379-0194
4V-8643	Bearing-Sleeve	374-8354
4V-8661	Pin As	375-9968
4V-8673	Bearing-Sleeve	307-1528
4V-8674	Bearing-Sleeve	307-1529
4V-8675	Bearing-Sleeve	394-0187
4V-9901	Pin As	374-6508
4W-0452	Seal As -CShft	325-6191
4W-2042	Spacer	325-6217
4W-2357	Mount As	386-4927
4W-2606	Seal Gp-CShft -A	311-9452
4W-2607	Seal Gp-CShft -A	311-9453

Classic Miscellaneous Parts

Premium Part Number	Part Name	Classic Part Number	Premium Part Number	Part Name	Classic Part Number	Premium Part Number	Part Name	Classic Part Number
4W-4588	Sleeve	394-0218	5K-0989	Cap-Upper	297-7158	5T-3288	Yoke	424-0743
4W-6150	Adapter-Support	432-4219	5K-0990	Pin	299-2035	5T-3323	Pin As	380-7394
4W-6869	Spacer-Fuel Pump	417-4534	5K-0991	Cap-Lower	319-3433	5T-3327	Pin As	383-2130
4W-9655	Support	419-0882	5K-2432	Pin-Cylinder	384-3473	5T-3329	Pin As	380-7395
4Y-1034	Pin As	396-0641	5K-3490	Spacer	308-9933	5T-5222	Shoe-Circle Gde	297-7261
4Y-4340	Pin As	319-3442	5K-3491	Spacer	308-9934	5T-6620	Shoe-Circle Gde	424-4943
4Y-4905	Washer-Soft	416-5535	5K-3493	Cover	391-9814	5T-6819	Pin	425-2563
4Y-5711	Pin As	425-6442	5K-3495	Collar	383-2129	5T-6820	Bearing	425-3447
4Y-7089	Pin As-Rmte Lub	397-5042	5K-3499	Pin-Lower	308-9898	5T-7130	Housing	396-0656
5C-3784	Pin As	241-2512	5K-3502	Cap-Lower	308-9835	5T-8365	Strip-Wear	380-7418
5C-5829	Pin As	241-2510	5K-3968	Cage-Bearing	308-9804	5T-8367	Strip-Wear	297-7263
5C-5837	Retainer-Pin	299-2047	5K-4079	Cage-Bearing	308-9805	5T-8500	Shoe-Circle Dr	243-0359
5C-6739	Bearing-Sleeve	445-7704	5K-4268	Retainer-Bearing	308-9916	5T-8501	Shoe-Circle Dr	243-0358
5C-8273	Adapter	415-1902	5K-4273	Bearing-Sleeve	374-1461	5T-8525	Plate	389-6307
5D-6201	Shoe-Yoke	243-0356	5K-4787	Bearing-Sleeve	308-9819	5T-8526	Pin As.	396-7270
5D-9745	Shoe-Guide	330-9285	5K-5927	Boss	299-1973	5T-8528	Pin As.	396-7269
5F-0736	Pin-Pivot	256-4823	5K-5933	Cover As	247-4125	5T-8652	Pin As	383-2131
5F-2256	Cage-Bearing	226-7973	5K-6377	Pin	241-2610	5T-8654	Pin As	396-0668
5F-7404	Nut-Bearing Lock	308-9878	5K-6383	Pin	241-2612	5T-8687	Pin As	423-3542
5F-7958	Shaft-Roller	434-1865	5K-7995	Bearing-Sleeve	308-9820	5T-9430	Race-Seal Ring	398-8347
5F-7993	Pin	319-3454	5K-8265	Pin	241-2590	5T-9536	Roller-Ejector	399-8559
5G-3612	Cap Gp-Protn	295-6419	5K-8628	Cage	449-4732	5T-9594	Pin As	419-6069
5H-5553	Screw-Tappet Adj	311-9451	5L-2648	Bearing-Sleeve	311-9362	5V-1508	Pin As.	361-1703
5I-3301	Pin As	387-2929	5L-2660	Bearing-Sleeve	311-9363	5V-1509	Pin As	319-3443
5I-3371	Pin As	393-3668	5L-7632	Support-Elbow	433-9854	5V-1511	Pin As	418-1945
5J-1192	Bearing-Sleeve	374-8355	5M-5894	Cover-Bearing	448-2438	5V-1530	Link As	374-1463
5J-1193	Bearing-Sleeve	382-8046	5M-6637	Bearing-Sleeve	380-7376	5V-1882	Pin As	361-1700
5J-1449	Pin As	393-3671	5M-7290	Cage-Bearing	216-7848	5V-5279	Bearing-Sleeve	299-1966
5J-1806	Pin	396-0662	5M-7340	Cage-Bearing	325-6034	5V-5661	Bearing-Sleeve	299-1965
5J-1825	Pin	367-6080	5M-7341	Cover-Bearing	452-0443	5V-5866	Pin As.	361-1707
5J-1968	Shaft-Roller	386-4928	5M-7955	Shaft As-Planet	364-5273	5V-7574	Ring-Retaining	392-4483
5J-1980	Pin	385-3805	5N-2902	Seal-Oil	314-8540	6A-7099	Bearing-Sleeve	388-0644
5J-2245	Bearing	422-6916	5N-3274	Plate	425-3648	6A-7129	Bearing-Sleeve	301-3130
5J-2246	Bearing	418-1927	5N-4504	Plate-Port	397-5048	6B-3158	Shoe-Yoke LH	243-0357
5J-2445	Bearing-Sleeve	380-7563	5N-6165	Bearing	425-3587	6B-7469	Spacer	417-4535
5J-3506	Retainer	399-8551	5P-8194	Ring-Retaining	308-9920	6D-0217	Bearing-Sleeve	325-6022
5J-4321	Trunnion	302-2700	5S-0927	Sleeve-Wear	425-3453	6D-4909	Cap-Pivot	297-7159
5J-4929	Bearing	256-4796	5S-0928	Carrier-Ring	443-2969	6D-5415	Plate	382-8043
5J-5365	Pin	380-7553	5S-1211	Cover-Valve	314-8665	6D-6859	Bearing	330-9248
5J-5643	Connector	325-6043	5S-4326	Housing-Screen	435-4790	6D-7788	Joint	380-7388
5J-6430	Bearing-Sleeve	379-0195	5S-4557	Bearing	311-9360	6D-8671	Bolt-Draft	243-0333
5J-6611	Bearing-Sleeve	383-2140	5S-5879	Bracket-Shaft	330-9247	6E-0787	Bearing-Sleeve	425-6443
5J-7980	Pin	256-4783	5S-7630	Bearing-Sleeve	394-0219	6E-1108	Bearing-Sleeve	325-6023
5J-7981	Pin	256-4784	5S-7893	Joint-Drive	380-7387	6E-5449	Bearing-Sleeve	464-4048
5J-8103	Bearing-Sleeve	389-6309	5S-8543	Bearing-Sleeve	376-3635	6F-2904	Bearing	295-5673
5J-8118	Bearing-Sleeve	451-9018	5T-0735	Chain Gp	390-5262	6F-6992	Cap-Ballsocket	297-7160
5J-8361	Bearing-Sleeve	384-4775	5T-0906	Cover	282-6625	6F-7523	Cap-Bearing	325-6039
5J-8363	Bearing-Sleeve	394-0209	5T-2925	Strip-Wear	282-6564	6G-1633	Chain Gp	282-6565
5K-0609	Cover	308-9843	5T-2926	Shoe-Circle Gde	302-2699	6G-1908	Housing As-Drive	297-7198
5K-0871	Pin-Lower	282-6630	5T-3030	Pin As	389-6308	6G-1914	Shim	434-1864
5K-0984	Bearing-Sleeve	330-9262				6G-1919	Cap-Pivot	243-0337

Classic Miscellaneous Parts

Premium Part Number	Part Name	Classic Part Number
6G-2947	Shaft	243-0346
6G-3784	Bearing-Sleeve	425-6455
6G-3785	Bearing-Sleeve	425-6454
6G-4372	Strip-Wear	380-7416
6G-4524	Strip-Wear	380-7417
6G-4525	Strip-Wear	282-6624
6G-4642	Shim	434-1863
6G-4680	Adapter	302-2633
6G-4831	Shaft	391-9809
6G-5155	Bearing-Thrust	394-0220
6G-5343	Bearing-Sleeve	450-9169
6G-6844	Bearing-Sleeve	419-6070
6G-6847	Bearing-Sleeve	419-4723
6G-9428	Bracket-Rail	396-7264
6G-9429	Bracket-Rail	396-7263
6G-9430	Bracket	418-1938
6J-0774	Trunnion	256-4844
6J-2326	Pin	319-3458
6J-3999	Connector	428-7631
6J-5179	Retainer	380-7406
6J-5342	Retainer	325-6182
6J-6043	Bearing-Sleeve	374-1456
6J-6229	Pin	299-2030
6J-6604	Pin	419-6071
6J-7500	Retainer	383-2104
6J-7563	Pin	319-3459
6J-8183	Bracket	394-0195
6J-9258	Trunnion As	256-4846
6J-9480	Pin As	384-4774
6J-9482	Pin As	380-7400
6K-2694	Bearing-Sleeve	453-6504
6K-2697	Bearing-Sleeve	330-9263
6K-2703	Pin-Lower	252-6853
6K-2704	Pin-Upper	252-6873
6K-2706	Cap-Lower	451-6443
6K-2899	Bearing-Sleeve	453-6505
6K-3937	Pin	241-2557
6K-4148	Bearing-Sleeve	393-3670
6K-4180	Pin-Upper	252-6854
6K-4189	Spacer	367-6075
6K-4190	Cap-Lower	297-7161
6K-4191	Cap-Upper	300-2576
6K-4192	Pin-Lower	252-6855
6K-4193	Plate-Lock	282-6566
6K-5513	Pin	241-2558
6K-5619	Shaft	253-1429
6K-5744	Cage-Bearing	330-9266
6K-6001	Pin	308-9902
6K-6046	Pin	241-2602
6K-6047	Pin	241-2603
6K-6053	Pin	241-2604

Premium Part Number	Part Name	Classic Part Number
6K-6054	Pin	241-2605
6K-6175	Pin	241-2606
6K-6185	Pin-Cylinder	252-6859
6K-6349	Pin	252-6860
6K-6350	Bearing-Sleeve	451-6444
6K-7161	Pin	241-2559
6K-7162	Pin	241-2560
6K-7164	Pin	241-2561
6K-7165	Pin	241-2562
6K-7166	Pin-Arm Pivot	241-2563
6K-7167	Pin	241-2569
6K-7284	Pin	241-2591
6K-7287	Pin	241-2564
6K-7288	Pin	252-6862
6K-8307	Pin	241-2593
6K-8308	Pin	241-2594
6K-8309	Pin	241-2595
6K-8311	Pin	241-2599
6K-8314	Pin	252-6863
6K-8316	Pin	252-6865
6K-8542	Pin	252-6867
6K-8544	Pin	252-6874
6K-8546	Pin	252-6868
6K-8895	Cap	374-6500
6K-8897	Bracket As	299-1977
6K-9070	Washer-Thrust	330-9294
6K-9150	Bearing-Sleeve	330-9264
6K-9151	Bearing-Sleeve	330-9265
6L-6490	Sleeve-O-Ring	398-8346
6L-7816	Seal-O-Ring	314-8542
6L-8761	Sleeve-O-Ring	396-7268
6M-1592	Bearing-Sleeve	374-1462
6N-0977	Bearing-Sleeve	417-4524
6N-1572	Mount As	308-9876
6N-2549	Mount As	384-3467
6N-3256	Mount As	314-8688
6N-5482	Plate-Friction	376-3637
6N-7174	Shield -Oil	314-8544
6N-8441	Bearing-Sleeve	380-7371
6N-9743	Support-Muffler	308-9940
6P-2322	Plate	389-6311
6P-7564	Carrier-Ring	384-3850
6P-7704	Carrier-Ring	314-8658
6P-7706	Carrier-Ring	388-6603
6P-8340	Sleeve	422-7895
6P-8829	Retainer	380-7407
6S-3457	Pin	325-6147
6S-3463	Bearing-Sleeve	374-6513
6S-3465	Bearing-Sleeve	382-6903
6S-3472	Pin As.	421-9629
6S-3474	Pin As	375-9981
6S-4074	Bearing	330-9249

Premium Part Number	Part Name	Classic Part Number
6S-7220	Plate As	396-0657
6T-0248	Ring-Seal	295-6440
6T-1235	Gasket	433-8190
6T-1702	Support As	299-2065
6T-1711	Plate	389-6324
6T-5611	Spacer	435-8520
6T-8249	Pin	399-8542
6T-9564	Guide As	416-5530
6V-3710	Gasket Kit	447-8646
6V-3831	Seal-O-Ring	436-2657
6W-4284	Cage-Bearing	308-9832
6W-4733	Retainer-Bearing	391-1089
6W-5119	Housing-Support	450-8051
6W-7352	Retainer	424-0741
6W-9172	Bearing	389-6330
6W-9173	Bearing	374-1457
6Y-0145	Plate-Locking	419-8801
6Y-0210	Bearing-Sleeve	453-6506
6Y-0305	Cage As-Bearing	297-7150
6Y-0306	Bearing-Sleeve	391-1104
6Y-0576	Support As	416-5531
6Y-1690	Carrier-Ring	384-3849
6Y-2065	Mount As-650 Cup	377-5844
6Y-2878	Retainer	424-0740
6Y-3545	Pin	391-9815
6Y-3896	Pin As	325-6132
6Y-4027	Pin	325-6148
6Y-5793	Ring-Seal	451-9028
6Y-5812	Bearing-Sleeve	325-6019
6Y-5814	Pin	389-6305
6Y-6126	Plate-Wear	325-6174
6Y-6127	Plate-Wear	325-6175
6Y-6134	Bearing-Sleeve	325-6013
6Y-6234	Bearing-Sleeve	325-6014
6Y-6236	Bearing-Sleeve	325-6024
6Y-6582	Plate-Wear	419-2307
6Y-6751	Pin	325-6149
6Y-6752	Pin	325-6150
6Y-6775	Pin	325-6151
6Y-7471	Pin-Pivot	325-6152
6Y-7474	Pin-Pivot	325-6153
6Y-8037	Guide As	435-9915
6Y-8248	Pin	325-6154
6Y-8842	Block-Rubber	432-8274
6Y-9930	Mount As	360-2353
6Y-9960	Mount As.	376-3639
7C-3567	Mount As	314-8689
7C-4297	Seal As-CShaft	325-6192
7C-4349	Mount As	383-2117
7C-6697	Shaft - Idler	425-9370
7C-9198	Block	419-2303

Classic Miscellaneous Parts

Premium Part Number	Part Name	Classic Part Number	Premium Part Number	Part Name	Classic Part Number	Premium Part Number	Part Name	Classic Part Number
7D-4519	Shaft	245-5807	7J-9434	Shaft	380-7557	7M-2167	Ring-Gov Cont	308-9919
7D-5859	Adapter	297-7136	7J-9682	Bearing-Sleeve	360-2335	7M-2531	Rod-Tie	297-7239
7D-5861	Adapter	243-0364	7J-9694	Bearing-Sleeve	385-3794	7M-7226	Gasket-Cam Cover	433-8189
7D-8362	Cover	396-0658	7J-9707	Bearing-Sleeve	308-9821	7N-1164	Mount As	295-5451
7E-5085	Bushing	377-5829	7J-9708	Bearing-Sleeve	299-1964	7N-2155	Bearing	383-2133
7E-6002	Bearing-Sleeve	417-4523	7J-9731	Bearing-Sleeve	308-9822	7N-2156	Bearing-Sleeve	380-7373
7E-6003	Bearing-Sleeve	417-4522	7J-9814	Bearing-Sleeve	308-9824	7N-2213	Bearing-Sleeve	394-0190
7E-6004	Bearing-Sleeve	417-4520	7J-9842	Bearing-Sleeve	299-1968	7N-2957	Cover-Rad Cap	361-1722
7E-7302	Bracket	416-5497	7J-9884	Bearing-Sleeve	325-6016	7N-4407	Gasket-Rod Comp	433-9853
7E-9907	Spacer-FP Timing	394-0222	7K-0078	Bearing-Sleeve	308-9825	7N-5206	Mount As	374-1451
7F-9541	Pin As-Drawbar	296-1361	7K-0084	Bearing-Sleeve	453-6508	7N-5656	Sleeve	384-3848
7F-9547	Pin As.-Drawbar	295-0414	7K-0085	Bearing-Sleeve	393-3646	7N-7878	Cover-Plate	434-2401
7G-2830	Ring-Seal	295-6441	7K-0087	Bearing-Sleeve	374-6514	7N-9352	Gasket	433-8188
7G-4281	Housing As-Spt	297-7201	7K-0686	Trunnion-Rear	297-7266	7P-1577	Pin As	375-9969
7G-5618	Manifold As	283-5204	7K-1510	Washer-Thrust	330-9295	7P-2285	Pin As	393-3669
7G-5972	Plate-Thrust	393-1055	7K-5213	Pin	252-6869	7P-3214	Pin	425-3452
7G-6042	Cage As	216-7856	7K-6497	Pin	252-6870	7P-3466	Bearing-Sleeve	422-9523
7G-6044	Cage As	216-7857	7K-7176	Pin	241-2570	7P-3472	Pin	374-8366
7G-6059	Carrier-Ring	393-0911	7K-7200	Pin	241-2600	7P-4695	Tube	424-0860
7G-6576	Cage As	216-7859	7K-9343	Pin	241-2571	7P-4777	Pin	416-5488
7G-6681	Cage As	216-7860	7K-9344	Pin	241-2607	7P-5082	Pin As	374-8367
7G-8389	Guard	226-0202	7K-9345	Pin	241-2608	7P-6348	Bearing	399-6042
7G-9708	Plate-Thrust	393-1054	7K-9346	Pin	252-6871	7P-6596	Bearing-Sleeve	295-6409
7H-2424	Sleeve-Spring	226-4852	7K-9347	Pin	252-6875	7P-6770	Support As	389-6299
7H-4710	Bushing-Sleeve	299-1990	7K-9348	Pin	252-6872	7P-6984	Pin	393-3674
7I-7713	Rod	391-9873	7K-9360	Pin	319-3461	7P-7858	Bearing-Sleeve	374-8362
7J-0086	Bearing As	256-4842	7K-9506	Pin	241-2584	7P-8370	Bearing	295-6410
7J-0373	Shaft As	399-8578	7K-9513	Pin	241-2596	7S-0847	Cage-Bearing	223-6311
7J-1333	Bearing-Sleeve	295-6408	7K-9514	Pin	241-2597	7S-1234	Bushing As-Spt	394-0192
7J-1334	Bearing-Sleeve	325-6015	7K-9515	Pin	241-2589	7S-3206	Seal-O-Ring	436-2656
7J-1335	Bearing-Sleeve	380-7567	7K-9528	Bearing-Sleeve	308-9828	7S-7043	Mount As	389-6332
7J-1336	Bearing-Sleeve	384-4776	7K-9589	Bearing-Sleeve	453-6509	7S-7809	Cap As-Radiator	295-6417
7J-1337	Bearing	380-7367	7K-9591	Bearing-Sleeve	365-8826	7T-1776	Slide	396-0659
7J-1770	Cap-Bearing	396-0664	7K-9592	Bearing-Sleeve	360-2336	7T-2036	Cap As-Fuel	361-1721
7J-2604	Bearing-Sleeve	380-7369	7K-9593	Bearing-Sleeve	360-2337	7T-2879	Trunnion As	396-7262
7J-4888	Bearing-Sleeve	385-3789	7K-9601	Bearing-Sleeve	360-2338	7T-4971	Cap-Bearing	428-8816
7J-4981	Trunnion	394-0210	7K-9602	Bearing-Sleeve	360-2339	7T-5216	Sleeve-Wear	422-9522
7J-4982	Bearing	383-2132	7K-9604	Bearing-Sleeve	308-9829	7T-6427	Pin	319-3462
7J-4983	Cap-Bearing	384-3460	7K-9638	Bearing-Sleeve	365-8827	7V-0638	Spacer	425-3651
7J-5131	Trunnion	296-1371	7K-9639	Bearing-Sleeve	314-8643	7V-3719	Collet As	376-3644
7J-5356	Guide LH	416-5503	7K-9640	Bearing-Sleeve	389-6328	7V-5981	Driver	231-0256
7J-6250	Bearing-Sleeve	385-3803	7K-9642	Bearing-Sleeve	360-2340	7V-6715	Pin As	361-1701
7J-6869	Ring	389-6329	7K-9643	Bearing-Sleeve	445-7707	7V-6716	Pin As	396-7273
7J-6884	Shaft	387-2937	7K-9644	Bearing-Sleeve	360-2341	7V-6898	Pin As	241-2539
7J-7488	Bearing	256-4836	7K-9717	Link As-Rear	434-2447	7W-1927	Ring-Retainer	387-2935
7J-8458	Bearing-Sleeve	380-7374	7K-9794	Link As-Rear	431-5262	7W-2315	Retainer	384-3475
7J-9344	Bearing-Sleeve	360-2334	7K-9981	Pin As	308-9887	7W-2731	Retainer	423-3541
7J-9346	Bearing-Sleeve	374-8357	7K-9988	Pin	308-9904	7W-3145	Plate	422-7894
7J-9365	Bearing-Sleeve	453-6507	7K-9989	Pin	308-9905	7W-3580	Bracket-Mtg	418-1939
7J-9366	Bearing-Sleeve	299-1985	7K-9990	Pin	308-9906	7W-7546	Gasket-Plate	433-8187
			7M-0699	Cap-Brace Brg	247-4123	7Y-0896	Cover	424-0128

Classic Miscellaneous Parts

Premium Part Number	Part Name	Classic Part Number
7Y-1035	Mount	383-2118
7Y-1646	Shaft-Planet	301-4624
7Y-1772	Cage	374-3500
7Y-2345	Pin	394-0211
7Y-2348	Pin	314-8697
7Y-2349	Pin	301-4556
7Y-2357	Pin	301-4564
7Y-2392	Link-RH	301-4765
7Y-2395	Bearing-Sleeve	314-8646
7Y-2396	Bearing-Sleeve	314-8634
7Y-3427	Bearing-Sleeve	314-8635
7Y-3428	Bearing-Sleeve	314-8647
7Y-3546	Link	438-1817
7Y-3547	Pin	396-7278
7Y-3548	Pin	396-7289
7Y-3549	Pin	360-2349
7Y-3550	Pin	360-2350
7Y-3551	Bearing-Sleeve	380-7375
7Y-3552	Bearing-Sleeve	364-5266
7Y-3553	Bearing-Sleeve	301-0433
7Y-4666	Bearing-Sleeve	314-8636
7Y-5102	Bearing-Sleeve	380-7368
7Y-5128	Bearing-Sleeve	314-8648
7Y-5131	Bearing-Sleeve	301-4626
7Y-6389	Bearing	372-7507
7Y-6607	Bearing	372-7508
7Y-6608	Bearing	314-8649
7Y-6626	Bearing	314-8650
8D-0983	Mounting	384-3470
8D-1634	Retainer	416-5533
8D-1651	Cover	396-7279
8D-1784	Pin	282-6567
8D-1833	Pin	364-5269
8D-2351	Pin	297-7217
8D-2429	Pin As	319-3445
8D-2469	Shaft-Drive	275-5280
8D-3744	Shaft-Drive	275-5283
8D-3997	Pin As	389-6302
8D-4673	Pin-Cylinder	302-2711
8D-4675	Pin-Cylinder	391-9863
8D-4766	Pin-Cylinder	365-8832
8D-5949	Stud	416-5492
8D-6629	Bearing	418-1953
8D-7083	Bearing	386-4930
8D-7086	Bearing	330-9251
8D-7096	Pin-Axle Leaning	297-7219
8D-7167	Pin	389-6319
8D-7284	Bearing	330-9252
8D-8168	Bearing	453-6511
8D-8572	Bearing-Sleeve	380-7384

Premium Part Number	Part Name	Classic Part Number
8D-8633	Shaft-Drive	275-5281
8D-8805	Cover	299-2002
8D-8829	Bearing-Sleeve	361-1692
8D-9296	Bearing	330-9253
8D-9804	Housing-Drive	302-2682
8D-9815	Pin-Cylinder	297-7220
8E-4026	Pin As	394-0902
8E-5450	Seal-EBar	325-6190
8E-6220	Pin As	422-4559
8E-6221	Pin	325-6155
8E-6752	Bearing-Sleeve	388-6576
8E-6754	Connector As	325-6044
8E-6755	Bearing-Sleeve	325-6026
8E-6756	Bearing-Sleeve	325-6027
8E-6758	Connector As	396-0639
8F-6058	Bearing-Sleeve	416-5494
8F-9365	Pin	319-3463
8G-0935	Cap	425-3584
8G-1682	Pin	241-2585
8G-3733	Pin As	419-7636
8G-4022	Bearing	422-6920
8G-4027	Pin As	393-3677
8G-4187	Pin As	295-5676
8G-4190	Seal-EBar	296-1366
8G-4372	Support As	376-3645
8G-8311	Bearing - Sleeve	295-6412
8G-8331	Pin As	443-2971
8G-8944	Sleeve-Wear	418-1954
8H-1383	Rod-Tie	299-2051
8H-5026	Cover-Adj Pulley	445-7698
8H-7577	Plate-Locking	392-4486
8H-8175	Bearing-Sleeve	376-3636
8H-8898	Pin	385-3801
8I-1098	Shaft	396-7275
8J-0201	Bearing-Sleeve	384-4781
8J-0278	Bearing-Sleeve	385-3808
8J-0632	Pin	396-7280
8J-1616	Lever	330-9271
8J-2653	Lever As	299-2015
8J-2654	Lever As	299-2016
8J-2880	Cap-Bearing	295-6420
8J-3443	Bearing	396-7281
8J-5014	Pin	384-4773
8J-5654	Bearing-Sleeve	325-6028
8J-5778	Bearing-Sleeve	374-8359
8J-6536	Bearing	425-6444
8J-6552	Carrier-Bearing	399-6055
8J-7211	Guide-LH	428-8815
8J-7466	SEAT	385-3787
8J-7596	Bearing-Sleeve	361-1693
8J-7694	Bearing	431-5264

Premium Part Number	Part Name	Classic Part Number
8J-7727	Pin	380-7552
8J-9926	Bearing-Sleeve	383-2115
8K-0067	Spacer	396-1569
8K-0455	Pin	241-2547
8K-0533	Bearing-Sleeve	314-8637
8K-1754	Spacer	231-0247
8K-2682	Adapter	231-0268
8K-4392	Bearing-Sleeve	389-6325
8K-4850	Cage-Bearing	451-0745
8K-5283	Plate	299-2043
8K-5334	Pin	241-2598
8K-5757	Bearing-Sleeve	367-6076
8K-5758	Pin	241-2566
8L-4282	Hub	444-0573
8L-4889	Shaft-Aux Drive	433-9212
8M-6191	Sleeve-Bolt	226-0234
8M-7166	Housing-Screen	297-7192
8M-8652	Shaft	297-7252
8N-0111	Mount As	374-1452
8N-0788	Cover	440-0849
8N-1214	Mount As	325-6125
8N-1300	Bushing As-Spt	394-0193
8N-2518	Bearing-Sleeve	417-4518
8N-2641	Sleeve	325-6210
8N-4550	Shaft-Pulley	445-9247
8N-5305	Spacer	363-7464
8N-5579	Retainer	425-3451
8N-7257	Mount As	396-0660
8N-7486	Condenser As	436-2263
8N-8110	Gasket-Cam Hsg	433-8186
8N-8258	Bearing-Sleeve	452-1077
8P-1324	Cage-GR Shft Brg	229-8239
8P-2430	Shaft As	297-7258
8P-3563	Cage-Bearing	451-0747
8P-3595	Mount	418-1950
8R-0931	Housing-Pinion	302-4300
8R-1088	Bearing-Sleeve	419-0885
8R-1693	Pin As	415-1906
8R-3921	Collet	308-9839
8R-3941	Collet	393-1016
8R-3943	Collet	308-9840
8R-3946	Collet	308-9841
8R-4184	Bearing-Sleeve	374-6515
8R-4265	Collet	384-3462
8R-4268	Collet	384-3461
8R-6213	Mount As	389-6301
8R-7336	Bearing	301-3394
8R-7425	Retainer	308-9917
8S-0611	Cage-Bearing	451-0748
8S-2123	Cage-FDR Bearing	217-7726
8S-2126	Spacer-Hub Brg	222-1767

Classic Miscellaneous Parts

Premium Part Number	Part Name	Classic Part Number	Premium Part Number	Part Name	Classic Part Number	Premium Part Number	Part Name	Classic Part Number
8S-2140	Trunnion-Gear	226-8020	9C-6029	Bearing-Planet	375-9982	9J-7099	Bearing-Sleeve	391-9818
8S-6511	Bearing-Sleeve	380-7372	9C-6187	Pin As	241-2521	9J-8323	Trunnion	361-1713
8V-1612	Shaft	425-6456	9C-6318	Bearing-Sleeve	374-6516	9J-9427	Bearing-Sleeve	361-1695
8V-1624	Lever	299-2019	9C-8986	Collet As	374-6502	9J-9487	Bearing-Sleeve	447-0822
8V-2632	Pin As	241-2523	9C-9191	Trunnion	302-2701	9J-9598	Pin	296-1362
8V-2634	Pin As	241-2518	9D-1511	Bearing-Sleeve	333-4943	9K-0723	Pin	396-7283
8V-2639	Pin As	241-2542	9D-1512	Bearing-Sleeve	333-4944	9K-0724	Collar	392-4524
8V-5439	Pin As	241-2531	9D-1589	Mounting	387-2928	9K-0725	Cap	444-0575
8V-6384	Spacer As	308-9935	9D-3288	Bolt-Draft	333-4941	9K-0726	Cap	393-3680
8V-7175	Pin	241-2567	9D-4094	Bearing-Sleeve	418-1933	9K-0802	Spacer	419-0892
8V-7176	Pin	241-2568	9D-5444	Pin	380-7396	9K-0804	Pin	367-6092
8V-7659	Pin As	361-1702	9D-5921	Shaft-Dr Pinion	297-7254	9K-0805	Cap	415-1910
8V-7885	Housing-Support	297-7193	9D-6889	Plate As	394-9818	9K-0806	Cap	430-4469
8W-1708	Pin	388-0643	9D-7924	Mount As	360-2356	9K-5639	Pin	425-6451
8W-1749	Plate	380-7403	9D-8285	Cap	391-9822	9K-8423	Bearing-Sleeve	421-9043
8W-1751	Bracket As	288-8732	9D-9665	Bracket-Cyl Mtg	299-1980	9K-8425	Bearing-Sleeve	314-8638
8W-1752	Bracket-Rail	288-8733	9D-9967	Washer-Thrust	389-6323	9K-8428	Pin As	241-2533
8W-1753	Bracket-Rail	288-8734	9D-9968	Washer-Thrust	391-9890	9K-8435	Pin	241-2552
8W-3589	Link As-Spring	380-7389	9F-3358	Link As-CL Drive	394-0207	9K-9158	Bearing-Sleeve	299-1970
8W-3613	Bearing	418-1960	9F-7101	Bushing-Collar	299-1988	9K-9271	Holder As-Cage	217-7730
8W-4066	Bracket-Rail	288-8735	9G-6744	Bearing-Sleeve	418-1931	9L-5908	Gasket	433-8196
8W-4067	Bracket-Rail	288-8736	9G-7038	Pin	396-0665	9L-5961	Adapter-Compr Dr	416-5508
8W-4167	Bearing-Sleeve	361-1694	9G-7993	Cage-GR Brg RH	239-7973	9L-6371	Rod-Eye	363-7459
8W-4523	Bearing-Sleeve	385-3798	9G-9078	Sleeve	431-6618	9M-1853	Mount As.	376-3638
8W-5092	Pinion-Circle Dr	282-6569	9G-9086	Bearing-Sleeve	416-5528	9M-1990	Dowel-Reaction	386-4963
8W-5293	Pin	282-6570	9J-0105	Hub	415-1894	9M-2417	Retainer-Gear	380-7409
8W-5296	Pin	438-2017	9J-0123	Trunnion	325-6227	9M-3025	Cover As	299-2001
8W-6324	Kit-Wear Strip	424-0739	9J-0940	Pin	319-3467	9M-4370	Bearing-Sleeve	453-6515
8W-6476	Pin	418-1935	9J-0944	Pin	380-7399	9M-4789	Shaft-Gov Cont	297-7256
8W-6493	Pin	395-1320	9J-0945	Bearing-Sleeve	383-2135	9M-5477	Bearing-Sleeve	374-6517
8W-6494	Pin	391-9902	9J-0946	Bearing	421-9759	9M-8395	Bearing-Sleeve	391-1103
8W-6497	Pin	319-3465	9J-0950	Bearing-Sleeve	396-0667	9N-3167	Plate-Block Bot	430-4468
8W-8512	Pin As	385-7220	9J-0951	Bearing-Sleeve	396-0666	9N-4622	Pin	319-3468
8X-0576	Kit-Wear Strip	383-2105	9J-1140	Bushing	384-4782	9P-0620	Cage-Pinion Brg	221-1052
8X-0962	Pin	423-3539	9J-1141	Bushing	384-4783	9P-0863	Pin	389-6321
8X-0967	Pin As	425-6445	9J-1187	Bearing-Sleeve	384-4785	9P-6912	Pin	394-0189
8X-5425	Guide As-Hose	432-4222	9J-1379	Pin As	389-6303	9P-8663	Spacer	422-9521
8X-8067	Mounting	394-0205	9J-1676	Bearing-Sleeve	380-7378	9P-9575	Cage-Bev GR Brg	216-7876
8Y-0395	Pin As	393-3678	9J-1679	Bearing-Sleeve	380-7566	9R-0097	Pin	346-5684
8Y-0978	Plate As	434-1402	9J-2290	Pin As	423-3538	9R-0424	Pin	346-5686
8Y-7186	Link As	399-8584	9J-2332	Bearing-Pivot	299-1969	9R-0437	Pin	389-6320
9B-0399	Link As-CL Drive	431-5268	9J-2365	Retainer	325-6186	9R-1725	Bearing-Sleeve	425-6446
9C-0624	Pin As.	361-1709	9J-2759	Trunnion	394-0216	9R-1917	Bearing-Sleeve	418-1958
9C-0625	Pin As	308-9888	9J-3741	Shaft	386-4933	9R-2421	Shaft	346-5689
9C-1484	Pin As	319-3446	9J-5284	Bearing-Sleeve	380-7379	9R-4208	Pin	425-3450
9C-3581	Pin As	374-6506	9J-5875	Bearing-Sleeve	308-9830	9R-6070	Pin As	393-3681
9C-3857	Pin	374-6503	9J-5942	Bearing-Sleeve	380-7380	9R-6161	Pin	374-6505
9C-4007	Bearing-Sleeve	374-1459	9J-6001	Cap As	444-0570	9R-6162	Pin	418-1943
9C-4202	Ring	424-0127	9J-6260	Trunnion	426-0031	9R-6163	Pin	346-5701
9C-4737	Pin As	241-2520	9J-6549	Bearing-Sleeve	453-6514	9R-6475	Pad As	346-5702
9C-4912	Pin As	241-2517				9R-6545	Pin	346-5703
9C-4978	Pin-Lower	319-3466						

Classic Miscellaneous Parts

Premium Part Number	Part Name	Classic Part Number
9R-7092	Bar	364-5272
9R-7696	Pin	346-5705
9R-8231	Pad As	397-5066
9R-8235	Pad As	383-2106
9R-8579	Pin	346-5711
9R-8580	Pin As	418-1932
9R-8663	Pin	365-8831
9R-8709	Pin	346-5715
9R-9402	Seal-RAX	347-0476
9R-9475	Bearing-Sleeve	380-7377
9R-9505	Bearing-Sleeve	453-6516
9R-9812	Pin	347-0468
9S-1026	Cage-Gear Brg	216-7873
9S-3321	Cage-Pinion Brg	226-7974
9S-3955	Cage-Gear Brg	216-7874
9S-5771	Bushing As	385-7219
9S-8184	Pin-Drawbar	398-8345
9U-0974	Bushing-Sleeve	374-1460
9U-8481	Pin As.	295-5675
9V-0247	Plate	417-4527
9V-2410	Housing-Bearing	302-2679
9V-3052	Plate	434-1401
9V-3289	Pin As	382-6904
9V-3363	Pin As	396-0663
9V-3405	Bearing-Sleeve	425-6453
9V-3406	Bearing-Sleeve	425-6441
9V-3829	Collar	382-6905
9V-3852	Bearing-Sleeve	450-9166
9V-3853	Pin	319-3469
9V-4975	Bearing-Sleeve	384-4784
9V-6523	Cap	297-7162
9V-6524	Cap	297-7163
9V-7860	Support As-Front	308-9938
9W-0099	Bearing-Sleeve	314-8639
9W-0876	Bearing-Sleeve	325-6031
9W-1677	Bearing	297-7145
9W-1683	Pin	391-9819
9W-2579	Plate	314-8701
9W-3120	Pin As	393-3641
9W-3605	Carrier-Ring	314-8662
9W-4897	Bracket As	295-6414
9W-6390	Sleeve	385-3795
9W-7919	Bearing-Sleeve	425-3647
9W-9027	Plate	419-2306
9W-9930	Mount As	295-6437
9W-9931	Mount As.	360-2354
9W-9940	Mount As.	360-2355
9X-4580	Seal As	451-6455
9Y-0635	Spacer	435-8519
9Y-7215	Sleeve-Isolator	425-3646
064-3274	Mount	391-9834

Premium Part Number	Part Name	Classic Part Number
086-0414	Flange	392-4522
086-0523	Pin	314-8696
087-5533	Bearing-Sleeve	314-8628
087-5548	Bearing-Sleeve	396-1568
087-5802	Link-RH	301-7964
087-5803	Link As	301-7966
087-5805	Pin	301-7967
087-5806	Pin	301-7968
087-5845	Pin	301-7969
087-5847	Bearing-Sleeve	314-8629
087-5978	Flange	374-3496
087-6372	Pin	396-7284
096-7911	Bearing-Sleeve	314-8653
096-7912	Bearing-Sleeve	314-8654
096-7913	Bearing-Sleeve	314-8655
099-0718	Bearing-Sleeve	360-2313
099-0721	Bearing-Sleeve	314-8641
099-0722	Link As	415-1909
100-2848	Ring-Guide	399-6057
100-6267	Plate As-Idler	375-9983
101-2749	Adaptr-Water Pmp	375-9984
101-4020	Pin As	396-7285
102-3167	Pin As	418-9575
102-4560	Bearing-Sleeve	347-0469
103-5345	Bearing-Sleeve	393-3640
104-4747	Pin	392-4527
104-7238	Plate	380-7404
104-8583	Manifold-Hsg	399-6058
104-8584	Housing-Rgltr	419-4725
104-8655	Bearing-Sleeve	391-9892
105-2070	Bushing	394-0221
105-2659	Bearing-Sleeve	419-2304
105-8704	Support-Trunnion	416-5510
106-6540	Retainer	418-1941
106-6878	Pin	372-7510
107-2139	Pin As.	360-2352
107-5002	Cage-Bearing	396-7261
107-8375	Shaft As	439-1134
107-9739	Pin As	393-3689
108-2735	Ring-Lock	386-4935
108-2736	Ring-Lock	384-3476
108-9191	Pin As	424-3515
109-0367	Pin	421-1566
109-0377	Pin As	399-8543
109-0380	Pin As	396-7276
109-0958	Pin	394-0208
109-1231	Strip	393-3683
109-9349	Mount -Rubber	384-3469
109-9350	Mount -Rubber	393-1046
109-9368	Mount -Rubber	384-3471
109-9369	Mount -Rubber	393-1047

Premium Part Number	Part Name	Classic Part Number
109-9445	Mount -Rubber	393-1048
109-9446	Mount -Rubber	393-1049
110-4652	Housing	302-2683
110-6167	Pin As	375-9972
111-4332	Plate	396-7290
111-4340	Pin	451-1512
111-4343	Pin	390-5272
112-5060	Bracket As	364-5270
112-5061	Bracket As	364-5271
113-2966	Pin As	380-7398
113-9098	Pin	425-6447
113-9099	Pin	425-3449
114-0468	Pin-G.E.T.	443-1203
115-2775	Pin As	418-1967
115-2958	Pin-Lower	393-0939
115-3184	Cap-Lower	395-1324
115-4072	Bearing	397-5069
115-6469	Spacer	425-3645
115-7048	Pin	393-3684
117-5435	Pin As	393-0934
117-5612	Pipe	398-2965
117-6270	Support As	434-1400
117-6675	Step As	419-0881
118-2800	Housing As.-Rgltr	419-4719
118-5196	Pin	380-7397
118-5839	Seal-Lip Type	435-8517
118-6335	Pin	436-3042
119-2863	Pin	314-8698
119-2950	Gasket	433-8195
120-3861	Bracket As	415-1897
122-6381	Pin As	419-6073
122-6387	Pin As	425-6448
124-3240	Pin	282-6548
124-5233	Pin	443-2664
124-5741	Pin	394-0204
125-1037	Pin As	375-9985
125-2873	Core As-AC Cond	436-2254
126-9461	Pin	392-4528
128-9863	Bearing-Sleeve	314-8630
128-9864	Bearing-Sleeve	425-6437
128-9882	Bearing-Sleeve	314-8642
128-9883	Bearing-Sleeve	360-2314
128-9884	Bearing-Sleeve	360-2315
129-7768	Bearing-Sleeve	360-2316
130-0479	Pin As	415-1907
130-0485	Pin	396-7286
130-1637	Shaft	347-0471
130-1918	Pin As	393-0933
130-2533	Pin	396-7265
130-2621	Pin As	390-5273
130-3139	Bearing-Sleeve	391-9875
130-4778	Housing As	419-4659

Classic Miscellaneous Parts

Premium Part Number	Part Name	Classic Part Number	Premium Part Number	Part Name	Classic Part Number	Premium Part Number	Part Name	Classic Part Number
130-4779	Housing As	441-1562	160-6306	Cap-Bearing	325-6038	227-6789	Bearing-Sleeve	360-2322
130-5451	Pin	394-9816	161-9918	Retainer-Bearing	395-1321	228-0416	Seal As	430-5356
131-3815	Seal Gp-Basic	325-6193	162-0152	Bearing-Sleeve	422-9519	228-0419	Seal As	443-3571
131-6001	Pin As	376-3646	163-3749	Bearing-Sleeve	433-7505	228-5621	Bearing-Sleeve	360-2323
131-7123	Bearing-Sleeve	422-6919	164-4413	Mount	419-0876	233-5001	Strip	393-3683
132-0985	Bearing-Sleeve	399-6056	165-5255	Pin As	425-6449	236-6268	Bearing-Sleeve	453-6499
133-2437	Link	377-6199	166-7870	Pad As-street	416-5515	236-6269	Bearing-Sleeve	453-6500
134-8948	Plate	399-8588	168-0444	Pin	393-3687	236-6270	Bearing-Sleeve	425-6436
134-8949	Plate	383-2110	169-4199	Gasket-Oil Pan	433-8194	236-6271	Bearing-Sleeve	360-2324
134-8950	Plate	399-8587	174-6820	Bearing-Sleeve	387-2903	236-6277	Bearing-Sleeve	419-0884
134-8951	Plate	382-5061	174-6822	Bearing-Sleeve	387-2901	236-7724	Retainer	299-2048
135-0524	Piston-Clutch	380-7402	176-1402	Pin	425-2562	236-8183	Bearing-Sleeve	453-6501
135-5553	Bearing	394-0203	177-9024	Adapter-Damper	299-1956	237-0944	Bearing-Sleeve	394-0194
137-2817	Bearing-Sleeve	434-2399	178-3086	Ballstud	374-1453	237-2252	Bearing-Sleeve	347-0474
137-2818	Bearing-Sleeve	380-7381	179-6152	Bearing	361-1704	237-9849	Cage-Bearing	443-1201
137-2819	Bearing-Sleeve	360-2317	183-2358	Bearing	425-3588	238-0293	Adapter-Jacket	424-0742
137-2820	Bearing-Sleeve	360-2318	184-1413	Pin As	393-1050	239-1497	Trunnion	394-0197
137-2821	Bearing-Sleeve	419-4717	186-5652	Pin	392-4532	240-2912	Bearing-Sleeve	418-1969
137-2822	Bearing-Sleeve	453-0971	186-5662	Pin	421-1560	240-2913	Bearing-Sleeve	360-2325
137-2919	Bearing-Sleeve	360-2319	186-5730	Pin	393-3688	240-2915	Bearing-Sleeve	360-2326
137-3060	Bearing-Sleeve	360-2320	187-3825	Pad As.	397-5054	240-2916	Bearing-Sleeve	360-2327
137-8479	Spacer	395-1323	187-3827	Pad As.	397-5057	244-8504	Pin As	426-0032
138-1840	Retainer-Seal	374-6511	189-3878	Link As	438-1813	245-5953	Track Roller AR	226-0206
142-2303	Pin As	423-3537	189-3922	Pin	393-0938	245-5953	Track Roller AR	226-0235
143-3321	Bearing-Sleeve	425-3583	189-3923	Pin	393-0935	250-1984	Trunnion	319-3476
143-5448	Gasket Kit - Sch	447-8652	189-4148	Pin As	423-3536	250-2398	Pin As	382-8047
144-7289	Roller As	434-1862	189-4150	Pin As	423-3535	250-2402	Pin As	360-2351
144-7293	Roller As	434-1992	189-6062	Pin As	425-2561	251-7319	Bearing-Sleeve	425-6450
144-7299	Roller As	434-1991	191-3240	Housing-Motor	418-1962	252-0168	Link Assembly	433-9210
144-7314	Roller As	434-8984	191-3243	Housing-Motor	418-1963	258-0768	Bearing Sleeve	394-0201
145-0803	Pin	393-0936	192-8318	Bearing-Sleeve	360-2321	258-2303	Bearing-Sleeve	307-1524
145-0804	Sleeve	391-9905	193-0646	Spacer	419-2310	258-2305	Bearing-Sleeve	325-6029
145-6749	Shaft As-Input	433-9211	193-1683	Pad	416-5496	258-2308	Bearing-Sleeve	325-6019
146-2601	Cover	399-6054	193-1684	Pad	396-0645	260-7799	Pinion-Circ Drv	367-6094
147-4358	Pin	419-6030	193-1688	Pad	416-5495	262-7044	Bearing	418-1948
147-4359	Pin	393-0937	193-5016	Flange	425-3644	268-5569	Pin As	415-1905
148-3091	Bearing-Sleeve	365-8825	197-5510	Support As	419-0880	269-6989	Pin	425-2559
148-3465	Pin	383-2112	200-7929	Housing	416-5489	275-0120	Pin As	419-7245
150-0351	Spacer	396-7291	201-4802	Sleeve	419-2309	310-1899	Pin As	393-0932
153-3580	Shaft	299-2055	208-5026	Pin	325-6133	310-3510	Roller As.	434-1919
154-5278	Pin	393-3685	208-8795	Retainer	430-5355	310-8658	Pin As	425-1526
154-5279	Pin	392-4529	208-8797	Retainer	432-8908	319-2228	Shoe-Circle Gde	419-4706
154-5280	Pin	391-9868	209-6188	Plate	393-1053	319-2229	Shoe-Circle Gde	396-7288
157-6257	Collar	393-0912	213-1364	Bearing-Sleeve	330-9255	325-3291	Roller As	434-1918
159-0959	Pin As	418-9578	213-1365	Bearing-Sleeve	330-9256	333-9877	Pin As	394-0217
159-0961	Pin	396-7287	213-1370	Bearing-Sleeve	380-7370	343-4836	Mount As	424-6369
160-1014	Pin As	347-0473	215-9365	Bearing	422-6917	347-6081	Gauge As	360-2348
160-5691	Pin	393-0931	227-6228	Cage	360-2343	349-7059	Cap As-Fuel	432-5218
160-6305	Cap-Bearing	295-5686						

Classic Undercarriage Parts

Premium Part Number	Part Name	Classic Part Number
1M-9029	Guard	226-0219
1P-0963	Guard As-Roller	226-0179
1P-1006	Strip-Guard	226-0245
1P-3318	Strip	385-7206
1R-6322	Cylinder	384-3463
1S-0876	Bolt-Spring	226-0224
1S-5331	Cylinder-Adj	226-0214
1S-6422	Pilot As-Spring	226-4849
1S-8734	Bracket-Roller	226-0212
2K-1386	Bearing	423-6991
2M-0125	Cylinder-Adj	226-0215
2M-0369	Pilot-Spring R	226-0226
2M-1163	Plate As-Spring	383-2123
2M-2416	Guard-Idler-LH	226-4933
2M-7116	Strip-Tapping	384-3480
2P-7622	Bolt-Spring	226-4850
2P-7984	Yoke As-Idler	226-0220
2S-6263	Guard GP-Spring	226-0192
2S-6264	Guard GP-Spring	226-0193
2S-6265	Rod GP-Recoil	226-0197
2S-7063	Nut	300-2584
2V-7198	Pilot As-Rec Spg	302-2709
3P-1459	Spring-Recoil	375-5448
3P-1465	Spring-Recoil	384-3479
3P-1885	Spring-Recoil	375-5449
3P-4135	Support As	396-7266
3P-4157	Yoke As-Idler	226-0221
3P-4197	Guard As-Idler	226-0189
3P-6560	Stop-Rec Spring	226-0232
3P-6561	Stop-Rec Spring	226-0233
3S-3917	Guard As-Sprkt	226-0188
3S-3918	Guard As-Sprkt	226-4950
3T-2481	Strip	295-5448
3T-2849	Strip	295-5697
3T-3150	Guide-Frt Idler	394-0191
3T-4482	Guide-Frt Idler	226-0248
3T-7192	Guard As	325-6100
3T-7195	Guard As	325-6101
3T-7701	Cylinder As	325-6058
3T-7710	Guide	325-6102
3T-7711	Guide	325-6103
3V-4643	Rod As	389-6333
3V-5257	Bracket-Carr Rlr	297-7149
3V-8976	Cylinder As	433-7508
3W-0643	Cylinder	325-6061
3W-6144	Hub-Sprocket	396-7277
3W-8339	Plate	397-5047
3W-8403	Sleeve	393-3673
3W-8679	Yoke As	425-1384
4F-5003	Spring As-Arm	383-2127

Premium Part Number	Part Name	Classic Part Number
4F-5004	Spring As-Arm	383-2128
4I-7401	Spring	380-7414
4S-5049	Guard As-RH	226-0183
4S-5050	Guard As-LH	226-0184
4S-6256	Nut-Brg Adj	235-8008
5G-9075	Strip	295-0412
5G-9076	Strip	295-0413
5K-2754	Spring-Recoil	418-1956
5M-2971	Guard As-F Idler	226-0190
5M-6674	Guard-F Idler LH	226-2736
5M-7306	Cylinder	226-2737
5M-7701	Cylinder	385-7229
5S-0160	Strip-Guard	226-2738
5S-0161	Strip-Guard	226-2739
6A-7196	Pilot-Front	385-7200
6C-1573	Rod	297-7238
6I-6457	Rod	421-8920
6P-4327	Pad	384-3472
6P-5172	Guard GP-Rec -A	226-0196
6P-5173	Guard GP-Rec -A	229-8617
6P-5343	Rod GP-Tck Adj	226-0200
6P-6653	Plate-Guide	226-0208
6S-3442	Strip-Wear	386-4929
6T-0952	Pad As	367-6087
6T-0956	Pad As	367-6088
6T-0960	Pad As	367-6089
6T-1261	Insert	418-1937
6T-1724	Bar As-Equalizer	283-5223
6T-1933	Collar-Idler End	226-2746
6T-1935	Guide-Frt Idler	440-3257
6T-1980	Collar-Idler End	226-0210
6T-7407	Shaft-Pivot	432-8910
6T-8801	Guide As	396-0640
6T-8907	Pad As	380-7391
6V-0240	Bearing-Brace	297-7143
6Y-6382	Strip	419-0888
6Y-7795	Pad As	391-9816
6Y-7796	Pad As	391-9817
7G-4605	Support As	387-2938
7I-7712	Cylinder	393-1019
7I-7714	Piston As	422-9530
7I-7717	Spring	392-4525
7K-1127	Nut-Adjusting	451-0744
7M-0457	Guard-Frame	226-0217
7M-0665	Bar As-Equalizer	231-3312
7M-0680	Housing As-Susp	444-1841
7M-1776	Plate-Idler Gde	226-0222
7M-1845	Plate As-Spring	384-3474
7M-1850	Strip-Wear	389-6327
7M-1851	Bolt-Spring	226-0223
7M-1856	Pilot-Rec Spg	226-0225

Premium Part Number	Part Name	Classic Part Number
7M-1859	Pilot As-Spring	226-0207
7M-1861	Stop-Spring RH	226-0228
7M-1862	Stop-Spring LH	226-0229
7M-9398	Plate-Guide	297-7230
7P-7734	Rod As	376-3643
7T-0204	Bearing-Brace	247-4126
7T-0205	Bearing-Brace	247-4127
7T-0206	Bearing-Brace	297-7144
7T-5510	Pad As-Resilient	367-6090
7Y-0631	Spring	375-5446
7Y-0680	Piston	360-2262
7Y-1258	Piston	367-6091
7Y-1606	Spring	375-5447
7Y-1685	Rod	333-4952
7Y-1687	Piston As	360-2266
7Y-1738	Support	443-5198
7Y-1780	Cylinder	360-2261
8E-3525	Hub-Sprocket	393-1043
8G-3102	Piston	325-6162
8G-3965	Hub-Sprocket	424-4942
8H-7980	Piston	226-0249
8K-2082	Spring-Recoil	388-6560
8K-2198	Cylinder	382-5062
8K-5587	Rod GP-Recoil	226-4954
8M-6676	Cylinder-Adj	226-4960
8M-7207	Guard As-FR R RH	226-0236
8M-7208	Guard As-Frame	226-0237
8P-0187	Nut-Adjusting	219-9676
8P-0621	Nut-Adjusting	451-0746
8P-1653	Nut-Sprocket Adj	449-4734
8P-1851	Hub As-Sprocket	224-1314
8P-1853	Nut-Adjusting	226-7997
8P-1855	Hub As-Sprocket	227-4770
8P-1865	Bar As-Equalizer	231-3313
8P-5117	Rod GP-Tck Adj	226-2747
8P-6274	Guard As-LH	226-4949
8P-6275	Guard As-RH	226-0191
8P-8221	Plate-Guide	226-2748
8S-1061	Pilot As-Spring	226-0227
8S-1831	Guard As-Sprkt	226-4947
8S-7818	Bracket	226-0211
8Y-0035	Yoke As	393-1057
8Y-1198	Strip	325-6220
8Y-1199	Strip	325-6221
8Y-1853	Strip	428-7633
8Y-2735	Spring	383-2134
8Y-6559	Hub	416-5501
8Y-6659	Spring-Recoil	422-7893
9G-0007	Hub	224-1311
9G-1696	Pad As	391-9820

Classic Undercarriage Parts

Premium Part Number	Part Name	Classic Part Number
9G-1697	Pad As	391-9821
9G-6476	Rod GP-Idler Rec	226-0198
9G-8302	Guide	226-4853
9G-8303	Collar-Idler End	226-0242
9G-9180	Hub-Sprocket	295-6436
9H-7670	Piston	226-4961
9K-9273	Nut-Adjusting	226-7998
9M-6692	Strip	386-4934
9S-1043	Guard As-Guiding	226-0240
9S-1044	Guard As-Guiding	226-0241
9S-1045	Strip-Guard	226-0246
9S-1046	Strip-Guard	226-0247
9S-8245	Strip-Tck Gde GD	226-0243
9S-8246	Strip-Tck Gde GD	226-0244
9S-8257	Guard As-Guiding	226-0238
9S-8258	Guard As-Guiding	226-0239
9S-8353	Strip-Tck Gde GD	226-4854
9S-8354	Strip-Tck Gde GD	226-4855
9S-8358	Guard As-Guiding	226-4856
9U-9198	Strip	388-0641
9V-9408	Spring	425-9369

Premium Part Number	Part Name	Classic Part Number
099-0166	Spring	399-4400
102-8139	Spring	392-4526
104-6374	Piston	393-1052
109-6938	Bracket	451-9033
112-4296	Cylinder As	443-5197
112-4297	Cylinder As	443-5199
115-6400	Spring	399-8564
115-6427	Spring	301-4776
115-6428	Piston As	394-0188
115-6429	Cylinder	301-4679
117-5553	Guard As-Tck Gde	419-4729
122-5076	Rod	301-4569
122-5077	Cylinder	301-4673
130-9293	Rod	314-8708
141-4689	Bar GP-Equalizer	443-3570
145-3030	Cylinder	360-2260
145-3036	Spring	375-5445
165-7211	Strip	325-6219
184-4395	Guide	393-1042
191-3235	Housing-Sprocket	394-0200
196-7078	Strip Wear Front	418-1968
201-2078	Bar As-Equalizer	418-1946

Premium Part Number	Part Name	Classic Part Number
245-5953	Track Roller AR	226-0188
245-5953	Track Roller AR	226-0189
245-5953	Track Roller AR	226-0191
245-5953	Track Roller AR	226-0196
245-5953	Track Roller AR	226-0200
245-5953	Track Roller AR	226-0210
245-5953	Track Roller AR	226-0211
245-5953	Track Roller AR	226-0215
245-5953	Track Roller AR	226-0219
245-5953	Track Roller AR	226-0221
245-5953	Track Roller AR	226-0224
245-5953	Track Roller AR	226-0226
245-5953	Track Roller AR	226-0227
245-5953	Track Roller AR	226-0232
245-5953	Track Roller AR	226-0233
245-5953	Track Roller AR	226-0240
245-5953	Track Roller AR	226-0241
245-5953	Track Roller AR	226-0246
245-5953	Track Roller AR	226-0247
245-5953	Track Roller AR	226-0249
248-2987	Guide	419-4709
274-4274	Bearing-Sleeve	391-9896



CYLINDER SEALS

Identification

Seal Identification

What is a Seal?

A seal is a device which prevents the escape or passage of a fluid (liquid or gas). A hydraulic cylinder seal is used to seal two surfaces under fluctuating pressure conditions.

Hydraulic Cylinders:

Hydraulic cylinders convert fluid pressure into motion that helps equipment perform different tasks. Caterpillar manufactures three cylinder designs: bolt-on head, threaded cylinder and threaded gland. Because these designs are very similar in the way they are sealed and repaired, this book makes no further attempt to address the different designs.

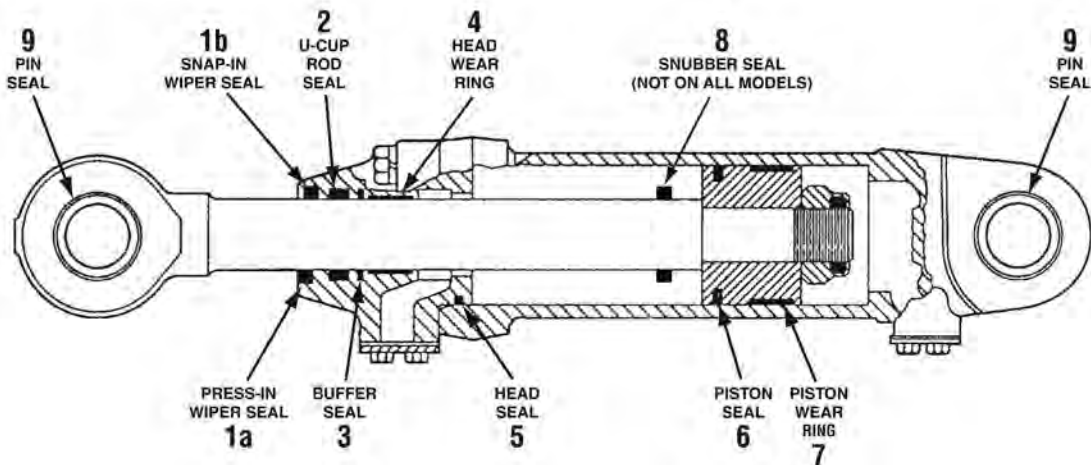
Hydraulic Cylinder Seals:

Cat seals are available as either individual pieces or kits. Kits offer a convenience as well as a cost-savings, priced substantially below the sum of the individual pieces.

Cat hydraulic seals can be used on other makes of cylinders. See the "Seal Selection for Other Than Cat Equipment" section for more details.

Identifying Hydraulic Cylinder Seals

Refer to the hydraulic cylinder illustration below. The seals in this Cat cylinder are those typically found in hydraulic cylinders.

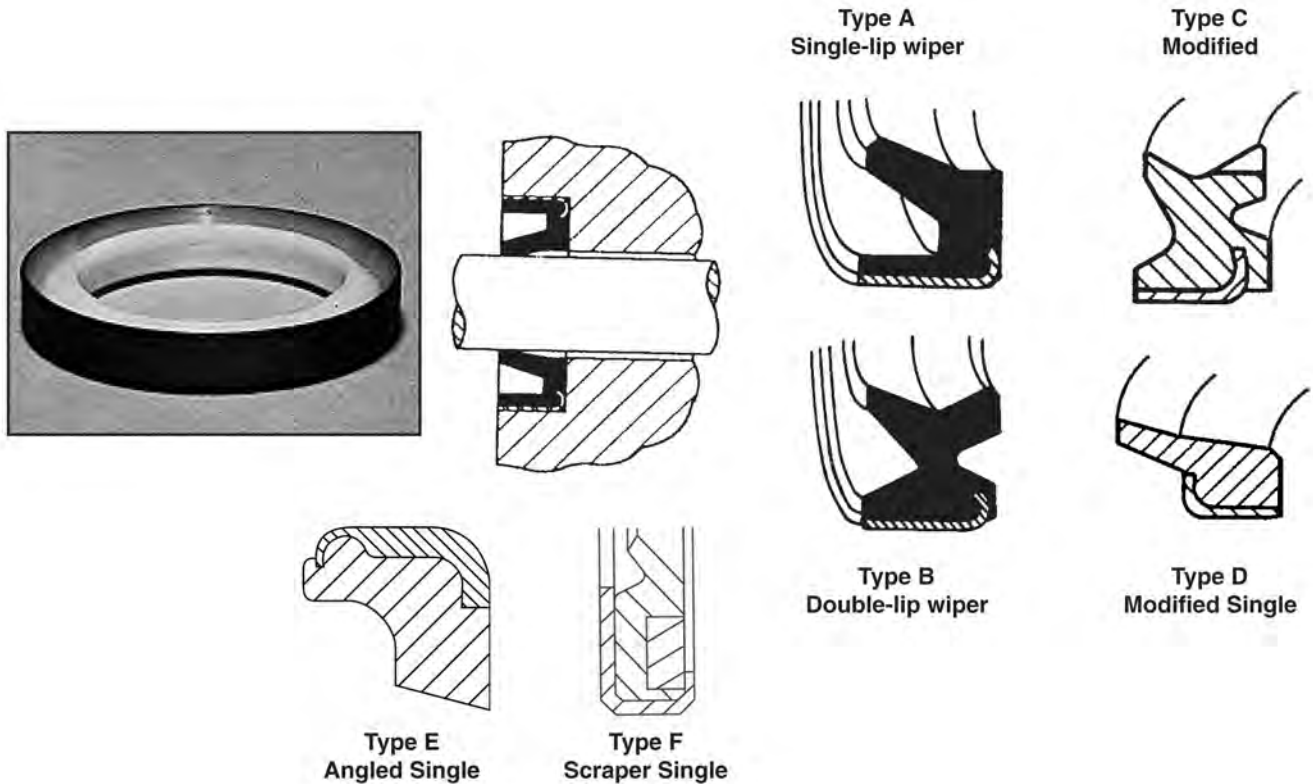


Usage

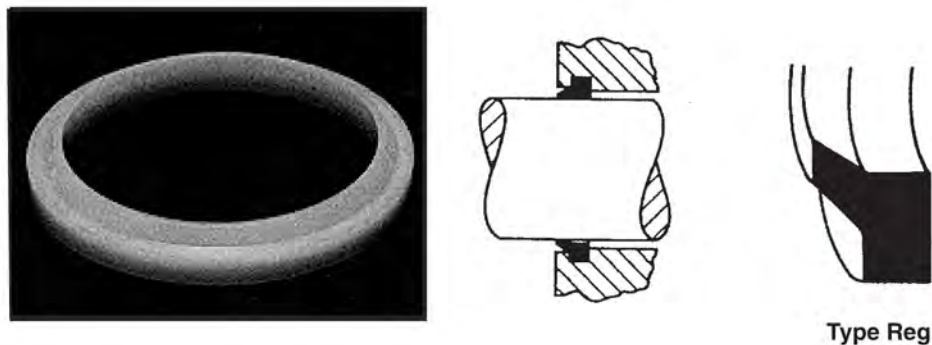
Use the seal pictures, cross-sections, cutaway illustrations and descriptions on the following pages to help you identify the different types of hydraulic cylinder seals.

Identifying Hydraulic Cylinder Seals (Cont'd.)

- 1a. Press-in Wiper Seal** – prevents external contaminants from entering the system. Single-lip (the lip is the projecting rim or edge of the seal) wipers clean the rod as it retracts. Double-lip wipers clean the rod as it retract sand seals oil, eliminating “weeping” (cosmetic leakage). The double-lip wipers are secured in place with a bearing mount. These urethane wipers are metal-encased for added strength. They are often referred to as “canned” wipers (metal-encased) or “J” wipers (the metal often forms a “J” shape when viewed in the cross-section).



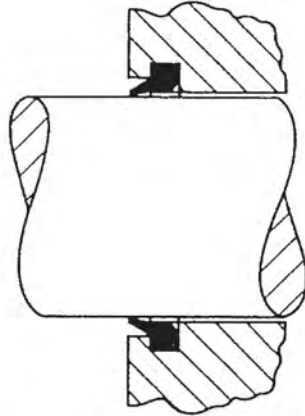
- 1b. Snap-in Wiper Seal** – prevents external contaminants from entering the system, but used in less severe environmental conditions and lighter duty hydraulic applications than its press-in counterpart.



Identification

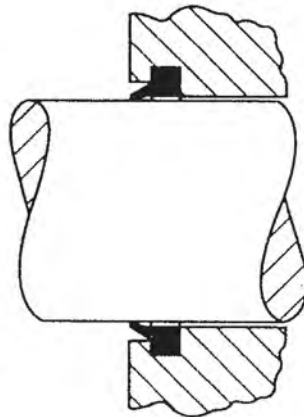
Identifying Hydraulic Cylinder Seals (Cont'd.)

The following various types of snap-in wipers are available for use on other makes of hydraulic cylinders. "Type SHU" wipers are slotted heel, universal style urethane wipers. The slotted heel acts as a relief slot to prevent a pressure trap occurring between the rod seal and the wiper. A pressure trap is excessive fluid pressure "trapped" between two seals.



Type SHU

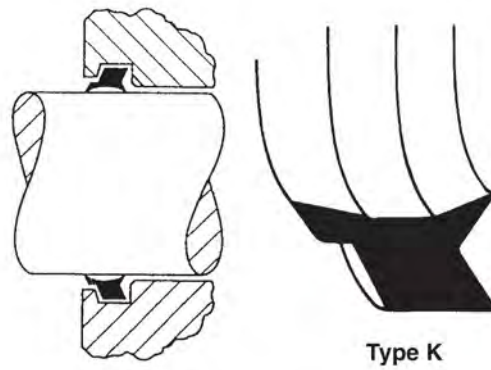
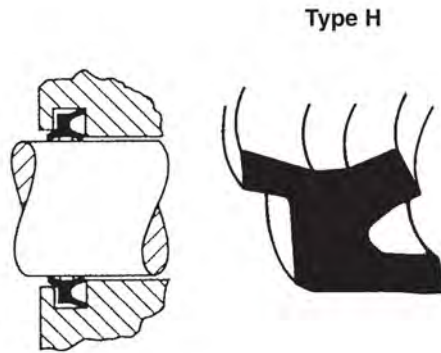
"Type AN" wipers are a non-current design, originally made for the military (AN refers to Army/Navy). This single-lip wiper is made of urethane.



Type AN

Identifying Hydraulic Cylinder Seals (Cont'd.)

"Type H" and "Type K" wipers are double-lip, urethane wipers.

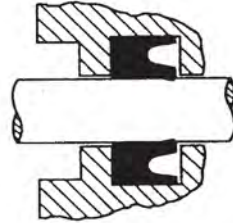


Type K

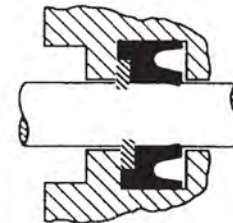
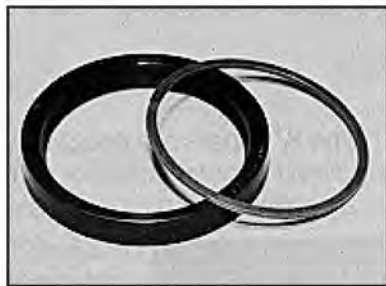
Identification

Identifying Hydraulic Cylinder Seals (Cont'd.)

2. **U-Cup Rod Seal** – performs as the primary rod seal. The U-Cup is made of urethane or nitrile. The nitrile U-Cup is used with a backup ring in water-glycol hydraulic systems. The backup ring prevents the seal from extruding (forced movement of a seal under pressure into the clearance between the metal parts being sealed).

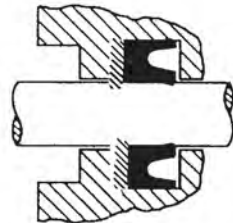


Type A



Type B

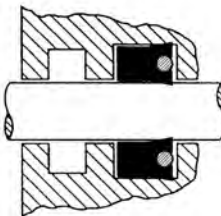
BACKUP RING



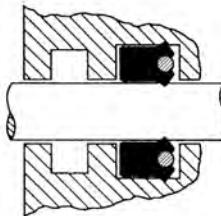
Type C

BACKUP RING

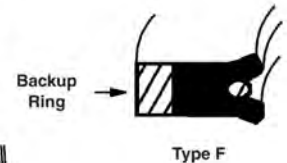
Loaded U-Cups are also available for use on other makes of cylinders. The "Type E" loaded U-Cup has a back-bevel lip for increased sealability.



Type D



Type E

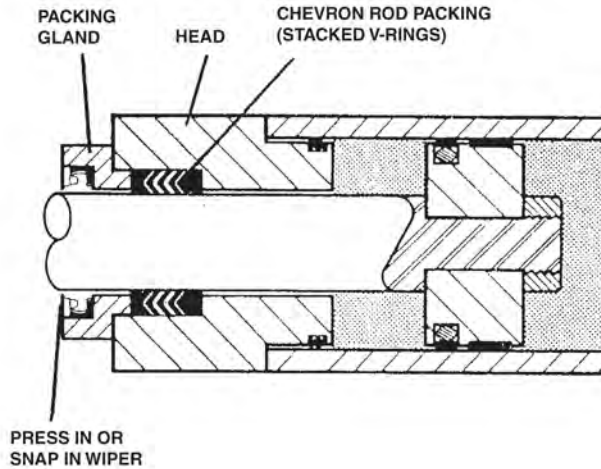


Backup Ring

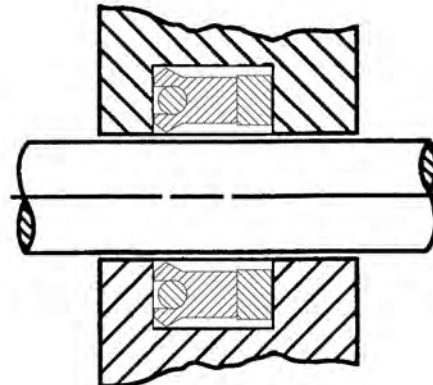
Type F

Identifying Hydraulic Cylinder Seals (Cont'd.)

- 2a. **Chevron Packing** – used as gland packing prior to the use of U-Cup seals. Made with a multi-compound material (usually cotton duck cloth and nitrile), it is often referred to as V-Packing, the shape formed by its cross-section. The end adapters can be tightened down, making the seal adjustable. Caterpillar no longer uses this seal design.



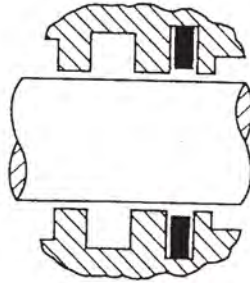
- 2b. **U-Cup Seal Assembly** – designed to replace Chevron Packing. These assemblies combine U-Cup Rod Seals with spacers to fill the original Chevron Packing grooves. Both U-Cup Seal Assemblies and Chevron Packing meet the same functional sealing specifications.



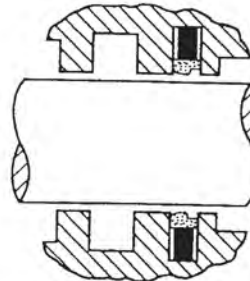
Identification

Identifying Hydraulic Cylinder Seals (Cont'd.)

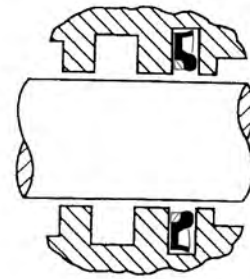
3. **Buffer Seal** – acts as a secondary rod seal and protects the rod from sudden increases in system pressure. There are currently three types of buffer seals. Type A is a one-piece seal made of urethane. Type B is a two-piece bronze filled PTFE seal with a nitrile expander. The notched view in the cross section must face the pressure side for maximum seal performance. Type C is a two-piece urethane seal with a thermoplastic backup ring. This design allows the seal to withstand higher pressures. Type B and Type C buffer seals are designed to prevent seal extrusion and pressure trapping.



Type A



Type B



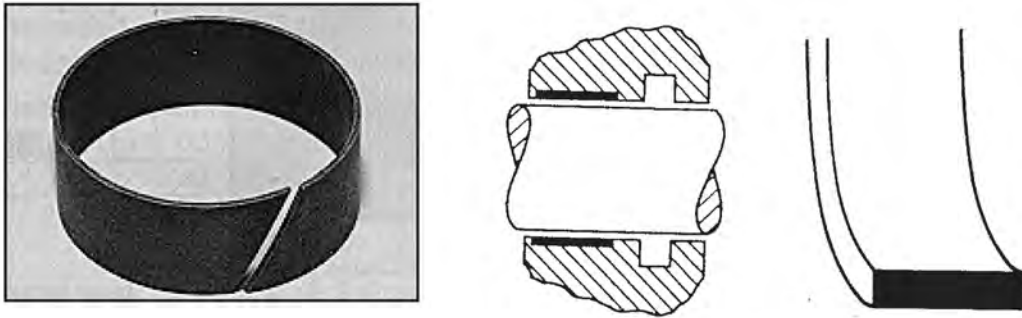
Type C



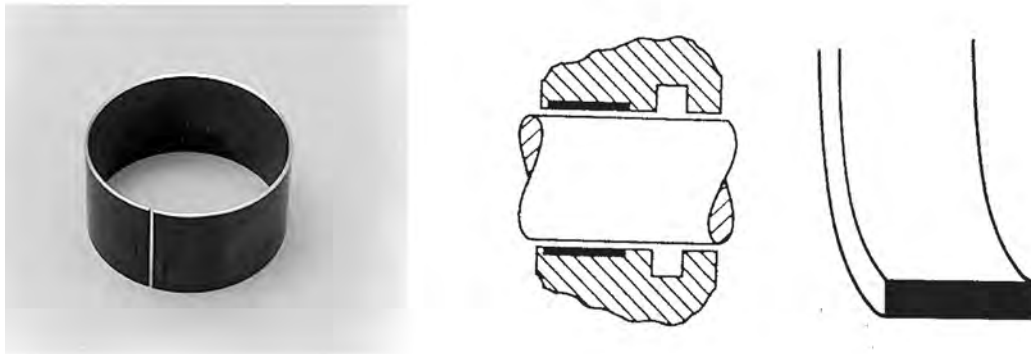
Type D

Identifying Hydraulic Cylinder Seals (Cont'd.)

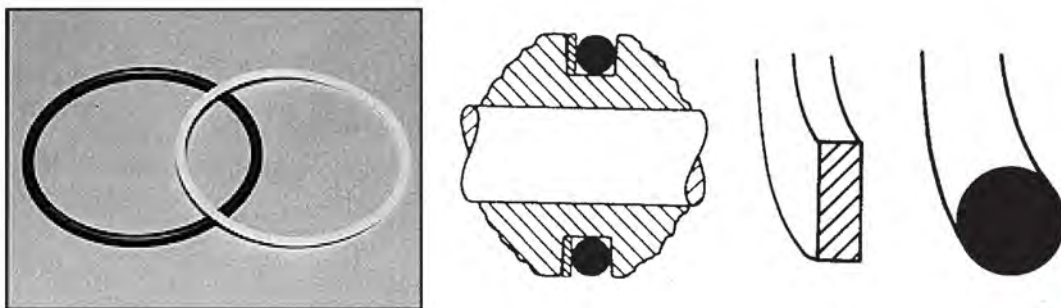
4. **Head Wear Ring** – eliminates metal-to-metal contact between the head and rod and prevents scoring (scratching) of the rod by the head.



- 4a. **Metal Bearing Head Wear Ring** – used instead of plastic head wear ring for some applications. The coated bearing is pressed into the cylinder group head and held in place with a split metal retaining ring. This bearing supports the hydraulic cylinder rod and prevents metal-to-metal contact between the head and the cylinder rod. This bearing can be reused as long as the coating on the ring remains intact.



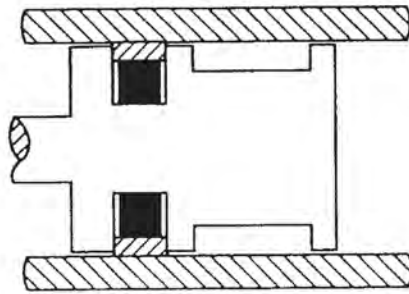
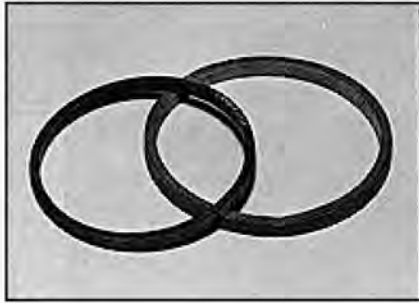
5. **Head Seal** – a two-piece seal, consisting of a nitrile O-ring and a backup ring, which seals the head to the cylinder wall.



Identification

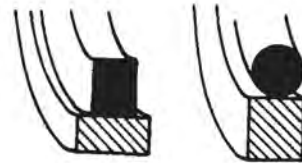
Identifying Hydraulic Cylinder Seals (Cont'd.)

6. **Piston Seal** – a two-piece seal, consisting of a piston ring and an expander, which prevents oil transfer between the rod end of the cylinder and the cap end. The piston seal is usually made of Teflon, with nylon available for pressures greater than 3000 psi (20,670 kpa). The various shaped expanders are nitrile. Type 4 consists of a Teflon piston ring with a nitrile rubber expander. Type 5 consists of a rubber expander surrounded by bronze filled Teflon on both sides. Type 6 is a urethane U-Cup seal used in single acting cylinders.



Type 1

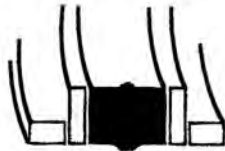
Type 2



Type 3



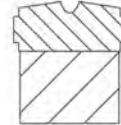
Type 4



Type 5

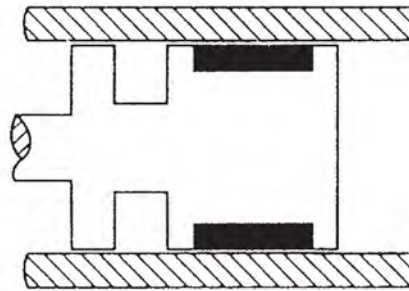
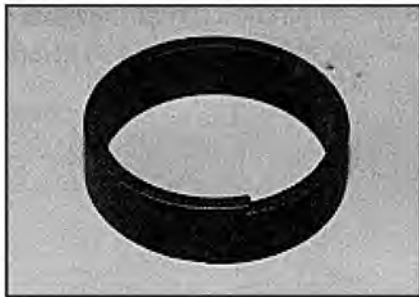


Type 6



Type 7

7. **Piston Wear Ring** – supports and centers the piston to prevent metal-to-metal contact between the piston and the cylinder wall.



Identifying Hydraulic Cylinder Seals (Cont'd.)

8. **Snubber Seals** – used in some cylinder designs, in conjunction with a stop, to cushion the extension and/or retraction of the rod. The snubber seal is located between the stop and the rod.



9. **Pin Seals** – used on either side of the rod eye and cap eye to seal the linkage pins in place. Information on pin seal part numbers is not included in this guide. Please refer to SIS or the machines' parts book for pin seal information.



Oversize Cylinders

Oversize Threaded-Gland Cylinder

The head seal for the oversize threaded-gland cylinder is the standard O-ring and back-up ring. See Illustration 1.

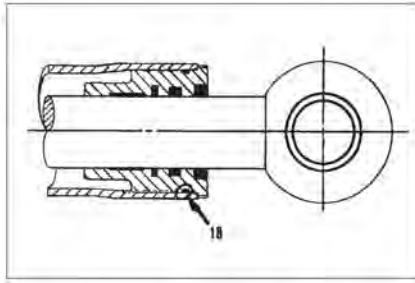


Illustration 1. Threaded gland with standard head seal.

18 = Head seal.

Oversize Threaded-Crown Cylinder

The head seal for the oversize threaded-crown cylinder is an oval cross-section seal that locates in the lead-in chamfer at the open end of the cylinder. The O-ring and back-up ring groove in the head is left empty.

See Chart 2 for part numbers.

Chart 2 – Oversize Seals

Standard Bore Size	Oversize Head Seal
2.50	8C-4889
2.75	8C-4890
3.00	8T-8367
3.25	8C-4891
3.50	8T-8368
3.75	8T-8369
4.00	8T-8370
4.25	8T-8371
4.50	8T-8372
4.75	8T-8373
5.00	8T-8374
5.25	8T-8375
5.50	8T-8376
6.00	8T-8377
6.25	8T-8378
6.50	8T-8379
7.00	8T-8380
7.25	8T-8381
7.50	8C-0553
7.75	8C-4892
8.25	8T-8392
8.50	8C-4893
9.25	8T-8383
10.00	8C-4895
10.25	8C-4896
10.50	8C-4897
11.50	8C-4898

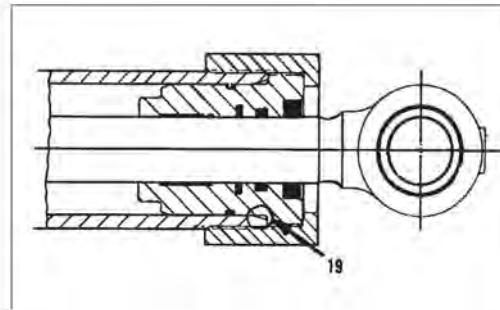


Illustration 2. Threaded crown with oval seal.

19 = Oval seal.

Cylinder Assembly Chamfer Dimensions

Oversize threaded crown cylinders are sealed by using an oval head seal that locates in the lead-in chamfer of the cylinder bore. After the cylinder has been honed, compare the chamfer to the specifications in Illustration 3.

Note: Chamfers that do not meet specifications will cause leaks.

If the chamfer is too deep, it can be shortened by machining a maximum of 3.0 mm (.12 in) from the end of cylinder tube (2). If the end of the cylinder is machined, during assembly, check to make sure the crown can be fully threaded onto the cylinder and the threads do not bottom before the head is seated against the cylinder. If the chamfer is not concentric with the cylinder bore, the chamfer must be re-machined so that it is concentric and perpendicular to the bore.

Chamfer Dimensions for Oval Head Seals

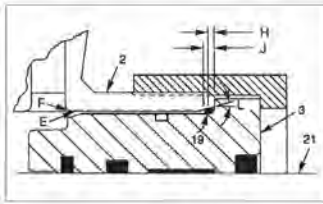


Illustration 3.

Chamfer Dimensions	
Item	Dimension
E	Standard bore
F	0.76 (.030) oversize
H	9.7 (.38) max. on standard size bore
J	8.1 (.32) max. on 0.76 (.030) oversize bore
L	15
Item	Description
2	Tube
3	Head
19	Oval Head Seal
21	Rod

Oversize Bolted-Head Cylinder

Formerly, the head seal for the oversize bolted-head cylinder was the same oval seal that is used in an oversize threaded-crown cylinder. The oversize bolted-head cylinder is now sealed at the head joint by an O-ring which provides a more effective seal than the oval head seal. An oversize bolted-head cylinder that has successfully operated with the oval seal may be resealed without machining the O-ring groove into the flange face. However, it is recommended that the oval seal be replaced by the flange face O-ring seal. Most oversize seal kits include both the oval seal and the O-ring seal in order to accommodate reseal requirements of both former and current designed cylinders. The current Cat remanufactured oversize cylinders (bolted-head type) have the O-ring groove machined into the flange face of the cylinder assembly.

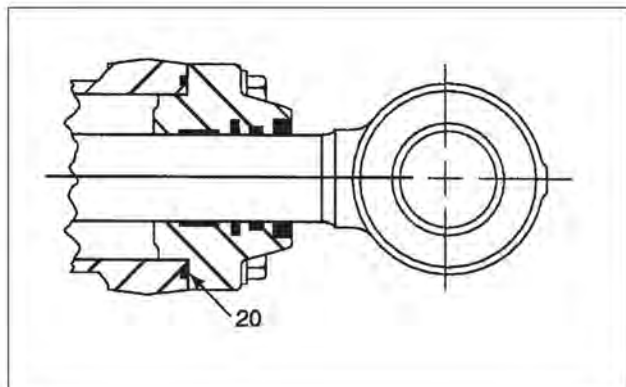


Illustration 4. Bolted head with face O-ring seal.
20 = Face O-ring seal.

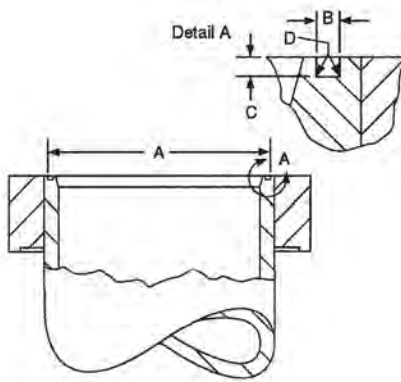
Oversize Cylinders

New Groove Dimensions for O-ring Part Numbers

Oversize bolted-head cylinders that lack the flange face O-ring groove can be reworked to add the groove. Recommended dimensions for the cylinder O-ring face seal grooves have been modified to increase the nominal compression of the O-ring face seal. Recommended groove widths have increased and groove depths have decreased. Recommended groove diameters have not changed. O-ring face seal part numbers also have not changed. The recommended O-ring face seal part numbers and O-ring face seal groove dimensions are listed in Chart 3. Refer to Illustration 5 for clarification.

Dealers who salvage cylinder assemblies of bolted-head cylinder groups by honing the bore oversize will need to use the new dimension recommendations to machine grooves for O-ring face seals. Bolted head cylinder assemblies already having O-ring face seal grooves should not be re-worked to the new groove dimensions.

Note: Some cylinder assemblies have been dealer re-worked to add an O-ring groove to the flange face of the head rather than the cylinder. Do not assemble a cylinder that would mate a cylinder and head both having an O-ring groove.



- A. Groove Diameter
- B. Groove Width
- C. Groove Depth
- D. Radius

Illustration 5. Seal Groove Width Dimensions
See Chart 3 for item reference and dimensions.

Chart 3 – Seal Part Numbers and Groove Dimensions

Cyl. Nominal Bore Dia.	O-ring Face Seal Part No.	Groove Dia. (A)	Groove Width (B)	Groove Depth (C)	Radius (D)
76.20 (3.000)	5P-2931	87.12 ± 0.50 (3.430 ± .020)	2.40 ± 0.05 (.094 ± .002)	1.33 ± 0.05 (.052 ± .002)	0.4 ± 0.05 (.016 ± .002)
88.90 (3.500)	4F-4097	101.96 ± 0.05 (4.014 ± .020)	3.53 ± 0.08 (.139 ± .003)	1.95 ± 0.08 (.077 ± .003)	0.4 ± 0.10 (.016 ± .004)
95.25 (3.750)	7X-5494	106.30 ± 0.50 (4.185 ± .020)	2.40 ± 0.05 (.094 ± .002)	1.33 ± 0.05 (.052 ± .002)	0.4 ± 0.05 (.016 ± .002)
101.60 (4.000)	9X-7357	112.52 ± 0.50 (4.430 ± .020)	2.40 ± 0.05 (.094 ± .002)	1.33 ± 0.05 (.052 ± .002)	0.4 ± 0.05 (.016 ± .002)
107.95 (4.250)	6S-3002	121.00 ± 0.50 (4.764 ± .020)	3.53 ± 0.08 (.139 ± .003)	1.95 ± 0.08 (.077 ± .003)	0.4 ± 0.10 (.016 ± .004)
114.30 (4.500)	9X-7566	127.36 ± 0.50 (5.014 ± .020)	3.53 ± 0.08 (.139 ± .003)	1.95 ± 0.08 (.077 ± .003)	0.4 ± 0.10 (.016 ± .004)
120.00 (4.720)	133-0128	136.00 ± 0.50 (5.354 ± .020)	3.53 ± 0.08 (.139 ± .003)	1.95 ± 0.08 (.077 ± .003)	0.4 ± 0.10 (.016 ± .004)
120.65 (4.750)	3F-5792	136.45 ± 0.50 (5.372 ± .020)	4.75 ± 0.13 (.187 ± .005)	2.64 ± 0.13 (.104 ± .005)	0.8 ± 0.20 (.031 ± .008)
120.65 (4.750)	3F-5792	136.45 ± 0.50 (5.372 ± .020)	4.75 ± 0.13 (.187 ± .005)	2.64 ± 0.13 (.104 ± .005)	0.8 ± 0.20 (.031 ± .008)
127.00 (5.000)	131-3716	137.92 ± 0.50 (5.430 ± .020)	2.40 ± 0.05 (.094 ± .002)	1.33 ± 0.05 (.052 ± .002)	0.4 ± 0.05 (.016 ± .002)
133.35 (5.250)	2D-8009	149.15 ± 0.50 (5.872 ± .020)	4.75 ± 0.13 (.187 ± .005)	2.64 ± 0.13 (.104 ± .005)	0.8 ± 0.20 (.031 ± .008)
139.70 (5.500)	9X-7358	152.76 ± 0.50 (6.014 ± .020)	3.53 ± 0.08 (.139 ± .003)	1.95 ± 0.08 (.077 ± .003)	0.4 ± 0.10 (.016 ± .004)
140.00 (5.510)	2K-8257	155.50 ± 0.50 (6.122 ± .020)	4.75 ± 0.13 (.187 ± .005)	2.64 ± 0.13 (.104 ± .005)	0.8 ± 0.20 (.020 ± .008)

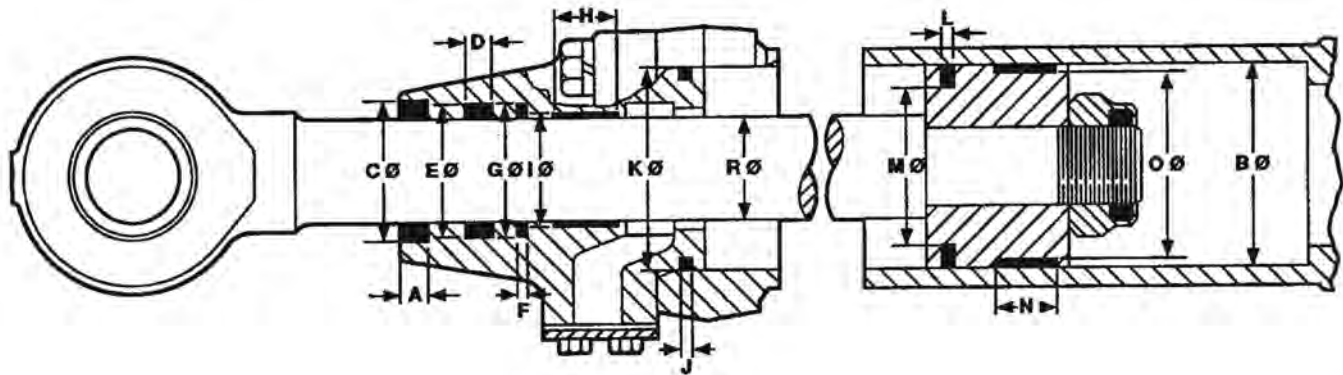
New Groove Dimensions for O-ring Part Numbers (Cont'd.)

Cyl. Nominal Bore Dia.	O-ring Face Seal Part No.	Groove Dia. (A)	Groove Width (B)	Groove Depth (C)	Radius (D)
152.40 (6.000)	8T-6404	165.46 ± 0.50 (6.514 ± .020)	3.53 ± 0.08 (.139 ± .003)	1.95 ± 0.08 (.077 ± .003)	0.4 ± 0.10 (.016 ± .004)
158.75 (6.250)	9X-7391	171.81 ± 0.50 (6.764 ± .020)	3.53 ± 0.08 (.139 ± .003)	1.95 ± 0.08 (.077 ± .003)	0.4 ± 0.10 (.016 ± .004)
160.00 (6.300)	9D-8042	176.15 ± 0.50 (6.935 ± .020)	3.53 ± 0.08 (.139 ± .003)	1.95 ± 0.08 (.077 ± .003)	0.4 ± 0.10 (.016 ± .004)
165.10 (6.500)	9D-8042	179.17 ± 0.50 (7.054 ± .020)	3.53 ± 0.08 (.139 ± .003)	1.95 ± 0.08 (.077 ± .003)	0.4 ± 0.10 (.016 ± .004)
170.00 (6.690)	9X-7725	187.50 ± 0.50 (7.382 ± .020)	3.53 ± 0.08 (.139 ± .003)	1.95 ± 0.08 (.077 ± .003)	0.4 ± 0.10 (.016 ± .004)
177.80 (7.000)	5J-2383	198.98 ± 0.50 (7.834 ± .020)	4.75 ± 0.13 (.187 ± .005)	2.64 ± 0.13 (.104 ± .005)	0.8 ± 0.20 (.031 ± .008)
180.00 (7.090)	5J-2383	196.50 ± 0.50 (7.736 ± .020)	4.75 ± 0.13 (.187 ± .005)	2.64 ± 0.13 (.104 ± .005)	0.8 ± 0.20 (.031 ± .008)
184.15 (7.250)	5J-2383	198.98 ± 0.50 (7.834 ± .020)	4.75 ± 0.13 (.187 ± .005)	2.64 ± 0.13 (.104 ± .005)	0.8 ± 0.20 (.031 ± .008)
190.50 (7.500)	3J-0634	211.68 ± 0.50 (8.334 ± .020)	4.75 ± 0.13 (.187 ± .005)	2.64 ± 0.13 (.104 ± .005)	0.8 ± 0.20 (.031 ± .008)
196.85 (7.750)	3J-0634	209.47 ± 0.50 (8.247 ± .020)	4.75 ± 0.13 (.187 ± .005)	2.64 ± 0.13 (.104 ± .005)	0.8 ± 0.20 (.031 ± .008)
200.00 (7.87)	5P-3092	225.00 ± 0.50 (8.858 ± .020)	7.40 ± 0.20 (.291 ± .008)	3.95 ± 0.20 (.155 ± .008)	1.6 ± 0.40 (.063 ± .016)
209.55 (8.250)	4K-6804	224.38 ± 0.50 (8.834 ± .020)	4.75 ± 0.13 (.187 ± .005)	2.64 ± 0.13 (.104 ± .005)	0.8 ± 0.20 (.031 ± .008)
215.90 (8.500)	1T-0132	241.22 ± 0.50 (9.496 ± .020)	4.75 ± 0.13 (.187 ± .005)	2.64 ± 0.13 (.104 ± .005)	0.8 ± 0.20 (.031 ± .008)
220.00 (8.66)	1M-9015	253.92 ± 0.50 (9.997 ± .020)	9.35 ± 0.25 (.368 ± .010)	5.20 ± 0.25 (.207 ± .006)	1.6 ± 0.40 (.063 ± .016)
234.95 (9.250)	5S-3676	253.92 ± 0.50 (9.997 ± .020)	4.75 ± 0.13 (.187 ± .005)	2.64 ± 0.13 (.104 ± .005)	0.8 ± 0.20 (.031 ± .008)
254.00 (10.000)	3S-3074	276.15 ± 0.50 (10.872 ± .020)	7.40 ± 0.20 (.291 ± .008)	3.95 ± 0.20 (.155 ± .008)	1.6 ± 0.40 (.063 ± .016)
266.70 (10.500)	5P-2236	288.85 ± 0.50 (11.372 ± .020)	7.40 ± 0.20 (.291 ± .008)	3.95 ± 0.20 (.155 ± .008)	1.6 ± 0.40 (.063 ± .016)
279.40 (11.00)	130-9108	310.50 ± 0.50 (12.224 ± .020)	7.40 ± 0.20 (.291 ± .008)	3.95 ± 0.20 (.155 ± .008)	1.6 ± 0.40 (.063 ± .016)
292.10 (11.50)	6V-3263	314.25 ± 0.50 (12.372 ± .020)	7.40 ± 0.20 (.291 ± .008)	3.95 ± 0.20 (.155 ± .008)	1.6 ± 0.40 (.063 ± .016)
317.50 (12.50)	130-9109	360.50 ± 0.50 (14.193 ± .020)	7.40 ± 0.20 (.291 ± .008)	3.95 ± 0.20 (.155 ± .008)	1.6 ± 0.40 (.063 ± .016)
330.20 (13.00)	130-9110	381.50 ± 0.50 (15.020 ± .020)	7.40 ± 0.20 (.291 ± .008)	3.95 ± 0.20 (.155 ± .008)	1.6 ± 0.40 (.063 ± .016)
342.90 (13.50)	130-9110	381.50 ± 0.50 (15.020 ± .020)	7.40 ± 0.20 (.291 ± .008)	3.95 ± 0.20 (.155 ± .008)	1.6 ± 0.40 (.063 ± .016)

Seal Selection for Other Than Cat Equipment

Seal Selection

Cat seals can be used on other-than Cat equipment. The following section will help you identify which seal is necessary for your repair.



How to Select the Correct Seals:

- For cylinders used on other-than Cat equipment, measure the components using the following procedure. To find the correct replacement seal size, the seal groove dimensions in the iron itself should always be measured whenever possible. Measuring a used seal can give false dimensions due to distortion in size from wear. The hydraulic cylinder illustration below calls out the iron dimensions required to identify the proper size replacement seal.

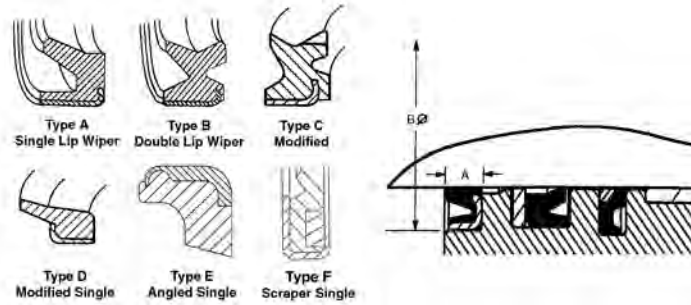
Seal Type	Diameter of Rod (R) or Cylinder Bore (B)	Groove Width	Groove Diameter
Rod Wiper:	R	A	C
Rod Seal:	R	D	E
Buffer Seal:	R	F	G
Head Wear Ring:	R	H	I
Head Seal:	B	J	K
Piston Seal:	B	L	M
Piston Wear Ring:	B	N	O

Should seal replacement be requested by a customer over-the-counter rather than through the service shop, measure the seal's outside diameter at four equally-spaced areas around the seal. Take the average of these measurements to determine the seal's outside diameter. Repeat this procedure with the seal's inside diameter and width (height) to determine seal replacement size. Seal dimensions equivalent to iron dimensions are shown in the following table.

Type of Seal	Iron Dimension	Equivalent Seal Dimension
Wiper Seal, U-Cup Seal, Buffer Seal, Head Wear Ring	Rod Diameter	Inside Diameter
	Groove Width	Width
	Groove Diameter	Outside Diameter
Snap-in Wiper Seal	Seal Bore Diameter	Base Thickness
Head Seal, Piston Seal, Piston Wear Ring	Bore Diameter	Outside Diameter
	Groove Width	Width
	Groove Diameter	Inside Diameter

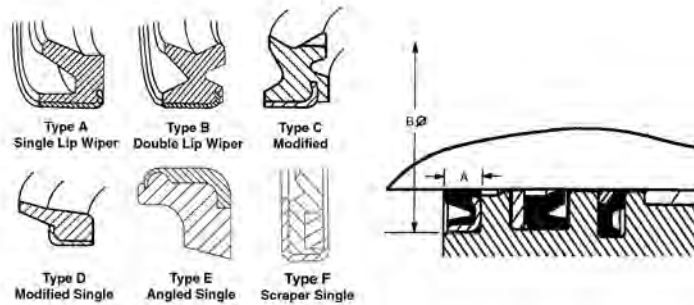
Use the tables in the following sections to find the right seal for your customer's repair. Note that the Hydraulic Information System (HIS – <https://his.cat.com>) also has seal search capabilities.

Press-In Wiper Seals



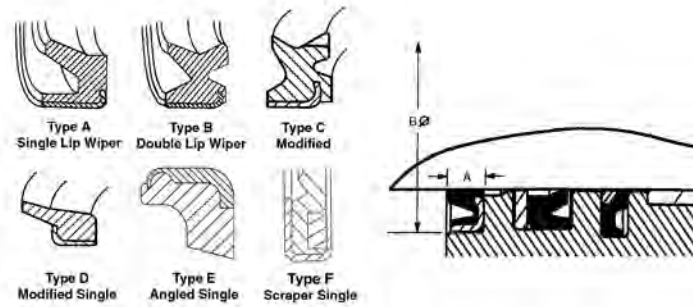
I.D.		PART NUMBER	SEAL TYPE	A WIDTH (± .02 in)		B O.D.	
(in)	(mm)			(in)	(mm)	(in)	(mm)
0.98	25.00	167-3100	URE A	0.28	7.00	1.38	35.02
1.00	25.40	7K-1864	URE	0.31	7.92	1.50	38.20
1.18	30.00	144-9480	URE D	0.39	10.00	1.58	40.02
1.25	31.75	167-2447	URE E	0.34	8.60	1.75	44.50
1.25	31.75	2H-1746	NIT A	0.28	7.00	1.75	44.50
1.25	31.75	4J-8982	URE A	0.34	8.60	1.75	44.50
1.25	31.75	3E-4160	URE A	0.31	7.92	1.75	44.45
1.26	32.00	167-3102	URE A	0.28	7.00	1.65	42.02
1.37	34.92	3E-4159	URE A	0.31	7.92	1.88	47.63
1.38	35.00	140-2392	URE D	0.39	10.00	1.77	45.02
1.50	38.10	167-2450	URE E	0.43	11.00	2.25	57.15
1.50	38.10	226-8202	URE B	0.43	11.00	2.25	57.15
1.50	38.10	3E-4161	URE A	0.31	7.92	2.00	50.80
1.50	38.10	4J-8979	URE A	0.43	11.00	2.25	57.15
1.50	38.10	8C-9131	URE B	0.43	11.00	2.25	57.15
1.50	38.10	9J-4037	NIT A	0.43	11.00	2.25	57.15
1.57	40.00	167-2446	URE E	0.33	8.50	2.13	54.05
1.57	40.00	167-3104	URE D	0.28	7.00	1.97	50.02
1.57	40.00	144-9492	URE D	0.39	10.00	1.97	50.02
1.63	41.28	4T-0486	URE A	0.33	8.50	2.13	53.98
1.75	44.40	150-6739	URE C	0.43	11.00	2.44	62.07
1.75	44.45	167-2452	URE E	0.43	11.00	2.44	61.90
1.75	44.45	4J-8980	URE A	0.43	11.00	2.44	61.90
1.75	44.45	5P-0092	NIT A	0.25	6.35	2.25	57.25
1.75	44.45	3E-4162	URE A	0.31	7.92	2.25	57.15
1.75	44.45	231-3539	URE B	0.43	11.00	2.44	61.90
1.75	44.45	8C-9132	URE B	0.43	11.00	2.44	61.90
1.75	44.45	8J-5817	NIT A	0.43	11.00	2.44	61.90
1.75	44.45	7J-6932	URE	0.31	7.94	2.25	57.25
1.77	45.00	233-0617	URE B	0.33	8.50	2.32	59.05
1.77	45.00	167-2448	URE E	0.33	8.50	2.32	59.05
1.77	45.00	141-0713	URE D	0.28	7.00	2.16	54.97
1.83	46.50	099-3929	URE A	0.33	8.35	2.52	64.02
1.87	47.62	167-2455	URE E	0.43	11.00	2.56	65.07
1.87	47.62	4T-6777	URE A	0.43	11.00	2.56	65.07
1.87	47.62	9X-3565	URE B	0.43	11.00	2.56	65.07
1.88	47.63	227-1143	URE B	0.43	11.00	2.56	65.07
1.89	47.90	116-3393	URE A	0.33	8.35	2.52	64.02
1.97	50.00	167-2456	URE E	0.43	11.00	2.66	67.45
1.97	50.00	233-0619	URE B	0.43	11.00	2.66	67.45
2.00	50.75	143-3670	URE C	0.43	11.00	2.69	68.42
2.00	50.80	167-2457	URE E	0.43	11.00	2.69	68.23

Press-In Wiper Seals



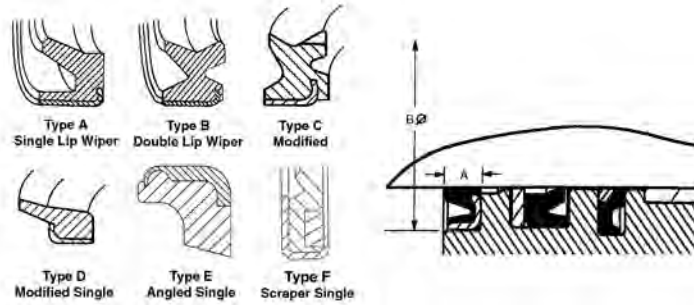
I.D.		PART NUMBER	SEAL TYPE	A WIDTH (± .02 in)		B O.D.	
(in)	(mm)			(in)	(mm)	(in)	(mm)
2.00	50.80	229-9382	URE B	0.43	11.00	2.69	68.23
2.00	50.80	1K-6981	URE A	0.43	11.00	2.69	68.23
2.00	50.80	3E-4164	URE A	0.31	7.92	2.50	63.50
2.00	50.80	7J-8277	NIT A	0.43	11.00	2.69	68.23
2.00	50.80	8C-9133	URE B	0.43	11.00	2.69	68.23
2.03	51.50	099-6995	URE A	0.33	8.35	2.72	69.02
2.12	53.93	150-6745	URE C	0.43	11.00	2.88	73.20
2.13	53.98	167-2458	URE E	0.43	11.00	2.88	73.03
2.13	53.98	9X-3567	URE B	0.43	11.00	2.88	73.03
2.13	53.98	4T-6125	URE A	0.43	11.00	2.88	73.03
2.13	53.98	227-1145	URE B	0.43	11.00	2.88	73.03
2.17	55.00	116-3392	URE A	0.33	8.35	2.72	69.02
2.22	56.50	096-1884	URE A	0.33	8.35	2.91	74.02
2.25	57.15	167-2459	URE E	0.43	11.00	3.00	76.13
2.25	57.15	167-2460	URE E	0.41	10.50	3.00	76.13
2.25	57.15	231-3538	URE B	0.43	11.00	3.00	76.13
2.25	57.15	5J-3937	URE A	0.29	7.35	3.13	79.38
2.25	57.15	5H-1513	URE A	0.51	12.83	3.25	82.55
2.25	57.15	4J-3515	URE A	0.43	11.00	3.00	76.13
2.25	57.15	3E-4165	URE A	0.31	7.92	2.75	69.85
2.25	57.15	8C-9134	URE B	0.43	11.00	3.00	76.13
2.25	57.15	7J-8278	NIT A	0.43	11.00	3.00	76.13
2.36	59.85	093-1433	URE F	0.16	4.15	2.96	75.12
2.36	60.00	233-0618	URE B	0.33	8.50	2.92	74.05
2.36	60.00	167-2454	URE E	0.33	8.50	2.92	74.05
2.36	60.00	116-3391	URE A	0.33	8.35	2.91	74.02
2.37	60.32	167-2461	URE E	0.43	11.00	3.12	79.35
2.37	60.32	231-3540	URE B	0.43	11.00	3.12	79.35
2.37	60.32	6J-3892	URE A	0.43	11.00	3.12	79.35
2.37	60.32	9X-7259	URE B	0.43	11.00	3.12	79.35
2.37	60.32	9J-1319	NIT A	0.43	11.00	3.12	79.35
2.42	61.50	095-7102	URE D	0.44	11.30	3.12	79.21
2.50	63.45	150-6751	URE C	0.43	11.00	3.26	82.75
2.50	63.50	167-2463	URE E	0.43	11.00	3.25	82.55
2.50	63.50	225-3281	URE B	0.43	11.00	3.25	82.55
2.50	63.50	7J-8273	NIT A	0.43	11.00	3.25	82.55
2.50	63.50	8C-3840	URE B	0.43	11.00	3.25	82.55
2.50	63.50	3E-4166	URE A	0.31	7.92	3.00	76.20
2.50	63.50	1K-6982	URE A	0.43	11.00	3.25	82.55
2.56	65.00	227-1148	URE B	0.43	11.00	3.31	84.02
2.56	65.00	167-2466	URE E	0.43	11.00	3.31	84.02
2.56	65.00	116-3390	URE A	0.33	8.35	3.11	79.02

Press-In Wiper Seals



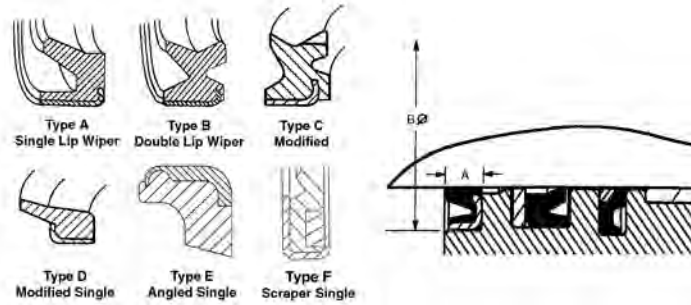
I.D.		PART NUMBER	SEAL TYPE	A WIDTH (± .02 in)		B O.D.	
(in)	(mm)			(in)	(mm)	(in)	(mm)
2.63	66.68	167-2464	URE E	0.43	11.00	3.37	85.72
2.63	66.68	227-1146	URE B	0.43	11.00	3.37	85.72
2.63	66.68	1U-4021	URE D	0.43	11.00	3.37	85.72
2.63	66.68	9X-3569	URE D	0.43	11.00	3.37	85.72
2.75	69.80	149-1488	URE C	0.55	14.00	3.76	95.49
2.75	69.85	167-2467	URE E	0.55	14.00	3.75	95.27
2.75	69.85	8C-3842	URE B	0.55	14.00	3.75	95.27
2.75	69.85	7J-8274	NIT A	0.55	14.00	3.75	95.27
2.75	69.85	1J-3540	URE A	0.55	14.00	3.75	95.27
2.75	69.85	225-3283	URE B	0.55	14.00	3.75	95.27
2.75	69.85	3E-4168	URE A	0.31	7.92	3.25	82.55
2.76	70.00	233-0630	URE B	0.31	8.00	3.31	84.02
2.76	70.00	167-2451	URE E	0.31	8.00	3.31	84.02
2.76	70.00	116-3389	URE A	0.33	8.35	3.31	84.02
2.88	73.15	167-2472	URE E	0.43	11.00	3.63	92.19
2.95	75.00	167-2468	URE E	0.32	8.20	3.50	89.02
2.95	75.00	116-3388	URE A	0.33	8.35	3.50	89.02
2.95	75.00	233-0621	URE B	0.32	8.20	3.50	89.02
3.00	76.15	143-3671	URE C	0.55	14.00	4.01	101.92
3.00	76.20	167-2469	URE E	0.55	14.00	4.00	101.67
3.00	76.20	2J-1411	URE A	0.55	14.00	4.00	101.67
3.00	76.20	225-3284	URE B	0.55	14.00	4.00	101.67
3.00	76.20	3E-4170	URE A	0.31	7.92	3.50	88.90
3.00	76.20	8C-5218	URE B	0.55	14.00	4.00	101.67
3.00	76.20	8J-0249	NIT A	0.55	14.00	4.00	101.67
3.06	77.70	165-9285	URE B	0.43	11.00	3.71	94.23
3.14	79.85	096-0854	URE F	0.16	4.15	3.75	95.15
3.15	80.00	116-3387	URE A	0.33	8.35	3.70	94.02
3.15	80.00	167-2506	URE E	0.33	8.50	3.70	94.05
3.15	80.00	167-2481	URE E	0.55	14.00	4.15	105.47
3.15	80.00	233-0637	URE B	0.33	8.50	3.70	94.05
3.21	81.50	7Y-5115	URE A	0.33	8.35	3.90	99.02
3.25	82.50	153-7558	URE C	0.55	14.00	4.26	108.16
3.25	82.55	167-2471	URE E	0.55	14.00	4.25	107.95
3.25	82.55	7J-7732	NIT A	0.55	14.00	4.25	107.95
3.25	82.55	6J-4169	URE A	0.55	14.00	4.25	107.95
3.25	82.55	8T-8389	URE B	0.55	14.00	4.25	107.95
3.25	82.55	225-3285	URE B	0.55	14.00	4.25	107.95
3.25	82.55	3E-4173	URE A	0.31	7.92	3.88	98.43
3.26	82.70	165-9286	URE B	0.43	11.00	3.91	99.23
3.35	85.00	121-1611	URE B	0.51	13.00	3.90	99.00
3.35	85.00	114-0644	URE A	0.33	8.50	3.90	99.02

Press-In Wiper Seals



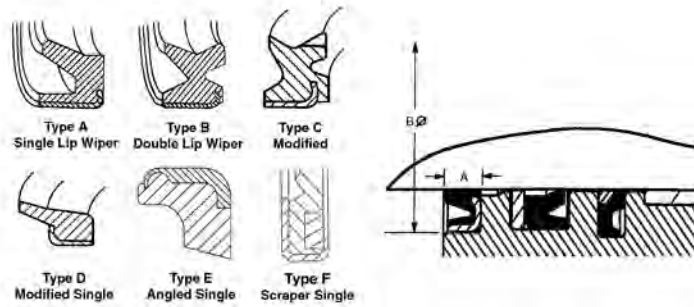
I.D.		PART NUMBER	SEAL TYPE	A WIDTH (± .02 in)		B O.D.	
(in)	(mm)			(in)	(mm)	(in)	(mm)
3.35	85.00	167-2470	URE E	0.33	8.50	3.90	99.03
3.35	85.00	233-0622	URE B	0.33	8.50	3.90	99.03
3.41	86.50	093-1441	URE A	0.33	8.35	4.10	104.02
3.50	88.85	143-3672	URE C	0.55	14.00	4.51	114.57
3.50	88.90	167-2474	URE E	0.55	14.00	4.50	114.32
3.50	88.90	225-3286	URE B	0.55	14.00	4.50	114.32
3.50	88.90	3E-4176	URE A	0.31	7.92	4.13	104.78
3.50	88.90	4J-8981	URE A	0.55	14.00	4.50	114.32
3.50	88.90	7J-8276	NIT A	0.55	14.00	4.50	114.32
3.50	88.90	8C-5219	URE A	0.55	14.00	4.50	114.32
3.54	90.00	233-0623	URE B	0.43	11.00	4.10	104.02
3.54	90.00	167-2473	URE E	0.43	11.00	4.10	104.02
3.54	90.00	126-1885	URE B	0.51	13.00	4.09	104.00
3.54	90.00	094-0723	URE D	0.53	13.50	4.09	104.00
3.54	90.00	116-3386	URE A	0.33	8.35	4.10	104.02
3.65	92.70	114-0645	URE A	0.33	8.50	4.29	109.03
3.65	92.70	165-9288	URE B	0.43	11.00	4.30	109.23
3.74	95.00	167-2476	URE E	0.33	8.50	4.29	109.03
3.74	95.00	167-2477	URE E	0.32	8.20	4.29	109.03
3.74	95.00	233-0624	URE B	0.33	8.50	4.29	109.03
3.75	95.20	227-1149	URE B	0.55	14.00	4.75	120.65
3.75	95.25	8C-9135	URE B	0.55	14.00	4.75	120.65
3.75	95.25	8J-6069	URE A	0.55	14.00	4.75	120.65
3.75	95.25	9J-1325	NIT A	0.55	14.00	4.75	120.65
3.75	95.25	167-2478	URE E	0.55	14.00	4.75	120.65
3.80	96.50	096-0059	URE A	0.33	8.35	4.49	114.02
3.94	100.00	094-4057	URE D	0.53	13.50	4.49	114.00
3.94	100.00	107-6254	URE D	0.31	8.00	4.49	114.00
3.94	100.00	114-0646	URE A	0.33	8.35	4.49	114.02
3.94	100.00	133-6904	URE B	0.51	13.00	4.49	114.00
3.94	100.00	167-2480	URE E	0.31	8.00	4.49	114.00
3.94	100.00	233-0626	URE B	0.31	8.00	4.49	114.00
4.00	101.55	138-9740	URE A	0.31	8.00	4.50	114.24
4.00	101.55	143-3673	URE C	0.55	14.00	5.01	127.23
4.00	101.60	167-2482	URE E	0.55	14.00	5.00	127.00
4.00	101.60	2D-8540	NIT A	0.50	12.70	5.00	127.10
4.00	101.60	225-3287	URE B	0.55	14.00	5.00	127.00
4.00	101.60	3E-4177	URE A	0.31	7.92	4.63	117.48
4.00	101.60	3G-2650	NIT A	0.55	14.00	5.00	127.00
4.00	101.60	8C-5220	URE B	0.55	14.00	5.00	127.00
4.00	101.60	7J-5673	URE A	0.55	14.00	5.00	127.00
4.00	101.60	7Y-4667	URE A	0.39	10.00	4.76	121.02

Press-In Wiper Seals



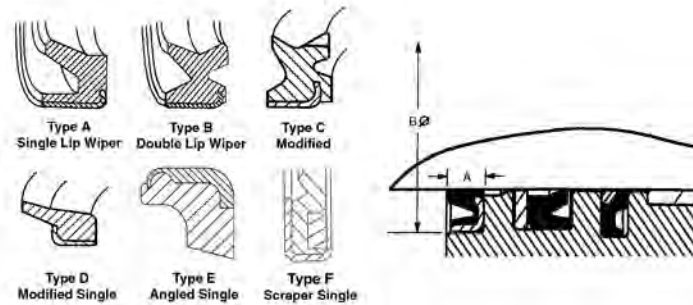
I.D.		PART NUMBER	SEAL TYPE	A WIDTH (± .02 in)		B O.D.	
(in)	(mm)			(in)	(mm)	(in)	(mm)
4.04	102.50	133-6813	URE B	0.37	9.30	4.77	121.26
4.13	105.00	165-9290	URE B	0.47	12.00	4.77	121.26
4.13	105.00	114-0647	URE A	0.37	9.50	4.76	121.02
4.13	105.00	114-0705	URE D	0.59	15.00	4.76	121.00
4.13	105.00	167-2483	URE E	0.37	9.50	4.76	121.03
4.13	105.00	2U-5368	A	0.47	12.00	5.12	130.00
4.13	105.00	233-0627	URE B	0.37	9.50	4.76	121.03
4.19	106.50	7Y-4940	URE A	0.37	9.35	4.96	126.02
4.23	107.50	133-6814	URE B	0.47	12.00	4.97	126.26
4.25	107.95	167-2484	URE E	0.55	14.00	5.25	133.35
4.25	107.95	7J-8942	URE A	0.55	14.00	5.25	133.35
4.25	107.95	9J-1333	NIT A	0.55	14.00	5.25	133.35
4.25	107.95	225-3288	URE B	0.55	14.00	5.25	133.35
4.25	107.95	6E-0426	URE B	0.55	14.00	5.25	133.35
4.33	110.00	233-0628	URE B	0.37	9.35	4.96	126.02
4.33	110.00	167-2485	URE E	0.37	9.35	4.96	126.02
4.33	110.00	165-9291	URE B	0.47	12.00	4.97	126.26
4.33	110.00	111-9957	URE A	0.37	9.35	4.96	126.02
4.50	114.30	143-3674	URE C	0.55	14.00	5.51	139.93
4.50	114.30	167-2487	URE E	0.55	14.00	5.50	139.70
4.50	114.30	225-3289	URE B	0.55	14.00	5.50	139.70
4.50	114.30	3J-4458	URE A	0.55	14.00	5.50	139.70
4.50	114.30	3E-4178	URE A	0.31	7.92	5.13	130.18
4.50	114.30	9J-1337	NIT A	0.55	14.00	5.50	139.70
4.50	114.30	9X-3580	URE D	0.55	14.00	5.50	139.70
4.53	115.00	167-2453	URE E	0.35	9.00	5.16	131.02
4.75	120.60	227-1150	URE B	0.55	14.00	5.75	146.13
4.75	120.65	9X-7262	URE B	0.55	14.00	5.75	146.05
4.75	120.65	9J-1341	NIT A	0.55	14.00	5.75	146.05
4.75	120.65	7J-9256	URE A	0.55	14.00	5.75	146.05
4.75	120.65	167-2488	URE E	0.55	14.00	5.75	146.13
4.82	122.50	165-9292	URE B	0.47	12.00	5.56	141.26
4.82	122.50	155-9194	URE A	0.35	9.00	5.56	141.26
4.90	124.50	121-1596	URE A	0.39	10.02	5.64	143.14
5.00	126.95	150-6263	URE C	0.55	14.00	6.01	152.70
5.00	127.00	167-2489	URE E	0.55	14.00	6.00	152.40
5.00	127.00	8J-4520	URE D	0.55	14.00	6.00	152.40
5.00	127.00	9J-1681	NIT A	0.55	14.00	6.00	152.40
5.00	127.00	9X-3582	URE B	0.55	14.00	6.00	152.40
5.00	127.00	225-3290	URE B	0.55	14.00	6.00	152.40
5.12	130.00	233-0631	URE B	0.37	9.35	5.75	146.02
5.12	130.00	167-2490	URE E	0.36	9.20	5.75	146.05

Press-In Wiper Seals



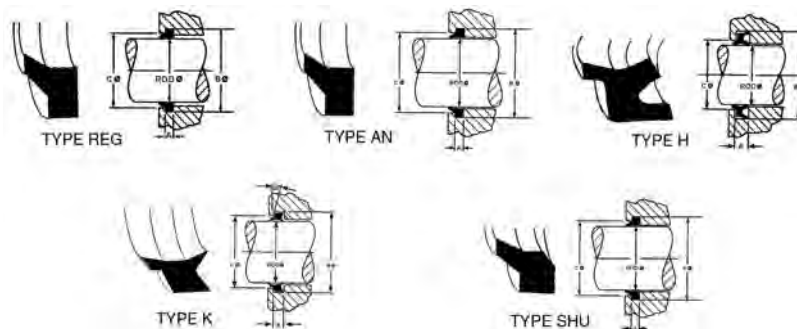
I.D.		PART NUMBER	SEAL TYPE	A WIDTH (± .02 in)		B O.D.		
(in)	(mm)			(in)	(mm)	(in)	(mm)	
5.12	130.00	167-2491	URE	E	0.37	9.35	5.75	146.02
5.12	130.00	165-9293	URE	B	0.47	12.00	5.76	146.26
5.12	130.00	111-9958	URE	A	0.37	9.35	5.75	146.02
5.25	133.30	233-0632	URE	B	0.55	14.00	6.25	158.75
5.25	133.35	9X-7268	URE	B	0.55	14.00	6.25	158.75
5.25	133.35	167-2492	URE	E	0.55	14.00	6.25	158.75
5.50	139.65	152-5063	URE	D	0.55	14.00	6.51	165.41
5.50	139.70	167-2493	URE	E	0.55	14.00	6.50	165.10
5.50	139.70	167-2993		E	0.55	14.00	6.50	165.10
5.50	139.70	9X-3573	URE	D	0.55	14.00	6.50	165.10
5.50	139.70	225-3291	URE	B	0.55	14.00	6.50	165.10
5.51	140.00	233-0633	URE	B	0.41	10.35	6.30	160.02
5.51	140.00	167-2494	URE	E	0.41	10.35	6.30	160.02
5.51	140.00	165-9294	URE	B	0.51	13.00	6.31	160.26
5.51	140.00	107-6615	URE	A	0.41	10.35	6.30	160.02
5.71	145.00	167-2505	URE	E	0.39	10.00	6.50	165.02
5.71	145.00	233-0636	URE	B	0.39	10.00	6.50	165.02
5.75	146.05	225-3293	URE	B	0.54	13.70	6.75	171.45
5.75	146.05	9J-5473	NIT	A	0.55	14.00	6.75	171.45
5.75	146.05	9J-5469	URE	A	0.55	14.00	6.75	171.45
5.75	146.05	9X-3574	URE	B	0.55	14.00	6.75	171.45
5.75	146.05	167-2495	URE	E	0.54	13.70	6.75	171.45
5.91	150.00	167-2496	URE	E	0.41	10.50	6.69	170.02
5.91	150.00	165-9296	URE	B	0.51	13.00	6.70	170.26
5.91	150.00	107-6616	URE	A	0.41	10.35	6.69	170.02
5.91	150.00	233-0634	URE	B	0.41	10.50	6.69	170.02
6.00	152.40	225-3294	URE	B	0.54	13.70	7.00	177.80
6.00	152.40	3J-7622	URE	A	0.54	13.70	7.00	177.80
6.00	152.40	9J-1697	NIT	A	0.55	14.00	7.00	177.80
6.00	152.40	161-5789	URE	D	0.55	14.00	7.01	178.11
6.00	152.40	167-2497	URE	E	0.54	13.70	7.00	177.80
6.50	165.10	167-2498	URE	E	0.54	13.70	7.50	190.50
6.50	165.10	9X-7323	URE	B	0.55	14.00	7.50	190.50
6.50	165.10	8J-1877	NIT	A	0.65	16.50	7.50	190.50
6.50	165.10	7J-2806	URE	A	0.65	16.50	7.50	190.50
6.50	165.10	225-3295	URE	B	0.54	13.70	7.50	190.50
6.75	171.40	227-1147	URE	B	0.55	14.00	7.75	196.85
6.75	171.45	3J-4460		A	0.55	14.00	7.75	196.85
6.75	171.45	8C-9146	URE	B	0.55	14.00	7.75	196.85
6.75	171.45	167-2499	URE	E	0.55	14.00	7.75	196.85
7.00	177.80	167-2500	URE	E	0.59	15.00	8.00	203.20
7.00	177.80	8C-9136	URE	D	0.55	14.00	8.00	203.20

Press-In Wiper Seals



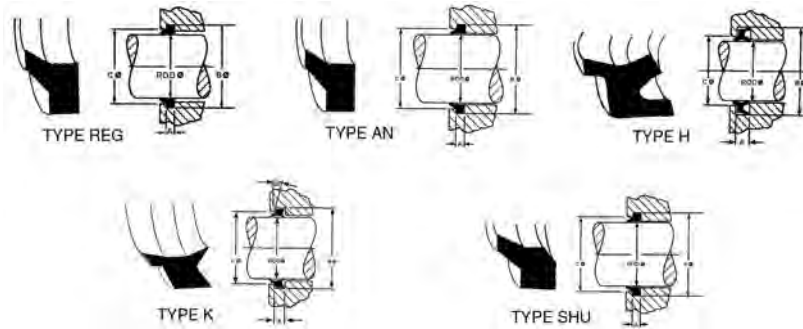
I.D.		PART NUMBER	SEAL TYPE	A WIDTH (± .02 in)		B O.D.		
(in)	(mm)			(in)	(mm)	(in)	(mm)	
7.00	177.80	9X-7333	URE	A	0.55	14.00	8.00	203.20
7.00	177.80	3G-2646	NIT	A	0.55	14.00	8.00	203.20
7.00	177.80	225-3296	URE	B	0.59	15.00	8.00	203.20
7.25	184.15	225-3297	URE	B	0.54	13.70	8.25	209.45
7.25	184.15	3J-7761	URE	A	0.55	14.00	8.25	209.55
7.25	184.15	167-2501	URE	E	0.54	13.70	8.25	209.45
7.25	184.15	108-0134	URE	D	0.55	14.00	8.25	209.55
7.25	184.15	108-0133			0.32	8.25	8.08	205.30
7.50	190.50	108-0132	URE	B	0.55	14.00	8.50	215.90
7.50	190.50	167-2502	URE	E	0.54	13.70	8.50	215.90
7.50	190.50	225-3298	URE	B	0.54	13.70	8.50	215.90
8.00	203.20	225-3299	URE	B	0.54	13.70	9.00	228.60
8.00	203.20	6E-0036	URE	B	0.55	14.00	9.00	228.60
8.00	203.20	167-2503	URE	E	0.54	13.70	9.00	228.60
8.00	203.25	152-5064	URE	D	0.55	14.00	9.01	228.91
8.25	209.55	9X-7329	NIT	B	0.55	14.00	9.25	234.95
8.75	222.25	062-3943	URE	B	0.55	14.00	9.75	247.65
8.75	222.25	225-3300	URE	B	0.54	13.70	9.75	247.65
8.75	222.25	108-6214	URE	B	0.55	14.00	9.75	247.65
8.75	222.25	167-2504	URE	E	0.54	13.70	9.75	247.65
9.00	228.60	9X-7354	URE	A	0.59	15.00	9.75	247.70
9.50	241.30	167-2508	URE	E	0.59	15.00	10.50	266.77
11.00	279.40	9X-7353	URE	A	0.59	15.00	12.00	304.85
12.50	317.50	9X-7352	URE	A	0.59	15.00	13.50	342.95
13.50	342.90	9X-7350	URE	A	0.59	15.00	14.50	368.35
15.75	400.05	149-2697	URE	B	0.55	14.00	16.76	425.82
18.45	468.60	9X-7355	NIT	A	0.55	14.00	19.45	494.12

Snap-In Wiper Seals



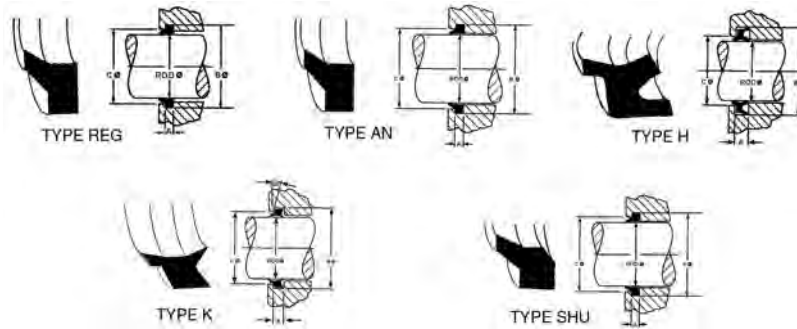
I.D.		PART NUMBER	SEAL TYPE	A WIDTH (± .002 in)		B O.D. (± .003 in)		C Base Thickness (± .010 in)	
(in)	(mm)			(in)	(mm)	(in)	(mm)	(in)	(mm)
0.63	15.88	6J-2274	REG	0.13	3.20	0.88	22.28	0.79	20.10
0.63	15.88	5J-2274	REG	0.13	3.20	0.88	22.28	0.79	20.10
0.75	19.05	6J-1879	REG	0.19	4.80	1.13	28.63	1.00	25.40
1.00	25.40	6J-1890	REG	0.19	4.80	1.38	34.98	1.25	31.75
1.00	25.40	3E-4124	K	0.19	4.95	1.39	35.18	1.08	27.48
1.13	28.58	3E-4138	SHU	0.19	4.75	1.50	38.02	1.37	34.80
1.25	31.75	3E-4139	SHU	0.19	4.75	1.62	41.20	1.49	37.97
1.25	31.75	3E-4125	K	0.19	4.95	1.64	41.53	1.33	33.83
1.38	34.93	3E-4140	SHU	0.19	4.75	1.75	44.37	1.62	41.15
1.50	38.10	3E-4141	SHU	0.19	4.75	1.87	47.55	1.74	44.32
1.50	38.10	3E-4126	K	0.19	4.95	1.89	47.88	1.58	40.18
1.50	38.10	5J-6795	REG	0.19	4.80	1.88	47.68	1.75	44.45
1.50	38.10	141-7451	H	0.34	8.76	0.00	0.00	2.00	50.80
1.50	38.10	3E-4103	AN	0.11	2.72	1.80	45.77	1.67	42.37
1.63	41.28	3E-4104	AN	0.11	2.72	1.93	48.95	1.79	45.54
1.63	41.28	3E-4163	SHU	0.19	4.75	2.00	50.72	1.74	44.32
1.75	44.40	8T-5431	REG	0.19	4.80	0.00	0.00	2.13	54.03
1.75	44.40	7U-7648	REG	0.00	0.00	2.13	54.00	0.00	0.00
1.75	44.45	3E-4105	AN	0.11	2.72	2.05	52.12	1.92	48.72
1.75	44.45	3E-4150	H	0.22	5.54	2.11	53.72	1.89	47.88
1.75	44.45	3E-4127	K	0.19	4.95	2.14	54.23	1.83	46.53
1.75	44.45	3E-4142	SHU	0.19	4.75	2.12	53.90	1.99	50.67
1.87	47.62	3G-4721	REG	0.19	4.80	2.25	57.20	2.13	53.98
1.97	50.00	3E-4151	H	0.22	5.54	2.36	60.07	2.14	54.23
1.97	50.00	3E-4143	SHU	0.25	6.32	2.50	63.42	2.33	59.11
1.97	50.00	5U-3693	REG	0.25	6.35	0.00	0.00	2.50	63.50
2.00	50.80	3E-4106	AN	0.11	2.72	2.30	58.47	2.18	55.32
2.00	50.80	3E-4128	K	0.19	4.95	2.39	60.58	2.08	52.88
2.00	50.80	4T-0415	REG	0.25	6.38	2.50	63.55	2.33	59.25
2.01	50.96	1K-5354	REG	0.18	4.68	0.00	0.00	2.37	60.25
2.25	57.15	3E-4107	AN	0.11	2.72	2.55	64.82	2.43	61.67
2.25	57.15	6J-0217	REG	0.25	6.38	2.75	69.90	2.58	65.60
2.25	57.15	3E-4152	H	0.28	7.14	2.74	69.72	2.39	60.58
2.25	57.15	3E-4129	K	0.26	6.48	2.76	70.10	2.41	61.14
2.25	57.15	3E-4144	SHU	0.25	6.32	2.75	69.77	2.58	65.46
2.37	60.32	5J-8016	REG	0.25	6.38	2.88	73.08	2.71	68.78
2.38	60.33	3E-4167	SHU	0.25	6.32	2.87	72.95	2.70	68.63
2.50	63.50	3E-4153	H	0.28	7.14	2.99	76.07	2.64	66.93
2.50	63.50	3E-4145	SHU	0.25	6.32	3.00	76.12	2.83	71.81

Snap-In Wiper Seals



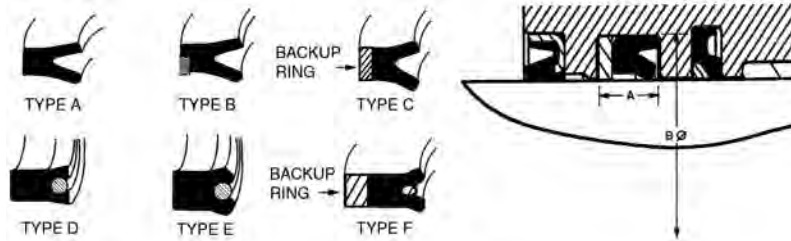
I.D.		PART NUMBER	SEAL TYPE	A WIDTH (± .002 in)		B O.D. (± .003 in)		C Base Thickness (± .010 in)	
(in)	(mm)			(in)	(mm)	(in)	(mm)	(in)	(mm)
2.50	63.50	3E-4130	K	0.26	6.48	3.01	76.45	2.66	67.49
2.50	63.50	5J-8156	REG	0.25	6.38	3.00	76.25	2.83	71.95
2.50	63.50	3E-4108	AN	0.11	2.72	2.80	71.17	2.68	68.02
2.63	66.68	3E-4131	K	0.26	6.48	3.14	79.63	2.78	70.66
2.63	66.68	3G-4719	REG	0.25	6.38	3.13	79.43	2.96	75.13
2.75	69.85	3E-4169	SHU	0.25	6.32	3.25	82.47	3.08	78.16
2.75	69.85	3E-4132	K	0.26	6.48	3.26	82.80	2.91	73.84
2.75	69.85	3E-4109	AN	0.12	3.10	3.11	79.10	2.96	75.16
2.75	69.85	5J-7036	REG	0.25	6.38	3.25	82.60	3.08	78.30
3.00	76.20	5J-7030	REG	0.25	6.38	3.50	88.95	3.33	84.65
3.00	76.20	5U-2818	REG	0.25	6.40	3.50	88.90	0.00	0.00
3.00	76.20	3E-4110	AN	0.12	3.10	3.36	85.45	3.21	81.51
3.00	76.20	3E-4133	K	0.26	6.48	3.51	89.15	3.16	80.19
3.00	76.20	3E-4146	SHU	0.25	6.32	3.50	88.82	3.33	84.51
3.00	76.20	3E-4154	H	0.28	7.14	3.49	88.77	3.13	79.53
3.25	82.55	5J-7034	REG	0.25	6.38	3.75	95.30	3.58	91.00
3.38	85.73	3E-4171	SHU	0.25	6.32	3.87	98.35	3.70	94.03
3.38	85.85	3E-4111	AN	0.12	3.10	3.74	94.97	3.58	91.03
3.50	88.90	3E-4112	AN	0.12	3.10	3.86	98.15	3.71	94.21
3.50	88.90	5J-7032	REG	0.25	6.38	4.00	101.65	3.83	97.35
3.50	88.90	5U-3529	REG	0.25	6.30	4.00	101.60	0.00	0.00
3.50	88.90	3E-4155	H	0.28	7.14	3.99	101.47	3.64	92.33
3.50	88.90	3E-4147	SHU	0.25	6.32	4.00	101.52	3.83	97.21
3.50	88.90	3E-4134	K	0.26	6.48	4.01	101.85	3.66	92.89
3.75	95.25	3E-4172	SHU	0.25	6.32	4.25	107.87	4.08	103.56
3.75	95.25	4T-5540	REG	0.25	6.38	4.25	108.00	4.08	103.70
3.75	95.25	3E-4113	AN	0.12	3.10	4.11	104.50	3.96	100.56
4.00	101.55	138-9739	REG	0.25	6.37	0.00	0.00	4.50	114.30
4.00	101.60	3E-4114	AN	0.14	3.51	4.43	112.45	4.24	107.70
4.00	101.60	5J-2221	REG	0.25	6.38	4.50	114.35	4.33	110.05
4.00	101.60	3E-4148	SHU	0.25	6.32	4.50	114.22	4.33	109.91
4.00	101.60	3E-4156	H	0.28	7.14	4.49	114.17	4.14	105.03
4.00	101.60	3E-4135	K	0.26	6.48	4.51	114.55	4.16	105.59
4.25	107.95	3E-4115	AN	0.14	3.51	4.68	118.80	4.49	114.05
4.25	107.95	4T-1637	REG	0.25	6.38	4.75	120.70	4.61	117.05
4.25	107.95	7U-4138	REG	0.25	6.30	4.75	120.65	0.00	0.00
4.50	114.30	3G-8505	REG	0.38	9.55	5.25	133.40	5.00	127.00
4.50	114.30	3E-4157	H	0.28	7.14	4.99	126.87	4.64	117.73
4.50	114.30	3E-4116	AN	0.14	3.51	4.93	125.15	4.74	120.40

Snap-In Wiper Seals



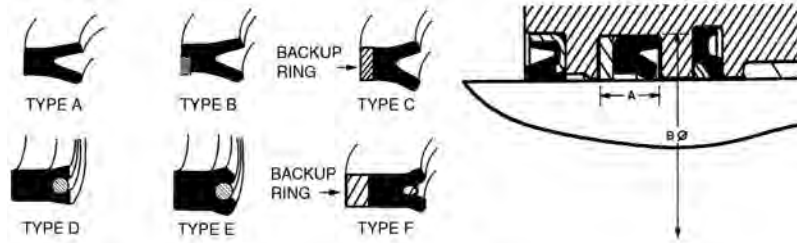
I.D.		PART NUMBER	SEAL TYPE	A WIDTH (± .002 in)		B O.D. (± .003 in)		C Base Thickness (± .010 in)	
(in)	(mm)			(in)	(mm)	(in)	(mm)	(in)	(mm)
4.50	114.30	3E-4136	K	0.26	6.48	5.01	127.25	4.66	118.29
4.75	120.65	3E-4117	AN	0.14	3.51	5.18	131.50	4.99	126.75
5.00	127.00	3E-4118	AN	0.14	3.51	5.43	137.85	5.24	133.10
5.00	127.00	3E-4137	K	0.26	6.48	5.51	139.95	5.16	130.99
5.00	127.00	3E-4158	H	0.28	7.14	5.49	139.57	5.14	130.43
5.00	127.00	3E-4149	SHU	0.37	9.50	5.75	145.97	5.49	139.52
5.00	127.00	9J-2547	REG	0.38	9.55	5.75	146.10	5.50	139.70
5.25	133.35	4T-5663	REG	0.38	9.55	6.00	152.45	5.75	146.05
5.25	133.35	3E-4119	AN	0.14	3.51	5.68	144.20	5.49	139.45
5.50	139.70	3E-4174	SHU	0.37	9.50	6.25	158.67	5.99	152.22
5.75	146.05	3E-4120	AN	0.15	3.91	6.24	158.47	6.02	152.96
5.75	146.05	6J-3073	REG	0.38	9.55	6.13	155.63	5.87	149.20
6.00	152.40	1U-2708	REG	0.38	9.55	6.75	171.50	6.50	165.10
6.00	152.40	3E-4121	AN	0.15	3.91	6.49	164.82	6.27	159.31
6.13	155.58	7J-3319	REG	0.38	9.55	6.88	174.68	6.63	168.28
6.25	158.70	121-4174	SHU	0.38	9.55	7.41	188.30	7.00	177.85
6.50	165.10	6J-0542	REG	0.40	10.20	7.50	190.55	7.17	182.00
6.50	165.10	3E-4122	AN	0.15	3.91	6.99	177.52	6.77	172.01
6.75	171.45	3E-4123	AN	0.15	3.91	7.24	183.87	7.02	178.36
7.00	177.80	5J-2682	REG	0.40	10.20	8.00	203.25	7.67	194.70
7.00	177.80	9X-7366	REG	0.40	10.19	0.00	0.00	8.00	203.20
7.25	184.15	4T-4802	REG	0.38	9.55	8.00	203.25	7.75	196.85
7.50	190.50	7J-3320	REG	0.40	10.20	8.50	215.95	8.17	207.40
7.75	196.80	121-4172	SHU	0.40	10.20	8.50	215.95	8.25	209.55
8.50	215.90	8J-9934	REG	0.40	10.20	9.25	235.00	9.00	228.60
8.75	222.25	6E-0252	REG	0.38	9.55	9.50	241.35	9.25	234.95
9.00	228.60	6J-7694	REG	0.40	10.20	9.75	247.70	9.50	241.35
9.00	228.60	9X-7367	SHU	0.40	10.20	9.75	247.70	9.50	241.30
9.50	241.25	121-4173	SHU	0.50	12.75	10.50	266.75	9.84	250.00
10.50	266.70	4T-4805	REG	0.50	12.75	11.50	292.15	11.17	283.60
11.00	279.40	9X-7368	SHU	0.50	12.75	12.00	304.85	11.67	296.30
11.00	279.40	1U-4625	REG	0.50	12.75	12.00	304.85	11.67	296.30
11.50	292.05	121-4171	SHU	0.50	12.75	12.50	317.55	12.17	309.00
12.50	317.50	9X-7369	SHU	0.50	12.75	13.50	342.95	13.17	334.40
12.50	317.50	4T-4130	REG	0.50	12.75	13.50	342.95	13.17	334.40

U-Cup Rod Seals



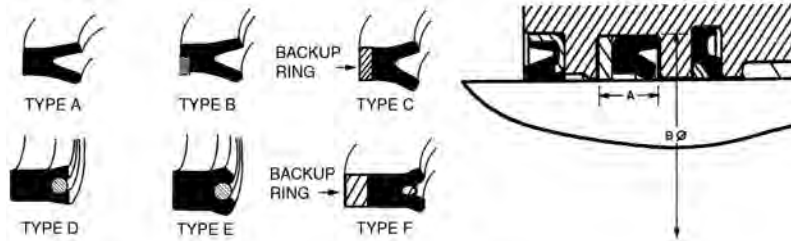
I.D. (in)	I.D. (mm)	PART NUMBER	SEAL TYPE		A WIDTH (+0.015, -0.000 in)		B O.D. (+0.002, -0.000 in)		CROSS SECTION		BACK-UP RING
					(in)	(mm)	(in)	(mm)	(in)	(mm)	
0.37	9.52	1U-3147	URE	A	0.16	4.10	0.63	16.00			
0.63	15.88	7J-0375	URE	A	0.29	7.26	0.88	22.28			
0.75	19.05	6J-1878	URE	A	0.29	7.26	1.00	25.45			
0.98	25.00	167-2362	URE	A	0.29	7.26	1.36	34.58			
1.00	25.40	6J-1889	URE	A	0.29	7.26	1.25	31.80			
1.13	28.58	3E-4284	URE	E	0.41	10.49	1.63	41.28	0.25	6.35	
1.13	28.58	3E-4175	URE	E	0.34	8.74	1.50	38.10	0.19	4.76	
1.18	30.00	144-9481	URE	A	0.43	11.00	1.57	40.00	0.20	5.00	
1.25	31.75	167-2295	URE	A	0.29	7.26	1.63	41.33			
1.25	31.75	3E-4180	URE	D	0.34	8.74	1.63	41.28	0.19	4.76	
1.25	31.75	3E-4181	URE	E	0.34	8.74	1.63	41.28	0.19	4.76	
1.25	31.75	3E-4193	URE	E	0.41	10.49	1.75	44.45	0.25	6.35	
1.25	31.75	5J-8125	URE	A	0.29	7.26	1.63	41.33			
1.25	31.75	4T-0959		E	0.29	7.26	1.63	41.33			
1.26	32.00	167-2364	URE	A	0.29	7.26	1.64	41.58			
1.38	34.93	3E-4182	URE	E	0.34	8.74	1.75	44.45	0.19	4.76	
1.38	34.93	3E-4194	URE	E	0.41	10.49	1.88	47.63	0.25	6.35	
1.38	34.93	3E-4283	URE	D	0.34	8.74	1.75	44.45	0.19	4.76	
1.38	35.00	140-2377	URE	A	0.43	11.00	1.77	45.05			
1.50	38.10	167-2294	URE	A	0.29	7.26	1.88	47.68			
1.50	38.10	9J-4038	NIT	B	0.29	7.26	1.88	47.68			
1.50	38.10	5J-8150	URE	A	0.29	7.26	1.88	47.68			
1.50	38.10	3E-4195	URE	E	0.41	10.49	2.00	50.80	0.25	6.35	
1.50	38.10	3E-4215	URE	E	0.55	13.97	2.13	53.98	0.31	7.94	
1.50	38.10	3E-4183	URE	E	0.41	10.49	1.88	47.63	0.19	4.76	
1.57	40.00	167-2298	URE	A	0.29	7.26	1.95	49.58			
1.63	41.28	3E-4184	URE	E	0.41	10.49	2.00	50.80	0.19	4.76	
1.63	41.28	3E-4201	URE	D	0.41	10.49	2.00	50.80	0.19	4.76	
1.63	41.28	4T-0488	URE	A	0.35	8.85	2.00	50.85			
1.75	44.45	5J-8175	URE	A	0.29	7.26	2.13	54.03			
1.75	44.45	3E-4287	URE	E	0.41	10.49	2.25	57.15	0.25	6.35	
1.75	44.45	3E-4216	URE	E	0.55	13.97	2.38	60.33	0.31	7.94	
1.75	44.45	3E-4185	URE	E	0.41	10.49	2.13	53.98	0.19	4.76	
1.75	44.45	167-2443	URE	E	0.29	7.26	2.13	54.03			
1.75	44.45	167-2300	URE	A	0.29	7.26	2.13	54.03			
1.75	44.45	8J-5816	NIT	B	0.29	7.26	2.13	54.03			
1.77	44.95	143-8914	URE	A	0.43	11.00	2.36	60.00			
1.77	45.00	167-2297	URE	A	0.29	7.26	2.15	54.58			
1.87	47.62	4T-6898	URE	A	0.35	8.85	2.25	57.20			
1.88	47.63	167-2302	URE	A	0.35	8.85	2.25	57.20			
1.97	50.00	167-2303	URE	A	0.35	8.85	2.35	59.58			

U-Cup Rod Seals



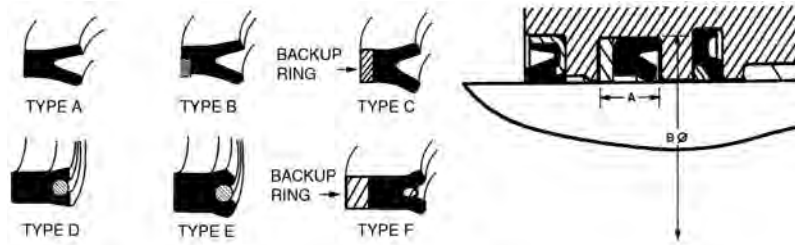
I.D. (in)	(mm)	PART NUMBER	SEAL TYPE	A WIDTH (+0.015, -0.000 in)		B O.D. (+0.002, -0.000 in)		CROSS SECTION		BACK-UP RING
				(in)	(mm)	(in)	(mm)	(in)	(mm)	
2.00	50.80	167-2304	URE	A	0.41	10.49	2.50	63.55		
2.00	50.80	9J-1318	NIT	B	0.41	10.49	2.50	63.55		
2.00	50.80	5J-8200	URE	A	0.41	10.49	2.50	63.55		
2.00	50.80	5U-3644	URE	D	0.38	9.53	2.50	63.50	0.25	6.40
2.00	50.80	3G-3259	URE	A	0.41	10.50	2.50	63.55		
2.00	50.80	3E-4227	URE	E	0.69	17.48	2.75	69.85	0.38	9.53
2.00	50.80	3E-4186	URE	E	0.41	10.49	2.38	60.33	0.19	4.76
2.00	50.80	3E-4217	URE	E	0.55	13.97	2.63	66.68	0.31	7.94
2.00	50.80	3E-4196	URE	E	0.41	10.49	2.50	63.50	0.25	6.35
2.13	53.98	3P-1344	URE	A	0.41	10.49	2.63	66.73		
2.13	53.98	4T-6126	URE	A	0.41	10.49	2.63	66.73		
2.13	53.98	167-2305	URE	A	0.41	10.49	2.63	66.73		
2.17	55.00	167-2306	URE	A	0.56	14.10	2.68	68.03		
2.17	55.00	099-6996	URE	C	0.56	14.10	2.68	68.02		099-6999
2.25	57.15	7J-4820	NIT	B	0.41	10.49	2.75	69.90		
2.25	57.15	167-2307	URE	A	0.41	10.49	2.75	69.90		
2.25	57.15	5J-8225	URE	A	0.41	10.49	2.75	69.90		
2.25	57.15	3E-4228	URE	E	0.69	17.48	3.00	76.20	0.38	9.53
2.25	57.15	3E-4197	URE	E	0.41	10.49	2.75	69.85	0.25	6.35
2.25	57.15	3E-4218	URE	E	0.55	13.97	2.88	73.03	0.31	7.94
2.25	57.15	3E-4187	URE	E	0.41	10.49	2.63	66.68	0.19	4.76
2.25	57.15	167-2423	URE	E	0.41	10.49	2.75	69.90		
2.36	60.00	167-2301	URE	A	0.35	8.85	2.74	69.58		
2.36	60.00	093-1475	URE	C	0.56	14.10	2.87	73.02		093-1518
2.37	60.28	5J-8238	URE	A	0.41	10.49	2.88	73.08		
2.37	60.32	167-2310	URE	A	0.41	10.49	2.88	73.08		
2.38	60.33	3G-2911	URE	A	0.41	10.50	2.88	73.08		
2.38	60.33	3E-4188	URE	E	0.41	10.49	2.75	69.86	0.19	4.76
2.38	60.33	3E-4204	URE	D	0.41	10.49	2.75	69.85	0.19	4.76
2.50	63.50	3E-4198	URE	E	0.41	10.49	3.00	76.20	0.25	6.35
2.50	63.50	3E-4219	URE	E	0.55	13.97	3.13	79.38	0.31	7.94
2.50	63.50	3E-4189	URE	E	0.41	10.49	2.88	73.03	0.19	4.76
2.50	63.50	167-2438	URE	E	0.41	10.49	3.00	76.25		
2.50	63.50	3G-3752	URE	A	0.41	10.49	3.00	76.25		
2.50	63.50	3E-4285	URE	D	0.55	13.97	3.13	79.38	0.31	7.94
2.50	63.50	3E-4229	URE	E	0.69	17.48	3.25	82.55	0.38	9.53
2.50	63.50	5J-0964	URE	A	0.41	10.49	3.00	76.25		
2.50	63.50	167-2312	URE	A	0.41	10.50	3.00	76.25		
2.50	63.50	167-2311	URE	A	0.35	8.92	2.88	73.13		
2.50	63.50	167-2313	URE	A	0.54	13.70	3.13	79.50		
2.50	63.50	7J-4824	NIT	B	0.41	10.49	3.00	76.25		

U-Cup Rod Seals



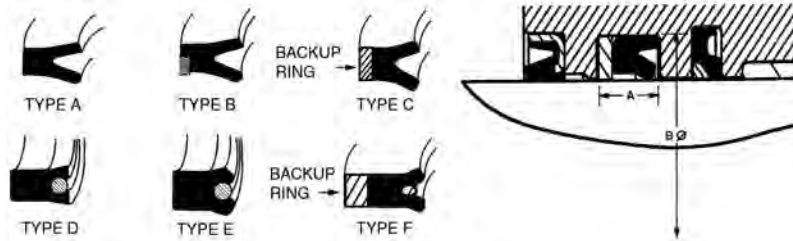
I.D. (in)	I.D. (mm)	PART NUMBER	SEAL TYPE	A WIDTH (+0.015, -0.000 in)		B O.D. (+0.002, -0.000 in)		CROSS SECTION		BACK-UP RING
				(in)	(mm)	(in)	(mm)	(in)	(mm)	
2.56	65.00	093-1476	URE	C	0.56	14.10	3.07	78.02		096-1055
2.56	65.00	167-2314	URE	A	0.41	10.49	3.06	77.75		
2.63	66.68	167-2315	URE	A	0.41	10.49	3.13	79.43		
2.63	66.68	3G-4718	URE	A	0.41	10.49	3.13	79.43		
2.75	69.85	3E-4230	URE	E	0.69	17.48	3.50	88.90	0.38	9.53
2.75	69.85	5J-8275	URE	A	0.41	10.49	3.25	82.60		
2.75	69.85	6E-1459	URE	E	0.41	10.49	3.25	82.60	0.38	9.65
2.75	69.85	167-2439	URE	E	0.41	10.49	3.25	82.60		
2.75	69.85	3E-4220	URE	E	0.55	13.97	3.38	85.73	0.31	7.94
2.75	69.85	3E-4199	URE	E	0.41	10.49	3.25	82.55	0.25	6.35
2.75	69.85	167-2317	URE	A	0.41	10.49	3.25	82.60		
2.75	69.85	9J-2944	NIT	B	0.41	10.49	3.25	82.60		
2.76	70.00	093-1477	URE	C	0.56	14.10	3.27	83.03		093-1519
2.76	70.00	167-2299	URE	A	0.56	14.10	3.27	83.03		
2.95	75.00	167-2318	URE	A	0.52	13.15	3.55	90.05		
2.95	75.00	096-3468	URE	C	0.56	14.10	3.47	88.03		096-3467
3.00	76.20	8J-0248	NIT	B	0.41	10.49	3.50	88.95		
3.00	76.20	167-2319	URE	A	0.41	10.49	3.50	88.95		
3.00	76.20	3E-4200	URE	E	0.41	10.49	3.50	88.90	0.25	6.35
3.00	76.20	3E-4221	URE	E	0.55	13.97	3.63	92.08	0.31	7.94
3.00	76.20	3E-4190	URE	E	0.41	10.49	3.38	85.73	0.19	4.76
3.00	76.20	5J-8300	URE	A	0.41	10.49	3.50	88.95		
3.00	76.20	3E-4231	URE	E	0.69	17.48	3.75	95.25	0.38	9.53
3.15	80.00	167-2343	URE	A	0.35	8.85	3.53	89.58		
3.15	80.00	167-2309	URE	A	0.41	10.49	3.74	95.05		
3.15	80.00	093-1479	URE	C	0.56	14.10	3.66	93.03		096-1054
3.25	82.55	7J-2145	NIT	B	0.41	10.49	3.75	95.30		
3.25	82.55	167-2320	URE	A	0.41	10.49	3.75	95.30		
3.25	82.55	5J-8325	URE	A	0.41	10.49	3.75	95.30		
3.35	85.00	167-2322	URE	A	0.56	14.10	3.94	100.03		
3.35	85.00	137-3656	URE	A	0.35	9.00	3.94	100.00		
3.35	85.00	7Y-5117	URE	C	0.56	14.10	3.94	100.03		7Y-5116
3.35	85.00	096-1567	URE	A						
3.38	85.73	3E-4286	URE	D	0.55	13.97	4.00	101.60	0.31	7.94
3.38	85.73	3E-4222	URE	E	0.55	13.97	4.00	101.60	0.31	7.94
3.38	85.75	3G-5051	URE	A	0.41	10.49	3.88	98.48		
3.50	88.90	3E-4232	URE	E	0.69	17.48	4.25	107.95	0.38	9.53
3.50	88.90	5J-8350	URE	A	0.41	10.49	4.00	101.65		
3.50	88.90	3E-4223	URE	E	0.55	13.97	4.13	104.78	0.31	7.94
3.50	88.90	3E-4202	URE	E	0.41	10.49	4.00	101.60	0.25	6.35
3.50	88.90	3E-4191	URE	E	0.41	10.49	3.88	98.43	0.19	4.76

U-Cup Rod Seals



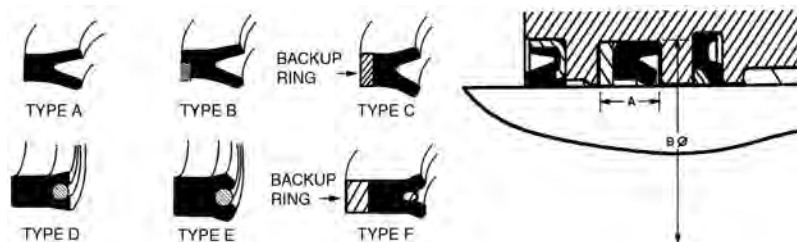
I.D. (in)	I.D. (mm)	PART NUMBER	SEAL TYPE	A WIDTH (+0.015, -0.000 in)		B O.D. (+0.002, -0.000 in)		CROSS SECTION		BACK-UP RING	
				(in)	(mm)	(in)	(mm)	(in)	(mm)		
3.50	88.90	104-9658	URE	A	0.39	10.00	4.29	108.90	0.39	10.00	
3.50	88.90	7J-2150		B	0.41	10.49	4.00	101.65			
3.50	88.90	167-2324	URE	A	0.41	10.49	4.00	101.65			
3.50	88.90	167-2323	URE	A	0.82	20.77	4.13	104.78			
3.54	90.00	167-2325	URE	A	0.44	11.10	4.14	105.03			
3.54	90.00	105-2577	URE	A							
3.54	90.00	133-6913	URE	A	0.35	9.00	4.13	105.00			
3.54	90.00	096-1587	URE	C	0.56	14.10	4.14	105.03			096-1588
3.74	95.00	7Y-4629	URE	A	0.56	14.10	4.33	110.03			
3.74	95.00	167-2326	URE	A	0.64	16.15	4.53	115.03			
3.74	95.00	167-2327	URE	A	0.56	14.10	4.33	110.03			
3.74	95.00	150-5826	URE	C	0.35	9.00	4.33	110.00			150-5827
3.75	95.25	167-2328	URE	A	0.41	10.49	4.25	108.00			
3.75	95.25	9J-1328		B	0.41	10.49	4.25	108.00			
3.75	95.25	3E-4192	URE	E	0.41	10.49	4.13	104.78	0.19	4.76	
3.75	95.25	3E-4203	URE	E	0.41	10.49	4.25	107.95	0.25	6.35	
3.75	95.25	3E-4224	URE	E	0.55	13.97	4.38	111.13	0.31	7.94	
3.75	95.25	5J-8375	URE	A	0.41	10.49	4.25	108.00			
3.94	100.00	8U-6849	URE	A	0.51	13.00	4.53	115.00	0.30	7.50	
3.94	100.00	096-2664	URE	C	0.56	14.10	4.53	115.03			096-2655
3.94	100.00	096-1572	URE	A							
3.94	100.00	133-6902	URE	A	0.47	12.00	4.72	120.00			
3.94	100.00	107-6256	URE	C	0.63	16.00	4.72	120.00	0.38	9.75	107-6255
3.94	100.00	121-1371	URE	A	0.35	9.00	4.53	115.00			
3.94	100.00	167-2330	URE	A	0.56	14.10	4.53	115.03			
3.94	100.00	167-2329	URE	A	0.51	13.00	4.72	120.00			
3.94	100.00	137-3659	URE	C	0.35	9.00	4.53	115.00			137-3660
4.00	101.60	167-2331	URE	A	0.41	10.49	4.63	117.53			
4.00	101.60	5J-8400	URE	A	0.41	10.49	4.63	117.53			
4.00	101.60	3E-4225	URE	E	0.62	15.72	4.63	117.48	0.31	7.94	
4.00	101.60	3E-4233	URE	E	0.69	17.48	4.75	120.65	0.38	9.53	
4.00	101.60	3G-2655		B	0.41	10.50	4.63	117.52			
4.00	101.60	2U-9113	URE	A	0.39	10.00	4.72	120.00	0.36	9.20	
4.13	105.00	167-2332	URE	A	0.56	14.10	4.73	120.03			
4.13	105.00	128-9269	URE	A	0.56	14.10	4.73	120.03			
4.13	105.00	7Y-4670	URE	C	0.56	14.10	4.73	120.03			7Y-4669
4.25	107.95	9J-1336		B	0.66	16.84	5.00	127.05			
4.25	107.95	167-2333	URE	A	0.66	16.84	5.00	127.05			
4.25	107.95	3E-4205	URE	E	0.62	15.72	4.75	120.65	0.25	6.35	
4.25	107.95	6J-1425	URE	A	0.66	16.84	5.00	127.05			
4.33	110.00	167-2334	URE	A	0.56	14.10	4.92	125.03			

U-Cup Rod Seals



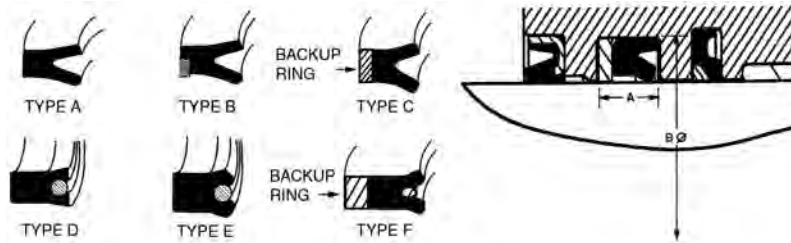
I.D. (in)	I.D. (mm)	PART NUMBER	SEAL TYPE	A WIDTH (+.015, -.000 in)		B O.D. (+.002, -.000 in)		CROSS SECTION		BACK-UP RING
				(in)	(mm)	(in)	(mm)	(in)	(mm)	
4.33	110.00	167-2338	URE	A	0.61	15.50	5.12	130.05		
4.33	110.00	7Y-4942	URE	C	0.56	14.10	4.92	125.03		7Y-4941
4.33	110.00	128-9270	URE	C	0.56	14.10	4.92	125.03		7Y-4941
4.37	111.12	3G-5054	URE	A	0.54	13.61	5.13	130.23		
4.37	111.12	1U-3363	URE	B	0.54	13.61	5.13	130.23		
4.50	114.25	6J-1450	URE	A	0.41	10.49	5.13	130.23		
4.50	114.30	3E-4234	URE	E	0.69	17.48	5.25	133.35	0.38	9.53
4.50	114.30	167-2440	URE	E	0.41	10.49	5.13	130.23		
4.50	114.30	3E-4206	URE	D	0.62	15.72	5.00	127.00	0.25	6.35
4.50	114.30	6U-9505		B	0.42	10.62	4.00	101.57	0.50	12.76
4.50	114.30	9J-1340		B	0.41	10.50	5.13	130.22		
4.50	114.30	167-2336	URE	A	0.41	10.49	5.13	130.23		
4.53	115.00	167-2360	URE	A	0.56	14.10	5.12	130.03		
4.75	120.65	3E-4207	URE	D	0.62	15.72	5.25	133.35	0.25	6.35
4.75	120.65	6J-1475	URE	A	0.66	16.84	5.50	139.75		
4.75	120.65	167-2337	URE	A	0.66	16.84	5.50	139.75		
4.75	120.65	9J-1344		B	0.66	16.84	5.50	139.75		
4.76	121.00	155-9192	URE	C	0.56	14.10	5.51	140.03		155-9193
4.87	123.82	4T-5664	URE	A	0.54	13.61	5.62	142.87		
5.00	126.95	121-1594	URE	C	0.38	9.53	5.60	142.13		121-1595
5.00	127.00	9J-1684	URE	B	0.66	16.84	5.75	146.10		
5.00	127.00	8J-4524	URE	A	0.66	16.84	5.75	146.10		
5.00	127.00	167-2339	URE	A	0.66	16.84	5.75	146.10		
5.00	127.00	3E-4235	URE	E	0.69	17.48	5.75	146.05	0.38	9.53
5.00	127.00	3E-4226	URE	E	0.69	17.48	5.63	142.88	0.31	7.94
5.00	127.00	3E-4208	URE	D	0.62	15.72	5.50	139.70	0.25	6.35
5.00	127.00	167-2441	URE	E	0.66	16.84	5.75	146.10		
5.12	130.00	167-2341	URE	A	0.56	14.10	5.71	145.03		
5.12	130.00	167-2340	URE	A	0.64	16.15	5.91	150.05		
5.12	130.00	087-5396	URE	C	0.56	14.10	5.71	145.03		087-5397
5.25	133.30	167-2342	URE	A	0.66	16.84	6.00	152.45		
5.25	133.35	3E-4209	URE	D	0.62	15.72	5.75	146.05	0.25	6.35
5.25	133.35	4T-5699	URE	A	0.66	16.84	6.00	152.45		
5.35	136.00	147-5770	URE	C	0.56	14.10	6.10	155.03		147-5771
5.50	139.70	139-9325	URE	C	0.41	10.49	6.13	155.63		
5.50	139.70	167-2344	URE	A	0.41	10.49	6.13	155.63		
5.50	139.70	9J-1692	URE	B	0.41	10.49	6.13	155.63		
5.50	139.70	6J-1550	URE	A	0.41	10.49	6.13	155.63		
5.50	139.70	3E-4236	URE	E	0.69	17.48	6.25	158.75	0.38	9.53
5.50	139.70	3E-4210	URE	D	0.62	15.72	6.00	152.40	0.25	6.35
5.50	139.70	167-2442	URE	E	0.41	10.49	6.13	155.63		

U-Cup Rod Seals



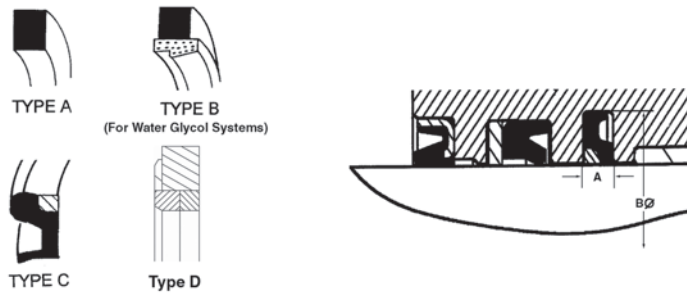
I.D. (in)	I.D. (mm)	PART NUMBER	SEAL TYPE	A WIDTH (+0.015, -0.000 in)		B O.D. (+0.002, -0.000 in)		CROSS SECTION		BACK-UP RING	
				(in)	(mm)	(in)	(mm)	(in)	(mm)		
5.50	139.70	167-2938	URE	E	0.41	10.49	6.13	155.63			
5.50	139.70	167-2414	URE	B	0.41	10.49	6.13	155.63			
5.51	140.00	167-2428	URE	E	0.55	14.00	6.10	155.00			
5.51	140.00	8C-9187	URE	F	0.06	1.42	6.10	155.05	0.03	0.73	8C-9188
5.71	145.00	167-2347	URE	A	0.55	14.00	6.30	160.03			
5.75	146.00	167-2345	URE	A	0.66	16.84	6.50	165.15			
5.75	146.00	9J-5470		B	0.66	16.84	6.50	165.15			
5.75	146.00	9J-5467	URE	A	0.66	16.84	6.50	165.15			
5.75	146.00	121-1602	URE	D	0.56	14.10	6.34	161.16			
5.75	146.00	3G-2286	URE	A	0.66	16.84	6.50	165.15			
5.91	150.00	167-2429	URE	E	0.55	14.00	6.50	165.00			
5.91	150.00	8C-9191	URE	F	0.06	1.42	6.50	165.05	0.03	0.73	8C-9192
6.00	152.40	136-7394	URE	C	0.54	13.65	6.75	171.50			
6.00	152.40	167-2346	URE	A	0.54	13.65	6.75	171.50			
6.00	152.40	167-2421	URE	B	0.54	13.65	6.75	171.50			
6.00	152.40	3E-4211	URE	D	0.62	15.72	6.50	165.10	0.25	6.35	
6.00	152.40	3E-4237	URE	E	0.69	17.48	6.75	171.45	0.38	9.53	
6.00	152.40	4T-9901	URE	A	0.54	13.65	6.75	171.50			
6.25	158.70	8J-4394	URE	A	0.54	13.61	6.75	171.50			
6.25	158.75	167-2348	URE	A	0.54	13.61	6.75	171.50			
6.50	165.10	167-2349	URE	A	0.66	16.80	7.25	184.20			
6.50	165.10	8J-4387	URE	A	0.66	16.84	7.25	184.20			
6.50	165.10	8J-1880	NIT	B	0.54	13.61	7.25	184.20			
6.50	165.10	6J-1650	URE	A	0.54	13.61	7.25	184.20			
6.50	165.10	3E-4238	URE	E	0.69	17.48	7.25	184.15	0.38	9.53	
6.50	165.10	3E-4212	URE	D	0.62	15.72	7.00	177.80	0.25	6.35	
6.50	165.10	167-2415	URE	B	0.54	13.61	7.25	184.20			
6.75	171.45	3G-4627	URE	A	0.41	10.49	7.25	184.20			
6.75	171.45	167-2351	URE	A	0.41	10.49	7.25	184.20			
7.00	177.80	167-2352	URE	A	0.54	13.61	7.75	196.90			
7.00	177.80	136-7397	URE	C	0.54	13.61	7.75	196.90			
7.00	177.80	9X-7450	URE	D	0.41	10.50	7.68	195.02			
7.00	177.80	3G-2649	URE	B	0.54	13.61	7.75	196.90			
7.00	177.80	3E-4239	URE	D	0.69	17.48	7.75	196.85	0.38	9.53	
7.00	177.80	6J-1700	URE	A	0.54	13.61	7.75	196.90			
7.00	177.80	167-2416	URE	B	0.54	13.61	7.75	196.90			
7.00	177.80	3E-4213	URE	D	0.62	15.72	7.50	190.50	0.25	6.35	
7.25	184.15	167-2417	URE	B	0.54	13.65	8.00	203.25			
7.25	184.15	167-2353	URE	A	0.54	13.65	8.00	203.25			
7.25	184.15	6E-0172	URE	A	0.54	13.65	8.00	203.25			
7.25	184.15	136-7398	URE	C	0.54	13.65	8.00	203.25			

U-Cup Rod Seals



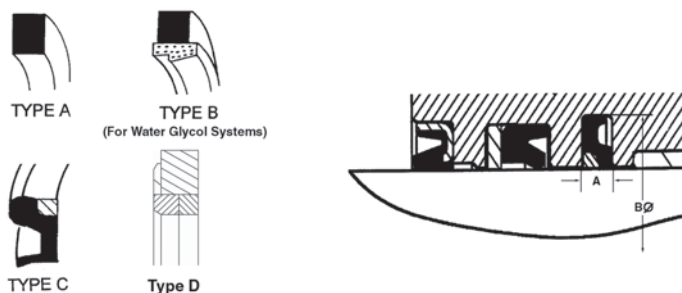
I.D.		PART NUMBER	SEAL TYPE	A WIDTH (+.015, -.000 in)		B O.D. (+.002, -.000 in)		CROSS SECTION		BACK-UP RING
(in)	(mm)			(in)	(mm)	(in)	(mm)	(in)	(mm)	
7.50	190.50	136-7399	URE	C	0.54	13.61	8.25	209.60		
7.50	190.50	7J-3322	URE	A	0.54	13.61	8.25	209.60		
7.50	190.50	3E-4240	URE	E	0.69	17.48	8.25	209.55	0.38	9.53
7.50	190.50	167-2355	URE	A	0.54	13.61	8.25	209.60		
7.50	190.50	167-2418	URE	B	0.54	13.61	8.25	209.60		
8.00	203.20	167-2354	URE	E	0.54	13.65	8.75	222.30		
8.00	203.20	3E-4214	URE	E	0.62	15.72	8.50	215.90	0.25	6.35
8.00	203.20	6E-0039	URE	A	0.54	13.65	8.75	222.30		
8.25	209.55	9X-7328	URE	A	0.54	13.65	9.00	228.65		
8.75	222.20	162-3943	URE		0.55	14.00	9.76	247.96		
8.75	222.25	136-7400	URE	C	0.54	13.65	9.50	241.35		
8.75	222.25	108-6219	URE	A	0.54	13.65	9.50	241.35		
8.75	222.25	167-2356	URE	A	0.54	13.65	9.50	241.35		
8.75	222.25	167-2419	URE	B	0.54	13.65	9.50	241.35		
9.00	228.50	9X-7334	URE	D	0.41	10.50	9.68	245.82		
9.50	241.30	167-2361	URE	A	0.41	10.50	10.18	258.52		
11.00	279.30	167-2432	URE	E	0.41	10.50	11.68	296.62		
11.00	279.30	9X-7389	URE	D	0.41	10.50	0.41	10.50		
11.04	280.31	8C-9157	NIT	B	0.64	16.13	11.81	300.10		
12.50	317.40	9X-7388	URE	D	0.41	10.50	13.18	334.72		
12.50	317.50	167-2433	URE	E	0.41	10.50	13.18	334.72		
13.50	342.90	167-2435	URE	E	0.41	10.50	14.18	360.12		
15.00	381.00	167-2434	URE	E	0.41	10.50	15.68	398.22		
15.75	399.98	149-0814	URE	A	0.41	10.50	16.43	417.27	0.34	8.65
15.75	400.05	167-2436	URE	E	0.41	10.50	16.43	417.27		

Buffer Seals



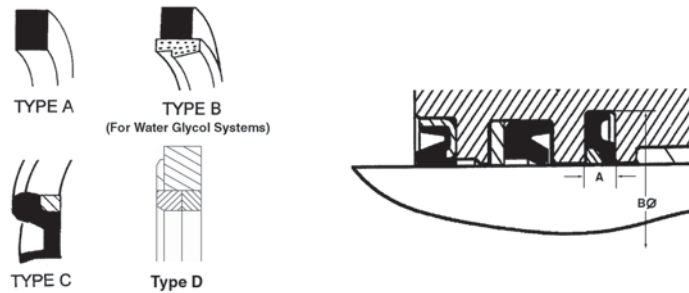
ROD DIAMETER		PART NUMBER	SEAL TYPE	A GROOVE WIDTH (± .005 in)		B GROOVE DIA. (± .005 in)	
(in)	(mm)			(in)	(mm)	(in)	(mm)
1.25	31.75	135-3251	B	0.14	3.56	1.78	45.29
1.25	31.75	9J-3497	A	0.14	3.56	1.78	45.29
1.38	34.95	141-0706	C	0.25	6.40	1.99	50.50
1.38	34.95	140-2310	C	0.25	6.40	1.99	50.50
1.50	38.10	167-2186	D	0.14	3.56	2.03	51.64
1.50	38.10	6J-9733	A	0.14	3.56	2.03	51.64
1.50	38.10	8C-9122	B	0.14	3.56	2.03	51.64
1.63	41.28	8C-9117	B	0.14	3.56	2.16	54.81
1.63	41.28	4T-0487	A	0.14	3.56	2.16	54.81
1.63	41.28	167-2188	D	0.14	3.56	2.16	54.81
1.75	44.40	150-6738	C	0.22	5.60	2.39	60.73
1.75	44.40	6J-9178	A	0.14	3.56	2.28	57.99
1.75	44.40	8C-9123	B	0.14	3.56	2.28	57.99
1.75	44.45	167-2191	D	0.22	5.60	2.39	60.73
1.75	44.45	167-2190	D	0.14	3.56	2.28	57.99
1.77	44.95	143-8915	C	0.27	6.75	2.38	60.50
1.87	47.62	4T-6778	A	0.14	3.56	2.25	57.20
1.87	47.62	9X-3566	B	0.14	3.56	2.25	57.20
1.88	47.63	167-2192	D	0.14	3.56	2.25	57.20
1.97	50.00	167-2183	D	0.14	3.56	2.47	62.75
2.00	50.80	167-2195	D	0.14	3.56	2.53	64.34
2.00	50.80	144-4055	C	0.14	3.56	2.53	64.34
2.00	50.80	6J-6917	A	0.14	3.56	2.53	64.34
2.00	50.80	8C-9124	B	0.14	3.56	2.53	64.34
2.12	53.93	150-6744	C	0.22	5.60	2.77	70.26
2.13	53.98	167-2197	D	0.22	5.60	2.77	70.26
2.13	53.98	167-2198	D	0.14	3.56	2.63	66.73
2.13	53.98	4T-6127	A	0.14	3.56	2.63	66.73
2.13	53.98	9X-3568	B	0.14	3.56	2.63	66.73
2.17	55.00	099-6997	C	0.25	6.40	2.78	70.52
2.17	55.00	167-2199	D	0.25	6.40	2.78	70.52
2.17	55.00	133-6785	C	0.25	6.40	2.78	70.52
2.25	57.15	167-2200	D	0.22	5.59	2.89	73.43
2.25	57.15	5J-3616	A	0.22	5.59	2.89	73.43
2.25	57.15	8C-9125	B	0.22	5.59	2.89	73.43
2.36	60.00	093-1481	C	0.25	6.40	2.97	75.52
2.36	60.00	167-2185	D	0.14	3.56	2.86	72.75
2.36	60.00	133-6784	C	0.25	6.40	2.97	75.52
2.37	60.32	167-2202	D	0.22	5.59	3.02	76.61

Buffer Seals



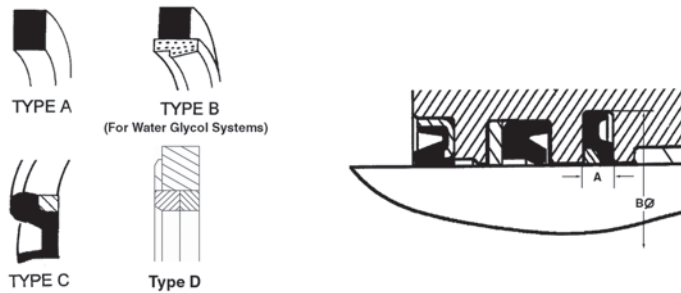
ROD DIAMETER		PART NUMBER	SEAL TYPE	A GROOVE WIDTH (± .005 in)		B GROOVE DIA. (± .005 in)	
(in)	(mm)			(in)	(mm)	(in)	(mm)
2.37	60.32	6J-6916	A	0.22	5.59	3.02	76.61
2.37	60.32	8C-9138	B	0.22	5.59	3.02	76.61
2.50	63.50	8C-3839	B	0.22	5.59	3.14	79.78
2.50	63.50	5J-3620	A	0.22	5.59	3.14	79.78
2.50	63.50	167-2203	D	0.23	5.94	3.18	80.70
2.50	63.50	167-2201	D	0.22	5.59	3.14	79.78
2.50	63.50	150-6750	C	0.22	5.60	3.14	79.78
2.56	65.00	167-2204	D	0.22	5.59	3.20	81.28
2.56	65.00	126-2149	C	0.25	6.40	3.17	80.53
2.63	66.68	9T-9363	B	0.22	5.59	3.27	82.96
2.63	66.68	1U-4020	A	0.22	5.59	3.27	82.96
2.72	69.00	126-2150	C	0.25	6.40	3.37	85.53
2.75	69.85	8C-3841	B	0.22	5.59	3.39	86.13
2.75	69.85	6J-6553	A	0.22	5.59	3.39	86.13
2.75	69.85	167-2207	D	0.22	5.59	3.39	86.13
2.75	69.85	148-5674	C	0.22	5.59	3.39	86.13
2.76	70.00	093-1483	C	0.25	6.40	3.37	85.53
2.91	74.00	126-2151	C	0.25	6.40	3.56	90.53
2.95	75.00	096-3469	C	0.25	6.40	3.56	90.53
3.00	76.20	8C-9126	B	0.22	5.59	3.64	92.48
3.00	76.20	152-9022	C	0.22	5.58	3.64	92.48
3.00	76.20	167-2208	D	0.22	5.59	3.64	92.48
3.00	76.20	6J-6915	A	0.22	5.59	3.64	92.48
3.11	79.00	126-2152	C	0.25	6.40	3.76	95.53
3.15	80.00	093-1484	C	0.25	6.40	3.76	95.53
3.25	82.55	8C-9121	B	0.22	5.59	3.89	98.83
3.25	82.55	6J-7167	A	0.22	5.59	3.89	98.83
3.25	82.55	167-2209	D	0.22	5.59	3.89	98.83
3.25	82.55	140-0234	C	0.22	5.59	3.89	98.83
3.31	84.00	123-1943	C	0.25	6.40	3.96	100.53
3.35	85.00	7Y-5118	C	0.25	6.40	3.96	100.54
3.35	85.00	167-2210	D	0.25	6.40	3.96	100.53
3.50	88.90	167-2211	D	0.22	5.59	4.14	105.18
3.50	88.90	142-2633	C	0.22	5.59	4.14	105.18
3.50	88.90	6J-6736	A	0.22	5.59	4.14	105.18
3.50	88.90	8C-9127	B	0.22	5.59	4.14	105.18
3.54	90.00	123-2048	C	0.25	6.40	4.16	105.54
3.54	90.00	096-1585	C	0.25	6.40	4.16	105.54
3.54	90.00	167-2212	D	0.25	6.40	4.16	105.54

Buffer Seals



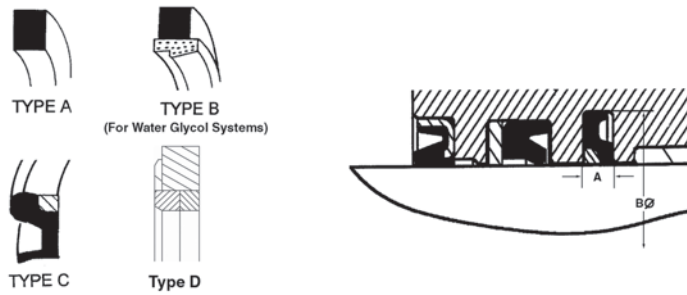
ROD DIAMETER		PART NUMBER	SEAL TYPE	A GROOVE WIDTH (± .005 in)		B GROOVE DIA. (± .005 in)	
(in)	(mm)			(in)	(mm)	(in)	(mm)
3.63	92.08	3G-1259	A	0.22	5.59	4.27	108.36
3.70	94.00	7Y-4630	C	0.25	6.40	4.35	110.54
3.74	95.00	093-1482	C	0.25	6.40	3.17	80.52
3.74	95.00	167-2213	D	0.25	6.40	4.35	110.54
3.74	95.00	150-5885	C	0.25	6.40	4.35	110.54
3.75	95.25	167-2214	D	0.22	5.59	4.39	111.53
3.75	95.25	8C-9128	B	0.22	5.59	4.39	111.53
3.75	95.25	8J-6070	A	0.22	5.59	4.39	111.53
3.94	100.00	096-2663	C	0.25	6.40	4.55	115.53
3.94	100.00	123-1983	C	0.25	6.40	4.55	115.53
3.94	100.00	107-6257	D	0.25	6.40	4.55	115.53
3.94	100.00	167-2215	D	0.25	6.40	4.55	115.53
4.00	101.60	167-2216	D	0.22	5.59	4.64	117.88
4.00	101.60	130-6056	C	0.22	5.59	4.64	117.88
4.00	101.60	8J-4627	A	0.22	5.59	4.64	117.88
4.00	101.60	8C-9129	B	0.22	5.59	4.64	117.88
4.13	105.00	7Y-4671	C	0.25	6.40	4.75	120.54
4.13	105.00	123-1942	C	0.25	6.40	4.75	120.53
4.13	105.00	128-9265	C	0.25	6.40	4.75	120.53
4.13	105.00	167-2217	D	0.25	6.40	4.75	120.53
4.25	107.95	167-2218	D	0.25	6.35	5.23	132.72
4.25	107.95	6E-0425	B	0.25	6.35	5.23	132.72
4.25	107.95	7J-8943	A	0.25	6.35	5.23	132.72
4.29	109.00	123-2031	C	0.25	6.40	4.94	125.53
4.33	110.00	7Y-4943	C	0.25	6.40	4.94	125.54
4.33	110.00	167-2219	D	0.25	6.40	4.94	125.54
4.33	110.00	128-9266	C	0.25	6.40	4.94	125.53
4.37	111.12	3G-5055	A	0.25	6.35	5.23	132.72
4.50	114.30	3G-8507	A	0.25	6.35	5.48	139.07
4.50	114.30	142-2634	C	0.25	6.35	5.48	139.07
4.50	114.30	167-2220	D	0.25	6.35	5.48	139.07
4.50	114.30	8C-9144	B	0.25	6.35	5.48	139.07
4.53	115.00	167-2189	D	0.25	6.40	5.14	130.53
4.75	120.65	167-2221	D	0.25	6.35	5.73	145.42
4.75	120.65	7J-9257	A	0.25	6.35	5.73	145.42
4.75	120.65	9X-7261	B	0.25	6.35	5.73	145.42
4.88	124.00	155-9191	C	0.25	6.40	5.53	140.53
5.00	127.00	150-6262	C	0.25	6.35	5.96	151.38
5.00	127.00	167-2222	D	0.25	6.35	5.96	151.38

Buffer Seals



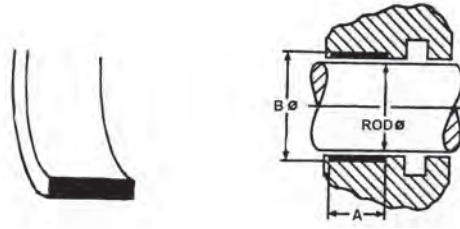
ROD DIAMETER		PART NUMBER	SEAL TYPE	A GROOVE WIDTH (± .005 in)		B GROOVE DIA. (± .005 in)	
(in)	(mm)			(in)	(mm)	(in)	(mm)
5.00	127.00	9X-3581	B	0.25	6.35	5.96	151.38
5.00	127.00	121-1593	C	0.25	6.40	5.63	142.88
5.00	127.00	8J-4509	A	0.25	6.35	5.96	151.38
5.12	130.00	126-2108	C	0.25	6.40	5.73	145.53
5.12	130.00	096-5169	C	0.25	6.40	5.73	145.53
5.12	130.00	167-2223	D	0.25	6.40	5.73	145.53
5.25	133.35	167-2224	D	0.25	6.35	6.21	157.73
5.25	133.35	4T-5717	A	0.25	6.35	6.21	157.73
5.25	133.35	9X-7267	B	0.25	6.35	6.21	157.73
5.47	139.00	147-5769	C	0.25	6.40	6.12	155.53
5.50	139.70	133-9572	C	0.25	6.35	6.12	155.35
5.50	139.70	167-2725	D	0.25	6.35	6.12	155.35
5.50	139.70	167-2225	D	0.25	6.35	6.12	155.35
5.50	139.70	9X-3572	B	0.25	6.35	6.12	155.35
5.51	140.00	8C-9189	C	0.25	6.40	6.12	155.53
5.51	140.00	167-2226	D	0.25	6.30	6.12	155.50
5.71	145.00	167-2231	D	0.25	6.40	6.32	160.53
5.75	146.05	167-2227	D	0.25	6.35	6.73	170.82
5.75	146.05	9J-5468	A	0.25	6.35	6.73	170.82
5.75	146.05	9X-3575	B	0.25	6.35	6.73	170.82
5.91	150.00	8C-9193	C	0.25	6.40	6.52	165.53
5.91	150.00	167-2229	D	0.25	6.30	6.52	165.50
6.00	152.40	167-2228	D	0.25	6.35	6.62	168.10
6.00	152.40	161-5788	C	0.54	13.65	6.75	171.50
6.00	152.40	161-5787	C	0.25	6.35	6.62	168.10
6.00	152.40	9X-3614	B	0.25	6.35	6.62	168.11
6.50	165.10	9X-7322	B	0.25	6.35	7.50	190.55
6.50	165.10	136-7396	C	0.54	13.61	7.25	184.20
6.50	165.10	136-7358	C	0.25	6.35	7.50	190.55
6.50	165.10	167-2230	D	0.25	6.35	7.50	190.55
6.50	165.10	6J-8631	A	0.25	6.35	7.50	190.55
6.75	171.45	167-2232	D	0.25	6.35	7.69	195.45
6.75	171.45	3G-8506	A	0.25	6.35	7.69	195.45
6.75	171.45	8C-9145	B	0.25	6.35	7.69	195.45
7.00	177.80	8C-9130	B	0.25	6.35	7.94	201.80
7.00	177.80	9J-2495	A	0.25	6.35	7.94	201.80
7.00	177.80	167-2233	D	0.25	6.35	7.94	201.80
7.00	177.80	135-1995	C	0.25	6.35	7.94	201.80
7.25	184.10	136-7359	C	0.25	6.35	8.08	205.30

Buffer Seals



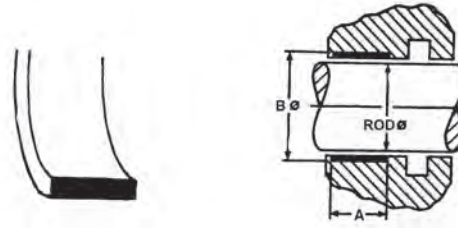
ROD DIAMETER		PART NUMBER	SEAL TYPE	A GROOVE WIDTH (± .005 in)		B GROOVE DIA. (± .005 in)	
(in)	(mm)			(in)	(mm)	(in)	(mm)
7.25	184.10	108-0133	B	0.25	6.35	8.08	205.30
7.25	184.15	167-2234	D	0.32	8.25	8.08	205.30
7.50	190.50	167-2236	D	0.32	8.25	8.33	211.65
7.50	190.50	135-1997	C	0.32	8.25	8.33	211.65
7.50	190.50	108-0131	B	0.32	8.25	8.33	211.65
8.00	203.20	149-3256	C	0.32	8.25	8.83	224.28
8.00	203.20	167-2239	D	0.32	8.25	8.83	224.35
8.00	203.20	6E-0246	B	0.32	8.25	8.83	224.35
8.25	209.55	9X-7327	B	0.32	8.25	9.08	230.70
8.75	222.25	108-6212	B	0.32	8.25	9.58	243.40
8.75	222.25	167-2240	D	0.32	8.25	9.58	243.40
8.75	222.25	135-1999	C	0.32	8.25	9.58	243.40
9.50	241.30	167-2241	D	0.32	8.25	10.33	262.45

Head Wear Rings



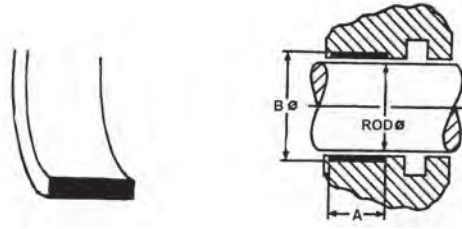
ROD DIAMETER		PART NUMBER	A GROOVE WIDTH (± .003 in)		B GROOVE DIA. (± .001 in)	
(in)	(mm)		(in)	(mm)	(in)	(mm)
1.50	38.10	8T-5443	1.25	31.75	1.62	41.18
1.50	38.10	8C-9120	0.83	21.00	1.62	41.18
1.50	38.10	8C-3853	1.62	41.18	2.09	53.00
1.50	38.10	4T-6780	0.98	25.00	1.62	41.18
1.75	44.45	4T-6907	0.98	25.00	1.87	47.53
1.87	47.62	4T-6779	0.98	25.00	2.00	50.70
1.87	47.62	8T-6441	0.26	6.50	2.00	50.70
1.87	47.62	8T-6442	0.73	18.50	2.00	50.70
2.00	50.80	8T-7030	1.25	31.75	2.12	53.88
2.00	50.80	8T-8205	0.79	20.00	2.12	53.88
2.00	50.80	4T-5613	0.98	25.00	2.12	53.88
2.00	50.80	8C-3836	1.57	40.00	2.12	53.88
2.00	50.80	7J-2171	1.06	27.00	2.51	63.63
2.13	53.98	4T-6128	0.98	25.00	2.25	57.06
2.13	53.98	8T-6681	0.73	18.50	2.25	57.06
2.13	53.98	8T-6682	0.37	9.50	2.25	57.06
2.25	57.15	8T-4958	0.98	25.00	2.37	60.23
2.25	57.15	8J-1585	1.43	36.31	3.35	85.09
2.25	57.15	8T-8204	1.18	30.00	2.37	60.23
2.37	60.32	9X-7260	1.26	32.00	2.50	63.45
2.50	63.50	8T-8394	1.69	43.00	2.62	66.58
2.50	63.50	8T-8365	2.28	58.00	2.62	66.58
2.50	63.50	8T-0785	0.98	25.00	2.62	66.58
2.50	63.50	8T-5668	1.25	31.75	2.62	66.58
2.63	66.68	8T-7372	0.98	25.00	2.75	69.76
2.75	69.85	8T-7849	1.57	40.00	2.87	72.93
2.75	69.85	8T-6743	1.97	50.00	2.95	74.93
2.75	69.85	8T-7020	1.81	46.00	2.87	72.93
2.75	69.85	8C-9200	1.00	25.50	2.87	72.93
2.75	69.85	4T-7283	1.25	31.75	3.01	76.33
2.75	69.85	6C-2385	1.26	32.00	2.87	72.93
2.75	69.85	8C-9114	1.00	25.50	2.87	72.93
3.00	76.20	8C-9161	0.98	25.00	3.12	79.28
3.00	76.20	8C-9153	1.18	30.00	3.20	81.28
3.00	76.20	8T-1714	1.57	40.00	3.12	79.28
3.00	76.20	8T-7584	1.65	42.00	3.12	79.28
3.00	76.20	9T-0094	1.26	32.00	3.12	79.28
3.25	82.55	8T-4813	1.61	41.00	3.45	87.63
3.25	82.55	8T-0777	1.73	44.00	3.37	85.63
3.25	82.55	8T-6745	1.97	50.00	3.45	87.63
3.25	82.55	8T-6744	2.76	70.00	3.45	87.63
3.25	82.55	8C-9101	1.12	28.50	3.37	85.63

Head Wear Rings



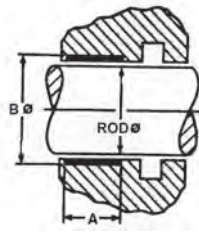
ROD DIAMETER		PART NUMBER	A GROOVE WIDTH (± .003 in)		B GROOVE DIA. (± .001 in)	
(in)	(mm)		(in)	(mm)	(in)	(mm)
3.50	88.90	8C-5245	1.06	27.00	3.62	91.98
3.50	88.90	6J-3075	2.00	50.70	3.76	95.40
3.50	88.90	8C-3829	1.77	45.00	3.70	93.98
3.50	88.90	8T-6746	2.36	60.00	3.70	93.98
3.50	88.90	8T-3329	1.89	48.00	3.62	91.98
3.50	88.90	8T-3000	1.65	42.00	3.74	94.98
3.50	88.90	119-4761	0.98	25.00	3.76	95.42
3.75	95.25	8T-7848	1.57	40.00	3.87	98.33
3.75	95.25	8T-3330	2.44	62.00	3.95	100.33
4.00	101.60	8T-6747	2.56	65.00	4.20	106.68
4.00	101.60	8T-7538	1.57	40.00	4.20	106.68
4.00	101.60	119-4760	1.00	25.40	4.26	108.12
4.00	101.60	7J-3300	2.50	63.50	4.26	108.15
4.00	101.60	4T-4753	1.89	48.00	4.26	108.08
4.25	107.95	8T-6748	2.36	60.00	4.45	113.03
4.50	114.30	9X-3579	1.97	50.00	4.70	119.38
4.50	114.30	9J-9792	3.50	88.90	4.75	120.74
4.50	114.30	4T-6929	3.50	88.90	4.75	120.74
4.75	120.65	8T-7850	1.97	50.00	4.95	125.73
5.00	127.00	9J-3054	3.62	92.07	5.25	133.45
5.00	127.00	8T-3331	2.52	64.00	5.20	132.08
5.25	133.35	4T-5718	2.50	63.50	5.45	138.43
5.50	139.70	8J-9917	2.37	60.30	5.75	146.09
5.50	139.70	9X-7429	1.97	50.00	5.70	144.78
5.50	139.70	9X-7420	2.37	60.32	5.76	146.30
5.51	140.00	9X-3571	1.97	50.00	5.71	145.08
5.75	146.05	8T-7851	1.97	50.00	5.95	151.13
5.75	146.05	8T-3332	3.62	92.00	5.95	151.13
5.91	150.00	6E-0499	2.36	60.00	6.10	155.06
6.00	152.40	4T-9319	2.76	70.00	6.26	158.88
6.00	152.40	9X-3613	1.97	50.00	6.20	157.48
6.13	155.58	7J-3299	2.50	63.50	6.38	162.13
6.38	161.93	096-5606	0.35	8.90	6.69	169.83
6.50	165.10	8C-3848	2.60	66.00	6.70	170.18
6.50	165.10	8C-9102	2.27	57.75	6.70	170.18
6.75	171.45	4T-6931	3.50	88.90	7.01	177.96
6.77	171.93	096-5157	0.35	8.90	7.08	179.83
7.00	177.80	8T-7693	7.14	181.36	7.26	184.28
7.00	177.80	8T-6749	3.15	80.00	7.20	182.88
7.25	184.15	6E-0173	2.36	60.00	7.45	189.24
7.25	184.15	4T-4811	2.95	75.00	7.50	190.60
7.50	190.45	108-0130	3.15	80.00	7.70	195.58

