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## Hand Tools and Shop Supplies

The Hand Tools and Shop Supplies catalog incorporates all of the shop supplies, general purpose hand tools, tool boxes, and personal safety items for dealer and customer service shops.

## Ordering Procedure

Most products listed in PECJ0003-03 are stocked at Cat® parts facilities. All products in PECJ0003-03 can be ordered through the Cat Parts Distribution system using existing stock or emergency ordering procedures.

## Prices

Prices are subject to change without notice. Standard dealer payment terms apply for any product ordered from this catalog (whether it is stocked or direct shipped).

## Warranty Claims Process

### Customers:

In the event that a warranty claim needs to be filed, contact your Cat dealer.

### Dealers:

The products offered in this catalog are covered by the standard six-month Caterpillar warranty unless they are covered by a manufacturer warranty. Where possible, the warranty type is listed in the product details. The most up-to-date information on warranty type and length is available in the Cat Dealer Numerical Parts Record (NPR) system.

For more warranty information and a sample claims form, visit [dealer.cat.com/toolsandsupplies](http://dealer.cat.com/toolsandsupplies).

## Questions

### Customers:

Contact your local Cat Dealer with any questions you may have about the products listed in this catalog.

### Dealers:

For more information about any of the products listed in the catalog contact the Global Dealer Services Network.

## Global Dealer Services Network

Parts Technical Support Team  
North America: 1 (877) 228-2420  
International: 1 (309) 266-4421  
Email: [Tech\\_Support@cat.com](mailto:Tech_Support@cat.com)

## Suggest a Product for the Cat Hand Tools and Shop Supplies Catalog

Did you find the product you were looking for? If not, suggest a product at [toolsandsupplies@cat.com](mailto:toolsandsupplies@cat.com).





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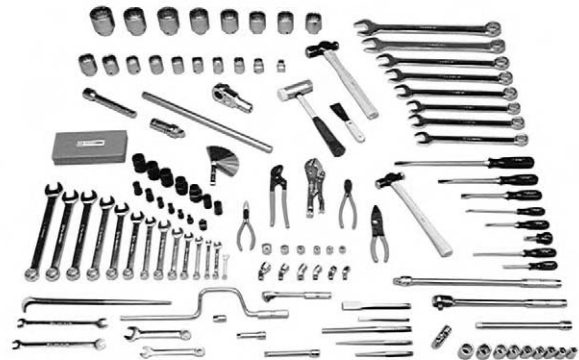
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**8T-0460 Serviceman's Tool Set, 117 Piece Set**

Warranty: See individual part number

- Ideal for servicemen apprentices and shop mechanics
- Large assortment of 3/8 inch, 1/2 inch and 3/4 inch drive tools, 1/4 inch to 1 5/8 inch wrenches, pliers, punches, hammers and screwdrivers
- Designed for use on heavy equipment
- See 8T-0461 Serviceman's Tool Set, 95 Piece, for a similar but smaller set of tools; 8T-0461 contains complete groups of 1/4 inch, 3/8 inch and 1/2 inch drive tools
- Individual hand tools within the group have a lifetime warranty
- Tool box must be ordered separately



Part Number	Description	Size
8T-0460	Serviceman's Tool Set (117 piece tool set)	--
<b>3/8 inch Drive Tools</b>		
239-6824	Reversible Ratchet	3/8 in
8H-8562	Universal Socket	7/16 in
8H-8563	Universal Socket	1/2 in
8H-8564	Universal Socket	9/16 in
8H-8565	Universal Socket	5/8 in
8H-8566	Universal Socket	3/4 in
8H-8567	Socket	7/16 in
8H-8568	Socket	1/2 in
8H-8569	Socket	9/16 in
8H-8570	Socket	5/8 in
8H-8571	Socket	3/4 in
8H-8573	Speeder Handle	3/8 in
8H-8574	Socket Extension	76.2 mm (3.00 in) long
8H-8575	Socket Extension	152.4 mm (6.00 in) long
8H-8576	Socket Adapter	3/8 in Female to 1/2 in Male
8S-2274	Socket	3/8 in
8S-2284	Universal Socket	3/8 in
<b>1/2 inch Drive Tools</b>		
168-0383	Breaker Bar	1/2 in
1S-0259	Socket	1/2 in
239-6826	Reversible Ratchet	1/2 in
8H-8549	Socket	9/16 in
8H-8550	Socket	5/8 in
8H-8551	Socket	11/16 in

Part Number	Description	Size
<b>1/2 inch Drive Tools (Continued)</b>		
8H-8552	Socket	3/4 in
8H-8553	Socket	13/16 in
8H-8554	Socket	7/8 in
8H-8555	Socket	15/16 in
8H-8556	Socket	1 in
8H-8559	Socket Extension	1/2 in drive, 254.0 mm (10.00 in) long
8H-8560	Universal Joint	1/2 in
8H-8561	Socket Adapter	1/2 in Female to 3/4 in Male
<b>3/4 inch Drive Tools</b>		
160-6389	Reversible Ratchet Head <sup>1</sup>	3/4 in
162-8716	Ratchet Head Handle	--
8H-8504	Socket	2 1/4 in
8H-8529	Socket	3/4 in
8H-8530	Socket	7/8 in
8H-8531	Socket	15/16 in
8H-8532	Socket	1 in
8H-8533	Socket	1 1/16 in
8H-8534	Socket	1 1/8 in
8H-8535	Socket	1 1/4 in
8H-8536	Socket	1 5/16 in
8H-8537	Socket	1 1/2 in
8H-8538	Socket	1 11/16 in
8H-8539	Socket	1 5/8 in
8H-8540	Socket	1 3/4 in
8H-8541	Socket	1 7/8 in
8H-8542	Socket	2 in
8H-8543	Socket	2 1/8 in

(Continued)

# Hand Tools (Inch)

## 8T-0460 Serviceman's Tool Set, 117 Piece Set (Continued)

Warranty: See individual part number

Part Number	Description	Size
<b>3/4 inch Drive Tools (Continued)</b>		
8H-8544	Socket	2 3/16 in
8H-8546	Breaker Bar Head	3/4 in
8H-8548	Socket Extension	203.2 mm (8.00 in) long
<b>Combination Wrenches</b>		
1S-0253	Combination Wrench	3/4 in (short)
1S-0254	Combination Wrench	9/16 in (short)
4C-9592	Combination Wrench	3/8 in
4C-9593	Combination Wrench	7/16 in
4C-9594	Combination Wrench	1/2 in
4C-9595	Combination Wrench	9/16 in
4C-9596	Combination Wrench	5/8 in
4C-9597	Combination Wrench	11/16 in
4C-9598	Combination Wrench	3/4 in
4C-9599	Combination Wrench	13/16 in
4C-9601	Combination Wrench	7/8 in
4C-9602	Combination Wrench (2)	15/16 in
4C-9603	Combination Wrench	1 in
4C-9604	Combination Wrench	1/4 in
4C-9605	Combination Wrench	5/16 in
8H-8423	Combination Wrench	1 5/8 in
8H-8424	Combination Wrench	1 1/2 in
8H-8501	Open End Tappet Wrench (2)	1/2 in x 9/16 in
8H-8516	Combination Wrench	1 1/16 in
8H-8517	Combination Wrench (2)	1 1/8 in
8H-8518	Combination Wrench	1 1/4 in
8H-8519	Combination Wrench	1 5/16 in
8H-8520	Combination Wrench	1 3/8 in (short)
<b>Sockets Designed for 12 Point Shoulder Bolts</b>		
261-0444	Socket Adapter	1/2 in Female to 3/8 in Male
8S-1589	Socket	1/4 in <sup>2</sup>
8S-1590	Socket	5/16 in <sup>2</sup>
8S-1591	Socket	3/8 in
8S-1592	Socket	7/16 in
8S-1593	Socket	1/2 in
8S-1594	Socket	9/16 in
8S-1595	Socket	5/8 in
8S-1596	Socket	11/16 in
8S-1597	Socket	3/4 in
8S-1598	Socket	13/16 in
8S-1599	Socket	7/8 in
8S-1600	Socket	15/16 in
8S-1601	Socket	1 in

Part Number	Description	Size
<b>Pliers, Punches, Screwdrivers and Hammers</b>		
1F-1159	Center Punch <sup>3</sup>	3/16 in, 152.4 mm (6.00 in) long
1F-1160	Chisel <sup>3</sup>	3/8 in Edge, 139.7 mm (5.50 in) long
1F-1161	Chisel <sup>3</sup>	3/4 in Edge, 177.8 mm (7.00 in) long
1S-0257	Ball Peen Hammer <sup>3</sup>	1 1/8 in, 340.2 g (12 oz)
1S-0258	Soft Face Hammer (Serviceable parts of the hammer, 1 Medium Tip 3S-0460, 1 Hard Tip 3S-0459) <sup>3</sup>	1 11/16 in, 907.2 g (32 oz)
277-8790	Plastic Handle Screwdriver	1/2 in tip, 469 mm (18.47 in) long
5F-4764	Rolling Head Pry Bar <sup>3</sup>	406.4 mm (16.00 in) long
6V-6192	Slip Joint Pliers	191.8 mm (7.50 in)
6V-6193	Heavy-Duty Diagonal Cutter	185.67 mm (7.31 in)
6V-6194	Needle Nose Pliers	181.1 mm (7.13 in)
6V-6195	Interlocking Joint Pliers	234.7 mm (9.25 in)
6V-7932	Standard Screwdriver	3/8 in tip, 342.1 mm (13.47 in) long
6V-7933	Standard Screwdriver	5/16 in tip, 277.11 mm (10.91 in) long
6V-7934	Phillips Screwdriver	No. 2 Phillips tip, 213.6 mm (8.41 in) long
6V-7935	Standard Screwdriver	1/4 in tip, 212.85 mm (8.38 in) long
6V-7936	Phillips Screwdriver	No. 1 Phillips tip, 162.9 mm (6.66 in) long
6V-7937	Standard Screwdriver	239.78 mm (9.44 in) long
6V-7938	Screwdriver	1/4 in tip, 100.1 mm (3.94 in) long
8H-8577	Ball Peen Hammer <sup>3</sup>	2 lb, 1 1/4 in
8H-8578	Punch <sup>3</sup>	3/8 in Point, 241.3 mm (9.50 in) long
8H-8579	Punch <sup>3</sup>	5/32 in Point, 203.2 mm (8.00 in) long
8H-8580	Straight Blade Scraper <sup>3</sup>	38.1 mm (1.50 in) wide
8H-8581	Feeler Gauge <sup>3</sup>	25 blade, .0015 in - .025 in
8H-8582 <sup>4</sup>	Vise Grip	254 mm (10.00 in)

<sup>1</sup> 160-6390 Repair Kit

<sup>2</sup> Shoulder bolt socket 12 point

<sup>3</sup> Warranty: Six Months

<sup>4</sup> Not available for individual sale

## 8T-0461 Serviceman's Tool Set, 95 Piece Set

Warranty: See individual part number

- Similar to 8T-0460 Serviceman's Tool Set, except in drive tools
- 8T-0461 set contains complete groups of 1/4 inch, 3/8 inch and 1/2 inch drive tools; whereas the 8T-0460 set contains 3/8 inch, 1/2 inch and 3/4 inch drive tools
- Individual hand tools within the group have a Lifetime Warranty; hand tools within a group will be warranted when necessary
- Tool box must be ordered separately



Part Number	Description	Size
8T-0461	Serviceman's Tool Group (full 95 piece set)	--
<b>1/4 inch Drive Tools</b>		
239-6823	Reversible Ratchet	1/4 in
9S-1711	Socket	3/16 in
9S-1712	Socket	7/32 in
9S-1713	Socket	1/4 in
9S-1714	Socket	9/32 in
9S-1715	Socket	5/16 in
9S-1716	Socket	11/32 in
9S-1717	Socket	3/8 in
9S-1718	Socket	7/16 in
9S-1719	Socket	1/2 in
9S-1720	Socket Extension	50.8 mm (2.00 in)
9S-1721	Socket Extension	101.6 mm (4.00 in)
9S-1722	Socket Driver	1/4 in
9S-1724	Universal Joint	1/4 in
9S-1725	Socket Case <sup>1</sup>	--
9S-2573	Deep Well Socket	3/8 in <sup>2</sup>
<b>3/8 inch Drive Tools</b>		
239-6824	Reversible Ratchet	3/8 in
261-0444	Socket Adapter	1/2 in Female to 3/8 in Male
8H-8562	Universal Socket	7/16 in
8H-8563	Universal Socket	1/2 in
8H-8564	Universal Socket	9/16 in

Part Number	Description	Size
<b>3/8 inch Drive Tools (Continued)</b>		
8H-8565	Universal Socket	5/8 in
8H-8566	Universal Socket	3/4 in
8H-8567	Socket	7/16 in
8H-8568	Socket	1/2 in
8H-8569	Socket	9/16 in
8H-8570	Socket	5/8 in
8H-8571	Socket	3/4 in
8H-8573	Speeder Handle	3/8 in
8H-8574	Socket Extension	76.2 mm (3.00 in) long
8H-8575	Socket Extension	152.4 mm (6.00 in) long
8H-8576	Socket Adapter	3/8 in Female to 1/2 in Male
8S-1589	Socket	1/4 in <sup>3</sup>
8S-1590	Socket	5/16 in <sup>3</sup>
8S-2274	Socket	3/8 in
8S-2284	Universal Socket	3/8 in
9S-1727	Universal Socket	11/16 in
9S-1728	Socket	11/16 in
<b>1/2 inch Drive Tools</b>		
168-0383	Breaker Bar	1/2 in
1S-0259	Socket	1/2 in
239-6826	Reversible Ratchet	1/2 in
8H-8549	Socket	9/16 in
8H-8550	Socket	5/8 in
8H-8551	Socket	11/16 in

(Continued)

# Hand Tools (Inch)

## 8T-0461 Serviceman's Tool Set, 95 Piece Set (Continued)

Warranty: See individual part number

Part Number	Description	Size
<b>1/2 inch Drive Tools (Continued)</b>		
8H-8552	Socket	3/4 in
8H-8553	Socket	13/16 in
8H-8554	Socket	7/8 in
8H-8555	Socket	15/16 in
8H-8556	Socket	1 in
8H-8559	Socket Extension	1/2 in drive, 254.0 mm (10.00 in) long
9S-1729	Socket	1 1/16 in
9S-1730	Socket	1 1/8 in
9S-1731	Socket	1 1/4 in
9S-1732	Socket Extension	1/2 in drive, 127.0 mm (5.00 in) long
<b>Combination Wrenches</b>		
1S-0253	Combination Wrench	3/4 in (short)
1S-0254	Combination Wrench	9/16 in (short)
4C-9592	Combination Wrench	3/8 in
4C-9593	Combination Wrench	7/16 in
4C-9594	Combination Wrench	1/2 in
4C-9595	Combination Wrench	9/16 in
4C-9596	Combination Wrench	5/8 in
4C-9597	Combination Wrench	11/16 in
4C-9598	Combination Wrench	3/4 in
4C-9599	Combination Wrench	13/16 in
4C-9601	Combination Wrench	7/8 in
4C-9602	Combination Wrench (2)	15/16 in
4C-9603	Combination Wrench	1 in
4C-9604	Combination Wrench	1/4 in
4C-9605	Combination Wrench	5/16 in
8H-8501	Open End Tappet Wrench (2)	1/2 in x 9/16 in

Part Number	Description	Size
<b>Pliers, Punches, Screwdrivers and Hammers</b>		
1F-1159	Center Punch <sup>1</sup>	3/16 in, 152.4 mm (6.00 in) long
1F-1160	Chisel <sup>1</sup>	3/8 in Edge, 139.7 mm (5.50 in) long
1F-1161	Chisel <sup>1</sup>	3/4 in Edge, 177.8 mm (7.00 in) long
1S-0257	Ball Peen Hammer <sup>1</sup>	1 1/8 in, 340.2 g (12 oz)
1S-0258	Soft Face Hammer (Serviceable parts of the hammer, 1 Medium Tip 3S-0460, 1 Hard Tip 3S-0459) <sup>1</sup>	1 11/16 in, 907.2 g (32 oz)
208-6183	Hacksaw	419.0 mm (16.50 in) long
5F-4764	Rolling Head Pry Bar <sup>1</sup>	406.4 mm (16.00 in) long
6V-6192	Slip Joint Pliers	191.8 mm (7.50 in)
6V-6193	Heavy-Duty Diagonal Cutter	185.67 mm (7.31 in)
6V-6194	Needle Nose Pliers	181.1 mm (7.13 in)
6V-6195	Interlocking Joint Pliers	234.7 mm (9.25 in)
6V-7932	Standard Screwdriver	3/8 in tip, 342.1 mm (13.47 in) long
6V-7933	Standard Screwdriver	5/16 in tip, 277.11 mm (10.91 in) long
6V-7934	Phillips Screwdriver	No. 2 Phillips tip, 213.6 mm (8.41 in) long
6V-7935	Standard Screwdriver	1/4 in tip, 212.85 mm (8.38 in) long
6V-7936	Phillips Screwdriver	No. 1 Phillips tip, 162.9 mm (6.66 in) long
6V-7937	Standard Screwdriver	239.78 mm (9.44 in) long
8H-8578	Punch <sup>1</sup>	3/8 in Point, 241.3 mm (9.50 in) long
8H-8579	Punch <sup>1</sup>	5/32 in Point, 203.2 mm (8.00 in) long
8H-8580	Straight Blade Scraper <sup>1</sup>	38.1 mm (1.50 in) wide
8H-8581	Feeler Gauge <sup>1</sup>	25 blade, .0015 in - .025 in
8H-8582 <sup>4</sup>	Vise Grip	254 mm (10.00 in)
9S-1742	Hex Key Wrench Assembly	9 bits: .05 in, 1/16 in, 5/64 in, 3/32 in, 7/64 in, 1/8 in, 9/64 in, 5/32 in, 3/16 in
9S-1743	Ferrule Nut Wrench	3/4 in and 1 in

<sup>1</sup>Warranty: Six Months

<sup>2</sup>Deep length socket

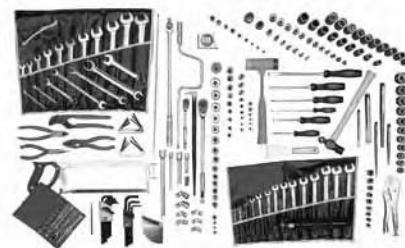
<sup>3</sup>Shoulder bolt socket 12 point

<sup>4</sup>Not available for individual sale

## 222-7876 Student Tool Set

Warranty: See individual part number

- A specially selected set of basic hand tools for students in the Cat® Model Dealer Service Technician Program
- Premier quality tools for the work done in the classroom and on the job
- Over 200 tools



Part Number	Description
222-7876	Complete Student Tool Set
<b>Set Consists of:</b>	
233-8577	Safety Glasses
146-2728	Flexible Pickup Tool
194-3574	Metric Socket Set
194-3576	Metric Socket Set
194-3578	Metric Socket Set
194-3584	Torx Socket Set
194-3585	Hex Bit Socket Set
199-6156	Metric Socket Set
199-9019	Metric Socket Set
1U-5545	Combination Wrench Set
1U-7321	Flashlight
200-1928	Fractional Hex Key Set
200-1929	Metric Hex Key Set
200-1931	Metric Hex Key Set
200-8413	Metric Socket Set
2P-5490	Deep Well Socket Set
5P-1720	Seal Pick
5P-3277	Measuring Tape
5P-3920	Steel Rule
8T-0461	Serviceman's Tool Group (full 95 piece set)

## 211-0616 Hand Tool Set

Warranty: See individual part numbers

- For performing routine adjustment and maintenance of all Track-Type Tractors, Track-Type Loaders and Engines



(Continued)



# Hand Tools (Inch)

## 211-0616 Hand Tool Set (Continued)

Warranty: See individual part numbers

Part Number	Description	Size
211-0616	Hand Tool Set	--
<b>Hand Tool Set Consists of:</b>		
185-3630	Filter Strap Wrench Assembly <sup>1</sup>	--
1S-0259	Socket	1/2 in, 1/2 in drive, 12 Pt.
211-0136	Cat Tool Bag (not shown)	--
212-8144	Petcock Socket	1/2 in drive
212-8145	Drain Plug Socket	1/2 in Female, 3/4 in Male
213-1983	Combination Pliers	167.0 mm (6.60 in) long
239-6826	Reversible Ratchet	1/2 in
4C-9592	Combination Wrench	3/8 in
4C-9594	Combination Wrench	1/2 in
4C-9595	Combination Wrench	9/16 in
4C-9596	Combination Wrench	5/8 in
4C-9598	Combination Wrench	3/4 in
4C-9601	Combination Wrench	7/8 in

Part Number	Description	Size
<b>Hand Tool Set Consists of: (Continued)</b>		
4C-9603	Combination Wrench	1 in
4C-9605	Combination Wrench	5/16 in
5F-4764	Rolling Head Pry Bar <sup>1</sup>	406.4 mm (16.00 in) long
6V-7934	Phillips Screwdriver	No. 2 Phillips tip, 213.6 mm (8.41 in) long
6V-7935	Standard Screwdriver	Standard 1/4 in tip, 212.85 mm (8.38 in) long
8F-9866	Grease Gun	--
8H-8549	Socket	9/16 in, 1/2 in drive, 12 Pt.
8H-8554	Socket	7/8 in, 1/2 in drive, 12 Pt.
8H-8555	Socket	15/16 in, 1/2 in drive, 12 Pt.
8H-8556	Socket	1 in, 1/2 in drive, 12 Pt.
8H-8559	Socket Extension	1/2 in drive, 254.0 mm (10.00 in) long
8H-8581	Feeler Gauge <sup>1</sup>	25 blade, .0015 in to .025 in
9S-1730	Socket	1 1/8 in, 1/2 in drive, 12 Pt
9S-1732	Socket Extension	1/2 in drive, 127.0 mm (5.0 in) long

<sup>1</sup>Warranty: Six Months

## 211-0617 Hand Tool Set

Warranty: See individual part numbers



- For routine maintenance and adjustment of all rubber-tired machines (Wheel Loaders, Motor Graders, Skidders, Solid Frame Off Highway Trucks, Wheel Tractors, Backhoe Loaders and Integrated Toolcarriers)

Part Number	Description	Size
211-0617	Hand Tool Set	--
<b>Hand Tool Set Consists of:</b>		
185-3630	Filter Strap Wrench Assembly <sup>1</sup>	--
1P-0545	Tire Pressure Gauge <sup>1</sup>	--
1S-0259	Socket	1/2 in, 1/2 in drive, 12 Pt.
212-8144	Petcock Socket	1/2 in drive
212-8145	Drain Plug Socket	1/2 in Female, 3/4 in Male

Part Number	Description	Size
<b>Hand Tool Set Consists of: (Continued)</b>		
213-1985	Sliding T-Handle	1/2 in drive, 304.8 mm (12.00 in) long
4C-9592	Combination Wrench	3/8 in
4C-9594	Combination Wrench	1/2 in
4C-9595	Combination Wrench	9/16 in
4C-9596	Combination Wrench	5/8 in
4C-9597	Combination Wrench	11/16 in
4C-9598	Combination Wrench	3/4 in

(Continued)

## 211-0617 Hand Tool Set (Continued)

Warranty: See individual part numbers

Part Number	Description	Size
<b>Hand Tool Set Consists of: (Continued)</b>		
4C-9605	Combination Wrench	5/16 in
5F-4764	Rolling Head Pry Bar <sup>1</sup>	406.4 mm (16.00 in) long
6V-7932	Standard Screwdriver	3/8 in tip, 342.1 mm (13.47 in) long
6V-7934	Phillips Screwdriver	No. 2 Phillips tip, 213.6 mm (8.41 in) long
8F-9866	Grease Gun	--
8H-8536	Socket	1 5/16 in, 3/4 in drive, 12 Pt.
8H-8537	Socket	1 1/2 in, 3/4 in drive, 12 Pt.
8H-8538	Socket	1 11/16 in, 3/4 in drive, 12 Pt.
8H-8541	Socket	1 7/8 in, 3/4 in drive, 12Pt.

Part Number	Description	Size
<b>Hand Tool Set Consists of: (Continued)</b>		
8H-8549	Socket	9/16 in, 1/2 in drive, 12 Pt.
8H-8551	Socket	11/16 in, 1/2 in drive, 12 Pt.
8H-8552	Socket	3/4 in, 1/2 in drive, 12 Pt.
8H-8553	Socket	13/16 in, 1/2 in drive, 21 Pt.
8H-8554	Socket	7/8 in, 1/2 in drive, 12 Pt.
8H-8555	Socket	15/16 in, 1/2 in drive, 12 Pt.
8H-8559	Socket Extension	1/2 in drive, 254.0 mm (10.00 in) long
8H-8581	Feeler Gauge <sup>1</sup>	25 blade, .0015 in to .025 in
9S-1730	Socket	1 1/8 in, 1/2 in drive, 12 Pt
9S-1731	Socket	1 1/4 in, 1/2 in drive, 12 Pt.