Head Wear Rings



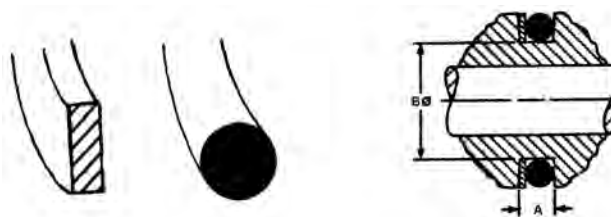
ROD DIAMETER		PART NUMBER	A GROOVE WIDTH (± .003 in)		B GROOVE DIA. (± .001 in)	
(in)	(mm)		(in)	(mm)	(in)	(mm)
8.00	203.20	6E-0245	2.95	75.00	8.20	208.28
8.25	209.55	9X-7330	2.95	75.00	8.45	214.63
8.34	211.93	4I-6443	0.35	8.90	8.65	219.83
8.75	222.25	6E-0248	2.95	75.00	9.01	228.80
8.75	222.25	108-6216	2.95	75.00	8.95	227.33
9.00	228.52	8C-3846	8.98	228.00	9.38	238.25
11.00	279.32	8C-9156	5.04	127.97	11.18	284.09
13.13	333.38	8C-9155	5.03	127.71	12.93	328.52
13.50	342.90	9X-7439	2.37	60.25	13.88	352.61
13.50	342.90	9X-3563	10.02	254.41	13.88	352.61
15.75	400.05	149-0813	10.02	254.41	16.13	409.76
15.75	400.05	149-0812	2.37	60.25	16.13	409.76

Metal Bearing Head Wear Rings



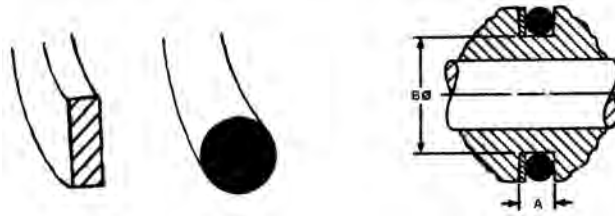
Rod Diameter		Bearing Sleeve Part Number	A Groove Width		B Groove Outside Dia.		Ring Retaining Part Number
(in)	(mm)		(in)	(mm)	(in)	(mm)	
1.77	45.00	198-0664	0.79	20.00	1.97	50.00	NA -
2.17	55.00	114-0752	1.19	30.30	2.36	60.00	099-7001
2.36	60.00	114-0751	1.59	40.30	2.56	65.00	099-6975
2.56	65.00	194-8330	1.38	35.00	2.76	70.00	NA -
2.56	65.00	114-0754	1.59	40.30	2.76	70.00	099-0700
2.76	70.00	114-0753	1.59	40.30	2.95	75.00	099-5400
2.95	75.00	114-8836	1.98	50.30	3.23	82.00	099-0661
2.95	75.00	114-0750	1.59	40.30	3.15	80.00	099-0661
3.15	80.00	114-0755	1.59	40.30	3.35	85.00	096-8139
3.15	80.00	150-5839	1.18	30.00	3.35	85.00	099-3205
3.35	85.00	114-0756	1.59	40.30	3.54	90.00	7Y-5119
3.35	85.00	096-4402	1.18	30.00	3.54	90.00	094-0747
3.54	90.00	114-0758	1.59	40.30	3.74	95.00	093-1571
3.54	90.00	105-2575	1.18	30.00	3.74	95.00	093-1571
3.54	90.00	121-1574	1.98	50.30	3.74	95.00	093-1571
3.74	95.00	096-4430	1.18	30.00	3.94	100.00	7Y-4631
3.74	95.00	6C-6093	1.98	50.30	3.94	100.00	7Y-4361
3.74	95.00	128-9260	1.59	40.30	3.94	100.00	7Y-4631
3.94	100.00	114-0757	1.59	40.30	4.13	105.00	093-1572
3.94	100.00	096-5625	1.38	35.00	4.13	105.00	094-1931
4.13	105.00	114-0760	1.98	50.30	4.33	110.00	7Y-4672
4.13	105.00	099-5572	1.38	35.00	4.33	110.00	099-5573
4.33	110.00	114-0761	2.37	60.30	4.53	115.00	7Y-4944
4.33	110.00	114-0762	1.98	50.30	4.53	115.00	7Y-4944
4.53	115.00	191-5644	2.37	60.30	4.72	120.00	191-5643
4.92	125.00	155-9190	2.37	60.30	5.12	130.00	155-9189
5.00	127.00	121-1599	2.37	60.30	5.20	132.02	121-1598
5.12	130.00	114-0763	2.37	60.30	5.31	135.00	087-5393
5.51	140.00	128-9261	2.18	55.30	5.71	145.00	102-0786
5.71	145.00	155-9100	2.37	60.30	5.91	150.00	155-9099
5.75	146.00	121-1607	1.98	50.30	5.95	151.07	121-1606
5.91	150.00	128-9262	2.37	60.30	6.10	155.00	103-8364
9.00	228.52	8C-3849	5.04	127.97	9.19	233.32	NA -
10.55	268.00	8C-3850	5.03	127.71	10.75	273.05	NA -

Head Seals



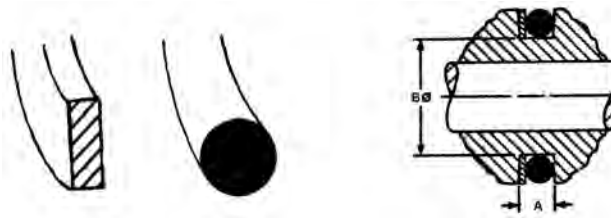
BORE DIAMETER		PART NUMBER	DASH SIZE	A GROOVE WIDTH (± .004 in)		B GROOVE DIA. (± .005 in)		CROSS SECTION		BACK-UP RING
(in)	(mm)			(in)	(mm)	(in)	(mm)	(in)	(mm)	
2.50	63.50	8F-6711	-228	0.22	5.61	2.28	57.80	0.14	3.53	3C-3239
2.75	69.85	1H-5728	-230	0.22	5.61	2.54	64.45	0.14	3.53	4J-9225
3.00	76.20	5H-8848	-232	0.22	5.61	2.79	70.80	0.14	3.53	6J-5731
3.15	80.00	09S-1710		0.25	6.43	3.15	79.95	0.12	3.10	099-7000
3.25	82.55	5P-6302	-240	0.22	5.61	3.95	100.21	0.14	3.53	2K-6830
3.25	82.55	1H-7339	-234	0.22	5.61	3.04	77.15	0.14	3.53	8J-2574
3.50	88.90	2H-3931	-236	0.22	5.61	3.29	83.50	0.14	3.53	4J-9224
3.54	90.00	09S-1711		0.16	4.00	3.46	88.00	0.12	3.10	
3.54	90.00	09S-1671		0.20	5.00	3.78	95.95	0.12	3.10	
3.75	95.25	2H-4145	-238	0.22	5.61	3.54	89.85	0.14	3.53	1S-0669
3.94	100.00	199-8394		0.14	3.53	4.54	115.21	0.10	2.62	
3.94	100.00	09S-1673		0.20	5.00	4.17	105.95	0.12	3.10	
3.94	100.00	09S-1626		0.36	9.13	3.74	94.95	0.22	5.70	10S-7393
3.94	100.00	09S-1625		0.35	8.93	3.54	89.95	0.22	5.70	099-0699
3.94	100.00	09S-1713		0.25	6.43	3.74	94.95	0.12	3.10	099-5399
4.00	101.60	1H-8128	-240	0.22	5.61	3.79	96.20	0.14	3.53	2K-6830
4.13	104.78	9X-4611	-241	0.22	5.61	3.91	99.38	0.14	3.53	1K-7098
4.25	107.95	1H-6227	-242	0.22	5.61	4.04	102.55	0.14	3.53	5J-7865
4.33	110.00	199-8393		0.14	3.53	5.11	129.76	0.10	2.62	
4.33	110.00	09S-1627		0.43	10.93	3.94	99.95	0.22	5.70	099-0660
4.33	110.00	09S-1674		0.20	5.00	4.37	110.95	0.12	3.10	
4.33	110.00	09S-1675		0.20	5.00	4.56	115.95	0.12	3.10	
4.33	110.00	09S-1716		0.23	5.73	4.33	109.95	0.12	3.10	10S-7360
4.33	110.00	112-6920		0.26	6.70	4.08	103.60	0.16	4.00	
4.50	114.30	2H-3928	-244	0.22	5.61	4.29	108.90	0.14	3.53	1K-7095
4.50	114.30	1J-2859		0.32	8.22	4.18	106.06	0.21	5.33	8J-3752
4.72	120.00	133-0128		0.13	3.23	5.35	136.00	0.10	2.62	
4.72	120.00	123-7724		0.32	8.20	4.41	112.00	0.20	5.00	123-8614
4.72	120.00	09S-1718		0.23	5.73	4.72	119.95	0.12	3.10	10S-7375
4.72	120.00	09S-1717		0.23	5.73	4.53	114.95	0.12	3.10	087-5510
4.72	120.00	09S-1676		0.20	5.00	4.76	120.95	0.12	3.10	
4.75	120.65	5H-6734	-246	0.22	5.61	4.54	115.25	0.14	3.53	2J-3961
4.75	120.65	1S-7408		0.32	8.22	4.43	112.41	0.21	5.33	9X-7278
5.00	127.00	5F-3144	-248	0.22	5.61	4.79	121.60	0.14	3.53	2K-4096
5.00	127.00	5P-4326		0.32	8.22	4.68	118.76	0.21	5.33	9X-7279
5.00	127.00	131-3716		0.09	2.16	5.43	137.92	0.07	1.78	
5.12	130.00	09S-1719		0.23	5.73	4.92	125.00	0.12	3.10	09S-1719
5.12	130.00	09S-1631		0.36	9.13	4.72	119.95	0.22	5.70	7Y-4633
5.12	130.00	199-8392		0.09	2.40	5.70	144.80	0.07	1.78	
5.25	133.35	5F-3106	-250	0.22	5.61	5.04	127.95	0.14	3.53	2J-7767
5.50	139.70	8J-1688	-354	0.32	8.22	5.18	131.46	0.21	5.33	8J-1689
5.50	139.70	8F-4469	-429	0.48	12.13	5.05	128.25	0.27	6.98	6U-3042

Head Seals



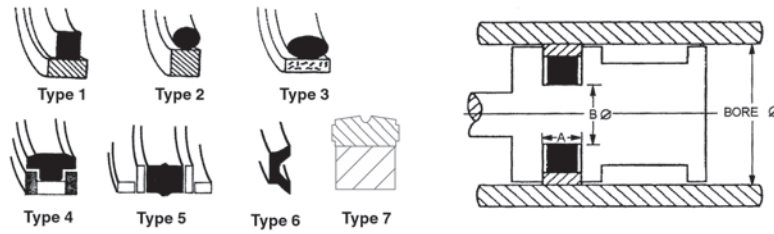
BORE DIAMETER		PART NUMBER	DASH SIZE	A GROOVE WIDTH (± .004 in)		B GROOVE DIA. (± .005 in)		CROSS SECTION		BACK-UP RING
(in)	(mm)			(in)	(mm)	(in)	(mm)	(in)	(mm)	
5.50	139.70	2H-9247	-252	0.22	5.61	5.29	134.30	0.14	3.53	2K-2961
5.51	140.00	095-1632		0.36	9.13	5.12	129.95	0.22	5.70	087-5436
5.51	140.00	095-1721		0.23	5.73	5.31	135.00	0.12	3.10	4I-3627
5.91	150.00	095-1633		0.36	9.13	5.51	139.95	0.22	5.70	7Y-4673
5.91	150.00	199-8391		0.14	3.53	6.61	167.94	0.10	2.62	
6.00	152.40	5H-3252	-256	0.22	5.61	5.79	147.00	0.14	3.53	2K-3258
6.00	152.40	6J-5541	-256	0.22	5.61	5.79	147.00	0.14	3.53	7X-4807
6.00	152.40	6D-9157	-358	0.32	8.22	5.68	144.16	0.21	5.33	8J-1717
6.25	158.75	8F-8733	-258	0.22	5.61	6.04	153.35	0.14	3.53	4J-9223
6.30	160.00	095-1635		0.36	9.13	5.90	149.95	0.22	5.70	087-5550
6.50	165.10	7J-8956	-361	0.32	8.22	6.18	156.86	0.21	5.33	7J-8955
6.50	165.10	2K-4472	-259	0.22	5.61	6.29	159.70	0.14	3.53	2K-4473
6.69	170.00	095-1726		0.36	9.13	6.30	159.95	0.22	5.70	7Y-4945
7.00	177.80	9F-1399	-261	0.22	5.61	6.79	172.40	0.14	3.53	4J-9218
7.00	177.80	8J-1665	-363	0.32	8.22	6.68	169.56	0.21	5.33	9X-7273
7.09	180.00	095-1728		0.36	9.13	6.69	169.95	0.22	5.70	087-5391
7.09	180.00	095-1731		0.36	9.13	7.48	189.95	0.22	5.70	4I-6330
7.25	184.10	4T-4803		0.19	4.72	8.00	203.14			
7.25	184.15	2K-2939	-262	0.22	5.61	7.04	178.75	0.14	3.53	2K-2940
7.25	184.15	5P-7593	-364	0.32	8.22	6.93	175.91	0.21	5.33	1U-1738
7.50	190.50	4H-6520	-263	0.22	5.61	7.29	185.10	0.14	3.53	4T-3107
7.75	196.85	3J-0634	-264	0.22	5.61	7.54	191.45	0.14	3.53	3J-9742
7.75	196.85	5K-1787	-366	0.32	8.22	7.43	188.61	0.21	5.33	8J-0548
7.99	203.00	1H-8278	-265	0.22	5.61	7.79	197.80	0.14	3.53	5J-6444
8.25	209.55	1J-2176	-266	0.22	5.61	8.04	204.15	0.14	3.53	2J-0744
8.25	209.55	8J-4386		0.32	8.22	7.93	201.31	0.21	5.33	3G-3747
8.50	215.90	9M-5024	-267	0.22	5.61	8.29	210.50	0.14	3.53	4J-6557
8.66	220.00	095-1733		0.36	9.13	8.27	209.95	0.22	5.70	4I-6442
9.25	234.95	8F-8230	-270	0.22	5.61	9.04	229.55	0.14	3.53	3J-8466
9.25	234.95	8F-6230	-429	0.22	5.61	9.04	229.55	0.14	3.53	3J-8466
9.25	234.95	1U-3174		0.32	8.22	8.93	226.71	0.21	5.33	1U-3173
9.50	241.30	1T-0132	-271	0.22	5.61	9.29	235.90	0.14	3.53	3J-2688
10.00	254.00	5P-2235	-375	0.32	8.22	9.68	245.76	0.21	5.33	1U-3307
10.25	260.35	5H-4909	-274	0.22	5.61	10.04	254.95	0.14	3.53	4J-1151
10.50	266.70	8L-9241	-377	0.32	8.22	10.18	258.46	0.14	3.53	1U-1770
10.75	273.05	8J-8879	-275	0.22	5.61	10.54	267.65	0.14	3.53	8J-8880
10.98	279.00	095-5702		0.32	8.22	10.68	271.16	0.21	5.33	108-0129
11.50	292.10	5P-2236	-379	0.32	8.22	11.18	283.86	0.21	5.33	1U-1626
12.50	317.50	6V-3263	-381	0.32	8.22	12.18	309.26	0.21	5.33	1U-3383
13.13	333.38	4M-0737		0.43	10.93	12.70	322.62	0.28	6.99	6V-3580
13.50	342.90	4D-4508	-454	0.43	10.93	13.02	330.80	0.27	6.98	122-0440
13.75	349.25	7S-8554	-382	0.32	8.22	13.43	341.01	0.21	5.33	9X-4595

Head Seals



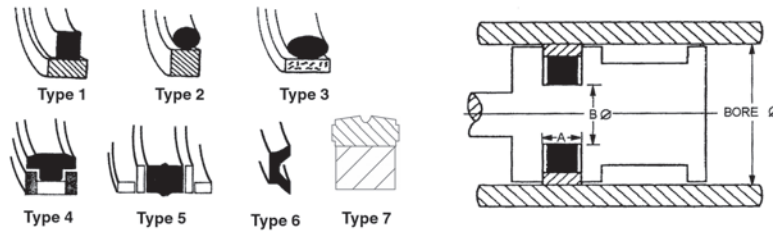
BORE DIAMETER		PART NUMBER	DASH SIZE	A GROOVE WIDTH (± .004 in)		B GROOVE DIA. (± .005 in)		CROSS SECTION		BACK-UP RING
(in)	(mm)			(in)	(mm)	(in)	(mm)	(in)	(mm)	
14.25	361.95	2M-3818		0.32	8.22	13.93	353.71	0.21	5.33	4T-4127
15.13	384.18	4J-1253	-457	0.43	10.93	14.70	373.43	0.28	6.99	4T-5929

Piston Seals



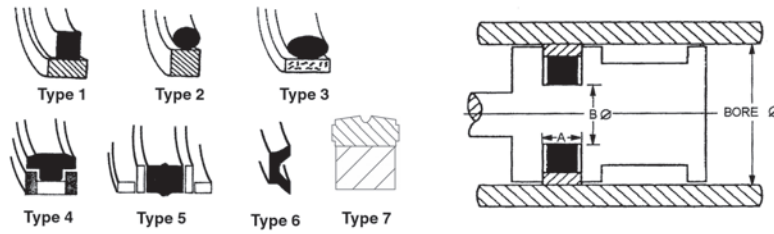
BORE DIAMETER		PART NUMBER	SEAL TYPE	OVERSIZE DIM	A GROOVE WIDTH (± .002 in)		B GROOVE DIA. (± .003 in)	
(in)	(mm)				(in)	(mm)	(in)	(mm)
0.04	1.00	1A-1111	2		0.12	3.00	0.16	4.00
0.20	5.12	197-8073	3	3	0.32	8.10	4.29	109.00
0.50	12.70	3E-4241	2		0.08	2.11	0.24	6.10
0.63	15.88	3E-4242	2		0.08	2.11	0.36	9.27
0.75	19.05	3E-4243	2		0.08	2.11	0.49	12.45
1.00	25.40	3E-4244	2		0.08	2.11	0.74	18.80
1.00	25.40	3E-4277	1		0.13	3.28	0.69	17.55
1.13	28.58	3E-4245	2		0.08	2.11	0.86	21.97
1.25	31.75	3E-4246	2		0.08	2.11	0.99	25.15
1.25	31.75	3E-4278	1		0.13	3.28	0.94	23.90
1.25	31.75	4W-2186	6		0.16	3.96	0.99	25.02
1.50	38.10	3E-4247	2		0.08	2.11	1.24	31.50
1.50	38.10	8C-9185	3		0.12	3.00	1.11	28.09
1.50	38.10	5J-9822	1		0.12	3.00	1.11	28.09
1.63	41.28	3E-4248	2		0.12	3.10	1.24	31.40
1.75	44.45	3E-4249	2		0.12	3.10	1.36	34.54
1.75	44.45	3E-4279	1		0.13	3.28	1.44	36.60
1.77	45.00	8Q-5993			0.08	2.00	2.17	55.00
1.97	50.00	8Q-6123			1.18	30.00	2.20	56.00
1.97	50.00	8Q-6121			0.08	2.00	2.56	65.00
2.00	50.80	8C-9170	3		0.19	4.88	1.63	41.28
2.00	50.80	5J-7004	1		0.19	4.88	1.63	41.28
2.00	50.80	3E-4250	2		0.13	3.30	1.61	40.79
2.01	50.96	1K-5354			0.18	4.68	2.37	60.25
2.17	55.00	144-9483	7		0.25	6.40	1.55	39.46
2.25	57.15	1U-3998	1		0.19	4.88	1.88	47.63
2.25	57.15	3E-4251	2		0.13	3.30	1.86	47.14
2.25	57.15	8C-4908	3	6	0.19	4.88	1.88	47.63
2.25	57.15	8C-4905	3	3	0.19	4.88	1.88	47.63
2.25	57.15	8J-1587	6		0.53	13.49	3.00	76.20
2.36	60.00	144-9485			0.25	6.40	1.75	44.46
2.36	60.00	118-3129			0.06	1.40	2.56	65.00
2.48	63.00	125-5707			2.72	69.00	1.18	30.00
2.48	63.00	125-0776			0.10	2.65	3.27	83.00
2.50	63.50	9X-7451			0.60	15.18	3.14	79.78
2.50	63.50	3E-4252	2		0.13	3.30	2.11	53.49
2.50	63.50	8J-6213	1		0.19	4.88	2.13	53.98
2.50	63.50	8C-9167	3		0.19	4.88	2.13	53.98
2.50	63.50	8C-4911	3	3	0.19	4.88	2.13	53.98
2.50	63.50	8C-4914	3	6	0.19	4.88	2.13	53.98
2.75	69.85	8C-4917	3	3	0.19	4.88	2.38	60.33

Piston Seals



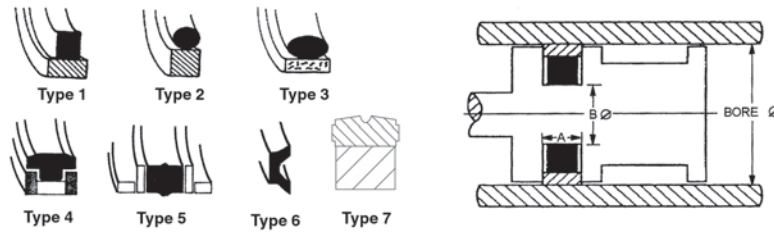
BORE DIAMETER		PART NUMBER	SEAL TYPE	OVERSIZE DIM	A GROOVE WIDTH (± .002 in)		B GROOVE DIA. (± .003 in)	
(in)	(mm)				(in)	(mm)	(in)	(mm)
2.75	69.85	8C-4920	3	6	0.19	4.88	2.38	60.33
2.75	69.85	5J-7010	1		0.19	4.88	2.38	60.33
2.75	69.85	3E-4253	2		0.13	3.30	2.36	59.84
2.75	69.88	4U-8768			0.24	6.00	4.33	110.00
2.76	70.00	118-2727			0.06	1.40	2.95	75.00
2.76	70.00	161-7145	7		0.25	6.40	2.14	54.46
2.76	70.00	8Q-5885			0.12	3.00	3.35	85.00
2.76	70.00	8Q-5888			2.99	76.00	1.57	40.00
2.95	75.00	8Q-6032			0.04	1.00	3.15	80.00
2.95	75.00	8Q-6012			3.54	90.00	0.59	15.00
2.95	75.00	8Q-6010			3.19	81.00	1.18	30.00
2.95	75.04	161-7146	7		0.25	6.40	2.34	59.46
3.00	76.20	9X-7445	4		0.19	4.88	2.46	62.48
3.00	76.20	9X-7337	3		0.19	4.88	2.46	62.48
3.00	76.20	3E-4254	2		0.13	3.30	2.61	66.19
3.00	76.20	8T-8212	3	6	0.19	4.88	2.46	62.48
3.00	76.20	8T-8209	3	3	0.19	4.88	2.46	62.48
3.00	76.20	6J-1972	1		0.19	4.88	2.46	62.48
3.07	78.00	2U-8421			0.18	4.65	5.67	144.00
3.15	80.00	099-6998	4		0.44	11.10	2.56	64.96
3.15	80.00	6U-0849			0.71	18.00	5.51	140.00
3.25	82.55	8C-4923	3	3	0.19	4.88	2.71	68.83
3.25	82.55	8C-4926	3	6	0.19	4.88	2.71	68.83
3.25	82.55	6J-0793	1		0.19	4.88	2.71	68.83
3.25	82.55	9J-1797			0.41	10.49	2.75	69.85
3.25	82.55	3E-4255	1		0.13	3.30	2.86	72.54
3.35	85.00	197-8065	3	3	0.44	11.10	2.75	69.96
3.35	85.00	7Y-5116			0.12	3.00	3.92	99.60
3.50	88.90	5J-7013	1		0.19	4.88	2.96	75.18
3.50	88.90	8T-8218	3	6	0.19	4.88	2.96	75.18
3.50	88.90	8T-8215	3	3	0.19	4.88	2.96	75.18
3.50	88.90	3E-4256	2		0.13	3.30	3.11	78.89
3.50	88.90	4T-8054	3		0.19	4.88	2.96	75.18
3.54	90.00	099-6973	4		0.44	11.10	2.95	74.96
3.54	90.00	096-1588			0.12	3.00	4.12	104.60
3.54	90.00	093-1488	5		1.52	38.70	2.99	75.96
3.54	90.00	144-5287	7		0.25	6.40	2.93	74.45
3.54	90.00	8Q-5984			0.16	4.00	4.13	105.00
3.54	90.00	8Q-5976			1.57	40.00	3.78	96.00
3.73	94.80	118-3123			0.07	1.70	3.98	101.00
3.74	95.00	118-3126			0.37	9.50	3.94	100.00

Piston Seals



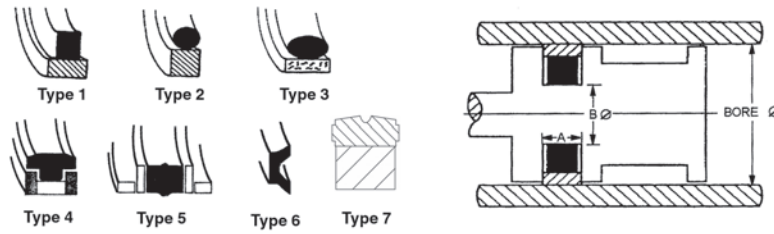
BORE DIAMETER		PART NUMBER	SEAL TYPE	OVERSIZE DIM	A GROOVE WIDTH (± .002 in)		B GROOVE DIA. (± .003 in)	
(in)	(mm)				(in)	(mm)	(in)	(mm)
3.74	95.00	8Q-5887			0.04	1.00	3.94	100.00
3.75	95.25	5J-8011	1		0.19	4.88	3.21	81.53
3.75	95.25	9X-7274	3		0.19	4.88	3.21	81.53
3.75	95.25	8T-8224	3	6	0.19	4.88	3.21	81.53
3.75	95.25	8T-8221	3	3	0.19	4.88	3.21	81.53
3.75	95.25	3E-4257	2		0.13	3.30	3.21	81.53
3.94	100.00	195-0392	3	3	0.50	12.60	3.34	84.90
3.94	100.00	8U-6849			4.53	115.00	0.51	13.00
3.94	100.00	8U-2918			0.28	7.00	4.33	110.00
3.94	100.00	9X-7298	3		0.29	7.24	3.38	85.75
3.94	100.00	133-3094	3	3	0.29	7.24	3.38	85.75
3.94	100.00	5I-5928	4		0.50	12.60	3.34	84.96
3.94	100.00	8Q-6109			4.17	106.00	1.18	30.00
4.00	101.50	5W-2860			0.10	2.50	4.26	108.30
4.00	101.60	5J-5402	1		0.19	4.88	3.21	81.53
4.00	101.60	8C-9160	3		0.19	4.88	3.21	81.53
4.00	101.60	165-6880	6		0.42	10.59	3.50	88.90
4.00	101.60	9J-9872	4		0.19	4.88	3.21	81.53
4.00	101.60	8T-8230	3	6	0.25	6.40	3.34	84.71
4.00	101.60	8T-8227	3	3	0.25	6.40	3.34	84.71
4.00	101.60	3E-4258	2		0.13	3.30	3.61	91.59
4.02	102.00	2U-6397			0.22	5.50	6.50	165.00
4.13	104.78	4T-0529	1		0.25	6.40	3.46	87.88
4.13	104.80	125-9695			0.07	1.70	4.37	111.00
4.13	105.00	125-9698			0.37	9.50	4.33	110.00
4.13	105.00	9X-3586	3		0.29	7.24	3.57	90.75
4.25	107.95	8T-8236	3	6	0.25	6.40	3.59	91.06
4.25	107.95	8T-8233	3	3	0.25	6.40	3.59	91.06
4.25	107.95	3E-4259	2		0.13	3.30	3.86	97.94
4.25	107.95	8C-9164	3		0.25	6.40	3.59	91.06
4.25	107.95	5J-7854	1		0.25	6.40	3.59	91.06
4.33	110.00	8Q-5974			0.04	1.00	4.53	115.00
4.33	110.00	195-0388	3	3	0.50	12.60	3.74	94.90
4.33	110.00	9X-7301	3		0.29	7.24	3.77	95.75
4.33	110.00	133-3098	3	3	0.29	7.24	3.77	95.75
4.33	110.00	099-6922	4		0.50	12.60	3.74	94.96
4.41	112.00	123-8614			0.08	2.00	4.72	120.00
4.49	114.00	118-2719			0.07	1.70	4.76	121.00
4.49	114.00	6U-9270			0.06	1.50	5.00	127.00
4.50	114.30	5J-4986	1		0.25	6.40	3.84	97.41
4.50	114.30	8J-3747	4		0.50	12.75	3.84	97.41

Piston Seals



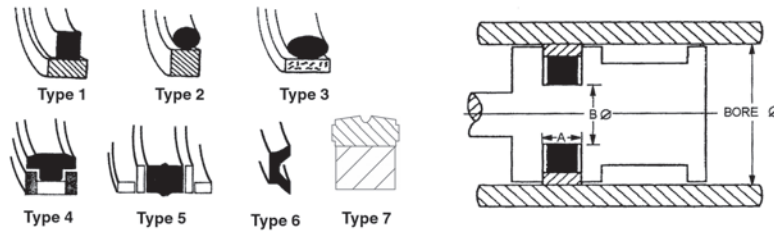
BORE DIAMETER		PART NUMBER	SEAL TYPE	OVERSIZE DIM	A GROOVE WIDTH (± .002 in)		B GROOVE DIA. (± .003 in)	
(in)	(mm)				(in)	(mm)	(in)	(mm)
4.50	114.30	165-6882			0.42	10.62	4.50	114.31
4.50	114.30	9X-7269	3		0.25	6.40	3.84	97.41
4.50	114.30	9X-4551	3	3	0.50	12.75	3.84	97.41
4.50	114.30	8T-8242	3	6	0.25	6.40	3.84	97.41
4.50	114.30	8T-8239	3	3	0.25	6.40	3.84	97.41
4.50	114.30	3E-4260	2		0.13	3.30	4.11	104.29
4.50	114.30	4T-5172	3		0.50	12.75	3.84	97.41
4.53	115.00	9X-3589	3		0.29	7.24	3.97	100.76
4.53	115.00	118-2723			0.37	9.50	4.72	120.00
4.53	115.00	8Q-5971			0.98	25.00	4.29	109.00
4.53	115.00	8Q-6125			0.04	1.00	4.92	125.00
4.72	120.00	108-2870	3	3	0.29	7.24	4.16	105.74
4.72	120.00	137-5042			1.97	50.00	4.96	126.00
4.72	120.00	9X-3592	3		0.29	7.24	4.16	105.74
4.72	120.00	197-8070	3	3	0.32	8.10	3.90	99.00
4.75	120.65	3E-4261	2		0.13	3.30	4.36	110.64
4.75	120.65	4T-8588	3		0.25	6.40	4.09	103.76
4.75	120.65	9X-7542	4		0.25	6.40	4.09	103.76
4.75	120.65	8T-8248	3	6	0.25	6.40	4.09	103.76
4.75	120.65	8T-8245	3	3	0.25	6.40	4.09	103.76
4.75	120.65	8C-5215	3		0.63	15.98	4.09	103.76
4.75	120.65	5J-4987	1		0.25	6.40	4.09	103.76
4.84	123.00	135-7934			0.07	1.70	5.16	131.00
4.84	123.00	2U-8920			0.03	0.76	5.00	127.00
4.92	125.00	135-7938			0.59	14.90	5.12	130.00
5.00	127.00	121-1595			0.13	3.18	5.58	141.68
5.00	127.00	8T-8254	3	6	0.38	9.63	4.23	107.32
5.00	127.00	8T-8251	3	3	0.38	9.63	4.23	107.32
5.00	127.00	9X-7264	3		0.38	9.63	4.23	107.32
5.00	127.00	9J-7868	4		0.63	15.98	4.23	107.32
5.00	127.00	3E-4262	2		0.13	3.30	4.61	116.99
5.00	127.00	5J-5020	1		0.38	9.63	4.23	107.32
5.00	127.00	6J-9176	4		0.63	15.98	4.23	107.32
5.00	127.00	6J-9354	4		0.38	9.63	4.23	107.32
5.00	127.00	7J-2032	1		0.25	6.35	3.48	88.44
5.00	127.00	8T-1787	3		0.63	15.98	4.23	107.32
5.05	128.27	6U-3042			0.12	3.00	5.52	140.27
5.12	130.00	9X-3595	3		0.29	7.24	4.56	115.74
5.12	130.00	108-2869	3	3	0.29	7.24	4.56	115.74
5.14	130.63	103-5754			0.04	1.10	5.38	136.63
5.25	133.35	191-2364	3	3	0.38	9.63	4.60	116.85

Piston Seals



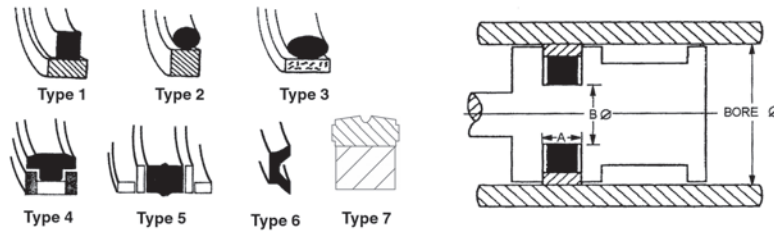
BORE DIAMETER		PART NUMBER	SEAL TYPE	OVERSIZE DIM	A GROOVE WIDTH (± .002 in)		B GROOVE DIA. (± .003 in)	
(in)	(mm)				(in)	(mm)	(in)	(mm)
5.25	133.35	8T-8260	3	6	0.38	9.63	4.48	113.67
5.25	133.35	8T-8257	3	3	0.38	9.63	4.48	113.76
5.25	133.35	3E-4263	2		0.13	3.30	4.86	123.34
5.25	133.35	5J-7234	1		0.38	9.63	4.48	113.67
5.25	133.35	8T-0763	3		0.38	9.63	4.48	113.67
5.25	133.40	5U-4278			0.75	19.05	5.50	139.70
5.28	134.06	140-0233			0.18	4.65	5.40	137.10
5.50	139.70	8T-8266	3	6	0.38	9.63	4.73	120.02
5.50	139.70	8T-8263	3	3	0.38	9.63	4.73	120.02
5.50	139.70	9X-4563	3	3	0.63	15.98	4.73	120.02
5.50	139.70	4T-5173	3		0.63	15.98	4.73	120.02
5.50	139.70	3E-4264	2		0.13	3.30	5.11	129.69
5.50	139.70	6E-0465	3		0.38	9.63	4.73	120.02
5.50	139.70	5J-4988	1		0.38	9.63	4.73	120.02
5.50	139.70	8J-8767	4		0.63	15.98	4.73	120.02
5.51	140.00	8C-9188			0.12	3.00	6.09	154.60
5.51	140.00	8Q-5982			0.98	25.00	5.28	134.00
5.51	140.00	9X-3598	3		0.38	9.63	4.75	120.62
5.51	140.00	191-4568	3	3	0.32	8.10	4.29	109.00
5.51	140.00	133-3102	3	3	0.38	9.63	4.75	120.62
5.51	140.00	123-3135	3		0.32	8.20	4.69	119.00
5.75	146.05	121-1603			0.13	3.18	6.33	160.73
5.75	146.05	9J-4981	1		0.38	9.63	4.98	126.37
5.75	146.05	3E-4265	2		0.16	4.06	5.23	132.89
5.91	150.00	197-8076	3	3	0.32	8.10	5.08	129.00
5.91	150.00	9X-3601	3		0.38	9.63	5.14	130.63
5.91	150.00	108-2871	3	3	0.38	9.63	5.14	130.63
5.91	150.00	137-5046			0.07	1.70	6.30	160.00
5.91	150.00	8C-9192			0.12	3.00	6.56	166.60
6.00	152.40	8C-9173	3		0.38	9.63	5.09	129.41
6.00	152.40	5J-4989	1		0.38	9.63	5.09	129.41
6.00	152.40	8C-4929	3	3	0.63	15.98	5.09	129.41
6.00	152.40	8C-4932	3	6	0.63	15.98	5.09	129.41
6.00	152.40	9J-1242	4		0.63	15.98	5.09	129.41
6.00	152.40	8T-8272	3	6	0.38	9.63	5.09	129.41
6.00	152.40	8T-8269	3	3	0.38	9.63	5.09	129.41
6.00	152.40	3E-4266	2		0.16	4.06	5.48	139.24
6.00	152.40	4T-4144	3		0.63	15.98	5.09	129.41
6.25	158.75	3E-4267	2		0.16	4.06	5.73	145.59
6.25	158.75	8T-8278	3	6	0.38	9.63	5.34	135.76
6.25	158.75	8T-8275	3	3	0.38	9.63	5.34	135.76

Piston Seals



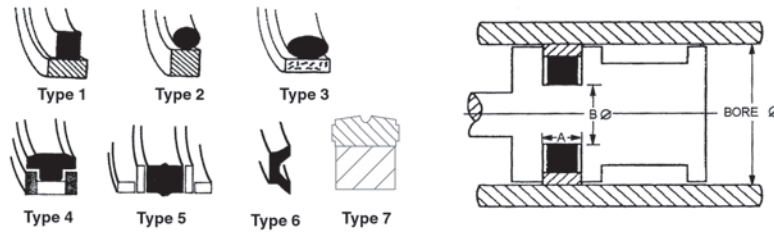
BORE DIAMETER		PART NUMBER	SEAL TYPE	OVERSIZE DIM	A GROOVE WIDTH (± .002 in)		B GROOVE DIA. (± .003 in)	
(in)	(mm)				(in)	(mm)	(in)	(mm)
6.25	158.75	9J-5558	4		0.63	15.98	5.34	135.76
6.25	158.75	8C-4935	3	3	0.63	15.98	5.34	135.76
6.25	158.75	8C-4938	3	6	0.63	15.98	5.34	135.76
6.25	158.75	5J-4990	1		0.38	9.63	5.34	135.76
6.25	158.75	8T-1788	3		0.63	15.98	5.34	135.76
6.30	160.00	9X-3604	3		0.38	9.63	5.54	140.61
6.30	160.00	133-3106	3	3	0.38	9.63	5.54	140.61
6.38	161.93	096-5609			0.35	8.90	6.69	169.83
6.50	165.10	8T-8284	3	6	0.38	9.63	5.59	142.11
6.50	165.10	8T-8281	3	3	0.38	9.63	5.59	142.11
6.50	165.10	3E-4268	2		0.16	4.06	5.98	151.94
6.50	165.10	4T-8695	3		0.63	15.98	5.59	142.11
6.50	165.10	8J-8703	4		0.63	15.98	5.59	142.11
6.50	165.10	5J-4991	1		0.38	9.63	5.59	142.11
6.50	165.10	8C-4941	3	3	0.63	15.98	5.59	142.11
6.50	165.10	8C-4944	3	6	0.63	15.98	5.59	142.11
6.69	170.00	9X-3607	3		0.38	9.63	5.93	150.62
6.69	170.00	133-3110	3	3	0.38	9.63	5.93	150.62
6.75	171.45	3E-4269	2		0.16	4.06	6.23	158.29
6.77	171.93	096-5167			0.35	8.90	7.08	179.83
7.00	177.80	124-8364	6		0.79	20.00	6.00	152.30
7.00	177.80	8T-8290	3	6	0.38	9.63	6.09	154.81
7.00	177.80	8T-8287	3	3	0.38	9.63	6.09	154.81
7.00	177.80	3E-4270	2		0.16	4.06	6.48	164.64
7.00	177.80	8C-5100	3	3	0.63	15.98	6.09	154.81
7.00	177.80	8C-5103	3	6	0.63	15.98	6.09	154.81
7.00	177.80	5J-4997	1		0.38	9.63	6.09	154.81
7.00	177.80	8J-3749	4		0.63	15.98	6.09	154.81
7.00	177.80	8T-1789	3		0.63	15.98	6.09	154.81
7.09	180.00	9X-3610	3		0.38	9.63	6.32	160.62
7.09	180.00	133-3114	3	3	0.38	9.63	6.32	160.62
7.25	184.15	8T-8296	3	6	0.38	9.63	6.34	161.16
7.25	184.15	8T-8293	3	3	0.38	9.63	6.34	161.16
7.25	184.15	3E-4271	2		0.16	4.06	6.73	170.99
7.25	184.15	8T-1790	3		0.63	15.98	6.34	161.16
7.25	184.15	8J-4510	4		0.63	15.98	6.34	161.16
7.25	184.15	5J-4993	1		0.38	9.63	6.34	161.16
7.25	184.15	8C-5112	3	3	0.63	15.98	6.34	161.16
7.25	184.15	8C-5115	3	6	0.63	15.98	6.34	161.16
7.43	188.60	158-3029			0.08	2.00	7.75	196.85
7.48	190.00	191-2362	3	3	0.38	9.63	6.72	170.62

Piston Seals



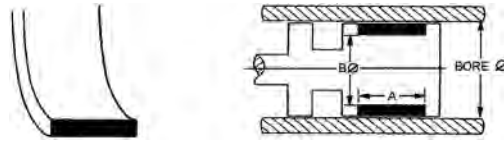
BORE DIAMETER		PART NUMBER	SEAL TYPE	OVERSIZE DIM	A GROOVE WIDTH (± .002 in)		B GROOVE DIA. (± .003 in)	
(in)	(mm)				(in)	(mm)	(in)	(mm)
7.48	190.00	125-1286	3		0.38	9.63	6.72	170.62
7.50	190.50	9J-5567	4		0.63	15.98	6.59	167.51
7.50	190.50	9J-7117	1		0.38	9.63	6.59	167.51
7.50	190.50	3E-4272	2		0.16	4.06	6.98	177.34
7.50	190.50	8C-5118	3	3	0.63	15.98	6.59	167.51
7.50	190.50	8C-5121	3	6	0.63	15.98	6.59	167.51
7.50	190.50	8C-0558	3	3	0.38	9.63	6.59	167.51
7.50	190.50	8C-0561	3	6	0.38	9.63	6.59	167.51
7.50	190.50	8T-1791	3		0.63	15.98	6.59	167.51
7.75	196.85	8T-1792	3		0.63	15.98	6.84	173.86
7.75	196.85	8J-5644	4		0.63	15.98	6.84	173.86
7.75	196.85	8C-5124	3	3	0.63	15.98	6.84	173.86
7.75	196.85	8C-5127	3	6	0.63	15.98	6.84	173.86
7.75	196.85	5J-7016	1		0.38	9.63	6.84	173.86
7.75	196.85	3E-4273	2		0.16	4.06	7.23	183.69
7.75	196.85	191-4563	3	3	0.38	9.63	6.84	173.86
7.87	200.00	133-3118	3	3	0.38	9.63	6.88	174.73
7.87	200.00	8C-9179	3		0.38	9.63	6.88	174.73
7.93	201.30	158-3030			0.08	2.00	8.25	209.54
8.00	203.20	3E-4274	2		0.16	4.06	7.48	190.04
8.00	203.20	3E-4280	1		0.38	9.60	7.25	184.25
8.25	209.55	3E-4275	2		0.16	4.06	7.73	196.39
8.25	209.55	8T-8302	3	6	0.38	9.63	7.26	184.28
8.25	209.55	8T-8299	3	3	0.38	9.63	7.26	184.28
8.25	209.55	8J-4390	4		0.63	15.98	7.26	184.28
8.25	209.55	8T-1793	3		0.63	15.98	7.26	184.28
8.25	209.55	5J-5559	1		0.38	9.63	7.26	184.28
8.25	209.55	8C-5130	3	3	0.63	15.98	7.26	184.28
8.25	209.55	8C-5133	3	6	0.63	15.98	7.26	184.28
8.34	211.93	4I-6443			0.35	8.90	8.50	215.88
8.50	215.90	3G-4762	4		0.63	15.98	7.51	190.63
8.50	215.90	3E-4276	2		0.16	4.06	7.98	202.74
8.50	215.90	9T-0119	3		0.63	15.98	7.51	190.63
8.50	215.90	8C-5136	3	3	0.63	15.98	7.51	190.63
8.50	215.90	6J-9385	1		0.38	9.63	7.51	190.63
8.50	215.90	8C-5139	3	6	0.63	15.98	7.51	190.63
8.66	220.00	8C-9182	3		0.38	9.63	7.67	194.74
8.75	222.25	108-6212			0.32	8.25	9.58	243.40
9.00	228.60	3E-4281	1		0.38	9.60	8.14	206.68
9.25	234.95	4T-4143	3		0.38	9.63	8.26	209.68
9.25	234.95	108-6198			0.47	11.99	9.26	235.25

Piston Seals



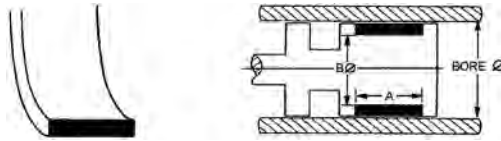
BORE DIAMETER		PART NUMBER	SEAL TYPE	OVERSIZE DIM	A GROOVE WIDTH (± .002 in)		B GROOVE DIA. (± .003 in)	
(in)	(mm)				(in)	(mm)	(in)	(mm)
9.25	234.95	8T-8384	3	6	0.38	9.63	8.26	209.68
9.25	234.95	5J-7019	1		0.38	9.63	8.26	209.68
9.28	235.71	8T-8305	3	3	0.38	9.63	8.26	209.68
9.50	241.30	9X-7321	3		0.38	9.63	8.51	216.04
9.50	241.30	123-3129			0.79	20.00	8.49	215.76
9.50	241.30	3E-4282	1		0.38	9.60	8.64	219.38
10.00	254.00	121-4179	1		0.44	11.18	8.88	225.55
10.00	254.00	9J-3406	2		0.69	17.53	8.88	225.55
10.00	254.00	8C-5142	3	3	0.69	17.53	8.88	225.55
10.00	254.00	8C-5145	3	6	0.69	17.53	8.88	225.55
10.00	254.00	8T-1794	3		0.69	17.53	8.88	225.55
10.25	260.35	8T-1795	3		0.69	17.53	9.13	231.90
10.25	260.35	8C-5148	3	3	0.69	17.53	9.13	231.90
10.25	260.35	8C-5151	3	6	0.69	17.53	9.13	231.90
10.50	266.70	8C-5154	3	3	0.69	17.53	9.38	238.25
10.50	266.70	8C-5157	3	6	0.69	17.53	9.38	238.25
10.50	266.70	8T-1796	3		0.69	17.53	9.38	238.25
10.50	266.70	5J-6762	1		0.44	11.18	9.38	238.25
10.50	266.70	3G-4765	2		0.69	17.53	9.38	238.25
11.00	279.32	8C-9156			5.04	127.97	11.18	284.09
11.00	279.40	6E-0253	1		0.69	17.53	9.88	250.95
11.00	279.40	108-0125	3		0.69	17.53	9.88	250.95
11.00	279.40	129-3706	3	3	0.69	17.53	9.88	250.95
11.50	292.10	8C-5163	3	6	0.69	17.53	10.38	263.65
11.50	292.10	8C-5160	3	3	0.69	17.53	10.38	263.65
11.50	292.10	8T-1797	3		0.69	17.53	10.38	263.65
12.00	304.80	9X-7326	3		0.69	17.53	10.88	276.35
12.25	311.15	8T-6923	1		0.44	11.18	8.38	212.85
12.50	317.50	6E-0307	3		0.69	17.53	11.38	289.05
12.50	317.50	129-3712	3	3	0.69	17.53	11.38	289.05
13.00	330.20	129-3709	3	3	0.69	17.53	11.88	301.75
13.00	330.20	108-6211	3		0.69	17.53	11.88	301.75
13.13	333.38	8C-9155			5.03	127.71	12.93	328.52
13.50	342.90	121-4185	3		0.69	17.53	12.40	314.95
13.50	342.90	130-1857	3	3	0.69	17.53	12.40	314.95
14.25	361.95	174-9634	3		0.69	17.53	13.13	333.50

Piston Wear Rings



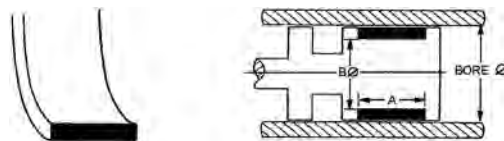
O.D.		PART NUMBER	OVERSIZE DIM	A WIDTH (± .03 in)		B I.D. (± .08 in)	
(in)	(mm)			(in)	(mm)	(in)	(mm)
1.50	38.10	5J-9073		0.50	12.60	1.24	31.53
2.00	50.80	5J-7942		0.50	12.60	1.74	44.22
2.25	57.15	7H-2423		0.89	22.50	1.99	50.57
2.25	57.15	8C-4803	6	0.89	22.50	1.99	50.57
2.25	57.15	8C-4802	3	0.89	22.50	1.99	50.57
2.50	63.50	8C-4804	3	0.75	19.05	2.24	56.92
2.50	63.50	8C-4805	6	0.75	19.05	2.24	56.92
2.50	63.50	8J-6212		0.75	19.05	2.24	56.92
2.68	68.10	118-2716		0.21	5.40	3.63	92.10
2.75	69.85	8J-0112		0.94	23.82	2.49	63.27
2.75	69.85	8C-4806	3	0.94	23.82	2.49	63.27
2.75	69.85	8C-4807	6	0.94	23.82	2.49	63.27
2.76	70.00	118-2717		0.58	14.80	2.95	75.00
2.76	70.00	118-2727		0.06	1.40	2.95	75.00
3.00	76.20	8T-8362	6	1.00	25.40	2.74	69.62
3.00	76.20	8T-8361	3	1.00	25.40	2.74	69.62
3.00	76.20	8C-4948	6	1.00	25.40	2.80	71.06
3.00	76.20	8C-4947	3	1.00	25.40	2.80	71.06
3.00	76.20	8T-6443		1.00	25.40	2.80	71.06
3.00	76.20	6J-5733		1.00	25.40	2.74	69.62
3.15	80.00	195-0402	3	0.23	5.90	2.83	71.98
3.15	80.00	105-7252		0.24	6.15	2.83	71.98
3.15	80.00	099-7002		1.19	30.10	2.91	73.98
3.25	82.55	8T-6683		1.13	28.70	3.05	77.41
3.25	82.55	8J-2577		0.75	19.05	2.99	75.97
3.25	82.55	8J-6371		1.13	28.70	2.99	75.97
3.25	82.55	8C-4808	3	1.13	28.70	2.99	75.97
3.25	82.55	8C-4809	6	1.13	28.70	2.99	75.97
3.25	82.55	7U-7647		0.75	19.05	3.50	88.90
3.35	85.00	197-7983	3	0.24	6.00	3.03	76.98
3.35	85.00	197-7982	3	1.17	29.80	3.11	78.98
3.50	88.90	4J-3236		1.50	38.00	3.24	82.32
3.50	88.90	7J-9885		1.12	28.57	3.24	82.32
3.50	88.90	8T-8318	6	1.12	28.57	3.24	82.32
3.50	88.90	8T-8317	3	1.12	28.57	3.24	82.32
3.50	88.90	8T-8332	6	1.50	38.00	3.24	82.32
3.50	88.90	8T-8331	3	1.50	38.00	3.24	82.32
3.54	90.00	105-2630		0.24	6.15	3.23	81.98
3.54	90.00	099-6976		1.19	30.10	3.31	83.98
3.54	90.00	195-0399	3	1.17	29.80	3.57	90.76
3.54	90.00	195-0400	3	0.23	5.90	3.23	81.98
3.75	95.25	8C-0548	6	1.25	31.65	3.49	88.67
3.75	95.25	8C-0547	3	1.25	31.65	3.49	88.67
3.75	95.25	5J-8019		1.25	31.65	3.49	88.67

Piston Wear Rings



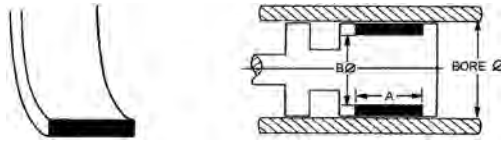
O.D.		PART NUMBER	OVERSIZE DIM	A WIDTH (± .03 in)		B I.D. (± .08 in)	
(in)	(mm)			(in)	(mm)	(in)	(mm)
3.75	95.25	8T-8338	6	1.00	25.40	3.49	88.67
3.75	95.25	8T-8337	3	1.00	25.40	3.49	88.67
3.75	95.25	8J-6245		1.00	25.40	3.49	88.67
3.94	100.00	195-0396	3	0.23	5.90	3.62	91.93
3.94	100.00	133-3097	3	1.19	30.30	3.70	93.87
3.94	100.00	133-3096	3	0.25	6.25	3.62	91.93
3.94	100.00	093-1628		0.25	6.25	3.62	91.93
3.94	100.00	093-1605		1.19	30.30	3.70	93.87
3.94	100.00	197-7981	3	0.23	5.90	3.70	93.87
3.94	100.00	197-7980	3	0.23	5.90	3.62	91.93
3.94	100.00	197-7979	3	0.88	22.30	3.70	93.87
3.98	101.10	125-9696		0.30	7.60	4.33	110.00
4.00	101.60	8T-8312	6	1.00	25.30	3.74	95.02
4.00	101.60	8T-8311	3	1.00	25.30	3.74	95.02
4.00	101.60	8T-8336	6	1.25	31.65	3.74	95.02
4.00	101.60	8T-8335	3	1.25	31.65	3.74	95.02
4.00	101.60	3D-4522		0.71	18.13	3.74	94.99
4.00	101.60	1M-1571		1.25	31.65	3.74	95.02
4.00	101.60	5J-7154		0.62	15.75	3.74	95.02
4.00	101.60	6J-2797		1.00	25.30	3.74	95.02
4.00	101.60	8C-0539	3	0.62	15.77	3.74	95.02
4.13	105.00	125-9699		0.58	14.80	4.33	110.00
4.25	107.95	8T-8330	6	1.50	38.00	3.99	101.37
4.25	107.95	8T-8329	3	1.50	38.00	3.99	101.37
4.25	107.95	8T-8326	6	1.25	31.75	3.99	101.37
4.25	107.95	8T-8325	3	1.25	31.75	3.99	101.37
4.25	107.95	8C-0542	6	1.00	25.32	3.99	101.37
4.25	107.95	8C-0541	3	1.00	25.32	3.99	101.37
4.25	107.95	5J-8157		1.50	38.00	3.99	101.37
4.25	107.95	6J-4003		1.25	31.75	3.99	101.37
4.25	107.95	6J-7264		1.00	25.32	3.99	101.37
4.33	110.00	197-7976	3	0.88	22.30	4.09	103.87
4.33	110.00	197-7975	3	1.37	34.80	4.09	103.87
4.33	110.00	197-7974	3	1.17	29.80	4.09	103.87
4.33	110.00	197-7973	3	1.37	34.80	4.09	103.87
4.33	110.00	197-7965	3	0.23	5.90	4.01	101.93
4.33	110.00	197-7964	3	0.23	5.90	4.09	103.87
4.33	110.00	197-7963	3	1.07	27.30	4.09	103.87
4.33	110.00	133-3100	3	0.25	6.25	4.01	101.98
4.33	110.00	133-3101	3	1.19	30.30	4.09	103.87
4.33	110.00	195-0391	3	0.23	5.90	4.01	101.93
4.33	110.00	093-1603		1.19	30.30	4.09	103.87
4.33	110.00	093-1629		0.25	6.25	4.01	101.98
4.37	111.10	118-2721		0.30	7.60	4.72	120.00

Piston Wear Rings



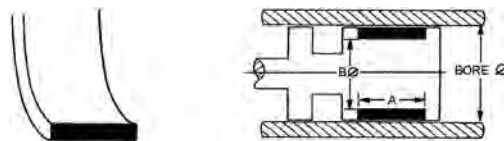
O.D.		PART NUMBER	OVERSIZE DIM	A WIDTH (± .03 in)		B I.D. (± .08 in)	
(in)	(mm)			(in)	(mm)	(in)	(mm)
4.50	114.30	8T-8356	6	1.50	38.00	4.24	107.72
4.50	114.30	8T-8355	3	1.50	38.00	4.24	107.72
4.50	114.30	8T-8328	6	1.00	25.32	4.24	107.72
4.50	114.30	8T-8327	3	1.00	25.32	4.24	107.72
4.50	114.30	8C-4810	3	1.87	47.52	4.24	107.72
4.50	114.30	2D-0829		0.79	19.95	4.24	107.72
4.50	114.30	4J-2620		1.50	38.00	4.24	107.72
4.50	114.30	4J-3745		1.00	25.32	4.24	107.72
4.50	114.30	4T-8758		1.87	47.52	4.24	107.72
4.50	114.30	4J-4605		0.93	23.72	4.24	107.72
4.50	114.30	6J-4175		1.87	47.52	4.24	107.72
4.53	115.00	118-2724		0.58	14.80	4.72	120.00
4.72	120.00	123-3153	3	1.19	30.30	4.48	113.87
4.72	120.00	108-2888	3	0.25	6.25	4.41	111.93
4.72	120.00	108-2885	3	1.39	35.30	4.48	113.87
4.72	120.00	191-2181	3	0.23	5.90	4.48	113.87
4.72	120.00	191-2180	3	0.23	5.90	4.41	111.93
4.72	120.00	191-1883	3	1.07	27.30	4.48	113.87
4.72	120.00	093-1630		0.25	6.25	4.41	111.93
4.72	120.00	093-1604		1.19	30.30	4.48	113.87
4.72	120.00	087-5505		1.39	35.30	4.48	113.87
4.72	120.00	197-7969	3	0.31	7.90	4.53	115.00
4.72	120.00	197-7968	3	0.88	22.30	4.48	113.87
4.72	120.00	197-7971	3	0.12	3.00	4.75	120.76
4.72	120.00	197-7970	3	0.31	7.90	4.41	112.00
4.75	120.65	4T-9248		1.25	31.75	4.49	114.07
4.75	120.65	4J-3342		1.25	31.65	4.49	114.07
4.75	120.65	7J-8879		0.39	9.97	3.99	101.24
4.75	120.65	8T-8390		1.00	25.40	4.49	114.07
4.75	120.65	191-1882	3	0.99	25.15	4.49	114.07
4.75	120.65	8T-8346	6	1.25	31.75	4.49	114.07
4.75	120.65	8T-8345	3	1.25	31.75	4.49	114.07
4.92	125.00	135-7939		0.58	14.80	5.12	130.00
5.00	127.00	8T-8340	6	1.56	39.67	4.74	120.42
5.00	127.00	8T-8339	3	1.56	39.67	4.74	120.42
5.00	127.00	8M-4226		1.25	31.65	4.74	120.42
5.00	127.00	8C-4813	3	1.12	28.57	4.74	120.42
5.00	127.00	8C-4812	3	1.12	28.57	4.74	120.42
5.00	127.00	7J-1627		0.86	21.80	4.74	120.42
5.00	127.00	4J-3420		1.56	39.67	4.74	120.42
5.00	127.00	4J-4630		1.12	28.57	4.74	120.42
5.12	130.00	197-7966	3	0.31	7.90	4.92	125.00
5.12	130.00	197-7962	3	0.31	7.90	4.80	122.00
5.12	130.00	197-7961	3	0.12	3.00	5.15	130.76

Piston Wear Rings



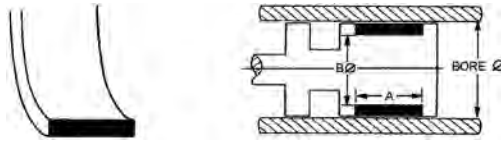
O.D.		PART NUMBER	OVERSIZE DIM	A WIDTH (± .03 in)		B I.D. (± .08 in)	
(in)	(mm)			(in)	(mm)	(in)	(mm)
5.12	130.00	197-7959	3	0.31	7.90	4.92	125.00
5.12	130.00	7Y-4636		1.59	40.30	4.84	122.87
5.12	130.00	7Y-4632		0.32	8.25	4.80	121.93
5.12	130.00	108-2884	3	1.59	40.30	4.84	122.87
5.12	130.00	108-2890	3	0.32	8.25	4.80	121.93
5.25	133.35	191-1881	3	1.02	25.83	4.99	126.77
5.25	133.35	191-1880	3	1.02	25.83	5.12	129.95
5.25	133.35	8T-8360	6	1.50	38.10	4.99	126.77
5.25	133.35	8T-8359	3	1.50	38.10	4.99	126.77
5.25	133.35	9J-7978		1.50	38.10	4.99	126.77
5.25	133.35	7J-8878		3.92	99.69	4.50	114.25
5.25	133.35	2D-0714		1.03	26.08	4.99	126.77
5.25	133.35	4J-3887		1.32	33.60	4.99	126.77
5.50	139.70	4J-3518		2.00	50.70	5.24	133.12
5.50	139.70	3J-9026		1.37	34.82	5.24	133.12
5.50	139.70	4J-4606		1.25	31.65	5.24	133.12
5.50	139.70	7J-1731		1.75	44.45	5.24	133.12
5.50	139.70	7J-3303		1.62	41.27	5.24	133.12
5.50	139.70	9J-7191		1.75	44.45	5.12	129.96
5.50	139.70	8C-4817	3	1.37	34.80	5.24	133.10
5.50	139.70	8C-4816	3	1.37	34.82	5.24	133.12
5.50	139.70	8C-4815	3	1.75	44.45	5.24	133.12
5.50	139.70	8C-4814	3	1.75	44.45	5.24	133.12
5.50	139.70	8C-4822	3	2.25	57.15	5.24	133.12
5.50	139.70	8C-4821	6	2.00	50.70	5.24	133.12
5.50	139.70	8C-4820	3	2.00	50.70	5.24	133.12
5.50	139.70	8C-4818	3	1.75	44.45	5.12	129.96
5.50	139.70	8T-8316	6	1.25	31.65	5.24	133.12
5.50	139.70	8T-8315	3	1.25	31.65	5.24	133.12
5.50	139.70	8C-9112		2.00	50.70	5.24	133.12
5.50	139.70	8J-1690		2.25	57.15	5.24	133.12
5.51	140.00	087-5429		1.78	45.30	5.23	132.87
5.51	140.00	096-1800		0.32	8.25	5.19	131.93
5.51	140.00	107-6263		0.38	9.70	5.31	134.87
5.51	140.00	107-6264		0.32	8.25	5.19	131.93
5.51	140.00	191-4578	3	0.31	7.90	5.19	131.93
5.51	140.00	191-4577	3	0.31	7.90	5.20	132.00
5.51	140.00	191-4576	3	0.37	9.50	5.31	135.00
5.51	140.00	191-4575	3	0.12	3.00	5.28	134.00
5.51	140.00	135-6988	3	1.78	45.30	5.23	132.87
5.51	140.00	118-3955		1.78	45.30	5.23	132.87
5.51	140.00	133-3104	3	0.32	8.25	5.19	131.93
5.51	140.00	133-3105	3	0.38	9.70	5.31	134.87
5.51	140.00	5U-4278		0.75	19.05	5.25	133.30

Piston Wear Rings



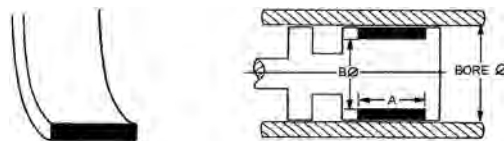
O.D.		PART NUMBER	OVERSIZE DIM	A WIDTH (± .03 in)		B I.D. (± .08 in)	
(in)	(mm)			(in)	(mm)	(in)	(mm)
5.51	140.00	197-7957	3	0.31	7.90	5.20	132.00
5.51	140.00	197-7984	3	0.12	3.00	5.54	140.76
5.67	144.00	099-0695		0.15	3.76	5.97	151.52
5.67	144.00	099-0674		0.15	3.76	5.97	151.52
5.75	146.05	9J-4164		1.62	41.27	5.49	139.47
5.75	146.05	6J-3074		2.00	50.70	5.49	139.47
5.91	150.00	7Y-4697		1.78	45.30	5.62	142.87
5.91	150.00	197-7955	3	0.31	7.90	5.59	142.00
5.91	150.00	197-7954	3	0.12	3.00	4.16	105.76
5.91	150.00	197-7953	3	0.37	9.50	5.71	145.04
5.91	150.00	096-1581		0.32	8.25	5.59	141.93
5.91	150.00	108-2889	3	0.32	8.25	5.59	141.93
5.91	150.00	108-2886	3	1.78	45.30	5.62	142.87
6.00	152.40	9J-5860		1.50	38.10	5.74	145.82
6.00	152.40	8J-1746		2.75	69.85	5.62	142.66
6.00	152.40	8T-8344	6	1.32	33.60	5.74	145.82
6.00	152.40	8T-8343	3	1.32	33.60	5.74	145.82
6.00	152.40	8T-8350	6	1.75	44.45	5.74	145.82
6.00	152.40	8T-8349	3	1.75	44.45	5.74	145.82
6.00	152.40	8T-8348	6	1.50	38.10	5.74	145.82
6.00	152.40	8T-8347	3	1.50	38.10	5.74	145.82
6.00	152.40	8C-4827	6	2.75	69.85	5.62	142.67
6.00	152.40	8C-4826	3	2.75	69.85	5.62	142.67
6.00	152.40	8C-4825	6	1.07	27.25	5.74	145.82
6.00	152.40	8C-4824	3	1.07	27.25	5.74	145.82
6.00	152.40	1J-0708		1.32	33.60	5.74	145.82
6.00	152.40	4J-7503		1.00	25.30	5.62	142.66
6.00	152.40	4T-6930		2.75	69.85	5.62	142.67
6.00	152.40	3G-6537		1.07	27.25	5.74	145.82
6.00	152.40	8C-0544	6	1.25	31.65	5.74	145.82
6.00	152.40	8C-0543	3	1.25	31.65	5.74	145.82
6.00	152.40	7J-8877		0.39	9.97	5.25	133.30
6.00	152.40	7J-5326		1.75	44.45	5.74	145.82
6.00	152.40	5J-0014		1.25	31.65	5.74	145.82
6.25	158.75	5J-3326		1.50	38.00	5.99	152.17
6.25	158.75	8C-4829	6	1.75	44.45	5.99	152.17
6.25	158.75	8C-4828	3	1.75	44.45	5.99	152.17
6.25	158.75	9J-5550		1.75	44.45	5.99	152.17
6.25	158.75	8T-8358	6	1.50	38.00	5.99	152.17
6.25	158.75	8T-8357	3	1.50	38.00	5.99	152.17
6.30	160.00	087-5539		1.78	45.30	6.02	152.87
6.30	160.00	096-3201		0.36	9.25	5.98	151.93
6.30	160.00	133-3108	3	0.36	9.25	5.98	151.93
6.30	160.00	133-3109	3	1.78	45.30	6.02	152.87

Piston Wear Rings



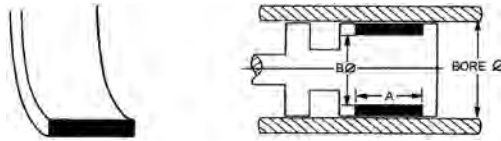
O.D.		PART NUMBER	OVERSIZE DIM	A WIDTH (± .03 in)		B I.D. (± .08 in)	
(in)	(mm)			(in)	(mm)	(in)	(mm)
6.50	165.10	9X-7554	3	2.86	72.64	6.24	158.50
6.50	165.10	9X-7553	3	2.74	69.70	6.24	158.50
6.50	165.10	8T-8354	6	1.50	38.00	6.24	158.52
6.50	165.10	8T-8353	3	1.50	38.00	6.24	158.52
6.50	165.10	9J-0811		3.50	88.90	6.24	158.52
6.50	165.10	9J-3055		2.88	73.03	6.24	158.52
6.50	165.10	9J-9806		1.75	44.45	6.24	158.52
6.50	165.10	9T-0096		1.50	38.00	6.24	158.52
6.50	165.10	8C-4831	6	1.75	44.45	6.24	158.52
6.50	165.10	8C-4830	3	1.75	44.45	6.24	158.52
6.50	165.10	8C-4835	6	3.50	88.90	5.99	152.22
6.50	165.10	8C-4834	3	3.50	88.90	5.99	152.22
6.50	165.10	8C-4833	6	2.00	50.80	6.24	158.52
6.50	165.10	8C-4832	3	2.00	50.80	6.24	158.52
6.50	165.10	8C-4837	6	1.37	34.82	6.24	158.52
6.50	165.10	8C-4836	3	1.37	34.82	6.24	158.52
6.50	165.10	8C-9111		2.00	50.80	6.24	158.52
6.50	165.10	5J-0058		1.25	31.65	6.24	158.52
6.50	165.10	7J-1938		2.00	50.80	6.24	158.52
6.50	165.10	7J-8881		3.50	88.90	5.99	152.22
6.50	165.10	7J-8880		0.25	6.25	5.99	152.15
6.50	165.10	7J-9232		2.88	73.03	6.50	165.10
6.50	165.10	8C-0546	6	1.25	31.65	6.24	158.52
6.50	165.10	8C-0545	3	1.25	31.65	6.24	158.52
6.50	165.10	3J-9703		1.50	38.00	6.24	158.52
6.50	165.10	3J-9027		1.37	34.82	6.24	158.52
6.50	165.10	4J-7532		1.00	25.30	6.12	155.36
6.68	169.77	5I-8589		0.35	8.90	6.99	177.67
6.69	170.00	096-5609		0.36	9.25	6.38	161.93
6.69	170.00	105-7262		1.98	50.30	6.37	161.87
6.69	170.00	133-3112	3	0.36	9.25	6.38	161.93
6.69	170.00	133-3113	3	1.98	50.30	6.37	161.87
6.88	174.63	7J-3302		2.00	50.80	6.62	168.05
7.00	177.80	3G-5098		2.00	50.80	6.74	171.22
7.00	177.80	3G-4641		3.50	88.90	6.74	171.22
7.00	177.80	3G-3470		2.37	60.30	6.74	171.22
7.00	177.80	9J-0711		3.12	79.35	6.74	171.22
7.00	177.80	8T-8364	6	2.00	50.80	6.74	171.22
7.00	177.80	8T-8363	3	2.00	50.80	6.74	171.22
7.00	177.80	8M-4228		1.75	44.45	6.74	171.22
7.00	177.80	8C-4839	6	1.75	44.45	6.74	171.22
7.00	177.80	8C-4838	3	1.75	44.45	6.74	171.22
7.00	177.80	8C-4840	3	3.12	79.37	6.74	171.22
7.09	180.00	105-2653		2.18	55.30	6.77	171.86

Piston Wear Rings



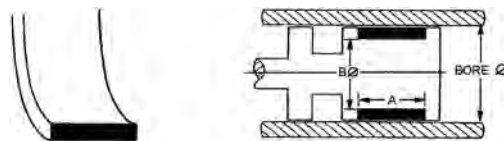
O.D.		PART NUMBER	OVERSIZE DIM	A WIDTH (± .03 in)		B I.D. (± .08 in)	
(in)	(mm)			(in)	(mm)	(in)	(mm)
7.09	180.00	096-5167		0.36	9.25	6.77	171.93
7.09	180.00	133-3116	3	0.36	9.25	6.77	171.93
7.09	180.00	133-3117	3	2.18	55.30	6.77	171.86
7.09	180.00	191-1879	3	1.11	28.20	6.77	171.86
7.09	180.00	191-2182	3	0.35	8.90	6.77	171.93
7.25	184.15	8C-4846	3	3.07	78.00	6.87	174.41
7.25	184.15	8J-1662		1.40	35.60	6.99	177.57
7.25	184.15	8T-8342	6	2.00	50.70	6.99	177.57
7.25	184.15	8T-8341	3	2.00	50.70	6.99	177.57
7.25	184.15	8T-8320	6	1.40	35.60	6.99	177.57
7.25	184.15	8T-8319	3	1.40	35.60	6.99	177.57
7.25	184.15	1U-1734		3.07	78.00	6.87	174.41
7.25	184.15	1J-2674		2.00	50.70	6.99	177.57
7.25	184.15	3J-7848		2.00	50.70	6.99	177.57
7.48	190.00	191-4574	3	0.35	8.90	7.16	181.93
7.48	190.00	191-1878	3	2.16	54.80	7.16	181.86
7.50	190.50	9J-5562		2.50	63.50	7.24	183.92
7.50	190.50	8J-9936		2.37	60.32	7.24	183.92
7.50	190.50	8C-4849	6	2.50	63.50	7.24	183.92
7.50	190.50	8C-4848	3	2.50	63.50	7.24	183.92
7.50	190.50	1U-2218		1.50	38.00	7.24	183.92
7.50	190.50	8C-0550	6	1.50	38.00	7.24	183.92
7.50	190.50	8C-0549	3	1.50	38.00	7.24	183.92
7.75	196.85	7J-9247		3.50	88.90	7.49	190.27
7.75	196.85	7J-8886		0.25	6.25	7.37	187.12
7.75	196.85	3G-4625		4.50	114.30	7.37	187.12
7.75	196.85	4T-6932		4.50	114.30	7.37	187.17
7.75	196.85	8C-4854	3	3.50	88.90	7.49	190.27
7.75	196.85	8C-4853	6	4.50	114.30	7.37	187.17
7.75	196.85	8C-4852	3	4.50	114.30	7.37	187.17
7.75	196.85	8C-4851	6	2.00	50.80	7.49	190.27
7.75	196.85	8C-4850	3	2.00	50.80	7.49	190.27
7.75	196.85	9J-5037		1.62	41.27	7.49	190.27
7.75	196.85	9J-3624		2.00	50.80	7.49	190.27
7.75	196.85	108-2880	3	1.62	41.27	7.49	190.27
7.87	200.00	9X-3570		1.77	45.00	7.61	193.37
7.87	200.00	085-7248		0.36	9.25	7.56	191.93
7.87	200.00	133-4884	3	0.36	9.25	7.56	191.93
7.87	200.00	133-4885	3	2.36	60.00	7.61	193.42
7.87	200.00	197-7952	3	1.11	28.20	7.55	191.86
8.00	203.15	1J-2100		1.75	44.36	8.25	209.55
8.00	203.15	8T-7695		5.00	126.90	7.74	196.62
8.25	209.55	8J-8826		2.75	69.85	7.99	202.97
8.25	209.55	8J-8375		2.12	53.97	7.99	202.97

Piston Wear Rings



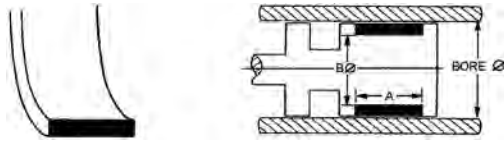
O.D.		PART NUMBER	OVERSIZE DIM	A WIDTH (± .03 in)		B I.D. (± .08 in)	
(in)	(mm)			(in)	(mm)	(in)	(mm)
8.25	209.55	8T-8324	6	1.75	44.35	7.99	202.97
8.25	209.55	8T-8323	3	1.75	44.35	7.99	202.97
8.25	209.55	8T-8334	6	1.50	38.00	7.99	202.97
8.25	209.55	8T-8333	3	1.50	38.00	7.99	202.97
8.25	209.55	8C-4856	3	2.12	53.97	7.99	202.97
8.25	209.55	8C-4858	3	2.25	57.15	7.99	202.97
8.25	209.55	8C-4857	6	2.12	53.97	7.99	202.97
8.25	209.55	8C-4867	6	3.50	88.90	7.74	196.57
8.25	209.55	8C-4866	3	3.50	88.90	7.74	196.57
8.25	209.55	8C-4864	3	2.00	50.80	7.87	199.81
8.25	209.55	8C-4859	6	2.25	57.15	7.99	202.97
8.25	209.55	9J-3056		4.13	104.78	7.99	202.97
8.25	209.55	2J-0745		1.50	38.00	7.99	202.97
8.25	209.55	3G-1315		4.00	101.60	7.87	199.80
8.25	209.55	4J-7376		1.50	38.00	7.99	202.97
8.25	209.55	3J-7632		2.25	57.05	7.99	202.97
8.25	209.55	3G-9882		2.00	50.80	7.87	199.81
8.25	209.55	3J-8683		1.75	44.35	7.99	202.97
8.25	209.55	7J-8887		0.50	12.75	7.74	196.60
8.25	209.55	7J-3301		2.50	63.50	7.99	202.97
8.25	209.55	4T-9320		3.50	88.90	7.74	196.57
8.50	215.90	6J-9365		2.00	50.70	8.24	209.32
8.50	215.90	7J-8064		2.37	60.30	8.24	209.32
8.50	215.90	8C-4869	6	2.37	60.30	8.24	209.32
8.50	215.90	8C-4868	3	2.37	60.30	8.24	209.32
8.50	215.90	8T-7694		3.01	76.45	8.24	209.32
8.66	220.00	191-1877	3	2.35	59.70	8.40	213.37
8.66	220.00	191-1876	3	1.49	37.75	8.40	213.42
8.66	220.00	191-4573	3	0.35	8.90	8.34	211.93
8.66	220.00	125-1204		1.50	38.00	8.40	213.42
8.66	220.00	6E-0496		1.18	30.00	8.40	213.37
8.66	220.00	4I-6443		0.36	9.25	8.34	211.93
9.00	228.60	108-0120		5.00	126.92	8.75	222.23
9.25	209.55	9J-8102		0.11	2.75	0.31	7.87
9.25	234.95	8T-8322	6	1.75	44.35	8.99	228.37
9.25	234.95	8T-8321	3	1.75	44.35	8.99	228.37
9.25	234.95	4T-5949		1.97	50.00	8.99	228.37
9.25	234.95	1J-5281		1.75	44.35	8.99	228.37
9.25	234.95	7J-2087		2.25	57.15	8.99	228.37
9.25	234.95	8C-0552	6	2.25	57.15	8.99	228.37
9.25	234.95	8C-0551	3	2.25	57.15	8.99	228.37
9.50	241.30	7J-8884		3.50	88.90	8.99	228.42
9.50	241.30	7J-8883		0.50	12.78	9.25	234.95
9.50	241.30	4T-6097		1.97	50.00	9.12	231.56

Piston Wear Rings



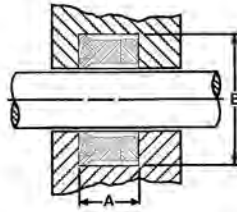
O.D.		PART NUMBER	OVERSIZE DIM	A WIDTH (± .03 in)		B I.D. (± .08 in)	
(in)	(mm)			(in)	(mm)	(in)	(mm)
9.50	241.30	8J-9932		3.08	78.20	9.24	234.72
10.00	254.00	8C-4875	6	3.25	82.55	9.74	247.42
10.00	254.00	8C-4874	3	3.25	82.55	9.74	247.42
10.00	254.00	8C-3843		2.76	70.00	9.74	247.42
10.00	254.00	9J-3369		3.25	82.55	9.74	247.42
10.00	254.00	117-8865		1.50	38.00	9.74	247.42
10.00	254.00	191-1874	3	1.49	37.75	9.74	247.42
10.03	254.81	129-3701		1.50	38.00	9.74	247.42
10.12	257.00	191-1875	3	2.74	69.70	9.74	247.42
10.25	260.35	8C-4877	6	3.50	88.90	9.74	247.47
10.25	260.35	8C-4876	3	3.50	88.90	9.74	247.47
10.25	260.35	7J-8891		3.50	88.90	9.74	247.47
10.25	260.35	7J-8890		0.25	6.25	9.74	247.40
10.50	266.70	7J-1065		3.50	88.93	10.24	260.12
10.50	266.70	8C-4879	6	2.75	69.85	10.24	260.12
10.50	266.70	8C-4878	3	2.75	69.85	10.24	260.12
10.50	266.70	8C-4881	6	4.00	101.60	10.24	260.12
10.50	266.70	8C-4880	3	4.00	101.60	10.24	260.12
10.50	266.70	8J-8900		3.75	95.25	10.24	260.12
10.50	266.70	8J-5980		4.00	101.60	10.24	260.12
10.50	266.70	9J-1159		2.75	69.85	10.24	260.12
10.75	273.05	8T-6637		6.50	165.10	10.37	263.31
11.00	279.40	108-0124		3.25	82.55	10.74	272.82
11.00	279.40	129-3703	3	1.93	49.00	10.74	272.82
11.00	279.40	129-3702	3	3.25	82.55	10.74	272.82
11.00	279.40	6E-0249		1.93	49.00	10.74	272.82
11.50	292.10	4T-4815		1.97	50.00	8.99	228.37
11.50	292.10	9J-2991		3.87	98.42	11.24	285.52
11.50	292.10	8C-4883	6	3.87	98.42	11.24	285.52
11.50	292.10	8C-4882	3	3.87	98.42	11.24	285.52
12.00	304.80	9X-7331		1.46	37.00	11.74	298.22
12.25	311.15	4T-6096		4.00	101.60	11.87	301.41
12.50	317.50	1U-2694		4.00	101.60	12.24	310.92
12.50	317.50	6E-0308		1.46	37.00	12.24	310.92
12.50	317.50	129-3705	3	1.46	37.00	12.24	310.92
13.00	330.20	129-3704	3	1.46	37.00	12.74	323.62
13.00	330.20	108-6215		1.46	37.00	12.74	323.62
13.13	333.38	8C-9155		5.03	127.71	12.93	328.52
13.13	333.38	1U-4627		7.87	200.00	12.74	323.64
13.50	342.90	121-4188		1.46	37.00	13.24	336.32
13.50	342.90	130-1859	3	1.46	37.00	13.24	336.32
13.75	349.25	6E-0247		4.02	102.00	13.49	342.67
14.25	361.95	4T-4129		4.00	101.60	13.99	355.37
15.13	384.18	4T-4825		7.72	196.00	14.74	374.44

Piston Wear Rings



O.D.		PART NUMBER	OVERSIZE DIM	A WIDTH (± .03 in)		B I.D. (± .08 in)	
(in)	(mm)			(in)	(mm)	(in)	(mm)
16.13	409.60	9X-3564		7.72	196.00	15.71	399.00
18.38	466.78	149-0811		7.72	196.00	17.99	456.98

U-Cup Seal Assemblies / Chevron Packing Replacement



Note: Caterpillar is replacing Chevron Packing Seals with U-Cup Seals and spacers. Orders will be filled with the Chevron Packing Seals until the seals are completely exhausted from stock. Both Chevron Packing Seals and U-Cup Seals and spacers meet Caterpillar functional sealing requirements.

Rod Diameter		PART NUMBER	A BORE DEPTH (± .005 in)		B BORE DIAMETER (± .012 in)	
(in)	(mm)		(in)	(mm)	(in)	(mm)
1.25	31.75	1K-7110	0.75	18.95	1.75	44.45
1.50	38.05	5F-6308	0.75	19.05	2.13	53.98
1.50	38.10	3D-1123	1.06	26.87	2.13	53.98
1.75	44.40	2K-0248	1.06	26.87	2.38	60.33
2.00	50.80	3F-9609	0.98	24.84	2.75	69.85
2.00	50.80	1K-7112	1.06	26.87	2.63	66.68
2.25	57.15	1H-4492	1.22	30.94	3.00	76.20
2.25	57.15	2K-4434	1.06	26.87	2.88	73.03
2.50	63.45	4J-5830	1.20	30.53	3.25	82.55
2.50	63.50	4F-8420	1.00	25.35	3.25	82.55
2.50	63.50	1K-7114	1.06	26.87	3.13	79.43
2.75	69.85	5F-3498	0.98	24.84	3.50	88.90
3.00	76.20	2J-1408	0.98	24.84	3.75	95.25
3.00	76.30	2K-1516	1.50	38.00	4.00	101.57
3.25	82.55	4J-6897	1.20	30.53	4.00	101.60
3.50	88.85	8M-3912	0.83	21.18	4.00	101.60
3.50	88.90	1J-2148	1.19	30.23	4.25	107.95
3.50	88.98	2K-4010	1.50	38.00	4.50	114.30
3.53	89.55	1K-7104	1.50	38.00	4.52	114.85
4.00	101.55	2K-0050	1.50	38.00	5.00	127.00
4.00	101.68	2J-6382	1.50	38.00	4.50	114.29
4.00	101.68	3K-8340	0.84	21.34	4.50	114.29
4.50	114.25	3J-9740	0.83	21.18	5.00	127.00
4.50	114.38	2K-1335	1.50	38.00	5.50	139.70
5.00	127.00	3J-7759	0.83	21.18	5.50	139.70
5.00	127.08	3K-8330	0.84	21.34	5.50	139.69
5.50	139.80	2J-3723	1.64	41.78	5.99	152.27
5.53	140.34	2K-0029	1.50	38.00	6.52	165.65
6.00	152.35	3K-8350	0.83	21.18	6.50	165.10
6.00	152.48	2J-9325	1.64	41.78	6.50	165.07
6.25	158.75	2K-1888	1.50	38.00	7.25	184.15
6.50	165.05	8M-3910	0.83	21.18	7.00	177.80
6.50	165.18	2J-6401	2.39	60.83	7.25	184.12
6.75	171.40	3J-9741	0.83	21.18	7.25	184.15
7.00	177.80	4J-1195	1.11	28.07	7.75	196.85
7.25	184.10	4J-1150	1.11	28.07	8.00	203.20
7.25	184.15	3J-7768	0.83	21.18	7.75	196.85
7.87	200.02	6V-0638	1.29	32.76	8.87	225.42
10.50	266.70	5P-9488	1.29	32.77	11.50	292.13

Snubber Seals

PART NUMBER	GROOVE WIDTH		GROOVE DIA.	
	(mm)	(in)	(mm)	(in)
6J-1972	0.19	4.88	2.46	62.48
105-7265	0.28	7.00	1.77	44.95
6I-6921	0.28	7.00	2.64	66.95
185-9050	0.28	7.00	2.52	63.90
6I-6911	0.28	7.00	2.44	61.95
103-8341	0.28	7.00	2.44	61.90
185-9051	0.28	7.00	2.32	58.95
6I-6910	0.28	7.00	2.32	58.95
6I-6922	0.28	7.00	2.24	56.95
185-9084	0.28	7.00	2.12	53.95
121-1997	0.28	7.00	2.09	53.00
283-5995	0.35	9.00	2.05	52.00
266-7859	0.35	9.00	2.28	58.00
283-5971	0.35	9.00	2.24	57.00
6I-6784	0.35	9.00	2.95	74.90
7I-1352	0.35	9.00	2.75	69.90
6I-6786	0.35	9.00	2.56	64.92
283-5972	0.35	9.00	2.44	62.00
087-5389	0.35	9.00	4.13	104.90
155-9187	0.35	9.00	3.93	99.90
6I-6785	0.35	9.00	3.50	88.90
5I-8516	0.35	9.00	3.34	84.90
6I-6787	0.35	9.00	3.15	79.90
8T-0763	0.38	9.64	4.46	113.40
167-2304	0.41	10.49	2.50	63.55
5J-8200	0.41	10.49	2.50	63.55
6J-1450	0.41	10.49	5.13	130.23
5J-8350	0.41	10.49	4.00	101.65
9J-2944	0.41	10.49	3.25	82.60
9J-7257	0.41	10.49	3.00	76.25
3G-3752	0.41	10.49	3.00	76.25
3G-2911	0.41	10.50	2.88	73.08
289-7921	0.43	11.00	2.63	66.85
247-8789	0.43	11.00	2.44	62.00
216-3418	0.43	11.00	5.75	145.96
116-3519	0.43	11.00	4.74	120.40
116-3520	0.43	11.00	4.66	118.40
155-9096	0.43	11.00	4.42	112.18
6I-6790	0.43	11.00	4.37	110.90
200-3620	0.43	11.00	4.02	102.13
231-6843	0.43	11.00	3.61	91.60
191-3128	0.43	11.00	3.45	87.67
191-3198	0.43	11.00	3.41	86.67
242-6833	0.43	11.00	3.22	81.85
247-8791	0.43	11.00	3.03	76.85
247-8829	0.43	11.00	2.83	71.85

Troubleshooting

Seal Failures

When seal failure occurs, it is important to determine the cause of failure in order to provide maximum replacement seal performance and life.

The most common causes of seal failures, other than normal wear, are improper installation, incorrect seal application and seal damage resulting from the condition of the cylinder assembly components. Other contributing factors to seal failure are contamination in the hydraulic system, seal extrusion and excessive heat. As seal failure may occur from more than one factor, it is critical to examine all aspects of the hydraulic system. These steps will assist you in analyzing seal failures. Also provided are questions to ask or clues to look for when performing each step. These steps will assist you in analyzing seal failures. Also provided are questions to ask or clues to look for when performing each step.

1. Investigate the worn seal's previous performance
2. Visually examine the worn seal for damage
3. Inspect the cylinder assembly component

Step 1: Investigate Previous Performance

- Find out if there has been a history of failures. Repeated failures may indicate the seal itself is not the problem.
- Determine when a leak started. Can it be related to a change in maintenance or operating procedures?

Step 2: Visual Examination

- Look for physical damage such as surface tears, scratches, extruded material, foreign particles, etc.
- Look for wear patterns on the seal lip(s).
 - Normal wear will flatten the sharp edge of the lip at its contact point.
 - Excessive lip wear can be caused by too little lubrication.
 - Rapid lip wear, often evidenced by the lip being totally blown off, can be caused by too much pressure.
 - Cracked and hardened lips can result from excessive heat.
- Measure the seal's inside and outside diameters to determine changes in the seal's dimensions.
- Look at the markings on the outside diameter of piston seals.
 - Marks should be straight and uniform if the seal was properly installed.
 - Deep scratches can be caused by a damaged bore.
 - Alternating pattern of smooth and marked areas can be a sign of an out-of-round bore.
- Has the seal's material softened or hardened?
 - Check for incompatibility between the seal's material and the system's fluid, excessive heat, and/or too little lubrication.
- Match the seal type and material to the application.

Step 3: Inspect Cylinder Assembly Components

- Inspect the cylinder bore and rod for damage. Look for:
 - burrs, nicks, cuts, scratches or sharp edges
 - corrosion
 - flaking of rod chrome
 - bent rod

If the cause of premature seal failure cannot be determined after completing the above three steps, investigate the operating conditions of the entire hydraulic system. Investigate the system's operating pressure and hydraulic fluid and look for changes in service or operating conditions.

Seal Installation

Improper seal installation is one of the major causes of seal failures. To provide maximum seal performance and life, the use of proper seal installation procedures is critical.

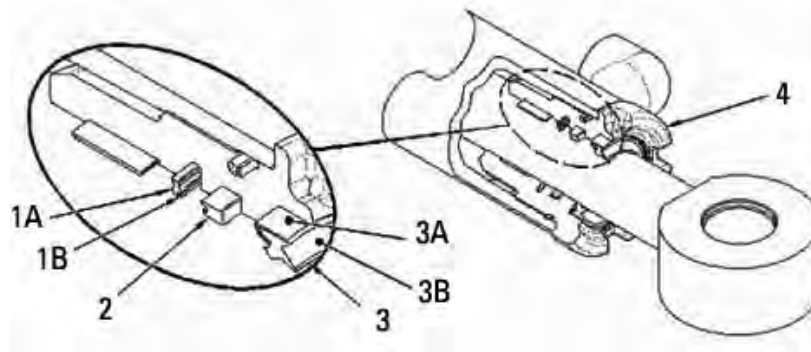
When disassembling the cylinder, place the used seals on a clean, flat work surface in the order in which they were removed. Identify the seals, making sure that none of the required seals are missing. Inspect the seals to help you determine the cause of seal failure. Look for signs of normal wear or damage caused by the condition of the cylinder components or problems related to the system's pressure or fluid (temperature or seal material compatibility).

If wear appears to be normal, replace the used seals with new Cat seals of the same type and size. If seal failure appears to be from other than normal wear, determine the corrective action to be taken in terms of: seal replacement, cylinder component repair, or adjustments to the hydraulic system's fluid or operating pressure.

Installation of Vented Buffer Seal Assembly, U-Cup Seal, and Wiper Seal for Hydraulic Cylinders

Introduction

This instruction gives the procedure for installing seals in the head of hydraulic cylinders. There are three seals in this kit. The three seals are one vented buffer seal assembly, one U-Cup seal, and one double lip wiper seal.



1. Install vented buffer seal assembly (1). The seal assembly consists of one seal (1A) and one backup ring (1B).
 - a. Install vented buffer seal (1A) in the correct groove of cylinder head (4). Seal (1) has a groove for backup ring (1B). The groove must face the rod end of the cylinder. Refer to Illustration 1 for the correct assembly position.
 - b. Install backup ring (1B) in seal (1A). Refer to Illustration 1 for the correct assembly position.
2. Install the U-Cup seal (2) in head (4). Install the seal with the open end of the "U" facing toward the piston end of the cylinder. Refer to Illustration 1 for the correct assembly position.
3. Use sandpaper or emery cloth to scuff the surfaces of the counterbore in the cylinder head and the outside diameter (3A) of the wiper seal's metal shell, if applicable.
4. Clean the counterbore in the head and the outside diameter (3A) of the wiper seal's metal shell with 222-3124 Component Cleaner or 169-5464 Acetone Primer. Clean the counterbore and the metal shell until neither of the components discolor a clean white towel.

Note: The metal shell of the wiper seal is coated with a corrosion inhibitor. This may prevent proper bonding of the wiper seal to the cylinder head if the inhibitor is not removed. After cleaning, do not touch the counterbore or the metal shell because the oil from your fingers may prevent a good bond. Handle the seal by the lip only.
5. Apply 169-5464 Acetone Primer on the counterbore and the metal shell. Allow the primer to dry. The primer will dry in approximately 30 seconds.
6. Apply 7M-7456 Bearing Mount Compound evenly but do not apply the compound excessively. Apply the compound to the counterbore and to the metal shell. Do NOT allow the compound to contact the sealing lip.
7. Install double lip wiper seal (3) into the cylinder head. Refer to Illustration in this section for the correct assembly position. The seal should be firmly seated against the bottom of the counterbore. Wipe away any excess bearing mount compound. Allow the compound to dry for 15 minutes before assembling the hydraulic cylinder.
8. Lightly lubricate the seals with clean hydraulic fluid before installing the head on the cylinder rod.

Installation

Seal Installation (Cont'd.)

General Installation Procedures:

Keep seals packaged until needed for assembly.

Double-check seal part number for accuracy.

Double-check part number dimensions with iron dimensions.

Clean and inspect all surfaces before installation.

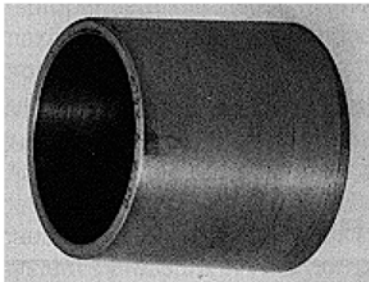
Protect the seal from any sharp edges it may come into contact with during installation.

Prelubricate the surfaces the seal will contact during installation (usually with system fluid).

Use only clean, recommended installation tools.

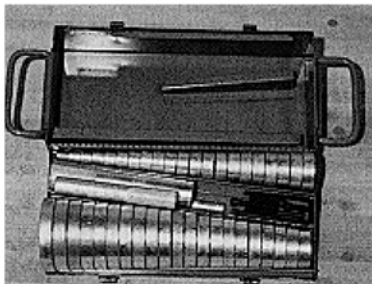
Installation Tools:

Many of the hydraulic cylinder seals can be pressed or snapped into place by hand. The more flexible seals can be formed by hand into a kidney shape and then "popped" into the groove. Never use steel hammers, chisels, screwdrivers, or any item with a sharp surface which can damage the seal during installation. Caterpillar offers the following tools to aid in hydraulic cylinder seal installation. These tools are also listed in the Tools and Shop Products Guide (NENG2500)



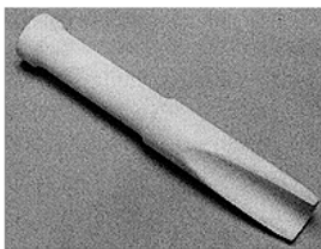
Rod Seal Guide

Used for guiding the head (with rod seals already installed) on rods with square shoulders. The rod shoulder can be sharp and cut the seal. This tool will guide the seal over the rod without cutting or damaging the seal



1P-0510 Driver Group

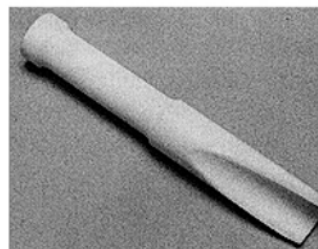
Used for installing press-in wipers flush with a housing or some distance below a housing surface. Contains a set of drive plates from 7/16" (11.1 mm) to 3.00" (76.2 mm) diameter. Drive plates are in 1/16" (1.59 mm) increments.



Buffer Installer

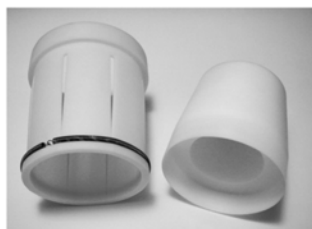
4C-4069 1.5" Installer

Used to install the 8C-9122 Step Buffer Seal Assembly in hydraulic cylinders on the 910 and 910E Wheel Loader, 508 Skidders, and the D3B Track-Type Tractor.



4C-4070 1.75" Installer

Used to install the 8C-9123 Step Buffer Seal Assembly in hydraulic cylinders on the 416, 426, 428, 436 and 438 Backhoe Loaders.



162-7704 Seal Installer Group

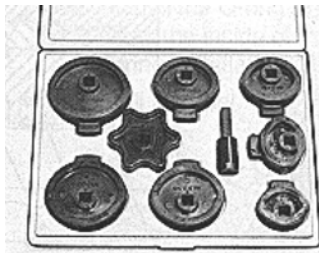
Used to install 096-7308 Seal onto 4I-3614 Cylinder Piston for 318B, 320, 320B, 322, 322B and 325 excavators. Helps prevent seal damage during installation.

Seal Installation (Cont'd.)



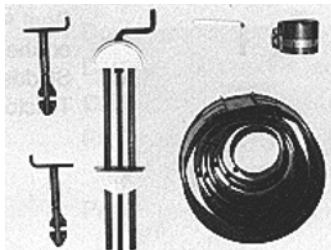
5P-1720 Seal Pick

Used for removal and installation of all types of oil seals. One end of the pick is pointed for prying out flexible seals. The blunt, hook end is used to align seals for installation and to eliminate the twist that occurs when installing O-ring seals. Both ends of the pick are hardened and provide much greater strength than would normally be expected from a tool of this size.



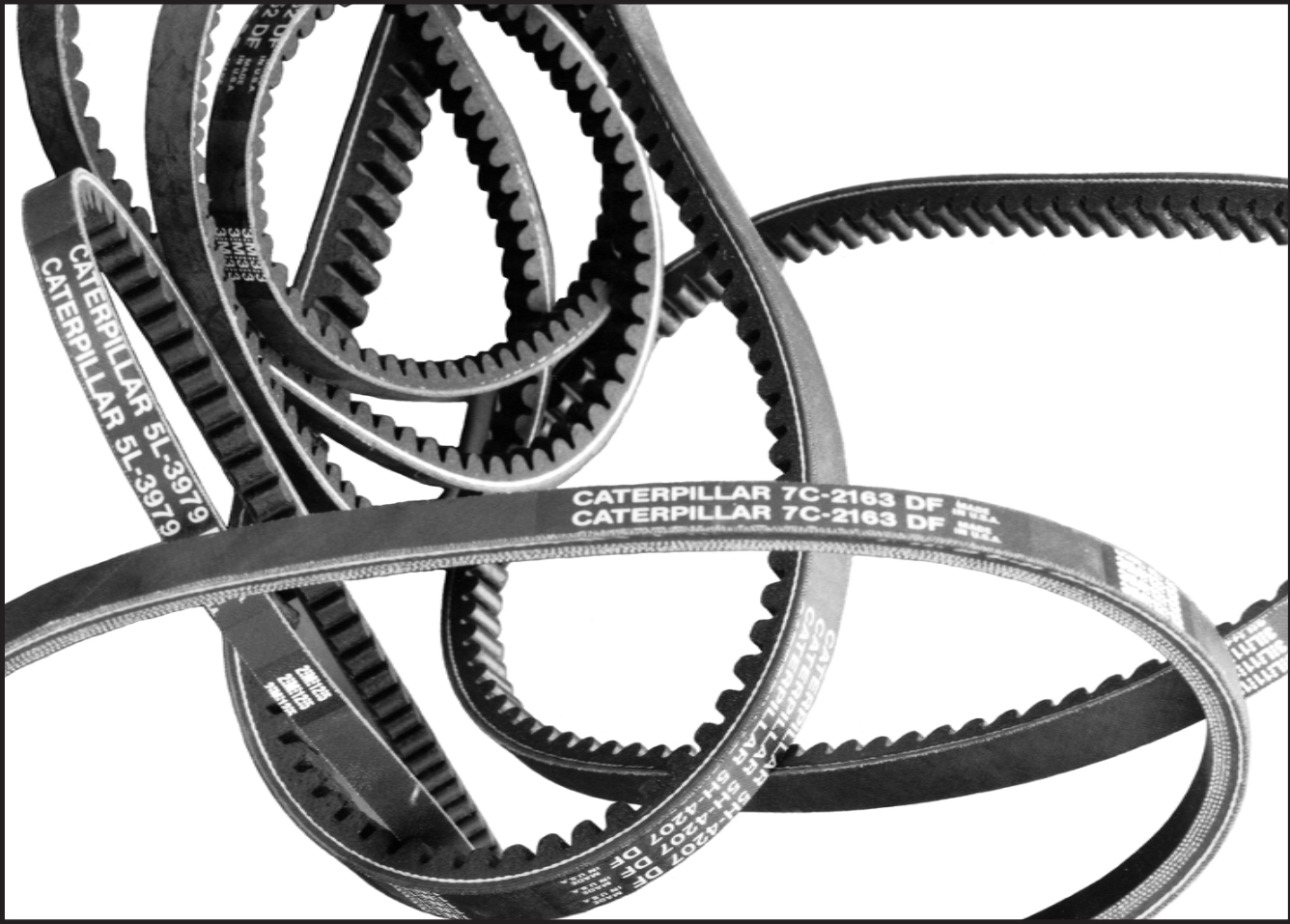
5P-5263 Tool Group

Used to install Teflon piston seals on the pistons of threaded crown hydraulic cylinders with bore sizes ranging from 2.50" (63.50 mm) to 4.00" (101.60 mm). Installation by hand can cause too much distortion, and the seal can be cut when the piston is assembled into its cylinder.



Teflon Seal Tools

The following tools are available to install cylinder pistons and to reassemble the piston into the cylinder bore: Various size compressor assemblies 4S-9447, 4S-9448, 4S-9449, 4S-9450, 9S-9451, 9S-9452, 9S-9453, 9S-9454, 9S-9455 and 9S-9456; expander assembly 4S-9181; and clamp assembly 4S-9446. See the Numerical Parts Record for individual part details.



ENGINE PARTS

Spark Plugs

Introduction

Your Cat dealer offers engine parts that are designed by Caterpillar engineers to work and wear as a system to deliver the product and efficiency you expect from your Cat equipment. This section contains some of the most commonly purchased maintenance parts. If you don't find what you are looking for, contact your Cat dealer. We can help you choose the right parts for your machine arrangement and application.

Engine Spark Plugs

Spark plugs enable the ignition of compressed fuel/air. Cat spark plugs are designed to provide easy removal and installation, limiting the amount of downtime required during each maintenance interval so that your engine is back up and running as soon as possible.

Part Number	Recommended Application	Engine	Engine Serial Number Prefix	For Shipping Purposes			
				Length	Width	Height	Weight
104-3170	G3408 Std plug for 11.4:1	G3400	6RJ, BAZ, 3WVR, 6FW, 3NK, 6ZM, 8LW, CTP	81.28 mm	22.86 mm	22.86 mm	3.30 mm
	G3408C Std plug for 11.4:1						
	G3412 Std plug for 11.4:1						
	G3412C Std plug for 11.4:1						
128-6238	G3408C Std plug for 8.5:1	G3400	BAZ, 3WVR, 6FW, 6ZM, 8LW, CTP	81.28 mm	22.86 mm	20.32 mm	3.30 mm
	G3412C Std plug for 8.5:1						
194-8518	G3500 Std plug for all Magento, EIS, and ADEM III	G3500	2JF, 4KC, 3RC, 4WD, 5JD, 8LD, 9TG, 7NJ, 4EK, 5PN, 9AW, 6JW, 8PW, 2TJ, 9FP, 5ZZ, 8JZ, 7SZ, 8BZ, GET	115.01 mm	23.01 mm	23.01 mm	5.82 mm
	All G3600 Natural Gas	G3600	3XF, 4WF, 1YG, 4CG, 4ZS, BEN, BKE, BLB				
243-4291	All G3600 Natural Gas	G3600	3XF, 4WF, 1YG, 4CG, 4ZS, BEN, BKE, BLB	116.84 mm	30.48 mm	30.48 mm	6.35 mm
	G3500 and All G3600 Bio-Gas (Landfill Gas and Digester Gas)	G3500 and G3600	3XF, 4WF, 1YG, 4CG, 4ZS, BEN, BKE, BLB, MAD, HAT, GZK, GZJ, LGS				
2N-2839	G3304 and G3306 Std plug	G3300	37Y, 07Y	75.95 mm	20.07 mm	20.07 mm	3.81 mm
	G3406 Std plug for 9.4:1 and 10.3:1	G3400	4FD, 1RK, 5NW, CTS, 6NB, 7DB, CTP				
	G3408 Std plug for 9.4:1 and 10.3:1						
	G3412 Std plug for 8.5:1, 9.7:1, and 11.4:1						
301-6663	G3500 EIS	G3500	4WD, 5JD, 8LD, 9TG, 7NJ, 4EK, 5PN, 9AW, 6JW, 8PW, 2TJ, 9FP, 5ZZ, 8JZ, 7SZ, 8BZ	114.30 mm	25.40 mm	25.40 mm	5.97 mm
346-5123	G3500B and G3500C	G3500	7EZ, CEY, CTW, CSC, CME, CFD, CTK, BGW, GAS, GSB, GWD, GZA, GZB, GZC, GZG, GZH, GZL, GZM, GZN, GZP, GZZ, CWD, CWW, CWY, B9P, GHC, GHE, HEB, ZBB, ZBC, TJB, TJC, SLY, RLP, HAL, SXY	103.96 mm	22.00 mm	22.00 mm	6.45 mm
4W-2256	G3304 and G3306 Canadian Standard Association (CSA)	G3300	37Y, 07Y	90.17 mm	25.40 mm	22.86 mm	6.10 mm
	G3406 CSA for 9.4:1 and 10.3:1	G3400	4FD, 1RK, 5NW, CTS, 6NB, 7DB, CTP				
	G3408 CSA for 9.4:1 and 10.3:1						
	G3412 CSA for 8.5:1, 9.7:1, and 11.4:1						
359-7744	G3500C and G3500E	G3500	GAS, GSB, GZA, GZB, GZC, GZE, GZH, GZL, GZM, GZN, GZZ, NGS, RLP, SSR	119.99 mm	24.99 mm	24.99 mm	7.57 mm
430-4521	G3500H	G3500	GFP, GLM, GLN, GZC	119.99 mm	24.99 mm	24.99 mm	7.29 mm

Note: Regarding Electrode Gap Setting. Refer to Operation Maintenance Manual for your engine or contact your local Cat dealer.

Exhaust includes four parts: bellows, manifold gaskets, manifold sleeves, and mufflers. The exhaust bellows connect the exhaust gas pipes and series turbochargers. The exhaust manifold gaskets seal the exhaust manifold to the cylinder head. The exhaust manifold sleeves are inserted into the exhaust ports for sealing the cylinder head. And the mufflers reduce the amount of noise emitted by the exhaust of an internal combustion engine. Cat[®] parts are manufactured to precise specifications and are built for durability, reliability, productivity, and less environmental impact.

Exhaust Bellows

Part Number	For Shipping Purposes			
	Length (mm)	Width (mm)	Height (mm)	Weight (kg)
223-5664	86.36	11.02	67.31	0.20
223-5665	104.14	17.15	66.04	0.31
227-6720	139.70	21.97	101.60	0.39
227-6721	215.90	28.55	101.60	0.51
233-8004	86.36	9.02	64.77	0.16
233-8005	104.14	13.46	68.58	0.24
243-2531	88.90	12.83	83.82	0.23
243-3566	93.98	10.16	63.50	0.18
267-6666	101.60	20.57	88.90	0.37
155-1067	406.40	904.24	406.40	16.18
150-1982	330.20	525.78	116.84	9.41
222-4717	156.21	160.02	149.86	2.86
232-3756	157.48	261.62	154.94	4.68
232-3757	154.94	257.56	154.94	4.61
288-9046	154.94	218.85	154.94	3.92
301-3073	182.88	112.01	162.56	2.00
308-4493	182.88	116.84	165.10	2.09
314-9617	281.94	328.80	170.18	5.88
322-8956	274.32	57.28	73.66	1.03
336-9259	152.40	164.01	152.40	2.94
359-4330	228.60	288.93	218.44	5.17
359-9170	228.60	320.55	215.90	5.74
389-9659	203.20	69.09	172.72	1.24
433-8272	558.80	685.80	355.60	12.27
7E-5580	124.46	21.84	95.25	0.39
130-1571	294.64	270.97	205.74	4.85
149-2274	220.98	335.28	191.77	6.00
169-3501	406.40	73.53	93.98	1.32
200-6554	180.34	117.20	109.22	2.10
221-6861	312.42	691.26	160.02	12.37
297-5506	371.30	309.40	171.20	5.54
328-3350	159.99	67.31	156.01	1.20
354-3510	190.50	91.69	190.50	1.64
378-8915	160.02	66.04	96.52	1.18
380-3133	165.10	124.46	325.12	2.23
439-2065	710.01	441.20	165.00	7.90
443-5914	541.02	1295.40	330.20	23.18
443-5915	548.64	939.80	342.90	16.82
263-9105	838.20	2033.83	584.20	36.40
377-4299	1955.80	889.00	304.80	15.91
207-1355	236.22	227.08	55.88	4.06

Part Number	For Shipping Purposes			
	Length (mm)	Width (mm)	Height (mm)	Weight (kg)
344-2461	167.64	196.85	153.67	3.52
7C-2018	142.24	6.30	134.62	0.11
211-1010	355.60	83.72	154.94	1.50
260-4639	175.01	21.56	100.00	0.39
307-5472	127.00	39.65	88.90	0.71
336-8526	228.60	72.26	170.18	1.29
365-9704	177.80	25.65	121.92	0.46
258-8016	226.06	82.04	124.46	1.47
7L-8055	93.98	6.35	76.20	0.11
7L-8240	129.54	15.24	92.71	0.27
9Y-1558	238.00	52.07	105.00	0.93
168-3383	356.87	648.97	250.19	11.61
201-5885	523.24	111.76	208.28	2.00
247-3379	170.18	51.69	110.49	0.93
260-4637	151.99	6.60	70.00	0.12
264-3088	120.65	20.57	86.36	0.37
274-7696	157.99	40.77	78.59	0.73
282-6664	342.90	1001.29	149.86	17.92
291-5165	156.21	45.97	114.30	0.82
302-6504	157.48	47.78	109.22	0.86
360-5850	148.01	60.99	180.01	1.09
394-3709	223.52	25.40	96.52	0.45
122-0782	259.08	412.24	111.76	7.38
190-6622	297.18	727.08	182.88	13.01
141-7161	218.44	298.20	157.48	5.34
142-2837	218.44	145.42	109.22	2.60
144-9533	322.58	276.35	120.65	4.95
145-1309	259.08	241.30	139.70	4.32
183-7232	271.78	461.52	104.14	8.26
194-8110	259.08	490.35	109.22	8.78
199-3836	160.02	182.32	149.86	3.26
203-7120	243.84	225.30	198.12	4.03
206-0406	259.08	455.17	106.68	8.15
207-1364	147.32	190.91	139.70	3.42
207-1388	127.00	41.53	106.68	0.74
210-2532	165.10	254.51	142.24	4.55
210-2543	154.94	227.97	139.70	4.08
218-7106	256.54	356.26	106.68	6.38
222-4705	299.72	470.94	114.30	8.43
222-4707	325.12	587.12	116.84	10.51

Exhaust

Exhaust Bellows (Cont'd.)

Part Number	For Shipping Purposes				Part Number	For Shipping Purposes			
	Length (mm)	Width (mm)	Height (mm)	Weight (kg)		Length (mm)	Width (mm)	Height (mm)	Weight (kg)
222-4710	256.54	212.60	144.78	3.80	371-7982	323.85	141.10	152.40	2.53
222-4711	312.42	576.05	114.30	10.31	374-8135	127.00	31.50	86.36	0.56
222-4714	294.64	457.45	111.76	8.19	381-5707	342.01	143.13	150.01	2.56
222-4715	299.72	267.61	190.50	4.79	381-7231	520.70	111.89	114.30	2.00
222-4716	297.18	508.00	116.84	9.09	384-0506	154.00	246.84	141.00	4.42
230-5021	129.54	67.59	83.82	1.21	384-0516	165.10	36.07	127.00	0.65
262-5054	144.78	193.04	139.70	3.45	389-1918	378.00	180.37	124.00	3.23
262-5055	165.10	259.11	139.70	4.64	399-0115	465.00	227.03	151.99	4.06
265-5219	121.92	26.16	81.28	0.47	437-3038	159.99	75.18	115.01	1.35
272-2498	269.24	69.34	68.58	1.24	304-9595	127.00	30.96	83.82	0.55
306-0297	334.80	325.12	306.30	5.82	304-9600	138.00	41.78	122.00	0.75
309-8951	192.00	195.83	161.90	3.50	333-1230	660.40	375.54	173.99	6.72
311-3385	292.10	323.11	111.76	5.78	343-9012	312.42	136.91	139.70	2.45
315-7909	177.80	50.67	111.76	0.91	155-6115	241.30	244.73	217.17	4.38
325-3656	176.53	104.55	156.21	1.87	207-1332	401.32	799.21	312.42	14.30
328-8798	222.25	332.05	155.58	5.94	207-1385	172.72	97.16	91.44	1.74
328-8799	325.12	602.97	175.26	10.79	209-1818	154.94	182.78	152.40	3.27
330-7325	144.78	143.00	109.22	2.56	209-1819	251.46	374.40	180.34	6.70
338-9266	354.99	655.73	259.99	11.73	214-6045	304.80	411.58	279.40	7.37
343-9010	266.70	117.35	139.70	2.10	217-6998	215.90	466.09	172.72	8.34
343-9015	289.99	115.06	119.99	2.06	218-7105	203.20	243.31	106.68	4.35
343-9018	313.00	162.43	159.99	2.91	218-7107	203.20	200.30	109.22	3.58
344-8305	271.78	123.57	135.89	2.21	221-7133	189.99	200.20	110.01	3.58
345-9531	316.99	609.60	289.99	10.91	222-4701	144.78	200.53	139.70	3.59
347-9308	154.99	217.42	154.99	3.89	222-4708	129.54	84.94	99.06	1.52
348-4793	337.82	688.47	259.08	12.32	222-4709	299.72	506.50	182.88	9.06
348-9252	165.10	42.93	129.54	0.77	222-4718	203.20	265.05	162.56	4.74
353-0188	322.58	175.13	170.18	3.13	227-4667	218.44	267.08	121.92	4.78
353-0189	317.50	149.86	149.86	2.68	236-4309	167.64	108.18	144.78	1.94
354-6778	279.40	162.61	127.00	2.91	239-3114	546.10	495.30	370.84	8.86
357-6065	231.14	118.11	152.40	2.11	239-3921	182.88	266.95	180.34	4.78
357-6066	264.16	118.62	152.40	2.12	239-3922	105.41	40.64	100.33	0.73
357-6067	287.02	127.00	152.40	2.27	242-0799	335.28	274.70	309.88	4.92
357-6068	326.39	137.92	152.40	2.47	262-1623	154.00	103.12	145.01	1.85
357-6069	342.90	143.00	152.40	2.56	288-3775	127.00	54.48	105.41	0.98
357-6070	441.96	168.40	152.40	3.01	310-7552	143.00	48.95	96.01	0.88
357-6761	190.50	62.71	127.00	1.12	311-3548	220.98	191.11	101.60	3.42
357-6762	157.48	78.36	135.89	1.40	322-5617	157.99	79.76	152.40	1.43
357-6768	514.35	184.79	152.40	3.31	330-7326	165.15	273.43	159.99	4.89
357-6769	513.08	186.69	160.02	3.34	330-7327	144.78	143.00	139.70	2.56
357-6770	457.20	175.13	152.40	3.13	335-3398	146.99	188.82	145.01	3.38
359-1392	248.01	123.19	124.99	2.20	339-5742	242.57	131.57	165.10	2.35
359-6702	99.06	17.78	86.36	0.32	340-2663	250.19	424.43	104.78	7.60
363-0394	273.05	110.62	97.79	1.98	341-2977	165.10	257.02	139.70	4.60
363-2095	86.00	17.91	100.00	0.32	343-9016	258.45	139.70	158.75	2.50
370-9171	446.00	220.62	130.99	3.95	344-0079	177.80	56.39	156.21	1.01
370-9173	446.61	220.62	131.75	3.95	345-0878	115.01	34.80	142.01	0.62
371-7981	406.40	178.56	165.10	3.20	347-2251	208.28	124.46	157.48	2.23

Exhaust Bellows (Cont'd.)

Part Number	For Shipping Purposes				Part Number	For Shipping Purposes			
	Length (mm)	Width (mm)	Height (mm)	Weight (kg)		Length (mm)	Width (mm)	Height (mm)	Weight (kg)
347-7060	144.78	47.50	109.22	0.85	438-7217	299.72	274.96	254.00	4.92
354-6789	165.10	152.40	292.10	2.73	440-4378	157.48	77.60	152.40	1.39
355-1036	419.10	675.89	203.20	12.10	443-5940	163.83	52.07	119.38	0.93
364-5416	157.48	61.34	139.70	1.10	180-8010	294.64	527.51	160.02	9.44
365-6532	215.90	78.74	203.20	1.41	207-1331	447.04	1384.30	317.50	24.77
374-8085	157.48	71.12	152.40	1.27	208-9471	558.80	1676.40	474.98	30.00
374-8098	157.48	59.94	152.40	1.07	362-9401	281.94	83.44	109.22	1.49
374-8146	220.98	84.33	129.54	1.51	363-1699	324.99	89.31	119.99	1.60
375-2132	157.48	52.58	114.30	0.94	210-2531	127.00	32.64	81.28	0.58
378-8925	256.54	416.05	165.10	7.45	207-1390	139.70	44.83	93.98	0.80
380-5671	317.50	127.00	152.40	2.27	370-6162	219.99	70.00	119.99	1.25
380-9647	231.14	211.33	111.76	3.78	324-9290	76.20	21.21	101.60	0.38
384-0515	156.01	52.71	111.00	0.94	342-6333	508.00	82.30	104.14	1.47
386-9660	157.48	40.13	114.30	0.72	330-8954	139.70	196.09	170.18	3.51
418-9323	389.99	102.74	115.01	1.84	357-6763	165.10	46.71	101.60	0.84
422-8011	180.34	55.25	156.21	0.99	168-3617	1016.00	2641.63	584.20	47.27
436-7495	155.58	56.77	111.13	1.02	168-3618	635.00	3708.37	1028.70	66.36
438-2037	279.40	370.46	210.82	6.63					

Exhaust Manifold Gasket

Part Number	For Shipping Purposes			
	Length (mm)	Width (mm)	Height (mm)	Weight (kg)
272-1956	96.52	1.02	1.52	0.02
7W-8145	124.99	1.02	1.60	0.02
161-3411	118.11	0.79	1.78	0.01

Exhaust Manifold Sleeve

Part Number	For Shipping Purposes			
	Length (mm)	Width (mm)	Height (mm)	Weight (kg)
107-8719	144.78	52.30	29.21	0.94
2W-9067	259.08	40.64	58.42	0.73
7E-9153	270.51	34.04	58.42	0.61
194-8124	68.58	7.26	57.15	0.13
281-8261	101.60	11.07	63.50	0.20
188-7774	99.06	9.53	60.96	0.17
239-7894	134.62	12.60	63.50	0.23
154-6393	144.78	46.74	57.15	0.84
203-2143	144.78	50.39	22.86	0.90
204-5455	139.70	97.38	40.64	1.74

Exhaust

Muffler

Part Number	For Shipping Purposes			
	Length (mm)	Width (mm)	Height (mm)	Weight (kg)
103-0632	1353.82	363.22	287.02	22.41
143-5996	1054.10	254.00	254.00	16.91
143-5998	1295.40	256.54	256.54	18.23
214-4928	838.20	434.34	243.84	33.20
228-4850	1041.40	281.94	281.94	19.09
228-4853	1117.60	284.48	284.48	20.14
228-4855	1033.78	254.00	254.00	15.93
228-4857	1270.00	304.80	304.80	22.27
228-4858	1219.20	439.42	439.42	22.41
228-4859	1158.24	368.30	279.40	22.09
228-4860	1143.00	292.10	292.10	20.46
228-4863	412.75	285.75	1016.00	20.23
228-4864	914.40	381.99	360.20	22.68
228-4865	266.70	266.70	1193.80	20.68
228-4867	1244.60	355.60	266.70	24.77
228-4873	863.60	279.40	279.40	19.75
228-4876	1013.46	350.52	297.18	25.11
228-4877	990.60	368.30	342.90	21.59
228-4880	1168.40	241.30	241.30	17.02
228-4881	901.70	381.00	431.80	20.46
228-4882	990.60	406.40	279.40	22.64
228-4883	1016.00	355.60	266.70	21.73
228-4886	1219.20	281.94	281.94	20.00
228-4887	977.90	368.30	284.48	19.55
228-4890	990.60	381.00	279.40	22.05
228-4891	990.60	330.20	406.40	22.64
228-4892	998.22	355.60	266.70	22.64
228-4893	990.60	355.60	342.90	22.64
228-4894	660.40	406.40	279.40	17.50
228-4897	1270.00	381.00	279.40	22.05
228-4900	1016.00	241.30	241.30	16.27
228-4901	901.70	279.40	279.40	17.32
228-4902	939.80	304.80	304.80	20.14
228-4904	990.60	355.60	279.40	17.14
228-4905	1397.00	254.00	254.00	17.64
228-4906	1409.70	279.40	279.40	19.77
228-4907	1206.50	609.60	284.48	19.50
228-4911	1193.80	1092.20	279.40	21.59
228-4914	1066.80	279.40	279.40	17.73
228-4915	1254.76	292.10	292.10	19.75
228-4916	1231.90	469.90	279.40	23.64
228-4917	965.20	406.40	393.70	24.09
228-4918	1219.20	457.20	279.40	22.27
228-6569	990.60	368.30	355.60	21.59
228-6570	406.40	279.40	1066.80	21.82
250-1179	833.12	381.00	360.68	36.34
254-7250	1346.20	254.00	254.00	23.59
254-7251	1301.75	260.35	247.65	24.66

Part Number	For Shipping Purposes			
	Length (mm)	Width (mm)	Height (mm)	Weight (kg)
254-7252	1301.75	266.70	234.95	24.18
254-7253	1049.02	360.68	279.40	24.36
254-7254	1295.40	281.41	281.41	27.68
254-7255	1295.40	279.40	279.40	27.48
254-7256	1130.30	279.40	279.40	24.84
254-7257	1117.60	279.40	279.40	25.75
254-7258	1046.48	355.60	279.40	25.09
254-7259	1352.55	304.80	292.10	27.82
254-7260	1300.48	266.70	254.00	20.68
254-7262	1219.20	342.90	254.00	20.23
254-7263	1295.40	266.70	254.00	20.68
254-7265	1066.80	266.70	266.70	16.77
254-7266	1308.10	279.40	254.00	21.09
254-7267	1295.40	254.00	254.00	20.64
255-4418	939.80	368.30	279.40	22.86
255-4419	944.88	368.30	279.40	22.36
257-0059	1358.90	209.55	209.55	19.52
257-0060	1358.90	203.20	203.20	32.36
257-7188	990.60	381.00	330.20	28.11
257-7189	990.60	406.40	330.20	33.36
257-7190	1079.50	330.20	342.90	29.05
257-9007	1437.64	508.00	254.00	26.27
257-9008	1422.40	431.80	317.50	25.18
257-9009	1212.85	546.10	482.60	29.30
257-9010	1219.20	1104.90	533.40	31.09
257-9011	997.00	406.40	292.10	23.61
257-9012	1041.40	330.20	431.80	23.36
257-9013	1143.00	279.40	279.40	21.36
257-9014	1117.60	279.40	279.40	22.82
257-9015	1041.40	406.40	279.40	22.66
257-9016	990.60	355.60	292.10	22.30
257-9017	762.00	355.60	279.40	21.30
257-9018	1219.20	520.70	482.60	28.64
257-9019	1200.91	1168.40	469.90	31.82
257-9020	1066.80	279.40	279.40	22.00
257-9021	1117.60	273.05	279.40	23.34
257-9022	1219.20	393.70	330.20	29.00
257-9023	1200.15	406.40	330.20	28.18
257-9024	1193.80	406.40	317.50	29.00
257-9025	1168.40	355.60	330.20	31.77
257-9026	965.20	533.40	406.40	28.18
257-9027	965.20	609.60	393.70	28.86
257-9028	927.10	361.95	279.40	22.25
257-9029	914.40	374.65	279.40	22.73
257-9030	889.00	317.50	279.40	21.59
257-9031	889.00	355.60	279.40	29.86
257-9032	914.40	292.10	292.10	20.18
257-9033	920.75	279.40	266.70	21.43

Muffler (Cont'd.)

Part Number	For Shipping Purposes			
	Length (mm)	Width (mm)	Height (mm)	Weight (kg)
257-9034	946.15	361.95	361.95	22.61
257-9035	939.80	368.30	368.30	29.86
257-9036	977.90	546.10	419.10	28.86
257-9037	660.40	330.20	330.20	20.95
257-9038	990.60	355.60	279.40	23.02
257-9039	990.60	368.30	279.40	23.09
257-9040	1092.20	279.40	279.40	23.77
257-9041	1104.90	406.40	330.20	23.86
257-9042	1107.44	467.36	335.28	32.05
262-2972	660.40	482.60	279.40	20.68
280-9023	723.90	368.30	342.90	29.86
444-7823	1117.60	431.80	342.90	30.00
104-4821	1066.80	381.00	363.22	19.23
104-4823	1059.18	381.00	360.68	18.18
117-3160	1117.60	368.30	292.10	21.50
226-8231	736.60	530.86	190.50	30.77
109-2729	609.60	241.30	165.10	4.22
110-8066	2209.80	939.80	939.80	410.00
112-5040	782.32	279.40	228.60	11.21
112-5284	2565.40	812.80	762.00	238.64
113-9491	774.70	279.40	228.60	11.82
114-1172	1854.20	673.10	584.20	115.55
114-5414	886.46	304.80	266.70	13.86
115-1360	2159.00	762.00	685.80	177.27
116-2439	1600.20	584.20	457.20	86.36
116-7949	723.90	228.60	190.50	7.32
117-2362	609.60	266.70	198.12	6.36
124-8534	685.80	386.08	299.72	25.45
129-3024	576.58	228.60	170.18	4.09
130-6276	1117.60	558.80	469.90	68.64
130-6277	1887.22	647.70	553.72	90.91
132-7188	1828.80	533.40	482.60	80.00
134-1945	596.90	231.14	180.34	6.68
136-6312	561.34	375.92	198.12	8.16
140-2345	381.00	304.80	266.70	8.51
140-2439	990.60	469.90	312.42	37.07
141-7047	1752.60	685.80	685.80	145.46
141-7048	2133.60	863.60	914.40	213.81
142-9460	1130.30	533.40	508.00	30.23
143-3897	1422.40	558.80	457.20	67.73
143-5875	1498.60	787.40	622.30	13.86
144-7187	2260.60	779.78	660.40	215.00
145-5572	2057.40	584.20	513.08	154.55
149-2752	901.70	182.88	182.88	7.02
150-3416	457.20	139.70	139.70	4.50
151-4878	2641.60	787.40	596.90	180.00
152-1900	2438.40	762.00	762.00	200.00
155-0913	1754.99	584.99	575.01	52.11

Part Number	For Shipping Purposes			
	Length (mm)	Width (mm)	Height (mm)	Weight (kg)
159-8467	2540.00	718.82	698.50	110.45
159-9917	2489.20	889.00	787.40	327.27
159-9919	2997.20	1295.40	1181.10	300.00
159-9921	1739.90	812.80	965.20	194.09
159-9922	1930.40	1143.00	939.80	315.91
160-1063	2489.20	889.00	774.70	239.55
160-9612	1333.50	330.20	330.20	69.55
160-9631	1671.32	635.00	604.52	123.27
166-0933	1676.40	406.40	368.30	26.36
166-1242	889.00	177.80	177.80	8.64
166-8718	3048.00	1384.30	1574.80	585.00
169-2157	1518.92	749.30	635.00	79.55
180-9425	1538.00	662.00	581.99	93.18
180-9426	1816.99	665.00	805.31	230.48
183-7641	1757.68	673.10	673.10	158.64
183-7643	1752.60	685.80	685.80	143.18
183-7644	1651.00	787.40	685.80	143.50
183-7645	2463.80	660.40	660.40	204.55
183-7646	2438.40	787.40	685.80	1009.09
187-8246	533.40	523.24	254.00	9.73
195-4724	3225.80	482.60	533.40	300.00
197-7911	599.44	276.86	276.86	8.19
197-9717	1419.86	238.76	127.00	6.86
202-4229	3059.99	730.00	689.99	330.69
205-5729	1371.60	393.70	368.30	39.27
2W-4073	1574.80	508.00	508.00	58.01
3K-3124	431.80	203.20	203.20	4.00
6N-5437	896.62	454.66	299.72	20.00
7S-8443	680.72	228.60	228.60	6.20
8S-2809	680.72	256.54	154.94	6.82
8S-4996	508.00	266.70	160.02	4.23
1W-2489	952.50	381.00	254.00	17.50
2C-9500	1066.80	406.40	279.40	24.59
9S-9328	647.70	177.80	177.80	5.68
207-0986	2899.99	1400.00	1300.00	350.74
210-0540	719.99	510.01	510.01	34.07
212-8491	624.99	406.40	406.40	9.02
212-8507	571.50	520.70	302.26	9.80
212-8633	617.22	558.80	289.56	10.02
2W-6603	736.60	304.80	304.80	15.45
8I-0725	482.60	185.42	152.40	4.98
214-4326	426.72	370.84	370.84	13.80
215-9487	452.12	279.40	266.70	7.19
216-7325	596.90	241.30	228.60	9.55
8U-0801	558.80	220.98	220.98	7.01
1W-3055	939.80	381.00	254.00	18.18
217-2728	547.37	222.25	659.77	10.55
217-8512	971.55	243.84	243.84	7.41

Exhaust

Muffler (Cont'd.)

Part Number	For Shipping Purposes				Part Number	For Shipping Purposes			
	Length (mm)	Width (mm)	Height (mm)	Weight (kg)		Length (mm)	Width (mm)	Height (mm)	Weight (kg)
217-8513	990.60	279.40	177.80	8.05	320-9160	1088.01	500.00	354.99	49.00
1R-6954	645.16	304.80	304.80	9.81	324-4156	645.16	445.01	780.01	23.05
2W-4072	1244.60	482.60	457.20	60.91	324-4157	810.01	650.01	430.00	22.05
1W-6048	604.52	368.30	304.80	19.54	332-4011	559.00	168.00	168.00	4.01
2W-4070	862.33	355.60	355.60	36.36	335-6122	536.58	330.20	292.10	14.55
2W-4071	990.60	406.40	406.40	22.73	338-3063	1447.80	254.00	254.00	14.71
2W-4075	1574.80	609.60	609.60	90.00	340-9283	545.01	330.00	330.00	17.90
3B-6216	406.40	220.98	220.98	5.00	371-6450	863.60	412.75	330.20	20.45
3B-6218	495.30	220.98	220.98	4.77	372-4991	542.70	330.20	330.20	18.84
5H-2656	518.16	220.98	220.98	5.45	375-3873	1473.20	571.50	571.50	56.82
5I-4661	685.80	360.68	241.30	12.05	375-9898	596.90	279.40	228.60	11.09
5I-6923	787.40	431.80	330.20	22.73	379-2679	330.00	200.00	189.99	5.39
3B-6217	419.10	228.60	228.60	3.82	383-1509	592.00	440.00	300.00	24.05
225-6007	1460.50	698.50	520.70	139.55	395-7947	825.50	381.00	254.00	13.88
227-9405	543.56	215.90	518.16	11.09	417-9601	1849.12	660.40	622.30	130.17
228-4656	3022.60	1022.40	1022.40	340.71	419-1015	2451.00	1324.99	813.00	638.64
229-0709	2565.40	698.50	914.40	152.27	431-5814	2120.90	444.50	444.50	71.33
232-4725	570.00	370.00	210.01	9.40	438-4598	826.00	381.00	254.00	14.83
238-9987	495.30	406.40	406.40	20.27	087-1467	601.98	220.98	170.18	5.49
239-6659	624.99	735.00	330.00	12.03	100-4594	1137.92	228.60	228.60	17.57
244-6593	1092.20	279.40	279.40	18.73	101-0349	528.32	480.06	177.80	12.03
246-1131	467.36	421.64	304.80	9.74	101-8740	627.38	381.00	254.00	14.09
258-5394	909.32	408.94	408.94	27.27	106-6699	1719.58	195.58	165.10	17.68
258-5395	1070.00	270.00	270.00	13.03	107-7473	571.50	273.05	261.62	6.82
260-3534	571.50	520.70	302.26	13.73	111-4352	889.00	463.30	666.50	51.11
262-6876	965.20	508.00	406.40	49.86	112-1665	614.68	401.32	284.48	10.09
262-6877	1435.10	711.20	685.80	104.27	112-2986	960.12	457.20	312.42	29.91
266-6197	754.99	624.99	324.99	12.03	112-3249	685.80	254.00	157.48	7.27
266-6250	698.50	683.26	414.02	19.00	112-6590	1892.30	520.70	406.40	98.18
266-6251	693.42	647.70	439.42	19.00	116-0680	749.30	393.70	368.30	5.70
267-5313	670.00	670.00	550.01	47.10	122-0174	566.50	477.70	241.40	7.80
272-4802	702.01	624.99	324.99	12.03	130-7963	683.26	375.92	228.60	10.91
273-5466	723.90	406.40	406.40	24.91	142-8811	533.40	463.55	187.96	8.96
275-3651	645.01	637.01	42.01	12.03	149-3509	1102.36	139.70	121.92	5.00
275-4926	540.00	340.00	330.00	11.42	163-0451	1505.00	442.60	374.60	25.85
278-9014	2667.00	673.10	558.80	177.27	7N-1659	1023.62	167.64	167.64	9.55
281-2263	939.80	431.80	406.40	23.86	1N-2936	642.62	495.30	345.44	30.45
287-0108	627.00	381.99	381.99	11.02	1N-3452	988.06	381.00	254.00	17.27
291-0139	500.00	500.00	419.00	39.08	1W-0370	1079.50	304.80	304.80	14.55
292-1873	2667.00	838.20	622.30	180.00	1W-1766	749.30	264.16	162.56	12.73
296-5054	1739.90	647.70	609.60	74.90	1W-2572	548.64	393.70	254.00	13.18
301-6865	812.80	368.30	292.10	10.14	1W-4623	655.32	393.70	165.10	8.18
302-0335	497.84	401.32	401.32	18.17	1W-9229	635.00	330.20	330.20	11.68
303-1454	659.00	243.99	180.01	7.29	1W-9519	1122.68	299.72	299.72	16.14
303-1455	659.99	270.00	180.01	7.27	1W-9832	1127.76	297.18	297.18	14.24
305-1256	1342.90	813.21	792.99	186.36	2P-5609	939.80	396.24	269.24	22.73
305-4925	845.01	794.00	395.00	21.04	2W-8437	787.40	660.40	533.40	37.73
320-0775	1104.90	508.00	381.00	38.13	2W-9626	863.60	635.00	469.90	41.82

Muffler (Cont'd.)

Part Number	For Shipping Purposes				Part Number	For Shipping Purposes			
	Length (mm)	Width (mm)	Height (mm)	Weight (kg)		Length (mm)	Width (mm)	Height (mm)	Weight (kg)
4N-4577	838.20	292.10	208.28	13.40	7N-2187	1079.50	381.00	254.00	18.64
4N-6638	767.08	279.40	266.70	9.05	7N-4674	449.58	266.70	264.16	5.45
4P-0660	538.48	203.20	203.20	4.73	7N-6905	1137.92	434.34	307.34	38.64
4P-4010	647.70	330.20	304.80	15.00	7N-8117	795.02	256.54	154.94	7.73
4W-0532	896.62	675.64	462.28	60.45	7N-8923	977.90	457.20	317.50	36.16
4W-5053	660.40	393.70	266.70	16.25	7N-9647	1115.06	693.42	396.24	31.36
4Y-4951	782.80	310.20	338.20	11.90	7W-3659	734.06	678.18	408.94	38.18
6I-0137	1513.84	375.92	304.80	25.45	7W-5867	810.26	490.22	601.98	48.64
6I-1715	1127.76	302.26	302.26	16.47	7W-8445	1117.60	381.00	254.00	21.36
7C-6398	746.76	746.76	274.32	20.91	8N-5388	528.32	381.00	259.08	21.06
7C-7344	647.70	178.05	178.05	4.85	8S-5438	952.50	381.00	254.00	19.09
7E-6811	1371.60	609.60	431.80	62.73	9Y-1403	688.85	367.79	273.05	12.73
7N-3235	845.82	307.34	226.06	22.27	2P-2728	1099.82	381.00	254.00	21.36
7N-9674	728.98	695.96	274.32	23.18	2P-2744	883.92	299.72	226.06	18.64
7W-3660	734.06	678.18	408.94	38.18	2W-3428	1097.28	396.24	312.42	31.05
7W-7181	1648.46	480.06	266.70	39.55	4N-1565	1137.92	459.74	307.34	37.73
7W-7182	1645.92	589.28	261.62	40.91	4N-5184	1049.02	464.82	304.80	31.82
7W-7439	736.60	304.80	304.80	13.20	4P-6199	1600.20	596.90	254.00	43.18
7W-9707	1079.50	457.20	457.20	54.55	4P-6515	1612.90	355.60	274.32	41.36
7Y-1978	876.30	444.50	419.10	16.00	6I-3015	1739.90	482.60	406.40	76.36
7Y-2040	736.60	419.10	368.30	11.82	6N-1878	1036.32	396.24	269.24	29.09
8N-4975	1099.82	355.60	248.92	19.55	6N-3964	609.60	403.86	274.32	22.73
8N-9463	563.88	304.80	215.90	7.82	7E-6061	1473.20	622.30	622.30	56.82
8S-0905	1181.10	165.10	165.10	8.18	7E-6691	749.30	436.88	393.70	27.27
8S-6443	965.20	368.30	254.00	16.36	7N-0061	571.50	317.50	317.50	17.27
8S-6558	845.82	292.10	210.82	12.73	7N-5539	1122.68	177.80	177.80	8.18
8S-6559	1099.82	381.00	254.00	18.64	8N-3172	1409.70	360.68	284.48	38.18
9S-7079	833.12	284.48	210.82	12.27	8N-3281	1409.70	381.00	284.48	38.18
9S-7786	1143.00	381.00	254.00	21.36	7C-3693	652.78	546.10	264.16	17.77
9Y-0254	563.88	375.92	266.70	7.73	7C-6444	891.54	383.54	297.18	26.82
9Y-4668	612.14	482.60	220.98	17.68	7Y-1508	784.86	391.16	304.01	11.82
1W-4187	703.58	571.50	317.50	30.00	4N-8307	1295.40	609.60	444.50	41.82
2W-3597	607.06	355.60	299.72	14.55	4W-6206	628.65	381.00	330.20	19.09
4N-8942	949.96	388.62	266.70	22.27	7E-2944	762.00	558.80	261.62	22.73
4P-2496	789.94	670.56	368.30	17.00	2N-1572	584.20	152.40	152.40	3.95
4P-4757	467.36	431.80	203.20	7.79	2P-5081	883.92	256.54	157.48	7.45
4W-0969	980.44	614.68	411.48	36.36	8S-9473	617.22	589.28	248.92	14.09
4W-3632	728.98	424.18	396.24	25.18	1R-7158	685.80	365.76	330.20	10.23
4W-8485	762.00	647.70	419.10	38.18	7E-7296	444.50	279.40	266.70	4.84
6I-2408	736.60	584.20	355.60	20.92	8S-8167	1117.60	393.70	266.70	19.24
6I-2518	596.90	444.50	246.38	11.36	2W-3773	1137.92	381.00	254.00	20.04
6I-3662	800.10	558.80	254.00	17.68	2W-6737	1143.00	419.10	281.94	37.27
6N-0731	590.55	434.34	254.00	10.48	4Y-5062	607.06	421.64	256.54	9.09
6N-4183	1143.00	396.24	269.24	30.00	4W-0456	939.80	292.10	210.82	14.55
6N-4184	929.64	553.72	375.92	49.55	1N-3450	939.80	292.10	210.82	15.91
7C-5851	627.00	381.00	254.00	13.86	1N-3530	962.66	459.74	307.34	30.68
7E-0853	762.00	304.80	304.80	20.23	1W-2491	1099.82	381.00	254.00	24.09
7N-1393	731.52	622.30	254.00	15.91	1W-2492	1099.82	381.00	254.00	19.55

Exhaust

Muffler (Cont'd.)

Part Number	For Shipping Purposes			
	Length (mm)	Width (mm)	Height (mm)	Weight (kg)
1W-8940	1150.62	381.00	254.00	23.18
2P-5224	1188.72	307.34	226.06	25.00
2W-9141	939.80	304.80	304.80	15.00
4N-6640	774.70	274.32	274.32	13.64
4W-3875	609.60	377.95	225.81	12.27
4W-9073	584.20	406.40	304.80	14.64
7E-3577	535.94	198.12	198.12	4.32
7W-7786	675.64	406.40	254.00	13.64
8N-6958	596.90	401.32	264.16	12.73
9Y-1402	668.02	378.46	292.10	12.73
9Y-5947	1092.20	406.40	266.70	27.61
4P-0614	474.98	330.20	241.30	8.02
081-5671	825.50	170.18	170.18	6.93
152-1681	594.36	388.62	302.26	19.49
102-3927	927.10	647.70	368.30	20.82
109-9323	889.00	414.02	342.90	18.62
109-9463	876.30	431.80	431.80	19.03
112-5088	563.88	342.90	281.94	10.44
112-5089	563.12	278.38	215.90	9.09
112-5090	563.12	278.38	203.20	10.23
112-5091	566.42	271.78	215.90	6.98
112-7670	863.60	317.50	304.80	15.55
118-9906	797.56	393.70	325.12	14.47
119-8411	685.80	635.00	215.90	11.36
122-3169	805.18	558.80	381.00	42.73
122-4990	1625.60	383.54	259.08	37.27
122-7044	609.60	589.28	431.80	33.70
123-1322	1358.90	431.80	355.60	32.73
123-1323	1447.80	558.80	457.20	39.55
127-8592	469.90	261.62	254.00	7.27
127-8594	469.90	304.80	256.54	7.66
128-1009	792.48	543.56	259.08	16.89
129-4048	1700.30	263.10	203.20	12.00
129-9459	868.68	553.72	535.94	38.18
131-8259	1397.00	241.30	152.40	7.73
133-5927	868.68	553.72	533.40	38.18
133-9285	474.98	254.00	251.46	10.53
133-9478	787.40	340.36	289.56	10.46
134-5423	685.80	685.80	284.48	30.91
134-7900	1219.20	243.84	116.84	12.71
136-5108	1505.00	442.60	374.60	25.85
137-4097	1143.00	254.00	254.00	11.82
137-6995	718.82	668.02	226.06	17.77
139-8723	922.02	505.46	457.20	23.64
139-8888	965.20	685.80	381.00	40.91
142-8820	584.20	508.00	127.00	8.30
142-8845	513.08	467.36	198.12	9.18
145-4585	617.22	472.44	208.28	10.84

Part Number	For Shipping Purposes			
	Length (mm)	Width (mm)	Height (mm)	Weight (kg)
146-9733	800.10	292.10	226.06	15.92
150-7147	668.02	635.00	271.78	23.66
151-9498	1104.90	673.10	609.60	46.00
152-9716	642.62	495.30	469.90	43.59
154-3627	2768.60	838.20	711.20	165.91
154-3628	2768.60	838.20	711.20	165.91
157-2828	800.10	647.70	426.72	38.00
158-2318	1536.70	624.84	426.72	53.86
159-3263	645.16	510.54	279.40	11.16
159-7441	876.30	477.52	375.92	28.39
160-7012	3218.18	457.20	457.20	127.73
160-7013	3218.18	457.20	457.20	127.73
160-8583	1079.50	1003.30	393.70	29.09
163-6559	876.30	449.58	396.24	28.75
164-7351	624.84	330.20	254.00	9.09
166-6670	693.42	673.10	297.18	27.95
170-3309	900.00	659.99	330.00	22.05
171-0475	513.08	322.58	152.40	3.93
171-0696	508.00	330.20	152.40	3.91
173-7129	762.00	581.66	254.00	9.83
175-2931	640.08	609.60	350.52	29.48
176-1368	838.20	657.86	431.80	48.57
190-4758	584.20	266.70	152.40	10.20
191-7556	401.32	299.72	208.28	5.63
191-9779	596.90	500.38	139.70	7.89
192-2614	528.32	502.92	205.74	9.50
192-4241	571.50	381.00	368.30	18.27
193-8598	901.70	711.20	558.80	60.91
193-8599	863.60	469.90	406.40	54.55
194-7246	566.42	533.40	381.00	13.39
194-7554	401.32	287.02	266.70	5.20
196-8203	949.96	518.16	457.20	24.30
198-1786	655.32	508.00	279.40	17.25
198-1939	662.94	647.70	287.02	28.64
198-2382	673.10	317.50	317.50	18.45
199-3003	660.40	431.80	317.50	20.17
199-5067	762.00	762.00	254.00	10.31
199-5068	678.18	596.90	266.70	27.34
200-3199	711.20	635.00	259.08	18.34
201-0346	487.68	388.62	335.28	13.43
202-0755	635.00	299.72	287.02	19.45
202-9716	495.30	457.20	170.18	9.30
203-9753	698.50	617.22	210.82	11.80
204-5071	645.00	216.00	455.70	7.60
205-6642	952.50	508.00	406.40	32.11
205-6785	624.99	315.01	216.99	11.65
205-9880	929.01	457.00	300.00	29.55
208-5440	1016.00	635.00	355.60	32.07

Muffler (Cont'd.)

Part Number	For Shipping Purposes				Part Number	For Shipping Purposes			
	Length (mm)	Width (mm)	Height (mm)	Weight (kg)		Length (mm)	Width (mm)	Height (mm)	Weight (kg)
208-8088	1092.20	635.00	355.60	31.82	289-3233	825.50	596.90	317.50	22.89
209-3449	375.92	274.32	317.50	5.70	290-6090	673.10	292.10	203.20	10.86
211-1311	838.20	533.40	292.10	27.73	291-0140	685.80	508.00	508.00	48.10
214-3232	508.00	487.68	177.80	9.05	291-3943	1028.70	546.10	355.60	240.91
216-1678	762.00	533.40	381.00	26.50	292-8536	965.20	457.20	304.80	14.36
222-0458	1193.80	260.35	260.35	22.52	293-4824	609.60	431.80	426.72	6.41
223-3646	939.80	635.00	482.60	42.73	295-8281	812.80	584.20	406.40	28.91
224-2687	1028.70	774.70	622.30	37.50	295-8282	609.60	431.80	622.30	28.91
224-3156	838.20	660.40	508.00	60.00	297-1711	685.80	609.60	406.40	22.14
2T-3814	952.50	393.70	266.70	21.72	298-6551	591.82	261.62	431.80	15.00
4P-6649	685.80	609.60	254.00	21.64	299-7985	502.01	457.20	304.80	12.09
7W-5194	500.38	350.52	255.27	8.18	303-2578	400.00	259.99	240.00	8.77
224-3157	863.60	508.00	660.40	23.05	303-2579	388.01	250.01	157.99	8.52
6I-6425	876.30	457.20	406.40	16.44	303-2580	340.00	259.99	154.99	7.63
228-1770	609.60	393.70	167.64	7.00	303-2581	335.28	236.22	160.02	8.06
231-7081	965.20	584.20	558.80	48.64	305-3795	576.58	330.20	685.80	28.18
231-7952	355.00	165.00	205.00	5.80	305-4672	1054.10	571.50	393.70	34.09
233-1254	876.30	381.00	342.90	18.64	306-1429	665.00	462.00	453.01	20.04
236-8761	685.80	584.20	279.40	31.36	310-7296	1828.80	1143.00	939.80	358.18
237-7873	774.70	452.12	452.12	27.11	310-9618	1050.01	540.00	389.99	33.07
4Y-9542	782.20	310.20	338.20	11.90	317-2731	1104.90	533.40	368.30	36.89
239-6580	1050.01	540.00	389.99	33.07	324-4082	1040.00	640.00	459.99	33.07
239-7897	1092.20	762.00	508.00	40.32	324-4083	1150.01	630.00	619.99	71.45
243-1675	900.00	570.00	500.00	36.08	327-7233	1040.00	750.01	419.99	33.07
243-6273	1340.00	389.99	359.99	65.14	333-3400	900.00	350.01	400.00	27.06
243-6276	1676.40	495.30	406.40	52.73	342-4460	1008.38	520.70	533.40	45.70
243-6277	1676.40	685.80	635.00	57.27	342-5926	812.80	357.81	678.00	33.91
243-6278	2260.60	787.40	685.80	76.36	347-8589	724.00	501.60	336.80	24.61
247-3408	889.00	355.60	304.80	21.82	348-6741	685.80	330.20	286.99	6.82
250-2220	965.20	508.00	596.90	37.58	350-2273	2590.80	1016.00	919.99	405.15
252-1152	680.01	640.00	230.00	20.04	352-1486	508.00	294.64	454.99	19.55
252-1153	670.00	659.99	280.01	22.55	353-4850	1028.70	558.80	558.80	68.76
252-7173	659.99	643.99	289.99	22.89	354-3378	891.01	529.49	362.20	36.78
255-3052	900.00	419.99	340.00	24.05	354-3383	980.11	642.01	362.20	34.07
261-9709	464.70	183.00	420.00	9.30	354-6193	2200.00	1300.00	780.01	304.64
262-1684	1070.00	589.99	400.00	34.07	354-8437	1244.60	603.25	678.18	95.20
262-2757	482.60	304.80	622.30	16.64	355-0792	1181.10	584.20	482.60	84.09
266-6173	780.01	659.99	350.01	19.04	355-7761	510.01	219.99	219.99	15.03
266-6213	1016.00	584.20	381.00	33.00	355-9070	248.92	259.08	403.86	7.56
267-1034	383.54	162.56	154.94	6.12	358-0503	1120.00	460.00	560.00	82.60
276-5053	670.00	219.99	219.99	19.04	358-0504	1120.00	460.00	560.00	82.60
276-5055	350.01	289.99	289.99	13.03	359-1059	845.00	405.00	485.00	45.00
277-4927	384.81	213.36	152.40	6.15	359-3633	860.00	590.00	495.00	52.00
277-8722	723.90	261.62	261.62	36.36	359-3634	1040.00	580.00	580.00	56.00
283-8256	1828.80	685.80	419.10	91.36	359-6596	770.00	455.00	275.00	24.10
285-4494	952.50	558.80	546.10	51.82	360-2691	1030.00	660.00	470.00	51.00
287-2446	2921.00	1168.40	1282.70	557.20	360-2692	770.00	455.00	275.00	24.10
288-5312	1016.00	476.25	533.40	44.09	360-2693	855.00	725.00	575.00	54.00

Exhaust

Muffler (Cont'd.)

Part Number	For Shipping Purposes				Part Number	For Shipping Purposes			
	Length (mm)	Width (mm)	Height (mm)	Weight (kg)		Length (mm)	Width (mm)	Height (mm)	Weight (kg)
360-2695	640.00	365.00	260.00	13.50	229-9601	570.00	380.01	359.99	22.55
360-2697	1000.00	659.99	500.00	50.11	230-6994	750.01	570.00	370.00	21.04
366-3821	560.71	560.71	767.31	56.36	231-1591	660.40	469.90	228.60	16.45
371-1287	840.00	770.00	319.99	23.20	242-1737	430.00	389.99	245.01	6.82
372-5951	431.80	431.80	203.20	4.15	242-2208	470.00	280.01	210.01	7.22
374-6040	756.01	440.99	261.01	40.08	257-3189	480.01	370.00	370.00	16.74
377-7710	1159.69	310.01	259.99	30.06	258-2419	685.80	279.40	317.50	9.14
377-7714	1389.99	350.01	300.00	16.23	261-6639	863.60	660.40	508.00	30.36
378-1265	384.99	235.00	230.00	7.25	264-3332	1676.40	762.00	609.60	177.27
378-6752	495.30	342.90	317.50	15.00	268-1168	1100.00	330.00	250.01	10.02
379-9919	643.89	408.31	408.31	34.16	269-6296	1219.20	254.00	254.00	12.14
380-0109	1358.90	812.80	889.00	250.53	269-8126	535.00	275.01	224.99	10.06
380-9964	843.00	715.01	554.99	58.12	275-0568	952.50	762.00	647.70	73.15
383-1510	1370.00	613.00	403.00	56.12	285-8552	939.80	457.20	558.80	19.09
383-4124	497.84	370.84	294.64	10.24	290-5638	731.52	299.72	292.10	18.24
387-5268	1841.50	927.10	1104.90	345.29	290-5642	759.99	289.99	289.99	18.34
389-8796	475.01	450.01	330.00	12.43	291-5505	635.00	266.70	228.60	6.36
390-0274	1028.70	457.20	508.00	42.79	299-5420	762.00	635.00	381.00	15.23
390-0303	1028.70	508.00	469.90	42.79	300-4485	520.70	228.60	228.60	5.82
391-2952	605.99	241.30	241.30	5.91	302-0633	838.20	609.60	431.80	25.15
391-2953	673.10	342.90	304.80	23.64	307-1303	1092.20	381.00	254.00	29.91
391-7200	459.99	230.00	230.00	12.53	312-5900	1066.80	558.80	381.00	33.27
392-0198	889.00	584.20	533.40	43.09	312-5901	1066.80	558.80	381.00	33.27
392-0245	500.00	359.99	359.99	20.04	317-8143	1030.91	728.98	444.50	76.47
415-2790	495.30	342.90	330.20	12.75	318-3667	1210.01	310.01	259.99	16.03
415-2802	378.00	510.01	159.99	8.50	200-3200	647.70	622.30	304.80	32.95
415-2806	502.92	449.58	187.96	8.30	122-4989	1625.60	571.50	259.08	37.23
415-2809	668.02	317.50	248.92	9.83	211-8768	812.80	322.58	259.08	26.52
417-9639	1735.00	665.00	835.00	89.93	213-6732	825.50	431.80	304.80	26.41
419-0042	592.00	517.50	300.00	32.07	269-7114	792.48	457.20	406.40	31.18
422-5192	1562.10	571.50	368.30	60.13	325-7106	883.01	419.99	300.00	31.82
431-4400	775.89	768.50	320.04	23.05	442-0050	939.80	444.50	292.10	32.27
437-0392	1030.00	719.99	611.00	72.65	211-8767	825.50	469.90	292.10	26.61
235-5364	571.50	254.00	228.60	5.23	213-6733	965.20	431.80	279.40	22.27
359-3496	554.99	545.01	219.99	7.74	269-7115	787.40	431.80	381.00	31.64
161-0695	726.44	398.78	200.66	23.30	325-7107	965.20	431.80	304.80	32.05
175-6542	452.12	254.00	208.28	7.11	442-0049	939.80	444.50	292.10	32.27
180-3269	524.99	415.01	304.80	13.38	235-5363	559.99	240.00	230.00	6.87
195-7858	812.80	495.30	330.20	21.36	269-8174	508.00	292.10	241.30	6.41
199-9700	533.40	444.50	342.90	13.26	273-2596	558.80	266.70	266.70	6.50
200-5024	736.60	591.82	302.26	18.18	325-3495	670.00	400.00	310.01	5.81
202-8135	655.32	317.50	317.50	16.26	359-3495	550.01	315.01	240.00	7.38
203-9931	624.84	350.52	297.18	10.12	384-8804	559.99	304.80	224.99	6.50
208-0421	914.40	381.00	330.20	30.45	276-2245	1080.01	480.01	210.01	24.05
216-9040	655.32	482.60	220.98	17.16	142-1857	1155.70	457.20	419.10	32.00
224-7519	650.24	441.96	233.68	13.52	152-0596	1549.40	685.80	1092.20	200.91
226-5611	546.10	330.20	279.40	10.80	165-6557	1186.18	609.60	457.20	62.27
226-5612	855.98	358.14	307.34	16.02	313-9418	2514.60	762.00	635.00	450.95

Muffler (Cont'd.)

Part Number	For Shipping Purposes			
	Length (mm)	Width (mm)	Height (mm)	Weight (kg)
315-4154	1879.60	660.40	736.60	113.64
370-1066	459.99	400.00	400.00	15.93
382-2773	990.60	787.40	558.80	89.69
437-0390	1066.80	711.20	571.50	88.19
264-0023	1752.60	889.00	787.40	259.09
264-0025	1955.80	939.80	1016.00	338.64
264-0026	2392.68	1221.74	1371.60	377.27
205-2940	3225.80	609.60	609.60	261.36
142-1576	474.98	247.65	247.65	6.89
144-1651	1178.56	401.32	266.70	24.84
231-7645	1000.00	400.00	200.00	24.05
260-0516	500.00	250.01	210.01	6.11
187-8247	533.40	520.70	226.06	9.77
287-0206	641.35	671.96	342.90	12.03
266-6252	647.70	894.05	408.94	16.00
517-7914	279.40	512.04	279.40	9.16
272-4674	645.01	754.38	609.60	13.50
7S8-8443	680.72	346.71	228.60	6.20
7E6-6811	1371.60	3505.20	431.80	62.73
7W5-5867	812.80	2718.05	482.60	48.64
1W4-4187	703.58	1676.40	317.50	30.00
8N4-4975	1099.82	1092.17	248.92	19.55
2W9-9626	863.60	2336.77	469.90	41.82

Part Number	For Shipping Purposes			
	Length (mm)	Width (mm)	Height (mm)	Weight (kg)
7W3-3659	734.06	2133.63	408.94	38.18
2W3-3773	1137.92	1119.94	254.00	20.04
7N6-6905	1137.92	2158.97	307.34	38.64
4W0-0532	896.62	3378.20	462.28	60.45
2W8-8437	787.40	2108.20	533.40	37.73
4W8-8485	762.00	2133.63	419.10	38.18
7W7-7182	1645.92	2286.00	261.62	40.91
7N3-3235	845.82	1244.60	226.06	22.27
7W8-8445	1117.60	1193.80	254.00	21.36
4W0-0969	980.44	2032.00	411.48	36.36
4P2-2496	789.94	949.93	368.30	17.00
7W7-7439	736.60	737.36	304.80	13.20
4N4-4577	838.20	748.51	208.28	13.40
7W3-3660	734.06	2133.63	408.94	38.18
7N1-1393	731.52	889.03	254.00	15.91
7Y1-1508	784.86	660.40	304.01	11.82
7W7-7181	1648.46	2209.80	266.70	39.55
1N3-3452	988.06	965.23	254.00	17.27
7C3-3693	652.78	993.14	264.16	17.77
9Y4-4668	612.14	988.09	220.98	17.68
1W9-9229	635.00	652.78	330.20	11.68
6I6-6425	876.30	918.92	406.40	16.44

Belts

V-Belt Sizing Guide



- Belt size refers to the pulley groove width (B) for belts under and equal to 1/2 in.
- Belt size refers to the belt top width (A) for belts over 1/2 in.

Belt Size	A	B
	Belt Top Width	Pulley Groove Width
9.6 mm (3/8 in)	10.72 mm (0.422 in)	9.65 mm (0.380 in)
12.7 mm (1/2 in)	13.89 mm (0.547 in)	12.70 mm (0.500 in)
17.5 mm (11/16 in)	17.48 mm (0.688 in)	15.88 mm (0.625 in)
19.1 mm (3/4 in)	19.05 mm (0.750 in)	17.53 mm (0.690 in)
22.2 mm (7/8 in)	21.51 mm (0.847 in)	19.94 mm (0.785 in)
23.8 mm (15/16 in)	23.83 mm (0.938 in)	22.30 mm (0.878 in)
27.0 mm (1 1/16 in)	26.97 mm (1.062 in)	25.48 mm (1.003 in)
31.8 mm (1 1/4 in)	32.94 mm (1.297 in)	31.83 mm (1.253 in)

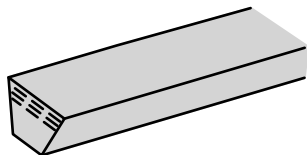
SAE effective length for COG and NON-COG belts equals:

Outer circumference minus 9.65 mm (0.38 in) for 3/8 inch and 1/2 inch belt sizes. Outer circumference minus 14.48 mm (0.57 in) for 11/16 in and larger belt sizes.

V-Belt Maintenance Tips

- Check for cracked, worn, or frayed belts. On matched belt sets, always replace the complete set. If just one belt is bad, uneven load on belts, pulleys, bearings, and shafts can occur.
- Check pulley grooves to make sure they are not worn, damaged, or aligned incorrectly. Poor belt to pulley contact will result in rapid wear and short life.

V-Belts - Non-Cogged



Size	Length	Part Number	Set Part Number	Set Quantity
10.7 mm (0.42 in)	895 mm (35.24 in)	286-1041	–	–
12.7 mm (0.50 in)	641 mm (25.24 in)	220-8129	–	–
12.7 mm (0.50 in)	787 mm (30.98 in)	7C-2163	–	–
12.7 mm (0.50 in)	800 mm (31.50 in)	190-0369	–	–
12.7 mm (0.50 in)	850 mm (33.46 in)	156-7124	156-7121	2
12.7 mm (0.50 in)	885 mm (34.84 in)	248-3100	–	–
12.7 mm (0.50 in)	965.2 mm (38 in)	258-3539	–	–
12.7 mm (0.50 in)	985 mm (38.78 in)	241-2894	–	–
12.7 mm (0.50 in)	1016 mm (40 in)	7C-8236	–	–
12.7 mm (0.50 in)	1054 mm (41.50 in)	1P-9744	–	–
12.7 mm (0.50 in)	1080 mm (42.52 in)	228-9937	–	–

V-Belts - Non-Cogged (cont'd.)

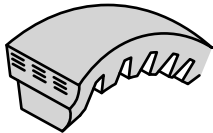
Size	Length	Part Number	Set Part Number	Set Quantity
12.7 mm (0.50 in)	1085.9 mm (42.75 in)	229-3540	—	—
12.7 mm (0.50 in)	1092 mm (42.99 in)	4N-7335	—	—
12.7 mm (0.50 in)	1105 mm (43.50 in)	9N-1329	9N-1330	2
12.7 mm (0.50 in)	1118 mm (44.02 in)	1N-3743	—	—
12.7 mm (0.50 in)	1143 mm (45 in)	2P-6820	9N-1322	2
12.7 mm (0.50 in)	1148 mm (45.20 in)	112-6055	—	—
12.7 mm (0.50 in)	1168 mm (45.98 in)	2P-6819	—	—
12.7 mm (0.50 in)	1181 mm (46.50 in)	4N-9891	—	—
12.7 mm (0.50 in)	1194 mm (47.01 in)	2P-6818	—	—
12.7 mm (0.50 in)	1206 mm (47.48 in)	1W-2934	—	—
12.7 mm (0.50 in)	1232 mm (48.50 in)	1P-3085	9N-1323	2
12.7 mm (0.50 in)	1245 mm (49.02 in)	7E-1362	—	—
12.7 mm (0.50 in)	1257 mm (49.49 in)	1P-4334	4N-8580	2
12.7 mm (0.50 in)	1270 mm (50 in)	3P-0130	9L-6128	2
12.7 mm (0.50 in)	1283 mm (50.51 in)	2P-6212	209-8749	2
12.7 mm (0.50 in)	1295 mm (50.98 in)	9Y-6117	—	—
12.7 mm (0.50 in)	1308 mm (51.50 in)	4N-6130	4N-8597	2
12.7 mm (0.50 in)	1334 mm (52.52 in)	2P-4191	7W-3896	2
12.7 mm (0.50 in)	1346 mm (52.99 in)	068-0610	—	—
12.7 mm (0.50 in)	1372 mm (54.02 in)	9L-6125	9L-6126	3
12.7 mm (0.50 in)	1384 mm (54.49 in)	4P-2405	—	—
12.7 mm (0.50 in)	1397 mm (55 in)	8N-0503	—	—
12.7 mm (0.50 in)	1410 mm (55.51 in)	2P-4685	—	—
12.7 mm (0.50 in)	1435 mm (56.50 in)	4N-7610	—	—
12.7 mm (0.50 in)	1460 mm (57.48 in)	2P-4230	7N-8518	2
12.7 mm (0.50 in)	1473 mm (57.99 in)	159-9261	—	—
12.7 mm (0.50 in)	1549 mm (60.98 in)	1P-6868	9N-3483	2
12.7 mm (0.50 in)	1588 mm (62.52 in)	1P-4313	6N-0724	2
12.7 mm (0.50 in)	1600 mm (62.99 in)	2P-6161	—	—
12.7 mm (0.50 in)	1613 mm (63.50 in)	174-9030	—	—
12.7 mm (0.50 in)	1626 mm (64.02 in)	216-0349	—	—
12.7 mm (0.50 in)	1638 mm (64.49 in)	2P-7333	053-3453	2
12.7 mm (0.50 in)	1664 mm (65.51 in)	2P-8720	9L-6130	3
12.7 mm (0.50 in)	1689 mm (66.50 in)	1N-4556	—	—
12.7 mm (0.50 in)	1714 mm (67.48 in)	2P-6532	—	—
12.7 mm (0.50 in)	1727 mm (67.99 in)	199-6602	—	—
12.7 mm (0.50 in)	1803 mm (70.98 in)	1W-6039	9Y-8312	2
12.7 mm (0.50 in)	1829 mm (72.01 in)	7W-5207	—	—
12.7 mm (0.50 in)	1842 mm (72.52 in)	127-4766	127-4767	2
12.7 mm (0.50 in)	1854 mm (72.99 in)	1N-3795	—	—
12.7 mm (0.50 in)	1880 mm (74.02 in)	1W-9693	—	—

Belts

V-Belts - Non-Cogged (cont'd.)

Size	Length	Part Number	Set Part Number	Set Quantity
12.7 mm (0.50 in)	1905 mm (75 in)	160-1821	–	–
12.7 mm (0.50 in)	1918 mm (75.51 in)	147-8910	147-8908	2
12.7 mm (0.50 in)	2083 mm (82.01 in)	9Y-1954	–	–
12.7 mm (0.50 in)	2108 mm (82.99 in)	6I-1758	–	–
12.7 mm (0.50 in)	2159 mm (85 in)	103-1612	–	–
12.7 mm (0.50 in)	2184 mm (85.98 in)	1W-8908	–	–
12.7 mm (0.50 in)	2235 mm (87.99 in)	2W-3906	–	–
12.7 mm (0.50 in)	2286 mm (90 in)	4W-5825	–	–
13 mm (0.51 in)	1219 mm (47.99 in)	255-2927	–	–
15.9 mm (0.63 in)	1435 mm (56.50 in)	156-7126	156-7123	3
15.9 mm (0.63 in)	1524 mm (60 in)	9N-1321	9N-1326	3
15.9 mm (0.63 in)	1664 mm (65.51 in)	9N-1320	9N-2802	2
15.9 mm (0.63 in)	1740 mm (68.50 in)	6N-7721	–	–

V-Belts - Cogged



Size	Length	Part Number	Set Part Number	Set Qty.
9.6 mm (0.38 in)	673 mm (26.50 in)	6L-6212	6L-6213	2
9.6 mm (0.38 in)	813 mm (32.01 in)	7N-0510	–	–
9.6 mm (0.38 in)	914 mm (35.98 in)	1N-8404	1N-8405	2
9.6 mm (0.38 in)	1016 mm (40 in)	030-2630	7L-4528	2
9.6 mm (0.38 in)	1105 mm (43.50 in)	2W-2531	9Y-7159	2
9.6 mm (0.38 in)	1257 mm (49.49 in)	1N-9310	2N-0159	2
9.6 mm (0.38 in)	1283 mm (50.51 in)	7N-3160	7N-3157	2
9.6 mm (0.38 in)	1308 mm (51.50 in)	7L-5090	7L-5091	2
9.6 mm (0.38 in)	1410 mm (55.51 in)	7N-3159	7N-3158	2
12.7 mm (0.50 in)	711 mm (27.99 in)	4H-0552	–	–
12.7 mm (0.50 in)	737 mm (29.02 in)	2L-1478	–	–
12.7 mm (0.50 in)	800 mm (31.50 in)	9L-2266	9L-2267	2
12.7 mm (0.50 in)	838 mm (32.99 in)	004-0909	–	–
12.7 mm (0.50 in)	851 mm (33.50 in)	061-8384	–	–
12.7 mm (0.50 in)	864 mm (34.02 in)	036-6775	–	–
12.7 mm (0.50 in)	876 mm (34.49 in)	7E-0744	–	–
12.7 mm (0.50 in)	889 mm (35 in)	030-3289	–	–
12.7 mm (0.50 in)	902 mm (35.51 in)	037-2448	–	–
12.7 mm (0.50 in)	914 mm (35.98 in)	036-2176	–	–
12.7 mm (0.50 in)	940 mm (37.01 in)	030-3291	–	–
12.7 mm (0.50 in)	952 mm (37.48 in)	5L-3979	5L-3980	2

V-Belts - Cogged (cont'd.)

Size	Length	Part Number	Set Part Number	Set Qty.
12.7 mm (0.50 in)	975 mm (38.39 in)	304-4010	–	–
12.7 mm (0.50 in)	991 mm (39.02 in)	1N-4635	2W-0237	2
12.7 mm (0.50 in)	1003 mm (39.49 in)	8N-3504	–	–
12.7 mm (0.50 in)	1016 mm (40 in)	9L-4896	9L-6177	2
12.7 mm (0.50 in)	1029 mm (40.51 in)	001-5645	–	–
12.7 mm (0.50 in)	1041 mm (40.98 in)	9L-1126	9L-1125	2
12.7 mm (0.50 in)	1054 mm (41.50 in)	4M-6291	9L-4226	2
12.7 mm (0.50 in)	1080 mm (42.52 in)	061-7139	2N-1493	2
12.7 mm (0.50 in)	1092 mm (42.99 in)	9L-4012	9L-4013	2
12.7 mm (0.50 in)	1105 mm (43.50 in)	1W-5555	1N-4223	2
12.7 mm (0.50 in)	1118 mm (44.02 in)	068-5590	061-9508	2
12.7 mm (0.50 in)	1130 mm (44.49 in)	5L-3834	5L-3826	2
12.7 mm (0.50 in)	1143 mm (45 in)	4L-6060	3N-4658	2
12.7 mm (0.50 in)	1168 mm (45.98 in)	9M-1091	6L-7954	2
12.7 mm (0.50 in)	1181 mm (46.50 in)	9Y-1131	–	–
12.7 mm (0.50 in)	1194 mm (47.01 in)	8L-8646	–	–
12.7 mm (0.50 in)	1206 mm (47.48 in)	6L-3408	6L-8161	2
12.7 mm (0.50 in)	1219 mm (47.99 in)	9L-2248	9L-0619	2
12.7 mm (0.50 in)	1232 mm (48.50 in)	6N-3113	111-0575	2
12.7 mm (0.50 in)	1245 mm (49.02 in)	3K-3408	5N-6350	2
12.7 mm (0.50 in)	1257 mm (49.49 in)	6F-1992	1S-1193	2
12.7 mm (0.50 in)	1270 mm (50 in)	5M-8137	8L-8984	3
12.7 mm (0.50 in)	1283 mm (50.51 in)	5L-4996	5L-4995	2
12.7 mm (0.50 in)	1308 mm (51.50 in)	5M-8135	3N-1491	2
12.7 mm (0.50 in)	1321 mm (52.01 in)	9L-0894	9L-0895	2
12.7 mm (0.50 in)	1334 mm (52.52 in)	3S-8448	3S-8447	3
12.7 mm (0.50 in)	1346 mm (52.99 in)	5L-3307	5L-3308	2
12.7 mm (0.50 in)	1359 mm (53.50 in)	3S-6272	8L-4526	2
12.7 mm (0.50 in)	1372 mm (54.02 in)	061-7140	130-3216	2
12.7 mm (0.50 in)	1397 mm (55 in)	9L-1553	9L-1557	2
12.7 mm (0.50 in)	1410 mm (55.51 in)	2S-2743	2S-2756	3
12.7 mm (0.50 in)	1422 mm (55.98 in)	3S-3964	5N-9303	2
12.7 mm (0.50 in)	1448 mm (57.01 in)	9L-1128	9L-1127	4
12.7 mm (0.50 in)	1460 mm (57.48 in)	3S-3961	4W-6025	2
12.7 mm (0.50 in)	1473 mm (57.99 in)	7L-5001	9L-1226	3
12.7 mm (0.50 in)	1486 mm (58.50 in)	2S-5218	2S-9779	2
12.7 mm (0.50 in)	1499 mm (59.02 in)	6L-5115	2N-2297	2
12.7 mm (0.50 in)	1511 mm (59.49 in)	7E-5798	7E-5799	3
12.7 mm (0.50 in)	1524 mm (60 in)	2S-9506	9L-1106	2
12.7 mm (0.50 in)	1524 mm (60 in)	4N-2745	–	–
12.7 mm (0.50 in)	1549 mm (60.98 in)	5N-4692	6L-4100	3

Belts

V-Belts - Cogged (cont'd.)

Size	Length	Part Number	Set Part Number	Set Qty.
12.7 mm (0.50 in)	1575 mm (62.01 in)	8M-8336	8M-8341	2
12.7 mm (0.50 in)	1600 mm (62.99 in)	9L-4479	068-8546	2
12.7 mm (0.50 in)	1626 mm (64.02 in)	8M-8335	8M-8340	2
12.7 mm (0.50 in)	1651 mm (65 in)	4S-6209	8S-5154	3
12.7 mm (0.50 in)	1664 mm (65.51 in)	1S-4699	1S-4700	2
12.7 mm (0.50 in)	1689 mm (66.50 in)	5S-5249	4W-8729	2
12.7 mm (0.50 in)	1702 mm (67.01 in)	9L-1130	9L-1129	2
12.7 mm (0.50 in)	1727 mm (67.99 in)	166-3354	—	—
12.7 mm (0.50 in)	1727 mm (67.99 in)	3S-9652	1S-1187	2
12.7 mm (0.50 in)	1740 mm (68.50 in)	4W-8654	4W-8655	2
12.7 mm (0.50 in)	1753 mm (69.02 in)	166-3352	166-3360	3
12.7 mm (0.50 in)	1753 mm (69.02 in)	5S-5052	9L-2526	2
12.7 mm (0.50 in)	1778 mm (70 in)	4S-8353	2S-2481	2
12.7 mm (0.50 in)	1782 mm (70.16 in)	364-7251	—	—
12.7 mm (0.50 in)	1791 mm (70.51 in)	2P-5617	2P-5618	2
12.7 mm (0.50 in)	1803 mm (70.98 in)	166-3351	166-3359	3
12.7 mm (0.50 in)	1803 mm (70.98 in)	6F-2590	1S-1208	3
12.7 mm (0.50 in)	1816 mm (71.50 in)	7E-6158	319-6293	3
12.7 mm (0.50 in)	1829 mm (72.01 in)	9L-2519	6L-6557	2
12.7 mm (0.50 in)	1842 mm (72.52 in)	166-3355	166-3363	3
12.7 mm (0.50 in)	1842 mm (72.52 in)	1S-4761	1S-4760	2
12.7 mm (0.50 in)	1854 mm (72.99 in)	8N-2814	139-9011	2
12.7 mm (0.50 in)	1880 mm (74.02 in)	9L-1629	9L-1630	4
12.7 mm (0.50 in)	1905 mm (75 in)	166-3353	166-3361	3
12.7 mm (0.50 in)	1905 mm (75 in)	5M-0923	7E-3372	3
12.7 mm (0.50 in)	1918 mm (75.51 in)	1N-4555	6N-3843	2
12.7 mm (0.50 in)	1943 mm (76.50 in)	9L-2349	9L-2350	3
12.7 mm (0.50 in)	1956 mm (77.01 in)	8M-3092	136-3646	2
12.7 mm (0.50 in)	1968 mm (77.48 in)	9L-4265	7E-6441	2
12.7 mm (0.50 in)	1981 mm (77.99 in)	8M-0760	7C-7204	2
12.7 mm (0.50 in)	2007 mm (79.02 in)	7E-6191	7E-6192	2
12.7 mm (0.50 in)	2032 mm (80 in)	7E-1365	7E-1364	3
12.7 mm (0.50 in)	2057 mm (80.98 in)	4P-4998	4P-4997	2
12.7 mm (0.50 in)	2187 mm (86.10 in)	117-0036	—	—
12.7 mm (0.50 in)	2235 mm (87.99 in)	213-6558	—	—
12.7 mm (0.50 in)	2288 mm (90.08 in)	117-0030	—	—
13 mm (0.51 in)	1845 mm (72.64 in)	304-9792	304-9807	2
15.9 mm (0.63 in)	2591 mm (102.01 in)	7N-3117	7N-3118	5
15.9 mm (0.63 in)	2616 mm (102.99 in)	1N-4092	1N-4480	6
15.9 mm (0.63 in)	2667 mm (105 in)	8N-6698	8N-6716	6
15.9 mm (0.63 in)	2692 mm (105.98 in)	1N-4090	8N-6720	6

V-Belts - Cogged (cont'd.)

Size	Length	Part Number	Set Part Number	Set Qty.
15.9 mm (0.63 in)	2718 mm (107.01 in)	7N-3119	7N-3120	6
15.9 mm (0.63 in)	2794 mm (110 in)	1N-4093	8N-6694	6
15.9 mm (0.63 in)	2819 mm (110.98 in)	1N-4089	1N-4098	6
15.9 mm (0.63 in)	2850 mm (112.20 in)	270-2637	270-2638	6
15.9 mm (0.63 in)	2921 mm (115 in)	256-2712	256-3246	6
15.9 mm (0.63 in)	2997.2 mm (118 in)	256-3244	256-3609	6
15.9 mm (0.63 in)	889 mm (35 in)	1L-6557	—	—
15.9 mm (0.63 in)	1080 mm (42.52 in)	6B-5653	—	—
15.9 mm (0.63 in)	1156 mm (45.51 in)	8P-3064	—	—
15.9 mm (0.63 in)	1232 mm (48.50 in)	6B-2746	—	—
15.9 mm (0.63 in)	1245 mm (49.02 in)	9L-6653	9L-6654	2
15.9 mm (0.63 in)	1270 mm (50 in)	147-7178	147-7177	2
15.9 mm (0.63 in)	1270 mm (50 in)	202-0131	—	—
15.9 mm (0.63 in)	1295 mm (50.98 in)	5B-8473	9L-0361	6
15.9 mm (0.63 in)	1308 mm (51.50 in)	6N-0341	205-1029	3
15.9 mm (0.63 in)	1359 mm (53.50 in)	7N-3948	7N-3949	3
15.9 mm (0.63 in)	1372 mm (54.02 in)	8L-5136	8L-5137	3
15.9 mm (0.63 in)	1390 mm (54.72 in)	204-1334	344-2738	6
15.9 mm (0.63 in)	1410 mm (55.51 in)	4L-4648	5L-5012	2
15.9 mm (0.63 in)	1422 mm (55.98 in)	4N-8216	4N-8217	2
15.9 mm (0.63 in)	1448 mm (57.01 in)	9L-6639	9N-1324	3
15.9 mm (0.63 in)	1460 mm (57.48 in)	6N-7135	9Y-4047	2
15.9 mm (0.63 in)	1473 mm (57.99 in)	130-7477	—	—
15.9 mm (0.63 in)	1486 mm (58.50 in)	4N-8220	4N-6373	4
15.9 mm (0.63 in)	1499 mm (59.02 in)	9L-6641	284-8095	3
15.9 mm (0.63 in)	1524 mm (60 in)	4P-1666	4P-1667	3
15.9 mm (0.63 in)	1549 mm (60.98 in)	9L-6643	6N-9159	3
15.9 mm (0.63 in)	1557 mm (61.30 in)	189-9826	205-2922	5
15.9 mm (0.63 in)	1562 mm (61.50 in)	4N-2531	4N-2532	3
15.9 mm (0.63 in)	1588 mm (62.52 in)	133-6443	—	—
15.9 mm (0.63 in)	1588 mm (62.52 in)	9L-6645	9L-6646	3
15.9 mm (0.63 in)	1613 mm (63.50 in)	125-8025	—	—
15.9 mm (0.63 in)	1613 mm (63.50 in)	6N-6657	6N-6656	4
15.9 mm (0.63 in)	1639 mm (64.53 in)	4N-8218	6N-0388	3
15.9 mm (0.63 in)	1664 mm (65.51 in)	4P-8398	4P-8397	3
15.9 mm (0.63 in)	1664 mm (65.51 in)	7C-9001	—	—
15.9 mm (0.63 in)	1689 mm (66.50 in)	9L-6647	6N-6652	4
15.9 mm (0.63 in)	1740 mm (68.50 in)	9L-6649	9L-6650	4
15.9 mm (0.63 in)	1752 mm (68.98 in)	7E-7645	7E-7646	4
15.9 mm (0.63 in)	1778 mm (70 in)	6N-6654	6N-6655	2
15.9 mm (0.63 in)	1803 mm (70.98 in)	3R-5603	3N-8848	3

Belts

V-Belts - Cogged (cont'd.)

Size	Length	Part Number	Set Part Number	Set Qty.
15.9 mm (0.63 in)	1803 mm (70.98 in)	4N-8221	180-9571	4
15.9 mm (0.63 in)	1803 mm (70.98 in)	9Y-9702	—	—
15.9 mm (0.63 in)	1816 mm (71.50 in)	9L-6651	164-3780	3
15.9 mm (0.63 in)	1829 mm (72.01 in)	6N-0073	5N-4751	4
15.9 mm (0.63 in)	1854 mm (72.99 in)	4N-8277	4N-8278	3
15.9 mm (0.63 in)	1892 mm (74.49 in)	166-3357	166-3365	3
15.9 mm (0.63 in)	1892 mm (74.49 in)	6N-6650	6N-6651	2
15.9 mm (0.63 in)	1905 mm (75 in)	3R-9089	3R-9090	4
15.9 mm (0.63 in)	1918 mm (75.51 in)	4N-8219	4N-6302	3
15.9 mm (0.63 in)	1956 mm (77.01 in)	166-3358	166-3366	3
15.9 mm (0.63 in)	1956 mm (77.01 in)	4P-8088	4P-8087	4
15.9 mm (0.63 in)	1981 mm (77.99 in)	6N-7054	1W-0422	4
15.9 mm (0.63 in)	2007 mm (79.02 in)	4W-6256	216-7877	3
15.9 mm (0.63 in)	2032 mm (80 in)	4Q-5034	—	—
15.9 mm (0.63 in)	2032 mm (80 in)	5L-7422	5L-7423	4
15.9 mm (0.63 in)	2032 mm (80 in)	7W-6129	7C-2500	2
15.9 mm (0.63 in)	2055 mm (80.91 in)	244-0536	244-0537	2
15.9 mm (0.63 in)	2057 mm (80.98 in)	166-3356	166-3364	3
15.9 mm (0.63 in)	2057 mm (80.98 in)	6N-5338	6N-5337	3
15.9 mm (0.63 in)	2083 mm (82.01 in)	7N-7056	7N-7055	2
15.9 mm (0.63 in)	2108 mm (82.99 in)	7W-8132	118-2018	3
15.9 mm (0.63 in)	2134 mm (84.02 in)	4N-8197	8N-6710	2
15.9 mm (0.63 in)	2135 mm (84.05 in)	266-2372	—	—
15.9 mm (0.63 in)	2159 mm (85 in)	1N-9382	1N-9383	5
15.9 mm (0.63 in)	2159 mm (85 in)	7N-8538	270-2639	3
15.9 mm (0.63 in)	2184 mm (85.98 in)	1N-3464	129-2416	3
15.9 mm (0.63 in)	2210 mm (87.01 in)	7N-4828	7N-4829	2
15.9 mm (0.63 in)	2235 mm (87.99 in)	7N-2143	1W-0530	2
15.9 mm (0.63 in)	2261 mm (89.02 in)	8N-6693	7N-9417	2
15.9 mm (0.63 in)	2286 mm (90 in)	1W-8044	7W-5228	2
15.9 mm (0.63 in)	2337 mm (92.01 in)	1N-3714	1N-3713	6
15.9 mm (0.63 in)	2362 mm (92.99 in)	2L-9492	254-3526	6
15.9 mm (0.63 in)	2388 mm (94.02 in)	8N-6717	8N-6700	6
15.9 mm (0.63 in)	2413 mm (95 in)	5L-7425	5L-7426	4
15.9 mm (0.63 in)	2413 mm (95 in)	7W-5259	254-3527	6
15.9 mm (0.63 in)	2438 mm (95.98 in)	8N-6709	8N-6705	6
15.9 mm (0.63 in)	2464 mm (97.01 in)	8N-6719	8N-6711	6
15.9 mm (0.63 in)	2489 mm (97.99 in)	7N-3121	7N-3122	6
15.9 mm (0.63 in)	2515 mm (99.02 in)	2W-5092	4W-0752	3
15.9 mm (0.63 in)	2515 mm (99.02 in)	9Y-9700	9Y-9699	3
15.9 mm (0.63 in)	2921 mm (115 in)	291-1476	294-2593	5

V-Belts - Cogged (cont'd.)

Size	Length	Part Number	Set Part Number	Set Qty.
16.7 mm (0.66 in)	1520 mm (59.84 in)	247-5895	—	—
17.5 mm (0.69 in)	2642 mm (104.02 in)	115-2459	115-2460	4
17.5 mm (0.69 in)	2642 mm (104.02 in)	125-6515	125-6516	4
17.5 mm (0.69 in)	2692 mm (105.98 in)	127-5564	127-5563	4
17.5 mm (0.69 in)	2769 mm (109.02 in)	169-0146	169-0147	4
17.5 mm (0.69 in)	1054 mm (41.50 in)	5M-5344	—	—
17.5 mm (0.69 in)	1143 mm (45 in)	5L-1584	—	—
17.5 mm (0.69 in)	1156 mm (45.51 in)	9S-9010	—	—
17.5 mm (0.69 in)	1181 mm (46.50 in)	1S-5138	—	—
17.5 mm (0.69 in)	1206 mm (47.48 in)	5M-5345	—	—
17.5 mm (0.69 in)	1232 mm (48.50 in)	3L-9717	5L-4660	2
17.5 mm (0.69 in)	1257 mm (49.49 in)	8F-2434	—	—
17.5 mm (0.69 in)	1334 mm (52.52 in)	7M-0169	—	—
17.5 mm (0.69 in)	1372 mm (54.02 in)	3S-8402	—	—
17.5 mm (0.69 in)	1397 mm (55 in)	5M-0924	7M-4691	2
17.5 mm (0.69 in)	1435 mm (56.50 in)	7M-0297	7M-0298	2
17.5 mm (0.69 in)	1448 mm (57.01 in)	8M-3646	—	—
17.5 mm (0.69 in)	1473 mm (57.99 in)	4M-9678	—	—
17.5 mm (0.69 in)	1486 mm (58.50 in)	3R-2689	—	—
17.5 mm (0.69 in)	1511 mm (59.49 in)	7M-3921	—	—
17.5 mm (0.69 in)	1524 mm (60 in)	8S-1574	8S-3199	2
17.5 mm (0.69 in)	1562 mm (61.50 in)	3P-0025	7M-6104	2
17.5 mm (0.69 in)	1575 mm (62.01 in)	4M-6292	7S-9807	2
17.5 mm (0.69 in)	1588 mm (62.52 in)	2P-6141	2P-6142	2
17.5 mm (0.69 in)	1600 mm (62.99 in)	8H-9832	7M-6105	2
17.5 mm (0.69 in)	1613 mm (63.50 in)	1P-2421	1P-2423	2
17.5 mm (0.69 in)	1626 mm (64.02 in)	2M-8502	7M-6100	2
17.5 mm (0.69 in)	1638 mm (64.49 in)	4S-7755	4S-7754	2
17.5 mm (0.69 in)	1651 mm (65 in)	5M-2733	7S-9811	2
17.5 mm (0.69 in)	1676 mm (65.98 in)	7S-9859	7S-9860	2
17.5 mm (0.69 in)	1689 mm (66.50 in)	8M-1715	8M-1714	3
17.5 mm (0.69 in)	1702 mm (67.01 in)	2L-2991	1S-1126	2
17.5 mm (0.69 in)	1727 mm (67.99 in)	5S-9505	5S-9078	2
17.5 mm (0.69 in)	1753 mm (69.02 in)	5S-9506	5S-9079	2
17.5 mm (0.69 in)	1765 mm (69.49 in)	7S-1691	7S-1690	2
17.5 mm (0.69 in)	1778 mm (70 in)	7S-9809	7S-9810	2
17.5 mm (0.69 in)	1791 mm (70.51 in)	5M-6096	5M-5343	2
17.5 mm (0.69 in)	1803 mm (70.98 in)	4M-9386	7M-5535	4
17.5 mm (0.69 in)	1842 mm (72.52 in)	9M-6934	9M-6933	2
17.5 mm (0.69 in)	1854 mm (72.99 in)	2P-6139	2P-6140	2
17.5 mm (0.69 in)	1880 mm (74.02 in)	2P-2356	2P-2357	2

Belts

V-Belts - Cogged (cont'd.)

Size	Length	Part Number	Set Part Number	Set Qty.
17.5 mm (0.69 in)	1892 mm (74.49 in)	6N-2349	6N-2348	2
17.5 mm (0.69 in)	1930 mm (75.98 in)	7S-8349	7S-8350	2
17.5 mm (0.69 in)	1943 mm (76.50 in)	9M-5146	8S-6178	2
17.5 mm (0.69 in)	1956 mm (77.01 in)	9M-3633	—	—
17.5 mm (0.69 in)	2007 mm (79.02 in)	4M-9072	5R-2455	2
17.5 mm (0.69 in)	2019 mm (79.49 in)	4N-4789	4N-4773	4
17.5 mm (0.69 in)	2032 mm (80 in)	5S-0290	5S-0291	3
17.5 mm (0.69 in)	2057 mm (80.98 in)	2S-9911	2S-8268	3
17.5 mm (0.69 in)	2083 mm (82.01 in)	7M-7373	4N-1745	3
17.5 mm (0.69 in)	2108 mm (82.99 in)	2S-5279	3S-9646	3
17.5 mm (0.69 in)	2184 mm (85.98 in)	5S-1762	7N-7502	2
22.3 mm (0.88 in)	2565 mm (100.98 in)	251-7492	251-7493	2
22.3 mm (0.88 in)	2591 mm (102.01 in)	4Q-5035	4Q-5036	4
22.3 mm (0.88 in)	2591 mm (102.01 in)	7W-1664	7W-1665	4
22.3 mm (0.88 in)	2688 mm (105.83 in)	313-3709	313-3710	5
22.3 mm (0.88 in)	2718 mm (107.01 in)	4W-5092	4W-5091	6
22.3 mm (0.88 in)	2768.6 mm (109 in)	123-5890	123-5889	4
22.3 mm (0.88 in)	2768.6 mm (109 in)	133-6444	133-6445	4
22.3 mm (0.88 in)	2780 mm (109.45 in)	6I-1757	6I-1973	6
22.3 mm (0.88 in)	2869 mm (112.95 in)	9Y-8466	9Y-8467	4
22.3 mm (0.88 in)	2895 mm (113.98 in)	119-6373	119-6374	6
22.3 mm (0.88 in)	1232 mm (48.50 in)	5F-7676	—	—
22.3 mm (0.88 in)	1270 mm (50 in)	5H-2896	—	—
22.3 mm (0.88 in)	1308 mm (51.50 in)	5H-9857	—	—
22.3 mm (0.88 in)	1372 mm (54.02 in)	7E-5096	7E-5097	2
22.3 mm (0.88 in)	1384 mm (54.49 in)	9Y-8865	9Y-8864	2
22.3 mm (0.88 in)	1397 mm (55 in)	7E-5114	7E-5113	2
22.3 mm (0.88 in)	1410 mm (55.51 in)	9F-1899	7M-4711	2
22.3 mm (0.88 in)	1422 mm (55.98 in)	1L-5514	1S-1127	2
22.3 mm (0.88 in)	1435 mm (56.50 in)	139-5170	139-5171	2
22.3 mm (0.88 in)	1448 mm (57.01 in)	5L-9902	4N-6529	2
22.3 mm (0.88 in)	1460 mm (57.48 in)	9Y-0290	9Y-0291	2
22.3 mm (0.88 in)	1486 mm (58.50 in)	8F-5164	7M-4715	2
22.3 mm (0.88 in)	1499 mm (59.02 in)	8M-9708	—	—
22.3 mm (0.88 in)	1511 mm (59.49 in)	4M-8218	4P-4905	2
22.3 mm (0.88 in)	1549 mm (60.98 in)	3S-2347	2P-2369	2
22.3 mm (0.88 in)	1575 mm (62.01 in)	5M-5347	8N-4128	2
22.3 mm (0.88 in)	1588 mm (62.52 in)	5M-5965	2P-2696	2
22.3 mm (0.88 in)	1600 mm (62.99 in)	4F-6390	7M-4716	2
22.3 mm (0.88 in)	1613 mm (63.50 in)	6B-8536	—	—
22.3 mm (0.88 in)	1626 mm (64.02 in)	2P-1272	2P-1388	2

V-Belts - Cogged (cont'd.)

Size	Length	Part Number	Set Part Number	Set Qty.
22.3 mm (0.88 in)	1638 mm (64.49 in)	6N-3636	6N-3637	2
22.3 mm (0.88 in)	1651 mm (65 in)	1L-5681	7M-0981	2
22.3 mm (0.88 in)	1676 mm (65.98 in)	7M-7477	4N-3587	2
22.3 mm (0.88 in)	1689 mm (66.50 in)	3L-7540	7L-7099	2
22.3 mm (0.88 in)	1702 mm (67.01 in)	2H-1383	7M-7864	2
22.3 mm (0.88 in)	1714 mm (67.48 in)	2M-8183	5L-5015	2
22.3 mm (0.88 in)	1753 mm (69.02 in)	9M-7220	9M-7221	3
22.3 mm (0.88 in)	1765 mm (69.49 in)	5H-4207	3P-0071	2
22.3 mm (0.88 in)	1778 mm (70 in)	4M-5429	7M-4706	2
22.3 mm (0.88 in)	1803 mm (70.98 in)	4M-5413	7M-4707	3
22.3 mm (0.88 in)	1816 mm (71.50 in)	7B-0344	7M-4719	2
22.3 mm (0.88 in)	1854 mm (72.99 in)	5H-7448	7M-4702	2
22.3 mm (0.88 in)	1867 mm (73.50 in)	3P-0099	3P-0098	2
22.3 mm (0.88 in)	1880 mm (74.02 in)	6H-5705	7M-0185	2
22.3 mm (0.88 in)	1918 mm (75.51 in)	2M-8255	8S-1475	3
22.3 mm (0.88 in)	1930 mm (75.98 in)	7H-9806	7M-4717	2
22.3 mm (0.88 in)	1943 mm (76.50 in)	2M-7863	7M-4703	2
22.3 mm (0.88 in)	1956 mm (77.01 in)	1H-6929	7M-4718	2
22.3 mm (0.88 in)	1968 mm (77.48 in)	3L-7539	5L-5014	3
22.3 mm (0.88 in)	1994 mm (78.50 in)	8B-3546	7M-4721	2
22.3 mm (0.88 in)	2007 mm (79.02 in)	8M-0959	8M-0934	2
22.3 mm (0.88 in)	2019 mm (79.49 in)	7M-0304	5R-7276	2
22.3 mm (0.88 in)	2032 mm (80 in)	9M-7800	9M-7801	3
22.3 mm (0.88 in)	2057 mm (80.98 in)	3L-6052	8M-8681	3
22.3 mm (0.88 in)	2083 mm (82.01 in)	3L-9489	6L-1987	2
22.3 mm (0.88 in)	2083 mm (82.01 in)	4R-9240	5R-9996	2
22.3 mm (0.88 in)	2108 mm (82.99 in)	4S-7796	4S-9791	2
22.3 mm (0.88 in)	2159 mm (85 in)	5H-7371	7M-4710	3
22.3 mm (0.88 in)	2184 mm (85.98 in)	7C-3560	7C-3559	2
22.3 mm (0.88 in)	2210 mm (87.01 in)	1M-7303	2W-8951	4
22.3 mm (0.88 in)	2235 mm (87.99 in)	2W-6765	2W-6766	4
22.3 mm (0.88 in)	2261 mm (89.02 in)	7N-3966	2W-8952	2
22.3 mm (0.88 in)	2286 mm (90 in)	5B-9790	6N-7575	2
22.3 mm (0.88 in)	2311 mm (90.98 in)	110-0375	124-5113	2
22.3 mm (0.88 in)	2337 mm (92.01 in)	4W-7507	4W-7508	2
22.3 mm (0.88 in)	2388 mm (94.02 in)	110-0376	123-3995	2
22.3 mm (0.88 in)	2460 mm (96.85 in)	167-7547	167-7549	2
22.3 mm (0.88 in)	2464 mm (97.01 in)	251-7494	251-7495	2
22.3 mm (0.88 in)	2489 mm (97.99 in)	110-0377	123-3996	2
22.3 mm (0.88 in)	2540 mm (100 in)	6B-9737	7M-4720	2
25.5 mm (1 in)	1156 mm (45.51 in)	6B-1039	—	—

Belts

V-Belts - Cogged (cont'd.)