<sup>1</sup>Warranty: Six Months

## 214-6153 Hand Tool Set

Warranty: See individual part number

- Use for routine maintenance adjustments on rear engine Track-Type Loaders such as the 943, 953, 963 and 973

Part Number	Description	Size
214-6153	Hand Tool Group	--
<b>Hand Tool Group Consists of:</b>		
185-3630	Filter Strap Wrench Assembly <sup>1</sup>	--
211-0136	Cat Tool Bag (not shown)	610.0 mm x 203.0 mm x 159.0 mm (24.00 in x 8.00 in x 6.25 in)
212-8144	Petcock Socket	1/2 in drive
213-1983	Combination Pliers	167.0 mm (6.60 in) long
239-6826	Reversible Ratchet	1/2 in
261-0444	Socket Adapter	1/2 in Female to 3/8 in Male
4C-9594	Combination Wrench	1/2 in
4C-9595	Combination Wrench	9/16 in
4C-9598	Combination Wrench	3/4 in
5F-4764	Rolling Head Pry Bar <sup>1</sup>	406.4 mm (16.00 in) long
6V-7935	Standard Screwdriver	1/4 in tip, 212.85 mm (8.38 in) long
8F-9866	Grease Gun	--
8H-8549	Socket	9/16 in
8H-8552	Socket	3/4 in
8H-8554	Socket	7/8 in
8H-8556	Socket	1 in
8H-8559	Socket Extension	1/2 in drive, 254.0 mm (10.00 in) long
9U-7419	Hex Bit	--

<sup>1</sup>Warranty: Six Months



Hand Tools

## 133-8877 Field Tool Set

416C, 426C, 436C, 428C, and 438C Backhoe Loaders

Warranty: See individual part numbers



- Used to perform routine maintenance and adjustment operations on C-series Backhoe Loaders
- Group includes 20 required hand tools
- Features both English and Metric wrenches and sockets
- Includes "T" handle wrench and extension for wheel lug removal and installation
- Canvas bag provides adequate storage even in limited space

Part Number	Description	Wrench Sizes	Socket Sizes	T-Handles	Extension	Screwdrivers	Pliers	Socket
133-8877	Field Tool Group	7/16 in, 1/2 in, 13/16 in, 7/8 in, 15/16 in (English); 14.0 mm, 17.0 mm (Metric)	15/16 in, 17.0mm (English and Metric 1/2 in drive)	1/2 in and 3/4 in drive	3/4 in drive	No. 2 Phillips and 1/4 in flat	1 slip joint, 1 retaining ring	3/8 in drive, T30 Torx Bit
<b>Group Also Contains:</b>								
185-3630	Filter Strap Wrench Assembly <sup>1</sup>	--	--	--	--	--	--	--
8F-9866	Grease Gun	--	--	--	--	--	--	--

<sup>1</sup>Warranty: Six Months

## 209-9239 Hand Tool Set

910E Wheel Loader, 12B and 14B Integrated Tool Carriers

Warranty: See individual part number

- For routine maintenance and adjustments



Part Number	Description	Size
209-9239	Complete Hand Tool Set	--
<b>Complete Set Consists of:</b>		
6V-7933	Standard Screwdriver	5/16 in tip, 277.11 mm (10.91 in) long
6V-9093	Wrench	13.0 mm
6V-9096	Wrench	16.0 mm
6V-9101	Combination Wrench	21.0 mm

Part Number	Description	Size
<b>Complete Set Consists of: (Continued)</b>		
8F-9866	Grease Gun	--
8H-8536	Socket	1 5/16 in, 3/4 in drive, 12 Pt.
8H-8537	Socket	1 1/2 in, 3/4 in drive, 12 Pt.
8H-8539	Socket	1 5/8 in, 3/4 in drive, 12 Pt.
8H-8556	Socket	1 in, 1/2 in drive, 12 Pt.
212-8145	Drain Plug Socket	1/2 in Female, 3/4 in Male

(Continued)

**209-9239 Hand Tool Set (Continued)**

910E Wheel Loader, 12B and 14B Integrated Tool Carriers

Warranty: See individual part number

Part Number	Description	Size
<b>Complete Set Consists of: (Continued)</b>		
213-1985	Sliding T-Handle	1/2 in drive, 304.8 mm (12.00 in) long
213-3088	Socket	9/16 in, 1/2 in drive 6 Pt.
213-6926	Impact Socket (1/2 in Drive)	10.0 mm, 1/2 in drive, 6 Pt.
213-6929	Impact Socket (1/2 in Drive)	13.0 mm, 1/2 in drive. 6 Pt.
213-6933	Impact Socket (1/2 in Drive)	16.0 mm, 1/2 in drive, 6 Pt.
213-6935	Impact Socket (1/2 in Drive)	18.0 mm, 1/2 in drive, 6 Pt.
213-6936	Impact Socket (1/2 in Drive)	19.0 mm, 1/2 in drive, 6 Pt.
239-6826	Reversible Ratchet	1/2 in
4C-9592	Combination Wrench	3/8 in
4C-9595	Combination Wrench	9/16 in

Part Number	Description	Size
<b>Complete Set Consists of: (Continued)</b>		
4C-9598	Combination Wrench	3/4 in
5F-4764	Rolling Head Pry Bar <sup>1</sup>	406.4 mm (16.00 in) long
6V-7932	Standard Screwdriver	3/8 in tip, 342.1 mm (13.47 in) long
185-3630	Filter Strap Wrench Assembly <sup>1</sup>	--
1P-0545	Tire Pressure Gauge <sup>1</sup>	--
211-0136	Cat Tool Bag (not shown)	--
8H-8559	Socket Extension	1/2 in drive, 254.0 mm (10.00 in) long
8H-8561	Socket Adapter	1/2 in Female to 3/4 in Male
8H-8581	Feeler Gauge <sup>1</sup>	25 blade, .0015 in to .025 in
9S-1730	Socket	1 1/8 in, 1/2 in drive, 12 Pt
6V-6192	Slip Joint Pliers	--

<sup>1</sup>Warranty: Six Months

**144-4674 Field Tool Set**

914G, 924F and 928G Wheel Loaders

Warranty: See individual part numbers

- Used to perform routine maintenance and adjustment operations
- Group contains 25 individual hand tools
- Features both English and metric wrenches and sockets
- Includes Cat grease gun, filter wrench and tire pressure gauge
- Canvas bag provides adequate storage even in limited space

144-4674 Field Tool Group Contents		
Hand wrench sizes SAE:	(English), 3/4 in, 13/16 in, 1 1/8 in, 1 3/8 in, & 1 5/8 in	(Metric), 10.0 mm, 13.0 mm, 16.0 mm, 18.0 mm, & 19.0 mm
Socket sizes:	(Metric), 10.0 mm, 13.0 mm, 16.0 mm, & 19.0 mm x 3/8 in drive	
Screwdrivers:	No. 2 Phillips	1/4 in flat
Pliers:	1 slip joint	
Ratchet:	3/8 in drive	
Adapter:	3/8 in female to 1/2 in male	
Extension:	152.4 mm (6.00 in) x 3/8 in drive	
Torx socket drivers:	T30 x 3/8 in drive	T50 x 3/8 in drive
Tool Bag		



Hand Tools

(Continued)

# Hand Tools (Inch)

## 144-4674 Field Tool Set (Continued)

914G, 924F and 928G Wheel Loaders

Warranty: See individual part numbers

Part Number	Description
144-4674	Complete Field Tool Group
Tools in Group	
185-3630	Filter Strap Wrench Assembly <sup>1</sup>
1P-0545	Tire Pressure Gauge <sup>1</sup>
8F-9866	Grease Gun

<sup>1</sup>Warranty: Six Months

## 214-7318 Hand Tool Set

All 300 Series Excavators

Warranty: See individual part number

- Used for routine maintenance and adjustment
- Flat top tool box provides adequate storage for all tools in this group
- Using proper tools reduces downtime

Hand Tools



Part Number	Description	Size
214-7318	Complete Hand Tool Group	--
Hand Tool Group Consists of:		
1U-7585	Hex Wrench	5/8 in
213-6926	Impact Socket (1/2 in Drive)	10.0 mm, 1/2 in drive, 6 Pt.
213-6927	Impact Socket (1/2 in Drive)	11.0 mm, 1/2 in drive, 6 Pt.
213-6929	Impact Socket (1/2 in Drive)	13.0 mm, 1/2 in drive, 6 Pt.
214-7222	Combination Wrench	32.0 mm
214-7223	Combination Wrench	36.0 mm
214-7329	Open End Wrench	41.0 mm
214-7330	Adjustable Wrench	12.00 in, 1 5/16 jaw range
239-6826	Reversible Ratchet	1/2 in
261-0444	Socket Adapter	1/2 in Female to 3/8 in Male
5F-4764	Rolling Head Pry Bar <sup>1</sup>	406.4 mm (16.00 in) long
6V-7932	Standard Screwdriver	3/8 in tip, 342.1 mm (13.47 in) long

Part Number	Description	Size
Hand Tool Group Consists of: (Continued)		
6V-9096	Wrench	16.0 mm
6V-9098	Wrench	18.0 mm
6V-9099	Wrench	19.0 mm
6V-9101	Combination Wrench	21.0 mm
6V-9102	Combination Wrench	22.0 mm
6V-9103	Combination Wrench	24.0 mm
6V-9104	Combination Wrench	30.0 mm
6V-9111	Socket (1/2 in Drive)	16.0 mm, 1/2 in drive, 12 Pt.
6V-9112	Socket (1/2 in Drive)	17.0 mm, 1/2 in drive, 12 Pt.
6V-9113	Socket (1/2 in Drive)	18.0 mm, 1/2 in drive, 12 Pt.
6V-9116	Socket (1/2 in Drive)	22.0 mm, 1/2 in drive, 12 Pt.
8F-9866	Grease Gun	--
8H-8424	Combination Wrench	1 1/2 in
8H-8577	Ball Peen Hammer <sup>1</sup>	2 lb, 1 1/4 in

(Continued)

## 214-7318 Hand Tool Set (Continued)

All 300 Series Excavators

Warranty: See individual part number

Part Number	Description	Size
<b>Hand Tool Group Consists of: (Continued)</b>		
8H-8581	Feeler Gauge <sup>1</sup>	25 blade, .0015 in - .025 in
9S-1732	Socket Extension	1/2 in drive, 127.0 mm (5.00 in) long
9U-6219	Tool Box	--
9U-7968	Pry Bar	--
185-3630	Filter Strap Wrench Assembly <sup>1</sup>	--
194-3535	Socket, Assembly, T30	--
194-3538	Socket, Assembly, T50	--

Part Number	Description	Size
<b>Hand Tool Group Consists of: (Continued)</b>		
194-3565	Socket	30 mm, 1/2 in drive, 12 Pt.
199-6154	Socket (1/2 in Drive)	24 mm, 1/2 in drive, 12 Pt.
1U-7563	Hex Wrench	4 mm
1U-7564	Hex Wrench	5 mm
1U-7565	Hex Wrench	6 mm
1U-7566	Hex Wrench	8 mm
1U-7567	Hex Wrench	10 mm
1U-7569	Hex Wrench	14 mm
6V-6192	Slip Joint Pliers	191.8 mm (7.50 in)

<sup>1</sup>Warranty: Six Months

## 214-7219 Hand Tool Set

Warranty: See individual part number

- For routine maintenance and adjustments

Part Number	Description	Size
214-7219	Complete Hand Tool Group	--
<b>Hand Tool Group Consists of:</b>		
213-1985	Sliding T-Handle	1/2 in drive, 304.8 mm (12.00 in) long
4C-9592	Combination Wrench	3/8 in
4C-9595	Combination Wrench	9/16 in
4C-9598	Combination Wrench	3/4 in
5F-4764	Rolling Head Pry Bar <sup>1</sup>	406.4 mm (16.00 in) long
8F-9866	Grease Gun	--
8H-8549	Socket	9/16 in
8H-8556	Socket	1 in
8H-8559	Socket Extension	1/2 in drive, 254.0 mm (10.00 in) long
8H-8581	Feeler Gauge <sup>1</sup>	25 blade, .0015 in - .025 in
185-3630	Filter Strap Wrench Assembly <sup>1</sup>	--

<sup>1</sup>Warranty: Six Months



Hand Tools

# Hand Tools (Inch)

## 152-4942 Field Tool Set

902, 906, and 908 Compact Wheel Loader

Warranty: See individual part number



- Used to perform routine maintenance and adjustments
- Includes 12 required hand tools
- Includes both English and metric wrenches and screwdrivers
- Roll-up tool pouch provides good storage in limited space

Part Number	Open End Wrenches	Hex Wrench	Screwdrivers	Ball Peen Hammer	Adjustable Wrench	Filter Band Wrench	T-Bar and Sliding Head	Deep Socket
152-4942	10.0, 11.0, 12.0, 13.0, 16.0, 17.0, 18.0, and 19.0 mm	4.0 mm	#2 Phillips and 1/4 in flat tip	0.02 oz	8.00 in	3 3/4 in diameter	12.00 in long x 1/2 in square drive	1 1/8 in, 6 point, 1/2 in square drive

## 157-0674 Hand Tool Set

Model: 972G Wheel Loader

Warranty: See individual part number



- Used to perform routine maintenance and adjustment
- Twenty six (26) individual hand tools
- Metric wrenches and sockets accommodate fasteners and fittings on wheel loader
- Reduce downtime by using proper tools

Part Number	Description	Size
157-0674	Complete Hand Tool Group	--
<b>Hand Tool Group Consists of:</b>		
162-8716	Ratchet Head Handle	--
185-3630	Filter Strap Wrench Assembly <sup>1</sup>	--
199-6150	Socket (1/2 in Drive)	13.0 mm
199-6154	Socket (1/2 in Drive)	24 mm, 1/2 in drive, 12 Pt.
1P-0545	Tire Pressure Gauge <sup>1</sup>	--
1U-5548	Wrench	8.0 mm
212-8144	Petcock Socket	1/2 in drive
212-8145	Drain Plug Socket	1/2 in Female, 3/4 in Male
213-1985	Sliding T-Handle	1/2 in drive, 304.8 mm (12.00 in) long
5F-4764	Rolling Head Pry Bar <sup>1</sup>	406.4 mm (16.00 in) long