Size	Length	Part Number	Set Part Number	Set Qty.
25.5 mm (1 in)	1245 mm (49.02 in)	7B-4032	—	—
25.5 mm (1 in)	1270 mm (50 in)	4F-7956	—	—
25.5 mm (1 in)	1334 mm (52.52 in)	5H-4239	—	—
31.8 mm (1.25 in)	1537 mm (60.51 in)	7B-2774	—	—
31.8 mm (1.25 in)	1562 mm (61.50 in)	8H-7180	—	—
31.8 mm (1.25 in)	1588 mm (62.52 in)	3B-8904	5L-6672	2
31.8 mm (1.25 in)	1651 mm (65 in)	1H-3592	6L-6552	2
31.8 mm (1.25 in)	1753 mm (69.02 in)	1H-5899	7M-4948	2
31.8 mm (1.25 in)	1880 mm (74.02 in)	5H-4462	7M-4953	2

Serpentine Belts



Size	Length	No. of Peaks	Part Number
2 mm (0.08 in)	1626 mm (64.02 in)	2	288-7195
3.6 mm (0.14 in)	1787 mm (70.35 in)	8	336-4436
3.6 mm (0.14 in)	1813 mm (71.38 in)	8	349-3353
8 mm (0.31 in)	2385 mm (93.90 in)	8	330-0663
14 mm (0.55 in)	1547 mm (60.91 in)	14	330-0662
19 mm (0.75 in)	1664 mm (65.51 in)	2	299-0179
20.8 mm (0.82 in)	917 mm (36.10 in)	6	179-7078
20.8 mm (0.82 in)	1510 mm (59.45 in)	6	285-2943
20.8 mm (0.82 in)	1700 mm (66.93 in)	6	310-7127
20.8 mm (0.82 in)	1750 mm (68.90 in)	6	318-6151
20.8 mm (0.82 in)	2170 mm (85.43 in)	6	304-4511
20.9 mm (0.82 in)	1392 mm (54.80 in)	6	8Q-1508
20.9 mm (0.82 in)	1420 mm (55.91 in)	6	101-4910
20.9 mm (0.82 in)	1455 mm (57.28 in)	6	129-3574
20.9 mm (0.82 in)	1511 mm (59.49 in)	6	133-4871
24.4 mm (0.96 in)	1404 mm (55.28 in)	7	155-4769
24.4 mm (0.96 in)	1790 mm (70.47 in)	7	135-9505
25.4 mm (1 in)	1778 mm (70 in)	2	198-6890
25.4 mm (1 in)	1829 mm (72.01 in)	2	198-6827

Size	Length	No. of Peaks	Part Number
25.4 mm (1 in)	1912 mm (75.28 in)	2	211-6557
25.4 mm (1 in)	2108 mm (82.99 in)	2	205-2201
25.4 mm (1 in)	2159 mm (85 in)	2	201-9911
27.9 mm (1.10 in)	2900 mm (114.17 in)	8	249-8740
27.9 mm (1.10 in)	2958 mm (116.46 in)	8	211-5406
27.9 mm (1.10 in)	917 mm (36.10 in)	8	218-9823
27.9 mm (1.10 in)	1341 mm (52.80 in)	8	312-4712
27.9 mm (1.10 in)	1361 mm (53.58 in)	8	312-4710
27.9 mm (1.10 in)	1900 mm (74.80 in)	8	337-3023
27.9 mm (1.10 in)	1930 mm (75.98 in)	8	277-8724
27.9 mm (1.10 in)	2005 mm (78.94 in)	8	260-1527
27.9 mm (1.10 in)	2005 mm (78.94 in)	8	334-1624
27.9 mm (1.10 in)	2050 mm (80.71 in)	8	260-1528
27.9 mm (1.10 in)	2050 mm (80.71 in)	8	334-1623
27.9 mm (1.10 in)	2658 mm (104.65 in)	8	239-5944
27.9 mm (1.10 in)	1054 mm (41.50 in)	8	100-3725
27.9 mm (1.10 in)	1075 mm (42.32 in)	8	178-6402
27.9 mm (1.10 in)	1093 mm (43.03 in)	8	141-7116
27.9 mm (1.10 in)	1170 mm (46.06 in)	8	186-4195

Serpentine Belts (cont'd.)

Size	Length	No. of Peaks	Part Number	Size	Length	No. of Peaks	Part Number
27.9 mm (1.10 in)	1181 mm (46.50 in)	8	7E-8244	27.9 mm (1.10 in)	1361 mm (53.58 in)	8	353-3976
27.9 mm (1.10 in)	1314 mm (51.73 in)	8	131-0762	27.9 mm (1.10 in)	1385 mm (54.53 in)	8	359-7476
27.9 mm (1.10 in)	1350 mm (53.15 in)	8	324-3408	27.9 mm (1.10 in)	1395 mm (54.92 in)	8	241-4982
27.9 mm (1.10 in)	1480 mm (58.27 in)	8	226-0443	27.9 mm (1.10 in)	1450 mm (57.09 in)	8	190-8143
27.9 mm (1.10 in)	1515 mm (59.65 in)	8	190-6560	27.9 mm (1.10 in)	1509 mm (59.41 in)	8	362-3039
27.9 mm (1.10 in)	1520 mm (59.84 in)	8	253-4794	27.9 mm (1.10 in)	1516 mm (59.68 in)	8	351-6508
27.9 mm (1.10 in)	1530 mm (60.24 in)	8	262-4995	27.9 mm (1.10 in)	1518 mm (59.76 in)	8	348-7891
27.9 mm (1.10 in)	1830 mm (72.05 in)	8	230-7207	27.9 mm (1.10 in)	1563 mm (61.54 in)	8	331-9604
27.9 mm (1.10 in)	1897 mm (74.68 in)	8	142-0861	27.9 mm (1.10 in)	1585 mm (62.40 in)	8	374-8476
27.9 mm (1.10 in)	1990 mm (78.35 in)	3	250-0678	27.9 mm (1.10 in)	1606 mm (63.23 in)	8	277-8713
27.9 mm (1.10 in)	2130 mm (83.86 in)	8	230-7198	27.9 mm (1.10 in)	1610 mm (63.39 in)	8	243-2143
27.9 mm (1.10 in)	2200 mm (86.61 in)	8	243-1559	27.9 mm (1.10 in)	1610 mm (63.39 in)	8	348-7036
27.9 mm (1.10 in)	2223 mm (87.52 in)	8	221-3775	27.9 mm (1.10 in)	1627 mm (64.05 in)	8	357-0492
27.9 mm (1.10 in)	2365 mm (93.11 in)	8	277-4586	27.9 mm (1.10 in)	1645 mm (64.76 in)	8	275-9346
27.9 mm (1.10 in)	2555 mm (100.59 in)	8	219-8689	27.9 mm (1.10 in)	1650 mm (64.96 in)	8	291-4051
27.9 mm (1.10 in)	2594 mm (102.13 in)	8	217-3031	27.9 mm (1.10 in)	1715 mm (67.52 in)	8	292-0678
27.9 mm (1.10 in)	2600 mm (102.36 in)	8	350-5810	27.9 mm (1.10 in)	1730 mm (68.11 in)	3	266-1464
27.9 mm (1.10 in)	2620 mm (103.15 in)	8	263-1862	27.9 mm (1.10 in)	1740 mm (68.50 in)	8	313-4537
27.9 mm (1.10 in)	2622 mm (103.23 in)	8	352-6441	27.9 mm (1.10 in)	1753 mm (69.02 in)	8	363-7389
27.9 mm (1.10 in)	2630 mm (103.54 in)	8	275-9345	27.9 mm (1.10 in)	1755 mm (69.09 in)	8	273-7533
27.9 mm (1.10 in)	2635 mm (103.74 in)	8	350-5391	27.9 mm (1.10 in)	1760 mm (69.29 in)	8	357-2890
27.9 mm (1.10 in)	2690 mm (105.91 in)	8	273-7531	27.9 mm (1.10 in)	1787 mm (70.35 in)	8	374-8480
27.9 mm (1.10 in)	2730 mm (107.48 in)	8	204-6587	27.9 mm (1.10 in)	1824 mm (71.81 in)	8	185-1911
27.9 mm (1.10 in)	2740 mm (107.87 in)	8	348-5783	27.9 mm (1.10 in)	1854 mm (72.99 in)	8	263-9079
27.9 mm (1.10 in)	2768 mm (108.98 in)	8	352-6437	27.9 mm (1.10 in)	1855 mm (73.03 in)	8	226-4020
27.9 mm (1.10 in)	2780 mm (109.45 in)	8	206-7824	27.9 mm (1.10 in)	1860 mm (73.23 in)	8	203-7765
27.9 mm (1.10 in)	2790 mm (109.84 in)	8	240-3374	27.9 mm (1.10 in)	1860 mm (73.23 in)	8	219-3303
27.9 mm (1.10 in)	2798 mm (110.16 in)	8	189-2214	27.9 mm (1.10 in)	1900 mm (74.80 in)	8	246-6296
27.9 mm (1.10 in)	2808 mm (110.55 in)	8	202-3197	27.9 mm (1.10 in)	1950 mm (76.77 in)	8	313-9120
27.9 mm (1.10 in)	2820 mm (111.02 in)	8	260-6106	27.9 mm (1.10 in)	1970 mm (77.56 in)	8	206-4229
27.9 mm (1.10 in)	2827 mm (111.30 in)	8	215-3015	27.9 mm (1.10 in)	1979 mm (77.91 in)	8	222-5511
27.9 mm (1.10 in)	2835 mm (111.61 in)	8	189-2213	27.9 mm (1.10 in)	1980 mm (77.95 in)	8	267-2949
27.9 mm (1.10 in)	2840 mm (111.81 in)	8	226-9381	27.9 mm (1.10 in)	1990 mm (78.35 in)	8	348-7890
27.9 mm (1.10 in)	2890 mm (113.78 in)	8	224-2636	27.9 mm (1.10 in)	2010 mm (79.13 in)	8	348-7888
27.9 mm (1.10 in)	2933 mm (115.47 in)	8	352-4863	27.9 mm (1.10 in)	2040 mm (80.31 in)	8	206-6497
27.9 mm (1.10 in)	3000 mm (118.11 in)	8	241-4231	27.9 mm (1.10 in)	2041 mm (80.35 in)	8	220-1856
27.9 mm (1.10 in)	3058 mm (120.39 in)	8	337-4339	27.9 mm (1.10 in)	2050 mm (80.71 in)	8	320-0788
27.9 mm (1.10 in)	3230 mm (127.16 in)	8	310-2103	27.9 mm (1.10 in)	2050 mm (80.71 in)	8	364-6417
27.9 mm (1.10 in)	1054 mm (41.50 in)	8	350-7106	27.9 mm (1.10 in)	2060 mm (81.10 in)	8	254-0298
27.9 mm (1.10 in)	1072 mm (42.20 in)	8	357-7153	27.9 mm (1.10 in)	2115 mm (83.27 in)	8	260-6641
27.9 mm (1.10 in)	1158.9 mm (45.63 in)	8	352-6439	27.9 mm (1.10 in)	2117 mm (83.35 in)	8	351-0497
27.9 mm (1.10 in)	1220 mm (48.03 in)	8	190-8142	27.9 mm (1.10 in)	2127 mm (83.74 in)	6	374-8478
27.9 mm (1.10 in)	1230 mm (48.43 in)	8	236-3842	27.9 mm (1.10 in)	2160 mm (85.04 in)	8	374-8479
27.9 mm (1.10 in)	1245 mm (49.02 in)	8	236-3839	27.9 mm (1.10 in)	2165 mm (85.24 in)	8	348-7885
27.9 mm (1.10 in)	1310 mm (51.57 in)	8	257-5523	27.9 mm (1.10 in)	2245 mm (88.39 in)	8	348-7886
27.9 mm (1.10 in)	1345 mm (52.95 in)	8	241-4981	27.9 mm (1.10 in)	2250 mm (88.58 in)	8	208-2827

Belts

Serpentine Belts (cont'd.)

Size	Length	No. of Peaks	Part Number	Size	Length	No. of Peaks	Part Number
27.9 mm (1.10 in)	2255 mm (88.78 in)	8	260-6107	28.4 mm (1.12 in)	2140 mm (84.25 in)	8	263-1849
27.9 mm (1.10 in)	2260 mm (88.98 in)	8	212-3176	28.4 mm (1.12 in)	2145 mm (84.45 in)	8	211-5021
27.9 mm (1.10 in)	2274 mm (89.53 in)	8	226-9380	28.4 mm (1.12 in)	2160 mm (85.04 in)	8	241-2896
27.9 mm (1.10 in)	2275 mm (89.57 in)	8	348-7889	28.4 mm (1.12 in)	2165 mm (85.24 in)	8	293-3908
27.9 mm (1.10 in)	2285 mm (89.96 in)	8	357-0490	28.4 mm (1.12 in)	2180 mm (85.83 in)	8	183-4494
27.9 mm (1.10 in)	2296 mm (90.39 in)	8	189-2216	28.4 mm (1.12 in)	2210 mm (87.01 in)	8	211-5022
27.9 mm (1.10 in)	2315 mm (91.14 in)	8	211-3576	28.4 mm (1.12 in)	2230 mm (87.80 in)	8	172-2245
27.9 mm (1.10 in)	2335 mm (91.93 in)	8	206-7825	28.4 mm (1.12 in)	2246 mm (88.42 in)	8	190-4155
27.9 mm (1.10 in)	2360 mm (92.91 in)	8	359-0185	28.4 mm (1.12 in)	2275 mm (89.57 in)	8	178-8481
27.9 mm (1.10 in)	2376 mm (93.54 in)	8	189-2218	28.4 mm (1.12 in)	2275 mm (89.57 in)	8	208-2832
27.9 mm (1.10 in)	2410 mm (94.88 in)	8	202-3198	28.4 mm (1.12 in)	2275 mm (89.57 in)	8	312-8934
27.9 mm (1.10 in)	2430 mm (95.67 in)	8	350-2822	28.4 mm (1.12 in)	2290 mm (90.16 in)	8	289-2980
27.9 mm (1.10 in)	2445 mm (96.26 in)	8	191-5215	28.4 mm (1.12 in)	2295 mm (90.35 in)	8	208-2833
27.9 mm (1.10 in)	2450 mm (96.46 in)	8	240-3373	28.4 mm (1.12 in)	2325 mm (91.54 in)	8	211-7878
27.9 mm (1.10 in)	2481 mm (97.68 in)	8	219-3304	28.4 mm (1.12 in)	2370 mm (93.31 in)	8	162-2742
27.9 mm (1.10 in)	2485 mm (97.83 in)	8	243-1324	28.5 mm (1.12 in)	2545 mm (100.20 in)	8	197-4567
27.9 mm (1.10 in)	2485 mm (97.83 in)	8	345-0409	28.5 mm (1.12 in)	2645.5 mm (104.15 in)	8	173-7178
27.9 mm (1.10 in)	2495 mm (98.23 in)	8	298-4466	28.5 mm (1.12 in)	2758 mm (108.58 in)	8	219-7450
27.9 mm (1.10 in)	2520 mm (99.21 in)	8	224-2638	28.5 mm (1.12 in)	1320 mm (51.97 in)	8	171-2321
27.9 mm (1.10 in)	2521 mm (99.25 in)	8	253-4531	28.5 mm (1.12 in)	1332 mm (52.44 in)	8	198-1118
27.9 mm (1.10 in)	2533 mm (99.72 in)	8	216-6935	28.5 mm (1.12 in)	1465 mm (57.68 in)	8	202-0951
28 mm (1.10 in)	1610 mm (63.39 in)	8	348-7884	28.5 mm (1.12 in)	1523 mm (59.96 in)	8	164-4599
28 mm (1.10 in)	1624 mm (63.94 in)	8	328-0811	28.5 mm (1.12 in)	1672 mm (65.83 in)	8	192-2169
28.1 mm (1.11 in)	1413 mm (55.63 in)	8	330-0661	28.5 mm (1.12 in)	1816 mm (71.50 in)	8	198-3611
28.1 mm (1.11 in)	2125 mm (83.66 in)	8	341-4938	28.5 mm (1.12 in)	1825 mm (71.85 in)	8	154-6036
28.3 mm (1.11 in)	1491 mm (58.70 in)	8	350-8741	28.5 mm (1.12 in)	2021 mm (79.57 in)	8	191-6635
28.3 mm (1.11 in)	1684 mm (66.30 in)	8	350-8742	28.5 mm (1.12 in)	2127 mm (83.74 in)	8	230-2190
28.4 mm (1.12 in)	2460 mm (96.85 in)	3	288-1607	28.5 mm (1.12 in)	1845 mm (72.64 in)	8	245-4628
28.4 mm (1.12 in)	2555 mm (100.59 in)	8	243-1276	28.5 mm (1.12 in)	2010 mm (79.13 in)	8	248-6195
28.4 mm (1.12 in)	2586 mm (101.81 in)	8	192-5479	29.5 mm (1.16 in)	1727 mm (67.99 in)	2	199-6601
28.4 mm (1.12 in)	2720 mm (107.09 in)	8	291-1025	29.5 mm (1.16 in)	1943 mm (76.50 in)	2	350-1223
28.4 mm (1.12 in)	2855 mm (112.40 in)	8	312-8933	32 mm (1.26 in)	1245 mm (49.02 in)	9	310-9543
28.4 mm (1.12 in)	2860 mm (112.60 in)	8	174-9690	32 mm (1.26 in)	1485 mm (58.46 in)	9	296-4737
28.4 mm (1.12 in)	3335 mm (131.30 in)	8	166-1324	32 mm (1.26 in)	1540 mm (60.63 in)	9	310-9592
28.4 mm (1.12 in)	1365 mm (53.74 in)	8	228-9100	32 mm (1.26 in)	1550 mm (61.02 in)	9	310-9778
28.4 mm (1.12 in)	1430 mm (56.30 in)	8	267-9281	32 mm (1.26 in)	1625 mm (63.98 in)	9	219-2324
28.4 mm (1.12 in)	1445 mm (56.89 in)	8	336-2178	35 mm (1.38 in)	1705 mm (67.13 in)	10	318-2528
28.4 mm (1.12 in)	1585 mm (62.40 in)	8	220-2945	35 mm (1.38 in)	1715 mm (67.52 in)	3	294-7665
28.4 mm (1.12 in)	1600 mm (62.99 in)	8	157-2830	35 mm (1.38 in)	1730 mm (68.11 in)	10	318-2530
28.4 mm (1.12 in)	1640 mm (64.57 in)	8	275-6653	35 mm (1.38 in)	1745 mm (68.70 in)	10	292-2187
28.4 mm (1.12 in)	1790 mm (70.47 in)	8	212-9353	35 mm (1.38 in)	2345 mm (92.32 in)	10	307-4643
28.4 mm (1.12 in)	1840 mm (72.44 in)	8	288-4641	35 mm (1.38 in)	2440 mm (96.06 in)	10	304-4510
28.4 mm (1.12 in)	1970 mm (77.56 in)	8	239-0238	35 mm (1.38 in)	2080 mm (81.89 in)	10	318-4830
28.4 mm (1.12 in)	2030 mm (79.92 in)	8	285-6217	35 mm (1.38 in)	2125 mm (83.66 in)	10	313-4400
28.4 mm (1.12 in)	2095 mm (82.48 in)	8	185-5872	35 mm (1.38 in)	2395 mm (94.29 in)	10	318-6086
28.4 mm (1.12 in)	2110 mm (83.07 in)	8	263-1830	35.6 mm (1.40 in)	1455 mm (57.28 in)	10	114-3552

Serpentine Belts (cont'd.)

Size	Length	No. of Peaks	Part Number	Size	Length	No. of Peaks	Part Number
35.6 mm (1.40 in)	1477.5 mm (58.17 in)	10	147-5440	49.8 mm (1.96 in)	2090 mm (82.28 in)	14	321-5168
35.6 mm (1.40 in)	1506 mm (59.29 in)	10	114-6414	51.9 mm (2.04 in)	2565 mm (100.98 in)	2	252-9028
42.2 mm (1.66 in)	1740 mm (68.50 in)	12	357-0493	51.9 mm (2.04 in)	1892 mm (74.49 in)	2	236-4190
42.2 mm (1.66 in)	1505 mm (59.25 in)	12	348-2705	51.9 mm (2.04 in)	1969 mm (77.52 in)	2	206-7870
42.2 mm (1.66 in)	1595 mm (62.80 in)	12	348-3785	51.9 mm (2.04 in)	2210 mm (87.01 in)	2	135-8652
42.2 mm (1.66 in)	1733 mm (68.23 in)	12	349-7267	51.9 mm (2.04 in)	2362 mm (92.99 in)	2	135-8653
42.4 mm (1.67 in)	2098 mm (82.60 in)	12	361-3339	51.9 mm (2.04 in)	2438 mm (95.98 in)	2	198-6750
42.7 mm (1.68 in)	2335 mm (91.93 in)	3	296-1503	51.9 mm (2.04 in)	2464 mm (97.01 in)	2	251-7496
42.8 mm (1.69 in)	2755 mm (108.46 in)	12	310-7128	54.5 mm (2.15 in)	2032 mm (80 in)	3	9Q-3669
42.8 mm (1.69 in)	2240 mm (88.19 in)	12	253-4011	54.5 mm (2.15 in)	2057 mm (80.98 in)	3	8Q-1499
42.8 mm (1.69 in)	2335 mm (91.93 in)	12	310-7131	54.5 mm (2.15 in)	2083 mm (82.01 in)	3	216-9993
42.8 mm (1.69 in)	2475 mm (97.44 in)	12	253-4012	54.5 mm (2.15 in)	2108 mm (82.99 in)	3	9Q-3668
49.3 mm (1.94 in)	1438 mm (56.61 in)	14	149-3417	54.5 mm (2.15 in)	2159 mm (85 in)	3	216-4326
49.3 mm (1.94 in)	1515 mm (59.65 in)	14	359-0188	54.5 mm (2.15 in)	2184 mm (85.98 in)	3	9Q-3670
49.3 mm (1.94 in)	1585 mm (62.40 in)	14	357-0494	54.5 mm (2.15 in)	2210 mm (87.01 in)	3	129-5119
49.3 mm (1.94 in)	1657 mm (65.24 in)	14	149-3416	54.5 mm (2.15 in)	2489 mm (97.99 in)	3	7W-0833
49.3 mm (1.94 in)	1680 mm (66.14 in)	14	316-7714	55.6 mm (2.19 in)	1969 mm (77.52 in)	3	269-1974
49.3 mm (1.94 in)	1855 mm (73.03 in)	14	284-1215	61 mm (2.40 in)	2121 mm (83.50 in)	3	4W-9341
49.8 mm (1.96 in)	1170 mm (46.06 in)	14	172-2246	83 mm (3.27 in)	2642 mm (104.02 in)	4	126-7587
49.8 mm (1.96 in)	1454 mm (57.24 in)	14	197-6292	83 mm (3.27 in)	2692 mm (105.98 in)	4	127-8398
49.8 mm (1.96 in)	1695 mm (66.73 in)	14	230-2188	83 mm (3.27 in)	2769 mm (109.02 in)	4	204-8034
49.8 mm (1.96 in)	2050 mm (80.71 in)	14	311-0338	106.6 mm (4.20 in)	2591 mm (102.01 in)	4	8Q-1500
49.8 mm (1.96 in)	1720 mm (67.72 in)	14	321-5169	106.6 mm (4.20 in)	2718 mm (107.01 in)	4	135-8654
49.8 mm (1.96 in)	1762 mm (69.37 in)	14	330-0659				



EQUIPMENT FLUIDS

Oils - Diesel Engine Oil

Health and Safety

Under normal conditions of intended use, these products do not pose a risk to health. Excessive exposure may result in eye, skin or respiratory irritation. Always observe good hygiene measures. Read and understand the Material Safety Data Sheet (MSDS) before using this product. For a copy of the MSDS, visit us on the web at www.catmsds.com.

Cat DEO™



Recommended Use

- Heavy-duty diesel made by other manufacturers that recommend API CI-4, CI-4 Plus, and CH4. See “Typical Characteristics” for more information.
- Automotive gasoline engines that require API SL or SJ category oils. See “Typical Characteristics” for more information.
- Cat earth moving, commercial, marine and on-highway truck diesel engines, excluding 3600, C280, 3126 and 3116 MUI Marine and MaK™ diesel engines. The 3116 and 3126 MUI Marine diesel engines with closed crankcase ventilation systems should use Cat SAEO™

Discover the Difference

- Cat DEO is developed, tested and approved by Caterpillar to meet the same high standards as all genuine Cat parts.
- Factory-Fill - Used as standard factory-fill for Cat machines.
- Increased Engine Life - Resists oxidation and prevents build-up on deposits on pistons and rings.
- Extended Drain Intervals - Extends oil drain intervals while providing excellent engine protection and performance when used in conjunction with out S•O•SSM Services oil analysis program.
- Proven Performance - Tested thoroughly in Cat diesel engines including Cat engines with ACERT™ Technology to ensure excellent engine life and performance.
- Long-Lasting Protection - Improved soot control and enhanced shear stability enable oil to maintain proper viscosity for longer operating periods in Cat engines with ACERT Technology, especially those equipped with HEUI™ systems.

Typical Characteristics ⁽¹⁾							
Location	Worldwide	Worldwide	Canada, Mexico and United States	Canada, Mexico and United States	Brazil	Brazil	Egypt and Saudi Arabia
SAE Viscosity Grade	SAE 15W-40	SAE 10W-30	SAE 15W-40	SAE 10W-30	SAE 15W-40	SAE 10W-30	SAE 15W-40
API Service Classifications	CI-4, CH-4	CI-4, CH-4	CI-4 PLUS, CI-4, CH-4	CI-4, CH-4	CI-4, CH-4	CI-4, CH-4	CI-4, CH-4
API Service Classifications -Gasoline	SL	SL	SL	SL	SL	SL	SL
ACEA Classifications	B3/A2/ E7	E7	E7	E7	E5		
Volvo Performance Level	VDS-3	VDS-2	VDS-3	VDS-3	VDS-3	VDS-2	
MB Performance Level	MB228.3				MB228.3		
Cummins Performance Level	CES 20071/72/76/77	CES 20071/76	CES 20071/76	CES 20071/76/78	CES20071/72/76/77	CES 20071/76	CES 20071/72/76/77
Mack Performance Level	EO-M Plus	EO-M Plus	EO-NPP, EO-M Plus	EO-M Plus	EO-M Plus	EO-M Plus	EO-M Plus
MAN Performance Level	M3275				M 3275		
RVI Performance Level	RLD				RLD		

Oils - Diesel Engine Oil

Cat DEO™ (Cont'd.)

Location	Worldwide 15W - 40	Worldwide 10W-30	Canada, Mexico and United States 15W - 40	Canada, Mexico and United States 10W-30	Brazil 15W - 40	Egypt and Saudi Arabia 15W - 40
Flash Point, C (ASTM D92)	230	222	224	220	220	240
Pour Point, (ASTM D97)	-30	-36	-30	-33	-33	-33
SAE Viscosity Grade	SAE 15W-40	SAE 10W-30	SAE 15W-40	SAE 10W-30	SAE 15W-40	SAE 15W-40
Viscosity cSt @ 40C (ASTM D445)	103	76	120.5	76	105	105
Viscosity cSt @ 100C (ASTM D445)	14.2	11.5	15.5	11.5	14.4	14.0
Viscosity Index (ASTM D2270)	135	144	135	145	141	135
Sulfated Ash, wt. (ASTM D874)	1.3	1.3	1.3	1.3	1.1	1.2
TBN (ASTM D2896)	11.3	10.4	10.4	10.4	10.6	10.3
Zinc, wt. (ASTM D4951)	0.146	0.146	0.146	0.146	0.133	0.123
Gravity 16C API (ASTM D287)	29.3	31.3	30	31.7	28.7	29
Gravity 16C Specific	0.88	0.87	0.88	0.87	0.88	0.88

English Volume (gal)	Metric Volume (L)	Qty.	Part Number ⁽¹⁾
DEO 10W-30			
5	—	—	3E-9709
55	—	—	3E-9708
Bulk	—	—	155-6198
—	5	—	335-9830
—	18	—	283-1709
—	20	—	3E-9844
—	200	—	130-7055
—	208	—	3E-9707
—	1,000	—	148-3539
—	1,100	—	384-8146
DEO 15W-40			
1 QT	—	4	3E-9715
1	—	—	248-7518
5	—	—	3E-9713
55	—	—	3E-9712
Bulk 1G	—	—	155-6199

English Volume (gal)	Metric Volume (L)	Qty.	Part Number ⁽¹⁾
—	1	—	123-4077
—	4	—	3E-9902
—	5	—	3E-9901
—	18	—	3E-9900
—	19	—	3E-9849
—	20	—	3E-9848
—	60	—	121-4038
—	200	—	3E-9842
—	205	—	3E-9841
—	208	—	3E-9840
—	900	—	381-7213
—	1,000	—	3E-9838
—	1,040	—	201-0775
—	1,100	—	384-8147
—	2,000	—	120-5285
—	10,000	—	119-5131

¹ Part numbers listed below are not available in all regions. See your Cat dealer for part numbers appropriate for your region.

Oils - Diesel Engine Oil

Cat DEO Monograde

For Cat 3600 Series Diesel Engines

Recommended Use

- Cat DEO Monograde is recommended for use in 3600 series diesel engines operating on distillate diesel fuels.
- Cat DEO Monograde is recommended for older Cat engines equipped with precombustion fuel injection systems that permit the use of American Petroleum Institute CD or CF oil.
- Cat DEO Monograde can be used with low-sulfur diesel fuel and protects Cat engines operating on higher sulfur diesel fuels (3600 Series engines operating on fuel containing up to 1.30% sulfur, and precombustion engines operating on fuel containing up to 0.065% sulfur fuel.)

Discover the Difference

- Cat DEO Monograde is developed, tested and approved by Caterpillar to meet the same high standards as all Genuine Cat Parts.
- Increased Engine Life — Resists oxidation and prevents build-up of deposits on pistons and rings.
- Extended Drain Intervals — Extends oil drain intervals while providing excellent engine protection and performance when used in conjunction with our S•O•S Services oil analysis program.
- Proven Performance — Tested in Cat 3600 Series diesel engines worldwide.

Typical Characteristics ⁽²⁾	
SAE Viscosity Grade	SAE 40 ⁽³⁾
API Service Classification	CF ⁽⁴⁾
CCMC	D3
Caterpillar Performance Level (engine)	1M-PC
Flash Point, °C (ASTM D92)	215 min
Pour Point, °C (ASTM D97)	-18 max
Viscosity cSt @ 40° C (ASTM D445)	132
Viscosity cSt @ 100° C (ASTM D445)	14.7
Viscosity Index (ASTM D2270)	112
Sulfated Ash, % wt. (ASTM D874)	1.4
TBN (ASTM D2896)	12.0
Zinc, % wt. (ASTM D4951)	0.10
Gravity @ 16° C API (ASTM D287)	25.5
Phosphorus, % wt. (ASTM D1091)	0.09

English Volume (gal)	Metric Volume (L)	Part Number
SAE 40		
5	—	416-9247
55	—	416-9246
Bulk 1G	—	155-6202
—	20	7X-7843

English Volume (gal)	Metric Volume (L)	Part Number
SAE 40		
—	200	9X-8528
—	208	9X-6463
—	1000	9X-6272
—	Bulk 1L	8C-3703

² The values shown are typical values and should not be used as quality control parameters to either accept or reject product. Specifications are subject to change without notice.

³ Passes FZG DIN 51354-2 A/8, 3/90 FLS 12.

⁴ Can be used in applications where the obsolete API CD classification oil is recommended.

Cat DEO Cold Weather



Best Performance and Protection for Cold Weather Applications

Cat DEO Cold Weather is a synthetic diesel engine oil designed with an extremely stable formula tailored to provide long-lasting engine protection over a wide temperature range, -40°F (-40°C) to 104°F (40°C). The backwards compatibility of Cat DEO Cold Weather makes it well suited for mixed fleets of new and old machines. When used in engines equipped with emissions reduction technologies, Cat DEO Cold Weather delivers the full life and performance of after treatment components. Cat DEO Cold Weather exceeds the performance requirements of Cat ECF-3 (Engine Crankcase Fluid Specification) and the API CJ-4 and API SM categories.

Cat DEO Cold Weather takes the trouble out of starting your engine when temperatures are very low. The special formulation flows readily at low temperatures, reducing startup wear and improving fuel economy in some applications. The outstanding thermal stability and oxidation resistance of Cat DEO Cold Weather keeps engine components cleaner, further reducing wear. In testing, Cat DEO Cold Weather was shown to reduce piston deposits by more than 30% and to have more than 80% better viscosity control than ECF-3 standards. These results demonstrate that Cat DEO Cold Weather will help lower your owning and operating costs through fewer oil changes and repairs.

Benefits

- Easier Engine Starts - Excellent low temperature performance eliminates hard starts
- Reduced Engine Wear - Improved detergents keep engine components cleaner
- Minimized Deposits - Reduced oxidation breakdown and thermal degradation improves stability which minimizes the formation of deposits, sludge, and varnish
- Full Component Life - Specially designed additives deliver superior engine protection while supporting consistent emissions performance and extending the life of after treatment system components.
- Extended Drain Intervals - When regular S•O•S Oil Analysis is utilized, long oil life is possible

Applications

Cat DEO Cold Weather is the preferred diesel engine oil for low temperature applications.⁽⁵⁾ Cat DEO Cold Weather supports consistent emissions performance in engines equipped with after treatment devices designed to meet.⁽⁶⁾

- 2007/ 2010 On-Highway exhaust emissions standards (US)
- Tier 4 (US)
- Stage IIIB/IV (EU)
- Step 4 (Japan)

5 Oil recommendations for 3116 and 3126 MUI Marine and MaK diesel engines can be found in the Operations & Maintenance Manual (OMM).

6 Aftertreatment devices can include Diesel Particulate Filters (DPF), Diesel Oxidation Catalyst (DOC), Selective Catalytic Reduction (SCR) and/or Lean NOx Trap (LNT).

Oils - Diesel Engine Oil

Cat DEO Cold Weather (Cont'd.)

Typical Characteristics ⁽⁷⁾	
SAE Viscosity Grade	0W-40
API Service Classification	Diesel: CJ-4, CI-4 PLUS/CI-4, CH-4; Gasoline: SM
OEM Performance	Cummins CES 20081, Mack EO-N PP'03
Viscosity cST @ 40°C (ASTM D445)	87
Viscosity cST @ 100°C (ASTM D445)	15.2
Viscosity Index (ASTM 2270)	186
Phosphorous, % wt (ATM D4951)	0.111
Sulfated Ash, % wt. (ASTM D874)	0.99
Sulfur, % wt. (ASTM D2622)	0.4
TBN (ASTM D2896)	7.8
Zinc, % wt (ASTM D4951)	0.121
Gravity @16°C API (ASTM D287)	36.2
Specific Gravity 16°C	0.844

English Volume (gal)	Metric Volume (L)	Part Number
SAE 0W-40		
1.1	4	361-0923
—	5	347-8468
5.3	20	347-8469
54.2	205	347-8470

English Volume (gal)	Metric Volume (L)	Part Number
SAE 0W-40		
—	1000	444-3551
—	Bulk	347-8471

⁷ The values shown are typical values and should not be used as quality control parameters to either accept or reject product. Specifications are subject to change without notice.

Cat DEO-ULS



(For the United States, Canada, and Mexico only)

Recommended Use

- Cat DEO-ULS exceeds the performance requirements of Cat ECF-3 (Engine Crankcase Fluid Specification) and API CJ-4.
- Preferred for all 2007 on-highway and non-road Tier 4 U.S. EPA engines and Euro Stage IIIB engines equipped with after treatment systems using 15-ppm sulfur fuel
- May also be used with engines not equipped with aftertreatment systems using 2000-ppm (or less) sulfur fuel without affecting the oil change interval.

Discover the Difference

- Cat DEO-ULS is developed and tested to provide superior protection and life for Cat engines.
- Better Detergents – Protect against piston and ring groove deposits.
- Advanced Additive Package - Improves protection of the engine and the Diesel Particulate Filter (DPF).
- Enhanced Dispersants - Provide better soot-related viscosity control, prevents viscosity loss from shearing and reduce oil consumption.
- Improved Protection from Thermal and Oxidative Breakdown - Withstands higher sump temperatures while offering low-temperature pumpability.

Typical Characteristics ⁽⁸⁾		
SAE Viscosity Grade	SAE 15W-40	SAE 10W-30
API Service Classification - Diesel	CJ-4, CI-4 PLUS/CI-4, CH-4	
API Service Classification - Gasoline	SM/SL	
Volvo Performance Level	VDS-4/VDS-3	VDS-4/VDS-3
ACEA Performance Level	E9/E7	E9/E7
Cummins Performance Level	CES 20081	
Mack Performance Level	EO-o Premium Plus	
DDC Performance Level	Powerguard 93K218	
Mercedes Benz Performance Level	MB 228.31	
Flash Point, °C (ASTM D92)	236	230
Pour Point, °C (ASTM D97)	-30	-27
Viscosity cSt @ 40°C (ASTM D445)	114	79
Viscosity cSt @ 100°C (ASTM D445)	15.0	11.9
Viscosity Index (ASTM D2270)	137	145
Sulfated Ash, % wt. (ASTM D874)	0.98	0.97 (ASTM D4739)
TBN (ASTM D2896)	10.4	10.4
Phosphorous, %wt. (ASTM D4951)	0.100	0.100
Sulfur, % wt. (ASTM D2622)	0.3	0.3
Gravity @16°C API (ASTM D287)	30.2	
Gravity @16°C Specific	0.876	

⁸ The values shown are typical values and should be used as quality control parameters to either accept or reject product. Specifications are subject to change without notice.

Oils - Diesel Engine Oil

Cat DEO-ULS (Cont'd.)

English Volume (gal)	Metric Volume (L)	Part Number
Cat DEO-ULS 15W-40		
1	—	291-3866
2.5	—	462-7705
5	—	291-3868
55	—	291-3869
Bulk	—	300-7013
—	4	378-6535
—	5	368-4791
—	20	300-7915
—	208	301-2233
—	1000	381-7214
—	Bulk	349-2581
Cat DEO-ULS 10W-30		
1	—	317-3081
2.5	—	462-7704
5	—	317-3083
55	—	317-3084
Bulk	—	319-2260
—	1	341-0729
—	4	378-8296
—	5	368-4792
—	20	308-1476
—	208	317-3085
—	1000	444-3549
—	Bulk	346-0465

Cat SAEO



Recommended Use

- Cat Special Application Engine oil is the only oil approved by Caterpillar for use in the 3116 and 3126 Marine Diesel Engine with mechanical unit injection and a closed crankcase ventilation system. This system circulates blowby gases from the engine crankcase to the turbocharger inlet. These blowby gases can form harmful deposits in the turbocharger and the aftercooler. Cat Special Application Engine Oil is designed to reduce or eliminate the formation of these harmful deposits.⁽⁹⁾

Discover the Difference

- Stops the buildup of deposits in the turbocharger compressor and the aftercooler that can reduce power and cause an increase in smoke.
- Maintains stable oil consumption within the specified oil change interval and from one interval to the next.
- Stabilizes functional chemistry throughout each service interval.
- Stops the buildup of deposits on pistons and rings that can increase oil consumption.
- Helps to eliminate the formation of deposits on pistons that are abrasive enough to polish the hone pattern from the surface of the lines.
- Prevents the clumping of soot particles that can cause an abnormal increase in viscosity, piston deposits, or sludge.

Typical Characteristics ⁽¹⁰⁾		
SAE Viscosity Grade	SAE 30	SAE 40
Manufacturer	Cat 1K	Cat 1K
Flash Point, °C (ASTM D92)	228	239
Pour Point, °C (ASTM D97)	-30	-18
Viscosity cSt @100°C (ASTM D445)	10.7	13.9 (min)
Sulfated ASH, % wt. (ASTM D874)	0.9	0.9
TBN (ASTM D2896)	6.5	6.5
Zinc, % wt. (ASTM D1549)	0.103 max	0.112 max
Phosphorous, % wt. (ASTM D1091)	0.102 max	0.102 max

English Volume (gal)	Metric Volume (L)	Part Number
SAE 30		
1	—	170-5262
5	—	198-7368
Bulk	—	161-5824

English Volume (gal)	Metric Volume (L)	Part Number
SAE 40		
1	—	170-5261
5	—	198-7369

9 Cat SAEO should not be used in 3406, 3126, C-10, C-12, or 3116 low emission on-highway truck engines. Use Cat DEO multi-grade oils.
 10 The values shown are typical values and should not be used as quality control parameters to either accept or reject product. Specifications are subject to change without notice.

Oils - Natural Gas Engine Oil

Cat NGEO™



Recommend Use

- Designed for engines using gaseous fuels.
- Compatible with exhaust catalyst applications that require a low-phosphorus oil.
- Provides optimum engine and oil life with low-sulfur gaseous fuels that contain less than 0.43 mg hydrogen sulfide per mega Joule (0.35 mg hydrogen sulfide per BTU).

Discover the Difference

- Cat NGEO is formulated from select base stocks blended with special additives to provide an economical engine oil for natural gas applications. Cat NGEO is developed, tested and approved by Caterpillar to meet the same high standards as all Genuine Cat Parts.
- High-Endurance Lubrication - Performs throughout the long oil change intervals common for gaseous fuel engines.
- Reduced Piston and Cylinder Wear - Anti-oxidation and anti-nitration properties prevent carbon deposit buildup to minimize scuffing, scoring and wear.
- Increased Valve Life - Protects against damage to guide faces and seals.
- Corrosion Protection - Neutralizes acids to prevent rust and copper corrosion.
- High-Temperature Performance - Provides excellent thermal stability and resists foaming and sludge formation.

Typical Characteristics ⁽¹⁾	
SAE Viscosity Grade	SAE 40
Gravity, API	27.5
Flash Point, °C (ASTM D92)	265
Pour Point, °C (ASTM D97)	-12 max
Viscosity cSt @ 40°C (ASTM D445)	130
Viscosity cSt @100°C (ASTM D455)	13.5
Viscosity Index (ASTM D567)	99
Sulfated Ash, % wt. (ASTM D874)	0.48
TBN, mg KoH/g (ASTM D2896)	6.2
Phosphorus, % wt. (Spectro or AA)	0.030
Calcium, % wt. (Spectro or AA)	0.125

English Volume (gal)	Metric Volume (L)	Part Number
SAE 40		
—	19	121-0327
—	200	197-6911
—	205	9X-8527

English Volume (gal)	Metric Volume (L)	Part Number
SAE 40		
—	208	105-3336
—	1000	159-8156

¹ The values shown are typical values and should not be used as quality control parameters to either accept or reject products. Specifications are subject to change without notice.

Cat NGE0 EL250

Applications

- For natural gas engines and other engines requiring low ash oil.

Features

- Increased detergent concentration and acid neutralizing capability to assure less lacquer and deposits on pistons and valves.
- Control of sludge formulation.
- Outstanding resistance to oil nitration and oxidation.

Benefits

- Improves ring and liner service life.
- Increased soot-handling capability.
- Protection against valve guide face and seat damage, piston scuffing, scoring and piston/cylinder wear, foam and corrosion damage, and piston carbon deposits.

Typical Characteristics	
SAE Visc Grade	SAE 40
Gravity, API	27.5
Flash Point, °C (ASTM D92)	262
Pour Point, °C (ASTM D97)	-12 min
Viscosity @ 40°C, cSt (AST D445)	130
Viscosity @ 100°C, cSt (ASTM D445)	13.5
Viscosity Index (ASTM D567)	99
Sulfated Ash, %wt (ASTM D874)	0.57
TBN, mg KOH/g (ASTM D2896)	6.5
Phosphorous, %wt (Spectro or AA)	0.030
Calcium, %wt (Spectro or AA)	0.14

English Volume (gal)	Metric Volume (L)	Part Number
SAE 40		
—	20	216-9221
—	208	216-9224
—	Bulk	7X-2426

Oils - Natural Gas Engine Oil

Cat NGE0 EL350™



Recommended Use

- Provides superior lubrication in high-horsepower gaseous-fueled engines.
- Compatible with exhaust catalyst applications that require a low-phosphorus oil.
- Compatible with “learn burn” engines requiring low-ash oil.
- Provides optimum engine and oil life with low-sulfur gaseous fuels that contain less than 0.43 mg hydrogen per mega Joule (0.35 mg hydrogen sulfide per BTU).
- May be used in engines that use high-sulfur gas or bio-gas, provided that shorts drain intervals are employed.

Discover the Difference

- Cat NGE0 EL350 is developed, tested, and approved by Caterpillar to meet the same high standards as all genuine Cat parts.
- Factory-Fill - Used as standard factory-fill for Cat natural gas engines.
- Reduced Piston and Cylinder Wear - Anti-oxidation and anti-nitration properties prevent deposit buildup to minimize scuffing, scoring and wear.
- Increased Spark Plug and Valve Life - Excellent detergent and dispersant additives protect against deposits and damage.
- Corrosion Protection - Acid neutralizers protect parts from rust and copper corrosion.
- Extended Drain Intervals - Provide extended oil drain capabilities when used in conjunction with out S•O•SSM Services oil analysis program.

Typical Characteristics ⁽²⁾	
SAE Viscosity Grade	SAE 40
Gravity @ 16°C, API (ASTM D287)	29.3
Gravity @ 16°C Specific	0.882
Flash Point, °C (ASTM D92)	247
Pour Point, °C (ASTM D97)	-21
Viscosity cSt @ 40°C (ASTM D445)	125
Viscosity cSt @ 100°C (ASTM D445)	13
Viscosity Index (ASTM 2270)	97
Sulfated Ash, % wt. (ASTM D874)	0.54
TBN, mg KoH/g (ASTM D2696)	6.2
Phosphorus, % wt. (Spectro or AA)	0.03
Calcium, % wt. (Spectro or AA)	0.13

English Volume (gal)	Metric Volume (L)	Part Number
SAE40		
—	20	225-5084
—	205	269-1971
—	208	225-5085

English Volume (gal)	Metric Volume (L)	Part Number
SAE40		
—	1000	249-2309
—	Bulk	283-0781

² The values shown are typical values and should not be used as quality control parameters to either accept or reject product. Specifications are subject to change without notice.

Cat NGEO Advanced 40

Cat NGEO Advanced 40 is an SAE 40 viscosity grade. The oil is designed to specifications that provide superior lubrication performance in Cat natural gas engines. Cat NGEO Advanced 40 is formulated from select base stocks blended with special additives to provide:

- Excellent oxidation stability and nitration control properties
- Good thermal stability for high temperatures deposit control
- Reduced carbon and sludge formation

Reduced Piston and Cylinder Liner Wear

- High temperatures deposit control properties prevent deposit buildup on pistons and piston rings to minimize scuffing, scoring, and wear.

Increased Spark Plug and Valve Life

- Excellent detergent and dispersant additives protect against deposits and damage.

Corrosion Protection

- Acid neutralizers protect parts from rust and copper corrosion.

NGEO Advanced 40 provides optimum engine and oil life with low-sulfur gaseous fuels that contain less than 0.43 mg hydrogen per mega joule (0.35 mg hydrogen sulfide per BTU) NGEO Advanced 40 may be used in engines that use high-sulfur gas, provided that shorter drain intervals are employed.

Typical Characteristics ⁽³⁾	
Viscosity Grade	SAE 40
Flash Point, °C, ASATM D92	252
Pour Point, °C ASTM D97	-30
Viscosity cSt, D445	
40°C	115
100°C	12.7
Viscosity Index, ASTM D2270	103
Sulfated Ash, wt %, ASTM D874	0.5
Total Base Number, mg KOH/G, ASTM D2896	6
Phosphorous, wt %, spectro	0.03
Calcium, wt % spectro	0.15

English Volume (gal)	Metric Volume (L)	Part Number
Cat NGEO Advanced 40		
5	—	381-2364
55	—	381-2365
—	20	331-7030

English Volume (gal)	Metric Volume (L)	Part Number
Cat NGEO Advanced 40		
—	208	331-7031
—	1000	381-2367
—	Bulk	331-7032

³ The values shown are typical values and should not be used as quality control parameters to either accept or reject product. Specifications are subject to change without notice.

Oils - Natural Gas Engine Oil

NGEO Ultra 40

Recommended Uses

- Compatible with exhaust catalyst applications that require low-phosphorous oil
- Compatible with “lean burn” engines requiring low-ash oil
- May be used in engines that use high-sulfur gas, provided that shorter drain intervals are employed

Typical Characteristics	
SAE Viscosity Grade	40
Flash Point °C (ASTM D92)	220 min
Pour Point °C (ASTM D97)	-21
Viscosity	
cST @ 40°C (ASTM D445)	125
cST @ 100°C (ASTM D445)	13.0
Viscosity Index (ASTM D2270)	95 min.
TBN, mg KOH/g (ASTM D2896)	6.0
Sulfated Ash, % wt (ASTM D874)	0.54
Phosphorous, % wt (Spectro or AA)	0.030
Calcium, % wt (Spectro or AA)	0.130

English Volume (gal)	Metric Volume (L)	Part Number
Cat NGEO Ultra 40		
5	20	331-7382
55	208	331-7383
—	Bulk	331-7384

Cat Bio HYDO™ Advanced

High Performing, Environmentally Friendly

Cat Bio HYDO Advanced is an environmentally friendly hydraulic fluid that has the drain interval of premium mineral-based oil. Developed for use in any environment, Cat BIO HYDO Advanced provides superior performance across a wide temperature range and many applications, including: Construction, Forestry, Dredging, Ports, and Tunnel Boring.

Benefits:

Environmentally Friendly

- Non-toxic formula
- Readily biodegradable
- EU Flower eco-label certified

Extended Drain Intervals

- Excellent oxidation stability
- Comparable to premium mineral-based hydraulic oils

Exceptional System Protection

- Superior wear protection
- Corrosion resistance
- Fast air release

Features:

- Long Life - Cat Bio HYDO Advanced out performs the previously recommended Cat Bio HYDO and competitive brands. In fact, Cat Bio HYDO Advanced performance is comparable to premium mineral-based hydraulic oils. Like Cat HYDO Advanced, Cat Bio HYDO Advanced can be taken up to 6,000 hour drain interval with Cat S•O•SSM Fluid Analysis.
- Biodegradable - readily biodegradable and non-toxic, so that it can be used in environmentally sensitive areas without concern.
- Wide temperature Range Protection - maintains consistent wear protection throughout the entire temperature range, - 22°F (-30°C)-113°F (45°C). From cold start through to operating temperature, Cat Bio HYDO Advanced gives you best system protection.
- Improved Flow Through Filters - retains its ability to flow through filters even when water is present.
- Seal Compatibility - Cat Bio HYDO Advanced is highly compatible with the seals used in Cat Hydraulic systems. This means fewer leaks and lower maintenance costs.
- Component Protection - specially developed additives form a perspective layer on wear surfaces, reducing wear in hydraulic pumps and other components. Cat BIO HYDO Advanced provides excellent corrosion protection to steel and bronze components, even at high temperatures.

Oils - Hydraulic Oil

Cat Bio HYDO™ Advanced (Cont'd.)

Cat Bio HYDO Advanced Typical Characteristics ⁽¹⁾		
Characteristics	Cat Bio HYDO Advanced (HEES)	Benefits of Cat Bio HYDO Advanced
Oxidation Stability Test, ASTM D493 (Longer is better)	More than 3,000 hrs (Dry)	Long Drain Interval Results in Reduced Owning & Operating Cost
Long Drain Interval Capability	Yes	—
Suitable for use in Environmentally Sensitive Areas	Yes	Low Environmental Impact
Renewable Content, ASTM D6866	>80%	—
Viscosity at 100°C, ASTM D445	9.0 cSt	Excellent Wear Protection and wide Operating Temperature Range
Viscosity at 40°C ASTM D445	46.0 cSt	Cat Bio HYDO Advanced is Recommended For Ambient Temperatures from -30°C to 45°C
Viscosity Index, ASTM D2270 (Higher is Better) ⁽¹⁾	180	—
Viscosity at 100°C, ASTM D445 During Use After Shear ⁽¹⁾	9.0 cSt	—
Pour Point, ASTM D 97	-48°C	—
Brookfield Viscosity at -20°C ASTM D2983	1,380 cP	—
FZG Gear Test DIN 51534, Fail Stage (Higher is better) ⁽¹⁾	>12	Excellent Wear Protection and Wide Operating Temperature Range
4-Ball Wear Test, ASTM D4172	0.35 mm	Cat Bio HYDO Advanced is Recommended for Ambient Temperatures from -30°C to 45°C
35VQ25 Total Wear, mg (Lower is better)	25 mg	—
Air Release at 50°C (ASTM D3427) (Lower is better)	1 minute	Faster Air Release Reduces Cavitation Damage
Copper Strip Corrosion ASTM D130, 3 Hours (1A is better than 1B. 1A at 150°C is better than 1A at 100°C)	1A at 150°C	Best in Class Corrosion Protection
Corrosion Protection, ASTM D665B	Pass	—

English Volume (gal)	Metric Volume (L)	Part Number
Cat Bio HYDO Advanced		
5	—	339-3249
55	—	339-3250
—	5	142-3218

English Volume (gal)	Metric Volume (L)	Part Number
Cat Bio HYDO Advanced		
—	20	341-3442
—	208	341-2443

Cat HYDO Advanced 10, 20, 30



6,000 Hour Extended Drain Intervals

Cat is introducing a new hydraulic oil to fluid product line, Cat HYDO Advanced 10. This new oil is a combination of premium additives and specially selected and controlled higher quality base oils designed to provide extended drain intervals and extra protection to hydraulic system components.

Cat HYDO Advanced 10 represents a significant performance breakthrough in hydraulic oil technology. The oil has been developed with an optimized formulation that has been subjected to severe qualification testing in the field and laboratory for thousands of hours. The result is the best product available for Cat hydraulic systems.

Cat HYDO Advanced 10, 20, 30 (Cont'd.)

Features & Benefits

- 6,000 hour extended drain intervals - up to the hours of Cat HYDO 10W when monitored with Cat S•O•S Services oil analysis program-every 500 hours. Reduced owning and operating costs and increases uptime.
- Improved corrosion protection - protects metal surfaces from rust. Better corrosion protection than most oils in the Cat line-up.
- Enhances long lasting anti-wear protection - specially developed additives form a protective layer on the wear surfaces, reducing component wear in high-pressure piston, vane and gear hydraulic pumps.
- Holds water in dispersion-contains emulsifiers specially designed to dispense water. Cat does not recommend oils that “separate,” “shed,” or “release” water. Separated water drawn through the hydraulic system can damage pumps and other components. If this water freezes, it can cause serious damage.
- Backward compatibility - the only hydraulic oil you need to stock for your maintenance operations. Preferred fill for Cat equipment.
- Improved filtration properties - special detergent dispersants keep components clean and improve transport of contaminants through the filters. Compatible with Cat Ultra High Efficiency filters.
- Faster air release –rapid air separation reduces air release time, preventing cavitation, Cat HYDO Advanced 10 air release of less than 4 minutes is far superior compared to Cat HYDO 10W at 7-10 minutes air release time (per ASTM D3427 testing).
- Wide temperature range protection - maintains consistent wear protection at both cold and hot temperatures. Designed to flow readily at cold temperature start up, and maintains excellent wear protection at operating temperatures.
- Improved oil stability - 250% increase in oxidation stability per ASTM D943. Improved oil stability and wear protection make Cat HYDO Advanced 10 last longer.

Cat HYDO Advanced 10 Typical Characteristics ⁽¹⁾			
Characteristics	HYDO Advanced 10	HYDO Advanced 20	HYDO Advanced 30
SAE Viscosity	10W	20	30
cST @ 40°C (ASTM D445)	42	68	90
cSt @ 100°C (ASTM D445)	6.7	9.0	10.6
Viscosity Index (ASTM d2270)	114	110	100
Viscosity after Shear (cSt, during use) ⁽¹⁾	6.7	9.0	10.6
FZG Gear Test DIN 51534, Fail Stage ⁽¹⁾	12	12	12
35VQ25 Vickers Total Wear Test	33 mg	33	33 mg
4 Ball	0.37 mm		0.30 mm
Pour Point, °C (ASTM D97)	-24	-33	-24
Pumping @ -30°C mPaS (ASTM D4684)	55,400		
Brookefeld Viscosity @ -20°C (ASTM D2983) mPaS		7,438	13,600
Zinc, % wt. (ASTM D4951) typical	0.090	0.094	0.090
Copper Strip Corrosion (3 hr, ASTM D130) ⁽¹⁾	1A @150°C	1A @150°C	1A @ 150°C
Rust Protection (ASTM D665B) ⁽¹⁾	Pass	Pass	Pass
Oxidation stability, hours (ASTM D943)	> 5,000	> 5,000	> 5,000
Long Drain Interval, confirmed by field testing	Yes	Yes	Yes
Filterability, Wet, E DIN ISO 13357-1	Pass	Pass	Pass
Air Release @ 50°C (ASTM D3427)	4 minutes	7 minutes	
Foam Test ⁽¹⁾			
Seq.1 ml. (ASTM D892)	0/0	0/0	0/0
Seq.2 ml. (ASTM D892)	5/0	0/0	0/0
Seq.3 ml. (ASTM D892)	0/0	0/0	0/0
Cleanliness	No interference with optical particle counters	No interference with optical particle counters	No interference with optical particle counters
Ability to keep water in emulsion	Yes	Yes	Yes

Oils - Hydraulic Oil

Cat HYDO Advanced 10, 20, 30 (Cont'd.)

English Volume (gal)	Metric Volume (L)	Part Number	English Volume (gal)	Metric Volume (L)	Part Number
Cat HYDO Advanced 10			Cat HYDO Advanced 20		
1	—	309-6932	—	15,000	309-6934
2.5	—	462-7710	1	—	422-6704
5	—	309-6931	5	—	422-6705
55	—	309-6930	55	—	422-6706
Bulk	—	314-5168	Bulk	—	422-6703
Bulk Rail	—	309-6929	—	4	422-6709
—	5	309-6945	—	5	422-6711
—	18	309-6944	—	20	422-6712
—	19	309-6943	—	208	422-6714
—	20	309-6942	—	1000	422-6715
—	60	309-6941	—	Bulk	422-6708
—	200	309-6940	Cat HYDO Advanced 30		
—	205	309-6939	—	18	319-5920
—	208	309-6938	—	20	319-5921
—	1,000	309-6937	—	200	319-5922
—	2,000	309-6936	—	208	319-5923
—	10,000	309-6935	—	Bulk	319-5919

Oils - Transmission and Drive Train Oil

Cat TDTO™



Recommended Use

- Preferred lubricant for Cat power shift transmissions, most final drives and wet brake compartments.
- Cat machine compartments where TO-4 and TO-4M specification oils are recommended.
- Other manufacturers' machines that recommend TO-4 or TO-4M or specifications oils for their transmissions, final drives and wet brake compartments.

Discover the Difference

- Cat TDTO is developed, tested and approved by Caterpillar to meet the same high standards as all genuine Cat parts.
- Factory-Fill - Used as standard factory-fill for Cat machine compartments where TO-4 oils are specified.
- Longer Clutch Life - Prolongs clutch disc life up to 45%.
- Optimum Wear Life – Ensures long life and excellent performance for gears, bearings and friction disc material.
- System-Matched Formula - Engineered as an integral part of Cat power shift transmissions, most wet brake compartments, and Hydrostatic Systems.

Typical Characteristics ⁽¹⁾			
SAE Viscosity Grade	SAE10W	SAE 30	SAE 50
Caterpillar Test	TO-4	TO-4	TO-4
Allison Test	C-4	C-4	C-4
ISO Viscosity	42	100	220
Flash Point, °C (°F) (ASTM D92)	202 (395)	224 (435)	240 (464)
Pour Point, °C (°F) (ASTM D97)	-33 (-27)	-18 (0)	-15 (5)
CCS Viscosity cP @ -25°C (ASTM D5293)	6840		
Kinematic Viscosity cSt @ 40°C (ASTM D445)	42.0	100	195
Kinematic Viscosity cSt @ 100°C (ASTM D445)	6.3	11.2	18.0
Viscosity Index (ASTM D2270)	97	97	96
TBN (ASTM D2896)	7.9	7.9	7.9
Zinc, % wt. (ASTM D4951)	0.127	0.127	0.127
Gravity API (ASTM D287)	27.9	27.0	24.7
Phosphorus, % wt. (ASTM D4951)	0.110	0.110	0.110

English Volume (gal)	Metric Volume (L)	Part Number
SAE 10W		
5	—	8T-9568
55	—	8T-9569
Bulk	—	155-6212
—	5	100-7019
—	19	145-0995
—	20	7X-7852
—	25	9X-8525
—	200	112-2866
—	205	7X-7851
—	208	103-2528

English Volume (gal)	Metric Volume (L)	Part Number
—	209	123-3104
—	1000	166-0393
—	Bulk	3P-0659
SAE 30		
1	—	248-7521
2.5	—	452-7708
5	—	8T-9572
55	—	8T-9573
Bulk	—	155-6213
—	4	452-6113
—	5	9X-6467

Oils - Transmission and Drive Train Oil

Cat TDTO™ (Cont'd.)

English Volume (gal)	Metric Volume (L)	Part Number
—	18	9X-2010
—	20	7X-7855
—	200	7X-2888
—	205	7X-7854
—	208	9X-6466
—	1000	7X-7611
—	Bulk	2P-9869
SAE 50		
2.5	—	462-7709
5	—	8T-9576
55	—	8T-9577
Bulk	—	155-6214

English Volume (gal)	Metric Volume (L)	Part Number
—	4	452-6114
—	5	9X-8443
—	18	9X-2012
—	20	7X-7858
—	200	9X-8520
—	205	7X-7857
—	208	3E-9478
—	1000	7X-7612
—	Bulk	5P-1228

Cat TDTO-TMS™



Recommended Use

- Cat transmissions, wet brakes and hydraulic compartments that must operate in wide temperature ranges.
- Cat machine compartments where TO-4 and TO-4M specification oils are recommended.
- Other manufacturers machines that recommend TO-4 or TO-4M specification oils for their transmissions, final drives and wet brake compartments.

Discover the Difference

- Cat TDTO-TMS is a proprietary formulation that was specifically developed, tested and approved by Caterpillar to ensure peak performance in your transmission and to meet the same high standards as all genuine Cat parts.
- Longer Component Life-Reduces wear on transmission gears.
- Improved Cold-Weather Performance - Improves performance and efficiency of transmissions in cold weather, especially for machines with electronic controls.
- Optimum Wear Life - Ensures long life and excellent performance for gears, bearings and friction disc material.
- Fewer Oils, Fewer Changes -Can be used in multiple compartments with extended drain intervals over multiple seasons.

Typical Characteristics ⁽¹⁾	
SAE viscosity Grade	Multi Viscosity
Caterpillar Test	TO-4M, TO-4
Allison Test	C-4
Gravity , API (ASTM D287)	29.2
Flash Point, °C (°F) (ASTM D92)	222 (432)
Pour Point, °C (°F) (ASTM D97)	-39 (-38)

¹ The values shown are typical values and should not be used as quality control parameters to either accept or reject product. Specifications are subject to change without notice.

Oils - Transmission and Drive Train Oil

Cat TDTO-TMS™ (Cont'd.)

Typical Characteristics ⁽²⁾	
Viscosity cSt @40°C (ASTM D445)	107
Viscosity cSt @100°C (ASTM D445)	14.2
Viscosity Index (ASTM D2270)	134
TBN (ASTM D2896)	8.4
Zinc, % wt. (ASTM D4951)	0.127
Phosphorus, % wt. (ASTM D4951)	0.110
KRL Shear Stability	10.0%

English Volume (gal)	Metric Volume (L)	Part Number
Multi-Viscosity		
2.5	—	469-0584
5	—	154-0195
55	—	154-0194
Bulk	—	154-0192

English Volume (gal)	Metric Volume (L)	Part Number
Multi-Viscosity		
—	20	154-0196
—	208	154-0197
—	1000	444-3553
—	Bulk	154-0193

Cat TDTO Cold Weather



Best Performance and Protection for Cold Weather Applications

Cat TDTO Cold Weather is a synthetic blend lubricant that provides superior performance and protection in transmissions, torque converters, final drives, hydraulics and/or wet brakes at temperatures down to -40°F (-40°C). The special formulation creates optimal friction performance and controls transmission slippage while eliminating clutch glaxing. Cat TDTO Cold Weather has excellent compatibility with all materials used in Cat machines, including friction materials, seals and elastomers. The outstanding thermal stability and oxidation resistance gives Cat TDTO Cold Weather long drain intervals.

Benefits:

Performance

- Easier Engine Starts
- Greater Machine Rim Pull and Breakout Force
- Long Drain Intervals

Protection

- Promotes Transmission Durability
- Increased Clutch, Gears and Bearing Life
- Optimal Cold Weather Friction Performance

Applications

Cat TDTO Cold Weather is the preferred transmission and drive train oil for low temperature operation in certain applications and can be used in wet brakes and hydraulics. Refer to SE-BU6250 for more information.

Long Drain Intervals

Cat TDTO Cold Weather is also recommended for applications with the following original equipment manufacturer requirements:

² The values shown are typical values and should not be used as quality control parameters to either accept or reject product. Specifications are subject to change without notice.

Oils - Transmission and Drive Train Oil

Cat TDTO Cold Weather (Cont'd.)

- Cat TO-4
- Allison C-4
- Komatsu Micro-Clutch
- Vickers 35VQ25

With the use of Cat S•O•SSMOil Analysis and Cat Filters, Cat TDTO Cold Weather is capable of long change intervals.

Typical Characteristics ⁽³⁾	
SAE Viscosity	0W-20
Gravity @ 16°C (60°F)	
Gravity @ API (ASTM D287)	30.8
Specific Gravity	.872
Flash Point @ °C (ASTM D92)	190
Pour Point @ °C (ASTM D97)	-48
Kinematic Viscosity (ASTM D445)	
CSt @ 40°C	30.7
cSt @100°C	7.4
Brookfield Viscosity (ASTM D2983)	
cP @ -40°C	8000 max
Phosphorus, ppm	1040
Zinc, % wt	0.129
Calcium, % wt	0.310

English Volume (gal)	Metric Volume (L)	Part Number
1	—	341-1949
5	—	228-6069
55	—	228-6070
Bulk	—	301-4523
—	4	332-8851

English Volume (gal)	Metric Volume (L)	Part Number
—	20	228-6069
—	205	228-6070
—	208	466-5027
—	1000	444-3552
—	Bulk	343-7108

³ The values shown are typical values and should not be used as quality control parameters to either accept or reject product. Specifications are subject to change without notice.

Oils - Transmission and Drive Train Oil

SATO

SATO will be the primary factory fill oil for the machine models listed previously. Top-off with other products from the CAT TDTO family should be limited to less than 10% maximum of sump capacity, and the use of higher viscosity fluids for top-off can adversely impact cold start performance

At the time of an oil change switching from CAT SATO to Cat TDTO or from Cat TDTO to Cat SATO, no special compartment flushing or alternative procedures are required. Follow Standard oil change procedures for the machine.

Typical Characteristics	
Flash Point, °C (ASTM D92)	236
Pour Point, °C (ASTM D97)	-42
Viscosity cP @ -30°C (ASTM D5293)	13,500
Viscosity @ 40°C, cSt (ASTM D445)	73
Viscosity @ 100°C, cSt (ASTM D445)	11.4
Viscosity Index (ASTMD2270)	149
Zinc, % wt (ASTM D4951)	0.138
Phosphorous, % wt ASTM D4951()	0.110
Calcium, % wt (ASTM D4951)	0.312
Temperature Range (ambient)	-30 to 50°C / -22 to 50°F

English Volume (gal)	Metric Volume (L)	Part Number
5	–	427-0401
55	–	427-0443
–	20	427-0375

English Volume (gal)	Metric Volume (L)	Part Number
–	208	427-0388
–	Bulk	427-0372

Contact Information:

Global Dealer Solutions Network

Parts Technical Support Team

Tool Free - North America: 1-877-228-2420

International: +1-309-266-4421

Electronic Requests:

Send via Microsoft Customer Relationship Management (MSCRM)

Oils - Final Drive and Axle Oil

Cat FDAO™



Recommended Use

- Preferred lubricant for Cat Off-Highway Truck front wheels, differentials and final drives.
- Preferred lubricant for Cat Large Track-Type Tractor, Pipelayer, and Track Skidder final drives (steel-tracked machines with elevated final drives except the D5M, D6M, and 561M).
- Compatible with Cat final drives and axles that previously specified TO-4 lubricants and do not contain friction material.

Discover the Difference

- Cat FDAO is developed, tested and approved by Caterpillar to meet the same high standards as all genuine Cat parts.
- Factory-Fill - Used as standard factory-fill Cat Off-Highway Trucks and Large Track-Type Tractors.
- Extended Drain intervals - Allows for double-length drain intervals in off-highway truck final drives, as compared to TO-4 commercial oils.
- Minimal Foaming - Formulated to protect against the damaging effects of air.

Typical Characteristics ⁽¹⁾	
SAE Viscosity Grade	SAE 60
ISO Viscosity Grade	320
Gravity, 16°C API (ASTM D287)	25.9
Gravity, 16°C Specific	.899
Flash Point, °C (°F) (ASTM D92)	255 (491)
Pour Point, °C (°F) (ASTM D97)	-15 (5)
Viscosity cSt @ 40°C (ASTM D445)	334
Viscosity cSt @ 100°C (ASTM D445)	25.2
Viscosity cSt @ -10°C (ASTM D2983)	75,000
Viscosity Index (ASTM D2270)	97
Copper Strip (ASTM D130, 2 hrs @100°C)	1A

English Volume (gal)	Metric Volume (L)	Part Number
SAE 60		
5	—	184-6022
55	—	184-6021
Bulk	—	184-6020
—	18	206-5210
—	20	184-8055
—	200	198-7672

English Volume (gal)	Metric Volume (L)	Part Number
SAE 60		
—	205	201-9855
—	208	184-8056
—	1000	221-3445
—	1200	202-9753
—	Bulk	184-8054

¹ The values shown are typical values and should not be used as quality control parameters to either accept or reject product. Specifications are subject to change without notice.

Cat FDAO SYN™



Recommended Use

- Preferred lubricant for Cat Off-Highway truck and D11R carrydozer front wheels, differentials and final drives operating under high load factors.
- Compatible with Cat final drives and axles that previously specified Cat FDAO or TO-4 lubricants and do not contain friction material.

Discover the Difference

- Cat FDAO SYN is developed, tested and approved by Caterpillar to meet the same high standards as all genuine Cat parts.
- Extended Drain Intervals - Extend drain intervals up to a factor of three in off-highway truck final drives, as compared to Cat TDTO and TO-4 oils.
- Mining Foaming - Formulated to protect against the damaging effects of the air.
- Longer Bearing and Gear Life – Has demonstrated the capability to double bearing life and quadruple gear life when compared to TDTO and TO-4 oils used off-highway truck final drives.

Typical Characteristics ⁽²⁾	
SAE Viscosity Grade	Multigrade
ISO Viscosity Grade	320
Caterpillar Test	FD-1
Gravity, 16°C API (ASTM D287)	33.4
Flash Point, °C (°F) (ASTM D92)	246 (474) min.
Pour Point, °C (°F) (ASTM D97)	-36 (-38)
Kinematic Viscosity cSt @ 40°C (ASTM D445)	320
Kinematic Viscosity cSt @ 100°C (ASTM D445)	31.6
Brookfield Viscosity cP @ -20°C (ASTM D2983)	34,000
Brookfield Viscosity cP @ -30°C (ASTM D2983)	131,200
Viscosity Index (ASTM D2270)	138
Copper Strip (ASTM D130, 2 hrs @100°C)	1A

English Volume (gal)	Metric Volume (L)	Part Number
Multi-Viscosity		
5	—	208-2390
55	—	198-7450
—	18	206-5211

English Volume (gal)	Metric Volume (L)	Part Number
Multi-Viscosity		
—	208	206-5212
—	1000	454-9064

² The values shown are typical values and should not be used as quality control parameters to either accept or reject product. Specifications are subject to change without notice.

Oils - Gear Oil

Cat GO



Recommended Use

- Cat GO does not meet Cat TO-4 specifications and should not be used when TO-4 is recommend
- Cat GO is a multi-viscosity API GL-5 classification gear oil intended for extreme-pressure applications, such as the following:
- Differentials and final drives on Cat Wheel Tractor-Scrapers, specific Articulated Trucks, Wheel Excavators, and Backhoe Loaders.
- Cold Planer direct drive transmissions, differentials and final drives.
- Drum bearings on Vibratory Soil Compactors

Discover the Difference

- Cat GO is tested and approved by Caterpillar to meet the same high standards as all genuine Cat parts.
- Longer Gear and Bearing Life - Superior thermal stability and oxidation resistance reduce deposits and wear.
- Extreme-Pressure Performance - Provides extra protection for improved performance and life in extreme-load conditions.
- Simplified Maintenance - Multi-purpose capability reduces number of gears lubricants needed for maintenance.
- Wide Temperature Range - Provides excellent stability at high temperatures and superior performance at low temperatures for easier start-ups.

Typical Characteristics ⁽¹⁾		
SAE Viscosity Grade	SAE 80W-90	SAE 85W-140
Gravity @ 16°C API (ASTM D287)	26.6	25.1
Flash Point, °C (°F) (ASTM D92)	174°C	226°C
Pour Point, °C (°F) (ASTM D97)	-27 (-17)	-24°C
Viscosity cSt @ 40°C (ASTM D445)	130	377
Viscosity cSt @100°C (ASTM D445)	14.5	27.4
Viscosity cP @ -26°C (ASTM D2983)	107,000	75,200
Viscosity Index (ASTM D2270)	110	98
Phosporous, % wt. (ASTM D1091)	0.088	0.088
Density @ 160°C	0.897	0.910

¹ The values shown are typical values and should not be used as quality control parameters to either accept or reject product. Specifications are subject to change without notice.

Cat GO (Cont'd.)

English Volume (gal)	Metric Volume (L)	Part Number	English Volume (gal)	Metric Volume (L)	Part Number
SAE 80W-90			SAE 85W-140		
2.5	—	462-7781	—	Bulk	2P-9863
5	—	8T-9582	2.5	—	462-7784
30	—	8T-9583	5	—	9X-6185
55	—	8T-9584	—	4	7X-7618
Bulk	—	155-6220	—	18	133-9643
—	5	9X-6470	—	20	7X-7617
—	20	7X-7867	—	200	205-4312
—	60	7X-7887	—	205	7X-7616
—	200	424-2169	—	208	161-1246
—	208	9X-6469	—	1000	7X-7615
—	1000	119-5129	—	Bulk	7X-7614
—	1200	8C-9927			

Cat Synthetic GO



Recommended Use

- Cat GO does not meet Cat TO-4 specifications and should not be used when TO-4 is recommended.
- Cat Synthetic GO is a full synthetic multi-viscosity API GL-5 classification multi-purpose gear oil for the following applications:
- Sealed-and-lubricated track pins on Cat Track-Type Tractors and Track-Type Loaders.
- Track Type Tractor equalizer bar ends.
- Differentials and final drives on Cat Wheel Tractor-Scrapers, specific Articulated trucks, Wheel and Mini Excavators, and Backhoe Loaders.
- Specific Articulated Trucks as recommended in your Operation and Maintenance Manual.
- Motor Grader circle drives.
- Cold Planer direct drive transmissions, differentials and final drives.
- Drum bearings on Vibratory Soil Compactors.
- Speed reducers on augers and elevators.

Discover the Difference

- Cat Synthetic GO is tested and approved by Caterpillar to meet the same high standards as all genuine Cat parts.
- Maximum Gear and Bearing Life – Provides ultimate protection against scoring of gear teeth, as well as pitting in gear teeth and rolling-element bearings.
- Extended Track Life - Improves galling resistance, reduces seal wear and minimizes bushing end grooving in sealed-and-lubricated track joints.
- Wide Temperature Range - Offers superior stability at high temperatures and superior performance at low, even arctic temperatures.
- Reduced Wear - Provides excellent oxidation resistance which reduces buildup of harmful deposits.
- Extreme-Pressure Performance - Offers powerful protection under extreme duty conditions.
- Factory-Fill - Used as standard factory-fill for Cat machines.

Oils - Gear Oil

Cat Synthetic GO (Cont'd.)

Typical Characteristics ⁽²⁾	
SAE Viscosity Grade	SAE 75W-140
API Service Classification	GL-5, MT-1
Gravity API (ASTM D287)	31.7
Gravity Specific	867
Flash Point, °C (°F) (ASTM D92)	220 (428)
Pour Point, °C (°F) (ASTM D97)	-46 (-51)
Channel Point, °C (°F, max (FMTS 791A-3456)	-45 (-49)
Viscosity cSt @ 40°C (ASTM D445)	185
Viscosity cSt @ 100°C (ASTM D445)	25
Viscosity Index (ASTM D2270)	172
Phosphorus, % wt. (ASTM D1091)	0.141

English Volume (gal)	Metric Volume (L)	Part Number
SAE 75W-140		
1 qt	—	350-9510
1	—	350-9509
5	—	242-3466
55	—	242-3467

English Volume (gal)	Metric Volume (L)	Part Number
SAE 75W-140		
—	4	350-9509
—	19	242-3466
—	208	242-3467
—	Bulk	8C-3400

² The values shown are typical values and should not be used as quality control parameters to either accept or reject product. Specifications are subject to change without notice.

Compactor Oil



- Special synthetic oil used in vibrator drum of Compactors
- Packaged in 20 L (5 gal) pails
- Large machines take 20 L (5 gal) per drum
- Small machines take 10 L (2 1/2 gal) per drum

Part Number	Size
353-4980	1
4C-6767	5
417-9262	55

Cat MTO



Recommended Use

- Recommended for older Car Backhoe Loader rear axles and Cat Challenger Tractors.
- Cat Components and systems recommending multipurpose tractor fluid that meet Ford/New Holland M2C134D specification.
- Most Cat Hydraulic Systems

Discover the Difference

- Cat MTO is developed, tested and approved by Caterpillar to meet the same high standards as all genuine Cat parts.
- Improved Braking and Clutching – Where approved for use, enhances control and extends life in clutches and wet brakes.
- Lower Maintenance Costs - Exceptional anti-wear properties extend equipment and component lives.
- Cold-Weather Operation - Can be used in temperatures as low as -13°F (-25°C).
- Simplified Maintenance - Can be used in multiple compartments, reducing inventory and the chance of using the wrong oil.
- Long-Lasting Performance - Offers high thermal stability and oxidation resistance for long service life in severe applications.

Oils - Special Application Oils

Cat MTO (Cont'd.)

OEM Compatibility	
Cat MTO meets the following OEM specifications ⁽¹⁾	
API	GL-4
CNH	MAT3525
For New Holland	FNHA-2-C-201
Kubota	UDT
Volvo	WB 101/BM
Cat MTO can be substituted in applications that require the following:	
AGCO Powerfluid	821 XL
Allison	C4 (Agriculture Applications Only)
Denison	HF-0/HF-1/HF-2 (T5D & P46)
Ford	ESN-M2C 134D
JI Case	MS 1204-07/09
John Deere	JMD J20C
Massey Ferguson	MF 1135/1141
Vickers	35VQ25
Typical Characteristics ⁽²⁾	
Gravity API (ASTM D287)	28.6
Flash Point, °C (°F) (ASTM D92)	214 (417)
Pour Point, °C (°F) (ASTM D97)	-42 (-44)
Viscosity Brookfield, cP at -20°C	4300
Viscosity cSt @ 40°C (ASTM D445)	58
Viscosity cSt @ 100°C (ASTM D445)	9.3
Viscosity Index (ASTM D2270)	140
Zinc, % wt.	0.15 min.

English Volume (gal)	Metric Volume (L)	Part Number
SAE 10W-30		
2.5	—	462-7711
5	—	105-3335
55	—	105-3334
Bulk	—	155-6218
—	5	172-6894
—	18	135-3189

English Volume (gal)	Metric Volume (L)	Part Number
SAE 10W-30		
—	20	109-4395
—	200	126-2700
—	205	138-4271
—	208	120-5286
—	Bulk	105-3333

1 Cat MTO does not meet Cat TO-4 or FD-1 and should not be used in compartments that specify TO-4 or FD-1 oil.

2 The values shown are typical values and should not be used as quality control parameters to either accept or reject product. Specifications are subject to change without notice.

Brake Fluid



- Makes DOT and SAE requirements

DOT 3

- Use where DOT 3 brake fluid is specified by service manual or operators guide
- Loaders, lift trucks, and service trucks

DOT5

- DOT 5 is for extreme service conditions where higher than normal temperatures will be encountered or where moisture absorption is a problem.
- High performance cars and off-road vehicles

Part Number	Qty.	Size
DOT 3		
4C-5585	12	0.94 L (1 qt)
4C-5586	4	3.78 L (1 gal)
DOT 5		
4C-5588	12	0.94 L (1 qt)

Governor Oil



- For 3600 Engine Woodward Governor

Part Number	Qty.	Size
136-9642	1	0.95 L

Oils - Additives

Cat Axle and Brake Oil Additive



English Volume (qt)	Metric Volume (L)	Part Number
1 qt	—	197-0017

Oil Stabilizer



- Reduces oil consumption
- Reduces engine wear
- Helps keep vital engine parts clean
- Reduces thermal oil and viscosity breakdown

Part Number	Qty	Size
143-3655	12	0.94 L

This product should only be used as needed in the following engines:

Engine Model	Engine Serial No.
3406E	5EK1-Up, 5DS1-Up, 6TS1-Up, 1LW1-Up, 2WS1-Up, 1MM1-Up, 4AS1-Up
C-15	6NZ1-82494
C-16	7CZ1-Up

Hydraulic Oil Additive



- Low friction additive for some hydraulic systems
- Relieves “stick-slip” on noisy hydraulic cylinders
- Not for use on machines which have a common sump for hydraulics, brake, and transmissions

Part Number	Size	Qty.
1U-9891	0395 L (1 qt) bottle	12

Health and Safety

Under normal conditions of intended use, these products do not pose a risk to health. Excessive exposure may result in eye, skin or respiratory irritation. Always observe good hygiene measures. Read and understand that Material Safety Data Sheet (MSDS) before using this product. For a copy of the MSDS, visit us on the web at www.catmds.com.

Cat ELC™



Recommended Use

- Cat ELC meets or exceeds the requirements of the following specifications and guidelines:
 - Cat EC-1
 - ASTM D-3306
 - ASTM-6210
 - TMC RP-329
 - TMC RP-338
 - SAE J1034

Discover the Difference

- Cat ELC is developed, tested and approved by Caterpillar to meet the same high standards as all genuine Cat parts.
- Factory-Fill - Used as standard
- Lower Maintenance Costs-Reduces engine coolant. CAT ELC eliminates the need for supplemental coolant additives, extends coolant change-out intervals and reduces disposal requirements.
- Advanced Metal Protection - Incorporates an advanced formula technology with organic acid additive corrosion inhibitors, such as a combination of mono and dicboxylates for maximum protection of copper, solder, brass, steel, cast iron and aluminum.

Typical Characteristics ⁽¹⁾	
Color	Strawberry Red
Boiling protection with 15 psi (1 bar) radiator cap	
50% Cat ELC/50% water	129°C (265°F)
60% Cat ELC/40% water (ELC concentrate added)	132°C (270°F)
Freezing protection	
50% Cat ELC/50% water	-37°C
60% Cat ELC/40% water (ELC concentrate added)	-52°C (°62F)
Nitrite (50% solution)	500 ppm
Molybdate (50% solution)	530 ppm

¹ The values shown are typical values and should not be used as quality control parameters to either accept or reject product. Specifications are subject to change without notice.

Coolants

Cat ELC™ (Cont'd.)

English Volume (gal)	Metric Volume (L)	Part Number	Distribution Region
Cat ELC Concentrate (with embitterment)			
—	4	365-8394	Asia Pacific
—	5	205-6615	Europe, Africa, Middle East
1	—	238-8647	North America and Latin America excluding Brazil
Cat ELC Premix 50/50 (with embitterment)			
—	4	365-8395	Asia Pacific
—	18	365-8396	Asia Pacific
—	200	365-8397	Asia Pacific
—	1000	365-8398	Asia Pacific
275	—	361-1024	North America and Latin America excluding Brazil
—	200	215-4242	Brazil
—	4	215-4245	Brazil
—	20	215-4246	Brazil
1	—	238-8648	North America and Latin America excluding Brazil
5	—	238-8649	North America and Latin America excluding Brazil
55	—	238-8650	North America and Latin America excluding Brazil
—	5	205-6611	Europe, Africa, Middle East
—	20	205-6612	Europe, Africa, Middle East
—	210	205-6613	Europe, Africa, Middle East
—	1000	205-6614	Europe, Africa, Middle East

Cat ELI

Recommended Use

- Inhibitor concentrate based on Cat
- For use in generator sets, industrial engines and marine engines that do not require freeze protection

Discover the Difference

- Corrosion protection, like Cat ELC, only without glycol
- Extended drain interval and little maintenance makes an excellent alternative to conventional supplement coolant additives with water.
- Lower total owning and operating costs compared to water and SCA because of the extended drain interval and limited maintenance of Cat ELC

English Volume (gal)	Metric Volume (L)	Part Number	Distribution Region
Cat ELI Concentrate			
1	—	351-9431	Worldwide except Europe, Africa, Middle East
—	1000	366-2753	Latin America, Australia and North America
—	20	351-9432	Worldwide except Europe, Africa, Middle East
—	208	351-9433	Worldwide except Europe, Africa, Middle East

Cat ELI (Cont'd.)

English Volume (gal)	Metric Volume (L)	Part Number	Distribution Region
Cat ELI Premix Brazil Only			
52.8	200L	375-8009	Brazil
264.2	1000L	375-8010	Brazil

Cat DEAC™



Recommended Use

- Cat DEAC is approved for use in all Cat machines, commercial engine and truck engine applications and most diesel, gas or natural gas engines made by other manufacturers.
- Cat DEAC meets the following ASTM standards:
- ASTM D6210 (Heavy-duty antifreeze/coolants)
- ASTM D3306 (Automotive applications)
- ASTM D1384 (Glassware corrosion test)

Discover the Difference

- Cat DEAC is developed, tested and approved by Caterpillar to meet the same high standards as all genuine Cat parts.
- Excellent Performance - Contains organic and inorganic corrosion inhibiting and antifoam additives, and provides superior protection against pitting, corrosion and freezing down to -37°C (-34°F)
- Convenience - Fully formulated, no pre-mixing with supplemental coolant additive required at initial fill. Concentrate available in 1 gallon, 20 liter, and 55 gallon containers for top off.

Typical Characteristics ⁽²⁾	
Color	Magenta
Boiling protection °C (°F) 15 psi pressure cap (ASTM D1177)	
50% Cat DEAC/50% water	129 (265)
60% Cat DEAC/40% water (maximum)	132 (270)
Freezing protection °C (°F)	
50% Cat DEAC/50% water	-37 (-34)
60% Cat DEAC/40% water (maximum)	-52 (-62)
Silicon concentrate (in the form of Silicates)	240 ppm
Ethylene Glycol (% volume)	95.2% min.

² The values shown are typical values and should not be used as quality control parameters to either accept or reject product. Specifications are subject to change without notice.

Coolants

Cat DEAC™ (Cont'd.)

English Volume (gal)	Metric Volume (L)	Part Number	Distribution Region
Cat DEAC - Concentrate with Embitterment			
1	3.79	339-3768	North America and Latin America
5	20	339-3770	North America and Latin America excluding Brazil
55	—	339-3769	North America and Latin America excluding Brazil
—	210	362-2181	Europe, Africa, Middle East
—	200	365-2713	Asia Pacific
—	4	365-8399	Asia Pacific
—	5	362-2180	Europe, Africa, Middle East

Cat NGEC™



Recommended Use

- Cat NGEC Premix 50/50 is a heavy-duty cooling system fluid especially designed to provide superior protection against pitting, freezing, and corrosion in Cat natural gas engines or natural engines made by other manufacturers.
- Cat NGEC meets the following ASTM standards:
- ASTM D6210 (Heavy-duty antifreeze/coolants)
- ASTM D3306 (Automotive applications)
- ASTM D1384 (Glassware corrosion test)

Discover the Difference

- Cat NGEC is developed, tested and approved by Caterpillar to meet the same high standards as all genuine Cat parts.
- Fully Formulated - Does not require an initial supplemental cooling additive.
- Quick, easy servicing
- Superior Protection – Contains both organic and inorganic corrosion inhibitors as well as antifoam additives. It provides superior protection against pitting, corrosion and freezing down to -37°C (-34°F)

Typical Characteristics ⁽³⁾	
Color	Purple
Boiling protection with 15 psi pressure cap °C (°F) (ASTM D1177)	°C (°F) ASTM D1177)
50% Cat NGE/50% water	265 (129)
60% Cat NGEC/40% water (concentrate added)	270 (132)
Freezing protection °C (°F)	
50% Cat NGEC/50% water	-34 (-37)
60% Cat NGEC/40% water (maximum)	-62 (-52)
Ash content, % wt. (ASTM D1119)	0.60

³ The values shown are typical values and should not be used as a quality control parameters to either accept or reject product. Specifications are subject to change without notice.

Cat NGEC™ (Cont'd.)

Silicon concentrate (in the form of Silicates)	120 ppm
Ethylene Glycol (% volume)	45.3

English Volume (gal)	Metric Volume (L)	Part Number	Distribution Region
—	210	362-2182	Europe, Africa, Middle East
Cat NGEC Premix 50/50 with Embitterment			
—	4	366-2714	Asia Pacific
—	18	366-2715	Asia Pacific
—	200	366-2716	Asia Pacific
—	1000	339-3766	Australia
1	—	339-3776	North America and Latin America excluding Brazil
5	—	339-3777	North America and Latin America excluding Brazil
55	—	339-3778	North America and Latin America excluding Brazil
275	—	339-3779	North America and Latin America excluding Brazil

Cooling System Cleaners

Cooling System Cleaner - Standard



Applications

- Cooling system cleaner, full effect after several weeks in the cooling system.
- Not for use in removing large amounts of oil from cooling systems.

Features

- Removes scale or lime deposits.

Benefits

- Cleans cooling system while the machine works.

English Volume (gal)	Metric Volume (L)	Part Number	Distribution Region
0.500 (2 qt.)	1.893	6V-4511	North America

Cooling System Cleaner - Quick Flush



Applications

- For use as preventative maintenance or as a short-time flush at the time of coolant change.
- Not for use in removing large amounts of oil from cooling systems.

Features

- Removes lime deposits, scale and solder bloom.

Benefits

- Allows for one-step cleaning in just 90 minutes.

English Volume (gal)	Metric Volume (L)	Part Number
0.125 (1 pt)	0.473	4C-4609
0.250 (1 qt)	0.946	4C-4610
1	3.785	4C-4611
5	18.92	4C-4612
55	208.45	4C-4613

Cooling Conditioner for Aluminum Components



- Passivates reactive aluminum components within the cooling system
- For use with Cat Extended Life Coolant (ELC) in applications with aluminum radiators
- Inhibits the reaction that can cause depletion in nitrites in the Extended Life Coolant
- 1-Time treatment, on-going use is not required

English Volume (gal)	Metric Volume (L)	Part Number
0.5 fl oz	15.0 ml	461-2417
1.5 fl oz	44.4 ml	369-0804
2.5 fl oz	73.9 ml	369-0805

Coolant Tools

275 Gallon Tote Ball Valve Dispensing Tool



To dispense coolant from 275-gallon totes, a new ball valve dispensing tool has been added to the Cat product line-up. It was designed specifically to dispense coolant from disposable totes.

The tote dispensing tool is easy to use, and instructions are included with each tool group. Also included are toll-free 800 numbers to receive assistance from an experienced professional on the ball valve tool, plus other accessories that may be useful per your specific installation.

The valve group should last for several years, but the cutting tool may dull, necessitating the replacement of the cutting tool only.

Part Number	Description
232-4452	Ball Valve Group
Group Consists of:	
232-4451	Ball Valve Assembly
232-4450	Cutting Tool
239-5289	Buttress Nipple

Cooling Conditioner Test Kit



Applications

- Simple dip test just minutes to perform. Measures coolant nitrite levels.
- Use on coolants containing nitrites (for measuring nitrite levels)

Features

- Does not require dilution, titration or drops to count.

Benefits

- Includes a color density change for people with color blindness.

Part Number	Product
4C-9301	Coolant Conditioner Test Kit (100 test strips, sample, bottle, pipette)
4C-9297	Refill test strips

Battery and Coolant Refractometer



- Used to measure freezing point of coolants plus battery charge condition.
- Refractometer uses a prism and lens with simple focus adjustment to provide.
- Easy to operate
- Automatic temperature compensation (ATC)
- Requires only 2 to 3 drops of solution.
- Carrying case and calibration screwdriver included.
- Reads degrees Centigrade and Fahrenheit.

Range	Resolution
-60 to 32° propylene glycol freeze point	10°F
-50 to 0°C ethylene glycol freeze point	5°C
1.15 to 1.30 specific gravity of battery acid	0.01
Product	Part Number
Battery and Coolant Refractometer	245-5829

Battery, Coolant and Diesel Exhaust Fluid Refractometer



- Digital refractometer is simple to use and to read
- Used for measuring concentration levels for multiple fluids including ethylene glycol-based coolants such as Cat ELC ad Cat DEAC, propylene glycol-based coolants, Cat ELI and battery charge condition.
- Tool operating manual provides conversion for concentration of coolant glycol level to corresponding freeze protection level.
- Automatic temperature compensation
- Requires only a few drops of fluid
- Case and cleaning cloth included

Product	Part Number
Test Kit, Brix Refractometer	360-0774

Additives

Cat[®] ELC Extender



Recommended Use

- Protects against cylinder liner/block pitting and cavitation erosion.
- Should be added to Cat ELC at 500,000 km (300,000 miles) for Cat powered on highway trucks and 6,000 hours for commercial engines.
- Extender is typically necessary only once during the life of the coolant
- Ensures CAT ELC performance to 1,000,000 km (600,000 miles) or 12,000 hours

ELC Extender and Flush Intervals

Cat ELC Extender should be added after 6,000 hours or 300,000 miles (500,000 km) of operation, and the system should be drained and flushed with clean water after 12,000 hours or 600,000 miles (1,000,000 km). No cleaning agents are needed.

English Volume (gal)	Metric Volume (L)	Part Number	Distribution Region
Cat ELC Extender			
>0.250 (1 Qt.)	.946	119-5152	—
1	3.79	210-0786	—
—	1	215-4241	Brazil

Cat[®] SCA



Application

- For regular maintenance use with Cat DEAC and other heavy duty diesel engine coolants requiring maintenance with SCA.
- For use in water-based cooling systems, such as marine applications that do not require glycol for antifreeze protection.
- Use for initial does in non-fully formulated (ASTM D4985) engine coolants

Features

- Helps stop rust and material deposits from forming in the cooling system.

Benefits

- Protects all metals.
- Protects against cylinder liner cavitation and corrosion.
- Will not affect gaskets or hoses.

English Volume (gal)	Metric Volume (L)	Part Number
Cat SCA		
.063 (1/2 pint)	—	6V-3542
.125 (1 pint)	—	8T-1589
.250 (1 qt)	—	3P-2044 ⁽¹⁾
5	—	8C-3680 ⁽¹⁾

English Volume (gal)	Metric Volume (L)	Part Number
Cat SCA		
55	—	5P-2907 ⁽¹⁾
—	1	217-0616 ⁽²⁾
—	20	217-0617 ⁽²⁾
—	208	217-0618 ⁽²⁾

1 North and South Americas only

2 EAME and APD only

Health and Safety

Cat Grease is developed, tested and approved by Caterpillar to meet the same high standards as all genuine Cat parts. Under normal conditions of intended use, these products do not pose a risk to health. Excessive exposure may result in eye, skin or respiratory irritation. Always observe good hygiene measures. Read and understand the Material Safety Data Sheet (MSDS) before using this product. For a copy of the MSDS, visit us on the web at www.catmsds.com.

Cat Grease

Lithium Complex Thickener



Cat Utility grease

- NLGI 2
- General Purpose Product – where solid additives are not required
- Corrosion Protection – resists oxidation and protects metal against rust
- For low speed and low load applications where operating temperatures are between (-20°C to +140°C (-4°F to +284°F))



Cat Prime Application Grease

- NLGI 2
- Reduced Component Wear – resists softening and protects parts for optimal life
- Extreme Pressure – enhanced with 3% Moly for moderate loads
- Long life – for applications where speed, loads and temperature are moderate
- Performs and protects where operating temperatures are between -20°C to +140°C (-4°F to +284°F)



Cat Extreme Application Grease – Arctic

- NLGI 0.5
- Extreme-Cold Operation – pumps and protects where operating temperatures are between -50°C to +130°C (-58°F to +266°F)
- Extreme Pressure - 5% Moly for exceptional heavy duty performance
- Semi-synthetic base oil

Calcium Sulfonate Thickener



Cat Extreme Application Grease 1

- NLGI 1
- Extreme Pressure - 5% Moly added for extreme impact and wear resistance
- Moisture Resistance – resists washout from fresh and salt water
- Performs and protects where operating temperatures are between -20°C to +140°C (-4°F to +284°F)



Cat Extreme Application Grease 2

- NLGI 2
- Extreme Pressure – 5% Moly added for extreme impact and wear resistance
- Moisture Resistance – resists washout from fresh and salt water
- Performs and protects where operating temperatures are between -15°C to +140°C (+5°F to +284°F)



Cat Extreme Application Grease – Desert

- NLGI 2
- Extreme-Heat Operation – performs and protects where operating temperatures are between -10°C to +140°C (+14°F to +284°F)
- Extreme Pressure - 5% Moly for exceptional heavy duty performance
- Mineral base oil

Greases

Specialty Greases



Cat Ball Bearing Grease

- Provides outstanding protection at high speeds and high temperatures associated with ball, needle and sealed bearing applications

Cat Hammer Paste⁽¹⁾

- Formulated for extreme temperatures and applications. Prevents seizing and significantly slows wear in applications with repetitive impact and vibration

Cat High Vacuum Grease⁽¹⁾

- Stiff silicone resists high temperatures while maintaining a seal under vacuum or pressure

Cat White Assembly Grease⁽¹⁾

- Ideal for holding bearings, seals, gaskets and other parts during assembly

Cat Petro Gel Amber⁽¹⁾

- Compound aiding in assembly of components

Reference Table

Previous Cat Product Name		Lithium Complex			Calcium Sulfonate Complex			Polyurea
		Cat Multipurpose	Cat Advanced Moly	Cat Arctic Platinum	Cat Ultra5 Moly #1	Cat Ultra5 Moly #2	Cat Desert Gold	Cat High Speed Ball Bearing
Package Description ⁽¹⁾	Size	Cat Utility Grease	Cat Prime Application Grease	Cat Extreme Application Grease - Arctic	Cat Extreme Application Grease 1	Cat Extreme Application Grease 2	Cat Extreme Application Grease - Desert	Cat Ball Bearing Grease
Cartridge ⁽¹⁾	450 g, 15.9 oz. ⁽¹⁾	452-6015	452-6010		452-6000	452-6005	452-7458	454-0292
Cartridge	390 g, 14 oz.	452-6011	452-6006	452-7459	452-5996	452-6001	452-6016	454-0291
Plastic Pail	16 kg, 35 lb.	452-6014	452-6009	452-6020	452-5999	452-6004	452-6019	
Keg	55 kg, 120 lb.	452-6013	452-6008	452-7461	452-5998	452-6003	452-6018	
Drum	180 kg, 400 lb.	452-6012	452-6007	452-7460	452-5997	452-6002	452-6017	

Package Description ⁽¹⁾	Size	Specialty			
		Al Complex	Silicone	Lithium Complex	Does Not Contain a Thickener
		Cat Hammer Paste	Cat High Vacuum Grease	Cat White Assembly Grease	Petro Gel Amber
Cartridge	390 g, 14 oz.	130-6951		129-1966	
Cartridge-AutoLube	390 g, 14 oz.	317-8491			
12 pack of 317-8491	390 g, 14 oz.	317-8492			
Tube	283 g, 10 oz.			266-9682	369-9451
Tube	150 g, 5.3 oz.		6V-2055		
Plastic Pail	2.72 kg, 6 lb.				
Plastic Pail	5 kg, 11 lb.	133-8807			369-9450
Plastic Pail	16 kg, 35 lb.			129-1969	

¹ Order through Antares

White Assembly Grease

Applications

- For use in general assembly and other light-duty applications.

Features

- Added tackifiers, making it ideal for holding gears, bearings, gaskets and other parts during assembly.
- Contains no molybdenum disulfide.

Benefits

- Exceptional general purpose Lithium Complex grease.

English Volume (gal)	Metric Volume (L)	Part Number
NLGI #0		
10 oz (tube)	254 g (tube)	266-9682
NLGI #2		
14 oz (cartridge)	397 g (cartridge)	129-1966
35 (plastic pail)	16 (plastic pail)	129-1969

Cat Hammer Paste



Cat[®] Hydraulic Hammer Paste (Grease) is formulated to lower friction and improve tool and bushing life in the harsh environments encountered with hydraulic impact hammer applications. These work tools generate high heat, severe shock, and heavy friction loads, which can fuse parts together. Cat Hydraulic Hammer Paste is made from copper and graphite to provide excellent wear protection even at temperatures higher than 2,000°F (1,093°C).

Performance

- Formulated for extreme temperatures and applications
- Strong adhesion, even in the presence of water

Protection

- Significantly slows wear
- Prevents seizing
- Extremely stable and corrosion resistant

Typical Characteristics ⁽²⁾	
Color	Copper
NLGI Class	2
Thicker Type	Aluminum Complex
Base Oil Type	Mineral
Operating Range	-20 to 1,100°C (-4 to 2,012°F)
Worked Penetration (mm)	265-295
Viscosity @ 40°C, cSt	350
4 Ball E.P. Weld Point (kg)	400
Dropping Point	260°C (500°F)

² The values shown are typical values and should not be used as quality control parameters

Greases

Cat Hammer Paste (Cont'd.)

English Volume (gal)	Metric Volume (L)	Part Number
NLGI #2		
–	12 pack (auto lube cartridge)	317-8492
–	400 g (auto lube cartridge)	317-8491
11 lbs (tub)	5 kg (tub)	133-8807
14 oz (cartridge)	397 g (cartridge)	130-6951

High Vacuum Grease

- Applications where maintaining a seal under vacuum or pressure is required.

English Volume (gal)	Metric Volume (L)	Part Number
4 oz (cartridge)	113 g (cartridge)	186-1530

Petro Gel Amber

- Provides overall compatibility in most application utilizing retention compounds
- High quality, meeting customer needs
 - For use in the following applications
 - Engine Seals
 - Transmission Seals
 - Machine Seals
 - Hydraulic Cylinder Seals
- Should not be used on gaskets or piston seals

English Volume	Metric	Part Number
6 lb	2.72 kg	369-9450
10 oz	283 g	369-9451

Cat Open Gear Lubricant – High Viscosity/Semi-Synthetic Compound

- For use in Electric Rope Shovels and Draglines Open Gears
- Formulated for high load/low speed applications
- Available in both Cold Weather and Warm Weather formulations

Cat OGL - Cold Weather			
English Volume	Metric	Part Number	Distribution
400 lb	181.4 kg	424-1487	Worldwide except Brazil
400 lb	181.4 kg	424-1480	Brazil Only
2100 lb	952.5 kg	424-1488	Worldwide except Brazil
2100 lb	952.5 kg	424-1489	Brazil Only

Cat Open Gear Lubricant – High Viscosity/Semi-Synthetic Compound (Cont'd.)

Cat OGL - Warm Weather			
English Volume	Metric	Part Number	Distribution
400 lb	181.4 kg	424-1485	Worldwide except Brazil
400 lb	181.4 kg	424-1470	Brazil Only
2100 lb	952.5 kg	424-1486	Worldwide except Brazil
2100 lb	952.5 kg	424-1477	Brazil Only



FILTERS

Filters Overview

Cat Filters...Engineered protection for every application

- Genuine parts optimized for Cat Equipment.
- Manufactured worldwide to Caterpillar specifications for global quality assurance.
- Complete line of products and services to meet your business needs.

Cat Liquid Filters



Standard Efficiency

- Features standard elements for normal duty filtration.
- Designed to maintain system cleanliness.
- Removes contaminants before the fluid reaches critical components.
- Available for older Cat equipment models.



Advanced Efficiency

Cat Advanced Efficiency Engine Filters provide increased contamination control over Standard Efficiency Filters, without requiring a shortened change interval. And, they are more economically priced than Ultra High Efficiency Filters.



Ultra High Efficiency

- Offers unsurpassed component protection by capturing the smallest particles which cause damage to the new high performing systems
- Benefits engine life and reduces engine wear.
- Maximizes engine performance and component life.
- The best way to keep your system clean.



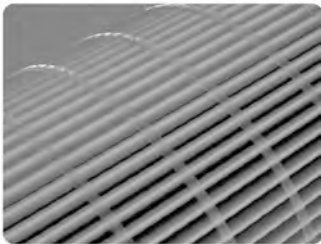
Aluminum Top Plate

- Non-Ferrous metal
- Reduces harmful contaminants
- More thread engagement

Canister

- Thickest can in the industry
- One piece can design
- Maximizes structural strength
- Minimizes potential leaks

Cat Element Features



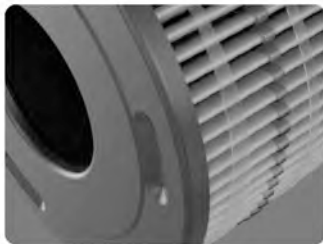
Spiral Roving

- Reduces pleat flex and fatigue
- Maximizes media surface utilization
- Increases contaminate retention



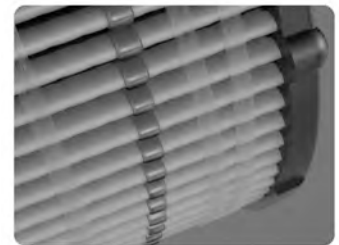
Non-Metallic Center Tube

- Stronger than metal
- Maximum cleanliness



Acrylic Beading

- Prevents Bunching
- Maximizes media surface area utilization



Urethane End Caps

- One-piece design
- Media molded into urethane
- Eliminates possible leak paths

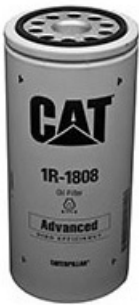
Engine Oil Filters

Engine Oil Filter - Standard Efficiency



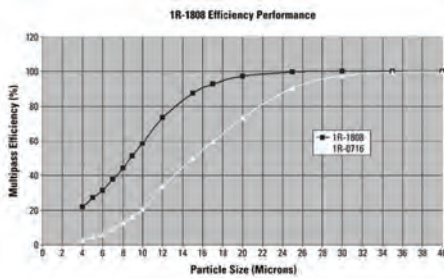
- Features standard elements for normal duty filtration.
- Designed to maintain system cleanliness.
- Removes contaminants before the lube oil reaches critical components.
- Available for most Cat equipment models.

Engine Oil Filter - Advanced Efficiency

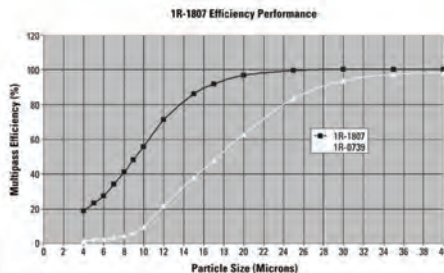


Cat Advanced Efficiency Engine Oil Filters provide increased contamination control over Standard Efficiency Filters, without requiring a shortened change interval. And, they are more economically priced than Ultra High Efficiency filters.

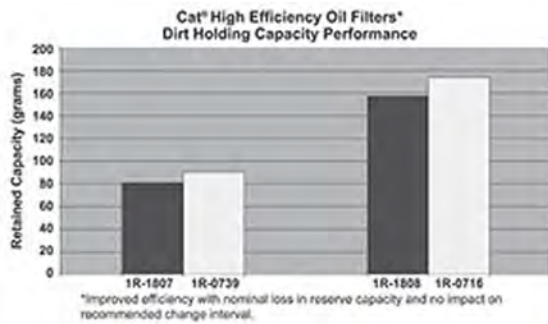
Improved Filtering Media



Cat Advanced Efficiency Oil Filters contain an improved filtering media which captures more contaminants, reducing wear on critical oil-lubricated engine components. This results in extended life and improved performance. The graphs below illustrate the efficiency of the 1R-1807 and 1R-1808 filters as compared to their Standard Efficiency Counterparts.



Reserve Dirt-Holding Capacity



Although higher-efficiency filters accumulate dirt more quickly than Standard Efficiency filters, Cat Advanced Efficiency Engine Oil filters do not require a shortened change interval. They feature a reserve dirt-holding capacity, which compensates for the majority of dirt accumulation increase, letting customers maintain standard oil change intervals. The relative dirt-holding capacity of Advanced and Standard Efficiency filters are illustrated in the graph.

Engine Oil Filter - Ultra High Efficiency



- Captures the smaller particles that are doing most of the damage in newer engines.
- Benefits engine life and reduces engine wear.
- Longer filter life leads to reduced contamination.

Fuel Filters

Fuel Filter (Secondary Fuel Filter) - Standard Efficiency



- Features standard elements for normal duty filtration.
- Designed to maintain system cleanliness.
- Removes contaminants before the fuel reaches critical components.
- Available for most Cat equipment models.

Fuel Filter (Secondary Fuel Filter) - Advanced Efficiency



- Engineered for maximum protection, performance and fuel economy.
- Removes more contaminants, maximizing protection of injectors, pumps and other critical engine components.
- Best choice to meet today's fuel contamination challenges, especially in applications with dirty fuel.
- Engineered for today's diesel engines with higher injection pressures and closer tolerances.
- High efficiency cellulose/synthetic blend filtration removes more than 98% of particles 4 microns or larger.

Fuel Filter (Secondary Fuel Filter) - Ultra High Efficiency



- Offers unsurpassed component protection by capturing particles four microns or smaller.
- Maximizes engine performance and component life.
- Offers easier serviceability and can be changed in most cases without the need for tools.

Fuel Water Separators

Fuel Water Separator (Primary Fuel Filter) - Standard Efficiency



- Effectively captures debris 20 microns and larger and eliminates most free water.
- Protects the fuel system while ensuring the secondary fuel filters meet their expected interval.

Fuel Water Separator (Primary Fuel Filter) - Advanced Efficiency



- Removes more than 98% of debris 10 microns and larger - and eliminates virtually all free water and more than 87% emulsified water.
- Minimize the risk of plunger-to-barrel scuffing and seizure in fuel injectors, reducing failure rates.
- Extends the life of engine fuel injectors and the secondary, high efficiency fuel filter.

Fuel Water Separator (Primary Fuel Filter) Ultra High Efficiency



- Increased separation of fuel water from fuel minimizes the risk of plunger-to-barrel scuffing and seizure in fuel injectors, reducing failure rates.
- Extends the life of engine fuel injectors and the secondary, ultra high efficiency fuel filter.

Fuel Water Separators

Cat Fuel Water Separators — Retrofits



- Easy to Install Pump
- Electric priming pump works with the flip of a switch, priming in two to six minutes.
- Resilient mounting extends pump life and absorbs some of the shock load.
- Primary fuel filter removes more than 98% of debris 10 microns and larger.
- Water separator removes virtually all free water and 87% of emulsified water from diesel fuel.
- All steel construction eliminates potential issues inherent to plastic bowls. Stepped can design isolates the collected water from the filter element.

Engine	Prime Time Full Flow Configuration	Hand Priming Configuration	Fuel Water ⁽¹⁾ Separator Basic Configuration
Small Engines C12 & smaller	Kit 206-5756 ⁽¹⁾	- Base 128-8557 with 423-8522 (axial seal) or - Base 202-9871 with 423-8525 (radial seal)	- Base 195-1068 with 423-8522 (axial seal) FWS or - Base 177-9778 with 423-8525 (radial seal) FWS ⁽¹⁾
Medium Engines C15-C16, 3408	Kit 206-5756 ⁽¹⁾ The 423-8525, included in the kit, can be replaced with the 423-8524	- Base 128-8557 with 423-8521 (axial seal) or - Base 202-9871 with 423-8524 (radial seal)	- Base 195-1068 with 423-8521 (axial seal) FWS or - Base 177-9778 with 423-8524 (radial seal) FWS ⁽¹⁾

Engine	Prime Time Pump Prime Only Configuration	Fuel Water ⁽¹⁾ Separator Basic Configuration
3508	Kit 206-5756 ⁽¹⁾ (for priming only)	- Base 175-7060 with 438-5385 (10 micron) or 438-5386 (4 micron)
3512-3516	Kit 206-5756 ⁽¹⁾ (for priming only)	232-5263 group, each include (2) base 225-6404 with (2) 438-5385 (10 micron) or 438-5386 (4 micron)
3524	Kit 206-5756 ⁽¹⁾ (for priming only)	232-5263 group, each include (3) base 225-6404 with (3) 438-5385 (10 micron) or 438-5386 (4 micron)

Cat PrimeTime Priming Pumps



Cat PrimeTime Priming Pumps are easily installed on the frame or engine as retrofits. They prime the filter and fuel system with a flip of the switch.

- No need to pre-fill filter and risk debris reaching injectors
- Primes fuel filter in two to six minutes
- No time-consuming, difficult manual pumping

Choosing the Correct Cat Hydraulic Filter



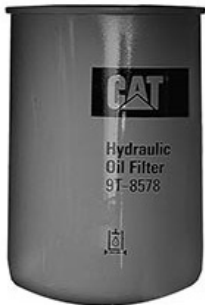
The Cat Hydraulic Filter line now includes Standard, Advanced Efficiency and Ultra High Efficiency (UHE) filters, providing our customers the best selection and the best engineered protection available anywhere.

Selection Guidelines

In order to choose the right filter for your machine, always begin by consulting the maintenance manual for proper change interval and recommended filter part numbers. It is usually safe to substitute a higher-efficiency filter, but NEVER substitute a lower-efficiency filter than the one recommended.

If your transmission or hydraulic system has a filter bypass dash indicator and a Standard filter is recommended, you can use an Advanced Efficiency or UHE. If you do not have a bypass indicator, consult your Cat Dealer before upgrading.

Hydraulic and Transmission Filters - Standard Efficiency



Cat Standard Efficiency Hydraulic and Transmission Filters

- Features standard elements for normal duty filtration.
- Designed to maintain system cleanliness.
- Available for most Cat equipment models.

Selection Guidelines

- In order to choose the right filter for your machine, always begin by consulting the maintenance manual for proper fit and installation.

Upgrade Procedure and Intervals

- Higher efficiency filters can clog sooner because they trap smaller particles which standard filters do not.

Hydraulic and Transmission Filters - Advanced Efficiency



Cat Advanced High Efficiency Hydraulic and Transmission Filters

- Special media provides advanced protection against contaminant introduction during maintenance and repair.
- Engineered for effective contamination control.
- Protects hydraulic and drive train systems against accelerated wear.

Selection Guidelines

- In order to choose the right filter for your machine, always begin by consulting the maintenance manual for proper fit and installation.

Upgrade Procedure and Intervals

- Higher efficiency filters can clog sooner because they trap smaller particles which standard filters do not.

Hydraulic Filters

Hydraulic and Transmission Filters - Ultra High Efficiency



Cat Ultra High Efficiency Hydraulic and Transmission Filters

- Super-fine synthetic media removes a higher proportion of very small particles and an even higher proportion of larger particles.
- Specially engineered to aid in optimum contamination control efforts.
- Increases system efficiency, eliminate system failures and extend oil life.
- Reduces exposure of abrasives to critical components - extending component wear life.
- Use to clean up systems following repairs and rebuilds.

Selection Guidelines

- In order to choose the right filter for your machine, always begin by consulting the maintenance manual for proper fit and installation.

Upgrade Procedure and Intervals

- Higher efficiency filters can clog sooner because they trap smaller particles which standard filters do not.



Air filters, also called air cleaners, are responsible for continuously cleaning the air coming into the engine or machine cab. Air filters are designed to effectively remove contaminants such as dust, dirt, soot and other air-borne particulates. Cat Filters are available in Standard Efficiency and Ultra High Efficiency, providing the best protection for your machine.

Cat Engine Air Filters

Standard Efficiency Air Filters

- Available for all Cat equipment models.
- Recommended for normal duty filtration
- Equipped with media designed to prevent dirt, soot, sand, and other contaminants from entering the engine under normal operating conditions.

Ultra High Efficiency (UHE) filters

- Available for some Cat equipment models.
- Recommended when extremely fine dust or soot make up a high percentage of the contaminants in the atmosphere.
- Higher initial and overall efficiency for improved engine performance and dirt holding capacity, which extends filter element service life.

Cat Cabin Air Filters

- Protects the equipment's heating and cooling system from dirt and debris as well as provide a clean air environment for the operator.
- Available in a variety efficiencies and upgrade options, including Standard Efficiency, High Efficiency, Activated Carbon, and Lower Restriction elements.

Air Filters

Cabin Air Filtration Upgrade Options

Not for use in filtering hazardous materials

Odor Reduction Cabin Air Filters

- Caterpillar offers a selection of activated carbon impregnated cabin air filters for use in applications where odors or airborne irritants are a concern. These filters provide significant odor reduction, but they are not designed to filter hazardous materials.

Compatibility and Fit

- Odor reduction cabin air filters can be used as direct replacements for standard filters. No modification is necessary, and pressure drop is similar to standard, so there is minimal effect on air flow, A/C and heat performance, or cabin air pressure. Correct substitutions are indicated in the following table.

Activated-carbon filtering

- Odor reduction cabin air filters use high-performance activated carbon to quickly absorb odor-causing particles and reduce odors to a comfortable level. A bonded structure holds carbon in place even in high-vibration conditions and prevents carbon dusting. This design also makes the filters easy to install and safe to dispose.

Improved particle removal

- Odor reduction cabin air filters also provide higher particle removal efficiency, both initially and throughout filter life. Fewer particles of soil, dust, and other irritants enter the cab, even after sustained use.

Replacement Guidelines

- Activated carbon cabin air filters must be replaced regularly for maximum odor reduction. Replace damaged filters, filters used longer than 12 months or filters that no longer reduce odors.

Cat Cabin Air Filters

Caterpillar offers optional cabin air filters for use in all applications and environments. All cabin air filters meet Caterpillar's stringent specifications for performance and quality construction. Advanced filtration technology reduces airborne irritants, creating a cleaner and more comfortable working environment for the operator. No equipment modification is needed for installation. Note: Cabin air filters are not for use in filtering hazardous materials.

High Efficiency

- Recommended for extremely dusty environments
- Improved dirt holding capacity, which may extend service life depending on the operating conditions
- Higher initial and overall efficiency for improved performance
- Easier to clean



Activated Carbon

- Recommended in situations where odor is a problem
- High performance activated carbon ensures fast rate of absorption
- Superior particle removal efficiency reduces eye, nose and throat irritants
- Higher capacity extends life and reduces maintenance costs
- No adverse effect on air flow, heat or air conditioning performance



Lower Restriction

- Recommended in situations where there is poor cab air flow
- Allows for more air flow into the cab
- Similar capacity to standard option
- Standard efficiency



Standard

- Recommended for most applications
- Designed to prevent dirt, soot, sand and other contaminants from entering the cab under normal operating conditions
- Standard efficiency



Dust and Odor Reduction Cabin Air Filter Options

Standard	Upgrade Option	Type
105-4968	139-3204	Dust & Odor Reduction
107-0266	175-2841	High Efficiency
107-0266	282-5339	Dust & Odor Reduction
112-7448	175-2838	Dust & Odor Reduction
113-0305	196-3161	Dust & Odor Reduction
116-5796	142-7069	Dust & Odor Reduction
119-3355	233-8359	Dust & Odor Reduction
119-3355	268-6704	Lower Restriction
149-1912	220-8800	Dust & Odor Reduction
180-7487	282-5340	Dust & Odor Reduction
209-8217	307-4442	Dust & Odor Reduction
209-8217	268-6705	Lower Restriction
209-8217	318-7190	High Efficiency
238-0479	319-7944	High Efficiency
238-0479	291-3928	Dust & Odor Reduction
259-3222	266-7765	Lower Restriction

Standard	Upgrade Option	Type
2V-0036	175-2837	Dust & Odor Reduction
6T-0988	175-2831	Dust & Odor Reduction
7G-8116	141-7903	Dust & Odor Reduction
7T-1889	175-2836	Dust & Odor Reduction
7T-1890	175-2839	High Efficiency
7T-1890	175-2832	Dust & Odor Reduction
7X-6012	200-8460	Dust & Odor Reduction
7X-6041	175-2834	Dust & Odor Reduction
8P-5343	175-2835	Dust & Odor Reduction
9G-1518	175-2833	Dust & Odor Reduction
9X-8216	175-2840	High Efficiency
231-0167	326-7963	Dust & Odor Reduction
290-2287	348-3432	Dust & Odor Reduction
304-8631	333-2112	HEPA, cabin precleaner
341-8392	450-3029	HEPA, cabin precleaner
457-2836	457-3049	HEPA, cabin precleaner

Air Filters

Retro-Fit Breather Upgrade

Function of Breathers

- Breathers are an important part of any professional contamination control strategy. As the volume of liquid changes inside a container (e.g., a hydraulic tank), air must enter and exit the container in order to prevent the container from becoming over-pressurized or in vacuum. Without a breather the exchange of air as it enters and exits tanks introduces air borne contaminants.

Not filtering small air-borne particles results in:

- Pre-mature component replacement
- Lower productivity
- More frequent filter changes

Use of Breathers

- Track-type tractors, stationary engines (industrial, marine, generator sets), motor graders, and Challenger® agriculture tractors are a few product families that have breathers installed on production fuel tanks, hydraulic systems, and gear boxes. Utilizing breathers in order to improve system performance on Caterpillar production equipment is expanding.
- To improve existing fluid system contamination control, Caterpillar is providing retrofit breathers for field installation on Cat equipment and other manufacturer's equipment.

Advantage of a Breather

- In general, small particles cause abrasive wear on components and larger particles tend to cause sudden breakdowns by clogging pathways or creating interference between components. Usually, a breather is much less expensive than a filter, and its use can increase the service interval for the filter. In systems where air is forced out through the breather, such as in hydraulic or fast fill applications, the dirt is blown out of the element, thereby increasing its life.

Breather Selection

- The level of breather filtration required in a system depends on the application. The more sensitive to contamination the system is, the greater the need for filtration.

General Rule of Thumb

- Efficiency - Higher breather efficiencies will maintain a cleaner system.
- Restriction - If air flow capacity is in question, use the larger breather.
- Location - When choosing the location for the breather, make sure that it is as convenient as possible to inspect and change: good clearance and visual line.

Change intervals:

- Breather change interval can vary widely depending on extremes in operating conditions. As a general rule, change breathers with every fluid change or when breather vent slots appear clogged.

Inspection:

- Include visual inspection of breathers in routine maintenance inspections. If in doubt, change the breather. The cost of a new breather is minimal in comparison to the potential downstream costs of not changing it.

Filter Efficiency Options

Engine Lube Oil

Standard Efficiency	Advanced Efficiency	Ultra High Efficiency	Notes
1R-0726	276-5403	284-9054	
1R-0739	1R-1807		
1R-0716	1R-1808	244-4484	1R-0716/1R-1808...not for use on 3500 Engines
272-1788	275-2604	244-4484	272-1788/275-2604...used on 3500 Engines

Hydraulic

Standard Efficiency	Advanced Efficiency	Ultra High Efficiency	Fire Resistance	Notes
4I-3948	184-3931	126-1813		
090-2900	144-6691	126-1815	121-9868	
094-3229		139-1539		
094-4412		139-1540		
9U-6985	9U-5870	9U-6983	198-3188	9U-5870 higher efficiency than 9U-6984
9U-6985	9U-6984	9U-6983	198-3188	9U-6984 more capacity than 9U-5870
123-8999		117-9900		
1R-0719	1R-0773	132-8875	4T-3131	
1R-0728		139-1532	4T-3130	
1R-0735	1R-0777	139-1537	104-6931	
1R-0741		132-8876	4T-3132	
1R-0746		126-1810		
1R-0722	1R-0774	139-1536	4T-2134	
	4T-6788	223-7809		
	9T-8578	144-0832		
	9T-6636	126-1816		
119-4740		221-1026		
126-2081	179-9806	126-2131		179-9806 lower efficiency than 342-1823
126-2081	342-1823	126-2131		342-1823 higher efficiency than 179-9806
1R-0732	1R-0792	167-2009	4T-3133	
	201-0875	223-7810		
	1G-8878	102-2828	156-0214	
9T-9054		9T-7656		
	130-3212	126-1814		130-3212 higher efficiency & capacity than 185-0337
	185-0337	126-1814		185-0337 lower efficiency & capacity than 130-3212
	4I-3950	126-1814		4I-3950 lower efficiency than 185-0337
	109-7287	132-7249		
	134-0964	4C-6860		
185-1379		185-1278		
	108-1153	126-1817	134-3014	108-1153 higher efficiency & capacity than 9T-0973
	9T-0973	126-1817	134-3014	9T-0973 lower efficiency & capacity than 108-1153
	6E-6408	126-1818		
	152-6902	207-5035		
185-1375	192-1560			
	198-7397	139-1533		
	436-3443	295-6257		
	435-6036	371-5170		

Filter Efficiency Options

Transmission

Standard Efficiency	Advanced Efficiency	Notes
4I-3948	184-3931	
090-2900	144-6691	
9U-6985	9U-5870	9U-5870 higher efficiency than 9U-6984
9U-6985	9U-6984	9U-6984 more capacity than 9U-5870
1R-0735	1R-0777	
1R-0722	1R-0774	
126-2081	179-9806	179-9806 lower efficiency than 342-1823
126-2081	342-1823	342-1823 higher efficiency than 179-9806
1R-0732	417-8416	
185-1375	192-1560	

Transmission Filters

Recommended*	Replaces
328-3655	338-3540
341-6643	1G-8878
	102-2828
343-4464	1R-0773
	132-8875
343-4465	1R-0778
	132-8876
417-8416	1R-0792
	167-2009

*Recommended only for Transmission Applications as a replacement to the former Hydraulic UHE filter. See PEHJ0251 for details.

Fuel

Standard Efficiency	Advanced Efficiency	Ultra High Efficiency	Notes
	1R-0755	422-7587	
1R-1740	1R-0750		
121-9868	1R-0751	306-9199	306-9199 less capacity than 364-5287
121-9868	1R-0751	364-5287	364-5287 more capacity than 306-9199
1R-1712	1R-0749	416-1225	
1R-1725	1R-0766		

Fuel/Water Separator

Standard Efficiency	Advanced Efficiency	Ultra High Efficiency	Notes
—	438-5385	438-5386	

Filter Efficiency Options

Fuel/Water Separator (Cont'd.)

New Advanced Efficiency Fuel/Water Separators - Bowl-less

New Part Number	Equivalent Part Number
423-8521	326-1641
423-8522	326-1642
423-8524	326-1643
423-8525	326-1644

Marine "White" Options

Marine Part Number	Description	Existing Part Number
389-0432	Advanced - Secondary Fuel Filter	1R-0749
389-0433	Advanced - Secondary Fuel Filter	1R-0755
389-0434	Advanced - Engine Lube Oil Filter	1R-1808
389-0435	Advanced - Engine Lube Oil Filter	249-2347
432-4245	Advanced - Fuel/Water Separator	423-8521 or 326-1641
432-4247	Advanced - Fuel/Water Separator	423-8522 or 326-1642
432-4248	Advanced - Fuel/Water Separator	423-8524 or 326-1643
432-4249	Advanced - Fuel/Water Separator	423-8525 or 326-1644
441-4342	Advanced - Secondary Fuel Filter	1R-0751
441-4348	Advanced - Engine Lube Oil Filter	1R-1807

Air - Engine

Standard Efficiency	Ultra High Efficiency	Notes	Standard Efficiency	Ultra High Efficiency	Notes
6I-2499	132-7164		142-1340	220-0454	
6I-2501	128-2686		165-1689	220-0455	
6I-2503	132-7165		4W-5716	132-7170	
6I-0273	122-1674		4W-5228	132-7171	
6I-2505	122-1675		8N-6309	185-8786	
6I-2507	132-7166		251-5885	292-5862	
6I-2509	132-7167		251-5886	292-5863	
106-3969	132-7168		386-2097	422-1089	
123-6855	132-7169		386-2099	456-9847	
131-8822	134-0685		396-2122	420-5282	
142-1339	220-0453		396-2123	467-2012	

Filter Efficiency Options

Air - Cabin

Standard Efficiency	Ultra High Efficiency	Notes
105-4968	139-3204	Dust & Odor Reduction
107-0266	175-2841	High Efficiency
107-0266	282-5339	Dust & Odor Reduction
112-7448	175-2838	Dust & Odor Reduction
113-0305	196-3161	Dust & Odor Reduction
116-5796	142-7069	Dust & Odor Reduction
119-3355	233-8359	Dust & Odor Reduction
119-3355	268-6704	Lower Restriction
149-1912	220-8800	Dust & Odor Reduction
180-7487	282-5340	Dust & Odor Reduction
209-8217	307-4442	Dust & Odor Reduction
209-8217	268-6705	Lower Restriction
209-8217	318-7190	High Efficiency
238-0479	319-7944	High Efficiency
238-0479	291-3928	Dust & Odor Reduction
259-3222	266-7765	Lower Restriction

Standard Efficiency	Ultra High Efficiency	Notes
304-8631	333-2112	HEPA, cabin precleaner
2V-0036	175-2837	Dust & Odor Reduction
6T-0988	175-2831	Dust & Odor Reduction
7G-8116	141-7903	Dust & Odor Reduction
7T-1889	175-2836	Dust & Odor Reduction
7T-1890	175-2839	High Efficiency
7T-1890	175-2832	Dust & Odor Reduction
7X-6012	200-8460	Dust & Odor Reduction
7X-6041	175-2834	Dust & Odor Reduction
8P-5343	175-2835	Dust & Odor Reduction
9G-1518	175-2833	Dust & Odor Reduction
9X-8216	175-2840	High Efficiency
231-0167	326-7963	Dust & Odor Reduction
290-2287	348-3432	Dust & Odor Reduction
341-8392	450-3029	HEPA, cabin precleaner

Axial Seal Air Filter to Radial Air Seal Filter Adapter Kit Cross Reference

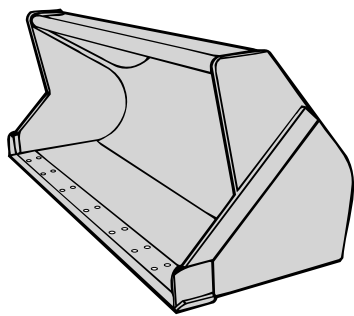
Axial Seal Type - Standard Primary	Axial Seal Type - Secondary	Optional Radial Seal Retrofit Kits - Axial to radial seal adapter kit	Radial Seal Type - Standard Primary	Radial Seal Type - Standard Primary Radial Seal Type - UHE Primary	Radial Seal Type - Secondary
7W-5389	2S-1285	6I-3828	6I-2499	132-7164	6I-2500
7W-5389	8N-4901	6I-3829	6I-2499	132-7164	6I-2500
7W-5317	2S-1286	6I-3830	6I-2501	128-2686	6I-2502
7W-5317	9S-9972	6I-3831	6I-2501	128-2686	6I-2502
7W-5316	8N-6883	6I-3831	6I-2503	132-7165	6I-2504
7W-5316	2S-1287	6I-3830	6I-2503	132-7165	6I-2504
7W-5495	1P-7360	6I-3832	6I-0273	132-1674	6I-0274
7W-5313	1P-8482	6I-3833	6I-2505	132-1675	6I-2506
7W-5313	6N-6444	6I-3833	6I-2507	132-7166	6I-2508
7W-5216	7N-1308	6I-3833	6I-2509	132-7167	6I-2510
7W-9853	7W-9567	106-7120	106-3969	132-7168	106-3973
4W-5716	6N-6067	106-7120 / 222-4376	106-3969	132-7168	106-3973
8N-6309	8N-2556	—	123-6855	132-7169	123-6856
9Y-7662	9Y-7663	—	131-8822	132-0685	131-8821



GROUND ENGAGING TOOLS

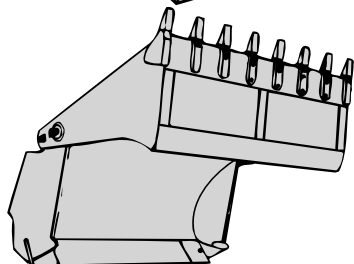
Backhoe Loaders

Backhoe Loaders — Front Buckets



General Purpose Bucket

- For use in handling bank and stockpile materials.



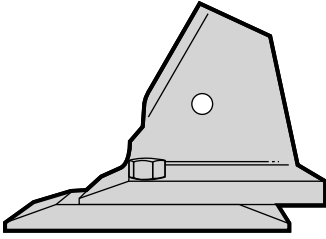
Multi-Purpose Bucket

- Provides more dump clearance and grabbing capabilities due to its movable clam.
- For use in general loading.

Model ⁽¹⁾	Base Edge Width	Base Edge	Bucket Corner	
			LH	RH
416, 416B, 416C, 416C IT, 416D, 420, 420D, 426, 426B, 426C, 426C IT, 428, 428B, 428C IT, 430D, 436B, 436C, 436C IT, 446, 446B, 446D	2240 mm (88.0 in)	9R-0316	—	—
	2262 mm (89.0 in)	9R-4672	9R-4674	9R-4674
	2262 mm (89.0 in)	9R-4672	9R-5205	9R-5206
	2388 mm (94.0 in)	9R-5313	9R-4674	9R-4674
	2395 mm (94.3 in)	9R-5313	9R-5205	9R-5206
	2408 mm (94.8 in)	9R-4101	9R-5748	9R-5747
	2408 mm (94.8 in)	6Q-2193	6Q-2196	6Q-2197
	2413 mm (95.0 in)	9R-4672	—	—

Backhoe Loader Edges and Adapters

Front Bucket Bolt-On Edges



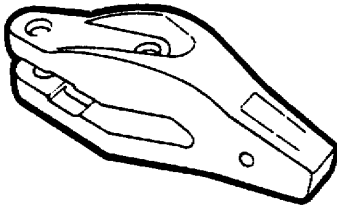
When penetration is not a problem, use bolt-on cutting edges.

Bolt-on cutting edges:

- Increase base edge life up to five times over an unprotected base edge.
- Are quick and easy to replace.
- Increase bucket capacity.
- Provide smooth floor maintenance capability.
- Are made of DH-2 steel alloy and are hardened to 430-520 Brinell.

Model	Base Edge Width	Base Edge ⁽¹⁾	Bucket Corner		Bolt-on Edge	Bolt	Nut
			LH	RH			
416, 416B, 416C, 416C IT, 416D, 420, 420D, 426, 426B, 426C, 426C IT, 428, 428B, 428C IT, 430D, 436B, 436C, 436C IT, 446, 446B, 446D	2240 mm (88.0 in)	9R-0316	—	—	—	—	—
	2262 mm (89.0 in)	9R-4672	9R-4674	9R-4674	9W-8215 (2)	3F-5108 (8)	4K-0367 (8)
	2262 mm (89.0 in)	9R-4672 ⁽¹⁾	9R-5205	9R-5206	9W-8215 (2)	3F-5108 (8)	8E-0367 (8)
	2388 mm (94.0 in)	9R-5313	9R-4674	9R-4674	118-7110 (2)	3F-5108 (8)	8E-0367 (8)
	2395 mm (94.3 in)	9R-5313	9R-5205	9R-5206	118-7110 (2)	3F-5108 (8)	8E-0367 (8)
	2408 mm (94.8 in)	9R-4101	9R-5748	9R-5747	9U-9665 (2)	3F-5188 (12)	4K-0367 (12)
	2408 mm (94.8 in)	6Q-2193	6Q-2196	6Q-2197	9U-9665 (2)	3F-5188 (12)	4K-0367 (12)
	2413 mm (95.0 in)	9R-4672	—	—	9W-8215 (2)	3F-5108 (8)	4K-0367 (8)

Front Bucket Bolt-On Adapters

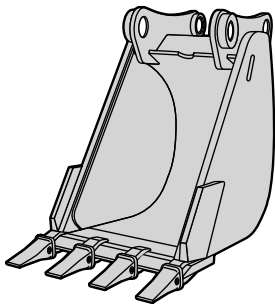


- Provide excellent impact resistance.
- Provide excellent penetration ability.
- For use with larger backhoe loaders that work in abrasive conditions.

Model	Base Edge Width	Base Edge ⁽¹⁾	Bucket Corner		Bolt-on Edge	Bolt	Nut
			LH	RH			
416, 416B, 416C, 416C IT, 416D, 420, 420D, 426, 426B, 426C, 426C IT, 428, 428B, 428C IT, 430D, 436B, 436C, 436C IT, 446, 446B, 446D	2240 mm (88.0 in)	9R-0316	—	—	—	—	—
	2262 mm (89.0 in)	9R-4672	9R-4674	9R-4674	8E-2184 (8)	4F-3656 (16)	4K-0367 (16)
	2262 mm (89.0 in)	9R-4672 ⁽¹⁾	9R-5205	9R-5206	8E-2184 (8)	4F-3656 (16)	8E-0367 (16)
	2388 mm (94.0 in)	9R-5313	9R-4674	9R-4674	8E-2184 (8)	4F-3656 (16)	8E-0367 (16)
	2395 mm (94.3 in)	9R-5313	9R-5205	9R-5206	8E-2184 (8)	4F-3656 (16)	8E-0367 (16)
	2408 mm (94.8 in)	9R-4101	9R-5748	9R-5747	—	—	—
	2408 mm (94.8 in)	6Q-2193	6Q-2196	6Q-2197	—	—	—
	2413 mm (95.0 in)	9R-4672	—	—	8E-2184 (8)	4F-3656 (16)	4K-0367 (16)

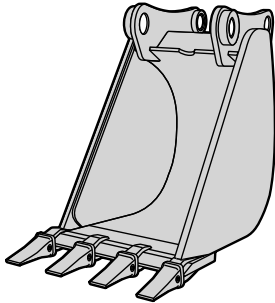
Backhoe Loader Buckets

Rear Buckets



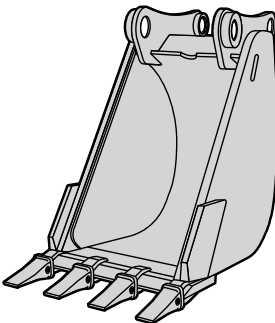
Standard Duty Bucket

- For use in handling bank and stockpile materials.



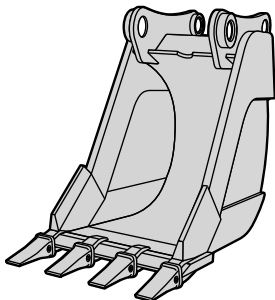
Heavy Duty Bucket

- Provides longer life in abrasive materials due to replaceable corners, a thicker base edge, and bottom wear strips.



High Capacity Bucket

- Provides more capacity and a longer tip radius.
- Contains the same construction as the heavy duty bucket.
- For use in abrasive materials that are easily penetrated.



Extreme Service Bucket

- Contains heavy duty side plates, base edges, and corner adapters in addition to side-bar protectors and bottom wear strips.
- For use in prying out rock and concrete.

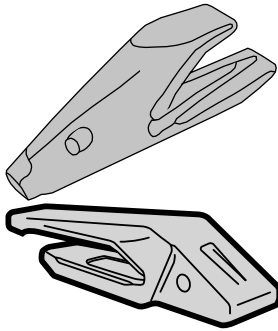
Backhoe Loader Base Edge and Corners

Model ⁽¹⁾	Base Edge Width	Base Edge	Bucket Corner		Weld-On Adapter	Weld-On Double Strap Adapter	Bolt-On Adapter	Bolt	Nut
			LH	RH					
416, 416B, 416C, 416C IT, 420, 426, 426B, 426C, 426C IT, 428, 428B, 428C IT, 436B, 436C IT, 446, 446B, 446D	296 mm (12 in)	100-6002	9R-8987	9R-8988	—	—	8E-2184 (3)	4F-3656 (6)	4K-0367 (6)
	335 mm (12 in)	134-5877	134-5884	134-5885	—	119-3204/119-3205 (3)	8E-2184 (3)	4F-3656 (6)	4K-0367 (6)
	339 mm (12 in)	136-6886	136-7150	136-7150	—	119-3204/119-3205 (3)	8E-2184 (3)	4F-3656 (6)	4K-0367 (6)
	413 mm (16 in)	134-5878	134-5884	134-5885	—	119-3204 (3)	—	—	—
	457 mm (18 in)	136-7046	136-7051	136-7049	6Y-3224 (3)	119-3204/119-3205 (4 or 5)	8E-2184 (3)	4F-3656 (6)	4K-0367 (6)
	451 mm (18 in)	136-6887	136-6885	136-6885	6Y-3224 (3)	119-3204/119-3205 (4 or 5)	8E-2184 (3)	4F-3656 (6)	4K-0367 (6)
	413 mm (16 in)	9R-8983 ⁽²⁾	9R-8987	9R-8988	6Y-3224 (3)	—	8E-2184 (3)	4F-3656 (6)	4K-0367 (6)
	419 mm (16 in)	9R-9459	9R-9456	9R-9454	6Y-3224 (3)	119-3204/119-3205 (4 or 5)	8E-2184 (3)	4F-3656 (6)	4K-0367 (6)
	603 mm (24 in)	134-5880	134-5884	134-5885	—	119-3204 (5)	—	—	—
	609 mm (24 in)	136-7047	136-7051	136-7049	6Y-3224 (4)	119-3204/119-3205 (4 or 5)	8E-2184 (4 or 5)	4F-3656 (8 or 10)	4K-0367 (8 or 10)
	603 mm (24 in)	136-6888	136-6885	136-6885	6Y-3224 (4)	119-3204/119-3205 (4 or 5)	8E-2184 (4 or 5)	4F-3656 (8 or 10)	4K-0367 (8 or 10)
	570 mm (22 in)	9R-9241	9R-9819	9R-9820	6Y-3224 (4)	119-3204/119-3205 (4 or 5)	8E-2184 (4 or 5)	4F-3656 (8 or 10)	4K-0367 (8 or 10)
	572 mm (23 in)	9R-9458	9R-9456	9R-9454	—	119-3204/119-3205 (4 or 5)	8E-2184 (4 or 5)	4F-3656 (8 or 10)	4K-0367 (8 or 10)
	566 mm (22 in)	9R-8984 ⁽²⁾	9R-8987	9R-8988	6Y-3224 (4)	—	8E-2184 (5 or 6)	4F-3656 (8 or 10)	4K-0367 (8 or 10)
	718 mm (28 in)	9R-8985 ⁽²⁾	9R-8987	9R-8988	6Y-3224 (5)	—	8E-2184 (5 or 6)	4F-3656 (10 or 12)	4K-0367 (10 or 12)
	722 mm (28 in)	9R-9833	9R-9819	9R-9820	6Y-3224 (5)	119-3204/119-3205 (5)	8E-2184 (5 or 6)	4F-3656 (10 or 12)	4K-0367 (10 or 12)
	755 mm (30 in)	136-6889	136-6885	136-6885	6Y-3224 (5)	119-3204/119-3205 (5)	8E-2184 (5 or 6)	4F-3656 (10 or 12)	4K-0367 (10 or 12)
	724 mm (29 in)	9R-9457	9R-9456	9R-9454	6Y-3224 (5)	119-3204/119-3205 (5)	8E-2184 (5 or 6)	4F-3656 (10 or 12)	4K-0367 (10 or 12)
	908 mm (36 in)	136-6890	136-6885	136-6885	6Y-3224 (6)	119-3204/119-3205 (6)	8E-2184 (6)	4F-3656 (12)	4K-0367 (12)
	871 mm (34 in)	9R-8986 ⁽²⁾	9R-8987	9R-8988	6Y-3224 (6)	—	8E-2184 (6)	4F-3656 (12)	4K-0367 (12)
876 mm (34 in)	9R-9455	9R-9456	9R-9454	6Y-3224 (6)	—	—	—	—	

- 1 Bucket does not include teeth. The base edge is drilled for Bolt-On Unitooth tips. J225 for 446, 446B, and 446D. J200 for all other machine models.
- 2 Bucket does not include teeth. The base edge is drilled for Bolt-On Unitooth tips. J225 for 446, 446B, and 446D. J200 for all other machine models.

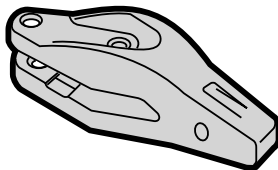
Backhoe Loader Adapters

Rear Bucket Adapters



Weld-On Double Strap Adapters

- Provides good retention in high-impact conditions.
- Protects the base edge well.
- For use in general loading applications where adapter retention is important.



Bolt-On Adapters

- Provides excellent impact resistance.
- Provides excellent penetration ability.
- For use with larger backhoe loaders that work in abrasive conditions.

Model	Base Edge Width	Base Edge ⁽¹⁾	Bucket Corner		Weld-on Double Strap Adapter
			LH	RH	
416D/420D/430D	305 mm (12 in)	174-3951			168-1204/195-9204 (3)
		154-5254	134-5884	134-5885	168-1204/195-9204 (3)
		154-5268			168-1204/195-9204 (3)
		219-9494			201-1235 (3)
		219-9493			201-1234 (3)
		219-9496			201-1234 (4)
	406 mm (16 in)	134-5878	134-5884	134-5885	195-9204 (3)
		219-9482			201-1234 (3)
		136-7046			168-1204/195-9204 (4)
	457 mm (18 in)	134-5879	134-5884	134-5885	168-1204/195-9204 (4)
		136-6887			168-1204/195-9204 (4)
		219-9487			201-1234 (4)
		219-9483			201-1234 (4)
		219-9491			201-1234 (4)
		136-7047			168-1204/195-9204 (5)
	610 mm (24 in)	134-5880	134-5884	134-5885	168-1204/195-9204 (5)
		136-6888			168-1204/195-9204 (5)
		219-9488			201-1234 (5)
		219-9484			201-1234 (5)
		219-9492			201-1234 (8)
		172-8270			195-9204 (10)
	762 mm (30 in)	134-5881	134-5884	134-5885	168-1204/195-9204 (5)
		136-6889			168-1204/195-9204 (5)

¹ Base Edge Part Numbers that start with 174-XXXX, 154-XXXX, 136-XXXX, 134-XXXX, 172-XXXX use DRS200.
Base Edge Part Numbers that start with 219-XXXX use DRS230.

Backhoe Loader Adapters

Rear Bucket Adapters (Cont'd.)

Model	Base Edge Width	Base Edge ⁽²⁾	Bucket Corner		Weld-on Double Strap Adapter
			LH	RH	
		219-9489			201-1235 (5)
		219-9485			201-1234 (5)
		219-9495			201-1234 (10)
	914 mm (36 in)	134-5882	134-5884	134-5885	168-1204/195-9204 (6)
		136-6890			168-1204/195-9204 (6)
		219-9490			201-1235 (6)
		219-9486			201-1234 (6)

² Base Edge Part Numbers that start with 174-XXXX, 154-XXXX, 136-XXXX, 134-XXXX, 172-XXXX use DRS200.
Base Edge Part Numbers that start with 219-XXXX use DRS230.

Backhoe Loader Tips

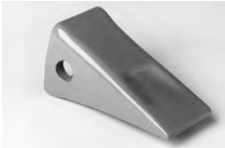
Tips

Cat backhoe loader bucket tips are side pinned for excellent tip retention and quick, easy tip changing. The pin hole is located through the tip sides which are the areas of least wear.



Long Tip

- The best choice for most applications.



Short Tip

- Provides more strength.
- Contains less wear material.



Utility Tip

- For use in general purpose excavator and loader bucket applications.



Wide Tip

- Contains less wear material.
- Provides less penetration.
- Provides a cleaner floor and less spillage.



Penetration Tip

- Provides better penetration.
- Contains less wear material.



Bolt-On Unitooth

- Improves penetration where breakage is not a problem.
- Tip and adapter are one integrated piece for easy installation and lower initial costs.
- For use in nonabrasive materials.



Sharp Corner Tip/Sharp Center Tip

- Provides the best penetration.
- Contains the least wear material.

Tips (Cont'd.)



Twin Sharp Tip

- For use for severe digging in rock and frost.



Heavy Duty Long Tip

- Contains more wear material than Abrasion Tip.
- Provides greater strength than Long Tip.
- Provides better penetration due to a streamlined-profile.



Heavy Duty Abrasion Tip

- Contains the greatest amount of wear material.
- Provides good strength.
- Provides good penetration.

Tips — Diagonal Retention System



DRS200 and DRS230

The new system for all rear Backhoe Loader buckets except for the 446 model, provides good retention that is not affected by surface wear and easier installation since no clearance is needed between tips.

- Proprietary (RH Drive).
- 20-30% more wear material vs. J200.
- Easy access for pin installation & removal (40°).

Tips

Front Bucket Tips

	J200	J225
Heavy Duty Abrasion		6Y-6223
Heavy Duty Long		8E-4222
Long	1U-3202	6Y-3222
Penetration	1U-3209	6Y-8229
Short		6Y-6221
Utility	7T-8202	
Unitooth Center Tip	8J-6207	
Unitooth Center Tip — Bolt	5J-4771	
Unitooth Corner Tip (lh)	1U-1868	
Unitooth Corner Tip (rh)	1U-1869	
Unitooth Corner Tip — Bolt	6F-0196	

Backhoe Loader Tips

Tips (Cont'd.)

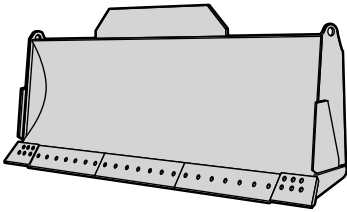
Front Bucket Tips (Cont'd.)

	J200	J225
Standard Pin	8E-6208	6Y-3228
Standard Retainer	8E-6209	8E-6259
Heavy Duty Pin		132-4762
Heavy Duty Retainer		149-5733

Rear Bucket Tips

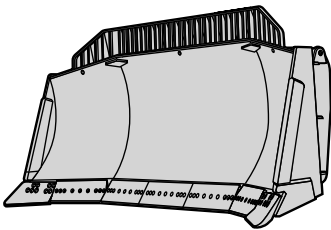
	J200	J225	DRS200	DRS230
Chisel			195-7202	208-5232
Heavy Duty Abrasion		6Y-6223		
Heavy Duty Long		8E-4222		
Impact			195-7205	
Long	1U-3202	6Y-3222	195-7206	208-5236
Penetration	1U-3209	6Y-8229		208-5235
Sharp			195-7209	208-5239
Sharp Center	9W-8209	6Y-7229		
Sharp Center	9W-8208	6Y-7228		
Short		6Y-6221		
Twin Sharp	135-8208		195-7207	208-5237
Utility	7T-8202			
Wide	109-9200	186-3010	195-7210	208-5240
Standard Pin	8E-6208	6Y-3228		201-1238
Standard Retainer	8E-6209	8E-6259		201-1239
Heavy Duty Pin		132-4762		
Heavy Duty Retainer		149-5733		
Flex Pin			195-7200	

Bulldozer Cutting Edges



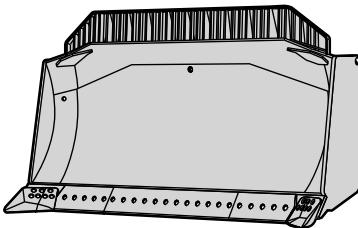
Straight Blade (S)

- A good general purpose blade for most dozing applications. Available for most machines.



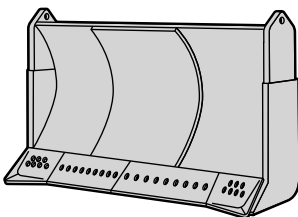
Universal Blade (U)

- A straight blade with large "wings" to carry large loads more efficiently over long distances. Available only for larger models.



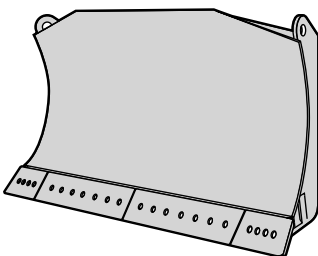
Semi-U Blade (SU)

- A straight blade with small "wings" to provide better load carrying characteristics for mid-sized and large machines.



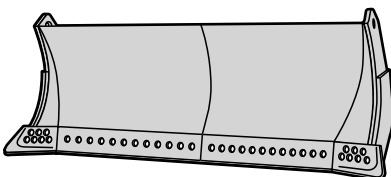
Cushion Blade (C)

- A relatively narrow blade, primarily for pushing scrapers.



Power Angle and Tilt Blade (P)

- A very versatile blade for smaller machines.



Angle Blade (A)

- An economical, light to medium duty blade designed for use on D8 and smaller machines where the ability to side-cast is desired.

Bulldozers/Compactors

Bulldozer Blades

Model	Serial Number	Blade Model	Edge Thickness	Edge Type	Edge Part Number ¹	Bolts Per Edge ¹	Nuts Per Edge ¹	Washers Per Edge ¹	
3S	6EH, 15W, 86U	Straight	16 mm (0.62 in)	Center Edge	4T-6230 (2)	3F-5108 (6)	4K-0367 (6)		
			18 mm (0.70 in) Precision	Center Edge	467-8024 (2)	3F-5108 (6)	4K-0367 (6)	5P-8247 (6)	
			21 mm (0.83 in) Precision	Center Edge	472-4114 (2)	3F-5108 (6)	4K-0367 (6)	5P-8247 (6)	
	31M, 40 V	Straight	16 mm (0.62 in)	Center Edge	4T-6231 (2)	3F-5108 (7)	4K-0367 (7)		
3P	8SU, 1GP, 2JP, 9RH	Power Angle & Tilt	16 mm (0.62 in)	Center Edge	4T-6230 (2)	3F-5108 (6)	4K-0367 (6)		
			18 mm (0.70 in) Precision	Center Edge	467-8024 (2)	3F-5108 (6)	4K-0367 (6)	5P-8247 (6)	
			21 mm (0.83 in) Precision	Center Edge	472-4114 (2)	3F-5108 (6)	4K-0367 (6)	5P-8247 (6)	
	96X, 5WH, 8JP	Power Angle & Tilt	16 mm (0.62 in)	Center Edge	4T-6232 (2)	3F-5108 (8)	4K-0367 (8)		
			18 mm (0.70 in) Precision	Center Edge	479-7956 (2)	3F-5108 (8)	4K-0367 (8)	5P-8247 (8)	
			21 mm (0.83 in) Precision	Center Edge	472-4122 (2)	3F-5108 (8)	4K-0367 (8)	5P-8247 (8)	
	8HP, 8KP	Power Angle & Tilt	16 mm (0.62 in)	Center Edge	6Y-5841 (2)	3F-5108 (6)	4K-0367 (6)		
			18 mm (0.70 in) Precision	Center Edge	476-8025 (2)	3F-5108 (6)	4K-0367 (6)	5P-8247 (6)	
			21 mm (0.83 in) Precision	Center Edge	472-4115 (2)	3F-5108 (6)	4K-0367 (6)	5P-8247 (6)	
	8XP	Power Angle & Tilt	16 mm (0.62 in)	Center Edge	141-0413 (2)	3F-5108 (8)	4K-0367 (8)		
	Super LGP	5LH		16 mm (0.62 in)	Center Edge	4T-6230 (2)	3F-5108 (6)	4K-0367 (6)	5P-8247 (6)
					Center Edge	4T-6231	3F-5108 (7)	4K-0367 (7)	5P-8247 (7)
Narrow PLGP			16 mm (0.62 in)	Center Edge	157-7338 (2)	3F-5108 (7)	4K-0367 (7)		
4A	12D, 78D, 05F1-2850	Angle	16 mm (0.62 in)	Center Edge	4T-2977	4F-3654 (18)	4K-0367 (18)		
	05F, 97E, 24F, 65F	Angle	16 mm (0.62 in)	Center Edge	4T-2979	4F-3654 (13)	4K-0367 (13)		
	10D, 79D, 06F1 -11299	Angle	16 mm (0.62 in)	Center Edge	4T-2981	4F-3654 (23)	4K-0367 (23)		
	52E, 96E, 26F, 06F11300-UP, 95G, 33R	Angle	16 mm (0.62 in)	Center Edge	4T-2974	4F-3654 (5)	4K-0367 (5)		
				End Edge	4T-2973 (2)	4F-3654 (6)	4K-0367 (6)		
	6AC, 2GC	Angle	16 mm (0.62 in)	Center Edge	4T-8940 (2)	5J-4773 (8)	2J-3506 (8)	5P-8248 (8)	
4S	2A, 25F, 67F	Straight	16 mm (0.62 in)	Center Edge	4T-2980	4F-3654 (15)	4K-0367 (15)		
	2TC, 3CH, 3DC	Straight	16 mm (0.62 in)	Center Edge	4T-3720 (2)	5J-4773 (6)	2J-3506 (6)	5P-8248 (6)	
	4A, 40D	Straight	16 mm (0.62 in)	Center Edge	4T-2977	4F-3654 (18)	4K-0367 (18)		
			19 mm (0.75 in)	Center Edge	4T-3021	4F-3654 (18)	4K-0367 (18)		
	27F, 67E, 94G	Straight	16 mm (0.62 in)	Left End/Right End	4T-2972	4F-3654 (4)	4K-0367 (4)		
				Center Edge	4T-2983	4F-3654 (3)	4K-0367 (3)		
			19 mm (0.75 in)	Left End/Right End	4T-3028	4F-3654 (4)	4K-0367 (4)		
				Center Edge	4T-3027	4F-3654 (3)	4K-0367 (3)		
	93C	Straight	16 mm (0.62 in)	Left End/Right End	8A-8581	4F-3654 (7)	4K-0367 (7)		
				Center Edge	8A-8580	4F-3654 (7)	4K-0367 (7)		
	4S-LGP	4HC	Straight	16 mm (0.62 in)	Center Edge	4T-8940 (2)	5J-4773 (8)	2J-3506 (8)	5P-8248 (8)
84E, 19J, 45J		Straight	19 mm (0.77 in)	Center Edge	4T-3028 (2)	4F-3654 (4)	4K-0367 (4)		
				Center Edge	4T-3029	4F-3654 (7)	4K-0367 (7)		
			16 mm (0.62 in)	Center Edge	4T-2972 (2)	4F-3654 (4)	4K-0367 (4)		
Center Edge	4T-2982	4F-3654 (7)		4K-0367 (7)					
4P	2YH	Power Angle & Tilt	16 mm (0.62 in)	Center Edge	4T-6230 (2)	3F-5108 (6)	4K-0367 (6)	5P-8247 (6)	

Bulldozer Blades (Cont'd.)

Model	Serial Number	Blade Model	Edge Thickness	Edge Type	Edge Part Number ¹	Bolts Per Edge ¹	Nuts Per Edge ¹	Washers Per Edge ¹	
			18 mm (0.70 in) Precision	Center Edge	467-8024 (2)	3F-5108 (6)	4K-0367 (6)	5P-8247 (6)	
			21 mm (0.83 in) Precision	Center Edge	472-4114 (2)	3F-5108 (6)	4K-0367 (6)	5P-8247 (6)	
	4AC, 9ZB, 5NH, 7EH	Power Angle & Tilt	16 mm (0.62 in)	Center Edge	3G-9306 (2)	5J-4773 (6)	2J-3506 (6)	5P-8248 (6)	
	6CH	Power Angle & Tilt	16 mm (0.62 in)	Center Edge	6Y-5841 (2)	3F-5108 (6)	4K-0367 (6)	5P-8247 (6)	
			18 mm (0.70 in) Precision	Center Edge	467-8025 (2)	3F-5108 (6)	4K-0367 (6)	5P-8247 (6)	
			21 mm (0.83 in) Precision	Center Edge	472-4115 (2)	3F-5108 (6)	4K-0367 (6)	5P-8247 (6)	
	8LP	Power Angle & Tilt	16 mm (0.62 in)	Center Edge	140-2187 (2)	3F-5108 (6)	4K-0367 (6)	5P-8247 (6)	
	9SH	Power Angle & Tilt	16 mm (0.62 in)	Center Edge	104-9634 (2)	3F-5108 (6)	4K-0367 (6)	5P-8247 (6)	
			18 mm (0.70 in) Precision	Center Edge	467-8026 (2)	3F-5108 (6)	4K-0367 (6)	5P-8247 (6)	
			21 mm (0.83 in) Precision	Center Edge	472-4117 (2)	3F-5108 (6)	4K-0367 (6)	5P-8247 (6)	
	4P-LGP	4GH, 8ZH, 9YH	Power Angle & Tilt	16 mm (0.62 in)	Center Edge	4T-6232 (2)	3F-5108 (8)	4K-0367 (8)	5P-8247 (8)
				18 mm (0.70 in)	Center Edge	457-7956 (2)	3F-5108 (8)	4K-0367 (8)	5P-8247 (8)
21 mm (0.83 in)				Center Edge	472-4122 (2)	3F-5108 (8)	4K-0367 (8)	5P-8247 (8)	
5EC, 5RH, 7CH		Power Angle & Tilt	16 mm (0.62 in)	Center Edge	4T-8940 (2)	5J-4773 (8)	2J-3506 (8)	5P-8248 (8)	
6DH, 9TH, 8MP		Power Angle & Tilt	16 mm (0.62 in)	Center Edge	6Y-5842 (2)	3F-5108 (8)	4K-0367 (8)	5P-8247 (8)	
8YP		Power Angle & Tilt	16 mm (0.62 in)	Center Edge	141-2238 (2)	3F-5108 (8)	4K-0367 (8)	5P-8247 (8)	
4P-XL	6XH	Power Angle & Tilt	16 mm (0.62 in)	Center Edge	8E-9377 (2)	5J-4773 (7)	2J-3506 (7)	5P-8248 (7)	
			19 mm (0.77 in)	Center Edge	4T-6659 (2)	5J-4773 (7)	2J-3506 (7)	5P-8248 (7)	
5A	91H, 96H, 42K	Angle	16 mm (0.62 in)	Center Edge	4T-2978	3F-5108 (24)	4K-0367 (24)		
			19 mm (0.75 in)	Center Edge	4T-3030 (2)	3F-5108 (12)	4K-0367 (12)		
	93H1-3846 98H, 11J, 13J	Angle	19 mm (0.75 in)	Center Edge	4T-3008	3F-5108 (24)	4K-0367 (24)		
				Left End /Right End	4T-3020	3F-5108 (12)	4K-0367 (12)		
	3AH, 2FH, 2TH	Angle	19 mm (0.75 in)	Center Edge	4T-3013	5J-4773	2J-3506	5P-8248	
				Left End /Right End	1U-2207	5J-4773	2J-3506	5P-8248	
6AC, 2GC	Angle	16 mm (0.62 in)	Center Edge	4T-8940 (2)	5J-4773 (8)	2J-3506 (8)	5P-8248 (8)		
5S	2BH, 4FH	Straight	19 mm (0.75 in)	Center Edge	3G-6062 (2)	5J-4773 (7)	2J-3506 (7)	5P-8248 (7)	
	10J, 12J, 92H, 97H	Straight	19 mm (0.75 in)	Left End /Right End	4T-3026	3F-5108 (4)	4K-0367 (4)	5P-8247 (4)	
				Center Edge	4T-3025	3F-5108 (7)	4K-0367 (7)	5P-8247 (7)	
	19R, 16K	Straight	19 mm (0.75 in)	Center Edge	4T-3024	3F-5108 (28)	4K-0367 (28)	5P-8247 (28)	
	90H	Straight	16 mm (0.62 in)	Left End /Right End	4T-2972	3F-5108 (4)	4K-0367 (4)	5P-8247 (4)	
				Center Edge	4T-2983	3F-5108 (3)	4K-0367 (3)	5P-8247 (3)	
				19 mm (0.75 in)	Left End/Right End	4T-3028	3F-5108 (4)	4K-0367 (4)	5P-8247 (4)
				Center Edge	4T-3027	3F-5108 (3)	4K-0367 (3)	5P-8247 (3)	
5S-LGP	1ZH, 3KH	Straight	19 mm (0.75 in)	Center Edge	1U-2211 (2)	5J-4773 (9)	2J-3506 (9)	5P-8248 (9)	
5S Pet.	4AH	Straight	19 mm (0.75 in)	Center Edge	4T-0731 (2)	5J-4773 (5)	2J-3506 (5)	5P-8248 (5)	
5SU	7BH	Semi-U	19 mm (0.75 in)	Left End Edge/ Right End	9U-8057	5 J-4773 (4)	2J-3506 (4)	5P-8248 (4)	
				Center Edge	4T-6659	5J-4773 (7)	2J-3506 (7)	5P-8248 (7)	

Bulldozers/Compactors

Bulldozer Blades (Cont'd.)

Model	Serial Number	Blade Model	Edge Thickness	Edge Type	Edge Part Number ¹	Bolts Per Edge ¹	Nuts Per Edge ¹	Washers Per Edge ¹
5P	2AH, 2MH, 7AH	Power Angle & Tilt	19 mm (0.75 in)	Center Edge	3G-4282 (2)	5J-4773 (7)	2J-3506 (7)	5P-8248 (7)
	4GP, 6JP	Power Angle & Tilt	16 mm (0.62 in)	Center Edge	8E-9377 (2)	5J-4773 (7)	2J-3506 (7)	5P-8248 (7)
			19 mm (0.75 in)	Center Edge	4T-6659 (2)	5J-4773 (7)	2J-3506 (7)	5P-8248 (7)
	6MH, 9WH	Power Angle & Tilt	16 mm (0.62 in)	Center Edge	3G-9306 (2)	5 J-4771 (6)	2J-3506 (6)	5P-8248 (6)
	8GP	Power Angle & Tilt	16 mm (0.62 in)	Center Edge	140-0983 (2)	5 J-4771 (6)	2J-3506 (6)	5P-8248 (6)
5P-LPG	1YH, 2SH	Power Angle & Tilt	19 mm (0.75 in)	Center Edge	4T-2315 (2)	5 J-4773 (10)	2J-3506 (10)	5P-8248 (10)
	4FP, BHY	Power Angle & Tilt	16 mm (0.62 in)	Center Edge	4T-8940 (2)	5J-4773 (8)	2J-3506 (8)	5P-8248 (8)
	6PH, 9XH, 8NP	Power Angle & Tilt	16 mm (0.62 in)	Center Edge	6Y-5842 (2)	3F-5108 (8)	4K-0367 (8)	5P-8247 (8)
			18 mm (0.70 in) Precision	Center Edge	467-8029 (2)	3F-5108 (8)	4K-0367 (8)	5P-8247 (8)
			21 mm (0.83 in) Precision	Center Edge	472-4121 (2)	3F-5108 (8)	4K-0367 (8)	5P-8247 (8)
8ZP	Power Angle & Tilt	16 mm (0.62 in)	Center Edge	142-4914 (2)	3F-5108 (8)	4K-0367 (8)	5P-8247 (8)	
6A	16C5001-UP, 37D, 81 D, 16E, 03F, 04F, 40H	Angle	19 mm (0.75 in)	Center Edge	4T-3008	3F-5108 (11)	4K-0367 (11)	
				End Edge	4T-3020 (2)	3F-5108 (9)	4K-0367 (9)	
	15C5001-UP, 39D, 82D, 08E, 09E	Angle	16 mm (0.62 in)	Center Edge	4T-2978	3F-5108 (24)	4K-0367 (24)	
				Center Edge	4T-3030 (2)	3F-5108 (12)	4K-0367 (12)	
	54U, 44E, 47G, 58G, 18H	Angle	19 mm (0.75 in)	Center Edge	4T-3009 (2)	4F-7827 (10)	2J-3506 (10)	5P-8248 (10)
	1B H1 -0569, 4D H, 4LH, 3EH	Angle	19 mm (0.75 in)	Center Edge	4T-6262 (3)	5J-4773 (7)	2J-3506 (7)	5P-8248 (7)
				Center Edge	7T-9977 (3)	5J-4773 (7)	2J-3506 (7)	5P-8248 (7)
	1BH0570-UP	Angle	19 mm (0.75 in)	Center Edge	4T-2952 (4)	5J-4773 (5)	2J-3506 (5)	5P-8248 (5)
				Center Edge	4T-2985 (4)	5J-4773 (5)	2J-3506 (5)	5P-8248 (5)
	1XP, 3GP, 1ZP, 1YP, 3PP, 4BP, 8TP	Angle	19 mm (0.75 in)	Center Edge	4T-2952 (4)	5J-4773 (5)	2J-3506 (5)	5P-8248 (5)
				Center Edge	4T-2985 (4)	5J-4773 (5)	2J-3506 (5)	5P-8248 (5)
	6A Custom Wide	6HP, A6B	Angle	19 mm (0.75 in)	Center Edge	109-9093 (4)	5J-4773 (6)	2J-3506 (6)
6S	1DH1-599, 2HH, 3JH, 4BH	Straight	19 mm (0.75 in)	Left End/Right End	4T-3010	5 J-4773 (4)	2J-3506 (4)	5P-8248 (4)
				Center Edge	4T-6659	5J-4773 (7)	2J-3506 (7)	5P-8248 (7)
				Left End/Right End	7T-9978	5 J-4773 (4)	2J-3506 (4)	5P-8248 (4)
				Center Edge	7T-9976 ²	5J-4773 (7)	2J-3506 (7)	5P-8248 (7)
	1DH600-Up, 1RP, 3EP, CLH, BHM	Straight	25 mm (1.00 in)	Center Edge	4T-2985 (3)	5J-4773 (5)	2J-3506 (5)	5P-8248 (5)
	2G, 3G, 15E, 36D, 38D, 39H, 80D, 85C	Straight	19 mm (0.75 in)	Center Edge	4T-3023	3F-5108 (22)	4K-0367 (22)	5P-8247 (22)
	15C1-5000	Straight	19 mm (0.75 in)	Center Edge	4T-3021	3F-5108 (18)	4K-0367 (18)	5P-8247 (18)
	17H, 46G, 55G, 63S, 95E	Straight	19 mm (0.75 in)	Left End/Right End	4T-3010	4F-7827 (4)	2J-3506 (4)	5P-8248 (4)
				Center Edge	4T-3013	4F-7827 (7)	2J-3506 (7)	5P-8248 (7)
	21H, 41H	Straight	19 mm (0.75 in)	Left End/Right End	4T-3010	4F-7827 (4)	2J-3506 (4)	5P-8248 (4)
				Center Edge	4T-3011	4F-7827 (11)	2J-3506 (11)	5P-8248 (11)
	16C1-5000	Straight	16 mm (0.62 in)	Center Edge	4T-2976	3F-5108 (22)	4K-0367 (22)	
	09A, 01C, 06C	Straight	16 mm (0.62 in)	Center Edge	4T-2977	3F-5108 (18)	4K-0367 (18)	
6S-LPG	1AH, 2LH, 3FH, 1SP, 3HP, BHG	Straight	19 mm (0.75 in)	Center Edge	4T-6659 (3)	5J-4773 (7)	2J-3506 (7)	5P-8248 (7)

Bulldozer Blades (Cont'd.)

Model	Serial Number	Blade Model	Edge Thickness	Edge Type	Edge Part Number ¹	Bolts Per Edge ¹	Nuts Per Edge ¹	Washers Per Edge ¹
			25 mm (1.00 in)	Center Edge	7T-9976 (3)	5J-4773 (7)	2J-3506 (7)	5P-8248 (7)
6SU	1CH, 2NH, 4PH, 8AH, 8BH	Semi-U	19 mm (0.75 in)	Center Edge	9W-1878 (8)	5J-4773 (8)	2J-3506 (8)	5P-8248 (8)
	1CH, 2NH, 4PH, 1TP, 3FP, 1WP, 3RP	Semi-U	25 mm (1.00 in)	Center Edge	6Y-3840 (2)	5J-4773 (8)	2J-3506 (8)	5P-8248 (8)
	8AH, 8BH	Semi-U	25 mm (1.00 in)	Center Edge	6Y-3840 (2)	5J-4773 (8)	2J-3506 (8)	5P-8248 (8)
	2SP, 6GP, ECA, SGD	Semi-U	19 mm (0.75 in)	Center Edge	4T-6659	5 J-4773 (4)	2J-3506 (4)	5P-8248 (4)
		Semi-U		End	9U-8057 (2)	5J-4773 (7)	2J-3506 (7)	5P-8248 (7)
	1 TP, 3FP, 1 WP, 3R P, 4AP, 8SP, B H M, D6C, D6A, D2S, M6H	Semi-U	19 mm (0.75 in)	Center Edge	9W-1878 (2)	5J-4773 (8)	2J-3506 (8)	5P-8248 (8)
				25 mm (1.00 in) Performance	Center Edge	479-8141	5J-4773 (6)	2J-3506 (6)
Intermediate RH				479-8139	5J-4773 (5)	2J-3506 (5)	5P-8248 (5)	
			Intermediate LH	479-8140	5J-4773 (5)	2J-3506 (5)	5P-8248 (5)	
6SU Custom Wide	1WP, 9BP, B8B	Semi-U	19 mm (0.75 in)	Center Edge	106-0956 (2)	5J-4773 (9)	2J-3506 (9)	5P-8248 (9)
			25 mm (1.00 in) Performance	Intermediate RH	479-8139	5J-4773 (5)	2J-3506 (5)	5P-8248 (5)
				Intermediate LH	479-8140	5J-4773 (5)	2J-3506 (5)	5P-8248 (5)
				Center Edge	479-8182	5J-4773 (8)	2J-3506 (8)	5P-8248 (6)
6PXL	B6X, G6M, G6N	Power Angle & Tilt	19 mm (0.75 in)	Center Edge	3G-4282 (2)	5J-4773 (7)	2J-3506 (7)	5P-8248 (7)
6P-LGP	4MP, B6L, G6G	Power Angle & Tilt	19 mm (0.75 in)	Center Edge	4T-2315 (2)	5 J-4773 (10)	2J-3506 (10)	5P-8248 (10)
	4TP, 4WP	Power Angle & Tilt	19 mm (0.75 in)	Center Edge	127-3050 (2)	5 J-4773 (10)	2J-3506 (10)	5P-8248 (10)
	G6M	Power Angle & Tilt	19 mm (0.75 in)	Center Edge	3G-4282 (2)	5J-4773 (7)	2J-3506 (7)	5P-8248 (7)
6P-LGP Foldable	F6W, F6Y	Power Angle & Tilt	19 mm (0.75 in)	Center Edge	177-4550 (2)	5J-4773 (9)	2J-3508 (9)	5P-8248 (9)
7S	2E, 5A, 17C1 -5000, 17E, 34D, 83D, 84C	Straight	19 mm (0.75 in)	Center Edge	4T-2954	5 J-4771 (23)	2J-3506 (23)	
			25 mm (1.00 in)	Center Edge	4T-2864	5 J-4771 (23)	2J-3506 (23)	
	6KB, 8ZB, 4XC, 8NH, J8L, CDC, 8GH	Straight	19 mm (0.75 in)	Center Edge	4T-5318 (3)	6F-0196 (6)	2J-3505 (6)	5P-8248 (6)
			25 mm (1.00 in)	Center Edge	7T-6678 ³	6F-0196 (6)	2J-3505 (6)	5P-8248 (6)
			35 mm (1.38 in)	Center Edge	107-3363(3)	6F-0196 (6)	2J-3505 (6)	5P-8249 (6)
	23F, 31F, 59F, 14H	Straight	19 mm (0.75 in)	Center Edge	4T-2946	5J-4773 (7)	2J-3506 (7)	
				Left End/Right End	4T-2945 (2)	5J-4773 (5)	2J-3506 (5)	
			25 mm (1.00 in)	Left End/Right End	4T-2991	5J-4773 (5)	2J-3506 (5)	
				Center Edge	4T-2990	5J-4773 (7)	2J-3506 (7)	
	49K, 53J, 60K, 64K, S7G	Straight	19 mm (0.75 in)	Center Edge	4T-2921	5J-4772 (7)	2J-3505 (7)	5P-8249 (7)
				Left End/Right End	4T-2922 (2)	5J-4772 (5)	2J-3505 (5)	5P-8249 (5)
			25 mm (1.00 in)	Left End/Right End	4T-2992	5J-4772 (5)	2J-3505 (5)	5P-8249 (5)
				Center Edge	4T-2993	5J-4772 (7)	2J-3505 (7)	5P-8249 (7)
				Left End/Right End	9W-9794	5J-4772 (5)	2J-3505 (5)	5P-8249 (5)
		Center Edge	9W-9795 ³	5J-4772 (7)	2J-3505 (7)	5P-8249 (7)		
7S-LGP	6JB, 3GH, 4FG, 4XH, 5GH	Straight	19 mm (0.75 in)	Center Edge	4T-3901 (3)	6F-0196 (7)	2J-3505 (7)	
			35 mm (1.38 in)	Center Edge	135-9778 ³	6F-0196 (7)	2J-3505 (7)	
	2RP, 8RH, 5SP, 9KP, J4L, CDN, 8JH	Straight	19 mm (0.75 in)	Center Edge	128-5883(3)	6F-0196 (7)	2J-3505 (7)	

Bulldozers/Compactors

Bulldozer Blades (Cont'd.)

Model	Serial Number	Blade Model	Edge Thickness	Edge Type	Edge Part Number ¹	Bolts Per Edge ¹	Nuts Per Edge ¹	Washers Per Edge ¹	
			25 mm (1.00 in)	Center Edge	135-6537 ³	6F-0196 (9)	2J-3505 (9)		
			35 mm (1.38 in)	Center Edge	145-7846 (3)	6F-0196 (7)	2J-3505 (7)		
			3GH, 4FG, 6JB, 4XH, 56H	Straight	25 mm (1.00 in)	Left End/Right End	7T-6537 ³	6F-0196 (5)	2J-3505 (5)
7U	5SB, 7AC, 9JB, 8M H, JI L, CD L	Universal	25 mm (1.00 in)	Left End/Right End	7T-6592	6F-0196 (4)	2J-3505 (4)	5P-8249 (4)	
				Center Edge	7T-6591 ³ (2)	6F-0196 (6)	2J-3505 (6)	5P-8249 (6)	
	42G	Universal	19 mm (0.75 in)	Center Edge	4T-2955	5J-4773 (9)	2J-3506 (9)		
				Left End/Right End	4T-2952 (2)	5J-4773(5)	2J-3506 (5)		
				25 mm (1.00 in)	Left End/Right End	4T-2985	5J-4773 (5)	2J-3506 (5)	
					Center Edge	4T-2890	5J-4773 (9)	2J-3506 (9)	
	85D, 61K, 94R	Universal	19 mm (0.75 in)	Center Edge	4T-2917	5J-4772 (9)	2J-3505 (9)	5P-8249 (9)	
				Left End/Right End	4T-2916 (2)	5J-4772 (5)	2J-3505 (5)	5P-8249 (5)	
			25 mm (1.00 in)	Center Edge	4T-3421	5J-4772 (9)	2J-3505 (9)	5P-8249 (9)	
				Left End/Right End	4T-3420 (2)	5J-4772 (5)	2J-3505 (5)	5P-8249 (5)	
				Center Edge	9W-9793 ³	5J-4772 (9)	2J-3505 (9)	5P-8249 (9)	
				Left End/Right End	9W-9792 ³ (2)	5J-4772 (5)	2J-3505 (5)	5P-8249 (5)	
7SU	2FC, 2JH, 4DB, 1JP, 8LH, CDT, J6L, BHT	Semi-U	25 mm (1.00 in)	Left End/Right End	7T-6936	6F-0196 (4)	2J-3505 (4)		
				Center Edge	7T-6678 ³	6F-0196 (6)	2J-3505 (6)		
			35 mm (1.38 in)	Left End/Right End	107-3362	6F-0196 (4)	2J-3505 (4)		
	Center Edge	107-3363		6F-0196 (6)	2J-3505 (6)				
	4DB, 2FC, 2JH, 1JP, 8LH, CDT, J6L, BHT, 8EH	Semi-U	19 mm (0.75 in)	Center Edge	4T-5318	6F-0196 (6)	2J-3505 (6)		
				Left End/Right End	1U-1192 (2)	6F-0196 (6)	2J-3505 (6)	5P-8249 (6)	
				25 mm (1.00 in) Performance	Intermediate RH	479-8135	6F-0196 (6)	2J-3505 (6)	5P-8249 (6)
			Intermediate LH		479-8136	6F-0196 (6)	2J-3505 (6)	5P-8249 (6)	
			Center Edge		107-3363	6F-0196 (6)	2J-3505 (6)	5P-8249 (6)	
7A			3CC, 4EB, 4ZC, 3CC, 42C, 22F, 30F, 72F, 13F, 13H, 4EB	Angle	19 mm (0.75 in)	Center Edge	4T-3901 (3)	6F-0196 (7)	2J-3505 (7)
	25 mm (1.00 in)	Center Edge			7T-6589 ³ (3)	6F-0196 (7)	2J-3505 (7)	5P-8249 (7)	
	3CC, 4EB, 4ZC	Angle	35 mm (1.38 in)	Center Edge	135-9778 ³	6F-0196 (7)	2J-3505 (7)	5P-8248 (8)	
	6A, 17C5001-Up, 35D, 84D, 6E, 18E	Angle	19 mm (0.75 in)	Center Edge	4T-2949 (2)	5J-4771 (15)	2J-3506 (15)	5P-8248 (15)	
			25 mm (1.00 in)	Center Edge	4T-2863 (2)	5 J-4771 (15)	2J-3506 (15)	5P-8248 (15)	
	13F, 13H, 22F, 30F, 72F	Angle	19 mm (0.75 in)	Center Edge	4T-2948 (3)	5 J-4771 (7)	2J-3506 (7)	5P-8248 (7)	
				Center Edge	4T-2989 (3)	5 J-4771 (7)	2J-3506 (7)	5P-8248 (7)	
				Center Edge	9W-9796 ³ (3)	5 J-4771 (7)	2J-3506 (7)	5P-8248 (7)	
	8U	1JH, 2WP, 6AH, 9CH, 9WP, CXB, A5G, DZB	Universal	28 mm (1.12 in)	Center Edge	9W-5232 (2)	4J-9058 (5)	2J-3507 (5)	5P-8250 (5)
Left End/Right End					4T-6378 (2)	4J-9058 (6)	2J-3507 (6)	5P-8250 (6)	
35 mm (1.38 in)				Left End/Right End	7T-9127	4J-9058 (5)	2J-3507 (5)	5P-8250 (5)	
				Center Edge	9W-6092 (2)	4J-9058 (6)	2J-3507 (6)	5P-8250 (6)	
45 mm (1.77 in)				Left End/Right End	112-2473	4J-9058 (5)	2J-3507 (5)	5P-8250 (5)	
				Center Edge	112-2475 ² (2)	4J-9058 (6)	2J-3507 (6)	5P-8250 (6)	

Bulldozer Blades (Cont'd.)

Model	Serial Number	Blade Model	Edge Thickness	Edge Type	Edge Part Number ¹	Bolts Per Edge ¹	Nuts Per Edge ¹	Washers Per Edge ¹		
	6Y1-1395	Universal	25 mm (1.00 in)	Center Edge	4T-3422 (2)	4J-9208 (7)	2J-3507 (7)	5P-8250 (7)		
				Left End/Right End	4T-3417 (2)	4J-9208 (5)	2J-3507 (5)	5P-8250 (5)		
			35 mm (1.38 in)	Left End/Right End	1U-4929	4J-9208 (5)	2J-3507 (5)	5P-8250 (5)		
				Center Edge	1U-4931 (2)	4J-9208 (7)	2J-3507 (7)	5P-8250 (7)		
			35 mm (1.38 in)	Left End/Right End	6Y-6359 ³	4J-9208 (5)	2J-3507 (5)	5P-8250 (5)		
				Center Edge	6Y-6360 ³ (2)	4J-9208 (7)	2J-3507 (7)	5P-8250 (7)		
			40 mm (1.57 in)	Left End Edge/Right End	7T-4346 ³ /45	4J-9208 (5)	2J-3507 (5)	5P-8250 (5)		
				Center Edge	7T-4347 ³ (2)	4J-9208 (7)	2J-3507 (7)	5P-8250 (7)		
			45 mm (1.77 in)	Left End/Right End	107-3480	4J-9208 (5)	2J-3507 (5)	5P-8250 (5)		
				Center Edge	107-3483 (2)	4J-9208 (7)	2J-3507 (7)	5P-8250 (7)		
			6Y1396-Up, 42Z, 82M	Universal	28 mm (1.12 in)	Center Edge	4T-9590	4J-9058 (14)	2J-3507 (14)	
						Left End/Right End	4T-9587 (2)	4J-9058 (5)	2J-3507 (5)	
					35 mm (1.38 in)	Left End/Right End	9W-4398	4J-9058 (5)	2J-3507 (5)	5P-8250 (5)
						Center Edge	9W-4397	4J-9058 (14)	2J-3507 (14)	5P-8250 (14)
45 mm (1.77 in)	Left End/Right End	9W-3927			4J-9058 (5)	2J-3507 (5)	5P-8250 (5)			
	Center Edge	9W-3926 ³			4J-9058 (14)	2J-3507 (14)	5P-8250 (14)			
11C, 74D, 88D, 24E	Universal	25 mm (1.00 in)	Center Edge	4T-3419	1J-6762 (12)	2J-3506 (12)				
			Left End/Right End	4T-2861 (2)	1J-6762 (9)	2J-3506 (9)				
20F, 45K, 48K	Universal	25 mm (1.00 in)	Center Edge	4T-6513	5 J-2409 (10)	2J-3505 (10)				
			Left End/Right End	4T-6512 (2)	5J-2409 (6)	2J-3505 (6)				
		35 mm (1.38 in)	Left End/Right End	6Y-6762	5J-2409 (6)	2J-3505 (6)				
			Center Edge	6Y-6765	5 J-2409 (10)	2J-3505 (10)				
		40 mm (1.57 in)	Center Edge	7T-4355 ²	4J-9058 (10)	2J-3507 (10)				
		45 mm (1.77 in)	Left End/Right End	107-3475	5J-2409 (6)	2J-3505 (6)				
Center Edge	107-3478		5 J-2409 (10)	2J-3505 (10)						
29J, 30E, 73E	Universal	45 mm (1.77 in)	Left End/Right End	107-3474	5J-2409 (6)	2J-3505 (6)				
29J, 30E, 73E	Universal	45 mm (1.77 in)	Center Edge	107-3478	5 J-2409 (10)	2J-3505 (10)				
30V, 34W, 65X, 69V	Universal	25 mm (1.00 in)	Center Edge	4T-2986	4J-9058 (5)	2J-3507 (5)				
			Left End/Right End	4T-2987 (2)	4J-9058 (6)	2J-3507 (6)				
		35 mm (1.38 in)	Left End/Right End	9W-8656	4J-9058 (5)	2J-3507 (5)				
			Center Edge	9W-8655 (2)	4J-9058 (6)	2J-3507 (6)				
			Center Edge	7T-4352 ³ (2)	4J-9208 (6)	2J-3507 (6)				
		45 mm (1.77 in)	Left End/Right End	107-3481	4J-9058 (6)	2J-3507 (6)				
Center Edge	107-3473 (2)		4J-9058 (5)	2J-3507 (5)						
8SU	1KH, 2PP, 2TP, 3MP, 3WH, 1HP, 6LH, 9BH, 9PH, 2NP 05A, 9TP, BHW, B8S, DZA, DZX	Semi-U	28 mm (1.12 in)	Center Edge	4T-6381	4J-9058 (9)	2J-3507 (9)	5P-8250 (9)		
				Left End/Right End	6Y-5540 (2)	4J-9058 (5)	2J-3507 (5)	5P-8250 (5)		
			35 mm (1.38 in)	Center Edge	7T-9126	4J-9058 (9)	2J-3507 (9)	5P-8250 (9)		

Bulldozers/Compactors

Bulldozer Blades (Cont'd.)

Model	Serial Number	Blade Model	Edge Thickness	Edge Type	Edge Part Number ¹	Bolts Per Edge ¹	Nuts Per Edge ¹	Washers Per Edge ¹			
			45 mm (1.77 in)	Left End/Right End	7T-9125 (2)	4J-9058 (5)	2J-3507 (5)	5P-8250 (5)			
				Center Edge	112-2472	4J-9058 (9)	2J-3507 (9)	5P-8250 (9)			
				Left End/Right End	112-2471 (2)	4J-9058 (5)	2J-3507 (5)	5P-8250 (5)			
			35 mm (1.38 in) Performance	Intermediate RH	479-8131	4J-9058 (5)	2J-3507 (5)	5P-8250 (5)			
				Intermediate LH	479-8132	4J-9058 (5)	2J-3507 (5)	5P-8250 (5)			
				Center Edge	7T-9126	4J-9058 (9)	2J-3507 (9)	5P-8250 (9)			
			3E, 8A, 12C, 18C, 32D, 44C1-1192, 86D	Semi-U		19 mm (0.75 in)	Center Edge	4T-2944 (2)	1J-6762 (13)	2J-3506 (13)	5P-8248 (13)
						25 mm (1.00 in)	Center Edge	4T-2860 (2)	1J-6762 (13)	2J-3506 (13)	5P-8248 (13)
			4Y1-1939	Semi-U	28 mm (1.12 in)	Left End/Right End	4T-3417	4J-9208 (5)	2J-3507 (5)	5P-8250 (5)	
	Center Edge	4T-3423 (2)				4J-9208 (6)	2J-3507 (6)	5P-8250 (6)			
	35 mm (1.38 in)	Left End/Right End			1U-4929	4J-9208 (5)	2J-3507 (5)	5P-8250 (5)			
		Center Edge			1U-4930 (2)	4J-9208 (6)	2J-3507 (6)	5P-8250 (6)			
		Left End/Right End			6Y-6359 ²	4J-9208 (5)	2J-3507 (5)	5P-8250 (5)			
		Center Edge			6Y-6358 ² (2)	4J-9208 (6)	2J-3507 (6)	5P-8250 (6)			
	40 mm (1.57 in)	Left End/Right End			7T-4346 ² /45	4J-9208 (5)	2J-3507 (5)	5P-8250 (5)			
		Center Edge			7T-5235 ²	4J-9208 (6)	2J-3507 (6)	5P-8250 (6)			
	45 mm (1.77 in)	Left End/Right End			107-3482	4J-9208 (5)	2J-3507 (5)	5P-8250 (5)			
		Center Edge			107-3480 (2)	4J-9208 (6)	2J-3507 (6)	5P-8250 (6)			
	4Y1940-Up	Semi-U			28 mm (1.12 in)	Center Edge	4T-9586	4J-9058 (11)	2J-3507 (11)	5P-8250 (11)	
						Left End/Right End	6Y-5540 (2)	4J-9058(5)	2J-3507 (5)	5P-8250 (5)	
			35 mm (1.38 in)	Left End/Right End	9W-4398	4J-9058 (5)	2J-3507 (5)	5P-8250 (5)			
				Center Edge	9W-4396	4J-9058 (11)	2J-3507 (11)	5P-8250 (11)			
			45 mm (1.77 in)	Left End/Right End	9W-3927	4J-9058 (5)	2J-3507 (5)	5P-8250 (5)			
				Center Edge	9W-3925	4J-9058 (11)	2J-3507 (11)	5P-8250 (11)			
	14J, 44K, 47K, 69E, 80V, 95S	Semi-U	25 mm (1.00 in)	Center Edge	4T-3418 (2)	5 J-2409 (10)	2J-3505 (10)	5P-8249 (10)			
35 mm (1.38 in)			Center Edge	6Y-6763 (2)	5 J-2409 (10)	2J-3505 (10)	5P-8249 (10)				
40 mm (1.57 in)			Center Edge	6Y-5777 ² (2)	5 J-2409 (10)	2J-3505 (10)	5P-8249 (10)				
45 mm (1.77 in)			Center Edge	107-3476 (2)	5 J-2409 (10)	2J-3505 (10)	5P-8249 (10)				
29E, 78C, 94E	Semi-U	25 mm (1.00 in)	Center Edge	4T-6531 (2)	5 J-2409 (10)	2J-3505 (10)	5P-8249 (10)				
		35 mm (1.38 in)	Center Edge	6Y-6764 (2)	5 J-2409 (14)	2J-3505 (14)	5P-8249 (14)				
29E, 78C, 94E	Semi-U	40 mm (1.57 in)	Center Edge	6Y-5776 ³ (2)	5J-2409 (14)	2J-3505 (14)	5P-8249 (14)				
		45 mm (1.77 in)	Center Edge	107-3477 (2)	5J-2409 (14)	2J-3505 (14)	5P-8249 (14)				
44C1193-Up, 73D	Semi-U		25 mm (1.00 in)	Center Edge	4T-2862 (2)	1J-6762 (14)	2J-3506 (14)	5P-8248 (14)			
8SU LGP	KMB, LAA, DZC	Semi-U	28 mm (1.12 in)	Center Edge	4Z-9058	4J-9058 (13)	2J-3507 (13)	5P-8250 (13)			
				Left End/Right End	6Y-5540 (2)	4J-9058 (5)	2J-3507 (5)	5P-8250 (5)			
8A	1HH, 2XP, 6NH, 9AH, 4ZP	Angle	28 mm (1.12 in)	Center Edge	9W-5432 ³	4F-4042 (9)	2J-3505 (9)	5P-8250 (9)			
			35 mm (1.38 in)	Center Edge	9W-9098	4F-4042 (7)	2J-3505 (7)	5P-8250 (7)			
			45 mm (1.77 in)	Center Edge	112-2474 (3)	4F-4042 (8)	2J-3507 (8)	5P-8250 (8)			
	5Y, 27B, 41Z	Angle		25 mm (1.00 in)	Left End/Right End	4T-2987	4J-9208 (6)	2J-3507 (6)	3K-5234 (6)		

Bulldozer Blades (Cont'd.)

Model	Serial Number	Blade Model	Edge Thickness	Edge Type	Edge Part Number ¹	Bolts Per Edge ¹	Nuts Per Edge ¹	Washers Per Edge ¹			
			35 mm (1.38 in)	Center Edge	4T-2988 (2)	4J-9208 (7)	2J-3507 (7)	3K-5234 (7)			
				Left End Edge/Right End	9W-8657	4J-9208 (6)	2J-3507 (6)	3K-5234 (6)			
				Center Edge	9W-8655 ³ (2)	4J-9208 (7)	2J-3507 (7)	3K-5234 (7)			
				Left End/Right End	1U-4932	4J-9208 (6)	2J-3507 (6)	3K-5234 (6)			
				Center Edge	1U-4933 (2)	4J-9208 (7)	2J-3507 (7)	3K-5234 (7)			
			40 mm (1.57 in)	Left End/Right End	7T-4352	4J-9208 (6)	2J-3507 (6)	3K-5234 (6)			
				Center Edge	7T-4353 ² (2)	4J-9208 (7)	2J-3507 (7)	3K-5234 (7)			
				45 mm (1.77 in)	Left End/Right End	107-3481	4J-9208 (6)	2J-3507 (6)	3K-5234 (6)		
			Center Edge		107-3479 (2)	4J-9208 (7)	2J-3507 (7)	3K-5234 (7)			
			07A, 18C, 33D, 99D, 87D, 07E, 22E, 72D	Angle	19 mm (0.75 in)	Center Edge	4T-2943 (2)	1J-6762 (16)	2J-3506 (16)		
	25 mm (1.00 in)	Center Edge			4T-2888 (2)	1J-6762 (16)	2J-3506 (16)				
	35 mm (1.38 in)	Center Edge			9W-8657 (2)	1J-6762 (16)	2J-3506 (16)				
	28E1-11125	Angle	25 mm (1.00 in)	Center Edge	4T-6532 (4)	5J-2409 (6)	2J-3505 (6)				
			35 mm (1.38 in)	Center Edge	6Y-6761 (4)	5J-2409 (6)	2J-3505 (6)				
			40 mm (1.57 in)	Center Edge	107-3474 ² (4)	5J-2409 (6)	2J-3505 (6)				
				Left End/Right End	7T-4348 ² (4)	5J-2409 (6)	2J-3505 (6)				
	28E11126-UP, 93E, 14F, 77C	Angle	25 mm (1.00 in)	Center Edge	4T-2994 (3)	4J-9058 (8)	2J-3507 (8)				
			35 mm (1.38 in)	Center Edge	9W-8658 (3)	4J-9058 (8)	2J-3507 (8)				
			40 mm (1.57 in)	Center Edge	107-3484 ² (3)	4J-9058 (8)	2J-3507 (8)				
				Left End/Right End	7T-4351 ² (3)	4J-9058 (8)	2J-3507 (8)				
	BHR, 9ZP, DZD, D1E, D1F	Angle	28 mm (1.12 in)	Center Edge	135-9373 (3)	4F-4042 (8)	2J-3507 (8)	5P-8250 (8)			
35 mm (1.38 in)			Center Edge	136-9628 (3)	4F-4042 (8)	2J-3507 (8)	5P-8250 (8)				
45 mm (1.77 in)			Center Edge	135-9629 (3)	4F-4042 (8)	2J-3507 (8)	5P-8250 (8)				
8C	71F, 77G	Cushion	25 mm (1.00 in)	Center Edge	4T-2867 (1)	5 J-2409 (13)	2J-3505 (13)				
8R	43 K	Rip Dozer	25 mm (1.00 in)	Center Edge	4T-3418 (2)	5 J-2409 (10)	2J-3505 (10)				
9U	1LH, 1MP, 2ZH, 7PH, 9MP, CMH, CMN, CMS, CMW, CMZ, T9H	Universal	28 mm (1.12 in)	Center Edge	6Y-5538	4J-9208 (15)	2J-3507 (15)	5P-8250 (15)			
				End	6Y-5540 (2)	4J-9208 (5)	2J-3507 (5)	5P-8250 (5)			
			35 mm (1.38 in)	Left End/Right End	7T-9125	4J-9058 (5)	2J-3507 (5)	5P-8250 (5)			
				Center Edge	7T-5701	4J-9058 (15)	2J-3507 (15)	5P-8250 (15)			
			45 mm (1.77 in)	Left End/Right End	112-2471	4J-9058 (5)	2J-3507 (5)	5P-8250 (5)			
				Center Edge	9W-7044 ²	4J-9058 (15)	2J-3507 (15)	5P-8250 (15)			
	1LH, 1MP, 2ZH, 7PH, 9MP, CMH, CMNCMS, CMW, CMZ	Universal	45 mm (1.77 in)	Center Edge	9W-7044 ²	4J-9058 (15)	2J-3507 (15)	5P-8250 (15)			
				14C, 19K, 78X	Universal	28 mm (1.12 in)	Center Edge	4T-6378 (3)	4J-9058 (6)	2J-3507 (6)	5P-8250 (6)
							End Edge	4T-6378 (3)	4J-9058 (6)	2J-3507 (6)	5P-8250 (6)
	Intermediate Edge	4T-6379 (2)	4J-9058 (4)				2J-3507 (4)	5P-8250 (4)			
	35 mm (1.38 in)	Right/Left End Edge	9W-6092		4J-9058 (6)	2J-3507 (6)	5P-8250 (6)				
		Intermediate Edge	9W-9197		4J-9058 (4)	2J-3507 (4)	5P-8250 (4)				
Center Edge		9W-6092	4J-9058 (6)		2J-3507 (6)	5P-8250 (6)					
40 mm (1.57 in)	Left End/Right End	7T-4341 ³	4J-9058 (6)	2J-3507 (6)	5P-8250 (6)						

Bulldozers/Compactors

Bulldozer Blades (Cont'd.)