Part Number	Description	Size
<b>Hand Tool Group Consists of: (Continued)</b>		
6V-7932	Standard Screwdriver	3/8 in tip, 342.1 mm (13.47 in) long
6V-7934	Phillips Screwdriver	No. 2 Phillips tip, 213.6 mm (8.41 in) long
6V-9090	Wrench	10.0 mm
6V-9093	Wrench	13.0 mm
6V-9097	Wrench	17.0 mm
6V-9099	Wrench	19.0 mm
6V-9112	Socket (1/2 in Drive)	17.0 mm, 1/2 in drive, 12 Pt.
6V-9114	Socket (1/2 in Drive)	19.0 mm
6V-9116	Socket (1/2 in Drive)	22.0 mm, 1/2 in drive, 12 Pt.
6V-9118	Socket	30 mm
6V-9119	Socket	36 mm

(Continued)



## 157-0674 Hand Tool Set (Continued)

Model: 972G Wheel Loader

Warranty: See individual part number

Part Number	Description	Size
<b>Hand Tool Group Consists of: (Continued)</b>		
6V-9120	Socket	46 mm
8F-9866	Grease Gun	--
8H-8546	Breaker Bar Head	3/4 in

Part Number	Description	Size
<b>Hand Tool Group Consists of: (Continued)</b>		
8H-8548	Socket Extension	203.2 mm (8.00 in) long
8H-8559	Socket Extension	1/2 in drive, 254.0 mm (10.00 in) long
8H-8581	Feeler Gauge <sup>1</sup>	25 blade, .0015 in - .025 in

<sup>1</sup>Warranty: Six Months

## 197-5088 Tool Set for Harvester Heads

Models: HH55 and HH65 Harvester Head (Skogsjan)

Essential Tool

- Used to perform routine maintenance and adjustment operations
- Service Group contains hand tools needed

Part Number	Description	Size
197-5088	Tool Set for Harvester Heads	--
<b>Tool Set for Harvester Heads Consists of:</b>		
161-5346 <sup>1</sup>	Shackle, qty. 4	--
161-5347 <sup>1</sup>	Link, qty. 4	--
161-8953	Hex Wrench	6.00 mm
161-8956 <sup>1</sup>	Cleaning Hook	--

Part Number	Description	Size
<b>Tool Set for Harvester Heads Consists of: (Continued)</b>		
164-3171	Spanner Wrench	--
164-5047 <sup>1</sup>	Chain Tool	--
197-3672 <sup>1</sup>	Saw Adjustment Wrench	Wrench opening: 3 3/4 in
224-0851 <sup>1</sup>	Chain	--
224-0853 <sup>1</sup>	Chain	--

<sup>1</sup> Not available for individual sale

## 207-1515 Hand Tool Set

Warranty: See below

- Basic maintenance tool group
- Contains 21 individual hand tools
- Includes canvas bag for storing or transporting tools
- Warranty: Canvas bag, grease gun, and strap wrench assembly have a 6 month warranty; all other hand tools have a lifetime warranty



(Continued)



# Hand Tools (Inch)

## 207-1515 Hand Tool Set (Continued)

Warranty: See below

Part Number	Description	Size
207-1515	Hand Tool Set	--
<b>Hand Tool Set Consists of:</b>		
185-3630	Filter Strap Wrench Assembly <sup>1</sup>	--
1U-7563	Hex Wrench	4 mm
1U-7564	Hex Wrench	5 mm
1U-7565	Hex Wrench	6 mm
1U-7566	Hex Wrench	8 mm
1U-7567	Hex Wrench	10 mm
1U-7569	Hex Wrench	14 mm
1U-7585	Hex Wrench	5/8 in
239-6826	Reversible Ratchet	1/2 in
5F-4764	Rolling Head Pry Bar <sup>1</sup>	406.4 mm (16.00 in) long

<sup>1</sup>Warranty: Six Months

Part Number	Description	Size
<b>Hand Tool Set Consists of: (Continued)</b>		
6V-7933	Standard Screwdriver	5/16 in tip, 277.11 mm (10.91 in) long
6V-7934	Phillips Screwdriver	No. 2 Phillips tip, 213.6 mm (8.41 in) long
6V-9096	Wrench	16.0 mm
6V-9098	Wrench	18.0 mm
6V-9099	Wrench	19.0 mm
6V-9101	Combination Wrench	21.0 mm
6V-9102	Combination Wrench	22.0 mm
6V-9103	Combination Wrench	24.0 mm
8F-9866	Grease Gun	--
8H-8581	Feeler Gauge <sup>1</sup>	25 blade, .0015 in - .025 in
9S-1732	Socket Extension	1/2 in drive, 127.0 mm (5.00 in) long

## 256-4816 Hand Tool Set

Warranty: See individual part number

- Used for routine maintenance and adjustment
- Flat top tool box provides adequate storage for all tools in this group
- Using proper tools reduces downtime

Part Number	Description	Size
256-4816	Hand Tool Set	--
<b>Hand Tool Group Consists of:</b>		
185-3630	Filter Strap Wrench Assembly <sup>1</sup>	--
194-3565	Socket	30 mm, 1/2 in drive, 12 Pt.
199-6154	Socket (1/2 in Drive)	24 mm, 1/2 in drive, 12 Pt.
1U-7563	Hex Wrench	4 mm
1U-7564	Hex Wrench	5 mm
1U-7565	Hex Wrench	6 mm
1U-7566	Hex Wrench	8 mm
1U-7567	Hex Wrench	10 mm
1U-7569	Hex Wrench	14 mm
1U-7585	Hex Wrench	5/8 in
200-1929	Metric Hex Key Set	1.5 mm, 2.0 mm, 2.5 mm, 3.0 mm, 4.0 mm, 5.0 mm, 6.0 mm, 8.0 mm, and 10.0 mm
213-6926	Impact Socket (1/2 in Drive)	10.0 mm, 1/2 in drive, 6 Pt.
213-6927	Impact Socket (1/2 in Drive)	11.0 mm, 1/2 in drive, 6 Pt.
213-6929	Impact Socket (1/2 in Drive)	13.0 mm, 1/2 in drive, 6 Pt.
214-7223	Combination Wrench	36.0 mm

Part Number	Description	Size
<b>Hand Tool Group Consists of: (Continued)</b>		
214-7322	Adjustable Wrench	8 in
214-7324	Torx Bit Set	--
214-7329	Open End Wrench	41.0 mm
239-6826	Reversible Ratchet	1/2 in
256-4879	Torx Wrench, T50	--
6V-7932	Standard Screwdriver	3/8 in tip, 342.1 mm (13.47 in) long
6V-9096	Wrench	16.0 mm
6V-9098	Wrench	18.0 mm
6V-9099	Wrench	19.0 mm
6V-9101	Combination Wrench	21.0 mm
6V-9102	Combination Wrench	22.0 mm
6V-9103	Combination Wrench	24.0 mm
6V-9104	Combination Wrench	30.0 mm
6V-9111	Socket (1/2 in Drive)	16.0 mm, 1/2 in drive, 12 Pt.
6V-9113	Socket (1/2 in Drive)	18.0 mm, 1/2 in drive, 12 Pt.
6V-9116	Socket (1/2 in Drive)	22.0 mm, 1/2 in drive, 12 Pt.
8F-9866	Grease Gun	--
8H-8577	Ball Peen Hammer <sup>1</sup>	2 lb, 1 1/4 in
9S-1732	Socket Extension	1/2 in drive, 127.0 mm (5.00 in) long
9U-6219	Tool Box	--
9U-7968	Pry Bar	--

<sup>1</sup>Warranty: Six Months

**213-4443 Socket Set, 17 Piece, 1/4 inch Drive**

Warranty: See individual part number

- 12 point
- 1/4 inch square drive
- Standard length sockets
- Chrome finish



Part Number	Description	Size	Length
213-4443	Socket Set	--	--
<b>Socket Set Consists of:</b>			
9S-1711	Socket	3/16 in	22.2 mm (.88 in)
9S-1712	Socket	7/32 in	22.2 mm (.88 in)
9S-1713	Socket	1/4 in	22.2 mm (.88 in)
9S-1714	Socket	9/32 in	22.2 mm (.88 in)
9S-1715	Socket	5/16 in	22.2 mm (.88 in)
9S-1716	Socket	11/32 in	22.2 mm (.88 in)
9S-1717	Socket	3/8 in	22.2 mm (.88 in)
9S-1718	Socket	7/16 in	22.2 mm (.88 in)
9S-1719	Socket	1/2 in	22.2 mm (.88 in)

Part Number	Description	Size	Length
<b>Accessories</b>			
213-4437	Socket Adapter	1/4 in Female to 3/8 in male	--
239-6823	Reversible Ratchet	1/4 in	--
261-0443	Socket Adapter	3/8 in Female to 1/4 in male	--
9S-1720	Socket Extension	50.8 m (2.00 in)	--
9S-1721	Socket Extension	101.6 mm (4.00 in)	--
9S-1722	Socket Driver	1/4 in	--
9S-1724	Universal Joint	1/4 in	--
9S-1725	Socket Case <sup>1</sup>	--	159.5 mm (6.28 in)

<sup>1</sup>Warranty: Six Months

**213-9965 Socket Set, 10 Piece, 1/4 inch Drive**

Warranty: See individual part number

- 6 point
- 1/4 inch square drive
- Deep length sockets
- Chrome finish
- Includes socket bar and clips
- Can be ordered by set or individually



Part Number	Description	Size	Length
213-9965	Socket Set	--	--
<b>Socket Set Consists of:</b>			
213-9967	Socket	3/16 in	50.8 mm (2 in)
213-9968	Socket	7/32 in	50.8 mm (2 in)
213-9969	Socket	1/4 in	50.8 mm (2 in)
213-9970	Socket	9/32 in	50.8 mm (2 in)
213-9971	Socket	5/16 in	50.8 mm (2 in)
213-9972	Socket	11/32 in	50.8 mm (2 in)
213-9974	Socket	3/8 in	50.8 mm (2 in)
213-9978	Socket	7/16 in	50.8 mm (2 in)
213-9980	Socket	1/2 in	50.8 mm (2 in)
213-9981	Socket	9/16 in	50.8 mm (2 in)

## 9S-1746 Socket Set, 11 Piece, 3/8 inch Drive

Warranty: See individual part number

- 12 point
- 3/8 inch square drive
- Chrome finish
- Can be ordered by set or individually



Part Number	Description	Size	Length
9S-1746	Socket Set	--	--
<b>Sockets Set consists of:</b>			
8S-2274	Socket	3/8 in	23 mm (0.91 in)
8H-8567	Socket	7/16 in	23 mm (0.91 in)
8H-8568	Socket	1/2 in	23.8 mm (0.94 in)
8H-8569	Socket	9/16 in	24.6 mm (0.97 in)
8H-8570	Socket	5/8 in	26.2 mm (1.03 in)
9S-1728	Socket	11/16 in	27 mm (1.06 in)
8H-8571	Socket	3/4 in	27.8 mm (1.09 in)
<b>Accessories included</b>			
8H-8574	Socket Extension	76.2 mm (3.00 in) long	76.2 mm (3 in)
8H-8575	Socket Extension	152.4 mm (6.00 in) long	152.4 mm (6 in)
239-6824	Reversible Ratchet	3/8 in	187.5 mm (7.38 in)
8H-8573	Speeder Handle	3/8 in	447.5 mm (17.62 in)

## 214-1143 Socket Set, 7 Piece, 3/8 inch Drive

Warranty: See individual part number

- 6 point
- 3/8 inch square drive
- Standard length sockets
- Chrome finish
- Includes socket bar and clips
- Can be ordered by set or individually



Part Number	Description	Size	Length
214-1143	Socket Set	--	--
<b>Socket Set Consists of:</b>			
214-1144	Socket	3/8 in	23.1 mm (0.91 in)
214-1145	Socket	7/16 in	23.1 mm (0.91 in)
214-1146	Socket	1/2 in	23.9 mm (0.94 in)
214-1147	Socket	9/16 in	26.2 mm (1.03 in)
214-1148	Socket	5/8 in	27.7 mm (1.09 in)
214-1149	Socket	11/16 in	28.7 mm (1.13 in)
214-1150	Socket	3/4 in	30.2 mm (1.19 in)

**241-0873 Twist Socket Set, 13 Piece, 3/8 inch Drive**

Warranty: Lifetime

- SAE / Metric impact sockets quickly and easily remove damaged or rounded nuts and bolts
- 6 fluted sockets grip onto fastener and tighten as more torque is applied (no hammering required to install socket over fastener)
- Applications include oil pan drain plugs, exhaust manifold nuts, studs, pipe nipples, and corroded marine fasteners
- Shallow depth
- Fits sizes from 10 to 19 mm (3/8 to 3/4 inch)
- 3/8 inch square drive
- Standard length
- Industrial black finish
- Includes plastic tray, socket bar, and clips
- Can be ordered by set or individual