Model	Serial Number	Blade Model	Edge Thickness	Edge Type	Edge Part Number ¹	Bolts Per Edge ¹	Nuts Per Edge ¹	Washers Per Edge ¹	
				Left Intermediate	7T-4336	4J-9058 (4)	2J-3507 (4)	5P-8250 (4)	
				Center Edge	7T-4341 ³	4J-9058 (6)	2J-3507 (6)	5P-8250 (6)	
				Right Intermediate	7T-4337 ³	4J-9058 (4)	2J-3507 (4)	5P-8250 (4)	
			40 mm (1.57 in)	Right/Left End Edge	7J-2959	4J-9208 (6)	2J-3507 (6)	5P-8250 (6)	
				Intermediate Edge	7J-2979	4J-9208 (4)	2J-3507 (4)	5P-8250 (4)	
				Center Edge	7J-2959	4J-9208 (6)	2J-3507 (6)	5P-8250 (6)	
	19Y1-1474, 78S	Universal	28 mm (1.12 in)	Left End/Right End	4T-6382	4J-9208 (6)	2J-3507 (6)	5P-8250 (6)	
				Center Edge	4T-6381	4J-9208 (9)	2J-3507 (9)	5P-8250 (9)	
			35 mm (1.38 in)	Left End/Right End	9W-4503	4J-9208 (6)	2J-3507 (6)	5P-8250 (6)	
				Center Edge	7T-9126 (2)	4J-9208 (9)	2J-3507 (9)	5P-8250 (9)	
			35 mm (1.38 in)	Left End/Right End	6Y-0315 ³	1J-4948 (6)	2J-3507 (6)	5P-8250 (6)	
				Center Edge	6Y-0313 ² (2)	1J-4948 (9)	2J-3507 (9)	5P-8250 (9)	
				Right End Edge	6Y-0314 ³	1J-4948 (6)	2J-3507 (6)	5P-8250 (6)	
			40 mm (1.57 in)	Left End/Right End	9W-4506	1J-4948 (6)	2J-3507 (6)	5P-8250 (6)	
				Center Edge	9W-4507 (2)	1J-4948 (9)	2J-3507 (9)	5P-8250 (9)	
			45 mm (1.77 in)	Left End Edge/Right End	6Y-0481 ³ /80	1J-4948 (6)	2J-3507 (6)	5P-8250 (6)	
				Center Edge	6Y-0479 ² (2)	1J-4948 (9)	2J-3507 (9)	5P-8250 (9)	
			19Y1475-Up	Universal	35 mm (1.38 in)	Left End/Right End	7T-9781	6V-8360 (5)	3K-9770 (5)
	Center Edge	9W-0775 (3)				6V-8360 (5)	3K-9770 (5)	4K-0684 (5)	
	45 mm (1.77 in)	Left End/Right End			9W-3929	5P-8823 (5)	3K-9770 (5)	4K-0684 (5)	
		Center Edge			9W-3931 (3)	5P-8823 (5)	3K-9770 (5)	4K-0684 (5)	
	55C	Universal	28 mm (1.12 in)	Center Edge	4T-6453 (1)	4J-9058(13)	2J-3507 (13)	5P-8250 (13)	
				End Edge	4T-6457 (2)	4J-9058 (6)	2J-3507 (6)	5P-8250 (6)	
	55C	Universal	40 mm (1.57 in)	Left End/Right End	7J-2964	4J-9058 (6)	2J-3507 (6)	5P-8250 (6)	
Center Edge				7J-2963	4J-9058 (13)	2J-3507 (13)	5P-8250 (13)		
9SU	1LP, 1MH, 2LP, 5BH, 7NH, 2ZP, 2B, 9LH, 9RP CLC, CLN, CLY, CMA, T9J	Semi-U	28 mm (1.10 in)	Center Edge	6Y-5539 (1)	4J-9208 (12)	2J-3507 (12)	5P-8250 (12)	
				End	6Y-5540 (2)	4J-9208 (5)	2J-3507 (5)	5P-8250 (5)	
			35 mm (1.38 in)	Left End/Right End	7T-9125	4J-9058 (5)	2J-3507 (5)	5P-8250 (5)	
				Center Edge	7T-5702	4J-9058 (12)	2J-3507 (12)	5P-8250 (12)	
			45 mm (1.77 in)	Left End/Right End	112-2471	4J-9058 (5)	2J-3507 (5)	5P-8250 (5)	
				Center Edge	9W-7043	4J-9058 (12)	2J-3507 (12)	5P-8250 (12)	
	1LP, 1MH, 2LP, 5BH, 7NH, 2ZP, 2B, 9LH, 9RP CLC, CLN, CLY, CMA, T9J	Semi-U	45 mm (1.77 in)	Center Edge	9W-7043	4J-9058 (12)	2J-3507 (12)	5P-8250 (12)	
				5A, 18K, 46K, 61U, 73R	Center Edge	4T-6386 (3)	4J-9208 (7)	2J-3507 (7)	5P-8250 (7)
					Center Edge	9W-4500 (3)	4J-9058 (7)	2J-3507 (7)	5P-8250 (7)
					Center Edge	7T-4342 ³ (3)	4J-9058 (7)	2J-3507 (7)	5P-8250 (7)
	18Y1-1875, 42S, 52Y	Semi-U	28 mm (1.12 in)	Center Edge	7J-2980 (3)	8J-2928 (7)	2J-3507 (7)	5P-8250 (7)	
				Center Edge	4T-6386	4J-9208 (7)	2J-3507 (7)	5P-8250 (7)	

Bulldozer Blades (Cont'd.)

Model	Serial Number	Blade Model	Edge Thickness	Edge Type	Edge Part Number ¹	Bolts Per Edge ¹	Nuts Per Edge ¹	Washers Per Edge ¹		
			35 mm (1.38 in)	End Edge	4T-6385 (2)	4J-9208 (8)	2J-3507 (8)	5P-8250 (8)		
				Left End/Right End	9W-4502	1J-4948 (8)	2J-3507 (8)	5P-8250 (8)		
				Center Edge	9W-4500	1J-4948 (7)	2J-3507 (7)	5P-8250 (7)		
				Left End Edge	6Y-0311 ³	4J-9208 (8)	2J-3507 (8)	5P-8250 (8)		
				Center Edge	6Y-0310 ²	4J-9208 (7)	2J-3507 (7)	5P-8250 (7)		
				Right End Edge	6Y-0312 ³	4J-9208 (8)	2J-3507 (8)	5P-8250 (8)		
			40 mm (1.57 in)	Left End/Right End	9W-4508	4J-9208 (8)	2J-3507 (8)	5P-8250 (8)		
				Center Edge	7J-2980	4J-9208 (7)	2J-3507 (7)	5P-8250 (7)		
			45 mm (1.77 in)	Left End Edge	6Y-0477 ³	4J-9208 (8)	2J-3507 (8)	5P-8250 (8)		
				Center Edge	6Y-0476 ²	4J-9208 (7)	2J-3507 (7)	5P-8250 (7)		
				Right End Edge	6Y-0478 ³	4J-9208 (8)	2J-3507 (8)	5P-8250 (8)		
			21E1-831, 25E, 06A	Semi-U	28 mm (1.12 in)	Center Edge	4T-6459 (1)	8J-2928 (9)	2J-3507 (9)	5P-8250 (9)
						End Edge	4T-6456 (2)	8J-2928 (6)	2J-3507 (6)	5P-8250 (6)
					40 mm (1.57 in)	Center Edge	7J-2961 (1)	4J-9208 (9)	2J-3507 (9)	5P-8250 (9)
						End Edge	7J-2960 (2)	4J-9208 (6)	2J-3507 (6)	5P-8250 (6)
18Y1876-Up	Semi-U	35 mm (1.38 in)	Left End/Right End	7T-9779	6V-8360 (5)	3K-9770 (5)	4K-0684 (5)			
			Center Edge	7T-9782 (2)	6V-8360 (6)	3K-9770 (6)	4K-0684 (6)			
		45 mm (1.77 in)	Left End/Right End	9W-3930	5P-8823 (5)	3K-9770 (5)	4K-0684 (5)			
			Center Edge	9W-3928 (2)	5P-8823 (6)	3K-9770 (6)	4K-0684 (6)			
21E832-Up, 53C, 89D	Semi-U	28 mm (1.12 in)	Center Edge	4T-6448	4J-9208 (10)	2J-3507 (10)	5P-8250 (10)			
		40 mm (1.57 in)	Center Edge	7J-2962 (2)	4J-9208 (10)	2J-3507 (10)	5P-8250 (10)			
9U SXS	20H	Universal	28 mm (1.12 in)	Center Edge	4T-6378 (4)	4J-9058 (6)	2J-3507 (6)	5P-8250 (6)		
				Center Edge	4T-6377 (3)	4J-9058 (4)	2J-3507 (4)	5P-8250 (4)		
				Center Edge	4T-6379 (2)	4J-9058 (4)	2J-3507 (4)	5P-8250 (4)		
9A	55C, 52C, 90D, 11E, 26E	Angle	28 mm (1.12 in)	Center Edge	4T-6388 (1)	8J-2928 (7)	2J-3507 (7)	5P-8250 (7)		
				End Edge	4T-6387 (2)	8J-2928 (9)	2J-3507 (9)	5P-8250 (9)		
			40 mm (1.57 in)	Center Edge	7J-2966 (1)	8J-2928 (7)	2J-3507 (7)	5P-8250 (7)		
				End Edge	7J-2965 (2)	8J-2928 (9)	2J-3507 (9)	5P-8250 (9)		
9C	70F, 45G, 20Y	Cushion	28 mm (1.12 in)	Center Edge	4T-6450 (1)	8J-2928 (15)	2J-3507 (15)	5P-8250 (15)		
				End Edge	4T-6388 (2)	8J-2928 (7)	2J-3507 (7)	5P-8250 (7)		
9R	39 K	Rip Dozer	28 mm (1.12 in)	Center Edge	4T-6386 (3)	8J-2928 (7)	2J-3507 (7)	5P-8250 (7)		
			40 mm (1.57 in)	Center Edge	7J-2980 (3)	8J-2928 (7)	2J-3507 (7)	5P-8250 (7)		
10U	80W	Universal	35 mm (1.38 in)	Left End/Right End	1U-4457 (2)	5P-8823 (7)	3K-9770 (7)	4K-0684 (7)		
				Center Edge	1U-4458 (3)	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)		
			40 mm (1.57 in)	Left End/Right End	4T-0084 (2)	5P-8823 (7)	3K-9770 (7)	4K-0684 (7)		
				Center Edge	4T-0083 (3)	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)		
			45 mm (1.77 in)	Left End/Right End	6Y-0019 (2)	5P-8823 (7)	3K-9770 (7)	4K-0684 (7)		
				Center Edge	6Y-0018 (3)	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)		
			50 mm (2.00 in)	Left End/Right End	4T-0608 (2)	5P-8823 (7)	3K-9770 (7)	4K-0684 (7)		
				Center Edge	4T-0609 (3)	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)		
			60 mm (2.36 in)	Left End/Right End	6Y-0022 (2)	5P-8823 (7)	3K-9770 (7)	4K-0684 (7)		

Bulldozers/Compactors

Bulldozer Blades (Cont'd.)

Model	Serial Number	Blade Model	Edge Thickness	Edge Type	Edge Part Number ¹	Bolts Per Edge ¹	Nuts Per Edge ¹	Washers Per Edge ¹
	1SH, 7WH, 4LP, 6FP, BHF, BHP	Universal	35 mm (1.38 in)	Center Edge	6Y-0023 (3)	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)
				End	9W-6615 (3)	5P-8823 (5)	3K-9770 (5)	4K-0684 (5)
			45 mm (1.77 in)	Center Edge	9W-6658 (3)	5P-8823 (5)	3K-9770 (5)	4K-0684 (5)
				End	9W-6657 (2)	5P-8823 (5)	3K-9770 (5)	4K-0684 (5)
			60 mm (2.36 in)	Center Edge	8E-2087 ² (3)	5P-8823 (5)	3K-9770 (5)	4K-0684 (5)
				End	8E-2086 ² (2)	5P-8823 (5)	3K-9770 (5)	4K-0684 (5)
			60 mm (2.36 in)	Center Edge (ARM)	223-8149 ² (3)	5P-8823 (5)	3K-9770 (5)	4K-0684 (5)
				End Edge (ARM)	195-9170 ² (1)	5P-8823 (5)	3K-9770 (5)	4K-0684 (5)
				End Edge (ARM)	201-1230 ² (1)	5P-8823 (5)	3K-9770 (5)	4K-0684 (5)
			10SU	79W	Semi-U	35 mm (1.38 in)	Center Edge	1U-4459 (2)
End	1U-4455 (2)	5P-8823 (9)					3K-9770 (9)	4K-0684 (9)
40 mm (1.57 in)	Center Edge	4T-0081 (2)				5P-8823 (9)	3K-9770 (9)	4K-0684 (9)
	End	4T-0082 (2)				5P-8823 (9)	3K-9770 (9)	4K-0684 (9)
45 mm (1.77 in)	Left End/Right End	6Y-0017 (2)				5P-8823 (9)	3K-9770 (9)	4K-0684 (9)
	Center Edge	6Y-0016 (2)				5P-8823 (9)	3K-9770 (9)	4K-0684 (9)
50 mm (2.00 in)	Center Edge	4T-0607 (2)				5P-8823 (9)	3K-9770 (9)	4K-0684 (9)
	End	4T-0604 (2)				5P-8823 (9)	3K-9770 (9)	4K-0684 (9)
60 mm (2.36 in)	Left End/Right End	6Y-0021 (2)				5P-8823 (9)	3K-9770 (9)	4K-0684 (9)
	Center Edge	6Y-0020 (2)				5P-8823 (9)	3K-9770 (9)	4K-0684 (9)
1RH, 7RH, 4KP, 6EP, BHJ, BHA	Semi-U	35 mm (1.38 in)		Center Edge	9W-6609 (2)	5P-8823 (6)	3K-9770 (6)	4K-0684 (6)
				End	9W-6608 (2)	5P-8823 (5)	3K-9770 (5)	4K-0684 (5)
		45 mm (1.77 in)		Center Edge	9W-6656 (2)	5P-8823 (6)	3K-9770 (6)	4K-0684 (6)
				End	9W-6657 (2)	5P-8823 (5)	3K-9770 (5)	4K-0684 (5)
		60 mm (2.36 in)		Center Edge (ARM)	195-9171 (2)	5P-8823 (6)	3K-9770 (6)	4K-0684 (6)
				End	195-9170	5P-8823 (5)	3K-9770 (5)	4K-0684 (5)
				End	201-1230	5P-8823 (5)	3K-9770 (5)	4K-0684 (5)
		60 mm (2.36 in)		Center Edge	8E-2085 ² (2)	5P-8823 (6)	3K-9770 (6)	4K-0684 (6)
				End Edge	8E-2086 ² (2)	5P-8823 (5)	3K-9770 (5)	4K-0684 (5)
		75 mm (2.95 in)		Center Edge	135-9580 ² (2)	5P-8823 (6)	3K-9770 (6)	4K-0684 (6)
1RH, 7RH, 4KP, 6EP, BHJ, BHA	Semi-U	75 mm (2.95 in)	End Edge	135-9579 ² (2)	5P-8823 (5)	3K-9770 (5)	4K-0684 (5)	
10C	83W	Cushion	35 mm (1.38 in)	Right/Left End Edge	9J-3751	8J-2928 (10)	2J-3507 (10)	5P-8250 (10)
11U	4CB, 5TB, 9MH, 9ZH, 4YP, 8RP	Universal	45 mm (1.77 in)	Right/Left End Edge	9W-2425	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)
				Right/Left Center Edge	9W-2424	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)
				Center Edge	9W-2426	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)
			45 mm (1.77 in)	Center Edge	138-6483 ⁴ (2)	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)
				Center Edge	138-6484	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)
				Center Edge	138-6485	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)
				Center Edge	138-6486	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)
			60 mm (2.36 in)	Right/Left End Edge	9W-4494	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)

Bulldozer Blades (Cont'd.)

Model	Serial Number	Blade Model	Edge Thickness	Edge Type	Edge Part Number ¹	Bolts Per Edge ¹	Nuts Per Edge ¹	Washers Per Edge ¹	
				Right/Left Center Edge	9W-4493	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)	
				Center Edge	9W-4495	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)	
			60 mm (2.36 in)	Center Edge (ARM)	195-9173 ² (2)	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)	
				Center Edge (ARM)	195-9174 ² (1)	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)	
				Center Edge (ARM)	195-9175 ² (1)	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)	
				Center Edge (ARM)	201-1231 ² (1)	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)	
				75 mm (3.00 in)	Center Edge	195-7187 ² (2)	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)
					Center Edge	135-9577 ² (2)	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)
			Center Edge		135-9578 ²	5P-8823 (9)	3K-9770 (9)	4K-0684 (9)	
			11SU	1AP, 4BB, 4KB, 9NH, 4XP, 8PP	Semi-U	45 mm (1.77 in)	Left End/Right End	9W-2425	5P-8823 (9)
Center Edge	9W-2426 (2)	5P-8823 (9)					3K-9770 (9)	4K-0684 (9)	
60 mm (2.36 in)	Left End/Right End	9W-4494				5P-8823 (9)	3K-9770 (9)	4K-0684 (9)	
	Center Edge	9W-4495 (2)				5P-8823 (9)	3K-9770 (9)	4K-0684 (9)	
75 mm (3.00 in)	Center Edge	135-9578 ² (2)				5P-8823 (9)	3K-9770 (9)	4K-0684 (9)	
	End Edge	135-9577 ² (2)				5P-8823 (9)	3K-9770 (9)	4K-0684 (9)	
11 Carry-dozer	5JP, BHZ	General Duty	45 mm (1.77 in)	Reversible Edge	238-3171 (5)	5P-8361 (8)	3K-9770 (8)	4K-0684 (8)	
				One-Way Edge	229-7052 (5)	5P-8361 (8)	3K-9770 (8)	4K-0684 (8)	
			60 mm (2.36 in)	Reversible Edge	238-3177 (5)	5P-8361 (8)	3K-9770 (8)	4K-0684 (8)	
				One-Way Edge	267-8654 (5)	5P-8361 (8)	3K-9770 (8)	4K-0684 (8)	
		Extended Wear Life (ARM)	60 mm (2.36 in)	Reversible Edge	268-8751 (5)	5P-8361 (8)	3K-9770 (8)	4K-0684 (8)	
				One-Way Edge	268-8750 (5)	5P-8361 (8)	3K-9770 (8)	4K-0684 (8)	

¹ Number in parenthesis () after the part number indicates the quantity required.

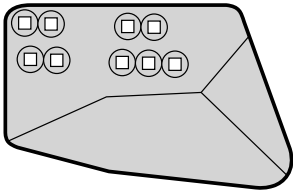
² Extended Wear Life edge. Edge is wider and contains offset bolt holes. Use only Extended Wear Life end bits.

³ Edges are 280 mm (11" wide).

⁴ 195-5118 - Same as 136-6153/4 with one sharp edge.

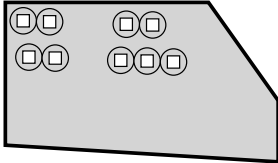
Bulldozers/Compactors

Bulldozer End Bits



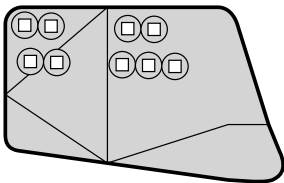
General Duty End Bits

- Provides a thicker wear area than the cutting edge.
- Made from DH-2 steel in the D3 through D6 sizes.
- Made from DH-3 steel in the D7 through D11 sizes.
- For use in most dozing applications.



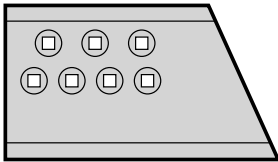
Utility End Bits

- Provides good corner protection in high impact, high abrasion materials.
- Made from through-hardened DH-2 steel.
- For use in applications where face wear is a problem.



Extended Wear Life End Bits

- Provides an excellent cutting edge to end bit wear ratio in abrasive conditions.
- Provides a maximum depth of cut relative to the cutting edge.
- Provides a thicker wear area than the cutting edge.
- Made from DH-2 steel in the D4 through D6 sizes.
- Made from DH-3 steel in the D7 through D11 sizes.



Finish Dozing End Bits

- Provides a depth of cut equal to the cutting edge.
- Protects the blade corner in low impact, low abrasion materials.
- Made from through-hardened DH-2 steel.
- For use in finish and semi-finish dozing.



Performance End Bits

- Forward profile for penetration in tough soil.
- Excellent blade control in tough production dozing applications.
- Superior finish grading capabilities.
- Match with EWL cutting edges for long wear life.



Precision End Bits

- Designed to provide the lowest cost per hour with 20% more wear material.
- Built in wear indicator.
- Superior finish grading capabilities.
- Designed to reduce your throw away weight with optimized wear material placement.

Bulldozer End Bits (Cont'd.)

Model	Serial Number	Blade Model	Thickness	General End Bits		Utility End Bits		Extended Wear Life End Bits		Finish Dozing End Bits		Bolts ⁽¹⁾	Nuts ⁽¹⁾	Washers ⁽¹⁾		
				(lh)	(rh)	(lh)	(rh)	(lh)	(rh)	(lh)	(rh)					
D3	5WH, 6EH, 85U, 96X, 8XP, 8HP, 8KP, 2JP, 9RH, 1GP, 8JP	Power Angle & Tilt	16 mm (0.62 in)							4T-6229	4T-6229	3F-5108(3)	4K-0367 (3)	5P-8247 (3)		
			18 mm (0.70 in) Precision								491-3754		3F-5108 (3)	4K-0367 (3)	5P-8247 (3)	
			21 mm (0.83 in) Precision									491-3755	3F-5108 (3)	4K-0367 (3)	5P-8247 (3)	
			25 mm (1.00 in) Performance								480-8940	480-8939	3F-5108 (3)	4K-0367 (3)	5P-8247 (3)	
			16 mm (0.62 in)								4T-6229	4T-6229	3F-5108(3)	4K-0367 (3)	5P-8247 (3)	
D4	15W, 31M, 40V, 86U, 5LH	Straight	18 mm (0.70 in) Precision								491-3754	3F-5108 (3)	4K-0367 (3)	5P-8247 (3)		
			21 mm (0.83 in) Precision								491-3755	3F-5108 (3)	4K-0367 (3)	5P-8247 (3)		
			19 mm (0.75 in)	9F-7074	9F-7073						4T-3052	4T-3051	3F-5108 (6)	4K-0367 (6)	5P-8247 (6)	
			22 mm (0.86 in)	3G-8322	3G-8321						4T-3052	4T-3051	3F-5108(6)	4K-0367 (6)	5P-8247 (6)	
			22 mm (0.88 in)	140-6788	140-6787					4T-5408	4T-5407					
			25 mm (1.00 in) Performance													
			16 mm (0.62 in)													
			18 mm (0.70 in) Precision													
			21 mm (0.83 in) Precision													
			25 mm (1.00 in) Performance													
D4 LGP	2A, 4A, 19J, 25F, 27F, 40D, 45J, 67E, 67F, 84E, 93C, 94G	Power Angle & Tilt	22 mm (0.88 in)	9F-7074	9F-7073											
			25 mm (1.00 in) Performance													
			16 mm (0.62 in)													
			18 mm (0.70 in) Precision													
			21 mm (0.83 in) Precision													
			25 mm (1.00 in) Performance													
			22 mm (0.88 in)													
			25 mm (1.00 in) Performance													
			19 mm (0.75 in)	9F-7074	9F-7073											
			22 mm (0.88 in)	3G-8322	3G-8321											
D4 LGP	25F, 27F, 40D, 45J, 67E, 67F, 84E, 93C, 94G	Straight	19 mm (0.75 in)	9F-7074	9F-7073											
			22 mm (0.88 in)													
			16 mm (0.62 in)													
			18 mm (0.70 in) Precision													
			21 mm (0.83 in) Precision													
			25 mm (1.00 in) Performance													
			22 mm (0.88 in)													
			25 mm (1.00 in) Performance													
			19 mm (0.75 in)	9F-7074	9F-7073											
			22 mm (0.88 in)	3G-8322	3G-8321											

1 Number in parentheses () after the part number indicates the quantity required.
 2 Angled.

Bulldozers/Compactors

Bulldozer End Bits (Cont'd.)

Model	Serial Number	Blade Model	Thickness	General End Bits		Utility End Bits		Extended Wear Life End Bits		Finish Dozing End Bits		Bolts ⁽³⁾	Nuts ⁽³⁾	Washers ⁽³⁾	
				(lh)	(rh)	(lh)	(rh)	(lh)	(rh)	(lh)	(rh)				
D5	2TC, 3CH, 3DC, 4HC	Straight	22 mm (0.88 in)					4T-5408	4T-5407	8E-9378	8E-9379	5J-4773(4)	2J-3506 (4)	5P-8248 (4)	
	2YH, 4AC, 4GH, 6CH, 6DH, 8ZH, 9SH, 9TH, 9YH, 8MP, 8YP, 8LP	Power Angle & Tilt	16 mm (0.62 in) 18 mm (0.70 in) Precision 21 mm (0.83 in) Precision 22 mm (0.88 in)								4T-6229 491-3754 491-3755	4T-6229	3F-5108(3) 3F-5108 (3) 3F-5108 (3)	4K-0367 (3) 4K-0367 (3) 4K-0367 (3)	5P-8247 (3) 5P-8247 (3) 5P-8247 (3)
	5NH, 7CH, 5EC, 5RH, 9ZB	Power Angle & Tilt	25 mm (1.00 in) Performance 22 mm (0.88 in) 25 mm (1.00 in) Performance					4T-5408	4T-5407		8E-9378 462-4829	8E-9379 462-4828	5J-4773(4) 3F-5108 (3)	2J-3506 (4) 4K-0367 (3)	5P-8248 (4) 5P-8247 (3)
	2AH, 2MH, 7AH, 6JP, 4GP, HGP, W5C	Power Angle & Tilt	22 mm (0.88 in)	140-6788(3)			140-6787(3)	4T-5408	4T-5407		8E-9378	8E-9379	5J-4773(4)	2J-3506(4)	5P-8248 (4)
	2BH, 4FH, 4AH	Straight	22 mm (0.88 in)	140-6788(3)			140-6787(3)	4T-5408	4T-5407		8E-9378	8E-9379	5J-4773(4)	2J-3506 (4)	5P-8248 (4)
	6MH, 9WH, 8GP	Power Angle & Tilt	25 mm (1.00 in) Performance								8E-7078 462-4829	8E-7079 462-4828	5J-4771(4) 5J-4773 (4)	2J-3506(4) 2J-3506 (4)	5P-8248 (4) 5P-8248 (4)
	7BH	Semi-U	22 mm (0.88 in) 25 mm (1.00 in) Performance	140-6788(3)			140-6787(3)	4T-5408	4T-5407		8E-9378 462-4829	8E-9379 462-4828	5J-4773(4) 5J-4773 (4)	2J-3506 (4) 2J-3506 (4)	5P-8248 (4) 5P-8248 (4)
	10J, 12J, 16K	Straight	19 mm (0.75 in)	9F-7074			9F-7073				4T-3052	4T-3051	3F-5108 (6)	4K-0367 (6)	5P-8247 (6)
	10J, 12J, 16K, 19R, 90H, 92H, 97H	Straight	22 mm (0.88 in)	3G-8322			3G-8321				4T-3052	4T-3051	3F-5108(6)	4K-0367 (6)	5P-8247 (6)
	91H, 96H, 42K, 11J, 13J, 98H	Angle	19 mm (0.75 in)	9F-7076			9F-7075				4T-3050	4T-3049	3F-5108 (6)	4K-0367 (6)	
	93H1-3846 93H-3847- Up, 6RH		22 mm (0.88 in) 19 mm (0.75 in) 22 mm (0.88 in)	3G-8296 4J-8262 3G-8298			3G-8295 4J-8261 3G-8297				4T-3050 4T-3042 4T-3041 4T-3042	4T-3049 4T-3041 4T-3041	3F-5108 (6) 4F-7827 (6) 4F-7827 (6)	4K-0367 (6) 2J-3506 (6) 2J-3506 (6)	
	3AH, 2FH, 2TH	Angle	22 mm (0.88 in) 25 mm (1.00) Performance	140-6788(3)			140-6787(3)	4T-5408	4T-5407		8E-9378(4) 462-4829	8E-9379(4) 462-4828	5J-4773(4) 5J-4773 (4)	2J-3506 (4) 2J-3506 (4)	5P-8248 (4) 5P-8248 (4)
1YH, 2SH, 8HY	Power Angle & Tilt	22 mm (0.88 in) 25 mm (1.00 in) Performance	140-6788(3)			140-6787(3)	4T-5408	4T-5407		8E-9378 462-4829	8E-9379 412-4828	5J-4773(4) 5J-4773 (4)	2J-3506(4) 2J-3506 (4)	5P-8248 (4) 5P-8248 (4)	

3 Number in parentheses () after the part number indicates the quantity required.

3 Hot cupped end bits.

4 Angled.

Bulldozer End Bits (Cont'd.)

Model	Serial Number	Blade Model	Thickness	General End Bits		Utility End Bits		Extended Wear Life End Bits		Finish Dozing End Bits		Bolts ⁽⁵⁾	Nuts ⁽⁵⁾	Washers ⁽⁵⁾
				(lh)	(rh)	(lh)	(rh)	(lh)	(rh)	(lh)	(rh)			
	1ZH, 3KH	Straight	22 mm (0.88 in)	140-6788 ⁽⁵⁾	140-6787 ⁽⁵⁾		4T-5408	4T-5407	8E-9378	8E-9379	5J-4773(4)	2J-3506 (4)	5P-8248 (4)	
			25 mm (1.00 in) Performance					462-4829		462-4829	5J-4773 (4)	2J-3506 (4)	5P-8248 (4)	
D6	8NP, 8ZP, 6PH, 9XH	Power Angle & Tilt	25 mm (1.00 in) Performance						6Y-5840 ⁽⁶⁾	6Y-5839 ⁽⁶⁾	3F-5108(3)	4K-0367 (3)	5P-8247 (3)	
			30 mm (1.18 in) 35 mm (1.38 in) Performance	6Y-4410	6Y-4411	122-8617	122-8618	9W-1876	9W-1875	9W-8875	9W-8874	5J-4773 (6) 5J-4773(6)	2J-3506 (6) 2J-3506 (6)	5P-8248 (6)
	01C, 02G, 03G, 6C, 9A, 800 15C1-5000, 15E, 02G, 16C1-5000, 36D, 03G, 38D 39H, 85C	Straight	22 mm (0.88 in)	3G-8322	3G-8321						4F-0391 (3)	4K-0367 (3)	5P-8248 (6)	
			30 mm (1.18 in)	6Y-4410	6Y-4411	122-8617	122-8618	9W-1876	9W-1875	9W-8875	9W-8874	5J-4773 (6)	2J-3506 (6)	5P-8248 (6)
	1CH, 2NH, 4PH	Semi-U	35 mm (1.38 in)								5J-4773(6)	2J-3506 (6)	5P-8248 (6)	
			25 mm (1.00 in) Performance				4T-5408	4T-5407	8E-9378	8E-9379	5J-4773(4)	2J-3506 (4)	5P-8248 (4)	
	2SP, 6GP, ECA, S6D	Semi-U	30 mm (1.18 in)	6Y-4410	6Y-4411	122-8617	9W-1875	9W-1876	9W-8875	9W-8874	5J-4773(6)	2J-3506 (6)	5P-8248 (6)	
			25 mm (1.00 in) Performance						479-8138	479-8137	5J-4773 (6)	2J-3506 (6)	5P-8248 (6)	
	1TP, 3FP, 1WP, 3RP, 4AP, 8SP, 9BP, BHM	Semi-U	30 mm (1.18 in)	6Y-4410	6Y-4411	122-8617	9W-1875	9W-1876	9W-8875	9W-8874	5J-4773(6)	2J-3506 (6)	5P-8248 (6)	
			25 mm (1.00 in) Performance						479-8138	479-8137	5J-4773 (6)	2J-3506 (6)	5P-8248 (6)	
	1D H1 -599, 1 AH 2HH, 3JH, 4BH	Straight					4T-4454	4T-4455	4T-4436	4T-4435	5J-4773 (6)	2J-3506 (6)	5P-8248 (6)	
			30 mm (1.18 in)	6Y-4410	6Y-4411	122-8617	122-8618	9W-1876	9W-1875	9W-8875	9W-8874	5J-4773(6)	2J-3506 (6)	5P-8248 (6)
	3EH, 4DH, 4LH, 1B H1 -569	Angle					4T-4454	4T-4455	4T-4436	4T-4435	5J-4773 (6)	2J-3506 (6)	5P-8248 (6)	
			22 mm (0.88 in)	3G-8296	3G-8295									
	3F, 4F, 8E, 9E, 15C5001-Up 16C5001-Up, 16E,	Angle	22 mm (0.88 in)	3G-8296	3G-8295				4T-3050	4T-3049	3F-5108 (6)	4K-0367 (6)		
			22 mm (0.88 in)	9F-7076	9F-7075							3F-5108 (6)	4K-0367 (6)	

5 Number in parentheses () after the part number indicates the quantity required.

5 Hot cupped end bits.

6 Angled.

Bulldozers/Compactors

Bulldozer End Bits (Cont'd.)

Model	Serial Number	Blade Model	Thickness	General End Bits		Utility End Bits		Extended Wear Life End Bits		Finish Dozing End Bits		Bolts ⁽⁷⁾	Nuts ⁽⁷⁾	Washers ⁽⁷⁾	
				(lh)	(rh)	(lh)	(rh)	(lh)	(rh)	(lh)	(rh)				
D6 LGP	37D, 39D, 40H, 81D, 82D														
	17H, 21 H, 46G	Straight	22 mm (0.88 in)	5J-1420	5J-1419					4T-3046	4T-3045	4F-7827 (6)	2J-3506 (6)		
	55G, 63S, 99E		22 mm (0.88 in)	3G-8320	3G-8319							4F-7827 (6)	2J-3506 (6)		
	18H, 44E, 47G	Angle	22 mm (0.88 in)	3G-8298	3G-8297					4T-3042	4T-3041	4F-7827 (6)	2J-3506 (6)		
	54U, 58G		25 mm (1.00 in)	8E-9900	8E-9901							4F-7827 (6)	2J-3506 (6)		
	1AH, 2LH, 3FH, 1SP, 3HP, BHN	Straight							4T-4454	4T-4455	4T-4435	4F-7827 (6)	2J-3506 (6)	5P-8248 (6)	
	4MP, 4TP, 4WP, B6L, G6G, G6M	Power Angle & Tilt	22 mm (0.88 in)	140-6788 ⁽⁷⁾	140-6787 ⁽⁷⁾				4T-5408	4T-5407	8E-9378 ⁽⁸⁾	8E-9379 ⁽⁸⁾	5J-4773(4)	2J-3506 (4)	5P-8248 (4)
	F6W, F6Y	Power Angle & Tilt	25 mm (1.00 in) Performance								462-4829	462-4828	5J-4773 (4)	2J-3506 (4)	5P-8248 (4)
			19 mm (0.75 in)			177-4552	177-4551						5J-4773(4)	2J-3506(4)	5P-8248 (4)
			22 mm (0.88 in)	140-6788 ⁽⁷⁾	140-6787 ⁽⁷⁾				4T-5408	4T-5407	8E-9378 ⁽⁸⁾	8E-9379 ⁽⁸⁾	5J-4773(4)	2J-3506 (4)	5P-8248 (4)
D6, D6XL	3WP, 3XP, B6X, G6M, G6N	Power Angle & Tilt	30 mm (1.18 in)	6Y-4410	6Y-4411	122-8617	122-8618	9W-1875	9W-1876	9W-8875	9W-8874	5J-4773(4)	2J-3506(4)	5P-8248 (4)	
D7	2E, 5A, 17C1-5000, 17E, 34D, 83D, 84C	Straight	35 mm (1.38 in)							4T-6672	4T-6671	5J-4771 (7)	2J-3506 (7)		
	4DB, 1JP, 8LH, 2FC, 2JH, BHT, J6L, CDT, 8EH	Semi-Universal	25 mm (1.00 in) Performance	9W-6198	9W-6199					479-8134	479-8133	5J-4771 (7)	2J-35056 (7)	5P-8249 (7)	
	4EB, 13H, 22F, 30F, 72F, 13F, 3CC, 4ZC	Angle	35 mm (1.38 in)							4T-6506	4T-6505	6F-0196 (7)	2J-3505 (7)		
			22 mm (0.88 in)	3G-8294	3G-8293					4T-6506	4T-6505	5J-2409 (7)	2J-3505 (7)		
			25 mm (1.00 in)	3G-8316	3G-8315					4T-6506	4T-6505	5J-2409(7)	2J-3505 (7)	5P-8249 (7)	
			28 mm (1.12 in)	4J-8844	4J-8843							5J-2409 (7)	2J-3505 (7)	5P-8249 (7)	
			35 mm (1.38 in)	9W-6198	9W-6199	105-0574	105-0575					5J-2409(7)	2J-3505 (7)	5P-8249 (7)	
			45 mm (1.75 in)			105-0576	105-0577					5J-2409 (7)	2J-3505 (7)	5P-8249 (7)	
	55B, 42G, 61K, 85D, 94R, 8MH, 7AC, 9JB, J1L, CDL	Universal	22 mm (0.88 in)	3G-8294	3G-8293							6F-0196 (7)	2J-3505 (7)		
			25 mm (1.00 in)	3G-8316	3G-8315					4T-6506	4T-6505	6F-0196 (7)	2J-3505 (7)		
			35 mm (1.38 in)			105-0574	105-0575					6F-0196 (7)	2J-3505 (7)		
			45 mm (1.75 in)			105-0576	105-0577					6F-0196 (7)	2J-3505 (7)		
	6A, 6E, 17C5001-18E, 35D, 84D	Angle	22 mm (0.88 in)	3J-2466	3J-2465							5J-4771(4)	2J-3506 (4)		
			28 mm (1.12 in)	3J-2466	3J-2465					4T-6668	4T-6667	1J-6761(3)	2J-3506(3)		

7 Number in parentheses () after the part number indicates the quantity required.

7 Hot cupped end bits.

8 Angled.

Bulldozer End Bits (Cont'd.)

Model	Serial Number	Blade Model	Thickness	General End Bits		Utility End Bits		Extended Wear Life End Bits		Finish Dozing End Bits		Bolts ⁽⁹⁾	Nuts ⁽⁹⁾	Washers ⁽⁹⁾				
				(lh)	(rh)	(lh)	(rh)	(lh)	(rh)	(lh)	(rh)							
D7 LGP	6KB, 14H, 82B, 23F, 31F, 49K, 53J, 59F, 60K, 64K, 4XC, 8ZB, 8NH, CDC, J8L, 576	Straight	22 mm (0.88 in)	3G-8294	3G-8293						4T-6506	4T-6505	6F-0196 (7)	2J-3505 (7)				
				3G-8316	3G-8315							4T-6506	4T-6505	6F-0196 (7)	2J-3505 (7)			
				4J-8844	4J-8843								4T-6506	4T-6505	6F-0196 (7)	2J-3505 (7)		
						105-0574	105-0575								6F-0196 (7)	2J-3505 (7)		
						9W-6198	9W-6199								6F-0196 (7)	2J-3505 (7)		
								105-0576	105-0577						6F-0196 (7)	2J-3505 (7)		
								105-0576	105-0577						6F-0196 (7)	2J-3505 (7)		
															6F-0196 (7)	2J-3505 (7)	5P-8249 (7)	
D8	6JB, 2RP, 8RH, 5SP, 9KP, CDN, J4L, 8JH, 1HH, 2XP, 6NH, 9AH, 4ZP, DZD, BHR, 9ZP	Straight	28 mm (1.12 in)	4J-8844	4J-8843						4T-6506	4T-6505	6F-0196 (7)	2J-3505 (7)				
				9W-6198	9W-6199									6F-0196 (7)	2J-3505 (7)			
						8E-4194	8E-4193			8E-4538	8E-4537		6Y-4278	6Y-4277	4F-4042 (7)	2J-3507 (7)	5P-8250 (7)	
								100-3140	100-3139						4F-4042 (7)	2J-3507 (7)	5P-8250 (7)	
								136-8756	136-8757									
						8E-4194	8E-4193			8E-4538	8E-4537		6Y-4278	6Y-4277	4J-9058(7)	2J-3507 (7)	5P-8250 (7)	
								100-3140	100-3139						4J-9058(7)	2J-3507 (7)	5P-8250 (7)	
								136-8756	136-8757									
													479-8130	479-8129	4J-9058 (7)	2J-3507 (7)	5P-8250 (7)	
													6Y-4278	6Y-4277	4J-9058(7)	2J-3507 (7)	5P-8250 (7)	
	1KH, 2PP, 3MP, 2TP, 9BH, 2NP, 1HP, 6LH, 9PH, 3WH, 05A, 9TP, KMB, LAA, BH, WB85, DZA, DZX	Semi-U	35 mm (1.38 in) Performance															
				8E-4194	8E-4193			8E-4538	8E-4537									
						100-3140	100-3139											
						136-8756	136-8757											
	3E, 8A, 12C, 18C, 32D, 44C, 73D, 86D	Semi-U	25 mm (1.00 in)															
	07A, 18C, 33D, 72D, 87D, 99D, 07E, 22E	Angle	25 mm (1.00 in)	3J-2465	3J-2466						4T-6672	4T-6671	1J-6761(7)	2J-3506 (7)				
	28E1-1125, 99E, 14F, 77C	Angle	28 mm (1.12 in)	4J-8844	4J-8843													
				3G-8316	3G-8315													
				3G-8286	3G-8285													

9 Number in parentheses () after the part number indicates the quantity required.

Bulldozers/Compactors

Bulldozer End Bits (Cont'd.)

Model	Serial Number	Blade Model	Thickness	General End Bits		Utility End Bits		Extended Wear Life End Bits		Finish Dozing End Bits		Bolts ⁽⁹⁾	Nuts ⁽⁹⁾	Washers ⁽⁹⁾	
				(lh)	(rh)	(lh)	(rh)	(lh)	(rh)	(lh)	(rh)				
D9	28E1126-UP	Angle	30 mm (1.18 in)	3G-8318	3G-8317							4J-9058(7)	2J-3507 (7)	5P-8250 (7)	
			40 mm (1.57 in)	3G-8288	3G-8287								4J-9058(7)	2J-3507 (7)	5P-8250 (7)
	4Y1-1939	Semi-U	30 mm (1.18 in)	3G-8318	3G-8317						4T-8090	4J-9208(7)	2J-3507 (7)	5P-8250 (7)	
			40 mm (1.58 in)	3G-8288	3G-8287							4J-9208(7)	2J-3507 (7)	5P-8250 (7)	
	4Y1940-Up	Semi-U	28 mm (1.12 in)	4J-8724	4J-8723	100-3136	100-3135	8E-4540	8E-4539				4J-9208(7)	2J-3507 (7)	5P-8250 (7)
			35 mm (1.38 in)	3G-8292	3G-8291			8E-4540	8E-4539				4J-9208(7)	2J-3507 (7)	5P-8250 (7)
			40 mm (1.58 in)	3G-8284	3G-8283								4J-9208(7)	2J-3507 (7)	5P-8250 (7)
			50 mm (1.97 in)	8E-4196	8E-4197	100-3138	100-3137						4J-9208(7)	2J-3507 (7)	5P-8250 (7)
	5Y, 27B, 41Z	Angle	30 mm (1.18 in)	3G-8318	3G-8317										
			40 mm (1.58 in)	3G-8288	3G-8287										
6Y1-1395, 30V, 34W, 65X 69V	Universal	28 mm (1.12 in)	9J-1478	9J-1477						4T-6240	4T-6239				
		40 mm (1.58 in)	3G-8288	3G-8287			7T-4090	8E-4539		4T-6240	4T-6239	4J-9058(7)	2J-3507 (7)	5P-8250 (7)	
		35 mm (1.38 in)	3G-8292	3G-8291	100-3136	100-3135	8E-4540	8E-4539				4J-9208(7)	2J-3507 (7)	5P-8250 (7)	
		45 mm (1.75 in)										4J-9208(7)	2J-3507 (7)	5P-8250 (7)	
6Y1396-Up, 82M, 42Z	Universal	50 mm (1.97 in)	8E-4196	8E-4197								4J-9208(7)	2J-3507 (7)	5P-8250 (7)	
		60 mm (2.36 in)			100-3138	100-3137						4J-9208(7)	2J-3507 (7)	5P-8250 (7)	
11C, 74D, 88D 24 E	Universal	28 mm (1.12 in)	3J-2466	3J-2465						4T-6667	4T-6668	1J-6762(7)	2J-3506 (7)		
		28 mm (1.12 in)	3G-8300	3G-8299								5J-2409 (7)	2J-3505 (7)		
		40 mm (1.58 in)	3G-8278	3G-8277								5J-2409(7)	2J-3505 (7)		
		28 mm (1.12 in)	4J-8844	4J-8843						4T-6506	4T-6505	5J-2409 (7)	2J-3505 (7)		
20F, 24E, 29J, 30E, 45K, 48K, 73E	Universal	28 mm (1.12 in)	3G-8316	3G-8315								5J-2409(7)	2J-3505 (7)		
		40 mm (1.58 in)	3G-8286	3G-8285								5J-2409 (7)	2J-3505 (7)		
		28 mm (1.12 in)	3G-8302	3G-8301								4J-9058(7)	2J-3507 (7)	5P-8250 (7)	
29V, 30W, 60V, 68V	Semi-U	40 mm (1.58 in)	3G-8280	3G-8279								4J-9058(7)	2J-3507 (7)	5P-8250 (7)	
		28 mm (1.12 in)	4J-8844	4J-8843						4T-6506	4T-6505	5J-2409(7)	2J-3505 (7)		
71F, 77G	Cushioned	28 mm (1.12 in)	3G-8316	3G-8315								5J-2409 (7)	2J-3505 (7)		
		40 mm (1.57 in)	3G-8286	3G-8285								5J-2409(7)	2J-3505 (7)		
43 K	Rip Dozer	40 mm (1.57 in)								4T-6669	4T-6670	5J-2409 (7)	2J-3505 (7)		
		45 mm (1.75 in)								7J-2976	7J-2975	5J-2409(7)	2J-3505 (7)		
1LH, 1MP, 2ZH, 7PH, CMS, CMV, WCMZ, 9MP, 19H	Universal	50 mm (1.97 in)	8E-4196	8E-4197	100-3136	100-3135	8E-4540	8E-4539				4J-9208(7)	2J-3507 (7)	5P-8250 (7)	
		50 mm (1.97 in)										4J-9208(7)	2J-3507 (7)	5P-8250 (7)	
		50 mm (1.97 in)										4J-9208(7)	2J-3507 (7)	5P-8250 (7)	
		60 mm (2.36 in)			100-3138	100-3137						4J-9208(7)	2J-3507 (7)	5P-8250 (7)	

9 Number in parentheses () after the part number indicates the quantity required.

Bulldozer End Bits (Cont'd.)

Model	Serial Number	Blade Model	Thickness	General End Bits		Utility End Bits		Extended Wear Life End Bits		Finish Dozing End Bits		Bolts ⁽⁹⁾	Nuts ⁽⁹⁾	Washers ⁽⁹⁾		
				(lh)	(rh)	(lh)	(rh)	(lh)	(rh)	(lh)	(rh)					
D10	1MH, 5BH, 2BP, 2ZP, 1LP, 2LP, 7NH, 9LH, 9RP, CLC, CLN, CLY, CMA, CMIN	Semi-U	45 mm (1.75 in)			100-3136	100-3135					4J-9208(7)	2J-3507 (7)	5P-8250 (7)		
			50 mm (1.97 in)	8E-4196	8E-4197			8E-4540	8E-4539	6Y-4277	6Y-4278	4J-9208(7)	2J-3507 (7)	5P-8250 (7)		
			60 mm (2.36 in)			100-3138	100-3137					4J-9208(7)	2J-3507 (7)	5P-8250 (7)		
	5A, 18K, 21E, 25E, 53C, 61U, 73R, 89D	Semi-U	35 mm (1.38 in)	3G-8290	3G-8289								8J-2928(7)	2J-3507 (7)	5P-8250 (7)	
			40 mm (1.58 in)	3G-8282	3G-8281									8J-2928(7)	2J-3507 (7)	5P-8250 (7)
			32 mm (1.25 in)	4J-8724	4J-8723			7T-4094	7T-4095					8J-2928(7)	2J-3507 (7)	5P-8250 (7)
	14C, 19K, 20H, 55C, 78X, CMH	Universal	35 mm (1.38 in)	3G-8292	3G-8291											
			40 mm (1.58 in)	3G-8284	3G-8283											
			50 mm (1.97 in)	8E-4196	8E-4197											
	18Y, 42S, 52Y	Semi-U	40 mm (1.58 in)	1U-1546	1U-1545											
45 mm (1.75 in)					100-3132	100-3131										
55 mm (2.16 in)			8E-4198	8E-4199												
19Y, 78S	Universal	60 mm (2.36 in)			100-3134	100-3133										
		60 mm (2.38 in)	7T-4688	7T-4689												
		40 mm (1.58 in)	1U-1546	1U-1545			8E-4542	8E-4541	3G-7764	3G-7763	5P-8823(7)	3K-9770 (7)	4K-0684 (7)			
52C, 90D	Angle	45 mm (1.75 in)			100-3132	100-3131										
		55 mm (2.16 in)	8E-4198	8E-4199												
		60 mm (2.36 in)	7T-4688	7T-4689												
11E, 26E	Cushioned	32 mm (1.25 in)	4J-8724	4J-8723												
		35 mm (1.38 in)	3G-8291	3G-8292												
		40 mm (1.57 in)	3G-8283	3G-8284												
70F, 45G	Cushioned															
		20Y														
		39 K														
1RH, 1SH, 4LP	Universal	45 mm (1.75 in)	8E-4198	8E-4199												
		45 mm (1.75 in)			100-3132	100-3131										
		60 mm (2.36 in)			100-3134	100-3133										
6FP, BHF, BHP	Semi-U	45 mm (1.75 in)	8E-4198	8E-4199												
		45 mm (1.75 in)														
		120 mm (4.72 in)	107-3516 ⁽⁹⁾	107-3515 ⁽⁹⁾												
1RH, 4KP, 6EP, 7RH, BHJ, BHA	Semi-U	45 mm (1.75 in)	8E-4198	8E-4199												
		45 mm (1.75 in)														
		120 mm (4.72 in)	113-0338 ⁽⁹⁾	113-0338 ⁽⁹⁾												
1SH, 4LP, 6EP, 7VWH, BHF, BHP	Universal	45 mm (1.75 in)														
		45 mm (1.75 in)														
		120 mm (4.72 in)	113-0338 ⁽⁹⁾	113-0338 ⁽⁹⁾												

9 Number in parentheses () after the part number indicates the quantity required.
 9 Heavy Duty Mining end bit.

Bulldozers/Compactors

Bulldozer End Bits (Cont'd.)

Model	Serial Number	Blade Model	Thickness	General End Bits		Utility End Bits		Extended Wear Life End Bits		Finish Dozing End Bits		Bolts ⁽¹⁰⁾	Nuts ⁽¹⁰⁾	Washers ⁽¹⁰⁾	
				(lh)	(rh)	(lh)	(rh)	(lh)	(rh)	(lh)	(rh)				
D11	79W, 80W	Semi-U	60 mm (2.36 in)	8E-4544	8E-4543	8E-9786	8E-9785	8E-4546	8E-4545			5P-8361 (9)	3K-9770 (9)	4K-0684 (9)	
			75 mm (2.95 in)			8E-9748	8E-9749					5P-8361 (9)	3K-9770 (9)	4K-0684 (9)	
		Universal	60 mm (2.36 in)	8E-4544	8E-4543	8E-9786	8E-9785	8E-4546	8E-4545			5P-8361 (9)	3K-9770 (9)	4K-0684 (9)	
			75 mm (2.95 in)			8E-9748	8E-9749					5P-8361 (9)	3K-9770 (9)	4K-0684 (9)	
	83W	Cushioned									4T-6538	4T-6358	8J-2928 (6)	2J-3507 (6)	5P-8250 (6)
			60 mm (2.36 in)	8E-4544	8E-4543	8E-9786	8E-9785	8E-4546	8E-4545					5P-8823 (9)	3K-9770 (9)
	4BB, 4KB, 9NH	Semi-U		75 mm (2.95 in)	8E-4544	8E-4543	8E-9748	8E-9749					5P-8823 (9)	3K-9770 (9)	4K-0684 (9)
	19P, 8PP, 1AP	Universal		60 mm (2.36 in)	8E-4544	8E-4543	8E-9786	8E-9785	8E-4546	8E-4545			5P-8823 (9)	3K-9770 (9)	4K-0684 (9)
				75 mm (2.95 in)	8E-4544	8E-4543	8E-9748	8E-9749							
	4CB, 5TB, 9MH	Universal		60 mm (2.36 in)	8E-4544	8E-4543	8E-9786	8E-9785	8E-4546	8E-4545			5P-8823 (9)	3K-9770 (9)	4K-0684 (9)
				75 mm (2.95 in)	8E-4544	8E-4543	8E-9748	8E-9749							
9ZH, 4YP, 8DP, 8RP			120 mm (4.72 in)	109-9047 ⁽¹⁰⁾	109-9047 ⁽¹⁰⁾							5P-8823 (9)	3K-9770 (9)	4K-0684 (9)	

10 Number in parentheses () after the part number indicates the quantity required.
 10 Heavy Duty Mining end bit.

Bulldozer End Bits (Cont'd.)

Part I

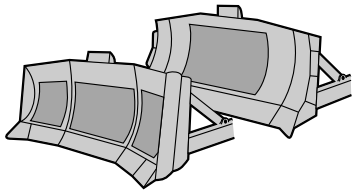
Model	Serial Number	Edge Thickness	Penetration End Bits		Standard End Bits		Extended Wear Life (EWL) End Bits		Short End Bits	
			(lh)	(rh)	(lh)	(rh)	(lh)	(rh)	(lh)	(rh)
11 Carrydozer	5JP, BHZ	60 mm (2.36 in)	273-7224	273-7223	273-7226	273-7225			273-7229	273-7228
		75 mm (3 in)					273-7231	273-7230		

Part II

Model	EWL - Short End Bits		ARM - EWL End Bits		ARM - Penetration End Bits		Bolts Per Edge ⁽¹⁾	Nuts Per Edge ⁽¹⁾	Washers Per Edge ⁽¹⁾
	(lh)	(rh)	(lh)	(rh)	(lh)	(rh)			
11 Carrydozer							5P-8361 (9)	3K-9770 (9)	4K-0684 (9)
	273-7233	273-7232	273-7235	273-7234	223-8128	223-8127	5P-8361 (9)	3K-9770 (9)	4K-0684 (9)

Bulldozer Wear Bars and Plates

Bulldozer Wear Bars



- Offers additional wear resistance and strength to the dozer blade in high wear/high impact applications.
- Made of DH-2 through-hardened alloy steel.
- For use over the blade liner or wear plate on a dozer blade.

Item	Length	Part Number
Wear Bar	2.438 m (8 ft)	107-3386
Wear Bar	2.743 m (9 ft)	107-3387
Wear Bar	3.353 m (11 ft)	107-3388

Item	Length	Part Number
Wear Bar	3.658 m (12 ft)	107-3389
Wear Bar	3.962 m (13 ft)	107-3390
Wear Bar	4.572 m (15 ft)	107-3391

Bulldozer Plates

Reinforcing Wear Plates:

- Provides extended blade life in highly abrasive or extreme impact conditions.
- Provides a repair or resurface option for worn or damaged moldboards.
- Are formed to fit the curve of the blade so that they are easily installed.

Pusher Plates:

- Are made of heat treated steel.
- Are formed to fit the curve of the blade so that they are easily installed.
- For use on bulldozer blades that are used to push loading scrapers.

Bulldozer Wear Bars and Plates

Bulldozer Wear Plates (Cont'd.)

Model	Serial Number	Blade Model	Item	Plate Height	Plate Width	Plate Thickness	Reinforcing Wear Plate ⁽¹⁾
D3	85U8376-Up	Power Angle & Tilt	Wear Plates			8 mm (0.31 in)	3J-3117
			Wear Plates			8 mm (0.31 in)	3J-3116 (2)
D3 LGP	85U1-8375	Power Angle & Tilt	Wear Plates			8 mm (0.31 in)	1J-3108(5)
			Wear Plates			8 mm (0.31 in)	3J-3114 (3)
D4	2A,29F67F	Straight	Wear Plates			8 mm (0.31 in)	3J-3114 (2)
			Wear Plates			8 mm (0.31 in)	3J-3116 (2)
D4	5F,12D,24F,65F,78D,97E 6YH,8L7EH,6DH,9TH,9ZB,4GH,9- SH,4AC,5NH	Power Angle & Tilt	Wear Plates			8 mm (0.31 in)	3J-3116 (4)
			Wear Plates			8 mm (0.31 in)	3J-3115
D5	10D,52E,79D,96E,06F,26F,95G,33R	Angle	Wear Plates	940 mm (37.0 in)	702 mm (27.6 in)	8 mm (0.31 in)	3J-3115
	67 E	Straight	Wear Plates	1302 mm (51.3 in)	546 mm (21.5 in)	8 mm (0.31 in)	3J-3117
	9WH	Power Angle	Wear Plates				3J-3740(4)
	2AH,4GP,6JP	Power Angle & Tilt	Wear Plates			10 mm (0.38 in)	3J-3740(5)
	2BH	Straight	Wear Plates			10 mm (0.38 in)	2J-8526 (4)
	10J,12J,19R,92H,97H	Straight	Wear Plates			10 mm (0.38 in)	1J-3108 (6)
	11J,13J,93H,98H	Angle	Wear Plates			10 mm (0.38 in)	1J-3106(6)
	42K,91H,96H	Angle	Wear Plates			10 mm (0.38 in)	1J-3106 (5)
	90H	Straight	Wear Plates			10 mm (0.38 in)	1J-3108(5)
	1CH,2NH,3TH,4JH,4PH	Semi-U	Wear Plates	787 mm (31.0 in)	854 mm (33.6 in)	10 mm (0.38 in)	2J-8526 (4)
D6	1RP,3EP	Straight	Wear Plates			8 mm (0.31 in)	3J-3142(3)
	1DH,2HH,30H,50H	Straight	Wear Plates			10 mm (0.38 in)	2J-8526 (4)
	3FP,1TP,8SP,4AP,1CH,2NH,1WP,3- RP,9BP	Semi-U	Wear Plates			12 mm (0.5 in)	9J-1659 (4)
	2SPECA,S6D,JCE,S6S	Semi-U	Right End Wear Plate			14 mm (0.55 in)	9W-2757
			Center Wear Plate			14 mm (0.55 in)	9J-1659(3)
			Left End Wear Plate			14 mm (0.55 in)	9W-2760
	3WP,3XP,B6X,G6N	Power Angle & Tilt	Wear Plates			8 mm (0.31 in)	3J-3142(3)
	54U,44E,18H,476	Angle	Wear Plates	610 mm (24.0 in)	610 mm (24.0 in)	10 mm (0.38 in)	3J-3740(6)
	01C,06C,15C,37D,16C,5001-Up,39- D,81D,82D,08E,09E,16E,03F,04- F,40H	Angle	Wear Plates			10 mm (0.38 in)	1J-3106(5)
	09A,16C- 5000,85C,80D,15E,02G,03G,39H	Straight	Wear Plates			10 mm (0.38 in)	1J-3108(5)
D6 LGP	95E	Straight	Wear Plates			10 mm (0.38 in)	2J-8526(5)
	1AH,2LH,3FH,1SP,3HP,55H	Straight	Wear Plates	787 mm (31.0 in)	854 mm (33.6 in)	10 mm (0.38 in)	3J-3380(4)
	4MP,B6L	Power Angle & Tilt	Wear Plates			8 mm (0.31 in)	3J-3142(4)
	21H	Semi-U	Wear Plates			10 mm (0.38 in)	1J-3108
D7	6A,17C,5001-Up,35- D,84D,6E,18E,13F,22F,30F,72F,13- H,4EB,3CC	Angle	Wear Plates			8 mm (0.31 in)	3J-3141 (3)
			Wear Plates			8 mm (0.31 in)	3J-3141 (3)

1 Number in parentheses () after the part number indicates the quantity required.

Bulldozer Wear Bars and Plates

Bulldozer Wear Plates (Cont'd.)

Model	Serial Number	Blade Model	Item	Plate Height	Plate Width	Plate Thickness	Reinforcing Wear Plate ⁽²⁾
D7 LGP	23F,31F,59F,14H,58J,49K,60K,64K,05A,1701-5000,84C,340,83D,02E,6KB,8NH,8-ZB,4XC	Straight	Wear Plates	1077 mm (42.4 in)	1076 mm (42.4 in)	8 mm (0.31 in)	3J-3142(3)
			Pusher Plate	1054 mm (41.5 in)	1054 mm (41.5 in)	16 mm (0.63 in)	4J-3699
	85D,42G,61K,94R,5SB,8MH,9J-B,7AC	Universal	Wear Plates	1077 mm (42.4 in)	1076 mm (42.4 in)	8 mm (0.31 in)	3J-3142(4)
			Pusher Plate	1054 mm (41.5 in)	1054 mm (41.5 in)	16 mm (0.63 in)	4J-3699
			Push Plate			16 mm (0.63 in)	4J-3699
			Wear Plates			8 mm (0.31 in)	3J-3142(4)
	4DB,1JP,8L11,CDT	Semi-U	Right End Wear Plate			12 mm (0.5 in)	4Z-9148
			Center Wear Plate			12 mm (0.5 in)	4Z-9151
			Left End Wear Plate			12 mm (0.5 in)	4Z-9150
			Wear Plates			12 mm (0.5 in)	2J-8523 (5)
D8	6JB,2RP, BRH,3GH,4XH,5GH,5SP,9K9	Straight	Left End Wear Plate			16 mm (0.63 in)	6Y-7246
			Center Wear Plate			16 mm (0.63 in)	6Y-7244
	1JH,6AH,2WP,A5G, DZB,9CH,6AH	Universal	Right End Wear Plate			16 mm (0.63 in)	6Y-7245
			Left End Wear Plate			16 mm (0.63 in)	9W-2760
	1KH,2PP,2TP,3MP,DZA, B8S,2NP,9BH,9PH,1HP,6LH	Semi-U	Left End Wear Plate			16 mm (0.63 in)	9W-2760
			Left Center Wear Plate			16 mm (0.63 in)	9W-2759
			Center Wear Plate			16 mm (0.63 in)	9W-2756
			Center Wear Plate			16 mm (0.63 in)	9W-1771
			Right Center Wear Plate			16 mm (0.63 in)	9W-2758
			Right End Wear Plate			16 mm (0.63 in)	9W-2757
1LH,2ZH 4Y1-1939	Semi-U	Right End Pusher Plate			16 mm (0.63 in)	9W-2757	
		Pusher Plate			16 mm (0.63 in)	9W-2756	
		Wear Plates			10 mm (0.40 in)	2J-8526(5)	
		Wear Plates			13 mm (0.50 in)	1U-4417 (5)	
		Pusher Plate			16 mm (0.63 in)	6J-9248	
		Left Center Wear Plate			16 mm (0.63 in)	9T-0252	
		Left Center Wear Plate			16 mm (0.63 in)	9T-0250	
		Center Wear Plate			16 mm (0.63 in)	4T-9592	
		Right End Wear Plate			16 mm (0.63 in)	9T-0249	
		Right Center Pusher Plate			16 mm (0.63 in)	9T-0251	
6Y1-1395,4SZ,82M	Universal	Wear Plates			13 mm (0.50 in)	1U-4417 (6)	

2 Number in parentheses () after the part number indicates the quantity required.

Bulldozer Wear Bars and Plates

Bulldozer Wear Plates (Cont'd.)

Model	Serial Number	Blade Model	Item	Plate Height	Plate Width	Plate Thickness	Reinforcing Wear Plate ⁽²⁾	
D9	6Y1396-Up	Universal	Left End Wear Plate			16 mm (0.63 in)	9T-0254	
			Left Center Wear Plate			16 mm (0.63 in)	9T-0256	
			Universal	Right Center Wear Plate			16 mm (0.63 in)	9T-0255
				Right End Wear Plate			16 mm (0.63 in)	9T-0253
	20F,45K,48K		Universal	Center Pusher Plate			16 mm (0.63 in)	4T-9592
				Wear Plates			13 mm (0.50 in)	6J-9286 (4)
	29V,30W,68V,60V		Semi-U	Wear Plates			12 mm (0.47 in)	9J-1659(5)
				Pusher Plate			16 mm (0.63 in)	9J-6870
	30E,73E,29J		Universal	Wear Plates			12 mm (0.47 in)	4J-4205 (4)
				Pusher Plate			20 mm (0.79 in)	4J-4129
	30V,65X,69V,34W		Universal	Left End Wear Plate			12 mm (0.47 in)	9J-7540
				Right End Wear Plate			12 mm (0.47 in)	9J-7539
	30V,65X,69V,34W		Universal	Wear Plates			12 mm (0.47 in)	9J-1659 (4)
				Pusher Plate			16 mm (0.63 in)	9J-6870
	43K		Rip Dozer	Wear Plates			16 mm (0.63 in)	6J-9285
				Pusher Plate			16 mm (0.63 in)	9J-6870
	60V,68V,29V,30W		Semi-U	Wear Plates			12 mm (0.47 in)	9J-1659
				Wear Plates			13 mm (0.50 in)	6J-9286 (4)
	68E,80V,95S,14J,44K,47K		Semi-U	Wear Plates			12 mm (0.47 in)	4J-4205 (4)
				Wear Plates			20 mm (0.79 in)	4J-4129
78C,29E,94E		Semi-U	Push Plate			16 mm (0.63 in)	2J-9418	
			Wear Plates			10 mm (0.4 in)	2J-8526(5)	
71F,77G		Cushioned Angle	Wear Plates			16 mm (0.63 in)	217-7157	
			Wear Plates			16 mm (0.63 in)	217-7156	
28E,93E,14F,77C,2XP,4Z-P,054,41227B,9AH,6NH		Universal	Center Wear Plate			16 mm (0.63 in)	217-7155	
			Right End Wear Plate			16 mm (0.63 in)	218-3887	
1LH,2ZH,7PH,1MP,9MP,CMS,CMZ,19H		Universal	Left End Wear Plate			16 mm (0.63 in)	9T-0252	
			Center Wear Plate			16 mm (0.63 in)	7T-5803	
1MH,5BH,CLY,CMA,7NH,1LP,2LP,2ZPT9J		Semi-U	Center Wear Plate			16 mm (0.63 in)	218-3888	
			Right Center Wear Plate			16 mm (0.63 in)	9T-0251	
		Universal	Right End Wear Plate			16 mm (0.63 in)	218-3885	
			Right End Wear Plate			16 mm (0.63 in)	218-3885	
		Universal	Pusher Plate			16 mm (0.63 in)	7T-5803	
			Wear Plates			13 mm (0.50 in)	6J-9269 (4)	

2 Number in parentheses () after the part number indicates the quantity required.

Bulldozer Wear Bars and Plates

Bulldozer Wear Plates (Cont'd.)

Model	Serial Number	Blade Model	Item	Plate Height	Plate Width	Plate Thickness	Reinforcing Wear Plate ⁽²⁾
			Center Wear Plate			16 mm (0.63 in)	6J-9248
			Wear Plates			13 mm (0.50 in)	6J-9249 (4)
		Angle	Wear Plates			13 mm (0.50 in)	3J-3380 (5)
	18Y1876-Up	Semi-U	Left End Wear Plate			16 mm (0.63 in)	9W-1261
			Left Center Wear Plate			16 mm (0.63 in)	9W-1260
			Center Wear Plate			16 mm (0.63 in)	9W-0810
			Right Center Wear Plate			16 mm (0.63 in)	9W-1259
			Right End Wear Plate			16 mm (0.63 in)	9W-1258
	19Y1-1474,78S1-1474	Universal	Left End Wear Plate			16 mm (0.63 in)	4T-3735
			Left Center Wear Plate			16 mm (0.63 in)	4T-3737
			Center Wear Plate			16 mm (0.63 in)	1U-0902
			Right Center Wear Plate			16 mm (0.63 in)	4T-3736
			Right End Wear Plate			16 mm (0.63 in)	4T-3734
	19Y1475-Up	Universal	Left End Wear Plate			16 mm (0.63 in)	9W-0808
			Left Center Wear Plate			16 mm (0.63 in)	9W-0811
			Center Wear Plate			16 mm (0.63 in)	9W-0810
			Right Center Wear Plate			16 mm (0.63 in)	9W-0809
	19Y1475-Up	Universal	Right End Wear Plate			16 mm (0.63 in)	9W-0812
	52Y	Semi-U	Left End Wear Plate			16 mm (0.63 in)	4T-3731
			Right Center Wear Plate			16 mm (0.63 in)	4T-3732
			Left Center Pusher Plate			16 mm (0.63 in)	4T-3733
			Center Pusher Plate			16 mm (0.63 in)	1U-0902
	55C	Universal	Wear Plates			12 mm (0.47 in)	2J-8525 (4)
	14C, 19K, 78X	Universal	Wear Plates			12 mm (0.47 in)	6J-9269 (4)
	18K, 46K, 73R, 61U, 05A	Semi-U	Wear Plates			12 mm (0.47 in)	6J-9249 (4)
			Push Plate			16 mm (0.63 in)	6J-9248
	9RP, CLC	Semi-U	Right End Wear Plate			14 mm (0.55 in)	218-3885
			Center Wear Plate			14 mm (0.55 in)	218-3888
			Left End Wear Plate			14 mm (0.55 in)	218-3887
	All Push-Plates		Push Plate			12 mm (0.47 in)	1U-0903
			Push Plate			16 mm (0.63 in)	1U-0902
	53C, 89D, 21E, 25E, 06A	Semi-U	Wear Plates			12 mm (0.47 in)	2J-8523 (4)

2 Number in parentheses () after the part number indicates the quantity required.

Bulldozer Wear Bars and Plates

Bulldozer Wear Plates (Cont'd.)

Model	Serial Number	Blade Model	Item	Plate Height	Plate Width	Plate Thickness	Reinforcing Wear Plate ⁽²⁾
D10	18Y1-1875,52Y1-1875,425	Semi-U	Push Plate			20 mm (0.79 in)	2J-8524
			Right End Wear Plate			16 mm (0.63 in)	4T-3730
			Right Center Wear Plate			16 mm (0.63 in)	4T-3732
	70F-456,20Y1-533,20Y543	Cushioned	Center Wear Plate			16 mm (0.63 in)	1U-0902
			Left Center Wear Plate			16 mm (0.63 in)	4T-3733
			Left End Wear Plate			16 mm (0.63 in)	4T-3731
			Push Plate			16 mm (0.63 in)	4J-3868
			Push Plate			20 mm (0.79 in)	9J-4567
	CMH,CMN 52C,90D,11E,26E 63E,39K	Angle	Push Plate			20 mm (0.79 in)	4T-9534
			Push Plate			16 mm (0.63 in)	7T-5803
			All			12 mm (0.47 in)	3J-3380 (5)
	1SH,7WH 79W1-536 79W537-Up 79W537-Up 80W1-467 80W468-Up	Rip Dozer	Sides			12 mm (0.47 in)	6J-9249 (4)
			Center			16 mm (0.63 in)	6J-9248
			Left End Wear Plate			16 mm (0.63 in)	9W-7265
			Left Center Wear Plate			16 mm (0.63 in)	9W-7264
			Center Wear Plate			16 mm (0.63 in)	9W-2409
			Center Wear Plate			16 mm (0.63 in)	6 Y-1080
			Right Center Wear Plate			16 mm (0.63 in)	9W-7262
			Right End Wear Plate			16 mm (0.63 in)	9W-7263
			Wear Plates	2005 mm (78.9 in)	710 mm (28 in)	13 mm (0.50 in)	3G-6344 (8)
Pusher Plate			1679 mm (66.1 in)	1524 mm (60 in)	16 mm (0.63 in)	3G-6343	
79W537-Up 79W537-Up 80W1-467 80W468-Up	Semi-U	Left End Wear Plate			16 mm (0.63 in)	4T-3723	
		Left Center Wear Plate			16 mm (0.63 in)	4T-3724	
		Right Center Wear Plate	1570 mm (61.8 in)	1074 mm (42.3 in)	16 mm (0.63 in)	4T-3725	
		Right End Wear Plate	1430 mm (56.3 in)	524 mm (20.6 in)	16 mm (0.63 in)	4T-3722	
		Center Pusher Plate	1905 mm (75.0 in)	2000 mm (78.7 in)	1 mm (0.63 in)	1U-3697	
		Wear Plates	2005 mm (78.9 in)	710 mm (28.0 in)	13 mm (0.50 in)	3G-6344 (9)	
		Left End Wear Plate			16 mm (0.63 in)	4T-3727	
		Left Center Wear Plate			16 mm (0.63 in)	4T-3728	
		Center Wear Plate			16 mm (0.63 in)	1U-3697	
		Right Center Wear Plate			16 mm (0.63 in)	4T-3729	
Right End Wear Plate			16 mm (0.63 in)	4T-3726			

2 Number in parentheses () after the part number indicates the quantity required.

Bulldozer Wear Bars and Plates

Bulldozer Wear Plates (Cont'd.)

Model	Serial Number	Blade Model	Item	Plate Height	Plate Width	Plate Thickness	Reinforcing Wear Plate ⁽²⁾		
D11	83W	Cushion	Pusher Plate	922 mm (36.3 in)	1900 mm (74.8 in)	20 mm (0.80 in)	9J-4567		
			Right End Wear Plate			14 mm (0.55 in)	218-3939		
	4LP6FP,BHF,BHP	Universal	Center Wear Plate			14 mm (0.55 in)	218-3941		
			Left End Wear Plate			14 mm (0.55 in)	218-3940		
	1RH,7RH,4KP6EP,BHA,BHJ	Semi-U	Right End Wear Plate			14 mm (0.55 in)	218-3922		
			Right Center Wear Plate			16 mm (0.63 in)	9W-7260		
			Center Wear Plate			16 mm (0.63 in)	9W-2409		
			Left Center Wear Plate			16 mm (0.63 in)	9W-7261		
			Left End Wear Plate			14 mm (0.55 in)	218-3923		
			Right End Wear Plate			14 mm (0.55 in)	218-3922		
			Center Wear Plate			14 mm (0.55 in)	218-3924		
			Left End Wear Plate			14 mm (0.55 in)	218-3923		
D11	4BB,4KB,9NH,1AP	Semi-U	Push Plate			16 mm (0.63 in)	9W-2409		
			Left End Wear Plate			16 mm (0.63 in)	4T-8144		
			Left End Wear Plate			16 mm (0.63 in)	4T-8144		
			Left Center Wear Plate			16 mm (0.63 in)	4T-8146		
			Center Wear Plate	1994 mm (78.5 in)	2050 mm (80.7 in)	16 mm (0.63 in)	4T-5308		
			Center Wear Plate			16 mm (0.63 in)	6Y-1100		
			Right Center Wear Plate	1783 mm (70.2 in)	1220 mm (48.0 in)	16 mm (0.63 in)	4T-8145		
			Right End Wear Plate			16 mm (0.63 in)	4T-8143		
			Pusher Plate			16 mm (0.63 in)	4T-5308		
			Right End Wear Plate			14 mm (0.55 in)	136-3984		
			Center Wear Plate			14 mm (0.55 in)	136-3986		
			Left End Wear Plate			14 mm (0.55 in)	139-3985		
8PP	4CB,5TB,4CB-Up to 00787	Universal	Left End Wear Plate			16 mm (0.63 in)	4T-7630		
			Left End Wear Plate			16 mm (0.63 in)	4T-7630		
			Left Center Wear Plate			16 mm (0.63 in)	4T-7631		
			Center Wear Plate	1994 mm (78.5 in)	2050 mm (80.7 in)	16 mm (0.63 in)	4T-5308		
			Center Wear Plate			16 mm (0.63 in)	6Y-1319		
			Right Center Wear Plate	1783 mm (70.2 in)	693 mm (27.3 in)	16 mm (0.63 in)	4T-7632		
			Right End Wear Plate			16 mm (0.63 in)	4T-7629		
			Right End Wear Plate			16 mm (0.63 in)	122-2320		
			Center Wear Plate			16 mm (0.63 in)	122-2322		
			4CB for 00788 and Up, 9MH,9ZH	Universal	Right End Wear Plate			16 mm (0.63 in)	4T-7629
					Center Wear Plate			16 mm (0.63 in)	122-2322

2 Number in parentheses () after the part number indicates the quantity required.

Bulldozer Wear Plates (Cont'd.)

Model	Serial Number	Blade Model	Item	Plate Height	Plate Width	Plate Thickness	Reinforcing Wear Plate ⁽²⁾
			Left End Wear Plate			16 mm (0.63 in)	122-2321
	8RP	Universal	Right End Wear Plate			14 mm (0.55 in)	126-8341
			Center Wear Plate			14 mm (0.55 in)	126-8343
			Left End Wear Plate			14 mm (0.55 in)	126-8342

2 Number in parentheses () after the part number indicates the quantity required.

Rippers/Scarifiers - Ripper/Scarifier Tips

Large Rippers

For large rippers, there are two types of tips available — centerline and penetration. Both types of tips have a center rib for strength and sharpness, in addition to being forged from DH-3 steel for added strength and wear resistance. Available in several lengths to meet various applications.



Centerline Ripper Tips

- Offers good penetration and more wear material.
- Can be flipped for maximum performance.



Penetration Ripper Tips

- Offer better initial penetration.
- Penetration tips should be installed with the rib up.



ARM Ripper Tips

- Offers increased wear life, and enhanced penetration and productivity.
- ARM Ripper Tips should not be used in severe impact conditions.



Sharp Tips

- Enhanced initial penetration in hard to penetrate materials like limestone and caliche applications.

Ripper Tips													
Model	Ripper Style	Centerline			ARM Centerline Intermediate	Penetration			ARM Penetration Intermediate	Sharp Limestone	ARM Sharp Centerline	Tip Pin	Retainer
		Long	Intermediate	Short		Long	Intermediate	Short					
D3, D3B, D3C, D4B, D4C, D5C	Pin-On		1U-3202			1U-3209			9W-8209		8E-6208	6E-6209	
	J200												
D3G, D3K, D4G, D4K, D5G, D5K,	Pin-On					9J-4259			9W-8259		132-4763	149-5733	
	J250												
D5M, D5N, D6M, D6N, D6R, D6M, D6N, D7R	Pin-On		6Y-0352		159-0355	6Y-0359		159-0356			114-0358	114-0359	
	CapSure		672-0824			477-0825					473-3816		
	R350												
D8L, D8, D8N D8R, D8K, D8T, D9L, D9R MS, D9T MS	Pin-On	114-0453	9W-2452	9W-2451	8E-5770	4T-5452	4T-5451	8E-5771			6Y-3394	8E-4743	
	R450												
	CapSure		380-1209	380-1218	380-1225	380-1216		380-1220			380-1211		
D9L, D9R SS*, D9T SS, D10, D10N,	Pin-On	8E-8503	4T-4502	4T-4501	8E-5774	4T-5503	4T-5502	4T-5501	8E-5772	159-0377	201-3502	6Y-1204	6Y-1202
	R500												
	CapSure		356-6430	380-1207	445-2041	331-3506	331-3505		331-3508			416-0246	

Rippers/Scarifiers - Ripper/Scarifier Tips

Large Rippers (Cont'd.)

Ripper Tips													
Model	Ripper Style	Centerline			ARM Center-line Intermediate	Penetration			ARM Penetration Intermediate	Sharp Limestone	ARM Sharp Center line	Tip Pin	Retainer
		Long	Intermediate	Short		Long	Intermediate	Short					
D10R, D10T, D11 MS	CR500												
D11 SS	Pin-On		9W-4552	9W-4551	122-2552		6Y-3552		135-9552			9N-4245	6Y-1205
	R550												
	CapSure		356-6428	357-2712	445-2039		331-3553		421-5417			353-2546	
	CR550												

Ripper Tip Features Maximize Productivity and Reduce Wear

Your ripper tips increase the processing of surface material and help prepare work areas for loaders, trucks and other machinery. Cat ripper tips are built to last and designed to increase your productivity.

- **DH-3™ Steel** resists the damaging effects of high-tip temperatures created during ripping, which can reduce the hardness of non-DH3 steel alloys and shorten life.
- **Cat Center-Rib Design** ensures tips stay sharper longer, providing more effective penetration, longer wear life and better ripping.
- Abrasion Resistant Materials (ARM) can extend wear life up to five-times longer than that of a standard tip. It maintains a sharp tip profile, resulting in greater productivity.
- **Side-Pinned** for better retention

Tips for increased productivity:

To get the most productivity from your ripping equipment and ripper tips:

- Use the longest tip possible that does not break
- Select the tip that best matches the application
- Replace your tips as needed — not too soon, not too late
- Inspect retention pins and retainers at each change. In less severe applications, and if no pins are lost, they may be reused two or three times.

Note: For additional ripper information, please refer to the Handbook of Ripping, AEDK0752

Ripper/Scarifier Shanks

Shanks

One-piece shanks made from DH-2 steel are available for rippers D8 size and larger. This design provides more strength and improves heel clearance because there is no weld joint. Surfaces and corners are fully machined and rounded for a tighter fit between the shank, tip and protector, which results in less movement for longer adapter and tip life.

Shanks						
Model	Shank Width Tip Size	Single Shank	Deep Ripper	Multi Shank	Adapter - Field Repair	Adapter Nose - Field Repair
D8K, D8, D8L, D8N, D8R, D8T, D9H, D9N, D9R	depth x length 75mm CR450/R450	332 x 1899 8E-5342	332 x 2449 8E-5340	332 x 1488 8E-5341	8E-8418	9U-9694
		332 x 2010 8E-5347		332 x 1600 8E-5346		
		332 x 2322 8E-5339		332 x 1753 8E-5345		
		332 x 2750 8E-5348				
D9L, D9R, D9T, D10N, D10R, D10T	depth x length 90mm CR500/R500	355 x 2305 8E-8414	355 x 2805 8E-8416	355 x 1799 8E-8415	103-8115, 1U- 3630 ⁽¹⁾	107-3361, 103- 8114 ⁽¹⁾
		355 x 2305 114-4503	355 x 2805 109-9114			
		380 x 2490 8E-8411	380 x 2977 8E-8417			
D10, D10R, D10T, D11N, D11R, D11T	depth x length 100mm CR500/R500	400 x 2490 118-2140	400 x 2977 109-3135	400 x 1958 8E-8413		
		400 x 2792 8E-8412	400 x 3035 4Z-8849			
D11N, D11R, D11T	depth x length 110mm CR550/R550	450 x 2707 104-9277	450 x 3267 104-9275		104-9279	
			450 x 4166 4Z-8814			

STTT Shanks

Curved and straight shanks are available for D6 size rippers or smaller. Straight shanks are stronger and reach farther, while curves shanks provide better penetration by exerting more pressure. Curved shanks also lift and break material ahead of the shank and can be stored out of the way when not in use.

STTT Shanks			
Model	Shank Width Tip Size	Straight	Curved
D3, D3B, D3C, D4B, D4C, D5C	depth x length; 35 mm	75 x 175	
	J200	8J-5299	
D3G, D4G, D5G, D3K, D3K2, D4K, D4K2, D5K, D5K2	depth x length; 50 mm		109 x 186
	J250		1U-1257
D5M, D5N	depth x length; 59 mm	138 x 498	138 x 472
	R350	9J-6586	9J-8913

¹ for 1-pin shank protectors

STTT Shanks (Cont'd.)

STTT Shanks			
Model	Shank Width Tip Size	Straight	Curved
D6R, D6M, D6N	depth x length; 75 mm	176 x 210	176 x 183
	R350	9J-3139	9J-8923
D7R	depth x length; 75 mm	228 x 712	332 x 720
	R350	9W-7382	8E-1853

Shank Protectors

Sharpened and standard protectors are recommended for all applications with D8 or larger rippers. They protect the lower portion of the shank and thee adapter. They provide additional strength and wear resistance, and they are easy to replace.

Sharp protectors are designed for tough-to-rip applications. They reduce resistance to ripping and drawbar horse-power loss.

CapSure Technology: Hammerless Ripper Tip & Shank Protector System

Better protection. Better performance.

- Eliminates hammering of traditional pins
- Use standard 3/4" ratchet for installation / removal
- Cast lift eyes for safer handling
- Optimizes wear life of shank protector
- Retainer is integral part of the tip & protector

Shank Protectors										
Shank Width	Shank Protector Style	Shank Protectors					Pins			
		Standard		Sharp		Extended	Upper Pin	Retainer	Lower Pin	Retainer
		1 pin	2 pin	1 pin	2 pin	2 pin				
75mm	Pin-on		6J-8814		8E-1848	132-4716	6Y-3394	8E-4743	6Y-3394	8E-4743
	CapSure				380-1214	380-1223	380-1211		380-1222	
90mm	Pin-on			6Y-9704	9W-8365	132-1014	6Y-1204	6Y-1202	6Y-1204	6Y-1202
	CapSure				444-9711	357-2702	416-0246		353-2548	
100mm	Pin-on	3G-9594		6Y-9704	6Y-8960	132-1015	6Y-1204	6Y-1202	6Y-1204	6Y-1202
	CapSure				331-3510	357-2704	416-0246		353-2548	
110mm	Pin-on				9N-4621	132-1016	9N-4245	6Y-1205	9N-4245	6Y-1205
	CapSure				331-3560	357-2701	353-2546		353-2600	

Shank Protectors and Pin/Retainers

Model	Shank Protector			Counterbored Ripper Shank				Non Counterbored Pin Assy.
				Non-reusable		Reusable		
	Standard	Sharp	Extended	Pin	Ret. Assy.	Pin	Retainer	
D8, D8N, D8R, D8L	6J-8814	8E-1848	132-4716	—	—	6Y-3394	8E-4743	4T-2479 ^(l) 6J-8814 ^(l)
D9, D9N, D9R, D9H	6J-8814	8E-1848	132-4716	—	—	6Y-3394	8E-4743	4T-2479 ^(l) 6J-8814 ^(l)

Ripper/Scarifier Shanks

Shank Protectors and Pin/Retainers (Cont'd.)

Model	Shank Protector			Counterbored Ripper Shank				Non Counterbored Pin Assy.
	Standard	Sharp	Extended	Non-reusable		Reusable		
				Pin	Ret. Assy.	Pin	Retainer	
D9L (1 pin protector)	—	6Y-9704	—	—	—	—	—	102-9062
D9L (2 pin protector) D9R SS ⁽¹⁾ , D9T SS ⁽¹⁾	—	9W-8365	132-1014	6Y-1204	6Y-1202	6Y-3909	4T-4707	102-9062
D10, D10R SS ⁽¹⁾ , D10T SS ⁽¹⁾ , D10T MS ⁽¹⁾	—	6Y-8960	132-1015	6Y-1204	6Y-1202	6Y-3909	4T-4707	102-9062
D10R MS ⁽¹⁾ , D10N	—	9W-8365	132-1014	6Y-1204	6Y-1202	6Y-3909	4T-4707	102-9062
D11 MS ⁽¹⁾	—	6Y-8960	132-1015	6Y-1204	6Y-1202	6Y-3909	4T-4707	102-9062
D11 SS ⁽¹⁾	—	9N-4621	132-1016	9N-4245	6Y-1205	8E-2229	8E-2230	6Y-2443
D10 (1 pin protector)	3G-9514	6Y-9704	—	—	—	—	—	102-9062

Shank Repair/Conversion Parts

Model	Adapter	Nose
D8L, D8, D8N, D8R, D8K	8E-8418	9U-9694
D9, D9N, D9R, D9H	8E-8418	9U-9694
D9L (1 pin protector)	1U-3630	103-8114
D9L, D9R HD (2 pin protector)	103-8115	107-3361
D10 (1 pin protector)	1U-3630	103-8114

Model	Adapter	Nose
D10 (2 pin protector)	103-8115	107-3361
D11 MS ⁽²⁾ (1 pin protector)	1U-3630	103-8114
D11 MS ⁽²⁾ (2 pin protector)	103-8115	107-3361
D11 SS ⁽³⁾	104-9279	—

2 Multi-Shank
3 Single Shank

Small Rippers and Scarifiers

For small rippers and scarifiers, there are two types of tips available — centerline and penetration. Both types of tips have a center rib for strength and sharpness, in addition to being forged from DH-3 steel for added strength and wear resistance. Available in several lengths to meet various applications.



Centerline Ripper Tips

- Offers good penetration and more wear material.
- Can be flipped for maximum performance.



Penetration Ripper Tips

- Offers better initial penetration.
- Penetration tips should be installed with the rib up.

Sharp Ripper Tips

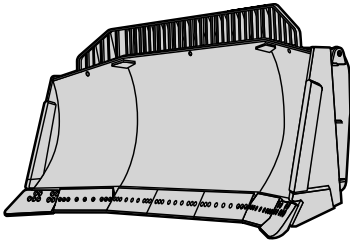
Model	Centerline Long	Penetration Long	Sharp	Arm	Pin	Retainer
No. 3, 931, 933, 939, D4C, D5C 135H,120H	1U-3202 ⁽¹⁾	1U-3209 ⁽¹⁾	9W-8209	—	8E-6208	8E-6209
No. 4, 963, 955, 951, 941, 12, 14, 130, 140, 143H, 160H, 163, D5M,D5N	6Y-0352	6Y-0309	9W-7309	168-1309	136-8308	114-0359
943, 953, D3G, D4G, D5G	—	9J-4259 ⁽¹⁾	9W-8259	—	132-4763	149-5733
No. 5, No. 6, 963, 973, 977, 983, No. 7, 16, 24H, D6M, D6N, D6R, D7R	6Y-0352	6Y-0359	—	159-0355 Centerline 159-0356 Penetration	114-0358	114-0359

Replacement Parts for Scarifiers

Components	V-Block (Rear Notched)	V-Block (Front Notched)	Straight Block (Rear Notched)	No. 6 (Non-Current)
Shank				
Standard	5B-0947	195-7218	195-7219	6K-5704 ⁽¹⁾
Long	—	7D-4501	—	—
Tips				
General Purpose (DH-2)	195-7234 ⁽¹⁾	195-7234 ⁽¹⁾	195-7234 ⁽¹⁾	—
High Temperature (DH-3)	6Y-5230 ⁽¹⁾	6Y-5230 ⁽¹⁾	6Y-5230 ⁽¹⁾	5K-0450 ⁽¹⁾
High Abrasion (ARM)	143-3074 ⁽¹⁾	143-3074 ⁽¹⁾	143-3074 ⁽¹⁾	143-3074 ⁽¹⁾

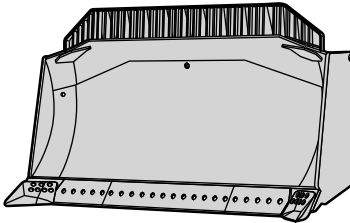
Compact Construction Equipment

Compactor Cutting Edges



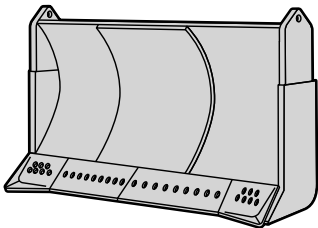
Universal Blade

- A straight blade with large “wings” to carry large loads more efficiently over long distances. Available only for larger models.



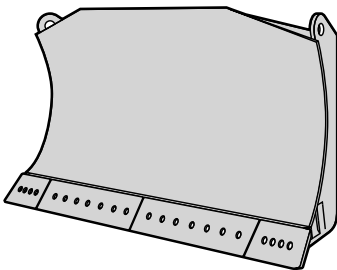
Semi-U Blade

- A straight blade with small “wings” to provide better load carrying characteristics for mid-sized and large machines.



Cushion Blade

- A relatively narrow blade, primarily for pushing scrapers.



Power Angle and Tilt Blade

- A very versatile blade for smaller machines.

Caterpillar compactor cutting edges are made of through-hardened alloy steel for excellent abrasion resistance and strength, and all Caterpillar compactor cutting edges are guaranteed against breakage. Caterpillar compactor cutting edges are available in various thicknesses to match your machine size and application, and they are available in shorter lengths for ease of storage, handling, installation, and maintenance.

Caterpillar compactor cutting edges are made of DH-2 steel.

- DH-2 steel provides increased hardness and toughness for excellent wear and impact resistance.

Compactor Blades

Model	Serial Number	Blade Model	Edge Thickness	Edge Type	Edge Part Number ⁽¹⁾	Bolts Per Edge	Nuts Per Edge	Washers Per Edge
814	36S, 16Z, 3YP		19 mm (0.75 in)	Right/Left End Edges	4T-2923	5J-2409	2J-3505	5P-8249
				Center Edge	4T-2922	5J-2409	2J-3505	5P-8249
	56D, 23K		19 mm (0.75 in)	Right/Left End Edges	4T-2922	6F-0196	2J-3505	
				Center Edge	4T-2993	6F-0196	2J-3505	
815	24K1 -1044, 59E1-341		19 mm (0.75 in)	Left/Right End Edges	4T-2922	6F-0196	2J-3505	
				Left/Right End Edges	4T-3020	3F-5108	4K-0567	

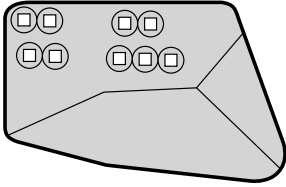
Compactor Blades

Compactor Blades (Cont'd.)

Model	Serial Number	Blade Model	Edge Thickness	Edge Type	Edge Part Number ⁽¹⁾	Bolts Per Edge	Nuts Per Edge	Washers Per Edge
				Center Edge	4T-3008	3F-5108	4K-0567	
	24K1045-UP, 59E342-UP		19 mm (0.75 in)	Center Edge	4T-3004	4F-7827	2J-3506	
				Center Edge	4T-3012	5J-4773	2J-3506	
816	41S, 15Z, 3ZP		19 mm (0.75 in)	Left/Right End Edges	4T-2923	5J-2409	2J-3505	
				Center Edge	4T-2922	5J-2409	2J-3505	
	51K		25 mm (1.00 in)	Left/Right End Edges	4T-6532	6F-0196	2J-3505	
				Center Edge	4T-6531	6F-0196	2J-3505	
824	2HP		25 mm (1.00 in)	Left End Edge	122-9227(2)	6F-0196	2J-3505	
				Right/Center End Edges	4T-3420	6F-0196	2J-3505	
	35G	Straight	25 mm (1.00 in)	Center Edge	4T-6514 (2)	5J-2409	2J-3505	
	35G, 64G, 93G	Straight	60 mm (2.36 in)	Left/Right End Edges	107-3524 ⁽¹⁾	5J-2409	2J-3505	
				Center Edge	109-9014(2) ⁽¹⁾	5J-2409	2J-3505	
	88H		29 mm (1.13 in)	Center Edge	4T-6448 (2)	4J-9058	2J-3507	
825	4JP		25 mm (1.00 in)	Center Edge	4T-6532	6F-0196	2J-3505	
	89X		25 mm (1.00 in)	Center Edge	4T-6238	4F-4042	2J-3507	
826	97X, 90K, 2GP		25 mm (1.00 in)	Center Edge	4T-6515 (2)	5J-2409	2J-3505	
834	14B	Universal	25 mm (1.00 in)	Left/Right End Edges	4T-8798	6F-0196	2J-3505	
				Center Edge	4T-8797 (2)	6F-0196	2J-3505	
	64G	Cushion	25 mm (1.00 in)	Center Edge	4T-2889 (2)	6F-0196	2J-3505	
	93G, 93GB		25 mm (1.00 in)	Left/Right Edges	4T-6532	6F-0196	2J-3505	
				Center Edge	4T-6531	6F-0196	2J-3505	
834G	27K, 14B, 36G, 96G		60 mm (2.36 in)	Left End Edge	123-3756 ⁽¹⁾	5J-2409	2J-3505	
				Center Edge	123-3754(2) ⁽¹⁾	5J-2409	2J-3505	
				Right End Edge	123-3755 ⁽¹⁾	5J-2409	2J-3505	
835	27K, 36G, 96G		25 mm (1.00 in)	Center Edge	4T-6515 (2)	5J-2409	2J-3505	

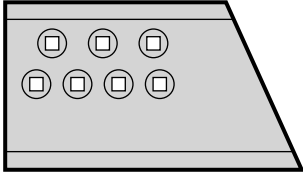
Compactor End Bits

Compactor End Bits



General Duty End Bits

- Provides a thicker wear area than the cutting edge.
- Made from DH-2 or DH-3 steel, depending on the application.
- For use in most dozing applications.



Finish Dozing End Bits

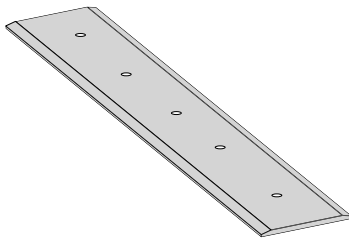
- Provides a depth of cut equal to the cutting edge.
- Protects the blade corner in low impact, low abrasion materials.
- Made from through-hardened DH-2 steel.
- For use in finish and semi-finish dozing.

Compactor End Bits (Cont'd.)

Model	Serial Number	Blade Model	Thickness	General Duty End Bits		Finish Dozing End Bits		Bolts	Nuts	Washers
				(lh)	(rh)	(lh)	(rh)			
814	36S, 41S, 32P 56D, 51K, 23K		28 mm (1.12 in)			4T-6242	4T-6241	5J-2409	2J-3505	5P-8249
				3G-8294	3G-9283	4T-6506	4T-6505	6F-0196	2J-3505	
				4J-8844	4J-8843	4T-6506	4T-6505	6F-0196	2J-3505	
				3G-8316	3G-8315	4T-6506	4T-6505	6F-0196	2J-3505	
				9F-7076	9F-7075	4T-3050	4T-3049	3F-5108	4K-0367	
815	24K1-1044 24K1045-UP 59E1-341 59E342-UP		22 mm (0.88 in)	3G-8296	3G-8295	4T-3050	4T-3049	3F-5108	4K-0367	
				4J-8262	4J-8261	4T-3042	4T-3041	4F-7827	2J-3506	
				3G-8298	3G-8297	4T-3042	4T-3041	4F-7827	2J-3506	
				5J-1420	5J-1419	4T-3046	4T-3045	5J-4773	2J-3506	
				3G-8298	3G-8297	4T-3046	4T-3045	5J-4773	2J-3506	
815S	39S, 95E 36S, 41S, 32P, 3YP	Straight	22 mm (0.88 in)			4T-6242	4T-6241	5J-2409	2J-3505	5P-8249
				3G-8294	3G-8293	3G-8294	3G-8293	6F-0196	2J-3505	
				3G-8316	3G-8315	4T-6506	4T-6505	6F-0196	2J-3505	
				4J-8844	4J-8843	4T-6506	4T-6505	6F-0196	2J-3505	
				3G-8316	3G-8315	4T-6506	4T-6505	6F-0196	2J-3505	
824	2HP, 35G, 64G, 93G 88H	Straight	60 mm (2.36 in)	109-9025*	109-9024*					
				3G-8290	3G-8289			4J-9208	2J-3507	
				3G-8282	3G-8281			4J-9208	2J-3507	
				109-9025*	109-9024*			5J-2406	2J-3505	
				3G-8316	3G-8315	4T-6506	4T-6505	6F-0196	2J-3505	
824S	4JP, 93G	Straight	28 mm (1.12 in)	3G-8288	3G-8287	4T-6240	4T-6239	4F-4042	2J-3505	
				9J-1478	9J-1477	4T-6240	4T-6239	4F-4042	2J-3505	
				3G-8318	3G-8317	4T-6240	4T-6239	4F-4042	2J-3505	
				3G-8294	3G-8293	4T-6506	4T-6505	6F-0196	2J-3505	
				3G-8316	3G-8315	4T-6506	4T-6505	6F-0196	2J-3505	
825	27K, 14B, 36G 97X, 90K, 2GP, 93G		28 mm (1.12 in)	4J-8844	4J-8843	4T-6506	4T-6505	6F-0196	2J-3505	
				3G-8316	3G-8315	4T-6506	4T-6505	6F-0196	2J-3505	
				3G-8316	3G-8315	4T-6506	4T-6505	6F-0196	2J-3505	
				3G-8294	3G-8293	4T-6506	4T-6505	6F-0196	2J-3505	
				4J-8844	4J-8843	4T-6506	4T-6505	6F-0196	2J-3505	
826	27K, 14B, 36G		28 mm (1.12 in)	3G-8316	3G-8315	4T-6506	4T-6505	6F-0196	2J-3505	
				3G-8316	3G-8315	4T-6506	4T-6505	6F-0196	2J-3505	
				3G-8294	3G-8293	4T-6506	4T-6505	6F-0196	2J-3505	
				4J-8844	4J-8843	4T-6506	4T-6505	6F-0196	2J-3505	
				3G-8316	3G-8315	4T-6506	4T-6505	6F-0196	2J-3505	
834	64G, 93G, 96G 27K, 14B, 36G		22 mm (0.88 in)	3G-8294	3G-8293	4T-6506	4T-6505	6F-0196	2J-3505	
				4J-8844	4J-8843	4T-6506	4T-6505	6F-0196	2J-3505	
				3G-8316	3G-8315	4T-6506	4T-6505	6F-0196	2J-3505	
				124-7285*	124-7284*			6F-0196	2J-3505	
				3G-8294	3G-8293	4T-6506	4T-6505	6F-0196	2J-3505	
834G	27K, 14B, 36G, 64G		28 mm (1.12 in)	4J-8844	4J-8843	4T-6506	4T-6505	6F-0196	2J-3505	
				3G-8316	3G-8315	4T-6506	4T-6505	6F-0196	2J-3505	
				3G-8294	3G-8293	4T-6506	4T-6505	6F-0196	2J-3505	
				4J-8844	4J-8843	4T-6506	4T-6505	6F-0196	2J-3505	
				3G-8316	3G-8315	4T-6506	4T-6505	6F-0196	2J-3505	
835	93G, 96G		28 mm (1.12 in)	3G-8294	3G-8293	4T-6506	4T-6505	6F-0196	2J-3505	
				4J-8844	4J-8843	4T-6506	4T-6505	6F-0196	2J-3505	
				3G-8316	3G-8315	4T-6506	4T-6505	6F-0196	2J-3505	
				3G-8294	3G-8293	4T-6506	4T-6505	6F-0196	2J-3505	
				4J-8844	4J-8843	4T-6506	4T-6505	6F-0196	2J-3505	

Compactor Plates/Tips

Compactor Sole Plates



Model	Serial Number	Blade Model	Sole Plate	Bolts Per Plate	Nuts Per Plate
814	23K, 56D	Straight	4T-3019 (2)	5J-4773 (5)	2J-3506 (5)
814	36S, 3YP	Straight	4T-3018 (2)	5J-4773 (4)	2J-3506(4)
824	2HP	Cushion	4T-8799 (3)	5J-4772 (5)	2J-3505(5)
824	35G1-222	Straight	7T-3491 (3)	5J-4773 (7)	2J-3506 (7)
824	35G223-Up	Straight	7T-3492 (3)	5J-4773 (7)	2J-3506(7)
834	14B	Universal	4T-8799 (2)	6F-0196 (7)	2J-3505(7)
834	36G, 96G	Straight	4T-6650 (2)	5J-4772 (8)	2J-3505 (8)
834	36G, 96G	Straight	4T-6651 (1)	5J-4772 (9)	2J-3505 (9)
834	64G	Cushion	4T-6645 (2)	5J-4772 (6)	2J-3505 (6)

Landfill Compactor Tip/Blades



Landfill Compactor Traction Tips:

- Forged for maximum strength and equipped with ARM for critical wear areas.
- For use in applications where maximum traction is required, such as frozen or difficult to penetrate materials.



Landfill Compactor Weld-On Plus Tips:

- Provide superior compaction densities, excellent traction, and excellent side hill stability.
- Provides less plugging and lower replacement costs because fewer teeth are required in its widely spaced distribution pattern.
- Lasts longer than chopper blades in high wear conditions.



ARM Chopper Blades:

- Provides good traction and aggressive chopping action in all types of trash.
- Manufactured from heat-treated, DH-2 steel.
- For use in sanitary landfill applications.

Model	Wheel Diameter	Weld-On Plus Tips	ARM Chopper Blade	ARM Chopper Blade Support	
816B, 816C		232-0160 (20)	6Y-6766 (20)	2V-6400 (10)	2V-6401 (10)
816B, 816C		232-0160 (20)	6Y-6766 (20)	2V-6400 (10)	2V-6401 (10)
826B, 826C	40 in	232-0160 (25)	6Y-4321 (24)	2V-6400 (12)	2V-6401 (12)
826B, 826C	48 in	232-0160 (25)	6Y-4321 (24)	2V-6400 (12)	2V-6401 (12)
826B, 826C	40 in	232-0160 (25)	6Y-4321 (24)	2V-6400 (12)	2V-6401 (12)
826B, 826C	48 in	232-0160 (25)	6Y-4321 (24)	2V-6400 (12)	2V-6401 (12)

Landfill Compactor Tip/Blades (Cont'd.)

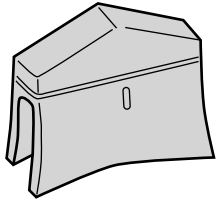
Model	Wheel Diameter	Weld-On Plus Tips	ARM Chopper Blade	ARM Chopper Blade Support	
836		232-0160 (35)	107-3374 (28)	2V-6400 (14)	2V-6401 (14)
836G		232-0160 (35)	107-3374 (28)	2V-6400 (14)	2V-6401 (14)

Compactor Feet

Landfill Compactor Wheel Assemblies

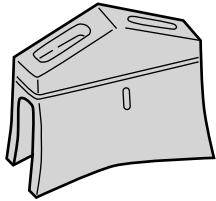
Model	Rim Thickness	Weld-On Plus Tip	Narrow Weld-On Plus Tip	ARM Chopper Blade	
				(lh front and rh rear)	(rh front and lh rear)
816	16 mm (0.625 in)	2Q-1498 (4)		4E-3523 (2)	4E-3524 (2)
826	25 mm (1.000 in)	128-8113 (4)	2Z-9142 (4) ⁽¹⁾	128-8116 (2)	128-8117(2)
836	25 mm (1.000 in)	129-2405 (4)		111-8237 (2)	111-8238(2)
836G	25 mm (1.000 in)	143-5952		189-1584	189-1585
836G	25 mm (1.000 in)	165-4970 ⁽¹⁾			

Weld-On Soil Compactor Feet



Model	Blade Serial Number	Tamping Foot	Rock Tamping Foot	Base
815	91P		4V-3851	7K-6908
815B	17Z	2V-7053		7K-6908
825C	86X	2V-6628	4V-0668	7K-7071

Bolt-On Soil Compactor Feet



Model	Blade Serial Number	Tamping Foot	Base	Bolts	Nuts	Washers
815	91P	8K-9189	7K-6908	0S-0484 (2)	6B-6684 (2)	5P-8245 (4)
825C	86X	8K-9171	7K-7071	0T-0856 (2)	6B-6682 (2)	5H-1504 (4)
835	44N333-UP	8K-9171	7K-7071	0T-0856 (2)	6B-6682 (2)	5H-1504 (4)

Compactor Feet/Cleaner Bars

Pin-On Soil Compactor Feet



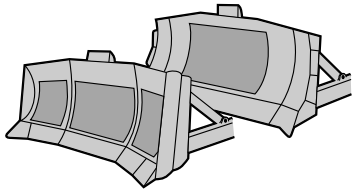
Model	Blade Serial Number	Tamping Foot	Rock Tamping Foot	Sheepsfoot	Base	Pin	Spring Assembly	Snap Ring
824B	36H	7K-2939	7K-2939		9S-1645	7K-9535	9S-1644	5S-1522
824B, C, G	36H, 85X, 45N			3S-3992		7K-9937	9S-1644	5S-1522
825B	43N	7K-2939			9S-1645	7K-9535	9S-1644	5S-1522
825C, G	86X,6RN			3S-3992		7K-9937	9S-1644	5S-1522
834	43E	7K-2939		3S-3992	9S-1645	7K-9535	9S-1644	5S-1522
835	44N1-332	7K-2939		3S-3992	9S-1645	7K-9535	9S-1644	5S-1522

Compactor Cleaner Bars

Model	Blade Serial Number	Tamping Foot Cleaner Bar	Rock Tamping Foot Cleaner Bar	Sheepsfoot Cleaner Bar	Landfill Cleaner Bar
815	91P	4S-7928			
815B, F	17Z, 1GN	106-204,141-7407, 3G-8250 ⁽¹⁾			
816B, F	15Z, 5FN				71-3968
824B	36H	3S-3228	3S-3228	4S-7928	
825B	36H, 43N	3S-3228 ⁽¹⁾	3S-3228	4S-7928	
825C, 825G	86X, 6RN	3S-3228 ⁽¹⁾	3G-8250 ⁽¹⁾		
826B	58U				71-3968
826C	87X				71-3968
826G	7LH				71-3968
834	43E	4S-7928	4S-7928	3S-3228	
835	44N	4S-7928	4S-7928	3S-3228	
836					71-3968

Compactor Wear Plates

Compactor Reinforcing Wear Plates



- Provides extended blade life in highly abrasive or extreme impact conditions.
- Provides a repair or resurface option for worn or damaged moldboards.
- Formed to fit the curve of the blade so they are easily installed.

Model	Serial Number	Item	Plate Thickness	Reinforcing Wear Plate
816	41S, 51K	Wear Plate	8 mm (0.31 in)	3J-3141
824	88H	Wear Plate	12 mm (0.47 in)	6J-0164 (2)
		Wear Plate	12 mm (0.47 in)	2J-8523 (4)
824C	2HP, 64G	Wear Plate	20 mm (0.79 in)	5J-2663
		Pusher Plate	20 mm (0.79 in)	4J-5622
		Wear Plate	20 mm (0.79 in)	4J-5622
824F	93G	Wear Plate	8 mm (0.31 in)	3J-3141
824G		Wear Plate	20 mm (0.79 in)	5J-2663
825	89X,, 93G	Wear Plate	8 mm (0.31 in)	3J-3141
826	97X,, 90K	Wear Plate	8 mm (0.31 in)	3J-3141
834C	64G	Pusher Plate	20 mm (0.79 in)	4J-5622
		Wear Plate	20 mm (0.79 in)	4J-5622
	96G	Wear Plate	8 mm (0.31 in)	3J-3142
835	27K	Wear Plate	8 mm (0.31 in)	3J-3141

Compact Wheel Loader – Compact Construction Equipment

Model	Bucket Type	Bucket Width	Bolt-on Teeth	Bolt-on Edge	Bucket Assembly	Rated Capacity	Base Edge	LH	RH	Rear Wear Plate
902	General Purpose	1770 mm (70 in)	150-8368	150-8369	138-8941	0.2 m ³ (0.8 yd ³)	138-8938	9R-5205	9R-5206	152-1096
	Multi-Purpose	1770 mm (70 in)	150-8370	150-8371	138-8912	0.2 m ³ (0.8 yd ³)	138-8938	9R-5205	9R-5206	
	Light Materials	1880 mm (74 in)		152-2005	149-9261	0.3 m ³ (1.3 yd ³)	138-8932	9R-5205	9R-5206	151-5131
	Stone Sieve	1770 mm (70 in)	152-2008	152-2009	148-8412	0.2 m ³ (0.8 yd ³)	160-5334	9R-5205	9R-5206	
	High Dump	1770 mm (70 in)	152-5214	152-1998	150-1917	0.2 m ³ (0.8 yd ³)	138-8938	9R-5205	9R-5206	
	Material Handling Grapple	1880 mm (74 in)		186-0152	184-3268		138-8932			151-5131
	General Purpose	1880 mm (74 in)	150-8385	150-8386	138-8931	0.25 m ³ (1.0 yd ³)	138-8932	9R-5205	9R-5206	151-5131
	Multi-Purpose	1880 mm (74 in)	150-8387	150-8388	138-8914	0.23 m ³ (0.9 yd ³)	138-8932	9R-5205	9R-5206	
	Light Materials	1940 mm (76 in)		152-2006	147-3152	0.41 m ³ (1.6 yd ³)	152-1051	9R-5205	9R-5206	152-1097
	Stone Sieve	1880 mm (74 in)	152-2010	152-2011	148-5385	0.23 m ³ (0.9 yd ³)	160-5335	9R-5205	9R-5206	
906	High Dump	1880 mm (74 in)	152-5215	152-1999	141-4990	0.23 m ³ (0.9 yd ³)	138-8932	9R-5205	9R-5206	
	Side Dump	1880 mm (74 in)	152-2001	152-2002	141-7263	0.23 m ³ (0.9 yd ³)	138-8932	9R-5205	9R-5206	
	Material Handling Grapple	1880 mm (74 in)		186-0152	184-3268		138-8932			151-5131
	General Purpose	2060 mm (81 in)	150-8389	150-8390	138-8905	0.33 m ³ (1.3 yd ³)	138-8937	9R-5205	9R-5206	152-1098
	Multi-Purpose	2060 mm (81 in)	150-8391	150-8392	138-8916	0.31 m ³ (1.2 yd ³)	147-1040	9R-5205	9R-5206	
	Light Materials	2060 mm (81 in)		152-2007	147-3153	0.51 m ³ (2.0 yd ³)	138-8937	9R-5205	9R-5206	152-1098
	Stone Sieve	2060 mm (81 in)	152-2012	152-2013	148-5386	0.31 m ³ (1.2 yd ³)	138-8937	9R-5205	9R-5206	
	High Dump	2060 mm (81 in)	152-5216	152-2000	141-4992	0.31 m ³ (1.2 yd ³)	138-8937	9R-5205	9R-5206	
	Side Dump	2060 mm (81 in)	152-2003	152-2004	141-7265	0.31 m ³ (1.2 yd ³)	138-8937	9R-5205	9R-5206	
	Material Handling Grapple	2060 mm (81 in)		186-0154	186-0153		138-8937			152-1098
908	General Purpose	2060 mm (81 in)	150-8389	150-8390	138-8905	0.33 m ³ (1.3 yd ³)	138-8937	9R-5205	9R-5206	152-1098
	Multi-Purpose	2060 mm (81 in)	150-8391	150-8392	138-8916	0.31 m ³ (1.2 yd ³)	147-1040	9R-5205	9R-5206	
	Light Materials	2060 mm (81 in)		152-2007	147-3153	0.51 m ³ (2.0 yd ³)	138-8937	9R-5205	9R-5206	152-1098
	Stone Sieve	2060 mm (81 in)	152-2012	152-2013	148-5386	0.31 m ³ (1.2 yd ³)	138-8937	9R-5205	9R-5206	
	High Dump	2060 mm (81 in)	152-5216	152-2000	141-4992	0.31 m ³ (1.2 yd ³)	138-8937	9R-5205	9R-5206	
	Side Dump	2060 mm (81 in)	152-2003	152-2004	141-7265	0.31 m ³ (1.2 yd ³)	138-8937	9R-5205	9R-5206	
	Material Handling Grapple	2060 mm (81 in)		186-0154	186-0153		138-8937			152-1098

Compact Wheel Loader

Compact Wheel Loader Tips & Edges



Bolt-On Unitooth

- Improves penetration where breakage is not a problem.
- Tip and adapter are one integrated piece for easy installation and lower initial costs.
- For use in nonabrasive materials.

Model	Unitooth	Bolts	Nuts
902, 906, 908	132-4720 (7)	159-2953 (14)	8T-4778 (14)

Bolt-On Edges

Model	Edges	Bolts	Nuts
902	132-4723	159-2953 (13)	8T-4778 (13)
906	132-4724	159-2953 (13)	8T-4778 (13)
908	132-4725	159-2953 (13)	8T-4778 (13)

Mini-Hex Buckets

Model	Bucket Type	Bucket Width	Bucket Group	Bucket Assembly	Rated Capacity	Base Edge ⁽¹⁾	Number of Teeth	Bolt-on Uniteeth	Bolts	Nuts	Sidecutters ⁽²⁾	
											LH	RH
302.5 303.5	Digging	260 mm (10 in)	176-7283 ⁽³⁾	179-6704 ⁽³⁾	0.035 m ³ (0.046 yd ³)	153-7873	3	135-9390 (3)	159-8839 (6)	8T-4778 (6)	135-9376	135-9377
		260 mm (10 in)	153-7848	153-7849	0.035 m ³ (0.046 yd ³)	153-7873	3	135-9390 (3)	159-8839 (6)	8T-4778 (6)	135-9376	135-9377
301.6 301.8	Digging	300 mm (12 in)	153-7851	153-7852	0.041 m ³ (0.053 yd ³)	153-7874	3	135-9390 (3)	159-8839 (6)	8T-4778 (6)	135-9376	135-9377
		400 mm (16 in)	153-7854	153-7855	0.064 m ³ (0.070 yd ³)	153-7875	3	135-9390 (3)	159-8839 (6)	8T-4778 (6)	135-9376	135-9377
301.5 301.6 301.8	Digging	457 mm (18 in)	190-7390	190-7392	0.065 m ³ (0.085 yd ³)	190-7394	3	135-9390 (3)	159-8839 (6)	8T-4778 (6)	135-9376	135-9377
		500 mm (20 in)	153-7857	153-7858	0.073 m ³ (0.095 yd ³)	153-7876	4	135-9390 (4)	159-8839 (8)	8T-4778 (8)	135-9376	135-9377
304.5	Digging	600 mm (24 in)	153-7860	153-7861	0.092 m ³ (0.120 yd ³)	153-7877	4	135-9390 (4)	159-8839 (8)	8T-4778 (8)	135-9376	135-9377
		800 mm (32 in)		153-7863	0.080 m ³ (0.105 yd ³)	153-7878 (N/ S)						
301.5 301.6 301.8	Digging	1000 mm (40 in)		153-7865	0.102 m ³ (0.133 yd ³)	153-7879 (N/ S)						
		1200 mm (47 in)		153-7867	0.116 m ³ (0.152 yd ³)	153-7880 (N/ S)						
301.5 301.6 301.8	Digging	230 mm (9 in)	147-1014	147-1015	0.018 m ³ (0.023 yd ³)	147-1033 (N/ S)	3	135-9380 ⁽⁴⁾ (3)	8T-4183 (6)	8T-4244 (6)	135-9378	135-9379
		300 mm (12 in)	147-1018	147-1017	0.018 m ³ (0.029 yd ³)	147-1034 (N/ S)	3	135-9380 ⁽⁴⁾ (3)	8T-4183 (6)	8T-4244 (6)	135-9378	135-9379
301.5 301.6 301.8	Digging	400 mm (16 in)	147-1020	147-1021	0.033 m ³ (0.043 yd ³)	147-1035 (N/ S)	3	135-9380 ⁽⁴⁾ (3)	8T-4183 (6)	8T-4244 (6)	135-9378	135-9379
		457 mm (18 in)	190-7387	190-7388	0.040 m ³ (0.052 yd ³)	190-7389 (N/ S)	3	135-9380 ⁽⁴⁾ (3)	8T-4183 (6)	8T-4244 (6)	135-9378	135-9379
301.5 301.6 301.8	Digging	500 mm (20 in)	147-1023	147-1024	0.045 m ³ (0.059 yd ³)	147-1036 (N/ S)	4	135-9380 ⁽⁴⁾ (4)	8T-4183 (8)	8T-4244 (8)	135-9378	135-9379
		600 mm (24 in)	147-1026	147-1027	0.056 m ³ (0.073 yd ³)	147-1037 (N/ S)	4	135-9380 ⁽⁴⁾ (4)	8T-4183 (8)	8T-4244 (8)	135-9378	135-9379
304.5	Ditch Cleaning	800 mm (32 in)		147-1029	0.044 m ³ (0.057 yd ³)	147-1038 (N/ S)						
		1000 mm (40 in)		147-1031	0.056 m ³ (0.073 yd ³)	147-1039 (N/ S)						
304.5	Digging	300 mm (12 in)	188-4369 ⁽³⁾	180-3627 ⁽³⁾	0.058 m ³ (0.076 yd ³)	180-3638 (N/ S)	3	135-8203 (3)	4F-3656 (6)	4K-0367 (6)	180-3639	180-3640
		300 mm (12 in)	180-3622	180-3627	0.058 m ³ (0.076 yd ³)	180-3638 (N/ S)	3	135-8203 (3)	4F-3656 (6)	4K-0367 (6)	180-3639	180-3640
304.5	Digging	400 mm (16 in)	180-3623	180-3628	0.076 m ³ (0.099 yd ³)	180-3647 (N/ S)	4	135-8203 (4)	4F-3656 (8)	4K-0367 (8)	180-3639	180-3640

- (N/S) — Non serviceable
- Please reference Information Release Memo (PELJ0617) (GET 0603 infocast) for bolt-on options.
- Includes 2 bucket mounting pins, 2 hydraulic fittings, and 4 retaining rings.
- Service replacement for 135-9380 factory tooth is 138-6410. Use 160-0018 flat head screw.

Compact Construction Equipment

Mini-Hex Buckets (Cont'd.)

Model	Bucket Type	Bucket Width	Bucket Group	Bucket Assembly	Rated Capacity	Base Edge ⁽⁵⁾	Number of Teeth	Bolt-on Uniteeth	Bolts	Nuts	Sidecutters ⁽⁶⁾	
											LH	RH
303.5	Digging	500 mm (20 in)	180-3624	180-3629	0.104 m ³ (0.136 yd ³)	180-3648 (N/ S)	4	135-8203 (4)	4F-3656 (8)	4K-0367 (8)	180-3639	180-3640
	Digging	600 mm (24 in)	180-3625	180-3630	0.133 m ³ (0.174 yd ³)	180-3649 (N/ S)	4	135-8203 (4)	4F-3656 (8)	4K-0367 (8)	180-3639	180-3640
	Digging	700 mm (28 in)	180-3626	180-3631	0.162 m ³ (0.212 yd ³)	180-3650 (N/ S)	4	135-8203 (4)	4F-3656 (8)	4K-0367 (8)	180-3639	180-3640
	Ditch Cleaning	1000 mm (40 in)		180-1355	0.139 m ³ (0.182 yd ³)	180-1365 (N/ S)						
	Ditch Cleaning	1300 mm (51 in)		180-1356	0.184 m ³ (0.241 yd ³)	180-1366 (N/ S)						
	Ditch Cleaning	1600 mm (63 in)		180-1357	0.229 m ³ (0.299 yd ³)	180-1367 (N/ S)						
	Digging	300 mm (12 in)	171-2759	171-2760	0.049 m ³ (0.065 yd ³)	174-2141 (N/ S)	3	135-9390 (3)	159-8839 (6)	8T-4778 (6)	174-2133	174-2134
	Digging	400 mm (16 in)	171-2761	171-2762	0.065 m ³ (0.085 yd ³)	174-2152 (N/ S)	3	135-9390 (3)	159-8839 (6)	8T-4778 (6)	174-2133	174-2134
	Digging	500 mm (20 in)	171-2763	171-2764	0.089 m ³ (0.116 yd ³)	174-2154 (N/ S)	4	135-9390 (4)	159-8839 (8)	8T-4778 (8)	174-2133	174-2134
	Digging	600 mm (24 in)	171-2767	171-2768	0.113 m ³ (0.148 yd ³)	174-2154 (N/ S)	4	135-9390 (4)	159-8839 (8)	8T-4778 (8)	174-2133	174-2134
	Ditch Cleaning	650 mm (26 in)	171-2769	171-2770	0.126 m ³ (0.165 yd ³)	174-2155 (N/ S)	4	135-9390 (4)	159-8839 (8)	8T-4778 (8)	174-2133	174-2134
	Ditch Cleaning	1000 mm (40 in)		174-2460	0.111 m ³ (0.145 yd ³)	153-7879 (N/ S)						
	Ditch Cleaning	1200 mm (47 in)		174-2461	0.135 m ³ (0.177 yd ³)	153-7880 (N/ S)						
	Ditch Cleaning	1400 mm (55 in)		174-1811	0.159 m ³ (0.208 yd ³)	173-9770 (N/ S)						

5 (N/S) — Non serviceable

6 Please reference Information Release Memo (PELJ0617) (GET 0603 infocast) for bolt-on options.

Skid Steer Loaders - Compact Construction Equipment

Skid Steer Loaders/Work Tools



Size	Toothbar	Bucket Assembly	Bucket Arrangement	Bolts	Nuts	Fasteners	
		(GP) ⁽¹⁾	(MP) ⁽¹⁾			Lockwashers	Washers
1525 mm (60 in)	136-8734	165-6152	154-5004	8S-9093 (2)	2J-3507(2)	3B-4516 (2)	5P-8250 (2)
1675 mm (66 in)	136-8735	165-6153	154-5008	8S-9093 (2)	2J-3507(2)	3B-4516 (2)	5P-8250 (2)
1830 mm (72 in)	136-8736	165-6154	154-5010	8S-9093 (2)	2J-3507(2)	3B-4516 (2)	5P-8250 (2)
1980 mm (78 in)	217-4878	199-7721	199-8321	8S-9093 (2)	2J-3507(2)	3B-4516 (2)	5P-8250 (2)
2135 mm (84 in)	275-5427	292-9270	293-0139	8S-9093 (2)	2J-3507(2)	3B-4516 (2)	5P-8250 (2)



Bucket	Edge Type	Size	Bucket Assembly	Bucket Arrangement	Bulldozer Assembly	Clam Assembly	Tooth	Base Edge	Cutting Edge	Cutting Edge Thickness	Bolt	Nut	Screw	Locknut	
Multi-Purpose	Base Edge	1525 mm (60 in)	154-5004		159-5345 (1)			154-5037							
	Base Edge	1525 mm (60 in)	154-5004	154-5045		149-4232		149-5435							
	Bolt-on Edge	1525 mm (60 in)	154-5004	154-5045					135-9394	16 mm (0.63 in)			159-2953 (8)	8T-4778 (8)	
	Bolt-on Teeth	1525 mm (60 in)	154-5004	154-5045			132-4720		174-7966	16 mm (0.63 in)	4F-3654 (8)	4K-0367 (8)	159-2953 (2)	8T-4778 (2)	
	Bolt-on Teeth	1525 mm (60 in)	154-5004	154-5045			132-4720		174-7972	19 mm (0.73 in)	4F-3654 (8)	4K-0367 (8)	159-2953 (2)	8T-4778 (2)	
	Base Edge	1675 mm (66 in)	154-5008			159-5346 (1)		154-5059							
	Base Edge	1675 mm (66 in)	154-5008	154-5047			154-5053		149-5436						
	Bolt-on Edge	1675 mm (66 in)	154-5008	154-5048						135-9395	16 mm (0.63 in)			159-2953 (8)	8T-4778 (8)
	Bolt-on Teeth	1675 mm (66 in)	154-5008	154-5048				132-4720		174-7967	16 mm (0.63 in)	4F-3654 (8)	4K-0367 (8)	159-2953 (2)	8T-4778 (2)
	Bolt-on Teeth	1675 mm (66 in)	154-5008	154-5048				132-4720		174-7973	19 mm (0.75 in)	4F-3654 (8)	4K-0367 (8)	159-2953 (2)	8T-4778 (2)
	Base Edge	1830 mm (72 in)	154-5010			154-5080			154-5077						
Base Edge	1830 mm (72 in)	154-5010	154-5049			154-5070		149-5437							

Skid Steer Loaders - Compact Construction Equipment

Skid Steer Loaders/Work Tools (Cont'd.)

Bucket	Edge Type	Size	Bucket Assembly	Bucket Arrangement	Bulldozer Assembly	Clam Assembly	Tooth	Base Edge	Cutting Edge	Cutting Edge Thickness	Bolt	Nut	Screw	Locknut
	Bolt-on Edge	1830 mm (72 in)	154-5010	154-5050					135-9394	16 mm (0.63 in)			159-2953 (11)	8T-4778 (11)
	Bolt-on Teeth	1830 mm (72 in)	154-5010	154-5050			132-4720		174-7968	16 mm (0.63 in)	4F-3654 (11)	4K-0367 (11)	159-2953 (2)	8T-4778 (2)
	Bolt-on Teeth	1830 mm (72 in)	154-5010	154-5050			132-4720		174-7974	19 mm (0.73 in)	4F-3654 (11)	4K-0367 (11)	159-2953 (2)	8T-4778 (2)

Skid Steer Loaders/Work Tools

Bucket	Edge Type	Size	Bucket Assembly	Bucket Arrangement	Tooth	Base Edge	Cutting Edge	Cutting Edge Thickness	Bolt	Nut	Screw	Locknut
General Purpose	Base Edge	1525 mm (60 in)	165-6152			149-5435						
	Bolt-on Edge	1525 mm (60 in)	165-6152	152-0224			135-9394	16.0 mm (0.63 in)			159-2953 (8)	8T-4778 (8)
	Bolt-on Teeth	1525 mm (60 in)	165-6152	152-0223	132-4720		174-7966	16.0 mm (0.63 in)	4F-3654 (8)	4K-0367 (8)	159-2953 (2)	8T-4778 (2)
	Bolt-on Teeth	1525 mm (60 in)	165-6152	152-0223	132-4720		174-7972	19.0 mm (0.75 in)	4F-3654 (8)	4K-0367 (8)	159-2953 (2)	8T-4778 (2)
	Base Edge	1675 mm (66 in)	165-6153			149-5436						
	Bolt-on Edge	1675 mm (66 in)	165-6153	152-0226			135-9395	16.0 mm (0.63 in)			159-2953 (8)	8T-4778 (8)
	Bolt-on Teeth	1675 mm (66 in)	165-6153	152-0225	132-4720		174-7967	16.0 mm (0.63 in)	4F-3654 (8)	4K-0367 (8)	159-2953 (2)	8T-4778 (2)
	Bolt-on Teeth	1675 mm (66 in)	165-6153	152-0225	132-4720		174-7973	19.0 mm (0.75 in)	4F-3654 (8)	4K-0367 (8)	159-2953 (2)	8T-4778 (2)
	Base Edge	1830 mm (72 in)	165-6154			149-5437						
	Bolt-on Edge	1830 mm (72 in)	165-6154	152-0229			135-9396	16.0 mm (0.63 in)			159-2953 (11)	8T-4778 (11)
	Bolt-on Teeth	1830 mm (72 in)	165-6154	152-0228	132-4720		174-7968	16.0 mm (0.63 in)	4F-3654 (11)	4K-0367 (11)	159-2953 (2)	8T-4778 (2)
	Bolt-on Teeth	1830 mm (72 in)	165-6154	152-0228	132-4720		174-7974	19.0 mm (0.75 in)	4F-3654 (11)	4K-0367 (11)	159-2953 (2)	8T-4778 (2)
Dirt	Base Edge	1370 mm (54 in)	165-6155			149-5434						
	Bolt-on Edge	1370 mm (54 in)	165-6155	152-0230			135-9393	12.7 mm (0.50 in)			159-2953 (8)	8T-4778 (8)
	Bolt-on Edge	1370 mm (54 in)	165-6155	152-0230			174-7965	16.0 mm (0.63 in)	4F-3654 (6)	4K-0367 (6)		
	Bolt-on Edge	1370 mm (54 in)	165-6155	152-0230			174-7971	19.0 mm (0.75 in)	4F-3654 (6)	4K-0367 (6)		
	Base Edge	1525 mm (60 in)	165-6156			149-5435						
	Bolt-on Edge	1525 mm (60 in)	165-6156	152-0231			135-9394	16.0 mm (0.63 in)			159-2953 (8)	8T-4778 (8)
	Bolt-on Edge	1525 mm (60 in)	165-6156	152-0231			174-7966	16.0 mm (0.63 in)	4F-3654 (6)	4K-0367 (6)		
	Bolt-on Edge	1525 mm (60 in)	165-6156	152-0231			174-7972	19.0 mm (0.75 in)	4F-3654 (6)	4K-0367 (6)		
	Base Edge	1675 mm (66 in)	165-6157			149-5436						

Skid Steer Loaders - Compact Construction Equipment

Skid Steer Loaders/Work Tools (Cont'd.)

Bucket	Edge Type	Size	Bucket Assembly	Bucket Arrangement	Tooth	Base Edge	Cutting Edge	Cutting Edge Thickness	Bolt	Nut	Screw	Locknut
	Bolt-on Edge	1675 mm (66 in)	165-6157	152-0232			135-9395	16.0 mm (0.63 in)			159-2953 (8)	8T-4778 (8)
	Bolt-on Edge	1675 mm (66 in)	165-6157	152-0232			174-7967	16.0 mm (0.63 in)	4F-3654 (6)	4K-0367 (6)		
	Bolt-on Edge	1675 mm (66 in)	165-6157	152-0232			174-7973	19.0 mm (0.75 in)	4F-3654 (6)	4K-0367 (6)		
Utility	Base Edge	1525 mm (60 in)	165-8835			149-5435						
	Bolt-on Edge	1525 mm (60 in)	165-8835	165-8836			135-9394	16.0 mm (0.63 in)			159-2953 (8)	8T-4778 (8)
	Bolt-on Edge	1525 mm (60 in)	165-8835	165-8836			174-7966	16.0 mm (0.63 in)	4F-3654 (6)	4K-0367 (6)		
	Bolt-on Edge	1525 mm (60 in)	165-8835	165-8836			174-7972	19.0 mm (0.75 in)	4F-3654 (6)	4K-0367 (6)		
	Base Edge	1675 mm (66 in)	165-8746			149-5436						
	Bolt-on Edge	1675 mm (66 in)	165-8746	165-8747			135-9395	16.0 mm (0.63 in)			159-2953 (8)	8T-4778 (8)
	Bolt-on Edge	1675 mm (66 in)	165-8746	165-8747			174-7967	16.0 mm (0.63 in)	4F-3654 (6)	4K-0367 (6)		
	Bolt-on Edge	1675 mm (66 in)	165-8746	165-8747			174-7973	19.0 mm (0.75 in)	4F-3654 (6)	4K-0367 (6)		
	Base Edge	1830 mm (72 in)	165-8747			149-5437						
	Bolt-on Edge	1830 mm (72 in)	165-8747	165-8778			135-9396	16.0 mm (0.63 in)			159-2953 (8)	8T-4778 (8)
	Bolt-on Edge	1830 mm (72 in)	165-8747	165-8778			174-7968	16.0 mm (0.63 in)	4F-3654 (6)	4K-0367 (6)		
	Bolt-on Edge	1830 mm (72 in)	165-8747	165-8778			174-7974	19.0 mm (0.75 in)	4F-3654 (6)	4K-0367 (6)		
Light Material	Base Edge	1830 mm (72 in)	164-7414			149-5437						
	Bolt-on Edge	1830 mm (72 in)	164-7414	164-7412			135-9396	16.0 mm (0.63 in)			159-2953 (11)	8T-4778 (11)
	Bolt-on Edge	1830 mm (72 in)	164-7414	164-7412			174-7968	16.0 mm (0.63 in)	4F-3654 (11)	4K-0367 (11)		
	Bolt-on Edge	1830 mm (72 in)	164-7414	164-7412			174-7974	19.0 mm (0.75 in)	4F-3654 (11)	4K-0367 (11)		
	Base Edge	1980 mm (78 in)	164-7415			167-7433 ⁽¹⁾						
	Bolt-on Edge	1980 mm (78 in)	164-7415	164-7413			135-9397	16.0 mm (0.63 in)			159-2953 (11)	8T-4778 (11)
	Bolt-on Edge	1980 mm (78 in)	164-7415	164-7413			174-7969	16.0 mm (0.63 in)	4F-3654 (11)	4K-0367 (11)		
	Bolt-on Edge	1980 mm (78 in)	164-7415	164-7413			174-7975	19.0 mm (0.75 in)	4F-3654 (11)	4K-0367 (11)		

Size	Toothbar	Bucket Assembly	Bucket Arrangement	Cutting Edge	Bolts	Nuts	Fasteners	
		(GP) ⁽¹⁾	(MP) ⁽¹⁾				Lockwashers	Washers
1525 mm (60 in)	159-0330	165-6152	154-5004	135-9394	8S-9093 (2)	2J-3507(2)	3B-4516 (2)	5P-8250 (2)
1675 mm (66 in)	159-0340	165-6153	154-5008	135-9395	8S-9093 (2)	2J-3507 (2)	3B-4516 (2)	5P-8250 (2)
1830 mm (72 in)	159-0350	165-6154	154-5010	135-9396	8S-9093 (2)	2J-3507(2)	3B-4516 (2)	5P-8250 (2)
1980 mm (78 in)	195-9160	199-7721	199-8321	135-9387	8S-9093 (2)	2J-3507 (2)	3B-4516 (2)	5P-8250 (2)
2135 mm (84 in)	264-2084	296-8192	296-8057	195-7124	8S-9093 (2)	2J-3507(2)	3B-4516 (2)	5P-8250 (2)

Skid Steer Loaders - Compact Construction Equipment

Skid Steer Loaders/Work Tools (Cont'd.)

Bucket	Edge Type	Size	Bucket Assembly	Bucket Arrangement	Base Edge	Cutting Edge	Cutting Edge Thickness	Bolt	Nut	Screw	Locknut
Industrial Grapple	Base Edge	1525 mm (60 in)	169-8941	157-7223	149-5435						
	Bolt-on Edge	1525 mm (60 in)	157-7223	157-7226		135-9394	16 mm (0.63 in)			159-2953 (8)	8T-4778 (8)
	Bolt-on Edge	1525 mm (60 in)	157-7223	157-7226		174-7966	16 mm (0.63 in)	4F-3654 (8)	4K-0367 (8)		
	Bolt-on Edge	1525 mm (60 in)	157-7223	157-7226		174-7972	19 mm (0.75 in)	4F-3654 (8)	4K-0367 (8)		
	Base Edge	1675 mm (66 in)	169-8942	157-7224	149-5436						
	Bolt-on Edge	1675 mm (66 in)	157-7224	157-7227		135-9395	16 mm (0.63 in)			159-2953 (8)	8T-4778 (8)
	Bolt-on Edge	1675 mm (66 in)	157-7224	157-7227		174-7967	16 mm (0.63 in)	4F-3654 (8)	4K-0367 (8)		
	Bolt-on Edge	1675 mm (66 in)	157-7224	157-7227		174-7973	19 mm (0.75 in)	4F-3654 (8)	4K-0367 (8)		
	Base Edge	1830 mm (72 in)	169-8943	157-7225	149-5437						
	Bolt-on Edge	1830 mm (72 in)	157-7225	157-7226		135-9396	16 mm (0.63 in)			159-2953 (11)	8T-4778 (11)
	Bolt-on Edge	1830 mm (72 in)	157-7225	157-7226		174-7968		4F-3654 (11)	4K-0367 (11)		
	Bolt-on Edge	1830 mm (72 in)	157-7225	157-7226		174-7974		4F-3654 (11)	4K-0367 (11)		

Bucket Type	Edge Type	Size	Blade GP	Blade Arrangement	Blade Assembly	Cutting Edge	Cutting Edge Length	Bolt	Nut	Screw	Locknut	Washer	End Plate
Angle Dozer	Cutting Edge	1830 mm (72.0 in)		177-1989		135-9396	1893 mm (74.5 in)			159-2953(6)	8T-4778 (6)		
	Non-metallic Cutting Edge	1830 mm (72.0 in)		177-1989		165-8477		8T-4140 (6)			8T-4778 (6)	165-7095 (6)	
	Cutting Edge	2070 mm (81.5 in)		177-1990		149-5740 (l)	2134 mm (84.0 in)			159-2953(6)	8T-4778 (6)		
	Non-metallic Cutting Edge	2070 mm (81.5 in)		177-1990		165-8478		8T-4140 (6)			8T-4778 (6)	165-7095 (6)	
	Cutting Edge	2320 mm (90.5 in)	186-5671	208-3331(l)	166-1686(l)	143-3088	1630 mm (64.1 in)	3F-5108 (17)	4K-0367 (17)			5P-8247 (17)	159-0372 (2)
	Cutting Edge	2320 mm (90.5 in)	186-5671	183-1769(l)	166-1686(l)	143-3088	1630 mm (64.1 in)	3F-5108 (17)	4K-0367 (17)			5P-8247 (17)	159-0372 (2)
	Cutting Edge	2320 mm (90.5 in)	186-5671	169-7646	166-1686(l)	143-3088	1630 mm (64.1 in)	3F-5108 (17)	4K-0367 (17)			5P-8247 (17)	159-0372 (2)
	Cutting Edge	2320 mm (90.5 in)	186-5671	208-3297(l)	166-1686(l)	143-3088	1630 mm (64.1 in)	3F-5108 (17)	4K-0367 (17)			5P-8247 (17)	159-0372 (2)
	Cutting Edge	2470 mm (94.4 in)	208-2038	208-3277(l)	166-1687(l)	143-3089	1730 mm (68.0 in)	3F-5108 (17)	4K-0367 (17)			5P-8247 (17)	195-7193(2)

Excavators Bucket Base Edge Assemblies

Base Edge Thickness	Bucket Width	Base Edge Assembly ⁽¹⁾	No. of Teeth	Adapters (qty)			Tip Size
				(LH)	(CTR)	(RH)	
22 mm (0.87 in)	305 mm (12 in)	121-9162	3	6Y-3224	6Y-3224	6Y-3224	J225
22 mm (0.87 in)	330 mm (13 in)	231-2988	3	6Y-3224	6Y-3224	6Y-3224	J225
22 mm (0.87 in)	457 mm (18 in)	158-3958	3	6Y-3224	6Y-3224	6Y-3224	J225
22 mm (0.87 in)	610 mm (24 in)	153-1558	4	6Y-3224	6Y-3224 (2)	6Y-3224	J225
22 mm (0.87 in)	762 mm (30 in)	153-1583	5	6Y-3224	6Y-3224 (3)	6Y-3224	J225
22 mm (0.87 in)	914 mm (36 in)	153-1585	6	6Y-3224	6Y-3224 (4)	6Y-3224	J225
32 mm (1.25 in)	457 mm (18 in)	226-1311	3	119-3253	119-3253	119-3253	J250
32 mm (1.25 in)	610 mm (24 in)	229-7650	4	119-3253	119-3253 (2)	119-3253	J250
32 mm (1.25 in)	635 mm (25 in)	241-0283	4	119-3253	119-3253 (2)	119-3253	J250
32 mm (1.25 in)	686 mm (27 in)	127-6104	4	119-3253	119-3253 (2)	119-3253	J250
32 mm (1.25 in)	762 mm (30 in)	193-4786	4	119-3253	119-3253 (2)	119-3253	J250
32 mm (1.25 in)	762 mm (30 in)	229-7653	5	119-3253	119-3253 (3)	119-3253	J250
32 mm (1.25 in)	800 mm (31.5 in)	241-0282	5	119-3253	119-3253 (3)	119-3253	J250
32 mm (1.25 in)	813 mm (32 in)	7Y-6664 ⁽¹⁾	5	119-3253	119-3253 (3)	119-3253	J250
32 mm (1.25 in)	840 mm (33 in)	127-6106	4	119-3253	119-3253 (2)	119-3253	J250
32 mm (1.25 in)	914 mm (36 in)	106-6857 ⁽¹⁾	5	119-3253	119-3253 (3)	119-3253	J250
32 mm (1.25 in)	914 mm (36 in)	190-3332	5	119-3253	119-3253 (3)	119-3253	J250
32 mm (1.25 in)	914 mm (36 in)	229-7656	6	119-3253	119-3253 (4)	119-3253	J250
32 mm (1.25 in)	990 mm (39 in)	127-6108	5	119-3253	119-3253 (3)	119-3253	J250
32 mm (1.25 in)	1067 mm (42 in)	229-7659	7	119-3253	119-3253 (5)	119-3253	J250
32 mm (1.25 in)	1145 mm (45 in)	127-6110	6	119-3253	119-3253 (4)	119-3253	J250
32 mm (1.25 in)	1219 mm (48 in)	229-7662	7	119-3253	119-3253 (5)	119-3253	J250
32 mm (1.25 in)	1295 mm (51 in)	127-6112	6	119-3253	119-3253 (4)	119-3253	J250
35 mm (1.37 in)	559 mm (22 in)	276-5880 ⁽¹⁾	3	229-7086	220-9084	229-7085	K80
35 mm (1.37 in)	610 mm (24 in)	279-3909 ⁽¹⁾	3	229-7086	220-9084	229-7085	K80
35 mm (1.37 in)	610 mm (24 in)	239-2810	3	220-9086	220-9084	220-9085	K80
35 mm (1.37 in)	610 mm (24 in)	240-9602	3	220-9086	220-9084	220-9085	K80
35 mm (1.37 in)	610 mm (24 in)	279-4080	3	232-2086	220-9084	232-2085	K80
35 mm (1.37 in)	610 mm (24 in)	232-0022 ⁽¹⁾	1		220-9084		K80
35 mm (1.37 in)	610 mm (24 in)	253-0132 ⁽¹⁾	2		220-9084 (2)		K80
35 mm (1.37 in)	711 mm (28 in)	276-5881 ⁽¹⁾	4	229-7086	220-9084 (2)	229-7085	K80
35 mm (1.37 in)	762 mm (30 in)	279-3910 ⁽¹⁾	3	229-7086	220-9084	229-7085	K80
35 mm (1.37 in)	762 mm (30 in)	239-2774	4	220-9086	220-9084 (2)	220-9085	K80
35 mm (1.37 in)	762 mm (30 in)	240-9603	4	220-9086	220-9084 (2)	220-9085	K80
35 mm (1.37 in)	762 mm (30 in)	279-4081	4	232-2086	220-9084 (2)	232-2085	K80
35 mm (1.37 in)	762 mm (30 in)	232-0023 ⁽¹⁾	2		220-9084 (2)		K80
35 mm (1.37 in)	813 mm (32 in)	279-3911 ⁽¹⁾	3	229-7086	220-9084	229-7085	K80
35 mm (1.37 in)	864 mm (34 in)	276-5882 ⁽¹⁾	5	229-7086	220-9084 (3)	229-7085	K80
35 mm (1.37 in)	914 mm (36 in)	279-3912 ⁽¹⁾	4	229-7086	220-9084 (2)	229-7085	K80
35 mm (1.37 in)	914 mm (36 in)	239-2615	5	220-9086	220-9084 (3)	220-9085	K80
35 mm (1.37 in)	914 mm (36 in)	239-2619	5	220-9086	220-9084 (3)	220-9085	K80
35 mm (1.37 in)	914 mm (36 in)	240-9604	5	220-9086	220-9084 (3)	220-9085	K80
35 mm (1.37 in)	914 mm (36 in)	279-4082	5	232-2086	220-9084 (3)	232-2085	K80
35 mm (1.37 in)	914 mm (36 in)	232-0024 ⁽¹⁾	3		220-9084 (3)		K80
35 mm (1.37 in)	1016 mm (40 in)	271-5409 ⁽¹⁾	4	229-7086	220-9084 (2)	229-7085	K80
35 mm (1.37 in)	1016 mm (40 in)	276-5883 ⁽¹⁾	6	229-7086	220-9084 (4)	229-7085	K80
35 mm (1.37 in)	1067 mm (42 in)	239-2764	5	220-9086	220-9084 (3)	220-9085	K80
35 mm (1.37 in)	1067 mm (42 in)	240-9605	5	220-9086	220-9084 (3)	220-9085	K80

Excavators

Excavators Bucket Base Edge Assemblies (Cont'd.)

Base Edge Thickness	Bucket Width	Base Edge Assembly ⁽¹⁾	No. of Teeth	Adapters (qty)			Tip Size
				(LH)	(CTR)	(RH)	
35 mm (1.37 in)	1067 mm (42 in)	279-4083	5	232-2086	220-9084 (3)	232-2085	K80
35 mm (1.37 in)	1067 mm (42 in)	232-0025 ⁽¹⁾	3		220-9084 (3)		K80
35 mm (1.37 in)	1118 mm (44 in)	279-3913 ⁽¹⁾	4	229-7086	220-9084 (2)	229-7085	K80
35 mm (1.37 in)	1168 mm (46 in)	276-5884 ⁽¹⁾	7	229-7086	220-9084(5)	229-7085	K80
35 mm (1.37 in)	1219 mm (48 in)	271-5410 ⁽¹⁾	5	229-7086	220-9084(3)	229-7085	K80
35 mm (1.37 in)	1219 mm (48 in)	239-2784	6	220-9086	220-9084 (4)	220-9085	K80
35 mm (1.37 in)	1219 mm (48 in)	240-9606	6	220-9086	220-9084(4)	220-9085	K80
35 mm (1.37 in)	1219 mm (48 in)	279-4084	6	232-2086	220-9084 (4)	232-2085	K80
35 mm (1.37 in)	1219 mm (48 in)	232-0026 ⁽¹⁾	4		220-9084(4)		K80
35 mm (1.37 in)	1321 mm (52 in)	276-5885 ⁽¹⁾	8	229-7086	220-9084 (6)	229-7085	K80
35 mm (1.37 in)	1321 mm (52 in)	279-3914 ⁽¹⁾	5	229-7086	220-9084(3)	229-7085	K80
35 mm (1.37 in)	1372 mm (54 in)	240-9607	6	220-9086	220-9084 (4)	220-9085	K80
35 mm (1.37 in)	1372 mm (54 in)	279-4085	7	232-2086	220-9084(5)	232-2085	K80
35 mm (1.37 in)	1422 mm (56 in)	279-3915 ⁽¹⁾	5	229-7086	220-9084(3)	229-7085	K80
35 mm (1.37 in)	1524 mm (60 in)	292-8978 ⁽¹⁾	5	229-7086	220-9084(3)	229-7085	K80
40 mm (1.57 in)	559 mm (22 in)	276-5890 ⁽¹⁾	3	223-8096	220-9094	223-8095	K90
40 mm (1.57 in)	610 mm (24 in)	239-2819	3	220-9096	220-9094	220-9095	K90
40 mm (1.57 in)	610 mm (24 in)	239-2676	3	220-9096	220-9094	220-9095	K90
40 mm (1.57 in)	610 mm (24 in)	227-8740	3	220-9096	220-9094	220-9095	K90
40 mm (1.57 in)	610 mm (24 in)	279-4090	3	232-2096	220-9094	232-2095	K90
40 mm (1.57 in)	610 mm (24 in)	232-0027 ⁽¹⁾	1		220-9094		K90
40 mm (1.57 in)	711 mm (28 in)	276-5891 ⁽¹⁾	4	223-8096	220-9094 (2)	223-8095	K90
40 mm (1.57 in)	762 mm (30 in)	239-2818	4	220-9096	220-9094(2)	220-9095	K90
40 mm (1.57 in)	762 mm (30 in)	239-2634	4	220-9096	220-9094 (2)	220-9095	K90
40 mm (1.57 in)	762 mm (30 in)	228-6951	4	220-9096	220-9094(2)	220-9095	K90
40 mm (1.57 in)	762 mm (30 in)	279-4091	4	232-2096	220-9094 (2)	232-2095	K90
40 mm (1.57 in)	762 mm (30 in)	232-0028 ⁽¹⁾	2		220-9094(2)		K90
40 mm (1.57 in)	864 mm (34 in)	276-5892 ⁽¹⁾	5	223-8096	220-9094(3)	223-8095	K90
40 mm (1.57 in)	914 mm (36 in)	239-2716	5	220-9096	220-9094(3)	220-9095	K90
40 mm (1.57 in)	914 mm (36 in)	239-2545	5	220-9096	220-9094(3)	220-9095	K90
40 mm (1.57 in)	914 mm (36 in)	228-6952	5	220-9096	220-9094(3)	220-9095	K90
40 mm (1.57 in)	914 mm (36 in)	279-4092	5	232-2096	220-9094(3)	232-2095	K90
40 mm (1.57 in)	914 mm (36 in)	232-0029 ⁽¹⁾	3		220-9094(3)		K90
40 mm (1.57 in)	1016 mm (40 in)	276-5893 ⁽¹⁾	5	223-8096	220-9094(3)	223-8095	K90
40 mm (1.57 in)	1067 mm (42 in)	239-2792	5	220-9096	220-9094(3)	220-9095	K90
40 mm (1.57 in)	1067 mm (42 in)	239-2642	5	220-9096	220-9094(3)	220-9095	K90
40 mm (1.57 in)	1067 mm (42 in)	228-6953	5	220-9096	220-9094(3)	220-9095	K90
40 mm (1.57 in)	1067 mm (42 in)	279-4093	5	232-2096	220-9094(3)	232-2095	K90
40 mm (1.57 in)	1067 mm (42 in)	232-0030 ⁽¹⁾	3		220-9094(3)		K90
40 mm (1.57 in)	1168 mm (46 in)	276-5894 ⁽¹⁾	6	223-8096	220-9094 (4)	223-8095	K90
40 mm (1.57 in)	1219 mm (48 in)	279-3916 ⁽¹⁾	4	223-8096	220-9094(2)	223-8095	K90
40 mm (1.57 in)	1219 mm (48 in)	239-2801	6	220-9096	220-9094 (4)	220-9095	K90
40 mm (1.57 in)	1219 mm (48 in)	239-2650	6	220-9096	220-9094(4)	220-9095	K90
40 mm (1.57 in)	1219 mm (48 in)	225-6813	6	220-9096	220-9094 (4)	220-9095	K90
40 mm (1.57 in)	1219 mm (48 in)	279-4094	6	232-2096	220-9094(4)	232-2095	K90
40 mm (1.57 in)	1219 mm (48 in)	238-3199 ⁽¹⁾	3		220-9094(3)		K90
40 mm (1.57 in)	1219 mm (48 in)	232-0031 ⁽¹⁾	4		220-9094 (4)		K90
40 mm (1.57 in)	1321 mm (52 in)	276-5895 ⁽¹⁾	7	223-8096	220-9094(5)	223-8095	K90

Excavators Bucket Base Edge Assemblies (Cont'd.)

Base Edge Thickness	Bucket Width	Base Edge Assembly ⁽¹⁾	No. of Teeth	Adapters (qty)			Tip Size
				(LH)	(CTR)	(RH)	
40 mm (1.57 in)	1372 mm (54 in)	235-2498	6	220-9096	220-9094 (4)	220-9095	K90
40 mm (1.57 in)	1372 mm (54 in)	279-4095	7	232-2096	220-9094(5)	232-2095	K90
40 mm (1.57 in)	1372 mm (54 in)	232-0032 ⁽¹⁾	5		220-9094(5)		K90
45 mm (1.77 in)	610 mm (24 in)	241-6724	3	220-9106	220-9104	220-9105	K100
45 mm (1.77 in)	610 mm (24 in)	279-4100	3	232-2106	220-9104	232-2105	K100
45 mm (1.77 in)	724 mm (28.5 in)	279-4121 ⁽¹⁾	3	232-0106	220-9104	232-0105	K100
45 mm (1.77 in)	762 mm (30 in)	241-6725	3	220-9106	220-9104	220-9105	K100
45 mm (1.77 in)	762 mm (30 in)	279-4101	3	232-2106	220-9104	232-2105	K100
45 mm (1.77 in)	762 mm (30 in)	232-0033 ⁽¹⁾	1		220-9104		K100
45 mm (1.77 in)	876 mm (34.5 in)	279-4122 ⁽¹⁾	4	232-0106	220-9104 (2)	232-0105	K100
45 mm (1.77 in)	914 mm (36 in)	241-6726	4	220-9106	220-9104 (2)	220-9105	K100
45 mm (1.77 in)	914 mm (36 in)	279-4102	4	232-2106	220-9104 (2)	232-2105	K100
45 mm (1.77 in)	914 mm (36 in)	232-0034 ⁽¹⁾	2		220-9104 (2)		K100
45 mm (1.77 in)	1029 mm (40.5 in)	279-4123 ⁽¹⁾	5	232-0106	220-9104 (3)	232-0105	K100
45 mm (1.77 in)	1067 mm (42 in)	241-6727	5	220-9106	220-9104 (3)	220-9105	K100
45 mm (1.77 in)	1067 mm (42 in)	279-4103	5	232-2106	220-9104 (3)	232-2105	K100
45 mm (1.77 in)	1067 mm (42 in)	232-0039 ⁽¹⁾	3		220-9104 (3)		K100
45 mm (1.77 in)	1181 mm (46.5 in)	279-4124 ⁽¹⁾	5	232-0106	220-9104 (3)	232-0105	K100
45 mm (1.77 in)	1219 mm (48 in)	241-6728	5	220-9106	220-9104 (3)	220-9105	K100
45 mm (1.77 in)	1219 mm (48 in)	279-4104	5	232-2106	220-9104 (3)	232-2105	K100
45 mm (1.77 in)	1219 mm (48 in)	232-0035 ⁽¹⁾	3		220-9104 (3)		K100
45 mm (1.77 in)	1334 mm (52.5 in)	279-4125 ⁽¹⁾	6	232-0106	220-9104 (4)	232-0105	K100
45 mm (1.77 in)	1372 mm (54 in)	241-6729	6	220-9106	220-9104 (4)	220-9105	K100
45 mm (1.77 in)	1372 mm (54 in)	279-4105	6	232-2106	220-9104 (4)	232-2105	K100
45 mm (1.77 in)	1372 mm (54 in)	232-0036 ⁽¹⁾	4		220-9104 (4)		K100
45 mm (1.77 in)	1486 mm (58.5 in)	279-4126 ⁽¹⁾	7	232-0106	220-9104 (5)	232-0105	K100
45 mm (1.77 in)	1524 mm (60 in)	241-6730	7	220-9106	220-9104 (5)	220-9105	K100
45 mm (1.77 in)	1524 mm (60 in)	279-4106	7	232-2106	220-9104 (5)	232-2105	K100
45 mm (1.77 in)	1524 mm (60 in)	232-0037 ⁽¹⁾	5		220-9104 (5)		K100
45 mm (1.77 in)	1676 mm (66 in)	242-1794	7	220-9106	220-9104 (5)	220-9105	K100
45 mm (1.77 in)	1676 mm (66 in)	279-4107	7	232-2106	220-9104 (5)	232-2105	K100
45 mm (1.77 in)	1676 mm (66 in)	232-0038 ⁽¹⁾	5		220-9104 (5)		K100
60 mm (2.36 in)	762 mm (30 in)	258-4571	3	232-0116	232-0114	232-0115	K110
60 mm (2.36 in)	762 mm (30 in)	241-6717	3	232-0116	232-0114	232-0115	K110
60 mm (2.36 in)	762 mm (30 in)	279-4110	3	264-2116	232-0114	264-2115	K110
60 mm (2.36 in)	762 mm (30 in)	253-0103 ⁽¹⁾	1		232-0114		K110
60 mm (2.36 in)	813 mm (32 in)	279-9956	3	264-2116	232-0114	264-2115	K110
60 mm (2.36 in)	914 mm (36 in)	260-9411 ⁽¹⁾	4	232-0114	232-0114 (2)	232-0114	K110
60 mm (2.36 in)	914 mm (36 in)	258-4572	4	232-0116	232-0114 (2)	232-0115	K110
60 mm (2.36 in)	914 mm (36 in)	244-3895	4	232-0116	232-0114 (2)	232-0115	K110
60 mm (2.36 in)	914 mm (36 in)	279-4111	4	264-2116	232-0114 (2)	264-2115	K110
60 mm (2.36 in)	914 mm (36 in)	279-9957	4	264-2116	232-0114 (2)	264-2115	K110
60 mm (2.36 in)	914 mm (36 in)	253-0104 ⁽¹⁾	1		232-0114		K110
60 mm (2.36 in)	1054 mm (41.5 in)	260-9413 ⁽¹⁾	4	232-0114	232-0114 (2)	232-0114	K110
60 mm (2.36 in)	1067 mm (42 in)	258-4573	4	232-0116	232-0114 (2)	232-0115	K110
60 mm (2.36 in)	1067 mm (42 in)	241-6719	4	232-0116	232-0114 (2)	232-0115	K110
60 mm (2.36 in)	1067 mm (42 in)	279-4112	4	264-2116	232-0114 (2)	264-2115	K110
60 mm (2.36 in)	1067 mm (42 in)	279-9958	4	264-2116	232-0114 (2)	264-2115	K110

Excavators

Excavators Bucket Base Edge Assemblies (Cont'd.)

Base Edge Thickness	Bucket Width	Base Edge Assembly ⁽¹⁾	No. of Teeth	Adapters (qty)			Tip Size
				(LH)	(CTR)	(RH)	
60 mm (2.36 in)	1067 mm (42 in)	253-0105 ⁽¹⁾	2		232-0114 (2)		K110
60 mm (2.36 in)	1219 mm (48 in)	260-9414 ⁽¹⁾	5	232-0114	232-0114 (3)	232-0114	K110
60 mm (2.36 in)	1219 mm (48 in)	258-4574	5	232-0116	232-0114 (3)	232-0115	K110
60 mm (2.36 in)	1219 mm (48 in)	241-6720	5	232-0116	232-0114 (3)	232-0115	K110
60 mm (2.36 in)	1219 mm (48 in)	279-4113	5	264-2116	232-0114 (3)	264-2115	K110
60 mm (2.36 in)	1219 mm (48 in)	279-9959	5	264-2116	232-0114 (3)	264-2115	K110
60 mm (2.36 in)	1219 mm (48 in)	253-0106 ⁽¹⁾	3		232-0114(3)		K110
60 mm (2.36 in)	1219 mm (48 in)	257-1771 ⁽¹⁾	3		232-0114(3)		K110
60 mm (2.36 in)	1372 mm (54 in)	260-9415 ⁽¹⁾	6	232-0114	232-0114 (4)	232-0114	K110
60 mm (2.36 in)	1372 mm (54 in)	258-4575	5	232-0116	232-0114(3)	232-0115	K110
60 mm (2.36 in)	1372 mm (54 in)	241-6721	5	232-0116	232-0114(3)	232-0115	K110
60 mm (2.36 in)	1372 mm (54 in)	279-4114	5	264-2116	232-0114(3)	264-2115	K110
60 mm (2.36 in)	1372 mm (54 in)	279-9960	5	264-2116	232-0114(3)	264-2115	K110
60 mm (2.36 in)	1372 mm (54 in)	253-0107 ⁽¹⁾	3		232-0114(3)		K110
60 mm (2.36 in)	1372 mm (54 in)	253-0108 ⁽¹⁾	3		232-0114(3)		K110
60 mm (2.36 in)	1524 mm (60 in)	260-9416 ⁽¹⁾	6	232-0114	232-0114 (4)	232-0114	K110
60 mm (2.36 in)	1524 mm (60 in)	258-4576	6	232-0116	232-0114(4)	232-0115	K110
60 mm (2.36 in)	1524 mm (60 in)	241-6722	6	232-0116	232-0114 (4)	232-0115	K110
60 mm (2.36 in)	1524 mm (60 in)	279-4115	6	264-2116	232-0114(4)	264-2115	K110
60 mm (2.36 in)	1524 mm (60 in)	279-9961	6	264-2116	232-0114 (4)	264-2115	K110
60 mm (2.36 in)	1524 mm (60 in)	253-0109 ⁽¹⁾	4		232-0114(4)		K110
60 mm (2.36 in)	1524 mm (60 in)	253-0110 ⁽¹⁾	4		232-0114 (4)		K110
60 mm (2.36 in)	1600 mm (63 in)	253-0111 ⁽¹⁾	4		232-0114(4)		K110
60 mm (2.36 in)	1676 mm (66 in)	260-9417 ⁽¹⁾	7	232-0114	232-0114(5)	232-0114	K110
60 mm (2.36 in)	1676 mm (66 in)	258-4577	7	232-0116	232-0114(5)	232-0115	K110
60 mm (2.36 in)	1676 mm (66 in)	241-6723	7	232-0116	232-0114(5)	232-0115	K110
60 mm (2.36 in)	1676 mm (66 in)	279-4116	7	264-2116	232-0114(5)	264-2115	K110
60 mm (2.36 in)	1676 mm (66 in)	253-0112 ⁽¹⁾	3		232-0114(3)		K110
60 mm (2.36 in)	1676 mm (66 in)	253-0113 ⁽¹⁾	4		232-0114 (4)		K110
60 mm (2.36 in)	1676 mm (66 in)	253-0114 ⁽¹⁾	4		232-0114(4)		K110
60 mm (2.36 in)	1727 mm (68 in)	304-3114	7	264-2116	232-0114(5)	264-2115	K110
60 mm (2.36 in)	1727 mm (68 in)	253-0115 ⁽¹⁾	4		232-0114 (4)		K110
60 mm (2.36 in)	1727 mm (68 in)	253-0116 ⁽¹⁾	4		232-0114(4)		K110
60 mm (2.36 in)	1829 mm (72 in)	260-9418 ⁽¹⁾	7	232-0114	232-0114(5)	232-0114	K110
60 mm (2.36 in)	1829 mm (72 in)	258-4578	7	232-0116	232-0114(5)	232-0115	K110
60 mm (2.36 in)	1829 mm (72 in)	244-3889	7	232-0116	232-0114(5)	232-0115	K110
60 mm (2.36 in)	1829 mm (72 in)	279-4117	7	264-2116	232-0114(5)	264-2115	K110
60 mm (2.36 in)	1829 mm (72 in)	253-0117 ⁽¹⁾	5		232-0114(5)		K110
60 mm (2.36 in)	1880 mm (74 in)	279-9963	7	264-2116	232-0114(5)	264-2115	K110
60 mm (2.36 in)	1980 mm (78 in)	260-9419 ⁽¹⁾	8	232-0114	232-0114 (6)	232-0114	K110
70 mm (2.76 in)	991 mm (39 in)	279-9971	3	264-2136	232-0130	264-2135	K130
70 mm (2.76 in)	1040 mm (41 in)	253-0126 ⁽¹⁾	1		232-0130		K130
70 mm (2.76 in)	1219 mm (48 in)	253-9075	4	232-0132	232-0130 (2)	232-0131	K130
70 mm (2.76 in)	1219 mm (48 in)	279-9972	4	264-2136	232-0130(2)	264-2135	K130
70 mm (2.76 in)	1219 mm (48 in)	253-0127 ⁽¹⁾	2		232-0130 (2)		K130
70 mm (2.76 in)	1372 mm (54 in)	253-9076	4	232-0132	232-0130(2)	232-0131	K130
70 mm (2.76 in)	1372 mm (54 in)	279-9973	4	264-2136	232-0130 (2)	264-2135	K130
70 mm (2.76 in)	1372 mm (54 in)	253-0128 ⁽¹⁾	3		232-0130(3)		K130

Excavators Bucket Base Edge Assemblies (Cont'd.)

Base Edge Thickness	Bucket Width	Base Edge Assembly ⁽¹⁾	No. of Teeth	Adapters (qty)			Tip Size
				(LH)	(CTR)	(RH)	
70 mm (2.76 in)	1524 mm (60 in)	253-9077	5	232-0132	232-0130(3)	232-0131	K130
70 mm (2.76 in)	1524 mm (60 in)	279-9974	5	264-2136	232-0130(3)	264-2135	K130
70 mm (2.76 in)	1524 mm (60 in)	265-3398*	4	232-0130	232-0130 (2)	232-0130	K130
70 mm (2.76 in)	1550 mm (61 in)	257-1752 ⁽¹⁾	3		232-0130(3)		K130
70 mm (2.76 in)	1676 mm (66 in)	279-9975	5	264-2136	232-0130(3)	264-2135	K130
70 mm (2.76 in)	1905 mm (75 in)	257-1753 ⁽¹⁾	4		232-0130 (4)		K130
70 mm (2.76 in)	1930 mm (76 in)	265-3400 ⁽¹⁾	6	232-0130	232-0130(4)	232-0130	K130
70 mm (2.76 in)	1981 mm (78 in)	279-9976	6	264-2136	232-0130 (4)	264-2135	K130
70 mm (2.76 in)	1981 mm (78 in)	257-1755 ⁽¹⁾	4		232-0130 (4)		K130
80 mm (3.15 in)	1067 mm (42 in)	293-6380	3	264-2156	195-9154	264-2155	K150
80 mm (3.15 in)	1372 mm (54 in)	293-6381	4	264-2156	195-9154 (2)	264-2155	K150
80 mm (3.15 in)	1676 mm (66 in)	293-6382	4	264-2156	195-9154 (2)	264-2155	K150
80 mm (3.15 in)	1778 mm (70 in)	264-2027 ⁽¹⁾	3		195-9154 (3)		K150
80 mm (3.15 in)	1981 mm (78 in)	293-6383	5	264-2156	195-9154 (3)	264-2155	K150
80 mm (3.15 in)	2007 mm (79 in)	260-1244	4	195-9156	195-9154 (2)	195-9155	K150
80 mm (3.15 in)	2007 mm (79 in)	260-1158 ⁽¹⁾	4	195-9156	195-9154 (2)	195-9155	K150
80 mm (3.15 in)	2083 mm (82 in)	264-2035 ⁽¹⁾	2		195-9154 (2)		K150
80 mm (3.15 in)	2108 mm (83 in)	260-1241	4	195-9156	195-9154 (2)	195-9155	K150
80 mm (3.15 in)	2108 mm (83 in)	264-2031 ⁽¹⁾	4		195-9154 (4)		K150
80 mm (3.15 in)	2261 mm (89 in)	264-2043 ⁽¹⁾	4		195-9154 (4)		K150
80 mm (3.15 in)	2286 mm (90 in)	264-2039 ⁽¹⁾	3		195-9154 (3)		K150
80 mm (3.15 in)	2438 mm (96 in)	264-2033 ⁽¹⁾	5		195-9154 (5)		K150
80 mm (3.15 in)	2464 mm (97 in)	264-2029 ⁽¹⁾	3		195-9154 (3)		K150
80 mm (3.15 in)	2464 mm (97 in)	264-2037 ⁽¹⁾	2		195-9154 (2)		K150
80 mm (3.15 in)	2489 mm (98 in)	264-2041 ⁽¹⁾	3		195-9154 (3)		K150
80 mm (3.15 in)	2540 mm (100 in)	264-2045 ⁽¹⁾	4		195-9154 (4)		K150
90 mm (3.54 in)	2311 mm (91 in)	293-6388	6	264-2176	232-2170 (4)	264-2175	K170
90 mm (3.54 in)	2311 mm (91 in)	293-6392*	5	232-2170	232-2170 (3)	232-2170	K170
90 mm (3.54 in)	2388 mm (94 in)	264-2051 ⁽¹⁾	4		232-2170 (4)		K170
90 mm (3.54 in)	2438 mm (96 in)	293-6389	6	264-2176	232-2170 (4)	264-2175	K170
90 mm (3.54 in)	2489 mm (98 in)	264-2047 ⁽¹⁾	3		232-2170 (3)		K170
90 mm (3.54 in)	2489 mm (98 in)	264-2049 ⁽¹⁾	3		232-2170 (3)		K170

Excavator Bucket Base Edges

Thickness	Length at Front	Width	Bevel Angle	Part Number
80 mm (3.15 in)	2363 mm (93.0 in)	500 mm (19.7 in)	22.5	119-3174
70 mm (2.76 in)	1999 mm (78.7 in)	380 mm (15.0 in)	22.5	6I-5303
70 mm (2.76 in)	1185 mm (46.7 in)	380 mm (15.0 in)	22.5	100-6198
60 mm (2.36 in)	1954 mm (76.9 in)	380 mm (15.0 in)	22.5	108-1066
50 mm (1.97 in)	1784 mm (70.2 in)	400 mm (15.75 in)	22.5	137-4104
50 mm (1.97 in)	1369 mm (53.9 in)	400 mm (15.75 in)	22.5	137-4101
50 mm (1.97 in)	1646 mm (64.8 in)	325 mm (12.8 in)	22.5	9C-3955
45 mm (1.77 in)	1829 mm (72.0 in)	305 mm (12.0 in)	22.5	135-3164
45 mm (1.77 in)	1829 mm (72.0 in)	305 mm (12.0 in)	22.5	232-2924

Excavators

Excavator Bucket Base Edges (Cont'd.)

Thickness	Length at Front	Width	Bevel Angle	Part Number
45 mm (1.77 in)	1689 mm (66.5 in)	305 mm (12.0 in)	22.5	135-3163
45 mm (1.77 in)	1658 mm (65.3 in)	305 mm (12.0 in)	22.5	127-2317
45 mm (1.77 in)	1226 mm (48.3 in)	305 mm (12.0 in)	22.5	127-2290
40 mm (1.57 in)	1830 mm (72.0 in)	300 mm (11.8 in)	22.5	232-2923
40 mm (1.57 in)	1524 mm (60.0 in)	300 mm (11.8 in)	22.5	227-8203
40 mm (1.57 in)	1484 mm (58.4 in)	300 mm (11.8 in)	22.5	129-1540
40 mm (1.57 in)	1442 mm (56.8 in)	306 mm (12.0 in)	22.5	135-8636
40 mm (1.57 in)	1207 mm (47.5 in)	300 mm (11.8 in)	22.5	129-5715
38 mm (1.50 in)	1727 mm (68.0 in)	306 mm (12.0 in)	22.5	135-8637
38 mm (1.50 in)	1575 mm (62.0 in)	254 mm (10.0 in)	35	5V-0166
38 mm (1.50 in)	1045 mm (41.1 in)	254 mm (10.0 in)	35	8K-0668
36 mm (1.42 in)	1349 mm (53.1 in)	290 mm (11.4 in)	22.5	7I-6713
36 mm (1.42 in)	1054 mm (41.5 in)	290 mm (11.4 in)	22.5	100-4150
32 mm (1.25 in)	1725 mm (67.9 in)	282 mm (11.1 in)	22.5	8R-2662
32 mm (1.25 in)	1676 mm (66.0 in)	305 mm (12.0 in)	22.5	135-3165
32 mm (1.25 in)	1829 mm (72.0 in)	305 mm (12.0 in)	22.5	135-3167
32 mm (1.25 in)	1090 mm (42.9 in)	200 mm (7.88 in)	22.5	086-0814
32 mm (1.25 in)	1000 mm (39.4 in)	200 mm (7.88 in)	22.5	086-0813
32 mm (1.25 in)	920 mm (36.2 in)	200 mm (7.88 in)	22.5	085-9510
32 mm (1.25 in)	821 mm (32.3 in)	200 mm (7.88 in)	22.5	086-0809
32 mm (1.25 in)	700 mm (27.6 in)	200 mm (7.88 in)	22.5	086-0812
32 mm (1.25 in)	600 mm (23.6 in)	200 mm (7.88 in)	22.5	086-0811
25 mm (1.00 in)	1960 mm (77.2 in)	230 mm (9.10 in)	22.5	5W-7957
20 mm (0.79 in)	2269 mm (89.3 in)	200 mm (8.66 in)	22.5	8U-2639
20 mm (0.79 in)	1110 mm (43.7 in)	220 mm (8.66 in)	22.5	7Y-6601

K Series Tips

Cat K Series excavator bucket tips use a new vertical retention system that allows quick and easy tip changes. Providing a new locking interface at every tip change to improve retention reliability. Lower profile improves penetration and wear life.



General Duty Tip

- General excavation and loading in moderate impact/abrasion.
- Moderate penetration.
- Symmetric, top and bottom self-sharpening cavities.



Extra Duty Tip

- General excavation and loading w/more wear material.
- Moderate impact, moderate penetration.
- Top self-sharpening cavity.



Penetration Tip

- For harder-to-penetrate, moderate impact, lower abrasion.
- Very good penetration.
- Top rib, bottom cavity to stay sharp.



Penetration Plus Tip

- High impact trenching, excavation and loading.
- Good penetration, stays sharp.
- Symmetric, ribbed top and bottom.



Spike Tip

- For maximum penetration, especially in cohesive material.
- Stays sharp for enhanced wear life.
- Top and bottom rib design.



Double Spike Tip

- For harder-to-penetrate, fracturable materials.
- Very good penetration, stays sharp.
- Use in corner positions with Spike Centers.
- Length matches spike.

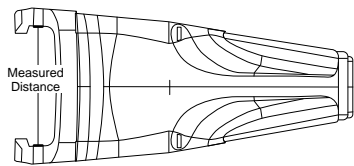


Wide Tip

- For easy-to-penetrate trenching applications.
- Low impact.
- Smooth floor trenches.

Excavator Tips - K Series™

K Family Identification



To identify tip or adapter family simply measure the distance between the "ears" of the tip in millimeters and round to the nearest 5 mm.

Ex: 80 mm (3.15") = K80

87.4 mm (3.44") = K90

96.1 mm (3.78") = K100

Tip Chart

	K80	K90	K100	K110	K130	K150	K170
General Duty	220-9089	220-9099	220-9109	286-2117	220-9139	229-7159	232-0179
Extra Duty	220-9081	220-9091	220-9101	286-2112	264-2131	264-2151	264-2171
Penetration	220-9082	220-9092	220-9102	286-2113	220-9132	229-7152	232-0172
Penetration Plus	220-9083	220-9093	220-9103	286-2114	220-9133	229-7153	232-0173
Spike	220-9087	220-9097	220-9107	286-2115	220-9137	229-7157	232-0177
Double Spike	220-9088	220-9098	220-9108	286-2116	220-9138	229-7158	232-0178
Wide	222-1080	222-1090	223-8100	286-2111	223-8130	195-5151	223-8170
Retainer	220-9090	220-9090	220-9090	286-2110	220-9130	233-7150	232-0170
SLAG Retainer				309-1119	232-2139	232-2159	232-2179

K Family Identification (Cont'd.)

Tips or Points

Description	J300	K80	J350	K90	J400	K100	J460	K110	J550	K130	J600	K150	J700	K170
J Wide = K Wide	107-3300	222-1080	107-3350	222-1090	107-3400	223-8100	107-3450	286-2111	107-3550	223-8130	N/A	195-5151	N/A	223-8170
J Heavy Duty Long = K Extra Duty	9N-4302	220-9081	9N-4352	220-9091	8E-4402	220-9101	9N-4452	286-2112	9N-4552	264-2131	7Y-0602	264-2151	9U-9702	264-2171
J Penetration = K Penetration	9J-4309	220-9082	9J-4359	220-9092	6Y-7409	220-9102	9W-8459	286-2113	9W-8559	220-9132	7I-7609	229-7152	4T-4709	232-0172
J Penetration Plus = K Penetration Plus	183-5300	220-9083	168-1359	220-9093	168-1409	220-9103	159-0459	286-2114	159-0559	220-9133	159-0607	229-7153	171-1709	232-0173
J Long Sharp = K Spike	168-1300	220-9087	168-1350	220-9097	159-0400	220-9107	159-0450	286-2115	159-0550	220-9137	159-0600	229-7157	136-8700	232-0177
J Twin Sharp = K Double Spike	135-9308	220-9088	135-9357	309-1098	135-9408	220-9108	138-6458	286-2116	138-6558	220-9138	135-9608	229-7158	N/A	232-0178
J Long = K General Duty	1U-3302	220-9089	1U-3352	220-9099	7T-3402	220-9109	9W-8452	286-2117	9W-8552	220-9139	6I-6602	229-7159	4T-4702	232-0179
J HDP = K Heavy Penetration	135-9300	222-1081	144-1358	222-1091	135-9400	223-8101	138-6451	286-2118	138-6552	264-2132	135-9600	264-2152	135-9700	264-2172
J HD Abrasion = K Heavy Abrasion	9N-4303	222-1082	9N-4353	222-1092	7T-3403	223-8102	9N-4453	286-2119	6Y-2553	223-8132	6I-66036I-6603	229-7156	9U-9703	232-2178
Extra Duty Long Life (ARM)	125-8302	229-7080	135-9352	232-0090	116-7402	232-0100	101-9054	315-0110	101-9055	232-2130	107-8602	232-0150	107-2001	233-7170
Penetration Long Life (ARM)	125-8309	229-7081	119-9359	232-0091	124-7409	232-0101	116-7459	315-0115	113-0559	232-2131	119-9609	232-0151	N/A	233-7171
Short									9W-8551	232-2137	6I-6601	232-2157		
Rock Chisel Tip							317-4456		338-0550		338-0600			
Retainer		220-9090		220-9090		220-9090		286-2110		220-9130		233-7150		232-0170
SLAG Retainer								309-1119		232-2139		232-2159		232-2179

Excavator Tips - K Series™

K Family Identification (Cont'd.)

Adapters or Shanks

Description	J300	K80		J350	K90		J400	K100		J460	K110	
HEX Two Strap Center (Edge Thickness)	8E-9490	220-9084	(36 mm)	6I-6354	220-9094	(40 mm)	6I-6404	220-9104	(45 mm)	159-0464	309-1114	(60 mm)
HEX Two Strap Corner RH			(36 mm)	6I-6355	220-9095	(40 mm)	6I-6405	220-9105	(45 mm)	159-0465	309-1115	(60 mm)
HEX Two Strap Corner LH			(36 mm)	6I-6356	220-9096	(40 mm)	6I-5406	220-9106	(45 mm)	159-0466	309-1116	(60 mm)

Description	J550	K130		J600	K150		J700	K170	
HEX Two Strap Center (Edge Thickness)	153-1696	232-0130	(70 mm)	113-9604	195-9154	(80 mm)	222-7700	232-2170	(90 mm)
HEX Two Strap Corner RH	N/A	232-0131	(70 mm)	113-9605	195-9155	(80 mm)	N/A	232-2171	(90 mm)
HEX Two Strap Corner LH	N/A	232-0132	(70 mm)	113-9606	195-9156	(80 mm)	N/A	232-2172	(90 mm)

Tips

Cat excavator bucket tips are side pinned for excellent tip retention and quick, easy tip changing. The pin hole is located through the tip sides which are the areas of least wear.



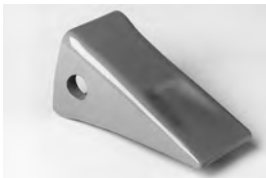
Penetration Long Life Tip

- Increases wear life.
- Enhances penetration due to self-sharpening tip.
- Includes ARM strips.



Long Tip

- General duty in low-abrasion applications.



Short Tip

- Provides more strength.
- Use to prevent breakage.



Wide Tip

- Provides less penetration.
- Provides a cleaner floor and less spillage.



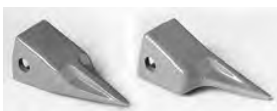
Penetration Tip

- Provides better penetration.
- Contains less wear material



Penetration Plus Tip

- Provides a good combination of strength and wear life.
- For use where penetration and increased wear life are desired.
- For use in most jobs.



Sharp Corner Tip/Sharp Center Tip

- Provides the best penetration.
- Contains the least wear material.

Excavator Tips - Side Pin Style

Tips (Cont'd.)



Twin Sharp Tip

- For use for severe digging in rock and frost.
- Use in combination with sharp tips.



Long Sharp Tip

- Provides more wear material than standard sharp tip.
- For use when penetration is the primary concern.



Heavy Duty Long Life Tip

- Contains ARM which is positioned to increase wear life and penetration.
- Not for use in extreme impact applications.



Heavy Duty Long Tip

- Provides more wear material and greater strength than long tip.
- Has a streamlined-profile for better penetration.



Heavy Duty Abrasion Tip

- Contains greater wear material.
- Not for use in high impact applications.

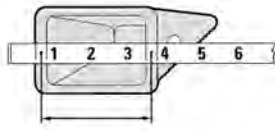


Light Duty Long Tip

- For use in low impact with low to medium abrasiveness.
- Self-sharpening design and symmetrical shape.

Excavator Tips - Side Pin Style

J Family Identification



To identify the tip or adapter family, place a tape measure across the back of the tip at the midpoint of the side walls. For example:

76.20 mm (3.0") measurement = J300 Family

88.90 mm (3.5") measurement = J350 Family

139.70 mm (5.5") measurement = J550 Family

In addition, the second and third to last locations in the part number often times refer to the J size.

Example: 9W-8551 = J550 Family

	J200	J225	J250	J300	J350	J400	J450/J460	J550	J600	J700	J800
Long	1U-3202	6Y-3222	1U-3252	1U-3302	1U-3352	7T-3402	9W-8452	9W-8552	6I-6602	4T-4702	6I-8802
Short		6Y-6221	1U-3251	1U-3301	1U-3351	7T-3401	9W-8451	9W-8551	6I-6601		
Light Duty Long	195-9209		168-1253	168-1301	168-1351	168-1401	168-1451				
Wide	109-9200	186-3010	208-5254	107-3300	107-3350	107-3400	107-3450	107-3550			
Penetration	1U-3209	6Y-8229	9J-4259	9J-4309	9J-4359	6Y-7409	9W-8459	9W-8559	7I-7609	4T-4709	117-6809
Penetration Long Life				125-8309	119-9359	124-7409	116-7459	113-0559	119-9609		
Penetration Plus				183-5300	168-1359	168-1409	159-0459	159-0559	159-0607	171-1709	
Sharp Corner	9W-8208	6Y-7228	9W-8258	9W-8308	9W-2358	6Y-5408	6I-8458	6I-8558	107-8608		
Sharp Center	9W-8209	6Y-7229	9W-8259	9W-8309	9W-2359	6Y-5409	7T-8459	9W-6559	107-8609		
Twin Sharp	135-8208	135-8228	135-8258	135-9308	135-9357	135-9408	138-6458	222-7553	222-7603		
Long Sharp				168-1300	168-1350	159-0400	159-0450	159-0550	159-0600	136-8700	
Heavy Duty Long		8E-4222	9N-4252	9N-4302	9N-4352	8E-4402	9N-4452	9N-4552	7Y-0602	9U-9702	
Heavy Duty Long Life			135-8252	125-8302	135-9352	116-7402	101-9054	101-9055	107-8602	107-2001	117-6802
Heavy Duty Abrasion		6Y-6223	9N-4253	9N-4303	9N-4353	7T-3403	9N-4453	6Y-2553	6I-6603	9U-9703	6I-8803
Heavy Duty Penetration				135-9300	144-1358	135-9400	138-6451	138-6552	135-9600	135-9700	135-9800
Standard Pin	8E-6208										
Standard Retainer	8E-6209										
Heavy Duty Pin		132-4762	132-4763	132-4766	114-0358	116-7408	114-0468 ⁽¹⁾	107-3378	113-9608	113-4708	134-1808
Heavy Duty Retainer Assembly		149-5733	149-5733	149-5733	114-0359	116-7409	107-3469 ⁽¹⁾	107-8559	113-9609	113-4709	134-1809
Rock Chisel Tip							317-4456	338-0550	338-0600		

Excavator Sidecutters

Sidecutters

- Increases bucket width and capacity.
- Protects bucket sides.
- Improves sidebar penetration.



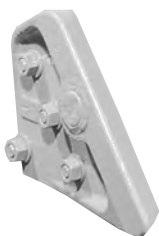
Blade Type 1 Sidecutter

- For use in most conditions.



One Piece Sidecutter

- For use in most soil conditions.
- Widens bite width.
- Provides good protection to bucket sides.



Heavy Duty Sidecutter

- For use in tough digging conditions.
- Contains more wear material and covers more of the sidebar for enhanced protection.
- Profile enhances digging performance.



Combination Blade Sidecutter

- For use in light to moderate conditions.



Tooth Type Sidecutter

- For use in tough conditions.
- Uses the same tips as the cutting edge.



Strike-Off Sidecutter

- For use in all conditions.
- Does not add width to bucket.

Excavator Sidecutters

Sidecutters

Type	LH Cutter	RH Cutter	Bolt	Nut	Washer
307, 308					
Sidecutters	153-1647	153-1646	096-7074	093-7676	
312, 314					
Sidecutters	7Y-0203	7Y-0204	096-7074	093-7676	
315					
Sidecutters	096-4747	096-4748	8T-0380	7X-0851	
318					
Sidecutters	7Y-0358	7Y-0357	6I-6371	2J-3507	
Sidecutters	357-2697	357-2696	1D-4635	2J-3507	3K-5234
B, S, C, CB, D, DB					
Sidecutters	7Y-0358	7Y-0357	6I-6371	2J-3507	
Sidecutters	357-2697	357-2696	1D-4635	2J-3507	3K-5234
F, TB, VB, HB					
Sidecutters	326-3406	326-3405	1D-4637	2J-3507	3K-5234
J, JB					
Sidecutters	326-3406	326-3405	7X-0410	2J-3507	3K-5234
JC					
Sidecutters	326-3406	326-3405	7X-0410	2J-3507	3K-5234

Note: These new style sidecutters will fit on older style HEX buckets, but the old style sidecutters and sidebar protectors will not fit on new D and E Series buckets.

Type	LH	RH	Blade	LH Upper	RH Upper	Bolt	Nut	Washer
Later B Linkage, C, CB, D, DB, S Linkages								
One Piece	7Y-0358	7Y-0357				1D-4635 (6)	2J-3507 (6)	3K-5234 (6)
Strike-off	174-8044	232-2140		232-2140	174-8044	1D-4635 (10)	2J-3507 (10)	3K-5234 (10)
Blade	8J-9614	8J-9615				7Y-2146 (6)	2J-3507 (6)	3K-5234 (6)
Combination	8J-9614	8J-9615	4T-2886 (2)			7Y-2146 (6)	2J-3507 (6)	3K-5234 (6)
Blade Hardware						1J-6762 (8)	2J-3506 (8)	
Heavy Duty	232-2148	232-2147				1D-4635 (8)	2J-3507 (8)	3K-5234 (8)
Tooth	8J-4952 ⁽¹⁾	8J-4951 ⁽¹⁾				7Y-2146 (6)	2J-3507 (6)	3K-5234 (6)
Use J350 Tip (i.e. 1U-3352) + 114-0358 Pin + 114-0359 Retainer with Tooth Sidecutter								
Early E, F, G, H Linkages								
Strike-off	8J-5188	8J-5188				1D-4635 (4)	2J-3507 (4)	3K-5234 (4)
Blade	8J-9826	8J-9825				7Y-1136 (10)	2J-3507 (10)	3K-5234 (10)
Combination	8J-9826	8J-9825	4T-6664 (2)			7Y-1136 (10)	2J-3507 (10)	3K-5234 (10)
Blade Hardware						4J-9208 (8)	2J-3507 (8)	
Tooth	8J-4948	8J-4947				7Y-1136 (10)	2J-3507 (10)	3K-5234 (10)
Use J550 Tip (i.e. 9W-8552) + 107-3378 Pin + 107-8554 Retainer with Tooth Sidecutter								
Early J Linkage								
Strike-off	8J-5188	8J-5188				7Y-2146 (4)	2J-3507 (4)	3K-5234 (4)
Blade	8J-9826	8J-9825				1D-4637 (10)	2J-3507 (10)	3K-5234 (10)
Combination	8J-9826	8J-9825	4T-6664 (2)			1D-4637 (10)	2J-3507 (10)	3K-5234 (10)
Blade Hardware						4J-9208 (8)	2J-3507 (8)	
Tooth	8J-4948	8J-4947				1D-4637 (10)	2J-3507 (10)	3K-5234 (10)

Excavator Sidecutters

Sidecutters (Cont'd.)

Type	LH	RH	Blade	LH Upper	RH Upper	Bolt	Nut	Washer
Use J550 Tip (i.e. 9W-8552) + 107-3378 Pin + 107-8554 Retainer with Tooth Sidecutter								
Later F, G, HB, TB, UB, V, VB Linkages								
Strike-off	275-5999	275-5998		195-5136	195-5136	7Y-2146 (12)	2J-3507 (12)	3K-5234 (12)
Heavy Duty	256-8691	256-8690				1D-4637 (10)	2J-3507 (10)	3K-5234 (10)
Later J, JB Linkages								
Heavy Duty	238-3170	238-3169				9X-8896 (12)	2J-3507 (12)	3K-5234 (12)

Hex Sidebar Protectors

- Use in rock loading applications.
- Protects bucket sidebar.

Type	Retainer	Pin	Protector	Shim Kit	Shear Block
318					
Sidebar Protector	132-0999	275-5962	329-5958	286-2140	330-2174
B, S, C, CB, D, DB					
Sidebar Protector	132-0999	275-5962	329-5958	286-2140	330-2174
Sidebar Protector	132-0999	275-5982	329-5958	286-2140	
F, TB, VB, HB					
Sidebar Protector	132-0999	132-0998	326-3407	286-2140	330-2174
	132-0999	132-0998	326-3407	286-2140	
J, JB					
Sidebar Protector	132-0999	132-1008	329-5955	286-2140	329-8805
JC					
Sidebar Protector	132-0999	357-2689	329-5957	286-2140	329-8805

NOTE: These new style sidebar protectors will fit on older style HEX buckets, but the old style sidecutters and sidebar protectors will not fit on new D and E Series buckets.



Part No.	Description	Length (mm)	Width (mm)	Thickness (mm)
280-4088	1.5 inch Chocky	241	38	25
280-4089	2.0 inch Chocky	241	51	25
280-4090	2.5 inch Chocky	241	64	25
280-4091	4.0 inch Chocky	241	102	25

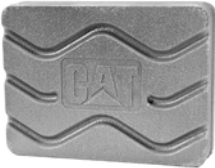
Part No.	Description	Diameter (mm)	Thickness (mm)
280-4092	2.5 inch Button	64	22
280-4093	3.5 inch Button	89	29
280-4094	4.5 inch Button	114	33
280-4095	6.0 inch Button	152	35

Excavator Sidecutters

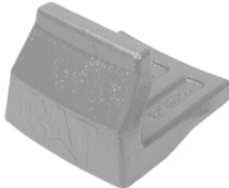
(Cont'd.)



Part No.	Description	Length (mm)	Width (mm)	Diameter (mm)
280-4096	1.25 inch Roll Bar	229	38	32
280-4097	2.0 inch Roll Bar	305	52	51
280-4098	3.0 inch Roll Bar	305	69	76



Part No.	Description	Length (mm)	Width (mm)	Diameter (mm)
280-4099	6.0 inch x 8.0 inch Wear Block	200	150	37



Description	Straight Heel Shroud Part Number	Curved Heel Shroud Part Number	Width (mm)	Height (mm)
Small Heel Shroud	280-4078	280-4079	120	108
Medium Heel Shroud	138-6529	138-6551	175	150
Large Heel Shroud	157-1019	157-1027	250	200

Loaders

992 Base Edge/Base Edge Assembly

	Type	Thickness	Length	Width @ Corner	Adapters	Adapter Qty	Segments
992G							
218-3418 ^(l)	Spade	76.2 mm (3.00 in)	4824 mm (189.92 in)	335 mm (13.19 in)	J700	8	Yes
146-8955 ^(l)	Spade	76.2 mm (3.00 in)	4824 mm (189.92 in)	335 mm (13.19 in)	J700	8	Yes
146-8966	Spade	76.2 mm (3.00 in)	4824 mm (189.92 in)	335 mm (13.19 in)			Yes
247-7241 ^(l)	Spade	76.2 mm (3.00 in)	4824 mm (189.92 in)	335 mm (13.19 in)	K170	8	Yes
153-5621 ^(l)	Spade	70 mm (2.76 in)	4824 mm (189.92 in)	335 mm (13.19 in)	J700	8	Yes
142-5790 ^(l)	Spade	70 mm (2.76 in)	4824 mm (189.92 in)	335 mm (13.19 in)	J600	8	Yes
112-9032 ^(l)	Spade	70 mm (2.76 in)	4824 mm (189.92 in)	335 mm (13.19 in)	J600	8	Yes
132-7091 ^(l)	Spade	70 mm (2.76 in)	4824 mm (189.92 in)	335 mm (13.19 in)	J550	8	Yes
112-9033	Spade	70 mm (2.76 in)	4824 mm (189.92 in)	335 mm (13.19 in)			Yes
170-1748	Spade	70 mm (2.76 in)	4824 mm (189.92 in)	335 mm (13.19 in)	BOCE		No
138-4386 ^(l)	Straight	70 mm (2.76 in)	4824 mm (189.92 in)	541 mm (21.30 in)	J600	8	No
235-1090 ^(l)	Spade	70 mm (2.76 in)	4824 mm (189.92 in)	335 mm (13.19 in)	K150	8	Yes
247-7232 ^(l)	Spade	70 mm (2.76 in)	4824 mm (189.92 in)	335 mm (13.19 in)	K170	8	Yes
132-7091 ^(l)	Spade	63.5 mm (2.50 in)	4824 mm (189.92 in)	335 mm (13.19 in)	J550	8	Yes
107-6763 ^(l)	Spade	70 mm (2.76 in)	4840 mm (190.55 in)	378 mm (14.88 in)	J600	8	Lugs
247-7247 ^(l)	Spade	70 mm (2.76 in)	4840 mm (190.55 in)	380 mm (14.96 in)	K150	8	Yes
278-8205 ^(l)	Spade	70 mm (2.76 in)	4840 mm (190.55 in)	405 mm (15.94 in)	K150	9	Yes
992C/D							
134-8333 ^(l)	Spade	76.2 mm (3.00 in)	4824 mm (189.92 in)	430 mm (16.93 in)	J700	8	Yes
257-8870 ^(l)	Spade	70 mm (2.76 in)	4750 mm (187.01 in)	438 mm (17.24 in)	K150	8	Yes
109-9094 ^(l)	Spade	70 mm (2.76 in)	4750 mm (187.01 in)	438 mm (17.24 in)	J600	8	Yes
107-8570	Spade	70 mm (2.76 in)	4750 mm (187.01 in)	438 mm (17.24 in)			Yes
257-8859 ^(l)	Spade	63.5 mm (2.50 in)	4750 mm (187.01 in)	438 mm (17.24 in)	K130	8	Yes
257-8857 ^(l)	Spade	63.5 mm (2.50 in)	4597 mm (180.98 in)	438 mm (17.24 in)	K130	8	No
2Q-0318 ^(l)	Spade	63.5 mm (2.50 in)	4750 mm (187.01 in)	438 mm (17.24 in)	J700	8	Yes
179-7379 ^(l)	Spade	63.5 mm (2.50 in)	4750 mm (187.01 in)	438 mm (17.24 in)	J600	8	Yes
4E-6462	Spade	63.5 mm (2.50 in)	4750 mm (187.01 in)	438 mm (17.24 in)	BOCE		Yes
112-2122 ^(l)	Spade	63.5 mm (2.50 in)	4750 mm (187.01 in)	438 mm (17.24 in)	J550	8	Yes
4E-6464 ^(l)	Spade	63.5 mm (2.50 in)	4750 mm (187.01 in)	438 mm (17.24 in)	J550	8	Yes
9V-0014 ^(l)	Spade	63.5 mm (2.50 in)	4750 mm (187.01 in)	438 mm (17.24 in)	J550	8	No
9V-0005	Spade	63.5 mm (2.50 in)	4750 mm (187.01 in)	438 mm (17.24 in)			No
112-2121 ^(l)	Spade	63.5 mm (2.50 in)	4750 mm (187.01 in)	332 mm (13.07 in)	J550	8	Yes
9V-3566 ^(l)	Spade	63.5 mm (2.50 in)	4750 mm (187.01 in)	332 mm (13.07 in)			Yes
257-1836 ^(l)	Spade	63.5 mm (2.50 in)	4750 mm (187.01 in)	332 mm (13.07 in)	K130	8	Yes
9V-0013 ^(l)	Spade	63.5 mm (2.50 in)	4750 mm (187.01 in)	332 mm (13.07 in)	J550	8	No
9V-0006 ^(l)	Spade	63.5 mm (2.50 in)	4750 mm (187.01 in)	332 mm (13.07 in)			No
142-1416	Straight	63.5 mm (2.50 in)	4750 mm (187.01 in)	695 mm (27.36 in)	BOCE		No
112-2123 ^(l)	Straight	63.5 mm (2.50 in)	4750 mm (187.01 in)	541 mm (21.30 in)	J550	8	Yes
9U-3846	Straight	63.5 mm (2.50 in)	4750 mm (187.01 in)	541 mm (21.30 in)			Yes
9V-0010 ^(l)	Straight ^(l)	63.5 mm (2.50 in)	4750 mm (187.01 in)	541 mm (21.30 in)	J550	8	No
9V-0007	Straight	63.5 mm (2.50 in)	4750 mm (187.01 in)	541 mm (21.30 in)			No
275-2477 ^(l)	Straight ^(l)	63.5 mm (2.50 in)	4750 mm (187.01 in)	541 mm (21.30 in)	K130	8	No
208-5326 ^(l)	Spade	70 mm (2.76 in)	4840 mm (190.55 in)	454 mm (17.87 in)	J600	8	Yes
250-7577 ^(l)	Spade	70 mm (2.76 in)	4840 mm (190.55 in)	454 mm (17.87 in)	K150	8	Yes

Loaders - Base Edge/Base Edge Assembly

990 Base Edge/Base Edge Assembly

	Type	Thickness	Length	Width @ Corner	Adapters	Adapter Qty	Segments	
990								
145-0795	Spade	76.2 mm (3.00 in)	4610 mm (181.50 in)	533 mm (20.98 in)				No
112-2118 ^(l)	Spade	63.5 mm (2.50 in)	4450 mm (175.20 in)	355 mm (13.98 in)	J550	8		No
101-9188	Spade	63.5 mm (2.50 in)	4450 mm (175.20 in)	355 mm (13.98 in)				No
151-5980	Spade	63.5 mm (2.50 in)	4450 mm (175.20 in)	355 mm (13.98 in)	BOCE			No
112-2119 ^(l)	Spade	63.5 mm (2.50 in)	4450 mm (175.20 in)	355 mm (13.98 in)	J550	8		Yes
4E-9915	Spade	63.5 mm (2.50 in)	4450 mm (175.20 in)	355 mm (13.98 in)				Yes
112-2120 ^(l)	Straight	63.5 mm (2.50 in)	4450 mm (175.20 in)	441 mm (17.36 in)	J550	8		Yes
101-9186	Straight	63.5 mm (2.50 in)	4450 mm (175.20 in)	441 mm (17.36 in)				Yes
111-9048 ^(l)	Straight	63.5 mm (2.50 in)	4450 mm (175.20 in)	506 mm (19.92 in)	J550	8		No
111-9049	Straight	63.5 mm (2.50 in)	4450 mm (175.20 in)	506 mm (19.92 in)				No
2Q-4246 ^(l)	Spade	63.5 mm (2.50 in)	4610 mm (181.50 in)	414 mm (16.30 in)	J550	8		Yes
2Q-4247	Spade	63.5 mm (2.50 in)	4610 mm (181.50 in)	414 mm (16.30 in)				Yes
2Q-7059 ^(l)	Spade	63.5 mm (2.50 in)	4450 mm (175.20 in)	355 mm (13.98 in)	J550	8		Yes
195-5088 ^(l)	Spade ^(l)	63.5 mm (2.50 in)	4574 mm (180.08 in)	355 mm (13.98 in)	J550	7		Lugs
255-3759 ^(l)	Spade	63.5 mm (2.50 in)	4450 mm (175.20 in)	355 mm (13.98 in)	K130	8		Yes
255-3756 ^(l)	Spade	63.5 mm (2.50 in)	4610 mm (181.50 in)	414 mm (16.30 in)	K130	8		Yes
255-3765 ^{(l)(l)}	Spade ^(l)	70 mm (2.76 in)	4574 mm (180.08 in)	477 mm (18.78 in)	K150	7		Yes
251-7776 ^{(l)(l)}	Spade ^(l)	70 mm (2.76 in)	4574 mm (180.08 in)	477 mm (18.78 in)	K150	7		Yes
(w/9 MAWPS bases — no base edge wear plates)								

988 Base Edge/Base Edge Assembly

	Type	Thickness	Length	Width @ Corner	Adapters	Adapter Qty	Segments	BOCE
988B								
3V-0187	Straight	45 mm (1.77 in)	3645 mm (143.50 in)	305 mm (12.01 in)			No	Yes
9V-0232	Straight	50.8 mm (2.00 in)	3645 mm (143.50 in)	330 mm (12.99 in)			No	No
9C-2932	Straight	50.8 mm (2.00 in)	3645 mm (143.50 in)	330 mm (12.99 in)			Yes	Yes
8V-9585	Spade	50.8 mm (2.00 in)	3645 mm (143.50 in)	311 mm (12.24 in)			No	No
8R-4649	Spade	50.8 mm (2.00 in)	3645 mm (143.50 in)	311 mm (12.24 in)			Yes	Yes
4E-0056 ^(l)	Straight	50.8 mm (2.00 in)	3645 mm (143.50 in)	330 mm (12.99 in)	J460	8	No	N/A
116-7201 ^(l)	Spade	50.8 mm (2.00 in)	3645 mm (143.50 in)	311 mm (12.24 in)	J460	8	Yes	N/A
116-7206 ^(l)	Spade	50.8 mm (2.00 in)	3645 mm (143.50 in)	311 mm (12.24 in)	J460	8	No	N/A
256-2934 ^(l)	Spade	50.8 mm (2.00 in)	3645 mm (143.50 in)	311 mm (12.24 in)	K110	8	Yes	N/A
256-2931 ^(l)	Straight ^(l)	50.8 mm (2.00 in)	3645 mm (143.50 in)	330 mm (12.99 in)	K110	8	No	N/A
988F								
4E-8112	Straight	50.8 mm (2.00 in)	3772 mm (148.50 in)	349 mm (13.74 in)			Yes	Yes
2Q-3133	Straight	50.8 mm (2.00 in)	3772 mm (148.50 in)	349 mm (13.74 in)			No	No
4E-7616	Spade ^(l)	50.8 mm (2.00 in)	3772 mm (148.50 in)	311 mm (12.24 in)			Yes	Yes
9U-4713	Spade	50.8 mm (2.00 in)	3772 mm (148.50 in)	311 mm (12.24 in)			No	No
132-3117	Spade	50.8 mm (2.00 in)	3772 mm (148.50 in)	311 mm (12.24 in)			Yes	Yes
2Q-4344	Spade ^(l)	50.8 mm (2.00 in)	3980 mm (156.69 in)	354 mm (13.94 in)			Yes	No
116-7204 ^(l)	Straight	50.8 mm (2.00 in)	3772 mm (148.50 in)	349 mm (13.74 in)	J460	8	Yes	N/A
2Q-3132 ^(l)	Straight ^(l)	50.8 mm (2.00 in)	3772 mm (148.50 in)	349 mm (13.74 in)	J460	8	No	N/A
257-1829 ^(l)	Straight ^(l)	50.8 mm (2.00 in)	3772 mm (148.50 in)	349 mm (13.74 in)	K110	8	No	N/A
253-0163 ^(l)	Straight ^(l)	50.8 mm (2.00 in)	3772 mm (148.50 in)	349 mm (13.74 in)	J460	10	No	N/A

Loaders - Base Edge/Base Edge Assembly

988 Base Edge/Base Edge Assembly (Cont'd.)

	Type	Thickness	Length	Width @ Corner	Adapters	Adapter Qty	Segments	BOCE
257-1830 ^(l)	Straight ^(l)	50.8 mm (2.00 in)	3772 mm (148.50 in)	349 mm (13.74 in)	K110	10	No	N/A
132-3116 ^(l)	Spade	50.8 mm (2.00 in)	3772 mm (148.50 in)	311 mm (12.24 in)	J460	8	Yes	N/A
133-0820 ^(l)	Spade	50.8 mm (2.00 in)	3772 mm (148.50 in)	311 mm (12.24 in)	J460	8	No	N/A
133-0818 ^(l)	Spade	50.8 mm (2.00 in)	3772 mm (148.50 in)	311 mm (12.24 in)	J550	8	Yes	N/A
2Q-7060 ^(l)	Spade ^(l)	50.8 mm (2.00 in)	3772 mm (148.50 in)	311 mm (12.24 in)	J460	8	Yes	N/A
256-2938 ^(l)	Spade	50.8 mm (2.00 in)	3772 mm (148.50 in)	311 mm (12.24 in)	K130	8	Yes	N/A
144-0106 ^(l)	Spade	50.8 mm (2.00 in)	3822 mm (150.47 in)	304 mm (11.97 in)	J550	8	Yes	N/A
257-1834 ^(l)	Spade	50.8 mm (2.00 in)	3822 mm (150.47 in)	304 mm (11.97 in)	K130	8	Yes	N/A
2Q-4342 ^(l)	Spade ^(l)	50.8 mm (2.00 in)	3980 mm (156.69 in)	354 mm (13.94 in)	J460	8	Yes	N/A
257-1835 ^(l)	Spade ^(l)	50.8 mm (2.00 in)	3980 mm (156.69 in)	354 mm (13.94 in)	K130	8	Yes	N/A
2Q-7019 ^(l)	Spade	63.5 mm (2.50 in)	3862 mm (152.05 in)	314 mm (12.36 in)	J550	7	Yes	N/A
257-1833 ^(l)	Spade	63.5 mm (2.50 in)	3862 mm (152.05 in)	314 mm (12.36 in)	K130	7	Yes	N/A
988G								
149-5915	Spade	50.8 mm (2.00 in)	3964 mm (156.06 in)	311 mm (12.24 in)			No	Yes
246-2743 ^(l)	Spade	50.8 mm (2.00 in)	3800 mm (149.61 in)	310 mm (12.20 in)	K110	8	Yes	N/A
156-1040 ^(l)	Straight	50.8 mm (2.00 in)	3800 mm (149.61 in)	418 mm (16.46 in)	J460	8	Yes	N/A
136-6175 ^(l)	Spade	50.8 mm (2.00 in)	3800 mm (149.61 in)	310 mm (12.20 in)	J460	8	Yes	N/A
195-0410 ^(l)	Spade ^(l)	50.8 mm (2.00 in)	3900 mm (153.54 in)	368 mm (14.49 in)	J460	8	Yes	N/A
257-1831 ^(l)	Spade ^(l)	50.8 mm (2.00 in)	3900 mm (153.54 in)	368 mm (14.49 in)	K110	8	Yes	N/A
204-0721 ^(l)	Straight ^(l)	50.8 mm (2.00 in)	3900 mm (153.54 in)	510 mm (20.08 in)	J460	8	No	N/A
257-1832 ^(l)	Straight ^(l)	50.8 mm (2.00 in)	3900 mm (153.54 in)	510 mm (20.08 in)	K110	8	No	N/A
151-1213 ^(l)	Spade ^(l)	50.8 mm (2.00 in)	3980 mm (156.69 in)	354 mm (13.94 in)	J460	8	Yes	N/A
156-6391 ^(l)	Spade ^(l)	50.8 mm (2.00 in)	3980 mm (156.69 in)	359 mm (14.13 in)	J460	8	Yes	N/A
186-3282 ^(l)	Spade ^(l)	63.5 mm (2.50 in)	3926 mm (154.57 in)	310 mm (12.20 in)	J550	6	Lugs	N/A
253-9582 ^(l)	Spade ^(l)	63.5 mm (2.50 in)	3926 mm (154.57 in)	390 mm (15.35 in)	K130	7	Yes	N/A
988H								
257-3667	CGS	50 mm (1.97 in)	3695 mm (145.47 in)	400 mm (15.75 in)			Yes	Yes
257-3649 ^(l)	Straight	50.8 mm (2.00 in)	3800 mm (149.61 in)	318 mm (12.52 in)	K110	8	Yes	N/A
246-2766 ^(l)	Spade ^(l)	50.8 mm (2.00 in)	3810 mm (150.00 in)	275 mm (10.83 in)	K110	8	Yes	N/A
246-2746 ^(l)	Spade ^(l)	50.8 mm (2.00 in)	3980 mm (156.69 in)	359 mm (14.13 in)	K110	8	Yes	N/A
246-2764 ^(l)	Spade ^(l)	50.8 mm (2.00 in)	3980 mm (156.69 in)	360 mm (14.17 in)	K110	8	Yes	N/A
246-2768 ^(l)	Spade ^(l)	63.5 mm (2.50 in)	3862 mm (152.05 in)	375 mm (14.76 in)	K130	7	Yes	N/A
257-3695 ^(l)	Spade ^(l)	63.5 mm (2.50 in)	3926 mm (154.57 in)	390 mm (15.35 in)	K130	7	Yes	N/A
253-9582 ^(l)	Spade ^(l)	63.5 mm (2.50 in)	3926 mm (154.57 in)	390 mm (15.35 in)	K130	7	Yes	N/A
(w/5 MAWPS bases — no base edge wear plates)								

Spade = 1 center, 3 RH, 3 LH segments

910-980 Loader Bucket Base Edges & Assemblies (Weld-On System)

Length at Front	Width at End	Thickness	Part Number	Edge Type	Adapters	Adapter Type	Qty	Segments	BOCE ⁽¹⁾
2218.5 mm (87.3 in)	190.5 mm (7.5 in)	19 mm (0.7 in)	5G-5764	Straight				No	No
2328 mm (91.7 in)	190.5 mm (7.5 in)	19 mm (0.7 in)	5G-8526	Straight				No	No
2434 mm (95.8 in)	190.5 mm (7.5 in)	19 mm (0.7 in)	5G-8911 ⁽¹⁾	Straight	J200	F ⁽¹⁾	8	No	No
2434 mm (95.8 in)	190.5 mm (7.5 in)	19 mm (0.7 in)	5G-8912	Straight				No	No
2454 mm (96.6 in)	190.5 mm (7.5 in)	19 mm (0.7 in)	128-1489	Straight				No	No
2076.5 mm (81.8 in)	228.6 mm (9.0 in)	25 mm (1.0 in)	1V-0074 ⁽¹⁾	Straight	J250	F ⁽¹⁾	6 ⁽¹⁾	No	No
2076.5 mm (81.8 in)	228.6 mm (9.0 in)	25 mm (1.0 in)	9K-8471	Straight				No	No
2156 mm (84.9 in)	228.5 mm (9.0 in)	25 mm (1.0 in)	9V-5110	Straight				No	No
2248 mm (88.5 in)	228.6 mm (9.0 in)	25 mm (1.0 in)	9K-8461	Straight				No	No
2286 mm (90.0 in)	228.6 mm (9.0 in)	25 mm (1.0 in)	1V-9077	Straight				No	No
2436.5 mm (95.9 in)	245 mm (9.6 in)	25 mm (1.0 in)	9V-9755 ⁽¹⁾	Straight	J250	F ⁽¹⁾	8	No	No
2438.5 mm (96.0 in)	228.6 mm (9.0 in)	25 mm (1.0 in)	1V-3916	Straight				No	No
2477 mm (97.5 in)	245 mm (9.6 in)	25 mm (1.0 in)	106-3192 ⁽¹⁾	Straight	J250	F ⁽¹⁾	8	No	No
2594 mm (102.1 in)	245 mm (9.6 in)	25 mm (1.0 in)	4E-2482 ⁽¹⁾	Straight				No	No
2594 mm (102.1 in)	245 mm (9.6 in)	25 mm (1.0 in)	4E-2483	St-F ⁽¹⁾	J250	F ⁽¹⁾	8	No	No
2686 mm (105.7 in)	228.6 mm (9.0 in)	25 mm (1.0 in)	1V-3915	Straight				No	No
2731 mm (107.5 in)	245 mm (9.6 in)	25 mm (1.0 in)	9V-9072	St-F ⁽¹⁾				No	No
2731 mm (107.5 in)	245 mm (9.6 in)	25 mm (1.0 in)	9V-9521 ⁽¹⁾	Straight	J250	F ⁽¹⁾	8	No	No
3090 mm (121.7 in)	245 mm (9.6 in)	25 mm (1.0 in)	5V-7416	Straight				No	No
2346 mm (92.4 in)	266.7 mm (10.5 in)	32 mm (1.3 in)	9V-5340	Straight				No	No
2489 mm (98.0 in)	266.7 mm (10.5 in)	32 mm (1.3 in)	9K-8472	Straight				No	No
2498 mm (98.3 in)	282 mm (11.1 in)	32 mm (1.3 in)	256-4723 ⁽¹⁾	Straight	K90	F ⁽¹⁾	8	No	No
2552 mm (100.5 in)	266.7 mm (10.5 in)	32 mm (1.3 in)	9V-5327 ⁽¹⁾	Straight	J300	F ⁽¹⁾	8	No	No
2552 mm (100.5 in)	266.7 mm (10.5 in)	32 mm (1.3 in)	9V-5328	Straight				No	No
2583 mm (101.7 in)	282 mm (11.1 in)	32 mm (1.3 in)	8Y-9405 ⁽¹⁾	Straight	J350	F ⁽¹⁾	8	No	No
2825 mm (111.2 in)	282 mm (11.1 in)	32 mm (1.3 in)	6W-4598	St-F ⁽¹⁾				No	No
2825 mm (111.2 in)	282 mm (11.1 in)	32 mm (1.3 in)	6W-4599 ⁽¹⁾	Straight	J300	F ⁽¹⁾	8	No	No
2825 mm (111.2 in)	282 mm (11.1 in)	32 mm (1.3 in)	257-1826 ⁽¹⁾	Straight	K80	F ⁽¹⁾	8	No	No
2921 mm (115.0 in)	266.7 mm (10.5 in)	32 mm (1.3 in)	1V-3917	Straight				No	No
2815 mm (110.8 in)	205 mm (8.1 in)	35 mm (1.4 in)	6W-2973	Spade				No	Yes
2815 mm (110.8 in)	205 mm (8.1 in)	35 mm (1.4 in)	9C-0967	Spade				No	No
2815 mm (110.8 in)	205 mm (8.1 in)	35 mm (1.4 in)	9W-9879 ⁽¹⁾	Spade	J350	B st ⁽¹⁾	8	No	No
2815 mm (110.8 in)	205 mm (8.1 in)	35 mm (1.4 in)	257-1827 ⁽¹⁾	Spade	K90	2 st ⁽¹⁾	8	No	No
2969 mm (116.9 in)	188.6 mm (7.4 in)	35 mm (1.4 in)	141-8823	Spade				No	Yes
2969 mm (116.9 in)	188.6 mm (7.4 in)	35 mm (1.4 in)	141-8824 ⁽¹⁾	Spade	J350	B st ⁽¹⁾	8	No	No
2969 mm (116.9 in)	188.6 mm (7.4 in)	35 mm (1.4 in)	142-9406	Spade				No	No
2969 mm (116.9 in)	188.6 mm (7.4 in)	35 mm (1.4 in)	154-7375 ⁽¹⁾	Spade	J350	2 st ⁽¹⁾	8	Yes	No
2969 mm (116.9 in)	188.6 mm (7.4 in)	35 mm (1.4 in)	257-1828 ⁽¹⁾	Spade	K90	2 st ⁽¹⁾	8	Yes	No
2583 mm (101.7 in)	300 mm (11.8 in)	40 mm (1.6 in)	219-3171	Straight				No	No
2690 mm (105.9 in)	290 mm (11.4 in)	40 mm (1.6 in)	9V-5287	Straight				No	No
2705 mm (106.5 in)	287 mm (11.3 in)	40 mm (1.6 in)	9V-0171	Spade				No	No
2705 mm (106.5 in)	287 mm (11.3 in)	40 mm (1.6 in)	9V-0178 ⁽¹⁾	Spade	J350	B st ⁽¹⁾	7	No	No
2934 mm (115.5 in)	290 mm (11.4 in)	40 mm (1.6 in)	9V-5283	Straight				No	No
2934 mm (115.5 in)	290 mm (11.4 in)	40 mm (1.6 in)	9V-5284 ⁽¹⁾	Straight	J350	F ⁽¹⁾	8	No	No
3085 mm (121.5 in)	262 mm (10.3 in)	40 mm (1.6 in)	9V-0170	Spade				No	No
3085 mm (121.5 in)	262 mm (10.3 in)	40 mm (1.6 in)	9V-0176 ⁽¹⁾	Spade	J350	B st ⁽¹⁾	8	No	No

Loader Buckets

910-980 Loader Bucket Base Edges & Assemblies (Weld-On System) (Cont'd.)

Length at Front	Width at End	Thickness	Part Number	Edge Type	Adapters	Adapter Type	Qty	Segments	BOCE ⁽¹⁾
3085 mm (121.5 in)	262 mm (10.3 in)	40 mm (1.6 in)	257-1825 ⁽¹⁾	Spade	K90	2 st ⁽¹⁾	8	No	No
3128 mm (123.1 in)	300 mm (11.8 in)	40 mm (1.6 in)	6W-5520 ⁽¹⁾	Straight	J350	F ⁽¹⁾	8	No	No
3252 mm (128.0 in)	260.5 mm (10.3 in)	40 mm (1.6 in)	148-6915	Spade				Yes	No
3252 mm (128.0 in)	260.5 mm (10.3 in)	40 mm (1.6 in)	148-6914 ⁽¹⁾	Spade	J350	2 st ⁽¹⁾	8	Yes	No
3252 mm (128.0 in)	260.5 mm (10.3 in)	40 mm (1.6 in)	254-4505 ⁽¹⁾	Spade	K90	2 st ⁽¹⁾	8	Yes	No
3252 mm (128.0 in)	260.5 mm (10.3 in)	40 mm (1.6 in)	154-1604	Spade				No	Yes
2705 mm (106.5 in)	287 mm (11.3 in)	45 mm (1.8 in)	6W-2994	Spade				Yes	Yes
2705 mm (106.5 in)	287 mm (11.3 in)	45 mm (1.8 in)	292-3263 ⁽¹⁾	Spade	J460	2 st ⁽¹⁾	7	Yes	No
3085 mm (121.5 in)	262 mm (10.3 in)	45 mm (1.8 in)	6W-2993	Spade				Yes	Yes
3370 mm (132.7 in)	302 mm (11.9 in)	45 mm (1.8 in)	4E-6806 ⁽¹⁾	Spade	J460	2 st ⁽¹⁾	8	Yes	No
3370 mm (132.7 in)	302 mm (11.9 in)	45 mm (1.8 in)	4E-6807 ⁽¹⁾	Spade	J350	B st ⁽¹⁾	8	Yes	No
3370 mm (132.7 in)	302 mm (11.9 in)	45 mm (1.8 in)	8V-9581	Spade				No	No
3370 mm (132.7 in)	302 mm (11.9 in)	45 mm (1.8 in)	9V-0233 ⁽¹⁾	Spade	J350	B st ⁽¹⁾	8	No	No
3370 mm (132.7 in)	302 mm (11.9 in)	45 mm (1.8 in)	257-1824 ⁽¹⁾	Spade	K100	2 st ⁽¹⁾	8	Yes	No
3370 mm (132.7 in)	302 mm (11.9 in)	45 mm (1.8 in)	9V-3561	Spade				Yes	Yes
3410 mm (134.3 in)	305 mm (12.0 in)	45 mm (1.8 in)	8V-6274	Straight				No	No
3492 mm (137.5 in)	264 mm (10.4 in)	45 mm (1.8 in)	113-9942	Spade				Yes	Yes
3492 mm (137.5 in)	264 mm (10.4 in)	45 mm (1.8 in)	123-1396	Spade				No	No
3492 mm (137.5 in)	264 mm (10.4 in)	45 mm (1.8 in)	126-6539 ⁽¹⁾	Spade	J400	2 st ⁽¹⁾	8	Yes	No
3492 mm (137.5 in)	264 mm (10.4 in)	45 mm (1.8 in)	126-6540 ⁽¹⁾	Spade	J400	2 st ⁽¹⁾	8	No	No
3492 mm (137.5 in)	305 mm (12.0 in)	45 mm (1.8 in)	130-4606 ⁽¹⁾	Straight	J400	F ⁽¹⁾	8	No	No
3492 mm (137.5 in)	305 mm (12.0 in)	45 mm (1.8 in)	136-0878	Straight				No	No
3492 mm (137.5 in)	305 mm (12.0 in)	45 mm (1.8 in)	261-8713 ⁽¹⁾	Straight	K100	F ⁽¹⁾	8	No	No
3492 mm (137.5 in)	264 mm (10.4 in)	45 mm (1.8 in)	261-8714 ⁽¹⁾	Spade	K100	2 st ⁽¹⁾	8	No	No
3492 mm (137.5 in)	264 mm (10.4 in)	45 mm (1.8 in)	261-8715 ⁽¹⁾	Spade	K100	2 st ⁽¹⁾	8	Yes	No
2714 mm (106.9 in)	330 mm (13.0 in)	50 mm (2.0 in)	9V-0255	Straight				No	No
2714 mm (106.9 in)	330 mm (13.0 in)	50 mm (2.0 in)	137-6264 ⁽¹⁾	Straight	J460	2 st ⁽¹⁾	6	No	No
3492 mm (137.5 in)	264 mm (10.4 in)	50 mm (2.0 in)	134-1747 ⁽¹⁾	Spade	J460	2 st ⁽¹⁾	8	Yes	No
3492 mm (137.5 in)	264 mm (10.4 in)	50 mm (2.0 in)	134-1748	Spade				Yes	No
3492 mm (137.5 in)	264 mm (10.4 in)	50 mm (2.0 in)	260-1385 ⁽¹⁾	Spade	K110	2 st ⁽¹⁾	8	Yes	No
3568 mm (140.5 in)	280 mm (11.0 in)	50 mm (2.0 in)	135-7114 ⁽¹⁾	Straight	J460	2 st ⁽¹⁾	8	Yes	No
3568 mm (140.5 in)	280 mm (11.0 in)	50 mm (2.0 in)	260-1384 ⁽¹⁾	Straight	K110	2 st ⁽¹⁾	8	Yes	No
3252 mm (128.0 in)	260.5 mm (10.3 in)	40 mm (1.6 in)	148-6915	Spade				Yes	No
3252 mm (128.0 in)	260.5 mm (10.3 in)	40 mm (1.6 in)	148-6914 ⁽¹⁾	Spade	J350	2 st ⁽¹⁾	8	Yes	No
3252 mm (128.0 in)	260.5 mm (10.3 in)	40 mm (1.6 in)	254-4505 ⁽¹⁾	Spade	K90	2 st ⁽¹⁾	8	Yes	No
3252 mm (128.0 in)	260.5 mm (10.3 in)	40 mm (1.6 in)	154-1604	Spade				No	Yes
2705 mm (106.5 in)	287 mm (11.3 in)	45 mm (1.8 in)	6W-2994	Spade				Yes	Yes
2705 mm (106.5 in)	287 mm (11.3 in)	45 mm (1.8 in)	292-3263 ⁽¹⁾	Spade	J460	2 st ⁽¹⁾	7	Yes	No
3085 mm (121.5 in)	262 mm (10.3 in)	45 mm (1.8 in)	6W-2993	Spade				Yes	Yes
3370 mm (132.7 in)	302 mm (11.9 in)	45 mm (1.8 in)	4E-6806 ⁽¹⁾	Spade	J460	2 st ⁽¹⁾	8	Yes	No
3370 mm (132.7 in)	302 mm (11.9 in)	45 mm (1.8 in)	4E-6807 ⁽¹⁾	Spade	J350	B st ⁽¹⁾	8	Yes	No
3370 mm (132.7 in)	302 mm (11.9 in)	45 mm (1.8 in)	8V-9581	Spade				No	No
3370 mm (132.7 in)	302 mm (11.9 in)	45 mm (1.8 in)	9V-0233 ⁽¹⁾	Spade	J350	B st ⁽¹⁾	8	No	No
3370 mm (132.7 in)	302 mm (11.9 in)	45 mm (1.8 in)	257-1824 ⁽¹⁾	Spade	K100	2 st ⁽¹⁾	8	Yes	No
3370 mm (132.7 in)	302 mm (11.9 in)	45 mm (1.8 in)	9V-3561	Spade				Yes	Yes
3410 mm (134.3 in)	305 mm (12.0 in)	45 mm (1.8 in)	8V-6274	Straight				No	No

910-980 Loader Bucket Base Edges & Assemblies (Weld-On System) (Cont'd.)

Length at Front	Width at End	Thickness	Part Number	Edge Type	Adapters	Adapter Type	Qty	Segments	BOCE ⁽¹⁾
3492 mm (137.5 in)	264 mm (10.4 in)	45 mm (1.8 in)	113-9942	Spade				Yes	Yes
3492 mm (137.5 in)	264 mm (10.4 in)	45 mm (1.8 in)	123-1396	Spade				No	No
3492 mm (137.5 in)	264 mm (10.4 in)	45 mm (1.8 in)	126-6539 ⁽¹⁾	Spade	J400	2 st ⁽¹⁾	8	Yes	No
3492 mm (137.5 in)	264 mm (10.4 in)	45 mm (1.8 in)	126-6540 ⁽¹⁾	Spade	J400	2 st ⁽¹⁾	8	No	No
3492 mm (137.5 in)	305 mm (12.0 in)	45 mm (1.8 in)	130-4606 ⁽¹⁾	Straight	J400	F ⁽¹⁾	8	No	No
3492 mm (137.5 in)	305 mm (12.0 in)	45 mm (1.8 in)	136-0878	Straight				No	No
3492 mm (137.5 in)	305 mm (12.0 in)	45 mm (1.8 in)	261-8713 ⁽¹⁾	Straight	K100	F ⁽¹⁾	8	No	No
3492 mm (137.5 in)	264 mm (10.4 in)	45 mm (1.8 in)	261-8714 ⁽¹⁾	Spade	K100	2 st ⁽¹⁾	8	No	No
3492 mm (137.5 in)	264 mm (10.4 in)	45 mm (1.8 in)	261-8715 ⁽¹⁾	Spade	K100	2 st ⁽¹⁾	8	Yes	No
2714 mm (106.9 in)	330 mm (13.0 in)	50 mm (2.0 in)	9V-0255	Straight				No	No
2714 mm (106.9 in)	330 mm (13.0 in)	50 mm (2.0 in)	137-6264 ⁽¹⁾	Straight	J460	2 st ⁽¹⁾	6	No	No
3492 mm (137.5 in)	264 mm (10.4 in)	50 mm (2.0 in)	134-1747 ⁽¹⁾	Spade	J460	2 st ⁽¹⁾	8	Yes	No
3492 mm (137.5 in)	264 mm (10.4 in)	50 mm (2.0 in)	134-1748	Spade				Yes	No
3492 mm (137.5 in)	264 mm (10.4 in)	50 mm (2.0 in)	260-1385 ⁽¹⁾	Spade	K110	2 st ⁽¹⁾	8	Yes	No
3568 mm (140.5 in)	280 mm (11.0 in)	50 mm (2.0 in)	135-7114 ⁽¹⁾	Straight	J460	2 st ⁽¹⁾	8	Yes	No
3568 mm (140.5 in)	280 mm (11.0 in)	50 mm (2.0 in)	260-1384 ⁽¹⁾	Straight	K110	2 st ⁽¹⁾	8	Yes	No

Loader Bucket Straight Base Edges (Bolt-On System)

Length at Front	Width at End	Thickness	Part Number	One Bolt Bucket Corner		Two Bolt Bucket Corner		Adapters (qty)	Segments (y/n)	Cutting Edges (y/n)
				(lh)	(rh)	(lh)	(rh)			
1823 mm (71.8 in)	190.5 mm (7.5 in)	19 mm (0.75 in)	5G-2808	5G-2806	5G-2807			8	n	y
1898 mm (74.7 in)	190.5 mm (7.5 in)	19 mm (0.75 in)	6S-6501	5G-2806	5G-2807			6	n	y
1950 mm (76.8 in)	190.5 mm (7.5 in)	19 mm (0.75 in)	8Y-4738	5G-2806	5G-2807			8	y	y
1950 mm (76.8 in)	190.5 mm (7.5 in)	19 mm (0.75 in)	5G-8467	5G-2806	5G-2807			8	n	y
2075 mm (81.7 in)	190.5 mm (7.5 in)	19 mm (0.75 in)	5G-2809	5G-2806	5G-2807			7	n	y
2150 mm (84.6 in)	190.5 mm (7.5 in)	19 mm (0.75 in)	5G-6133	5G-2806	5G-2807			7	y	y
2264 mm (89.1 in)	190.5 mm (7.5 in)	19 mm (0.75 in)	5G-8763	5G-2806	5G-2807			7	y	y
2330 mm (91.7 in)	190.5 mm (7.5 in)	19 mm (0.75 in)	5G-3477	5G-2806	5G-2807			7	n	y
2366 mm (93.1 in)	190.5 mm (7.5 in)	19 mm (0.75 in)	5G-8342	5G-2806	5G-2807			8	y	y
2406 mm (94.7 in)	190.5 mm (7.5 in)	19 mm (0.75 in)	6S-7291	5G-2806	5G-2807			7	n	n
2018 mm (79.4 in)	245 mm (9.6 in)	25 mm (1.0 in)	6W-2977	4V-1545	4V-1544	6I-8310	6I-8311	8	y	y
2079 mm (81.9 in)	245 mm (9.6 in)	25 mm (1.0 in)	9V-6571	4V-1545	4V-1544	6I-8310	6I-8311	8	y	y
2079 mm (81.9 in)	245 mm (9.6 in)	25 mm (1.0 in)	4V-8335	4V-1545	4V-1544	6I-8310	6I-8311	8	n	y
2152 mm (84.7 in)	245 mm (9.6 in)	25 mm (1.0 in)	8Y-8763	4V-1545	4V-1544	6I-8310	6I-8311	8	y	y
2210 mm (87.0 in)	245 mm (9.6 in)	25 mm (1.0 in)	4V-8850	4V-1545	4V-1544	6I-8310	6I-8311	8	n	y
2210 mm (87.0 in)	245 mm (9.6 in)	25 mm (1.0 in)	9V-6570	4V-1545	4V-1544	6I-8310	6I-8311	8	y	y
2248 mm (88.5 in)	245 mm (9.6 in)	25 mm (1.0 in)	5V-7437			6I-8310	6I-8311	8	n	y
2248 mm (88.5 in)	245 mm (9.6 in)	25 mm (1.0 in)	8V-7453	4V-1545	4V-1544	6I-8310	6I-8311	8	n	y
2248 mm (88.5 in)	245 mm (9.6 in)	25 mm (1.0 in)	6W-2976	4V-1545	4V-1544	6I-8310	6I-8311	8	y	y
2370 mm (93.3 in)	245 mm (9.6 in)	25 mm (1.0 in)	5V-4670	4V-1545	4V-1544	6I-8310	6I-8311	8	n	y
2370 mm (93.3 in)	245 mm (9.6 in)	25 mm (1.0 in)	9V-6572	4V-1545	4V-1544	6I-8310	6I-8311	8	y	y
2408 mm (94.8 in)	245 mm (9.6 in)	25 mm (1.0 in)	6W-2984	4V-1545	4V-1544	6I-8310	6I-8311	8	y	y
2435 mm (95.9 in)	245 mm (9.6 in)	25 mm (1.0 in)	110-4781	4V-1545	4V-1544	6I-8310	6I-8311	8	y	y
2524 mm (99.4 in)	245 mm (9.6 in)	25 mm (1.0 in)	4E-0659	4V-1545	4V-1544	6I-8310	6I-8311	8	y	y
2639 mm (103.9 in)	245 mm (9.6 in)	25 mm (1.0 in)	8V-1825	4V-1545	4V-1544	6I-8310	6I-8311	8	n	y

Loader Buckets

Loader Bucket Straight Base Edges (Bolt-On System) (Cont'd.)

Length at Front	Width at End	Thickness	Part Number	One Bolt Bucket Corner		Two Bolt Bucket Corner		Adapters (qty)	Segments (y/n)	Cutting Edges (y/n)
				(lh)	(rh)	(lh)	(rh)			
2639 mm (103.9 in)	245 mm (9.6 in)	25 mm (1.0 in)	6W-2985	4V-1545	4V-1544	6I-8310	6I-8311	8	y	y
2690 mm (105.9 in)	245 mm (9.6 in)	25 mm (1.0 in)	105-2345	4V-1545	4V-1544	6I-8310	6I-8311	8	y	y
2723 mm (107.2 in)	245 mm (9.6 in)	25 mm (1.0 in)	110-4712	4V-1545	4V-1544	6I-8310	6I-8311	8	y	y
2412 mm (95.0 in)	245 mm (9.6 in)	25 mm (1.0 in)	6W-2986	4V-1545	4V-1544	6I-8310	6I-8311	8	y	y
2615 mm (103.0 in)	245 mm (9.6 in)	25 mm (1.0 in)	6W-2987	4V-1545	4V-1544	6I-8310	6I-8311	8	y	y
Note: All the above 245 mm wide x 25 mm thick base edges can be equipped with the following bucket corners for upsized adapters. On narrower edges check for segment-tip interference.										
				5V-7395	5V-7396	8E-5302	8E-5303			
2744 mm (108.0 in)	245 mm (9.6 in)	25 mm (1.0 in)	5V-7410			6I-8310	6I-8311	0	n	y
2237 mm (88.1 in)	282 mm (11.1 in)	32 mm (1.3 in)	6W-2978	5V-1784	5V-1783	8E-5301	8E-5300	8	y	y
2268 mm (89.3 in)	282 mm (11.1 in)	32 mm (1.3 in)	4V-4958	5V-1784	5V-1783	8E-5301	8E-5300	8	n	y
2268 mm (89.3 in)	282 mm (11.1 in)	32 mm (1.3 in)	6W-2979	5V-1784	5V-1783	8E-5301	8E-5300	8	y	y
2430 mm (95.7 in)	282 mm (11.1 in)	32 mm (1.3 in)	5V-7263	5V-1784	5V-1783	8E-5301	8E-5300	8	n	y
2474 mm (97.4 in)	282 mm (11.1 in)	32 mm (1.3 in)	4V-3174	5V-1784	5V-1783	8E-5301	8E-5300	8	n	y
2474 mm (97.4 in)	282 mm (11.1 in)	32 mm (1.3 in)	6W-2980	5V-1784	5V-1783	8E-5301	8E-5300	8	y	y
2736 mm (107.7 in)	282 mm (11.1 in)	32 mm (1.3 in)	5V-4696	5V-1784	5V-1783	8E-5301	8E-5300	8	n	y
2736 mm (107.7 in)	282 mm (11.1 in)	32 mm (1.3 in)	9V-6573	5V-1784	5V-1783	8E-5301	8E-5300	8	y	y
2840 mm (111.8 in)	282 mm (11.1 in)	32 mm (1.3 in)	6W-2989	5V-1784	5V-1783	8E-5301	8E-5300	8	y	y
2856 mm (112.4 in)	282 mm (11.1 in)	32 mm (1.3 in)	6W-2990	5V-1784	5V-1783	8E-5301	8E-5300	8	y	y
2886 mm (113.6 in)	282 mm (11.1 in)	32 mm (1.3 in)	141-4847	5V-1784	5V-1783	8E-5301	8E-5300	8	y	y
Note: All the above 282 mm wide x 32 mm thick base edges can be equipped with the following bucket corners for upsized adapters. On narrower edges check for segment-tip interference. (Corners are not dimensionally equal.)										
				5V-2773	5V-2772	8E-5321	8E-5320			
2498 mm (98.3 in)	282 mm (11.1 in)	32 mm (1.3 in)	8Y-6263			8E-5321	8E-5320	8	y	y
3040 mm (119.7 in)	282 mm (11.1 in)	32 mm (1.3 in)	7V-0912	5V-2773	5V-2772	8E-5321	8E-5320	0	n	y
2430 mm (95.7 in)	300 mm (11.8 in)	40 mm (1.6 in)	6W-2983	4V-7174	4V-7175	8E-5310	8E-5311	8	y	y
2602 mm (102.4 in)	300 mm (11.8 in)	40 mm (1.6 in)	5V-0600	4V-7174	4V-7175	8E-5310	8E-5311	8	n	y
2602 mm (102.4 in)	300 mm (11.8 in)	40 mm (1.6 in)	6W-2982	4V-7174	4V-7175	8E-5310	8E-5311	8	y	y
2702 mm (106.4 in)	300 mm (11.8 in)	40 mm (1.6 in)	5G-7303	4V-7174	4V-7175	8E-5310	8E-5311	8	n	y
2702 mm (106.4 in)	300 mm (11.8 in)	40 mm (1.6 in)	5G-7304	4V-7174	4V-7175	8E-5310	8E-5311	8	y	y
2846 mm (112.0 in)	300 mm (11.8 in)	40 mm (1.6 in)	4V-9714	4V-7174	4V-7175	8E-5310	8E-5311	8	n	y
2846 mm (112.0 in)	300 mm (11.8 in)	40 mm (1.6 in)	6W-2981	4V-7174	4V-7175	8E-5310	8E-5311	8	y	y
2912 mm (114.6 in)	300 mm (11.8 in)	40 mm (1.6 in)	7V-6844	4V-7174	4V-7175	8E-5310	8E-5311	8	n	y
2925 mm (115.2 in)	300 mm (11.8 in)	40 mm (1.6 in)	7I-3631	4V-7174	4V-7175	8E-5310	8E-5311	8	y	y
3032 mm (119.4 in)	300 mm (11.8 in)	40 mm (1.6 in)	7V-1490	4V-7174	4V-7175	8E-5310	8E-5311	8	n	y
3032 mm (119.4 in)	300 mm (11.8 in)	40 mm (1.6 in)	9V-6575	4V-7174	4V-7175	8E-5310	8E-5311	8	y	y
3200 mm (126.0 in)	300 mm (11.8 in)	40 mm (1.6 in)	7I-3015	4V-7174	4V-7175	8E-5310	8E-5311	8	y	y
3323 mm (130.8 in)	300 mm (11.8 in)	40 mm (1.6 in)	7V-0909	4V-7174	4V-7175	8E-5310	8E-5311	0	n	y
3179 mm (125.2 in)	305 mm (12.0 in)	45 mm (1.8 in)	6W-2991	7V-4180	7V-4181	6I-8250	6I-8249	8	y	y
3315 mm (130.5 in)	305 mm (12.0 in)	45 mm (1.8 in)	7V-4188	7V-4180	7V-4181	6I-8250	6I-8249	8	n	y
3315 mm (130.5 in)	305 mm (12.0 in)	45 mm (1.8 in)	9V-6574	7V-4180	7V-4181	6I-8250	6I-8249	8	y	y
3405 mm (134.1 in)	305 mm (12.0 in)	45 mm (1.8 in)	111-9770	7V-4180	7V-4181	6I-8250	6I-8249	8	y	y
3560 mm (140.2 in)	305 mm (12.0 in)	45 mm (1.8 in)	4E-6085	7V-4180	7V-4181	6I-8250	6I-8249	8	y	y
3607 mm (142.0 in)	305 mm (12.0 in)	45 mm (1.8 in)	193-9015	7V-4180	7V-4181	6I-8250	6I-8249	0	n	y
3687 mm (145.2 in)	305 mm (12.0 in)	45 mm (1.8 in)	9U-3748	7V-4180	7V-4181	6I-8250	6I-8249	8	y	y
3810 mm (150.0 in)	305 mm (12.0 in)	45 mm (1.8 in)	194-0659	7V-4180	7V-4181	6I-8250	6I-8249	0	n	y

Loader Bucket Straight Base Edges (Bolt-On System) (Cont'd.)

Length at Front	Width at End	Thickness	Part Number	One Bolt Bucket Corner		Two Bolt Bucket Corner		Adapters (qty)	Segments (y/n)	Cutting Edges (y/n)
				(lh)	(rh)	(lh)	(rh)			
3687 mm (145.2 in)	325 mm (12.8 in)	50 mm (2.0 in)	183-5190			61-8250	61-8249	8	y	y
3695 mm (145.5 in)	400 mm (15.7 in)	50 mm (2.0 in)	257-3667			61-8250	61-8249	8	y	y

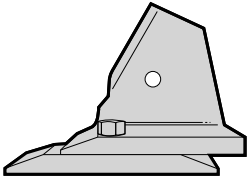
Loader Edges

Bolt-On Edges

When penetration is not a problem, use bolt-on cutting edges.

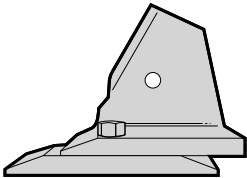
Bolt-on cutting edges:

- Increases base edge life up to five times over an unprotected base edge.
- Are quick and easy to replace.
- Increases bucket capacity.
- Provides smooth floor maintenance capability.
- Are made of DH-2 steel alloy and are hardened to 430-520 Brinell.



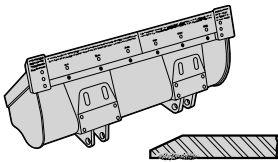
Standard Bolt-On Edges

- Reversible for a second wear life.



Heavy Duty Bolt-On Edges

- Provides at least 50% more wear material than standard bolt-on edges.
- Reversible for a second wear life.



ARM Bolt-On Edges

- Provides three to five times the wear life of standard bolt-on edges.
- For use in low to moderate impact applications where wear rates are high — such as in abrasive materials.

Loader Rock Buckets

Loader Rock Bucket Bolt-On Cutting Edges

Note: All quantities are (1) unless indicated otherwise

Base Edge Part Number	BOCE Type	LH End (qty)	LH Center (qty)	Center (qty)	RH Center (qty)	RH End (qty)	Hardware		
							Bolt (qty)	Nut (qty)	Washer
4E-6462	Standard	6I-8368	6I-8367	6I-8364	6I-8365	6I-8366	5P-8823 (28)	3K-9770 (28)	4K-0684 (28)
	Heavy Duty	127-7430	127-7432	127-7429	127-7433	127-7431	5P-8823 (28)	3K-9770 (28)	4K-0684 (28)
4E-7616	Standard	101-9032		101-9350		101-9351	6V-6535 (21)	3K-9770 (21)	4K-0684 (21)
	Heavy Duty	107-3544		107-3540		107-3543	6V-6535 (21)	3K-9770 (21)	4K-0684 (21)
	ARM	136-6794		136-6790		136-6793	6V-6535 (21)	3K-9770 (21)	4K-0684 (21)
4E-8112	Standard	102-2184		102-9350		102-2184	6V-6535 (21)	3K-9770 (21)	4K-0684 (21)
	Heavy Duty	107-3541		107-3540		107-3541	6V-6535 (21)	3K-9770 (21)	4K-0684 (21)
	ARM	132-1067		132-1068		132-1067	6V-6535 (21)	3K-9770 (21)	4K-0684 (21)
4E-9915	Standard	162-3296	106-6423	106-6420	106-6421	162-3297	5P-8823 (32)	3K-9770 (32)	4K-0684 (32)
6W-2973	Standard	7T-5964	7T-5961	7T-5962	7T-5963	7T-5960	8T-9079 (18)	3K-9770 (18)	4K-0684 (18)
6W-2993	Standard	4T-9127	4T-9125	4T-9185	4T-9128	4T-9126	6V-6535 (16)	3K-9770 (16)	4K-0684 (16)
6W-2994	Standard	9W-3678		9W-3676		9W-3677	6V-6535 (12)	3K-9770 (12)	4K-0684 (12)
8R-4649	Standard	9W-5732	9W-5731	9W-5733	9W-5736	9W-5735	6V-6535 (25)	3K-9770 (25)	4K-0684 (25)
	Heavy Duty	106-1095	106-1094	106-1096	106-1098	106-1097	6V-6535 (25)	3K-9770 (25)	4K-0684 (25)
	ARM	208-5282	208-5281	208-5283	208-5286	208-5285	6V-6535 (25)	3K-9770 (25)	4K-0684 (25)
9C-2932	Standard	9W-8249		9W-8250		9W-8249	6V-6535 (11)	3K-9770 (11)	4K-0684 (11)
9V-3561	Standard	4T-7143	4T-7145	4T-7141	4T-7144	4T-7142	6V-6535 (18)	3K-9770 (18)	4K-0684 (18)
	Heavy Duty	107-8588	107-8590	107-8586	107-8589	107-8587	6V-6535 (18)	3K-9770 (18)	4K-0684 (18)
101-9186	Standard	106-6378		106-6377(2)		106-6378	5P-8823 (26)	3K-9770 (26)	4K-0684 (26)
113-9942	Standard	109-9125	109-9124	109-9123	109-9122	109-9121	6V-6535 (25)	3K-9770 (25)	4K-0684 (25)
132-3117	Standard	101-9352		144-1331		101-9351	6V-6535 (21)	3K-9770 (21)	4K-0684 (21)
141-8823	Standard	109-9016	7T-5961	132-1089	7T-5963	109-9017	8T-9079 (18)	3K-9770 (18)	4K-0684 (18)
149-5915	Standard	9W-5732	9W-5731	9W-5733	9W-5736	9W-5735	6V-6535 (28)	3K-9770 (28)	4K-0684 (28)
				+9W-5734					
	Heavy Duty	106-1095	106-1094	106-1096	106-1098	106-1097	6V-6535 (28)	3K-9770 (28)	4K-0684 (28)
				+107-3490					
154-1604	Standard	135-8242	135-8244	135-8240	135-8243	135-8241	8T-9079 (18)	3K-9770 (18)	4K-0684 (18)
151-5980	Standard	162-3296	106-6423	106-6420	106-6421	162-3297	5P-8823 (32)	3K-9770 (32)	4K-0684 (32)
170-1748	Standard	6I-8368	6I-8367	6I-8364	6I-8365	6I-8366	5P-8823 (28)	3K-9770 (28)	4K-0684 (28)
	Heavy Duty	127-7430	127-7432	127-7429	127-7433	127-7431	5P-8823 (28)	3K-9770 (28)	4K-0684 (28)

Loader GP Buckets

Loader GP Bucket Bolt-On Cutting Edges & Top Wear Plates

Note: All quantities are (1) unless indicated otherwise

Base Edge Part Number	BOCE Type	Center (qty)	Straight Endbit/End		Angled Endbit		Hardware	
			LH (qty)	RH (qty)	LH (qty)	RH (qty)	Bolt (qty)	Nut (qty)
3V-0187	Standard	4T-6588	4T-6588	4T-6588			4J-9058 (18)	2J-3507 (18)
4E-0659	Standard	8E-4567 (2)	4T-8091	4T-8091	1U-1896	1U-1896	1J-5607 (10)	2J-3507 (10)
	ARM	135-6728/9	9W-3482	9W-3481			1J-5607 (10)	2J-3507 (10)
4E-6085	Standard	9W-1375 (2)	1U-0761	1U-0761	1U-0764	1U-0764	5P-8823 (12)	3K-9770 (12)
	ARM	109-2697 (2)	123-0335	123-0334			5P-8823 (12)	3K-9770 (12)
4V-3174	Standard	1U-0600 (2)	4T-8101	4T-8101	1U-1898	1U-1898	4F-4042 (12)	2J-3507 (12)
4V-4958	Standard	1U-0599 (2)	4T-8101	4T-8101	1U-1898	1U-1898	4F-4042 (12)	2J-3507 (12)
4V-8335	Standard	1U-0294 (2)	4T-8091	4T-8091	1U-1896	1U-1896	1J-5607 (10)	2J-3507 (10)
4V-8850	Standard	1U-0293 (2)	4T-8091	4T-8091	1U-1896	1U-1896	1J-5607 (10)	2J-3507 (10)
4V-9714	Standard	1U-2406 (2)	3G-6395	3G-6395	1U-1897	1U-1897	5P-8823 (12)	3K-9770 (12)
5G-2808	Standard	4T-2911	4T-2910	4T-2910			4F-7827 (8)	2J-3506 (8)
	Heavy Duty		195-7130	195-7130			4F-7827 (8)	2J-3506 (8)
5G-2809	Standard	4T-8796	4T-2914	4T-2914			4F-7827 (7)	2J-3506 (7)
	Heavy Duty		195-7131	195-7132			4F-7827 (7)	2J-3506 (7)
5G-2395 ⁽¹⁾	Standard		4T-2912	4T-2912			4F-7827 (8)	2J-3506 (8)
5G-3477	Standard	4T-2915	4T-2914	4T-2914			4F-7827 (7)	2J-3506 (7)
	Heavy Duty		195-7135	195-7136			4F-7827 (7)	2J-3506 (7)
5G-6133	Standard	4T-2913	4T-2914	4T-2914			4F-7827 (7)	2J-3506 (7)
	Heavy Duty		195-7133	195-7134			4F-7827 (7)	2J-3506 (7)
5G-7303	Standard	9W-8334 (2)	3G-6395	3G-6395	1U-1897	1U-1897	5P-8823 (12)	3K-9770 (12)
5G-7304	Standard	9W-8334 (2)	3G-6395	3G-6395	1U-1897	1U-1897	5P-8823 (12)	3K-9770 (12)
5G-8342	Standard	9W-8620	4T-2914	4T-2914			4F-7827 (8)	2J-3506 (8)
	Heavy Duty		195-7137	195-7137			4F-7827 (8)	2J-3506 (8)
5G-8467	Standard	9W-9943	9W-9944	9W-9944			4F-7827 (8)	2J-3506 (8)
5G-8763	Standard	9W-8694	4T-2914	4T-2914			4F-7827 (7)	2J-3506 (7)
	Heavy Duty		195-7139	195-7140			4F-7827 (7)	2J-3506 (7)
5V-0600	Standard	1U-0591 (2)	3G-6395	3G-6395	1U-1897	1U-1897	5P-8823 (12)	3K-9770 (12)
5V-4670	Standard	1U-0295 (2)	4T-8091	4T-8091	1U-1896	1U-1896	1J-5607 (10)	2J-3507 (10)
	ARM	9W-3486/7	9W-3482	9W-3481			1J-5607 (10)	2J-3507 (10)
5V-4696	Standard	1U-0601 (2)	4T-8101	4T-8101	1U-1898	1U-1898	4F-4042 (12)	2J-3507 (12)
	Heavy Duty	132-1034(2)	132-1033	132-1033			4F-4042 (12)	2J-3507 (12)
	ARM	9W-3492/3	9W-3488	9W-3489			4F-4042 (12)	2J-3507 (12)
5V-7263	Standard	1U-2411 (2)	4T-8101	4T-8101	1U-1898	1U-1898	4F-4042 (12)	2J-3507 (12)
5V-7410	Standard	1U-0601 (2)	4T-8101	4T-8101	1U-1898	1U-1898	4F-4042 (12)	2J-3507 (12)
	Heavy Duty	132-1034(2)	132-1033	132-1033			4F-4042 (12)	2J-3507 (12)
	ARM	9W3492/3	9W-3488	9W-3489			4F-4042 (12)	2J-3507 (12)
5V-7437	Standard		1U-1471	1U-1471			1J-5607 (8)	2J-3507 (8)
6S-6500 ⁽¹⁾	Standard	4T-2920	4T-2910	4T-2910			4F-7827 (7)	2J-3506 (7)
6S-6501	Standard		4T-2919	4T-2919			4F-7827 (6)	2J-3506 (6)
6W-2976	Standard	4T-9563 (2)	4T-8091	4T-8091	1U-1896	1U-1896	1J-5607 (10)	2J-3507 (10)
6W-2977	Standard	1U-0605 (2)	4T-8091	4T-8091	1U-1896	1U-1896	1J-5607 (10)	2J-3507 (10)
6W-2978	Standard	1U-2410 (2)	4T-8101	4T-8101	1U-1898	1U-1898	4F-4042 (12)	2J-3507 (12)
6W-2979	Standard	1U-0599 (2)	4T-8101	4T-8101	1U-1898	1U-1898	4F-4042 (12)	2J-3507 (12)
6W-2980	Standard	1U-0600 (2)	4T-8101	4T-8101	1U-1898	1U-1898	4F-4042 (12)	2J-3507 (12)
6W-2981	Standard	1U-2406 (2)	3G-6395	3G-6395	1U-1897	1U-1897	5P-8823 (12)	3K-9770 (12)
6W-2982	Standard	1U-0591 (2)	3G-6395	3G-6395	1U-1897	1U-1897	5P-8823 (12)	3K-9770 (12)

Loader GP Buckets

Loader GP Bucket Bolt-On Cutting Edges & Top Wear Plates (Cont'd.)

Base Edge Part Number	BOCE Type	Center (qty)	Straight Endbit/End		Angled Endbit		Hardware	
			LH (qty)	RH (qty)	LH (qty)	RH (qty)	Bolt (qty)	Nut (qty)
6W-2983	Standard	1U-2408 (2)	3G-6395	3G-6395	1U-1897	1U-1897	5P-8823 (12)	3K-9770 (12)
6W-2984	Standard	1U-0607 (2)	4T-8091	4T-8091	1U-1896	1U-1896	1J-5607 (10)	2J-3507 (10)
	ARM	9W-3483 (2)	9W-3482	9W-3481			1J-5607 (10)	2J-3507 (10)
6W-2985	Standard	1U-0292 (2)	4T-8091	4T-8091	1U-1896	1U-1896	1J-5607 (10)	2J-3507(10)
	ARM	9W-3484/5	9W-3482	9W-3481			1J-5607 (10)	2J-3507(10)
6W-2986	Standard	1U-2414 (2)	4T-8101	4T-8101	1U-1898	1U-1898	4F-4042 (12)	2J-3507(12)
	Heavy Duty	132-1030(2)	132-1033	132-1033			4F-4042 (12)	2J-3507(12)
6W-2987	Standard	1U-2412 (2)	4T-8101	4T-8101	1U-1898	1U-1898	4F-4042 (12)	2J-3507(12)
	Heavy Duty	132-1031(2)	132-1033	132-1033			4F-4042 (12)	2J-3507(12)
	ARM	9W-3490/1	9W-3488	9W-3489			4F-4042 (12)	2J-3507(12)
6W-2988 ⁽¹⁾	Standard	1U-2413 (2)	4T-8101	4T-8101	1U-1898	1U-1898	4F-4042 (12)	2J-3507(12)
	Heavy Duty	132-1032(2)	132-1033	132-1033			4F-4042 (12)	2J-3507(12)
6W-2989	Standard	1U-2407 (2)	3G-6395	3G-6395	1U-1897	1U-1897	5P-8823 (12)	3K-9770 (12)
	Heavy Duty	135-9532(2)	100-4044	100-4044			5P-8823 (12)	3K-9770 (12)
6W-2990	Standard	1U-2406 (2)	3G-6395	3G-6395	1U-1897	1U-1897	5P-8823 (12)	3K-9770 (12)
	Heavy Duty	100-4045(2)	100-4044	100-4044			5P-8823 (12)	3K-9770 (12)
	ARM	9W-3479/80	123-0336	123-0337			5P-8823 (12)	3K-9770 (12)
6W-2991	Standard	4T-5273 (2)	1U-0761	1U-0761	1U-0764	1U-0764	5P-8823 (12)	3K-9770 (12)
7I-3015	Standard	100-6668(2)	3G-6395	3G-6395	1U-1897	1U-1897	5P-8823 (12)	3K-9770 (12)
	Heavy Duty	140-6823(2)	167-7430	167-7430			5P-8823 (12)	3K-9770 (12)
	ARM	107-3287/8	123-0336	123-0337			5P-8823 (12)	3K-9770 (12)
	ARM (rev)	229-6944 (2)	208-5343	208-5343			5P-8823 (12)	3K-9770 (12)
	Half Arrow	253-0071(3)	253-0069	253-0070			5P-8823 (18)	3K-9770 (18)
	HA (arm)	253-0075(3)	253-0073	253-0074			5P-8823 (18)	3K-9770 (18)
Top Wear Plate for HA Edge		286-1981(2)	286-1980	286-1979			5P-8361 (8)	
7I-3631	Standard	1U-1909 (2)	3G-6395	3G-6395	1U-1897	1U-1897	5P-8823 (12)	3K-9770 (12)
	Heavy Duty	135-9533(2)	100-4044	100-4044			5P-8823 (12)	3K-9770 (12)
	ARM	107-3282/3	123-0336	123-0337			5P-8823 (12)	3K-9770 (12)
7V-0898 ⁽¹⁾	Standard	1U-2409 (2)	3G-6395	3G-6395	1U-1897	1U-1897	5P-8823 (12)	3K-9770 (12)
7V-0909	Standard	1U-0762 (2)	1U-0761	1U-0761	1U-0764	1U-0764	5P-8823 (12)	3K-9770 (12)
	Heavy Duty	100-4047(2)	100-4043	100-4043			5P-8823 (12)	3K-9770 (12)
	ARM	6Y-3271 (2)	123-0335	123-0334			5P-8823 (12)	3K-9770 (12)
	ARM (rev)	208-5344(2)	208-5177	208-5177			5P-8823 (12)	3K-9770 (12)
7V-0912	Standard	1U-0593 (2)	3G-6395	3G-6395	1U-1897	1U-1897	5P-8823 (12)	3K-9770 (12)
7V-1490	Standard	1U-0593 (2)	3G-6395	3G-6395	1U-1897	1U-1897	5P-8823 (12)	3K-9770 (12)
	Heavy Duty	100-4046(2)	100-4044	100-4044			5P-8823 (12)	3K-9770 (12)
	ARM	9W-3477/8	123-0336	123-0337			5P-8823 (12)	3K-9770 (12)
	ARM (rev)	208-5345(2)	208-5343	208-5343			5P-8823 (12)	3K-9770 (12)
	Half Arrow	253-0079(3)	253-0077	253-0078			5P-8823 (18)	3K-9770 (18)
	HA (arm)	253-0083(3)	253-0081	253-0082			5P-8823 (18)	3K-9770 (18)
Top Wear Plate for HA Edge		286-1984 (2)	286-1983	286-1982			5P-8361 (8)	
7V-4188	Standard	1U-0762 (2)	1U-0761	1U-0761	1U-0764	1U-0764	5P-8823 (12)	3K-9770 (12)
	Heavy Duty	100-4047(2)	100-4043	100-4043			5P-8823 (12)	3K-9770 (12)
	ARM	6Y-3271 (2)	123-0335	123-0334			5P-8823 (12)	3K-9770 (12)
	ARM (rev)	208-5344(2)	208-5177	208-5177			5P-8823 (12)	3K-9770 (12)
	Half Arrow	217-4725(3)	217-4726	217-4726			5P-8823 (18)	3K-9770 (18)
	HA (arm)	236-7033(3)	229-6526	229-6526			5P-8823 (18)	3K-9770 (18)

Loader GP Buckets

Loader GP Bucket Bolt-On Cutting Edges & Top Wear Plates (Cont'd.)

Base Edge Part Number	BOCE Type	Center (qty)	Straight Endbit/End		Angled Endbit		Hardware	
			LH (qty)	RH (qty)	LH (qty)	RH (qty)	Bolt (qty)	Nut (qty)
7V-6844	Standard	1U-1909 (2)	3G-6395	3G-6395	1U-1897	1U-1897	5P-8823 (12)	3K-9770 (12)
	Heavy Duty	135-9533(2)	100-4044	100-4044			5P-8823 (12)	3K-9770 (12)
	ARM	107-3282/3	123-0336	123-0337			5P-8823 (12)	3K-9770 (12)
8K-8161 ⁽¹⁾	Standard	1U-1465	1U-1464	1U-1464			1J-5607(9)	2J-3507 (9)
	Heavy Duty	132-1026	132-1027	132-1027			1J-5607(9)	2J-3507 (9)
	ARM	9W-3469	9W-3470	9W-3471			1J-5607(9)	2J-3507 (9)
8V-1825	Standard	1U-0292 (2)	4T-8091	4T-8091	1U-1896	1U-1896	1J-5607(10)	2J-3507(10)
	ARM	9W-3484/5	9W-3482	9W-3481			1J-5607(10)	2J-3507(10)
8V-7453	Standard	4T-9563 (2)	4T-8091	4T-8091	1U-1896	1U-1896	1J-5607(10)	2J-3507(10)
8Y-4738	Standard	9W-9943	9W-9944	9W-9944			4F-7827 (8)	2J-3506 (8)
8Y-6263	Standard	8E-5793 (2)	3G-6395	3G-6395	1U-1897	1U-1897	5P-8823 (12)	3K-9770 (12)
8Y-8763	Standard	100-6359 (2)	4T-8091	4T-8091	1U-1896	1U-1896	1J-5607(10)	2J-3507 (10)
9U-3748	Standard	104-5841 (2)	1U-0761	1U-0761	1U-0764	1U-0764	5P-8823 (12)	3K-9770 (12)
	Heavy Duty	183-5325 (2)	1U-0761	1U-0761			5P-8823 (12)	3K-9770 (12)
	ARM	132-1069/70	123-0335	123-0334			5P-8823 (12)	3K-9770 (12)
9V-6570	Standard	1U-0293 (2)	4T-8091	4T-8091	1U-1896	1U-1896	1J-5607(10)	2J-3507 (10)
9V-6571	Standard	1U-0294 (2)	4T-8091	4T-8091	1U-1896	1U-1896	1J-5607(10)	2J-3507 (10)
9V-6572	Standard	1U-0295 (2)	4T-8091	4T-8091	1U-1896	1U-1896	1J-5607(10)	2J-3507 (10)
	ARM	9W-3486/7	9W-3482	9W-3481			1J-5607(10)	2J-3507 (10)
9V-6573	Standard	1U-0601 (2)	4T-8101	4T-8101	1U-1898	1U-1898	4F-4042 (12)	2J-3507 (12)
	Heavy Duty	132-1034(2)	132-1033	132-1033			4F-4042 (12)	2J-3507 (12)
	ARM	9W-3492/3	9W-3488	9W-3489			4F-4042 (12)	2J-3507 (12)
9V-6574	Standard	1U-0762 (2)	1U-0761	1U-0761	1U-0764	1U-0764	5P-8823 (12)	3K-9770 (12)
	Heavy Duty	100-4047 (2)	100-4043	100-4043			5P-8823 (12)	3K-9770 (12)
	ARM	6Y-3271 (2)	123-0335	123-0334			5P-8823 (12)	3K-9770 (12)
	ARM (rev)	208-5344 (2)	208-5177	208-5177			5P-8823 (12)	3K-9770 (12)
	Half Arrow	217-4725 (3)	217-4726	217-4726			5P-8823 (18)	3K-9770 (18)
	HA (arm)	236-7033(3)	229-6526	229-6526			5P-8823 (18)	3K-9770 (18)
Top Wear Plate for HA Edge		309-6120 (2)	309-6119	309-6118			5P-8361 (8)	
9V-6575	Standard	1U-0593 (2)	3G-6395	3G-6395	1U-1897	1U-1897	5P-8823 (12)	3K-9770 (12)
	Heavy Duty	100-4046 (2)	100-4044	100-4044			5P-8823 (12)	3K-9770 (12)
	ARM	9W-3477/8	123-0336	123-0337			5P-8823 (12)	3K-9770 (12)
	ARM (rev)	208-5345 (2)	208-5343	208-5343			5P-8823 (12)	3K-9770 (12)
	Half Arrow	253-0079 (3)	253-0077	253-0078			5P-8823 (18)	3K-9770 (18)
	HA (arm)	253-0083 (3)	253-0081	253-0082			5P-8823 (18)	3K-9770 (18)
Top Wear Plate for HA Edge		286-1984(2)	286-1983	286-1982			5P-8361 (8)	
105-2345	Standard	107-3746 (2)	4T-8091	4T-8091	1U-1896	1U-1896	1J-5607(10)	2J-3507 (10)
	Heavy Duty	138-6425 (2)	138-6560	138-6560			1J-5607(10)	2J-3507 (10)
	ARM	107-3298/9	9W-3482	9W-3481			1J-5607(10)	2J-3507 (10)
110-4712	Standard	110-4711 (2)	4T-8091	4T-8091	1U-1896	1U-1896	1J-5607(10)	2J-3507 (10)
	ARM	123-9195/6	9W-3482	9W-3481			1J-5607(10)	2J-3507 (10)
110-4781	Standard	110-4782 (2)	4T-8091	4T-8091	1U-1896	1U-1896	1J-5607(10)	2J-3507 (10)
111-9770	Standard	109-9212 (2)	1U-0761	1U-0761	1U-0764	1U-0764	5P-8823 (12)	3K-9770 (12)
	Heavy Duty	109-9230 (2)	100-4043	100-4043			5P-8823 (12)	3K-9770 (12)
	ARM	109-9214 (2)	123-0335	123-0334			5P-8823 (12)	3K-9770 (12)
	ARM (rev)	208-5178 (2)	208-5177	208-5177			5P-8823 (12)	3K-9770 (12)
	Half Arrow	217-4727 (3)	217-4726	217-4726			5P-8823 (18)	3K-9770 (18)

Loader GP Bucket Bolt-On Cutting Edges & Top Wear Plates (Cont'd.)

Base Edge Part Number	BOCE Type	Center (qty)	Straight Endbit/End		Angled Endbit		Hardware	
			LH (qty)	RH (qty)	LH (qty)	RH (qty)	Bolt (qty)	Nut (qty)
	HA (arm)	236-7034(3)	229-6526	229-6526			5P-8823 (18)	3K-9770 (18)
Top Wear Plate for HA Edge		253-0184 (2)	253-0183	253-0182			5P-8361 (8)	
141-4847	Standard	139-9230 (2)	4T-8101	4T-8101	1U-1898	1U-1898	4F-4042 (12)	2J-3507 (12)
	Heavy Duty	135-9666 (2)	132-1033	132-1033			4F-4042 (12)	2J-3507 (12)
	ARM	138-0672/3	9W-3488	9W-3489			4F-4042 (12)	2J-3507 (12)
183-5190	Standard	104-5841 (2)	1U-0761	1U-0761	1U-0764	1U-0764	5P-8823 (12)	3K-9770 (12)
	Heavy Duty	183-5325 (2)	1U-0761	1U-0761			5P-8823 (12)	3K-9770 (12)
	ARM	132-1069/70	123-0335	123-0334			5P-8823 (12)	3K-9770 (12)
193-9015	Standard	4T-6588	4T-6588	4T-6588			8J-2928 (18)	2J-3507 (18)
194-0659	Standard	4T-6589 (2)	1U-0761	1U-0761	1U-0764	1U-0764	8J-2928 (16)	2J-3507 (16)
					End bit hardware		5P-8823 (6)	3K-9770 (6)
257-3667	Standard	104-5841 (2)	1U-0761	1U-0761	1U-0764	1U-0764	5P-8823 (12)	3K-9770 (12)
	Heavy Duty	183-5325 (2)	1U-0761	1U-0761			5P-8823 (12)	3K-9770 (12)
	ARM	132-1069/70	123-0335	123-0334			5P-8823 (12)	3K-9770 (12)

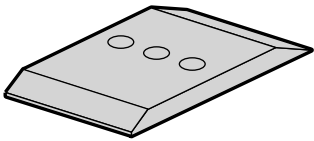
Loader Segments

Bolt-On Segments

Bolt-on segments bolt directly to the bottom of the base edge between adapters.

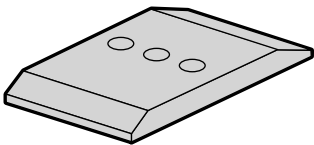
Bolt-on segments:

- Increase bucket capacity.
- Maintain a smoother work surface.
- Protect the base edge between teeth, eliminating scalloping.
- Increase base edge life up to five times.
- Hardened to 430-520 Brinell.



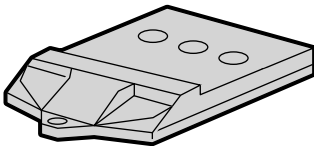
Standard Bolt-On Segments

- Reversible for a second wear life.



Heavy Duty Bolt-On Segments

- Provides at least 50% more wear material than standard bolt-on segments.
- Reversible for a second wear life.



Half-Arrow Bolt-On Segments

- Stay sharper and enhance protection of the base edge front and bevel.
- Protects against scalloping of the base edge between adapters.
- Protects against scalloping of the segment.
- Match bottom strap thickness of the shouldered adapters.

Segments & Top Wear Plates

992 Segments & Top Wear Plates

Standard (40 mm)	Center	1	4T-6760
	RH	3	4T-6761
	LH	3	4T-6762
Heavy Duty (50 mm)	Center	1	107-3530
	RH	3	107-3531
	LH	3	107-3532
Heavy Duty (60 mm)	Center	1	107-6294
	RH	3	107-6295
	LH	3	107-6296
Half Arrow (60 mm)	Center	1	275-5460
	RH	3	275-5461
	LH	3	275-5462
Half Arrow (75 mm)	Center	1	275-5470
	RH	3	275-5471
	LH	3	275-5472
ARM (40 mm)	Center	1	138-0861
	RH	3	138-0862
	LH	3	138-0863
	Bolts	28	5P-8823
	Nuts	28	3K-9770
Top Plates ⁽¹⁾	Center	1	195-7096
	RH	3	195-7097
	LH	3	195-7098
	ARM Center	1	195-7246
	ARM RH	3	195-7247
	ARM LH	3	195-7248

High Abrasion Bucket Top Plates

8 Tip Edge	Center	1	208-5327
	RH	3	208-5328
	LH	3	208-5329
9 Tip Edge	RH	4	235-8777
	LH	4	235-8778
	Long Bolts	14 or 18	198-1092
	Lug Nuts	14 or 18	5P-8362

¹ Top Plates used with Half Arrow segments.

General Purpose and Material Handling Buckets

924H & G/924Hz & Gz – General Purpose and Material Handling Buckets (2540 mm/100 in)

- Commonly used GET
- Not compatible with all buckets

Bolt-on Cutting Edges			
8E-4566 (25 mm)	Edge - End	2	4T-8091
	Edge - Cutting	2	8E-4567
	Bolt	10	1J-5607
	Nut	10	2J-3507

Corner Protectors			
174-7947	Corner Guard	1	253-0060
	Corner Guard	1	253-0061
	Nut	4	2J-3507
	Bolt	4	4F-4042

Bolt-on Adapters (Set of 8)			
116-9713 (J250)	Adapter - Center	6	1U-0257
	Adapter - LH	1	6I-9250
	Adapter - RH	1	6I-9251
	Nut	4	2J-3507
	Bolt	2	4F-4042
	Bolt	2	4J-9058
	Bolt	12	8J-2928
	Nut	12	8J-2933

Bolt-on Segments (Set of 7)			
8E-4569 (25 mm)	Bolt	14	1J-5607
	Nut	14	2J-3507

938H & GII/IT38H & GII – General Purpose and Material Handling Buckets

- Commonly used GET
- Not compatible with all buckets

Bolt-on Cutting Edges			
107-3747 (25 mm)	Edge - End	2	4T-8091
	Edge - Cutting	2	107-3746
	Bolt	10	1J-5607
	Nut	10	2J-3507
138-6426 (HD - 35 mm)	Edge - End	2	138-6560
	Edge - Cutting	2	138-6425
	Bolt	10	1J-5607
	Nut	10	2J-3507
107-3297 (ARM - 25 mm)	Edge End - RH	1	9W-3481
	Edge End - LH	1	9W-3482

General Purpose and Material Handling Buckets

938H & GII/IT38H & GII – General Purpose and Material Handling Buckets (Cont'd.)

Bolt-on Cutting Edges			
	Edge - ARM	1	107-3298
	Edge - ARM	1	107-3299
	Bolt	10	1J-5607
	Nut	10	2J-3507
Bolt-on Cutting Edge and Corner Protectors			
275-5481 (25 mm)	Edge - End	2	4T-8091
	Edge - Cutting	2	107-3746
	Corner Guard	1	253-0060
	Corner Guard	1	253-0061
	Bolt	10	1J-5607
	Nut	14	2J-3507
	Bolt	4	4F-4042
275-5482 (HD - 38 mm)	Edge - End	2	138-6560
	Edge - Cutting	2	138-6425
	Corner Guard	1	253-0060
	Corner Guard	1	253-0061
	Bolt	10	1J-5607
	Nut	14	2J-3507
	Bolt	4	4F-4042
Corner Protectors			
174-7947	Corner Guard	1	253-0060
	Corner Guard	1	253-0061
	Nut	4	2J-3507
	Bolt	4	4F-4042
Bolt-on Adapters (Set of 8)			
116-9713 (J250)	Adapter - Center	6	1U-0257
	Adapter - LH	1	6I-9250
	Adapter - RH	1	6I-9251
	Nut	4	2J-3507
	Bolt	2	4F-4042
	Bolt	2	4J-9058
	Bolt	12	8J-2928
	Nut	12	8J-2933
Bolt-on Segments (Set of 7)			
7T-9326 (25 mm)	Edge Segment	7	4T-6695
	Nut	14	2J-3507
	Bolt	14	1J-5607
132-1062 (HD - 35 mm)	Edge Segment	7	132-1037
	Nut	14	2J-3507
	Bolt	14	1J-5607

General Purpose and Material Handling Buckets

950H & G/962H & G – General Purpose and Material Handling Buckets

- Commonly used GET
- Not compatible with all buckets

Bolt-on Cutting Edges			
139-9229 (30 mm)	Edge - End	2	4T-8101
	Edge - Cutting	2	139-9230
	Bolt	12	4F-4042
	Nut	12	2J-3507
132-1052 (HD - 35 mm)	Edge - End	2	132-1033
	Edge - Cutting	2	135-9666
	Bolt	12	4F-4042
	Nut	12	2J-3507
138-0674 (ARM - 25 mm)	Edge End - RH	1	9W-3488
	Edge End - LH	1	9W-3489
	Edge - ARM	1	138-0672
	Edge - ARM	1	138-0673
	Bolt	12	4F-4042
	Nut	12	2J-3507

Bolt-on Cutting Edge and Corner Protectors			
275-5483 (25 mm)	Edge - End	2	4T-8101
	Edge - Cutting	2	139-9230
	Corner Guard RH	1	253-0062
	Corner Guard LH	1	253-0063
	Nut	12	2J-3507
	Nut	4	3K-9770
	Bolt	12	4F-4042
	Bolt	4	8T-9079
275-5484 (HD - 38 mm)	Edge - End	2	132-1033
	Edge - Cutting	2	135-9666
	Corner Guard RH	1	253-0062
	Corner Guard LH	1	253-0063
	Nut	12	2J-3507
	Nut	4	3K-9770
	Bolt	12	4F-4042
	Bolt	4	8T-9079

Corner Protectors			
174-7948	Corner Guard RH	1	253-0062
	Corner Guard LH	1	253-0063
	Nut	4	3K-9770
	Bolt	4	8T-9079

Bolt-on Adapters (Set of 8)			
257-1766 (K80)	Adapter - Center	6	222-1087

General Purpose and Material Handling Buckets

950H & G/962H & G – General Purpose and Material Handling Buckets (Cont'd.)

Bolt-on Adapters (Set of 8)			
	Adapter - RH	1	222-1088
	Adapter - LH	1	222-1089
	Nut	4	2J-5997
	Bolt	2	6V-6535
	Bolt	2	8T-9079
	Bolt	12	5P-8136
	Nut	12	8J-2933
Bolt-on Segments (Set of 7)			
139-9279 (30 mm)	Edge Segment	5	140-7601
	Edge - Cutting	2	263-7545
	Nut	14	2J-3507
	Bolt	14	4F-4042
107-3394 (HD - 35 mm)	Edge Segment	5	132-4715
	Edge - Cutting	2	257-1762
	Nut	14	2J-3507
	Bolt	14	4F-4042

966K & H/972K & H – General Purpose and Material Handling (3226 mm/127 in)

- Commonly used GET
- Not compatible with all buckets

Bolt-on Cutting Edges			
100-6669 (30 mm)	Edge - End	2	3G-6395
	Edge - Cutting	2	100-6668
	Bolt	12	5P-8823
	Nut	12	3K-9770
140-6824 (HD - 35 mm)	Edge - End	2	167-7430
	Edge - Cutting	2	140-6823
	Bolt	12	5P-8823
	Nut	12	3K-9770
253-0072 (Half Arrow)	Edge End - RH	1	253-0070
	Edge End - LH	1	253-0070
	Edge - Center	3	253-0071
	Bolt	18	6V-8360
	Nut	18	3K-9770
Bolt-on Cutting Edge and Corner Protectors			
275-5407 (30 mm)	Edge - End	2	3G-6395
	Edge - Cutting	2	100-6668
	Corner Guard RH	1	253-0064

General Purpose and Material Handling Buckets

966K & H/972K & H – General Purpose and Material Handling (3226 mm/127 in) (Cont'd.)

Bolt-on Cutting Edge and Corner Protectors			
	Corner Guard LH	1	253-0065
	Nut	16	3K-9770
	Bolt	12	5P-8823
	Bolt	4	6V-6535
275-5406 (HD - 35 mm)	Edge - End	2	167-7430
	Edge - Cutting	2	140-6823
	Corner Guard RH	1	253-0064
	Corner Guard LH	1	253-0065
	Nut	16	3K-9770
	Bolt	12	5P-8823
	Bolt	4	6V-6535
275-5405 (Half Arrow)	Edge - End LH	1	253-0069
	Edge - End RH	1	253-0070
	Edge Segment - Center	3	253-0071
	Corner Guard RH	1	253-0064
	Corner Guard LH	1	253-0065
	Nut	22	3K-9770
	Bolt	18	6V-8360
	Bolt	4	6V-6535
Corner Protectors			
174-7949	Corner Guard RH	1	253-0064
	Corner Guard LH	1	253-0065
	Nut	4	3K-9770
	Bolt	4	6V-6535
Bolt-on Adapters (Set of 8)			
229-6942 (K90)	Adapter - Center	6	222-1097
	Adapter - RH	1	229-7098
	Adapter - LH	1	229-7099
	Nut	4	2J-5997
	Bolt	2	5P-8823
	Bolt	2	6V-6535
	Bolt	12	5P-8361
	Nut	12	5P-8362
Bolt-on Segments (Set of 7)			
100-6667 (30 mm)	Edge Segment	5	100-6666
	Edge - Cutting	2	308-4322
	Nut	14	3K-9770
	Bolt	14	5P-8823
143-3062 (HD - 35 mm)	Edge Segment	5	140-6870
	Edge - Cutting	2	310-4067
	Nut	14	3K-9770

General Purpose and Material Handling Buckets

966K & H/972K & H – General Purpose and Material Handling (3226 mm/127 in) (Cont'd.)

Bolt-on Segments (Set of 7)			
174-4169 (Half Arrow)	Bolt	14	5P-8823
	Half Arrow	7	313-5550
	Nut	14	3K-9770
	Bolt	14	5P-8823

966K & H/972K & H – Rock and HD Rock Buckets

- Commonly used GET
- Not compatible with all buckets

Bolt-on Segments (Set of 7)			
135-9293 (40 mm)	Segment - Center	1	135-9294
	Segment - RH	3	135-9295
	Segment - LH	3	135-9296
	Nut	14	3K-9770
	Bolt	14	8T-9079
135-9543 (Half Arrow)	Segment - Center	1	135-9544
	Segment - RH	3	135-9545
	Segment - LH	3	135-9546
	Nut	14	3K-9770
	Bolt	14	6V-6535

Sidebar Protectors			
135-8245	Retainer	4	114-0359
	Sidebar Protector	2	135-8246
	Pin	4	135-9292
	Shear Blocks	4	331-7418

980 G & H – General Purpose and Material Handling

- Commonly used GET
- Not compatible with all buckets

Bolt-on Cutting Edges			
109-9213 (35 mm)	Edge - End	2	280-4068
	Edge - Cutting	2	109-9212
	Bolt	12	5P-8823
	Nut	12	3K-9770
127-0718 (HD - 40 mm)	Edge - End	2	100-4043
	Edge - Cutting	2	109-9230
	Bolt	12	5P-8823
	Nut	12	3K-9770
109-3129 (ARM 1-Way)	Edge - Cutting	2	109-9214

General Purpose and Material Handling Buckets

980 G & H – General Purpose and Material Handling (Cont'd.)

Bolt-on Cutting Edges			
	Edge - End RH	1	123-0334
	Edge - End LH	1	123-0335
	Bolt	12	5P-8823
	Nut	12	3K-9770
287-1901 (Reversible ARM)	Edge - End	2	291-9126
	Edge - Cutting	2	315-5761
	Bolt	12	5P-8361
	Nut	12	3K-9770
229-6959 (Half Arrow)	Edge - End	2	217-4726
	Edge - Cutting	3	217-4727
	Bolt	18	6V-8360
	Nut	18	3K-9770
257-1791 (ARM Half Arrow)	Edge - End ARM	2	229-6526
	Edge - Center ARM	3	236-7034
	Bolt	18	6V-8360
	Nut	18	3K-9770

Bolt-on Cutting Edge and Corner Protectors			
264-2105 (35 mm)	Edge - End	2	1U-0761
	Edge - Cutting	2	109-9212
	Corner Guard RH	1	253-0066
	Corner Guard LH	1	253-0067
	Nut	16	3K-9770
	Bolt	16	5P-8823
264-2104 (HD - 40 mm)	Edge - End	2	100-4043
	Edge - Cutting	2	109-9230
	Corner Guard RH	1	253-0066
	Corner Guard LH	1	253-0067
	Nut	16	3K-9770
	Bolt	16	5P-8823
264-2103 (Half Arrow)	Edge - End	1	217-4726
	Edge - Center	1	217-4727
	Corner Guard RH	1	253-0066
	Corner Guard LH	1	253-0067
	Nut	22	3K-9770
	Bolt	18	6V-8360
	Bolt	4	5P-8823

Corner Protectors			
174-7950	Corner Guard RH	1	253-0066
	Corner Guard LH	1	253-0067
	Nut	4	3K-9770
	Bolt	4	5P-8823

General Purpose and Material Handling Buckets

980 G & H – General Purpose and Material Handling (Cont'd.)

Bolt-on Adapters (Set of 8)				
257-1770 (K100)	Adapter - Center	6	223-8107	
	Adapter - LH	1	223-8108	
	Adapter - RH	1	223-8109	
	Nut	4	3K-9770	
	Bolt	14	5P-8361	
	Bolt	2	6V-6535	
	Nut	12	5P-8362	
Bolt-on Half Arrow Cutting Edge				
264-2085 (Half Arrow with TMWP)	Nut	22	3K-9770	
	Bolt	8	5P-8361	
	Half Arrow - End	2	217-4726	
	Half Arrow - Center	3	217-4727	
	Corner Guard RH	1	253-0066	
	Corner Guard LH	1	253-0067	
	Top Wear Plate - RH	1	253-0182	
	Top Wear Plate - LH	1	253-0183	
	Top Wear Plate - Center	2	253-0184	
	Bolt	4	5P-8823	
	Bolt	10	6V-8360	
	Bolt-on Segments (Set of 7)			
	109-9059 (30 mm)	Edge Segment	7	109-9019
		Nut	14	3K-9770
Bolt		14	5P-8823	
135-9667 (HD - 45 mm)	Edge Segment	2	135-8219	
	Nut	14	3K-9770	
	Bolt	14	5P-8823	
Sidebar Protectors				
135-8245	Retainer	4	114-0359	
	Sidebar Protector	2	135-8246	
	Pin	4	135-9292	
	Shear Blocks	4	331-7418	

Rock (Spade Nose)

980 G & H – Rock Spade Nose

- Commonly used GET
- Not compatible with all buckets

Bolt-on Cutting Edges			
109-9120 (35 mm)	Washer	25	4K-0684
	Bolt	25	6V-6535
	Cutting Edge - RH	1	109-9121
	Cutting Edge - RH	1	109-9122
	Cutting Edge - Center	1	109-9123
	Cutting Edge - LH	1	109-9124
	Cutting Edge - LH	1	109-9125
	Nut	25	3K-9770

Bolt-on Segments (Set of 7)			
119-3230 (30 mm)	Segment - Center	1	9W-5734
	Segment - LH	3	9W-5730
	Segment - RH	3	9W-5737
	Nut	21	3K-9770
	Bolt	21	8T-9079
107-3498 (HD - 45 mm)	Segment - Center	1	107-3490
	Segment - RH	3	107-3491
	Segment - LH	3	107-3492
	Nut	21	3K-9770
	Bolt	21	8T-9079
138-6473 (35 mm - ARM)	Segment - Center	1	138-6470
	Segment - RH	3	138-6471
	Segment - LH	3	138-6472
	Nut	21	3K-9770
	Bolt	21	8T-9079
109-3123 (Half Arrow)	Half Arrow - Center	1	116-7460
	Half Arrow - RH	3	116-7461
	Half Arrow - LH	3	116-7462
	Nut	21	3K-9770
	Bolt	21	8T-9079

Sidebar Protectors			
106-0912	Retainer	4	114-0359
	Sidebar Protector	2	9J-9600
	Pin	4	135-9350
	Shear Blocks	4	331-7417

988 G & H – General Purpose

- Commonly used GET
- Not compatible with all buckets

Bolt-on Cutting Edges			
183-5318 (40 mm)	Edge - End	2	1U-0761
	Edge - Cutting	2	183-5325
	Nut	12	3K-9770
	Bolt	12	6V-8360

Corner Protectors			
174-7950	Corner Guard RH	1	253-0066
	Corner Guard LH	1	253-0067
	Nut	4	3K-9770
	Bolt	4	5P-8823

Bolt-on Adapters (Set of 8)			
232-0167 (K110)	Adapter - Center	6	315-0117
	Adapter - LH	1	315-0119
	Adapter - RH	1	315-0118
	Nut	4	3K-9770
	Bolt	14	198-1092
	Bolt	2	5P-8361
	Nut	12	5P-8362

Bolt-on Segments (Set of 7)			
183-5321 (45 mm)	Edge Segment	7	183-5324
	Nut	14	3K-9770
	Bolt	14	6V-8360

Rock (Straight Nose)

988 G & H – Rock (Straight Nose)

- Commonly used GET
- Not compatible with all buckets

Bolt-on Segments (Set of 7)			
8E-9898 (40 mm)	Segment	7	101-9435
	Nut	21	3K-9770
	Bolt	21	6V-6535
107-3545 (HD 45 mm)	Segment - Center	7	107-3536
	Nut	21	3K-9770
	Bolt	21	6V-6535

Sidebar Protectors			
106-0912	Retainer	4	114-0359
	Sidebar Protector	2	9J-9600
	Pin	4	135-9350
	Shear Blocks	4	331-7417

988 G & H – Rock (Spade Nose)

- Commonly used GET
- Not compatible with all buckets

Bolt-on Segments (Set of 7)			
109-9051 (40 mm)	Segment - Center	1	101-9435
	Segment - RH	3	101-9436
	Segment - LH	3	101-9437
	Nut	21	3K-9770
	Bolt	21	6V-6535
107-3533 (HD 45 mm)	Segment - Center	1	107-3536
	Segment - RH	3	107-3537
	Segment - LH	3	107-3538
	Nut	21	3K-9770
	Bolt	21	6V-6535
138-0869 (ARM)	Segment - Center	1	138-0865
	Segment - RH	3	138-0866
	Segment - LH	3	138-0867
	Nut	21	3K-9770
	Bolt	21	6V-6535
124-6346 (Half Arrow)	Half Arrow - Center	1	109-9080
	Half Arrow - RH	3	109-9081
	Half Arrow - LH	3	109-9082
	Nut	21	3K-9770
	Bolt	21	6V-6535

Edge Protector (Half Arrow with Top Mounted Wear Plate)			
232-0161 (45 mm Half Arrow with TMWP)	Half Arrow - Center	1	109-9080
	Half Arrow - RH	3	109-9081
	Half Arrow - LH	3	109-9082
	Wear Plate - Center	1	195-7180
	Wear Plate - RH	3	195-7181
	Wear Plate - LH	3	195-7182
	Bolt	21	5P-8361
	Nut	21	3K-9770
	Nut	21	5P-8362

Top Mounted Wear Plate			
195-7141	Wear Plate - Center	1	195-7180
	Wear Plate - RH	3	195-7181
	Wear Plate - LH	3	195-7182
	Bolt	21	5P-8361
	Nut	21	3K-9770
	Nut	21	5P-8362

Sidebar Protectors			
106-0912	Retainer	4	114-0359

Rock (Spade Nose)

988 G & H – Rock (Spade Nose) (Cont'd.)

Sidebar Protectors			
	Sidebar Protector	2	9J-9600
	Pin	4	135-9350
	Shear Blocks	4	331-7417

Rock, HD Rock, HD Abrasion, HD Granite (Spade Nose)

990 – Rock, HD Rock, HD Abrasion, HD Granite (Spade Nose)

- Commonly used GET
- Not compatible with all buckets

Bolt-on Segments (Set of 7)			
4T-6763 (40 mm)	Segment - Center	1	4T-6760
	Segment - RH	3	4T-6761
	Segment - LH	3	4T-6762
	Nut	28	3K-9770
	Bolt	28	5P-8823
107-3529 (HD 50 mm)	Segment - Center	1	107-3530
	Segment - RH	3	107-3531
	Segment - LH	3	107-3532
	Nut	28	3K-9770
	Bolt	28	5P-8823
107-6293 (HD 60 mm)	Segment - Center	1	107-6294
	Segment - RH	3	107-6295
	Segment - LH	3	107-6296
	Nut	28	3K-9770
	Bolt	28	5P-8823
123-4392 (Half Arrow - 60 mm)	Half Arrow - Center	1	275-5460
	Half Arrow - LH	3	275-5461
	Half Arrow - RH	3	275-5462
	Nut	28	3K-9770
	Bolt	28	5P-8823
109-2674 (Half Arrow - 75 mm)	Half Arrow - Center	1	275-5470
	Half Arrow - LH	3	275-5471
	Half Arrow - RH	3	275-5472
	Nut	28	3K-9770
	Bolt	28	5P-8823

Half Arrow with Top Mounted Wear Plate			
232-0162 (60 mm Half Arrow with TMWP)	Half Arrow - Center	1	275-5460
	Half Arrow - LH	3	275-5461
	Half Arrow - RH	3	275-5462
	Wear Plate - Center	1	195-7096
	Wear Plate - RH	3	195-7097
	Wear Plate - LH	3	195-7098
	Bolt	14	5P-8823
	Bolt	14	198-1092
	Nut	14	5P-8362
	Nut	28	3K-9770

Half Arrow with ARM Top Mounted Wear Plate			
303-3319 (60 mm Half Arrow with ARM TMWP)	Half Arrow - Center	1	275-5460
	Half Arrow - LH	3	275-5461

Rock, HD Rock, HD Abrasion, HD Granite (Spade Nose)

990 – Rock, HD Rock, HD Abrasion, HD Granite (Spade Nose) (Cont'd.)

Half Arrow with ARM Top Mounted Wear Plate			
	Half Arrow - RH	3	275-5462
	Wear Plate - Center	1	195-7246
	Wear Plate - RH	3	195-7247
	Wear Plate - LH	3	195-7248
	Bolt	14	5P-8823
	Bolt	14	5P-8361
	Nut	14	5P-8362
	Nut	28	3K-9770

Top Mounted Wear Plate (Use with 195-7190, 195-7191 and 195-7192 Half Arrows)			
195-7094	Wear Plate - Center	1	195-7096
	Wear Plate - RH	3	195-7097
	Wear Plate - LH	3	195-7098
	Bolt	14	5P-8823
	Bolt	14	198-1092
	Nut	14	5P-8362
	Nut	28	3K-9770

Sidebar Protectors			
101-3083	Retainer	4	107-8559
	Sidebar Protector	2	1U-0740
	Pin	4	133-0738
	Shear Blocks	4	330-4456

992 G & K – Rock, HD Rock, HD Abrasion, HD Granite (Spade Nose)

- Commonly used GET
- Not compatible with all buckets

Bolt-on Segments (Set of 7)			
4T-6763 (40 mm)	Segment - Center	1	4T-6760
	Segment - RH	3	4T-6761
	Segment - LH	3	4T-6762
	Nut	28	3K-9770
	Bolt	28	5P-8823
107-3529 (HD 50 mm)	Segment - Center	1	107-3530
	Segment - RH	3	107-3531
	Segment - LH	3	107-3532
	Nut	28	3K-9770
	Bolt	28	5P-8823
107-6293 (HD 60 mm)	Segment - Center	1	107-6294
	Segment - RH	3	107-6295
	Segment - LH	3	107-6296

Rock, HD Rock, HD Abrasion, HD Granite (Spade Nose)

992 G & K – Rock, HD Rock, HD Abrasion, HD Granite (Spade Nose) (Cont'd.)

Bolt-on Segments (Set of 7)			
	Nut	28	3K-9770
	Bolt	28	5P-8823
123-4392 (Half Arrow - 60 mm)	Half Arrow - Center	1	275-5460
	Half Arrow - LH	3	275-5461
	Half Arrow - RH	3	275-5462
	Nut	28	3K-9770
	Bolt	28	5P-8823
109-2674 (Half Arrow - 75 mm)	Half Arrow - Center	1	275-5470
	Half Arrow - LH	3	275-5471
	Half Arrow - RH	3	275-5472
	Nut	28	3K-9770
	Bolt	28	5P-8823

Half Arrow with Top Mounted Wear Plate			
232-0162 (60 mm Half Arrow with TMWP)	Half Arrow - Center	1	275-5460
	Half Arrow - LH	3	275-5461
	Half Arrow - RH	3	275-5462
	Wear Plate - Center	1	195-7096
	Wear Plate - RH	3	195-7097
	Wear Plate - LH	3	195-7098
	Bolt	14	5P-8823
	Bolt	14	198-1092
	Nut	14	5P-8362
	Nut	28	3K-9770

Half Arrow with ARM Top Mounted Wear Plate			
303-3319 (60 mm Half Arrow with ARM TMWP)	Half Arrow - Center	1	275-5460
	Half Arrow - LH	3	275-5461
	Half Arrow - RH	3	275-5462
	Wear Plate - Center	1	195-7246
	Wear Plate - RH	3	195-7247
	Wear Plate - LH	3	195-7248
	Bolt	14	5P-8823
	Bolt	14	5P-8361
	Nut	14	5P-8362
	Nut	28	3K-9770

Top Mounted Wear Plate (Use with 195-7190, 195-7191 and 195-7192 Half Arrows)			
195-7094	Wear Plate - Center	1	195-7096
	Wear Plate - RH	3	195-7097
	Wear Plate - LH	3	195-7098
	Bolt	14	5P-8823
	Bolt	14	198-1092
	Nut	14	5P-8362
	Nut	28	3K-9770

Rock, HD Rock, HD Abrasion, HD Granite (Spade Nose)

992 G & K – Rock, HD Rock, HD Abrasion, HD Granite (Spade Nose) (Cont'd.)

Sidebar Protectors			
101-3083	Retainer	4	107-8559
	Sidebar Protector	2	1U-0740
	Pin	4	133-0738
	Shear Blocks	4	330-4456
Wings			
	Wing Plate	6	288-8235

993K Rock, HD Rock, and Granite Buckets

993K

- Commonly used GET
- Not compatible with all buckets

Bolt-on Segments (Set of 7)			
309-1071 (60 mm)	Segment - Center	1	107-6294
	Segment - RH	3	107-6295
	Segment - LH	3	107-6296
	Nut	28	3K-9770
	Bolt	28	5P-8361

Half Arrow - 60 mm			
309-1070	Half Arrow - Center	1	275-5460
	Half Arrow - RH	3	275-5461
	Half Arrow - LH	3	275-5462
	Nut	28	3K-9770
	Bolt	28	5P-8361

Half Arrow - 75 mm			
309-1043	Half Arrow - Center	1	275-5470
	Half Arrow - RH	3	275-5471
	Half Arrow - LH	3	275-5472
	Nut	28	3K-9770
	Bolt	28	5P-8361

Half Arrow with Top Mounted Wear Plate			
315-0140 (60 mm Half Arrow with TMWP)	Half Arrow - Center	1	275-5460
	Half Arrow - RH	3	275-5461
	Half Arrow - LH	3	275-5462
	Wear Plate - Center	1	307-5600
	Wear Plate - RH	3	307-5601
	Wear Plate - LH	3	307-5602
	Bolt	14	5P-8361
	Bolt	14	209-9311
	Nut	14	5P-8362
	Nut	28	3K-9770

Half Arrow with ARM Top Mounted Wear Plate			
264-2068 (75 mm Half Arrow with TMWP)	Half Arrow - Center	1	275-5470
	Half Arrow - LH	3	275-5471
	Half Arrow - RH	3	275-5472
	Wear Plate - Center	1	307-5600
	Wear Plate - RH	3	307-5601
	Wear Plate - LH	3	307-5602
	Bolt	14	5P-8361
	Bolt	14	209-9311
	Nut	14	5P-8362
	Nut	28	3K-9770

993K Rock, HD Rock, and Granite Buckets

993K (Cont'd.)

Top Mounted Wear Plate (Use with 275-5460, 275-5461 and 275-5462 Half Arrows)			
195-7094	Wear Plate - Center	1	307-5600
	Wear Plate - RH	3	307-5601
	Wear Plate - LH	3	307-5602
	Bolt	14	5P-8361
	Bolt	14	209-9311
	Nut	14	5P-8362
	Nut	28	3K-9770
Sidebar Protectors			
101-3083	Retainer	4	107-8559
	Sidebar Protector	2	1U-0740
	Pin	4	133-0738
	Shear Blocks	4	330-4456
Wings			
	Wing Plate	6	288-8235

Loader GP Bucket Bolt-On Segments

Base Edge Part Number	Segment Type							Hardware	
	Standard		Heavy Duty		ARM		Half Arrow		
	Center (qty)	End (qty)	Center (qty)	End (qty)	Center (qty)	End (qty)	Center (qty)	Bolt (qty)	Nut (qty)
4E-0659	8E-4569 (7)							1J-5607 (14)	2J-3507(14)
4E-6085	4T-6700 (7)		107-8580 (7)				173-7447 (7)	5P-8823 (14)	3K-9770 (14)
4E-6085 ⁽¹⁾	4T-6700 (5)	308-4327 (2)						5P-8823 (14)	3K-9770 (14)
5G-6133	128-2873 (6)							4F-7827 (12)	2J-23506(12)
5G-7304	4T-6697 (7)		140-6866 (7)		135-9648 (7)			5P-8823 (14)	3K-9770 (14)
5G-8342	128-2873 (7)							4F-7827 (14)	2J-23506(14)
5G-8763	128-2873 (4)	128-2872 (2)						4F-7827 (12)	2J-23506(12)
6W-2976	4T-6692 (5)	4T-6693 (2)						1J-5607 (14)	2J-3507(14)
6W-2977	4T-6691 (7)							1J-5607 (14)	2J-3507(14)
6W-2978	4T-6692 (7)							4F-4042 (14)	2J-3507(14)
6W-2979	4T-6692 (5)	4T-6693 (2)						4F-4042 (14)	2J-3507(14)
6W-2980	4T-6694 (7)		132-1035 (7)					4F-4042 (14)	2J-3507(14)
6W-2980 ⁽¹⁾	4T-6694 (5)	308-4324 (2)						4F-4042 (14)	2J-3507(14)
6W-2981	4T-6698 (7)		140-6867 (7)					5P-8823 (14)	3K-9770 (14)
6W-2981 ⁽¹⁾	4T-6698 (5)	308-4323 (2)	140-6867 (5)	310-4065 (2)				5P-8823 (14)	3K-9770 (14)
6W-2982	4T-6697 (7)		140-6866 (7)		135-9648 (7)			5P-8823 (14)	3K-9770 (14)
6W-2982 ⁽¹⁾	4T-6697 (5)	309-1042 (2)						5P-8823 (14)	3K-9770 (14)
6W-2983	4T-6696 (7)		140-6865 (7)					5P-8823 (14)	3K-9770 (14)
6W-2984	4T-6694 (5)	4T-6693 (2)	132-1035 (5)	132-1036 (2)				1J-5607 (14)	2J-3507(14)
6W-2985	4T-6695 (7)		132-1037 (7)					1J-5607 (14)	2J-3507(14)
6W-2986	4T-6694 (5)	4T-6693 (2)	132-1035 (5)	132-1036 (2)				1J-5607 (14)	2J-3507(14)
6W-2987	4T-6694 (5)	4T-6695 (2)	132-1035 (5)	132-1037 (2)				1J-5607 (14)	2J-3507(14)
6W-2988 ⁽¹⁾	4T-6694 (5)	4T-6695 (2)	132-1035 (5)	132-1037 (2)				1J-5607 (14)	2J-3507(14)
6W-2989	4T-6698 (7)		140-6867 (7)					5P-8823 (14)	3K-9770 (14)
6W-2989 ⁽¹⁾	4T-6698 (5)	308-4323 (2)	140-6867 (5)	310-4065 (2)				5P-8823 (14)	3K-9770 (14)
6W-2990	4T-6698 (7)		140-6867 (7)					5P-8823 (14)	3K-9770 (14)
6W-2990 ⁽¹⁾	4T-6698 (5)	308-4323 (2)	140-6867 (5)	310-4065 (2)				5P-8823 (14)	3K-9770 (14)
6W-2991	4T-6700 (7)		107-8580 (7)				173-7447 (7)	5P-8823 (14)	3K-9770 (14)
6W-2991 ⁽¹⁾	4T-6700 (5)	308-4327 (2)						5P-8823 (14)	3K-9770 (14)
7I-3015	100-6666 (7)		140-6870 (7)				174-4116 (7)	5P-8823 (14)	3K-9770 (14)
7I-3015 ⁽¹⁾	100-6666 (5)	308-4322 (2)	140-6870 (5)	310-4067 (2)			315-5550 (7)	5P-8823 (14)	3K-9770 (14)
7I-3631	100-6664 (7)		140-6869 (7)					5P-8823 (14)	3K-9770 (14)
8Y-4738	6Y-6362 (7)							4F-7827 (14)	2J-23506(14)
8Y-6263	4T-6697 (5)	4T-6696 (2)	140-6866 (5)	140-6865 (2)				6V-6535 (14)	3K-9770 (14)
8Y-6263 ⁽¹⁾	4T-6697 (5)	308-4325 (2)	140-6866 (5)	308-4326 (2)				6V-6535 (14)	3K-9770 (14)
8Y-8763	4T-6692 (7)							1J-5607 (14)	2J-3507(14)
9U-3748	138-6540 (7)		183-5324 (7)					5P-8823 (14)	3K-9770 (14)
9V-6570	4T-6692 (7)							1J-5607 (14)	2J-3507(14)
9V-6571	4T-6691 (7)							1J-5607 (14)	2J-3507(14)
9V-6572	4T-6694 (7)		132-1035 (7)					1J-5607 (14)	2J-3507(14)
9V-6572 ⁽¹⁾	4T-6694 (5)	308-4324 (2)						4F-4042 (14)	2J-3507(14)
9V-6573	4T-6695 (7)		132-1037 (7)					4F-4042 (14)	2J-3507(14)
9V-6574	4T-6700 (7)		107-8580 (7)				173-7447 (7)	5P-8823 (14)	3K-9770 (14)
9V-6574 ⁽¹⁾	4T-6700 (5)	308-4327 (2)						5P-8823 (14)	3K-9770 (14)
9V-6575	4T-6699 (7)		140-6868 (7)				174-4114 (7)	5P-8823 (14)	3K-9770 (14)
9V-6575 ⁽¹⁾	4T-6699 (5)	308-3054 (2)	140-6868 (5)	310-4064 (2)			315-5548 (7)	5P-8823 (14)	3K-9770 (14)

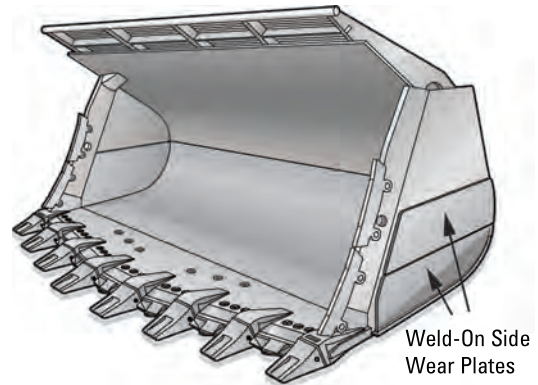
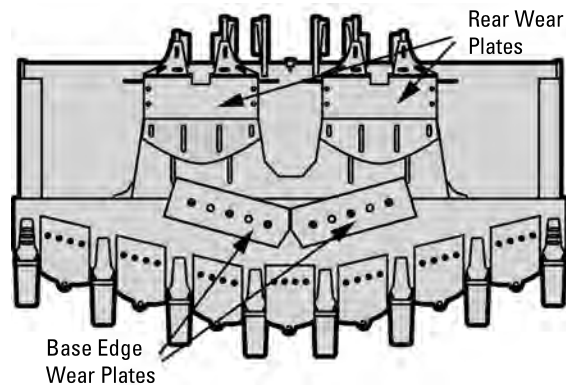
Loader GP Buckets

Loader GP Bucket Bolt-On Segments (Cont'd.)

Base Edge Part Number	Segment Type							Hardware	
	Standard		Heavy Duty		ARM		Half Arrow		
	Center (qty)	End (qty)	Center (qty)	End (qty)	Center (qty)	End (qty)	Center (qty)	Bolt (qty)	Nut (qty)
105-2345	4T-6695 (7)		132-1037 (7)					1J-5607 (14)	2J-3507(14)
110-4712	4T-6695 (7)		132-1037 (7)					1J-5607 (14)	2J-3507(14)
110-4781	4T-6694 (7)		132-1035 (7)					1J-5607 (14)	2J-3507(14)
110-4781 ⁽¹⁾	4T-6694 (5)	308-4324 (2)						4F-4042 (14)	2J-3507(14)
111-9770	109-9019 (7)		135-8219(7)				174-4115 (7)	5P-8823 (14)	3K-9770 (14)
141-4847	140-7601 (7)		132-4715 (7)					4F-4042 (14)	2J-3507(14)
141-4847 ⁽¹⁾	140-7601 (5)	263-7545 (2)	132-4715 (5)	257-1762(2)				4F-4042 (14)	2J-3507(14)
183-5190	138-6540 (7)		183-5324(7)					5P-8823 (14)	3K-9770 (14)
257-3667	138-6540 (7)		183-5324(7)					5P-8823 (14)	3K-9770 (14)

Wear Plates

Wear plates offer enhanced protection to the base edge, bucket sides, and bucket rear.



Base Edge Wear Plates

- Covers the bottom area of the base edge not protected by segments.
- Extends base edge life.

Heavy Duty Base Edge Wear Plates

- Provides extended base edge life due to a thicker base edge wear plate.

Rear Wear Plates

- Extends life by protecting the rear of the bucket.

Heavy Duty Rear Wear Plates

- Extends life by protecting the rear of the bucket.
- Provides more protection than the standard rear wear plates.

Weld-On Rear Wear Plates

- Extends life by protecting the rear of the bucket.

Weld-On Side Wear Plates

- Protects against bucket side plate wear

Loader Sidebar Protectors

Sidebar Protectors



- Protects the bucket sides.

Model	Bucket Type	Sidebar Protector	Pin	Retainer Assembly
980F, 980G	Rock	135-8246 (2)	135-9292 (4)	114-0359 (4)
988B, F, G	Rock	9J-9600 (2)	135-9350 (4)	114-0359 (4)
990, 992C, D, 992G	Rock	1U-0740 (2)	133-0738 (4)	107-8559 (4)
966G	Rock	135-8246 (4)	135-9292 (8)	114-0359 (8)
972G	Rock	135-8246 (4)	135-9292(8)	114-0359 (8)

Bucket Corner Protector

Tip Size	Corner Protector Part Number		Bolt	Nut
	Left Hand	Right Hand		
J250	253-0061	253-0060	4F-4042 (4)	2J-3507 (4)
J300	253-0063	253-0062	8T-9079 (4)	3K-9770 (4)
J350	253-0065	253-0064	6V-6535 (4)	3K-9770 (4)
J400, J460	253-0067	253-0066	5P-8823 (4)	3K-9770 (4)

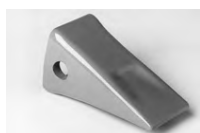
Tips

Cat loader bucket tips are side pinned for excellent tip retention and quick, easy tip changing. The pin hole is located through the tip sides which are the areas of least wear.



Long Tip

- The best choice for most applications.
- Made of longer wearing DH-3 steel for 988 and 992 sizes.



Short Tip

- Provides more strength.
- Contain less wear material.



Light Duty Long Tip

- For use in low impact with low to medium abrasiveness.
- Self-sharpening design and symmetrical shape.



Penetration Tip

- Provides better penetration.
- Contains less wear material.



Heavy Duty Long Tip

- Contains more wear material than Long Tip.
- Provides greater strength than Long Tip.
- Provides better penetration due to a streamlined-profile.



Heavy Duty Long Life Tip

- Increases wear life 2 to 5 times more than the Heavy Duty Long Tip.
- Provides better productivity because they get sharper as they wear.



Heavy Duty Abrasion Tip

- Contains the greatest amount of wear material.
- Provides good strength.
- Provides good penetration.



Heavy Duty Penetration Tip

- Use in high impact, hard-to-penetrate material.
- Longer wear life.
- Stays sharp.

	J200	J225	J250	J300	J450/J350	J400	J460	J550	J600	J700	J800
Long	1U-3202	6Y-3222	1U-3252	1U-3302	1U-3352	7T-3402	9W-8452	9W-8552	6I-6602	4T-4702	
Short		6Y-6221	1U-3251	1U-3301	1U-3351	7T-3401	9W-8451	9W-8551	6I-6601		
Abrasion	4T-2203									4T-4703	

Loader Tips

Tips (Cont'd.)

	J200	J225	J250	J300	J450/J350	J400	J460	J550	J600	J700	J800
Light Duty Long Tip	195-9209		168-1253	168-1301	168-1351	168-1401	168-1451				
Penetration	1U-3209	6Y-8229	9J-4259	9J-4309	9J-4359	6Y-7409	9W-8459	9W-8559	7I-7609	4T-4709	117-6809
Heavy Duty Long		8E-4222	9N-4252	9N-4302	9N-4352	8E-4402	9N-4452	9N-4552	7Y-0602	9U-9702	6I-8802
Heavy Duty Long Life			135-8252	125-8302	135-9352	116-7402	101-9054	101-9055	107-8602	107-2001	
Heavy Duty Abrasion		6Y-6223	9N-4253	9N-4303	9N-4353	7T-3403	9N-4453	6Y-2553	6I-6603	9U-9703	6I-8803
Heavy Duty Penetration				135-9300	144-1358	135-9400	138-6451	138-6552	135-9600	135-9700	135-9800
Pin	8E-6208	132-4762	132-4763	132-4766	114-0358	116-7408	114-0468 ⁽¹⁾	107-3378	113-9608	113-4708	134-1808
Retainer	8E-6209	149-5733	149-5733	149-5733	114-0359	116-7409	107-3469 ⁽¹⁾	107-8559	113-9609	113-4709	134-1809

Bolt-On Unitooth Tips



- Improves penetration where breakage is not a problem.
- Tip and adapter are one integrated piece for easy installation and lower initial costs.
- For use in nonabrasive materials.

Tip Size	Model
J200	910, 931, 914G, 935, IT12, IT14G
J250	916, 920, 924, 926, 928, 930, 936, 938, 939, 941, 943, 951, 953, IT18, IT28
J300 ⁽¹⁾	944, 950, 953B
J300 ⁽²⁾	950B, 955, 960F, 963
J300 ⁽³⁾	966C
J350	960F, 966D, 970F, 973, 977

Bolt-On Unitooth Tip Chart

Unitooth Components	J200	J250	J300 ⁽¹⁾	J300 ⁽²⁾	J300 ⁽³⁾	J350
Unitooth Center Tip	8J-6207	1U-1857	1U-1877	8E-1637	1U-1877	6Y-0649
Unitooth One Bolt Corner Tip (lh)	1U-1868	1U-1858	1U-1878	1U-1878	1U-1888	1U-1888
Unitooth One Bolt Corner Tip (rh)	1U-1869	1U-1859	1U-1879	1U-1879	1U-1889	1U-1889
Unitooth Two Bolt Corner Tip (lh)		6I-8388	8E-8608	8E-8608	8E-5318	8E-5318
Unitooth Two Bolt Corner Tip (rh)		6I-8389	8E-8609	8E-8609	8E-5319	8E-5319

Cat K Series Tips

Cat K Series excavator bucket tips use a new vertical retention system that allows quick and easy tip changes. Providing a new locking interface at every tip change to improve retention reliability. Lower profile improves penetration and wear life.

- 1 25 mm edge.
- 2 32 mm edge.
- 3 32 mm edge (bigger bolts).

Cat K Series Tips (Cont'd.)



Penetration Tip

- For harder-to-penetrate, moderate impact, lower abrasion.
- Very good penetration.
- Top rib, bottom cavity to stay sharp.



Spike Tip

- For maximum penetration, especially in cohesive material.
- Stays sharp for enhanced wear life.
- Top and bottom rib design.



Double Spike Tip

- For harder-to-penetrate, fracturable materials.
- Very good penetration, stays sharp.
- Use in corner positions with Spike Centers.
- Length matches spike.



Wide Tip

- For easy-to-penetrate trenching applications.
- Low impact.
- Smooth floor trenches.



Heavy Penetration

- Recommended for high abrasive and impact conditions, especially shot rock.
- Excellent penetration and wear material, stays sharp.



Heavy Abrasion

- Recommended for high abrasive, moderate impact, easier-to-penetrate materials.
- Excellent wear material, less penetration.



General Duty

- Recommended for general applications in moderate impact and abrasive conditions.
- Good penetration, self-sharpening cavities.



Extra Duty — (plus ARM parts option)

- Recommended for general applications requiring more wear material in moderate impact conditions.
- Good wear material, good penetration.

Loader Tips

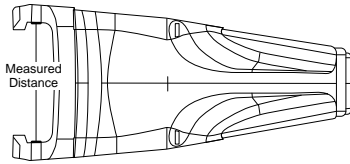
Cat K Series Tips (Cont'd.)



Penetration — (plus ARM parts option)

- Recommended for harder-to-penetrate, moderate impact, lower abrasive materials.
- Very good penetration, less wear material, stays sharp.

K Family Identification



To identify tip or adapter family simply measure the distance between the “ears” of the tip in millimeters and round to the nearest 5 mm.

Ex: 80 mm (3.15") = K80

Ex: 87.4 mm (3.44") = K90

Ex: 96.1 mm (3.78") = K100

Tip Chart

	K80	K90	K100	K110	K130	K150	K170
Wide	222-1080	222-1090	223-8100	223-8110	223-8130	195-5151	223-8170
Extra Duty	220-9081	220-9091	220-9101	232-2111	264-2131	264-2151	264-2171
Penetration	220-9082	220-9092	220-9102	220-9112	220-9132	229-7152	232-0172
Penetration Plus	220-9083	220-9093	220-9103	220-9113	220-9133	229-7153	232-0173
Spike	220-9087	220-9097	220-9107	220-9117	220-9137	229-7157	232-0177
Double Spike	220-9088	220-9098	220-9108	220-9118	220-9138	229-7158	232-0178
General Duty	220-9089	220-9099	220-9109	220-9119	220-9139	229-7159	232-0179
Heavy Penetration	222-1081	222-1091	223-8101	232-2112	264-2132	264-2152	264-2172
Heavy Abrasion	222-1082	222-1092	223-8102	223-8112	223-8132	229-7156	232-2178
Extra Duty Long Life (ARM)	229-7080	232-0090	232-0100	232-0110	232-2130	232-0150	233-7170
Penetration Long Life (ARM)	229-7081	232-0091	232-0101	232-0111	232-2131	232-0151	233-7171
Retainer	220-9090	220-9090	220-9090	220-9110	220-9130	233-7150	232-0170
SLAG Retainer				309-1119	232-2139	232-2159	232-2179

Tips or Points

Description	J300	K80	J350	K90	J400	K100	J460	K110	J550	K130	J600	K150	J700	K170
J Wide = K Wide	107-3300	222-1080	107-3350	222-1090	107-3400	223-8100	107-3450	286-2111	107-3550	223-8130	N/A	195-5151	N/A	223-8170
J Heavy Duty Long = K Extra Duty	9N-4302	220-9081	9N-4352	220-9091	8E-4402	220-9101	9N-4452	286-2112	9N-4552	264-2131	7Y-0602	264-2151	9U-9702	264-2171
J Penetration = K Penetration	9J-4309	220-9082	9J-4359	220-9092	6Y-7409	220-9102	9W-8459	286-2113	9W-8559	220-9132	7I-7609	229-7152	4T-4709	232-0172
J Penetration Plus = K Penetration Plus	183-5300	220-9083	168-1359	220-9093	168-1409	220-9103	159-0459	286-2114	159-0559	220-9133	159-0607	229-7153	171-1709	232-0173
J Long Sharp = K Spike	168-1300	220-9087	168-1350	220-9097	159-0400	220-9107	159-0450	286-2115	159-0550	220-9137	159-0600	229-7157	136-8700	232-0177
J Twin Sharp = K Double Spike	135-9308	220-9088	135-9357	309-1098	135-9408	220-9108	138-6458	286-2116	138-6558	220-9138	135-9608	229-7158	N/A	232-0178
J Long = K General Duty	1U-3302	220-9089	1U-3352	220-9099	7T-3402	220-9109	9W-8452	286-2117	9W-8552	220-9139	6I-6602	229-7159	4T-4702	232-0179
J HDP = K Heavy Penetration	135-9300	222-1081	144-1358	222-1091	135-9400	223-8101	138-6451	286-2118	138-6552	264-2132	135-9600	264-2152	135-9700	264-2172
J HD Abrasion = K Heavy Abrasion	9N-4303	222-1082	9N-4353	222-1092	7T-3403	223-8102	9N-4453	286-2119	6Y-2553	223-8132	6I-6603	229-7156	9U-9703	232-2178

K Family Identification (cont'd.)

Tips or Points (Cont'd.)

Description	J300	K80	J350	K90	J400	K100	J460	K110	J550	K130	J600	K150	J700	K170
Extra Duty Long Life (ARM)	125-8302	229-7080	135-9352	232-0090	116-7402	232-0100	101-9054	315-0110	101-9055	232-2130	107-8602	232-0150	107-2001	233-7170
Penetration Long Life (ARM)	125-8309	229-7081	119-9359	232-0091	124-7409	232-0101	116-7459	315-0115	113-0559	232-2131	119-9609	232-0151	N/A	233-7171
Short									9W-8551	232-2137	6I-6601	232-2157		
Rock Chisel Tip							317-4456		338-0550		338-0600			
Retainer		220-9090		220-9090		220-9090		286-2110		220-9130		233-7150		232-0170
SLAG Retainer								309-1119		232-2139		232-2159		232-2179

Adapters or Shanks

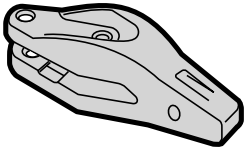
Description	J300	K80		J350	K90		J400	K100		J460	K110	
LDR Two Strap Center				135-9354	222-1094	(40 mm)	125-8404	223-8104	(45 mm)	114-0464	315-0114	(51 mm)
LDR Two Strap RH				135-9355	222-1095	(40 mm)	125-8405	223-8105	(45 mm)	114-0465	315-0115	(51 mm)
LDR Two Strap LH				135-9356	222-1096	(40 mm)	125-8406	223-8106	(45 mm)	114-0466	315-0116	(51 mm)
LDR Two Strap Long Life Center							125-8407	229-7100	(45 mm)	116-7464	309-1110	(51 mm)
LDR Two Strap Long Life RH							125-8408	229-7101	(45 mm)	116-7465	309-1111	(51 mm)
LDR Two Strap Long Life LH							125-8409	229-7102	(45 mm)	116-7466	309-1112	(51 mm)
LDR Flushmount Center	1U-1304	229-7084	(38 mm-25 mm)	1U-1354	229-7094	(32 mm-45 mm)	107-3404	229-7104	(38 mm-51 mm)	8E-0464	309-1113	(45 mm-51 mm)
LDR Abrasion Center										8E-1464	N/A	(51 mm)
LDR Abrasion Corner											N/A	(51 mm)
LDR Bolt-On Center	4T-4307	222-1087	(32 mm)	3G-3357	222-1097	(38 mm)	6I-9898	223-8107	(45 mm)	183-4605	315-0117	(50 mm)
LDR Bolt-On RH Corner	8E-5309	222-1088	(32 mm-25 mm)	8E-5359	229-7098	(38 mm-32 mm)	6I-8243	223-8108	(45 mm)	6I-8299	315-0118	(50 mm)
LDR Bolt-On LH Corner	8E-5308	222-1089	(32 mm-25 mm)	8E-5358	229-7099	(38 mm-32 mm)	6I-8244	223-8109	(45 mm)	6I-8298	315-0119	(50 mm)
LDR Bolt-On Center	1U-0307	229-7087	(25 mm)	170-0073	223-8097	(32 mm)						
LDR Bolt-On RH Corner	8E-5309	222-1088	(32 mm-25 mm)	8E-5359	229-7098	(38 mm-32 mm)						
LDR Bolt-On LH Corner	8E-5308	222-1088	(32 mm-25 mm)	8E-5358	229-7099	(38 mm-32 mm)						

Loader Tips

K Family Identification (cont'd.) Adapters or Shanks (Continued)

Description	J550	K130	Description	J600	K150	Description	J700	K170	Description
LDR Two Strap Center	107-3554	223-8134	(63.5 mm)	119-8604	195-7154	(70 mm)	171-1704	232-2174	(76 mm)
LDR Two Strap RH	107-3555	223-8135	(63.5 mm)	119-8605	195-7155	(70 mm)	171-1705	232-2175	(76 mm)
LDR Two Strap LH	107-3556	223-8136	(63.5 mm)	119-8606	195-7156	(70 mm)	171-1706	232-2176	(76 mm)
LDR Two Strap Center	138-6554	232-0134	(51 mm)	N/A	232-0154	(63.5 mm)	133-0704	232-0174	(70 mm)
LDR Two Strap RH	138-6555	232-0135	(51 mm)	N/A	232-0155	(63.5 mm)	133-0705	232-0175	(70 mm)
LDR Two Strap LH	138-6556	232-0136	(51 mm)	N/A	232-0156	(63.5 mm)	133-0706	232-0176	(70 mm)
LDR Two Strap Long Life Center	112-2554	229-7130	(63.5 mm)	119-8607	232-2150	(70 mm)	187-2113	233-7174	(76 mm)
LDR Two Strap Long Life RH	112-2555	229-7131	(63.5 mm)	119-8609	232-2151	(70 mm)	187-2114	233-7175	(76 mm)
LDR Two Strap Long Life LH	112-2556	229-7132	(63.5 mm)	119-8608	232-2152	(70 mm)	187-2115	233-7176	(76 mm)
LDR Two Strap Long Life Center	159-0554	232-2134	(51 mm)	N/A	233-7154	(63.5 mm)	133-0707	238-3174	(70 mm)
LDR Two Strap Long Life RH	159-0555	232-2135	(51 mm)	N/A	233-7155	(63.5 mm)	133-0709	238-3175	(70 mm)
LDR Two Strap Long Life LH	159-0556	232-2136	(51 mm)	N/A	233-7156	(63.5 mm)	133-0708	238-3176	(70 mm)
LDR Flushmount Center	3G-4554	229-7134	(51 mm - 64 mm)	N/A	232-2154	(64 mm - 76 mm)			
LDR Abrasion Center	N/A	232-0138	(63.5 mm)	119-9604	232-0158	(70 mm)			
LDR Abrasion Corner	N/A	232-0139	(63.5 mm)	119-9605	232-0159	(70 mm)			

Bolt-On Center Adapters



Tip Size	Model	Edge Thickness	Bolt-On Adapter (center)	Bolt	Nut
J200	938, 939, 914G	19 mm (0.75 in)	9J-4207	5J-4771	2J-3506
	416, 426, 428, 436	20 mm (0.80 in)	8E-2184		
J225	938, 939, 914G	19 mm (0.75 in)	6Y-6227	1J-6762	2J-3506
J250	953, 951, 943, 941, 936, 930, 926, 920, 916, IT28, IT18	25 mm (1.00 in)	1U-0257	8J-2928	8J-2933
J300	944, 950, 953B, 953C	25 mm (1.00 in)	1U-0307	8J-2928	8J-2933
	950B, 950E, 950F, 944	32 mm (1.25 in)	4T-4307	5P-8136	8J-2933
	966C	32 mm (1.25 in)	3G-9307	5P-8361	5P-8362
	966C	32 mm (1.25 in)	3G-5307 ⁽¹⁾	8J-2928	8J-2933
J350	977, 973, 966D, 970F	38 mm (1.50 in)	3G-3357	5P-8361	5P-8362
	963B, 973, 977, 966C	32 mm (1.25 in)	170-0073	6V-8360	5P-8362
	980A, 980B, 980C, 980G, 980F	45 mm (1.75 in)	1U-1357	5P-8361	5P-8362
	980B	45 mm (1.75 in)	3G-2357 ⁽¹⁾	8J-2928	8J-2933
	977	38 mm (1.50 in)	3G-1357 ⁽¹⁾	8J-2928	8J-2933
J400	980C, 980F	45 mm (1.75 in)	6I-9898	5P-8361	5P-8362
J460	988, 980C, 980F	45 mm (1.75 in)	8E-2467	5P-8361	5P-8362
	977, 973, 966D, 970F	38 mm (1.50 in)	8E-3467	5P-8361	5P-8362

One-Bolt Corner Adapters



Tip Size	Model	Edge Thickness	One-Bolt Adapter		Bolt	Nut
			(lh)	(rh)		
J200	935, 931, 910, IT12	19 mm (0.75 in)	1U-2208	1U-2209	6F-0196	2J-3505
J225	935, 931	19 mm (0.75 in)	6Y-6228	6Y-6229	6F-0196	2J-3505
J250	953, 951, 943, 941, 936, 930, 926, 920, 916, IT28, IT18	25 mm (1.00 in)	3G-4258	3G-4259	4J-9058	8J-2933
J300	944, 950, 950B, 950E, 950F, 960F	25-32 mm (1.00-1.25 in)	3G-4308	3G-4309	6V-6535	5P-8362
	953B, 953C, 963	25-32 mm (1.00-1.25 in)	3G-4308	3G-4309	4J-9058	8J-2933
	966C	32 mm (1.25 in)	3G-8308	3G-8309	5P-8823	5P-8362
J350	960F, 963B, 966D, 966E, 966F	32-38 mm (1.25-1.50 in)	3G-5358	3G-5359	5P-8823	5P-8362
	970F, 973, 977	32-38 mm (1.25-1.50 in)	3G-5358	3G-5359	5P-8823	5P-8362

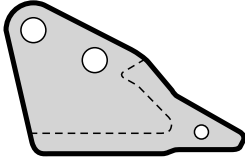
1 3-bolt adapter.

Loader Adapters

One-Bolt Corner Adapters (Cont'd.)

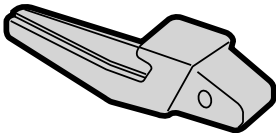
Tip Size	Model	Edge Thickness	One-Bolt Adapter		Bolt	Nut
			(lh)	(rh)		
	980A, 980B, 980C, 980F, 980G	45 mm (1.75 in)	1U-1358	1U-1359	6V-8360	5P-8362
J460	988, 980	45 mm (1.75 in)	8E-2469	8E-2468	6V-8360	5P-8362
	977, 973, 966D	38 mm (1.50 in)	8E-3469	8E-3468	6V-8360	5P-8362

Two-Bolt Corner Adapters



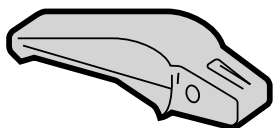
Tip Size	Model	Edge Thickness	Two-Bolt Adapter		Bolt	Bolt	Nut
			(lh)	(rh)			
J250	920, 924F, 926, 928, 928F, 928G	25 mm (1.00 in)	6I-9250	6I-9251	4J-9058	4F-4042	2J-3507
	930, 936, 936E, 936F, 938F	25 mm (1.00 in)	6I-9250	6I-9251	4J-9058	4F-4042	2J-3507
	939, 941, 943, 951, 953	25 mm (1.00 in)	6I-9250	6I-9251	4J-9208	4F-4042	2J-3507
	IT18, IT24F, IT28	25 mm (1.00 in)	6I-9250	6I-9251	4J-9058	4F-4042	2J-3507
J300	944, 950, 953B, 953C, 963	25-32 mm (1.00-1.25 in)	8E-5308	8E-5309	8T-9079	6V-8360	3K-9770
	950B, 950E, 950F, 960F	25-32 mm (1.00-1.25 in)	8E-5308	8E-5309	8T-9079	5P-8823	3K-9770
J350	977, 973, 966, 963	32-38 mm (1.25-1.50 in)	8E-5358	8E-5359	5P-8361	6V-6535	3K-9770
J400/J460	980/988	44 mm (1.75 in)	6I-8244	6I-8243	8T-9079	6V-8360	3K-9770
J460	988	51 mm (2.00 in)	6I-8298	6I-8299	6V-6535	5P-8361	3K-9770

Bottom Strap Adapters



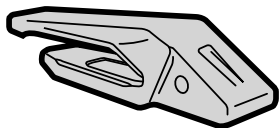
Tip Size	Model	Edge Thickness	Bottom Strap Adapter		
			(lh)	(center)	(rh)
J200	935, 931, 910, IT12, 428, 426, 416	13-19 mm (0.50-0.75 in)	—	8J-7525	—
J250	953, 951, 943, 941, 936, 930, 926, 920, 916, IT28, IT18	25-32 mm (1.00-1.25 in)	—	3G-0169	—
J300	966C, 963, 955, 950	25-32 mm (1.00-1.25 in)	—	9J-8929	—
J350	980, 977, 973, 966D	32-45 mm (1.25-1.75 in)	1U-1352	1U-1350	1U-1351
J350	966D, 966E, 966F	40 mm (1.57 in)	1U-1352	1U-1350	1U-1351
J460	988, 983	45-57 mm (1.75-2.25 in)	8E-5466	8E-5464	8E-5465
J550	992	51-64 mm (2.00-2.50 in)	9J-3664	9J-3662	9J-3663

Flushmount Adapters



Tip Size	Model	Edge Thickness	Flushmount Adapter		
			(lh)	(center)	(rh)
J200	935, 931, 910, IT12, 428, 426, 416	13-25 mm (0.50-1.00 in)	—	4T-1204	—
J250	953, 951, 943, 941, 936, 930, 926, 920, 916, IT28, IT18	19-32 mm (0.75-1.25 in)	—	1U-1254	—
J300	966C, 963, 955, 950	25-38 mm (1.00-1.50 in)	—	1U-1304	—
J350	980, 977, 973, 966D	32-45 mm (1.25-1.75 in)	1U-1356	1U-1354	1U-1355
J400	980	38-51 mm (1.50-2.00 in)	—	107-3404	—
J460	988, 983	45-51 mm (1.75-2.00 in)	8E-0466	8E-0464	8E-0465
J550	990, 992C	51-64 mm (2.00-2.50 in)	3G-4556	3G-4554	3G-4555
	992, 992B	51-64 mm (2.00-2.50 in)	7J-9556	7J-9554	7J-9555

Two-Strap Adapters

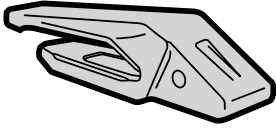


Tip Size	Model	Edge Thickness	Two-Strap Adapter		
			(lh)	(center)	(rh)
J450	980, 973 ⁽²⁾ , 966D ⁽²⁾	45 mm (1.75 in)	4T-8456	4T-8454	4T-8455
J460	988, 983	51 mm (2.00 in)	8E-3466	8E-3464	8E-3465
	980	45 mm (1.75 in)	8E-2166	8E-2164	8E-2165
J550	990, 992	64 mm (2.50 in)	3G-9496	3G-9494	3G-9495
	988	51 mm (2.00 in)	4T-7556	4T-7554	4T-7555
J600	992	70 mm (2.75 in)	6I-8606	6I-8604	6I-8605
J700	994	76 mm (3.00 in)	4T-4706	4T-4704	4T-4705
	990, 992	64 mm (2.50 in)	9W-9706	9W-9704	9W-9705
	994	100 mm (4.00 in)	100-7416	—	—
J800	994	100 mm (4.00 in)	6I-8804	—	—

2 Requires spade base edge with segment bolt holes.

Loader Adapters

Heavy Duty Adapters



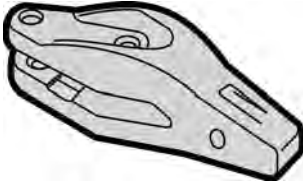
Tip Size	Model	Edge Thickness	Heavy Duty Adapter		
			(lh)	(center)	(rh)
J350	966	40 mm (1.50 in)	135-9356	135-9354	135-9355
	980	45 mm (1.75 in)	113-0356	113-0354	113-0355
J400	980	45 mm (1.75 in)	125-8406	125-8404	125-8405
J460	988	51 mm (2.00 in)	114-0466	114-0464	114-0465
J550	990, 992	63 mm (2.50 in)	107-3556	107-3554	107-3555
	988	51 mm (2.00 in)	138-6556	138-6554	138-6555
J600	992	70 mm (2.75 in)	119-8606	119-8604	119-8605
	990, 992	63 mm (2.50 in)	143-3116	143-3115	143-3114
J700	992	70 mm (2.75 in)	133-0706	133-0704	133-0705
J700	994	100 mm (4.00 in)	—	100-7416	—
	992	70 mm (2.75 in)	133-0706	133-0704	133-0705
	992	76 mm (3.00 in)	171-1706	171-1704	171-1705
J800	994	100 mm (4.00 in)	—	61-8804	—

Heavy Duty ARM Adapters



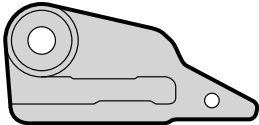
Tip Size	Model	Edge Thickness	Heavy Duty Arm Adapter		
			(lh)	(center)	(rh)
J400	980	45 mm (1.75 in)	125-8409	125-8407	125-8408
J460	988	51 mm (2.00 in)	116-7466	116-7464	116-7465
J550	990, 990	63 mm (2.50 in)	112-2556	112-2554	112-2555
	988	51 mm (2.00 in)	159-0556	159-0554	159-0555
J600	992	70 mm (2.75 in)	119-8606	119-8604	119-8605
	990, 992	63 mm (2.50 in)	186-5386	186-5384	186-5385
J700	992	70 mm (2.75 in)	133-0708	133-0707	133-0709
	994	76 mm (3.00 in)	187-2115	187-2113	187-2114

Upsize Bolt-On Center Adapters



Tip Size	Edge Thickness	Model	Upsize Tip Size	Upsize Bolt-On Adapter (center)	Upsize Bolt	Upsize Nut
J200	19 mm (0.75 in)	910, 914G, 939	J225	6Y-6227	5J-4771	2J-3506
J250	25 mm (1.00 in)	916, 920, 926, 930, 936	J300	1U-0307	8J-2928	8J-2933
	25 mm (1.00 in)	941, 943, 951, 953	J300	1U-0307	8J-2928	8J-2933
	25 mm (1.00 in)	IT18, IT28	J300	1U-0307	8J-2928	8J-2933
J300	32 mm (1.25 in)	966C	J350	3G-7357	6V-8360	5P-8362
J350	38 mm (1.50 in)	966D, 970F, 973, 977	J460	8E-3467	5P-8361	5P-8362
	45 mm (1.75 in)	980	J460	8E-2467	5P-8361	5P-8362
J400	46 mm (1.80 in)	980G	J460	8E-2467	5P-8361	5P-8362

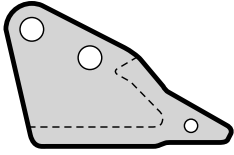
Upsize One-Bolt Corner Adapters



Tip Size	Edge Thickness	Model	Upsize Tip Size	Upsize Bolt-On Adapter		Upsize Bolt	Upsize Nut
				(lh)	(rh)		
J200	19 mm (0.75 in)	910, 914G, 939	J225	6Y-6228	6Y-6229	6F-0196	2J-3505
J250	25 mm (1.00 in)	916, 920, 926, 930, 936	J300	3G-4308	3G-4309	6V-6535	5P-8362
	25 mm (1.00 in)	941, 943, 951, 953	J300	3G-4308	3G-4309	6V-6535	5P-8362
	25 mm (1.00 in)	IT18, IT28	J300	3G-4308	3G-4309	6V-6535	5P-8362
J300	32 mm (1.25 in)	966C	J350	3G-5358	3G-5359	5P-8823	5P-8362
J350	38 mm (1.50 in)	966, 973, 977	J460	8E-3469	8E-3468	5P-8823	6V-8360
	45 mm (1.75 in)	980	J460	8E-2469	8E-2468	6V-8360	5P-8362

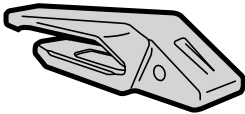
Loader Adapters/Protectors

Upsize Two-Bolt Corner Adapters



Tip Size	Edge Thickness	Model	Upsize Tip Size	Upsize Two-Bolt Adapter		Upsize Bolt	Upsize Bolt	Upsize Nut
				(lh)	(rh)			
J250	25 mm (1.00 in)	916, 920, 926, 930	J300	8E-5308	8E-5309	8T-9079	6V-8360	3K-9770
	25 mm (1.00 in)	941, 943, 951, 953	J300	8E-5308	8E-5309	8T-9079	6V-8360	3K-9770
J300	32 mm (1.25 in)	950, 953, 955, 963	J350	8E-5358	8E-5359	5P-8361	6V-6535	3K-9770

Upsize Two-Strap Adapters



Tip Size	Edge Thickness	Model	Upsize Tip Size	Upsize Two-Strap Adapter		
				(lh)	(center)	(rh)
J350	45 mm (1.75 in)	980	J450	4T-8456	4T-8454	4T-8455
J350	45 mm (1.75 in)	980	J460	8E-2166	8E-2164	8E-2165
J460	51 mm (2.00 in)	983, 988	J550	4T-7556	4T-7554	4T-7555
J550	64 mm (2.50 in)	992	J700	9W-9706	9W-9704	9W-9705
J600	76 mm (3.00 in)	992	J700	133-0706	133-0704	133-0705
J700	100 mm (4.00 in)	994	J800		6I-8804	

K Series Adapters

Description	Base Edge Thickness											
	K80		K90		K100	K110	K130		K150		K170	
	25 mm	32 mm	32 mm	36 mm	45 mm	50 mm	50 mm	63 mm	63 mm	70 mm	70 mm	76 mm
Adapters												
LDR Two Strap CNTR				222-1094	223-8104	232-2114	232-0134	223-8134	232-0154	195-7154	232-0174	232-2174
LDR Two Strap RH				222-1095	223-8105	232-2115	232-0135	223-8135	232-0155	195-7155	232-0175	232-2175
LDR Two Strap LH				222-1096	223-8106	232-2116	232-0136	223-8136	232-0156	195-7156	232-0176	232-2176
LDR Two Strap Long Life CNTR (ARM)					229-7100	229-7110	232-2134	229-7130	233-7154	232-2150	238-3174	233-7174
LDR Two Strap Long Life RH					229-7101	229-7111	232-2135	229-7131	233-7155	232-2151	238-3175	233-7175
LDR Two Strap Long Life LH					229-7102	229-7112	232-2136	229-7132	233-7156	232-2152	238-3176	233-7176
LDR Flushmount CNTR		229-7084		229-7094	229-7104	232-2117		229-7134		232-2154		
LDR Abrasion CNTR								232-0138		232-0158		
LDR Abrasion Corner								232-0139		232-0159		
LDR Bolt-On CNTR	229-7087	222-1087	223-8097	222-1097	223-8107	232-2110						
LDR Bolt-On Corner RH	222-1088	222-1088	222-1098	229-7098	223-8108	223-8118						
LDR Bolt-On Corner LH	222-1089	222-1089	222-1099	229-7099	223-8109	223-8119						
Models	953	950, 962	963	950, 962, 966, 972, 973	980	988	988	990, 992D, 990H, 992G, 992K	990, 992D, 992G, 992K	992G, 992K	992G, 992K	992G, 992K, 993K

Loader Adapters/Protectors



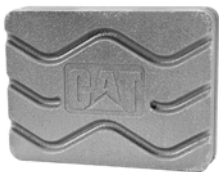
Part No.	Description	Length (mm)	Width (mm)	Thickness (mm)
280-4088	1.5 inch Chocky	241	38	25
280-4089	2.0 inch Chocky	241	51	25
280-4090	2.5 inch Chocky	241	64	25
280-4091	4.0 inch Chocky	241	102	25



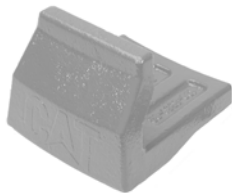
Part No.	Description	Diameter (mm)	Thickness (mm)
280-4092	2.5 inch Button	64	22
280-4093	3.5 inch Button	89	29
280-4094	4.5 inch Button	114	33
280-4095	6.0 inch Button	152	35



Part No.	Description	Length (mm)	Width (mm)	Diameter (mm)
280-4096	1.25 inch Roll Bar	229	38	32
280-4097	2.0 inch Roll Bar	305	52	51
280-4098	3.0 inch Roll Bar	305	69	76



Part No.	Description	Length (mm)	Width (mm)	Diameter (mm)
280-4099	6.0 inch x 8.0 inch Wear Block	200	150	37



Description	Straight Heel Shroud Part Number	Curved Heel Shroud Part Number	Width (mm)	Height (mm)
Small Heel Shroud	280-4078	280-4079	120	108
Medium Heel Shroud	138-6529	138-6551	175	150
Large Heel Shroud	157-1019	157-1027	250	200

Mechanically Attached Wear Plate System

Wear Indicator

The wear plate has recessed holes (blind holes) cast into each corner to serve as a wear indicator making inspections quick and easy. When the holes become exposed in one or more corners, it is time to change the wear plate. If the wear plate is allowed to wear beyond the wear indicator, damage to base plate may occur.

Parts Consist

Mechanically Attached Wear Plate System						
Series	Suggested Models	Base Plate (thk)	Wear Plate (dimension)	Compression Retainer	Radius Capability ⁽¹⁾	Retainer Plug
20 Series	844, 966, 980, 988, 345B, other similar sizes	138-0020 0.70 in thick (18 mm) 5.35 lb (2.43 kg)	138-0022 8.85 in x 7.87 in x 1.38 in (225 mm x 200 mm x 35 mm) 14.15 lb (6.42 kg)	138-0006	7.87 in (200 mm) minimum	275-5444
Heavy Duty	same	same	138-0023 8.85 in x 7.87 in x 1.97 in (225 mm x 200 mm x 50 mm) 23.9 lb (10.85 kg)	138-0006	same	275-5444
Heavy Duty ARM	same	same	264-2195	138-0006	same	275-5444
30 Series	854, 990, 992, 375, 5080, other similar sizes	138-0030 0.86 in thick (22 mm) 8.2 lb (3.72 kg)	138-0032 10.8 in x 7.87 in x 1.77 in (275 mm x 200 mm x 45 mm) 21.3 lb (9.67 kg)	138-0006	15.75 in (400 mm) minimum	275-5444
Standard ARM	same	same	229-7067	138-0006	same	275-5444
Heavy Duty	same	same	138-0033 10.8 in x 7.87 in x 2.36 in (275 mm x 200 mm x 60 mm) 32.6 lb (14.8 kg)	138-0006	same	275-5444
Heavy Duty ARM	same	same	317-3350	138-0006	same	275-5444
40 Series	5110, 5130, other similar sizes	138-0040 1.14 in thick (29 mm) 10.15 lb (4.61 kg)	138-0042 10.8 in x 7.87 in x 2.36 in (275 mm x 200 mm x 60 mm) 29.25 lb (13.28 kg)	138-0007	31.50 in (800 mm) minimum	275-5444
Heavy Duty	same	same	138-0043 10.8 in x 7.87 in x 2.95 in (275 mm x 200 mm x 75 mm) 41.2 lb (18.7 kg)	138-0007	same	275-5444
50 Series	994, 5230, other similar sizes	138-0050 1.14 in thick (29 mm) 13.4 lb (6.08 kg)	138-0052 11.81 in x 9.8 in x 2.95 in (300 mm x 250 mm x 75 mm) 55.25 lb (25.08 kg)	138-0007	47.25 in (1200 mm) minimum	275-5444
Heavy Duty	same	same	138-0053 11.81 in x 9.8 in x 3.93 in (300 mm x 250 mm x 100 mm) 83.15 lb (37.75 kg)	138-0007	same	275-5444

Skeletal Mechanically Attached Wear Plate System						
Series	Suggested Models	Base Plate (thk)	Wear Plate (dimension)	Compression Retainer	Radius Capability ⁽¹⁾	Retainer Plug
Standard	Off Highway Trucks	138-0020 0.70 in thick (18 mm) 5.35 lb (2.43 kg)	138-0024 8 in x 12.2 in x 1.38 in (202 mm x 310 mm x 35 mm) 12.9 lb (5.9 kg)	138-0006	7.87 in (200 mm)	275-5444
Heavy Duty	Off Highway Trucks	138-0020 0.70 in thick (18 mm) 5.35 lb (2.43 kg)	138-0025 8.15 in x 12.2 in x 1.77 in (207 mm x 310 mm x 45 mm) 18.3 lb (8.4 kg)	138-0006	7.87 in (200 mm)	275-5444

Motor Graders

GraderBits™ Systems

The Caterpillar GraderBits System is a road maintenance edge that lowers owning and operating costs by increasing productivity, decreasing blade maintenance, and reducing downtime.

The Caterpillar GraderBits System works by using special adapters and grader bits instead of a conventional cutting edge. The adapters are bolted onto the moldboard, and then, the grader bits are secured within the adapter using snap rings. Different combinations of grader bit sizes and types allow you to customize the edge pattern to deliver the best performance in any surface condition, including mining haul roads, public roads, farm roads, logging roads, and even paved roads.



Standard Bit Arrangement

- For use on larger motor graders.
- Good in highly abrasive applications where penetration is not critical.



Sharp Bit Arrangement

- For use on smaller motor graders.
- Use where maximum penetration is required.



Penetration Bit Arrangement

- Use with midsize motor graders.



Wide Bit Arrangement

- Available in a continuous design with narrow gap adapters.
- May be used on the ends of all grader bit configurations to extend wear life.

Model	Gap Size	Edge Length	GraderBit Arrangement ⁽¹⁾				Snap Ring Retainer ⁽¹⁾
			Standard	Sharp	Penetration	Wide	
All	Narrow	0.914 m (3 ft)	6Y-4339 (15)	105-5183 (15)	105-5180 (15)	6Y-4340 (15)	353-2624 (15)
		1.219 m (4 ft)	6Y-4339 (20)	105-5183 (20)	105-5180 (20)	6Y-4340 (20)	353-2624 (15)
14, 16	Wide	0.914 m (3 ft)	6Y-4339 (12)	105-5183 (12)	105-5180 (12)	6Y-4340 (12)	353-2624 (15)
		1.219 m (4 ft)	6Y-4339 (16)	105-5183 (16)	105-5180 (16)	6Y-4340 (16)	353-2624 (15)

GraderBit Systems Adapters

Model	Gap Size	Edge Length	Moldboard Length	Adapter Part Number	Bolts	Nuts
14, 16, 140H (3/2 bolts), 143H (3/2 bolts)	Narrow V' bolts	0.914 m (3 ft)	3.05 m (10 ft)	159-0318 (2)	5J-4771 (19)	2J-3506 (19)
			3.35 m (11 ft)	159-0318	5J-4771 (21)	2J-3506 (21)
			3.96 m (13 ft)	159-0318 (3)	5J-4771 (24)	2J-3506 (24)

Motor Grader - Motor Grader Bits

GraderBit Systems Adapters (Cont'd.)

Model	Gap Size	Edge Length	Moldboard Length	Adapter Part Number	Bolts	Nuts			
			4.27 m (14 ft)	159-0318 (2)	5J-4771 (30)	2J-3506 (30)			
			4.57 m (5 ft)	159-0318	5J-4771 (28)	2J-3506 (28)			
		1.219 m (4 ft)	3.05 m (10 ft)	159-0317	5J-4771 (19)	2J-3506 (19)			
			3.35 m (11 ft)	159-0317 (2)	5J-4771 (21)	2J-3506 (21)			
			3.66 m (2 ft)	159-0317 (3)	5J-4771 (23)	2J-3506 (23)			
			3.96 m (13 ft)	159-0317	5J-4771 (24)	2J-3506 (24)			
			4.27 m (14 ft)	159-0317 (2)	5J-4771 (30)	2J-3506 (30)			
			4.57 m (5 ft)	159-0317 (3)	5J-4771 (28)	2J-3506 (28)			
		4.88 m (6 ft)	159-0317 (4)	5J-4771 (36)	2J-3506 (36)				
		Wide bolts	0.914 m (3 ft)	3.05 m (10 ft)	159-0313 (2)	5J-4771 (19)	2J-3506 (19)		
				3.35 m (11 ft)	159-0313	5J-4771 (21)	2J-3506 (21)		
				3.96 m (13 ft)	159-0313 (3)	5J-4771 (24)	2J-3506 (24)		
				4.27 m (14 ft)	159-0313 (2)	5J-4771 (30)	2J-3506 (30)		
				4.57 m (5 ft)	159-0313	5J-4771 (28)	2J-3506 (28)		
	1.219 m (4 ft)		3.05 m (10 ft)	159-0314	5J-4771 (19)	2J-3506 (19)			
			3.35 m (11 ft)	159-0314 (2)	5J-4771 (21)	2J-3506 (21)			
			3.66 m (2 ft)	159-0314 (3)	5J-4771 (23)	2J-3506 (23)			
			3.96 m (13 ft)	159-0314	5J-4771 (24)	2J-3506 (24)			
			4.27 m (14 ft)	159-0314 (2)	5J-4771 (30)	2J-3506 (30)			
			4.57 m (5 ft)	159-0314 (3)	5J-4771 (28)	2J-3506 (28)			
			4.88 m (6 ft)	159-0314 (4)	5J-4771 (36)	2J-3506 (36)			
			All except 14, 16, 140H (5/s- bolts), 143H (5/s- bolts)	Narrow 5/s' bolts	0.914 m (3 ft)	3.05 m (10 ft)	159-0311 (2)	3F-5108 (19)	4K-0367 (19)
						3.35 m (11 ft)	159-0311	3F-5108 (21)	4K-0367 (21)
	3.96 m (13 ft)	159-0311 (3)				3F-5108 (24)	4K-0367 (24)		
	4.27 m (14 ft)	159-0311 (2)				3F-5108 (30)	4K-0367 (30)		
	4.57 m (5 ft)	159-0311				3F-5108 (28)	4K-0367 (28)		
	1.219 m (4 ft)	3.05 m (10 ft)			159-0312	3F-5108 (19)	4K-0367 (19)		
		3.35 m (11 ft)			159-0312 (2)	3F-5108 (21)	4K-0367 (21)		
3.66 m (2 ft)		159-0312 (3)			3F-5108 (23)	4K-0367 (23)			
3.96 m (13 ft)		159-0312			3F-5108 (24)	4K-0367 (24)			
4.27 m (14 ft)		159-0312 (2)			3F-5108 (30)	4K-0367 (30)			
Wide 5/s' bolts	0.914 m (3 ft)	3.05 m (10 ft)		159-0315 (2)	3F-5108 (19)	4K-0367 (19)			
		3.35 m (11 ft)		159-0315	3F-5108 (21)	4K-0367 (21)			
		3.96 m (13 ft)		159-0315 (3)	3F-5108 (24)	4K-0367 (24)			
		4.27 m (14 ft)		159-0315 (2)	3F-5108 (30)	4K-0367 (30)			
		4.57 m (5 ft)	159-0315	3F-5108 (28)	4K-0367 (28)				
	1.219 m (4 ft)	3.05 m (10 ft)	159-0316	3F-5108 (19)	4K-0367 (19)				
		3.35 m (11 ft)	159-0316 (2)	3F-5108 (21)	4K-0367 (21)				
		3.66 m (2 ft)	159-0316 (3)	3F-5108 (23)	4K-0367 (23)				
		3.96 m (13 ft)	159-0316	3F-5108 (24)	4K-0367 (24)				
		4.27 m (14 ft)	159-0316 (2)	3F-5108 (30)	4K-0367 (30)				
		4.57 m (5 ft)	159-0316 (3)	3F-5108 (28)	4K-0367 (28)				
		4.88 m (6 ft)	159-0316 (4)	3F-5108 (36)	4K-0367 (36)				

Motor Grader - Motor Grader Bits

Mining Bit Systems

Mining Bit System for larger machines (16H and 24H) in heavy-duty applications like haul road maintenance. The Mining Bits have two separate pieces of carbide for added wear protection. The first is brazed on the face of the bit to reduce wear as the bit moves through the material. The second piece of carbide is inserted into a slot behind the face to protect the bottom of the bit. The Mining Bit also has an angled shank to facilitate proper orientation with respect to the ground — reducing chances for premature wear.

Model	Gap Size	Edge Length	Mining Bit Arrangement ⁽¹⁾	
			Standard	Wide
16H	Narrow	0.914 m (3 ft)	308-5193 (13)	135-9586
		1.219 m (4 ft)	308-5193 (13)	135-9586
	Wide	0.914 m (3 ft)	308-5193 (13)	135-9586
		1.219 m (4 ft)	308-5193 (13)	135-9586
24H	Wide	0.914 m (3 ft)	310-2113	N/A

Mining Bit System Adapters

Model	Gap Size	Edge Length	Moldboard Length	Adapter Part Number	Bolts	Nuts
16H	Narrow 5/8" bolts	0.914 m (3 ft)	4.267 m (14 ft)	135-9596	3F-5108 (30)	4K-0367 (30)
			4.877 m (16 ft)	135-9596	3F-5108 (36)	4K-0367 (30)
	Wide 5/8" bolts	0.914 m (3 ft)	4.267 m (14 ft)	135-9593	3F-5108 (30)	4K-0367 (30)
			4.877 m (16 ft)	135-9593	3F-5108 (36)	4K-0367 (36)
	Narrow 3/4" bolts	0.914 m (3 ft)	4.267 m (14 ft)	135-9592	5J-4771 (30)	2J-3506 (30)
			4.877 m (16 ft)	135-9592	5J-4771 (36)	2J-3506 (36)
	Wide 3/4" bolts	0.914 m (3 ft)	4.267 m (14 ft)	135-9591	5J-4771(30)	2J-3506 (30)
			4.877 m (16 ft)	135-9591	5J-4771 (36)	2J-3506 (36)
	Narrow 5/8" bolts	1.219 m (4 ft)	4.267 m (14 ft)	135-9590	3F-5108	4K-0367 (30)
			4.877 m (16 ft)	135-9590	3F-5108	4K-0367 (36)
	Wide 5/8" bolts	1.219 m (4 ft)	4.267 m (14 ft)	135-9589	3F-5108	4K-0367 (30)
			4.877 m (16 ft)	135-9589	3F-5108	4K-0367 (36)
	Narrow 3/4" bolts	1.219 m (4 ft)	4.267 m (14 ft)	135-9588	5J-4771	2J-3506 (30)
			4.877 m (16 ft)	135-9588	5J-4771	2J-3506 (36)
	Wide 3/4" bolts	1.219 m (4 ft)	4.267 m (14 ft)	135-9587	5J-4771	2J-3506 (30)
			4.877 m (16 ft)	135-9587	5J-4771	2J-3506 (36)
24H	Wide 1" bolts	0.914 m (3 ft)	7.315 m (24 ft)	178-4095	1J-3527	2J-3507

¹ Includes snap ring retainer 178-4092.

Cutting Edges

Caterpillar Motor Grader Cutting Edges are made of DH2 alloy steel, SAE specification high carbon steel, or Tungsten Carbide and are double bevel shaped for improved penetration.

DH2 Through-Hardened Edges are heat treated for longer wear life and greater breakage resistance than surface hardened edges or high carbon steel edges. DH2 Through-Hardened Edges have a lifetime warranty against breakage.

High Carbon Edges are wear resistant and intended for light duty applications.

Tungsten Carbide Edges provide up to twenty times more wear life in low impact, high wear applications.



Curved Cutting Edges

- Provides best penetration.
- For use in most construction and finish grading applications.



Flat Cutting Edges

- Provide greater strength and more wear material.
- For use with large machines in road maintenance and pioneering applications.



Serrated Cutting Edges

- Provides better penetration of frozen or hard-packed materials.
- For use in gravel raking and spreading applications, as well as other special applications.

Edge Width	Edge Thickness	Edge Length	Edge Type	Steel Type	Bolt Size	Edge Part Number	Bolts	Nuts		
121 mm (4.75 in)	19 mm (0.75 in)	0.610 m (2 ft)	Curved	Tungsten Carbide	0.62	207-4695	3F-5108 (5)	4K-0367 (5)		
					0.75	208-8863	4F-7827 (5) ^(l)	2J-3506 (5)		
		0.914 m (3 ft)	Curved	Tungsten Carbide	0.62	208-8862	3F-5108 (7)	4K-0367 (7)		
					0.75	217-4698	4F-7827 (7) ^(l)	2J-3506 (7)		
152 mm (6.00 in)	13 mm (0.50 in)	1.219 m (4 ft)	Curved	DH2	0.62	3G-8016	3F-5108 (9)	4K-0367 (9)		
					High Carbon	0.62	9W-2293	3F-5108 (6)	4K-0367 (6)	
						0.75	9W-2294	4F-7827 (6) ^(l)	2J-3506 (6)	
				1.524 m (5 ft)	Curved	DH2	0.62	9J-3862	3F-5108 (11)	4K-0367 (11)
							High Carbon	0.62	9W-2295	3F-5108 (7)
						0.75		9W-2296	4F-7827 (7) ^(l)	2J-3506 (7)
		1.828 m (6 ft)	Curved	DH2	0.62	8D-2786	3F-5108 (13)	4K-0367 (13)		
					0.75	9J-3660	4F-7827 (13) ^(l)	2J-3506 (13)		
						9W-2297	3F-5108 (8)	4K-0367 (8)		
		152 mm (6.00 in)	13 mm (0.50 in)	1.828 m (6 ft)	Curved	High Carbon	0.62	9W-2297	3F-5108 (8)	4K-0367 (8)
							0.75	9W-2298	4F-7827 (8) ^(l)	2J-3506(8)
				2.133 m (7 ft)	Curved	DH2	0.62	8D-2787	3F-5108(15)	4K-0367 (15)
0.75	9J-3659						4F-7827 (15) ^(l)	2J-3506(15)		
High Carbon	0.62					9W-2299	3F-5108 (9)	4K-0367 (9)		
	0.75					9W-2300	4F-7827 (9) ^(l)	2J-3506 (9)		
2.438 m (8 ft)	Curved			DH2	0.62	8J-7782	3F-5108(17)	4K-0367 (17)		
					0.75	9J-3656	4F-7827 (17) ^(l)	2J-3506(17)		
				High Carbon	0.62	9W-2301	3F-5108(10)	4K-0367 (10)		
					0.62	9W-2301	3F-5108(10)	4K-0367 (10)		

Motor Grader Cutting Edges

Cutting Edges (Cont'd.)

Edge Width	Edge Thickness	Edge Length	Edge Type	Steel Type	Bolt Size	Edge Part Number	Bolts	Nuts	
					0.75	9W-2302	4F-7827 (10) ⁽¹⁾	2J-3506 (10)	
		2.743 m (9 ft)	Curved	High Carbon	0.62	4Z-8968	3F-5108 (11)	4K-0367 (11)	
		3.048 m (10 ft)	Curved	High Carbon	0.62	9W-2303	3F-5108(12)	4K-0367 (12)	
					0.75	9W-2304	4F-7827 (12) ⁽¹⁾	2J-3506 (12)	
		3.658 m (12 ft)	Curved	High Carbon	0.62	9W-2305	3F-5108(13)	4K-0367 (13)	
					0.75	9W-2306	4F-7827 (14) ⁽¹⁾	2J-3506 (14)	
		4.267 m (14 ft)	Curved	High Carbon	0.62	9W-2307	3F-5108(16)	4K-0367 (16)	
					0.75	9W-2308	4F-7827 (16) ⁽¹⁾	2J-3506 (16)	
		16 mm (0.62 in)	0.610 m (2 ft)	Curved	DH2	0.62	9W-1835	3F-5108 (4)	4K-0367 (4)
					High Carbon	0.62	9W-2325	3F-5108 (6)	4K-0367 (6)
			1.219 m (4 ft)	Curved	High Carbon	0.75	9W-2326	4F-7827 (6) ⁽¹⁾	2J-3506 (6)
						0.62	7D-4508	3F-5108 (11)	4K-0367 (11)
	1.524 m (5 ft)		Curved	High Carbon	0.62	7T-1640	3F-5108 (7)	4K-0367 (7)	
					0.75	9W-2327	4F-7827 (7) ⁽¹⁾	2J-3506 (7)	
					0.62	5D-9553	3F-5108(13)	4K-0367 (13)	
	1.828 m (6 ft)		Curved	High Carbon	0.75	9J-3657	4F-7827 (13) ⁽¹⁾	2J-3506(13)	
					0.62	7T-1633	3F-5108 (8)	4K-0367 (8)	
					0.75	7T-1637	4F-7827 (8) ⁽¹⁾	2J-3506 (8)	
	2.133 m (7 ft)		Curved	High Carbon	0.62	5D-9554	3F-5108(15)	4K-0367 (15)	
					0.75	9J-3658	4F-7827 (15) ⁽¹⁾	2J-3506 (15)	
					0.62	7T-1645	3F-5108 (9)	4K-0367 (9)	
	2.438 m (8 ft)		Curved	High Carbon	0.75	7T-1626	4F-7827 (9) ⁽¹⁾	2J-3506 (9)	
					0.62	8J-4043	3F-5108(17)	4K-0367 (17)	
					0.75	9J-3655	4F-7827 (17) ⁽¹⁾	2J-3506 (17)	
	3.353 m (11 ft)		Curved	High Carbon	0.62	7T-1632	3F-5108(10)	4K-0367 (10)	
					0.75	7T-1629	4F-7827 (10) ⁽¹⁾	2J-3506 (10)	
		0.62			4Z-8652	3F-5108(13)	4K-0367 (13)		
	3.658 m (12 ft)	Curved	High Carbon	0.62	4Z-8653	3F-5108(14)	4K-0367 (14)		
				0.62	3G-7966	3F-5108 (11)	4K-0367 (11)		
				0.62	5D-9556	3F-5108(13)	4K-0367 (13)		
19 mm (0.75 in)	1.524 m (5 ft)	Curved	DH2	0.62	5D-9557	3F-5108(15)	4K-0367 (15)		
			0.75	4Z-8785	4F-7827 (15) ⁽¹⁾	2J-3506 (15)			
	2.133 m (7 ft)	Curved	DH2	0.62	208-8864	3F-5108 (5)	4K-0367 (5)		
170 mm (6.69 in)	25 mm (1.00 in)	0.610 m (2 ft)	Curved Serrated	Carbide	0.75	208-8865	4F-7827 (5) ⁽¹⁾	2J-3506 (5)	
				0.62	217-4696	3F-5108 (7)	4K-0367 (7)		
		0.914 m (3 ft)	Curved Serrated	Carbide	0.75	217-4697	4F-7827 (7) ⁽¹⁾	2J-3506 (7)	
				0.62	208-8866	3F-5108 (7)	4K-0367 (7)		
171 mm (6.75 in)	19 mm (0.75 in)	0.610 m (2 ft)	Curved	Carbide	0.75	195-7266	4F-7827 (5) ⁽¹⁾	2J-3506 (5)	
				0.62	195-7265	3F-5108 (5)	4K-0367 (5)		
		0.914 m (3 ft)	Curved	Carbide	0.75	195-7267	4F-7827 (7) ⁽¹⁾	2J-3506 (7)	
				0.62	208-8866	3F-5108 (7)	4K-0367 (7)		
1.219 m (4 ft)	Curved	Tungsten Carbide	0.75	208-8866	4F-7827 (9) ⁽¹⁾	2J-3506 (9)			
203 mm (8.00 in)	13 mm (0.50 in)	1.219 m (4 ft)	Curved	DH2	0.62	3G-7965	3F-5108 (9)	4K-0367 (9)	
					0.75	135-6738	4F-7827 (9) ⁽¹⁾	2J-3506 (9)	
				High Carbon	0.62	9W-2309	3F-5108 (6)	4K-0367 (6)	
					0.75	9W-2310	4F-7827 (6) ⁽¹⁾	2J-3506 (6)	
		1.524 m (5 ft)	Curved	DH2	0.62	9J-3863	3F-5108 (11)	4K-0367 (11)	
					0.75	134-1779	4F-7827 (11) ⁽¹⁾	2J-3506 (11)	

Motor Grader Cutting Edges

Cutting Edges (Cont'd.)

Edge Width	Edge Thickness	Edge Length	Edge Type	Steel Type	Bolt Size	Edge Part Number	Bolts	Nuts		
		1.828 m (6 ft)	Curved	High Carbon	0.62	9W-2311	3F-5108 (7)	4K-0367 (7)		
					0.75	9W-2312	4F-7827 (7) ^(l)	2J-3506 (7)		
				DH2	0.62	8D-2788	3F-5108 (13)	4K-0367 (13)		
					0.75	3G-1626	4F-7827 (13) ^(l)	2J-3506 (13)		
		2.133 m (7 ft)	Curved	DH2	0.62	9W-2313	3F-5108 (8)	4K-0367 (8)		
					0.75	9W-2314	4F-7827 (8) ^(l)	2J-3506 (8)		
				High Carbon	0.62	8D-2789	3F-5108 (15)	4K-0367 (15)		
					0.75	3G-1627	4F-7827 (15) ^(l)	2J-3506 (15)		
		2.438 m (8 ft)	Curved	DH2	0.62	9W-2315	3F-5108 (9)	4K-0367 (9)		
					0.75	9W-2316	4F-7827 (9) ^(l)	2J-3506 (9)		
				High Carbon	0.62	8J-8980	3F-5108 (17)	4K-0367 (17)		
					0.75	3G-1628	4F-7827 (17) ^(l)	2J-3506 (17)		
		2.438 m (8 ft)	Curved	High Carbon	0.75	9W-2317	3F-5108 (10)	4K-0367 (10)		
		3.048 m (10 ft)	Curved	High Carbon	0.62	9W-2318	4F-7827 (10) ^(l)	2J-3506 (10)		
					0.75	9W-2319	3F-5108 (12)	4K-0367 (12)		
		3.658 m (12 ft)	Curved	High Carbon	0.62	9W-2320	4F-7827 (12) ^(l)	2J-3506 (12)		
					0.75	9W-2321	3F-5108 (14)	4K-0367 (14)		
		4.267 m (14 ft)	Curved	High Carbon	0.62	9W-2322	4F-7827 (14) ^(l)	2J-3506 (14)		
					0.75	9W-2323	3F-5108 (16)	4K-0367 (16)		
						High Carbon	0.62	9W-2324	4F-7827 (16) ^(l)	2J-3506 (16)
							0.75	9W-2324	4F-7827 (16) ^(l)	2J-3506 (16)
			16 mm (0.62 in)	0.610 m (2 ft)	Curved	DH2	0.62	109-3137	3F-5108 (5)	4K-0367 (5)
							0.75	3G-2166	4F-7827 (4) ^(l)	2J-3506 (4)
				1.219 m (4 ft)	Curved	DH2	0.62	132-1088	3F-5108 (9)	4K-0367 (9)
	0.75						134-1773	4F-7827 (9) ^(l)	2J-3506 (9)	
	High Carbon					0.62	9W-2328	3F-5108 (6)	4K-0367 (6)	
						0.75	9W-2329	4F-7827 (6) ^(l)	2J-3506 (6)	
	1.524 m (5 ft)			Curved	DH2	0.62	7D-4509	3F-5108 (11)	4K-0367 (11)	
						0.75	9W-2330	4F-7827 (7) ^(l)	2J-3506 (7)	
					High Carbon	0.62	7T-1641	3F-5108 (7)	4K-0367 (7)	
						0.75	9W-2330	4F-7827 (7) ^(l)	2J-3506 (7)	
	1.828 m (6 ft)			Flat	DH2	0.62	4T-2967	3F-5108 (11)	4K-0367 (11)	
						0.75	4Z-8120	4F-7827 (13) ^(l)	2J-3506 (13)	
					Curved	DH2	0.62	5D-9562	3F-5108 (13)	4K-0367 (13)
							0.75	9J-7701	4F-7827 (13) ^(l)	2J-3506 (13)
	2.133 m (7 ft)			Curved	High Carbon	0.62	7T-1636	3F-5108 (8)	4K-0367 (8)	
0.75						7T-1639	4F-7827 (8) ^(l)	2J-3506 (8)		
Flat					DH2	0.62	4T-2968	3F-5108 (13)	4K-0367 (13)	
						0.75	4T-2971	4F-7827 (13) ^(l)	2J-3506 (13)	
2.438 m (8 ft)	Curved			DH2	0.62	5D-9561	3F-5108 (15)	4K-0367 (15)		
					0.75	7D-1158	4F-7827 (15) ^(l)	2J-3506 (15)		
				High Carbon	0.62	7T-1643	3F-5108 (9)	4K-0367 (9)		
					0.75	7T-1624	4F-7827 (9) ^(l)	2J-3506 (9)		
						High Carbon	0.62	4T-2969	3F-5108 (15)	4K-0367 (15)
							0.75	4T-2970	4F-7827 (15) ^(l)	2J-3506 (15)
2.438 m (8 ft)	Curved			DH2	0.62	5D-9731	3F-5108 (17)	4K-0367 (17)		
					0.75	8J-9821	4F-7827 (17) ^(l)	2J-3506 (17)		
203 mm (8.00 in)	16 mm (0.62 in)			2.438 m (8 ft)	Curved	High Carbon	0.62	7T-1631	3F-5108(10)	4K-0367 (10)
							0.75	7T-1628	4F-7827 (10) ^(l)	2J-3506 (10)
					Flat	DH2	0.62	4T-2966	3F-5108(17)	4K-0367 (17)
							0.75	4T-2966	3F-5108(17)	4K-0367 (17)

Motor Grader Cutting Edges

Cutting Edges (Cont'd.)

Edge Width	Edge Thickness	Edge Length	Edge Type	Steel Type	Bolt Size	Edge Part Number	Bolts	Nuts	
	19 mm (0.75 in)	0.610 m (2 ft)	Curved	DH2	0.62	6G-8623	3F-5108 (4)	4K-0367 (4)	
					0.75	3G-2165	4F-7827 (4) ^(l)	2J-3506 (4)	
		0.914 m (3 ft)	Flat	DH2	0.62	4Z-8129	3F-5108 (11)	4K-0367 (11)	
					0.62	4Z-8119	3F-5108 (6)	4K-0367 (6)	
		1.219 m (4 ft)	Flat	DH2	0.62	132-1087	3F-5108 (9)	4K-0367 (9)	
					0.75	109-3124	4F-7827 (9) ^(l)	2J-3506 (9)	
			Curved	DH2	0.62	9W-2338	3F-5108 (6)	4K-0367 (6)	
				High Carbon	0.75	9W-2339	4F-7827 (6) ^(l)	2J-3506 (6)	
			Curved Serrated	DH2	0.62	8D-3428	3F-5108 (9)	4K-0367 (9)	
					0.75	8J-8255	4F-7827 (9) ^(l)	2J-3506 (9)	
			1.524 m (5 ft)	Curved	DH2	0.62	9W-6252	3F-5108 (11)	4K-0367 (11)
						0.75	4Z-8131	4F-7827 (7) ^(l)	2J-3506 (7)
		High Carbon		DH2	0.62	9W-2340	3F-5108 (7)	4K-0367 (7)	
					0.75	9W-2341	4F-7827 (7) ^(l)	2J-3506 (7)	
		Curved Serrated		DH2	0.62	8D-3429	3F-5108 (11)	4K-0367 (11)	
					0.75	8J-8256	4F-7827 (11) ^(l)	2J-3506 (11)	
		Flat		DH2	0.62	4T-3034	3F-5108 (11)	4K-0367 (11)	
					0.62	5D-9558	3F-5108(13)	4K-0367 (13)	
		1.828 m (6 ft)	Curved	DH2	0.62	7D-1576	4F-7827 (13) ^(l)	2J-3506 (13)	
					0.75	7T-1634	3F-5108 (8)	4K-0367 (8)	
			High Carbon	DH2	0.62	7T-1638	4F-7827 (8) ^(l)	2J-3506 (8)	
					0.75	132-1072	3F-5108(13)	4K-0367 (13)	
			Curved Serrated	DH2	0.62	4T-3007	3F-5108(13)	4K-0367 (13)	
					0.75	4T-3033	4F-7827 (13) ^(l)	2J-3506 (13)	
			Flat	DH2	0.62	5D-9559	3F-5108(15)	4K-0367 (15)	
					0.75	7D-1577	4F-7827 (15) ^(l)	2J-3506 (15)	
		2.133 m (7 ft)	Curved	DH2	0.62	7T-1623	3F-5108 (9)	4K-0367 (9)	
					0.75	7T-1625	4F-7827 (9) ^(l)	2J-3506 (9)	
			High Carbon	DH2	0.62	4Z-9020	3F-5108(15)	4K-0367 (15)	
					0.62	4T-3036	3F-5108(15)	4K-0367 (15)	
			Curved Serrated	DH2	0.62	4T-3032	4F-7827 (15) ^(l)	2J-3506 (15)	
					0.75	5D-9732	3F-5108(17)	4K-0367 (17)	
			2.438 m (8 ft)	Curved	DH2	0.62	7D-1949	4F-7827 (17) ^(l)	2J-3506 (17)
						0.75	7T-1630	3F-5108(10)	4K-0367 (10)
		High Carbon		DH2	0.62	7T-1627	4F-7827 (10) ^(l)	2J-3506 (10)	
					0.75	132-1073	3F-5108(17)	4K-0367 (17)	
		Curved Serrated	DH2	0.62	4T-3035	3F-5108(17)	4K-0367 (17)		
				0.75	4T-3037	4F-7827 (17) ^(l)	2J-3506 (17)		
		Flat	DH2	0.62	135-9692	3F-5108 (11)	4K-0367 (11)		
				0.75	4Z-8926	4F-7827 (13) ^(l)	2J-3506 (13)		
		25 mm (1.00 in)	1.219 m (4 ft)	Curved	DH2	0.75	109-3150	4F-7827 (9) ^(l)	2J-3506 (9)
						0.75	4T-3512	4F-7827 (9) ^(l)	2J-3506 (9)
				Curved Serrated	DH2	0.62	135-9692	3F-5108 (11)	4K-0367 (11)
						0.75	4Z-8926	4F-7827 (13) ^(l)	2J-3506 (13)
		Flat	DH2	0.75	7T-3600	4F-7827 (9) ^(l)	2J-3506 (9)		
				0.75	7T-3600	4F-7827 (9) ^(l)	2J-3506 (9)		

Motor Grader Cutting Edges

Cutting Edges (Cont'd.)

Edge Width	Edge Thickness	Edge Length	Edge Type	Steel Type	Bolt Size	Edge Part Number	Bolts	Nuts	
		1.524 m (5 ft)	Curved	DH2	0.62	4T-2240	3F-5108 (11)	4K-0367 (11)	
			Curved Serrated	DH2	0.75	4T-3511	4F-7827 (11) ^(l)	2J-3506 (11)	
			Flat	DH2	0.62	7T-3497	3F-5108 (11)	4K-0367 (11)	
203 mm (8.00 in)	25.0 mm (1.00 in)	1.524 m (5 ft)	Flat Serrated	DH2	0.75	7T-3601	4F-7827 (11) ^(l)	2J-3506 (11)	
			1.828 m (6 ft)	Curved	DH2	0.62	4T-2244	3F-5108 (13)	4K-0367 (13)
				0.75		4T-2231	4F-7827 (13) ^(l)	2J-3506 (13)	
		Flat		DH2	0.62	7T-3499	3F-5108 (13)	4K-0367 (13)	
					0.75	7T-3493	4F-7827 (13) ^(l)	2J-3506 (13)	
		2.133 m (7 ft)	Curved	DH2	0.62	4T-2242	3F-5108 (15)	4K-0367 (15)	
					0.75	4T-2233	4F-7827 (15) ^(l)	2J-3506 (15)	
			Flat	DH2	0.62	7T-3498	3F-5108 (15)	4K-0367 (15)	
					0.75	7T-3494	4F-7827 (15) ^(l)	2J-3506 (15)	
		2.438 m (8 ft)	Curved	DH2	0.62	4T-2237	3F-5108 (17)	4K-0367 (17)	
					0.75	4T-2236	4F-7827 (17) ^(l)	2J-3506 (17)	
			Flat	DH2	0.62	7T-3496	3F-5108 (17)	4K-0367 (17)	
0.75	7T-3495				4F-7827 (17) ^(l)	2J-3506 (17)			
254 mm (10.00 in)	25.0 mm (1.00 in)	1.219 m (4 ft)	Flat Serrated	DH2	0.75	4T-8800	4F-7827 (9) ^(l)	2J-3506 (9)	
			1.524 m (5 ft)	Flat Serrated	DH2	0.75	4T-8801	4F-7827 (11) ^(l)	2J-3506 (11)
		1.828 m (6 ft)	Flat	DH2	0.75	4T-6502	4F-7827 (13) ^(l)	2J-3506 (13)	
		2.133 m (7 ft)	Flat	DH2	0.75	4T-6508	4F-7827 (15) ^(l)	2J-3506 (15)	
			Flat Serrated	DH2	0.75	4Z-8055	4F-7827 (15) ^(l)	2J-3506 (15)	
		2.438 m (8 ft)	Flat	DH2	0.75	4T-6511	4F-7827 (17) ^(l)	2J-3506 (17)	
			Flat Serrated	DH2	0.75	4Z-8056	4F-7827 (17) ^(l)	2J-3506 (17)	
		35.0 mm (1.38 in)	2.133 m (7 ft)	Flat	DH2	0.75	4T-8316	4F-7827 (15) ^(l)	2J-3506 (15)
				Flat Serrated	DH2	0.75	4Z-8346	4F-7827 (15) ^(l)	2J-3506 (15)
			2.438 m (8 ft)	Flat	DH2	0.75	4T-8317	4F-7827 (17) ^(l)	2J-3506 (17)
	Flat Serrated			DH2	0.75	100-4581	4F-7827 (17) ^(l)	2J-3506 (17)	
	45.0 mm (1.75 in)	2.438 m (8 ft)	Flat	DH2	0.75	104-3628	4F-7827 (17) ^(l)	2J-3506 (17)	
		2.438 m (8 ft)	Flat Serrated	DH2	0.75	104-3631	4F-7827 (17) ^(l)	2J-3506 (17)	
	280 mm (11.00 in)	25.0 mm (1.00 in)	2.133 m (7 ft)	Flat	DH2	0.75	140-6790	4F-7827 (15) ^(l)	2J-3506 (15)
			2.438 m (8 ft)	Flat	DH2	0.75	140-6832	4F-7827 (17) ^(l)	2J-3506 (17)
		35.0 mm (1.38 in)	2.438 m (8 ft)	Flat	DH2	0.75	132-1086	4F-7827 (17) ^(l)	2J-3506 (17)
305 mm (12.00 in)	35.0 mm (1.38 in)	2.436 m (8 ft)	Flat	DH2	0.75	4Z-9188	4F-7827 (17) ^(l)	2J-3506 (17)	
330 mm (13.00 in)	28.5 mm (1.18 in)	1.217 m (4 ft)	Flat	DH2	1.00	109-3117	4J-9058 (9) ^(l)	2J-3507 (9)	
			Flat Serrated	DH2	1.00	138-6542	4J-9058 (9) ^(l)	2J-3507 (9)	
		2.436 m (8 ft)	Flat	DH2	1.00	109-3116	4J-9058 (9) ^(l)	2J-3507 (9)	
			Flat Serrated	DH2	0.75	128-2577	4F-7827 (17) ^(l)	2J-3506 (17)	
	45.0 mm (1.75 in)	1.217 m (4 ft)	Flat	DH2	1.00	109-3116	4J-9058 (9) ^(l)	2J-3507 (9)	
			Flat Serrated	DH2	0.75	134-1778	4F-7827 (17) ^(l)	2J-3506 (17)	
60.0 mm (2.38 in)	1.219 m (4 ft)	Flat	DH2	1.00	132-1019	4J-9058 (9) ^(l)	2J-3507 (9)		
		Flat Serrated	DH2	1.00	132-4753	4J-9058 (9) ^(l)	2J-3507 (9)		

Motor Grader Cutting Edges

Cutting Edges (Cont'd.)

Edge Width	Edge Thickness	Edge Length	Edge Type	Steel Type	Bolt Size	Edge Part Number	Bolts	Nuts
406 mm (16.00 in)	28.0 mm (1.18 in)	1.219 m (4 ft)	Flat	DH2	1.00	135-9690	4J-9058 (9) ⁽¹⁾	2J-3507 (9)
	45.0 mm (1.75 in)		Flat	DH2	1.00	138-6440	4J-9058 (9) ⁽¹⁾	2J-3507 (9)
	60.0 mm (2.38 in)	1.219 m (4 ft)	Flat	DH2	1.00	135-9349	4J-9058 (9) ⁽¹⁾	2J-3507 (9)
			Flat Serrated	DH2	1.00	135-9796	4J-9058 (9) ⁽¹⁾	2J-3507 (9)
	75.0 mm (3.00 in)		Flat	DH2	1.00	135-9576	4J-9058 (9) ⁽¹⁾	2J-3507 (9)
			Flat Serrated	DH2	1.00	135-9797	4J-9058 (9) ⁽¹⁾	2J-3507 (9)

Moldboard End Bits



- Designed to protect the end of the moldboard from wear and damage.
- For use in all applications.
- For machines equipped with a power blade arrangement, please refer to the Machine CAM parts book for the applicable moldboard end bits.

Model	Serial Number	Moldboard End Bit (2) Required	Bolts	Nuts
12, 12G	12 (All), 12G (61M1-11715)	7D-2052	3F-5108 (5)	4K-0367 (5)
12G	61M11716-UP	8E-5531	3F-5108 (5)	4K-0367 (5)
12H	All	8E-5531	3F-5108 (5)	4K-0367 (5)
14	All	7D-2083/4	3F-5108 (5)	4K-0367 (5)
14G	96U1-7324	9J-4405/6	4F-7827 (4)	2J-3506 (4)
	96U7325-UP	8E-5529	5J-4773 (5)	2J-3506 (5)
14H	All	8E-5529	5J-4773 (5)	2J-3506 (5)
16	All	9J-4407/8	3F-5108 (4)	4K-0367 (4)
16G	93U1-2777	9D-4880/1	4F-7827 (4)	2J-3506 (4)
	93U2778-UP	8E-5530	1J-6762 (5) ⁽¹⁾	2J-3506 (5)
16H	All	8E-5530	1J-6762 (5) ⁽¹⁾	2J-3506 (5)
24H	All	109-3118	1J-3527 (6)	2J-3507 (6)
112	All	7D-2052	3F-5108 (5)	4K-0367 (5)
120	87V1-6134	7D-2052	3F-5108 (5)	4K-0367 (5)
120G	87V6135-UP	8E-5531	3F-5108 (5)	4K-0367 (5)
120H	All	8E-5531	3F-5108 (5)	4K-0367 (5)
130	74V1-2292	7D-2052	3F-5108 (5)	4K-0367 (5)
130G	74V2293-UP	8E-5531	3F-5108 (5)	4K-0367 (5)
135H	All	8E-5531	3F-5108 (5)	4K-0367 (5)
140	72V1-9828	7D-2052	3F-5108 (5)	4K-0367 (5)
140G	72V9829-UP	8E-5531	3F-5108 (5)	4K-0367 (5)
140H (Blades using % bolts)	All with 112-4520 and 112-4521 Blade Groups	8E-5529	5J-4773 (5)	4K-0367 (5)
140H (Blades using 5/s bolts)	All with 8X-8011 and 8X-8016 Blade Groups	8E-5531	3F-5108 (5)	2J-3506 (5)
143H (Blades using % bolts)	All with 112-4520 and 112-4521 Blade Groups	8E-5529	5J-4773 (5)	4K-0367 (5)
143H (Blades using 5/s bolts)	All with 8X-8011 and 8X-8016 Blade Groups	8E-5531	3F-5108 (5)	2J-3506 (5)
				4K-0367 (5)
160H,163H	All	8E-5529	5J-4773 (5)	2J-3506 (5)
212	All	9J-4411	3F-5108 (4)	4K-0367 (4)

Overlay End Bits



- Designed to protect the ends of the cutting edge from excessive wear.
- Curved overlay end bits can be rotated 180° and used on the other end of the moldboard for a second wear life.
- For use on machines used for ditching where cutting edges wear fastest on the outer corners.

Motor Grader End Bits

Overlay End Bits (Cont'd.)

Model	Serial Number	Edge Width	Edge Type	Overlay End Bit		Bolts	Nuts
				(lh)	(rh)		
12, 12G	61M1-11715	152 mm (6.00 in)	Curved	—	6D-1904	4F-3658 (5)	4K-0367 (5)
		203 mm (8.00 in)	Curved	—	6D-1948	4F-3658 (5)	4K-0367 (5)
			Flat ⁽¹⁾	4D-5758	4D-5757	4F-3658 (5)	4K-0367 (5)
12G	61M11716-UP	121 mm (4.75 in)	Curved	—	135-9345	4F-3657 (5)	4K-0367 (5)
		152 mm (6.00 in)	Curved	—	9W-1767	4F-3658 (5)	4K-0367 (5)
		203 mm (8.00 in)	Curved	—	9W-1768	4F-3658 (5)	4K-0367 (5)
12H	—	121 mm (4.75 in)	Curved	—	135-9345	4F-3657 (5)	4K-0367 (5)
		152 mm (6.00 in)	Curved	—	9W-1767	4F-3658 (5)	4K-0367 (5)
		203 mm (8.00 in)	Curved	—	9W-1768	4F-3658 (5)	4K-0367 (5)
14	early models	203 mm (8.00 in)	Curved	—	7D-5583	1J-6762 (5)	2J-3506 (5)
	later models	203 mm (8.00 in)	Flat ⁽¹⁾	4D-5758	4D-5757	4F-3658 (5)	4K-0367 (5)
14G	96U1-7324	203 mm (8.00 in)	Curved	—	7D-9999	1J-6762 (5)	2J-3506 (5)
	96U7325-UP	203 mm (8.00 in)	Curved	—	6Y-2805	1J-6762 (5)	2J-3506 (5)
14H	—	203 mm (8.00 in)	Curved	—	6Y-2805	1J-6762 (5)	2J-3506 (5)
16	early models	152 mm (6.00 in)	Curved	—	7D-5582	1J-6762 (5)	2J-3506 (5)
		203 mm (8.00 in)	Curved	—	7D-5193	4F-3658 (5)	4K-0367 (5)
16G	93U1-2777	203 mm (8.00 in)	Curved	—	7D-9999	1J-6762 (5)	2J-3506 (5)
	93U2778-UP	203 mm (8.00 in)	Curved	—	6Y-2805	1J-6762 (5)	2J-3506 (5)
120, 120G	87V1-6135	152 mm (6.00 in)	Curved	—	6D-1904	4F-3658 (5)	4K-0367 (5)
		203 mm (8.00 in)	Curved	—	6D-1948	4F-3658 (5)	4K-0367 (5)
			Flat ⁽¹⁾	4D-5758	4D-5757	4F-3658 (5)	4K-0367 (5)
120G	87V6135-UP	121 mm (4.75 in)	Curved	—	135-9345	4F-3657 (5)	4K-0367 (5)
		152 mm (6.00 in)	Curved	—	9W-1767	4F-3658 (5)	4K-0367 (5)
		203 mm (8.00 in)	Curved	—	9W-1768	4F-3658 (5)	4K-0367 (5)
120H	—	121 mm (4.75 in)	Curved	—	135-9345	4F-3657 (5)	4K-0367 (5)
		152 mm (6.00 in)	Curved	—	9W-1767	4F-3658 (5)	4K-0367 (5)
		203 mm (8.00 in)	Curved	—	9W-1768	4F-3658 (5)	4K-0367 (5)
130, 130G	74V1-2292	152 mm (6.00 in)	Curved	—	6D-1904	4F-3658 (5)	4K-0367 (5)
		203 mm (8.00 in)	Curved	—	6D-1948	4F-3658 (5)	4K-0367 (5)
			Flat ⁽¹⁾	4D-5758	4D-5757	4F-3658 (5)	4K-0367 (5)
130G	74V2293-UP	121 mm (4.75 in)	Curved	—	135-9345	4F-3657 (5)	4K-0367 (5)
		152 mm (6.00 in)	Curved	—	9W-1767	4F-3658 (5)	4K-0367 (5)
		203 mm (8.00 in)	Curved	—	9W-1768	4F-3658 (5)	4K-0367 (5)
135H	—	121 mm (4.75 in)	Curved	—	135-9345	4F-3657 (5)	4K-0367 (5)
		152 mm (6.00 in)	Curved	—	9W-1767	4F-3658 (5)	4K-0367 (5)
		203 mm (8.00 in)	Curved	—	9W-1768	4F-3658 (5)	4K-0367 (5)
140, 140G	72V1-9828	152 mm (6.00 in)	Curved	—	6D-1904	4F-3658 (5)	4K-0367 (5)
		203 mm (8.00 in)	Curved	—	6D-1948	4F-3658 (5)	4K-0367 (5)
			Flat ⁽¹⁾	4D-5758	4D-5757	4F-3658 (5)	4K-0367 (5)
140G	72V9829-UP	152 mm (6.00 in)	Curved	—	9W-1767	4F-3658 (5)	4K-0367 (5)
		203 mm (8.00 in)	Curved	—	9W-1768	4F-3658 (5)	4K-0367 (5)
140H ⁽¹⁾ , 143H ⁽¹⁾	—	121 mm (4.75 in)	Curved	—	135-9345	4F-3657 (5)	4K-0367 (5)
		152 mm (6.00 in)	Curved	—	9W-1767	4F-3658 (5)	4K-0367 (5)
		203 mm (8.00 in)	Curved	—	9W-1768	4F-3658 (5)	4K-0367 (5)
140H ⁽¹⁾ , 143H ⁽¹⁾	—	203 mm (8.00 in)	Curved	—	6Y-2805	1J-6762 (5)	2J-3506 (5)
160H, 163H	—	203 mm (8.00 in)	Curved	—	6Y-2805	1J-6762 (5)	2J-3506 (5)

Reducer Bushings

- For moldboards with 3/4 inch bolt holes.

Part Number	Moldboard Thickness
280-4070	7/8 in
280-4071	1 in

NOTE: M Series Grader Moldboards are all 3/4 inch hole size (exception: 24M).

Paving Products - Paving Product Bits, Tools and Holders

Profiler/Road Reclaimer



- Caterpillar cutter bits are designed for optimum performance in a variety of materials.
- Proprietary carbide tips provide longer life and lower operational costs.

Item	Part Number		
Blocks/Holders	Part Number		
Holder - Breakaway Reclaimer (3A')	6R-3927		
Holder - Dual Bit Stabilizer (1')	113-0313		
Holder - Heavy Duty Breakaway Cold Planer/Reclaimer (3A')	151-9941		
Holder - Heavy Duty Weld-On Cold Planer (3/0)	113-0328		
Holder - Quick Change (7/s')	117-3887		
Holder - Standard Weld-On Reclaimer (3/0)	7R-6187		
Holder - Weld-On Cold Planer (3A')	9U-9617		
Holder - Weld-On Reclaimer/Stabilizer (7/s')	117-4076		
Mounting Block (For use with Weld-On Holders)	8T-4084		
Mounting Block - Breakaway (For use with 6R-3927 Holder)	6R-3926		
Mounting Block - Heavy Duty Breakaway (For use with 151-9941 Holder)	169-1412		
Mounting Block - Standard Reclaimer (For use with 7R-6187 Holder)	077-2848		
Holder - Quick Change (For use with 077-4018/077-2820)	107-3343		
Soil Stabilizer Tools	Part Number	LH Part Number	RH Part Number
Chopper Tools - Carbide Face	—	077-7343	077-4727
Chopper Tools - Hardened Steel	—	077-2775	077-2776
Quick Change Tools - Carbide Face	077-4018	—	—
Quick Change Tools - Hardened Steel	077-2820	—	—
Quick Change Tools - Holder	077-2807	—	—
Straight Tool	077-2774	—	—
Straight Tool Holder	077-2789	—	—
Cutter Bits	Part Number	Pallet Quantity (2,000)	
Asphalt Bit - Low Horse Power (3A' Shank)	222-7571	222-7578	
Asphalt Bit - Heavy Duty (3A' Shank)	140-2864	144-1238	
Asphalt Bit - Heavy Duty - Washered (3A' Shank)	222-7570	222-7579	
Asphalt Bit - Full Bodied - Washered (3A' Shank)	238-3191	238-3182	
Asphalt Bit (3A" Shank)	350-7198	350-7199	
Asphalt Bit - Washered (3A" Shank)	222-7570	222-7579	
Asphalt Bit - Washered (3A" Shank)	316-2326	316-2327	
Asphalt Bit - Washered (3A" Shank)	349-4945	349-4947	
Asphalt Bit - Washered (3A" Shank)	349-4944	349-4946	
Asphalt and Concrete Bit (3A" Shank)	351-2677	351-2678	
Concrete Bit - Low Horse Power (3A' Shank)	227-7340	—	
Concrete Bit (3A' Shank)	149-5763	144-1236	
Concrete Bit (3A" Shank)	375-7681	376-2346	
Asphalt and Soil Stabilizer Bit (7/s' Shank)	117-3884	342-1302	
Asphalt and Soil Stabilizer Bit - Carbide Face (7/s' Shank)	117-3885	—	
Soil Stabilizer Bit (7/s' Shank)	195-7244	—	
Soil Stabilizer Bit (7/s" Shank)	316-6084	342-1304	

Paving Products - Paving Product Bits, Tools and Holders

Profiler/Road Reclaimer (Cont'd.)

Item		
Stabilizer Bit (1' Shank for use with 113-0313 Dual Holder)	113-0312	—
Washer - Hardened	8C-1856	—
Specialty Tools	Part Number	
Installation/Removal Tool	8T-4474	
Punch	104-8591	

Scrapers

Scraper Cutting Edges

There's a complete line of scraper cutting edges, providing the right combination of edge thickness and arrangement to match practically any job condition.

All edges are rolled from DH-2 steel and through-hardened for strength and wear resistance. Two types are available:

Level Cut Arrangement

- For finish work or very high impact conditions where stinger breakage is a problem.

Stinger Arrangement

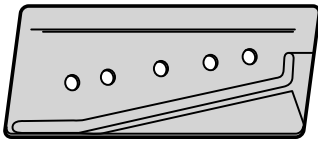
- The standard configuration of cutting edge on most scrapers. Provides good penetration and efficient flow of material into the bowl.

Model	Thickness	Stinger Arrangement		Changes for Level Cut		Bolts	Nuts
		Center	Ends	Center	Ends		
613, 613C	22 mm (0.88 in)	4T-6611	4T-6613 (2)	—	— ^(l)	4F-7827 (15)	2J-3506 (15)
615(46Z1-1342, 47Z1-1339)	22 mm (0.88 in)	7T-5104	7T-5105 (2)	—	— ^(l)	5J-2409 (13)	2J-3505 (13)
	22 mm (0.88 in)	9W-5807	9W-5810	—	9W-5806 (2)	4J-9058 (17)	2J-3507 (17)
621B, 621E, 621F, 627B, 627E, 627F	22 mm (0.88 in)	4T-6568	4T-6612 (2)	— ^(l)	—	3J-2801 (14)	2J-3507 (14)
	28 mm (1.12 in)	4T-2896	4T-6380 (2)	—	4T-2894 (2)	3J-2801 (14)	2J-3507 (14)
623B, 623E, 623F, J619, J621	22 mm (0.88 in)	4T-2887	4T-6612 (2)	4T-6620	—	4F-4042 (20)	2J-3507 (20)
	28 mm (1.12 in)	4T-2895	4T-6380 (2)	— ^(l)	—	4F-4042 (20)	2J-3507 (20)
631D, 631E, 637D, 637E	22 mm (0.88 in)	4T-6566	4T-6614 (2)	— ^(l)	—	4F-4042 (16)	2J-3507 (16)
	28 mm (1.12 in)	4T-3444	4T-6378 (2)	— ^(l)	—	4F-4042 (16)	2J-3507 (16)
	35 mm (1.38 in)	9J-4369	9W-6092 (2)	—	7J-0225 (2)	4F-4042 (16)	2J-3507 (16)
	41 mm (1.62 in)	9J-5899	7J-2959 (2)	— ^(l)	—	4F-4042 (16)	2J-3507 (16)
633D, 639	28 mm (1.12 in)	4T-3428	4T-2899 (2)	— ^(l)	—	4F-4042 (17)	2J-3507 (17)
	35 mm (1.38 in)	9J-1111	9J-1109 (2)	— ^(l)	—	4F-4042 (17)	2J-3507 (17)
651B, 657B	35 mm (1.38 in)	7J-1551	7J-0225(2)	7J-0226	—	4J-9058 (34)	2J-3507 (17)
	41 mm (1.62 in)	7J-2977	7J-2978 (2)	7J-2981	—	4J-9058 (34)	2J-3507 (17)
651E (88Z146-UP)	35 mm (1.38 in)	9W-4901	9W-4902	— ^(l)	—	4J-9058 (48)	2J-3507 (48)
	35 mm (1.38 in)	9W-4505	9W-4399 (2)	— ^(l)	—	6V-6535 (29) ^(l)	3K-9770 (29)
	41 mm (1.62 in)	9W-4394	9W-4509 (2)	— ^(l)	—	6V-6535 (29) ^(l)	3K-9770 (29)
	45 mm (1.75 in)	9W-9701	9W-9702	— ^(l)	—	4J-9058 (48)	2J-3507 (48)
651F, 657F	35 mm (1.38 in)	9W-4901	9W-4902	— ^(l)	—	4J-9058 (48)	2J-3507 (48)
	45 mm (1.75 in)	9W-9701	9W-9702	— ^(l)	—	4J-9058 (48)	2J-3507 (48)
657E (86Z241-UP, 6MB91-UP)	35 mm (1.38 in)	9W-4901	9W-4902	— ^(l)	—	4J-9058 (48)	2J-3507 (48)
	35 mm (1.38 in)	9W-4505	9W-4399 (2)	— ^(l)	—	6V-6535 (29) ^(l)	3K-9770 (29)
	41 mm (1.62 in)	9W-4394	9W-4509 (2)	— ^(l)	—	6V-6535 (29) ^(l)	3K-9770 (29)
	45 mm (1.75 in)	9W-9701	9W-9702	— ^(l)	—	4J-9058 (48)	2J-3507 (48)

Scrapers - Scraper Router Bits

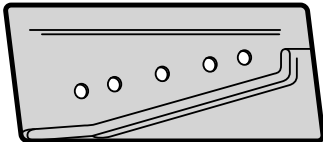
Router Bits

Router Bits are used on all scrapers to protect the lower corners of the bowl. They are made of DH-2 steel and through-hardened for extra strength and wear resistance. Three types are available:



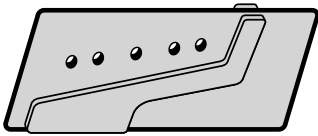
Standard Router Bits

- Recommended for most applications. Reversible for added life and value.