Part Number	Description	Size	Length
241-0873	Twist Socket Set	--	--
<b>Twist Socket Set Consists of:</b>			
241-0868	Socket (3/8 in Drive)	1/2 in	31.7 mm (1.25 in)
241-0860	Socket (3/8 in Drive)	10 mm	31.7 mm (1.25 in)
241-0867	Socket (3/8 in Drive)	11 mm	31.7 mm (1.25 in)
241-0871	Socket (3/8 in Drive)	11/16 in	34.9 mm (1.37 in)
241-0861	Socket (3/8 in Drive)	12 mm	31.7 mm (1.25 in)
241-0862	Socket (3/8 in Drive)	13 mm	31.7 mm (1.25 in)

Part Number	Description	Size	Length
<b>Twist Socket Set Consists of: (Continued)</b>			
241-0863	Socket (3/8 in Drive)	14 mm	31.7 mm (1.25 in)
241-0864	Socket (3/8 in Drive)	15 mm	31.7 mm (1.25 in)
241-0870	Socket (3/8 in Drive)	16 mm	31.7 mm (1.25 in)
241-0865	Socket (3/8 in Drive)	17 mm	31.7 mm (1.25 in)
241-0872	Socket (3/8 in Drive)	19 mm	34.9 mm (1.37 in)
241-0866	Socket (3/8 in Drive)	3/8 in	31.7 mm (1.25 in)
241-0869	Socket (3/8 in Drive)	9/16 in	31.7 mm (1.25 in)

**214-1151 Socket Set, 9 Piece, 3/8 inch Drive**

Warranty: See individual part number

- 6 point
- 3/8 inch square drive
- Deep length sockets
- Polished chrome finish
- Includes socket bar and clips
- Can be ordered by set or individually



Part Number	Description	Size	Length
214-1151	Socket Set	--	--
<b>Socket Set Consists of:</b>			
214-1152	Socket	3/8 in	54 mm (2.13 in)
214-1153	Socket	7/16 in	54 mm (2.13 in)
214-1154	Socket	1/2 in	60.3 mm (2.37 in)
214-1155	Socket	9/16 in	60.3 mm (2.37 in)
214-1156	Socket	5/8 in	60.3 mm (2.37 in)
214-1157	Socket	11/16 in	66.7 mm (2.63 in)
214-1158	Socket	3/4 in	66.7 mm (2.63 in)
214-1159	Socket	13/16 in	69.9 mm (2.75 in)
214-1160	Socket	7/8 in	69.9 mm (2.75 in)

## 214-6490 Socket Set, 9 Piece, 3/8 inch Drive

Warranty: See individual part number



- 12 point
- 3/8 inch square drive
- Deep length sockets
- Chrome finish
- Includes socket bar and clips
- Can be ordered by set or individually

Part Number	Description	Size	Length
214-6490	Socket Set	--	--
<b>Socket Set Consists of:</b>			
214-6491	Socket	3/8 in	54.1 mm (2.13 in)
214-6492	Socket	7/16 in	54.1 mm (2.13 in)
214-6493	Socket	1/2 in	60.5 mm (2.38 in)
214-6494	Socket	11/16 in	66.8 mm (2.63 in)
214-6495	Socket	3/4 in	66.8 mm (2.63 in)
214-6496	Socket	13/16 in	69.9 mm (2.75 in)
6V-0199	Socket	7/8 in	69.9 mm (2.75 in)
8S-2357	Socket	9/16 in	60.5 mm (2.38 in)
9S-5031 <sup>1</sup>	Socket	5/8 in	60.5 mm (2.38 in)

<sup>1</sup> Comes with insert for removing spark plugs

## 271-4600 Impact Socket Set, 12 Piece, 3/8 inch Drive

Warranty: See individual part number



- 6 point
- 3/8 inch drive
- Standard length sockets
- Includes socket bar and clips
- Can be ordered by set or individually

Part Number	Description	Size	Length
271-4600	Impact Socket Set	--	--
<b>Impact Socket Set Consists of:</b>			
271-4601	Socket	5/16 in	22.2 mm (0.87 in)
271-4602	Socket	3/8 in	23.8 mm (0.94 in)
271-4603	Socket	7/16 in	23.8 mm (0.94 in)
271-4604	Socket	1/2 in	23.8 mm (0.94 in)
271-4605	Socket	9/16 in	23.8 mm (0.94 in)
271-4606	Socket	5/8 in	23.8 mm (0.94 in)
271-4607	Socket	11/16 in	26.2 mm (1.03 in)
271-4608	Socket	3/4 in	26.2 mm (1.03 in)
271-4609	Socket	13/16 in	30.2 mm (1.19 in)
271-4610	Socket	7/8 in	32.5 mm (1.28 in)
271-4611	Socket	15/16 in	33.3 mm (1.31 in)
271-4612	Socket	1 in	25.4 mm (1 in)

**271-4613 Impact Socket Set, 7 Piece, 3/8 inch Drive**

Warranty: See individual part number

- 12 point
- 3/8 inch drive
- Standard length sockets
- Includes socket bar and clips
- Can be ordered by set or individually



Part Number	Description	Size	Length
271-4613	Impact Socket Set	--	--
<b>Impact Socket Set Consists of:</b>			
271-4615	Socket	3/8 in	22.2 mm (0.87 in)
271-4616	Socket	7/16 in	23.8 mm (0.94 in)
271-4617	Socket	1/2 in	23.8 mm (0.94 in)
271-4618	Socket	9/16 in	23.8 mm (0.94 in)
271-4619	Socket	5/8 in	23.8 mm (0.94 in)
271-4620	Socket	11/16 in	26.2 mm (1.03 in)
271-4621	Socket	3/4 in	26.2 mm (1.03 in)

**271-4669 Impact Socket Set, 12 Piece, 3/8 inch Drive**

Warranty: See individual part number

- 6 point
- 3/8 inch drive
- Deep length sockets
- Includes socket bar and clips
- Can be ordered by set or individually



Part Number	Description	Size	Length
271-4669	Impact Socket Set	--	--
<b>Impact Socket Set Consists of:</b>			
271-4670	Socket	5/16 in	54 mm (2.13 in)
271-4671	Socket	3/8 in	54 mm (2.13 in)
271-4672	Socket	7/16 in	54 mm (2.13 in)
271-4673	Socket	1/2 in	54 mm (2.13 in)
271-4674	Socket	9/16 in	60.3 mm (2.37 in)
271-4675	Socket	5/8 in	60.3 mm (2.37 in)
271-4676	Socket	11/16 in	74.6 mm (2.94 in)
271-4677	Socket	3/4 in	69.9 mm (2.75 in)
271-4678	Socket	13/16 in	69.9 mm (2.75 in)
271-4679	Socket	7/8 in	69.9 mm (2.75 in)
271-4680	Socket	15/16 in	69.9 mm (2.75 in)
271-4681	Socket	1 in	69.9 mm (2.75 in)

## 2P-5520 Open-End Crowfoot Wrench Group, 9 piece, 3/8 inch Drive

Warranty: See individual part number

- Can be used with 3/8 inch drive ratchet or torque wrenches
- Can be ordered by set or individually



Part Number	Description	Size	Drive
2P-5520	Open-End Crowfoot Wrench Group	--	--
<b>Open-End Crowfoot Wrench Group Consists of:</b>			
2P-5487	Wrench	3/8 in	3/8 in
2P-5488	Wrench	7/16 in	3/8 in
2P-5489	Wrench	1/2 in	3/8 in
2P-5491	Wrench	9/16 in	3/8 in
2P-5492	Wrench	5/8 in	3/8 in
2P-5493	Wrench	11/16 in	3/8 in
2P-5494	Wrench	3/4 in	3/8 in
2P-5495	Wrench	13/16 in	3/8 in
2P-5496	Wrench	7/8 in	3/8 in

## 5P-0336 Crowfoot Wrench Group, 11 Piece

Warranty: See individual part number

- 12 point
- May be used with 3/8 inch or 1/2 inch drive ratchet or torque wrenches
- Can be ordered by set or individually



Part Number	Description	Size	Drive
5P-0336	Crowfoot Wrench Group	--	--
<b>Crowfoot Wrench Group Consists of:</b>			
5P-0324	Wrench	5/8 in	3/8 in
5P-0325	Wrench	11/16 in	3/8 in
5P-0326	Wrench	3/4 in	3/8 in
5P-0327	Wrench	13/16 in	3/8 in
5P-0328	Wrench	7/8 in	3/8 in
5P-0329	Wrench	15/16 in	3/8 in

Part Number	Description	Size	Drive
<b>Crowfoot Wrench Group Consists of: (Continued)</b>			
5P-0331	Wrench	1 in	3/8 in
5P-0332	Wrench	1 1/16 in	3/8 in
5P-0333	Wrench	1 1/8 in	1/2 in
5P-0334	Wrench	1 1/4 in	1/2 in
5P-0335	Wrench	1 3/8 in	1/2 in
<b>Optional Wrenches (not included in 5P-0336)</b>			
1U-5536	Wrench	1 5/16 in	1/2 in
5P-0294	Wrench	1 11/16 in	1/2 in

### 9S-1748 Socket Set, 16 Piece, 1/2 inch Drive

Warranty: See individual part number

- 12 point
- 1/2 inch square drive
- Chrome finish
- Can be ordered by set or individually

Part Number	Description	Size	Length
9S-1748	Socket Set	--	--
<b>Socket Set Consists of:</b>			
1S-0259	Socket	1/2 in	38.1 mm (1.50 in)
8H-8549	Socket	9/16 in	38.1 mm (1.50 in)
8H-8550	Socket	5/8 in	38.1 mm (1.50 in)
8H-8551	Socket	11/16 in	38.1 mm (1.50 in)
8H-8552	Socket	3/4 in	38.1 mm (1.50 in)
8H-8553	Socket	13/16 in	38.1 mm (1.50 in)
8H-8554	Socket	7/8 in	38.1 mm (1.50 in)
8H-8555	Socket	15/16 in	38.1 mm (1.50 in)
8H-8556	Socket	1 in	38.1 mm (1.50 in)
9S-1729	Socket	1 1/16 in	41.3 mm (1.63 in)
9S-1730	Socket	1 1/8 in	44.5 mm (1.75 in)
9S-1731	Socket	1 1/4 in	47.6 mm (1.87 in)
<b>Accessories Included</b>			
239-6826	Reversible Ratchet	1/2 in	381 mm (15 in)
168-0383	Breaker Bar	1/2 in	457.2 mm (18 in)
8H-8559	Socket Extension	1/2 in drive, 254.0 mm (10.00 in) long	279 mm (10.98 in)
9S-1732	Socket Extension	1/2 in drive, 127.0 mm (5.00 in) long	127 mm (5 in)



### 214-6498 Socket Set, 12 Piece, 1/2 inch Drive

Warranty: See individual part number

- 6 point
- 1/2 inch square drive
- Standard length sockets
- Chrome finish
- Includes socket bar and clips
- Can be ordered by set or individually

Part Number	Description	Size	Length
214-6498	Socket Set	--	--
<b>Socket Set Consists of:</b>			
214-6500	Socket	7/16 in	38.1 mm (1.50 in)
214-6501	Socket	1/2 in	38.1 mm (1.50 in)
214-6503	Socket	9/16 in	38.1 mm (1.50 in)
214-6504	Socket	5/8 in	38.1 mm (1.50 in)
214-6506	Socket	11/16 in	38.1 mm (1.50 in)
214-6507	Socket	3/4 in	38.1 mm (1.50 in)
214-6509	Socket	13/16 in	38.1 mm (1.50 in)
214-6510	Socket	7/8 in	38.1 mm (1.50 in)
214-6511	Socket	15/16 in	38.9 mm (1.53 in)
214-6512	Socket	1 in	39.7 mm (1.56 in)
214-6513	Socket	1 1/16 in	42.9 mm (1.69 in)
214-6514	Socket	1 1/8 in	44.5 mm (1.75 in)





## 2P-5490 Deep Well Socket Set, 9 Piece, 1/2 inch Drive

Warranty: See individual part number

- 6 point
- 1/2 inch square drive
- Chrome finish
- Includes socket bar and clips
- Can be ordered by set or individually



Part Number	Description	Size	Length
2P-5490	Deep Well Socket Set	--	--
<b>Deep Well Socket Set Consists of:</b>			
2P-5475	Socket	1/2 in	82.6 mm (3.25 in)
2P-5476	Socket	9/16 in	82.6 mm (3.25 in)
2P-5477	Socket	5/8 in	82.6 mm (3.25 in)
2P-5478	Socket	11/16 in	82.6 mm (3.25 in)
2P-5479	Socket	3/4 in	82.6 mm (3.25 in)
2P-5481	Socket	13/16 in	82.6 mm (3.25 in)
2P-5482	Socket	7/8 in	82.6 mm (3.25 in)
2P-5483	Socket	15/16 in	82.6 mm (3.25 in)
2P-5484	Socket	1 in	82.6 mm (3.25 in)

## 213-3086 Impact Socket Set, 11 Piece, 1/2 inch Drive

Warranty: See individual part number



- 6 point
- 1/2 inch square drive
- Standard length sockets
- Black oxide finish
- Includes socket bar and clips
- Can be ordered by set or individually

Part Number	Description	Size	Length
213-3086	Impact Socket Set	--	--
<b>Impact Socket Set Consists of:</b>			
213-3087	Socket	1/2 in	38.1 mm (1.50 in)
213-3088	Socket	9/16 in	38.1 mm (1.50 in)
213-3089	Socket	5/8 in	38.1 mm (1.50 in)
213-3091	Socket	11/16 in	38.1 mm (1.50 in)

Part Number	Description	Size	Length
<b>Impact Socket Set Consists of: (Continued)</b>			
213-3094	Socket	3/4 in	38.1 mm (1.50 in)
213-3099	Socket	13/16 in	38.1 mm (1.50 in)
213-3102	Socket	7/8 in	38.1 mm (1.50 in)
213-3104	Socket	15/16 in	44.5 mm (1.75 in)
213-3107	Socket	1 in	44.5 mm (1.75 in)
213-3109	Socket	1 1/16	50.8 mm (2 in)
213-3110	Socket	1 1/8 in	50.8 mm (2 in)

## 213-3515 Impact Socket Set, 12 Piece, 1/2 inch Drive

Warranty: See individual part number



- 6 point
- 1/2 inch square drive
- Deep length sockets
- Black oxide finish
- Includes socket bar and clips
- Can be ordered by set or individually

(Continued)

**213-3515 Impact Socket Set, 12 Piece, 1/2 inch Drive (Continued)**

Warranty: See individual part number

Part Number	Description	Size	Length
213-3515	Impact Socket Set	--	--
<b>Impact Socket Set Consists of:</b>			
213-3516	Socket	7/16 in	82.6 mm (3.25 in)
213-3517	Socket	1/2 in	82.6 mm (3.25 in)
213-3518	Socket	9/16 in	82.6 mm (3.25 in)
213-3520	Socket	5/8 in	82.6 mm (3.25 in)
213-3521	Socket	11/16 in	82.6 mm (3.25 in)
<b>Impact Socket Set Consists of: (Continued)</b>			
213-3522	Socket	3/4 in	82.6 mm (3.25 in)
213-3523	Socket	13/16 in	82.6 mm (3.25 in)
213-3524	Socket	7/8 in	88.9 mm (3.50 in)
213-3525	Socket	15/16 in	88.9 mm (3.50 in)
213-3526	Socket	1 in	88.9 mm (3.50 in)
213-3528	Socket	1 1/16 in	88.9 mm (3.50 in)
213-3530	Socket	1 1/8 in	88.9 mm (3.50 in)

**214-1161 Socket Set, 11 Piece, 1/2 inch Drive**

Warranty: See individual part number

- 12 point
- 1/2 inch square drive
- Deep length sockets
- Polished chrome finish
- Includes socket bar and clips
- Can be ordered by set or individually

Part Number	Description	Size	Length
214-1161	Socket Set	--	--
<b>Socket Set Consists of:</b>			
214-1162	Socket	1/2 in	82.6 mm (3.25 in)
214-1163	Socket	9/16 in	82.6 mm (3.25 in)
214-1164	Socket	5/8 in	82.6 mm (3.25 in)
214-1165	Socket	11/16 in	82.6 mm (3.25 in)
214-1166	Socket	3/4 in	82.6 mm (3.25 in)
214-1167	Socket	13/16 in	82.6 mm (3.25 in)
214-1168	Socket	7/8 in	82.6 mm (3.25 in)
214-1169	Socket	15/16 in	82.6 mm (3.25 in)
214-1170	Socket	1 in	82.6 mm (3.25 in)
214-1171	Socket	1 11/16 in	82.6 mm (3.25 in)
214-1172	Socket	1 1/8 in	82.6 mm (3.25 in)



Hand Tools

**9S-1747 Universal Socket Set, 7 Piece, 3/8 inch Drive**

Warranty: See individual part number

- 12 point
- 3/8 inch universal drive
- Polished chrome finish
- Can be ordered by set or individually

Part Number	Description	Size	Length
9S-1747	Universal Socket Set	--	--
<b>Socket Set Consists of:</b>			
8S-2284	Universal Socket	3/8 in	40.1 mm (1.58 in)
8H-8562	Universal Socket	7/16 in	40.1 mm (1.58 in)
8H-8563	Universal Socket	1/2 in	42.1 mm (1.66 in)
8H-8564	Universal Socket	9/16 in	42.8 mm (1.69 in)
8H-8565	Universal Socket	5/8 in	44.5 mm (1.75 in)
9S-1727	Universal Socket	11/16 in	49.6 mm (1.95 in)



(Continued)

## 9S-1747 Universal Socket Set, 7 Piece, 3/8 inch Drive (Continued)

Warranty: See individual part number

Part Number	Description	Size	Length
<b>Socket Set Consists of: (Continued)</b>			
8H-8566	Universal Socket	3/4 in	50.4 mm (1.98 in)

## 261-8581 Universal Impact Socket Set, 7 Piece, 3/8 inch Drive

Warranty: See individual part number



- 6 point
- 3/8 inch square drive
- Includes socket bar and clips
- Can be ordered by set or individually

Part Number	Description	Size	Length
261-8581	Universal Impact Socket Set	--	--
<b>Socket Set Consists of:</b>			
261-8583	Socket	3/8 in	50 mm (1.97 in)
261-8585	Socket	7/16 in	50 mm (1.97 in)
261-8586	Socket	1/2 in	54.1 mm (2.13 in)
261-8587	Socket	9/16 in	55.6 mm (2.19 in)
261-8589	Socket	5/8 in	57.2 mm (2.25 in)
261-8590	Socket	11/16 in	64.3 mm (2.53 in)
261-8591	Socket	3/4 in	65.8 mm (2.59 in)

## 214-6518 Universal Impact Socket Set, 5 Piece, 1/2 inch Drive

- 6 point
- 1/2 inch square drive
- Black oxide finish
- Includes socket bar and clips
- Can be ordered by set or individually



Part Number	Description	Size	Length
214-6518	Universal Impact Socket Set	--	--
<b>Universal Impact Socket Set Consists of:</b>			
214-6521	Socket	1/2 in	73.8 mm (2.91 in)
214-6522	Socket	9/16 in	73.8 mm (2.91 in)
214-6523	Socket	5/8 in	73.8 mm (2.91 in)
214-6524	Socket	11/16 in	77.8 mm (3.06 in)
214-6526	Socket	3/4 in	77.8 mm (3.06 in)

**246-8184 Universal Impact Socket Set, 14 Piece, 1/2 inch Drive**

- 6 point
- 1/2 inch square drive
- Black oxide finish
- Standard length impact sockets
- Includes socket bar and clips
- Can be ordered by set or individually



Part Number	Description	Size	Length
246-8184	Socket Set	--	--
<b>Universal Impact Socket Set Consists of:</b>			
214-6521	Socket	1/2 in	73.8 mm (2.91 in)
214-6522	Socket	9/16 in	73.8 mm (2.91 in)
214-6523	Socket	5/8 in	73.8 mm (2.91 in)
214-6524	Socket	11/16 in	77.8 mm (3.06 in)
214-6526	Socket	3/4 in	77.8 mm (3.06 in)
246-8173	Socket	13/16 in	77.8 mm (3.06 in)
246-8175	Socket	7/8 in	77.8 mm (3.06 in)
246-8176	Socket	15/16 in	77.8 mm (3.06 in)
246-8177	Socket	1 in	77.8 mm (3.06 in)
246-8178	Socket	1 1/16 in	80.2 mm (3.16 in)
246-8179	Socket	1 1/8 in	84.9 mm (3.34 in)
246-8180	Socket	1 3/16 in	84.9 mm (3.34 in)
246-8181	Socket	1 1/4 in	86.5 mm (3.41 in)
246-8182	Socket	1 5/16 in	86.5 mm (3.41 in)

**9S-1749 Socket Set, 21 Piece, 3/4 inch Drive**

Warranty: See individual part number

- 12 point
- 3/4 inch drive
- Chrome finish
- Can be ordered by set or individually



Part Number	Description	Size	Length
9S-1749	Socket Set	--	--
<b>Socket Set Consists of:</b>			
8H-8531	Socket	15/16 in	50.8 mm (2 in)
8H-8529	Socket	3/4 in	50.8 mm (2 in)
8H-8530	Socket	7/8 in	50.8 mm (2 in)
8H-8532	Socket	1 in	52.4 mm (2.06 in)
8H-8533	Socket	1 1/16 in	54 mm (2.13 in)
8H-8534	Socket	1 1/8 in	55.5 mm (2.19 in)
8H-8535	Socket	1 1/4 in	57.2 mm (2.25 in)
8H-8536	Socket	1 5/16 in	58.7 mm (2.31 in)
8H-8537	Socket	1 1/2 in	63.5 mm (2.50 in)
8H-8539	Socket	1 5/8 in	66.7 mm (2.63 in)

Part Number	Description	Size	Length
<b>Socket Set Consists of: (Continued)</b>			
8H-8538	Socket	1 11/16 in	69.9 mm (2.75 in)
8H-8540	Socket	1 3/4 in	69.9 mm (2.75 in)
8H-8541	Socket	1 7/8 in	79.4 mm (3.13 in)
8H-8542	Socket	2 in	79.4 mm (3.13 in)
8H-8504	Socket	2 1/4 in	82.6 mm (3.25 in)
8H-8543	Socket	2 1/8 in	82.6 mm (3.25 in)
8H-8544	Socket	2 3/16 in	82.6 mm (3.25 in)

(Continued)

# Hand Tools (Inch)

## 9S-1749 Socket Set, 21 Piece, 3/4 inch Drive (Continued)

Warranty: See individual part number

Part Number	Description	Size	Length
<b>Accessories Included</b>			
8H-8546	Breaker Bar Head	3/4 in	93.6 mm (3.69 in)
8H-8548	Socket Extension	203.2 mm (8.00 in) long	203.2 mm (8 in)
162-8716	Ratchet Head Handle	--	489 mm (19.25 in)

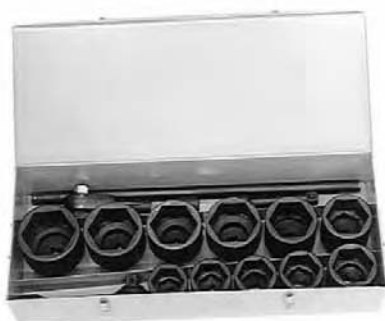
Part Number	Description	Size	Length
<b>Accessories Included (Continued)</b>			
160-6389	Reversible Ratchet Head <sup>1</sup>	3/4 in	--

<sup>1</sup> 160-6390 Repair Kit

## 5S-6093 Heavy-Duty Socket Set, 17 Piece, 1 inch Drive

Warranty: See individual part number

- 6 point
- 1 inch square drive
- Black oxide finish
- Can be ordered by set or individually



Part Number	Description	Size	Length
5S-6093	Socket Set	--	--
<b>Heavy-Duty Socket Set Consists of:</b>			
5S-6077	Socket	2 3/8 in <sup>1</sup>	98.4 mm (3.87 in)
5S-6078	Socket	2 1/2 in <sup>1</sup>	104.8 mm (4.13 in)
5S-6079	Socket	2 5/8 in <sup>1</sup>	57.2 mm (2.25 in)
5S-6080	Socket	2 3/4 in <sup>1</sup>	114.3 mm (4.50 in)
5S-6081	Socket	3 in <sup>1</sup>	123.8 mm (4.87 in)
5S-6082	Socket	3 1/8 in <sup>1</sup>	127 mm (5 in)
5S-6083	Socket	3 1/4 in <sup>1</sup>	127 mm (5 in)
5S-6084	Socket	3 1/2 in <sup>1</sup>	133.4 mm (5.25 in)
5S-6085	Socket	3 5/8 in <sup>1</sup>	133.4 mm (5.25 in)
5S-6086	Socket	3 3/4 in <sup>1</sup>	136.5 mm (5.37 in)
5S-6087	Socket	4 in <sup>1</sup>	127 mm (5 in)
<b>Accessories Included</b>			
5S-6092	Tool Box <sup>2</sup>	--	788.7 mm (31.05 in)
5S-6088	Sledge Socket Wrench <sup>2</sup>	--	--
161-3983	Ratchet Head <sup>3</sup>	--	--
5S-6089	Wrench Handle	--	736.6 mm (29 in)
5S-6076	Socket Extension	203.2 mm (8.00 in)	203.2 mm (8 in)
5S-6090	Sliding T Wrench Head	--	--

<sup>1</sup> Chrome Finish

<sup>2</sup> Warranty: Six Months

<sup>3</sup> 161-3985 Repair Kit (5S-6094 Repair Kit is available for former 5S-6091 Ratchet Head.)