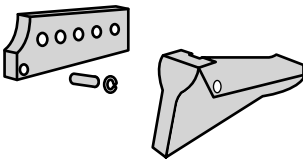
Heavy Duty Router Bits

- Have 45% more wear material than standard router bits and are reversible. To avoid possible damage to the bowl, they should not be used in high impact conditions.



Level Cut Bits

- Level cut end bits are used for clean-up or finishing type work with elevating scrapers. They clean-up windrows by extending further forward to keep material in front of the center cutting edge.



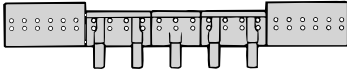
Quick Change Router Bits

- Designed to reduce downtime in abrasive conditions. Pinned onto supports which bolt to the bowl.

Model	Std.	Heavy Duty	Level Cut	Quick-Change				Bolts	Nuts	Washers
				Support	Bit	Pin	Retain.			
613, 613B	9F-1831 ⁽¹⁾	—	—	—	—	—	—	— ⁽¹⁾	4K-0367 (3)	—
613C	4T-4336	9W-4903 ⁽¹⁾	—	—	—	—	—	8S-9092 (3)	4K-0367 (3)	5P-8247 (3)
615, 621, 623, 627	4J-8665	—	—	—	—	—	—	1D-4637 (5)	2J-3507 (5)	5P-8250 (5)
615, 621, 623, 627	—	—	220-9150	—	—	—	—	1D-4709 (5)	2J-3507 (5)	—
631, 633, 637	4J-8665	7J-3023 ⁽¹⁾	—	4T-0051	4T-0054	4T-0055	1U-2405	4F-4042 (5)	2J-3507 (5)	5P-8250 (5)
631, 633, 637	—	—	220-9150	—	—	—	—	1D-4709 (5)	2J-3507 (5)	—
639, 651B, 657B	4J-8665	7J-3023 ⁽¹⁾	—	4T-0051	4T-0054	4T-0055	1U-2405	4F-4042 (5)	2J-3507 (5)	5P-8250 (5)
639, 651B, 657B	—	—	220-9150	—	—	—	—	1D-4709 (5)	2J-3507 (5)	—
651E (88Z146-UP)	—	7J-3023	—	4T-0051	4T-0054	4T-0055	1U-2405	4J-9058 (5)	2J-3507 (5)	5P-8250 (5)
651E (88Z146-UP)	—	—	220-9150	—	—	—	—	1D-4709 (5)	2J-3507 (5)	—
651E (88Z1-145)	4T-0668	—	—	4T-1512	4T-1514	8E-6358	8E-6359	5P-8823 (5) ⁽¹⁾	3K-9770 (5)	4K-0684 (5)
651E (88Z1-145)	—	—	220-9150	—	—	—	—	1D-4709 (5)	2J-3507 (5)	—
651F, 657F	—	7J-3023	—	4T-0051	4T-0054	4T-0055	1U-2405	4J-9058 (5)	2J-3507 (5)	5P-8250 (5)
651F, 657F	—	—	220-9150	—	—	—	—	1D-4709 (5)	2J-3507 (5)	—
657E (86Z241-UP, 6MB91-UP)	—	7J-3023	—	4T-0051	4T-0054	4T-0055	1U-2405	4J-9058 (5)	2J-3507 (5)	5P-8250 (5)
657E (86Z241-UP, 6MB91-UP)	—	—	220-9150	—	—	—	—	1D-4709 (5)	2J-3507 (5)	—
657E (86Z1-240, 6MB1-90)	4T-0668	—	—	4T-1512	4T-1514	8E-6358	8E-6359	5P-8823 (5) ⁽¹⁾	3K-9770 (5)	4K-0684 (5)
657E (86Z1-240, 6MB1-90)	—	—	220-9150	—	—	—	—	1D-4709 (5)	2J-3507 (5)	—

Scraper Cutting Edges and Tips

Integrated Tooth Cutting Edges



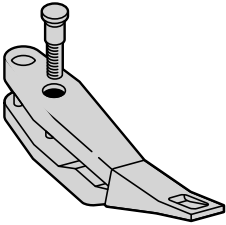
- Improves penetration in compacted soils.
- Consists of three center edge sections with cast-in adapters and two standard end sections.
- Replaceable tips provide low operating costs in abrasive conditions.

Model	Center Tooth Edge	End Tooth Edge	Cutting Edge Ends	Bolts	Nuts
623	1U-1901 (1)	1U-1902 (2)	4T-6612 (2)	3J-2801 (10) ⁽¹⁾ 4F-4042 (20)	2J-3507 (30)
633, 639	9J-1108 (1)	9J-1107 (2)	9J-1109 (2) ⁽¹⁾	4F-4042 (34)	2J-3507 (34)

Integrated Tooth Cutting Edge Tips

Model	Number of Teeth	Short	Long	Penetration	Wide	Sharp	Heavy Duty Long	Heavy Duty Abrasion	Pin	Retainer Assembly
623	5	1U-3301	1U-3302	9J-4309	107-3300	9W-8309	9N-4302	9N-4303	107-3308	8E-6259
633, 639	5	1U-3351	1U-3352	9J-4359	107-3350	9W-2359	9N-4352	9N-4353	8E-6358	8E-6359

Bolt-On Adapters



- Improves penetration in compacted soils.
- Provides an easily replaceable tooth option for machines that change applications frequently and may not need teeth on all jobs.
- Installs over the center section in the stinger configuration.

Model	Adapter	Bolts	Nuts	Washers
613	9J-8455	5F-8933 (2)	2J-3506 (2)	
615 (47Z1-1339)	4T-5805	1J-0849 (2)	2J-3505 (2)	
615 (47Z1340-UP)	9J-2307	1J-3527 (2)	2J-3507 (2)	5P-8250 (2)
J619, J621, 623, 633, 639	9W-9971 ⁽¹⁾	1J-4947 (2)	2J-3507 (2)	5P-8250 (2)

Scraper Bolt-On Adapter Tips

Bolt-On Adapter Tips

Model	Number of Teeth	Short	Long	Penetration	Wide	Sharp	Heavy Duty Long	Heavy Duty Abrasion	Pin	Retainer Assembly
613	4	1U-3251	1U-3252	9J-4259	107-3300	9W-8309	9N-4252	9N-4253	8E-6258	8E-6259
615 (47Z1-1339)	5	1U-3301	1U-3302	9J-4309	107-3300	9W-8309	9N-4302	9N-4303	107-3308	8E-6259
615 (47Z1340-UP)	4	1U-3301	1U-3302	9J-4309	107-3300	9W-8309	9N-4302	9N-4303	107-3308	8E-6259
J619, J621, 623, 633, 639	5	1U-3351	1U-3352	9J-4359	107-3350	9W-2359	9N-4352	9N-4353	8E-6358	8E-6359

ARM Cutting Edges

In addition to our standard cutting edges, your dealer now has a full line of ARM Cutting Edges for Scrapers. These include ARM Center C/E, ARM End Edge, ARM Router Bits, and ARM Serrated Center C/E.

Bowlside Protector — Pin-On

Model	Protector	Qty.	Pin	Qty.	Retainer	Qty.	Adapter Plate	Qty.
620, 630 650 Series	8J-4143	2	9J-8441	4	8E-5559	4	152-0034	2

Bowlside Protector — Bolt-On

Model	Protector	Qty.	Bolt	Qty.	Nut	Qty.	Adapter Plate	Qty.
620, 630 650 Series	232-0048	2	1J-4948	8	2J-3507	8	232-0049	2

Elevating Scraper Parts

Elevating Scraper Parts

Model	613	613B	613C	615	615C	615D	615G
Chain Assembly	—	—	2T-0104	2T-0072, 239-8147	308-0325, 2T-0072, 2T-3038, 239-8147	8I-2435	216-6925
61 Link Assembly	2T-0104	2T-0104	—	—	—	—	—
80 Link Assembly	9J-0115	9J-0115	—	—	—	—	—
Link Assembly — Outside (with pins)	2T-1133	2T-1133	2T-1133	2T-0290	2T-0290	—	8J-7675
Inside	2T-1134	2T-1134	2T-1134	2T-0075	2T-0075	—	3G-3392
Offset (with pin)	2T-0076	2T-0076	2T-0076	2T-0076	2T-0076	—	3G-3393
Flight	2T-1136	2T-1136	2T-1136	2T-0073	2T-0073	—	8J-7672
Lock Pin	2T-1137	2T-1137	2T-1137	2T-1137	2T-1137	6J-8873	6J-8873
Link Pin	2T-1138	2T-1138	2T-1138	2T-1609	2T-1609	—	8J-7791
Roller	2T-3963	2T-3963	2T-3963	—	5J-3708	—	5J-3708
Bushing	—	—	—	—	216-6927	—	216-6927
Flight Link	—	6J-0560	—	—	—	—	—
Flight Assembly	2T-0679, 2T-3883, 8J-4174	2T-0679, 2T-3883, 8J-4174	2T-0679	2T-3893	2T-3893	8I-2113	217-9042
Sprocket	2T-2623, 9J-1653	2T-2744, 9J-1653	2T-0704, 2T-2623	2T-0249, 2T-2259	316-4419, 2T-0249, 2T-2259	8I-2192	216-6900
Idler Group	—	—	2T-3964	—	—	—	—
Small	—	—	—	—	2T-0046	—	—
Medium	—	—	—	—	2T-0047	—	—
Large	—	—	—	—	2T-0048	—	—
Roller Group	—	—	—	—	215-4459	—	215-4459
Idler	—	—	—	—	2T-0242	—	2T-0242

Model	623	623B	623E	623F	623G	631B	633
Chain Assembly	2T-3038	3G-3391	3G-3391, 2T-3038	2T-3038	2T-3038, 308-0325	—	—
Link Assembly — Outside (with pins)	—	8J-7675	8J-7675	—	8J-7675	—	—
Inside	3G-3392	—	3G-3392	—	3G-3392	6J-0556	8J-0556
Offset (with pin)	3G-3393	3G-3393	3G-3393	—	3G-3393	—	6J-3621
Flight	8J-7672	8J-7672	8J-7672	—	8J-7672	—	—
Lock Pin	6J-8873	6J-8873	6J-8873	6J-8873	6J-8873	—	6J-8873
Link Pin	8J-7791	8J-7791	8J-7791	—	8J-7791	6J-0557	6J-0557
Roller	5J-3708	5J-3708	5J-3708	—	5J-3708	7J-4320	7J-4320
Bushing	216-6927	216-6927	216-6927	—	216-6927	—	—
Flight Link	—	—	—	—	—	—	6J-0560
Flight Assembly	2T-3883	8J-7122	8J-7122, 2T-3883	2T-3883	2T-3883	—	—
Sprocket	2T-2891	8J-6544	2T-2891, 8J-6544	2T-2891	2T-2891, 316-4419	7J-9382	7J-9382
Idler Group	3G-0960	—	2T-0046, 3G-1086	—	—	—	—
Upper	—	—	3G-0960	—	—	—	—
Small	—	2T-0046	—	—	—	—	—
Medium	—	3G-0960	—	—	—	—	—
Large	—	3G-1086	—	—	—	—	—

Elevating Scraper Parts

Elevating Scraper Parts (Cont'd.)

Model	623	623B	623E	623F	623G	631B	633
Roller Group	—	8J-6562	8J-6562	—	215-4459	—	—
Idler	—	8J-6561	8J-6561	—	—	7J-1384	7J-1384

Model	633B	633C	633D	633E	639D	639E	J619
Chain Assembly			8J-3059	2T-3762	9J-9920	9J-9920	
Link Assembly — Outside (with pins)	—	—	—	—	—	—	8J-7675
Inside	6J-0556	—	8J-3221	6J-0556, 8J-3221	8J-3221	8J-3221	3G-3392
Offset (with pin)	—	—	—	—	—	—	5J-3710
Offset (without pin)	—	—	8J-4340	8J-4340	8J-4340	8J-4340	
Flight	—	—	—	—	—	—	9J-5187
Lock Pin	6J-8873	—	6J-0555	6J-0555	6J-0555	6J-0555	6J-8873
Link Pin	6J-0557	6J-0557	8J-3217	8J-3217	8J-3217	8J-3217	8J-7791
Roller	7J-4320		7J-4320, 7J-7507	7J-4320, 7J-7507	7J-4320, 7J-7507	7J-4320, 7J-7507	5J-3708
Bushing	—	—	—	—	—	—	216-6927
Flat Link — Sidebar Link	—	—	8J-3218, 8J-3219	8J-3218, 8J-3219	8J-3218, 8J-3219	8J-3218, 8J-3219	—
Flight Link —	6J-0560	6J-0560	—	—	—	—	—
Outside Link	—	—	8J-3220	8J-3220	8J-3220	8J-3220	—
Inside Link	—	—	8J-3222	8J-3222	8J-3222	8J-3222	—
Flight Assembly	—	—	9J-1587	8I-1272	9J-1587	9J-1587	—
Sprocket	7J-9382	—	7J-9382	7J-9382	7J-9382	7J-9382	6J-5070
Idler Group	—	—	9J-1035	9J-1035	9J-1035	9J-1035	—
Roller Assembly	—	—	7J-1184	7J-1184	7J-1184	7J-1184	—
Idler Assembly	—	—	9J-1513	9J-1513	9J-1513	9J-1513	—
Roller Group	—	—	—	2T-3972, 2T-3973, 8I-1643	—	—	—
Idler	—	7J-1384	7J-1384		—	—	—

Model	J621	950
Chain Assembly	3G-5327	—
Link Assembly — Outside (with pins)	8J-7675	—
Inside	3G-3392	—
Flight	8J-7672	—
Lock Pin	6J-8873	8J-2746
Link Pin	8J-7791	8J-2743
Roller	5J-3708	—
Bushing	216-6927	—
Sprocket	6J-5070	—

Elevating Scraper Parts/Parts Kits

Elevating Scraper Parts Kits

Model	613C	615, 615C	623E, 623F, 623G
To receive all Part Kit quantities, order Part Kit number in bold.			
Parts Kit	217-4880(1)	217-4882 (1)	217-4884(1)
Components:			
Chain Assembly	2T-0104 (2)	2T-0072 (2)	2T-3038 (2)
Sprockets	2T-2623 (2)	2T-0249 (2)	2T-2891 (2)
Bolts	1A-8537 (16)	0S-1756 (8) 3B-2968 (8)	0S-1756 (16)
Nuts	4K-0367 (16)	2J-3506(16)	2J-3506(16)
Washers	5P-8247 (16)	5P-8248 (16)	5P-8248 (32)
Bolts	0S-1603 (120)	0S-1576(144)	0S-1576 (120)
Nuts	6B-6684 (120)	6B-6683 (144)	6B-6683 (120)
Washers	5P-8245 (240)	5P-8247 (288)	5P-8247 (240)
Parts Kit	217-4881⁽¹⁾ (1)	217-4883⁽¹⁾ (1)	217-4885⁽¹⁾ (1)
Components:			
Flight Assembly	2T-0679 (15)	2T-3893 (18)	2T-3883 (15)

1 NOTE: Hardware not included. Hardware for flight assemblies included in appropriate chain and sprocket kits listed above.

Plastic Auger Groups

Plastic Auger Groups — Models: 621F, 621G, 627F, 627G

Part Number	Description	Qty.	Hardware	Part Number	Qty.
144-5723	Cutting Edge	1	Bolt	4F-4042	3
			Nut	6V-8190	3
108-0424	Wear Plate	6			
108-0423	Liner – Upper	1	Washer	146-5795	94 ⁽¹⁾
			Plug	146-5796	94 ⁽¹⁾
108-0421	Liner – Middle	4			
108-0418	Liner – Lower	1			
108-0413	Shoe – Tungsten Carbide	38	Bolt – Plow	4F-3654	76
			Nut – Full	7X-0448	76
108-0412	Shoe – Nickel	38	Bolt — Plow	4F-3654	76
			Nut – Full	7X-0448	76
108-0410	Shoe – Std.	38	Bolt – Plow	4F-3654	76
			Nut – Full	7X-0448	76

Plastic Auger Groups — Models: 631E, 631G, 637E, 637G

Part Number	Description	Qty.	Hardware	Part Number	Qty.
144-5723	Cutting Edge	1	Bolt	4F-4042	3
			Nut	6V-8190	3
150-2658	Wear Plate	8			
150-2661	Liner	1	Washer	146-5795	46 ⁽¹⁾
			Plug	146-5796	46 ⁽¹⁾
108-0431	Liner — Upper	1			
108-0430	Liner — Middle	3			
108-0427	Liner — Lower	1			
150-2663	Shoe — Std.	52	Bolt — Plow	4F-3654	104
			Nut — Full	7X-0448	104
150-2665	Shoe — Nickel Alloy	42	Bolt — Plow	4F-3654	84
			Nut — Full	7X-0448	84
150-2667	Shoe — Tungsten Carbide	42	Bolt — Plow	4F-3654	84
			Nut — Full	7X-0448	84

Plastic Auger Groups

Plastic Auger Groups — Models: 651E, 657E

Part Number	Description	Qty.	Hardware	Part Number	Qty.
144-5723	Cutting Edge	1	Bolt	4F-4042	3
			Nut	2J-3507	3
150-2658	Wear Plate	8			
10-6649	Liner — Lower	1	Washer	146-5795	69 ⁽¹⁾
			Plug	146-5796	69 ⁽¹⁾
10-6654	Liner — Plastic	2			
10-6656	Liner — Plastic	2			
150-2663	Shoe — Std.	42	Bolt — Plow	4F-3654	84
			Nut — Full	7X-0448	84
150-2665	Shoe — Nickel	42	Bolt — Plow	4F-3654	84
			Nut — Full	7X-0448	84
150-2667	Shoe — Tungsten Carbide	42	Bolt — Plow	4F-3654	84
			Nut — Full	7X-0448	84

NOTE: Difference between Plastic and Steel Augers: Steel Augers use multiple steel wear plates.

Steel Auger Groups

Steel Auger Groups — Models: 621F, 621G, 629F, 629G

Part Number	Description	Qty.	Hardware	Part Number	Qty.
144-5723	Cutting Edge	1	Bolt	4F-4042	3
			Nut	6V-8190	3
108-0424	Wear Plate	37			
108-0420	Liner — Top	1	Washer	146-5795	34 ^(l)
			Plug	146-5796	34 ^(l)
108-0419	Liner — Middle	1			
108-0418	Liner — Lower	1			
108-0413	Shoe — Tungsten Carbide	38	Bolt — Plow	4F-3654	76
			Nut — Full	7X-0448	76
108-0412	Shoe — Nickel Alloy	38	Bolt — Plow	4F-3654	76
			Nut — Full	7X-0448	76
108-0410	Shoe — Std.	38	Bolt — Plow	4F-3654	76
			Nut — Full	7X-0448	76

Steel Auger Groups — Models: 631E, 631G, 637E, 637G

Part Number	Description	Qty.	Hardware	Part Number	Qty.
144-5723	Cutting Edge	1	Bolt	4F-4042	3
			Nut	6V-8190	3
150-2628	Wear Plate	42			
108-0429	Liner — Top	1	Washer	146-5795	46 ^(l)
			Plug	146-5796	46 ^(l)
108-0428	Liner — Middle	4			
108-0427	Liner — Lower	1			
150-2663	Shoe — Std.	52	Bolt — Plow	4F-3654	104
			Nut — Full	7X-0448	104
150-2665	Shoe — Nickel Alloy	42	Bolt — Plow	4F-3654	84
			Nut — Full	7X-0448	84
150-2667	Shoe — Tungsten Carbide	42	Bolt — Plow	4F-3654	84
			Nut — Full	7X-0448	84

Steel Auger Groups

Steel Auger Groups — Models: 651E, 657E

Part Number	Description	Qty.	Hardware	Part Number	Qty.
144-5723	Cutting Edge	1	Bolt	4F-4042	3
			Nut	2J-3507	3
150-2658	Wear Plate	47			
1Q-6649	Liner — Lower	1	Washer	146-5795	46 ⁽¹⁾
			Plug	146-5796	46 ⁽¹⁾
1Q-6653	Liner — Plastic	4			
150-2663	Shoe — Std.	42	Bolt — Plow	4F-3654	84
			Nut — Full	7X-0448	84
150-2665	Shoe — Nickel	42	Bolt — Plow	4F-3654	84
			Nut — Full	7X-0448	84
150-2667	Shoe — Tungsten Carbide	42	Bolt — Plow	4F-3654	84
			Nut — Full	7X-0448	84

NOTE Difference between Plastic and Steel Augers: Steel Augers use multiple steel wear plates.



HAND TOOLS and SHOP SUPPLIES

The Tools and Supplies You Need For the Jobs You Do.

Cat Hand Tools and Shop Supplies

Keeping machines and engines running at top performance requires regular maintenance and the tools and supplies you use can make a big difference. Cat Hand Tools and Shop Supplies are designed for work around heavy equipment. This makes your job easier which means you can get those machines and engines back to work more quickly.

Cat Hand Tools and Shop Supplies has everything you need for your shop.

- Tool Boxes
- Tool Sets
- Wrenches
- Work Knives
- Ratchets and Sockets
- Pneumatic Tools
- Torque Tools
- Grease Guns
- Chisels and Punches
- Screwdrivers
- Pliers
- Locking Pliers
- Hammers
- Slide Sledges
- Pry Bars
- Tool Storage
- Misc. Hand Tools
- Gloves
- Safety Glasses
- Personal Protective Equipment
- Lighting and Electrical Products
- Contamination Control
- Caps and Plugs
- Fluid Sampling Equipment
- Towels and Wipers
- Absorbents and Spill Kits
- Floor Mats
- Abrasives
- Metal Cutting and Repair
- Vises
- Battery Service Equipment
- Packing Supplies and Equipment
- Brushes
- Misc. Shop Supplies

For the complete line of tools and supplies:

Dealers can download or order (in print) the full Cat Hand Tools and Shop Supplies catalog at:

<https://cmic.cat.com>

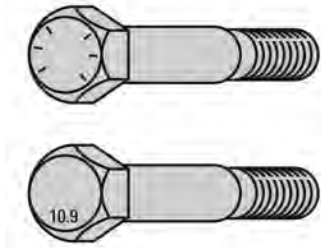
Customers can download it at: <https://parts.cat.com> Under "Shop by Category" > Hand Tools > (in the Reference Tab at the bottom)



HARDWARE

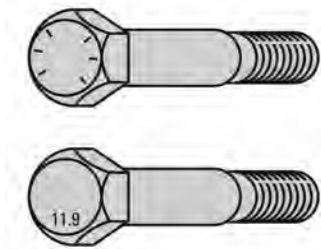
Bolts

Hex Head Bolts



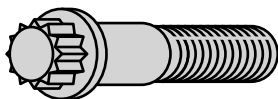
- Designed with smooth rolled threads for better clamp load, shear resistance and resistance to stripping.
- Made of fine grain steel for a more uniform micro-structure, resulting in improved toughness and fracture resistance.
- Inch Bolts:
 - Meet or exceed SAE Grade 8 specifications for tensile strength and proof load, minimum tensile strength of 150,000 psi.
 - Have 20% higher head height than SAE specifications for longer wear life, easier gripping and less slippage.
 - Marked with 6 radial dashes on the bolt head.
- Metric Bolts:
 - Meet or exceed ISO Class 10.9 specifications for tensile strength and proof load, minimum tensile strength of 1040 mPa (150,000 psi).
 - Marked with 10.9 on the bolt head.
- Bolt Coatings:
 - Phosphate and Oil coating provides better clamp loads and torque retention.
 - Zinc plating provides better long term corrosion resistance.

High Strength Hex Head Bolts



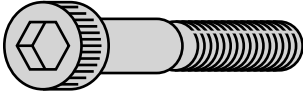
- Thread design and steel — similar to HEX Head Bolts
- Inch Bolts:
 - Have 20% higher head height than SAE specifications for longer wear life, easier gripping and less slippage.
 - Exceed SAE Grade 8 specifications for tensile strength and proof load, minimum tensile strength of 170,000 psi.
 - Marked with seven radial dashes on the bolt head.
- Metric Bolts:
 - Exceed ISO 10.9 specifications for tensile strength of 1170 mPa (170,000 psi).
 - Marked with 11.9 on the bolt head.
- Coatings – similar to HEX Head Bolts.

12 Point Head Bolts



- Designed with smooth rolled threads for better clamp load, shear resistance, and resistance to stripping.
- Made of fine grain steel for a more uniform micro-structure, resulting in improved toughness and fracture resistance.
- Exceeds SAE Grade 8 specifications for tensile strength and proof load, minimum tensile strength of 1170 mPa (170,000 psi).
- For use in restricted clearance applications.

Hex Socket Head Screw Bolts



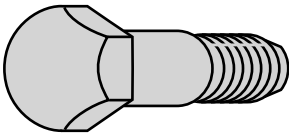
- Designed with smooth rolled threads for better clamp load, shear resistance, and resistance to stripping.
- Made of fine grain steel for a more uniform micro-structure, resulting in improved toughness and fracture resistance.
- Exceeds SAE Grade 8 specifications for tensile strength and proof load, minimum tensile strength of 1170 mPa (170,000 psi).
- For use in restricted clearance applications.

Hex Head Forcing Bolts



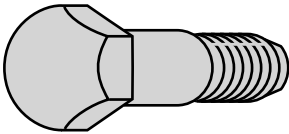
- Designed with smooth rolled threads for better clamp load, shear resistance, and strip resistance.
- Made of fine grain steel for a more uniform micro-structure, resulting in improved toughness and fracture resistance.

Track Bolt and Split Master Link Bolts



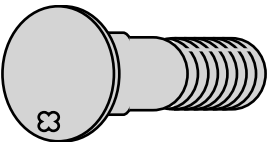
- High dome Hex head for longer wear life and reusability.
- Exceeds SAE Grade 8 specification for tensile strength and proof load, minimum tensile strength 170,000 psi.
- Special induction heat treat process provides Rockwell C37-42 hardness.

High Strength Track Bolts



- Similar high dome Hex head as standard Track Bolts.
- Exceeds SAE Grade 8 specifications for tensile strength and proof load, minimum tensile strength 180,000 psi.
- Special induction heat treat process provides Rockwell C39-43 hardness.

Cutting Edge Bolts



- Dome shaped head for added strength and wear resistance.
- Exceeds SAE Grade 8 specifications for tensile strength and proof load, minimum tensile strength of 150,000 psi.
- Special induction heat treat process provides Rockwell C33-39 minimum.

Bolts

Hex Head Bolts/Inch/Phosphate & Oil

Thread Size	OAL (in)	Grip Length (in)	Part Number
Thread Size (in - TPI) 1/4 - 20			
1/4 - 20	1/2	1/16	0S-1614
1/4 - 20	5/8	1/8	2A-0762
1/4 - 20	3/4	1/8	0S-1615
1/4 - 20	7/8	1/8	4F-7957
1/4 - 20	1	1/8	0S-1616
1/4 - 20	1 1/8	3/8	9F-6580
1/4 - 20	1 1/4	1/8	7B-2742
1/4 - 20	1 3/8	5/8	2A-5546
1/4 - 20	1 1/2	1/4	9F-7022
1/4 - 20	1 5/8	7/8	7B-8167
1/4 - 20	1 3/4	1	1B-2713
1/4 - 20	2	1 1/8	8B-2377
1/4 - 20	2 1/4	1 3/8	1D-4533
1/4 - 20	2 1/2	1 3/4	1B-2714
1/4 - 20	2 3/4	2	2A-4781
1/4 - 20	3	2	4B-9365
1/4 - 20	3 1/4	2 1/2	8F-8178
1/4 - 20	4	3 1/4	8S-4710
1/4 - 20	4 1/2	3 3/4	8S-4711
1/4 - 20	4 3/4	4	4L-3776
1/4 - 20	Nut	-	9S-8750
-	Washer	-	5P-0537
Thread Size (in - TPI) 5/16 - 18			
5/16 - 18	1/2	1/16	1C-0569
5/16 - 18	5/8	1/8	2H-3755
5/16 - 18	3/4	1/8	0S-1617
5/16 - 18	7/8	1/8	2B-2695
5/16 - 18	1	1/8	0S-1618
5/16 - 18	1 1/8	1/4	4B-3388
5/16 - 18	1 1/4	3/8	1B-7182
5/16 - 18	1 3/8	1/2	1B-2790
5/16 - 18	1 1/2	3/32	1A-9579
5/16 - 18	1 5/8	3/4	1H-5514
5/16 - 18	1 3/4	7/8	1B-9575
5/16 - 18	2	1 1/8	2B-2694
5/16 - 18	2 1/4	1 3/8	1D-4538
5/16 - 18	2 1/2	1 5/8	1D-4539
5/16 - 18	2 3/4	1 7/8	1D-4540
5/16 - 18	3	5/36	1D-4541
5/16 - 18	3 1/4	2 1/4	1F-5842
5/16 - 18	3 1/2	2 5/8	1F-4111
5/16 - 18	3 3/4	2 3/4	4B-0831
5/16 - 18	4	3	4B-3903
5/16 - 18	4 1/4	3 3/8	8H-8769

Thread Size	OAL (in)	Grip Length (in)	Part Number
5/16 - 18	4 1/2	3 5/8	3H-5932
5/16 - 18	4 3/4	3 7/8	3H-3243
5/16 - 18	5 1/2	4 5/8	5L-1761
5/16 - 18	5 3/4	4 7/8	8M-1865
5/16 - 18	6 1/2	5 3/8	4F-3508
5/16 - 18	Nut	-	5S-0003
-	Washer	-	9M-1974
Thread Size (in - TPI) 3/8 - 16 and 3/8 - 24			
3/8 - 16	1/2	3/32	4F-4879
3/8 - 16	5/8	3/32	0T-0102
3/8 - 16	3/4	1/8	0S-0509
3/8 - 16	7/8	1/8	0L-1351
3/8 - 16	1	1/8	0S-1594
3/8 - 16	1 1/8	5/16	1A-2029
3/8 - 16	1 1/4	1/4	0S-1588
3/8 - 16	1 1/4	1/4	165-3928 ⁽¹⁾
3/8 - 16	1 3/8	3/8	3B-1915
3/8 - 16	1 1/2	3/8	165-3929 ⁽¹⁾
3/8 - 16	1 5/8	7/8	2A-4639
3/8 - 16	1 3/4	3/4	165-3931 ⁽¹⁾
3/8 - 16	1 7/8	1 1/16	1C-2251
3/8 - 16	2	27/28	0S-1590
3/8 - 16	2 1/4	1 1/4	0L-2070
3/8 - 16	2 1/4	1 1/4	435-3128 ⁽¹⁾
3/8 - 16	2 1/4	1 1/4	165-3933 ⁽¹⁾
3/8 - 16	2 1/4	1/8	1M-0644
3/8 - 16	2 1/2	1 1/2	0L-1143
3/8 - 16	2 1/2	1 1/2	26-15615 ⁽¹⁾
3/8 - 16	2 3/4	1 3/4	0T-0573
3/8 - 16	2 3/4	1 3/4	165-3934 ⁽¹⁾
3/8 - 16	2 7/8	2 3/16	2H-5330
3/8 - 16	3	2	0S-1619
3/8 - 16	3	2	165-3935 ⁽¹⁾
3/8 - 16	3 1/4	2 1/4	0L-1352
3/8 - 16	3 1/2	2 1/2	0T-0065
3/8 - 16	3 1/2	2 1/2	245-3804 ⁽¹⁾
3/8 - 16	3 3/4	2 1/2	0S-1608
3/8 - 16	4	3	8S-9191
3/8 - 16	4 1/4	3 1/4	0T-0055
3/8 - 16	4 1/2	3 1/2	165-3936 ⁽¹⁾
3/8 - 16	4 1/2	3 1/4	1A-5964
3/8 - 16	4 3/4	3 3/4	1A-5183
3/8 - 16	4 3/4	3 3/4	245-3803 ⁽¹⁾
3/8 - 16	5	4	5B-9603
3/8 - 16	5	3 3/4	223-4903 ⁽¹⁾

1 High Strength Bolt

Hex Head Bolts/Inch/Phosphate & Oil (Cont'd.)

Thread Size	OAL (in)	Grip Length (in)	Part Number	Thread Size	OAL (in)	Grip Length (in)	Part Number
3/8 - 16	5 1/4	4 1/4	5B-2638	1/2 - 13	1 1/8	1/8	6H-1717
3/8 - 16	5 1/4	4	165-3937 ⁽²⁾	1/2 - 13	1 1/4	5/16	0S-1595
3/8 - 16	5 1/2	4 1/2	5F-4899	1/2 - 13	1 3/8	7/16	7B-3235
3/8 - 16	5 3/4	4 1/2	165-3925 ⁽²⁾	1/2 - 13	1 1/2	1/4	0S-1585
3/8 - 16	6	4 7/8	1D-4706	1/2 - 13	1 3/4	7/16	0S-1587
3/8 - 16	6 1/4	4 3/4	8F-8544	1/2 - 13	2	3/4	1A-1460
3/8 - 16	6 1/4	4 3/4	231-4470 ⁽²⁾	1/2 - 13	2	3/4	223-4419
3/8 - 16	6 1/2	5 1/4	4F-0411	1/2 - 13	2	3/4	241-1855 ⁽²⁾
3/8 - 16	7	5 3/4	9F-8999	1/2 - 13	2	3/4	305-1401 ⁽²⁾
3/8 - 16	7 1/2	6 1/4	6B-1557	1/2 - 13	2 1/4	1	2B-0947 ⁽²⁾
3/8 - 16	8	6 3/4	8F-6350	1/2 - 13	2 1/4	3/8	5L-4398
3/8 - 16	8 1/2	7 1/4	9F-2773	1/2 - 13	2 3/8	3/4	351-1777 ⁽²⁾
3/8 - 16	9	7 3/4	5F-6044	1/2 - 13	2 1/2	1 1/4	9S-1366
3/8 - 16	10 1/4	9	7L-7524	1/2 - 13	2 3/4	1 1/2	216-7555
3/8 - 16	10 3/4	9 1/2	334-8167	1/2 - 13	2 3/4	1 1/2	1A-5822
3/8 - 16	12 3/8	11 1/8	8J-5985	1/2 - 13	3	1 3/4	0L-1329 ⁽²⁾
3/8 - 16	Nut	-	9S-8752	1/2 - 13	3 1/4	2	0V-0375
-	Washer	-	5M-2894	1/2 - 13	3 1/2	2 1/4	1D-4566 ⁽²⁾
Thread Size (in - TPI) 7/16 - 14				1/2 - 13	3 3/4	2 1/2	1B-2886
7/16 - 14	1	1/8	0T-0318	1/2 - 13	3 3/4	3/16	275-9360
7/16 - 14	1 1/8	1/8	4F-8965	1/2 - 13	4	2 3/4	0S-1573
7/16 - 14	1 1/4	1/8	0T-0320	1/2 - 13	4 1/4	3	1D-4569
7/16 - 14	1 3/8	1/4	3H-5368	1/2 - 13	4 1/4	3	5M-4113
7/16 - 14	1 1/2	3/8	0T-0772	1/2 - 13	4 1/4	3	223-9639
7/16 - 14	1 3/4	5/8	0T-0768	1/2 - 13	4 1/2	3 1/4	8S-9089
7/16 - 14	2	7/8	0T-0319	1/2 - 13	4 1/2	3 1/4	463-6790
7/16 - 14	2 1/4	1 1/8	1D-4707	1/2 - 13	4 3/4	3 1/2	223-9638 ⁽²⁾
7/16 - 14	2 1/2	1 3/8	1D-4703	1/2 - 13	4 3/4	3 1/2	2B-2006 ⁽²⁾
7/16 - 14	2 3/4	1 5/8	1D-4556	1/2 - 13	5	3 3/4	2H-6488 ⁽²⁾
7/16 - 14	3	1 7/8	4F-5192	1/2 - 13	5 1/4	4	6F-5282 ⁽²⁾
7/16 - 14	3 1/4	2 1/8	3B-8428	1/2 - 13	5 1/2	4 1/4	1D-4572 ⁽²⁾
7/16 - 14	3 1/2	2 3/8	7F-8698	1/2 - 13	6	4 3/4	1D-4574
7/16 - 14	3 1/2	2 3/8	223-4421	1/2 - 13	6 1/4	4 3/4	9H-8260
7/16 - 14	3 3/4	2 5/8	9F-2491	1/2 - 13	6 1/2	5	231-4471 ⁽²⁾
7/16 - 14	4	2 7/8	4F-7226	1/2 - 13	6 1/2	5	2A-1531
7/16 - 14	4	2 7/8	223-6475	1/2 - 13	6 3/4	5 1/4	9M-7269
7/16 - 14	4 1/2	3 1/4	4B-7220	1/2 - 13	7	5 1/2	1A-7669
7/16 - 14	5	3 3/4	5B-5059	1/2 - 13	7 1/4	5 3/4	4S-5882
7/16 - 14	5 1/2	4 3/8	8F-4197	1/2 - 13	7 1/2	6	1A-0168
7/16 - 14	6	4 7/8	8F-6419	1/2 - 13	8	6 1/2	9S-1374
7/16 - 14	Nut	-	3S-1546	1/2 - 13	8	4	6V-6633
-	Washer	-	5P-8244	1/2 - 13	8 1/2	7	1B-3573
Thread Size (in - TPI) 1/2 - 13				1/2 - 13	9	7 1/2	6M-9613
1/2 - 13	3/4	1/8	0S-1620	1/2 - 13	9 3/4	8 1/4	6V-1612
1/2 - 13	7/8	9/32	2H-3855	1/2 - 13	11	9 1/2	363-0193 ⁽²⁾
1/2 - 13	1	1/8	0S-1621	1/2 - 13	11	9 1/2	8S-3887 ⁽²⁾

Bolts

Hex Head Bolts/Inch/Phosphate & Oil (Cont'd.)

Thread Size	OAL (in)	Grip Length (in)	Part Number
1/2 - 13	12 8/25	10 41/50	4M-2442 ⁽³⁾
1/2 - 13	14 25/29	13 69/80	6V-7568 ⁽³⁾
1/2 - 13	Nut	-	1F-7958
-	Washer	-	5P-8245
Thread Size (in - TPI) 5/8 - 11 and 5/8 - 18			
5/8 - 11	3/4	1/16	1H-9456
5/8 - 11	1	3/16	0S-1624
5/8 - 11	1 1/4	3/16	0S-1592
5/8 - 11	1 3/8	3/16	4B-4043
5/8 - 11	1 1/2	3/16	9X-6380 ⁽³⁾
5/8 - 11	1 3/4	1/4	0S-1589
5/8 - 11	2	1/2	9X-8880
5/8 - 11	2	1/2	1A-1135 ⁽³⁾
5/8 - 11	2 1/4	3/4	8S-9092 ⁽³⁾
5/8 - 11	2 1/2	5/8	0S-1625 ⁽³⁾
5/8 - 11	2 3/4	1 1/4	1A-8537 ⁽³⁾
5/8 - 11	3	1 1/2	1B-4367
5/8 - 11	3 1/4	1 3/4	1D-4585
5/8 - 11	3 1/2	2	1D-4586
5/8 - 11	3 3/4	2 1/4	9X-6417 ⁽³⁾
5/8 - 11	4	2 1/2	0S-1569
5/8 - 11	4 1/4	2 3/4	1D-4588
5/8 - 11	4 1/4	2 3/4	22-92364
5/8 - 11	4 1/2	3	1A-8651
5/8 - 11	4 3/4	3 1/4	1D-4590
5/8 - 11	5	3 1/2	1A-5405
5/8 - 11	5	3 1/2	22-92365
5/8 - 11	5 1/2	4	1D-4593
5/8 - 11	5 62/63	4 1/2	1D-4595
5/8 - 11	6 1/4	4 1/2	5D-9514
5/8 - 11	6 1/4	4 1/2	231-7068 ⁽³⁾
5/8 - 11	6 1/2	4 3/4	1D-4597
5/8 - 11	7	5 1/4	1D-4599
5/8 - 11	8	6 1/4	1B-7709
5/8 - 11	8 1/2	6 3/4	1D-4601
5/8 - 11	9	7 1/4	2H-3756
5/8 - 11	9 1/2	7 3/4	1D-4602
5/8 - 11	13	11 1/4	461-9980
5/8 - 11	13 1/4	11 1/2	174-1621 ⁽³⁾
5/8 - 18	2 1/2	1	127-1571 ⁽³⁾
5/8 - 18	6 1/4	4 1/2	156-7439
5/8 - 18	7	5 1/4	113-9122 ⁽³⁾
5/8 - 18	7 1/4	5 1/2	349-8521 ⁽³⁾
5/8 - 18	9 3/4	8 1/4	261-9576
5/8 - 18	Nut	-	6B-6683
5/8 - 11	Nut	-	4K-0367

Thread Size	OAL (in)	Grip Length (in)	Part Number
-	Washer	-	5P-8247
Thread Size (in - TPI) 3/4 - 10 and 3/4 - 16			
3/4 - 10	1	5/16	7H-2069
3/4 - 10	1 1/4	5/16	0S-1583
3/4 - 10	1 1/2	5/16	0S-1626
3/4 - 10	1 3/4	5/16	1A-0458
3/4 - 10	2	5/16	0L-1178
3/4 - 10	2 1/4	1/2	2A-1538 ⁽³⁾
3/4 - 10	2 1/2	3/4	1A-8063
3/4 - 10	2 3/4	1	223-9651 ⁽³⁾
3/4 - 10	2 3/4	1	1D-4608 ⁽³⁾
3/4 - 10	3	1 1/4	1D-4609 ⁽³⁾
3/4 - 10	3 1/4	1 1/2	1D-4610 ⁽³⁾
3/4 - 10	3 1/2	1 3/4	3B-2968 ⁽³⁾
3/4 - 10	3 3/4	2	7F-5227
3/4 - 10	4 1/4	2 1/2	0S-1756
3/4 - 10	4 1/2	2 3/4	0S-1627
3/4 - 10	4 3/4	3	3B-6753
3/4 - 10	5	3 1/4	1D-4614
3/4 - 10	5 1/2	3 3/4	1D-4615
3/4 - 10	5 3/4	4	6K-1330
3/4 - 10	6	4 1/4	1D-4616
3/4 - 10	6 1/4	4 1/4	1D-4617
3/4 - 10	6 1/2	4 1/2	2B-1015
3/4 - 10	7	5	1D-4620
3/4 - 10	7 1/2	5 1/2	1D-4621
3/4 - 10	8	6	1D-4622
3/4 - 10	8 1/2	6 1/2	1D-4623
3/4 - 10	9	7	1D-4624
3/4 - 10	15	13	8K-1493
3/4 - 16	12	9 1/2	220-2832
3/4 - 16	Nut	-	6B-6682
3/4 - 10	Nut	-	2J-3506
-	Washer	-	5P-8248
Thread Size (in - TPI) 7/8 - 9 and 7/8 - 14			
7/8 - 9	2	3/8	0S-1973 ⁽³⁾
7/8 - 9	2 1/2	1/2	174-3056 ⁽³⁾
7/8 - 9	2 3/4	3/4	1D-4626 ⁽³⁾
7/8 - 9	3 1/4	1 1/4	1D-4628 ⁽³⁾
7/8 - 9	3 1/2	1 1/2	1D-4629 ⁽³⁾
7/8 - 9	3 3/4	1 3/4	2H-3856 ⁽³⁾
7/8 - 9	4	2	1D-4630 ⁽³⁾
7/8 - 9	5 3/4	3 3/4	188-9435
7/8 - 9	8	5 3/4	1D-6259
7/8 - 9	10	7 3/4	2B-2391
7/8 - 14	3	1	123-4955 ⁽³⁾

Hex Head Bolts/Inch/Phosphate & Oil (Cont'd.)

Thread Size	OAL (in)	Grip Length (in)	Part Number
7/8 - 14	8 1/2	6 1/4	2T-3427
7/8 - 14	11	8 3/4	7X-7925 ⁽⁴⁾
7/8 - 14	12 1/2	10 1/4	2T-3428
7/8 - 14	Nut	-	1A-5666
7/8 - 9	Nut	-	2J-3505
-	Washer	-	5P-8249
Thread Size (in - TPI) 1 - 8 and 1 - 14			
1 - 8	1 1/4	5/16	8S-4767
1 - 8	1 1/2	5/16	0V-0450
1 - 8	1 3/4	3/8	1J-7370
1 - 8	2	5/16	1J-5257
1 - 8	2 1/4	1/4	8S-9093
1 - 8	2 1/2	1/2	1D-4635
1 - 8	2 3/4	3/4	7Y-2146 ⁽⁴⁾
1 - 8	2 3/4	1/2	9S-1363
1 - 8	3	3/4	1D-4709
1 - 8	3	3/4	7Y-1136 ⁽⁴⁾
1 - 8	3 1/4	1	1D-4637
1 - 8	3 1/4	1	6I-8600 ⁽⁴⁾
1 - 8	3 1/2	1 1/4	1D-4638
1 - 8	3 3/4	1 1/2	8H-5772
1 - 8	4	1 3/4	1D-4639 ⁽⁴⁾
1 - 8	4	1 3/4	229-2388 ⁽⁴⁾
1 - 8	4 1/4	2	1D-4640 ⁽⁴⁾
1 - 8	4 1/2	2 1/4	1D-4641
1 - 8	4 3/4	2 1/2	2A-1420
1 - 8	5	2 3/4	1D-4642 ⁽⁴⁾
1 - 8	5 1/2	3 1/4	1D-4643
1 - 8	5 1/2	3/8	9X-2194 ⁽⁴⁾
1 - 8	6	3 3/4	9F-6936
1 - 8	6 1/4	4	227-6181 ⁽⁴⁾
1 - 8	6 1/2	4	5B-5473
1 - 8	7	4 1/2	5F-9338
1 - 8	7 1/2	5	2B-7218
1 - 8	8	5 1/2	1D-4644
1 - 8	8 1/2	6	1D-4645
1 - 8	9	6 1/2	1D-4646
1 - 8	9 1/2	7	1D-4647
1 - 8	10	7 1/2	142-7074 ⁽⁴⁾
1 - 8	14	10 1/2	6M-2001
1 - 8	16	14	6M-1029
1 - 8	21	18	108-5215
1 - 14	2 3/4	1 31/50	3S-7461
1 - 14	3 1/2	1 1/4	9S-1368
1 - 14	8	5 1/2	8S-4757
1 - 14	9	6 1/2	9F-8122

Thread Size	OAL (in)	Grip Length (in)	Part Number
1 - 14	9 1/2	7	5F-7136
1 - 14	12	9 1/2	7X-0825
1 - 14	18 1/4	15 8/31	213-9024
1 - 14	Nut	-	1A-1935
1 - 8	Nut	-	2J-3507
-	Washer	-	5P-8250
Thread Size (in - TPI) 1 1/8 - 7 and 1 1/8 - 12			
1 1/8 - 7	2	1/4	3J-8281
1 1/8 - 7	3	1/2	1J-2814
1 1/8 - 7	3 1/2	3/7	1J-2175
1 1/8 - 7	4 1/2	2	5M-0544
1 1/8 - 7	6	3 1/2	8H-5727
1 1/8 - 7	6 1/2	3 3/4	8F-4486
1 1/8 - 7	7	2 3/4	262-7250 ⁽⁴⁾
1 1/8 - 12	9 1/4	6	2M-3530
1 1/8 - 12	11 1/2	8 3/4	346-0351
1 1/8 - 12	Nut	-	3S-1356
1 1/8 - 7	Nut	-	4J-5977
-	Washer	-	3S-1349
Thread Size (in - TPI) 1 1/4 - 7 and 1 1/4 - 12			
1 1/4 - 7	3 1/2	3/4	2B-1955
1 1/4 - 7	4 1/2	1 3/4	3R-2300
1 1/4 - 7	4 3/4	2	8F-1156
1 1/4 - 7	5	2 1/4	136-4188 ⁽⁴⁾
1 1/4 - 7	5 1/2	2 3/4	1B-2721
1 1/4 - 7	6	3 1/4	2H-1537
1 1/4 - 7	6 1/2	3 1/2	6H-1628
1 1/4 - 7	7	4	6V-2624 ⁽⁴⁾
1 1/4 - 7	8 1/2	5 1/2	1J-6775
1 1/4 - 7	9	6	1K-9418
1 1/4 - 7	9 1/2	6 1/2	1K-9420
1 1/4 - 7	20	17	033-0512
1 1/4 - 12	11	8	142-0142
1 1/4 - 12	Nut	-	3S-1356
1 1/4 - 7	Nut	-	7H-7539
-	Washer	-	4K-0684
Thread Size (in - TPI) 1 1/2 - 6 and 1 1/2 - 12			
1 1/2 - 6	3 1/2	2/5	3J-1805
1 1/2 - 6	5	1 3/4	1K-9414
1 1/2 - 6	6 3/4	3 1/4	192-3694
1 1/2 - 6	8	4 1/2	502-9411
1 1/2 - 6	12 1/2	9	127-4840 ⁽⁴⁾
1 1/2 - 6	16 1/4	10 1/4	478-7546
1 1/2 - 6	18	14 1/2	506-4218
1 1/2 - 12	4	3/4	8F-5535
1 1/2 - 12	4 1/2	1 1/4	1F-6762

Bolts

Hex Head Bolts/Inch/Phosphate & Oil (Cont'd.)

Thread Size	OAL (in)	Grip Length (in)	Part Number
1 1/2 - 12	7	1/4	098-0635
1 1/2 - 12	Nut	-	8H-3390

Thread Size	OAL (in)	Grip Length (in)	Part Number
1 1/2 - 6	Nut	-	7X-0452
-	Washer	-	3S-6162

Hex Head Bolts/Inch/Zinc Plated

Thread Size	OAL (in)	Grip Length (in)	Part Number
Thread Size (in - TPI) 1/4 - 20 and 1/4 - 28			
1/4 - 20	3/8	1/16	6V-1322
1/4 - 20	1/2	1/16	5S-7349
1/4 - 20	5/8	1/8	8T-9364
1/4 - 20	3/4	1/8	4M-5281
1/4 - 20	7/8	1/8	1H-3337
1/4 - 20	1	1/8	8T-8908
1/4 - 20	1 1/8	3/8	6D-2928
1/4 - 20	1 1/4	1/8	7X-2501
1/4 - 20	1 3/8	5/8	8C-0617
1/4 - 20	1 1/2	1/4	4M-5282
1/4 - 20	1 5/8	7/8	7X-3178
1/4 - 20	1 3/4	1	5P-2675
1/4 - 20	2	1 1/8	8T-9367
1/4 - 20	2 1/4	1 3/8	8T-9368
1/4 - 20	2 1/2	1 3/4	7X-0264
1/4 - 20	2 3/4	2	7X-0265
1/4 - 20	3	2	7X-0266
1/4 - 20	3 1/4	2 1/2	7X-0267
1/4 - 20	3 1/2	2 3/4	7X-0268
1/4 - 20	3 3/4	3	8C-3793
1/4 - 20	4	3 1/4	7X-0269
1/4 - 20	5 1/2	4 1/2	7X-0271
1/4 - 20	7	5 62/63	113-4201
1/4 - 28	1/2	3/32	7X-3182
1/4 - 28	5/8	5/64	0S-1570
1/4 - 28	7/8	5/64	6V-3960
1/4 - 28	1	1/4	0S-1597
1/4 - 20	Nut	-	6V-8185
-	Washer	-	8T-4205
Thread Size (in - TPI) 5/16 - 18 and 5/16 - 24			
5/16 - 18	1/2	1/16	8T-5391
5/16 - 18	5/8	1/8	5K-0906
5/16 - 18	3/4	1/8	4M-0061
5/16 - 18	7/8	1/8	8T-9043
5/16 - 18	1	1/8	4M-6425
5/16 - 18	1 1/8	1/4	6V-5782
5/16 - 18	1 1/4	3/8	6V-8918
5/16 - 18	1 3/8	1/2	8C-6561
5/16 - 18	1 1/2	3/32	8C-3121
5/16 - 18	1 5/8	3/4	8C-6876

Thread Size	OAL (in)	Grip Length (in)	Part Number
5/16 - 18	1 3/4	7/8	7X-0440
5/16 - 18	1 3/4	1/8	9L-2796
5/16 - 18	2 1/4	1 3/8	8T-8912
5/16 - 18	2 1/2	1 5/8	5P-2955
5/16 - 18	2 3/4	1 7/8	7X-0274
5/16 - 18	3	2 1/8	4M-6424
5/16 - 18	3 1/4	2 1/4	7X-0275
5/16 - 18	3 1/2	2 5/8	7X-0276
5/16 - 18	3 3/4	2 3/4	7X-0277
5/16 - 18	4	3	7X-0278
5/16 - 18	4 1/4	3 3/8	7X-3351
5/16 - 18	4 1/2	3 5/8	7X-0473
5/16 - 18	4 3/4	3 7/8	7X-0279
5/16 - 18	5	4 1/8	7X-0280
5/16 - 18	5 1/2	4 5/8	7X-0281
5/16 - 18	6	5 1/8	5P-0059
5/16 - 18	6 1/2	5 3/8	7X-0282
5/16 - 18	7	5 7/8	136-4181
5/16 - 18	Nut	-	6V-8189
-	Washer	-	9M-1974
Thread Size (in - TPI) 3/8 - 16 and 3/8 - 24			
3/8 - 16	7/16	1/8	203-7700
3/8 - 16	1/2	3/32	8T-9371
3/8 - 16	5/8	3/32	5P-8167
3/8 - 16	1 1/8	5/16	8T-2502
3/8 - 16	1 1/2	10/11	351-2247
3/8 - 16	1 1/2	3/32	7X-0860
3/8 - 16	1 5/8	7/8	7X-0288
3/8 - 16	1 3/4	3/4	5S-7383
3/8 - 16	1 3/4	1 5/24	354-5701
3/8 - 16	1 7/8	1 1/16	7X-0289
3/8 - 16	2	1 3/19	353-3914
3/8 - 16	2	27/28	8T-2501
3/8 - 16	2	3/8	7F-0192
3/8 - 16	2 1/8	1 1/8	7X-3186
3/8 - 16	2 1/4	1/8	8T-0192
3/8 - 16	2 1/2	1 1/2	4L-6459
3/8 - 16	2 1/2	1	8F-6974
3/8 - 16	2 52/93	1 62/87	354-5653
3/8 - 16	2 3/4	1 3/4	8T-9101
3/8 - 16	2 7/8	2 3/16	7X-3185

Hex Head Bolts/Inch/Zinc Plated (Cont'd.)

Thread Size	OAL (in)	Grip Length (in)	Part Number	Thread Size	OAL (in)	Grip Length (in)	Part Number
3/8 - 16	3	2	8T-7008	7/16 - 14	3 3/4	2 5/8	7X-0317
3/8 - 16	3	1 3/8	7F-1866	7/16 - 14	4	2 7/8	7X-0318
3/8 - 16	3 1/4	2 1/4	8T-8915	7/16 - 14	4 1/4	3 1/8	7X-0319
3/8 - 16	3 1/2	2 1/2	7X-0290	7/16 - 14	4 1/2	3 1/4	7X-0456
3/8 - 16	3 3/4	2 1/2	7X-0291	7/16 - 14	4 3/4	3 5/8	7H-3472
3/8 - 16	4	3	8T-9378	7/16 - 14	5	3 3/4	7X-0320
3/8 - 16	4 1/4	3 1/4	8T-9379	7/16 - 14	5 1/2	4 3/8	7X-0321
3/8 - 16	4 1/2	3 1/4	7X-0292	7/16 - 14	6	4 7/8	7X-0322
3/8 - 16	4 3/4	3 3/4	7X-0293	7/16 - 14	6 1/2	5 1/8	3L-0742
3/8 - 16	5	4	7X-0294	7/16 - 14	7	5 5/8	7H-7209
3/8 - 16	5 1/4	4 1/4	7X-0295	7/16 - 14	8	6 5/8	20-91253
3/8 - 16	5 1/2	4 1/2	7X-0296	7/16 - 20	1 1/2	3/8	8S-4723
3/8 - 16	5 3/4	4 3/4	7X-0297	7/16 - 20	1 3/4	3/20	205-6388
3/8 - 16	6	4 7/8	8C-7323	7/16 - 20	2 1/4	1 1/8	8S-4724
3/8 - 16	6 1/4	4 3/4	7X-0299	7/16 - 20	2 3/4	1 5/8	8S-4725
3/8 - 16	6 1/2	5 1/4	7X-0300	7/16 - 20	3	1 7/8	8S-4726
3/8 - 16	7	5 3/4	7X-0301	7/16 - 14	Nut	-	7X-0447
3/8 - 16	7 1/2	6 1/4	7X-0302	-	Washer	-	5P-8244
3/8 - 16	8	6 3/4	7X-0303	Thread Size (in - TPI) 1/2 - 13 and 1/2 - 20			
3/8 - 16	8 1/2	7 1/4	7X-0304	1/2 - 13	1/2	1/16	7X-0323
3/8 - 16	9	7 3/4	7X-0305	1/2 - 13	3/4	1/8	8T-9383
3/8 - 16	10	8 1/4	6V-7191	1/2 - 13	7/8	9/32	8T-9384
3/8 - 16	10 3/4	9 1/2	9X-2648	1/2 - 13	1 3/8	7/16	341-0742
3/8 - 16	12	11	7M-1202	1/2 - 13	1 3/8	7/16	8C-4436
3/8 - 24	5/8	3/32	0T-0642	1/2 - 13	1 3/4	7/16	8T-8919
3/8 - 24	7/8	3/32	7X-0469	1/2 - 13	2	1 13/55	351-2245
3/8 - 24	1	3/16	7X-3183	1/2 - 13	2	3/4	8T-4835
3/8 - 24	1 3/8	3/8	7X-3174	1/2 - 13	2 1/4	1	5P-2424
3/8 - 24	1 3/4	3/4	7X-7477	1/2 - 13	2 1/4	5/26	9X-8278
3/8 - 24	2 1/4	1 1/4	7X-3187	1/2 - 13	2 3/8	3/4	068-2121
3/8 - 16	Nut	-	6V-8801	1/2 - 13	2 1/2	1 1/4	7X-0325
-	Washer	-	5M-2894	1/2 - 13	2 1/2	1/4	1H-2415
Thread Size (in - TPI) 7/16 - 14 and 7/16 - 20				1/2 - 13	2 3/4	1 1/2	8T-9389
7/16 - 14	3/4	3/16	7X-0307	1/2 - 13	2 3/4	2/13	175-4149
7/16 - 14	7/8	1/8	7X-0272	1/2 - 13	3	1 3/4	7X-0326
7/16 - 14	1	1/8	8T-9380	1/2 - 13	3	3/4	0S-1623
7/16 - 14	1 1/8	1/8	8T-6973	1/2 - 13	3 1/4	2	8T-8920
7/16 - 14	1 1/4	1/8	8T-9382	1/2 - 13	3 1/2	3/8	7D-5962
7/16 - 14	1 3/8	1/4	7X-0308	1/2 - 13	3 3/4	2 1/2	8T-9391
7/16 - 14	1 1/2	3/8	8T-8916	1/2 - 13	4	2 3/4	6V-4432
7/16 - 14	1 3/4	5/8	8C-6877	1/2 - 13	4 1/4	3	7X-0331
7/16 - 14	2	7/8	7X-0310	1/2 - 13	4 1/4	3/16	7D-9766
7/16 - 14	2 1/4	1 1/8	7X-0311	1/2 - 13	4 1/2	3 1/4	7X-0332
7/16 - 14	2 1/2	1 3/8	7X-0312	1/2 - 13	4 3/4	3 1/2	7X-0333
7/16 - 14	2 3/4	1 5/8	7X-0313	1/2 - 13	5	3 3/4	7X-0334
7/16 - 14	3	1 7/8	7X-0314	1/2 - 13	5	5/26	483-2712
7/16 - 14	3 1/4	2 1/8	7X-0315	1/2 - 13	5 1/4	4	7X-0335
7/16 - 14	3 1/2	2 3/8	7X-0316	1/2 - 13	5 1/2	4 1/4	7X-0336

Bolts

Hex Head Bolts/Inch/Zinc Plated (Cont'd.)

Thread Size	OAL (in)	Grip Length (in)	Part Number
1/2 - 13	5 3/4	4 1/2	7X-0337
1/2 - 13	6	4 3/4	7X-0338
1/2 - 13	6 1/4	4 3/4	7X-0339
1/2 - 13	6 1/2	5	7X-0340
1/2 - 13	7	5 1/2	7X-0341
1/2 - 13	7 1/2	6	8T-9392
1/2 - 13	7 1/2	3/4	8T-7834
1/2 - 13	8	6 1/2	7X-0481
1/2 - 13	8 1/2	7	7X-0471
1/2 - 13	8 3/4	7 1/4	2D-0516
1/2 - 13	11	9 1/2	293-9002
1/2 - 20	3/4	1/8	6F-7032
1/2 - 20	1	1/8	0S-1629
1/2 - 20	1 1/4	1/8	7X-3195
1/2 - 20	1 3/4	1/2	7X-3194
1/2 - 20	2	3/4	286-2493
1/2 - 13	Nut	-	6V-8188
-	Washer	-	5P-8245
Thread Size (in - TPI) 5/8 - 11 and 5/8 - 18			
5/8 - 11	3/4	1/16	7X-0342
5/8 - 11	1	3/16	5C-6266
5/8 - 11	1 1/8	9/32	7S-9372
5/8 - 11	1 1/4	3/16	7X-0343
5/8 - 11	1 3/8	3/16	7X-0344
5/8 - 11	1 1/2	3/16	8I-1391
5/8 - 11	1 3/4	1/4	7X-0345
5/8 - 11	2	1/2	7X-0346
5/8 - 11	2 1/4	3/4	7X-0347
5/8 - 11	2 1/2	5/8	8T-6871
5/8 - 11	2 3/4	1 1/4	8C-6362
5/8 - 11	2 3/4	1/2	7B-2725
5/8 - 11	3	1 1/2	7X-0349
5/8 - 11	3 5/32	3/16	105-6491
5/8 - 11	3 1/4	1 3/4	8T-9396
5/8 - 11	3 1/2	2	7X-0350
5/8 - 11	3 3/4	2 1/4	7X-0351
5/8 - 11	4	2 1/2	7X-0352
5/8 - 11	4	1 3/8	136-9774
5/8 - 11	4 1/4	2 3/4	7X-0353
5/8 - 11	4 1/2	3	7X-0354
5/8 - 11	4 3/4	3 1/4	7X-0355
5/8 - 11	5	3 1/2	7X-0356
5/8 - 11	5	3/11	370-2185
5/8 - 11	5 1/2	4	7X-0358
5/8 - 11	5 3/4	2 1/4	8D-4348
5/8 - 11	5 62/63	4 1/2	7X-0359
5/8 - 11	6 1/4	4 1/2	7X-0360
5/8 - 11	6 1/2	4 3/4	7X-0361

Thread Size	OAL (in)	Grip Length (in)	Part Number
5/8 - 11	7	5 1/4	7X-0362
5/8 - 11	7	2	9K-9679
5/8 - 11	7 1/4	5 1/2	9F-8689
5/8 - 11	7 1/2	5 3/4	1D-4600
5/8 - 11	8	6 1/4	7X-0363
5/8 - 11	8 1/2	6 3/4	7X-0364
5/8 - 11	9	7 1/4	7X-3184
5/8 - 11	9 1/2	7 3/4	7X-7890
5/8 - 11	10 1/4	8 1/2	1D-4603
5/8 - 11	10 1/2	8 3/4	5P-4626
5/8 - 11	11	9 1/4	5P-4625
5/8 - 11	11 1/2	9 3/4	5P-4624
5/8 - 11	12	10 1/4	5P-7971
5/8 - 18	1	5/36	170-4870
5/8 - 18	1 1/2	3/16	7X-3352
5/8 - 18	1 3/4	1/4	7X-3177
5/8 - 18	2	1/2	7X-3192
5/8 - 18	2 1/4	3/4	7X-3193
5/8 - 18	7	5 1/4	503-0790
5/8 - 18	9	6 3/4	148-2871
5/8 - 11	Nut	-	7X-0448
-	Washer	-	5P-8247
Thread Size (in - TPI) 7/16 - 10 and 7/16 - 16			
3/4 - 10	1	5/16	5C-7886
3/4 - 10	1 1/2	5/16	7X-0365
3/4 - 10	1 3/4	5/16	8T-9398
3/4 - 10	2	5/16	7X-0366
3/4 - 10	2 1/4	1/2	8T-9399
3/4 - 10	2 1/2	3/4	8T-8924
3/4 - 10	2 3/4	1	8C-6857
3/4 - 10	3 1/4	1 1/2	7X-0369
3/4 - 10	3 1/2	1 3/4	7X-0370
3/4 - 10	3 1/2	1/4	459-9006
3/4 - 10	3 3/4	2	7X-0371
3/4 - 10	4	2 1/4	8C-8842
3/4 - 10	4 1/4	2 1/2	7X-0372
3/4 - 10	4 1/4	17/32	3K-3318
3/4 - 10	4 1/2	1 1/4	8J-1148
3/4 - 10	4 3/4	3	8T-8925
3/4 - 10	5	3 1/4	7X-0375
3/4 - 10	5 1/2	3 3/4	7X-0373
3/4 - 10	5 3/4	4	7X-0374
3/4 - 10	6	4 1/4	8T-9312
3/4 - 10	6 1/2	4 1/2	7X-0377
3/4 - 10	7	5	8T-9313
3/4 - 10	7 1/2	5 1/2	1J-8930
3/4 - 10	8	6	5P-4135
3/4 - 10	9	7	7X-3179

Hex Head Bolts/Inch/Zinc Plated (Cont'd.)

Thread Size	OAL (in)	Grip Length (in)	Part Number
3/4 - 10	10	8	8F-4225
3/4 - 16	1 1/4	3/16	237-7252
3/4 - 16	2 3/4	1	8F-3152
3/4 - 16	3 1/4	1 1/2	473-2151
3/4 - 16	8	6	473-2149
3/4 - 10	Nut	-	6V-8182
-	Washer	-	5P-8248
Thread Size (in - TPI) 7/8 - 9 and 7/8 - 14			
7/8 - 9	6 1/2	4 1/4	7X-0393
7/8 - 9	4 1/4	2 1/4	7X-0455
7/8 - 9	4 1/2	2 1/2	7X-0388
7/8 - 9	6	3 3/4	7X-0392
7/8 - 9	9	6 3/4	7X-0397
7/8 - 9	4 3/4	2 3/4	7X-0389
7/8 - 9	2	3/8	7X-0381
7/8 - 9	8	5 3/4	7X-0395
7/8 - 9	3 3/4	1 3/4	7X-0453
7/8 - 9	2 3/4	3/4	7X-0383
7/8 - 9	2 1/4	3/8	7X-0382
7/8 - 9	3 1/4	1 1/4	7X-0385
7/8 - 9	1 1/2	1/4	7X-0379
7/8 - 9	8 1/2	6 1/4	7X-0396
7/8 - 9	1 3/4	3/8	7X-0380
7/8 - 9	7	4 3/4	7X-0394
7/8 - 9	5 1/2	3 1/2	7X-0391
7/8 - 9	4	2	7X-0387
7/8 - 14	2 1/2	1/2	7X-3180
7/8 - 14	1 5/8	3/14	9R-2466
7/8 - 9	5 1/2	4 1/4	197-4619
7/8 - 9	Nut	-	7X-0449
-	Washer	-	5P-8249
Thread Size (in - TPI) 1 - 8 and 1 - 14			
1 - 8	1 1/4	5/16	7X-0399
1 - 8	1 1/2	5/16	7X-0400
1 - 8	1 3/4	3/8	7X-0401
1 - 8	2 1/4	1/4	7X-0403
1 - 8	2 3/8	1	6J-4302
1 - 8	2 1/2	1/2	7X-0404
1 - 8	2 3/4	1/2	7X-0405
1 - 8	3	3/4	7X-0406
1 - 8	3 1/4	1	7X-0407
1 - 8	3 1/2	1 1/4	7X-0408
1 - 8	3 57/77	3/8	215-6297
1 - 8	3 3/4	1 1/2	8T-8927
1 - 8	4 1/4	2	7X-0411
1 - 8	4 1/2	2 1/4	8C-8843
1 - 8	4 3/4	2 1/2	7X-0412
1 - 8	5	2 3/4	8C-8844

Thread Size	OAL (in)	Grip Length (in)	Part Number
1 - 8	5 1/4	3 1/4	443-2430
1 - 8	5 1/2	3 1/4	7X-0443
1 - 8	6	3 3/4	1J-5929
1 - 8	6	1/2	3E-8047
1 - 8	6 1/2	4	7X-0444
1 - 8	7	4 1/2	7X-0413
1 - 8	7 1/2	5	7X-0414
1 - 8	8	5 1/2	7X-0415
1 - 8	8 1/2	6	7X-0416
1 - 8	9	6 1/2	7X-0417
1 - 8	9 1/2	7	7X-0418
1 - 8	10 1/2	8	8F-6453
1 - 8	11	8 1/2	183-7218
1 - 8	11 1/2	9	7X-0855
1 - 8	12	5/16	477-6583
1 - 8	14 1/2	12	466-8153
1 - 8	16	13 1/2	467-0905
1 - 8	17	14 1/2	467-0904
1 - 14	2	1/4	2H-3743
1 - 14	2 1/4	1/4	7X-0466
1 - 14	3	3/4	7X-0463
1 - 14	3 1/2	1 1/4	208-0956
1 - 14	4 22/25	3 1/4	077-5307
1 - 14	14	11 1/2	469-6696
1 - 8	Nut	-	6V-8190
-	Washer	-	5P-8250
Thread Size (in - TPI) 1 1/8 - 7			
1 1/8 - 7	4 1/2	2	7X-0423
1 1/8 - 7	6	3 1/2	7X-0425
1 1/8 - 7	2	1/4	7X-0420
1 1/8 - 7	3	1/2	7X-0421
1 1/8 - 7	7 1/2	4 3/4	127-4835
1 1/8 - 7	3 1/2	1	7X-0422
1 1/8 - 7	6 1/2	3 3/4	7X-0426
1 1/8 - 7	Nut	-	7X-0450
-	Washer	-	3S-1349
Thread Size (in - TPI) 1 1/4 - 7 and 1 1/4 - 12			
1 1/4 - 7	4 1/4	1 1/2	1S-6560
1 1/4 - 7	4 1/2	1 3/4	7X-0429
1 1/4 - 7	5	2 1/4	7X-0445
1 1/4 - 7	5 1/2	2 3/4	7X-0430
1 1/4 - 7	6	3 1/4	7X-0431
1 1/4 - 7	6 1/2	3 1/2	7X-0432
1 1/4 - 7	7	4	7X-0433
1 1/4 - 7	7 1/2	4 1/2	462-9834
1 1/4 - 7	8	5	7X-0434
1 1/4 - 7	8 1/2	5 1/2	7X-0435
1 1/4 - 7	9	6	7X-0436

Bolts

Hex Head Bolts/Inch/Zinc Plated (Cont'd.)

Thread Size	OAL (in)	Grip Length (in)	Part Number
1 1/4 - 7	9 1/2	6 1/2	7X-0437
1 1/4 - 7	11	8	1K-9415
1 1/4 - 7	12 1/2	9 1/2	153-0142
1 1/4 - 7	13	10	153-1857
1 1/4 - 7	15	12	031-0213
1 1/4 - 12	2 1/4	1/4	7B-2289
1 1/4 - 12	3 1/2	3/4	2K-0439
1 1/4 - 12	11 1/2	8 3/8	6F-4438
1 1/4 - 7	Nut	-	7X-0451
-	Washer	-	4K-0684

Thread Size	OAL (in)	Grip Length (in)	Part Number
Thread Size (in - TPI) 1 1/2 - 6 and 1 1/2 - 12			
1 1/2 - 12	3	1/4	7X-3305
1 1/2 - 6	2 3/4	0	443-2453
1 1/2 - 6	4	1/2	7X-0857
1 1/2 - 6	7	3 1/2	465-5149
1 1/2 - 6	7 1/2	4	469-6703
1 1/2 - 6	8 1/2	5	506-4227
1 1/2 - 6	10	6 1/2	462-9895
1 1/2 - 6	16 1/2	13	462-9867
-	Nut	-	7X-0452
-	Washer	-	3S-6162

Hex Head Bolts/Inch/Zinc Flake

Thread Size	OAL (in)	Grip Length (in)	Part Number
Thread Size (in - TPI) 5/16 - 18			
5/16 - 18	3/4	1/8	313-5637
5/16 - 18	2	1 1/8	8T-8911
Thread Size (in - TPI) 3/8 - 16			
3/8 - 16	3/4	1/8	5M-3062
3/8 - 16	7/8	1/8	5S-7379
3/8 - 16	1	1/8	4L-6454
3/8 - 16	1 1/4	1/4	9B-7237
3/8 - 16	1 3/8	3/8	5S-7382
3/8 - 16	1 1/2	3/8	4L-9337
3/8 - 16	2 1/4	1 1/4	8T-9377
3/8 - 18	1	1/8	313-5638
Thread Size (in - TPI) 7/16 - 20			
7/16 - 20	1 1/4	1/8	0T-0244
7/16 - 20	2	7/8	0T-0489
Thread Size (in - TPI) 1/2 - 13 and 1/2 - 20			
1/2 - 13	1	1/8	5P-2228
1/2 - 13	1 1/8	1/8	5C-6565
1/2 - 13	1 1/4	5/16	8T-8917
1/2 - 13	1 3/8	7/16	6C-3242 ⁽⁵⁾
1/2 - 13	1 1/2	1/4	6C-3241 ⁽⁵⁾
1/2 - 13	1 3/4	7/16	6C-3285 ⁽⁵⁾
1/2 - 13	2 1/4	1	202-9769 ⁽⁵⁾
1/2 - 13	3 1/2	2 1/4	7X-0328
1/2 - 13	6 1/2	5	329-7057 ⁽⁵⁾
1/2 - 20	2 1/4	1	299-3398
1/2 - 20	3	1 3/4	421-3183
Thread Size (in - TPI) 5/8 - 11			
5/8 - 11	1 1/2	3/16	8T-9393

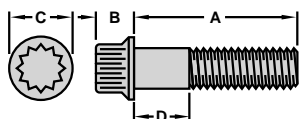
Thread Size	OAL (in)	Grip Length (in)	Part Number
5/8 - 11	1 3/4	1/4	6C-3240 ⁽⁵⁾
5/8 - 11	2	1/2	202-9008 ⁽⁵⁾
5/8 - 11	2 1/4	1/2	202-9770 ⁽⁵⁾
5/8 - 11	2 1/2	5/8	201-7354 ⁽⁵⁾
5/8 - 11	2 3/4	1 1/4	201-7355 ⁽⁵⁾
5/8 - 11	3	1 1/2	6C-3281 ⁽⁵⁾
5/8 - 11	3 1/4	1 3/4	6C-3244 ⁽⁵⁾
5/8 - 11	4 1/4	2 3/4	6C-3209 ⁽⁵⁾
5/8 - 11	5 1/4	3 3/4	201-8898 ⁽⁵⁾
5/8 - 18	2 1/4	3/4	6C-3233 ⁽⁵⁾
5/8 - 18	3	1 1/2	299-3434
Thread Size (in - TPI) 3/4 - 10			
3/4 - 10	1 1/4	5/16	8T-9397
3/4 - 10	1 3/4	5/16	6C-3284 ⁽⁵⁾
3/4 - 10	2 1/4	1/2	201-2184 ⁽⁵⁾
3/4 - 10	3	1 1/4	336-8237 ⁽⁵⁾
3/4 - 10	3 1/4	1 1/2	299-5419 ⁽⁵⁾
3/4 - 10	3 1/2	1 3/4	201-2185 ⁽⁵⁾
3/4 - 10	3 3/4	2	6C-3234 ⁽⁵⁾
3/4 - 10	4 1/4	1 3/4	251-5715 ⁽⁵⁾
3/4 - 10	4 1/2	2 3/4	8T-9311
3/4 - 10	5	3 1/4	289-0272 ⁽⁵⁾
3/4 - 10	6 1/4	4 1/4	6C-3222 ⁽⁵⁾
3/4 - 10	6 1/2	4 1/2	6C-3224 ⁽⁵⁾
3/4 - 10	8 1/2	6 1/2	299-3399
3/4 - 16	1 3/4	3/16	253-9037
3/4 - 16	10	8	311-1538
Thread Size (in - TPI) 7/8 - 9 and 7/8 - 14			
7/8 - 9	2 1/2	1/2	338-8484

Hex Head Bolts/Inch/Zinc Flake (Cont'd.)

Thread Size	OAL (in)	Grip Length (in)	Part Number
7/8 - 9	3	1	6C-3210 ⁽⁶⁾
7/8 - 9	3 1/2	1 1/2	299-3436 ⁽⁶⁾
7/8 - 9	5	3	6C-3220 ⁽⁶⁾
7/8 - 9	10	7 3/4	304-5286
7/8 - 14	11 1/2	9 1/4	329-3702
Thread Size (in - TPI) 1 - 8			
1 - 8	2	1/3	7X-0402
1 - 8	2 1/2	1/2	6I-6371 ⁽⁶⁾
1 - 8	3	3/4	6C-3245 ⁽⁶⁾
1 - 8	4	1 3/4	6C-3212 ⁽⁶⁾
1 - 8	4 1/4	2	6C-3213 ⁽⁶⁾
1 - 8	4 1/2	2 1/4	6C-3214 ⁽⁶⁾
1 - 8	4 3/4	2 1/2	299-7350
1 - 8	6	3 3/4	6C-3216 ⁽⁶⁾

Thread Size	OAL (in)	Grip Length (in)	Part Number
1 - 8	6 1/2	4	6C-3208 ⁽⁶⁾
1 - 8	7	4 1/2	6C-3215 ⁽⁶⁾
1 - 8	7 1/2	5	6J-7107 ⁽⁶⁾
1 - 8	8 1/2	6	3E-8030 ⁽⁶⁾
Thread Size (in - TPI) 1 1/4 - 7 and 1 1/4 - 12			
1 1/4 - 7	3 1/2	3/4	7X-0427
1 1/4 - 7	4	1 1/4	7X-0428
1 1/4 - 7	10	7	1D-4649
1 1/4 - 12	3	1/4	491-5688
Thread Size (in - TPI) 1 1/2 - 6 and 1 1/2 - 12			
1 1/2 - 6	4 1/2	1 1/4	138-8455
1 1/2 - 6	5	1 3/4	7X-0439
1 1/2 - 6	6	2 1/2	288-8101 ⁽⁶⁾
1 1/2 - 12	3 3/4	1/2	6C-3243 ⁽⁶⁾

12 Point Head Bolt/Inch/Coarse & Fine Thread



Thread Size (in - TPI)	A	B	C	D	Part Number
	Bolt Length	Head Height	Head Width	Grip Length	
Coarse Thread					
1/4 - 20	1/16 in	0.27 in	0.38 in	0.11 in	9S-5033
5/16 - 18	3/4 in	0.31 in	0.47 in	0.11 in	1T-0416
5/16 - 18	1 in	0.31 in	0.47 in	0.11 in	1T-0414
5/16 - 18	1 1/4 in	0.31 in	0.47 in	0.11 in	6L-4783
5/16 - 18	1 1/2 in	0.31 in	0.47 in	0.11 in	8M-8162
5/16 - 18	1 1/2 in	0.31 in	0.47 in	0.63 in	2N-7517
5/16 - 18	1 3/4 in	0.31 in	0.47 in	0.63 in	6L-4784
5/16 - 18	2 1/2 in	0.31 in	0.47 in	1.13 in	3S-4346
5/16 - 18	3 in	0.31 in	0.47 in	1.63 in	2S-5818
5/16 - 18	3 1/2 in	0.31 in	0.47 in	2.25 in	2S-0629
5/16 - 18	4 1/2 in	0.31 in	0.47 in	3.25 in	9M-4288
5/16 - 18	5 in	0.31 in	0.47 in	3.63 in	9M-4289
5/16 - 18	5 1/2 in	0.31 in	0.47 in	4.25 in	1S-9810
5/16 - 18	6 in	0.31 in	0.47 in	4.63 in	1S-9811
5/16 - 18	6 1/2 in	0.31 in	0.47 in	5.25 in	4S-5845
3/8 - 16	3/4 in	0.38 in	0.56 in	0.25 in	1T-0822
3/8 - 16	1 in	0.38 in	0.56 in	0.25 in	1T-0765
3/8 - 16	1 1/16 in	0.38 in	0.56 in	0.50 in	4D-5239
3/8 - 16	1 1/4 in	0.38 in	0.56 in	0.25 in	1T-0720
3/8 - 16	2 in	0.38 in	0.56 in	0.50 in	3S-1307

Thread Size (in - TPI)	A	B	C	D	Part Number
	Bolt Length	Head Height	Head Width	Grip Length	
3/8 - 16	2 1/4 in	0.38 in	0.56 in	1.00 in	3S-0127
3/8 - 16	2 3/4 in	0.38 in	0.56 in	1.50 in	2S-3567
3/8 - 16	3 in	0.38 in	0.56 in	1.50 in	4S-9002
3/8 - 16	3 3/4 in	0.38 in	0.56 in	2.50 in	8M-2518
7/16 - 14	1 1/2 in	0.44 in	0.66 in	0.14 in	6K-3771
7/16 - 14	2 1/4 in	0.44 in	0.66 in	0.63 in	6K-3772
1/2 - 13	1 in	0.50 in	0.75 in	0.16 in	9M-6590
1/2 - 13	1 1/4 in	0.50 in	0.75 in	0.16 in	8M-2530
1/2 - 13	1 1/2 in	0.50 in	0.75 in	0.16 in	4K-5175
1/2 - 13	2 in	0.50 in	0.75 in	0.16 in	5J-5793
1/2 - 13	2 1/4 in	0.50 in	0.75 in	0.75 in	6J-2515
1/2 - 13	2 1/2 in	0.50 in	0.75 in	1.00 in	7K-6058
1/2 - 13	2 3/4 in	0.50 in	0.75 in	0.75 in	9S-9739
1/2 - 13	3 1/2 in	0.50 in	0.75 in	1.50 in	5J-5794
1/2 - 13	4 1/2 in	0.50 in	0.75 in	3.00 in	8D-0648
5/8 - 11	7/8 in	0.62 in	0.94 in	0.19 in	1S-9808
5/8 - 11	1 in	0.62 in	0.94 in	0.19 in	9S-8889
5/8 - 11	1 3/4 in	0.62 in	0.94 in	0.19 in	8S-2332
5/8 - 11	2 in	0.62 in	0.94 in	0.19 in	8S-2331
5/8 - 11	2 1/4 in	0.62 in	0.94 in	0.50 in	6M-9149
5/8 - 11	2 1/2 in	0.62 in	0.94 in	0.75 in	031-1382

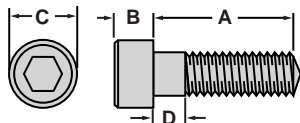
Bolts

12 Point Head Bolt/Inch/Coarse & Fine Thread (Cont'd.)

Thread Size (in - TPI)	A	B	C	D	Part Number
	Bolt Length	Head Height	Head Width	Grip Length	
5/8 - 11	3 in	0.62 in	0.94 in	1.25 in	031-3185
5/8 - 11	3 1/4 in	0.62 in	0.94 in	1.50 in	6J-3913
5/8 - 11	3 1/2 in	0.62 in	0.94 in	1.50 in	7K-3116
3/4 - 10	1 1/2 in	0.75 in	1.13 in	0.25 in	6J-3991
3/4 - 10	1 3/4 in	0.75 in	1.13 in	0.19 in	6M-8796
Fine Thread					
5/16 - 24	3/4 in	0.31 in	0.47 in	0.08 in	5D-8269
3/8 - 24	5/8 in	0.38 in	0.56 in	0.08 in	1T-0510
3/8 - 24	1 in	0.38 in	0.56 in	0.08 in	1T-0417
3/8 - 24	1 1/4 in	0.38 in	0.56 in	0.50 in	1T-0448
3/8 - 24	1 3/4 in	0.38 in	0.56 in	0.50 in	1T-0954

Thread Size (in - TPI)	A	B	C	D	Part Number
	Bolt Length	Head Height	Head Width	Grip Length	
3/8 - 24	2 1/2 in	0.38 in	0.56 in	1.00 in	5K-4451
7/16 - 20	2 3/4 in	0.44 in	0.66 in	1.25 in	5J-7820
1/2 - 20	3 in	0.50 in	0.75 in	1.50 in	8S-0509
5/8 - 18	1 in	0.62 in	0.94 in	0.19 in	9S-8890
5/8 - 18	3 in	0.62 in	0.94 in	0.75 in	2P-1956
5/8 - 18	2 1/2 in	0.62 in	0.94 in	0.75 in	9S-8891
3/4 - 16	3 1/4 in	0.75 in	1.13 in	1.00 in	9S-8892
7/8 - 14	2 1/2 in	0.88 in	1.31 in	0.16 in	2N-5014
1 - 14	2 1/2 in	1.00 in	1.50 in	0.75 in	2N-5006
1 - 14	4 in	1.00 in	1.50 in	1.00 in	9S-8893

Hex Socket Head Screw Bolts/Inch/Coarse & Fine Thread



Thread Size (in - TPI)	A	B	C	D	Part Number
	Bolt Length	Head Height	Head Width	Grip Length	
Coarse Thread					
No. 4 - 40	3/8 in	0.11 in	0.19 in	0.05 in	2S-9255
No. 4 - 40	1/2 in	0.11 in	0.19 in	0.05 in	6D-3033
No. 4 - 40	5/8 in	0.11 in	0.19 in	0.05 in	107-1716
No. 4 - 40	1 1/4 in	0.11 in	0.19 in	0.05 in	228-6056
No. 6 - 32	1/2 in	0.16 in	0.27 in	0.05 in	6V-8927
No. 8 - 32	3/8 in	0.16 in	0.27 in	0.06 in	6D-3031
No. 8 - 32	1/2 in	0.16 in	0.27 in	0.06 in	6D-3897
No. 8 - 32	5/8 in	0.16 in	0.27 in	0.06 in	2N-2658
No. 8 - 32	3/4 in	0.16 in	0.27 in	0.06 in	7D-5473
No. 8 - 32	1 in	0.16 in	0.27 in	0.06 in	9M-4704
No. 10 - 24	1/2 in	0.19 in	0.31 in	0.08 in	5S-2671
No. 10 - 24	5/8 in	0.19 in	0.31 in	0.08 in	2H-0191
No. 10 - 24	3/4 in	0.19 in	0.31 in	0.08 in	3L-2540
No. 10 - 24	7/8 in	0.19 in	0.31 in	0.08 in	9F-1707
No. 10 - 24	1 in	0.19 in	0.31 in	0.08 in	8C-9034
No. 10 - 24	1 1/4 in	0.19 in	0.31 in	0.38 in	7L-0688
No. 10 - 24	1 1/2 in	0.19 in	0.31 in	0.38 in	5J-1714
No. 10 - 24	1 3/4 in	0.19 in	0.31 in	0.88 in	2N-0402
No. 10 - 24	2 in	0.19 in	0.31 in	0.88 in	8C-6512
1/4 - 20	3/8 in	0.25 in	0.38 in	0.11 in	7J-0637
1/4 - 20	1/2 in	0.25 in	0.38 in	0.11 in	8H-0708
1/4 - 20	5/8 in	0.25 in	0.38 in	0.11 in	8H-3128
1/4 - 20	3/4 in	0.25 in	0.38 in	0.11 in	8H-3127
1/4 - 20	7/8 in	0.25 in	0.38 in	0.11 in	6L-5897
1/4 - 20	1 in	0.25 in	0.38 in	0.11 in	8H-0707
1/4 - 20	1 1/4 in	0.25 in	0.38 in	0.09 in	4L-7124
1/4 - 20	1 1/2 in	0.25 in	0.38 in	0.50 in	2H-3764
1/4 - 20	1 3/4 in	0.25 in	0.38 in	0.50 in	5L-9018
1/4 - 20	2 in	0.25 in	0.38 in	1.00 in	6L-1596
1/4 - 20	2 1/4 in	0.25 in	0.38 in	1.00 in	6L-5551
1/4 - 20	2 1/2 in	0.25 in	0.38 in	1.50 in	6H-3958
1/4 - 20	2 3/4 in	0.25 in	0.25 in	1.50 in	6J-2819
1/4 - 20	3 1/4 in	0.25 in	0.25 in	2.00 in	6V-7698
5/16 - 18	3/4 in	0.31 in	0.47 in	0.11 in	9F-5975
5/16 - 18	7/8 in	0.31 in	0.47 in	0.11 in	7X-3373
5/16 - 18	1 in	0.31 in	0.47 in	0.11 in	1T-0284
5/16 - 18	1 1/4 in	0.31 in	0.47 in	0.11 in	9F-6641
5/16 - 18	1 1/2 in	0.31 in	0.47 in	0.11 in	5J-5314
5/16 - 18	1 3/4 in	0.31 in	0.47 in	0.63 in	7S-6701

Thread Size (in - TPI)	A	B	C	D	Part Number
	Bolt Length	Head Height	Head Width	Grip Length	
5/16 - 18	2 in	0.31 in	0.47 in	0.63 in	9S-7381
5/16 - 18	2 3/4 in	0.31 in	0.47 in	1.63 in	2L-1352
5/16 - 18	3 1/2 in	0.31 in	0.47 in	2.25 in	9S-7382
3/8 - 16	3/4 in	0.38 in	0.56 in	0.25 in	1L-0509
3/8 - 16	7/8 in	0.38 in	0.56 in	0.25 in	4S-5565
3/8 - 16	1 in	0.38 in	0.56 in	0.25 in	2D-4534
3/8 - 16	1 1/4 in	0.38 in	0.56 in	0.25 in	2J-5245
3/8 - 16	1 1/2 in	0.38 in	0.56 in	0.25 in	4D-3120
3/8 - 16	1 3/4 in	0.38 in	0.56 in	0.50 in	5S-2586
3/8 - 16	2 in	0.38 in	0.56 in	0.50 in	1L-8793
3/8 - 16	2 1/4 in	0.38 in	0.56 in	1.00 in	2L-3793
3/8 - 16	2 1/2 in	0.38 in	0.56 in	1.00 in	1Y-7574
3/8 - 16	2 3/4 in	0.38 in	0.56 in	1.50 in	2K-6073
3/8 - 16	3 1/4 in	0.38 in	0.56 in	2.00 in	4B-3835
3/8 - 16	4 in	0.38 in	0.56 in	2.50 in	3B-7614
3/8 - 16	5 in	0.38 in	0.56 in	3.50 in	8L-3837
3/8 - 16	6 in	0.38 in	0.56 in	4.50 in	2D-8992
7/16 - 14	3/4 in	0.38 in	0.56 in	0.14 in	5F-3476
7/16 - 14	7/8 in	0.44 in	0.66 in	0.14 in	4J-1096
7/16 - 14	1 1/4 in	0.44 in	0.66 in	0.14 in	7B-7525
7/16 - 14	2 in	0.44 in	0.66 in	0.63 in	2N-0412
7/16 - 14	2 1/2 in	0.44 in	0.66 in	1.13 in	3J-4567
1/2 - 13	1/2 in	0.50 in	0.75 in	0.16 in	021-7916
1/2 - 13	3/4 in	0.50 in	0.75 in	0.16 in	013-8289
1/2 - 13	1 in	0.50 in	0.75 in	0.16 in	5H-4893
1/2 - 13	1 1/4 in	0.50 in	0.75 in	0.16 in	5F-8807
1/2 - 13	1 1/2 in	0.50 in	0.75 in	0.16 in	3F-7147
1/2 - 13	1 3/4 in	0.50 in	0.75 in	0.16 in	5S-2256
1/2 - 13	2 in	0.50 in	0.75 in	0.19 in	8B-7997
1/2 - 13	2 1/4 in	0.50 in	0.75 in	0.75 in	2L-0041
1/2 - 13	2 1/2 in	0.50 in	0.75 in	0.75 in	8B-7979
1/2 - 13	2 3/4 in	0.50 in	0.75 in	0.75 in	5S-2389
1/2 - 13	3 in	0.50 in	0.75 in	1.50 in	4L-8515
1/2 - 13	3 1/4 in	0.50 in	0.75 in	1.50 in	6D-0119
1/2 - 13	3 1/2 in	0.50 in	0.75 in	1.50 in	8B-7998
1/2 - 13	5 in	0.50 in	0.75 in	3.00 in	5S-2388
1/2 - 13	6 in	0.50 in	0.75 in	4.50 in	8L-4612
1/2 - 13	7 in	0.50 in	0.75 in	5.25 in	7L-0654
5/8 - 11	1 1/4 in	0.62 in	0.94 in	0.19 in	5S-2201
5/8 - 11	2 in	0.62 in	0.94 in	0.19 in	5S-2457

Bolts

Hex Socket Head Screw Bolts/Inch/Coarse & Fine Thread (Cont'd.)

Thread Size (in - TPI)	A	B	C	D	Part Number
	Bolt Length	Head Height	Head Width	Grip Length	
5/8 - 11	3 in	0.62 in	0.94 in	0.75 in	4D-0242
5/8 - 11	4 in	0.62 in	0.94 in	2.25 in	8L-4743
5/8 - 11	4 1/2 in	0.62 in	0.94 in	2.25 in	6H-3959
5/8 - 11	5 1/2 in	0.62 in	0.94 in	3.75 in	7L-8304
3/4 - 10	1 1/2 in	0.75 in	1.12 in	0.20 in	7L-9787
3/4 - 10	1 3/4 in	0.75 in	1.12 in	0.20 in	5F-5321
3/4 - 10	2 1/2 in	0.75 in	1.12 in	0.20 in	2N-6170
3/4 - 10	3 1/4 in	0.75 in	1.12 in	1.00 in	2N-1746
3/4 - 10	3 1/2 in	0.75 in	1.12 in	1.00 in	9S-4920
7/8 - 9	2 1/2 in	0.88 in	1.31 in	0.22 in	8L-4638
7/8 - 9	4 in	0.88 in	1.31 in	1.00 in	8L-9299
7/8 - 9	4 1/2 in	0.88 in	1.31 in	3.00 in	8L-4717
1 - 8	2 1/2 in	1.00 in	1.50 in	0.25 in	8L-6059
1 - 8	3 in	1.00 in	1.50 in	0.25 in	7L-9198
1 - 8	5 in	1.00 in	1.50 in	2.00 in	8L-3745
Fine Thread					
No. 10 - 32	7/16 in	0.19 in	0.31 in	0.13 in	8H-9299
No. 10 - 32	1 1/2 in	0.19 in	0.31 in	1.00 in	6V-7488
No. 10 - 32	5/8 in	0.19 in	0.31 in	0.06 in	3K-6168
No. 10 - 32	1 1/2 in	0.19 in	0.31 in	0.38 in	2R-8159
No. 10 - 32	2 1/4 in	0.19 in	0.31 in	1.18 in	9T-5110
1/4 - 28	1/2 in	0.25 in	0.38 in	0.08 in	7K-8407
1/4 - 28	5/8 in	0.25 in	0.38 in	0.08 in	021-7941
1/4 - 28	3/4 in	0.25 in	0.38 in	0.08 in	3H-1392
1/4 - 28	7/8 in	0.25 in	0.38 in	0.08 in	8S-1571
1/4 - 28	2 7/8 in	0.25 in	0.38 in	1.87 in	9T-5112
1/4 - 28	3 1/2 in	0.25 in	0.38 in	2.50 in	9T-5113
5/16 - 24	3/4 in	0.31 in	0.31 in	0.08 in	3F-8156
5/16 - 24	1 in	0.31 in	0.31 in	0.08 in	8T-0908

Thread Size (in - TPI)	A	B	C	D	Part Number
	Bolt Length	Head Height	Head Width	Grip Length	
3/8 - 24	3/4 in	0.38 in	0.56 in	0.08 in	013-8253
3/8 - 24	7/8 in	0.38 in	0.56 in	0.08 in	4L-1507
3/8 - 24	1 in	0.38 in	0.56 in	0.08 in	5L-4183
3/8 - 24	1 1/4 in	0.38 in	0.56 in	0.08 in	1T-0131
3/8 - 24	1 1/2 in	0.38 in	0.56 in	0.19 in	5L-8894
3/8 - 24	1 3/4 in	0.38 in	0.56 in	0.50 in	013-8257
3/8 - 24	2 in	0.38 in	0.56 in	0.50 in	013-8258
3/8 - 24	2 1/4 in	0.38 in	0.56 in	1.00 in	013-8259
7/16 - 20	1/2 in	0.44 in	0.66 in	0.11 in	8S-2696
7/16 - 20	1 in	0.44 in	0.66 in	0.10 in	089-7989
7/16 - 20	1 3/4 in	0.44 in	0.66 in	0.11 in	8F-1948
7/16 - 20	2 1/2 in	0.44 in	0.66 in	1.50 in	6H-3958
7/16 - 20	4 1/2 in	0.44 in	0.66 in	3.14 in	213-6004
1/2 - 20	1/2 in	0.50 in	0.75 in	0.11 in	021-7956
1/2 - 20	1 in	0.50 in	0.75 in	0.11 in	013-8307
1/2 - 20	1 1/4 in	0.50 in	0.75 in	0.11 in	1F-1375
1/2 - 20	1 1/2 in	0.50 in	0.75 in	0.11 in	8F-0069
1/2 - 20	1 3/4 in	0.50 in	0.75 in	0.11 in	013-8310
1/2 - 20	2 in	0.50 in	0.75 in	0.11 in	2H-3763
1/2 - 20	2 1/4 in	0.50 in	0.75 in	0.75 in	013-8312
1/2 - 20	2 1/2 in	0.50 in	0.75 in	1.50 in	6H-3958
1/2 - 20	3 in	0.50 in	0.75 in	1.50 in	013-8315
5/8 - 18	1 1/4 in	0.62 in	0.94 in	0.11 in	183-5527
5/8 - 18	1 3/4 in	0.62 in	0.94 in	0.11 in	013-8374
5/8 - 18	2 1/4 in	0.62 in	0.94 in	0.11 in	9S-9078
5/8 - 18	4 1/4 in	0.62 in	0.94 in	2.25 in	174-3741
5/8 - 18	6 3/4 in	0.62 in	0.94 in	4.50 in	253-2180
3/4 - 16	2 in	0.75 in	1.12 in	0.13 in	061-8718

Hex Head Bolts/Metric/Phosphate & Oil

Thread Size	Pitch (mm)	OAL (mm)	Grip Length (mm)	Part Number
Thread Size (dia x pitch) M6 x 1.00				
M6	1.00	12	3	8T-0639
M6	1.00	14	3	6V-8836
M6	1.00	16	3	6V-8837
M6	1.00	20	3	6V-8214
M6	1.00	25	3	6V-8490
M6	1.00	30	3	8T-0640
M6	1.00	35	3	6V-2315
M6	1.00	40	3	2W-9499
M6	1.00	45	3	6V-7728
M6	1.00	50	3	8T-0275
M6	1.00	55	3	6V-8211

Thread Size	Pitch (mm)	OAL (mm)	Grip Length (mm)	Part Number
M6	1.00	60	3	8T-5066
M6	1.00	70	52	6V-8359
M6	1.00	110	92	295-4303
M6	1.00	130	106	384-8758
M6	1.00	140	116	6V-9606
-	Nut	-	-	6V-8225
-	Washer	-	-	9X-8267
Thread Size (dia x pitch) M8 x 1.00				
M8	1.25	10	1.90	2W-9533
M8	1.25	12	2.50	6V-2316
M8	1.25	14	3.75	8T-0642
M8	1.25	16	3.75	6V-5215

Hex Head Bolts/Metric/Phosphate & Oil (Cont'd.)

Thread Size	Pitch (mm)	OAL (mm)	Grip Length (mm)	Part Number	Thread Size	Pitch (mm)	OAL (mm)	Grip Length (mm)	Part Number
M8	1.25	20	3.75	6V-5217	M10	1.50	85	59	160-8492
M8	1.25	25	3	481-2982	M10	1.50	90	64	8T-0644
M8	1.25	30	3.75	160-8756	M10	1.50	100	74	6V-1819
M8	1.25	35	3.75	6V-5218	M10	1.50	110	78	8T-0355
M8	1.25	40	3.75	204-0714	M10	1.50	120	94	8T-5030
M8	1.25	45	3.75	8T-0276	M10	1.50	130	98	210-4460
M8	1.25	50	3.75	6V-3918	M10	1.50	140	108	8C-2926
M8	1.25	55	3.75	8C-5748	M10	1.50	150	118	8T-9085
M8	1.25	60	3.75	8T-0100	M10	1.50	160	128	8T-0356
M8	1.00	65	43	8T-2316	M10	1.50	170	138	212-2085
M8	1.25	70	3.75	5P-8347	M10	1.50	180	148	8T-7950
M8	1.25	75	3.75	6V-9804	M10	1.50	200	168	8T-6854
M8	1.25	80	3.75	6V-5221	-	Nut	-	-	2Y-5829
M8	1.25	85	63	6V-5222	-	Washer	-	-	6V-5839
M8	1.25	90	68	8T-0292	Thread Size (dia x pitch) M12 x 1.75				
M8	1.25	100	78	6V-5223	M12	1.75	16	5.25	6V-8177
M8	1.25	105	83	143-4654	M12	1.75	20	5.25	8T-0293
M8	1.25	110	88	6V-3821	M12	1.75	25	4	388-8553
M8	1.25	120	98	6V-9607	M12	1.75	30	5.25	6V-3668
M8	1.25	130	102	7X-0457	M12	1.75	35	4	481-3008
M8	1.25	140	112	7X-0870	M12	1.75	40	5.25	6V-8197
M8	1.25	145	117	276-5413	M12	1.75	45	5.25	6V-5684
M8	1.25	150	122	8C-4984	M12	1.75	50	5.25	6V-7673
M8	1.25	160	132	3E-8005	M12	1.75	60	5.25	6V-3823
M8	1.25	165	137	237-2227	M12	1.75	65	5.25	160-8750
M8	1.25	180	152	9X-6000	M12	1.75	70	40	6V-8336
M8	1.25	200	172	9X-6628	M12	1.75	80	50	6V-5696
M8	1.25	205	164	174-3490	M12	1.75	85	65.5	4P-4057
M8	1.25	240	199	9X-6630	M12	1.75	90	60	8T-0372
-	Nut	-	-	5P-7970	M12	1.75	95	65	8T-0279
-	Washer	-	-	9M-1974	M12	1.75	100	70	8T-0106
Thread Size (dia x pitch) M10 x 1.00					M12	1.75	110	80	8T-0646
M10	1.50	12	4.50	6V-8084	M12	1.75	130	94	253-6267
M10	1.50	16	4.50	6V-8212	M12	1.75	140	104	7X-0909
M10	1.50	20	4.50	6V-6317	M12	1.75	160	124	8T-0162
M10	1.50	25	4.50	6V-4248	M12	1.75	180	144	8T-6991
M10	1.50	30	4.50	6V-1820	M12	1.75	200	147	8C-3226
M10	1.50	35	4.50	6V-3822	M12	1.75	220	167	515-4689 ⁽⁷⁾
M10	1.50	40	4.50	6V-5842	M12	1.75	300	251	152-7146 ⁽⁷⁾
M10	1.50	45	4.50	6V-5843	M12	1.75	340	291	155-5081
M10	1.50	50	4.50	6V-4249	M12	1.75	355	300	277-0359
M10	1.50	55	4.50	160-8742	M12	1.75	470	410	162-1497 ⁽⁷⁾
M10	1.50	60	4.50	6V-5230	-	Nut	-	-	6V-8149
M10	1.50	65	4.50	8T-5035	-	Washer	-	-	5P-8245
M10	1.50	70	44	6V-7981	Thread Size (dia x pitch) M16 x 2.00				
M10	1.50	75	49	6V-5815	M16	2.00	16	6	8T-2926
M10	1.50	80	54	8T-0643	M16	2.00	25	6	6V-5224

Bolts

Hex Head Bolts/Metric/Phosphate & Oil (Cont'd.)

Thread Size	Pitch (mm)	OAL (mm)	Grip Length (mm)	Part Number
M16	2.00	30	6	8T-0299
M16	2.00	35	6	6V-5844
M16	2.00	40	6	290-7296 ⁽⁸⁾
M16	2.00	45	6	8T-0375
M16	2.00	45	6	154-1578 ⁽⁸⁾
M16	2.00	50	6	6V-5686
M16	2.00	50	6	178-3707 ⁽⁸⁾
M16	2.00	55	6	162-2776 ⁽⁸⁾
M16	2.00	55	6	357-6018 ⁽⁸⁾
M16	2.00	60	6	6V-3303
M16	2.00	60	22	202-6473 ⁽⁸⁾
M16	2.00	65	27	8T-0088
M16	2.00	65	27	441-6455 ⁽⁸⁾
M16	2.00	70	32	8T-0357
M16	2.00	70	32	357-6019 ⁽⁸⁾
M16	2.00	75	37	357-9606
M16	2.00	80	42	8T-0281
M16	2.00	80	42	137-3301 ⁽⁸⁾
M16	2.00	90	52	8T-0358
M16	2.00	90	52	6C-8648 ⁽⁸⁾
M16	2.00	95	57	281-1112 ⁽⁸⁾
M16	2.00	100	61.65	8T-0207
M16	2.00	100	62	170-1483 ⁽⁸⁾
M16	2.00	110	72	8T-0649
M16	2.00	110	72	354-5736
M16	2.00	110	72	6C-5304 ⁽⁸⁾
M16	2.00	120	82	354-5738
M16	2.00	120	82	235-9631 ⁽⁸⁾
M16	2.00	130	86	354-5737
M16	2.00	130	86	6C-3522 ⁽⁸⁾
M16	2.00	140	96	6V-7675
M16	2.00	140	96	235-8810 ⁽⁸⁾
M16	2.00	150	106.2	6V-8154
M16	2.00	150	116	236-6365 ⁽⁸⁾
M16	2.00	160	116	8T-0650
M16	2.00	160	116	175-0454 ⁽⁸⁾
M16	2.00	170	126	6C-8647 ⁽⁸⁾
M16	2.00	180	136	8T-5002
M16	2.00	180	136	9X-6493 ⁽⁸⁾
M16	2.00	190	146	236-0483 ⁽⁸⁾
M16	2.00	195	163	236-6366 ⁽⁸⁾
M16	2.00	200	156	9X-2075
M16	2.00	200	156	6C-5303 ⁽⁸⁾
M16	2.00	215	183	190-3153 ⁽⁸⁾
M16	2.00	220	163	8T-7013
M16	2.00	220	176	242-1811 ⁽⁸⁾

Thread Size	Pitch (mm)	OAL (mm)	Grip Length (mm)	Part Number
M16	2.00	230	173	160-0017 ⁽⁸⁾
M16	2.00	240	183	161-4517
M16	2.00	250	193	126-1499
M16	2.00	260	203	8T-5045
M16	2.00	260	203	477-1344 ⁽⁸⁾
M16	2.00	270	213	505-0058
M16	2.00	420	384	120-9486 ⁽⁸⁾
M16	2.00	470	410	162-1498 ⁽⁸⁾
-	Nut	-	-	8T-1757
-	Washer	-	-	9X-8268
Thread Size (dia x pitch) M20 x 2.50				
M20	2.50	20	7.50	113-6989
M20	2.50	25	7.50	113-6990
M20	2.50	30	7.50	8T-0651
M20	2.50	40	7.50	6V-7729
M20	2.50	45	7.50	8T-0652
M20	2.50	45	6.20	219-7569 ⁽⁸⁾
M20	2.50	50	7.50	461-3877
M20	2.50	50	7.50	6V-3531
M20	2.50	55	15	093-6096
M20	2.50	55	7.50	6V-6787
M20	2.50	60	7.50	6V-3532
M20	2.50	60	7.5	287-3585 ⁽⁸⁾
M20	2.50	70	7.5	6V-5845
M20	2.50	70	7.5	173-9685
M20	2.50	80	34	6V-3669
M20	2.50	85	39	6V-5231
M20	2.50	90	44	8T-0360
M20	2.50	90	44	457-9304
M20	2.50	90	44	145-9278 ⁽⁸⁾
M20	2.50	100	54	6V-9667
M20	2.50	110	64	8T-0362
M20	2.50	110	64	457-9305
M20	2.50	110	64	5Q-3560v ⁽⁸⁾
M20	2.50	120	74	8T-0070
M20	2.50	120	74	165-9756 ⁽⁸⁾
M20	2.50	130	78	8T-0655
M20	2.50	130	78	5Q-3561 ⁽⁸⁾
M20	2.50	140	88	6V-9167
M20	2.50	140	88	295-2409 ⁽⁸⁾
M20	2.50	150	98	8T-0656
M20	2.50	160	108	8T-0657
M20	2.50	160	108	127-4836
M20	2.50	170	118	6V-8807
M20	2.50	170	118	179-8733 ⁽⁸⁾
M20	2.50	170	132	189-3925 ⁽⁸⁾
M20	2.50	180	128	8T-0658

Hex Head Bolts/Metric/Phosphate & Oil (Cont'd.)

Thread Size	Pitch (mm)	OAL (mm)	Grip Length (mm)	Part Number
M20	2.50	190	138	252-9148
M20	2.50	200	148	6V-8569
M20	2.50	200	163	190-3152 ⁽⁹⁾
M20	2.50	200	148	9X-6494 ⁽⁹⁾
M20	2.50	220	155	8T-7505
M20	2.50	230	165	467-426 ⁽⁹⁾²
M20	2.50	240	175	8T-0161
M20	2.50	240	203	190-3154 ⁽⁹⁾
M20	2.50	280	215	9X-2475
M20	2.50	350	285	140-7092 ⁽⁹⁾
M20	2.50	390	325	098-6000
-	Nut	-	-	6V-7742
-	Washer	-	-	8T-3282
Thread Size (dia x pitch) M24 x 3.00				
M24	3.00	50	9	6V-9199
M24	3.00	60	9	8T-0380
M24	3.00	70	9	8T-0664
M24	3.00	70	9	201-7949 ⁽⁹⁾
M24	3.00	80	9	6V-8133
M24	3.00	80	9	173-9779 ⁽⁹⁾
M24	3.00	100	46	8T-0667
M24	3.00	100	46	173-9684
M24	3.00	110	56	8T-0668
M24	3.00	110	56	244-6356 ⁽⁹⁾
M24	3.00	120	66	137-3274
M24	3.00	120	66	112-1531
M24	3.00	130	70	8T-0669
M24	3.00	140	80	8T-0670
M24	3.00	140	80	112-1532
M24	3.00	150	90	141-6373
M24	3.00	160	100	8T-0672
M24	3.00	160	100	112-1533
M24	3.00	170	110	102-6445 ⁽⁹⁾
M24	3.00	180	120	8T-0674
M24	3.00	180	120	353-1660 ⁽⁹⁾
M24	3.00	200	140	6V-8198
M24	3.00	220	147	8T-0364
M24	3.00	240	167	8T-0365
M24	3.00	250	177	6V-8207
M24	3.00	260	187	8T-0367
M24	3.00	270	221	177-8363 ⁽⁹⁾
M24	3.00	280	207	8T-5397
M24	3.00	300	227	152-0604
M24	3.00	340	267	166-9314
M24	3.00	420	347	100-3204
M24	3.00	500	427	129-0438

Thread Size	Pitch (mm)	OAL (mm)	Grip Length (mm)	Part Number
M24	3.00	700	627	489-1832
-	Nut	-	-	7X-0851
-	Washer	-	-	6V-8237
Thread Size (dia x pitch) M30 x 3.50				
M30	3.50	50	10.5	9X-2199
M30	3.50	60	7	286-9617
M30	3.50	75	9	7Y-1810 ⁽⁹⁾
M30	3.50	80	10.5	8C-3222
M30	3.50	80	14	274-4642 ⁽⁹⁾
M30	3.50	85	19	145-2970 ⁽⁹⁾
M30	3.50	90	10.5	173-9683 ⁽⁹⁾
M30	3.50	95	29	152-0194
M30	3.50	100	10.5	8T-0368
M30	3.50	100	34	202-7708 ⁽⁹⁾
M30	3.50	110	44	354-5735 ⁽⁹⁾
M30	3.50	130	58	177-9754 ⁽⁹⁾
M30	3.50	140	68	8T-0370
M30	3.50	150	78	101-1806 ⁽⁹⁾
M30	3.50	160	88	177-9755 ⁽⁹⁾
M30	2.00	190	118	493-5352 ⁽⁹⁾
M30	3.50	190	118	171-9325 ⁽⁹⁾
M30	3.50	200	128	163-8682 ⁽⁹⁾
M30	3.50	210	134	199-4500 ⁽⁹⁾
M30	3.50	210	138	163-8683 ⁽⁹⁾
M30	3.50	220	135	178-2992 ⁽⁹⁾
M30	3.50	222	175	416-7801 ⁽⁹⁾
M30	3.50	235	150	199-4502 ⁽⁹⁾
M30	3.50	240	155	9X-6151
M30	3.50	240	155	334-6836 ⁽⁹⁾
M30	3.50	260	188	125-3300
M30	3.50	260	175	139-5942 ⁽⁹⁾
M30	3.50	280	195	3E-8031
M30	3.50	280	195	138-4179 ⁽⁹⁾
M30	3.50	320	235	116-7878
M30	3.50	320	235	139-5943 ⁽⁹⁾
M30	3.50	350	265	3E-8036 ⁽⁹⁾
M30	3.50	450	365	113-1047 ⁽⁹⁾
M30	3.50	500	415	3E-8009
M30	3.50	520	435	3E-8010
M30	3.50	550	460	332-4571
M30	3.50	620	535	3E-8012
M30	3.50	700	615	3E-8013
M30	3.50	760	675	3E-8011
-	Nut	-	-	8T-1583
-	Washer	-	-	9X-8399

Bolts

Hex Head Bolts/Metric/Zinc Plated

Thread Size	Pitch (mm)	OAL (mm)	Grip Length (mm)	Part Number
Thread Size (dia x pitch) M6 x 1.00				
M6	1.00	18	3	233-1291
M6	1.00	40	3	6C-9129
M6	1.00	45	3	8T-2947
M6	1.00	55	3	118-6503
-	Nut	-	-	5C-2890
-	Washer	-	-	9X-8256
Thread Size (dia x pitch) M8 x 1.25				
M8	1.25	12	2.50	421-4221
M8	1.25	16	3.75	250-8737
M8	1.25	16	3.75	457-8757
M8	1.25	20	3.75	453-3432
M8	1.25	22	3.75	199-2235
M8	1.25	25	3.75	453-3433
M8	1.25	28	18	446-8221
M8	1.25	30	3.75	457-8758
M8	1.25	35	24.10	351-2246
M8	1.25	40	3.75	8T-4197
M8	1.25	45	3.75	453-3435
M8	1.25	50	3.75	247-4285
M8	1.25	60	4.50	9X-6277
M8	1.25	80	3.75	190-7979
M8	1.25	100	3.75	085-4773
M8	1.25	105	83	305-4746
M8	1.25	110	88	453-3438
M8	1.25	140	112	453-3439
M8	1.25	180	152	452-4277
-	Nut	-	-	5C-7261
-	Washer	-	-	8T-4224
Thread Size (dia x pitch) M10 x 1.25 and M10 x 1.50				
M10	1.25	16	3.75	251-1391
M10	1.25	20	3.75	51-4936
M10	1.25	25	3.75	127-4839
M10	1.25	30	4.50	9X-8912
M10	1.25	35	3.75	303-8825
M10	1.25	40	3.75	128-7747
M10	1.25	45	27	154-2235
M10	1.25	50	3.75	388-6412
M10	1.25	55	33.75	205-6883
M10	1.25	70	44	51-4969
M10	1.25	80	54	125-3003
M10	1.50	16	4.50	460-2453
M10	1.50	20	4.50	457-8759
M10	1.50	25	4.50	455-3798
M10	1.50	30	4.50	453-3440
M10	1.50	35	4.50	457-5821
M10	1.50	40	4.50	151-8754
M10	1.50	40	14	279-0961

Thread Size	Pitch (mm)	OAL (mm)	Grip Length (mm)	Part Number
M10	1.50	45	19	172-7865
M10	1.50	50	4.5	323-3730
M10	1.50	50	24	453-3441
M10	1.50	60	34	172-7864
M10	1.50	60	4.50	180-4686
M10	1.50	65	4.50	260-6673
M10	1.50	70	4.50	237-2228
M10	1.50	75	4.50	438-9251
M10	1.50	86	25.40	271-3567
M10	1.50	95	69	271-7649
M10	1.50	100	4.50	8T-4782
M10	1.50	110	84	453-3442
M10	1.50	120	4.50	153-8497
M10	1.50	135	103	145-7231
M10	1.50	155	123	453-3443
M10	1.50	160	128	453-3444
M10	1.50	180	148	453-3445
Nut	1.50	-	-	8T-4133
Washer	1.50	-	-	8T-4121
Thread Size (dia x pitch) M12 x 1.25 and M12 x 1.75				
M12	1.25	20	3.75	199-0957
M12	1.25	25	3.75	150-3715
M12	1.25	30	5.25	119-9880
M12	1.25	35	3.75	176-8518
M12	1.25	40	5.25	143-0116
M12	1.25	45	15	226-3694
M12	1.75	20	5.25	461-2757
M12	1.75	30	5.25	451-2181
M12	1.75	35	5.25	453-3446
M12	1.75	40	5.25	453-3447
M12	1.75	45	15	453-3448
M12	1.75	45	5.25	165-7019
M12	1.75	50	20	453-3449
M12	1.75	60	30	453-3450
M12	1.75	70	40	491-0944
M12	1.75	75	5.25	438-9215
M12	1.75	80	5.25	092-5524
M12	1.75	90	10	7Y-0589
M12	1.75	100	80	365-0628
M12	1.75	100	40	286-0433
M12	1.75	105	80	198-5646
M12	1.75	115	85	250-0492
M12	1.75	125	60	124-5556
Nut	1.75	-	-	8T-4244
Washer	1.75	-	-	8T-4223
Thread Size (dia x pitch) M16 x 2.00				
M16	2.00	20	6	453-4168
M16	2.00	25	6	447-1730
M16	2.00	35	6	451-2180

Hex Head Bolts/Metric/Zinc Plated (Cont'd.)

Thread Size	Pitch (mm)	OAL (mm)	Grip Length (mm)	Part Number
M16	2.00	40	6	453-1259
M16	2.00	45	5	447-1709
M16	2.00	50	12	447-1711
M16	2.00	55	6	453-2837
M16	2.00	60	6	447-1707
M16	2.00	70	32	453-2838
M16	2.00	80	42	447-1708
M16	2.00	90	52	447-1704
M16	2.00	90	6	453-4135
M16	2.00	100	6	453-4133
M16	2.00	100	56	453-2839
M16	2.00	110	72	453-1256
M16	2.00	120	82	447-1703
M16	2.00	130	86	447-1706
M16	2.00	140	96	453-2840
M16	2.00	150	106	453-2841
M16	2.00	160	116	453-2842
M16	2.00	170	126	486-6429
M16	2.00	180	136	453-2843
M16	2.00	190	146	454-6928
M16	2.00	200	156	453-4169
M16	2.00	230	173	328-4315
M16	2.00	240	183	453-4171
M16	2.00	260	203	453-4172
M16	2.00	280	223	453-4136
-	Nut	-	-	8T-4132
-	Washer	-	-	8T-4122
Thread Size (dia x pitch) M18 x 1.50 and M18 x 2.50				
M18	1.50	33	4.50	157-1442
M18	1.50	40	4.50	234-0390
M18	1.50	65	23	275-2231
M18	1.50	80	38	134-4765
M18	1.50	105	63	370-0553
M18	2.50	25	7.50	300-2648
M18	2.50	30	5	304-6991
M18	2.50	45	7.50	135-9421
M18	2.50	50	7.50	135-9422
M18	2.50	55	7.50	183-8005
M18	2.50	110	68	255-8933
Washer	-	-	-	8T-4123
Thread Size (dia x pitch) M20 x 2.50				
M20	2.50	30	30	453-2844
M20	2.50	35	7.50	453-4174
M20	2.50	40	7.50	453-2845
M20	2.50	45	6.20	447-1717
M20	2.50	50	4	447-1718
M20	2.50	60	14	447-1719
M20	2.50	70	7.50	447-1720
M20	2.50	80	34	447-1716

Thread Size	Pitch (mm)	OAL (mm)	Grip Length (mm)	Part Number
M20	2.50	90	44	453-2847
M20	2.50	100	54	447-1731
M20	2.50	120	74	447-1715
M20	2.50	130	7.50	168-7790
M20	2.50	130	78	447-1712
M20	2.50	150	98	447-1714
M20	2.50	160	6.2	146-4176
M20	2.50	160	122	186-5649
M20	2.50	170	118	7Y-5260
M20	2.50	180	128	453-4137
M20	2.50	180	142	113-2116
M20	2.50	190	138	7Y-5261
M20	2.50	200	148	453-2850
M20	2.50	210	145	4I-6765
M20	2.50	220	155	453-2851
M20	2.50	280	215	198-6003
M20	2.50	320	255	454-3206
M20	2.50	450	385	154-7415
-	Washer	-	-	8T-4167
Thread Size (dia x pitch) M24 x 3.00				
M24	3.00	35	9	453-4177
M24	3.00	40	9	453-2852
M24	3.00	45	9	453-2853
M24	3.00	50	9	453-2854
M24	3.00	60	9	447-1722
M24	3.00	70	9	447-1726
M24	3.00	80	9	447-1725
M24	3.00	80	9	451-4523
M24	3.00	90	36	453-2855
M24	3.00	100	46	453-2856
M24	3.00	110	56	447-1723
M24	3.00	120	66	430-2986
M24	3.00	120	66	447-1724
M24	3.00	140	80	453-4179
M24	3.00	143	100	253-0777
M24	3.00	150	90	447-1732
M24	3.00	160	100	447-1721
M24	3.00	180	9	169-2519
M24	3.00	180	120	430-2985
M24	3.00	190	130	454-6929
M24	3.00	200	152	201-2836
M24	3.00	200	140	430-2984
M24	3.00	210	165	115-2748
M24	3.00	220	147	453-4182
M24	3.00	270	197	241-1912
M24	3.00	350	277	453-2857
-	Washer	-	-	9X-8258
Thread Size (dia x pitch) M30 x 3.50				
M30	3.50	80	14	453-2858
M30	3.50	90	24	447-1728

Bolts

Hex Head Bolts/Metric/Zinc Plated (Cont'd.)

Thread Size	Pitch (mm)	OAL (mm)	Grip Length (mm)	Part Number
M30	3.50	100	34	451-9261
M30	3.50	110	44	447-1729
M30	3.50	120	12	309-6466
M30	3.50	120	54	447-1733
M30	3.50	130	10.50	453-4189
M30	3.50	140	68	453-2859
M30	3.50	150	78	447-1727
M30	3.50	160	88	447-2461

Thread Size	Pitch (mm)	OAL (mm)	Grip Length (mm)	Part Number
M30	3.50	220	135	453-4192
M30	3.50	260	188	453-4193
M30	3.50	380	295	177-1449
M30	3.50	435	350	453-2860
M30	3.50	450	365	453-2861
-	Nut	-	-	451-2186
-	Washer	-	-	309-2686

Hex Head Bolts/Metric/Zinc Flake

Thread Size	Pitch (mm)	OAL (mm)	Grip Length (mm)	Part Number
Thread Size (dia x pitch) M6 x 1.00				
M6	1.00	10	3	7X-2619
M6	1.00	12	3	8T-4171
M6	1.00	14	3	8T-4970
M6	1.00	16	3	5C-9553
M6	1.00	20	3	8T-4138
M6	1.00	22	3	6V-6936
M6	1.00	25	3	6V-7357
M6	1.00	27	9	491-4660
M6	1.00	30	3	8T-4971
M6	1.00	32	14	488-9170
M6	1.00	35	3	7X-2533
M6	1.00	35	3	488-5325
M6	1.00	35	22	349-6111
M6	1.00	40	3	8C-8451
M6	1.00	42	24	491-3147
M6	1.00	45	3	9X-2480
M6	1.00	50	3	7X-2534
M6	1.00	60	3	7X-2535
M6	1.00	65	47	287-8257
M6	1.00	70	52	8T-3844
M6	1.00	80	62	8T-6974
M6	1.00	90	72	7X-7888
M6	1.00	95	77	8T-4145
M6	1.00	100	82	7X-0465
M6	1.00	100	82	457-2451 (10)
M6	1.00	180	156	9X-8498
M6	1.00	200	176	7X-0490
-	Nut	-	-	344-5673
-	Washer	-	-	9X-8256
Thread Size (dia x pitch) M8 x 1.25				
M8	1.25	10	1.9	7X-2620
M8	1.25	12	2.5	8T-4199

Thread Size	Pitch (mm)	OAL (mm)	Grip Length (mm)	Part Number
M8	1.25	14	2.5	7X-2536
M8	1.25	16	3.75	8T-4200
M8	1.25	18	3.75	6V-5216
M8	1.25	20	3.75	8T-4189
M8	1.25	25	3.75	8T-4908
M8	1.25	30	3.75	8T-7547
M8	1.25	35	3.75	7X-2537
M8	1.25	40	3.75	099-3649
M8	1.25	45	3.75	7X-0818
M8	1.25	45	27	349-6110
M8	1.25	50	3.75	8T-6912
M8	1.25	50	34	305-5385 (10)
M8	1.25	55	3.75	8T-7329
M8	1.25	60	3.75	8T-6869
M8	1.25	65	3.75	285-9066
M8	1.25	65	43	488-5390
M8	1.25	70	3.75	8T-6870
M8	1.25	75	3.75	096-5866
M8	1.25	80	3.75	8T-3647
M8	1.25	85	63	243-7112
M8	1.25	90	68	8T-4177
M8	1.25	100	78	7X-2538
M8	1.25	110	88	7X-2539
M8	1.25	115	93	269-8354
M8	1.25	120	98	7X-2540
M8	1.25	125	103	153-3061
M8	1.25	130	102	108-2989
M8	1.25	140	112	7X-2541
M8	1.25	145	117	301-9551
M8	1.25	150	122	7X-2542
M8	1.25	160	132	8T-7352
M8	1.25	170	142	317-1119
M8	1.25	180	152	315-5494

Hex Head Bolts/Metric/Zinc Flake (Cont'd.)

Thread Size	Pitch (mm)	OAL (mm)	Grip Length (mm)	Part Number
M8	1.25	220	179	9X-2028
-	Nut	-	-	344-5674
-	Washer	-	-	8T-4224
Thread Size (dia x pitch) M10 x 1.25				
M10	1.50	12	4.5	7X-2621
M10	1.50	16	4.5	8T-4191
M10	1.50	20	4.5	8T-4137
M10	1.50	20	0	489-4580
M10	1.50	25	4.5	8T-4136
M10	1.50	30	4.5	8T-4195
M10	1.50	30		489-4566
M10	1.50	35	4.5	8T-4196
M10	1.50	35	4.5	183-7121 (11)
M10	1.50	40	4.5	8T-4186
M10	1.50	45	4.5	8T-4182
M10	1.50	45	19	311-8193 (11)
M10	1.50	50	4.5	8T-4185
M10	1.50	50	4.5	250-0394 (11)
M10	1.50	55	4.5	085-8091
M10	1.50	55	29	276-1326 (11)
M10	1.50	60	4.5	8T-6466
M10	1.50	60	4.5	451-2617 (11)
M10	1.50	70	44	8T-5005
M10	1.50	70	44	196-6723 (11)
M10	1.50	75	49	280-8912
M10	1.50	80	54	8T-4172
M10	1.50	80	4.5	272-2351
M10	1.50	90	64	8T-4178
M10	1.50	90	4.5	272-3089
M10	1.50	100	74	8T-4198
M10	1.50	105	79	297-8107
M10	1.50	110	84	8T-6685
M10	1.50	120	94	7X-2543
M10	1.50	130	98	8T-5436
M10	1.50	140	108	7X-2544
M10	1.50	150	118	7X-2545
M10	1.50	155	123	178-3333
M10	1.50	160	128	8T-6408
M10	1.50	170	138	308-0918
M10	1.50	175	143	313-5645
M10	1.50	180	148	7X-2546
M10	1.50	190	158	316-8227
M10	1.50	200	168	7X-2547

Thread Size	Pitch (mm)	OAL (mm)	Grip Length (mm)	Part Number
M10	1.50	210	172	6E-5293
M10	1.50	220	175	7X-0474
M10	1.50	230	185	153-2146
M10	1.50	240	195	159-7463
M10	1.50	250	205	157-4822
M10	1.50	260	215	8T-4144
M10	1.50	270	225	295-8888
M10	1.50	295	255	190-8250
M10	1.50	300	255	286-3219
-	Nut	-	-	344-5675
-	Washer	-	-	8T-4121
Thread Size (dia x pitch) M12 x 1.25				
M12	1.75	16	5.25	7X-2548
M12	1.75	20	5.25	8T-4179
M12	1.75	20		491-5837
M12	1.75	25	5.25	8T-4192
M12	1.75	25	0	488-9230
M12	1.75	30	5.25	8T-4139
M12	1.75	35	5.25	8T-4956
M12	1.75	35	5.25	362-1320 (11)
M12	1.75	40	5.25	8T-4183
M12	1.75	40	5.25	259-2627 (11)
M12	1.75	45	5.25	8T-4184
M12	1.75	45	5.25	319-6699 (11)
M12	1.75	50	5.25	8T-4194
M12	1.75	50	30	359-3328
M12	1.75	55	5.25	096-9986
M12	1.75	60	5.25	8T-4910
M12	1.75	60	3.9	489-4519
M12	1.75	65	5.25	172-9966
M12	1.75	70	40	8T-4648
M12	1.75	75	5.25	7Y-7992
M12	1.75	80	50	8T-6868
M12	1.75	80	50	489-1140
M12	1.75	85	55	489-5186
M12	1.75	85	55	323-3731 (11)
M12	1.75	90	60	8T-4176
M12	1.75	90	60	356-9261 (11)
M12	1.75	100	70	7X-2549
M12	1.75	110	80	7X-2550
M12	1.75	110	80	488-7177
M12	1.75	110	80	319-6698 (11)
M12	1.75	120	90	8T-5041

Bolts

Hex Head Bolts/Metric/Zinc Flake (Cont'd.)

Thread Size	Pitch (mm)	OAL (mm)	Grip Length (mm)	Part Number
M12	1.75	120	90	488-9185
M12	1.75	130	94	8T-5001
M12	1.75	140	104	8T-5412
M12	1.75	140	60	151-1174
M12	1.75	150	114	8T-5092
M12	1.75	160	124	8T-7930
M12	1.75	170	134	372-2073
M12	1.75	180	144	8T-7929
M12	1.75	190	154	7X-2456
M12	1.75	190	23	296-8187
M12	1.75	200	147	7X-2551
M12	1.75	200	147	483-2035 (12)
M12	1.75	220	167	7X-7960
M12	1.75	240	191	7X-3335
M12	1.75	260	211	8C-8407
M12	1.75	300	251	270-5290 (12)
-	Nut	-	-	329-3356
-	Washer	-	-	8T-4223
Thread Size (dia x pitch) M16 x 1.25				
M16	2.00	20	6	142-8545
M16	2.00	25	6	8T-4190
M16	2.00	25	4	489-3178
M16	2.00	30	6	7X-2552
M16	2.00	35	6	8T-4779
M16	2.00	40	6	7X-2553
M16	2.00	45	6	8T-7338
M16	2.00	50	6	8T-4193
M16	2.00	50	6	485-2850
M16	2.00	55	6	099-0169
M16	2.00	60	6	8T-4140
M16	2.00	60		488-9030
M16	2.00	60	22	339-1910 (12)
M16	2.00	65	27	118-4977
M16	2.00	70	32	7X-2554
M16	2.00	70	32	118-7313 (12)
M16	2.00	75	37	489-4522
M16	2.00	75	37	489-4520
M16	2.00	80	42	7X-2555
M16	2.00	80	42	303-9441 (12)
M16	2.00	85	47	489-3183
M16	2.00	85	47	106-9162
M16	2.00	90	52	8T-4175
M16	2.00	90	6	489-3182
M16	2.00	90	6	170-8555

Thread Size	Pitch (mm)	OAL (mm)	Grip Length (mm)	Part Number
M16	2.00	90	52	141-8390 (12)
M16	2.00	90	52	303-9442 (12)
M16	2.00	100	56	7X-2556
M16	2.00	100	6	136-4182
M16	2.00	110	72	8T-4173
M16	2.00	110	72	392-9233 (12)
M16	2.00	120	82	8T-4174
M16	2.00	130	86	7X-2475
M16	2.00	140	96	7X-2557
M16	2.00	140	6	170-8556
M16	2.00	150	106	7X-2558
M16	2.00	160	116	7X-2559
M16	2.00	170	126	8T-6384
M16	2.00	180	136	8T-6385
M16	2.00	190	146	7Y-5227 ⁽¹²⁾
M16	2.00	200	156	8T-6383
M16	2.00	210	153	7Y-3557 ⁽¹²⁾
M16	2.00	220	163	7X-2560
M16	2.00	240	183	100-8255
M16	2.00	260	203	8T-6382
M16	2.00	280	223	110-6968
M16	2.00	300	256	110-6969
M16	2.00	310	253	100-3740
M16	2.00	460	403	128-7800
-	Nut	-	-	8T-4132
-	Washer	-	-	9X-8257
Thread Size (dia x pitch) M20 x 1.25				
M20	2.50	30	7.5	8T-4780
M20	2.50	35	7.5	7X-2561
M20	2.50	40	7.5	8T-5460
M20	2.50	45	7.5	7X-2562
M20	2.50	45	7.5	288-3678 (12)
M20	2.50	50	7.5	8T-6430
M20	2.50	50	7.5	287-5701 (12)
M20	2.50	55	7.5	304-9129
M20	2.50	55	7.5	290-6437 (12)
M20	2.50	60	7.5	7X-2563
M20	2.50	60	7.5	106-4175 (12)
M20	2.50	60	7.5	257-8529 (12)
M20	2.50	65	7.5	262-7686
M20	2.50	70	7.5	8T-4141

Hex Head Bolts/Metric/Zinc Flake (Cont'd.)

Thread Size	Pitch (mm)	OAL (mm)	Grip Length (mm)	Part Number
M20	2.50	70	7.5	378-2695 (13)
M20	2.50	75	0	491-1364
M20	2.50	75	29	166-1880 (13)
M20	2.50	80	7.5	180-5932
M20	2.50	80		488-9088
M20	2.50	80	34	213-5007 (13)
M20	2.50	90	44	7X-2564
M20	2.50	90	44	112-3927 (13)
M20	2.50	90	44	303-9444 (13)
M20	2.50	100	54	7X-2565
M20	2.50	110	64	7X-2566
M20	2.50	110	64	112-3926 (13)
M20	2.50	110	64	303-9443 (13)
M20	2.50	120	74	8T-6381
M20	2.50	120	74	201-8034 (13)
M20	2.50	125	74	339-1911 (13)
M20	2.50	130	78	7X-2532
M20	2.50	130	78	489-3181
M20	2.50	140	88	8C-8478
M20	2.50	140	88	225-0098 (13)
M20	2.50	150	98	8T-4170
M20	2.50	150	98	202-0308 (13)
M20	2.50	160	108	7X-2488
M20	2.50	180	128	7X-2568
M20	2.50	180	128	488-9075
M20	2.50	190	138	488-8326
M20	2.50	190	138	488-9060
M20	2.50	190	138	437-5742
M20	2.50	200	148	7X-2569
M20	2.50	220	155	7X-2570
M20	2.50	230	165	4I-6766
M20	2.50	240	175	7X-2571
M20	2.50	240	175	8T-1491(13)
M20	2.50	250	185	089-7990
M20	2.50	260	195	125-3297
M20	2.50	270	205	199-7178
M20	2.50	290	225	222-3595
M20	2.50	310	245	3E-8045
M20	2.50	320	255	7X-2440 (13)

Thread Size	Pitch (mm)	OAL (mm)	Grip Length (mm)	Part Number
M20	2.50	330	265	4I-6994
M20	2.50	350	285	473-7175 (13)
M20	2.50	380	315	296-2039
-	Nut	-	-	8T-4131
-	Washer	-	-	8T-4123
Thread Size (dia x pitch) M24 x 1.25				
M24	3.00	35	9	7X-2572
M24	3.00	40	9	7X-2573
M24	3.00	45	9	7X-2574
M24	3.00	50	9	8T-5379
M24	3.00	60	9	7X-2575
M24	3.00	70	9	7X-2576
M24	3.00	75	9	8T-0381
M24	3.00	80	9	8T-5878
M24	3.00	80	26	489-1080
M24	3.00	80	9	114-6099 (13)
M24	3.00	90	36	7X-2577 (13)
M24	3.00	100	46	7X-2489
M24	2.00	100	46	286-0721
M24	3.00	100	9	234-2007
M24	3.00	100	6	489-4523
M24	3.00	100	46	112-3929 (13)
M24	3.00	110	56	7X-2454
M24	3.00	110	56	293-4938 (13)
M24	3.00	120	66	8T-0363
M24	3.00	120	66	475-9623
M24	3.00	120	9	152-0191
M24	3.00	120	66	112-3931 (13)
M24	3.00	125	65	288-3686 (13)
M24	3.00	130	70	8T-6380
M24	3.00	130	70	112-3928 (13)
M24	3.00	140	80	8T-4649
M24	3.00	140	80	112-3930 (13)
M24	3.00	150	90	8C-3290
M24	3.00	150	90	488-8311
M24	3.00	150	90	147-5112 (13)
M24	3.00	160	100	7X-2567
M24	3.00	160	100	475-9624
M24	3.00	160	100	169-5792 (13)

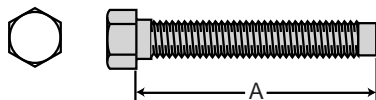
Bolts

Hex Head Bolts/Metric/Zinc Flake (Cont'd.)

Thread Size	Pitch (mm)	OAL (mm)	Grip Length (mm)	Part Number
M24	3.00	170	110	116-2434 (14)
M24	3.00	180	120	7X-2465
M24	3.00	180	108	319-3520
M24	3.00	190	130	7Y-5235
M24	3.00	190	130	298-2764 (14)
M24	3.00	200	140	7X-2578
M24	3.00	200	140	106-7994 (14)
M24	3.00	220	147	7X-2476
M24	3.00	240	167	7X-2579
M24	3.00	240	120	348-0255
M24	3.00	260	187	7X-2455
M24	3.00	280	207	9X-8477
M24	3.00	280	200	437-1474
M24	3.00	300	227	9X-8913
M24	3.00	315	242	121-7897
M24	3.00	320	247	104-9255
M24	3.00	340	267	127-4834
M24	3.00	350	277	140-3048
M24	3.00	360	287	132-5794
M24	3.00	380	307	4I-6806
M24	3.00	420	347	310-4096
M24	3.00	500	427	488-9235
-	Nut	-	-	8T-4001
-	Washer	-	-	8T-4167
Thread Size (dia x pitch) M30 x 1.25				
M30	3.50	50	10.5	7X-7900
M30	3.50	70	10.5	7Y-5232
M30	3.50	80	10.5	8C-8723
M30	3.50	90	10.5	7X-2580
M30	3.50	100	10.5	7X-2581
M30	3.50	110	44	7X-2582
M30	3.50	110	44	302-4536 (14)
M30	3.50	120	54	335-8955
M30	3.50	120	54	7X-2583 (14)
M30	3.50	130	10.5	130-0099
M30	3.50	140	68	7X-2584
M30	3.50	150	78	107-3953
M30	3.50	160	88	7X-2585
M30	3.50	160	88	313-2634 (14)

Thread Size	Pitch (mm)	OAL (mm)	Grip Length (mm)	Part Number
M30	3.50	180	108	297-0846
M30	3.50	180	108	7X-2586 (14)
M30	2.00	180	108	438-9254
M30	3.50	190	118	179-2203 (14)
M30	3.50	200	128	9X-6385
M30	3.50	200	128	190-8494 (14)
M30	2.00	200	128	438-9255
M30	3.50	210	125	304-7356 (14)
M30	3.50	210	134	207-4918
M30	3.50	220	135	3E-9850
M30	3.50	230	145	107-8425 (14)
M30	3.50	240	155	217-4455
M30	3.50	260	175	7Y-5231
M30	3.50	260	175	264-4447 (14)
M30	3.50	280	195	108-7931 (14)
M30	3.50	290	205	376-9256
M30	3.50	300	215	3E-7442
M30	3.50	300	215	264-4449 (14)
M30	3.50	320	235	264-4450 (14)
M30	3.50	350	265	264-4451 (14)
M30	3.50	360	275	9X-8478
M30	3.50	370	285	264-4452 (14)
M30	3.50	380	295	264-4453 (14)
M30	3.50	400	315	100-3205 (14)
M30	3.50	420	335	152-1351 (14)
M30	3.50	430	345	264-4454 (14)
M30	3.50	435	350	105-6203
M30	3.50	450	365	176-7524
M30	3.50	480	425	282-0867
M30	3.50	650	565	345-8533
-	Nut	-	-	8C-8722
-	Washer	-	-	9X-8258

Forcing Bolts/Inch/Fine Thread UNF



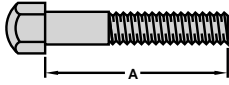
Thread Size (in - TPI)	A	Grip Length	Part Number
	Length		
7/8 - 14	5 3/8 in	0.33 in	5P-5265
1 - 14	6 15/16 in	0.97 in	5P-8715
1 1/2 - 12	2 7/8 in	0.33 in	6V-0187
1 1/2 -12	4 3/4 in	0.33 in	5P-5264

Forcing Bolts/Metric/Coarse Thread

Thread Size (dia x pitch)	A	Grip Length	Part Number
	Length		
M24 x 3.0	190 mm	13 mm	136-1978

Bolts

Track Bolts/Inch



Model	Thread Size (in - TPI)	A	Part Number
		Bolt Length	
307, E70, E70B	1/2 - 20	35 mm (1.38 in)	102-8072
307, PM465	1/2 - 20	38.1 mm (1.50 in)	3A-9605
D3, D4, 931	1/2 - 20	38.1 mm (1.50 in)	8H-7504
931C, 933C, 935C, 941, D3, D4, D4B, D3C, D4C, D3G, D4G, 215, TR225B, AP1050, PR450, SF350	9/16 - 18	41.4 mm (1.63 in)	4K-7038
AP650B, BG225C, AP1050B, BG245C	9/16 - 18	50.8 mm (2 in)	8S-4745
D5C, 561, D4, D5, D6, 941, 943, 951, 953, 955, 977, 205, 211, 213, 215, 215SA, 219, 225, PR750, PR1000, PM565, SF500, TR500 ⁽¹⁵⁾	5/8 - 18	51 mm (2.01 in)	7H-3597
D5N, D5M, D5C, D5H, D4H, 953, 939, 939C	5/8 - 18	55.1 mm (2.17 in)	9G-3110
D6, D7, 572, 955, 963, 977, 215SA, 219, 225, 225SA, 229, 231, 235, FB227	3/4 - 16	54.8 mm (2.16 in)	1S-1859
D6N, D7N, D6R, D6H, D6M, D5H, 517, 257, FB227, D6HD	3/4 - 16	60.9 mm (2.40 in)	6V-1792
D7, D8, 571, 572, 973, 977, 235, 583	3/4 - 16	61.2 mm (2.41 in)	7H-3598
D7R, D7H, D8, 973, 983, 235	7/8 - 14	67.5 mm (2.66 in)	7H-3599
235	7/8 - 14	71.1 mm (2.80 in)	5P-4028
D8T/R/N, D8L, 583R, 578	7/8 - 14	87.1 mm (3.43 in)	6V-1723
D9, 594, 245 ⁽¹⁶⁾	1 - 14	74.6 mm (2.94 in)	2M-5657
245	1 - 14	78.9 mm (3.11 in)	3T-6308
D9T/R/N	1 - 14	89.9 mm (3.54 in)	6T-2638
D9L, 589	1 - 14	96.7 mm (3.81 in)	6V-1726
D10T/R/N	1 1/8 - 12	96 mm (3.78 in)	7T-1000
D10	1 1/8 - 12	106.9 mm (4.21 in)	5P-3868
D11RN, 5130	1 3/8 - 12	109.2 mm (4.30 in)	6T-8853
5130	1 3/8 - 12	120.1 mm (4.73 in)	6I-8648

Track Bolts/Inch/Self Cleaning Shoes

Model	Thread Size (in - TPI)	A	Part Number
		Bolt Length	
D3G, D4G, D3C, D4	9/16 - 18	41.4 mm (1.63 in)	4K-7038
D3G, D4G, D3C, D4	9/16 - 18	76.2 mm (3 in)	5A-3187
D4, D5	5/8 - 18	51 mm (2.01 in)	7H-3597
D5H, D5N, D5M, D4H	5/8 - 18	55.1 mm (2.17 in)	9G-3110
D4, D5	5/8 - 18	84 mm (3.31 in)	9G-8592
D5H, D5N, D5M, D4H	5/8 - 18	89.9 mm (3.54 in)	3T-3884
D6	3/4 - 16	54.8 mm (2.16 in)	1S-1859
D7H, D6R, D6H, D6N, D6M, D5H	3/4 - 16	60.9 mm (2.40 in)	6V-1792
D7	3/4 - 16	61.2 mm (2.41 in)	7H-3598
D6N, D6M, D5H	3/4 - 16	91.9 mm (3.62 in)	107-0718
D6	3/4 - 16	99 mm (3.90 in)	5A-7524
D7	3/4 - 16	104.1 mm (4.10 in)	5P-1028

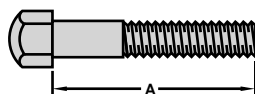
15 Use model D5C with 9K links

16 Use model 245 with 8K links

Track Bolts/Inch/Self Cleaning Shoes (Cont'd.)

Model	Thread Size (in - TPI)	A	Part Number
		Bolt Length	
D7H, D6R, D6H	3/4 - 16	104.9 mm (4.13 in)	6T-2162
D7R/H	7/8 - 14	67.5 mm (2.66 in)	7H-3599
D7R/H	7/8 - 14	109.9 mm (4.33 in)	116-8145

Track Bolts/Metric



Model	Thread Size (dia x pitch)	A	Part Number
		Bolt Length	
308, 307B	M14 x 1.50	35 mm	136-2401
311, 312, 313, 314, E110, E110B, E120, E120B	M16 x 1.50	46 mm	4I-7538
E140	M16 x 1.50	55 mm	096-1043
E180	M18 x 1.50	58 mm	093-0262
315, 317, 318, 319, 320, 321, 322, E200B, E240B, E240C	M20 x 1.50	55 mm	9W-3619
E240, E300	M20 x 1.50	63 mm	093-0266
317, 318, 319, 320, 321, 322, 320S, 325	M20 x 1.50	63 mm	6Y-0846
E300B, EL300	M20 x 1.50	70 mm	093-0265
330, 345, 350 D6R SystemOne™	M22 x 1.50	67 mm	6Y-9024
350	M22 x 1.50	73 mm	143-4891
E450	M22 x 1.50	78 mm	093-0268
345B	M24 x 1.50	67 mm	301-2299
E650	M24 x 1.50	81 mm	093-0271
365B	M27 x 2.00	78 mm	144-0805
375, 5080	M27 x 2.00	90 mm	6Y-7432
385B, 5090	M30 x 2.00	90 mm	174-0221

Track Bolts/Metric/Self Cleaning Shoes

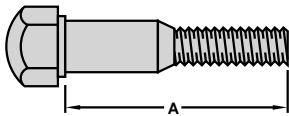
Model	Thread Size (dia x pitch)	A	Part Number
		Bolt Length	
311, 312, 313, 314, E110, E110B, E120, E120B, E140	M16 x 1.50	68 mm	093-0259
311, 312, 313, 314, E110, E110B, E120, E120B, E140	M16 x 1.50	108 mm	093-0261
E180 ⁽¹⁷⁾	M18 x 1.50	90 mm	093-0264
315, 317, 318, 319, 320, 321, 322, E200B, E240B, E240C	M20 x 1.50	55 mm	9W-3619
325	M20 x 1.50	63 mm	6Y-0846
315, 317, 318, 319, 320, 321, 322, E200B, E240B, E240C	M20 x 1.50	80 mm	8E-9349
E240 ⁽¹⁷⁾	M20 x 1.50	108 mm	096-0551

Bolts

Track Bolts/Metric/Self Cleaning Shoes (Cont'd.)

Model	Thread Size (dia x pitch)	A	Part Number
		Bolt Length	
325	M20 x 1.50	110 mm	6Y-5686
330	M22 x 1.50	67 mm	6Y-0924
330	M22 x 1.50	110 mm	254-0224

Split Master Link Bolts/Inch



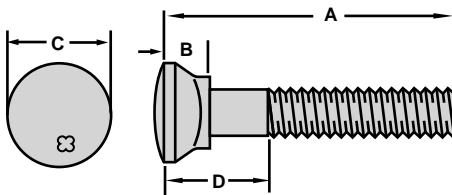
Model	Thread Size (in - TPI)	A	Part Number
		Bolt Length	
D3G, D4G, D3C, D4C	9/16 - 18	76.2 mm (3 in)	5A-3187
AP650B, BG225C, AP1050B, BG245C	9/16 - 18	88.9 mm (3.50 in)	8S-4747
D5N, D5M, D4H, D5H, D5G, D5C, 939C, 953	5/8 - 18	67 mm (2.64 in)	3T-8601
D5N, D5M, D4H	5/8 - 18	83 mm (3.27 in)	9G-8592
D5C, D4, D5, D6, 561, 941, 943, 951, 953, 955, 977 ⁽¹⁸⁾	5/8 - 18	88.9 mm (3.50 in)	3P-2274
D5H	5/8 - 18	91 mm (3.58 in)	3T-8580
D6N, D6M, D5H, 517	3/4 - 16	74 mm (2.91 in)	106-1642
D7H	3/4 - 16	80 mm (3.15 in)	6V-1793
D6N, D6M, D5H	3/4 - 16	99 mm (3.90 in)	107-0719
D6R/H, D6, D7	3/4 - 16	105 mm (4.13 in)	9S-1838
D7, 571, 572, 973, 977	3/4 - 16	113 mm (4.45 in)	2P-9670
D7R/H	7/8 - 14	87.1 mm (3.43 in)	6V-1723
D8T/R/N, D8L, 583R, 578	7/8 - 14	96 mm (3.78 in)	6V-1724
D7R/H	7/8 - 14	116 mm (4.57 in)	9W-9058
D8, 983, 583	7/8 - 14	123 mm (4.84 in)	8S-0395
D7R/H	7/8 - 14	129 mm (5.08 in)	6V-1725
D9, 594	1 - 14	87 mm (3.43 in)	8S-1723
D9T/R/N, D9L, 589	1 - 14	123 mm (4.84 in)	7T-2283
D9T/R/N, D9L, 589	1 - 14	148 mm (5.83 in)	6V-1728
D10T/R/N	1 1/8 - 12	134 mm (5.28 in)	7T-0999
D10T/R/N	1 1/8 - 12	164 mm (6.46 in)	7T-0998
D10	1 1/8 - 12	168 mm (6.61 in)	5P-8222
D11R/N	1 3/8 - 12	153 mm (6.02 in)	6T-8521
D11R/N	1 3/8 - 12	183 mm (7.20 in)	6T-8520

18 Use model D5C with 9K links

Split Master Link Bolts/Inch/Self Cleaning Shoes

Model	Thread Size (in - TPI)	A	Part Number
		Bolt Length	
D3G, D4G, D3C, D4C	9/16 - 18	76.2 mm (3 in)	5A-3187
D3G, D4G, D3C, D4C	9/16 - 18	109 mm (4.29 in)	5P-4683
D5N, D5M, D4H	5/8 - 18	83 mm (3.27 in)	9G-8592
D4, D5	5/8 - 18	88.9 mm (3.50 in)	3P-2274
D5H	5/8 - 18	91 mm (3.58 in)	3T-8580
D5N, D5M, D4H, D5H	5/8 - 18	102 mm (4.02 in)	3T-3889
D4, D5	5/8-18	117.5 mm (4.63 in)	5P-0569
D6N, D6M, D5H	3/4 - 16	99 mm (3.90 in)	107-0719
D6R/H, D6, D7	3/4 - 16	105 mm (4.13 in)	9S-1838
D6N, D6M, D5H	3/4 - 16	109 mm (4.29 in)	107-0717
D7H, D7	3/4 - 16	113 mm (4.45 in)	2P-9670
D7H	3/4 - 16	125 mm (4.92 in)	6T-1441
D6R/H, D6, D7	3/4 - 16	139 mm (5.47 in)	3P-1111
D7R/H	7/8 - 14	116 mm (4.57 in)	9W-9058
D7R/H	7/8 - 14	129 mm (5.08 in)	6V-1725

Cutting Edge Bolts/Inch/Coarse Thread



Thread Size (in - TPI)	A	B	C	D	Part Number
	Bolt Length	Head Height	Head Width	Grip Length	
Thread Size (in - TPI) 3/8 - 16					
3/8 - 16	1 in	0.31 in	0.67 in	0.44 in	8T-9414
3/8 - 16	2 in	0.31 in	0.67 in	1.00 in	4F-4048
3/8 - 16	Nut	-	-	-	9S-8752
Thread Size (in - TPI) 1/2 - 13					
1/2 - 13	1 1/4 in	0.44 in	0.89 in	0.50 in	4F-3647
1/2 - 13	1 1/2 in	0.44 in	0.89 in	0.63 in	4F-3646
1/2 - 13	1 3/4 in	0.44 in	0.89 in	0.63 in	4F-3648
1/2 - 13	2 in	0.44 in	0.89 in	0.75 in	4F-3649
1/2 - 13	2 1/4 in	0.44 in	0.89 in	1.00 in	4F-3650
1/2 - 13	2 1/2 in	0.44 in	0.89 in	1.25 in	4F-3651
1/2 - 13	2 3/4 in	0.44 in	0.89 in	1.50 in	4F-3652
1/2 - 13	3 in	0.44 in	0.89 in	1.75 in	4F-3662
1/2 - 13	3 1/2 in	0.45 in	0.89 in	2.25 in	4F-3663
1/2 - 13	5 in	0.44 in	0.89 in	3.75 in	4F-4043
1/2 - 13	Nut	-	-	-	1F-7958

Thread Size (in - TPI)	A	B	C	D	Part Number
	Bolt Length	Head Height	Head Width	Grip Length	
Thread Size (in - TPI) 5/8 - 11					
5/8 - 11	1 1/2 in	0.54 in	1.04 in	0.63 in	4F-3664
5/8 - 11	1 3/4 in	0.54 in	1.04 in	0.63 in	4F-3653
5/8 - 11	2 in	0.54 in	1.04 in	0.75 in	4F-3654
5/8 - 11	2 1/4 in	0.54 in	1.04 in	1.25 in	3F-5108
5/8 - 11	2 1/2 in	0.54 in	1.04 in	1.00 in	4F-3656
5/8 - 11	2 3/4 in	0.54 in	1.04 in	1.25 in	4F-3657
5/8 - 11	3 in	0.54 in	1.04 in	1.50 in	4F-3658
5/8 - 11	3 1/2 in	0.54 in	1.04 in	2.00 in	4F-3665
5/8 - 11	3 3/4 in	0.54 in	1.04 in	2.25 in	4F-0391
5/8 - 11	4 in	0.54 in	1.04 in	2.50 in	4F-3671
5/8 - 11	Nut	-	-	-	4K-0367
Thread Size (in - TPI) 3/4 - 10					
3/4 - 10	2 in	0.63 in	1.20 in	0.75 in	4F-3672
3/4 - 10	2 1/4 in	0.63 in	1.20 in	1.00 in	4F-7827
3/4 - 10	2 1/2 in	0.63 in	1.20 in	1.19 in	5J-4773

Bolts

Cutting Edge Bolts/Inch/Coarse Thread (Cont'd.)

Thread Size (in - TPI)	A	B	C	D	Part Number
	Bolt Length	Head Height	Head Width	Grip Length	
3/4 - 10	2 3/4 in	—	—	1.50 in	5J-4771
3/4 - 10	3 1/8 in	0.63 in	1.20 in	1.38 in	1J-6762
3/4 - 10	3 3/4 in	0.63 in	1.20 in	2.00 in	5F-8933
3/4 - 10	4 1/4 in	0.63 in	1.20 in	2.50 in	1J-0962
3/4 - 10	4 5/8 in	0.63 in	1.20 in	2.88 in	1J-6761
3/4 - 10	6 in	0.63 in	1.20 in	4.00 in	5P-6783
3/4 - 10	7 1/4 in	0.63 in	1.20 in	5.25 in	5P-6784
3/4 - 10	Nut	—	—	—	2J-3506
Thread Size (in - TPI) 7/8 - 9					
7/8 - 9	2 1/2 in	0.74 in	1.41 in	1.36 in	5J-4772
7/8 - 9	2 3/4 in	0.74 in	1.41 in	1.50 in	6F-0196
7/8 - 9	3 in	0.74 in	1.41 in	1.25 in	5J-2409
7/8 - 9	3 1/4 in	0.74 in	1.41 in	2.44 in	8J-2935
7/8 - 9	3 1/2 in	0.74 in	1.41 in	1.75 in	2J-2548
7/8 - 9	4 1/4 in	0.74 in	1.41 in	2.50 in	2J-5458
7/8 - 9	4 5/8 in	0.74 in	1.41 in	2.63 in	1J-0849
7/8 - 9	Nut	—	—	—	2J-3505
Thread Size (in - TPI) 1 - 8					
1 - 8	2 1/2 in	0.81 in	1.60 in	1.31 in	3J-2801

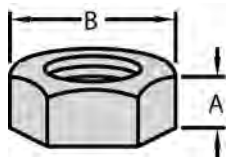
Thread Size (in - TPI)	A	B	C	D	Part Number
	Bolt Length	Head Height	Head Width	Grip Length	
1 - 8	2 3/4 in	0.81 in	1.60 in	1.50 in	1J-5607
1 - 8	3 in	0.81 in	1.60 in	1.75 in	4F-4042
1 - 8	3 1/4 in	0.81 in	1.60 in	1.91 in	4J-9058
1 - 8	3 1/2 in	0.81 in	1.60 in	2.19 in	4J-9208
1 - 8	3 3/4 in	0.81 in	1.60 in	1.50 in	1J-4948
1 - 8	3 3/4 in	0.81 in	1.60 in	2.69 in	8J-2928
1 - 8	4 in	0.81 in	1.60 in	2.95 in	5P-8136
1 - 8	4 1/2 in	0.81 in	1.60 in	2.25 in	1J-3527
1 - 8	5 1/4 in	0.81 in	1.60 in	3.00 in	1J-4947
1 - 8	6 in	0.81 in	1.60 in	3.00 in	317-1693
1 - 8	Nut	—	—	—	2J-3507
Thread Size (in - TPI) 1 1/4 - 7					
1 1/4 - 7	3 3/8 in	1.06 in	2.03 in	1.65 in	8T-9079
1 1/4 - 7	3 3/4 in	1.06 in	2.03 in	2.28 in	6V-6535
1 1/4 - 7	4 1/8 in	1.02 in	2.01 in	2.28 in	5P-8823
1 1/4 - 7	4 1/2 in	1.06 in	2.03 in	2.28 in	6V-8360
1 1/4 - 7	4 15/16 in	1.06 in	2.03 in	2.28 in	5P-8361
1 1/4 - 7	5 1/2 in	1.06 in	2.03 in	2.28 in	198-1092
1 1/4 - 7	6 1/2 in	1.06 in	2.03 in	2.28 in	209-9311
1 1/4 - 7	Nut	—	—	—	3K-9770

Maintenance Tips For Cutting Edge Hardware

1. Clean all surfaces of rust, paint, nicks, and burrs.
2. Install bolts first in the center and work out toward the edge.
3. Tighten all bolts to the specified torque (see chart below for specifications).
4. Set bolt heads firmly into the edge countersink using a heavy hammer. Safety glasses MUST be worn when striking bolt heads.
5. Tighten all bolts again to the specified torque.

Thread Size (in - TPI)	(ft lb)	Torque (N-m)	Size
5/8	200 ± 30	270 ± 40	16 mm
3/4	350 ± 45	475 ± 60	19 mm
7/8	550 ± 65	750 ± 90	22 mm
1	825 ± 110	1125 ± 150	25 mm
1 1/4	1350 ± 220	1850 ± 300	31 mm

Nuts/Hex/ Head/Inch



- Made of fine grain steel.
- Designed with a washer-faced surface.
- Provides a tensile strength comparable to SAE Grade 8 bolt.
- Hardened nuts marked with 6 lines, dashes, or dots for identification.

Coarse Thread UNC/Phosphate & Oil Coated/Hardened

Thread Size (in - TPI)	A	B	Part Number
	Nut Height	Nut Width	
1/4 - 20	0.22 in	7/16 in	9S-8750
5/16 - 18	0.27 in	1/2 in	5S-0003
3/8 - 16	0.33 in	9/16 in	9S-8752
7/16 - 14	0.38 in	11/16 in	3S-1546
1/2 - 13	0.44 in	3/4 in	1F-7958
9/16 - 12	0.48 in	7/8 in	5P-0539
5/8 - 11	0.55 in	15/16 in	4K-0367

Thread Size (in - TPI)	A	B	Part Number
	Nut Height	Nut Width	
3/4 - 10	0.64 in	1 1/8 in	2J-3506
7/8 - 9	0.75 in	1 5/16 in	2J-3505
1 - 8	0.86 in	1 1/2 in	2J-3507
1 1/8 - 7	0.97 in	1 11/16 in	4J-5977
1 1/4 - 7	1.06 in	1 7/8 in	3K-9770
1 3/8 - 6	1.17 in	2 1/16 in	9M-3770
1 1/2 - 6	1.28 in	2 1/4 in	9S-8216

Coarse Thread UNC/Zinc Plated/Hardened

Thread Size (in - TPI)	A	B	Part Number
	Nut Height	Nut Width	
1/4 - 20	0.22 in	7/16 in	6V-8185
5/16 - 18	0.27 in	1/2 in	6V-8189
3/8 - 16	0.33 in	9/16 in	6V-8801
7/16 - 14	0.37 in	11/16 in	7X-0447
1/2 - 13	0.44 in	3/4 in	6V-8188
5/8 - 11	0.55 in	15/16 in	7X-0448

Thread Size (in - TPI)	A	B	Part Number
	Nut Height	Nut Width	
3/4 - 10	0.64 in	1 1/8 in	6V-8182
7/8 - 9	0.75 in	1 5/16 in	7X-0449
1 - 8	0.86 in	1 1/2 in	6V-8190
1 1/8 - 7	0.61	1 11/16	2H-3787
1 1/4 - 7	1.06 in	1 7/8 in	7X-0451
1 1/2 - 6	1.28 in	2 1/4 in	7X-0452

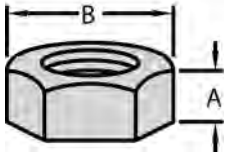
Fine Thread UNF/Phosphate & Oil Coated/Hardened

Thread Size (in - TPI)	A	B	Part Number
	Nut Height	Nut Width	
1/4 - 28	0.22 in	7/16 in	9S-8748
5/16 - 24	0.27 in	1/2 in	9S-8751
3/8 - 24	0.33 in	9/16 in	3S-2713
7/16 - 20	0.38 in	11/16 in	9S-8905
1/2 - 20	0.44 in	3/4 in	6B-6684
9/16 - 18	0.48 in	7/8 in	5P-0540
5/8 - 18	0.55 in	15/16 in	6B-6683

Thread Size (in - TPI)	A	B	Part Number
	Nut Height	Nut Width	
3/4 - 16	0.64 in	1 1/8 in	6B-6682
7/8 - 14	0.75 in	1 5/16 in	1A-5666
1 - 14	0.86 in	1 1/2 in	1A-1935
1 1/8 - 12	0.97 in	1 11/16 in	3S-1356
1 1/4 - 12	1.06 in	1 7/8 in	7H-7539
1 3/8 - 12	1.17 in	2 in	2M-0400
1 1/2 - 12	1.28 in	2 1/4 in	8H-3390

Nuts — Self-Locking Nuts/Hex Head/Inch

Self Locking Nuts/Hex Head/Inch



- Made of fine grain steel.
- Resist loosening under vibration.
- Provides a tensile strength comparable with SAE Grade 8 bolts.
- Resist loosening under vibration.

Coarse Thread UNC/Hardened

Thread Size (in - TPI)	A	B	Part Number
	Nut Height	Nut Width	
1/4 - 20	0.23 in	7/16 in	2D-6235
5/16 - 18	0.27 in	1/2 in	031-4155
3/8 - 16	0.33 in	9/16 in	2K-4973
7/16 - 14	0.38 in	11/16 in	6V-5729
1/2 - 13	0.44 in	3/4 in	1K-6872
9/16 - 12	0.50 in	7/8 in	034-9954

Thread Size (in - TPI)	A	B	Part Number
	Nut Height	Nut Width	
5/8 - 11	0.55 in	15/16 in	3K-2889
3/4 - 10	0.64 in	1 1/8 in	1K-6870
7/8 - 9	0.75 in	1 5/16 in	6K-0545
1-8	0.86 in	1 1/2 in	6K-3632
1 1/4 - 7	1.06 in	1 7/8 in	2J-5997
1 7/8 - 7	0.97 in	1 11/16 in	8D-9513

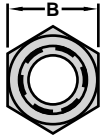
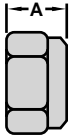
Fine Thread UNF/Hardened

Thread Size (in - TPI)	A	B	Part Number
	Nut Height	Nut Width	
1/4 - 28	0.23 in	7/16 in	2L-9038
5/16 - 24	0.27 in	1/2 in	3D-8752
1/2 - 20	0.44 in	3/4 in	2K-0564
9/16 - 18	0.50 in	7/8 in	054-5448
5/8 - 18	0.55 in	15/16 in	2K-4821
3/4 - 16	0.64 in	1 1/8 in	2K-0337

Thread Size (in - TPI)	A	B	Part Number
	Nut Height	Nut Width	
7/8 - 14	0.75 in	1 5/16 in	5D-1986
1 - 14	0.86 in	1 1/2 in	2K-7471
1 1/8 - 12	0.97 in	1 11/16 in	3D-4904
1 1/4 - 12	1.06 in	1 7/8 in	2K-7468
1 1/2 - 12	1.28 in	2 1/4 in	5M-6667

Nuts — Self-Locking Nuts/Hex Head/Inch/Plastic Insert

Self-Locking Nuts/Hex Head/Inch/Plastic Insert



- Resist loosening under vibration.

Coarse Thread/UNC/Zinc Plated/Hardened

Thread Size (in - TPI)	A	B	Part Number
	Nut Height	Nut Width	
1/4	0.31 in	7/16 in	3E-9865
5/16 - 18	0.34 in	1/2 in	3E-9860
3/8 - 16	0.45 in	9/16 in	3K-6060
1/2 - 13	0.59 in	3/4 in	9X-0941

Thread Size (in - TPI)	A	B	Part Number
	Nut Height	Nut Width	
5/8 - 11	0.75 in	15/16 in	3E-9861
3/4 - 10	0.88 in	1 1/16 in	3E-9862
7/8 - 9	0.98 in	1 1/4 in	3E-9863

Coarse Thread/UNC/Zinc Plated/Non Hardened

Thread Size (in - TPI)	A	B	Part Number
	Nut Height	Nut Width	
No. 6-32	0.18 in	5/16 in	7D-6922
No. 8-32	0.23 in	11/32 in	6D-5801

Thread Size (in - TPI)	A	B	Part Number
	Nut Height	Nut Width	
No. 10-24	0.25 in	3/8 in	031-0249
3/8 - 16	0.37 in	11/16 in	9T-2730

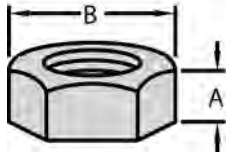
Fine Thread/UNF/Zinc Plated/Non Hardened

Thread Size (in - TPI)	A	B	Part Number
	Nut Height	Nut Width	
No. 10-32	0.25 in	3/8 in	4L-1250
1/4	0.31 in	7/16 in	3F-7674
5/16 - 24	0.34 in	1/2 in	3F-2617

Thread Size (in - TPI)	A	B	Part Number
	Nut Height	Nut Width	
3/8 - 24	0.18 in	9/16 in	2F-8616
1/2 - 20	0.59 in	3/4 in	2M-2570

Nuts — Hex Jam Nuts/Hex Head/Inch

Hex Jam Nuts/Hex Head/Inch



- Designed with a chamfered and washer-faced surface.
- For use in locking other nuts to prevent loosening.

Coarse Thread UNC/Non Hardened

Thread Size (in - TPI)	A	B	Part Number
	Nut Height	Nut Width	
1/4 - 20	0.16 in	7/16 in	1B-4427
5/16 - 18	0.19 in	1/2 in	5B-3180
3/8 - 16	0.22 in	9/16 in	1B-2578
7/16 - 14	0.25 in	11/16 in	1L-9048
1/2 - 13	0.31 in	3/4 in	3H-3680

Thread Size (in - TPI)	A	B	Part Number
	Nut Height	Nut Width	
9/16 - 12	0.31 in	7/8 in	8S-5151
5/8 - 11	0.38 in	15/16 in	1D-5118
3/4 - 10	0.42 in	1 1/8 in	1D-5119
7/8 - 9	0.48 in	1 5/16 in	5P-0541
1-8	0.55 in	1 1/2 in	1D-6306

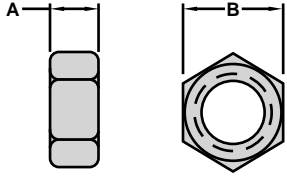
Fine Thread UNF/Non Hardened

Thread Size (in - TPI)	A	B	Part Number
	Nut Height	Nut Width	
1/4 - 28	0.16 in	7/16 in	9M-1311
5/16 - 24	0.19 in	1/2 in	4F-2294
3/8 - 24	0.22 in	9/16 in	5B-9079
7/16 - 20	0.25 in	11/16 in	5B-3254

Thread Size (in - TPI)	A	B	Part Number
	Nut Height	Nut Width	
3/4 - 16	0.42 in	1 1/8 in	1D-5120
7/8 - 14	0.48 in	1 5/16 in	1D-5121
1 - 14	0.55 in	1 1/2 in	2H-3786

Nuts — Nuts/Hex Head/Metric

Nuts/Hex Head/Metric



- Made of fine grain steel.
- Designed with a washer-faced surface.
- Provides a proof load comparable to 10.9 metric bolt.

Coarse Thread/Phosphate & Oil Coated/Hardened

Thread Size (dia x pitch)	A	B	Part Number
	Nut Height	Nut Width	
M6 x 1.00	5.20 mm	10 mm	6V-8225
M8 x 1.25	6.80 mm	13 mm	5P-7970
M10 x 1.50	8.40 mm	16 mm	2Y-5829
M12 x 1.75	10.80 mm	18 mm	6V-8149
M16 x 2.00	14.80 mm	24 mm	8T-1757

Thread Size (dia x pitch)	A	B	Part Number
	Nut Height	Nut Width	
M20 x 2.50	18.00 mm	30 mm	6V-7742
M24 x 3.00	21.50 mm	36 mm	7X-0851
M30 x 3.50	25.60 mm	46 mm	8T-1583
M36 x 4.00	31.00 mm	55 mm	8C-4032

Coarse Thread UNC/Zinc Plated and Zinc Flake Hardened

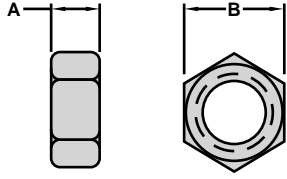
Thread Size (dia x pitch)	A	B	Part Number
	Nut Height	Nut Width	
M3 x 0.50	2.40 mm	5.5 mm	3C-6969
M6 x 1.00	5.20 mm	10 mm	5C-2890
M8 x 1.25	6.80 mm	13 mm	5C-7261
M10 x 1.50	8.40 mm	16 mm	8T-4133
M12 x 1.75	10.80 mm	18 mm	8T-4244
M16 x 2.00	14.80 mm	24 mm	8T-4132 ⁽¹⁾

Thread Size (dia x pitch)	A	B	Part Number
	Nut Height	Nut Width	
M20 x 2.50	18.00 mm	30 mm	8T-4131 ⁽¹⁾
M24 x 3.00	21.50 mm	36 mm	8T-4001 ⁽¹⁾
M30 x 3.50	25.60 mm	46 mm	8C-8722 ⁽¹⁾
M36 x 4.00	31.00 mm	55 mm	8T-4955 ⁽¹⁾

1 Zinc Flake

Nuts — Self-Locking Nuts/Hex Head/Metric

Self-Locking Nuts/Hex Head/Metric

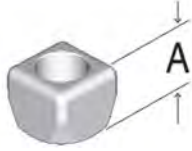


- Made of fine grain steel.
- Designed with a washer-faced surface.
- Provides a proof load comparable to 10.9 metric bolt.
- Resists loosening under vibration.

Coarse Thread UNC/Hardened

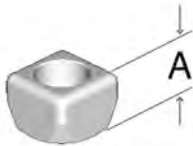
Thread Size (dia x pitch)	A		Part Number	Thread Size (dia x pitch)	A		Part Number
	Nut Height	Nut Width			Nut Height	Nut Width	
M6 x 1.00	5.90 mm	10 mm	6V-7743	M16 x 2.00	15.20 mm	24 mm	8T-4778
M8 x 1.25	7.10 mm	13 mm	6V-9189	M20 x 2.50	22.15 mm	30 mm	6V-7688
M10 x 1.50	9.00 mm	16 mm	6V-7744	M24 x 3.00	26.35 mm	36 mm	6V-7676
M12 x 1.75	11.60 mm	18 mm	6V-7687	M30 x 3.50	30.00 mm	46 mm	8T-5065

Track Nuts Inch



Model	Thread Size (in - TPI)	A	Part Number
		Nut Height	
307, E70, E70B	1/2 - 20	12.9 mm (0.51 in)	102-8073
D4	1/2 - 20	14.2 mm (0.56 in)	8H-5724
D3, 931	1/2 - 20	15.875 mm (0.63 in)	117-8885
307, PM465	1/2 - 20	16 mm (0.63 in)	117-8885
D4, 941	9/16 - 18	15.4 mm (0.61 in)	7H-3606
D3, D3B, D3C, D4C, D4B, D4, D3G, D4G, 215, 931, 933, 935, 941, PR450, PM 565, AP650B, AP1050, BG225C, BG245C, SF350, TR225B	9/16 - 18	18.2 mm (0.72 in)	7K-2017
D5N, D5M, D5G, D5C, D4, D5, D6, 561, 939, 941, 943, 951, 953, 955, 977, 205, 211, 213, 215, 215SA, 219, 225, 215SA, 219, 225, PR750, PR1000, SF500, TR500	5/8 - 18	18.2 mm (0.72 in)	1M-1408
D6N, D6M, D5H, D6R/H, D7H, 517, 527, D6, D7, D8, 955, 936, 973, 977, 571, 572, 583, 215SA, 219, 225, 225SA, FB227, 229, 231, 235	3/4 - 16	18.2 mm (0.72 in)	1S-1860
D7R/H D8, 983, 583	7/8 - 14	23.6 mm (0.93 in)	2S-2140
973, 235	7/8 - 14	23.8 mm (0.94 in)	7T-9825
D9, 594, 245	1 - 14	25.4 mm (1 in)	1S-6421
245 ⁽¹⁾	1 - 14	25.4 mm (1 in)	2V-0250

Metric

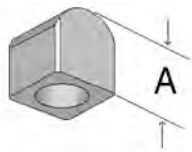


Model	Thread Size (dia x pitch)	A	Part Number
		Nut Height	
308, 307B	M14 x 1.50	14 mm	136-2402
311, 312, 313, 314, E110, E110B, E120B, E120	M16 x 1.50	16 mm	5I-6125
E140	M16 x 1.50	22 mm	099-0658
E180, EL180	M18 x 1.50	22 mm	093-0320
315, 317, 318, 319, 320, 321, 322, 325, 320S, E200B, EL200B, E240B, EL240B, E240C, EL240C	M20 x 1.50	21 mm	9W-3361
E240, EL240, E300B, E300, EL300, EL300B	M20 x 1.50	27 mm	093-0321
330, 345, 350, D6R SystemOne™	M22 x 1.50	22 mm	9W-4381
E450	M22 x 1.50	29 mm	096-0586
345B	M24 x 1.50	24 mm	150-4742
E650	M24 x 1.50	29 mm	093-0323
365B	M27 x 2.00	27 mm	144-0806
375, 5080	M27 x 2.00	38.5 mm	6Y-7433
385B, 5090B	M30 x 2.00	38.5 mm	174-0222

Nuts — Track Nuts

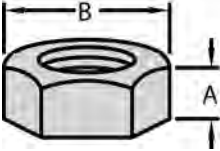
Track Nuts (Cont'd.)

Inch



Model	Thread Size (in - TPI)	A	Part Number
		Nut Height	
D8T/R/N, D8L, 583R, 578	7/8 - 14	35 mm (1.38 in)	7G-6442
D9T/R/N	1 - 14	39.8 mm (1.57 in)	7G-0343
D10, D10T/R/N, 5110B	1 3/8 - 12	43.6 mm (1.72 in)	5P-8221
D11R/N, 5130	1 3/8 - 12	45.9 mm (1.81 in)	3T-6292

Cutting Edge Nuts



Thread Size (in - TPI)	A	B	Part Number
	Height	Width	
1/2 - 20	0.44 in	3/4 in	6B-6684
5/8 - 11	0.55 in	15/16 in	4K-0367
3/4 - 10	0.64 in	1 1/8 in	2J-3506
3/4 - 16	0.64 in	1 1/8 in	6B-6682
7/8 - 9	0.75 in	1 5/16 in	2J-3505
1 - 8	0.86 in	1 1/2 in	2J-3507
1 1/4 - 7	1.06 in	1 7/8 in	3K-9770

Nuts — Wing Nuts/Zinc Plated

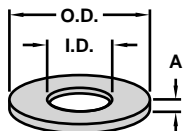
Wing Nuts Zinc Plated



- Install and remove by hand.

Inch	
Thread Size (in - TPI)	Part Number
10 - 24	6F-6898
1/4 - 20	1F-1739
5/16 - 18	3B-0723
3/8 - 16	2B-9498
1/2 - 13	053-4881
Metric	
M5 x 0.8	240-6575
M6 x 1.0	8T-2910
M8 x 1.25	095-1250
M10 x 1.50	6V-8444
M10 x 1.50	275-8115
M10 x 1.50	7E-3510
M16 x 2.00	439-2984

Washers/Flat/Inch



- Compatible with SAE Grade 5/Grade 8 and above bolts.

Phosphate and Oil Coated/Hardened

Bolt Diameter	Inside Diameter	Outside Diameter	A	Part Number
			Thickness	
1/4 in	0.28 in	0.56 in	0.08 in	5P-0537
5/16 in	0.34 in	0.62 in	0.08 in	9M-1974
3/8 in	0.39 in	0.72 in	0.09 in	5M-2894
7/16 in	0.50 in	0.88 in	0.09 in	5P-8244
1/2 in	0.53 in	1.00 in	0.12 in	5P-8245
9/16 in	0.62 in	1.14 in	0.12 in	5P-8246
5/8 in	0.67 in	1.26 in	0.14 in	5P-8247

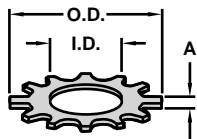
Bolt Diameter	Inside Diameter	Outside Diameter	A	Part Number
			Thickness	
3/4 in	0.79 in	1.44 in	0.14 in	5P-8248
7/8 in	0.94 in	1.62 in	0.16 in	5P-8249
1 in	1.09 in	1.94 in	0.20 in	5P-8250
1 1/8 in	1.19 in	2.06 in	0.25 in	3S-1349
1 1/4 in	1.31 in	2.12 in	0.25 in	4K-0684
1 1/2 in	1.59 in	2.62 in	0.25 in	3S-6162

Zinc Plated/Hardened

Bolt Diameter	Inside Diameter	Outside Diameter	A	Part Number
			Thickness	
1/4 in	0.28 in	0.56 in	0.08 in	8T-4205
5/16 in	0.34 in	0.62 in	0.08 in	8T-4224
3/8 in	0.41 in	0.72 in	0.09 in	8T-4896
7/16 in	0.47 in	0.88 in	0.09 in	8T-5360
1/2 in	0.53 in	1.00 in	0.12 in	8T-4223
5/8 in	0.66 in	1.25 in	0.14 in	8T-4122

Bolt Diameter	Inside Diameter	Outside Diameter	A	Part Number
			Thickness	
3/4 in	0.78 in	1.44 in	0.14 in	8T-4994
7/8 in	0.94 in	1.62 in	0.16 in	8C-6913
1 in	1.09 in	1.94 in	0.20 in	8T-5361
1 1/8 in	1.22 in	2.06 in	0.25 in	7X-0531
1 1/4 in	1.34 in	2.19 in	0.25 in	7X-0533
1 1/2 in	1.59 in	2.64 in	0.25 in	7X-0537

Lock Washers/External Tooth/Inch



- Provides "spring" action to keep assembly under tension.
- Resists corrosion due to zinc plated finish.

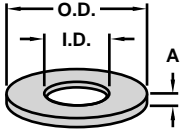
Zinc Plated/Non-Hardened

Bolt Diameter	Inside Diameter	Outside Diameter	A	Part Number
			Thickness	
No. 6	0.15 in	0.31 in	0.02 in	5H-6555
No. 8	0.17 in	0.38 in	0.02 in	1H-4393
No. 10	0.20 in	0.40 in	0.02 in	9F-8125
1/4 in	0.26 in	0.50 in	0.03 in	1H-3338
5/16 in	0.33 in	0.59 in	0.03 in	7H-3937

Bolt Diameter	Inside Diameter	Outside Diameter	A	Part Number
			Thickness	
3/8 in	0.39 in	0.69 in	0.04 in	4D-1326
7/16 in	0.46 in	0.75 in	0.04 in	7F-6998
1/2 in	0.52 in	0.89 in	0.04 in	3J-4818

Washers

Washers/Flat/Metric



- Compatible with ISO property class 8.8, 10.9, 11.9, 12.9.

Phosphate and Oil Coated/Hardened

Bolt Diameter (mm)	Inside Diameter	Outside Diameter	A	Part Number
			Thickness	
M6	6.60 mm	12.00 mm	2.00 mm	9X-8267
M8	8.80 mm	16.00 mm	2.00 mm	9M-1974
M10	11.00 mm	21.00 mm	2.50 mm	6V-5839
M12	13.50 mm	25.50 mm	3.00 mm	5P-8245
M14	15.50 mm	29.00 mm	3.00 mm	5P-8246

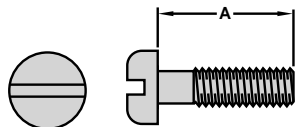
Bolt Diameter (mm)	Inside Diameter	Outside Diameter	A	Part Number
			Thickness	
M16	17.50 mm	30.00 mm	3.50 mm	9X-8268
M20	22.00 mm	35.00 mm	3.50 mm	8T-3282
M24	26.00 mm	44.00 mm	4.00 mm	6V-8237
M30	33.00 mm	56.00 mm	6.00 mm	9X-8399

Zinc Plated/Hardened

Bolt Diameter (mm)	Inside Diameter	Outside Diameter	A	Part Number
			Thickness	
M6	6.60 mm	12.00 mm	2.00 mm	9X-8256
M8	8.80 mm	16.00 mm	2.00 mm	8T-4224
M10	11.00 mm	21.00 mm	2.50 mm	8T-4121
M12	13.50 mm	25.50 mm	3.00 mm	8T-4223

Bolt Diameter (mm)	Inside Diameter	Outside Diameter	A	Part Number
			Thickness	
M16	17.50 mm	30.00 mm	3.50 mm	9X-8257
M20	22.00 mm	35.00 mm	3.50 mm	8T-4123
M24	26.00 mm	44.00 mm	4.00 mm	8T-4167
M30	33.00 mm	56.00 mm	6.00 mm	9X-8258

Pan Head/Machine Screws/Inch



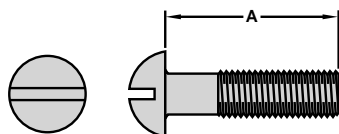
- Made of steel and finished with a zinc plating.
- Conforms to ANSI B18.6.3 standard.

Thread Size (in - TPI)	A	
	Screw Length	Part Number
No. 6 - 32	1/2 in	9X-6258
No. 6 - 32	3/4 in	2N-3476
No. 6 - 32	1 in	030-8838
No. 6 - 32	1 1/4 in	2N-3477
No. 6 - 32	1 1/2 in	033-4815
No. 8 - 32	3/4 in	7U-4892
No. 8 - 32	1 1/4 in	6V-7697

Thread Size (in - TPI)	A	
	Screw Length	Part Number
No. 8 - 32	1 1/2 in	7S-1198
No. 8 - 32	2 in	5S-9105
No. 10 - 24	3/8 in	2N-3478
No. 10 - 24	1/2 in	2N-3479
No. 10 - 24	3/4 in	2N-3480
No. 10 - 24	1 1/2 in	2N-7456

Thread Size (in - TPI)	A	
	Screw Length	Part Number
1/4 - 20	3/8 in	030-9614
1/4 - 20	5/8 in	3K-6881
1/4 - 20	3/4 in	2Y-1020
1/4 - 20	1 in	033-8755

Round Head/Machine Screws/Inch



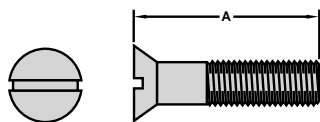
- Made of steel and finished with a zinc plating.
- Conforms to ANSI B18.6.3 standard.

Thread Size (in - TPI)	A	
	Screw Length	Part Number
No. 6 - 32	1/4 in	4B-1218
No. 6 - 32	3/8 in	5S-7348
No. 6 - 32	1 1/4 in	010-0744
No. 6 - 32	1 1/2 in	010-0746
No. 8 - 32	1/4 in	9B-7242
No. 8 - 32	3/8 in	4B-1220

Thread Size (in - TPI)	A	
	Screw Length	Part Number
No. 8 - 32	1/2 in	4B-1221
No. 8 - 32	3/4 in	5M-6668
No. 8 - 32	1 in	3K-8106
No. 10 - 24	1/4 in	4B-1226
No. 10 - 24	3/8 in	4B-1227
No. 10 - 24	1/2 in	4B-1229

Thread Size (in - TPI)	A	
	Screw Length	Part Number
No. 10 - 24	3/4 in	4B-1232
No. 10 - 24	1 1/4 in	4B-1234
No. 10 - 24	1 1/2 in	011-0508
No. 10 - 24	2 in	032-8924

Flat Head/Machine Screws/Inch/Coarse Thread



- Made of steel and finished with a zinc plating.
- Conforms to ANSI B18.6.3 standard.

Thread Size (in - TPI)	A		Drive Type	Part Number
	Screw Length			
No. 6 - 32	3/8 in		Slotted	5D-0853
No. 6 - 32	3/8 in		Int Hex	6V-7178
No. 6 - 32	1/2 in		Phillips	7K-3435
No. 6 - 32	3/4 in		Slotted	2D-6327
No. 8 - 32	1/2 in		Phillips	8T-3427
No. 8 - 32	3/4 in		Slotted	4B-1270
No. 10 - 24	3/8 in		Slotted	4B-1293
No. 10 - 24	1/2 in		Int Hex	8T-7922

Thread Size (in - TPI)	A		Drive Type	Part Number
	Screw Length			
No. 10 - 24	1/2 in		Slotted	4B-1273
No. 10 - 24	5/8 in		Int Hex	4B-1274
No. 10 - 24	3/4 in		Slotted	2H-6120
No. 10 - 24	1 in		Slotted	1H-8456
No. 10 - 24	1 1/4 in		Slotted	5P-5583
No. 10 - 24	1 3/4 in		Slotted	5P-5582
1/4 - 20	3/8 in		Slotted	2M-5139
1/4 - 20	1/2 in		Slotted	4M-0190
1/4 - 20	5/8 in		Slotted	4B-1281

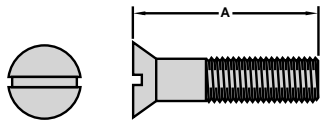
Screws

Flat Head/Machine Screws/Inch/Coarse Thread (Cont'd.)

Thread Size (in - TPI)	A	Drive Type	Part Number
	Screw Length		
1/4 - 20	5/8 in	Int Hex	9M-2750
1/4 - 20	5/8 in	Int Hex	033-0695
1/4 - 20	3/4 in	Int Hex	6D-5799
1/4 - 20	1 in	Slotted	4B-1284
1/4 - 20	1 in	Int Hex	8M-6802
1/4 - 20	1 in	Int Hex	7D-6921
1/4 - 20	1 1/4 in	Slotted	4B-1285
1/4 - 20	1 1/2 in	Slotted	1H-8294
1/4 - 20	1 3/4 in	Slotted	1H-8298
1/4 - 20	3 3/4 in	Int Hex	107-5011
5/16 - 18	1/2 in	Slotted	4B-1286
5/16 - 18	5/8 in	Int Hex	034-3223
5/16 - 18	3/4 in	Int Hex	077-2907
5/16 - 18	7/8 in	Torx	119-0036
5/16 - 18	1 1/4 in	Slotted	1H-8293
5/16 - 18	1 1/2 in	Slotted	1H-8658
5/16 - 18	1 3/4 in	Int Hex	034-3101
5/16 - 18	1 3/4 in	Slotted	5P-0399

Thread Size (in - TPI)	A	Drive Type	Part Number
	Screw Length		
5/16 - 18	2 1/4 in	Slotted	6N-0768
5/16 - 18	4 in	Int Hex	107-5012
3/8 - 16	3/4 in	Slotted	1H-8296
3/8 - 16	3/4 in	Int Hex	108-4311
3/8 - 16	1 in	Int Hex	030-9621
3/8 - 16	1 in	Int Hex	030-7571
3/8 - 16	1 in	Slotted	4B-1291
3/8 - 16	1 1/2 in	Slotted	8F-6987
3/8 - 16	1 3/4 in	Slotted	8H-9579
3/8 - 16	2 in	Int Hex	032-0682
1/2 - 13	1 in	Int Hex	107-2783
1/2 - 13	1 in	Int Hex	4K-1493
1/2 - 13	1 1/2 in	Int Hex	107-2784
1/2 - 13	1 3/4 in	Int Hex	2J-0996
5/8 - 18	1 1/2 in	Int Hex	8T-4110
3/4 - 10	1 3/4 in	Int Hex	105-3517
3/4 - 10	2 in	Int Hex	061-6666

Flat Head/Machine Screws/Metric/Coarse Thread



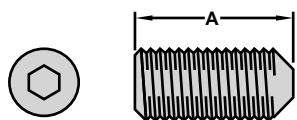
Thread Size (in - TPI)	Screw Length	Drive Type	Part Number
M2.5 x 0.45	10 mm	Phillips	6V-9668
M3 x 0.50	12 mm	Slotted	081-6373
M4 x 0.70	10 mm	Int Hex	3E-4302
M4 x 0.70	10 mm	Phillips	8T-0309
M4 x 0.70	20 mm	Phillips	167-4063
M4 x 0.70	20 mm	Slotted	8T-7585
M5 x 0.80	12 mm	Int Hex	205-2941
M5 x 0.80	25 mm	Int Hex	8T-1573
M5 x 0.80	30 mm	Phillips	8C-6428
M5 x 0.80	35 mm	Slotted	8T-0386
M6 x 1.00	16 mm	Torx	127-1960
M6 x 1.00	16 mm	Int Hex	5C-7423
M6 x 1.00	20 mm	Int Hex	9X-6155
M6 x 1.00	20 mm	Phillips	8C-8454
M6 x 1.00	25 mm	Int Hex	119-5025
M6 x 1.00	25 mm	Int Hex	260-6695
M6 x 1.00	30 mm	Int Hex	205-5149
M6 x 1.00	30 mm	Phillips	8C-6430
M6 x 1.00	30 mm	Int Hex	8C-6802
M6 x 1.00	40 mm	Phillips	7X-0847

Thread Size (in - TPI)	Screw Length	Drive Type	Part Number
M8 x 1.00	40 mm	Phillips	8C-6431
M8 x 1.25	14 mm	Slotted	6V-8973
M8 x 1.25	16 mm	Int Hex	171-9455
M8 x 1.25	20 mm	Int Hex	8C-7562
M8 x 1.25	20 mm	Int Hex	8C-7505
M8 x 1.25	30 mm	Int Hex	131-3539
M8 x 1.25	30 mm	Phillips	117-6952
M8 x 1.25	60 mm	Int Hex	114-3350
M8 x 1.25	80 mm	Slotted	133-8831
M10 x 1.50	20 mm	Int Hex	127-2909
M10 x 1.50	25 mm	Int Hex	6V-7726
M10 x 1.50	25 mm	Int Hex	157-0949
M10 x 1.50	30 mm	Int Hex	3E-4310
M10 x 1.50	40 mm	Int Hex	191-9739
M12 x 1.75	35 mm	Int Hex	123-0354
M12 x 1.75	40 mm	Int Hex	145-1893
M12 x 1.75	45 mm	Int Hex	160-0018
M12 x 1.75	60 mm	Int Hex	173-8341
M12 x 1.75	80 mm	Int Hex	172-4014
M16 x 2.00	30 mm	Int Hex	8C-6789

Flat Head/Machine Screws/Metric/Coarse Thread (Cont'd.)

Thread Size (in - TPI)	Screw Length	Drive Type	Part Number	Thread Size (in - TPI)	Screw Length	Drive Type	Part Number
M16 x 2.00	50 mm	Int Hex	159-2953	M20 x 2.50	100 mm	Int Hex	144-2715
M16 x 2.00	55 mm	Int Hex	246-4349	M20 x 2.50	110 mm	Int Hex	144-2687
M16 x 2.00	60 mm	Int Hex	159-8839	M20 x 2.50	120 mm	Int Hex	144-3087
M16 x 2.00	70 mm	Int Hex	144-2531	M20 x 2.50	150 mm	Int Hex	174-6943
M16 x 2.00	80 mm	Int Hex	135-3241	M20 x 2.50	160 mm	Int Hex	175-0335
M20 x 2.50	70 mm	Int Hex	169-6065	M24 x 3.00	90 mm	Int Hex	170-4740
M20 x 2.50	75 mm	Int Hex	145-4075	M24 x 3.00	120 mm	Int Hex	144-6589
M20 x 2.50	80 mm	Int Hex	170-3524	M24 x 3.00	140 mm	Int Hex	144-7425
M20 x 2.50	90 mm	Int Hex	144-2698	M24 x 3.00	160 mm	Int Hex	144-5966

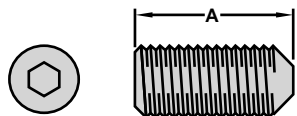
Cup Point/Set Screws/Inch/UNC



- Heat treated with a black oxide finish.

Thread Size (in - TPI)	A		Thread Size (in - TPI)	A		Thread Size (in - TPI)	A	
	Screw Length	Part Number		Screw Length	Part Number		Screw Length	Part Number
8 - 32	1/4 in	9L-9596	1/4 - 20	1 in	8C-3996	3/8 - 16	5/8 in	2F-5325
No. 10 - 24	1/4 in	5B-9324	5/16 - 18	1/4 in	010-2580	3/8 - 16	3/4 in	3H-8430
No. 10 - 24	3/8 in	8C-8430	5/16 - 18	3/8 in	8B-7179	3/8 - 16	1 in	010-2597
No. 10 - 24	1/2 in	4B-3627	5/16 - 18	3/4 in	5P-2556	3/8 - 16	1 1/8 in	4L-4155
1/4 - 20	1/4 in	4B-9806	5/16 - 18	3/4 in	1T-0241	1/2 - 13	1/2 in	010-2615
1/4 - 20	1/4 in	8T-3601	5/16 - 18	27/32 in	144-0691	1/2 - 13	1/2 in	031-8610
1/4 - 20	5/16 in	010-2571	5/16 - 18	1 3/16 in	4D-5253	1/2 - 13	1/2 in	8J-5912
1/4 - 20	3/8 in	010-2570	5/16 - 18	1 1/2 in	5N-2882	1/2 - 13	5/8 in	010-2616
1/4 - 20	1/2 in	4B-9808	5/16 - 18	1 1/2 in	1N-3887	1/2 - 13	3/4 in	4B-1771
1/4 - 20	1/2 in	173-5787	3/8 - 16	1/4 in	010-2591	1/2 - 13	1 in	2H-3906
1/4 - 20	5/8 in	1K-6979	3/8 - 16	3/8 in	2F-5326			
1/4 - 20	3/4 in	010-2573	3/8 - 16	1/2 in	3B-8601			

Cup Point/Set Screws/Metric/Coarse Thread



- Heat treated with a black oxide finish.