**214-6142 Hex Driver Set, 10 Piece**

Warranty: See individual part number

- Seven 3/8 inch drive hex sockets and three 1/2 inch drive hex sockets
- Includes socket bar and clips
- Can be ordered by set or individually

Part Number	Description	Hex Size	Square Drive	Overall Length	Replacement Bit
214-6142	Hex Driver Set	--	--	--	--
<b>Hex Driver Set Consists of:</b>					
2P-8263	Drive Hex Socket	1/8 in	3/8 in	52.39 (2.06 in)	2P-8269
2P-8264	Drive Hex Socket	5/32 in	3/8 in	52.39 (2.06 in)	2P-8271
2P-8265	Drive Hex Socket	3/16 in	3/8 in	52.39 (2.06 in)	2P-8272
2P-8266	Drive Hex Socket	1/4 in	3/8 in	52.39 (2.06 in)	2P-8273
2P-8267	Drive Hex Socket	5/16 in	3/8 in	52.39 (2.06 in)	--
2P-8268	Drive Hex Socket	3/8 in	3/8 in	53.18 (2.09 in)	2P-8275
8T-3042	Drive Hex Socket	7/32 in	3/8 in	52.39 (2.06 in)	8T-3043
214-7320	Drive Hex Socket	1/2 in	1/2 in	53.18 (2.09 in)	214-7321
214-7327	Drive Hex Socket	9/16 in	1/2 in	53.18 (2.09 in)	1P-3566
214-7328	Drive Hex Socket	5/8 in	1/2 in	53.18 (2.09 in)	214-7331
<b>Individual Socket and Hex Bit</b>					
5P-7253	Socket and Hex Bit	9/64 in	--	--	--

**246-8499 Hex Ball Driver Socket Set, 8 Piece**

Warranty: See individual part number

- Four 1/4 inch drive hex ball sockets and four 3/8 inch drive hex ball sockets
- Material: steel
- Includes socket bar and clips
- Can be ordered by set or individually

Part Number	Description	Hex Size	Square Drive	Overall Length
246-8499	Hex Ball Driver Socket Set	--	--	--
<b>Hex Ball Driver Socket Set Consists of:</b>				
243-5178	Socket	1/8 in	1/4 in	47.63 mm (1 7/8 in)
243-5179	Socket	9/64 in	1/4 in	47.63 mm (1 7/8 in)
243-5180	Socket	5/32 in	1/4 in	47.63 mm (1 7/8 in)
243-5181	Socket	3/16 in	1/4 in	49.21 mm (1 15/16 in)
243-5175	Socket	7/32 in	3/8 in	52.39 mm (2 1/16 in)
243-5177	Socket	1/4 in	3/8 in	52.39 mm (2 1/16 in)
243-5173	Socket	5/16 in	3/8 in	53.18 mm (2 3/32 in)
243-5174	Socket	3/8 in	3/8 in	53.18 mm (2 3/32 in)



## Drivers for TORX Screws

Warranty: Lifetime



Part Number	Description	Size	Use
6V-2123	Socket Assembly	3/8 in square drive	Removal of TORX T-55 screws which retain brake cylinders to support plates on "V" Series Lift Trucks
5P-3038	Socket Assembly	3/8 in square drive	Removal of shaft seal and bearing retainer fasteners TORX T-30 on 16G Motor Grader circle drive motor
5P-8689	Socket Assembly	3/8 in square drive	Assembly and disassembly of TORX T-50 fasteners on cab door strikers

## 194-3584 TORX Driver Set, 10 Piece

Warranty: See individual part number

- Ten pieces, 1/4 inch and 3/8 inch square drive
- TORXALIGN design grips TORX fasteners for easier fastener starting (TORX and TORXALIGN are registered trademarks of Camcar, Inc.)
- Includes socket bar and clips
- Can be ordered by set or individually



Torx Size	Part Number	Description	Square Drive	Overall Length
<b>Complete Driver Set</b>				
--	194-3584	Torx Socket Set	--	--
<b>TORXALIGN Bits</b>				
T10	194-3531	Socket, Assembly, T10	1/4 in	39.6 mm (1.56 in)
T15	194-3532	Socket, Assembly, T15	1/4 in	39.6 mm (1.56 in)
T20	194-3533	Socket, Assembly, T20	1/4 in	39.6 mm (1.56 in)
T25	194-3534	Socket, Assembly, T25	1/4 in	39.6 mm (1.56 in)
T30	194-3535	Socket, Assembly, T30	3/8 in	44.5 mm (1.75 in)
T40	194-3536	Socket, Assembly, T40	3/8 in	44.5 mm (1.75 in)
T45	194-3537	Socket, Assembly, T45	3/8 in	52.3 mm (2.06 in)
T50	194-3538	Socket, Assembly, T50	3/8 in	52.3 mm (2.06 in)
T55	194-3539	Socket, Assembly, T55	3/8 in	51.6 mm (2.03 in)
<b>One Piece, 1/4 inch Square Drive TORX Socket included</b>				
E8	194-3540	Square Drive TORX Socket	1/4 in	22.2 mm (0.87 in)

**227-4383 Inverted TORX Socket Set, 10 Piece**

Warranty: See individual part number

- TORX sockets for fuel system maintenance and repair
- Ten piece set, 1/4 inch and 3/8 inch square drive
- Socket teeth provide maximum engagement and increased gripping ability
- Each socket can be ordered separately
- Sockets should not be used with power drivers (air wrenches, etc.)
- Chrome plating prevents corrosion and cleans easily
- Includes socket rail and clips to keep sockets neatly organized
- Can be ordered by set or individually



Torx Size	Square Drive	Part Number	Overall Length
<b>Complete Socket Set</b>			
--	--	227-4383	--
<b>Set Consists of:</b>			
E4	1/4 in	227-4384	22 mm (0.87 in)
E5	1/4 in	227-4385	22 mm (0.87 in)
E6	1/4 in	227-4386	22 mm (0.87 in)
E7	1/4 in	227-4387	22 mm (0.87 in)
E8	1/4 in	227-4388	22 mm (0.87 in)
E10	3/8 in	227-4389	30 mm (1.18 in)
E12	3/8 in	227-4390	30 mm (1.18 in)
E14	3/8 in	227-4391	30 mm (1.18 in)
E16	3/8 in	227-4392	32 mm (1.26 in)
E18	3/8 in	227-4393	33 mm (1.30 in)

**Individual Sockets, 1/4 through 1 1/2 inch Drive**

Warranty: Lifetime

- All sockets are chrome finish unless otherwise stated



Part Number	Size	Length
<b>1/4 inch Drive, Standard Length Sockets, 12 Point</b>		
9S-1711	3/16 in	22.2 mm (0.87 in)
9S-1712	7/32 in	22.2 mm (0.87 in)
9S-1713	1/4 in	22.2 mm (0.87 in)
9S-1714	9/32 in	22.2 mm (0.87 in)
9S-1715	5/16 in	22.2 mm (0.87 in)
9S-1716	11/32 in	22.2 mm (0.87 in)
9S-1717	3/8 in	22.2 mm (0.87 in)
9S-1718	7/16 in	22.2 mm (0.87 in)
9S-1719	1/2 in	22.2 mm (0.87 in)
5P-0127	5/16 in <sup>1</sup>	31.8 mm (1.25 in)
9S-2573	3/8 in <sup>2</sup>	50.8 mm (2 in)

Part Number	Size	Length
<b>1/4 inch Drive, Deep Length Sockets, 6 Point, Chrome</b>		
213-9967	3/16 in	50.8 mm (2 in)
213-9968	7/32 in	50.8 mm (2 in)
213-9969	1/4 in	50.8 mm (2 in)
213-9970	9/32 in	50.8 mm (2 in)
213-9971	5/16 in	50.8 mm (2 in)
213-9972	11/32 in	50.8 mm (2 in)
213-9974	3/8 in	50.8 mm (2 in)
213-9978	7/16 in	50.8 mm (2 in)
213-9980	1/2 in	50.8 mm (2 in)
213-9981	9/16 in	50.8 mm (2 in)

(Continued)



# Hand Tools (Inch)

## Individual Sockets, 1/4 through 1 1/2 inch Drive (Continued)

Warranty: Lifetime

Part Number	Size	Length
<b>3/8 inch Drive, Universal Sockets, 12 Point</b>		
8H-8562	7/16 in	40.1 mm (1.58 in)
8S-2284	3/8 in	40.1 mm (1.58 in)
8H-8563	1/2 in	42.1 mm (1.66 in)
8H-8564	9/16 in	42.8 mm (1.69 in)
8H-8565	5/8 in	44.5 mm (1.75 in)
9S-1727	11/16 in	49.6 mm (1.95 in)
8H-8566	3/4 in	50.4 mm (1.98 in)
<b>3/8 inch Drive, Standard Length Sockets, 12 Point</b>		
8H-8567	7/16 in	23 mm (0.91 in)
8S-2274	3/8 in	23 mm (0.91 in)
8H-8568	1/2 in	23.8 mm (0.94 in)
8H-8569	9/16 in	24.6 mm (0.97 in)
8H-8570	5/8 in	26.2 mm (1.03 in)
9S-1728	11/16 in	27 mm (1.06 in)
8H-8571	3/4 in	27.8 mm (1.09 in)
8S-1589	1/4 in <sup>3</sup>	31.8 mm (1.25 in)
8S-1590	5/16 in <sup>3</sup>	31.8 mm (1.25 in)
8S-1591	3/8 in	38.1 mm (1.50 in)
8S-1592	7/16 in	38.1 mm (1.50 in)
<b>3/8 inch Drive, Deep Length Sockets, 12 Point, Chrome</b>		
3P-2210 <sup>4</sup>	7/16 in	54 mm (2.13 in)
214-6491	3/8 in	54.1 mm (2.13 in)
214-6492	7/16 in	54.1 mm (2.13 in)
214-6493	1/2 in	60.5 mm (2.38 in)
8S-2357	9/16 in	60.5 mm (2.38 in)
9S-5031 <sup>5</sup>	5/8 in	60.5 mm (2.38 in)
214-6494	11/16 in	66.8 mm (2.63 in)
214-6495	3/4 in	66.8 mm (2.63 in)
214-6496	13/16 in	69.9 mm (2.75 in)
6V-0199	7/8 in	69.9 mm (2.75 in)
<b>3/8 inch Drive, Standard Length Sockets, 6 Point, Chrome</b>		
214-1144	3/8 in	23.1 mm (0.91 in)
214-1145	7/16 in	23.1 mm (0.91 in)
214-1146	1/2 in	23.9 mm (0.94 in)
214-1147	9/16 in	26.2 mm (1.03 in)
214-1148	5/8 in	27.7 mm (1.09 in)
214-1149	11/16 in	28.7 mm (1.13 in)
214-1150	3/4 in	30.2 mm (1.19 in)
<b>3/8 inch Drive, Deep Length Sockets, 6 Point, Chrome</b>		
214-1152	3/8 in	54 mm (2.13 in)
214-1153	7/16 in	54 mm (2.13 in)
214-1154	1/2 in	60.3 mm (2.37 in)
214-1155	9/16 in	60.3 mm (2.37 in)
214-1156	5/8 in	60.3 mm (2.37 in)
214-1157	11/16 in	66.7 mm (2.63 in)
214-1158	3/4 in	66.7 mm (2.63 in)
214-1159	13/16 in	69.9 mm (2.75 in)

Part Number	Size	Length
<b>3/8 inch Drive, Deep Length Sockets, 6 Point, Chrome (Continued)</b>		
214-1160	7/8 in	69.9 mm (2.75 in)
<b>3/8 inch Drive, Standard Length Impact Sockets, 6 Point</b>		
271-4601	5/16 in	22.2 mm (0.87 in)
271-4602	3/8 in	23.8 mm (0.94 in)
271-4603	7/16 in	23.8 mm (0.94 in)
271-4604	1/2 in	23.8 mm (0.94 in)
271-4605	9/16 in	23.8 mm (0.94 in)
271-4606	5/8 in	23.8 mm (0.94 in)
271-4612	1 in	25.4 mm (1 in)
271-4607	11/16 in	26.2 mm (1.03 in)
271-4608	3/4 in	26.2 mm (1.03 in)
271-4609	13/16 in	30.2 mm (1.19 in)
271-4610	7/8 in	32.5 mm (1.28 in)
271-4611	15/16 in	33.3 mm (1.31 in)
<b>3/8 inch Drive, Deep Length Impact Sockets, 12 Point</b>		
271-4615	3/8 in	22.2 mm (0.87 in)
271-4616	7/16 in	23.8 mm (0.94 in)
271-4617	1/2 in	23.8 mm (0.94 in)
271-4618	9/16 in	23.8 mm (0.94 in)
271-4619	5/8 in	23.8 mm (0.94 in)
271-4620	11/16 in	26.2 mm (1.03 in)
271-4621	3/4 in	26.2 mm (1.03 in)
<b>3/8 inch Drive, Deep Length Impact Sockets, 6 Point</b>		
271-4670	5/16 in	54 mm (2.13 in)
271-4671	3/8 in	54 mm (2.13 in)
271-4672	7/16 in	54 mm (2.13 in)
271-4673	1/2 in	54 mm (2.13 in)
271-4674	9/16 in	60.3 mm (2.37 in)
271-4675	5/8 in	60.3 mm (2.37 in)
271-4677	3/4 in	69.9 mm (2.75 in)
271-4678	13/16 in	69.9 mm (2.75 in)
271-4679	7/8 in	69.9 mm (2.75 in)
271-4680	15/16 in	69.9 mm (2.75 in)
271-4681	1 in	69.9 mm (2.75 in)
271-4676	11/16 in	74.6 mm (2.94 in)
<b>1/2 inch Drive, Standard Length Sockets, 12 Point</b>		
1S-0259	1/2 in	38.1 mm (1.50 in)
214-6497	7/16 in	38.1 mm (1.50 in)
8H-8549	9/16 in	38.1 mm (1.50 in)
8H-8550	5/8 in	38.1 mm (1.50 in)
8H-8551	11/16 in	38.1 mm (1.50 in)
8H-8552	3/4 in	38.1 mm (1.50 in)
8H-8553	13/16 in	38.1 mm (1.50 in)
8H-8554	7/8 in	38.1 mm (1.50 in)
8H-8555	15/16 in	38.1 mm (1.50 in)
8H-8556	1 in	38.1 mm (1.50 in)