Thread Size (in - TPI)	A		Thread Size (in - TPI)	A		Thread Size (in - TPI)	A	
	Screw Length	Part Number		Screw Length	Part Number		Screw Length	Part Number
M4 x 0.70	20 mm	7X-7889	M6 x 1.00	8 mm	6V-9327	M6 x 1.00	40 mm	087-4759
M5 x 0.70	12 mm	9Y-9846	M6 x 1.00	10 mm	6V-8932	M6 x 1.00	60 mm	109-5550
M5 x 0.80	20 mm	106-5472	M6 x 1.00	12 mm	8C-7531	M8 x 1.25	16 mm	8T-0351
M5 x 0.80	25 mm	8T-5434	M6 x 1.00	16 mm	095-1274	M8 x 1.25	20 mm	8T-2997
M5 x 0.80	30 mm	8T-6702	M6 x 1.00	16 mm	8T-0723	M8 x 1.25	30 mm	123-0368
M6 x 1.00	6 mm	095-1260	M6 x 1.00	25 mm	178-7877	M8 x 1.25	31.3 mm	6E-5583
M6 x 1.00	8 mm	9X-6608	M6 x 1.00	30 mm	099-5742	M8 x 1.25	45 mm	9X-8914

Screws

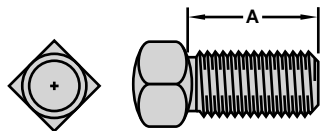
Cup Point/Set Screws/Metric/Coarse Thread (Cont'd.)

Thread Size (in - TPI)	A	
	Screw Length	Part Number
M10 x 1.50	12 mm	095-1267
M10 x 1.50	16 mm	9X-6611
M10 x 1.50	21 mm	087-4710
M10 x 1.50	30 mm	096-2966
M10 x 1.50	44.3 mm	260-7524
M10 x 1.50	120 mm	274-9987
M12 x 1.25	50 mm	9T-6779
M12 x 1.75	10 mm	8T-9533
M12 x 1.75	12 mm	096-3216
M12 x 1.75	20 mm	095-1277

Thread Size (in - TPI)	A	
	Screw Length	Part Number
M12 x 1.75	30 mm	095-1270
M12 x 1.75	50 mm	9X-2403
M12 x 1.75	70 mm	9X-8482
M12 x 1.75	80 mm	9X-8483
M12 x 1.75	90 mm	125-1379
M12 x 1.75	110 mm	195-3834
M14 x 2.00	14 mm	096-6210
M16 x 2.00	22 mm	7Y-0466
M16 x 2.00	30 mm	095-1271
M16 x 2.00	130 mm	136-8416

Thread Size (in - TPI)	A	
	Screw Length	Part Number
M20 x 2.50	25 mm	099-8112
M20 x 2.50	45 mm	225-4607
M20 x 2.50	50 mm	096-5400
M20 x 2.50	60 mm	8T-5064
M20 x 2.50	80 mm	129-2220
M20 x 2.50	100 mm	8T-8555
M24 x 3.00	25 mm	157-2235
M27 x 2.00	27 mm	7Y-8436

Square Head/Set Screws/Inch/Coarse Thread UNC



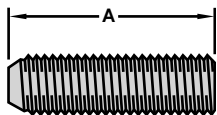
- Made of case-hardened steel with a full square head.

Thread Size (in - TPI)	A	
	Screw Length	Part Number
1/4 - 20	3/8 in	4B-3565
1/4 - 20	1/2 in	4B-3566
1/4 - 20	1 in	4B-3569
5/16 - 18	3/8 in	4B-3571
5/16 - 18	1/2 in	4B-3570
3/8 - 16	3/8 in	4B-3573
3/8 - 16	1/2 in	4B-3572
3/8 - 16	3/4 in	4B-3574
3/8 - 16	7/8 in	4B-4994
3/8 - 16	1 in	4B-3575
3/8 - 16	1 1/4 in	4B-3576
3/8 - 16	1 1/2 in	4B-3577

Thread Size (in - TPI)	A	
	Screw Length	Part Number
3/8 - 16	1 3/4 in	2H-3881
1/2 - 13	3/4 in	4B-3580
1/2 - 13	7/8 in	4B-3581
1/2 - 13	1 1/4 in	4B-3583
1/2 - 13	1 1/2 in	4B-3584
1/2 - 13	1 3/4 in	4B-3585
1/2 - 13	2 in	4B-3586
1/2 - 13	5 in	4B-3626
5/8 - 11	1 1/2 in	4B-3594
5/8 - 11	1 3/4 in	4B-3595
5/8 - 11	2 in	4B-3596
5/8 - 11	2 in	4B-3619

Thread Size (in - TPI)	A	
	Screw Length	Part Number
5/8 - 11	3 in	4B-3599
3/4 - 10	1 1/2 in	4B-3601
3/4 - 10	1 3/4 in	4B-3602
3/4 - 10	2 in	4B-3603
3/4 - 10	2 1/2 in	4B-3604
3/4 - 10	2 27/32 in	4B-3605
3/4 - 10	4 1/2 in	8T-4162
1 - 8	2 3/4 in	2K-3229
1 - 8	3 1/4 in	292-5889
1 - 8	3 1/4 in	4D-8318
1 - 14	3 7/8 in	4L-6665
1 1/2 - 12	7 1/2 in	6V-5137

Taper Lock/Studs/Inch/Coarse Thread



- Heat treated with a direct-hardening process.
- Hardened to Rockwell C33-39
- Designed with a taper point for a plug tap.
- Meet SAE grade 8 strength requirements.

Thread Size (in - TPI)	A	
	Screw Length	Part Number
3/8 - 16	1 3/8 in	9M-2151
3/8 - 16	1 9/16 in	5P-2603
3/8 - 16	1 9/16 in	2M-1538

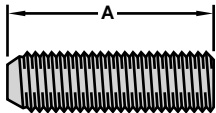
Thread Size (in - TPI)	A	
	Screw Length	Part Number
3/8 - 16	1 11/16 in	2N-9288
3/8 - 16	1 3/4 in	2M-4779
3/8 - 16	1 3/4 in	6L-8562

Thread Size (in - TPI)	A	
	Screw Length	Part Number
3/8 - 16	1 31/32 in	1J-8668
3/8 - 16	2 in	7L-0520
3/8 - 16	2 5/32 in	313-9550

Taper Lock/Studs/Inch/Coarse Thread (Cont'd.)

Thread Size (in - TPI)	A		Thread Size (in - TPI)	A		Thread Size (in - TPI)	A	
	Screw Length	Part Number		Screw Length	Part Number		Screw Length	Part Number
3/8 - 16	2 3/16 in	4M-2743	1/2 - 13	2 3/16 in	5M-1932	3/4 - 10	2 15/16 in	4D-6578
3/8 - 16	2 3/16 in	6V-1525	1/2 - 13	2 3/8 in	2D-8154	3/4 - 10	3 1/8 in	4D-7246
3/8 - 16	2 3/8 in	8M-1871	1/2 - 13	2 9/16 in	4J-6925	3/4 - 10	3 3/8 in	7D-3504
3/8 - 16	2 3/8 in	106-1793	1/2 - 13	2 13/16 in	3D-0472	3/4 - 10	3 9/16 in	5J-6796
3/8 - 16	2 5/8 in	3M-0496	1/2 - 13	3 in	3D-6627	3/4 - 10	3 13/16 in	6D-1915
3/8 - 16	2 5/8 in	9L-1658	1/2 - 13	3 1/8 in	2D-8426	3/4 - 10	4 3/16 in	2P-1303
3/8 - 16	2 3/4 in	6V-1426	1/2 - 13	3 3/8 in	9H-1288	7/8 - 9	3 1/8 in	7D-2838
3/8 - 16	2 13/16 in	7S-6719	1/2 - 13	3 9/16 in	2D-8155	7/8 - 9	3 9/16 in	4D-6589
3/8 - 16	2 15/16 in	9M-3296	1/2 - 13	3 13/16 in	3D-0473	7/8 - 9	3 3/4 in	139-4774
3/8 - 16	3 1/16 in	9L-1657	1/2 - 13	4 1/2 in	5P-7071	7/8 - 9	4 3/16 in	4D-7259
3/8 - 16	3 1/8 in	2M-8411	5/8 - 11	2 3/16 in	3D-4639	7/8 - 9	4 7/16 in	5P-2098
3/8 - 16	3 3/16 in	4S-6137	5/8 - 11	2 3/8 in	2D-8822	1 - 8	3 15/16 in	229-4975
3/8 - 16	3 11/32 in	9X-2840	5/8 - 11	2 9/16 in	2D-5238	1 - 8	3 15/16 in	139-4775
3/8 - 16	3 35/64 in	6V-1427	5/8 - 11	2 3/4 in	4D-4823	1 - 8	3 15/16 in	5D-3118
3/8 - 16	3 9/16 in	2M-2488	5/8 - 11	2 15/16 in	6L-7655	1 - 8	4 3/16 in	9M-5854
3/8 - 16	3 15/16 in	106-1792	5/8 - 11	3 3/16 in	3J-8154	1 - 8	4 7/16 in	9M-3948
3/8 - 16	4 in	6L-4428	5/8 - 11	3 3/8 in	3D-8439	1 - 8	4 15/16 in	6D-0419
3/8 - 16	4 3/16 in	2P-1974	5/8 - 11	3 9/16 in	3D-5963	1 - 8	5 1/8 in	5D-0600
3/8 - 16	4 1/2 in	101-8917	5/8 - 11	4 in	5P-3887	1 1/2 - 16	2 5/16 in	2W-8225
1/2 - 13	1 9/16 in	8M-8778	5/8 - 11	4 3/16 in	5D-4809	1 1/2 - 16	39 5/8 in	2P-4304
1/2 - 13	1 3/4 in	2D-8153	3/4 - 10	2 9/16 in	4D-6579			
1/2 - 13	2 in	3D-0490	3/4 - 10	2 3/4 in	2D-8369			

Taper Lock/Studs/Metric/Coarse Thread



- Heat treated with a direct-hardening process.
- Hardened to Rockwell C33-39
- Designed with a taper point for a plug tap.
- Meet SAE grade 8 strength requirements.

Thread Size (dia x pitch)	A		Thread Size (dia x pitch)	A		Thread Size (dia x pitch)	A	
	Screw Length	Part Number		Screw Length	Part Number		Screw Length	Part Number
M8 x 1.25	30 mm	329-8793	M10 x 1.50	50 mm	264-0168	M10 x 1.50	100 mm	274-6085
M8 x 1.25	40 mm	191-6301	M10 x 1.50	50 mm	245-9750	M12 x 1.75	45 mm	141-9481
M8 x 1.25	45 mm	232-5849	M10 x 1.50	50 mm	281-2592	M12 x 1.75	50 mm	8T-5414
M8 x 1.25	50 mm	295-4142	M10 x 1.50	55 mm	309-1906	M12 x 1.75	55 mm	3E-4319
M8 x 1.25	55 mm	328-0826	M10 x 1.50	60 mm	288-4402	M12 x 1.75	55 mm	124-8101
M8 x 1.25	65 mm	9X-8496	M10 x 1.50	65 mm	109-3001	M12 x 1.75	65 mm	246-5451
M8 x 1.25	95 mm	192-7207	M10 x 1.50	70 mm	231-0336	M12 x 1.75	70 mm	310-1945
M10 x 1.50	35 mm	8T-7004	M10 x 1.50	75 mm	224-5445	M12 x 1.75	80 mm	272-1882
M10 x 1.50	35 mm	250-0485	M10 x 1.50	80 mm	259-7140	M16 x 2.00	70 mm	8C-0623
M10 x 1.50	40 mm	8T-7044	M10 x 1.50	85 mm	116-3715	M16 x 2.00	85 mm	296-5175
M10 x 1.50	45 mm	133-7810	M10 x 1.50	85 mm	288-4403	M16 x 2.00	85 mm	151-6286
M10 x 1.50	45 mm	186-0870	M10 x 1.50	95 mm	268-4779	M16 x 2.00	90 mm	341-3770
M10 x 1.50	45 mm	351-9434	M10 x 1.50	100 mm	335-2395	M16 x 2.00	120 mm	342-9452
M10 x 1.50	45 mm	9X-8281	M10 x 1.50	100 mm	309-1905	M16 x 2.00	130 mm	8C-6709

Screws

Taper Lock/Studs/Metric/Coarse Thread (Cont'd.)

Thread Size (dia x pitch)	A	Part Number
	Screw Length	
M20 x 2.50	75 mm	116-3719
M20 x 2.50	85 mm	286-2631

Thread Size (dia x pitch)	A	Part Number
	Screw Length	
M20 x 2.50	85 mm	160-0011
M24 x 3.00	105 mm	116-3720

Thread Size (dia x pitch)	A	Part Number
	Screw Length	
M24 x 3.00	140 mm	292-4252
M36 x 4.00	135 mm	151-6288

Standard/Studs/Inch/Coarse Thread UNC

Thread Size (in - TPI)	Screw Length	Part Number
No. 1 - 5	17 17/32 in	266-8994
No. 1 - 14	13 1/2 in	344-4705
No. 1 - 14	14 in	6V-2078
No. 1 - 14	14 15/16 in	252-9971
No. 1 - 14	16 3/8 in	252-9951
No. 1 - 14	18 in	5P-4776
1/4 - 20	1 3/4 in	037-6874
1/4 - 28	1 3/8 in	4V-0151
1/4 - 28	1 7/16 in	8Y-2952
1/4 - 28	2 1/4 in	8L-9315
5/16 - 24	1 3/8 in	3N-7824
5/16 - 24	1 3/4 in	3N-2775
5/16 - 24	2 3/8 in	6B-0607

Thread Size (in - TPI)	Screw Length	Part Number
5/16 - 24	3 in	061-7284
3/8 - 16	1 in	133-5261
3/8 - 16	1 3/4 in	5P-9263
3/8 - 16	1 3/4 in	4K-2877
3/8 - 16	2 in	9L-4023
3/8 - 16	2 in	031-2666
3/8 - 16	2 1/2 in	4D-9589
3/8 - 16	3 1/4 in	9W-9687
3/8 - 16	3 3/8 in	5F-6849
1/2 - 13	4 in	193-1450
1/2 - 13	4 1/64 in	3D-0471
1/2 - 13	5 in	262-4377

Thread Size (in - TPI)	Screw Length	Part Number
1/2 - 20	2 3/8 in	4D-7235
5/8 - 11	3 5/8 in	7U-5270
5/8 - 18	8 1/2 in	8B-7552
5/8 - 18	8 7/8 in	6W-8509
5/8 - 18	12 in	8K-8466
3/4 - 10	9 5/8 in	1U-9597
1 1/8 - 12	20 in	1U-7758
1 1/4 - 5	24 in	264-5774
1 1/4 - 12	18 in	5P-4184
1 1/2 - 12	23 5/8 in	5P-7273
1 1/2 - 12	32 3/32 in	6V-2074

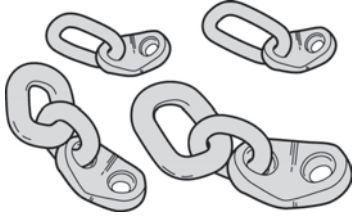
Standard/Studs/Metric/Coarse Thread

Thread Size (dia x pitch)	Screw Length	Part Number
M5 x 0.80	40 mm	240-6577
M6 x 1.00	25 mm	8T-3982
M6 x 1.00	40 mm	6R-7651
M6 x 1.00	108 mm	320-9318
M8 x 1.25	31 mm	216-1035
M8 x 1.25	33 mm	216-1036
M8 x 1.25	35 mm	157-8861
M8 x 1.25	50 mm	166-0599
M8 x 1.25	60 mm	121-0483
M8 x 1.25	82 mm	111-9897
M8 x 1.25	225 mm	217-6670
M10 x 1.25	516 mm	334-7396
M10 x 1.50	43 mm	172-2663

Thread Size (dia x pitch)	Screw Length	Part Number
M10 x 1.50	46 mm	172-2718
M10 x 1.50	48 mm	331-4350
M10 x 1.50	55 mm	180-3998
M10 x 1.50	55 mm	376-3408
M10 x 1.50	60 mm	357-0351
M10 x 1.50	60 mm	7Y-8710
M10 x 1.50	65 mm	9R-4764
M10 x 1.50	75 mm	164-1525
M10 x 1.50	80 mm	115-1958
M10 x 1.50	83 mm	164-1438
M10 x 1.50	95 mm	9R-3579
M10 x 1.50	100 mm	338-4549
M10 x 1.50	105 mm	9R-2753

Thread Size (dia x pitch)	Screw Length	Part Number
M10 x 1.50	110 mm	356-2419
M10 x 1.50	125 mm	288-7158
M12 x 1.75	60 mm	7X-3342
M12 x 1.75	60 mm	7X-3149
M12 x 1.75	85 mm	358-3156
M12 x 1.75	200 mm	152-2489
M14 x 2.00	65 mm	285-6325
M14 x 2.00	85 mm	242-2911
M16 x 2.00	60 mm	9X-2209
M16 x 2.00	127 mm	338-3116
M16 x 2.00	150 mm	332-0035
M16 x 2.00	165 mm	215-3965
M24 x 3.00	140 mm	212-8687

Link Brackets

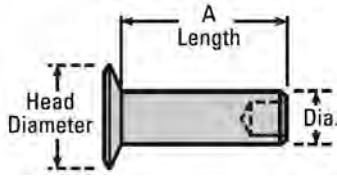


- Used to remove or install large components such as excavator swing gears (provides acceptable method of attaching hoist to component).
- 9U-6502 Link Bracket is used specifically to remove and install swing gear and bearing assembly on 5130 and 5230 Mining Excavators.
- All link brackets meet ANSI Standards for lifting devices.
- Bolts directly onto swing bearing/gear or other component (always use Grade 8 bolts to attach link bracket to component).
- Requires less clearance than standard eye bolt and makes placement/alignment of swing gear/bearing much faster and simpler.
- Used for any general purpose lifting where bracket can be attached to component.
- These link brackets are 100% proof tested at two times the working load limit. They comply with the requirements of ANSI/ASME B30.9.1984 as noted on the Certificate of Proof Test contained with each piece.

Part Number	Bolt Size	Working Load Limit	Minimum Bolt Torque
138-7573	3/8 in	1000 kg (2,205 lb)	43 Nm (32 lb ft)
138-7575	1/2 in	1800 kg (3,968 lb)	95 Nm (70 lb ft)
138-7574	3/4 in	4000 kg (8,818 lb)	360 Nm (266 lb ft)
138-7576	30 mm (1 1/4 in)	4000 kg (8,818 lb)	1300 Nm (959 lb ft)
163-6455	36 mm	5448 kg (12,011 lb)	2700 Nm (1,991 lb ft)

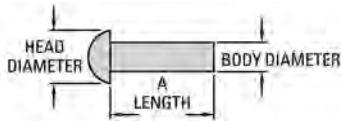
Rivets

Rivets/Flat Head/Countersunk Shank/Inch



Body Diameter	A	Head Diameter	Part Number	Material
	Length			
5/32 in	5/16 in	3/8 in	6B-4284	Steel
3/16 in	9/32 in	3/8 in	7B-5048	Brass
3/16 in	5/16 in	3/8 in	7B-5050	Brass
3/16 in	3/8 in	3/8 in	7B-5054	Brass
3/16 in	13/32 in	3/8 in	7B-5056	Brass
3/16 in	15/32 in	3/8 in	7B-5060	Brass
3/16 in	1/2 in	3/8 in	7B-5062	Brass
3/16 in	17/32 in	3/8 in	6B-1985	Steel
3/16 in	17/32 in	3/8 in	7B-5064	Brass
3/16 in	19/32 in	3/8 in	6B-4594	Steel
3/16 in	19/32 in	3/8 in	7B-5068	Brass
3/16 in	3/4 in	3/8 in	6B-1369	Steel

Rivets/Button Head/Solid Shank/Inch

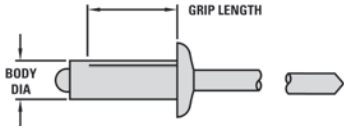


- Made of cold-formed steel.
- Meets ANSI B18.1.1 requirements.

Body Diameter	A	Head Diameter	Part Number
	Length		
1/8 in	1/4 in	0.23	4B-4304
1/8 in	3/8 in	0.23	4B-4306
1/8 in	1/2 in	0.23	4B-4307
3/16 in	3/8 in	0.34	4B-4310
3/16 in	1/2 in	0.34	4B-4311
3/16 in	5/8 in	0.34	4B-4312
3/16 in	3/4 in	0.34	4B-4314
3/16 in	7/8 in	0.34	1J-6280
3/16 in	1 in	0.34	4B-4315
1/4 in	3/8 in	0.45	4B-4319
1/4 in	1/2 in	0.45	4B-4320
1/4 in	5/8 in	0.45	4B-4321

Body Diameter	A	Head Diameter	Part Number
	Length		
1/4 in	3/4 in	0.45	4B-4322
1/4 in	7/8 in	0.56	1F-3577
1/4 in	1 1/8 in	0.45	4B-4325
5/16 in	5/8 in	0.56	4B-4334
5/16 in	3/4 in	0.56	4B-4335
5/16 in	7/8 in	0.56	4B-4336
5/16 in	1 in	0.56	4B-4337
3/8 in	3/4 in	0.67	4B-4343
3/8 in	7/8 in	0.67	4B-4344
3/8 in	1 in	0.67	4B-4345
3/8 in	1 1/8 in	0.67	4B-4346
3/8 in	1 1/4 in	0.67	4B-4347

Rivets/Blind/Inch



- Contains an open-end and a steel mandrel.

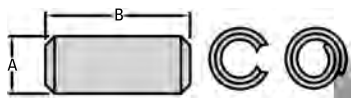
Body Diameter	Grip Length	Part Number
1/8 in	1/16 - 1/8 in	8L-7905
1/8 in	1/8 - 3/16 in	7K-6536
1/8 in	5/16 - 3/8 in	9M-5731
1/8 in	3/8 - 1/2 in	6K-3273

Body Diameter	Grip Length	Part Number
5/32 in	1/8 - 1/4 in	2N-2258
5/32 in	1/4 - 3/8 in	034-7044
3/16 in	1/8 - 1/4 in	9M-5733
3/16 in	1/4 - 3/8 in	9M-5732

Body Diameter	Grip Length	Part Number
3/16 in	3/8 - 1/2 in	033-9412
3/16 in	1/2 - 5/8 in	4D-6716

Pins

Spring Pins/Roll Pin/Inch



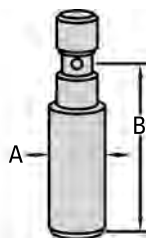
- Contains a chamfered end for easy installation.
- Made of heat-treated steel.

A Diameter	B Pin Length	Part Number
1/16 in	1/4 in	8S-7499
1/16 in	3/8 in	1L-5316
1/16 in	1/2 in	8S-3157
1/16 in	3/4 in	2L-4911
3/32 in	1/2 in	3H-1118
3/32 in	5/8 in	2K-3455
3/32 in	3/4 in	2L-5894
3/32 in	1 in	5M-8009
3/32 in	1 1/8 in	032-8870
1/8 in	3/8 in	8L-6565
1/8 in	1/2 in	3H-9675
1/8 in	5/8 in	4H-1641
1/8 in	3/4 in	3K-4897
1/8 in	7/8 in	8T-0277
1/8 in	1 1/4 in	2K-8467
5/32 in	1/2 in	1T-0099
5/32 in	3/4 in	2L-5893
5/32 in	1 in	5H-9839
5/32 in	1 1/2 in	6V-3259
3/16 in	1/2 in	5H-8985
3/16 in	5/8 in	2K-5986
3/16 in	5/8 in	3S-8109
3/16 in	3/4 in	4H-8380

A Diameter	B Pin Length	Part Number
3/16 in	1 in	6H-3956
3/16 in	1 1/4 in	138-1645
3/16 in	1 1/4 in	1H-1200
3/16 in	1 1/2 in	4H-3119
3/16 in	1 3/4 in	1J-5799
1/4 in	1/2 in	6B-6863
1/4 in	5/8 in	3H-2617
1/4 in	45/64 in	095-0884
1/4 in	3/4 in	7M-5130
1/4 in	7/8 in	3S-2708
1/4 in	1 in	5H-3182
1/4 in	1 1/4 in	5H-3193
1/4 in	1 1/2 in	2L-1699
1/4 in	2 in	4H-6996
1/4 in	2 1/2 in	1J-5353
5/16 in	3/4 in	4H-1440
5/16 in	1 in	1T-0550
5/16 in	1 1/4 in	8T-2925
5/16 in	1 13/32 in	095-0891
5/16 in	1 1/2 in	2H-9445
5/16 in	1 3/4 in	5M-1179
5/16 in	1 31/32 in	2M-3521
5/16 in	3 in	2K-1594

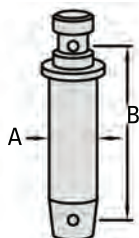
A Diameter	B Pin Length	Part Number
3/8 in	5/8 in	1T-0068
3/8 in	3/4 in	8T-5089
3/8 in	1 in	2L-3650
3/8 in	1 1/4 in	5J-3941
3/8 in	1 1/2 in	2J-5850
3/8 in	1 3/4 in	5L-5711
3/8 in	2 in	1J-8136
3/8 in	2 1/2 in	053-1720
3/8 in	3 in	045-7012
25/64 in	1 31/32 in	238-3200
15/32 in	1 3/16 in	195-6754
1/2 in	3/4 in	7K-6820
1/2 in	1 in	1N-5981
1/2 in	1 1/4 in	2K-9062
1/2 in	1 1/2 in	5H-4905
1/2 in	2 1/2 in	2K-8078
1/2 in	3 in	027-3873
1/2 in	3 1/2 in	031-0255
1/2 in	4 in	8C-8513
37/64 in	4 21/64 in	9W-9455
21/32 in	5 1/8 in	6Y-8029
13/16 in	1 37/64 in	3Q-7864
13/16 in	2 3/4 in	9X-2617

Drawbar and Clevis Pins/Type I



A Diameter	Pin Hole Diameter	B Length	Part Number
1 1/2 in	25/64 in	9 7/8 in	5H-8812
2 in	25/64 in	8 3/8 in	9S-8184
2 in	25/64 in	9 3/8 in	2R-0179
2 15/64 in	25/64 in	10 3/8 in	1H-4106

Drawbar and Clevis Pins/Type II

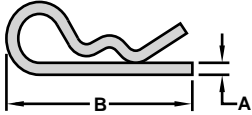


A Diameter	Pin Hole Diameter	B Length	Part Number
1 1/2 in	25/64 in	7 in	7F-9549
1 1/2 in	25/64 in	8 in	7F-9544
1 35/64 in	25/64 in	9 in	7F-9541
1 3/4 in	25/64 in	8 in	7F-9547

Drawbar and Clevis Pins/Type II (Cont'd.)

A	Pin Hole Diameter	B	Part Number
Diameter		Length	
1 3/4 in	25/64 in	12 in	5H-2209
2 in	25/64 in	10 1/2 in	2M-0093

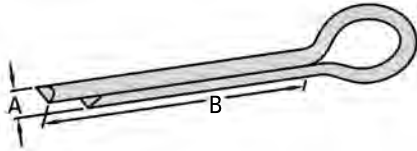
Locking Pins/Inch/Steel



A	Pin Hole Diameter	B	Part Number
Diameter		Length	
3/32 in	1/4 - 1/2 in	1.62 in	5P-0372
3/32 in	1/2 in	2.00 in	008-3843
1/8 in	1/2 - 3/4 in	1.75 in	6S-6646
1/8 in	5/8 - 7/8 in	2.50 in	8S-6377
5/32 in	5/8 - 7/8 in	3.00 in	5P-0370
3/16 in	3/4 - 11/16 in	3.75 in	5P-8837

Pins

Cotter Pins/Inch/Zinc Plated Steel

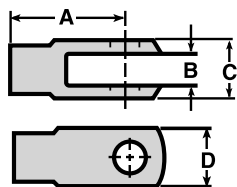


A	B	Cotter End Type	Part Number
Diameter	Pin Length		
1/16 in	3/4 in	Mitered End	3B-4605
1/16 in	1 1/4 in	Mitered End	3B-4606
1/16 in	1 1/2 in	Mitered End	010-3365
3/32 in	1 in	Mitered End	3B-4611
3/32 in	1 1/4 in	Mitered End	3B-4612
3/32 in	1 3/4 in	Chisel End	2H-3862
3/32 in	2 in	Mitered End	010-3378
1/8 in	15/32 in	Chisel End	6L-3960
1/8 in	1/2 in	Mitered End	3B-4613
1/8 in	1/2 in	Square End	3B-4607
1/8 in	1 in	Mitered End	3S-0515
1/8 in	1 in	Mitered End	3B-4617
1/8 in	1 1/4 in	Square End	3B-4618
1/8 in	2 1/4 in	Mitered End	3B-4622
1/8 in	2 1/2 in	Mitered End	8B-9264
5/32 in	1 1/2 in	Square End	3B-5301
5/32 in	2 in	Mitered End	2H-3768
5/32 in	2 1/4 in	Mitered End	010-3401
5/32 in	2 3/4 in	Mitered End	3B-4625
3/16 in	1 in	Mitered End	3B-4627
3/16 in	1 1/4 in	Square End	3B-4628
3/16 in	1 1/2 in	Mitered End	3B-4629
3/16 in	2 in	Square End	3B-4631
3/16 in	2 1/4 in	Mitered End	3B-5302

A	B	Cotter End Type	Part Number
Diameter	Pin Length		
3/16 in	2 1/2 in	Mitered End	3B-4632
3/16 in	2 3/4 in	Mitered End	3B-4633
3/16 in	3 in	Mitered End	3B-4634
3/16 in	4 in	Mitered End	3B-4636
1/4 in	1 in	Mitered End	3B-4637
1/4 in	1 in	Mitered End	2H-3769
1/4 in	1 1/2 in	Mitered End	3B-5313
1/4 in	1 3/4 in	Mitered End	3B-4639
1/4 in	2 in	Mitered End	3B-4640
1/4 in	2 1/4 in	Mitered End	3B-5303
1/4 in	2 1/2 in	Mitered End	3B-4641
1/4 in	3 in	Mitered End	3B-5328
1/4 in	3 1/2 in	Mitered End	3B-4643
1/4 in	4 1/2 in	Mitered End	4D-8002
5/16 in	1 in	Mitered End	3B-6705
5/16 in	1 1/4 in	Mitered End	2H-3770
5/16 in	1 1/2 in	Mitered End	2H-3771
5/16 in	2 in	Mitered End	3B-5314
5/16 in	2 in	Mitered End	095-0863
5/16 in	2 1/4 in	Mitered End	3B-5315
5/16 in	2 1/2 in	Mitered End	3B-5316
5/16 in	3 in	Mitered End	3B-5317
5/16 in	3 1/2 in	Mitered End	2H-3772
5/16 in	4 in	Mitered End	2H-3773

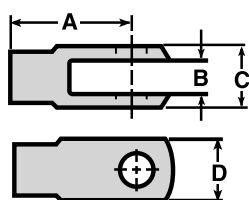
A	B	Cotter End Type	Part Number
Diameter	Pin Length		
5/16 in	4 1/2 in	Mitered End	3F-8357
5/16 in	5 in	Mitered End	2H-3774
3/8 in	1 1/2 in	Mitered End	3B-4644
3/8 in	2 in	Mitered End	3B-4646
3/8 in	2 1/2 in	Mitered End	3B-4647
3/8 in	2 3/4 in	Mitered End	3B-5319
3/8 in	3 in	Mitered End	3B-5320
3/8 in	3 1/2 in	Mitered End	3B-5322
3/8 in	4 in	Mitered End	3B-5329
3/8 in	4 1/2 in	Mitered End	4J-1888
13/32 in	2 1/2 in	Mitered End	095-7944
13/32 in	3 11/32 in	Mitered End	095-0868
13/32 in	5 1/2 in	Mitered End	096-1820
1/2 in	2 in	Mitered End	3B-5323
1/2 in	2 1/2 in	Mitered End	3B-5324
1/2 in	2 3/4 in	Mitered End	3B-5325
1/2 in	3 in	Mitered End	2H-3775
1/2 in	3 1/2 in	Mitered End	3B-5326
1/2 in	4 1/4 in	Square End	1J-2919
1/2 in	4 23/32 in	Mitered End	095-0872
1/2 in	5 1/2 in	Square End	3J-2985
5/8 in	3 in	Mitered End	3B-5327

Yoke-Type Rod End/Inch



Diameter	A	B	C	D	Part Number	Nut	Pin Assy.	Clevis Pin	Retain. Clip	Retain. Pin	Cotter Pin
	Length to Pin Hole	Gap Size	Height	Width							
1/4 in	26.2 in	7.10 in	15.90 in	12.70 in	2M-4036	5L-4426	–	4B-3057	–	–	3B-4607
1/4 in	50.8 in	7.10 in	15.90 in	12.70 in	8B-3768	5L-4426	–	4B-3057	–	–	3B-4607
5/16 in	30.2 in	8.70 in	19.00 in	15.00 in	3D-9609	1B-4202	–	1A-2457	–	–	3B-4609
5/16 in	57.0 in	8.70 in	18.00 in	15.00 in	010-4037	1B-4202	–	1A-2457	–	–	3B-4609
3/8 in	34.9 in	11.10 in	22.20 in	17.50 in	1M-1341	1B-4203	8T-8932	1B-0676	–	–	3B-4615
3/8 in	63.5 in	11.10 in	22.20 in	17.50 in	1A-9252	1B-4203	–	1B-0676	–	–	3B-4617
1/2 in	46.0 in	14.30 in	28.60 in	23.90 in	2M-8340	9S-5585	–	8B-1419	–	6S-6646	3B-4617
1/2 in	76.2 in	14.30 in	28.60 in	23.90 in	6F-7010	9S-5585	–	8B-1419	–	6S-6646	3B-4617
5/8 in	57.9 in	17.50 in	34.90 in	30.20 in	4M-7930	5D-3183	–	9S-1315	–	–	3B-4617
5/8 in	125.4 in	17.50 in	34.90 in	30.20 in	9S-1314	5D-3183	–	9S-1315	–	–	3B-4617

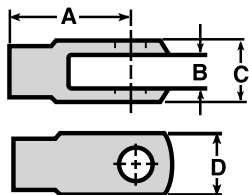
Yoke-Type Rod End/Metric



Diameter	A	B	C	D	Part Number	Nut	Pin Assy.	Clevis Pin	Retain. Clip	Retain. Pin	Cotter Pin
	Length to Pin Hole	Gap Size	Height	Width							
M12-LH	72.0 mm	12.0 mm	24.0 mm	24.0 mm	7X-0858	8T-4244	8T-5382	8T-6905, 7X-3161	8T-6903	6S-6646	3B-4615
M12	72.0 mm	12.0 mm	24.0 mm	24.0 mm	8T-4650	8T-4244	8T-5382	8T-6905, 7X-3161	8T-6903	6S-6646	3B-4615
M6	36.0 mm	6.0 mm	12.0 mm	12.0 mm	8T-4742	5C-2890	8T-4744	8T-6904	8T-6902	–	–
M10	40.0 mm	10.0 mm	20.0 mm	20.0 mm	8T-4815	8T-4133	8T-4743	9R-2806	9R-2807	–	–
M10-LH	60.0 mm	10.0 mm	20.0 mm	20.0 mm	8C-6955	9X-2065	8T-5381	9R-2806	9R-2807	–	–
M10	60.0 mm	10.0 mm	20.0 mm	20.0 mm	8T-5063	8T-4133	9T-5381	9R-2806	9R-2807	–	–
M12	48.0 mm	12.2 mm	24.0 mm	24.0 mm	8C-3393	8T-4244	8C-3394	8T-6905, 7X-3161	8T-6903	6S-6646	3B-4615

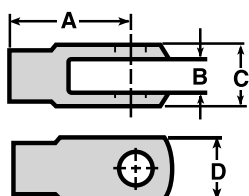
Rod Ends

Yoke-Type Rod End/Jump Sizes/Metric



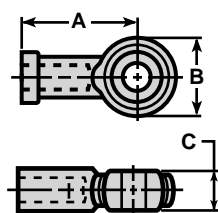
Diameter	A	B	C	D	Part Number	Nut	Pin Assy.	Clevis Pin	Retain. Clip	Retain. Pin	Cotter Pin
	Length to Pin Hole	Gap Size	Height	Width							
M10 ^(l)	40.0 mm	10.0 mm	20.0 mm	20.0 mm	8T-5921	8T-4133	–	–	–	–	–
M10 ^(l)	40.0 mm	10.0 mm	20.0 mm	20.0 mm	3E-3826	8T-4133	–	1B-0676	–	6S-6646	3B-4615

Yoke-Type Rod End/Forged/Metric



Diameter	A	B	C	D	Part Number	Nut	Pin Assy.	Clevis Pin	Retain. Clip	Retain. Pin	Cotter Pin
	Length to Pin Hole	Gap Size	Height	Width							
M6 ^(l)	45.0 mm	7.1 mm	15.9 mm	13.0 mm	7X-2496	5C-2890	–	7X-2618	–	–	3B-4607
M10 ^(l)	34.9 mm	11.1 mm	22.2 mm	17.5 mm	8T-4968	8T-4133	–	1B-0676	–	6S-6646	3B-7615
M10 ^(l)	63.5 mm	11.1 mm	22.2 mm	17.5 mm	8T-3988	8T-4133	–	1B-0676	–	6S-6646	3B-7615
M12 ^(l)	46.4 mm	14.3 mm	28.6 mm	23.9 mm	7X-7660	8T-4244	–	8B-1419	–	–	3B-4617

Spherical Rod End/Inch



Diameter	A	B	C	Part Number
	Length to Pin Hole	Diameter	Height	
1/4 in	1.33 in	0.89 in	0.37 in	6L-7751
5/16 in	1.37 in	1.02 in	0.44 in	7H-3641
5/16 in	1.40 in	1.02 in	0.44 in	5P-6672
5/16 in	1.40 in	1.02 in	0.44 in	7L-4186
5/16 in	1.90 in	1.02 in	0.44 in	7E-9748
5/16 in	1.90 in	1.02 in	0.44 in	6V-8955
5/16 in	1.90 in	1.02 in	0.44 in	6V-9163
5/16 in	1.90 in	1.02 in	0.44 in	6L-3353
3/8 in	1.63 in	1.00 in	0.50 in	225-3770
3/8 in	1.63 in	1.00 in	0.50 in	225-3769

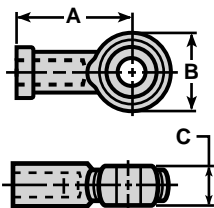
Diameter	A	B	C	Part Number
	Length to Pin Hole	Diameter	Height	
3/8 in	1.64 in	1.13 in	0.50 in	8C-7321
3/8 in	1.64 in	1.13 in	0.50 in	8C-7315
3/8 in	1.64 in	1.13 in	0.50 in	7X-7875
3/8 in	1.64 in	1.13 in	0.50 in	7X-7874
3/8 in	1.64 in	1.13 in	0.50 in	4D-4064
3/8 in	1.96 in	1.13 in	0.50 in	8C-6971
1/2 in	2.14 in	1.39 in	0.63 in	4D-4065
1/2 in	2.63 in	1.50 in	0.63 in	212-6854
5/8 in	2.52 in	1.57 in	0.75 in	2K-5804

Spherical Rod End/Inch (Cont'd.)

Diameter	A	B	C	Part Number
	Length to Pin Hole	Diameter	Height	
5/8 in	2.63 in	1.50 in	0.75 in	125-6857

Diameter	A	B	C	Part Number
	Length to Pin Hole	Diameter	Height	
1 1/4 in	4.13 in	2.76 in	1.37 in	8C-1457

Spherical Rod End/Metric

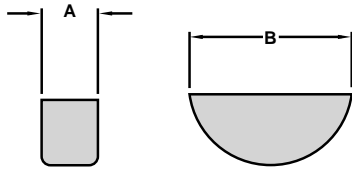


Diameter (mm)	A	B	C	Part Number
	Length to Pin Hole	Diameter	Height	
M6	29.0 mm	22.0 mm	9.0 mm	8C-3111
M6	29.0 mm	22.0 mm	9.0 mm	7U-2713
M6	30.0 mm	18.0 mm	9.0 mm	208-8479
M8	36.0 mm	24.0 mm	13.0 mm	381-2885
M8	36.0 mm	24.0 mm	13.0 mm	381-2911
M8	36.0 mm	22.0 mm	12.0 mm	7X-7915
M10	42.0 mm	30.0 mm	14.0 mm	132-0994
M10	42.0 mm	30.0 mm	14.0 mm	8T-6431
M10	47.0 mm	30.0 mm	14.0 mm	8C-5057
M12	50.0 mm	31.0 mm	16.0 mm	240-9815
M12	54.0 mm	30.0 mm	16.0 mm	102-8245
M12	49.0 mm	34.0 mm	16.0 mm	240-9816
M12	54.0 mm	34.0 mm	10.0 mm	279-0963
M12	49.0 mm	34.0 mm	19.0 mm	8C-3392
M14	63.0 mm	40.0 mm	14.0 mm	309-4481

Diameter (mm)	A	B	C	Part Number
	Length to Pin Hole	Diameter	Height	
M14	63.0 mm	40.0 mm	12.0 mm	309-4480
M14	50.0 mm	30.0 mm	16.0 mm	095-6591
M16	66.7 mm	37.9 mm	21.0 mm	098-5653
M16	63.0 mm	42.0 mm	21.0 mm	9R-4760
M20	77.0 mm	53.0 mm	25.0 mm	254-3355
M20	78.0 mm	53.0 mm	16.0 mm	260-3418
M20	78.0 mm	53.0 mm	16.0 mm	260-3417
M20	133.0 mm	50.8 mm	25.4 mm	366-6668
M20	77.0 mm	54.0 mm	16.0 mm	293-6590
M24	94.0 mm	65.0 mm	20.0 mm	253-3745
M24	94.0 mm	65.0 mm	20.0 mm	253-3746
M42	300.0 mm	108.0 mm	51.0 mm	180-7336
M42	270.0 mm	108.0 mm	51.0 mm	180-6758

Woodruff Keys

Woodruff Keys

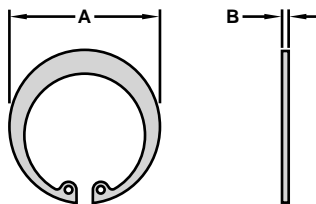


- Made of medium carbon steel and machined to a smooth finish.

A Thickness	B Diameter	MFG Number	Part Number
1/16 in	5/16 in	206	4F-2291
1/16 in	3/8 in	211	3B-2098
1/8 in	3/8 in	212	1B-8735
1/8 in	3/8 in	213	5H-2532
1/8 in	1/2 in	2	8L-4000
1/8 in	1/2 in	2	3H-1489
1/8 in	1/2 in	2	1B-8701
1/8 in	1/2 in	3	1B-8702
1/8 in	5/8 in	4	1B-8703
1/8 in	5/8 in	5	1B-8704
1/8 in	3/4 in	7	1B-8706
3/16 in	8/13 in	–	8M-5599
3/16 in	5/8 in	6	1B-8705
3/16 in	3/4 in	8	1B-8707
3/16 in	3/4 in	9	1B-8708
3/16 in	3/4 in	9	5H-2671
3/16 in	7/8 in	10	1B-8709
3/16 in	7/8 in	11	1B-8710
3/16 in	1 in	13	1B-8712
3/16 in	1 1/8 in	16	1B-8715
1/4 in	3/4 in	91	2B-9373

A Thickness	B Diameter	MFG Number	Part Number
1/4 in	7/8 in	A	1B-8736
1/4 in	7/8 in	–	094-4628
1/4 in	1 in	14	3K-4723
1/4 in	1 in	15	1B-8714
1/4 in	1 1/8 in	18	1B-8716
1/4 in	1 1/4 in	21	1B-8719
1/4 in	1 3/8 in	22	1B-8720
1/4 in	1 1/2 in	24	1B-8722
5/16 in	1 in	B	1H-6627
5/16 in	1 1/8 in	C	1B-8737
5/16 in	1 1/4 in	D	1B-8738
5/16 in	1 3/8 in	23	1B-8721
5/16 in	1 1/2 in	25	1B-8723
5/16 in	2 3/4 in	SX	1B-8742
3/8 in	1 1/4 in	E	1B-8739
3/8 in	1 3/8 in	F	1B-8740
3/8 in	1 1/2 in	G	1B-8741
3/8 in	2 3/4 in	T	1B-8743
3/8 in	2 3/4 in	TX	1B-8744
1/2 in	2 3/4 in	V	1B-8745

Snap Rings/Internal/Inch



- Made of tempered carbon steel.

Bore Diameter	A	B	Part Number
	Free Diameter	Thickness	
Tempered Basic			
0.44 in	0.48 in	0.025 in	3D-8358
0.50 in	0.55 in	0.035 in	1S-1638
0.56 in	0.62 in	0.035 in	2R-1256
0.69 in	0.76 in	0.035 in	1H-4142
0.75 in	0.83 in	0.035 in	2M-8191
0.81 in	0.90 in	0.042 in	5S-4455
0.88 in	0.97 in	0.042 in	2L-6726
0.90 in	1.00 in	0.042 in	4L-1466
1.00 in	1.11 in	0.042 in	4D-1322
1.12 in	1.25 in	0.050 in	5S-1522
1.25 in	1.39 in	0.050 in	2D-6398
1.38 in	1.53 in	0.050 in	1L-3768
1.44 in	1.60 in	0.050 in	2H-1142
1.50 in	1.66 in	0.062 in	8N-7294
1.56 in	1.73 in	0.062 in	3K-9879
1.65 in	1.83 in	0.062 in	2R-1230
1.81 in	1.95 in	0.069 in	7X-2908
1.81 in	2.01 in	0.062 in	2D-5826
1.85 in	2.05 in	0.078 in	1L-8490
2.05 in	2.28 in	0.078 in	6J-7855
2.31 in	2.54 in	0.078 in	2D-6648
2.44 in	2.61 in	0.079 in	8T-9598
2.44 in	2.70 in	0.078 in	6L-8797
2.50 in	2.77 in	0.078 in	4D-1736
2.75 in	3.05 in	0.093 in	6K-3531
2.83 in	3.01 in	0.098 in	09S-0942
2.83 in	3.12 in	0.093 in	2H-5549
3.00 in	3.33 in	0.093 in	2R-1236
3.15 in	3.37 in	0.098 in	2W-1145
3.16 in	3.52 in	0.109 in	1K-6985
3.25 in	3.62 in	0.109 in	8J-7636
3.35 in	3.56 in	0.118 in	6V-5590
3.50 in	3.89 in	0.109 in	3D-8341
3.54 in	3.76 in	0.118 in	8T-0707
3.56 in	3.94 in	0.109 in	1J-6472
3.88 in	4.29 in	0.109 in	1S-3311
3.88 in	4.29 in	0.109 in	9M-9935
3.94 in	4.36 in	0.109 in	5J-3964
4.00 in	4.42 in	0.109 in	7M-2275
4.13 in	4.41 in	0.157 in	8T-7567
4.33 in	4.76 in	0.109 in	5L-4751
4.53 in	4.80 in	0.157 in	9T-2584
4.72 in	5.21 in	0.109 in	067-3161

Bore Diameter	A	B	Part Number
	Free Diameter	Thickness	
4.92 in	5.20 in	0.157 in	3E-4334
5.00 in	5.49 in	0.109 in	2L-0043
5.12 in	5.39 in	0.109 in	8T-9044
5.50 in	6.07 in	0.125 in	8D-2258
5.91 in	6.22 in	0.157 in	109-0119
6.00 in	6.62 in	0.125 in	5L-4756
6.25 in	6.89 in	0.156 in	8J-8905
6.63 in	7.31 in	0.156 in	6V-4495
7.00 in	7.72 in	0.156 in	1L-7388
7.25 in	7.99 in	0.187 in	1U-4022
8.00 in	8.82 in	0.187 in	8T-5380
8.25 in	9.09 in	0.187 in	9X-1802
8.27 in	8.74 in	0.197 in	3E-9400
9.06 in	9.53 in	0.197 in	101-2860
10.24 in	10.82 in	0.197 in	3E-9401
11.02 in	11.61 in	0.197 in	192-7145
11.42 in	12.01 in	0.197 in	103-8096
13.39 in	14.06 in	0.236 in	117-9750
–	2.35 in	0.078 in	3J-8500
–	2.53 in	0.079 in	250-2940
–	2.91 in	0.093 in	216-6148
–	3.05 in	0.094 in	8N-7296
–	3.32 in	0.093 in	253-1238
–	5.19 in	0.156 in	7C-1413
Rectangular			
0.69 in	0.73 in	0.035 in	3P-8485
2.17 in	2.38 in	0.125 in	6V-2832
2.31 in	2.48 in	0.078 in	7X-2495
3.08 in	3.41 in	0.124 in	290-9849
3.54 in	3.81 in	0.109 in	8C-3229
3.75 in	3.90 in	0.062 in	6V-0835
3.75 in	3.93 in	0.125 in	6V-5837
4.00 in	4.30 in	0.109 in	6V-6768
4.25 in	4.56 in	0.109 in	121-1257
4.45 in	4.66 in	0.125 in	4J-4968
4.63 in	4.94 in	0.109 in	121-1258
4.72 in	4.94 in	0.125 in	5P-6414
4.75 in	4.97 in	0.062 in	6V-0473
4.82 in	5.08 in	0.125 in	5P-7074
5.00 in	5.19 in	0.078 in	132-1183
5.12 in	5.36 in	0.156 in	3P-7313
5.32 in	5.44 in	0.098 in	8T-2151
5.50 in	5.69 in	0.210	8W-3074
5.51 in	5.75 in	0.156 in	5P-9957

Bore Diameter	A	B	Part Number
	Free Diameter	Thickness	
6.25 in	6.52 in	0.093 in	6V-0836
6.25 in	7.25 in	0.156 in	5P-7151
6.30 in	6.57 in	0.093 in	7X-7608
6.48 in	6.83 in	0.125 in	236-2541
6.50 in	6.83 in	0.156 in	8T-1742
6.50 in	6.83 in	0.156 in	8C-4400
6.51 in	6.84 in	0.093 in	9W-3136
7.09 in	7.38 in	0.187 in	3E-3212
7.48 in	7.89 in	0.187 in	1Q-3332
7.50 in	7.89 in	0.086 in	185-2888
7.64 in	7.97 in	0.172 in	6V-2833
7.75 in	8.24 in	0.125 in	6V-1586
7.87 in	8.27 in	0.120 in	313-4918
7.90 in	8.31 in	0.125 in	188-0751
8.00 in	8.51 in	0.187 in	8C-6799
8.50 in	9.04 in	0.187 in	3E-4371
9.06 in	9.62 in	0.187 in	117-8806
10.00 in	10.35 in	0.076 in	261-3121
10.00 in	10.46 in	0.187 in	5P-8194
12.60 in	12.92 in	0.157 in	241-0163
16.75 in	17.09 in	0.078 in	183-6233
17.72 in	20.08 in	0.210 in	7G-5831
27.68 in	31.65	0.210 in	5P-7989
31.48 in	9.00 in	0.210 in	5T-4024
35.12 in	39.37 in	0.210 in	8X-0559
40.55 in	49.21 in	0.210 in	139-7645
–	1.34 in	0.197 in	6Y-2875
–	1.34 in	0.197 in	6Y-2115
–	1.71 in	0.252 in	8N-6739
–	2.29 in	0.120 in	4D-1186
–	2.39 in	0.078 in	4M-8010
–	2.50 in	0.125 in	1T-0895
–	3.00 in	0.126 in	234-0743
–	3.56 in	0.095 in	8F-1145
–	3.75 in	0.125 in	5H-0793
–	4.19 in	0.127 in	1H-9106
–	4.31 in	0.188 in	1P-9646
–	4.81 in	0.138 in	7Y-4672
–	4.83 in	0.093 in	5T-6667
–	5.37 in	0.125 in	7J-3296
–	5.80 in	0.138 in	087-5393
–	5.91 in	0.333 in	6T-0364
–	6.13 in	0.120 in	3P-8218
–	7.07 in	0.125 in	1T-1232

Snap Rings

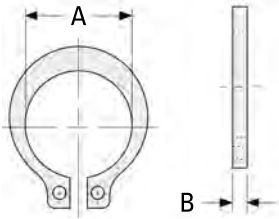
Snap Rings/Internal/Inch (Cont'd.)

Bore Diameter	A	B	Part Number
	Free Diameter	Thickness	
–	7.77 in	0.210 in	8X-0563
–	8.19 in	0.125 in	5P-6047
–	8.94 in	0.197 in	091-5224
–	10.63 in	0.157 in	144-4284
–	12.13 in	0.125 in	7G-1596
–	12.76 in	0.118 in	108-2736
–	13.78 in	0.125 in	3T-0007
–	14.87 in	0.125 in	1T-0896
–	15.51 in	0.156 in	115-0764
Spiral			
1.25 in	1.33 in	0.050 in	8H-1037
2.00 in	2.13 in	0.062 in	2D-0592
2.06 in	2.19 in	0.078 in	2K-6091
2.13 in	2.26 in	0.078 in	6H-9361
2.44 in	2.59 in	0.078 in	2D-1523
2.63 in	2.79 in	0.093 in	5S-7779
3.13 in	3.25 in	0.061 in	2J-7761

Bore Diameter	A	B	Part Number
	Free Diameter	Thickness	
3.35 in	3.55 in	0.111 in	4M-8910
3.56 in	3.78 in	0.111 in	066-5816
3.94 in	4.18 in	0.111 in	8S-9104
4.13 in	4.28 in	0.061 in	9M-6166
4.33 in	4.59 in	0.111 in	5M-4480
4.50 in	4.77 in	0.111 in	3K-2556
4.75 in	5.03 in	0.111 in	3K-2559
5.00 in	5.30 in	0.111 in	1M-8649
5.12 in	5.31 in	0.153 in	340-2367
5.12 in	5.44 in	0.127 in	5J-9454
5.25 in	5.56 in	0.127 in	2S-0613
5.75 in	5.95 in	0.072 in	9H-3452
6.00 in	6.31 in	0.127 in	7S-3004
7.00 in	7.37 in	0.156 in	340-2375
7.37 in	7.76 in	0.187 in	340-2382
8.25 in	8.68 in	0.187 in	340-2377
9.05 in	9.47 in	0.187 in	340-2378

Bore Diameter	A	B	Part Number
	Free Diameter	Thickness	
9.25 in	9.56 in	0.086 in	6V-7979
9.33 in	9.87 in	0.165 in	3W-2421
9.76 in	10.07 in	0.086 in	6P-8309
10.25 in	10.79 in	0.187 in	5P-9362
10.59 in	11.13 in	0.165 in	3W-2025
10.75 in	11.09 in	0.086 in	9M-1976
11.02 in	11.42 in	0.187 in	340-2381
13.52 in	14.07 in	0.187 in	5P-6651
14.29 in	14.76 in	0.111 in	9W-3301
14.96 in	15.52 in	0.111 in	8E-2827
15.43 in	15.92 in	0.111 in	7T-8004
17.09 in	17.65 in	0.111 in	7X-2627
18.61 in	19.30 in	0.187 in	5P-4041
19.53 in	20.15 in	0.111 in	7X-2628
–	12.76 in	0.187 in	5P-4256

Snap Rings/External/Inch



- Made of tempered carbon steel.

Shaft Diameter	A	B	Part Number	Shaft Diameter	A	B	Part Number	Shaft Diameter	A	B	Part Number
	Free Diameter	Thickness			Free Diameter	Thickness			Free Diameter	Thickness	
0.25 in	0.22 in	0.025 in	6H-5829	2.83 in	2.62 in	0.197 in	9W-5915	—	1.53 in	0.120 in	2B-9747
0.38 in	0.34 in	0.025 in	9M-7611	2.94 in	2.72 in	0.093 in	7J-6580	—	1.56 in	0.118 in	3T-2405
0.44 in	0.40 in	0.025 in	4H-0094	3.02 in	2.79 in	0.126 in	147-5764	—	1.61 in	0.120 in	9W-6926
0.44 in	0.43 in	0.035 in	8C-5061	3.03 in	2.75 in	0.120 in	5P-9863	—	1.62 in	0.120 in	4B-1127
0.47 in	0.43 in	0.025 in	6L-3801	3.11 in	2.85 in	0.157 in	9W-5925	—	1.64 in	0.207 in	4K-9269
0.50 in	0.46 in	0.059 in	6P-1037	3.16 in	2.92 in	0.093 in	1N-8620	—	1.65 in	0.098 in	274-8635
0.56 in	0.52 in	0.035 in	3D-2975	3.27 in	2.97 in	0.142 in	6Y-5790	—	1.75 in	0.105 in	4K-1240
0.59 in	0.55 in	0.035 in	2L-8509	3.35 in	3.09 in	0.093 in	9S-4368	—	1.81 in	0.120 in	4B-1136
0.62 in	0.58 in	0.035 in	8F-4610	3.35 in	3.15 in	0.157 in	9W-6277	—	1.81 in	0.120 in	9W-6904
0.75 in	0.69 in	0.042 in	2F-6356	3.50 in	3.24 in	0.109 in	5L-4753	—	1.86 in	0.125 in	6S-3172
0.81 in	0.75 in	0.042 in	9F-5444	3.55 in	3.35 in	0.157 in	9W-6278	—	1.88 in	0.157 in	213-4227
0.94 in	0.87 in	0.042 in	6H-6109	3.62 in	3.35 in	0.109 in	7J-6525	—	1.90 in	0.207 in	3K-9263
0.98 in	0.89 in	0.079 in	3E-4332	3.74 in	3.58 in	0.126 in	315-6224	—	2.01 in	0.126 in	197-0087
0.98 in	0.91 in	0.042 in	1L-8497	4.00 in	3.70 in	0.109 in	8F-1959	—	2.02 in	0.063 in	096-7380
1.00 in	0.93 in	0.042 in	001-5600	4.02 in	3.78 in	0.207 in	6V-2835	—	2.12 in	0.120 in	9H-6425
1.06 in	0.98 in	0.050 in	3K-8276	4.25 in	3.99 in	0.109 in	1N-5410	—	2.14 in	0.135 in	4M-1709
1.12 in	1.04 in	0.050 in	5L-4019	4.38 in	4.11 in	0.109 in	5H-5012	—	2.16 in	0.125 in	5M-4443
1.19 in	1.10 in	0.050 in	4M-5285	4.75 in	4.46 in	0.109 in	2L-0049	—	2.16 in	0.207 in	6K-0468
1.25 in	1.16 in	0.050 in	2M-4287	5.75 in	5.40 in	0.125 in	5L-8579	—	2.25 in	0.125 in	6H-2953
1.31 in	1.21 in	0.050 in	4D-8309	6.25 in	5.87 in	0.156 in	2L-0044	—	2.26 in	0.188 in	3S-2619
1.38 in	1.27 in	0.050 in	1J-6474	10.07 in	9.91 in	0.120 in	151-5729	—	2.28 in	0.095 in	3K-6701
1.50 in	1.38 in	0.098 in	145-0909	—	0.16 in	0.020 in	1W-0565	—	2.31 in	0.120 in	4H-6195
1.56 in	1.45 in	0.062 in	2L-6965	—	0.21 in	0.020 in	7N-8821	—	2.31 in	0.125 in	6H-6237
1.62 in	1.50 in	0.062 in	9L-2336	—	0.33 in	0.026 in	4N-2953	—	2.33 in	0.188 in	4S-6712
1.69 in	1.56 in	0.062 in	5L-2931	—	0.39 in	0.062 in	5B-6161	—	2.36 in	0.126 in	195-6899
1.77 in	1.64 in	0.062 in	2J-7550	—	0.40 in	0.059 in	2S-1387	—	2.37 in	0.120 in	1M-1655
1.81 in	1.68 in	0.062 in	5K-9106	—	0.52 in	0.035 in	7N-6825	—	2.41 in	0.120 in	4B-1135
1.85 in	1.69 in	0.120 in	253-3262	—	0.61 in	0.060 in	3J-6008	—	2.64 in	0.138 in	099-6975
1.88 in	1.74 in	0.062 in	1K-6995	—	0.62 in	0.031 in	5I-9311	—	2.69 in	0.187 in	6Y-1890
1.89 in	1.77 in	0.098 in	3E-3891	—	0.62 in	0.038 in	4T-0933	—	2.71 in	0.188 in	8S-6328
1.93 in	1.76 in	0.120 in	7T-7162	—	0.62 in	0.083 in	096-4032	—	2.87 in	0.177 in	104-7336
1.97 in	1.82 in	0.062 in	077-9687	—	0.67 in	0.102 in	4N-7521	—	3.09 in	0.207 in	7K-4520
2.12 in	1.96 in	0.078 in	1K-6984	—	0.72 in	0.062 in	4F-3544	—	3.12 in	0.187 in	2M-4479
2.16 in	1.99 in	0.078 in	4K-4284	—	0.78 in	0.079 in	130-8150	—	3.15 in	0.187 in	4M-1708
2.24 in	2.07 in	0.063 in	094-1399	—	0.78 in	0.105 in	4H-8158	—	3.19 in	0.120 in	165-0512
2.50 in	2.31 in	0.078 in	5K-4627	—	0.91 in	0.060 in	6H-3455	—	3.38 in	0.207 in	5K-7989
2.56 in	2.32 in	0.120 in	9W-6927	—	0.91 in	0.060 in	1A-6235	—	3.88 in	0.207 in	7S-2020
2.56 in	2.38 in	0.078 in	6S-1753	—	1.06 in	0.236 in	243-2101	—	3.94 in	0.118 in	177-5241
2.56 in	2.39 in	0.102 in	7Y-4955	—	1.06 in	0.630 in	234-8962	—	3.98 in	0.250 in	8G-1259
2.62 in	2.43 in	0.078 in	1K-6992	—	1.34 in	0.090 in	1A-4590	—	4.21 in	0.250 in	7P-6552
2.74 in	2.68 in	0.142 in	8E-2144	—	1.37 in	0.120 in	2A-4758	—	4.25 in	0.188 in	2M-4480
2.75 in	2.54 in	0.093 in	5J-3864	—	1.44 in	0.091 in	191-2164	—	4.44 in	0.188 in	2P-3421
2.80 in	2.50 in	0.120 in	5P-9862	—	1.52 in	0.062 in	7S-4439	—	4.78 in	0.250 in	8P-4608

Snap Rings

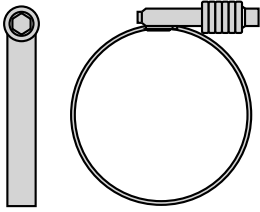
Snap Rings/External/Inch (Cont'd.)

Shaft Diameter	A		Part Number
	Free Diameter	Thickness	
–	4.86 in	0.250 in	7P-2781
–	5.12 in	0.179 in	4F-2198
–	5.32 in	0.138 in	155-9189
–	5.98 in	0.125 in	6P-3964
–	6.00 in	0.244 in	2B-7862

Shaft Diameter	A		Part Number
	Free Diameter	Thickness	
–	6.04 in	0.250 in	7P-4796
–	6.30 in	0.187 in	155-4881
–	6.46 in	0.079 in	136-2444
–	6.75 in	0.177 in	3V-9541
–	6.88 in	0.177 in	9C-7368

Shaft Diameter	A		Part Number
	Free Diameter	Thickness	
–	7.75 in	0.250 in	8K-2691
–	7.76 in	0.156 in	6P-7983
–	8.75 in	0.187 in	1J-6269
–	8.86 in	0.125 in	1W-2824

Hose Clamps



Working Diameter	Part Number
Belleville	
17 - 32 mm (5/8 - 1 1/4 in)	159-1503
21 - 27 mm (7/8 - 1 1/16 in)	9X-2488
25 - 44 mm (1 - 1 3/4 in)	7X-7958
32 - 54 mm (1 1/4 - 2 1/8 in)	8T-4983
45 - 67 mm (1 3/4 - 2 5/8 in)	8T-6703
57 - 79 mm (2 1/4 - 3 1/8 in)	8T-4984
83 - 105 mm (3 1/4 - 4 1/8 in)	8T-4985
95 - 118 mm (3 6/8 - 4 5/8 in)	9X-2201
108 - 130 mm (4 1/4 - 5 1/8 in)	8T-4986
121 - 143 mm (4 3/4 - 5 5/8 in)	9X-6654
133 - 156 mm (5 1/4 - 6 1/8 in)	8T-4987
146 - 168 mm (5 3/4 - 6 5/8 in)	3E-7424
149 - 307 mm (5 7/8 - 12 1/8 in)	366-5879
159 - 181 mm (6 1/4 - 7 1/8 in)	8T-4988
172 - 194 mm (6 3/4 - 7 3/4 in)	124-2732
184 - 206 mm (7 1/4 - 8 1/8 in)	8T-4989
210 - 232 mm (8 1/ - 9 1/8 in)	8T-4990
248 - 270 mm (9 3/4 - 10 5/8 in)	116-8535
335 - 381 mm (13 1/4 - 15 in)	301-0402
T-Bolt Spring	
35.05 - 39.12 mm (1 3/8 - 1 1/2 in)	250-2952
36.5 - 39.6 mm (1 7/16 - 1 9/16 in)	222-6962
42.9 - 47.4 mm (1 11/16 - 1 7/8 in)	220-3246
44.5 - 49 mm (1 3/4 - 1 15/16 in)	216-1649
46 - 52.4 mm (1 13/16 - 2 1/16 in)	232-4901
47.6 - 53.7 mm (1 7/8 - 2 7/64 in)	222-1178
49.28 - 57.15 mm (1 15/16 - 2 1/4 in)	296-5807
52.4 - 58.5 mm (2 1/16 - 2 5/16 in)	221-5252
54.1 - 62 mm (2 1/8 - 2 7/16 in)	215-4012
55.6 - 63.5 mm (2 3/16 - 2 1/2 in)	263-9020
55.65 - 63.45 mm (2 3/16 - 2 1/2 in)	215-4011
57.2 - 65 mm (2 1/4 - 2 9/16 in)	212-6933
57.2 - 65 mm (2 1/4 - 2 9/16 in)	214-7457
58.6 - 66.6 mm (2 5/16 - 2 5/8 in)	212-6934
58.7 - 66.5 mm (2 5/16 - 2 5/8 in)	214-7458
60.4 - 68.4 mm (2 3/8 - 2 3/4 in)	217-6885
61.9 - 69.9 mm (2 7/16 - 2 3/4 in)	223-9985
61.9 - 69.9 mm (2 7/16 - 2 3/4 in)	216-6944

Working Diameter	Part Number
63.45 - 71.45 mm (2 1/2 - 2 13/16 in)	221-8571
63.5 - 71.4 mm (3 - 2 13/16 in)	215-4013
65.1 - 71.2 mm (2 9/16 - 2 13/16 in)	216-6945
68.25 - 76.25 mm (2 11/16 - 3 in)	226-0449
68.25 - 76.25 mm (2 11/16 - 3 in)	216-4983
68.3 - 78 mm (2 11/16 - 3 1/16 in)	324-3210
69.9 - 75.9 mm (2 3/4 - 3 in)	208-6054
69.9 - 77.7 mm (2 3/4 - 3 1/16 in)	320-0635
71.4 - 79.2 mm (2 13/16 - 3 1/8 in)	295-5550
71.4 - 79.2 mm (2 13/16 - 3 1/8 in)	209-4573
73.2 - 81 mm (2 7/8 - 3 3/16 in)	209-4574
74.6 - 82.5 mm (2 15/16 - 3 1/4 in)	209-4575
77.7 - 85.6 mm (3 1/16 - 3 3/8 in)	209-4577
79.5 - 87.4 mm (3 1/8 - 3 7/16 in)	208-6055
81 - 88.9 mm (3 3/16 - 3 1/2 in)	209-4578
82.55 - 90.45 mm (3 1/4 - 3 9/16 in)	209-4579
84.1 - 91.9 mm (3 5/16 - 3 5/8 in)	209-4580
85.9 - 93.7 mm (3 3/8 - 3 11/16 in)	209-4581
87.3 - 95.2 mm (3 7/16 - 3 3/4 in)	209-4582
90.5 - 98.4 mm (3 9/16 - 3 7/8 in)	254-5633
92.2 - 100 mm (3 5/8 - 3 15/16 in)	166-1153
93.7 - 101.6 mm (3 11/16 - 4 in)	209-4586
96.8 - 102.9 mm (3 13/16 - 4 3/64 in)	209-4588
98.4 - 104.5 mm (3 7/8 - 4 7/64 in)	209-4589
100 - 106.1 mm (4 - 4 1/8 in)	216-6947
103.12 - 111 mm (4 1/16 - 4 3/8 in)	307-9917
104.6 - 112.9 mm (4 1/8 - 4 7/16 in)	135-6259
104.65 - 112.78 mm (4 1/8 - 4 7/16 in)	208-7448
106.43 - 114.3 mm (4 3/16 - 4 1/2 in)	212-6932
109.5 - 115.6 mm (4 5/16 - 4 9/16 in)	209-4590
109.5 - 115.6 mm (4 5/16 - 4 9/16 in)	216-6946
112.7 - 120.6 mm (4 7/16 - 4 3/4 in)	230-3671
117.6 - 125.5 mm (4 5/8 - 5 in)	224-0807
120.65 - 128.52 mm (4 3/4 - 5 1/16 in)	250-2953
122.2 - 130 mm (4 13/16 - 5 1/8 in)	221-9208
128.5 - 136.4 mm (5 1/16 - 5 3/8 in)	222-2277
130.2 - 142.9 mm (5 1/8 - 5 5/8 in)	135-6260
130.3 - 138.2 mm (5 1/8 - 5 7/16 in)	219-0314
131.82 - 139.7 mm (5 3/16 - 5 1/2 in)	256-4448

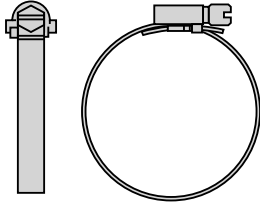
Hose Clamps

Hose Clamps (Cont'd.)

Working Diameter	Part Number
133.35 - 141.22 mm (5 1/4 - 5 9/16 in)	247-1925
134.87 - 142.75 mm (5 5/16 - 5 5/8 in)	239-5609
135 - 147 mm (5 5/16 - 5 13/16 in)	147-1685
136.22 - 144.53 mm (5 3/8 - 5 11/16 in)	246-8026
136.65 - 144.53 mm (5 3/8 - 5 11/16 in)	226-0087
141.22 - 149.09 mm (5 9/16 - 5 7/8 in)	237-0226
143 - 150.88 mm (5 5/8 - 5 15/16 in)	220-4125
150.11 - 155.45 mm (5 29/32 - 6 1/8 in)	220-4126
152.42 - 160.32 mm (6 - 6 5/16 in)	240-2651
155.7 - 163.6 mm (6 1/8 - 6 7/16 in)	219-0313
155.7 - 168.4 mm (6 1/8 - 6 1/2 in)	135-6261
158.7 - 164.9 mm (6 1/4 - 6 1/2 in)	214-0584
158.75 - 171.45 mm (6 1/4 - 6 3/4 in)	233-8350
160.3 - 168.1 mm (6 5/16 - 6 5/8 in)	216-2212
160.3 - 168.1 mm (6 5/16 - 6 5/8 in)	216-2211
163.6 - 176.3 mm (6 7/16 - 6 15/16 in)	231-3264
165.1 - 171.2 mm (6 1/2 - 6 3/4 in)	224-0808
169.93 - 182.63 mm (6 3/4 - 7 3/16 in)	233-8351
181.1 - 188.99 mm (7 1/8 - 7 7/16 in)	230-2536
184.15 - 192.02 mm (7 1/4 - 7 9/16 in)	251-4184
185.67 - 198.37 mm (7 1/4 - 7 13/16 in)	233-8482
187.45 - 195.33 mm (7 3/8 - 7 11/16 in)	231-5210
188.98 - 201.68 mm (7 7/16 - 7 15/16 in)	233-8483
196.85 - 209.55 mm (7 3/4 - 8 1/4 in)	233-8354
206.38 - 214.25 mm (8 1/8 - 8 7/16 in)	289-4013
208 - 220.7 mm (8 3/16 - 8 11/16 in)	323-3315
211.07 - 223.77 mm (8 5/16 - 8 13/16 in)	233-8484
215.9 - 228.6 mm (8 1/2 - 9 in)	254-0816

Working Diameter	Part Number
216.78 - 224.65 mm (8 17/32 - 8 27/32 in)	230-2535
222.25 - 234.95 mm (8 3/4 - 9 1/4 in)	233-8356
254 - 266.7 mm (10 - 10 1/2 in)	230-2534
265.18 - 277.88 mm (10 7/16 - 10 15/16 in)	233-8485
268.22 - 280.92 mm (10 1/2 - 11 1/16 in)	251-0039
287.66 - 307.98 mm (11 21/64 - 12 1/8 in)	232-1779
635 - 647 mm (25 - 25 1/2 in)	313-5058
Wave Liner	
25 - 38 mm (1 - 1 1/2 in)	289-9139
27 - 35 mm (1 1/16 - 1 3/8 in)	284-3502
33 - 48 mm (1 1/4 - 1 7/8 in)	335-8254
35 - 51 mm (1 3/8 - 2 in)	280-8911
39 - 57 mm (1 1/2 - 2 1/4 in)	300-6036
39 - 59 mm (1 1/2 - 2 5/16 in)	347-3148
46 - 67 mm (1 13/16 - 2 5/8 in)	347-4163
48 - 70 mm (1 7/8 - 2 3/4 in)	314-7599
51 - 76 mm (2 - 3 in)	335-9214
56 - 83 mm (2 3/16 - 3 1/4 in)	343-6821
60 - 89 mm (2 3/8 - 3 1/2 in)	347-4165
60 - 91 mm (2 3/8 - 3 9/16 in)	346-9043
69 - 102 mm (2 11/16 - 4 in)	343-1820
73 - 108 mm (2 7/8 - 4 1/4 in)	346-4789
76 - 114 mm (3 - 4 1/2 in)	346-4790
86 - 127 mm (3 3/8 - 5 in)	346-4791
94 - 140 mm (3 11/16 - 5 1/2 in)	346-4788
102 - 152 mm (4 - 6 in)	346-4792
124 - 173 mm (4 7/8 - 6 13/16 in)	342-9511

Standard Hose Clamps



Working Diameter	Part Number
6 - 16 mm (1/4 - 5/8 in)	1P-4278
16 - 27 mm (5/8 - 1 1/16 in)	5D-1026
22 - 44 mm (7/8 - 1 3/4 in)	9M-7958
32 - 51 mm (1 1/4 - 2 in)	5P-2230
43 - 64 mm (1 11/16 - 2 1/2 in)	9M-0164
45 - 67 mm (1 3/4 - 2 5/8 in)	5P-0597

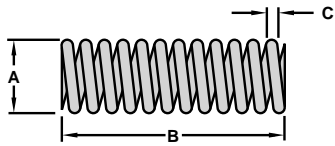
Working Diameter	Part Number
54 - 105 mm (2 1/8 - 4 1/8 in)	5P-0598
65 - 89 mm (2 9/16 - 3 1/2 in)	9M-7959
89 - 108 mm (3 1/2 - 4 1/4 in)	9M-6738
133 - 156 mm (5 1/4 - 6 1/8 in)	5P-0599
156 - 229 mm (6 1/8 - 9 in)	5P-0600

Clamp Style Recommendations

- For low pressure joints, up to 7 PSI, a standard worm drive clamp is recommended.
- For joints with higher pressure, which does not exceed 50 PSI, a constant pressure style clamp is recommended (T-Bolt, Belleville, and Wave Liner).
- For pressure lines exceeding 50 PSI, a T-Bolt style clamp or hose assembly with crimped fittings should be used.

Springs

Springs/Compression



A	B	C	Part Number
Outside Diameter	Length	Wire Diameter	
1/4 Inch			
1/4 in	5/16 in	0.031 in	9N-1747
1/4 in	3/8 in	0.031 in	9L-9522
1/4 in	1/2 in	0.031 in	09I-7106
1/4 in	9/16 in	0.031 in	3G-0670
1/4 in	3/4 in	0.031 in	7V-3827
1/4 in	13/16 in	0.031 in	09O-5957
1/4 in	1 in	0.063 in	4T-7794
1/4 in	1 5/16 in	0.063 in	1V-8784
1/4 in	1 1/2 in	0.031 in	9N-4049
1/4 in	2 1/4 in	0.031 in	9N-1622
1/4 in	2 13/16 in	0.063 in	8J-9273
3/8 Inch			
3/8 in	1/2 in	0.031	6B-3364
3/8 in	9/16 in	0.063	7M-3801
3/8 in	5/8 in	0.031	7M-7446
3/8 in	3/4 in	0.031	3K-7217
3/8 in	7/8 in	0.063	4K-8350
3/8 in	15/16 in	0.031	9S-1347
3/8 in	1 in	0.031	1V-9969
3/8 in	1 1/8 in	0.031	9L-6422
3/8 in	1 1/4 in	0.031	3N-6233
3/8 in	1 1/2 in	0.031	5B-1890
3/8 in	1 5/8 in	0.031	6N-8793
3/8 in	1 3/4 in	0.031	2V-3457
3/8 in	1 7/8 in	0.063	6P-4993
3/8 in	2 3/16 in	0.063	7N-0426
3/8 in	2 1/4 in	0.031	2L-4403
3/8 in	2 1/2 in	0.031	7F-7276
3/8 in	2 5/8 in	0.094	2H-5062
3/8 in	3 1/8 in	0.094	1P-9602
3/8 in	3 3/8 in	0.094	7B-9411
3/8 in	3 5/8 in	0.094	4M-5912
3/8 in	4 in	0.031	03A-3705
1/2 Inch			
1/2 in	5/8 in	0.031 in	6F-0967
1/2 in	1 in	0.031 in	5K-3918
1/2 in	1 1/4 in	0.031 in	5F-7464
1/2 in	1 1/2 in	0.063 in	6Y-0172
1/2 in	1 5/8 in	0.031	3C-0585
1/2 in	1 3/4 in	0.125	3G-7402

A	B	C	Part Number
Outside Diameter	Length	Wire Diameter	
1/2 in	1 7/8 in	0.063	9M-1986
1/2 in	2 in	0.031	7M-7244
1/2 in	2 1/4 in	0.063	0L-1466
1/2 in	2 1/2 in	0.063	6P-7701
1/2 in	2 5/8 in	0.031	3N-5738
1/2 in	3 1/4 in	0.031	0L-1142
1/2 in	3 3/4 in	0.063	5B-1952
1/2 in	3 7/8 in	0.094	5J-9605
1/2 in	4 1/4 in	0.063	5B-8858
1/2 in	4 3/4 in	0.063	5M-6110
1/2 in	4 7/8 in	0.094	3T-7584
1/2 in	5 3/8 in	0.094	6T-1318
1/2 in	5 7/8 in	0.094	9S-9876
5/8 Inch			
5/8 in	3/8 in	0.094	1K-7039
5/8 in	1/2 in	0.063	6T-8234
5/8 in	5/8 in	0.031	9N-6249
5/8 in	1 in	0.188	6B-3416
5/8 in	1 1/8 in	0.094	6S-8736
5/8 in	1 1/4 in	0.094	9M-3091
5/8 in	1 1/2 in	0.063	5B-3754
5/8 in	1 13/16 in	0.063	3F-8845
5/8 in	1 7/8 in	0.094	4F-9503
5/8 in	2 in	0.094	9W-1467
5/8 in	2 1/8 in	0.063	2P-5700
5/8 in	2 1/4 in	0.063	5J-1787
5/8 in	2 1/2 in	0.063	2F-5889
5/8 in	2 3/4 in	0.063	4F-6145
5/8 in	3 1/8 in	0.094	4J-4051
5/8 in	3 1/4 in	0.063	1W-6077
5/8 in	3 3/8 in	0.125	3P-7566
5/8 in	3 1/2 in	0.063	6P-9784
5/8 in	3 3/4 in	0.125	4T-4033
5/8 in	4 3/8 in	0.094	2P-4498
5/8 in	4 1/2 in	0.125	9T-1676
3/4 Inch			
3/4 in	7/8 in	0.031	4T-2684
3/4 in	1 in	0.125	6F-4294
3/4 in	1 3/8 in	0.031	3N-7848
3/4 in	1 1/2 in	0.094	7M-3496
3/4 in	1 5/8 in	0.125	5F-2201

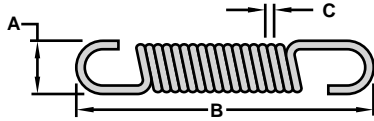
Springs/Compression (Cont'd.)

A	B	C	Part Number
Outside Diameter	Length	Wire Diameter	
3/4 in	2 in	0.063	5F-9035
3/4 in	2 1/4 in	0.094	7G-5378
3/4 in	2 3/8 in	0.125	9S-8237
3/4 in	2 1/2 in	0.125	1K-4476
3/4 in	2 5/8 in	0.125	3D-2777
3/4 in	2 7/8 in	0.063	8F-3398
3/4 in	3 in	0.156	1K-9105
3/4 in	3 1/8 in	0.094	6H-1649
3/4 in	3 3/8 in	0.094	5H-7473
3/4 in	3 5/8 in	0.094	1U-1067
3/4 in	3 7/8 in	0.063	2H-6117
3/4 in	4 in	0.125	1S-5646
3/4 in	4 1/4 in	0.094	9F-6092
3/4 in	4 1/2 in	0.031	9T-8208
3/4 in	4 7/8 in	0.094	2S-6538
7/8 Inch			
7/8 in	7/16 in	0.063	3P-8042
7/8 in	15/16 in	0.063	9P-9211
7/8 in	1 3/16 in	0.094	8J-6080
7/8 in	2 in	0.094	9S-8632
7/8 in	2 3/16 in	0.094	9H-4204
7/8 in	2 7/16 in	0.125	4M-6012
7/8 in	2 7/8 in	0.125	1W-9860
7/8 in	3 in	0.125	5N-3015
7/8 in	3 1/8 in	0.125	3P-0246
7/8 in	3 3/8 in	0.125	1W-2208
7/8 in	3 1/2 in	0.125	9L-9243
7/8 in	4 3/8 in	0.063	5M-6111
7/8 in	4 1/2 in	0.094	6K-4302
7/8 in	4 5/8 in	0.125	6B-8809
7/8 in	5 3/8 in	0.156	4D-7637
7/8 in	5 1/2 in	0.094	7M-1405
7/8 in	5 5/8 in	0.156	5D-6293
7/8 in	5 15/16 in	0.094	4H-1221
7/8 in	6 7/16 in	0.125	4D-9469
7/8 in	7 1/4 in	0.125	7D-6198
1 Inch			
1 in	5/8 in	0.063	9T-1699

A	B	C	Part Number
Outside Diameter	Length	Wire Diameter	
1 in	7/8 in	0.125	7W-2110
1 in	1 in	0.094	7V-0444
1 in	1 1/8 in	0.094	9P-8308
1 in	1 1/4 in	0.094	6T-7221
1 in	1 3/8 in	0.094	7J-0736
1 in	1 1/2 in	0.125	1P-0620
1 in	1 5/8 in	0.063	4N-5663
1 in	1 3/4 in	0.125	1S-7592
1 in	1 7/8 in	0.063	9F-1993
1 in	2 in	0.094	2S-8398
1 in	2 1/8 in	0.125	9T-2168
1 in	2 1/4 in	0.156	8H-9488
1 in	2 3/8 in	0.094	2J-0075
1 in	2 1/2 in	0.125	7W-7700
1 in	2 5/8 in	0.125	3V-5498
1 in	2 3/4 in	0.094	8J-3819
1 in	2 7/8 in	0.125	6L-2084
1 in	3 in	0.094	4J-7066
1 in	3 1/8 in	0.094	5J-3719
1 in	3 1/4 in	0.094	8J-1705
1 in	3 3/8 in	0.188	039-8820
1 in	3 1/2 in	0.156	9T-1848
1 in	3 3/4 in	0.094	5J-3419
1 in	4 in	0.063	4B-4910
1 in	4 1/8 in	0.063	1L-1098
1 in	4 1/4 in	0.156	6L-4173
1 in	4 1/2 in	0.156	9J-5002
1 in	4 3/4 in	0.094	8J-6728
1 in	4 7/8 in	0.125	5M-5526
1 in	5 in	0.063	3L-4521
1 in	5 1/4 in	0.094	8J-5839
1 in	5 3/8 in	0.188	8M-1955
1 in	5 1/2 in	0.188	6N-1320
1 in	5 5/8 in	0.156	4M-0804
1 in	6 1/8 in	0.156	2S-2760
1 in	6 1/4 in	0.094	4F-6446
1 in	6 1/2 in	0.125	6D-0314
1 in	6 7/8 in	0.125	5M-7884

Springs

Springs/Extension



A	B	C	Part Number
Outside Diameter	Length	Wire Diameter	
5/16 Inch			
5/16 in	1 in	0.094 in	039-9138
5/16 in	1 1/4 in	0.035 in	7F-7613
5/16 in	1 7/16 in	0.031 in	1A-3540
5/16 in	1 11/16 in	0.031 in	3C-0481
5/16 in	2 13/32 in	0.031 in	038-8415
3/8 Inch			
3/8 in	1 1/2 in	0.063 in	1A-1376
3/8 in	1 5/8 in	0.063 in	7L-4563
3/8 in	4 9/32 in	0.047 in	5H-4291
1/2 Inch			
1/2 in	1 1/4 in	0.063 in	8L-8491
1/2 in	1 1/2 in	0.063 in	090-3006
1/2 in	2 in	0.063 in	1A-0302
9/16 Inch			
9/16 in	1 5/8 in	0.063 in	5M-9708
9/16 in	4 1/4 in	0.063 in	2R-0416
5/8 Inch			
5/8 in	1 3/8 in	0.063 in	9F-0965
5/8 in	2 1/8 in	0.063 in	001-2809
5/8 in	2 7/8 in	0.031 in	001-2810
5/8 in	4 in	0.063 in	001-2811

A	B	C	Part Number
Outside Diameter	Length	Wire Diameter	
11/16 Inch			
11/16 in	4 in	0.094 in	1D-1313
11/16 in	6 in	0.094 in	7D-5289
3/4 Inch			
3/4 in	2 5/32 in	0.063 in	1A-8189
25/32 Inch			
25/32 in	3 3/4 in	0.094 in	1F-4449
7/8 Inch			
7/8 in	2 in	0.094 in	2D-9871
7/8 in	2 1/4 in	0.125 in	8L-5917
7/8 in	3 1/8 in	0.125 in	5G-1684
7/8 in	3 1/4 in	0.094 in	8Y-4581
7/8 in	3 13/16 in	0.094 in	9S-1312
7/8 in	4 in	0.125 in	7G-1251
1 Inch			
1 in	4 in	0.094 in	009-2445
1 in	5 1/8 in	0.094 in	035-7877
1 in	5 3/8 in	0.156 in	038-2805
1 3/6 Inch			
1 3/6 in	5 5/32 in	0.156 in	9P-9185
1 3/6 in	5 3/8 in	0.125 in	091-7882
1 3/6 in	6 1/2 in	0.156 in	091-7881

Springs Extension/Crossover Loop

Outside Diameter	Length	Wire Diameter	End Configuration	Spring End Orientation	Part Number
3/4 in	4 17/64 in	0.091 in	Crossover Loop	360	1M-0437
49/64 in	8 29/64 in	0.091 in	Crossover Loop	180	4M-4014
1 in	7 1/7 in	0.120 in	Crossover Loop	90	4B-6493
1 1/16 in	8 3/4 in	0.105 in	Crossover Loop	360	9H-6700
1 3/32 in	5 13/32 in	0.091 in	Crossover Loop	360	5K-5697
1 1/2 in	7 in	0.148 in	Crossover Loop	360	119-0952

Springs Extension/Machine Hook

Outside Diameter	Length	Wire Diameter	End Configuration	Spring End Orientation	Part Number
15/32 in	2 1/16 in	0.047 in	Machine Hook	180	9D-1058
15/32 in	2 5/8 in	0.048 in	Machine Hook	90	4F-6123
31/64 in	1 1/4 in	0.059 in	Machine Hook	180	8L-8491
1/2 in	2 3/4 in	0.048 in	Machine Hook	90	3W-6485
1/2 in	2 61/64 in	0.072 in	Machine Hook	360	1S-6889

Springs Extension/Machine Hook (Cont'd.)

Outside Diameter	Length	Wire Diameter	End Configuration	Spring End Orientation	Part Number
1/2 in	5 29/64 in	0.058 in	Machine Hook	360	9L-6626
17/32 in	1 9/16 in	0.047 in	Machine Hook	90	8P-2290
9/16 in	1 5/8 in	0.072 in	Machine Hook	180	5M-9708
9/16 in	2 1/8 in	0.076 in	Machine Hook	90	2G-3765
9/16 in	2 11/32 in	0.072 in	Machine Hook	360	2P-3682
9/16 in	3 in	0.062 in	Machine Hook	90	9L-7372
9/16 in	3 7/8 in	0.055 in	Machine Hook	180	203-7559
9/16 in	4 1/4 in	0.063 in	Machine Hook	180	106-0070
37/64 in	2 9/16 in	0.098 in	Machine Hook	360	4M-8799
5/8 in	2 19/64 in	0.091 in	Machine Hook	180	2S-1381
21/32 in	3 5/16 in	0.120 in	Machine Hook	90	6W-5817
11/16 in	1 43/64 in	0.062 in	Machine Hook	180	3B-9762
11/16 in	2 in	0.076 in	Machine Hook	360	8M-1019
11/16 in	2 in	0.078 in	Machine Hook	360	8C-3442
11/16 in	3 15/16 in	0.091 in	Machine Hook	180	1D-1313
11/16 in	4 3/4 in	0.091 in	Machine Hook	90	8D-8456
11/16 in	6 in	0.091 in	Machine Hook	180	7D-5289
45/64 in	1 29/32 in	0.063 in	Machine Hook	90	3Y-2806
23/32 in	2 9/32 in	0.080 in	Machine Hook	90	1U-1648
3/4 in	3 15/32 in	0.079 in	Machine Hook	180	159-9875
3/4 in	7 1/2 in	0.331 in	Machine Hook	90	7G-6942
25/32 in	3 13/64 in	0.024 in	Machine Hook	180	8Y-4581
51/64 in	3 7/64 in	0.207 in	Machine Hook	180	8W-2823
13/16 in	2 23/64 in	0.069 in	Machine Hook	180	176-2447
7/8 in	2 61/64 in	0.135 in	Machine Hook	360	318-9461
7/8 in	4 1/8 in	0.120 in	Machine Hook	180	7G-1251
7/8 in	5 1/4 in	0.120 in	Machine Hook	360	1H-2348
15/16 in	3 27/32 in	0.438 in	Machine Hook	360	3W-4324
1 in	5 17/64 in	0.120 in	Machine Hook	360	9R-1587
1 in	5 1/2 in	0.115 in	Machine Hook	180	141-6343
1 3/32 in	3 in	0.091 in	Machine Hook	180	6K-1898
1 3/32 in	3 1/8 in	0.160 in	Machine Hook	360	194-7034
1 1/8 in	4 7/8 in	0.148 in	Machine Hook	360	9D-2641
1 1/8 in	11 in	0.135 in	Machine Hook	90	6K-1961
1 5/32 in	4 59/64 in	0.157 in	Machine Hook	90	090-8612
1 5/32 in	5 5/32 in	0.162 in	Machine Hook	180	9P-9185
1 3/16 in	5 11/32 in	0.138 in	Machine Hook	180	296-5446
1 1/4 in	5 1/2 in	0.162 in	Machine Hook	180	149-2065
1 1/4 in	6 5/16 in	0.162 in	Machine Hook	360	2J-2664
1 19/64 in	2 25/32 in	0.156 in	Machine Hook	360	111-3780
1 19/64 in	6 1/64 in	0.234 in	Machine Hook	360	103-4867
1 11/32 in	6 3/4 in	0.162 in	Machine Hook	360	7B-5594
1 13/32 in	12 1/2 in	0.156 in	Machine Hook	90	5H-6044
1 5/8 in	5 27/32 in	0.207 in	Machine Hook	360	4E-8340
1 5/8 in	10 3/16 in	0.187 in	Machine Hook	90	4F-2943
2 in	11 33/64 in	0.263 in	Machine Hook	360	125-5071
2 1/8 in	13 in	0.283 in	Machine Hook	180	344-6306
2 1/2 in	9 1/16 in	0.225 in	Machine Hook	180	6G-0254
3 in	19 11/16 in	0.394 in	Machine Hook	90	229-0108

Springs

Springs Extension/Machine Loop

Outside Diameter	Length	Wire Diameter	End Configuration	Spring End Orientation	Part Number
1/2 in	1 39/64 in	0.062 in	Machine Loop	90	4H-3521
1/2 in	2 in	0.062 in	Machine Loop	180	1A-0302
5/8 in	3 3/4 in	0.080 in	Machine Loop	360	4M-1768
5/8 in	4 1/16 in	0.080 in	Machine Loop	360	4S-8569
21/32 in	5 13/32 in	0.072 in	Machine Loop	360	5N-5291
3/4 in	5 1/4 in	0.080 in	Machine Loop	90	7D-9722
1 5/32 in	4 29/32 in	0.157 in	Machine Loop	90	300-0541

Hardware Bin Kits

Thirteen different Hardware Bin Kits are available for customers who want to stock hardware bins for their service departments and/or service vehicles with various quantities of popular sizes of Cat bolts, nuts and washers. Kits available:

Part Number	Thread	Coating	Contains	Pieces	Bolt Head
237-2351	Inch - Fine	Phosphate and Oil	40 Part Numbers	1570	12-Point
222-9998	Inch - Coarse	Zinc Dichromate	59 Part Numbers	2175	Hex
222-9999	Inch - Coarse	Zinc Dichromate	38 Part Numbers	1520	Hex
223-0000	Metric - Coarse	Phosphate and Oil	56 Part Numbers	1965	Hex
223-0001	Metric - Coarse	Zinc Dichromate	56 Part Numbers	1985	Hex
223-0002	Metric - Coarse	Zinc Dichromate	38 Part Numbers	1510	Hex
3E-6640	Inch - Coarse	Phosphate and Oil	59 Part Numbers	1735	Hex
3E-9420	Inch - Coarse	Phosphate and Oil	38 Part Numbers	1975	Hex
3E-9421	Inch - Fine	Phosphate and Oil	38 Part Numbers	1650	Hex
3E-9422	Metric - Coarse	Phosphate and Oil	38 Part Numbers	1580	Hex

Hardware Shop and Field Kits

Five different Hardware Shop/Field Kits are available for small repair shops or field service vehicles. Kits contain assortments of popular sizes of Cat bolts with matching washers and nuts, in phosphate and oil coatings. The hardware is packaged in a rugged metal box with hinged metal cover and latch. Inch Hardware Kits come in two sizes, small and large, depending on the quantity of hardware in the kit. Kits available:

Part Number	Thread	Coating	Size	Contains	Pieces
178-2207	Inch - Fine	Phosphate and oil	Large	24 Part Numbers	476
178-2208	Inch - Fine	Phosphate and oil	Small	29 Part Numbers	894
178-2209	Inch - Coarse	Phosphate and oil	Small	27 Part Numbers	502
178-2210	Inch - Coarse	Phosphate and oil	Large	34 Part Numbers	936
178-2211	Metric - Coarse	Phosphate and oil	Small	32 Part Numbers	630

Check-a-Thread



- Quickly identifies hardware thread diameter and pitch
- Four holes on mounting base for easy attachment to retail parts counter, service shop tool crib, or field service truck

Dimensions (L x H x W)	609 m (24 in) x 101 mm (4 in) x 76 mm (3 in)
Metric:	
Media literature number	250-6866
Range	16 mm-2.0 to 4 mm-0.7
No. of bolt sizes	15
Inch:	
Media literature number	250-6865
Range	3/4-16 to #6-32
No. of bolt sizes	21
Sheet metal/wood screw sizes	5



OPERATOR ENVIRONMENT

Cat Cabin Air Quality System

Universal Precleaner Kits

To Protect Operators in High-Risk Areas



You are responsible for the safety of equipment operators throughout your fleet. That's why Caterpillar equips all of its heavy equipment with pressurized cabins and standard positive air filtration. However, some harsh applications—particularly at construction, quarry, waste, mining and oil/gas-extraction sites—produce excessive amounts of airborne particles and odors that can cause acute respiratory problems. The Cat Cabin Air Quality System adds an extra measure of protection for your operators who work in these types of harmful environments.



Cat Cabin Air Quality System

Improve Cabin Air Quality Easily and Efficiently

STEP 1

Order one Cat Advanced Cabin Filtration Kit for every machine that you want to retrofit.⁽¹⁾



Extended length/Life



Standard

ITEM	PART NUMBER
Advanced Cabin Filtration Kit includes: (This unit comes with a MERV16 filter— part number 457-2836— unless a different filter is specified. See the MULTI-TIERED FILTER OFFERINGS table below.)	418-6474
Extended Length/Life Kit	514-6873

¹ Caterpillar recommends reading the Maintenance Guide for Cab Pressurization on All Caterpillar Products (REHS6117).

Cat Cabin Air Quality System

Step 2

Select the most suitable filter for each system, to match its end-use application. All filters listed below feature Caterpillar's advanced filtration technology, which reduces airborne irritants to create a cleaner and more comfortable working environment for the operator. Compared to standard filters, which have a filtration level in the range of MERV 8 to MERV 10, these advanced options perform at a level of MERV 16 or higher. Plus, these filters are engineered for durability: Each filter provides 500+ hours of life.



MULTI-TIERED FILTER OFFERINGS FOR INITIAL INSTALLATION AND ONGOING MAINTENANCE					
LENGTH/LIFE	FILTRATION LEVEL	TYPICAL OPERATING ENVIRONMENT (Sample substances)	DESCRIPTION	TYPICAL PARTICLE SIZE (Efficiency)	PART NUMBER
Standard Length/ Life 448.2 mm x 286 Space claim 500+ Hours	MERV16 ⁽²⁾	General Use (Dust & Silica)	<ul style="list-style-type: none"> Offers excellent removal of dust, soil pollen and mold spores in enclosed operator cabs 	< 1.0 µm (>95%)	457-2836
	HEPA ⁽³⁾	Finer Dusts (Asbestos) and/or Smoke	<ul style="list-style-type: none"> Higher efficiency (compared to MERV16 filter) for better dust reduction⁽⁴⁾ 	< 0.3 µm (≈ 99.9%)	457-3049
	Activated Carbon	Odor Reducing (Waste & Diesel Smells)	<ul style="list-style-type: none"> Ideal for landfill operations Higher performance activated charcoal ensures fast rate of absorption Delivers increased odor reduction compared to competition Higher capacity extends life and reduces maintenance costs Superior particle removal efficiency reduces eye, nose, and throat irritants 	< 0.3 µm (≈ 99.9%)	472-7939

2 The MERV16 rating is equivalent to an F9 rating according to EN779, and roughly equivalent to E11 according to EN1822.

3 The HEPA filters are certified to H13 according to EN1822.

4 The air quality leaving the 333-2112 HEPA filter meets the minimum efficiency requirement of 99.97% at 0.3 microns to be considered a HEPA filter. However, using 333-2112 HEPA filter will not guarantee the operator cab environment is to a HEPA level of cleanliness. Caterpillar recommends operators use personal protective equipment (PPE) when working in environments with hazardous materials.

Cat Cabin Air Quality System

Step 2 (Cont'd.)

MULTI-TIERED FILTER OFFERINGS FOR INITIAL INSTALLATION AND ONGOING MAINTENANCE					
LENGTH/LIFE	FILTRATION LEVEL	TYPICAL OPERATING ENVIRONMENT (Sample substances)	DESCRIPTION	TYPICAL PARTICLE SIZE (Efficiency)	PART NUMBER
			<ul style="list-style-type: none"> No adverse effect on air flow, heat or air conditioning performance No operator exposure to loose carbon particles, even in rough applications 		
Extended Length/ Life (for machines that will be used or have been used in hazardous gas environments) 286 mm x 626 mm Space claim 750+ Hours	MERV16 ⁽⁵⁾	General Use (Dust & Silica)	(See MERV16 filter description above)	< 1.0 µm (>95%)	503-4678
	HEPA ⁽⁶⁾	Finer Dusts (Asbestos) and/or Smoke	(See HEPA filter description above)	< 0.3 µm (≈ 99.9%)	503-7472
	Activated Carbon	Odor Reducing (Waste & Diesel Smells)	(See Odor Reducing filter description above)	< 0.3 µm (≈ 99.9%)	503-7917
	CLASS 1 ABEK-Hg GASES**	Hazardous Gases (Sulfur Dioxide SO ₂ , Hydrogen Sulphide H ₂ S, Chlorine Cl ₂ , Hydrogen Cyanide HCN, Ammonia NH ₃)	<ul style="list-style-type: none"> The only filter intended for filtering hazardous material 	< 0.3 µm (≈ 99.9%)	472-7444

5 The MERV16 rating is equivalent to an F9 rating according to EN779, and roughly equivalent to E11 according to EN1822.

6 The HEPA filters are certified to H13 according to EN1822.

Cat Work Lights, Signal Lights, Strobes and Bulbs

Cat Work Lights

When you're working against the clock, Cat Work Lights help turn night into day and increase productivity of both machines and operators in a wide range of applications. Premium Cat Work Lights are designed to meet the demanding vibration levels of both large and small machines, offering long life and low maintenance costs. Well-lit work areas also increase operator safety with enhanced visibility for the operator and personnel. Count on highly reliable Cat Work Lights to light up your job site — and make time work for you.

Cat Light Emitting Diode (LED) Work Lights



Operators and work sites prefer the bright lights of LEDs. The Cat LED work lights are designed for applications where high service life and durability is important. The extremely long life of LEDs is an easy decision to upgrade to LED work lights, thus drastically reducing owning and operating costs.

LED lights estimated life is over 40K hours, low power consumption, multi voltage use (9V to 32+), high vibration resistance, water-proof, environmentally safe, and contains no bulbs. The features and versatility of LED's is a smart choice and ideal for all applications.

LED 3" x 3" Lights					
Part Number	Lens Pattern	Mounting	Volts	Connector	Effective Lumens
386-1723	High	Vertical/Suspended	9 to 32	Integral DT	600
386-1722	Flood	Vertical/Suspended	9 to 32	Integral DT	600
386-1724	Reverse	Vertical/Suspended	9 to 32	Integral DT	600
417-0977 ⁽¹⁾	Flood	Suspended	9 to 32	Integral DT	600
476-6074	Flood	Vertical/Suspended	12 to 100	Integral DT	3000
459-0177	Flood	Snap-in	9 to 32	Integral DT	1500

LED 4" x 4" Lights					
Part Number	Lens Pattern	Mounting	Volts	Connector	Effective Lumens
383-8634	Flood	Vertical/Suspended	9 to 32	Integral DT	2100
386-1717	High/Spot	Vertical/Suspended	9 to 32	Integral DT	2100
386-1718	Low	Vertical/Suspended	9 to 32	Integral DT	2100
398-7378	Flood	Pole mount	24	Pigtail	—
449-9219 ⁽²⁾	Flood	Vertical/Suspended	9 to 32	Integral DT	2100
461-8616 ⁽³⁾	Flood	Vertical/Suspended	9 to 32	Integral DT	2100
441-0314	Flood	Vertical/Suspended	9 to 32	Integral DT	4200
441-0315	High/Spot	Vertical/Suspended	9 to 32	Integral DT	4200
441-0316	Flood	Vertical/Suspended	9 to 32	Integral DT	700
487-1739	Flood	Snap-in	9 to 32	Integral DT	4200

- 1 Bracket (417-9541) required for weld nut install
- 2 Offset bracket
- 3 0-90 degree mounting capable

Cat Work Lights, Signal Lights, Strobes and Bulbs

Cat Light Emitting Diode (LED) Work Lights (Cont'd.)

LED round Lights						
Part Number	Lens Pattern	Mounting	Volts	Dimension	Connector	Effective Lumens
431-9514	Flood	Suspended	9 to 32	2.7" round	Integral DT	800
466-2421	Flood	Suspended	9 to 32	3" round	Integral DT	850
426-5380	Flood	Suspended	9 to 32	3" round	Integral DT	850
424-5603	Flood	Suspended	9 to 32	5" round	Integral DT	2100
461-7569	Low	Suspended	9 to 32	5" round	Integral DT	2100

LED round Lights						
Part Number	Lens Pattern	Mounting	Volts	Dimension	Connector	Effective Lumens
479-8444	Wide-range Flood	Suspended	9 to 32	4" round	Integral DT	850
479-8445	Wide-range Flood	Suspended	9 to 32	4" round	Integral DT	850
479-8446	Narrow range-Flood	Suspended	9 to 32	4" round	Integral DT	850
479-8447	Narrow range-Flood	Suspended	9 to 32	4" round	Integral DT	850

LED Miscellaneous Lights						
Part Number	Lens Pattern	Mounting	Volts	Dimension	Connector	Effective Lumens
476-6075	Flood	Suspended	12 to 100	5" x 5"	Integral DT	5000
431-9513	Flood	Suspended	-	Oval	-	1700
455-8660	Area/room Lighting	Suspended	9 to 32	5" x 9"	Integral DT	1950

High Intensity Gas Discharge (HID) Lights (Xenon)



High Intensity Gas Discharge Work Lights from Caterpillar increase productivity of both machines and operators providing bright light around-the-clock or extended night operations. Cat HID Work Lights are built to handle tough jobs efficiently, producing the equivalent of several halogen lights with the same wattage for exterior floodlighting. Compared to Halogen lights, HID lights resist vibration and shock better and last longer. Your operators will work more safely and efficiently in a work area widely illuminated by the bright HID Work Lights. Life expectancy is six to eight times that of Halogen lamps and produce more than two times more light output than Halogen. HID lights are available in three sizes and two light patterns.

5" x 5" HID Bright Lights							
Part Number	Lens Pattern	Bulb	Mounting	Lens	Volts	Ballast	Connector
359-3426	Flood	290-8160	Vertical	277-3082	12	319-7383	Integral DT
359-3425	Flood	290-8160	Suspended	277-3082	12	319-7383	Integral DT
359-3429	Low Beam	290-8160	Suspended	229-9970	24	319-7384	Integral DT

Cat Work Lights, Signal Lights, Strobes and Bulbs

High Intensity Gas Discharge (HID) Lights (Xenon) (Cont'd.)

5" x 5" HID Bright Lights							
Part Number	Lens Pattern	Bulb	Mounting	Lens	Volts	Ballast	Connector
359-3428	Low Beam	290-8160	Vertical	229-9970	24	319-7384	Integral DT
359-3430	High Beam	290-8160	Suspended	229-9971	24	319-7384	Integral DT
359-3427	High Beam	290-8160	Vertical	229-9971	24	319-7384	Integral DT
332-9402	Flood	290-8160	Suspended	277-3082	24	319-7384	Integral DT
347-9427	Flood	290-8160	Vertical	277-3082	24	319-7384	Integral DT

3" x 3" HID Lights							
Part Number	Lens Pattern	Bulb	Mounting	Lens	Volts	Ballast	Connector
319-7381	Long Range	290-8160	Suspended	291-2941	24	319-7384	Integral DT
319-7379	Flood	290-8160	Suspended	291-2943	24	319-7384	Integral DT
319-7378	Flood	290-8160	Suspended	291-2943	12	319-7383	Integral DT
319-7380	Flood	290-8160	Vertical	291-2943	24	319-7384	Integral DT
319-7377	Flood	290-8160	Vertical	291-2943	12	319-7383	Integral DT
319-7382	Trapezoid	290-8160	Suspended	291-2942	24	319-7384	Integral DT

70 mm Round HID Lights							
Part Number	Lens Pattern	Bulb	Mounting	Lens	Volts	Ballast	Connector
324-3740	Flood	290-8160	Suspended	352-8986	24	319-7384	Integral DT
334-6198	Flood	290-8160	Vertical	352-8986	24	319-7384	Integral DT

Shock-Resistant Halogen Lights



Versatile Cat Shock-Resistant Halogen Lights offer up to ten times improvement in bulb life versus non shock-resistant lights, contributing to lower operation costs in applications with high vibration where current bulb life is short. These lights are environmentally sealed and meet Caterpillar design specifications for resistance to water spray and vibration.

5" x 5" Shock-resistant Halogen Lights						
Part Number	Lens Pattern	Bulb	Mounting	Volts	Connector	Mounting Bracket
227-5978	Flood	351-9918	Suspended	24	Integral DT	Yes
153-2073	Flood	351-9918	Vertical	24	Integral DT	No
161-3509	Low Beam	351-9918	Vertical	24	Integral DT	No
161-0908	Low Beam	351-9918	Suspended	24	Integral DT	No
180-1300	High Beam	351-9918	Vertical	24	Integral DT	No
171-2067	High Beam	351-9918	Vertical	24	Pigtail DT	No
168-1960	High Beam	351-9918	Suspended	24	Pigtail DT	No

Cat Work Lights, Signal Lights, Strobes and Bulbs

Shock-Resistant Halogen Lights (Cont'd.)

5" x 5" Shock-resistant Halogen Lights						
Part Number	Lens Pattern	Bulb	Mounting	Volts	Connector	Mounting Bracket
157-0305	High Beam	351-9918	Suspended	24	Integral DT	No
257-3168	Flood, Red	351-9918	Vertical	24	Integral DT	No
257-3171	Flood, Amber	351-9918	Vertical	24	Integral DT	No

Shock-resistant 70 mm Round Halogen Lights					
Part Number	Lens Pattern	Bulb	Mounting	Volts	Connector
325-4471	Wide-range Flood	351-9918	Vertical	24	Integral DT
339-3505	Wide-range Flood	351-9918	Suspended	24	Integral DT
325-4472	Wide-range Flood	351-9918	Right Hand	24	Integral DT

Light Emitting Diode (LED) Signal Lights



Designed for long life and lower maintenance costs over incandescent signal light bulbs, Cat LED Signal Lights have a demonstrated life of over 40,000 hours — that's 800 times the life of an incandescent signal bulb. LED signal lights use no filaments, so they resist high vibration, and they can be retrofitted to any (12/24 Volt) application. LED signal lights meet Cat® design specifications for resistance to water spray, water dunk and vibration, and are permanently sealed with sonic welded lenses and potted circuitry.

LED Signal Lights					
Part Number	Lens Color	Description	Mounting	Volts	Mounting Connector
334-5409	Amber	Front Turn & Park	Rectangular	12 or 24	Pigtail DT
135-0428	Amber	Front Turn & Park	Round	24	Pigtail DT
334-5410	Amber	Turn	Rectangular	12 or 24	Pigtail DT
334-8049	Red	Stop and Tail	Rectangular	12 or 24	Pigtail DT
143-2014	Red	Stop and Tail	Round	24	Pigtail DT
232-6136	Red/Amber	Stop/Tail/Turn	Rectangular	24	Pigtail DT
252-7165	Clear	Stop/Tail/Turn	Rectangular	12 or 24	Pigtail DT
375-0305	Blue	Speciality	Rectangular	24	Pigtail DT
201-5464	Amber	Turn	Rectangular	12 or 24	Pigtail DT
428-6700	Red/Amber	Stop/Tail/Turn	Round	24-Jan	Pigtail DT
321-7871	Green	Speciality	Rectangular	24	Pigtail DT
351-5587	Red/Amber	Stop/Tail/Turn	Round	24	Pigtail DT

Cat Work Lights, Signal Lights, Strobes and Bulbs

Value Priced Flood Lights (Non-Machine Applications)



Environmentally sealed and meets Cat design specifications for resistance to water spray and vibration.

3" x 3" Value Priced Halogen Lights – Not Recommended for High Vibration Application						
Part Number	Lens Pattern	Bulb	Mounting	Lens	Volts	Connector
219-6485	Wide-range Flood	351-9918	Vertical	202-6614	24	Integral DT
219-6487	Wide-range Flood	351-9918	Suspended	202-6614	24	Integral DT
212-9347	Wide-range Flood	9W-0607	Vertical	202-6614	12	Integral DT
214-2968	Wide-range Flood	9W-0607	Suspended	202-6614	12	Integral DT
219-6486	Long-range Flood	351-9918	Vertical	202-6611	24	Integral DT
219-6488	Long-range Flood	351-9918	Suspended	202-6611	24	Integral DT
214-2969	Long-range Flood	9W-0607	Suspended	202-6611	12	Integral DT
290-5749	High Beam	351-9918	Suspended	N/A	24	Integral DT
384-9610	Low Beam	351-9918	Suspended	N/A	24	Integral DT
346-9593	Long-Range Flood	351-9918	Suspended	202-6611	24	Integral DT

Combo Halogen/Turn Light



This is ECE approved headlight and turn signal combination light. This light provides high beam, low beam, position light and turn-signal in one package with easy one bolt mounting. This light meets Cat vibration and sealing requirements and approved for use in US, Europe, India, and Japan.

Combination Headlights: Shock Resistant						
Part Number	Volts	Description	Traffic side	Machine side	Connector	Approval
344-3455	24	Combination Head/Turn	RH	RH	DT rect. (6)	ECE
344-3456	24	Combination Head/Turn	RH	LH	DT rect. (6)	ECE
344-3457	24	Combination Head/Turn	LH	RH	DT rect. (6)	ECE
344-3458	24	Combination Head/Turn	LH	LH	DT rect. (6)	ECE
344-3459	24	Combination Head/LED Turn	RH	RH	DT rect. (6)	ECE
344-3460	24	Combination Head/LED Turn	RH	LH	DT rect. (6)	ECE

Cat Work Lights, Signal Lights, Strobes and Bulbs

Combo Halogen/Turn Light (Cont'd.)

Combination Headlights: Non-Shock Resistant						
Part Number	Volts	Description	Traffic side	Machine side	Connector	Approval
238-2797	24	Combination Head/Turn	RH	RH	DT rect. (6)	ECE
238-2798	24	Combination Head/Turn	RH	LH	DT rect. (6)	ECE
243-4274	24	Combination Head/Turn	LH	RH	DT rect. (6)	ECE
243-4275	24	Combination Head/Turn	LH	LH	DT rect. (6)	ECE
195-0189	12	Combination Head/Turn	RH	RH	DT rect. (6)	ECE
195-0190	12	Combination Head/Turn	RH	LH	DT rect. (6)	ECE
195-0191	12	Combination Head/Turn	LH	RH	DT rect. (6)	ECE
195-0192	12	Combination Head/Turn	LH	LH	DT rect. (6)	ECE
259-9287	24	Combination Head/ LED Turn	RH	LH	DT rect. (6)	ECE
259-9288	24	Combination Head/ LED Turn	RH	RH	DT rect. (6)	ECE

Individual Headlights

Individual Headlights						
Part No.	Volts	Description	Traffic side	Machine side	Connector	Approval
9X-1440	24	5X5 High Beam – Vertical	RH	Both	Screw Terminals	ECE
9X-1441	24	5X5 Low Beam – Vertical	RH	Both	Screw Terminals	ECE
238-8638	24	5X5 Low Beam – Vertical	RH	Both	DT rect. (2)	ECE
238-8639	24	5X5 Low Beam – Vertical	LH	Both	DT rect. (2)	ECE
151-2457	12	5X5 Low Beam – Suspended	RH	Both	Screw Terminals	ECE
149-7498	12	4X6 High/Low Beam – Vertical	RH	Both	DT rect. (3)	ECE
153-9154	12	4X6 High/Low Beam – Vertical	LH	Both	DT rect. (3)	ECE
311-1920	12	3X3 Low Beam - Vertical	RH	Both	DT rect. (2)	ECE
299-1771	24	Round High Beam	RH	Both	Blade Terminals	ECE
299-1812	24	Round Low Beam	RH	Both	Blade Terminals	ECE

Rotating Beacons and Strobes



Cat Rotating Beacons use a halogen bulb on a rotating base. Strobes are warning beacons, which use electronics to emit light using a gas tube and LEDs use a semiconductor as the light source. As with other Cat lights, the beacons and strobes are designed to withstand high-vibration conditions and increase safety on any job site.

Cat Work Lights, Signal Lights, Strobes and Bulbs

Rotating Beacons and Strobes (Cont'd.)

Rotating Beacon and Strobe Lights (Amber)					
Part Number	Description	Bulb	Volts	Base	Connector
294-2546	Rotating	9X-8118	12	Rubber Pole Mount	Single Pole Plug
309-1325	Rotating	9X-8118	12	Magnetic	Cigarette Lighter
130-7580	Rotating	9X-8118	12	3-Bolt	Cigarette Lighter
271-4507	Rotating	9X-7849	24	Magnetic	Pigtail DT
108-1029	Rotating	9X-7850	24	Magnetic	Pigtail DT
140-3668	Strobe	—	12 to 24	Magnetic	Cigarette Lighter
284-3757	Strobe	—	12 to 24	3-Bolt	Pigtail DT
355-7153	Short Strobe Red	—	12 to 24	—	—
355-7154	Short Strobe Blue	—	12 to 24	—	—
355-7155	Short Strobe Green	—	12 to 24	—	—
355-7156	Short Strobe Amber	—	12 to 24	—	—
338-1132	LED Strobe Non ECE	—	9 to 32	3-Bolt	Pigtail DT
378-6901	LED Strobe ECE	—	9 to 32	Magnetic	Pigtail DT
371-2241	LED Strobe ECE	—	9 to 32	3-Bolt	Pigtail DT
382-2746	LED Strobe Blue	—	9 to 32	3-Bolt	Pigtail DT
421-5582	LED Pattern Program-able Amber	—	9 to 32	3-Bolt	Pigtail DT
444-6522	LED Strobe Amber	—	10 to 32	Magnetic	Cigarette Plug
289-6268	Mini LED Strobe	—	9 to 32	2-Bolt	Pigtail DT
180-3664	Rotating	9X-8118	12	Magnetic	Pigtail DT
185-7016	Rotating	9X-8118	12	Magnetic	Pigtail DT

Sealed Beam Electrical Lamps



Sealed Beam Electrical Lamps				
Part Number	Item	Voltage	ANSI Number	Wattage
1M-5899	Dual Head Lamp	24	4579	80/60
1M-5896	Flood Lamp	6	4078	50
2M-4168	Flood Lamp	12	4478	60
9W-1281	Flood Lamp (Halogen)	24	H4578	60
2P-7469	Flood Lamp (Screw Terminal)	12	4410	35
6N-7987	Flood Lamp (Screw Terminal)	24	4752	60
7G-9319	Fog Lamp	24	4402A	50
7N-7682	Head Lamp (Screw Terminal)	24	4750	60
1M-5897	Hi/Lo Lamp	6	4031	45/35
1H-7027	Hi/Lo Lamp	12	4431	45/35

Cat Work Lights, Signal Lights, Strobes and Bulbs

Sealed Beam Electrical Lamps (Cont'd.)

Sealed Beam Electrical Lamps				
Part Number	Item	Voltage	ANSI Number	Wattage
5S-5149	High Head Lamp	24	4814	90
8T-8752	Low Head Lamp (Halogen)	24	H4813	90
7T-1371	Spot Lamp	24	4505	50
069-2999	High/Spot	12	4416	30

Signal Lights - Incandescent



Signal Lights - Incandescent				
Item	Voltage	Body Assembly	Style	Lens Color
Stop/Tail	12	092-2992	Rectangle	Red
Stop/Tail	24	107-4401	Rectangle	Red
Stop/Tail	24	7M-7147	Round	Red
Turn	12	3E-9346	Rectangle	Amber
Turn	24	162-2073	Rectangle	Amber
Turn	24	3E-6466	Rectangle	Amber
Turn	24	231-5144	Round	Amber
Payload	24	227-9530	Round	Red
Payload	24	227-9531	Round	Green
Compartment	24	171-5672	Rectangle	Clear
Position	24	162-5402	Rectangle	Clear

Reversing Lights















Reversing Lights					
Part Number	Description	Bulb Number	Lens PN	Voltage (V)	Orientation
081-5957	Reversing Lamp	9W-3326	6R-7477	12	Rectangular
261-1502	Reversing Lamp	9X-4493	264-5346	24	Rectangular
338-5716	Reversing Lamp	9X-4493	304-7167	24	Rectangular
267-1445	Reversing Lamp	9X-4493	344-7955	24	Round
386-1724	Reversing Lamp - LED	-		9V-32V	Rectangular

Cat Work Lights, Signal Lights, Strobes and Bulbs

License Plate Lights





License Plate Lights							
Part Number	Description	Bulb Type	Bulb Number	Voltage (V)	Amps (A)	Mount Type	Orientation
190-8962	License Plate Lamp	Incandescent	195-9712	12	-	Surface	Horizontal
259-0134	License Plate Lamp	Incandescent	5C-9583	24	.2	Surface	Vertical
304-4163	License Plate Lamp	LED	-	12	0.19	Panel	Horizontal
326-8837	License Plate Lamp	Incandescent	9X-4494	24	0.6	Surface	Horizontal

Miniature Electrical Lamps

Part Number	Voltage	ANSI Number	Item	Part Number	Voltage	ANSI Number	Item
9D-4185	24	459		084-4375	12	N/A	
5D-0284	12	1895		7M-9957	12	631	
118-5075	14	194A		7H-2976	24	1683	
8M-6176	12	53		7N-9943	24	2232	
7X-2058	24	265		9W-2111	24	1495	
1S-4168	12	93		9S-3335	24	623R	
5M-8034	12	1156		3C-4883	12	P21W	
8J-4863	24	307					
9X-4493	24	13498					
8T-9749	24	1638					
034-2535	24	1662					
9X-4492	24	13499					
7S-1800	12	1157					
9B-3117	6	63					
7N-1996	24	624					
3H-2691	24	1251					

Cat Work Lights, Signal Lights, Strobes and Bulbs

Miniature Electrical Lamps (Cont'd.)

Part Number	Voltage	ANSI Number	Item	Part Number	Voltage	ANSI Number	Item
9K-9140	24	1309		100-3245	24	2661	
7X-9065	12	161		8M-7119	6	1154	No Image
110-2079	24	657		7N-9967	24	28MB	
8L-9801	12	1816		5D-1708	24	456	
1239294	28	757		3E-8825	24	7839B	

LED Bulbs



Care has to be taken when selecting LED indicators as a replacement for incandescent bulbs. LEDs do not operate like incandescent bulbs and will not work with diagnostic drivers and can possibly glow when powered by electronic controls due to leakage current. LED indicators do not have over-voltage protection circuitry so care has to be taken when used with other electrical devices (i.e. solenoids).

Part Number	Volts	Base Type	Base Size	Bulb Size	Color	Polarity	MSCD	Bulb Style
125-9955	24	Slide	T5.5	–	Red	Bi-Polar	–	Single
125-9956	24	Slide	T5.5	–	Amber	Bi-Polar	–	Single
125-9957	24	Slide	T5.5	–	Green	Bi-Polar	–	Single
163-1876	24	Wedge	W-2	T-3 1/4	Red	Bi-Polar	2500	Single / Diffuser
163-1878	24	Wedge	W-2	T-3 1/4	Amber	Bi-Polar	2000	7-Cluster
163-1879	24	Wedge	W-2	T-3 1/4	Green	Bi-Polar	2000	Single / Diffuser
163-1882	24	Bayonet	A-1	T-3 1/4	Red	Bi-Polar	2500	Single / Diffuser
163-1883	24	Bayonet	A-1	T-3 1/4	Amber	Bi-Polar	2000	7-Cluster
163-1884	24	Bayonet	A-1	T-3 1/4	Green	Bi-Polar	2000	Single / Diffuser
163-1885	24	Bayonet	A-1	T-3 1/4	Blue	Bi-Polar	150	Single / Diffuser
163-6509	24	Bayonet	A-1	T-3 1/4	White	Bi-Polar	3000	7-Cluster
165-5674	24	Bi-Pin	–	T-3 1/4	White	Polar	900	Single
171-1033	24	Bayonet	B-2	G-6	Red	Bi-Polar	5000	7-Cluster
188-3447	8	Wedge	W-2	T-3 1/4	White	Bi-Polar	1560	Single
336-0067	24	Wedge	W-2	T-3 1/4	White	Bi-Polar	3000	7-Cluster

Cat Work Lights, Signal Lights, Strobes and Bulbs

Halogen Bulbs

Halogen Bulbs			
Part Number	Voltage	Type	Wattage
314-5728	24	H7	70
290-7057	12	H7	55
9W-0607	12	H3	55
351-9918	24	H3	70
9W-3324	12	H4	60/55

Halogen Bulbs			
Part Number	Voltage	Type	Wattage
9X-3465	24	H4	75/70
9X-8118	12	H1	68
9X-7849	24	H1	70
113-8886	12	H11	50

HID Bulbs

HID Bulbs			
Part Number	Voltage	Category	Wattage
209-6638	12 or 24	D2S	35
290-8160	12 or 24	D1S	35

Dash Lamps

- Allow operators to read gauges at night.
- For use with miniature electrical lamps.
- Dash Lamp Assembly 6N-8355

Dash Lamps				
Item	Voltage	Wire Length	Part number	Bulb
Dash Lamp	6	152-610 mm (36,701 in)	6N-8355	9B-3117
Dash Lamp	12	152-610 mm (36,710 in)	6N-8355	7M-9957
Dash Lamp	24	152-610 mm (36,701 in)	6N-8355	3H-2691
Dash Lamp	10 to 32	160mm	433-1072	—
Dash Lamp-LED	10 to 32	142mm	316-6409	—

LED Purpose Lights



The evolving versatility of LEDs expands the use and application of LED lighting. Adding compartment LED lighting brightens areas where lighting can benefit hard to see areas not typically lit up by easily adding compact LED lights.

Cat Work Lights, Signal Lights, Strobes and Bulbs

LED Purpose Lights (Cont'd.)

LED Purpose Lights					
Part Number	Purpose	Volts	Mounting	Color	Dimension
424-5598	Step/Compartment	12 to 48	Bracket	Bright White	2.4 in x 2.4 in
418-5545	Engine/Compartment	12 to 24	Surface	Bright White	5 in x 1 in
379-3416	Back-up/Porch	24	Surface	Bright White	5 in x 3 in
419-3911	Dash/Indicator/ market/step	12 to 24	3/4" Round Snap-in	Amber	1" round
419-3912	Dash/Indicator/ market/step	12 to 24	3/4" Round Snap-in	Blue	1" round
442-1341	Dash/Indicator/ market/step	12 to 24	3/4" Round Snap-in	Red	1" round
443-2975	Dash/Indicator/ market/step	12 to 24	3/4" Round Snap-in	Green	1" round
333-7383	Dash/Indicator/ market/step	24	3/4" Round Snap-in	Soft White	1" round
456-0632	Dash/Indicator/ market/step	12 to 24	3/4" Round Snap-in	Bright White	1" round
459-0178	Payload marker	9 to 32	2.75" hole	Red	2.5" round
459-0179	Payload marker	9 to 32	2.75" hole	Green	2.5" round
459-0180	Payload marker	9 to 32	2.75" hole	Amber	2.5" round

Dome Lights

Dome Lights						
Part Number	Volts	Connector	Mount	Switch	Bulb	Comments
3E-6389	24	Pigtail DT (3)	Rectangle-Surface mt.	2-Position Switch (On/Off)	7N-9943	Heavy Duty
3E-7301	12	Pigtail DT (3)	Rectangle-Surface mt.	2-Position Switch (On/Off)	7M-9957	Heavy Duty
7X-6399	24	Pigtail SS (2)	Rectangle-Surface mt.	None	7N-9943	Heavy Duty
084-4277	12	Blade terminals	Rectangle-Flush mt.	3-Position Switch (On/Off/On)	210-8754	Switch in lens
107-6032	24	Blade terminals	Rectangle-Flush mt.	3-Position Switch (On/Off/On)	259-1286	Switch in lens
345-1932	24	Pigtail DT (3)	Round-Surface mt.	None	—	LED

Cat Work Lights, Signal Lights, Strobes and Bulbs

Dome Lights (Cont'd.)

Dome Lights						
Part Number	Volts	Connector	Mount	Switch	Bulb	Comments
375-1478	24	Pigtail DT (3)	Rectangle-Surface mt.	2-Position Switch (On/Off)	—	LED (3)
338-1128	24	Pigtail DT (3)	Rectangle-Flush mt.	3-Position Switch (On/Off/On)	—	LED (3)

Interior Specialty

Interior Specialty				
Part Number	Volts	Connector	Features	Bulb
8Y-6335	24	Blade terminals	Map light – round eyeball	305-5629
170-3463	24		Courtesy Light	LED
250-8335	24	Pigtail DT (2)	Courtesy light - Rectangle Amber	LED
162-5402	24	Pigtail DT (2)	Rectangle - Clear	9X-4494

LED Step Lights

LED Step Lights				
Part Number	Volts	Connector	Features	Bulb
333-7383	28	Amp 2	Round	LED
304-4163	12	Pigtail DT (2)	Rectangle- Flush mt.	LED

Reflectors



Reflectors				
Part Number	Description	Color	Shape	Size
252-6645	Reflector	Yellow	Oval	100 x 45 x 5 mm
252-6646	Reflector	Red	Oval	100 x 45 x 5 mm
9R-1499	Reflector	Red	Rectangle	108 x 44 x 9 mm
9R-2404	Reflector	Amber	Rectangle	108 x 44 x 9 mm
129-8547	Reflector	Amber	Rectangle	45 x 73 mm
227-9859	Reflector	Red	Rectangle	70 x 31.5 x 5 mm
156-5431	Reflector	Red	Rectangle	76 x 44 x 8 mm
116-9621	Reflector	Yellow	Rectangle	94 x 44 x 7 mm
116-9622	Reflector	Red	Rectangle	94 x 44 x 7 mm
6C-5712	Reflector	Orange	Rectangle	55 x 115 x 7 mm
313-5271	Reflector	Red	Round	60 mm

Cat Work Lights, Signal Lights, Strobes and Bulbs

Reflectors (Cont'd.)

Reflectors				
Part Number	Description	Color	Shape	Size
313-5270	Reflector	Amber	Round	60 mm
6C-5736	Reflector	Red	Round	85 mm

Lighting Reference

Mount Type



Suspended Mount
(Hanging type mounting)



Vertical Mount
(Pedestal type mounting)

Light Patterns



Flood Beam Pattern
General & Work Lighting



Spot Beam Pattern
Concentrated Beam



Trapezoid Beam Pattern
Forward Illumination

Cat Radio and Accessories

Built Tough for the Most Rugged Environments



Just as you do with any other part or component, you should consider the durability of a radio. A car radio isn't going to be durable enough to withstand the vibrations and other extremes where you work. Instead, select one that is designed to take abuse.

Cat offers a line of rugged radios and accessories that can withstand the toughest applications in machines, on-highway trucks, boats or private sector use. Cat radios and accessories also are designed to withstand both hot and cold temperature extremes.

You can choose from five models, from a robust receiver to a unit that includes a CD, and an integrated satellite tuner.

All models provide the following features and benefits:

- Exceeds shock and vibration standard SAE J1455
- Withstand temperatures from -40° to 85° C (-40° to 185° F)
- Weather band
- Worldwide frequency compatible tuner

AM/FM Receiver



Cat offers four models, beginning with the basic AM/FM receiver.

Features:

- Total Power (RMS) 72 (18x4)
- LED lighted display
- Quartz clock
- 6 AM and 18 FM presets
- Auto preset memory with preset scan
- Scan
- Seek Up/Down
- Worldwide frequency compatible tuner
- Weather band
- Front auxiliary input (MP3 Player or I-Pod)

Part Number	Description
462-9618	AM/FM Receiver

Deluxe AM/FM Receiver with Bluetooth capability



This model has the following radio features:

- Total Power (RMS) 68 (17x4)
- MP3 playback (USB and Auxiliary port only)
- LED backlighting
- 6 AM presets and 12 FM presets
- Auto-store memory
- Seek/Scan tuning
- Preset scan
- Alarm Clock
- Worldwide frequency compatible tuner
- Weather band
- USB port faceplate
- Front and rear Auxiliary input
- Bluetooth

Taking advantage of the Bluetooth capability requires an external microphone (Cat part 349-8642), and an external microphone harness (Cat part 353-1634) that plugs into the back of the radio.

Part Number	Description
439-1562	Deluxe AM/FM Receiver (Bluetooth)

Deluxe AM/FM Receiver with CD and Bluetooth capability



This model has the following radio and CD features:

- Total Power (RMS) 68 (17 x 4)
- LED lighted display
- Quartz clock
- 6 AM and 18 FM presets
- Auto preset memory with preset scan
- Scan
- Seek Up/Down
- Worldwide frequency compatible tuner
- Displays elapsed time and track
- Next/previous track
- Fast forward/reverse
- Anti-shock floating mechanism
- Track, scan, search and repeat
- Auto-loading mechanism
- Front and rear auxiliary input (MP3 Player or I-Pod®)
- Bluetooth

Taking advantage of the Bluetooth capability requires an external microphone (Cat part 349-8642), and an external microphone harness (Cat part 353-1634) that plugs into the back of the radio.

Part Number	Description
439-1563	AM/FM Receiver with CD and Bluetooth

Cat Radio and Accessories

Deluxe AM/FM Receiver with CD, Satellite Radio, and Bluetooth capability



In addition to the integrated satellite radio, this model also has the following features:

- Total Power (RMS) 68 (17x4)
- MP3 playback (USB, Auxiliary port and CD)
- LED backlighting
- 6 AM presets and 12 FM presets
- Auto-store memory
- Seek/Scan tuning
- Preset scan
- Alarm Clock
- Worldwide frequency compatible tuner
- Weather band
- Anti-shock floating mechanism
- Track, scan, search and repeat
- Track pause
- Random track play
- Fast forward/reverse
- Next/previous track
- Ignition off load and eject
- XM or Sirius
- Bluetooth

Taking advantage of the Bluetooth capability requires an external microphone (Cat part 349-8642), and an external microphone harness (Cat part 353-1634) that plugs into the back of the radio.

Part Number	Description
439-1564	Sirius or XM Deluxe AM/FM Receiver (Bluetooth) with CD and SAT

Bluetooth® Microphone for Cat Radios

- The Bluetooth function allows hands free usage of your cell phone through the radio.
 - This is not a voice-activated device.
- Bluetooth capability is available in Cat radio part numbers 439-1562 and 439-1564.
- There is an expanded feature for Bluetooth on Cat radio part number 439-1562 that also allows streaming of music from your cell phone through the radio.
- This Microphone is used in conjunction with Bluetooth Harness (353-1634).

Part Number	Description
349-8642	Bluetooth Microphone

Bluetooth Harness for Cat Radios

- This Harness is used in conjunction with Bluetooth Microphone (349-8642).

Part Number	Description
353-1634	Bluetooth Harness

Auxiliary Port for Cat Radios

- The Aux Port allows the operator to plug in an MP3 player (I-Pod) for use through the radio.
- The auxiliary port comes in two pieces:
 1. a stereo jack to be mounted in the dash board and
 2. a wiring harness to connect the stereo jack to the plug in at the back of the radio.
- Available for use with Cat radio part numbers 439-1562 and 439-1564.
- Cannot be used with 439-1562 and 439-1564 radios if the wiring harness for Bluetooth capability has already been installed.

Part Number	Description
344-5594	Auxiliary Port

Radio Installation Kits



Mounting Kit - Cat radio ready machines

Cat Radio ready machines come with speakers, antenna, radio mounting, harness connector and 24 volt to 12 volt connector. The following parts are needed to complete the install:

- 200-5728 harness
- 4E-1411 bushing 20 mm (0.79 in) or 241-4939 bushing 28 mm (1.1 in)

Mounting Kit - Non radio ready Cat competitive machines Part Number 136-3643

Part Number	Description	Qty.
136-3643	Mounting Kit	1
Kit Includes:		
100-2881	Screws	4
106-8142	Mounting Shell	1
106-8153	Harness	1
106-8154	Rectangular Speaker (75 Watts)	2
200-5728	Harness	1
241-4939	Bushing	1
275-2138	Bracket	1
3B-4503	Lock Washers	4
3S-2093	Cable Straps	4
4E-1411	Rubber Bushing	1
4M-8478	Machine Screw	1
6V-7699	Washers	4
8E-1118	Flexible Antenna - Rubber Mast	1
8R-6111	Coax Cable - 1525 mm (60 in)	1

Adapter Harnesses



Part Number	Manufacturer	Model
106-8153	Non-radio ready machine - Cat or competitor	Plugs into the Deutsch connector end of the 200-5728 harness. This is a Deutsch connector to wire harness that can be used in wiring in a Cat radio into a non-radio ready Cat or competitive machine.
200-5728	Radio ready machines - Cat	This harness adapts the radio to the harness in Cat Radio-ready machines
279-9663	Kenworth and Peterbilt On-highway trucks	Kenworth: COE K100E series. All conventional models built after March 1988 — February 2005. Peterbilt: All medium duty COE Midranger, all medium duty conventional 330, COE models built after October 1986, conventional models built after October 1986, convention model, premium sound, from February 2000.
279-9664	Kenworth and Peterbilt On-highway trucks	Kenworth: All medium duty convention T300 and T2000. Peterbilt: 387 (except concert Class).
279-9665	International On-highway trucks	International: 2600-8300 series medium duty, 9000 series conventional Pro Sleeper from June 1994.
279-9666	Mack On-highway truck	Mack: COE model MH, RD, RM and DMM models built after November 1992. Mack: CH and CL series Vision.
279-9668	Sterling On-highway trucks	Sterling: 1999-2001 models

Antennas - Flexible



Flexible rubber mast

- Antenna mast length is 355 mm (14 in) with 1/2-20 connector. Antenna can be adjusted from 0 to 90 degrees in mounting base.

Part Number	Description
8E-1118	Flexible Antenna - Rubber Mast

Antennas - Sealed



- Antenna mast length is 0.21 m (8.3 in).
- Antenna can be adjusted from 0 to 90 degrees in mounting base.

Part Number	Description
374-0752	Sealed Antenna

Antennas - Wire Whip



Wire whip with spring

- Antenna mast length is 668 mm (26 in) with 1/2-20 connector. Antenna can be adjusted from 0 to 90 degrees in mounting base.

Part Number	Description
9W-3072	Wire Whip Antenna

Radio Installation Kits

Antennas - Satellite

Mirror Mount

- Needed with 439-1564 SIRIUS or XM radios

Rooftop Mount

- Needed with 439-1564 SIRIUS or XM radios

Part Number	Description	Cable Length
284-9055	Satellite Antenna - Mirror Mount	8 ft (2.4m)
307-2245	Satellite Antenna - Rooftop Mount	12 ft (3.6m)

Speakers - Round



5.25 inch (133 mm) coaxial

- Mounting: Recessed opening
- Impedance: 4 Ohms
- Power: 60 Watts
- Frequency response: 75 Hz to 20 KHz
- Speaker cover 101-3055 required

Part Number	Description
168-8772	Round Speaker (60 Watts)

Speakers - Rectangular

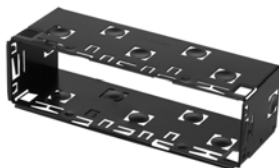


7.32 inch (186 mm) two speaker with internal crossover

- Impedance: 6 Ohms
- Power: 75 Watts
- Frequency response: 90 Hz to 20 KHz

Part Number	Description
106-8154	Rectangular Speaker (75 Watts)

Radio Sleeve



- Sleeve is used to hold radio into dash

Part Number	Description
192-7054	Radio Sleeve

Coax Cable



Part Number	Length	Connector
Radio connector to antenna connector		
101-2640	1000 mm (39.4 in)	1/2 - 20
109-8981	1200 mm (47.2 in)	1/2 - 20
110-6391	4280 mm (168.5 in)	1/2 - 20
117-2932	4080 mm (160.6 in)	1/2 - 20
162-7264	3500 mm (137.8 in)	1/2 - 20
199-3387	1800 mm (70.9 in)	1/2 - 20
8R-6111	1525 mm (60 in)	1/2 - 20
9W-3073	2670 mm (105.1 in)	1/2 - 20
Radio connector to 90 degree antenna connector		
146-3722	650 mm (25.6 in)	1/2 - 20
9U-8746	500 mm (19.7 in)	1/2 - 20

Converters - 24 Volts to 12 Volts

5 amp continuous



- Used to reduce machine 24 volts to 12 volts. When the radio is wired to one (of the two batteries in series) the battery never gets a full charge, which can result in premature battery failure.

Part Number	Description
340-7160	Converter - 5 amp continuous

10 amp continuous



- Used to reduce machine 24 volts to 12 volts. When the radio is wired to one (of the two batteries in series) the battery never gets a full charge, which can result in premature battery failure.

Part Number	Description
340-7161	10 amp continuous

15 amp continuous/20 amp intermittent



- Used to reduce machine 24 volts to 12 volts. When the radio is wired to one (of the two batteries in series) the battery never gets a full charge, which can result in premature battery failure.

Part Number	Description
443-6362	Converter - 15 amp continuous/20 amp intermittent

Cameras

Cat Work Area Vision System (WAVS) Customized Kits



Customized kits are now available for the Cat Work Area Vision System. The kits include a display (without mount), camera(s), display harness, and switcher (if more than one camera). These kits do not contain camera cables, display mount, or brackets; these are to be ordered separately. Due to various types of cable and brackets, selecting the proper cables (length and type) for the machine allows you to customize your kit.

Kit Types	Kit Part Number	Kit Contents
1 camera	353-5450	Display (with 4 m cord), 1 camera, display harness
2 cameras	353-5451	Display (with 4 m cord), 2 cameras, display harness, camera switcher
3 cameras	353-5452	Display (with 4 m cord), 3 cameras, display harness, camera switcher

Benefits of Customizable Kits:

- Proper fit of camera system to your machine
- System that is ideal for your application
- No excess cable to hide
- Purchase only what you need

Caterpillar includes the following options to the Camera Systems:

Cable Length		Cable Part Number	
		Armored	Non-Armored
3.28 ft	1 m	–	320-9715
9.8 ft	3 m	283-0657	261-3223
16.4 ft	5 m	274-4477	251-8248
24.6 ft	7.5 m	283-0658	266-2116

Cat Work Area Vision System (WAVS) Customized Kits (Cont'd.)

Caterpillar includes the following options to the Camera Systems: (Cont'd.)

Cable Length		Cable Part Number	
		Armored	Non-Armored
29.5 ft	9 m	283-0659	–
36 ft	11 m	274-4478	251-4169
52.5 ft	16 m	274-4479	271-7453
68.9 ft	21 m	–	251-8249

Note: Cables can be connected in series and in combination with armored and non-armored types

Brackets Available:

Part Number	Description
248-6979	Bracket to mount on side wall of machine/structure
290-0106	Bracket to mount on side wall of machine/structure
276-2638	Bracket to mount on side wall of machine/structure
320-5392	Bracket to mount on side wall of machine/structure
347-0745	Bracket to mount on top of machine/structure
268-9063	Bracket to mount on top of machine/structure
305-3748	Bracket to mount on sidewall of machine/structure or use with supporting bracket 312-4475
312-4475	Bracket to support 305-3748

Mount for Display

The display mount recommended is the RAM mount. See the table below:

RAM Mount Parts

Part Number	Description
259-4397	3.5" Ram Mount
259-4398	Studded (3/8") Ram Mount Ball
259-4399	Ram Mount Ball Base
259-4400	3.5" Mount, Stud Ball, (3/8"), & Ball Bases
261-3222	3.5" Mount, 2 Ball Bases
270-3311	5.75" Ram Mount
271-7455	Double Ball Connector

Cameras

Original Generic WAVS Kits Still Available

The generic Cat WAVS kits are still available. These are 1, 2, or 3 camera kits which include a display (with mount), cameras, switcher (if more than one camera), brackets and 16 m armored cable(s). Table below lists the part numbers for these generic kits.

Generic WAVS Kits:

Generic Kit Type	Part Number
1 Camera Kit	282-4441
2 Camera Kit	282-4442
3 Camera Kit	282-4443

- The Cat Work Area Vision System improves productivity and increases operator awareness of surroundings, work tool activity, and changing work area conditions.
- The versatile camera system can provide machine operators with views from up to 3 cameras through advanced switching algorithms. Developed for rugged applications and environments, the Cat Work Area Vision System is simple to install on any machine and offers powerful capabilities.
- The internal display, a 7-inch color TFT (Thin Film Transistor) LCD with an auto-sense illumination for changing light conditions has an Aspect Ratio of 16:9 and a Sealing specification of IP67, which withstands splashing.
- The Color Camera (max viewing angle 115 degrees) has a robust design that withstands vibration and pressure washing and includes an internal heater for removal of condensation, snow, and ice.

For Cable Length determination steps, Cable selection, and Camera Wash System, refer to PELJ1173

New WAVS for Use in Light Duty Applications

The Caterpillar designed Light Duty Camera system is available and ideal for small construction machines (12V) that operate in less severe applications.

This system has a similar look and functionality to the current WAVS product, but designed more for the smaller vehicles operating in less-extreme conditions. This Cat designed system includes a 7 inch TFT LED Backlight Display with mount (includes 1.8m camera cable and power harness), camera(s), and an 11m coaxial standard type cable.

The WAVS Light Duty kits are offered in a one or two camera configuration, see table below for kit part numbers.

WAVS Light Duty Kit Part Numbers

Part Number	Description	Includes
377-9894	One Camera Kit	Display with harness (1.8 m) and mount, one camera, 11 m cable
379-0069	Two Camera Kit	Display with harness (1.8 m) and mount, two cameras, 11 m cables

Display / Monitor Features

- On screen display (OSD) menu language options (English, Dutch, German, French, Italian, Polish, Portuguese, Spanish, Turkish, Swedish, Finnish, Danish and Norwegian)
- Easy to navigate menu structure

Display Camera Settings

- Auto Brightness Control (ABC) one touch display
- Contrast adjustment one touch display
- Brightness adjustment one touch display
- Camera tags (on screen)
- Mirror image
- Upside down image
- Horizontal and vertical line mark
- Graticule (grid overlay)

Camera Features

The 12V, Color Camera (max viewing angle 115 degrees) has a robust design that withstands vibration and pressure washing and the built-in heater eliminates condensation, snow, and ice buildup. A preferred camera eyeball design makes adjusting the camera position easy and versatile with no vertical or horizontal bracket limitations.

Camera Cables

The Light Duty system utilizes the same type of cables as the current WAVS product, see table 2.0 for additional cable options.

Cameras

Camera Cable and Install Part Options

Optional WAVS Parts

Quantity	Part Number	Description
1	333-8153	Connector - Video Bulkhead
1	320-9715	Cable Assembly - 1 meter Standard
1	283-0657	Cable Assembly - 3 meter Standard
1	261-3223	Cable Assembly - 3 meter Standard
1	274-4477	Cable Assembly - 5 meter Standard
1	251-8248	Cable Assembly - 5 meter Standard
1	283-0658	Cable Assembly - 7.5 meter Standard
1	266-2116	Cable Assembly - 7.5 meter Standard
1	283-0659	Cable Assembly - 9 meter Standard
1	274-4478	Cable Assembly - 11 meter Standard
1	251-4169	Cable Assembly - 11 meter Standard
1	274-4479	Cable Assembly - 16 meter Standard
1	271-7453	Cable Assembly - 16 meter Standard
1	251-8249	Cable Assembly - 21 meter Standard
1	261-3222	Display Mounting Group

For additional information refer to PELJ1505, IRM WAVS



O-RINGS



Cat O-Rings

Cat O-Rings - Deliver Long, Leak-Free Performance



Prevent fluid contamination and deliver long, leak-free performance

- Meet or exceed SAE standards
- Specifically matched to your Cat system's different fluid types, temperatures, and pressures
- Provide superior resistance to compression set
- Feature special dimensional tolerances and O-ring coatings for improved installation and performance
- Marked with the Cat logo and part number for easy identification and protection against counterfeit seals
- Available in time- and money-saving kits

Ten O-Ring Tips

- Keep O-rings packaged until installation.
- Don't store O-rings near heat.
- Protect O-rings from UV rays.
- Remove old O-rings with brass or plastic picks to prevent groove damage.
- Don't reuse O-rings.
- Clean the seal groove before installation.
- Don't soak O-rings.
- Don't twist or cut O-rings during installation.
- Don't select O-rings based on material color. There is no universal color standard.
- Maintain your cooling system. High fluid temperatures are the number-one cause of shortened seal life.

O-Ring Chart

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Standard Size	NBR (60)	NBR (70)	NBR (75)	NBR (90)	FKM (70)	FKM (75)	FKM (90)	Silicone (70)	EPDM (70)	HNBR (78)	Urethane (93)	ACM (75)	TFEP (80)
0.78	25.4	-	271-7437	-	-	-	-	-	-	-	-	-	-	-	-
1	3	-	-	-	-	8U-7383	-	-	-	-	-	-	-	-	-
1	6	-	-	-	-	6V-3693	-	107-7642	-	-	-	-	-	-	-
1.02	10.03	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.17	10.41	-	-	-	-	-	-	189-3769	-	-	-	-	-	-	-
1.3	11	-	-	-	-	-	-	192-7115	-	-	-	-	-	-	-
1.3	13	-	-	-	8U-1402	-	-	-	-	-	-	-	-	-	-
1.35	11.63	-	-	-	1P-8116	-	-	-	-	-	-	-	-	-	-
1.4	4.5	-	-	-	-	-	-	-	-	-	-	273-5308	-	-	-
1.4	6.7	-	-	-	085-8219	-	-	-	-	-	-	-	-	-	-
1.4	25.63	-	-	-	-	-	-	-	9X-7430	-	-	-	-	-	-
1.42	3.99	-	-	-	-	-	-	5P-9262	-	-	-	-	-	-	-
1.42	4.47	-	-	-	5P-6458	-	-	-	-	-	-	9X-7379	-	-	-
1.42	4.7	901	-	-	7M-0105	-	-	-	-	3S-2912	-	-	-	-	-
1.5	1.5	-	-	-	-	-	-	179-7400	-	-	-	-	-	-	-
1.5	4	-	-	-	-	263-3320	-	-	213-9243	-	-	-	-	-	-
1.5	4.5	-	-	-	-	3E-4288	-	-	213-9246	-	-	-	-	-	-
1.5	5	-	-	-	-	-	-	8C-3131	-	-	-	-	-	-	-
1.5	5.5	-	-	-	-	263-3319	-	-	-	-	-	-	-	-	-
1.5	6	-	-	-	192-7507	-	-	-	-	-	-	-	-	-	-
1.5	6.2	-	-	-	-	-	-	-	228-7099	-	-	-	-	-	-
1.5	6.5	-	-	-	8U-1766	3E-4289	-	-	-	-	-	-	-	-	-
1.5	7	-	-	-	8U-3899	192-7512	-	-	-	-	-	-	-	-	-
1.5	7.5	-	-	-	177-2645	192-7513	-	-	-	-	-	-	-	-	-
1.5	8	-	-	-	192-7514	3E-4296	-	-	-	-	-	-	-	-	-
1.5	8.2	-	-	-	-	8T-7876	-	192-7116	8C-3076	-	262-9990	-	-	-	-
1.5	8.5	-	-	-	-	-	-	192-7111	-	-	-	-	-	-	-
1.5	9	-	-	-	123-2341	8U-0598	-	-	-	-	-	-	-	-	-
1.5	9.5	-	-	-	147-4214	-	-	-	-	-	-	-	-	-	-
1.5	10	-	-	-	-	3E-4297	-	8U-5942	-	-	-	-	-	-	-
1.5	10.5	-	-	-	-	8U-0599	-	-	-	-	-	-	-	-	-
1.5	11.5	-	-	-	7I-2750	-	-	-	-	-	-	-	-	-	-
1.5	12	-	-	-	-	-	-	9X-7377	-	-	-	-	-	-	-
1.5	13.5	-	-	-	4I-0754	-	-	-	-	-	-	-	-	-	-
1.5	15	-	-	-	192-7510	-	-	-	-	-	-	-	-	-	-
1.5	15.5	-	-	-	136-0152	-	-	-	-	-	-	-	-	-	-
1.5	16	-	-	-	-	-	-	242-4313	-	-	-	-	-	-	-
1.5	17	-	-	-	-	-	-	-	8C-3106	-	-	-	-	-	-
1.5	17.5	-	-	-	112-0034	-	-	-	-	-	-	-	-	-	-
1.5	19.5	-	-	-	122-7776	-	-	-	-	-	-	-	-	-	-

Cat O-Rings

O-Ring Chart (Cont'd.)

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Standard Size	NBR (60)	NBR (70)	NBR (75)	NBR (90)	FKM (70)	FKM (75)	FKM (90)	Silicone (70)	EPDM (70)	HNBR (78)	Urethane (93)	ACM (75)	TFEP (80)
1.5	21.5	-	-	-	279-8671	-	-	-	-	-	-	-	-	-	-
1.5	30	-	-	-	-	8U-3189	-	-	-	-	-	-	-	-	-
1.5	32	-	-	-	157-2042	-	-	-	-	-	-	-	-	-	-
1.5	38	-	-	-	-	-	-	-	-	326-0772	-	-	-	-	-
1.5	52	-	-	-	-	-	-	175-0054	-	-	-	-	-	-	-
1.57	12.7	-	-	-	5D-0834	-	-	-	-	-	-	-	-	-	-
1.57	15.88	-	-	-	4M-6582	-	-	-	-	-	-	-	-	-	-
1.59	34.99	-	-	-	-	280-5038	-	-	-	-	-	-	-	-	-
1.6	6.5	-	-	-	-	-	-	-	-	-	-	71-6601	-	-	-
1.6	7.1	-	323-6115	-	-	-	-	-	-	-	-	-	-	-	-
1.6	8.1	-	-	-	-	-	-	-	196-6803	-	-	-	-	-	-
1.6	9.5	-	-	-	-	-	-	81-4285	-	-	-	-	-	-	-
1.6	11.1	-	-	-	-	-	-	81-4284	-	-	-	-	-	-	-
1.6	12.1	-	-	-	216-8994	-	-	-	107-7640	-	-	-	-	-	-
1.6	12.5	-	-	-	-	-	-	-	8C3133	-	-	-	-	-	-
1.6	13.1	-	-	-	8C-3097	201-0255	-	-	-	-	-	-	-	-	-
1.6	14	-	-	-	-	-	-	8C-3132	-	-	-	-	-	-	-
1.6	14.3	-	-	-	-	-	-	202-2074	-	-	-	-	-	-	-
1.6	22.1	-	-	-	8C-3099	-	-	-	-	-	-	-	-	-	-
1.6	22.2	-	-	-	-	-	-	81-4581	-	-	-	-	-	-	-
1.6	25.1	-	-	-	8C-3102	-	-	-	-	-	-	-	-	-	-
1.6	27.1	-	-	-	8C-3101	-	-	-	-	-	-	-	-	-	-
1.63	6.07	902	-	-	-	4J-7533	-	163-4565	238-5078	-	8T-9587	109-0093	-	-	-
1.63	7.65	903	-	119-2189	-	7J-0204	-	5P-7813	238-5079	-	8K-0001	-	-	-	-
1.65	14.5	-	-	-	-	-	-	-	117-8804	-	-	-	-	-	-
1.77	53.7	034	-	-	-	-	-	151-8670	-	-	-	-	-	-	-
1.78	1.78	004	-	-	-	085-7537	-	-	-	-	-	-	-	-	-
1.78	2.57	005	-	-	-	-	-	8C-3095	-	-	-	-	-	-	-
1.78	2.9	006	-	-	-	-	-	9N-1749	-	-	-	-	-	-	-
1.78	3.68	007	-	-	-	-	-	-	168-0268	-	-	150-4651	-	-	-
1.78	4.47	008	-	-	8F-7219	6V-5722	150-8698	-	221-3491	8M-8468	-	-	8T-2360	-	-
1.78	5.28	009	-	-	8F-9538	3G-1209	-	192-7117	107-3116	8M-5250	-	-	8T-2361	-	-
1.78	6.07	010	-	-	2D-6392	6V-5586	015-08701	9N-1756	163-7897	3L-6768	-	-	1P-7363	-	-
1.78	6.4	-	-	-	-	147-6603	-	-	-	-	-	-	-	-	-
1.78	6.75	-	-	-	-	209-4526	-	-	-	-	-	-	-	-	-
1.78	7.65	011	-	-	5F-9144	4J-5477	-	061-7538	228-7088	-	121-4345	9X-7380	-	-	-
1.78	8.73	-	-	-	172-0938	-	-	-	-	-	-	-	-	-	-
1.78	9.25	012	-	-	1H-1023	161-6154	-	464-0509	033-6039	5H-8853	6D-7128	-	-	-	-
1.78	9.27	012	-	-	-	6V-8397	-	5P-8942	228-7089	-	-	-	-	-	-
1.78	9.7	-	-	-	-	-	-	149-2090	-	-	-	-	-	-	-

O-Ring Chart (Cont'd.)

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Standard Size	NBR (60)	NBR (70)	NBR (75)	NBR (90)	FKM (70)	FKM (75)	FKM (90)	Silicone (70)	EPDM (70)	HNBR (78)	Urethane (93)	ACM (75)	TFEP (80)
1.78	10.82	013	-	-	6M-5062	095-1750	-	317-0808	3E-6780	-	121-4344	9X-7381	126-6514	-	-
1.78	12.42	014	-	214-7654	4K-2039	161-6149	-	033-6033	6V-5758	-	180-8424	9X-7408	126-6515	-	-
1.78	12.47	014	-	-	-	6V-8398	-	-	228-7090	-	-	-	-	-	-
1.78	13.34	-	-	-	-	-	-	317-0810	-	-	-	117-2983	-	-	-
1.78	14	015	-	-	5L-4758	095-1751	-	149-2091	033-6043	5P-6620	121-4342	9X-7382	126-6516	-	-
1.78	15.6	016	-	-	4D-2297	-	-	8L-2746	9X-7737	-	6V-5138	-	-	-	-
1.78	15.72	-	-	-	-	7J-9108	-	136-7226	228-7091	-	-	-	-	-	-
1.78	17.17	017	-	-	1S-8947	6V-8399	-	2P-2975	135-2652	-	121-4801	9X-7383	-	-	-
1.78	18.77	018	-	234-6137	8M-8997	9X-7454	-	5P-9757	9X-7681	-	250-2343	-	-	-	-
1.78	18.94	-	-	-	-	6V-9746	-	-	228-7092	-	294-9072	-	-	-	-
1.78	20.35	019	-	270-5269	2V-2272	6V-6580	363-5174	221-9941	5E-9816	-	-	-	-	-	-
1.78	21.95	020	-	-	030-4605	8J-2413	-	221-9937	-	-	-	-	396-4852	-	-
1.78	23.52	021	-	-	8C-3098	-	-	106-9586	8C-3093	-	-	-	-	-	-
1.78	23.66	-	-	-	-	5K-9090	-	-	228-7093	-	415-2887	-	-	-	-
1.78	25.12	022	-	-	5L-4759	8U-7381	150-8700	6V-9178	310-7258	-	-	-	-	-	310-7259
1.78	26.7	023	-	-	077-3241	005-8592	-	033-6032	136-3377	-	-	9X-7384	-	-	-
1.78	28.3	024	-	-	003-8137	4K-4986	-	5P-5600	-	-	-	-	-	-	-
1.78	29.87	025	-	-	6V-0894	2V-2347	-	9X-7734	-	5P-6436	-	-	-	-	-
1.78	30.01	025	-	-	-	6V-8400	-	-	228-7094	-	-	-	-	-	-
1.78	31.47	026	-	197-3698	8F-0212	085-7538	-	179-8128	310-7255	-	-	-	-	-	310-7257
1.78	33.05	027	-	-	5D-6539	8T-4827	-	5P-5601	-	-	-	-	-	-	-
1.78	34.65	028	-	-	5D-6543	5K-5221	-	5P-9658	-	5P-4932	-	-	-	-	166-3718
1.78	36.55	-	-	-	188-2042	-	-	-	-	-	-	-	-	-	-
1.78	37.82	029	-	-	-	187-9630	150-8699	7X-4782	-	-	-	-	-	-	-
1.78	37.98	029	-	-	-	8T-0315	-	180-4364	228-7095	-	294-9075	-	-	-	-
1.78	41	030	-	-	3J-9015	5K-6526	-	-	-	-	-	-	-	-	-
1.78	44.17	031	-	-	3P-1979	5K-0227	-	5E-8767	-	5P-7914	-	-	-	-	-
1.78	47.35	032	-	-	-	5K-0216	-	5E-8768	-	5P-8907	-	-	-	-	-
1.78	50.52	033	-	-	6V-0895	279-4701	-	180-3927	-	-	-	-	-	-	-
1.78	53.7	034	-	-	-	-	-	-	-	3P-5859	-	-	-	-	-
1.78	56.87	035	-	-	219-1897	-	-	-	-	-	-	-	-	-	-
1.78	60.05	036	-	-	077-5843	095-1753	-	-	-	-	-	-	-	-	-
1.78	60.43	-	-	-	-	-	-	311-6130	-	-	-	-	-	-	-
1.78	63.22	037	-	-	7R-5060	-	-	7X-4745	-	3P-0815	-	-	-	-	-
1.78	66.4	038	-	-	-	-	-	247-6020	195-2987	-	-	-	-	-	-
1.78	69.57	039	-	-	-	113-7820	-	247-6019	-	2P-5820	-	-	-	-	-
1.78	72.75	040	-	-	077-3548	9J-5686	-	-	-	-	-	-	-	-	-
1.78	75.92	041	-	210-0529	-	-	-	6V-3865	-	-	-	-	-	-	-
1.78	78.56	-	-	-	-	-	-	-	-	5P-3114	-	-	-	-	-
1.78	79	-	-	-	142-6218	-	-	-	-	-	-	-	-	-	-

Cat O-Rings

O-Ring Chart (Cont'd.)

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Standard Size	NBR (60)	NBR (70)	NBR (75)	NBR (90)	FKM (70)	FKM (75)	FKM (90)	Silicone (70)	EPDM (70)	HNBR (78)	Urethane (93)	ACM (75)	TFEP (80)
1.78	82.27	042	-	-	5P-2931	208-0926	-	6V-5778	-	-	-	-	-	-	-
1.78	88.6	043	-	-	5P-3881	5E-9838	-	8T-6717	-	-	8T-2944	-	-	-	-
1.78	94.97	044	-	-	7X-9372	-	-	5E-8769	-	201-9833	-	-	-	-	-
1.78	101.32	045	-	-	7X-9494	-	-	6V-1320	-	8T-2572	-	-	-	-	-
1.78	107.67	046	-	-	-	9X-7357	-	-	-	-	-	-	-	-	-
1.78	114.02	047	-	-	444-4862	-	-	-	-	-	-	-	-	-	-
1.78	120.37	048	-	-	8C-5237	-	-	133-5909	-	199-9240	-	-	-	-	-
1.78	124.4	-	-	-	-	-	-	9X-7365	-	-	-	-	-	-	-
1.78	126.72	049	-	-	-	8C-0737	-	3E-6799	-	-	-	-	-	-	-
1.78	133.07	050	-	-	-	131-3716	-	6V-1934	-	5P-4969	-	-	-	-	-
1.78	139.89	-	-	-	-	199-8392	-	-	-	-	-	-	-	-	-
1.78	142.34	-	-	-	-	-	-	-	-	5P-9650	-	-	-	-	-
1.78	157.5	-	-	-	-	-	-	-	-	415-1704	-	-	-	-	-
1.78	193.37	-	-	-	-	-	-	-	-	9S-6929	-	-	-	-	-
1.78	196.44	-	-	-	184-6387	-	-	-	-	-	-	-	-	-	-
1.78	221.79	-	-	-	-	-	-	486-2241	-	-	-	-	-	-	-
1.78	228.83	-	-	-	-	-	-	-	-	1S-7390	-	-	-	-	-
1.78	273.3	-	-	-	-	-	-	-	-	433-5968	-	-	-	-	-
1.78	302.03	-	-	-	-	-	-	367-9384	-	-	-	-	-	-	-
1.78	331.5	-	-	-	-	-	-	-	-	433-5967	-	-	-	-	-
1.78	340.67	-	-	-	-	-	-	367-9385	-	-	-	-	-	-	-
1.78	348.46	-	-	-	-	-	-	422-3877	-	-	-	-	-	-	-
1.8	7	-	-	-	8U-1400	124-0623	-	-	-	-	-	105-9410	-	-	-
1.8	10.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.8	12.3	-	-	-	-	-	-	215-2422	-	-	-	-	-	-	-
1.8	13.2	-	-	-	-	483-3887	-	-	-	-	-	-	-	-	-
1.8	14.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.83	8.92	904	-	-	147-4244	3J-7354	-	128-4004	-	-	-	-	-	-	-
1.83	10.52	905	-	-	-	1J-9671	-	6V-5048	214-7566	-	6V-9027	9X-7378	-	-	-
1.85	13.3	-	-	-	-	-	-	5P-7814	214-7567	-	291-8144	-	-	7L-3348	-
1.88	7.98	-	-	-	-	-	-	-	-	-	-	105-9409	-	-	-
1.9	2.8	P3	-	-	095-1508	095-1571	-	-	-	-	-	-	-	-	-
1.9	3.8	P4	-	-	095-1509	7V-5280	-	-	206-9288	-	-	-	-	-	-
1.9	4.8	P5	-	-	095-1510	095-1572	-	-	-	-	-	-	-	-	-
1.9	5.8	P6	-	-	3T-7528	095-1573	-	-	-	-	-	-	-	-	-
1.9	6.8	P7	-	-	095-1511	095-1574	-	-	249-6658	-	-	-	-	-	-
1.9	7.8	P8	-	-	095-1512	095-1575	-	207-4849	199-0518	-	-	-	-	-	-
1.9	8.8	P9	-	-	095-1513	095-1576	-	103-8254	206-9290	-	-	-	-	-	-
1.9	9.8	P10	-	-	095-1514	095-1578	-	-	236-2184	-	-	-	-	-	-
1.9	10.8	-	-	-	-	-	-	-	189-9763	-	-	-	-	-	-
1.9	10.8	-	-	-	-	-	-	-	249-6661	-	-	-	-	-	-

O-Ring Chart (Cont'd.)

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Standard Size	NBR (60)	NBR (70)	NBR (75)	NBR (90)	FKM (70)	FKM (75)	FKM (90)	Silicone (70)	EPDM (70)	HNBR (78)	Urethane (93)	ACM (75)	TFEP (80)
1.9	14.8	-	-	-	146-5297	-	-	-	-	-	-	-	-	-	-
1.9	17	-	-	-	-	-	-	-	198-0077	-	-	-	-	-	-
1.9	27.7	-	-	-	146-5283	-	-	-	-	-	-	-	-	-	-
1.98	11.89	906	-	-	-	3J-1907	451-8550	190-7634	214-7568	-	6V-3250	-	-	7L-6385	-
2	5	-	-	-	192-7506	-	-	-	-	-	-	-	-	-	-
2	6	-	5W-4878	-	147-4538	-	-	9X-4626	213-9244	-	-	-	-	-	-
2	7	-	-	-	-	187-1979	-	-	8T-9528	-	-	-	-	-	-
2	7.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	8	-	166-6080	-	-	319-7001	-	-	-	-	-	-	-	-	-
2	9	-	-	5W-5494	-	5W-9411	-	9X-4617	-	-	-	-	-	-	-
2	9.5	-	-	8U-5928	-	-	-	-	-	-	-	-	-	-	-
2	10	-	-	-	236-5189	9T-4057	-	187-8567	-	-	-	-	-	-	-
2	10.5	-	-	-	-	-	-	-	135-3437	-	-	-	-	-	-
2	11	-	-	-	192-7515	-	-	-	-	-	-	-	-	-	-
2	11.5	-	-	-	-	-	-	-	213-9247	-	-	-	-	-	-
2	11.52	-	-	-	151-7517	-	-	-	-	-	-	-	-	-	-
2	11.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	12	-	-	-	123-2342	3E-4298	-	216-8581	-	-	-	-	-	-	-
2	13	-	-	-	-	8U-6457	-	-	213-9250	-	-	-	-	-	-
2	14	-	-	-	8T-0116	5W-1749	-	-	-	-	-	-	-	-	-
2	15	-	-	-	-	122-9250	-	3E-6749	-	-	-	-	-	-	-
2	16	-	-	121-8112	-	490-8643	-	173-8277	203-0213	-	-	-	-	-	-
2	17	-	-	8U-6013	-	8U-5943	-	-	3E-6769	-	-	-	-	-	-
2	18	-	-	-	5W-7510	5W-4863	-	-	-	-	-	-	-	-	-
2	19	-	-	8U-5951	-	-	-	-	-	-	-	-	-	-	-
2	20	-	-	-	-	3E-6761	-	-	-	-	-	-	-	-	-
2	21	-	-	-	-	5W-5488	-	-	-	-	-	-	-	-	-
2	22	-	-	-	198-8564	-	-	-	-	-	-	-	-	-	-
2	23	-	-	8U-5952	-	-	-	-	-	-	-	-	-	-	-
2	23.5	-	-	-	218-0457	-	-	-	-	-	-	-	-	-	-
2	24.5	-	-	-	111-9986	-	-	-	-	-	-	-	-	-	-
2	25	-	-	430-6318	-	-	-	-	-	-	-	-	-	-	-
2	26	-	-	-	-	092-2304	-	-	-	-	-	-	-	-	-
2	27.5	-	-	-	-	310-0420	-	-	-	-	-	-	-	-	-
2	28	-	-	-	-	-	-	-	-	326-0773	-	-	-	-	-
2	28.5	-	-	-	-	146-2315	-	-	-	-	-	-	-	-	-
2	30	-	-	5W-5490	-	-	-	9X-4618	-	-	-	-	-	-	-
2	32	-	-	8U-4125	-	-	-	-	-	-	-	-	-	-	-
2	35	-	-	-	242-9574	-	-	-	-	-	-	-	-	-	-
2	35.8	-	-	-	-	71-7204	-	-	-	-	-	-	-	-	-

Cat O-Rings

O-Ring Chart (Cont'd.)

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Standard Size	NBR (60)	NBR (70)	NBR (75)	NBR (90)	FKM (70)	FKM (75)	FKM (90)	Silicone (70)	EPDM (70)	HNBR (78)	Urethane (93)	ACM (75)	TFEP (80)
2	36	-	-	-	-	-	-	192-7121	-	-	-	-	-	-	-
2	39	-	-	5W-4856	-	-	-	-	-	-	-	-	-	-	-
2	45	-	-	-	243-3149	-	-	-	-	-	-	-	-	-	-
2	47	-	-	-	-	-	-	8U-2064	-	-	-	-	-	-	-
2	50	-	-	117-1495	-	-	-	484-7661	-	-	-	-	-	-	-
2	57	-	-	-	-	-	-	125-3193	-	-	-	-	-	-	-
2	59.5	-	-	-	71-2749	-	-	-	-	-	-	-	-	-	-
2	66.5	-	-	130-7114	-	-	-	-	-	-	-	-	-	-	-
2	70.5	-	-	-	132-7641	-	-	-	-	-	-	-	-	-	-
2	74.5	-	-	-	116-3682	-	-	-	-	-	-	-	-	-	-
2	78	-	-	233-2601	-	-	-	192-7120	-	-	-	-	-	-	-
2	79.5	-	-	219-0063	-	-	-	-	-	-	-	-	-	-	-
2	80	-	-	-	-	8U-0580	-	8T-9525	-	-	-	-	-	-	-
2	83	-	-	-	-	-	-	445-5058	-	-	-	-	-	-	-
2	84	-	-	-	107-6279	-	-	-	-	-	-	-	-	-	-
2	84.5	-	-	-	165-9448	-	-	-	-	-	-	-	-	-	-
2	88	-	-	434-8911	-	-	-	-	-	-	-	-	-	-	-
2	94.5	-	-	210-0524	-	-	-	-	-	-	-	-	-	-	-
2	105	-	-	8U-4774	-	-	-	-	-	-	-	-	-	-	-
2	116	-	-	-	-	-	-	-	143-5975	-	-	-	-	-	-
2	116.5	-	510-4672	-	-	-	-	-	-	-	-	-	-	-	-
2	149.5	-	-	-	177-2553	-	-	-	-	-	-	-	-	-	-
2	160	-	-	-	-	-	-	8U-5019	-	-	-	-	-	-	-
2.1	9.4	-	-	-	-	6V-9028	-	199-9267	228-7100	-	219-0669	-	-	-	-
2.1	11.4	-	-	-	-	6V-6560	-	-	228-7101	199-9252	216-8579	-	-	-	-
2.1	13.4	907	-	-	-	8T-6850	-	-	228-7102	-	291-8174	-	-	-	-
2.1	15.4	-	-	-	-	8T-7524	-	-	228-7103	-	199-9751	-	-	-	-
2.1	17.4	-	-	-	-	8T-7877	-	-	228-7104	-	-	-	-	-	-
2.1	19.4	-	-	-	-	6V-7970	-	216-8582	228-7105	-	216-7485	-	-	-	-
2.15	87	-	-	-	-	-	-	-	-	-	-	423-9049	-	-	-
2.2	8	-	-	-	-	-	-	-	269-4676	-	-	-	-	-	-
2.2	9.6	-	-	-	-	-	-	-	9X-7317	-	-	-	-	-	-
2.2	33	-	-	203-0215	-	-	-	-	-	-	-	-	-	-	-
2.21	16.36	908	-	-	9X-7745	3K-0360	-	8L-2786	238-5080	-	6V-6609	112-5282	-	-	-
2.3	16.6	-	-	-	-	-	-	-	202-2073	-	-	-	-	-	-
2.37	98.95	-	-	-	450-2555	-	-	-	-	-	-	-	-	-	-
2.38	22.22	-	-	-	-	-	-	2T-2894	-	-	-	-	-	-	-
2.387	139.7	-	391-2081	-	-	-	-	-	-	-	-	-	-	-	-
2.4	5.3	-	-	5W-4881	-	-	-	-	-	-	-	-	-	-	-
2.4	6.3	-	-	8U-1981	-	-	-	-	-	-	-	-	-	-	-

O-Ring Chart (Cont'd.)

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Standard Size	NBR (60)	NBR (70)	NBR (75)	NBR (90)	FKM (70)	FKM (75)	FKM (90)	Silicone (70)	EPDM (70)	HNBR (78)	Urethane (93)	ACM (75)	TFEP (80)
2.4	7.3	-	-	-	194-5158	-	-	8U-2113	-	-	-	-	-	-	-
2.4	8.3	-	-	-	-	280-1953	-	-	-	-	-	-	-	-	-
2.4	9.3	-	-	-	-	-	-	8T-9521	-	-	-	-	-	-	-
2.4	9.8	P10A	-	-	112-0033	095-1577	-	-	-	-	-	-	-	-	-
2.4	10.8	P11	433-8069	-	095-1515	095-1579	-	-	206-9292	-	-	-	-	-	-
2.4	11	P11.2	-	-	-	297-0607	-	-	-	-	-	-	-	-	-
2.4	11.3	-	-	8U-2233	-	-	-	-	-	-	-	-	-	-	-
2.4	11.8	P12	-	-	095-1516	095-1580	-	-	-	-	-	-	-	-	-
2.4	12.3	P12.5	-	-	185-0550	095-1581	-	8T-9522	249-6660	-	-	-	-	-	-
2.4	12.6	-	-	-	2U-1570	-	-	-	-	-	-	-	-	-	-
2.4	13.3	-	-	-	8U-6058	-	-	-	-	-	-	-	-	-	-
2.4	13.8	P14	397-9066	-	095-1517	095-1582	-	-	-	-	-	-	-	-	-
2.4	14.3	-	-	-	-	-	-	2T-1872	-	-	-	-	-	-	-
2.4	14.8	P15	-	-	095-1518	095-1583	327-7241	103-8255	206-9293	-	-	-	-	-	-
2.4	15.3	-	-	-	-	-	-	8U-3473	-	-	-	-	-	-	-
2.4	15.6	-	-	-	-	322-6179	-	-	-	-	-	-	-	-	-
2.4	15.8	P16	-	-	095-1519	095-1584	-	273-8316	206-9294	-	-	-	-	-	-
2.4	16.3	-	-	5W-4849	123-2343	3E-4299	-	7U-2937	117-8766	-	-	-	-	-	-
2.4	17.3	-	-	-	-	-	-	209-3940	-	-	-	-	-	-	-
2.4	17.6	-	-	-	2U-1571	-	-	-	-	-	-	-	-	-	-
2.4	17.8	P18	-	8T-0211	-	095-1585	-	-	206-9295	-	-	-	-	-	-
2.4	18.3	-	-	-	-	-	-	8T-9523	117-8764	-	-	-	-	-	-
2.4	19.3	-	-	-	-	8U-6850	-	9X-4619	-	-	-	-	-	-	-
2.4	19.8	P20	-	-	095-1521	095-1586	-	-	206-9296	-	-	-	-	-	-
2.4	20.3	-	-	-	-	3E-6762	-	-	-	-	-	-	-	-	-
2.4	20.8	P21	-	-	095-1522	095-1587	-	-	109-1294	-	-	-	119-5458	-	-
2.4	21.3	-	-	-	192-7505	-	-	-	-	-	-	-	-	-	-
2.4	21.8	P22	-	-	095-1524	095-1590	-	-	206-9297	-	229-4896	-	-	-	-
2.4	22.3	-	-	-	216-8997	-	-	-	-	-	-	-	-	-	-
2.4	23.3	-	-	8U-5959	-	-	-	-	-	-	-	-	-	-	-
2.4	25.3	-	-	-	123-2345	3E-6763	-	5W-8507	-	-	-	-	-	-	-
2.4	27.3	-	-	-	-	-	-	9X-4625	-	-	-	-	-	-	-
2.4	47.6	-	-	-	-	195-7657	-	-	-	-	-	-	-	-	-
2.4	52.6	-	-	-	-	189-2624	-	-	-	-	-	-	-	-	-
2.4	55.2	-	-	-	-	237-5000	-	-	-	-	-	-	-	-	-
2.4	67.6	-	-	-	8T-6716	-	-	-	-	-	-	-	-	-	-
2.42	31.42	-	-	-	-	-	-	-	110-1873	-	-	-	-	-	-
2.44	17.5	-	-	-	-	-	-	351-1904	-	-	-	-	-	-	-
2.46	19.18	910	-	-	-	2M-9780	-	186-7227	152-2939	-	6V-3251	114-4427	-	7L-2224	-
2.5	5	-	-	-	-	170-5716	-	-	-	-	-	-	-	-	-

Cat O-Rings

O-Ring Chart (Cont'd.)

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Standard Size	NBR (60)	NBR (70)	NBR (75)	NBR (90)	FKM (70)	FKM (75)	FKM (90)	Silicone (70)	EPDM (70)	HNBR (78)	Urethane (93)	ACM (75)	TFEP (80)
2.5	7	-	-	-	-	-	-	-	174-5057	-	-	-	-	-	-
2.5	8	-	-	-	-	-	-	-	174-5056	-	-	-	-	-	-
2.5	10	-	-	-	192-7509	-	-	-	-	-	-	-	-	-	-
2.5	12	-	-	-	-	-	-	-	-	-	295-8143	-	-	-	-
2.5	12.5	-	-	-	-	-	-	133-6291	-	-	-	-	-	-	-
2.5	13	-	-	-	236-5193	-	-	-	-	-	-	-	-	-	-
2.5	14	-	-	-	-	-	-	-	-	-	295-8142	-	-	-	-
2.5	15	-	-	5W-9533	-	-	-	-	-	-	-	-	-	-	-
2.5	16	-	-	-	-	192-7508	-	-	-	-	-	-	-	-	-
2.5	17	-	-	-	-	-	-	-	213-9242	-	-	-	-	-	-
2.5	18	-	-	8U-0216	-	-	-	-	-	-	-	-	-	-	-
2.5	19	-	-	-	217-3875	-	-	-	-	-	-	-	-	-	-
2.5	20	-	379-2553	-	-	-	-	-	-	-	-	-	-	-	-
2.5	23	-	-	-	-	-	-	5W-1752	308-1511	-	-	-	-	-	-
2.5	24	-	-	8U-0215	-	-	-	-	-	-	-	-	-	-	-
2.5	25	-	-	5W-4877	-	118-2725	-	-	-	-	-	-	-	-	-
2.5	26	-	-	-	-	113-0308	-	-	-	-	-	-	-	-	-
2.5	32	-	-	-	-	9X-7447	-	-	-	-	-	-	-	-	-
2.5	32.3	-	-	-	-	-	-	215-5520	-	-	-	-	-	-	-
2.5	33	-	-	-	203-0214	3E-6764	-	-	-	-	-	-	-	-	-
2.5	38	-	-	-	190-8676	-	-	-	-	-	-	-	-	-	-
2.5	40	-	-	8U-4122	-	-	-	204-0728	-	-	-	-	-	-	-
2.5	60	-	-	217-1990	-	-	-	-	-	-	-	-	-	-	-
2.5	75	-	-	-	-	-	-	201-0880	-	-	-	-	-	-	-
2.5	84	-	-	-	-	-	-	-	241-1019	-	-	-	-	-	-
2.5	86	-	-	-	-	-	-	-	117-8765	-	-	-	-	-	-
2.5	90	-	-	-	-	-	-	192-5166	-	-	-	-	-	-	-
2.5	94	-	-	441-0261	-	-	-	-	-	-	-	-	-	-	-
2.5	96	-	-	464-6188	-	-	-	-	-	-	-	-	-	-	-
2.5	104	-	-	441-2548	-	-	-	-	-	-	-	-	-	-	-
2.5	107	-	-	-	-	-	-	-	8C-3083	-	-	-	-	-	-
2.5	115	-	-	441-3145	127-9485	-	-	-	-	-	-	-	-	-	-
2.5	125	-	-	-	192-7470	-	-	-	-	-	-	-	-	-	-
2.5	130	-	-	-	-	-	-	169-7442	-	-	-	-	-	-	-
2.5	135	-	515-9149	-	-	-	-	242-9575	-	-	-	-	-	-	-
2.5	140	-	-	-	8C-3057	-	-	-	-	-	-	-	-	-	-
2.5	148	-	-	-	-	-	-	-	213-9248	-	-	-	-	-	-
2.5	167	-	-	-	190-3009	-	-	-	-	-	-	-	-	-	-
2.5	195	-	-	-	-	-	-	-	3E-6770	-	-	-	-	-	-
2.5	225	-	-	-	9X-0617	-	-	-	-	-	-	-	-	-	-

O-Ring Chart (Cont'd.)

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Standard Size	NBR (60)	NBR (70)	NBR (75)	NBR (90)	FKM (70)	FKM (75)	FKM (90)	Silicone (70)	EPDM (70)	HNBR (78)	Urethane (93)	ACM (75)	TFEP (80)
2.5	277	-	-	098-2996	-	-	-	-	-	-	-	-	-	-	-
2.5	360	-	-	367-0576	-	-	-	-	-	-	-	-	-	-	-
2.6	15.92	-	-	390-7672	-	-	-	-	-	-	-	-	-	-	-
2.6162	168.8	-	-	-	9X-0876	-	-	-	-	-	-	-	-	-	-
2.62	4.42	106	-	-	-	8J-1699	-	-	-	-	-	-	-	-	-
2.62	5.23	107	-	-	8B-7216	5P-4933	-	9X-7675	-	-	-	-	-	-	-
2.62	6.02	108	-	-	196-1804	5P-5874	-	9X-7676	-	-	235-5678	-	-	-	-
2.62	7.59	109	-	-	4J-2506	6J-3134	-	032-8970	125-8274	-	-	-	-	-	-
2.62	8.1	-	-	-	-	356-2456	-	-	-	-	-	-	-	-	-
2.62	9.19	110	-	-	6F-5559	4J-5309	-	330-8196	107-3118	8M-8157	-	-	-	-	-
2.62	9.8	-	-	-	7W-3983	-	-	-	-	-	-	-	-	-	-
2.62	10.77	111	-	-	5H-6005	4J-9535	-	8L-2777	109-3204	8M-5127	-	-	-	-	-
2.62	12.37	112	-	-	8F-9206	7Y-5219	-	269-7852	126-7524	8M-5251	-	-	-	-	-
2.62	13.94	113	437-2896	437-7163	6F-4855	4J-5268	-	228-4947	6V-8350	8M-4437	-	203-3940	-	-	-
2.62	15.54	114	-	210-6634	8F-3469	5J-2974	-	112-3102	107-3117	8M-5260	486-6237	118-5068	-	7L-2180	-
2.62	17.12	115	-	-	6F-6672	4J-5351	-	323-7347	6V-8351	8M-4438	-	-	-	-	-
2.62	17.86	-	-	-	-	-	-	-	7U-2934	-	-	-	-	-	-
2.62	17.96	-	-	-	-	6V-5325	-	-	-	-	-	-	-	-	-
2.62	18.72	116	-	195-2139	7F-8607	6V-3922	-	7L-9061	109-3203	8M-5253	-	-	-	-	-
2.62	19.4	-	-	-	-	-	-	326-2042	-	-	-	-	-	-	-
2.62	20.3	117	-	-	4M-8303	5P-3108	-	5P-9186	033-6041	8M-4389	-	-	-	-	283-2446
2.62	21.89	118	-	-	9H-6761	361-3549	-	5P-8356	3E-6786	8M-8283	-	-	-	-	-
2.62	23.47	119	-	-	4D-9986	6V-5326	-	330-8197	6V-8352	9X-4609	-	-	-	-	-
2.62	24.3	-	-	-	-	-	-	326-2041	-	-	-	-	-	-	-
2.62	25.07	120	-	-	3D-4245	6V-5556	-	5P-3456	6V-6339	1S-7462	-	-	6V-8958	-	-
2.62	26.64	121	-	-	3D-2992	085-7539	-	6V-6228	114-8718	8M-4431	205-4831	-	-	-	-
2.62	27.18	-	-	-	-	-	-	263-4016	-	-	-	-	-	-	-
2.62	28.24	122	-	-	2K-8199	099-8232	-	5P-7530	6V-4591	8M-8514	9X-7544	-	-	-	-
2.62	29.82	123	-	-	3S-9233	6V-8978	-	188-0171	-	8M-1112	243-2646	-	-	-	-
2.62	31.42	124	-	-	2S-4663	096-3044	-	9X-3979	3E-6787	-	297-4854	-	-	-	-
2.62	32.5	-	-	-	-	-	-	-	-	-	-	-	-	-	259-0508
2.62	32.99	125	-	-	2K-8198	6V-8218	-	250-0466	6V-3550	8M-8515	264-0601	-	-	-	-
2.62	34.59	126	-	-	5M-2057	096-6100	-	6V-4367	166-2903	-	355-1596	-	-	-	166-2904
2.62	36.17	127	-	-	6J-2419	6V-5393	-	5P-8065	245-4907	-	-	107-9570	-	-	-
2.62	36.54	-	-	-	-	-	-	-	131-3719	-	-	-	-	-	-
2.62	37.3	-	-	-	-	-	-	258-6526	-	-	-	-	-	-	-
2.62	37.77	128	-	-	4D-3107	6V-5391	-	210-9246	6V-7323	6F-0249	8T-5917	-	-	-	-
2.62	39.34	129	-	-	5P-8215	1R-5318	-	269-7847	6V-1250	-	359-7607	-	394-3909	-	247-1074
2.62	40.94	130	-	-	9X-7684	6V-5597	-	3E-6788	-	-	-	219-7000	-	-	-
2.62	42.52	131	4J-8268	-	4L-7711	085-7540	-	9X-7432	188-2199	-	-	-	-	-	217-4521

Cat O-Rings

O-Ring Chart (Cont'd.)

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Standard Size	NBR (60)	NBR (70)	NBR (75)	NBR (90)	FKM (70)	FKM (75)	FKM (90)	Silicone (70)	EPDM (70)	HNBR (78)	Urethane (93)	ACM (75)	TFEP (80)
2.62	44.12	132	-	439-5518	2D-0598	5P-2588	-	330-8195	-	-	-	-	-	8C-4949	-
2.62	45.69	133	-	-	7D-9749	3E-6771	-	8C-3078	6E-5413	-	204-7844	-	-	-	-
2.62	47.3	134	-	194-7224	032-9882	-	-	225-6948	-	-	-	-	-	-	-
2.62	48.9	135	-	-	3D-2898	-	-	6V-8676	-	-	-	-	394-3910	-	-
2.62	50.47	136	396-0007	-	8C-3080	321-5628	-	8C3079	-	-	-	-	451-6155	-	-
2.62	52.07	137	-	-	005-8593	-	-	-	6E-5412	-	-	-	451-6159	-	-
2.62	53.64	138	-	-	3D-7805	127-8586	-	272-2583	-	-	8C-5196	-	-	-	-
2.62	54.76	-	-	-	-	195-2874	-	-	-	-	-	-	-	-	-
2.62	55.24	139	5J-1808	-	004-1963	256-2212	-	6V-3832	135-2655	-	231-4708	-	-	-	-
2.62	56.82	140	-	-	-	7V-5269	-	144-7338	-	-	-	144-7339	-	-	-
2.62	58.42	141	-	-	7J-2036	119-7843	-	5P-5756	-	3S-4489	-	-	462-7878	-	-
2.62	60	142	-	-	8T-7000	-	-	009-2061	-	-	-	-	451-7185	-	-
2.62	61.6	143	-	-	8S-0768	484-2069	-	334-2932	-	-	227-5903	-	-	-	-
2.62	63.17	144	-	-	8C-3081	195-2862	-	009-2062	-	-	8T-2929	-	462-7886	-	-
2.62	64.77	145	-	117-7273	-	279-0169	-	273-5039	180-2391	5S-4548	-	-	-	-	-
2.62	66.34	146	-	-	5M-6509	131-3715	-	378-0746	-	-	-	-	-	-	-
2.62	67.94	147	-	-	107-4057	-	-	-	-	129-5701	-	-	-	-	-
2.62	69.52	148	-	-	004-1964	190-3750	-	360-2963	-	-	-	-	-	-	-
2.62	71.12	149	-	-	3K-4025	-	-	-	-	-	-	-	-	-	-
2.62	72.69	150	-	-	5P-0908	-	-	8C-5197	-	-	-	-	-	-	-
2.62	75.87	151	-	-	7R-8872	119-7844	-	5E-8770	-	-	-	107-5769	-	-	-
2.62	79.38	-	-	-	2072757	-	-	-	-	-	-	-	-	-	-
2.62	82.22	152	-	-	5P-3863	5P2569	-	8C-3089	6V-3551	-	-	-	-	-	-
2.62	85.29	-	-	-	-	-	-	351-8955	-	-	-	-	-	-	-
2.62	88.57	153	-	-	6V-2483	-	-	6V-3834	136-3378	-	8T-6340	-	-	-	-
2.62	92.41	-	-	-	-	-	-	185-3241	-	-	-	-	-	-	-
2.62	93.12	-	-	-	-	140-7969	-	-	-	-	-	-	-	-	-
2.62	94.92	154	-	-	4F-4097	-	-	-	107-3119	-	7X-4752	185-3503	-	-	-
2.62	97.8	-	-	-	-	-	-	7X-4804	-	-	-	-	-	-	-
2.62	101.27	155	-	-	3K-0715	8T-5049	-	6D-7146	107-3120	-	-	-	394-3908	-	-
2.62	107.62	156	-	-	-	1T-1068	-	122-1874	133-6578	-	9X-7549	-	394-3912	-	-
2.62	113.97	157	-	-	6S-3002	-	-	6V-7350	-	-	-	-	-	-	-
2.62	120.32	158	-	-	-	9X-7566	-	5E-8771	-	-	117-3036	-	-	-	-
2.62	120.65	158	-	098-0321	-	-	-	-	-	-	-	-	-	-	-
2.62	122.72	-	-	-	-	199-8393	-	-	-	-	-	-	-	-	-
2.62	126.67	159	-	-	7J-6285	323-2282	-	117-8801	270-0603	-	9X-7697	-	-	-	-
2.62	131.2	-	-	-	-	133-0128	-	-	-	-	-	-	-	-	-
2.62	133.02	160	-	-	2P-1692	-	-	369-7078	-	-	-	-	-	-	-
2.62	139.37	161	-	441-1126	5J-3886	117-7282	-	346-8576	-	-	-	-	-	-	-
2.62	145.72	162	-	221-1489	1W-9312	9X-7358	-	346-8577	146-4263	-	-	-	-	-	-

O-Ring Chart (Cont'd.)

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Standard Size	NBR (60)	NBR (70)	NBR (75)	NBR (90)	FKM (70)	FKM (75)	FKM (90)	Silicone (70)	EPDM (70)	HNBR (78)	Urethane (93)	ACM (75)	TFEP (80)
2.62	152.07	163	-	-	5P-3864	-	-	9X-4576	-	-	-	-	-	-	-
2.62	158.42	164	-	-	8T-6404	119-7845	-	9X-7286	209-0035	-	-	-	-	-	-
2.62	160.9	-	-	-	-	199-8391	-	-	-	-	-	-	-	-	-
2.62	164.8	165	-	-	-	9X-7391	-	-	-	-	4S-7762	-	-	-	-
2.62	171.12	166	-	-	9D-8042	-	-	-	-	-	-	-	-	-	-
2.62	177.47	167	-	-	5P-5397	-	-	311-0827	209-0033	-	-	-	-	-	-
2.62	183.82	168	-	-	9X-7725	-	-	-	-	-	-	-	-	-	-
2.62	190.17	169	-	-	9X-7683	-	-	9X-7295	-	-	-	-	-	-	-
2.62	196.52	170	-	-	-	-	-	-	-	-	9X-4575	-	-	-	-
2.62	202.87	171	-	-	-	-	-	223-8512	9X-7410	7X-4799	-	-	-	-	-
2.62	209.22	172	-	-	162-9997	-	-	316-9962	-	-	-	-	-	-	-
2.62	215.57	173	-	-	161-4102	-	-	-	-	-	-	-	-	-	-
2.62	221.92	174	-	-	-	-	-	261-3307	-	-	-	-	-	-	-
2.62	228.27	175	-	-	-	192-4486	-	-	-	-	-	-	-	-	-
2.62	234.62	176	-	-	-	-	-	107-3114	-	-	-	-	-	-	-
2.62	240.97	177	-	-	190-8501	-	-	-	-	-	-	-	-	-	-
2.62	247.32	178	-	-	110-8715	-	-	154-8741	-	-	-	-	-	-	-
2.62	249.5	-	-	-	8C-5175	-	-	-	-	-	-	-	-	-	-
2.62	260	-	-	-	8C-5177	-	-	-	-	-	-	-	-	-	-
2.62	269.4	-	-	-	8C-5176	-	-	292-6378	-	-	-	-	-	-	-
2.62	287.91	-	-	-	201-3321	-	-	-	-	-	-	-	-	-	-
2.62	323.93	-	-	-	-	-	-	-	-	-	-	300-0477	-	-	-
2.62	330.89	-	-	-	-	-	-	-	-	-	194-3087	-	-	-	-
2.62	375.82	-	-	-	-	-	-	-	-	-	-	269-9157	-	-	-
2.65	88.57	-	-	-	-	8U-2522	-	-	-	-	-	-	-	-	-
2.65	145.72	-	-	-	-	-	-	8U-2543	-	-	-	-	-	-	-
2.65	183.8	-	-	-	-	125-4189	-	-	-	-	-	-	-	-	-
2.66	9.87	-	-	-	-	173-5549	-	-	-	-	-	-	-	-	-
2.7	13.6	-	-	-	8T0-117	-	-	-	-	-	-	-	-	-	-
2.7	16	-	-	-	-	-	-	215-5513	-	-	-	-	-	-	-
2.8	22.7	-	-	-	-	8T-7878	-	-	-	-	-	-	-	-	-
2.8	23.7	-	-	-	-	8T-7525	-	-	228-7106	-	216-8578	217-5207	-	-	-
2.8	26.7	-	-	-	-	-	-	-	228-7107	-	-	-	-	-	-
2.8	29.7	-	-	-	-	8T-7526	-	-	215-4639	-	216-8580	-	-	-	-
2.8	38.7	-	-	-	-	8C-5193	-	8U-2588	228-7108	-	-	-	-	-	-
2.8	56.7	-	-	-	-	-	-	-	209-5798	-	-	-	-	-	-
2.9	23.5	-	-	-	-	483-3883	-	-	-	-	-	-	-	-	-
2.9	29.6	-	-	-	-	252-8073	-	-	-	-	-	-	-	-	-
2.9	38.6	-	-	-	-	-	-	-	241-5790	-	-	-	-	-	-
2.95	21.92	911	-	-	9X-7692	-	-	-	-	-	-	-	-	-	-

Cat O-Rings

O-Ring Chart (Cont'd.)

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Standard Size	NBR (60)	NBR (70)	NBR (75)	NBR (90)	FKM (70)	FKM (75)	FKM (90)	Silicone (70)	EPDM (70)	HNBR (78)	Urethane (93)	ACM (75)	TFEP (80)
2.95	23.47	912	-	-	-	3D-2824	-	6V-5050	189-9377	-	6V-5063	-	-	7L-3385	-
2.95	25	913	-	-	-	382-5765	-	-	-	-	-	-	-	-	-
2.95	26.59	914	-	-	-	-	-	6V-1903	033-6038	-	-	119-5155	-	-	-
2.95	26.62	914	-	-	-	4K-1388	-	-	238-5083	-	291-8145	-	-	-	-
2.95	29.74	916	437-3456	-	9X-7744	7M-9485	-	5P-7701	238-5084	-	6V-5064	-	-	7L-2229	-
2.95	34.42	918	-	-	-	230-5935	-	-	238-5085	-	-	-	-	-	-
3	9	-	-	-	-	-	-	132-4240	-	-	-	-	-	-	-
3	11	-	-	-	-	-	-	121-8080	-	-	-	-	-	-	-
3	15	-	-	203-0216	-	-	-	-	-	-	-	-	-	-	-
3	16	-	-	5W-4871	-	-	-	-	-	-	-	-	-	-	-
3	19	-	-	-	-	-	-	2T-2695	-	-	-	-	-	-	-
3	20.6	-	-	-	-	382-5856	-	-	-	-	-	-	-	-	-
3	22	-	-	-	-	5W-8024	-	-	-	-	-	-	-	-	-
3	22.2	-	-	-	-	-	-	7U-2939	-	-	-	-	-	-	-
3	23	-	-	-	-	5W-9413	-	-	215-4638	-	-	-	-	-	-
3	24	-	-	133-4771	-	-	-	-	-	-	-	-	-	-	-
3	24.2	-	-	-	-	372-5909	-	-	-	-	-	-	-	-	-
3	26	-	-	-	-	118-3131	-	8U-2503	-	-	-	-	-	-	-
3	26.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	27	-	-	-	-	-	-	192-7112	-	-	-	-	-	-	-
3	28	-	-	224-7262	-	-	-	-	-	-	-	-	-	-	-
3	29	-	-	5W-9436	-	-	-	192-7113	-	-	-	-	-	-	-
3	30	-	-	-	-	5W-1754	-	-	-	-	-	-	-	-	-
3	32	-	-	-	-	5W-8039	-	-	-	-	-	-	-	-	-
3	32.2	-	-	9C-6250	-	-	-	-	-	-	-	-	-	-	-
3	33	-	-	-	-	5W-9437	-	-	-	-	-	-	-	-	-
3	34	-	-	-	-	179-9013	-	-	-	-	-	-	-	-	-
3	36	-	-	-	-	242-3561	-	-	-	-	-	-	-	-	-
3	36.5	-	-	-	-	-	-	9X-4621	-	-	-	-	-	-	-
3	37.47	920	-	-	-	2S-4078	-	5P-7815	183-2317	-	6V-5065	-	-	7L-3386	-
3	38	-	-	8U-0766	-	-	-	-	-	-	-	-	-	-	-
3	40	-	-	-	-	195-9771	-	-	-	-	-	-	-	-	-
3	41	-	-	2T-2692	-	-	-	-	-	-	-	-	-	-	-
3	43.69	924	-	-	-	6K-6307	-	5P-7816	238-5086	-	8C-0562	-	-	1N-6002	-
3	45	-	-	238-5087	-	-	-	-	-	-	-	-	-	-	-
3	46	-	-	-	-	123-0373	-	-	-	-	-	-	-	-	-
3	46.8	-	-	-	-	-	-	215-5514	-	-	-	-	-	-	-
3	49	-	-	121-8117	-	-	-	-	-	-	-	-	-	-	-
3	50	-	-	-	-	-	-	9X-4616	-	-	-	-	-	-	-
3	52	-	-	5W-1755	-	-	-	-	-	-	-	-	-	-	-

O-Ring Chart (Cont'd.)

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Standard Size	NBR (60)	NBR (70)	NBR (75)	NBR (90)	FKM (70)	FKM (75)	FKM (90)	Silicone (70)	EPDM (70)	HNBR (78)	Urethane (93)	ACM (75)	TFEP (80)
3	53.1	928	-	-	-	8T-4945	-	9X-3978	-	-	8T-2928	-	-	-	-
3	54	-	-	-	-	-	-	-	174-5055	-	-	-	-	-	-
3	56	-	-	-	-	122-9251	-	-	-	-	-	-	-	-	-
3	59.36	932	-	-	-	030-4606	-	5P-7817	228-7097	-	-	-	-	-	-
3	59.5	932	-	490-8764	-	3E-6729	-	-	-	-	-	-	-	-	-
3	60	-	-	-	-	118-3128	-	-	-	-	-	-	-	-	-
3	64	-	-	367-0579	-	122-9252	-	-	-	-	-	-	-	-	-
3	64.5	-	-	441-3146	-	-	-	-	-	-	-	-	-	-	-
3	65	-	-	-	-	5W-1876	-	-	-	-	-	-	-	-	-
3	67.68	-	-	-	-	179-4274	-	-	-	-	-	-	-	-	-
3	70	-	-	-	-	5W-6388	-	128-4005	-	-	-	-	-	-	-
3	75	-	-	8U-4061	-	-	-	-	-	-	-	-	-	-	-
3	82	-	-	5W-5485	-	-	-	-	-	-	-	-	-	-	-
3	84	-	-	1257005	-	-	-	-	-	-	-	-	-	-	-
3	84.5	-	-	-	-	6U-9599	-	9X-4622	-	-	-	-	-	-	-
3	85	-	-	5W-4819	-	482-8800	-	-	177-0344	-	-	-	-	-	-
3	86	-	-	5W-5481	-	-	-	-	-	-	-	-	-	-	-
3	88	-	-	5W-1772	-	-	-	-	-	-	-	-	-	-	-
3	92	-	-	-	-	109-5698	-	-	-	-	-	-	-	-	-
3	96	-	-	113-7822	-	-	-	-	-	-	-	-	-	-	-
3	97	-	-	-	-	-	-	121-9907	-	-	-	-	-	-	-
3	98	-	-	-	-	121-8094	-	-	-	-	-	-	-	-	-
3	100	-	-	-	-	195-9770	-	-	-	-	-	-	-	-	-
3	102	-	-	-	-	179-3560	-	-	-	-	-	-	-	-	-
3	104	-	-	118-3122	-	-	-	-	-	-	-	-	-	-	-
3	105	-	-	-	-	-	-	227-5904	-	-	-	-	-	-	-
3	106	-	-	-	-	-	-	8T-9526	230-8891	-	-	-	-	-	-
3	108	-	-	8U-2401	-	-	-	5W-5487	-	-	-	-	-	-	-
3	108.86	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	115	-	-	125-9701	-	-	-	-	-	-	-	-	-	-	-
3	120	-	-	-	-	5W-5486	-	8U-2058	-	-	-	-	-	-	-
3	122	-	-	-	-	-	-	9X-4627	-	-	-	-	-	-	-
3	124	-	-	-	-	8U-2552	-	-	-	-	-	-	-	-	-
3	125	-	-	-	-	222-5792	-	276-3188	-	-	-	-	-	-	-
3	128	-	-	118-2720	-	-	-	-	-	-	-	-	-	-	-
3	130	-	-	135-7935	-	-	-	-	-	-	-	-	-	-	-
3	132	-	-	-	-	-	-	-	377-6087	-	-	-	-	-	-
3	134	-	-	367-0569	-	-	-	-	-	-	-	-	-	-	-
3	134.5	-	-	-	-	2U-5342	-	-	-	-	-	-	-	-	-
3	140	-	-	5W-3061	-	-	-	-	-	-	-	-	-	-	-

Cat O-Rings

O-Ring Chart (Cont'd.)

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Standard Size	NBR (60)	NBR (70)	NBR (75)	NBR (90)	FKM (70)	FKM (75)	FKM (90)	Silicone (70)	EPDM (70)	HNBR (78)	Urethane (93)	ACM (75)	TFEP (80)
3	144.5	-	-	-	-	195-3443	-	192-5167	-	-	-	-	-	-	-
3	150	-	-	-	109-5700	-	-	-	-	-	-	-	-	-	-
3	154.5	-	-	-	2U-5345	-	-	-	-	-	-	-	-	-	-
3	160	-	-	5W-5491	-	8U-2538	-	-	-	-	-	-	-	-	-
3	164	-	-	-	-	-	-	8U-5030	-	-	-	-	-	-	-
3	164.5	-	-	-	7U-1277	-	-	-	-	-	-	-	-	-	-
3	170	-	-	464-6197	-	-	-	-	-	-	-	-	-	-	-
3	175	-	-	-	201-7396	-	-	-	-	-	-	-	-	-	-
3	179	-	-	-	-	-	-	192-5168	-	-	-	-	-	-	-
3	179.5	-	-	-	107-5665	-	-	-	-	-	-	-	-	-	-
3	185	-	-	-	270-6871	-	-	-	-	-	-	-	-	-	-
3	189.5	-	-	-	2U-5346	-	-	-	-	-	-	-	-	-	-
3	190	-	-	-	-	-	-	132-4423	-	-	-	-	-	-	-
3	192	-	-	-	-	-	-	167-1829	-	-	-	-	-	-	-
3	200	-	-	-	109-5693	-	-	-	-	-	-	-	-	-	-
3	203	-	-	5W-5475	-	-	-	-	-	-	-	-	-	-	-
3	205	-	-	8U-5927	-	-	-	-	-	-	-	-	-	-	-
3	210	-	-	-	109-5694	-	-	-	-	-	-	-	-	-	-
3	214	-	-	-	222-5793	-	-	-	-	-	-	-	-	-	-
3	220	-	-	-	109-5701	-	-	-	-	-	-	-	-	-	-
3	224	-	-	8U-6079	-	-	-	-	-	-	-	-	-	-	-
3	240	-	-	-	270-4969	-	-	-	-	-	-	-	-	-	-
3	276	-	-	390-7673	-	-	-	-	-	-	-	-	-	-	-
3	280	-	-	-	109-5706	-	-	-	-	-	-	-	-	-	-
3	300	-	-	-	242-9573	-	-	-	-	-	-	-	-	-	-
3	315	-	-	-	109-5705	-	-	-	-	-	-	-	-	-	-
3	335	-	-	-	133-4769	-	-	-	-	-	-	-	-	-	-
3	342	-	-	367-0575	-	-	-	-	-	-	-	-	-	-	-
3	360	-	-	-	109-5695	-	-	-	-	-	-	-	-	-	-
3	420	-	-	-	145-5935	-	-	-	-	-	-	-	-	-	-
3.1	24.4	G25	433-8068	-	095-1657	095-1696	-	-	249-6659	-	-	-	-	-	-
3.1	29.4	G30	-	-	095-1658	095-1698	-	-	206-9298	-	-	-	-	-	-
3.1	34.4	G35	-	-	095-1659	095-1700	-	-	206-9299	-	-	-	-	-	-
3.1	39.4	G40	-	8T-4202	-	095-1701	-	-	109-1296	-	-	-	-	-	-
3.1	44.4	G45	-	6V-7660	-	095-1703	-	-	206-9285	-	-	-	-	-	-
3.1	49.4	G50	-	-	095-1662	095-1704	-	-	-	-	-	-	-	-	-
3.1	54.4	G55	390-9009	-	095-1663	095-1705	-	-	-	-	-	-	-	-	-
3.1	59.4	G60	-	6V-7658	-	095-1706	-	-	-	-	-	-	-	-	-
3.1	64.4	G65	-	6V-7609	-	095-1707	-	-	206-9286	-	-	-	-	-	-
3.1	65	-	-	-	-	192-0680	-	-	-	-	-	-	-	-	-

O-Ring Chart (Cont'd.)

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Standard Size	NBR (60)	NBR (70)	NBR (75)	NBR (90)	FKM (70)	FKM (75)	FKM (90)	Silicone (70)	EPDM (70)	HNBR (78)	Urethane (93)	ACM (75)	TFEP (80)
3.1	69.4	G70	-	6V-7661	-	095-1708	-	-	-	-	-	-	-	-	-
3.1	74.4	G75	397-9067	6V-7659	-	095-1709	-	-	206-9300	-	-	-	-	-	-
3.1	75	-	-	-	-	192-0626	-	-	-	-	-	-	-	-	-
3.1	79.4	G80	-	8T-5376	-	095-1710	-	193-1736	-	-	-	-	-	-	-
3.1	84.4	G85	-	-	8T-3338	095-1711	-	273-8315	246-9867	-	-	-	356-3296	-	-
3.1	89.4	G90	-	6V-7610	-	095-1712	-	-	-	-	-	-	-	-	-
3.1	94.4	G95	-	-	095-1671	095-1713	-	096-3944	249-6657	-	-	-	-	-	-
3.1	99.4	G100	-	-	6V-8467	095-1714	-	-	-	-	-	-	-	-	-
3.1	104.4	G105	-	-	095-1673	0951715	-	-	236-6919	-	-	-	356-3297	-	-
3.1	109.4	G110	-	-	095-1674	095-1716	-	274-1262	292-3264	-	-	-	-	-	-
3.1	114.4	G115	398-0951	-	095-1675	095-1717	-	-	-	-	-	-	-	-	-
3.1	119.4	G120	-	-	095-1676	095-1718	-	-	-	-	-	-	-	-	-
3.1	124.4	G125	-	8T-4894	-	095-1719	-	-	206-9287	-	-	-	-	-	-
3.1	129.4	G130	397-9068	-	095-1678	095-1720	-	-	-	-	-	-	-	-	-
3.1	134.4	G135	-	-	095-1679	095-1721	-	-	-	-	-	-	-	-	-
3.1	139.4	G140	-	-	095-1680	095-1722	367-9300	-	-	-	-	-	-	-	-
3.1	144.4	G145	390-9011	-	095-1681	095-1723	-	-	-	-	-	-	-	-	-
3.1	150	-	-	-	-	165-5819	-	-	-	-	-	-	-	-	-
3.1	152.5	-	-	-	-	107-6986	-	-	-	-	-	-	-	-	-
3.1	154.3	-	-	-	-	307-4802	-	-	-	-	-	-	-	-	-
3.1	160	-	-	-	-	095-7384	-	-	-	-	-	-	-	-	-
3.1	164	-	-	-	-	165-5823	-	-	-	-	-	-	-	-	-
3.1	174	-	-	-	-	095-7383	-	-	-	-	-	-	-	-	-
3.1	179	-	-	-	-	165-5821	-	-	-	-	-	-	-	-	-
3.1	179.3	-	-	-	-	139-8195	-	-	-	-	-	-	-	-	-
3.1	181.9	-	-	-	-	-	-	-	210-0834	-	-	-	-	-	-
3.1	190	-	-	-	-	096-4377	-	-	-	-	-	-	-	-	-
3.1	191.3	-	-	-	-	-	-	-	210-0835	-	-	-	-	-	-
3.15	30	-	-	-	-	-	-	8T-9524	-	-	-	-	-	-	-
3.18	34.11	-	-	-	4D-5256	-	-	-	-	-	-	-	-	-	-
3.18	49.23	-	-	-	4F-2709	-	-	-	-	-	-	-	-	-	-
3.2	42	-	-	-	5W-5474	-	-	-	-	-	-	-	-	-	-
3.25	114	-	-	-	-	140-0180	-	-	-	-	-	-	-	-	-
3.25	168.74	-	-	-	-	140-0236	-	-	-	-	-	-	-	-	-
3.3	31.75	-	-	-	4F-2928	-	-	-	-	-	-	-	-	-	-
3.3	66.68	-	-	-	3F-3759	-	-	-	-	-	-	-	-	-	-
3.3	74.63	-	-	-	4F-3408	-	-	-	-	-	-	-	-	-	-
3.3	106.38	-	-	-	4F-9174	-	-	-	-	-	-	-	-	-	-
3.3	195.28	-	-	-	4F-2410	-	-	-	-	-	-	-	-	-	-
3.4	23.7	-	203-0883	-	-	-	-	-	-	-	-	-	-	-	-

Cat O-Rings

O-Ring Chart (Cont'd.)

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Standard Size	NBR (60)	NBR (70)	NBR (75)	NBR (90)	FKM (70)	FKM (75)	FKM (90)	Silicone (70)	EPDM (70)	HNBR (78)	Urethane (93)	ACM (75)	TFEP (80)
3.4	285.6	-	-	-	177-8740	-	-	273-8314	-	-	-	-	-	-	-
3.5	21.7	P22A	-	-	-	095-1589	-	-	-	-	-	-	51-4115	-	-
3.5	22.1	P22.4	-	-	095-1525	095-1591	-	-	-	-	-	-	-	-	-
3.5	23.4	-	-	-	-	391-4635	-	-	-	-	-	-	-	-	-
3.5	23.7	P24	-	-	095-1526	095-1592	-	-	190-7674	-	-	-	-	-	-
3.5	24.7	P25	-	-	095-1527	095-1593	-	273-8317	-	-	-	-	-	-	-
3.5	25.7	P26	-	-	095-1528	095-1594	-	273-8319	206-9301	-	-	-	102-0889	-	-
3.5	27.7	P28	-	6V-7656	-	095-1595	-	-	-	-	-	-	-	-	-
3.5	28.7	P29	-	-	095-1530	095-1596	-	-	-	-	-	-	-	-	-
3.5	29.7	P30	-	-	095-1531	095-1597	-	-	-	-	-	-	-	-	-
3.5	30.7	P31	-	-	095-1532	095-1598	-	-	-	-	-	-	-	-	-
3.5	31.7	P32	-	-	095-1533	095-1599	-	-	-	-	-	-	103-8173	-	-
3.5	33.7	P34	-	-	095-1534	095-1600	-	-	-	-	-	-	-	-	-
3.5	34.7	P35	-	-	8T-2148	095-1601	-	-	-	-	-	-	-	-	-
3.5	35.7	P36	-	-	-	095-1602	-	-	-	-	-	-	-	-	-
3.5	37.69	P38	-	123-4598	095-1537	095-1603	-	-	190-7673	-	-	-	-	-	-
3.5	38.7	P39	-	-	095-1538	096-5572	-	273-8318	-	-	-	-	-	-	-
3.5	39.4	-	-	447-9739	-	-	-	-	-	-	-	-	-	-	-
3.5	39.7	P40	-	-	095-1539	095-1604	-	-	-	-	-	-	-	-	-
3.5	40.7	P41	-	-	095-1540	095-1605	-	-	-	-	-	-	-	-	-
3.5	41.7	P42	-	-	095-1541	095-1606	095-1652	-	-	-	-	-	-	-	-
3.5	43.4	-	-	-	-	-	-	-	-	-	-	-	248-7172	-	-
3.5	43.7	P44	-	6V-7657	-	095-1607	-	-	-	-	-	-	-	-	-
3.5	44.4	-	-	447-9740	-	-	-	215-5515	-	-	-	-	-	-	-
3.5	44.7	P45	-	-	095-1543	095-1608	-	-	-	-	-	-	-	-	-
3.5	45.7	P46	-	-	095-1544	095-1609	-	-	-	-	-	-	-	-	-
3.5	47.7	P48	-	-	-	095-1610	-	-	-	-	-	-	-	-	-
3.5	48	-	-	-	-	-	-	-	177-0343	-	-	-	-	-	-
3.5	48.7	P49	-	-	095-1545	-	-	-	-	-	-	-	-	-	-
3.5	49.7	P50	-	-	09-51547	095-1613	-	-	-	-	-	-	-	-	-
3.5	70.6	-	-	-	146-5272	-	-	-	-	-	-	-	-	-	-
3.5	84.6	-	-	-	-	-	-	-	-	8C-5212	-	-	-	-	-
3.5	98.5	-	-	-	-	-	-	-	5W-5480	-	-	-	-	-	-
3.5	101.19	-	-	-	-	310-2186	-	-	-	-	-	-	-	-	-
3.5	107.54	-	-	-	-	310-2184	-	-	-	-	-	-	-	-	-
3.5	110	-	390-9073	492-3333	-	-	-	-	-	-	-	-	-	-	-
3.5	117.07	-	-	-	-	310-2187	-	-	-	-	-	-	-	-	-
3.5	120.24	-	-	-	-	310-2189	-	-	-	-	-	-	-	-	-
3.5	150	-	-	-	-	145-3576	-	-	-	-	-	-	-	-	-
3.5	195	-	-	-	-	-	-	238-5088	-	-	-	-	-	-	-

O-Ring Chart (Cont'd.)

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Standard Size	NBR (60)	NBR (70)	NBR (75)	NBR (90)	FKM (70)	FKM (75)	FKM (90)	Silicone (70)	EPDM (70)	HNBR (78)	Urethane (93)	ACM (75)	TFEP (80)
3.5	367	-	-	-	239-8433	-	-	-	-	-	-	-	-	-	-
3.53	5.94	202	-	-	2H-5001	9J-6491	-	6V-4366	189-0190	8M-8281	-	-	-	-	-
3.53	7.52	203	-	-	6V-5555	6V-5555	-	137-8101	-	-	-	-	-	-	-
3.53	9.12	204	-	-	2J-6274	6V-0913	-	7X-4805	6V-3548	-	-	-	-	-	-
3.53	10.69	205	-	149-9907	230-5936	-	-	119-9443	-	-	-	-	-	-	-
3.53	12.29	206	-	-	2M-4453	5P-6300	-	5P-0840	-	8M-4447	-	147-0182	-	-	-
3.53	13.21	-	-	-	-	-	-	-	-	5M-1868	-	-	-	-	-
3.53	13.87	207	-	-	3H-3385	-	-	228-4947	219-7001	8M-8282	-	-	-	-	-
3.53	15.47	208	-	-	2J-0157	6J-1038	-	5P-5598	-	8M-4448	8C-0504	-	-	-	-
3.53	17.04	209	-	-	-	-	-	5P-8119	-	-	-	-	-	-	-
3.53	18.64	210	6.00E-151	194-7158	5F-7054	4J-5140	-	269-7846	189-0193	8M-4435	5P-3148	169-7487	-	-	289-9732
3.53	18.66	210	-	-	8U-6426	-	-	-	-	-	-	-	-	-	-
3.53	20.22	211	-	-	1H-8171	008-2103	-	061-7539	-	-	-	9X-7385	-	-	-
3.53	21.82	212	-	-	3H-0107	4J-8996	-	3P-1156	-	8M-4445	-	112-3132	-	-	-
3.53	23.39	213	-	-	5H-2767	-	-	6V-3683	109-3207	8M-4446	-	-	-	-	-
3.53	24.77	-	-	-	-	-	-	243-5739	-	-	-	-	-	-	-
3.53	24.99	214	-	8U-5490	5F-1678	4J-5267	-	117-8803	109-3205	8M-4988	-	-	-	-	-
3.53	25.86	-	-	-	-	241-8200	-	-	-	-	-	-	-	-	-
3.53	26.57	215	-	-	4F-8946	180-8722	-	451-1493	208-1464	8M-4432	-	-	-	-	-
3.53	28.17	216	-	317-6025	2H-3932	4J-8997	-	061-9458	279-2252	8M-5248	227-2519	121-0145	-	-	-
3.53	29.74	217	-	-	4F-9029	6V-0357	-	165-4854	456-3475	8M-4433	-	-	-	-	-
3.53	31.34	218	-	210-6633	6F-6673	4J-0519	-	5P-8210	169-8598	8M-5254	-	-	-	-	-
3.53	32.92	219	-	-	4F-7391	4J-0520	-	295-5609	170-5715	8M-4987	-	437-4425	-	-	-
3.53	34.52	220	-	-	3H-1461	4J-0521	-	330-3517	3E-6766	8M-5249	7L-4774	-	-	-	-
3.53	34.56	220	-	-	-	-	-	-	215-3198	-	-	-	-	-	-
3.53	36.07	221	-	-	6V-8544	-	-	-	-	-	-	-	-	-	-
3.53	36.09	221	-	-	5F-9657	4J-8998	-	6V-5266	230-3775	1S-9799	-	-	-	-	-
3.53	37.69	222	-	-	4F-7952	4J-0522	-	061-7540	191-2962	8M-4986	-	118-7214	-	7L-2175	-
3.53	39.27	-	-	-	2J-1826	-	-	-	-	-	-	-	-	-	-
3.53	39.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.53	40.87	223	-	-	6F-0711	4J-5573	-	243-5741	-	-	-	-	-	-	-
3.53	42.86	-	-	-	193-4726	-	-	346-4897	194-9584	8M-4992	226-3571	118-8586	-	-	-
3.53	43.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.53	44.04	224	-	-	1H-9696	4J-0523	-	243-5742	-	-	-	-	-	-	-
3.53	47.22	225	-	-	7F-8267	4J-0524	-	8J-4351	5P-1480	8M-4443	8T-9588	129-1653	-	-	272-7018
3.53	50.39	226	-	440-6078	5F-8000	4J-0525	-	061-9455	234-3544	8M-5661	-	-	-	-	-
3.53	53.57	227	-	441-0260	7F-8268	4J-0526	-	5P-8211	389-8390	8M-4436	384-9992	-	-	-	-
3.53	55.6	-	-	-	137-3623	-	-	124-1858	8C-3077	8M-5010	-	-	-	-	-
3.53	56.74	228	-	149-9906	8F-6711	4J-0527	149-7726	447-7206	6V-4590	8M-4390	8T-1703	112-1577	-	-	-
3.53	58.5	-	-	-	-	311-0823	-	-	-	-	-	-	-	-	-

Cat O-Rings

O-Ring Chart (Cont'd.)

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Standard Size	NBR (60)	NBR (70)	NBR (75)	NBR (90)	FKM (70)	FKM (75)	FKM (90)	Silicone (70)	EPDM (70)	HNBR (78)	Urethane (93)	ACM (75)	TFEP (80)
3.53	58.74	-	-	248-5877	-	-	-	-	-	-	-	-	-	-	-
3.53	59.92	229	-	436-8716	175-7894	4J-0528	-	5P-4882	-	1S-2174	-	-	473-1550	-	-
3.53	63.09	230	-	-	1H-5728	3P-0439	-	06I-9457	389-8395	8M-4395	-	-	468-5112	-	-
3.53	65.07	-	-	-	5B-4399	-	-	-	-	-	-	-	-	-	-
3.53	66.27	231	-	-	8F-8882	3E-6730	-	6J-2244	389-8387	8M-5252	-	118-8706	-	-	-
3.53	69.44	232	-	441-4070	175-7895	6J-2680	-	425-2519	81-0568	9M-7539	167-4407	112-1574	-	-	-
3.53	72.62	233	-	-	6H-3977	149-0231	-	6V-1179	-	1Z-6390	-	-	-	-	-
3.53	73.03	-	-	-	-	-	-	242-2815	-	-	-	-	-	-	-
3.53	75.79	234	433-8067	194-7227	175-7896	-	-	5P-4889	-	5M-3038	205-4832	-	-	-	-
3.53	78.97	235	-	441-1135	175-7897	3E-6732	-	153-1157	170-7098	273-7325	-	-	-	-	-
3.53	82.14	236	-	-	2H-3931	6V-6707	-	6V-1196	170-4821	6L-9965	8C-3073	-	-	-	-
3.53	85.32	237	-	-	2H-6338	117-1266	-	124-1859	395-8817	2P-3538	8C-3072	-	-	-	-
3.53	88.49	238	-	441-0263	175-7898	6R-0365	-	6V-8002	389-8389	3S-1427	200-6410	224-6079	-	-	-
3.53	91.67	239	-	440-6080	8H-7521	3E-6735	-	131-3718	-	2M-2561	-	258-8738	-	-	-
3.53	94.84	240	-	-	1H-8128	5P-6302	-	3E-6773	-	5K-1770	-	-	-	-	-
3.53	98.02	241	-	441-2546	175-7900	9X-4611	-	6V-1197	-	9M-9836	-	-	-	-	-
3.53	101.19	242	-	-	1H-6227	-	-	6V-6353	-	2S-2182	-	-	394-3907	-	-
3.53	104.37	243	-	-	4M-0189	-	-	5D-5957	-	7M-9909	-	-	-	-	-
3.53	107.54	244	-	441-3142	175-7901	331-2484	-	3E-6785	-	8S-5654	213-9397	-	394-3903	-	-
3.53	110.72	245	-	-	175-7902	3E-6703	-	8T-9527	-	9M-9729	-	-	394-3905	-	-
3.53	113.89	246	-	-	5H-6734	190-3011	-	9X-7287	-	-	8C-5208	271-4928	-	-	-
3.53	116.69	247	-	-	-	-	-	445-4979	-	-	-	-	-	-	-
3.53	117.07	247	-	-	2J-8163	331-2496	-	5D-5958	-	5P-1705	-	-	-	-	-
3.53	120.24	248	-	-	5F-3144	175-7903	-	259-4598	-	8M-5255	213-9396	-	450-7582	7L-2211	-
3.53	123.42	249	-	370-0633	5F-3999	331-2487	-	6V-8260	180-2393	7M-6637	-	-	-	-	-
3.53	126.59	250	-	-	175-7904	031-4392	-	9X-7371	-	4S-5898	-	-	-	-	-
3.53	129.77	251	-	-	3F-5792	104-4948	-	130-0229	-	5P3457	-	-	-	7L-4090	-
3.53	132.94	252	-	-	175-7905	316-2516	-	6V-7351	-	9N-1619	-	-	-	-	-
3.53	136.12	253	-	-	2H-3935	316-2517	-	6V-1195	-	9N-2693	-	-	-	-	-
3.53	139.29	254	-	-	8F-9516	190-3010	-	-	-	8M-5007	-	-	-	-	-
3.53	142.47	255	-	-	2D-8009	-	-	161-8068	-	6V-1904	-	129-1609	-	-	-
3.53	145.64	256	-	-	5H-3252	6J-5541	-	243-2737	6V-3549	-	6V-3428	-	-	-	-
3.53	148.82	257	-	-	2K-8257	096-6789	-	161-8069	-	3S-5135	8T-5918	129-1610	-	-	-
3.53	149.23	257	-	-	-	-	-	-	-	-	-	-	3E-6701	-	-
3.53	151.99	258	-	-	8F-8733	7D-9014	-	6V-5553	170-7106	5D-4311	-	-	-	2L-1778	-
3.53	153	-	501-1419	-	-	-	-	-	-	-	-	-	-	-	-
3.53	158.34	259	-	-	2K-4472	356-3285	-	6V-3319	-	6V-3689	-	135-2654	451-6160	7L-3380	-
3.53	164.69	260	-	-	6F-4718	3E-6711	-	298-6387	175-5077	1S-4974	-	-	451-6161	-	-
3.53	171.04	261	-	-	9F-1399	-	376-6479	5P-8428	170-4825	2S-4071	213-9395	311-0828	447-8224	-	-
3.53	177.39	262	-	-	2K-2939	493-5233	-	6V-1902	-	5S-4554	-	-	-	7L-2181	-

O-Ring Chart (Cont'd.)

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Standard Size	NBR (60)	NBR (70)	NBR (75)	NBR (90)	FKM (70)	FKM (75)	FKM (90)	Silicone (70)	EPDM (70)	HNBR (78)	Urethane (93)	ACM (75)	TFEP (80)
3.53	179.42	-	-	-	-	170-1616	-	-	-	-	-	-	-	-	-
3.53	183.74	263	-	-	4H-6520	-	-	6V-3907	175-5088	1S-6119	-	-	-	-	-
3.53	190.09	264	-	-	3J-0634	5J-2383	-	437-2800	224-6080	-	6V-5098	149-5461	-	-	-
3.53	196.44	265	-	-	1H-8278	126-4003	-	-	-	-	8T-2921	271-4926	-	8L-5189	-
3.53	202.79	266	-	-	1J-2176	7Y-4277	-	227-5538	271-5027	9M-9545	-	-	-	-	-
3.53	209.14	267	-	-	9M-5024	7Y-4294	376-6480	238-6646	224-6081	9N-2694	-	122-3771	-	-	-
3.53	212.78	-	-	-	-	158-8978	-	-	-	-	-	-	-	-	-
3.53	214.3	-	-	-	2M-0340	-	-	-	-	-	-	-	-	-	-
3.53	215.49	268	-	-	4K-6804	-	-	156-5198	199-0759	-	-	122-3772	-	-	-
3.53	217.29	-	-	-	-	170-1612	-	-	-	-	-	-	-	-	-
3.53	221.84	269	-	-	8F-5900	-	-	186-3075	-	-	-	-	394-3911	-	-
3.53	226	-	-	-	116-7830	-	-	-	-	-	-	-	-	-	-
3.53	228.19	270	-	-	8F-6230	-	-	6V-3684	-	-	-	-	-	-	-
3.53	230.67	-	-	-	-	-	-	-	-	146-7311	-	-	-	-	-
3.53	234.54	271	-	-	1T-0132	-	-	235-3546	-	8L-3017	-	-	-	-	-
3.53	238.23	-	-	-	-	-	-	-	-	146-7312	-	-	-	-	-
3.53	240.89	272	-	-	2D-9572	126-4002	71-7553	170-5942	199-0700	9N-1609	-	-	-	-	-
3.53	245	-	-	-	174-4454	-	-	-	-	-	-	-	-	-	-
3.53	247.24	273	-	-	5S-3676	5W-7415	-	-	-	-	-	-	-	-	-
3.53	253.59	274	-	-	5H-4909	243-4572	-	234-9503	-	7D-1979	-	185-3502	-	-	-
3.53	266.29	275	-	-	8J-8879	-	-	464-8978	-	-	-	205-6051	-	-	-
3.53	269.88	-	-	-	9H-5548	-	-	-	-	-	-	-	-	-	-
3.53	278.99	276	-	-	2R-0239	5W-7393	-	180-4365	-	-	-	-	-	-	-
3.53	282.37	-	-	-	6V-7991	-	-	-	-	-	-	-	-	-	-
3.53	291.69	277	-	-	5P-2545	196-6102	-	213-9833	-	9N-1520	-	-	-	-	-
3.53	298.45	-	-	-	9X-7686	-	-	-	-	-	-	-	-	-	-
3.53	304.39	278	-	-	2D-6533	-	-	165-4852	-	-	-	-	-	-	-
3.53	307.57	-	-	-	-	-	-	5P-9035	-	-	-	-	-	-	-
3.53	316.87	-	-	-	5P-2861	-	-	-	-	-	-	-	-	-	-
3.53	317.91	-	-	-	-	-	-	-	-	6V-2406	-	-	-	-	-
3.53	323.44	-	-	-	-	5J-1086	-	-	-	-	-	-	-	-	-
3.53	329.79	279	-	-	4D-6695	196-6103	-	349-5726	-	9N-1552	-	-	-	-	-
3.53	340.99	-	-	-	171-9375	-	-	-	-	-	-	-	-	-	-
3.53	342.9	-	9R-2495	-	-	-	-	-	-	-	-	-	-	-	-
3.53	345	-	-	-	116-5897	-	-	-	-	-	-	-	-	-	-
3.53	351	-	-	-	171-9298	-	-	-	-	-	-	-	-	-	-
3.53	355.19	280	-	-	4S-5879	-	-	5D-5959	-	9N-1562	-	-	-	-	-
3.53	367.89	-	-	-	6D-0692	-	-	-	-	-	-	-	-	-	-
3.53	380.59	281	-	-	4D-1577	-	-	-	-	-	-	135-2653	-	-	-
3.53	385.34	-	-	-	8D-2714	-	-	6V-5058	-	-	-	-	-	-	-

Cat O-Rings

O-Ring Chart (Cont'd.)

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Standard Size	NBR (60)	NBR (70)	NBR (75)	NBR (90)	FKM (70)	FKM (75)	FKM (90)	Silicone (70)	EPDM (70)	HNBR (78)	Urethane (93)	ACM (75)	TFEP (80)
3.53	386.94	-	-	-	174-5336	-	-	-	-	-	-	-	-	-	-
3.53	399.8	-	-	-	5P-9147	-	-	-	-	-	-	-	-	-	-
3.53	405.26	282	-	-	7S-8561	195-2855	-	-	-	-	-	-	-	-	-
3.53	412.34	-	-	-	2P-3628	-	-	-	-	-	-	-	-	-	-
3.53	421.84	-	-	-	295-9234	-	-	-	-	-	-	-	-	-	-
3.53	430.66	283	-	-	4S-5924	-	-	-	-	-	-	-	-	-	-
3.53	434	-	-	-	-	-	-	-	-	-	-	269-9158	-	-	-
3.53	448.4	-	-	-	-	-	-	-	-	-	-	304-2218	-	-	-
3.53	454.91	284	-	-	7X-1548	-	-	-	-	-	-	-	-	-	-
3.53	456.06	284	-	-	-	184-0842	-	-	-	-	-	-	-	-	-
3.53	470	-	-	-	8C-5240	-	-	297-1217	-	-	-	-	-	-	-
3.53	480	-	-	-	-	-	-	9X-7723	-	-	-	-	-	-	-
3.53	481.46	-	-	-	2D-6507	-	-	-	-	-	-	-	-	-	-
3.53	484.86	-	-	-	6W-4310	-	-	-	-	-	-	-	-	-	-
3.53	500.74	-	-	-	136-2967	-	-	-	-	-	-	-	-	-	-
3.53	523.47	-	-	-	7D-7519	-	-	-	-	-	-	-	-	-	-
3.53	535.5	-	-	-	6V-6204	-	-	-	-	-	-	-	-	-	-
3.53	552.04	-	-	-	4D-0449	-	-	-	-	-	-	-	-	-	-
3.53	570	-	-	-	-	-	-	-	-	9X-7550	-	-	-	-	-
3.53	576.48	-	-	-	7Y-0640	-	-	-	-	-	-	-	-	-	-
3.53	606.02	-	-	-	7D-5868	-	-	-	-	-	-	-	-	-	-
3.53	698.09	-	-	-	6D-1355	-	-	458-3472	-	-	-	-	-	-	-
3.53	749	-	-	-	5P-4076	-	-	-	-	35-0854	-	-	-	-	-
3.53	985	-	-	-	-	-	-	-	-	202-7482	-	-	-	-	-
3.53	1108	-	-	-	-	-	-	-	-	150-8791	-	-	-	-	-
3.53	1209	-	-	-	-	-	-	-	-	422-1005	-	-	-	-	-
3.55	155	-	-	-	-	-	-	-	129-5426	-	-	-	-	-	-
3.55	160	-	-	-	283-6090	-	-	-	-	-	-	-	-	-	-
3.55	185	-	-	-	123-2003	-	-	-	-	-	-	-	-	-	-
3.6	24.6	-	-	-	-	-	-	3E-6775	-	-	-	-	-	-	-
3.6	68.8	-	397-9876	-	-	-	-	-	-	-	-	-	-	-	-
3.96	111.13	-	-	-	4F-5675	-	-	-	-	-	-	-	-	-	-
3.96	22.22	-	-	-	4F-5676	-	-	-	-	-	-	-	-	-	-
3.96	25.4	-	-	8B-6015	-	-	-	-	-	-	-	-	-	-	-
3.96	88.04	-	-	-	-	-	-	-	-	7H-0538	-	-	-	-	-
3.96	117.48	-	-	-	7F-6268	-	-	-	-	-	-	-	-	-	-
3.99	70.02	-	-	-	-	-	-	-	-	-	-	448-2607	-	-	-
3.99	121	-	-	-	-	-	-	-	-	-	-	459-8432	-	-	-
3.99	141	-	-	-	-	-	-	-	-	-	-	483-2085	-	-	-
3.99	189.02	-	-	-	-	-	-	-	-	-	-	448-2609	-	-	-

O-Ring Chart (Cont'd.)

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Standard Size	NBR (60)	NBR (70)	NBR (75)	NBR (90)	FKM (70)	FKM (75)	FKM (90)	Silicone (70)	EPDM (70)	HNBR (78)	Urethane (93)	ACM (75)	TFEP (80)
3.99	229.02	-	-	-	-	-	-	-	-	-	-	448-2610	-	-	-
3.99	246	-	-	-	-	-	-	-	-	-	-	483-2086	-	-	-
3.99	259.7	-	-	-	-	-	-	-	-	-	-	453-6657	-	-	-
3.99	267	-	-	-	-	-	-	-	-	-	-	459-8433	-	-	-
3.99	291	-	-	-	-	-	-	-	-	-	-	448-2606	-	-	-
3.99	310.6	-	-	-	-	-	-	-	-	-	-	453-6656	-	-	-
3.99	316	-	-	-	-	-	-	-	-	-	-	442-0177	-	-	-
3.99	377	-	-	-	-	-	-	-	-	-	-	442-0176	-	-	-
3.99	388.02	-	-	-	-	-	-	-	-	-	-	448-2608	-	-	-
3.99	400	-	-	-	-	-	-	-	-	-	-	449-3828	-	-	-
3.99	444.5	-	-	-	-	-	-	-	-	-	-	449-3829	-	-	-
4	26	-	-	317-8516	-	-	-	-	-	-	-	-	-	-	-
4	35	-	-	-	-	-	-	207-2755	-	-	-	-	-	-	-
4	38	-	-	121-7687	-	-	-	-	-	-	-	-	-	-	-
4	48	-	-	5W-8040	-	-	-	-	-	-	-	-	-	-	-
4	63	-	-	-	-	204-0831	-	-	-	-	-	-	-	-	-
4	64	-	-	317-8518	-	-	-	-	-	-	-	-	-	-	-
4	65	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	72	-	-	-	-	221-2330	-	-	-	-	-	-	-	-	-
4	75	-	-	-	-	112-8921	-	-	-	-	-	-	-	-	-
4	76	-	-	-	-	125-7001	-	-	-	-	-	-	-	-	-
4	80	-	-	5W-3043	-	5W-4816	-	-	-	-	-	-	-	-	-
4	83	-	-	-	-	-	-	-	230-8879	-	-	-	-	-	-
4	88	-	-	-	-	267-8985	-	-	-	-	-	-	-	-	-
4	92	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	95	-	-	-	-	165-8066	-	-	-	-	-	-	-	-	-
4	102	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	112	-	-	-	-	-	-	8U-2359	-	-	-	-	-	-	-
4	117	-	-	-	-	-	-	-	230-8903	-	-	-	-	-	-
4	120	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	126	-	-	-	-	1G-8054	-	-	-	-	-	-	-	-	-
4	132	-	-	-	-	5W-3040	-	-	-	-	-	-	-	-	-
4	140	-	-	-	-	9X-7440	-	-	-	-	-	-	-	-	-
4	150	-	-	-	-	-	-	111-7052	-	-	-	-	-	-	-
4	160	-	-	-	-	109-5704	-	-	-	-	-	-	-	-	-
4	165	-	-	-	-	141-0749	-	-	-	-	-	-	-	-	-
4	168	-	-	442-0366	-	-	-	-	-	-	-	-	-	-	-
4	171	-	-	-	-	287-8400	-	-	-	-	-	-	-	-	-
4	172	-	-	-	-	8C-3058	-	-	-	-	-	-	-	-	-
4	180	-	-	-	-	-	-	1C-7069	-	-	-	-	-	-	-

Cat O-Rings

O-Ring Chart (Cont'd.)

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Standard Size	NBR (60)	NBR (70)	NBR (75)	NBR (90)	FKM (70)	FKM (75)	FKM (90)	Silicone (70)	EPDM (70)	HNBR (78)	Urethane (93)	ACM (75)	TFEP (80)
4	330	-	-	-	109-5707	-	-	-	-	-	-	-	-	-	-
4	375	-	-	-	109-5703	-	-	-	-	-	-	-	-	-	-
4	380	-	-	-	242-9572	-	-	-	-	-	-	-	-	-	-
4	395	-	-	-	239-8434	-	-	-	-	-	-	-	-	-	-
4	530	-	-	-	133-4767	-	-	-	-	-	-	-	-	-	-
4	545	-	-	-	-	-	-	282-2935	-	-	-	-	-	-	-
4	595	-	-	-	109-5692	-	-	-	-	-	-	-	-	-	-
4.29	9.52	-	-	-	7B-0305	-	-	-	-	-	-	-	-	-	-
4.3	9.53	-	-	-	-	-	-	-	-	3S-5496	-	-	-	-	-
4.31	140.2	-	-	-	-	-	-	142-6217	-	-	142-7072	110-2220	-	-	-
4.31	141	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.39	42.88	-	-	-	7B-6868	-	-	-	-	-	-	-	-	-	-
4.39	101.6	-	-	-	7B-2125	-	-	-	-	-	-	-	-	-	-
4.39	113.8	-	-	-	-	-	-	-	-	-	3S-3977	-	-	-	-
4.39	117.1	-	-	-	-	-	-	-	-	-	456-5581	-	-	-	-
4.6	142.53	-	459-3347	-	-	-	-	-	-	-	-	-	-	-	-
4.6	158.34	-	459-3346	-	-	-	-	-	-	-	-	-	-	-	-
4.76	66.675	-	-	470-9936	-	-	-	-	-	-	-	-	-	-	-
4.76	1401.18	-	-	-	-	-	-	-	-	-	358-7623	-	-	-	-
4.76	1425.48	-	-	-	-	-	-	-	-	-	358-7624	-	-	-	-
4.78	7.92	-	-	-	2A-3307	-	-	-	-	-	-	-	-	-	-
4.78	23.83	-	-	-	-	-	-	-	-	-	-	-	390-5442	-	-
4.78	25.4	-	-	-	2A-3854	-	-	-	-	-	-	-	-	-	-
4.78	73.02	-	-	-	3F-9141	-	-	-	-	-	-	-	-	-	-
4.78	76.2	-	-	-	5B-3323	-	-	-	-	-	-	-	-	-	-
4.78	107.92	-	-	-	1Y-6637	-	-	-	-	-	-	-	-	-	-
4.78	193.68	-	-	-	7F-7151	-	-	-	-	-	-	-	-	-	-
4.78	219.08	-	-	-	7B-5716	-	-	-	-	-	-	-	-	-	-
4.78	249.22	-	-	-	9F-3384	-	-	-	-	-	-	-	-	-	-
4.78	320.68	-	-	-	7F-2093	-	-	-	-	-	-	-	-	-	-
4.78	469.9	-	-	-	4F-2411	-	-	-	-	-	-	-	-	-	-
4.88	84.07	-	-	-	6F-8509	-	-	-	-	-	-	-	-	-	-
4.88	112.73	-	-	-	4F-7471	-	-	-	-	-	-	-	-	-	-
4.88	133.8	-	-	-	-	-	-	-	-	-	6H-6998	-	-	-	-
4.88	139.8	-	-	-	-	-	-	-	-	-	3S-3978	-	-	-	-
4.88	152.4	-	-	-	-	-	-	-	-	-	6L-7812	-	-	-	-
4.88	165.1	-	-	-	-	-	-	-	-	-	6L-7815	-	-	-	-
4.88	175	-	-	-	-	-	-	-	-	-	7N-2046	-	-	-	-
5	70	-	-	-	267-8986	-	-	-	-	-	-	-	-	-	-
5	80	-	-	-	242-6281	-	-	-	-	-	-	-	-	-	-

O-Ring Chart (Cont'd.)

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Standard Size	NBR (60)	NBR (70)	NBR (75)	NBR (90)	FKM (70)	FKM (75)	FKM (90)	Silicone (70)	EPDM (70)	HNBR (78)	Urethane (93)	ACM (75)	TFEP (80)
5	90	-	-	-	5W-1757	-	-	-	-	-	-	-	351-2187	-	-
5	100	-	-	-	-	5W-1775	-	-	-	-	-	-	-	-	-
5	112	-	-	-	123-7724	-	-	-	-	-	-	-	-	-	-
5	120	-	-	-	135-7933	-	-	-	-	-	-	-	-	-	-
5	130	-	-	-	206-0511	-	-	-	-	-	-	-	-	-	-
5	140	-	-	-	-	-	-	-	-	-	-	-	351-2185	-	-
5	205	-	-	-	8C-3059	-	-	-	-	-	-	-	-	-	-
5	210	-	-	5W-4841	-	-	-	-	-	-	-	-	-	-	-
5	235	-	-	-	-	195-9769	-	-	-	-	-	-	-	-	-
5	248	-	-	-	133-4768	-	-	-	-	-	-	-	-	-	-
5	780	-	-	-	109-5699	-	-	-	-	-	-	-	-	-	-
5	820	-	-	-	272-9640	-	-	-	-	-	-	-	-	-	-
5	1560	-	-	-	133-4874	-	-	-	-	-	-	-	-	-	-
5.29	841.3	-	-	-	-	-	-	-	-	1Z-9347	-	-	-	-	-
5.3	45	-	-	-	283-6089	-	-	-	-	-	-	-	-	-	-
5.33	7.14	-	-	-	-	-	-	4G-4972	-	-	-	-	-	-	-
5.33	12.07	310	-	-	3H-4970	-	-	121-0718	-	3H-2388	-	-	-	-	-
5.33	15.24	312	-	-	5H-8038	-	-	6V-3955	-	1S-7104	-	247-0708	-	-	-
5.33	16.81	313	-	-	466-0391	-	-	-	-	8M-4990	-	-	-	-	-
5.33	18.42	314	-	-	3B-8453	-	-	6V-3348	-	1S-0004	6V-5061	-	-	-	-
5.33	19.3	-	-	-	-	-	-	-	-	9M-4618	-	-	-	-	-
5.33	19.99	315	-	-	9H-4557	-	-	-	-	-	-	-	-	-	-
5.33	21.59	316	-	-	6H-5672	-	-	2N-3350	-	9H-6067	6V-5062	-	-	-	170-8690
5.33	23.16	317	-	-	8F-4994	-	-	112-3540	-	9M-4849	7L-4773	114-2687	-	-	-
5.33	24.77	318	-	-	8B-4967	-	-	6V-4430	-	8M-5266	8T-0280	-	-	-	-
5.33	26.34	319	-	-	-	-	-	8C-3104	-	-	-	-	-	-	-
5.33	27.94	320	-	-	5H-7370	-	-	293-7589	-	8M-4991	-	-	-	-	-
5.33	31.12	322	-	-	4F-5607	-	-	6V-5134	-	5H-7153	305-4484	-	-	-	-
5.33	32.69	323	-	-	5M-7423	-	-	-	-	-	-	-	-	-	-
5.33	34.29	324	-	-	5M-5860	-	-	6V-3830	-	1S-9544	5P-7204	-	-	5P-5316	-
5.33	37.47	325	3S-6538	-	4F-7389	-	-	5P-8068	-	9M-7002	-	109-0078	-	5L-2727	-
5.33	37.74	-	-	-	-	-	-	-	-	-	6V-9769	-	-	-	-
5.33	40.64	326	-	-	2H-3927	8S-5953	-	5P-5846	-	9M-9647	6L-7817	109-0072	-	-	-
5.33	43.82	327	-	-	4F-8824	-	-	8C-5230	-	2S-2251	2N-5749	109-0073	-	-	-
5.33	46.2	-	-	-	-	-	-	-	-	9M-2610	-	-	-	-	-
5.33	46.99	328	-	-	4F-9653	9S-8307	-	8C-3107	-	6L-1648	6V-1585	112-3258	-	-	-
5.33	50.17	329	2H-3088	-	5K-5959	-	-	113-5304	-	6L-1651	171-4358	109-0076	-	-	-
5.33	53.34	330	-	-	4F-7390	-	-	6V-3831	-	-	2N-5243	112-3260	-	-	-
5.33	56.52	331	-	-	3H-2652	7S-4001	-	109-2332	-	6L-1650	2N-0475	110-7752	-	-	-
5.33	59.69	332	-	-	6F-8146	099-4780	-	3P-0651	-	6L-9284	-	112-3259	-	-	-

Cat O-Rings

O-Ring Chart (Cont'd.)

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Standard Size	NBR (60)	NBR (70)	NBR (75)	NBR (90)	FKM (70)	FKM (75)	FKM (90)	Silicone (70)	EPDM (70)	HNBR (78)	Urethane (93)	ACM (75)	TFEP (80)
5.33	62.87	333	-	-	2H-2665	2R-0039	-	237-7623	-	6L-1649	8T-1919	112-1102	-	-	-
5.33	66.04	334	-	-	2H-3933	-	-	3P-0656	-	8H-1607	-	-	-	-	-
5.33	69.22	335	-	-	7F-2122	006-8352	-	3P-0653	-	8M-4989	-	109-0075	-	-	-
5.33	72.39	336	-	-	5F-3092	-	-	269-7885	-	9M-4218	288-5476	259-4599	-	-	-
5.33	75.57	337	-	-	7H-2444	-	-	6V-5051	-	-	-	109-0092	-	-	-
5.33	78.74	338	-	-	9F-4446	-	-	6V-3833	500-8049	1M-6036	-	109-0079	-	7L-2174	-
5.33	81.92	339	-	-	4L-9564	5D-1597	-	287-5812	-	6L-5359	-	-	-	-	-
5.33	85.09	340	-	-	8H-2046	-	-	259-4600	-	9M-4217	6V-5066	259-4597	-	-	-
5.33	88.26	341	-	-	1H-0474	-	-	6V-0973	-	-	-	112-8186	-	-	-
5.33	91.44	342	-	-	5F-0149	-	461-9110	5P-7818	-	9X-7727	-	109-0074	-	-	-
5.33	94.62	343	-	119-1547	5H-8624	-	-	6V-4315	-	-	-	-	-	-	-
5.33	97.79	344	-	-	9M-2092	371-0442	-	5S-9134	221-2506	6V-5188	6V-5139	109-0080	-	-	-
5.33	100.97	345	-	-	4F-7387	9X-7458	-	6V-3908	-	4H-3243	416-1498	109-0077	-	7L-2197	-
5.33	104.14	346	-	442-1643	1J-2859	356-3287	-	6V-5052	-	-	-	-	-	-	-
5.33	107.32	347	-	-	9F-7283	-	-	6V-5101	-	1S-1225	6V-5504	-	-	-	-
5.33	110.49	348	-	-	1S-7408	356-3289	-	7D-7111	-	-	-	-	-	-	-
5.33	113.66	349	-	-	5H-5672	-	-	5P-8872	-	8S-5655	6V-5140	112-1580	-	-	-
5.33	116.84	350	-	-	5P-4326	-	-	8C-3103	-	-	6V-5067	-	-	-	-
5.33	120.02	351	-	-	1P-9005	331-2485	-	270-1820	-	-	-	-	-	-	-
5.33	123.19	352	-	-	2S-8439	-	-	310-3954	-	107-3185	8T-2903	109-0081	-	-	-
5.33	126.36	353	-	-	068-9002	-	-	-	-	-	-	258-8734	-	-	-
5.33	129.54	354	-	441-1128	8J-1688	371-0443	-	6V-4314	170-7103	-	6V-5068	258-8733	-	-	-
5.33	132.72	355	-	-	5P-1979	-	-	258-8735	-	-	-	-	-	-	211-8113
5.33	135.89	356	-	-	-	141-1774	-	9X-7562	170-7105	-	-	-	-	-	-
5.33	136.5	356	-	8U-5059	-	-	-	-	-	-	-	-	-	-	-
5.33	139.07	357	-	-	9M-3786	356-3291	-	6V-5054	-	3S-1219	6V-6809	-	-	-	-
5.33	142.24	358	-	-	6D-9157	-	-	6V-3835	-	-	225-7003	-	-	-	-
5.33	145.42	359	-	-	3S-1223	-	-	-	-	-	-	-	-	-	-
5.33	148.49	360	-	-	-	242-3564	-	-	-	-	-	-	-	-	-
5.33	148.59	360	-	-	6V-5657	-	-	-	-	-	-	-	-	-	-
5.33	151.77	361	-	-	7J-8956	315-7986	-	6V-5055	170-4823	-	-	-	-	-	-
5.33	158.12	362	-	-	8T-6444	-	-	6V-4297	-	8C-3091	-	-	-	-	-
5.33	164.46	363	-	-	8J-1665	356-3286	-	258-6947	170-4824	7S-8758	-	-	-	-	-
5.33	170.82	364	-	-	-	5P-7593	-	258-8736	-	-	-	-	-	-	-
5.33	176.05	-	-	-	-	-	-	395-3794	-	-	-	-	-	-	-
5.33	177.17	365	-	-	8T-7568	230-4560	-	109-7411	-	9X-7704	-	199-6163	-	-	-
5.33	183.52	366	-	-	5K-1787	-	-	6V-5102	-	-	-	-	-	-	-
5.33	189.86	367	-	-	3F-1547	-	-	-	-	-	-	-	-	-	-
5.33	192.48	-	-	-	-	-	-	-	-	430-9131	-	-	-	-	-
5.33	196.22	368	-	-	5M-7142	356-3288	-	6V-3349	-	-	197-8006	-	-	-	-

O-Ring Chart (Cont'd.)

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Standard Size	NBR (60)	NBR (70)	NBR (75)	NBR (90)	FKM (70)	FKM (75)	FKM (90)	Silicone (70)	EPDM (70)	HNBR (78)	Urethane (93)	ACM (75)	TFEP (80)
5.33	199.39	-	-	-	-	8J-4386	-	-	-	-	-	-	-	-	-
5.33	202.56	369	-	-	9M-5894	485-4640	-	177-6911	-	1Z-9357	6V-7703	-	-	-	-
5.33	208.92	370	-	-	4N-1230	-	-	5P-8429	-	-	-	259-4596	-	-	-
5.33	211.19	-	-	-	-	-	-	-	-	-	-	134-5958	-	-	-
5.33	215.27	371	-	-	5P-3092	356-3290	-	-	490-3178	-	253-9950	-	-	-	-
5.33	221.62	372	-	-	5H-4081	1U-3174	-	6V-5141	271-5029	2W-2072	-	134-5959	-	-	-
5.33	227.97	373	-	-	-	5P-5374	-	-	-	5D-9344	-	-	-	-	-
5.33	234.32	374	-	-	-	488-3857	-	6V-5375	-	-	-	-	-	-	-
5.33	240.67	375	-	-	-	5P-2235	-	6V-7701	-	5P-8105	-	-	-	-	-
5.33	247.01	376	-	-	-	386-5910	-	-	-	-	-	-	-	-	-
5.33	253.36	377	-	-	8L-9241	320-6169	-	-	-	-	-	-	-	-	-
5.33	266.06	378	-	-	3S-3074	109-5702	-	174-3357	275-8521	5P-5819	-	-	-	-	-
5.33	270.21	-	-	-	-	-	-	-	-	2W-2073	-	-	-	-	-
5.33	274.02	-	-	-	-	488-3859	-	-	-	-	-	-	-	-	-
5.33	278.77	379	-	-	-	5P-2236	-	6V-5554	292-9201	-	-	-	-	-	-
5.33	287	-	-	-	-	-	-	8C-9023	-	-	-	-	-	-	-
5.33	291.46	380	-	-	-	386-5911	-	6V-5057	-	-	-	-	-	-	-
5.33	300.42	-	-	-	-	130-9108	-	-	-	-	-	-	-	-	-
5.33	304.17	381	-	-	-	6V-3263	-	159-8802	-	-	-	158-6563	-	-	-
5.33	310.13	-	-	-	5H-4082	-	-	-	-	-	-	-	-	-	-
5.33	317.24	-	-	-	-	-	-	6V-7702	-	-	-	-	-	-	-
5.33	325	-	-	-	-	-	-	-	-	-	1W-0115	-	-	-	-
5.33	329.57	382	-	-	-	-	-	9X-7688	-	-	-	-	-	-	-
5.33	335	-	-	-	7S-8554	-	-	6V-3602	-	-	-	-	-	-	-
5.33	342.9	-	-	-	-	320-2510	-	231-3135	-	-	-	-	-	-	-
5.33	350.42	-	-	-	2M-3818	130-9109	-	-	-	-	-	-	-	-	-
5.33	354.97	383	-	-	-	130-9109	-	8C-3828	-	-	-	-	-	-	-
5.33	371.42	-	-	-	6V-1175	130-9110	-	-	-	-	-	-	-	-	-
5.33	372	-	-	-	-	-	-	8T-0098	-	-	-	-	-	-	-
5.33	380.37	384	-	-	2M-3340	-	-	118-7536	-	-	-	-	-	-	-
5.33	383.6	-	-	-	-	-	-	9X-7428	-	-	-	-	-	-	-
5.33	390	-	-	-	-	-	-	6V-4244	-	-	-	-	-	-	-
5.33	399.42	-	-	-	7S-4571	-	-	-	-	-	-	-	-	-	-
5.33	405.3	385	-	-	5M-6200	223-5519	-	-	-	-	-	-	-	-	-
5.33	411.48	-	-	-	5M-7329	-	-	-	-	-	-	-	-	-	-
5.33	415	-	-	-	-	-	-	6V-9670	-	-	-	-	-	-	-
5.33	421.7	-	-	-	-	-	-	8T-8883	-	-	-	-	-	-	-
5.33	422	-	-	-	144-8299	-	-	-	-	-	-	-	-	-	-
5.33	430.66	386	-	-	5P-9806	-	-	-	-	9L-5650	-	-	-	-	-
5.33	440.69	-	-	-	6M-5218	-	-	-	-	-	-	-	-	-	-

Cat O-Rings

O-Ring Chart (Cont'd.)

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Standard Size	NBR (60)	NBR (70)	NBR (75)	NBR (90)	FKM (70)	FKM (75)	FKM (90)	Silicone (70)	EPDM (70)	HNBR (78)	Urethane (93)	ACM (75)	TFEP (80)
5.33	456.06	387	-	-	2R-0098	-	-	6V-5059	-	-	-	-	-	-	-
5.33	470	-	-	-	-	-	-	-	-	317-2403	-	-	-	-	-
5.33	481.41	388	-	-	8D-4771	-	-	-	-	-	-	-	-	-	-
5.33	488	-	-	-	-	-	-	179-4551	-	-	-	-	-	-	-
5.33	494.66	-	-	-	9H-0846	-	-	6V-5043	-	-	-	-	-	-	-
5.33	514.65	-	-	-	9M-5892	-	-	-	-	-	-	-	-	-	-
5.33	532.21	390	-	-	4H-6730	-	-	-	-	380-1397	-	-	-	-	-
5.33	548.64	-	-	-	-	-	-	-	-	8S-6251	-	-	-	-	-
5.33	557.61	391	-	-	9H-3360	-	-	-	-	-	-	-	-	-	-
5.33	576	-	-	-	-	-	-	-	-	-	156-5197	-	-	-	-
5.33	582.68	392	-	431-5960	3D-9422	-	-	-	-	-	-	-	-	-	-
5.33	598.2	-	-	-	-	-	-	228-7098	-	-	-	-	-	-	-
5.33	608.1	393	-	-	8T-3013	-	-	-	-	-	-	-	-	-	-
5.33	610.38	393	-	-	-	-	207-8824	-	-	-	-	-	-	-	-
5.33	621	-	-	-	-	-	-	-	-	-	154-9416	-	-	-	-
5.33	633.48	394	-	-	9H-6832	-	-	-	-	-	-	-	-	-	-
5.33	643.38	-	-	-	8D-5096	-	-	-	-	381-8975	-	-	-	-	-
5.33	684.28	-	-	-	5D-7523	-	-	-	-	-	-	-	-	-	-
5.33	716	-	-	-	450-9217	-	-	-	-	-	-	-	-	-	-
5.33	728.4	-	-	-	-	-	-	303-1541	-	-	-	-	-	-	-
5.33	736.6	-	-	-	2D-6506	-	-	159-8752	-	-	-	-	-	-	-
5.33	760	-	-	-	5P-4057	-	-	-	-	-	-	-	-	-	-
5.33	786.76	-	-	-	3D-3295	-	-	-	-	-	-	-	-	-	-
5.33	795	-	-	-	-	-	-	-	-	186-3712	-	-	-	-	-
5.33	838.2	-	-	-	279-8816	-	-	-	-	-	-	-	-	-	-
5.33	843	-	-	-	-	-	-	-	-	5P-9519	-	-	-	-	-
5.33	870	-	-	-	-	-	-	-	-	143-8729	-	-	-	-	-
5.33	885.92	-	-	-	-	-	-	-	-	422-1004	-	-	-	-	-
5.33	920	-	-	-	-	-	-	-	-	111-1503	-	-	-	-	-
5.33	940	-	-	-	-	-	-	-	-	6V-6557	-	-	-	-	-
5.33	1146	-	-	-	-	-	-	-	-	113-1700	-	-	-	-	-
5.33	1180	-	-	-	-	-	-	-	-	152-0985	-	-	-	-	-
5.33	1275	-	-	-	-	-	-	-	-	152-7039	-	-	-	-	-
5.334	29.515	321	-	-	-	-	-	156-3881	-	-	-	-	-	-	-
5.5	31.8	-	-	-	-	290-2685	-	-	-	-	-	-	-	-	-
5.5	32	-	-	-	121-8140	-	-	-	-	-	-	-	-	-	-
5.5	80	-	-	5W-1855	-	-	-	-	-	-	-	-	-	-	-
5.6	130	-	-	-	-	140-7651	-	-	-	-	-	-	-	-	-
5.7	39.2	-	-	-	-	5W-5482	-	-	-	-	-	-	-	-	-
5.7	49.3	-	-	-	-	-	-	-	-	-	-	-	-	-	248-7173

O-Ring Chart (Cont'd.)

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Standard Size	NBR (60)	NBR (70)	NBR (75)	NBR (90)	FKM (70)	FKM (75)	FKM (90)	Silicone (70)	EPDM (70)	HNBR (78)	Urethane (93)	ACM (75)	TFEP (80)
5.7	49.6	P50A	-	-	095-1546	095-1612	-	-	-	-	-	-	-	-	-
5.7	51.6	P52	-	-	096-0121	095-1614	-	-	-	-	-	-	-	-	-
5.7	52.3	-	-	-	2U-1574	-	-	-	-	-	-	-	-	-	-
5.7	52.6	P53	-	-	-	095-1615	-	-	-	-	-	-	-	-	-
5.7	54.6	P55	-	-	8T-6346	095-1616	-	-	-	-	-	-	-	-	-
5.7	55.6	P56	-	-	-	095-1617	-	-	-	-	-	-	-	-	-
5.7	57.6	P58	-	-	-	095-1618	-	-	-	-	-	-	-	-	-
5.7	59.2	-	-	-	-	-	-	-	-	-	-	-	248-7174	-	-
5.7	59.6	P60	-	-	095-1549	095-1619	-	-	-	-	-	-	-	-	-
5.7	61.6	P62	-	-	-	095-1620	-	-	-	-	-	-	-	-	-
5.7	62.3	P63	-	490-8741	-	-	-	-	-	-	-	-	-	-	-
5.7	64.2	-	-	-	-	-	-	-	-	-	-	-	248-7175	-	-
5.7	64.6	P65	-	-	095-1550	095-1621	-	-	-	-	-	-	-	-	-
5.7	66.6	P67	-	-	270-6438	-	-	-	-	-	-	-	-	-	-
5.7	69.1	-	-	-	-	-	-	-	-	-	-	-	248-7176	-	-
5.7	69.6	P70	-	-	095-1551	095-1622	-	-	-	-	-	-	-	-	-
5.7	74.6	P75	-	-	095-1552	-	-	-	-	-	-	-	-	-	-
5.7	79	-	-	-	-	-	-	-	-	-	-	-	248-7177	-	-
5.7	79.6	P80	-	-	-	095-1623	-	-	-	-	-	-	-	-	-
5.7	84.2	P85	-	487-6143	-	-	-	-	-	-	-	-	-	-	-
5.7	84.6	P85	-	-	095-1554	095-1624	-	-	-	-	-	-	-	-	-
5.7	88.9	-	-	-	-	-	-	-	-	-	-	-	248-7178	-	-
5.7	89.6	P90	-	-	095-1555	095-1625	-	-	-	-	-	-	-	-	-
5.7	94.6	P95	-	-	-	095-1626	-	-	-	-	-	-	-	-	-
5.7	99.6	P100	-	-	095-1557	095-1627	-	-	-	-	-	-	-	-	-
5.7	104.6	P105	-	-	-	095-8859	-	-	-	-	-	-	-	-	-
5.7	109.6	P110	-	-	095-1558	095-1628	-	-	-	-	-	-	-	-	-
5.7	111.6	P112	-	-	132-3056	095-1629	-	-	-	-	-	-	-	-	-
5.7	114.6	P115	-	-	095-1560	187-4803	-	-	-	-	-	-	-	-	-
5.7	118.7	-	-	-	-	-	-	-	-	-	-	-	248-7179	-	-
5.7	119.6	P120	-	-	-	095-1631	-	-	-	-	-	-	-	-	-
5.7	124.6	P125	-	-	-	096-5382	-	-	-	-	-	-	-	-	-
5.7	129.2	P130	-	3E-6705	-	-	-	-	-	-	-	-	-	-	-
5.7	129.6	P130	-	-	095-1562	095-1632	-	-	-	-	-	-	-	-	-
5.7	139.3	P140	-	352-3916	-	-	-	-	-	-	-	-	-	-	-
5.7	139.6	P140	-	-	095-1563	095-1633	095-8010	-	-	-	-	-	-	-	-
5.7	144.6	P145	-	-	-	095-1634	-	-	-	-	-	-	-	-	-
5.7	149.3	G150	-	-	095-1682	095-1724	-	-	-	-	-	-	-	-	-
5.7	149.6	G150	-	-	-	095-1635	-	-	-	-	-	-	-	-	-
5.7	150	G150	-	-	-	140-7663	-	-	-	-	-	-	-	-	-

Cat O-Rings

O-Ring Chart (Cont'd.)

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Standard Size	NBR (60)	NBR (70)	NBR (75)	NBR (90)	FKM (70)	FKM (75)	FKM (90)	Silicone (70)	EPDM (70)	HNBR (78)	Urethane (93)	ACM (75)	TFEP (80)
5.7	154.3	G155	-	490-8771	096-4921	095-1725	-	-	-	-	-	-	-	-	-
5.7	159.3	G160	-	-	095-1683	095-1726	-	-	-	-	-	249-6671	-	-	-
5.7	164.3	G165	-	-	-	095-1727	-	-	-	-	-	-	-	-	-
5.7	169.3	G170	-	-	095-1684	095-1728	-	-	-	-	-	081-4674	-	-	-
5.7	174.3	G175	-	-	-	095-1729	-	-	-	-	-	-	-	-	-
5.7	179.3	G180	-	-	095-1685	095-1730	-	-	-	-	-	-	-	-	-
5.7	184.3	G185	-	-	095-1686	-	-	-	-	-	-	-	-	-	-
5.7	189.3	G190	-	-	095-1687	095-1731	-	-	-	-	-	-	-	-	-
5.7	194.3	G195	-	-	095-1688	185-0045	-	-	-	-	-	-	-	-	-
5.7	199.3	G200	-	-	095-1689	095-1732	-	-	-	-	-	-	-	-	-
5.7	204.3	-	-	-	148-4642	-	-	-	-	-	-	-	-	-	-
5.7	209.3	G210	-	-	7U-3263	095-1733	-	-	-	-	-	-	-	-	-
5.7	219.3	G220	-	-	-	095-1734	-	-	-	-	-	-	-	-	-
5.7	226	-	-	-	-	-	-	-	-	-	-	162-7473	-	-	-
5.7	229.3	G230	-	-	095-1692	095-1735	-	-	-	-	-	-	-	-	-
5.7	239.3	G240	-	3E-6717	-	-	-	-	-	-	-	-	-	-	-
5.7	249.3	G250	390-9012	490-8772	095-1693	095-1736	-	-	-	-	-	-	-	-	-
5.7	259.3	G260	-	352-3918	-	095-1737	-	-	-	-	-	-	-	-	-
5.7	269.3	G270	-	490-8736	-	-	-	-	-	-	-	-	-	-	-
5.7	279.3	G280	-	490-8773	095-1694	095-1738	-	-	-	-	-	-	-	-	-
5.7	289.3	G290	-	136-2942	-	352-3919	-	9X-4623	-	-	-	-	-	-	-
5.7	299.3	G300	-	-	095-1695	095-1739	-	-	-	-	-	-	-	-	-
5.7	310	-	390-9047	-	-	-	-	-	-	-	-	-	-	-	-
5.7	399.3	-	-	-	7U-7852	-	-	-	-	-	-	-	-	-	-
5.84	60.65	-	-	-	6V-2699	-	-	-	-	-	-	-	-	-	-
5.84	72.39	-	-	-	6V-2701	-	-	346-7703	-	-	-	-	-	-	-
5.84	81.4	-	-	-	6V2700	-	-	-	-	-	-	-	-	-	-
5.84	87.8	-	-	-	6V-2698	-	-	-	-	-	-	-	-	-	-
5.84	113.66	-	-	-	6V-2475	-	-	-	-	-	-	-	-	-	-
6	125	-	-	5W-1787	-	-	-	-	-	-	-	-	-	-	-
6	180	-	-	-	145-6735	-	-	-	-	-	-	-	-	-	-
6.22	49.23	-	-	-	2B-8293	-	-	-	-	-	-	-	-	-	-
6.25	196.22	-	-	-	-	358-5990	-	-	-	-	-	-	-	-	-
6.35	40.49	-	-	-	1A-2298	-	-	-	-	-	-	-	-	-	-
6.35	53.98	-	6B-7021	-	-	-	-	-	-	-	6L-7816	-	-	-	-
6.35	60.96	-	-	-	7F-9134	-	-	-	-	-	-	-	-	-	-
6.35	350.8	-	-	-	4L-3579	-	-	-	-	-	-	-	-	-	-
6.35	698.5	-	-	-	446-4719	-	-	-	-	-	-	-	-	-	-
6.4	342.9	-	-	-	443-2332	-	-	-	-	-	-	-	-	-	-
6.5	553	-	-	-	-	468-9310	-	-	-	-	-	-	-	-	-

O-Ring Chart (Cont'd.)

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Standard Size	NBR (60)	NBR (70)	NBR (75)	NBR (90)	FKM (70)	FKM (75)	FKM (90)	Silicone (70)	EPDM (70)	HNBR (78)	Urethane (93)	ACM (75)	TFEP (80)
6.99	12.7	-	-	-	3B-7363	-	-	-	-	-	-	-	-	-	-
6.99	31.12	-	-	-	4H-1860	-	-	-	-	6L-4905	8C-5209	-	-	-	-
6.99	37.46	-	-	-	7H-9959	-	-	-	-	-	-	-	-	-	-
6.99	42.8	-	-	-	8S-0530	-	-	-	-	-	-	-	-	-	-
6.99	46.99	-	-	-	1M3548	-	-	-	-	-	-	-	-	-	-
6.99	56.52	-	-	-	7D-1195	-	-	-	-	4M-0142	-	-	-	-	-
6.99	61.6	-	-	-	5P-8432	-	-	-	-	-	-	-	-	-	-
6.99	63	-	-	-	294-5738	-	-	-	-	-	-	-	-	-	-
6.99	64.26	-	-	-	1T-0136	-	-	-	-	-	-	-	-	-	-
6.99	69.22	-	-	-	1M-0556	-	-	-	-	4M-0141	-	-	-	-	-
6.99	75.56	-	-	-	5H-2824	-	-	-	-	5H-9205	-	-	-	-	-
6.99	81	-	-	-	-	-	-	-	-	4L-8337	-	125-4641	-	-	-
6.99	81.92	-	-	-	-	-	-	310-3953	-	-	7L-7459	-	-	-	-
6.99	85.09	-	-	-	2A-3676	-	-	-	-	-	-	-	-	-	-
6.99	88.26	-	-	-	6K-9149	-	-	130-5694	-	5S-1188	-	125-4642	-	-	-
6.99	91.44	-	-	-	5S-0982	-	-	-	-	-	-	-	-	-	-
6.99	94.61	-	-	-	-	-	-	-	-	5H-7704	-	-	-	-	-
6.99	94.62	-	-	-	-	-	-	6V-3917	-	-	7L-7460	-	-	-	-
6.99	100.96	-	-	-	-	-	-	6V-2695	-	5H-1039	-	-	-	-	-
6.99	107.31	-	-	-	-	-	-	6V-5166	-	6H-1871	-	-	-	-	-
6.99	113.67	425	-	2U-0238	114-9275	-	-	-	-	7S-1156	-	-	-	-	-
6.99	116.84	426	-	-	9S-3888	107-6259	-	170-5941	-	9M-8788	-	-	-	-	-
6.99	120.02	427	-	-	-	-	-	-	-	3H-0976	7L-2031	-	-	-	-
6.99	123.19	428	-	-	-	6F-0671	-	5S-6760	-	-	-	-	-	-	-
6.99	126.36	429	-	-	8F-4469	-	-	6V-5103	-	2M-5173	6L-9405	-	-	-	-
6.99	132.72	431	-	-	5H-9524	-	-	-	-	-	-	-	-	-	-
6.99	135.89	432	-	-	4F-7507	488-0243	-	3E-6751	-	-	-	-	-	-	-
6.99	139.07	433	-	-	5H-6733	143-4637	-	6V-5167	-	6H-1995	-	-	-	-	-
6.99	145.42	435	-	-	2Y-8252	384-5137	-	-	417-8558	-	-	-	-	-	-
6.99	148.59	436	-	-	5P-3620	003-2770	-	269-7886	-	5D-6642	-	-	-	-	-
6.99	151.76	437	-	-	8H-0273	6H-4162	-	5P-8862	-	6L-5473	-	-	-	-	-
6.99	158.12	438	-	-	5L-5032	140-0240	-	-	-	-	-	467-2620	-	-	-
6.99	164.46	439	-	-	2H-6124	-	-	135-6950	170-7100	7M-6952	-	-	-	-	-
6.99	170.82	440	-	-	2D-1692	006-8350	-	-	-	-	5P-6619	192-4309	-	-	-
6.99	177.16	441	-	-	4F-9652	370-6664	-	6V-5095	-	5D-7665	-	-	-	-	-
6.99	183.52	442	-	-	2D-1690	-	-	7X-4810	-	-	-	-	-	-	-
6.99	189.87	443	-	-	5F-6222	-	-	-	-	-	201-9701	-	-	-	-
6.99	199.26	-	-	-	2M-0338	-	-	-	-	-	-	-	-	-	-
6.99	202.56	445	-	-	2D-1691	365-9196	-	3P-0658	-	6L-5360	-	-	-	-	-
6.99	208.9	-	-	-	-	-	-	170-4822	-	-	-	-	-	-	-

Cat O-Rings

O-Ring Chart (Cont'd.)

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Standard Size	NBR (60)	NBR (70)	NBR (75)	NBR (90)	FKM (70)	FKM (75)	FKM (90)	Silicone (70)	EPDM (70)	HNBR (78)	Urethane (93)	ACM (75)	TFEP (80)
6.99	210.9	-	-	-	161-4511	-	-	-	-	-	-	-	-	-	-
6.99	215.26	446	-	-	4F-7388	-	-	-	-	-	279-3397	-	-	2N-6037	-
6.99	218.5	-	-	-	-	-	-	6V-3603	-	-	-	-	-	-	-
6.99	224.79	-	-	-	4D-6548	-	-	-	-	-	-	-	-	-	-
6.99	227.96	447	-	-	1J-2890	-	-	-	-	2S-2966	-	-	-	7L-2176	-
6.99	240.66	448	-	-	1M-9015	476-9346	-	-	-	-	-	-	-	-	-
6.99	253.37	449	-	-	3E-6794	-	-	-	-	-	-	-	-	1N-6000	-
6.99	259.7	-	-	-	386-6002	-	-	-	-	-	-	-	-	-	-
6.99	266.07	450	-	-	8F-8861	-	-	-	175-5086	-	-	-	-	-	-
6.99	268.44	-	-	-	5P-3487	-	-	9X-7442	-	-	-	-	-	-	-
6.99	278.77	451	-	-	2H-6340	160-5266	-	-	-	-	-	-	-	-	-
6.99	287.41	-	-	-	129-3719	-	-	-	-	-	-	-	-	-	-
6.99	291.47	452	-	112-4062	8H-8257	160-5267	-	-	-	-	-	-	-	-	-
6.99	304.17	453	-	-	4M-0661	-	-	-	200-2017	-	1W-0118	-	-	-	-
6.99	310.13	-	-	-	4M-0737	-	-	-	-	-	-	-	-	-	-
6.99	316.86	454	-	-	4D-4508	494-0200	-	6V-3967	-	-	8T-9047	-	-	-	-
6.99	329.56	455	-	-	5M-4454	488-3856	-	-	-	1Z-6392	-	-	-	-	-
6.99	342	456	-	490-8781	-	-	-	-	-	-	-	-	-	-	-
6.99	342.27	456	510-4687	-	5P-9217	-	-	6V-6638	271-5031	-	-	-	-	-	-
6.99	354.96	457	-	-	4J-1253	-	-	-	-	-	-	-	-	-	-
6.99	367.67	458	-	-	6V-5862	488-3858	-	-	-	-	-	-	-	-	-
6.99	369.19	458	-	-	-	-	353-3210	-	-	-	-	-	-	-	-
6.99	380.36	459	-	-	8F-9960	-	-	-	-	-	-	-	-	-	-
6.99	386.24	-	-	-	-	-	-	137-4349	-	-	-	-	-	-	-
6.99	393.07	460	-	-	5P-4342	-	-	-	-	-	-	-	-	-	-
6.99	405.26	461	-	-	8F-6498	160-5260	-	-	-	-	-	-	-	-	-
6.99	417.96	462	-	-	4D-4503	-	-	-	-	-	-	-	-	-	-
6.99	428.92	463	-	-	-	-	-	137-4350	-	-	-	-	-	-	-
6.99	430.66	463	5145929	-	3S-9896	-	-	241-6948	-	-	-	-	-	-	-
6.99	443.36	464	-	-	-	160-5261	-	353-3211	-	-	-	-	-	-	-
6.99	446.88	-	-	-	149-2695	-	-	-	-	-	-	-	-	-	-
6.99	456.06	465	-	-	446-4609	-	-	-	-	-	-	-	-	-	-
6.99	460	-	-	-	-	-	-	-	-	289-2270	-	-	-	-	-
6.99	468.76	466	-	-	8T-4811	-	-	448-8275	-	-	-	-	-	-	-
6.99	481.46	467	-	-	5D-1071	-	-	-	-	-	-	-	-	-	-
6.99	494.16	468	-	-	2D-8363	-	-	6V-5060	-	-	-	-	-	-	-
6.99	520.07	-	-	-	5P-2587	-	-	-	-	-	-	-	-	-	-
6.99	532.26	470	-	-	3D-8241	-	-	-	-	380-6914	-	-	-	-	-
6.99	564.5	-	-	-	-	-	-	-	-	143-6387	-	-	-	-	-
6.99	582.68	472	-	-	2D-8364	-	-	-	-	-	-	-	-	-	-

O-Ring Chart (Cont'd.)

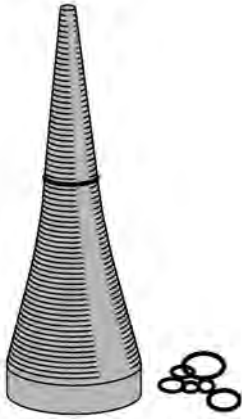
Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Standard Size	NBR (60)	NBR (70)	NBR (75)	NBR (90)	FKM (70)	FKM (75)	FKM (90)	Silicone (70)	EPDM (70)	HNBR (78)	Urethane (93)	ACM (75)	TFEP (80)
6.99	608.08	473	-	-	5D-6428	-	-	-	-	-	-	-	-	-	-
6.99	635	474	-	480-1798	-	-	-	-	-	-	-	-	-	-	-
6.99	659	475	-	-	-	-	-	185-7080	-	-	-	-	-	-	-
6.99	747	-	-	-	-	-	-	241-3294	-	-	-	-	-	-	-
6.99	765	-	-	-	430-4008	-	-	-	-	-	-	-	-	-	-
6.99	1091	-	-	-	-	-	-	172-5635	-	-	-	-	-	-	-
7	79	-	-	118-3125	-	-	-	-	-	-	-	-	-	-	-
7	89	-	-	125-9697	-	-	-	-	-	-	-	-	-	-	-
7	97.5	-	-	-	-	140-0178	-	-	-	-	-	-	-	-	-
7	99	-	-	118-2722	-	-	-	-	-	-	-	-	-	-	-
7	106	-	-	-	-	135-7937	-	-	-	-	-	-	-	-	-
7	234.3	-	-	-	-	-	-	-	175-5075	-	-	-	-	-	-
7.16	18.47	-	-	-	-	-	-	139-6123	-	5P-2428	-	-	-	-	-
7.5	56	-	-	-	-	175-6176	-	-	-	-	-	-	-	-	-
7.98	76.96	-	-	-	-	-	-	-	-	-	-	-	-	1L-7548	-
8	40	-	-	442-0365	-	-	-	-	-	-	-	-	-	-	-
8	216.2	-	-	-	-	8T-6690	-	-	-	-	-	-	-	-	-
8	285.1	-	-	-	-	293-4374	-	-	-	-	-	-	-	-	-
8.4	149.5	P150A	-	113-2073	-	-	-	-	-	-	-	-	-	-	-
8.4	154.5	P155	-	-	-	095-1636	-	-	-	-	-	-	-	-	-
8.4	164.5	P165	-	-	-	095-1637	-	-	-	-	-	-	-	-	-
8.4	174.5	P175	-	-	-	095-1638	-	-	-	-	-	-	-	-	-
8.4	179.5	P180	-	-	-	095-1639	-	-	-	-	-	-	-	-	-
8.4	189.5	P190	-	-	095-1565	-	-	-	-	-	-	-	-	-	-
8.4	199.5	P200	-	-	095-1566	-	-	-	-	-	-	-	-	-	-
8.4	214.5	P215	-	-	095-1567	-	-	-	-	-	-	-	-	-	-
8.4	249.5	P250	-	-	095-1568	095-1643	-	-	-	-	-	-	-	-	-
8.4	264.5	P265	-	-	-	096-0037	-	-	-	-	-	-	-	-	-
8.4	289.5	P290	-	-	095-1569	-	-	-	-	-	-	-	-	-	-
8.4	384.5	P385	-	-	095-1570	-	-	-	-	-	-	-	-	-	-
8.79	28.17	-	-	-	5H-4196	-	-	-	-	-	-	-	-	-	-
8.79	37.34	-	-	-	8F-2691	-	-	-	-	-	-	-	-	-	-
9	80	-	-	093-1341	-	-	-	-	-	-	-	-	-	-	-
9	96	-	-	-	-	-	-	-	-	-	-	367-8465	-	-	-
9.52	196.85	-	-	-	3K-1516	-	-	-	-	-	-	-	-	-	-
9.53	70.1	-	-	-	1H-7683	-	-	-	-	-	-	-	-	-	-
10	124.7	-	-	-	-	-	-	-	-	-	-	367-8466	-	-	-
10	140	-	-	-	-	-	-	-	-	-	-	367-8467	-	-	-
10	155	-	-	-	-	-	-	-	-	-	-	367-8468	-	-	-
10	175	-	-	-	-	-	-	-	-	-	-	367-8469	-	-	-

Cat O-Rings

O-Ring Chart (Cont'd.)

Cross Section Dia. (mm)	Seal Inside Dia. (mm)	Standard Size	NBR (60)	NBR (70)	NBR (75)	NBR (90)	FKM (70)	FKM (75)	FKM (90)	Silicone (70)	EPDM (70)	HNBR (78)	Urethane (93)	ACM (75)	TFEP (80)
10	200	-	-	-	-	-	-	-	-	-	-	367-8470	-	-	-
10	210	-	-	-	-	-	-	-	-	-	-	367-8471	-	-	-
10	230	-	-	-	-	-	-	-	-	-	-	367-8472	-	-	-
10	250	-	-	-	-	-	-	-	-	-	-	367-8473	-	-	-
11.43	300.61	-	9M-6097	-	-	-	-	-	-	-	-	-	-	-	-
11.43	326	-	4V-4884	-	-	-	-	-	-	-	-	-	-	-	-
14.28	650	-	9J-0818	-	-	-	-	-	-	-	-	-	-	-	-
15	155.44	-	-	-	501-9536	-	-	-	-	-	-	-	-	-	-
15.875	751.84	-	8J-3699	-	-	-	-	-	-	-	-	-	-	-	-
15.88	600	-	6A-4503	-	-	-	-	-	-	-	-	-	-	-	-
15.88	660.4	-	5P-3228	-	-	-	-	-	-	-	-	-	-	-	-

O-Ring Measuring Cone



- Designed to measure SAE industry standard O-Ring dimensions by cross section and dash size.
- Made of high impact, yellow plastic with 65 steps indicating the varying inside diameters.
- Contains a round base with five industry standard O-Ring cross section diameters cut into the edge.
- Makes finding the correct O-Ring replacement easier and faster.

Item	Part Number
O-Ring Measuring Cone	9U-5155

O-Ring Seal Kits

O-Ring Seal Kits 270-1528 (Mixed SAE — Nitrile)



- Include frequently used o-ring sizes, reducing the need to order individual seals.
- Come in individual compartments with a rugged plastic container that latches shut for protection.
- Exceed SAE and other seal specifications, ensuring longer life and lower costs per hour.

Part Number	Description	Seal Type	Contents	Application(s)
270-1528	O-Ring Seal Kit	O-Ring Seal	32 Sizes, 570 Seals Nitrile, 90 Duro	SAE STOR Fittings, SAE ORFS Fittings, SAE Code 61 Flanges, SAE Code 62 Flanges

270-1528 Kit Contents		
Part Number	Description	Qty.
270-1528	SAE Straight Thread O-Ring (STOR)	10
030-4606	SAE Straight Thread O-Ring (STOR)	20
1J-9671	SAE Straight Thread O-Ring (STOR)	20
2M-9780	SAE Straight Thread O-Ring (STOR)	20
2S-4078	SAE Straight Thread O-Ring (STOR)	20
3D-2824	SAE Straight Thread O-Ring (STOR)	20
3J-1907	SAE Straight Thread O-Ring (STOR)	20
3J-7354	SAE Straight Thread O-Ring (STOR)	20
3K-0360	SAE Straight Thread O-Ring (STOR)	20
4J-0519	SAE Code 61/62 Flange Seal	15
4J-0520	SAE Code 61/62 Flange Seal	15
4J-0521	SAE Code 61/62 Flange Seal	15
4J-0522	SAE Code 61/62 Flange Seal	15
4J-0523	SAE Code 61/62 Flange Seal	15
4J-0524	SAE Code 61/62 Flange Seal	15
4J-0525	SAE Code 61/62 Flange Seal	10
4J-0526	SAE Code 61/62 Flange Seal	10

270-1528 Kit Contents		
Part Number	Description	Qty.
4J-0527	SAE Code 61/62 Flange Seal	10
4J-5140	SAE Code 61/62 Flange Seal	20
4J-5267	SAE Code 61/62 Flange Seal	20
4J-5477	SAE O-Ring Face Seal (ORFS)	20
4J-7533	SAE O-Ring Face Seal (STOR)	20
4K-1388	SAE O-Ring Face Seal (STOR)	20
5K-9090	SAE O-Ring Face Seal (ORFS)	20
6K-6307	SAE O-Ring Face Seal (STOR)	20
6V-8397	SAE O-Ring Face Seal (ORFS)	20
6V-8398	SAE O-Ring Face Seal (ORFS)	20
6V-8400	SAE O-Ring Face Seal (ORFS)	20
6V-9746	SAE O-Ring Face Seal (ORFS)	20
7J-0204	SAE O-Ring Face Seal (ORFS)	20
7J-9108	SAE O-Ring Face Seal (ORFS)	20
7M-8485	SAE O-Ring Face Seal (STOR)	20
8T-0315	SAE O-Ring Face Seal (ORFS)	20
276-9576 ⁽¹⁾	Utility Box	1

¹ Not available for individual sale

O-Ring Seal Kits 270-1533



- Include frequently used o-ring sizes, reducing the need to order individual seals.
- Come in individual compartments with a rugged plastic container that latches shut for protection.
- Exceed SAE and other seal specifications, ensuring longer life and lower costs per hour.

Part Number	Description	Seal Type	Contents	Application(s)
270-1533	O-Ring Seal Kit	O-Ring Seal	32 Sizes, 149 Seals Silicone, 70 Duro	Low-Pressure, High-Temperature Applications

270-1533 Kit Contents		
Part Number	Description	Qty.
1S-0004	Silicone Rubber O-Ring	5
2S-2251	Silicone Rubber O-Ring	5
6L-1651	Silicone Rubber O-Ring	5
8M-4389	Silicone Rubber O-Ring	5
8M-4390	Silicone Rubber O-Ring	3
8M-4432	Silicone Rubber O-Ring	5
8M-4435	Silicone Rubber O-Ring	5
8M-4436	Silicone Rubber O-Ring	3
8M-4437	Silicone Rubber O-Ring	10
8M-4438	Silicone Rubber O-Ring	5
8M-4443	Silicone Rubber O-Ring	3
8M-4445	Silicone Rubber O-Ring	5
8M-4446	Silicone Rubber O-Ring	5
8M-4986	Silicone Rubber O-Ring	10
8M-4987	Silicone Rubber O-Ring	10
8M-4988	Silicone Rubber O-Ring	5

270-1533 Kit Contents		
Part Number	Description	Qty.
8M-4990	Silicone Rubber O-Ring	3
8M-4991	Silicone Rubber O-Ring	3
8M-4992	Silicone Rubber O-Ring	3
8M-5010	Silicone Rubber O-Ring	3
8M-5248	Silicone Rubber O-Ring	5
8M-5249	Silicone Rubber O-Ring	5
8M-5252	Silicone Rubber O-Ring	3
8M-5254	Silicone Rubber O-Ring	5
8M-5661	Silicone Rubber O-Ring	3
8M-8157	Silicone Rubber O-Ring	5
8M-8283	Silicone Rubber O-Ring	3
8M-8515	Silicone Rubber O-Ring	5
9H-6067	Silicone Rubber O-Ring	5
9M-4849	Silicone Rubber O-Ring	5
9M-7002	Silicone Rubber O-Ring	3
9M-9647	Silicone Rubber O-Ring	3
276-9576	Utility Box ⁽²⁾	1

2 Not available for individual sale

O-Ring Seal Kits

O-Ring Seal Kits 270-1535 (Cat Flanges)



- Include frequently used o-ring sizes, reducing the need to order individual seals.
- Come in individual compartments with a rugged plastic container that latches shut for protection.
- Exceed SAE and other seal specifications, ensuring longer life and lower costs per hour.

Part Number	Description	Seal Type	Contents	Application(s)
270-1535	O-Ring Seal Kit	Rectangular Seal	9 Sizes, 80 Seals Nitrile, 90 Duro	Cat Flanges

270-1535 Kit Contents		
Part Number	Description	Qty.
1P-3700	Rectangular Seal	10
1P-3702	Rectangular Seal	10
1P-3703	Rectangular Seal	10
1P-3704	Rectangular Seal	10
1P-3705	Rectangular Seal	10

270-1535 Kit Contents		
Part Number	Description	Qty.
1P-3706	Rectangular Seal	10
1P-3707	Rectangular Seal	10
1P-3708	Rectangular Seal	5
1P-3709	Rectangular Seal	5
276-9578 ⁽³⁾	Utility Box	1

O-Ring Seal Kits 270-1537 (Metric STOR — Nitrile)



- Include frequently used o-ring sizes, reducing the need to order individual seals.
- Come in individual compartments with a rugged plastic container that latches shut for protection.
- Exceed SAE and other seal specifications, ensuring longer life and lower costs per hour.

Part Number	Description	Seal Type	Contents	Application(s)
270-1537	O-Ring Seal Kit	O-Ring Seal	10 Sizes, 125 Seals Nitrile, 90 Duro	Metric STOR (ISO 6149)

270-1537 Contents		
Part Number	Description	Qty.
6V-6560	ISO (Metric) Straight Thread O-Ring Seal	15
6V-7970	ISO (Metric) Straight Thread O-Ring Seal	10
6V-9028	ISO (Metric) Straight Thread O-Ring Seal	15
8T-6850	ISO (Metric) Straight Thread O-Ring Seal	15

270-1537 Contents		
Part Number	Description	Qty.
8T-7524	ISO (Metric) Straight Thread O-Ring Seal	15
8T-7525	ISO (Metric) Straight Thread O-Ring Seal	10
8T-7526	ISO (Metric) Straight Thread O-Ring Seal	5
8T-7876	ISO (Metric) Straight Thread O-Ring Seal	15

3 Not available for individual sale

O-Ring Seal Kits 270-1537 (Metric STOR — Nitrile) (Cont'd.)

270-1537 Contents		
Part Number	Description	Qty.
8T-7877	ISO (Metric) Straight Thread O-Ring Seal	15

270-1537 Contents		
Part Number	Description	Qty.
8T-7878	ISO (Metric) Straight Thread O-Ring Seal	10
276-9578 ⁽⁴⁾	Utility Box	1

O-Ring Seal Kits 270-1539 (SAE ORFS — Nitrile)



- Include frequently used o-ring sizes, reducing the need to order individual seals.
- Come in individual compartments with a rugged plastic container that latches shut for protection.
- Exceed SAE and other seal specifications, ensuring longer life and lower costs per hour.

Part Number	Description	Seal Type	Contents	Application(s)
270-1539	O-Ring Seal Kit	O-Ring Seal	8 Sizes, 120 Seals Nitrile, 90 Duro	SAE ORFS Fittings

270-1539 Kit Contents		
Part Number	Description	Qty.
4J-5477	SAE O-Ring Face Seal	20
5K-9090	SAE O-Ring Face Seal	10
6V-8397	SAE O-Ring Face Seal	20
6V-8398	SAE O-Ring Face Seal	20

270-1539 Kit Contents		
Part Number	Description	Qty.
6V-8400	SAE O-Ring Face Seal	10
6V-9746	SAE O-Ring Face Seal	10
7J-9108	SAE O-Ring Face Seal	20
8T-0315	SAE O-Ring Face Seal	10
276-9578 ⁽⁴⁾	Utility Box	1

4 Not available for individual sale

O-Ring Seal Kits

O-Ring Seal Kits 270-1540 (Air Conditioning Fittings)



- Include frequently used o-ring sizes, reducing the need to order individual seals.
- Come in individual compartments with a rugged plastic container that latches shut for protection.
- Exceed SAE and other seal specifications, ensuring longer life and lower costs per hour.

Part Number	Description	Seal Type	Contents	Application(s)
270-1540	O-Ring Seal Kit	O-Ring Seal	12 Sizes, 150 Seals	Air-Conditioning Fittings (R134 Compatible)

270-1540 Contents		
Part Number	Description	Qty.
121-7136	O-Ring Seal	10
121-7137	O-Ring Seal	10
121-7138	O-Ring Seal	10
229-4896	O-Ring Seal	10
9X-7378	O-Ring Seal	15
9X-7379	O-Ring Seal	15

270-1540 Contents		
Part Number	Description	Qty.
9X-7380	O-Ring Seal	15
9X-7381	O-Ring Seal	15
9X-7382	O-Ring Seal	15
9X-7383	O-Ring Seal	10
9X-7384	O-Ring Seal	10
9X-7385	O-Ring Seal	15
276-9578 ⁽⁵⁾	Utility Box	1

O-Ring Seal Kits 270-1545 (SAE Code 61/61)



- Include frequently used o-ring sizes, reducing the need to order individual seals.
- Come in individual compartments with a rugged plastic container that latches shut for protection.
- Exceed SAE and other seal specifications, ensuring longer life and lower costs per hour.

Part Number	Description	Seal Type	Contents	Application(s)
270-1545	O-Ring Seal Kit	O-Ring Seal	6 Sizes, 60 Seals Nitrile, 90 Duro	SAE Code 61 Flanges, SAE Code 62 Flanges

270-1545 Contents		
Part Number	Description	Qty.
4J-0520	SAE Code 61/62 Flange Seal	10
4J-0522	SAE Code 61/62 Flange Seal	10
4J-0524	SAE Code 61/62 Flange Seal	10

270-1545 Contents		
Part Number	Description	Qty.
4J-0527	SAE Code 61/62 Flange Seal	10
4J-5140	SAE Code 61/62 Flange Seal	10
4J-5267	SAE Code 61/62 Flange Seal	10
276-9578 ⁽⁵⁾	Utility Box	1

⁵ Not available for individual sale

O-Ring Seal Kits 271-0459 (SAE ORFS — FKM)



- Include frequently used o-ring sizes, reducing the need to order individual seals.
- Come in individual compartments with a rugged plastic container that latches shut for protection.
- Exceed SAE and other seal specifications, ensuring longer life and lower costs per hour.

Part Number	Description	Seal Type	Contents	Application(s)
271-0459	O-Ring Seal Kit	O-Ring Seal	8 Sizes, 40 Seals FKM, 90 Duro	SAE ORFS Fittings, High Temperature, High Pressure

271-0459 Kit Contents		
Part Number	Description	Qty.
228-7088	SAE O-Ring Face Seal	5
228-7089	SAE O-Ring Face Seal	5
228-7090	SAE O-Ring Face Seal	5
228-7091	SAE O-Ring Face Seal	5
228-7092	SAE O-Ring Face Seal	5

271-0459 Kit Contents		
Part Number	Description	Qty.
228-7093	SAE O-Ring Face Seal	5
228-7094	SAE O-Ring Face Seal	5
228-7095	SAE O-Ring Face Seal	5
276-9578 ⁽⁶⁾	Utility Box	1

O-Ring Seal Kits 271-0460 (SAE STOR — FKM)



- Include frequently used o-ring sizes, reducing the need to order individual seals.
- Come in individual compartments with a rugged plastic container that latches shut for protection.
- Exceed SAE and other seal specifications, ensuring longer life and lower costs per hour.

Part Number	Description	Seal Type	Contents	Application(s)
271-0460	O-Ring Seal Kit	O-Ring Seal	13 Sizes, 65 Seals FKM, 90 Duro	SAE STOR Fittings High Temperature, High Pressure

271 Kit Contents		
Part Number	Description	Qty.
214-7566	SAE Straight Thread O-Ring Seal	5
214-7567	SAE Straight Thread O-Ring Seal	5
214-7568	SAE Straight Thread O-Ring Seal	5
228-7096	SAE Straight Thread O-Ring Seal	5
228-7097	SAE Straight Thread O-Ring Seal	5
238-5078	SAE Straight Thread O-Ring Seal	5
238-5079	SAE Straight Thread O-Ring Seal	5

271 Kit Contents		
Part Number	Description	Qty.
238-5080	SAE Straight Thread O-Ring Seal	5
238-5081	SAE Straight Thread O-Ring Seal	5
238-5082	SAE Straight Thread O-Ring Seal	5
238-5083	SAE Straight Thread O-Ring Seal	5
238-5084	SAE Straight Thread O-Ring Seal	5
238-5086	SAE Straight Thread O-Ring Seal	5
276-9578 ⁽⁶⁾	Utility Box	1

6 Not available for individual sale

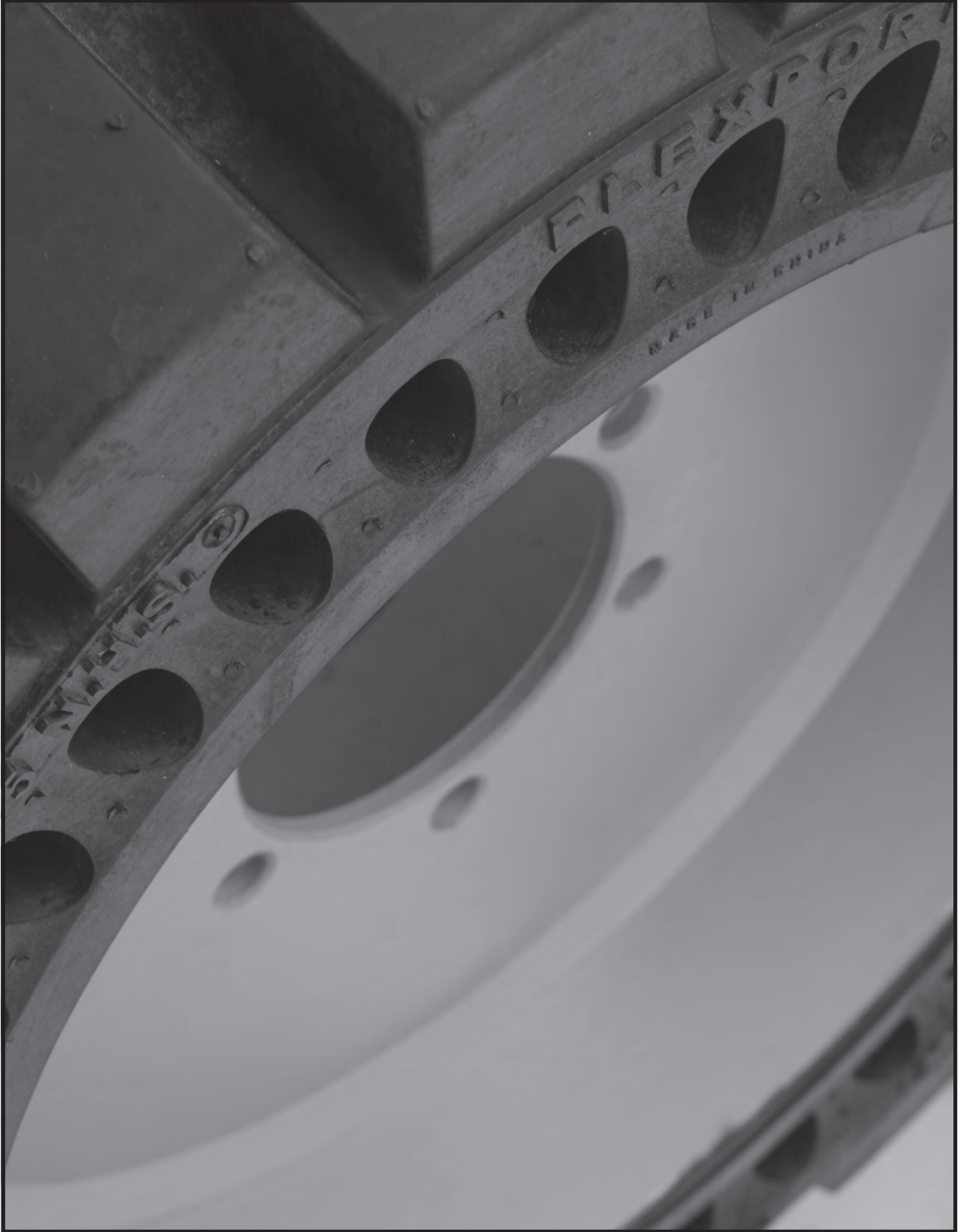
O-Ring Seal Kits

Material Chart

Material	Hardness	Temp.	Compatible With	Applications	Not Compatible With
Ethylene Propylene Diene Modified 70) (EPDM)	70 Durometer	-55°- 135° C -67° -275° F	Alcohols Automotive brake fluids Hot, cold water Ketones Ozone and sunlight Phosphate ester fluids Silicone fluids Some dilute acids Steam (200 Degree C max) Steam (400 Degree F max)	Ebullient cooled engine cooling systems	Aromatic fuels Diester lubricants Petroleum fluids
Fluorocarbon 75) (FKM)	75 Durometer	-40°- 175° -40°-350° F	Diester lubricants Halogenated hydrocarbons (above 100 Deg. C) Highly resistant to compression set Petroleum fluids Phosphate ester fluids Silicone fluids Some acids	High temperature applications requiring resistance to air, fuels, lubricants and hydraulic fluids	Amines Brake fluids Engine Coolant Fire Resistant Fluids Ketones Steam Water
Fluorocarbon 90) (FKM)	90 Durometer	-40°-175° C -40°-350° F	Diester lubricants Halogenated hydrocarbons (above 100 Deg. C) Highly resistant to compression set Petroleum fluids Phosphate ester fluids Silicone fluids Some acids	High pressure, high temperature applications requiring resistance to air, fuels, lubricants and hydraulic fluids ORFS, STORS seals	Amines Brake fluids Engine Coolant Fire Resistant Fluids Ketones Steam Water
Highly Saturated Nitrile (78) (HNBR)	78 Durometer	-40°-121° C -40° -275° F	Abrasion resistant Diesel fuels Diester lubricants Ozone Petroleum oils, greases Refrigerant HFC— 134a (Non-Freon) Silicone fluids Steam Water base engine coolants	Automotive air conditioner seals High temperature flex boot seals High temperature power steering seals Higher temperature hydraulic seals Middle cylinder liner seals	Aromatic and oxygenated gasolines Automotive and aircraft brake fluids Chlorinated hydrocarbons Ethers Ketones Phosphate ester fluids
Nitrile (60)	60 Durometer	-40°-100° C -40°-212° F	Alpha-Olefin base synthetic lubricants Ethylene Glycol Petroleum base lubricants Silicone oils and greases Water, water base engine coolants	Ambient temperature fuel handling High and low pressure LPG service Hydraulic fluids Power steering seals Radiator thermostat seals	Automotive and aircraft brake fluids High levels of ozone Ketones Phosphate ester fluids UV Light
Nitrile (70)	70 Durometer	-40°-100° C -40°-212° F	Alpha-Olefin base synthetic lubricants Ethylene Glycol Hydrocarbon fuels Petroleum base lubricants Silicone oils and greases Water, water base engine coolants	Ambient temperature fuel handling High and low pressure LPG service Hydraulic fluids Power steering seals Radiator thermostat seals	Acetone Automotive and aircraft brake fluids Chlorinated hydrocarbons High levels of ozone Ketones Nitro hydrocarbons Phosphate ester fluids Strong acids UV light
Nitrile (90)	90 Durometer	-40°-100° C -40°-212° F	Abrasion resistant Alpha-Olefin base synthetic lubricants Ethylene Glycol Hydrocarbon fuels Petroleum base lubricants Silicone oils and greases Water, water base engine coolants ORFS, STORS seals	Ambient temperature fuel handling High and low pressure LPG service Hydraulic fluids (to 10,335 kPa/ 1,500 psi) Power steering seals Radiator thermostat seals	Automotive and aircraft brake fluids High levels of ozone Ketones Phosphate ester fluids Strong acids UV light
Polyacrylic (75) (ACM)	75 Durometer	-12°-135° C +10°-275° F	Excellent resistance to oxidation Excellent resistance to ozone Excellent resistance to sunlight & UV light Petroleum base fluids	Power steering seals Transmissions	Aromatic hydrocarbons Brake fluids Chlorinated hydrocarbons Ethylene Glycol Methanol

Material Chart (Cont'd.)

Material	Hardness	Temp.	Compatible With	Applications	Not Compatible With
			Transmission fluids Type "R" power steering fluid		Other alcohols Phosphate ester fluids Water or steam
Silicone (70)	70 Durometer	-46°-150° C -50°-300° F	Air Diacetone alcohol Ethylene glycol Extreme high/low temperatures High aniline point oil Iso-butyl alcohol Ozone & UV light Polyglycol	Electrical system seals High temperature air seals High temperature static grease seals	Acetone Aromatic hydrocarbons EP oil Fuel oil Gasoline Ketones Low aniline point oils Petroleum oils Steam & hot water
Urethane (90)	90 Durometer	-40° - 93° C -40°-200° F	Ozone Petroleum base lubricants and hydraulic fluids/fuels UV light	Brake seals Hydraulic cylinder seals	Water Water base hydraulic fluids



TIRES

Cat Flexport™ Tires

Cat Flexport Tires

For Skid Steer Loaders and Wheel Loaders



COMFORTABLE. STABLE. DURABLE.

Created with operator comfort in mind, Flexport Tires use a series of elliptical-shaped ports molded through the outer ring of the sidewalls. The ports increase tire flexibility to produce a smoother, more cushioned ride on any surface—from waste and scrap to quarry and glass. The ports won't crush under the weight of a full bucket, and the innovative design also improves machine stability when lifting and carrying.

Features & Benefits

- Patented sidewall ports make the ride more comfortable for operators.
- Elliptical ports won't collapse under heavy loads, reducing stress points for longer wear life.
- Greater machine stability when carrying maximum loads.
- Deep tread delivers long wear life and excellent traction—on any surface.
- Tread pattern handles tough terrain, and allows easy, smooth transitions from unimproved to improved surfaces.
- Highest quality rubber compound manufactured to Caterpillar specifications means durability for longer wear life and a consistent product.
- Puncture-proof design puts an end to fixing flats.
- One-piece tire-and-rim design reduces tire-servicing costs.
- In compliance with CAT ROPS

The Cat Flexport Tires are designed specifically for your wheel loaders and skid steer loaders. Available in three different tread patterns— construction, smooth-tread and OTR (off the road).

Construction Tread



Flexport Tires' construction tread design is the right choice for maximum performance in your toughest environments. It is designed for smaller machine applications where better traction is required.

Smooth - Tread



Cat Flexport Tires Smooth-Tread design is ideal for special applications where debris is an issue like scrap yards, recycling centers and some waste transfer stations.

Off the Road (OTR)



The OTR design has a block pattern that provides a degree of traction in applications where debris is not an issue.

Applications	Flexport Construction	Flexport Smooth Tread	Flexport OTR
Building & Farming	•		•
Demolition	•		
Hammering	•		
Industrial & Waste	•	•	
Landscaping	•		•
Loading	•		•
Pavement Profiling	•		
Quarry Cleanup	•		
Recycling	•	•	
Scrap Yard	•	•	
Transfer Station	•	•	

Cat Flexport™ Tires

Cat Flexport Tires for Skid Steer Loaders



Cat Flexport tires for Skid Steer Loaders are a 1-piece tire / rim design and are available in directional construction, smooth and OTR tread patterns.

For most applications, the machine width can be customized by altering the placement of the rim on the machine.

Cat Flexport tires are available on both new machines and from your Cat Dealer as service parts.

Flexport Assemblies for Skid Steer Loaders

Flexport Tire Part Number	Machine Application	Available for First Fit	Available for Aftermarket	Tread Design	Flexport Size	Pneumatic Size Equivalent	Flexport Weight (kg)
329-6989 ⁽¹⁾	126B, 216B2, 216B3, 226B, 226B2, 226B3, 232B, 232B2,	Y	Y	Construction	31 x 6 x 10	10 x 16.5	112
329-6990 ⁽¹⁾	232D, 236D, 242B, 242B2, 242B3, 242D	Y	Y	Construction	31 x 6 x 10	10 x 16.5	112
329-6989 ⁽¹⁾	126B, 216B2, 216B3, 226B, 226B2, 226B3, 232B, 232B2,	Y	Y	Construction	31 x 6 x 10	10 x 16.5	112
329-6990 ⁽¹⁾	232D, 236D, 242B, 242B2, 242B3, 242D	Y	Y	Construction	31 x 6 x 10	10 x 16.5	112
345-7585	126B, 216B2, 216B3, 226B, 226B2, 226B3, 232B, 232B2, 242B, 242B2, 242B3	-	Y	Smooth	31 x 6 x 10	10 x 16.5	125
329-6783 ⁽¹⁾	236B, 236B2, 236B3, 246B, 246C, 246CQ, 246D, 248B, 252B, 252B3,	Y	Y	Construction	33 x 6 x 11	12 x 16.5	132
329-6784 ⁽¹⁾	256C, 262B, 262C, 262C2, 262D, 268B, 272C (72" WIDTH)	Y	Y	Construction	33 x 6 x 11	12 x 16.5	132
329-6783 ⁽¹⁾	272D (72" WIDTH), 272D XHP, 277C, 279C, 287C, 289C, 297C, 299C	Y	Y	Construction	33 x 6 x 11	12 x 16.5	132
329-6784 ⁽¹⁾		Y	Y	Construction	33 x 6 x 11	12 x 16.5	132
329-6785	236B, 236B2, 236B3, 246B, 246C, 246CQ, 248B, 252B, 252B3, 256C, 262B, 262C, 262C2, 268B, 272C, 272D, XHP	-	Y	Smooth	33 x 6 x 11	12 x 16.5	149
324-33427	236B, 236B2, 236B3, 246B, 246C, 246CQ, 248B, 252B, 252B3, 256C, 262B, 262C, 262C2, 268B, 272C, 272D, XHP	-	Y	OTR	33 x 6 x 11	12 x 16.5	140

Flexport Rims for Skid Steer Loaders

Flexport Part Number	Rim Bolt Pattern (No. of Holes / Hole Dia. / Bolt Circle - mm)	Rim Pilot Hole Diameter - mm	Tire / Rim Assembly Offset	Tire / Rim Assembly to Machine Torque
329-6989	8, 17, 203.2	152.5	31.7	163 +/- 7 Nm
329-6990				
345-7585				
329-6783			44.5	
329-6784				
329-6785				
324-3427				

Cat Flexport Tires for Compact Wheel Loaders



Cat Flexport tires for Compact Wheel Loaders are a 1-piece tire / rim design and are available in directional construction, smooth and OTR tread patterns.

Cat Flexport tires are available on both new machines and from your Cat Dealer as service parts.

Flexport Assemblies for Compact Wheel Loaders

Flexport Part Number	Machine Application	Available for First	Available for Aftermarket	Tread Design	Flexport Size	Pneumatic Size Equivalent	Flexport Weight (kg)
329-7298	904B	–	Y	Smooth	33 x 6 x 11	12 x 16.5	154
465-9047 ⁽¹⁾	904h	–	Y	Construction	33 x 6 x 11	12 x 16.5	125
465-9048 ⁽¹⁾		–	Y	Construction	33 x 6 x 11	12 x 16.5	125
327-8482	904H	–	Y	OTR	33 x 6 x 11	12 x 16.5	150
315-7843	904H, 904H2, 906K, 906M, 907H, 907H2, 907K, 907M	Y	Y	OTR	38 x 7 x 13.5	12.5 x 80/18	241
316-0016	908H	–	Y	OTR	40 x 7 x 13.5	12.5 x 20	255
353-7103	914G	–	Y	OTR	53.5 x 9 x 16.5	17.5 x 25	573
447-1131	914K	Y	Y	OTR	53.5 x 9 x 16.5	17.5 x 25	590

Flexport Rims for Compact Wheel Loaders

Flexport Part Number	Rim Bolt Pattern (No. of Holes / Hole Dia. / Bolt Circle -mm)	Rim Pilot Diameter - mm	Tire / Rim Assembly Offset	Tire / Rim Assembly to Machine Torque
329-7298	6 / 22 / 203.2	152.4	55	520 +/- 70 Nm
465-9048	6 / 21.5 / 205	161.8	16	300 Nm
465-9047				
327-8482				
315-7843	8 / 21 / 275	221	47.5	360 +/- 25
316-0016	8 / 21 / 275	221	10	360 +/- 25
353-7103	8 / 26 / 200	147	53	300 +/- 40 Nm + additional turn of 60 +/- 5 deg
447-1131	10 / 26 / 335	281	10	550 +/- 60 Nm

Cat Flexport™ Tires

Cat Flexport Tires for Small Wheel Loaders



Cat Flexport tires for Small Wheel Loaders are a 1-piece tire / rim design and are available in smooth and OTR tread patterns. Fitment of a Cat Flexport tire on a Small Wheel Loader requires the use of an adaptor plate and hardware as shown. Cat Flexport tires are available on both new machines and from your Cat Dealer as service parts.

Flexport Assemblies for Small Wheel Loaders

Flexport Part Number	Machine Application	Available for First Fit	Available for Aftermarket	Tread Design	Flexport Size	Pneumatic Size Equivalent	Flexport Weight (kg)
324-3436	924K, 926M, 930H, 930K, 930M, 938K, 938M	Y	Y	OTR	60.5 x 10.5 x 21	20.5 x 25	842
324-3437	924K, 926M, 930H, 930K, 930M, 938K, 938M	Y	Y	Smooth	60.5 x 10.5 x 21	20.5 x 25	889

Flexport Part Number	Machine Application	Cat Adaptor Disc	Blank Adaptor Disc	Adaptor Mounting Instructions	Adaptor Hardware			Adaptor Torque	Adaptor Order Bolt Pattern (No. of Holes / Hole Dis. / Bolt Circle - mm)	Adapter Disc Weight (kg)	
					Bolt (x 20)	Washer (x 40)	Nut (x 20)				
324-3436	924K, 926M, 930H, 930K, 930M	336-8289	364-1287	ASSEMBLE TO DEEP SIDE OF THE RIM	451-4523	451-5656	451-4526	900 +/- 100 Nm	20 / 26 / 6732	62	
324-3437										58	
324-3436	938G	336-8291								45	
324-3437										938K, 938M	369-4675
324-3437											

NOTE

In certain machine configurations, Cat Flexport tires may cause the machine to exceed ROPS capacity. To be certain that the machine does not exceed ROPS, the machine should be weighed to verify that the ROPS limits will not be exceeded with Flexport Tires. The ROPS capacity can be found on the cab of the machine.

Cat Flexport Tires for Medium Wheel Loaders



Cat Flexport tires for Medium Wheel Loaders are a 1-piece tire / rim design and are available in smooth and OTR tread patterns.

Fitment of a Cat Flexport tire on a Medium Wheel Loader requires the use of an adapter plate and hardware as shown.

Cat Flexport tires are available on both new machines and from your Cat Dealer as service parts.

Flexport Part Number	Machine Application	Available for First Fit	Available for Aftermarket	Tread Design	Flexport Size	Pneumatic Size Equivalent	Flexport Weight (kg)
332-5712	950H, 950K, 950M	Y	Y	OTR	65 x 13 x 25	23.5 x 25	1144
	962H, 962K, 962M	Y	Y				
324-3421	950H, 950K, 950M	Y	Y	Smooth	65 x 13 x 25	23.5 x 25	1235
	962H, 962K, 962M	Y	Y				
316-0529	966H, 966K, 966KXE, 966M, 966MXE, 972H, 972K, 972M, 972MXE	Y	Y	OTR	70 x 14 x 28	26.5 x 25	1533
322-9596	966H, 966K, 966KXE, 966M, 966MXE, 972H, 972K, 972M, 972MXE	Y	Y	Smooth	70 x 14 x 28	26.5 x 25	1608
324-3432	980H/K	–	Y	OTR	74.5 x 14 x 31.5	29.5 x 25	2034
324-3433	980H/K	–	Y	Smooth	74.5 x 14 x 31.5	29.5 x 25	2170

Flexport Part Number	Machine Application	Rim Part Number	Tire Rim & Adapter			
			Bolt Pattern (No. of Holes / Hole Dia. / Bolt Circle - mm)	Pilot Hole Diameter (mm)	to Axle Torque	Offset
332-5712	950H/K, 962H/K	323-1707	20 / 26 / 310	262	570 +/- 80 additional 60 +/- 5 degrees	21.5
324-3431						
316-0529	966H/K, 972H/K	316-0527	20 / 26 / 375	327	570 +/- 80 additional 60 +/- 5 degrees	0
322-9596						
324-3432	980H/K	323-1708	26 / 26 / 485	430	1000 +/- 25 Nm	306
324-3433						

Flexport Part Number	Machine Application	Cat Adapter Disc	Blank Adapter Disc	Adapter Mounting Instructions	Adapter Hardware			Adapter Torque	Adapter Outer Bolt Pattern (No of Holes / Hole Disc / Bolt Circle -mm)	Adapter Disc Weight (kg)
					Bolt (x 20)	Washer (x 40)	Nut (x 20)			
332-5712	950H, 950K, 950M, 962H, 962K, 962M	364-1289	336-8295	ASSEMBLE TO DEEP SIDE OF THE RIM	7X-2577	267-3507	268-8262	900 +/- 100 Nm	20 / 26 / 673.1	58
324-3431									20 / 26 / 625	44
316-0529	966H, 966K, 966KXE, 966M, 966MXE, 972H, 972K, 972M, 972MXE	364-1290	316-0526	ASSEMBLE TO DEEP SIDE OF THE RIM	7X-2577	267-3507	268-8262	900 +/- 100 Nm	20 / 26 / 625	44
322-9596									20 / 26 / 625	44

NOTE



In certain machine configurations, Cat Flexport tires may cause the machine to exceed ROPS capacity. To be certain that the machine does not exceed ROPS, the machine should be weighed to verify that the ROPS limits will not be exceeded with Flexport Tires. The ROPS capacity can be found on the cab of the machine...









Cat Flexport™ Tires

Head-to-Head Comparison Results



Flexport elliptical design for superior to round design

	<p><i>Other tire companies manufacture tires with round holes.</i></p> <ul style="list-style-type: none">• The round design easily collapses into a flat shape under a load, which creates corners that cause "pinch" or "stress" points.• Stress point damage will typically result in cracking and chunking of a tire.
	<p><i>Caterpillar designed Flexport Tires with elliptical-shaped ports.</i></p> <ul style="list-style-type: none">• Flexport's elliptical ports are designed not to crush when compressed by heavy weight.• Because the ports don't crush, this reduces stress points—and increases wear life.

Load	0%	25%	50%	100%
Industry Round Vent				
Flexport Elliptical Vent				

Premium Conventional Tires



Cat Premium Conventional tires are engineered to deliver the trademark Cat durability—which says a lot. Skid steer sizes are equipped with the industry’s deepest tread depth, thickest side wall (on a premium conventional model), and heaviest rim guard. Cat tires outperform the competition.

Advantages

- Self-cleaning, open tread design for reduced maintenance time
- Extra large, tapered lugs for traction in slippery conditions and maximum wear life
- Dual side wall construction for puncture and tear protection
- An advanced blend of natural and synthetic rubber and a reinforced bead area for maximum wear life
- Heavy rim guard reduces potential for damage to tire bead and wheel flange

Applications: Highly Recommended

- Dry Soil
- Snow

Applications: Recommended

- Rock & Shale
- Quarries
- Rocky Soil
- Wet Soil
- Sandy Soil

Part Number	Tire Width	Wheel Diameter	Ply Rating	Inflated Dimensions			Load Specifications @ 5 mph			Maximum Load	Tread Depth
				Rim Width	Section Width	Outside Diameter	Maximum Inflation	Suggested Inflation	Suggested Inflation		
Skid Steer Loaders											
185-9932	254 mm (10 in)	419 mm (16.5)	8	209 mm (8.2 in)	271 mm (10.7 in)	784 mm (30.9 in)	413kPa (60 psi)	310 kPa (45 psi)	1,800 kg (4,145 lb)	24 kg (52 lb)	19 mm (24/32)
185-9933	304 mm (12 in)	419 mm (16.5 in)	10	247 mm (9.7 in)	312 mm (12.3 in)	838 mm (33 in)	448 kPa (65 psi)	310 kPa (45 psi)	2,542 kg (5,604 lb)	35 kg (77 lb)	21 mm (26/32 in)
238-7740	177 mm (7 in)	381 mm (15 in)	6	139 mm (5.5 in)	203 mm (8 in)	759 mm (29.9 in)	413 kPa (60 psi)	–	15 kg (34 lb)	15 kg (34 lb)	14 mm (18/32 in)
Backhoe Loaders											
357-1994	317 mm (12.5 in)	457 mm (18 in)	10	228 mm (9 in)	304 mm (12 in)	985 mm (38.8 in)	317 kPa (46 psi)	275 kPa (40 psi)	38 kg (85 lb)	38 kg (85 lb)	25 mm (1 in)
357-1995	467 mm (18 in)	660 mm (26 in)	12	406 mm (16 in)	477 mm (18.8 in)	1,417 mm (55.8 in)	220 kPa (32 psi)	193 kPa (28 psi)	98 kg (217 lb)	98 kg (217 lb)	28 mm (34/32 in)
357-1996	429 mm (16.9 in)	711 mm (28 in)	12	381 mm (15 in)	442 mm (17.4 in)	1,386 mm (54.6 in)	262 kPa (33 psi)	227 kPa (33 psi)	85 kg (187 lb)	85 kg (187 lb)	27 mm (35/32 in)
Telehandlers											
208-8512	394 mm (15.5 in)	635 mm (25 in)	–	304 mm (12 in)	425 mm (16.7 in)	1,316 mm (51.8 in)	399 kPa (58 psi)	372 kPa (54 psi)	88 kg (195 lb)	88 kg (195 lb)	28 mm (34/32 in)
281-6590	330 mm (13 in)	609 mm (24 in)	12	203 mm (8 in)	360 mm (14.2 in)	1,392 mm (54.8 in)	448 kPa (65 psi)	339 kPa (58 psi)	2,721 kg (6,000 lb)	73 kg (161 lb)	23 mm (29/32 in)
281-6591	355 mm (14 in)	609 mm (24 in)	12	254 mm (10 in)	390 mm (15.4 in)	1,392 mm (54.8 in)	427 kPa (65 psi)	372 kPa (54 psi)	3,084 kg (6,800 lb)	92 kg (203 lb)	25 mm (1 in)

Cat Pneumatic Tires

XD Tires

The XD design is tough through and through. From the deep tread and ultra heavy side walls to the extra large rim guard, the XD equips your skid steer to maneuver effectively in the most extreme applications. In fact, the features that make the XD so tough also make it 26 percent heavier. Concrete and demolition, quarries, and asphalt recycling jobs are just some of the rigorous environments where the XD is the clear choice.



Advantages

- 14 ply rating enhances tear and puncture resistance
- 40 percent deeper tread depth than Premium Conventional model ensures long tire life on rough terrain
- Less void between the tread lugs reduces wear by spreading it across a larger surface area
- Superior carcass strength allows the tire to bear up to 1,300 lbs more than competitive models

Applications: Highly Recommended

- Asphalt
- Bricks
- Sand Stone
- Rock & Shale
- Quarries
- Rocky Soil

Applications Recommended

- Concrete
- Scrap Yard
- Gravel
- Dry Soil
- Wet Soil

Part Number	Tire Width	Wheel Diameter	Ply Rating	Inflated Dimension			Load Specifications @ 5 mph			Tire Weight	Tire Depth
				Rim Width	Section Width	Outside Diameter	Maximum Inflation	Suggested Inflation	Maximum Load		
222-3962	254 mm (10 in)	419 mm (16.5 in)	10	209 mm (8.25 in)	264 mm (10.4 in)	777 mm (30.6 in)	517 kPa (75 psi)	275 kPa (40 psi)	1,968 kg (4,340 lb)	37 kg (81 lb)	35 mm (44/32 in)
222-3963	305 mm (12 in)	419 mm (16.5 in)	14	247 mm (9.74 in)	312 mm (12.3 in)	830 mm (32.7 in)	621 kPa (90 psi)	345 kPa (50 psi)	2,540 kg (5,600 lb)	48 kb (105 lb)	35 m (44/32 in)

Premium Conventional Flotation Tires



For work in soft terrain, such as at a nursery, in sand, or some landscape sites, use Cat Premium Conventional Flotation tires. A new industry trend, the flotation design can replace the use of tracks in some applications. Cat Premium Conventional Flotation tires are constructed with the same rugged durability as Cat Premium Conventional tires, but are engineered specifically to create less ground pressure.

The flotation tire design incorporates the traditional lug pattern with a wider footprint to provide a lower ground pressure.

Tire assembly diameter is either 31 or 33 inches, depending on the machine model. The wheel bolt holes are an eight hole pattern on an eight inch bolt circle. This wheel design has an outset of 1.75 inches.

The flotation tires are designed to stay within the larger bucket widths of the Cat machines (66 inch bucket use for 216, 226, 28, 232, and 242 Models or 72 inch bucket use for 236, 246, 248, 252, 262, 268, and 272 Models). The 33-inch flotation tire is also compatible with the 904.

The Cat flotation tire is made like the premium conventional tire, except the tire width is 15.5 inches instead of 10 or 12 inches.

Advantages

- Self-cleaning, open tread design for reduced maintenance time
- Extra large, tapered lugs for traction in slippery conditions and maximum wear life
- Dual side wall construction for puncture and tear protection
- An advanced blend of natural and synthetic rubber and a reinforced bead area for maximum wear life
- Heavy rim guard reduces potential for damage to tie bead and wheel flange
- Wider footprint for better load distribution
- Stable ride in soft terrain without sinking
- Heavier, 12-ply rating for greater load carrying capacity

Applications: Highly Recommended

- Wet Soil
- Sandy Soil
- Mud

Applications: Recommended

- Rocky Soil
- Dry Soil
- Snow

Part Number	Tire Width	Wheel Diameter	Ply Rating	Inflated Dimensions			Load Specifications @ 5 mph			Tire Weight	Tread Depth
				Rim Width	Section Width	Outside Diameter	Maximum Inflation	Suggested Inflation	Maximum load		
199-5436	393 mm (15.5 in)	419 mm (16.5 in)	8	304 mm (12 in)	381 mm (15 in)	787 mm (31 in)	241 kPa (35 psi)	206 kPa (30 psi)	2,032 kg (4,480 lb)	28kg (62 lb)	19 mm (24/32 in)
199-5440	393 mm (15.5 in)	419 mm (16.5 in)	12	304 mm (12 in)	381 mm (15 in)	838 mm (33 in)	379 kPa (55 psi)	310 kPa (45 psi)	2,2944 kg (6,490 lb)	38 kg (85lb)	21 mm (26/32 in)



Undercarriage Parts

Product Information

LINK ASSEMBLIES

Functions

- Provide a rail for the machine to run on.
- Provide a means to attach track shoes.
- Transmits driving force from track bushing to track shoe.

Requirements

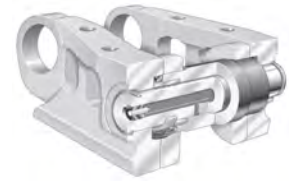
- Flexible joints between sections.
- Matched wear and structural life of components.
- Components replaceable and/or reusable.

Features

- Assembled from components designed and manufactured to fit and work together as a system.
- Pins, bushings and links resist loosening, cracking, and breaking until worn beyond wear limits.
- Designed for a second wear life if proper maintenance and rebuilding practices are followed.

Supporting Reference Material Available

- Sleeve Bearing Track Data Sheet (PEHJ0004)
- Grease Lubricated Track Data Sheet (PEHP9555)
- SystemOne™ Undercarriage Elevated Sprocket Machines (PEHJ0060)
- SystemOne Undercarriage Oval Track Machines (PEHJ0064)
- Positive Pin Retention Data Sheet (PEHP7025)
- Heavy Duty Track Data Sheet (PEHP5031)
- Rotating Bushing Track Data Sheet (PEHP5030)
- Sealed and Lubricated Track Data Sheet (PEDP0036)

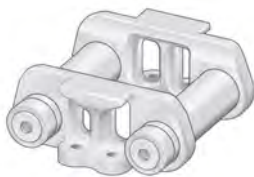


Sleeve Bearing Track



Grease Lubricated Track

Note: Sealed Track is not offered on elevated sprocket tractors.



SystemOne Track



Positive Pin Retention Track



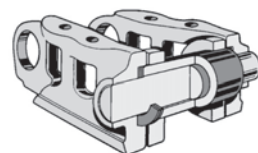
Heavy Duty Track



Rotating Bushing Track



Sealed and Lubricated Track



Sealed Track

TRACK LINKS

Functions

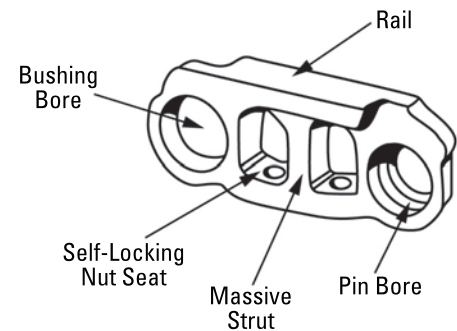
- Provide a continuous rail for rollers.
- Support weight of the machine.

Requirements

- Machined to close tolerances for pin, bushing and shoe retention.
- Long rail wear life.
- Resist cracking, spalling and fatigue failures.
- Rebuildable.

Features

- Forged of Deep Hardening Steel.
- High body hardness.
- Uniform rail hardness.
- High rail design.
- Massive strut design.
- Self-locking nut seats.
- Rebuildable.



Deep Hardening Steel

Deep Hardening Steel used in current links allows high body hardness, greater hardened depth and greater fatigue resistance than plain medium carbon steel.

High Body Hardness

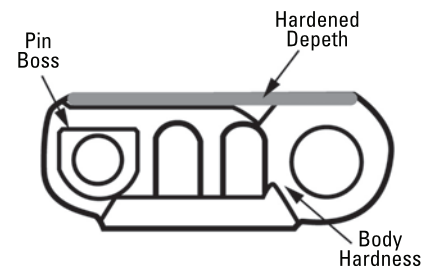
Links on current track-type tractors, loaders, and excavators have a high body hardness. This increases toughness, durability, fatigue resistance and improves pin and bushing retention.

Uniform Rail Hardness

Link rails are pattern induction heated, spray water quenched and furnace tempered for a deep, uniform hardened depth. This gives link rails a crown hardness pattern that resists side wear and roll-over. The hardened rail matches the track roller tread and flange hardness for optimum wear life.

High Rail Design

The high rail design link has more pin boss-to-roller flange clearance (working clearance) than former links. This means longer link and roller wear life potential.



Rebuildability

Cat track links are rebuildable; high body hardness results in good pin and bushing retention, even after repeated disassembly and reassembly.

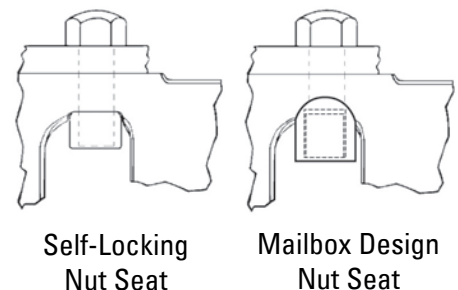
Massive Strut Design

Provides the best available resistance to cracking failures that result from flexing shoes, pins, and bushings.

Self-locking Nut Seats

Allow easy installation and removal of track shoes. Also, help keep hardware tight.

The nut and nut seat on "L", "N", "R", and "T" series tractors are rounded to reduce stress risers in the link.



Product Information

SPLIT MASTER LINK

Function

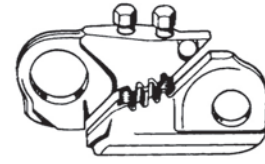
- Allows convenient removal and installation of track.
- Eliminates the need for a master pin and master bushing.

Requirements

- Wear life equal to regular link.
- Same strength as regular link.
- Serviceable and Reusable.

Features

- Bolt-together design for faster and easier assembly and disassembly.
- Allows use of regular pins and bushings.
- Factory assembled with lubricant.



Bolt-Together Design

Removing and installing track has always been time consuming. To improve this, Caterpillar designed a two-piece or split master track link, joined with bolts. Only a wrench is needed to separate the track in place of field press tooling.

Regular Pins and Bushings

Split master links require no master pins, master bushings, nor spacers. Instead they use standard pins and bushings. Thus, pins and bushings in split master links wear at the same rate as all others and can be turned along with others.

NOTE: Split master links often require a master shoe, with different bolt hole pattern than other shoes and four special track bolts.

MASTER LINK ASSEMBLING AND TORQUING PROCEDURE

- Refer to machine O&M manual for master bolt assembly and torque specifications

SystemOne™ LINK BOX

Serviced at the Link Box level

- Contains two common links and two cartridges

Track Links

- New rail design for increase wear life
- Stronger straight link design
- Stronger straight link design
- Forged of deep hardened steel that provides high body hardness, hardened depth and toughness
- Rail guided design for superior guiding
- Self-locking nuts

Cartridge

- Factory sealed and welded to control end play
- Improved seal integrity through an innovative new sealing system
- Uses standard Cat Synthetic SAE 75W-140 gear oil to lubricate the joint

SystemOne TRACK CLAMP MASTER

Master Links with Center Strut

- Reffer to machine O&M manual for master bolt assembly and torque specifications

Master Links without Center Strut

- Reffer to machine O&M manual ot D&A manual for master bolt assembly and torque specifications

TRACK PINS / TRACK BUSHINGS

TRACK PINS

Functions

- Help hold track section together.
- Act as hinge with bushing at adjoining section.
- Transfer loads between bushing and link.
- Provide reservoir for lubricant in Sealed and Lubricated Track.

Requirements

- Strength — to resist flexing and cracking, even when worn to limit.
- Wear Resistant.
- Finished to close dimensions — for accurate press fit with link and clearances with bushing I.D.

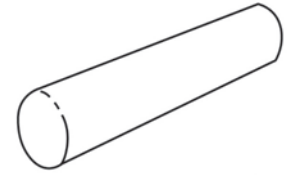
Features

- Machined from medium carbon steel.
- Heat treated.
 - Induction hardened.
 - Spray water quenched.
 - Tempered.
- Sealed and Lubricated Track pins ground to final dimensions.

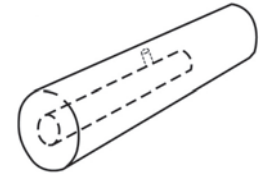
MEDIUM CARBON STEEL

Caterpillar manufactures track pins from a medium carbon steel which provides a tough pin with good surface hardness. This provides good spalling and cracking resistance in high impact conditions.

Sealed and Lubricated Track pins are center drilled to provide an oil reservoir and cross drilled to provide a passage for the oil to flow between the pin and bushing. After heat treatment the pin ends are ground to provide the close final dimensions required for accurate press fit and oil retention.



Sealed Track Pin



Sealed and Lubricated Track Pin

Product Information

TRACK PINS / TRACK BUSHINGS (Cont'd.)

TRACK BUSHINGS

Functions

- Help hold track section together.
- Act as hinge with pin of adjacent section.
- Provide sealing surface to keep abrasives out and lubricant in with Sealed and Lubricated Track.

Requirements

- Strength — to resist cracking, even when worn to service limits.
- Finished to close dimensions — for accurate press fit into link bushing bore clearance with pin O.D.
- Wear resistant — on I.D. equal to pin, on O.D. greater than sprocket.
- Smooth finish on end — to maximize sealing and minimize seal wear.

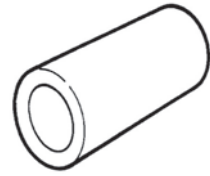
Features

- Formed by cold extrusion of low carbon steel. (Extruded bushings have smoother inner and outer surfaces with more uniform dimensions than machined bushings.)
- Carburized and heat treated for optimum hardness and toughness.

Difference between Sealed Track bushings and Sealed and Lubricated Track bushings

Sealed and Lubricated Track bushings are:

- Polished on the ends for a smooth sealing surface.
- Shorter than Sealed Track bushings to provide the space needed in the link counter bore for the thicker thrust ring and seal.



Straight Wall



Stepped

TRACK SEALS

Sealed Track Seals

Functions

- Retard abrasive entry between pin and bushing.
- Prevent bushing from wearing against link counterbore.
- Carry side loads.

Requirements

- Wear life equal to pin and bushing turn time.
- Have spring-like resiliency without brittleness.

Features

- Made from hardened and tempered spring steel. Seals are formed like cone shaped washers. Used in pairs, they fit into each link counterbore. One washer butts against the bushing end, the other against the link counterbore base. When track sections are pressed together, the washers flatten to form a seal. The spring effect of the flattened washers maintains sealing pressure as they wear. Seals are designed to wear against each other instead of against the link counterbore and bushing end. This system extends internal pin and bushing life by 20-30% compared to unsealed track. Sealed Track Seals are not reusable at turn time.



Uncompressed Seals



Compressed Seals

TRACK SEALS (Cont'd.)

GREASE LUBRICATED TRACK SEALS

Internal pin and bushing wear is usually the reason for track maintenance with Sealed Track. Caterpillar engineers have designed a track system that reduces internal pin and bushing wear on excavators. The sealing arrangement is what makes this reduction possible.

Functions

- Keep abrasives out of internal pin and bushing joint.
- Keep grease in joint.
- Absorb side or thrust loads.
- Reduction in noise compared to Sealed Track

Requirements

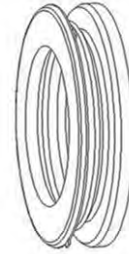
- Pin and Bushing internal wear life affected less by external environment.
- Not a lifetime lubricated track.

Features

- Seal Assembly – Consists of a “W” shape polyurethane seal. The seal contacts the smooth bushing end. The seal distributes an even load along the sealing surface to assure a 360° seal.
- Seals are designed to operate at a maximum temperature of 70° C (160° F). Exposure to high temperatures will reduce seal life.
- Shorter bushing compared to Sealed Track.

Benefits of Grease Lubricated Track

- Internal pin and bushing wear reduced as the primary maintenance consideration.
- The system keeps abrasives from entering the internal pin, bushing, and link counterbore area of the joint.
- Grease reduces normal friction and wear between the pin and bushing.
- Decrease of internal wear and resulting track pitch extension reduces snaky track; this reduces wear on other components, such as links, rollers, and guiding components.
- Most undercarriage components are reusable.
- Internal bushing life is extended about 20% compared to Sealed Track.



Product Information

SEALED AND LUBRICATED TRACK SEALS

Internal pin and bushing wear is usually the reason for track maintenance with Sealed Track. Caterpillar engineers designed a track system that would eliminate internal pin and bushing wear as a maintenance consideration. The sealing arrangement is what makes this possible.

Functions

- Keep abrasives out of internal pin and bushing joint.
- Keep lubricant in joint.
- Absorb side or thrust loads.

Requirements

- Pin and Bushing internal wear life not affected by external environment.

Features

- Seal Assembly — Consists of a plastic seal and resilient rubber load ring. The seal contacts the smooth bushing end. The rubber load ring distributes an even load along the sealing surface to assure a 360° seal. Seals are designed to operate at a maximum temperature of 70° C (160° F). Exposure to higher temperatures will reduce seal life.
- Greater end play capacity from .030 to .060.
- Thrust Ring — Made from hardened steel, it protects the seal assembly from side thrust loads. The ring has notches so the oil can flow past the ring into the sealing areas.
- Rigid Seal Design now available for all Elevated Sprocket machines, Low Sprocket machines, and Track Type Loader machines.



Rigid Seal

Benefits of Sealed and Lubricated Track

- Internal pin and bushing wear eliminated as the primary maintenance consideration.
- The system keeps abrasives from entering the internal pin, bushing, and link counterbore area of the joint.
- Lubricant eliminates normal friction and wear between the pin and bushing.
- Absence of internal wear and resulting track pitch extension reduces snaky track; this reduces wear on other components, such as links, rollers and guiding components.
- Most undercarriage components are reusable. •External bushing life is extended about 50% compared to Sealed Track.

Oil

- Caterpillar uses Synthetic SAE 75W–140 gear oil to lubricate the joint.

SPROCKETS

Functions

- Transfer driving loads from the final drive to the track through the bushings.

Requirements

- Wear life — equal to at least one side of the bushing.
- Strength — to resist cracking.

BOLT-ON SEGMENTS

Used on: All Track-Type Tractors and Track-Type Loaders, but not available for D4E or 941.

Features

- Formed from Deep Hardening Steel.
- Both segments and sprockets are manufactured to accurately mate with bushings.
- Tightly controlled manufacturing processes to ensure proper mounting segment hardware.

Benefits of Bolt-on Sprocket Segments

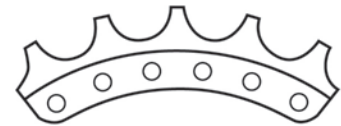
- Reduced maintenance and downtime.
- No need to remove track group to replace sprockets.
- Segments are easier to handle.
- No risk of misalignment.
- Reversible — switching segments to opposite sides of the machine can increase sprocket life.

Conversion to Bolt-on Sprocket Segments

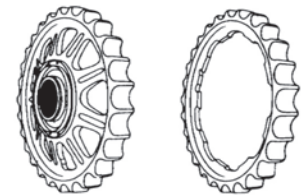
A one-piece weld-on adapter ring is available for converting some older models to bolt-on sprocket segments. Once a customer converts a machine to the bolt-on design, he will save both labor and downtime cost when the segments need replacing.

Torquing Procedure

- Refer to machine O&M manual or D&A manual for sprocket bolt assembly and torque specifications.



Bolt-on Segments



Cast Assembly and Weld-on Rim

CAST ASSEMBLY, WELD-ON, AND BOLT-ON RIM

Used on: Earlier Tractors, Earlier Loaders, and 200 Series Excavators. Current 300 Series Excavators have bolt-on one piece sprockets.

Features

- Cast from Deep Hardening Steel.

Deep Hardening Steel

Cat sprockets are formed from Deep Hardening Steel which allows about twice the hardened depth as plain medium carbon steel.

Product Information

TRACK SHOES

Functions

- Support the machine's weight on the ground
- Provide traction.

Requirements

- Strength — to resist bending and breaking.
- Wear resistant grouser and plate.
- Retention — to resist loosening during link wear life.

Features

- Furnace or induction hardened, die quenched and tempered.
- Curved leading and trailing edge.
- Rebuildable

Curved leading and trailing edges provide stiffness to reduce shoe bending and hardware loosening. Overlapped edges keep debris from lodging between shoes as the track bends around the sprocket and idler.

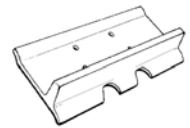
Track Shoe Selection

The wide variety of working conditions makes choosing the right shoe very important. **A good rule is: choose the narrowest shoe that provides adequate flotation.** Shoes that are too wide will loosen, bend and crack more easily. They require more power to turn, and affect maneuverability. Shoes of the correct width give maximum performance and the lowest possible cost to the entire system.

Caterpillar offers the following track shoes:

SINGLE GROUSER MODERATE SERVICE SHOES (MS)

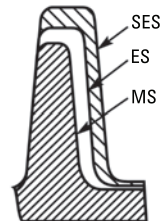
The Moderate Service shoe is the best shoe for low to medium impact and abrasive conditions. It gives the best penetration and traction, resists wear and bending and is available in various widths and modifications. Rolled from modified medium carbon steel.



Single Grouser Shoe

SINGLE GROUSER EXTREME SERVICE SHOES (ES)

Extreme Service shoes should be used wherever the Moderate Service shoe bends or breaks, or where links out last shoes. Extreme Service shoes are both stronger to resist bending and breaking and have more allowable wear material than the Moderate Service shoe. Greater Strength – Extreme Service shoes are rolled from tough alloy steel. They are also more massive. They are heat treated to provide a higher tensile strength to resist bending and breaking in high impact conditions. More Wear Material – Extreme Service shoes have up to **approximately 50% more allowable** wear material than the respective Moderate Service shoe. More Rebuildable – Because of the thicker section on the Extreme Service shoe, it can be successfully regrousered more times than the Moderate Service shoe (when used in similar conditions and worn to comparable limits).



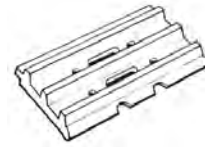
SINGLE GROUSER SUPER EXTREME SERVICE SHOES (SES)

Super Extreme Service shoes provide approximately 25% more life than the Extreme Service in high wear applications.

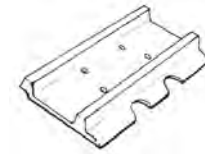
TRACK SHOES

MULTI-GROUSER SHOE (Triple and Double Grouser)

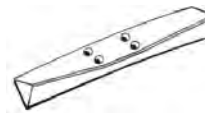
Multi-Grouser shoes have less penetration and traction than Single Grouser shoes, but better turning ability. These shoes are standard on track-type loaders and excavators because less turning resistance and greater maneuverability are needed. By spreading tractor weight over the larger contact area of several low profile grousers, the turning resistance is reduced and maneuverability improved.



Triple Grouser



Double Grouser



Low Ground Pressure Shoe

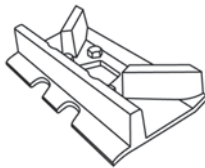
SPECIAL SHOES

Self-Cleaning, Low Ground Pressure Shoe

This shoe is designed for use in loose, muddy conditions. As these shoes move around the sprocket and idler, they separate from one another, causing debris to fallout. These cast steel shoes come in widths that make them suitable for LGP machines only and should not be used in high abrasive or high impact conditions.

Chopper

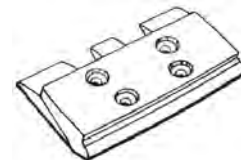
This shoe is designed for use in demolition and landfill applications where compaction is required. Designed with a full length front grouser, two angled side grousers and a center opening for material extrusion, these shoes provide long wear life and structural life in the most demanding underfoot conditions.



Chopper Shoe

Steel Mill Flat

Designed for use in hot slag and other heavy abrasive materials where low penetration and high wear and bending resistance is required. Large, countersunk bolt holes are designed to protect the bolt heads.



Steel Mill Flat

TRACK SHOE SUPPORTS FOR HYDRAULIC EXCAVATORS

Forestry applications for Hydraulic Excavators generally involve high impact and severe underfoot conditions for the undercarriage components. For this reason, full length track shoe supports mounted to the track roller frame are recommended for forestry applications. These shoe supports are intended to limit the torsional loads experienced by the link assembly when the machine encounters uneven underfoot conditions.

As the machine rides over objects such as rocks or stumps, the track shoe deflects and the track chain begins to twist. With track shoe supports, the shoes contact the support and prevent further twisting of the chain. These supports limit the loads going into the link assembly and significantly reduce the occurrence of link cracking and track pin walking.

Product Information

TRACK HARDWARE

TRACK BOLTS

Function

- Hold the shoe on the link.

Requirements

- Wear resistant head.
- Tensile and shear strength.

Features

- Induction hardened heads.
- Rolled threads.
- Tensile strength exceeds Grade 8 specifications.
- Reusable

Induction Hardened Heads

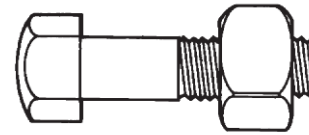
Track bolt heads are induction hardened to protect them from deforming in high impact, highly abrasive conditions to extend their wear life.

Rolled Threads

Rolled threads resist stripping better than cut threads. By rolling, the natural flow lines of the steel follow the thread contours. Cutting threads cut the flow lines, making the threads weaker.

Strength

Cat track bolts exceed Grade 8 strength requirements with a minimum tensile strength of 160,000 PSI.



Rolled Threads

TRACK NUTS

Function:

- Used with the track bolt to hold the shoe to the link.

Requirements

- Strength
- Retention on bolt.

Features

- Furnace hardened and tempered.
- Self-locking.

Furnace hardened

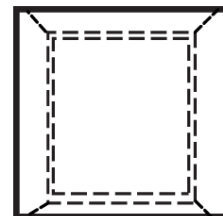
Track nuts are thru-hardened and tempered to match or exceed bolt strength. Track nut core hardness is Rc30 minimum.

Self-locking

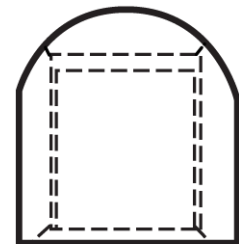
Track nuts are designed to fit into the nut seats in the link strap area. Broached grooves hold the nut so bolts can be removed from the shoe.

TRACK SHOE TIGHTENING PROCEDURE

- Refer to machine O&M manual or D&A manual for track bolt assembly and torque specifications.



Square Nut Design



Mailbox Nut Design

TRACK ROLLERS

Functions

- Support the machine on the track.
- Guide the machine along the track.

Requirements

- Strength — to resist structural failure before tread wear life is utilized.
- Shell tread wear life equal to links
- Shell tread and flanges rebuildable.
- Most internal components reusable.
- No maintenance during original tread wear life.

Features

- Shells forged from deep hardening steel and are designed to resist bellmouthing.
- Shafts and bearings are designed to reduce friction and wear and to provide maximum strength.
- Lifetime Lubricated for minimum maintenance.

Bronzed Sleeve Bearing

- Sleeve design provides a large surface area for better load distribution.
- Inner diameter surface is polished to a smooth finish.
- Soft bronze coating in the bearing absorbs any small foreign particles before they can damage the shaft and seals.

Duo-Cone™ Seal

- Seals oil in and abrasives out.
- The Duo-Cone Seal consists of two metal seal rings and two rubber toric rings. The toric rings provide the proper pressure to both sides of the metal seal rings.
- Resists permanent deformation and temperature changes from -40F (-40C) to 225F (107C). **Extreme Temperature Seals** respond over a wider temperature range from -60F (-50C) to 325F (163C) constant and 450F (233C) peak.
- Duo-Cone Seals are designed to last through several roller shell tread lives, depending on individual conditions. For reusability guidelines, refer to SEBF8511 (Guidelines for Reusable Parts).

Oil

- Cat Lifetime Lubricated Track Rollers use a 30 weight oil, which cools and lubricates better than grease.
- Cat track-type tractors and loaders use both single and double flange rollers. Typically excavators use all single flange rollers. Single flange rollers are used adjacent to the sprocket so they can be placed closer to the sprocket. Double flanged rollers are used to maximize the guiding effect wherever space permits.

Product Information

TRACK ROLLERS (Cont'd.)

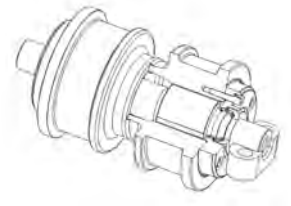
SystemOne TRACK ROLLERS

- Serviced at Roller Group level
 - Single flange roller shell
 - Forged from deep hardened steel and through hardened heat treated for internal strength to resist bellmouthing and uniform hardened depth that provides wear life equal to link wear life
 - Through hardened flanges to resist wear and prevent cracking or breakage
 - Tall flange rollers for superior guiding
 - Track Roller Shaft
 - Forged and heat treated for strength
 - Bearing surfaces are hardened and polished to reduce friction and wear
 - End Caps
 - Retain the roller shaft to the track roller frame and provides serviceability
 - Not part of the roller group and serviced separately
- The unique characteristics of the four roller designs are as follows:

For D11R, D11N, D10, D10T, D10R, D10N, D9T, D9R, D9N, D9L, D8T, D8R, D8N, D8L

Track Roller Shell

- Forged from Deep Hardening Steel and heat treated for internal strength to resist bellmouthing and to increase rebuildability.
- 2-piece roller shell rim
- Heat treated for a deep, uniform hardened depth that provides wear life equal to link wear life.
- Thru-hardened flanges to resist bending and improve rebuildability.
- Steel-backed bronze bearings are press fit inside the shell.



Track Roller Shaft

- Forged and heat treated for strength.
- Bearing surfaces are hardened and polished to reduce friction and wear.
- Larger diameter for greater load bearing capacity.

Retainer

- Bolts to the ends of the track roller shells.
- Transmits side loads to the roller shaft and houses the Duo-Cone Seals.

End Caps

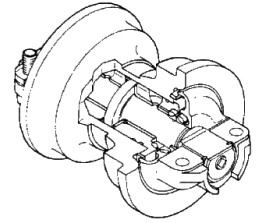
- End caps retain the roller shaft to bogies, and provide serviceability.
- **End caps are serviced separately.**

TRACK ROLLERS (Cont'd.)

For D7R, D7H, D6R, D6H, D6N, D6M, D5H, D5N, D5M, D4H 973,963,953,943

Track Roller Shell

- Forged from Deep Hardening Steel and heat treated for internal strength to resist bell-mouthing and to increase rebuildability.
- 2-piece roller shell rim
- Heat treated for a deep, uniform hardened depth that provides wear life equal to link wear life.
- Thru-hardened flanges to resist bending and improve rebuildability.



Track Roller Shaft

- Forged and heat treated for strength.
- Bearing surfaces are hardened and polished to reduce friction and wear.
- Center flange absorbs side thrust from roller shell.

Cast Iron Bushing

- Supports the bronze sleeve bearing.
- Cast from iron to absorb loads without permanent deformation.
- Large lubricant reservoir to reduce heat build-up.

End Collar

- Attaches the track roller to the track roller frame.
- Houses and protects the outer Duo-Cone Seal.

Snap Ring Design

- Retain cast iron bushing.
- Eliminates need to use bolts to retain cast iron bushing.

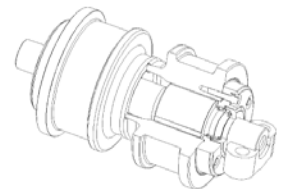
TRACK ROLLERS

For D11R, D11N, D10, D10T, D10R, D10N, D9T, D9R, D9N, D9L, D8T, D8R, D8N, D8L

The unique characteristics of the four roller designs are as follows:

Track Roller Shell

- Forged from Deep Hardening Steel and heat treated for internal strength to resist bell-mouthing and to increase rebuildability.
- 2-piece roller shell rim
- Heat treated for a deep, uniform hardened depth that provides wear life equal to link wear life.
- Thru-hardened flanges to resist bending and improve rebuildability.
- Steel-backed bronze bearings are press fit inside the shell.



Track Roller Shaft

- Forged and heat treated for strength.
- Bearing surfaces are hardened and polished to reduce friction and wear.
- Larger diameter for greater load bearing capacity.

Retainer

- Bolts to the ends of the track roller shells.
- Transmits side loads to the roller shaft and houses the Duo-Cone Seals.

Product Information

TRACK ROLLERS (Cont'd.)

For D11R, D11N, D10, D10T, D10R, D10N, D9T, D9R, D9N, D9L, D8T, D8R, D8N, D8L (Cont'd.)

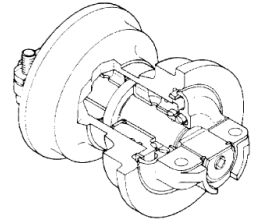
End Caps

- End caps retain the roller shaft to bogies, and provide serviceability.
- **End caps are serviced separately.**

For D7R, D7H, D6R, D6H, D6N, D6M, D5H, D5N, D5M, D4H 973,963,953,943

Track Roller Shell

- Forged from Deep Hardening Steel and heat treated for internal strength to resist bell-mouthing and to increase rebuildability.
- 2-piece roller shell rim
- Heat treated for a deep, uniform hardened depth that provides wear life equal to link wear life.
- Thru-hardened flanges to resist bending and improve rebuildability.



Track Roller Shaft

- Forged and heat treated for strength.
- Bearing surfaces are hardened and polished to reduce friction and wear.
- Center flange absorbs side thrust from roller shell.

Cast Iron Bushing

- Supports the bronze sleeve bearing.
- Cast from iron to absorb loads without permanent deformation.
- Large lubricant reservoir to reduce heat build-up.

End Collar

- Attaches the track roller to the track roller frame.
- Houses and protects the outer Duo-Cone Seal.

Snap Ring Design

- Retain cast iron bushing.
- Eliminates need to use bolts to retain cast iron bushing.

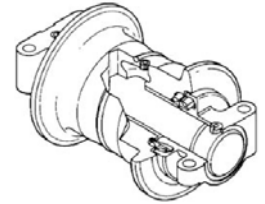
For Excavators

Track Roller Shell

- 2-piece roller shell rim.
- Forged from deep hardening steel and heat treated for internal strength to resist bellmouthing.
- Heat treated for a deep, uniform hardened depth that provides good wear life
- A large oil reservoir is provided for in the shell and is filled through a threaded hole located between the wear surfaces.
- Steel-backed bronze bearing is press fit inside the shell.

Track Roller Shaft

- Forged and heat treated for strength.
- Bearing surfaces are hardened and polished to reduce friction and wear.
- Large diameter for a greater load bearing capacity.
- Straight, solid shaft, with a hole in each end to provide positive attachment of the end collar.
- Reduces end play growth.



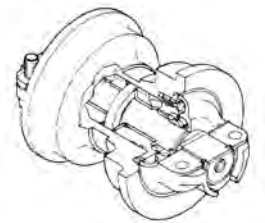
End Collar

- Completely encircles the shaft to give added strength. Connected to the shaft by pins. Mounting surface area is larger for improved bolt retention.

For Low Sprocket D9H, D8K, D7G, D6D, D5G, D5C, D5B, D4E, D4B, D4G, D3G, D4C, D3C, D3 and 983, 977, 955, 951, 941, 939, 935, 933, 931

Track Roller Shell

- Forged from Deep Hardening Steel and heat treated for internal strength to resist bellmouthing and to increase rebuildability.
- 2-piece roller shell rim.
- Heat treated for a deep, uniform hardened depth that provides wear life equal to link wear life.
- Thru-hardened flanges to resist bending and improve rebuildability.



Track Roller Shaft

- Forged and heat treated for strength.
- Bearing surfaces are hardened and polished to reduce friction and wear.
- Center flange absorbs side thrust from roller shell.

Cast Iron Bushing

- Supports the bronze sleeve bearing.
- Cast from iron to absorb loads without permanent deformation.
- Large lubricant reservoir to reduce heat build-up.

End Collar

- Attaches the track roller to the track roller frame.
- Houses and protects the outer Duo-Cone Seal.

Product Information

Track Roller Sequence

Use the following charts to determine the original position of track rollers, identified by their flange type. The letter "D" represents a Double flange roller and the letter "S" represents a Single flange roller.

ELEVATED SPROCKET MACHINES

Model	Rollers Per Side	Roller Position									
D11R/N ⁽¹⁾ , D10T/R/N ⁽¹⁾ , D10 ⁽¹⁾	8	S	S	D	D	D	D	S	S		
D9T/R/N ⁽¹⁾ , D9L	8	S	S	D	D	D	D	S	S		
D8T/R/N ⁽¹⁾ , D8L ⁽¹⁾	8	S	S	D	D	D	D	S	S		
D7R/H STD & LGP	7	S	D	S	D	S	D	S			
D7R/H XR	8	S	D	S	D	D	S	D	S		
D6T/R/H STD	6	S	D	S	D	S	S				
D6H XL & XR	7	S	D	S	D	S	D	S			
D6T/R/H XW & XL	7	S	D	S	D	S	D	S			
D6T/R/H LGP	8	S	D	S	D	D	S	D	S		
D6N/M XL, D5H TSK & XL	7	S	D	S	D	S	D	S			
D5H STD	6	S	D	S	S	D	S				
D6N/M LGP, D5H LGP	8	S	D	S	D	D	S	D	S		
D5M, D4H STD, D5N/M XL, D4H XL	7	S	D	S	D	S	D	S			
D5M LGP, D4H LGP & TSK	7	S	D	S	D	S	D	S			
D5N/M LGP, D4H LGP	8	S	D	S	D	D	S	D	S		
527 517 Skidders	7	S	D	S	D	S	D	S			
527 517 Skidders	8	S	D	S	D	D	S	D	S		
572R, 561M, 561H	7	S	D	S	D	S	D	S			
578	8	S	S	D	D	D	D	S	S		
583R	9	D	D	D	D	D	D	D	D	D	
589	10	S	S	D	D	D	D	D	D	S	S

SystemOne Track Roller Sequence:

For elevated sprocket machines all rollers are single flange. Rollers per side are the same as in the table above.

LOW SPROCKET TRACTORS AND LOADERS

Model	Rollers Per Side	Roller Position						
		F	2	3	4	5	6	7
D9G & H	7	D	D	S	D	S	D	S
D9D, E & G	7	D	D	S	D	S	D	S
D8H & K	7	D	D	S	S	D	D	S
D8H	6	D	S	D	S	D	S	
D8NC (8.00" Pitch)	7	D	D	S	D	S	D	S
D7E, F & G	6	D	S	D	S	D	S	
D7 LGP	7	D	D	S	D	S	D	S
D7NC (8.00" Pitch)	5	S	D	S	D	S		
D6C & D	6	D	S	D	S	D	S	
D6B & D6NC	6	S	D	D	D	D	S	
D6 LGP	7	D	D	S	D	S	D	S
D6K	7	S	S	S	S	S	S	S
D5C	6	S	D	S	S	D	S	
D5 & D5B	6	S	D	D	S	D	S	
D5 LGP	7	S	D	D	S	D	D	S

Track Roller Sequence (Cont'd.)

LOW SPROCKET TRACTORS AND LOADERS (Cont'd.)

Model	Rollers			Roller Position				
	Per Side	F	2	3	4	5	6	7
D4G XL LGP, D5C XL LGP, D5G XLLGP	7	S	D	S	D	S	D	S
D4B, D4B LGP, D4C, D4C LGP	6	S	D	S	S	D	S	
D4D & E, LGP	5	D	D	S	D	S		
D4NC	4	S	D	D	S			
D3, D3 LGP, D3B, D3C	5	S	D	S	D	S		
D3B LGP, D3C LGP, D3G XL LGP	6	S	D	S	S	D	S	
D3 Special LGP	7	D	D	S	S	D	S	S
D2	4	S	D	D	S			
983	7	D	D	S	D	S	D	S
973	7	S	D	D	S	D	D	S
977E, H & K	7	D	D	S	D	S	D	S
977D & No. 6	7	S	D	D	D	D	D	S
955K, L & LGP, 963	6	S	D	D	S	D	S	
955H	6	S	D	D	D	D	S	
955F, E & C	5	D	D	S	D	S		
953, 943	6	S	D	S	S	D	S	
951A	5	D	S	D	S	D		
951B	5	S	D	S	D	S		
951 LGP	5	S	D	S	D	S		
941 incl. LGP, 933E & F	5	D	D	S	D	S		
933C, 933 ⁽¹⁾ , 939	6	S	D	S	S	D	S	
931 incl. LGP, 935	5	S	D	S	D	S		

SystemOne Track Roller Sequence:

For low sprocket tractors and loaders all rollers are single flange. Rollers per side are the same as in the table above.

Product Information

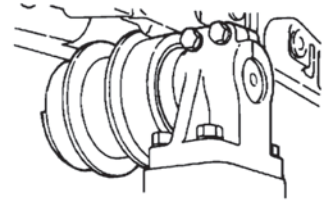
CARRIER ROLLERS

Functions

- Support the track as it moves between the sprocket and idler.
- Guide the track between the sprocket and idler.

Requirements

- Strength — to resist failure before tread wear life is utilized.
- Tread wear life matched to track links.
- Treads and flanges rebuildable on forged shells
- Most internal components reusable.
- No maintenance required during tread wear life.



Carrier Roller Group

CARRIER ROLLER SHELL

Carrier rollers have shells forged from Deep Hardening Steel for strength, wear life and rebuildability. Cat carrier rollers used Duo-Cone Seals for maintenance free operation.

Features

- Heat treated shells for body strength and long wear life.
- Shaft and bearings designed to carry and turn with heavy track weight.
- Lifetime Lubricated for minimum maintenance.

Note

D8T and larger track-type tractors use a single flange track roller group as the carrier roller.

IDLERS

IDLER ASSEMBLY

Functions

- Guide the track in and out of the track rollers.
- Intermittently support the machine's weight.
- Provide a way to control track slack and tension.

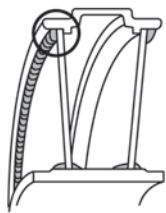
Requirements

- Strength to resist failure before tread wear life is utilized.
- Tread wear life equal to or greater than link wear life to service limits.
- Treads and center flanges rebuildable.
- No lubricant maintenance during original tread wear life.

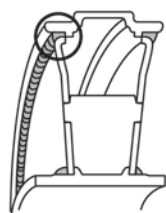
Features

- Tread hardness similar to links, track rollers and carrier rollers for impact strength and balanced wear life.
- Lifetime Lubricated for minimum maintenance.
- Rebuildable tread.

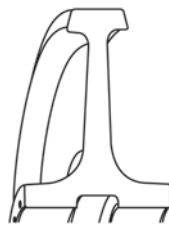
Fabricated Idlers



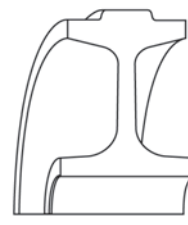
Straight Side Plate



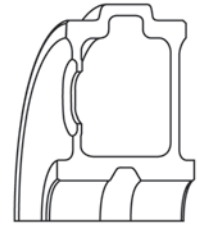
Curved Side Plate



Center Tread Idler (CTI)



Typical Cast/Forged Idler



Cast Idler

TRACK ROLLER GUARDS

Functions

- Protect the track, rollers and sprockets from rocks and debris.
- Provide some additional tracking guiding assistance.

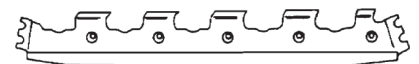
Cat track roller guards help prevent large rocks and other high strength debris from jamming and being crushed between the track rollers, track and sprockets. This crushing could accelerate wear and damage components. Caterpillar offers two types of roller guards — full and partial. Both bolt to the roller frame.

The full length track roller guards cover the entire roller area. With full length guards, track guiding guards cannot be used. Full length track roller guards have bolt-on wear strips. See CTS Handbook for usage information.

Partial length track roller guards are designed to be used with end guiding guards. They protect the roller area while allowing the use of end guiding guards. See CTS Handbook for usage information.



Full Length Guard



Partial Length Guard

Product Information

TRACK ROLLER GUARDS (Cont'd.) TRACK GUIDING GUARDS

Caterpillar offers three types of track guiding guards — end guiding guards, center guiding guards, and full length guiding guards.

Function

- Help align and guide the track in and out of the idler and the sprocket and through the rollers.

End Guiding Guard

- Located at the front and rear of the track roller frame.
- Helps guide the track as it enters and leaves the sprocket and idler.
- Prevents link gouging by the sprocket during turning and sidehill operations.

Segmented (Center) Guiding Guard

- Located in the middle of the track roller frame.
- Maintains track alignment.
- Reduces link scuffing with other undercarriage components.
- Allows packing material to fall free.

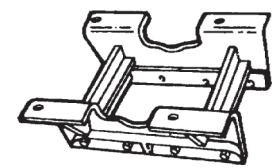
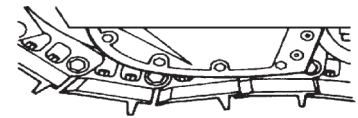
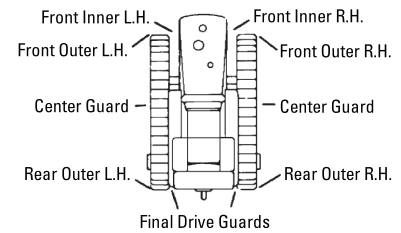
Full Length Guiding Guard

- Covers entire roller area.
- Maintains track alignment.

Cast Guards (Center and Full Length)

- Strength.
- Better pin coverage.

Cat track guiding guards have heat treated bolt-on wear strips. They can easily be replaced to restore the worn surface without changing the entire guard assembly.



DETERMINING COMPETITIVE UNDERCARRIAGE CONVERSIONS

To identify which Cat components can be used, and if modifications are required, to convert any track type machine to Cat undercarriage components, refer to the following guidelines:

- Refer to guidelines on the following pages to determine what dimensions should be collected on the competitive machine to make a complete or partial conversion to Cat undercarriage.
- Use Conversion Report Form/Work Sheet PEEP0210, to collect dimensional data.
- Refer to IRM UC96-12, titled "Cat Undercarriage Components Dimension Guide". This guide provides information to compare the dimensions of the competitive undercarriage with Cat undercarriage components for conversion purposes.

Conversion Report Form/Work Sheet

Competitive Model _____ Dealer _____
 Serial Number/Year _____ Branch _____
 Conversion Date _____ Salesman _____

Component	Competitive Dimensions	Worn	New*
Link Assembly 	Pitch (A)	_____	_____
	Bushing Outside Diameter (B)	_____	_____
	Rail Spread	_____	_____
	Inside (C)	_____	_____
	Outside (D)	_____	_____
	Link Height (E)	_____	_____
	Length of Pin (F)	_____	_____
	Rail to Pin Boss (G)	_____	_____
	Rail to Bushing (H)	_____	_____
	Bolt Size (I)	_____	_____
Link Part Number	_____	_____	_____
Track Shoe 	Bolt Hole Spacing (A)	_____	_____
	(B)	_____	_____
	(C)	_____	_____
	Bolt Size	_____	_____
Track Shoe Part Number	_____	_____	_____
Sprocket 	Tip Diameter (A)	_____	_____
	Root Diameter (B)	_____	_____
	Inner Diameter (C)	_____	_____
	Sprocket Part Number	_____	_____
	Modifications	_____	_____
Track Roller 	Tread Outside Diameter (A)	_____	_____
	Flange Outside Diameter (B)	_____	_____
	Roller	_____	_____
	Inside (C)	_____	_____
	Outside (D)	_____	_____
	Roller Width (E)	_____	_____
	Width Between Bolt Centers (F)	_____	_____
	Bolt Size (G)	_____	_____
	Bolt Hole Spacing (H)	_____	_____
	Roller Frame to Tread Surface (I)	_____	_____
Single Flange Part Number	_____	Qty. _____	
Double Flange Part Number	_____	Qty. _____	
Modifications	_____	_____	

*Actual or Estimated from Worn Dimension

Component	Competitive Dimensions	Worn	New*
Carrier Roller 	Tread Outside Diameter (A)	_____	_____
	Flange Outside Diameter (B)	_____	_____
	Roller	_____	_____
	Inside (C)	_____	_____
	Outside (D)	_____	_____
	Shaft Outside Diameter (E)	_____	_____
	Shaft Length (F)	_____	_____
	Reference Dimension (G)	_____	_____
	Carrier Roller Part Number	_____	_____
	Modifications	_____	_____
Idler Group 	Tread Outside Diameter (A)	_____	_____
	Flange Outside Diameter (B)	_____	_____
	Idler	_____	_____
	Inside (C)	_____	_____
	Outside (D)	_____	_____
	Shaft Outside Diameter (E)	_____	_____
	Shaft Length (F)	_____	_____
	Idler Assembly Part Number	_____	_____
	Modifications/Other Parts	_____	_____
	Comments/Problems	_____	_____

*Actual or Estimated from Worn Dimensions

CATERPILLAR®

Conversion Guide

LINK ASSEMBLY

Primary Dimensions

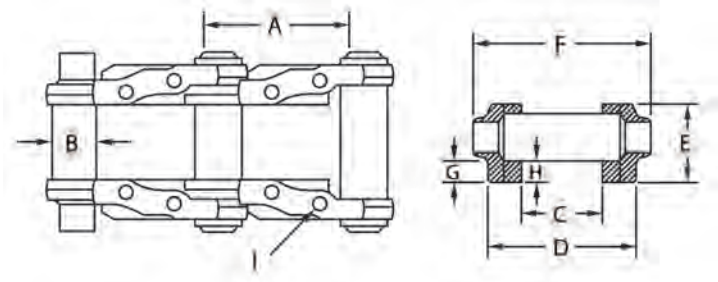
Pitch	— A
Bushing O.D.	— B
Rail Spread	
Inside	— C
Outside	— D

Secondary Dimensions

Link Height	— E
Pin Length	— F
Rail to Pin Boss	— G
Rail to Bushing	— H
Bolt Size	— I

Other Considerations

Number of Sections



PRIMARY DIMENSIONS

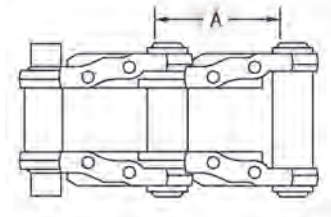
The primary dimensions are the critical dimensions to determine if a Cat link assembly can be used with the OEM sprocket and/or OEM rolling components. Compare measurements to Cat link assembly dimensions, refer to IRM UC96-12. If measurements are within the ranges shown then the Cat link assembly may be used with the OEM sprocket and/or rollers. If measurements and Cat link dimensions are different, or conversion to Cat sprockets and/or rollers is desired, sprocket and/or roller measurements must also be taken.

Pitch — A

Purpose: Determines OEM sprocket compatibility with Cat track.

Range: $\pm .03"$ (.76 mm)

Method: Track pitch (A) is the distance between pin centers in adjacent track sections. Track pitch can be determined by measuring the distance from one side of the pin to the same side of the pin in the adjacent section. When measuring to determine OEM pitch on worn link assemblies, you will need to adjust for an increase in track pitch due to internal wear.



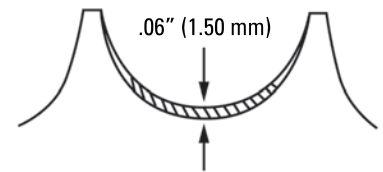
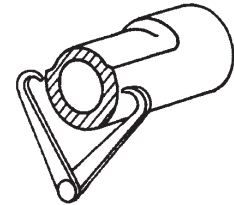
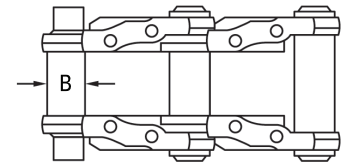
LINK ASSEMBLY (Cont'd.)

Bushing Outer Diameter (O.D.) — B

Purpose: Determines OEM sprocket compatibility with Cat track.

Range: - .12" (3.04 mm) without modifications
± .12" (3.04 mm) with modifications

Method: The bushing outer diameter measurement should be taken across the unworn horizontal centerline of the bushing. In cases where the competitive track bushing is of smaller diameter than the Cat track bushing, and where the competitive sprocket must be used, the new competitive sprocket root should be ground out to properly accommodate the larger diameter bushing. This grinding should be done with the sprocket held in a fixture to achieve uniform profile and pitch. Failure to grind out the difference in radius can result in mismatch and accelerated bushing wear. Normal break-in cannot be expected to relieve the difference without some detrimental wear.



Rail Spread

Inside — C

Outside — D

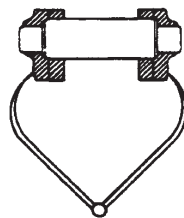
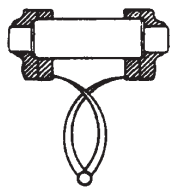
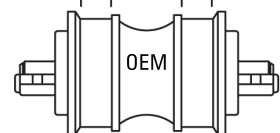
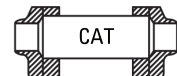
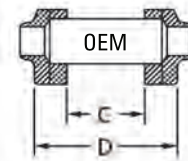
Purpose: Determines OEM rolling component compatibility with Cat track.

Range: Inner — .0" to + .19" (4.83 mm)

Outer — -.19" (4.83 mm) to + .0"

Method: The inside and outside rail spreads can be measured as shown at below.

Note: As link assemblies wear, there will be a slight change of rail spread. It does not significantly affect measured dimensions.

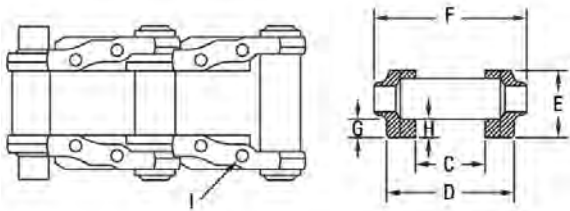


Conversion Guide

LINK ASSEMBLY (Cont'd.)

SECONDARY DIMENSIONS

The secondary dimensions are less critical. Although they rarely prevent a conversion, modifications may be necessary in order to protect a complete Cat undercarriage system.



Link Height — E

Purpose: Determines if machine height will be raised or lowered and affects number of sections required.

Pin Length — F

Purpose: Determines if pin will clear guards or other machine parts.

Rail to Pin Boss — G

Purpose: Determines material available for wear.

Rail to Bushing — H

Purpose: Determines if link will clear idler, roller flanges, and provide maximum wear material without sacrificing guidability, number of sections required.

Bolt Size — I

Purpose: Bolt sizes need to be equivalent to ensure use of competitive shoe and proper fastener strength.

OTHER CONSIDERATIONS

Number of Sections

The number of Cat track sections required should be determined from the number used on the competitive machine at the time of conversion.

Assuming the sprockets and rolling components maintain relatively constant placement and sizes, the following procedure is usually accurate enough to determine the number of Cat sections required.

$$\text{No. Sections of Cat} = \frac{\text{OEM Pitch (New)} \times \text{No. Sections Currently}}{\text{Cat Pitch}}$$

Example: Calculations for converting a competitive 7.50" pitch 36-section machine to Cat 8.00" pitch track are as follows:

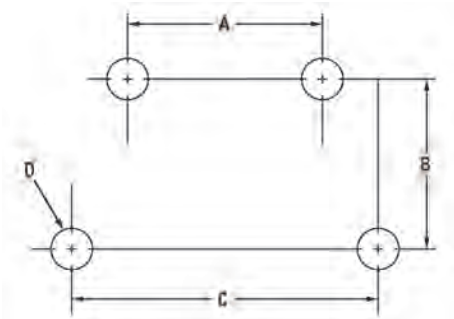
7.50" x 36 = 270 total inches of chain required on this machine. 270" / 8.00" or 33.75 or 34 sections of Cat 8.00" pitch track required for conversion.

If link height and/or rail to pin boss clearance increases a large amount, the preceding formula may lead to a link assembly that is too short.

TRACK SHOE

Primary Dimensions

Bolt Hole Spacing	— A
	— B
	— C
Bolt Size	— D



Bolt Hole Spacing — A, B, C

Purpose: Determines interchangeability of track shoes.

Range: .0"

Method: There are two methods of measuring shoe bolt spacing:

1. Measure a track shoe, by measuring from one side of a bolt hole to the same point of the hole adjacent
2. Measure an assembled track group, by measuring from the center of the bolt head to the center of the adjacent bolt

Bolt Size — D

Purpose: Determines reuse of track shoes and/or track hardware.

Range: .0"

Other Considerations

The shoe leading and trailing edges must maintain proper clearance, especially if link pitch changes, to allow proper assembly and operation.

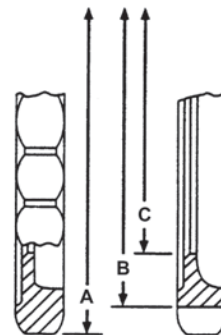
SPROCKET

Primary Dimensions

Tip Diameter	— A
Root Diameter	— B
Inner Diameter	— C

Other Considerations

- Offset
- Segment Hardware



PRIMARY DIMENSIONS

Use these dimensions to determine if a Cat sprocket can be used on the competitive machine.

Conversion Guide

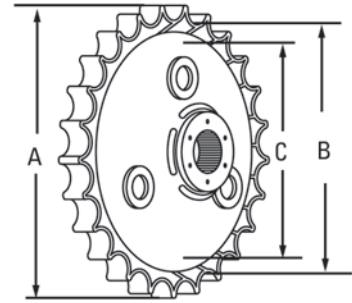
SPROCKET (Cont'd.)

Tip Diameter — A

Purpose: Determines if machine interference will result from using Cat sprocket.

Range: Not Specified

Method: Measure the overall diameter of the sprocket. It may be helpful to mark the center of the hub or axle. Then, using a 12" ruler extended from the tooth tip measure to the hub center with a tape measure. The most accurate sprocket measurements can be obtained after the track has been removed from the machine. Either too large or too small tip diameter can result in track or sprocket interference with other machine components.



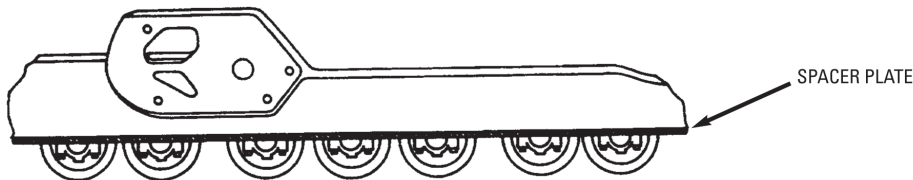
Root Diameter — B

Purpose: Determines if sprocket will carry machine weight.

Range: Not Specified

Method: Measure the diameter of the (estimated) unworn sprocket roots. The track bushings must increase elevation such that at the six o'clock sprocket position the bushing is above the level that it left the last roller.

It may be necessary to use spacer plates on the competitive track roller frame to increase ground clearance when using a larger diameter Cat sprocket. This should lift the track roller frame at the bottom entry position. Spacers may be fabricated from 1030 or 1020 steel. Full length spacer plates are recommended and bolts should be checked for tightness at regular intervals.



Inner Diameter — C

Purpose: Determines if there is adequate space and geometry for welding.

Range: Not Specified

Method: Measure the area that will facilitate welding. Use same procedure described above.

OTHER CONSIDERATIONS

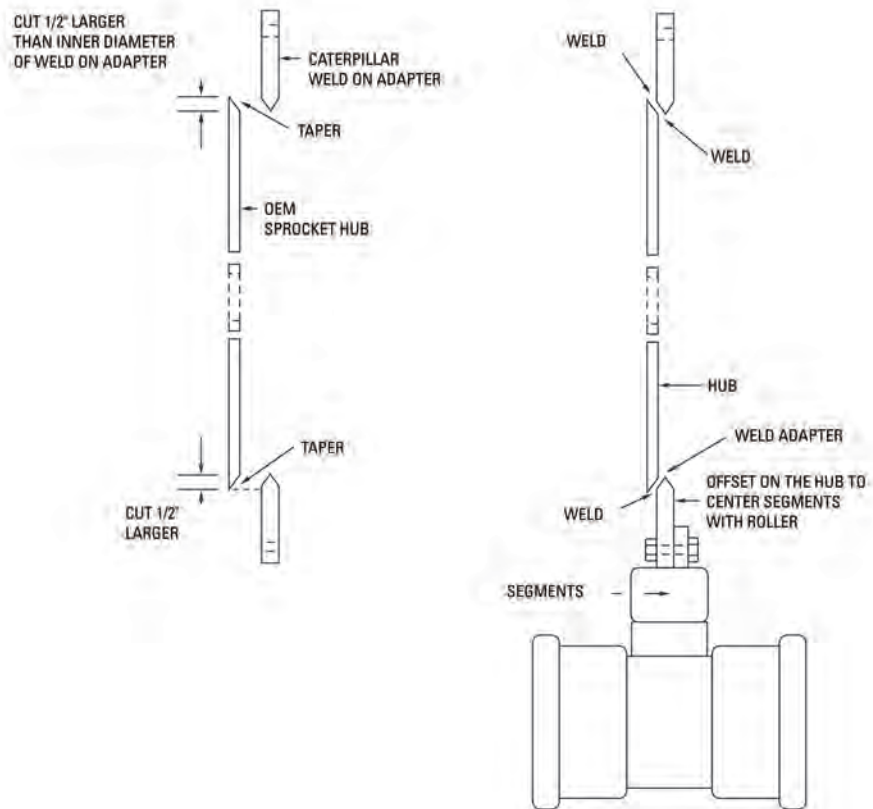
Offset

The Cat rim or adapter ring and segments may have a different offset than the OEM design. Failure to compensate for the offset will result in sprocket-link interference.

Whether you use an adapter ring or a weld-on rim, the inner diameter must allow proper mounting and orientation on the competitive sprocket "hub."

When welding, the sprocket teeth must be in line with the track roller center line and the rim or segments must be clear of all other parts.

OTHER CONSIDERATIONS (Cont'd.)



Segment Hardware

Any additional clearances needed for segment hardware must be considered, especially if the sprocket runs close to final drive housings, guards, etc.

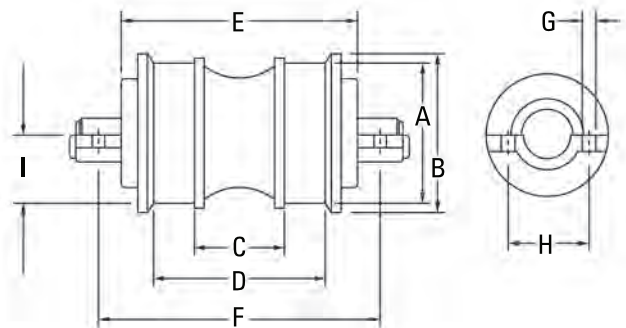
TRACK ROLLERS

Primary Dimensions

Tread Diameter	— A
Tread	
Inside	— C
Outside	— D
Mounting Width	— E
Roller Frame to Tread Surface	— I
Width Between Bolt Centers	— F
Bolt Hole Spacing	— H

Other Considerations

Flange Diameter	— B
Bolt Size	— G
Roller Spacing	



Conversion Guide

TRACK ROLLERS (Cont'd.)

PRIMARY DIMENSIONS

Use these dimensions to determine if Cat link assemblies will fit on the competitive track rollers.

Tread

Inside — C

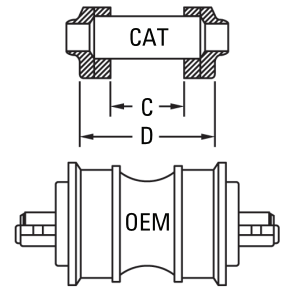
Outside — D

Purpose: Determines Cat link assembly compatibility with OEM track rollers.

Range: Outside — .0" to + .19" (4.83 mm)

Inside — .19" (4.83 mm) to + .0"

Method: Measure from inside flange to inside flange and outside flange to outside flange. Measurements from worn rollers will result in slightly inaccurate dimensions. If clearances appear to be close compensation for wear may be needed. Note: Be sure to compare these measurements to the link assembly intended for use in the conversion.



Use these dimensions to determine if Cat track rollers can be used on the competitive machine.

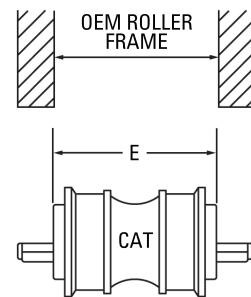
Mounting Width — E

Purpose: Determines if Cat rollers will fit in OEM frame.

Range: - .10" (2.54 mm) to + .0" (.0 mm)

Method: Measure the OEM track roller frame and compare to Dimension E on the Cat roller.

Note: Failure to maintain a clearance between the roller frame and roller end collar vertical faces may cause roller damage.

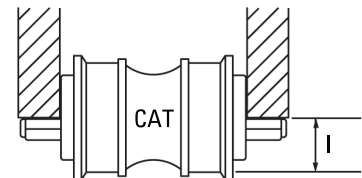


Roller Frame to Tread Surface — I

Purpose: Determines if Cat roller lowers or raises machine.

Range: Depends on roller wear limits, idler and sprocket placement.

Method: Differences in tread diameter or end collar design can result in slightly raising or lowering overall height of machine. This can cause track interference with frame, guards or cause sprocket to carry some machine weight. Frame to tread surface (Dimension I) should be measured and any potential interference compensated for as necessary on a case by case basis. If required, roller frame spacers can be used.



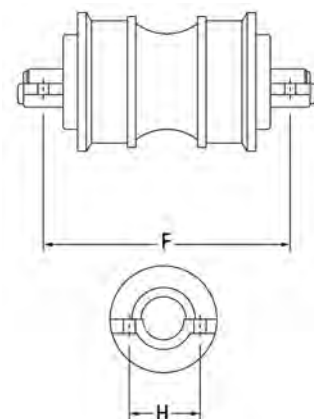
Width of Bolt Centers — F

Bolt Spacing — H

Purpose: To determine use of existing bolt pattern.

Range: ± .01" (.254 mm)

Method: Measure from the center to center point of bolts in track roller frame. For comparison, use Cat track roller dimensions as reference. If patterns are not within range, plugging, drilling, and tapping of the competitive roller frame may be needed.



OTHER CONSIDERATIONS

Flange Outer Diameter

TRACK ROLLERS (Cont'd.)

Two points to check are (1) roller flange to link pin boss clearance, and (2) roller flange and track frame interference.

Bolt Size

If bolt size and tread type are similar, reuse of competitive hardware maybe possible.

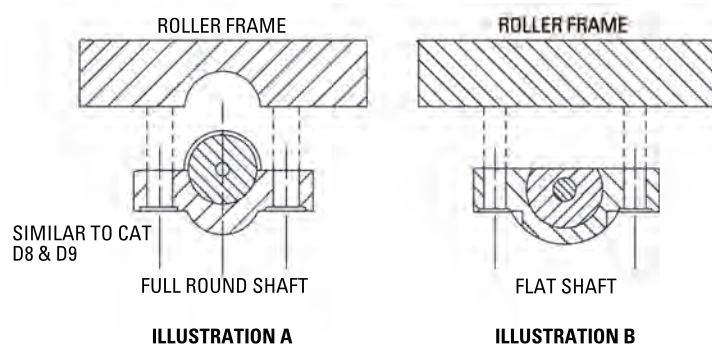
Roller Spacing

If the Cat roller selected has different tread, flange diameters and/or roller frame to tread surface dimensions, be sure to compensate for these to prevent idler/sprocket interference, especially on the front and rear roller.

Shaft and End Collar Design

(flat shaft mounting vs. round shaft mounting)

For example, Cat D8 and D9 size track rollers utilize a full round shaft mounting which requires a saddle type cutout in the roller frame (Illustration B). D8 size roller conversion can use 983 rollers which do mount flat as in Illustration A. However, D9 roller conversion will require a roller frame saddle arrangement.



Conversion Guide

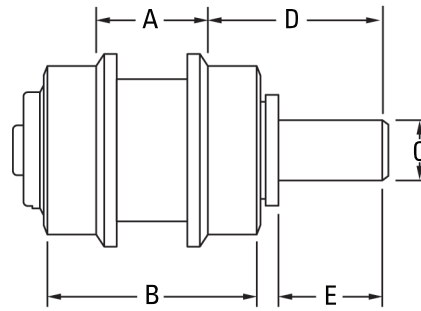
CARRIER ROLLERS

Primary Dimensions

Tread Inside	— A
Tread Outside	— B
Shaft Outer Diameter	— C
Reference Dimension	— D

Other Considerations

Shaft Mounting Length	— E
Dowel	
Spacing	
Size	



PRIMARY DIMENSIONS

Use these dimensions to determine if Cat link assemblies can be used on the competitive carrier roller.

Tread

Inside	— A
Outside	— B

Purpose: Determines link assembly compatibility with carrier rollers.

Range: Inside — .19" (4.83 mm) to +.0"

Outside — .0" to +.19" (4.83 mm)

Method: Measure from inside flange to inside flange and outside flange to outside flange. Measurements from worn rollers will result in slightly inaccurate dimensions. If clearances appear to be close compensation for wear may be needed. Note: Be sure to compare these measurements to the link assembly intended for use in the conversion.

Use these dimensions to determine if Cat carrier rollers can be used on the competitive machine.

Shaft Outer Diameter — C

Purpose: Determines compatibility of Cat roller shaft with competitive carrier roller holder.

Range: As small as competitive roller holder will hold. As large as competitive roller shafts.

Method: Measure competitive shaft with calipers, compare to Cat roller; if Cat roller is smaller, a sleeve may be fabricated to compensate for small diameter.

Reference Dimensions — D

Purpose: Determines compatibility of Cat carrier roller with competitive carrier roller holder and link assembly.

Range: $\pm .10$ " (2.54 mm) depends on tread inside and competitive holders.

Method: Measure from radius to holder to determine reference dimension. The reference dimensions assure proper carrier roller alignment with the link assembly.

OTHER CONSIDERATIONS

Shaft Mounting Length — E

The Cat carrier roller shaft may have a longer or shorter shaft mounting length, providing it does not interfere with the holder or other components.

Dowel Spacing and Size

The dowel spacing and size may need to be moved or resized; many times this is accomplished by drilling new holes in the competitive holder.

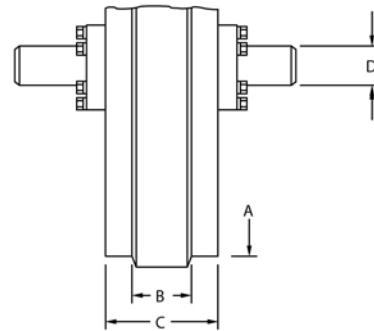
IDLER

Primary Dimensions

Tread Diameter	— A
Tread Inside	— B
Tread Outside	— C
Mounting Shaft Diameter	— D

Other Considerations

Slide Plate Profile



PRIMARY DIMENSIONS

Use these dimensions to determine if Cat link assemblies can be used on the competitive idlers.

Tread Diameter — A

Purpose: Determines link assembly compatibility with idler.

Range: Slightly smaller than OEM up to OEM diameter.

Method: Measure the diameter; compensate for wear as much as possible.

Tread

Inside — B

Outside — C

Purpose: Determines link assembly compatibility with idler.

Range: Inside — .19" (4.83 mm) to +.0"

Outside — .0" to +.19" (4.83 mm)

Method: Measure from inside flange to inside flange and outside flange to outside flange. Measurements from worn rollers will result in slightly inaccurate dimensions. If clearances appear to be close compensation for wear may be needed. Note: Be sure to compare these measurements to the link assembly intended for use in the conversion.

Use these dimensions to determine if Cat carrier rollers can be used on the competitive machine.

Mounting Shaft — D

Purpose: Determines use of OEM mounting block.

Range: Same shaft O.D., same mounting arrangement.

Method: Compare Cat shaft O.D., length and mounting type with competitive idler. Modification to OEM mounting block may permit use of Cat idler.

Conversion Guide

OTHER CONSIDERATIONS

Side Plate Profile

Some manufacturers use guards that run close to idler side plates; modification may be needed to avoid interference.

For additional conversion information go to this Knowledge Network site:

<https://kn.cat.com/cat.cfm?ID=11053>



LITERATURE REFERENCE

Literature Reference

Catalog References

Didn't find what you were looking for? Contact your local Cat Dealer and request one of the catalogs listed below. The One Safe Source contains only the most commonly used maintenance and repair parts. The catalogs below are comprehensive guides related to a single parts product.

Interested in learning more? Need a part for your engine, drive train, hydraulic system, or undercarriage?

Contact your Cat Dealer. We have the full lineup of parts for Cat machines and engines. We also have the experts to make sure you get the right parts and service solutions when and where you need them.

Catalog Title	Description	Media Number
Cat Batteries Cross Reference Guide	This cross reference guide shows Cat battery part numbers for Cat machines, cars, trucks and many other applications which require an automotive type battery. The 2017 addition will include Starters and Alternators as well.	PEGP7801
Cat Classic Parts Product Book	Cat Classic Parts provide owners of older Cat products with competitively-priced repair alternatives that minimize the risk associated with non-genuine parts. This reference guide provides part numbers and marketing information for the complete Cat Classic Parts product line to help customers choose the optimal parts options for the machines and engines.	PECJ0051
GET PSK	The Ground Engaging Tools Parts Sales kit is the most complete source of GET information available for daily use among PSSRs. This is a reference book for Dealers to use when advising their customers.	PECP3001
Hydraulic Cylinder and Seal Reference Guide	This catalog contains part numbers and dimensional information as well as features and benefits of Cat Hydraulic Cylinders, Reman Cylinders and Rods, Seals and Seal Kits. It's primary purpose is to help Cat Dealers service Cat Cylinders. It can also assist in the selection of Cat cylinder seals for use on other brands of equipment. This is a reference book for Dealers to use when advising their customers.	PEKP1020
Filter & Fluid Application Guide	Catalog of filter and fluid part numbers and information to help customers decide which Cat Fluids and Filters are the best choice for their machine and application.	PEWJ0074
Cat Hand Tools and Shop Supplies	The Hand Tools and Shop Supplies catalog contains hand tools and shop supplies for effectively running your service shop and for your personal use needs. Dealers can download or order (in print) the full Cat Hand Tools and Shop Supplies catalog at: https://cmic.cat.com/ Customers can download it at: https://parts.cat.com Under "Shop by Category" > Hand Tools > (in the Reference Tab at the bottom)	PECJ0003
Cat Tire Product Guide	This revised cross reference guide is an important tool to help sell Skid Steer, Wheel Loader and Backhoe Loader Tires for both Caterpillar and competitive models. The guide contains tire reference information, tire specifications and wheel specifications. It is an easy to use guide that will ensure you select the right wheel and tire for each machine.	PECP9064
PSK Undercarriage	The Undercarriage Parts Sales Kit (PSK) contains part numbers, specifications, features and benefits for Cat Undercarriage.	PECP3003
Catalog Library for Cat Dealers	This page on dealer.cat.com has links to all Cat Parts Catalogs: https://dealer.cat.com/en/ps/parts/parts-mktg/c/parts-catalogs.html	



PECP9067-06

© 2016 Caterpillar • All Rights Reserved

CAT, CATERPILLAR, BUILT FOR IT, their respective logos, "Caterpillar Yellow," the "Power Edge" trade dress as well as corporate and product identity used herein, are trademarks of Caterpillar and may not be used without permission.