(Continued)

## Individual Sockets, 1/4 through 1 1/2 inch Drive (Continued)

Warranty: Lifetime

Part Number	Size	Length	Part Number	Size	Length
<b>1/2 inch Drive, Standard Length Sockets, 12 Point (Continued)</b>			<b>1/2 inch Drive, Standard Length Impact Sockets, 6 Point, Black (Continued)</b>		
9S-1729	1 1/16 in	41.3 mm (1.63 in)	213-3091	11/16 in	38.1 mm (1.50 in)
8S-1593	1/2 in	44.5 mm (1.75 in)	213-3094	3/4 in	38.1 mm (1.50 in)
8S-1594	9/16 in	44.5 mm (1.75 in)	213-3099	13/16 in	38.1 mm (1.50 in)
8S-1595	5/8 in	44.5 mm (1.75 in)	213-3102	7/8 in	38.1 mm (1.50 in)
8S-1596	11/16 in	44.5 mm (1.75 in)	213-3104	15/16 in	44.5 mm (1.75 in)
9S-1730	1 1/8 in	44.5 mm (1.75 in)	213-3107	1 in	44.5 mm (1.75 in)
9S-1731	1 1/4 in	47.6 mm (1.87 in)	213-3109	1 1/16 in	50.8 mm (2 in)
<b>1/2 inch Drive, Standard Length Sockets, 6 Point, Chrome</b>			213-3110	1 1/8 in	50.8 mm (2 in)
214-6500	7/16 in	38.1 mm (1.50 in)	<b>1/2 inch Drive, Universal Impact Sockets, 6 Point, Black</b>		
214-6501	1/2 in	38.1 mm (1.50 in)	214-6521	1/2 in	73.8 mm (2.91 in)
214-6503	9/16 in	38.1 mm (1.50 in)	214-6522	9/16 in	73.8 mm (2.91 in)
214-6504	5/8 in	38.1 mm (1.50 in)	214-6523	5/8 in	73.8 mm (2.91 in)
214-6506	11/16 in	38.1 mm (1.50 in)	214-6524	11/16 in	77.8 mm (3.06 in)
214-6507	3/4 in	38.1 mm (1.50 in)	214-6526	3/4 in	77.8 mm (3.06 in)
214-6509	13/16 in	38.1 mm (1.50 in)	<b>1/2 inch Drive, Deep Length Impact Sockets, 6 Point, Black</b>		
214-6510	7/8 in	38.1 mm (1.50 in)	213-3516	7/16 in	82.6 mm (3.25 in)
214-6511	15/16 in	38.9 mm (1.53 in)	213-3517	1/2 in	82.6 mm (3.25 in)
214-6512	1 in	39.7 mm (1.56 in)	213-3518	9/16 in	82.6 mm (3.25 in)
214-6513	1 1/16 in	42.9 mm (1.69 in)	213-3520	5/8 in	82.6 mm (3.25 in)
214-6514	1 1/8 in	44.5 mm (1.75 in)	213-3521	11/16 in	82.6 mm (3.25 in)
<b>1/2 inch Drive, Deep Length Sockets, 12 Point</b>			213-3522	3/4 in	82.6 mm (3.25 in)
214-1162	1/2 in	82.6 mm (3.25 in)	213-3523	13/16 in	82.6 mm (3.25 in)
214-1163	9/16 in	82.6 mm (3.25 in)	1U-8701	1 1/4 in	88.9 mm (3.50 in)
214-1164	5/8 in	82.6 mm (3.25 in)	213-3524	7/8 in	88.9 mm (3.50 in)
214-1165	11/16 in	82.6 mm (3.25 in)	213-3525	15/16 in	88.9 mm (3.50 in)
214-1166	3/4 in	82.6 mm (3.25 in)	213-3526	1 in	88.9 mm (3.50 in)
214-1167	13/16 in	82.6 mm (3.25 in)	213-3528	1 1/16 in	88.9 mm (3.50 in)
214-1168	7/8 in	82.6 mm (3.25 in)	213-3530	1 1/8 in	88.9 mm (3.50 in)
214-1169	15/16 in	82.6 mm (3.25 in)	<b>3/4 inch Drive, Standard Length Sockets, 12 Point</b>		
214-1170	1 in	82.6 mm (3.25 in)	8H-8529	3/4 in	50.8 mm (2 in)
214-1171	1 11/16 in	82.6 mm (3.25 in)	8H-8530	7/8 in	50.8 mm (2 in)
214-1172	1 1/8 in	82.6 mm (3.25 in)	8H-8531	15/16 in	50.8 mm (2 in)
<b>1/2 inch Drive, Deep Length Sockets, 6 Point</b>			8H-8532	1 in	52.4 mm (2.06 in)
2P-5475	1/2 in	82.6 mm (3.25 in)	8H-8533	1 1/16 in	54 mm (2.13 in)
2P-5476	9/16 in	82.6 mm (3.25 in)	8H-8534	1 1/8 in	55.5 mm (2.19 in)
2P-5477	5/8 in	82.6 mm (3.25 in)	8H-8535	1 1/4 in	57.2 mm (2.25 in)
2P-5478	11/16 in	82.6 mm (3.25 in)	8S-1601	1 in	57.2 mm (2.25 in)
2P-5479	3/4 in	82.6 mm (3.25 in)	8H-8536	1 5/16 in	58.7 mm (2.31 in)
2P-5481	13/16 in	82.6 mm (3.25 in)	8H-8537	1 1/2 in	63.5 mm (2.50 in)
2P-5482	7/8 in	82.6 mm (3.25 in)	8H-8539	1 5/8 in	66.7 mm (2.63 in)
2P-5483	15/16 in	82.6 mm (3.25 in)	8H-8538	1 11/16 in	69.9 mm (2.75 in)
2P-5484	1 in	82.6 mm (3.25 in)	8H-8540	1 3/4 in	69.9 mm (2.75 in)
<b>1/2 inch Drive, Standard Length Impact Sockets, 6 Point, Black</b>			8H-8541	1 7/8 in	79.4 mm (3.13 in)
213-3087	1/2 in	38.1 mm (1.50 in)	8H-8542	2 in	79.4 mm (3.13 in)
213-3088	9/16 in	38.1 mm (1.50 in)	2P-8276	5/8 in <sup>3</sup>	82.6 mm (3.25 in)
213-3089	5/8 in	38.1 mm (1.50 in)	8H-8504	2 1/4 in	82.6 mm (3.25 in)

(Continued)

# Hand Tools (Inch)

## Individual Sockets, 1/4 through 1 1/2 inch Drive (Continued)

Warranty: Lifetime

Part Number	Size	Length
<b>3/4 inch Drive, Standard Length Sockets, 12 Point (Continued)</b>		
8H-8543	2 1/8 in	82.6 mm (3.25 in)
8H-8544	2 3/16 in	82.6 mm (3.25 in)
8S-1597	3/4 in	82.6 mm (3.25 in)
8S-1598	13/16 in	82.6 mm (3.25 in)
8S-1599	7/8 in	82.6 mm (3.25 in)
8S-1600	15/16 in	82.6 mm (3.25 in)
3P-2230	2 1/2 in <sup>6</sup>	152.4 mm (6 in)
<b>3/4 inch Drive, Standard Length Impact Sockets, 6 Point, Black</b>		
214-6553	3/4 in	44.5 mm (1.75 in)
214-6554	13/16 in	47.8 mm (1.88 in)
214-6556	7/8 in	47.8 mm (1.88 in)
214-6557	15/16 in	47.8 mm (1.88 in)
214-6558	1 in	50.8 mm (2 in)
214-6559	1 11/16 in	50.8 mm (2 in)
214-6560	1 1/8 in	54.1 mm (2.13 in)
214-6561	1 3/16 in	54.1 mm (2.13 in)
214-6562	1 1/4 in	54.1 mm (2.13 in)
214-6564	1 5/16 in	57.2 mm (2.25 in)
214-6565	1 3/8 in	57.2 mm (2.25 in)
214-6566	1 7/16 in	57.2 mm (2.25 in)
8T-5182	1 1/2 in	57.2 mm (2.25 in)
214-6567	1 9/16 in	60.5 mm (2.38 in)
214-6568	1 5/8 in	60.5 mm (2.38 in)
214-6569	1 3/4 in	65 mm (2.56 in)
214-6607	1 11/16 in	65 mm (2.56 in)
214-6570	1 13/16 in	66.8 mm (2.63 in)
214-6571	1 7/8 in	69.9 mm (2.75 in)
214-6572	2 in	73.2 mm (2.88 in)
<b>3/4 inch Drive, Deep Length Impact Sockets, 6 Point, Black</b>		
214-6599	1 in	76.2 mm (3 in)
214-6600	1 1/16 in	76.2 mm (3 in)
214-6601	1 1/8 in	76.2 mm (3 in)
214-6602	1 3/16 in	82.6 mm (3.25 in)
214-6603	1 1/4 in	82.6 mm (3.25 in)
214-6604	1 5/16 in	82.6 mm (3.25 in)
214-6605	1 3/8 in	82.6 mm (3.25 in)
1U-5715	1 1/2 in	88.9 mm (3.50 in)
214-6606	1 7/16 in	88.9 mm (3.50 in)
214-6608	1 9/16 in	88.9 mm (3.50 in)
214-6609	1 5/8 in	88.9 mm (3.50 in)
214-6611	1 3/4 in	88.9 mm (3.50 in)
227-4397 <sup>7</sup>	1 1/8 in	88.9 mm (3.50 in)
6V-7874	1 11/16 in	88.9 mm (3.50 in)
214-6612	1 13/16 in	95.3 mm (3.75 in)
214-6613	1 7/8 in	95.3 mm (3.75 in)
214-6614	2 in	95.3 mm (3.75 in)

Part Number	Size	Length
<b>3/4 inch Drive, Deep Length Impact Sockets, 6 Point, Black (Continued)</b>		
5P-3053 <sup>8</sup>	1 3/16 in	101.6 mm (4 in)
5P-3054	1 1/2 in	127 mm (5 in)
<b>3/4 inch Drive, Tapered Impact Sockets, 12 Point, Black</b>		
124-0662	3/4 in	127 mm (5 in)
<b>1 inch Drive, Standard Length Sockets, 12 Point</b>		
6V-0024	1 1/2 in	69.9 mm (2.75 in)
<b>1 inch Drive, Standard Length Sockets, 6 Point, Black</b>		
5P-3579	1 3/32 in <sup>9</sup>	57.2 mm (2.25 in)
5S-6079	2 5/8 in <sup>10</sup>	57.2 mm (2.25 in)
6V-2002	29/32 in <sup>9</sup>	57.2 mm (2.25 in)
9S-6373	1 1/8 in <sup>9</sup>	57.2 mm (2.25 in)
4C-6723	1 7/16 in	63.5 mm (2.50 in)
5P-3580	1 9/32 in <sup>9</sup>	63.5 mm (2.50 in)
5P-3581	1 15/32 in <sup>9</sup>	63.5 mm (2.50 in)
9S-6371	1 1/2 in <sup>9</sup>	63.5 mm (2.50 in)
9S-6372	1 5/16 in <sup>9</sup>	63.5 mm (2.50 in)
9S-6374	15/16 in <sup>11</sup>	63.5 mm (2.50 in)
9S-6369	1 1/8 in <sup>11</sup>	66.8 mm (2.63 in)
2P-2334	1 11/16 in	76.2 mm (3 in)
2P-2335	1 3/4 in	76.2 mm (3 in)
9S-6370	15/16 in <sup>9</sup>	76.2 mm (3 in)
2P-2336	1 7/8 in	82.6 mm (3.25 in)
5P-1748	2 1/4 in <sup>12</sup>	87.1 mm (3.43 in)
5P-1745	7/8 in <sup>10</sup>	88.9 mm (3.50 in)
6V-4175	27/32 in	88.9 mm (3.50 in)
9S-6375	7/8 in <sup>11</sup>	88.9 mm (3.50 in)
5P-1662	4 1/4 in	90.4 mm (3.56 in)
2P-2338	2 3/16 in	91.9 mm (3.62 in)
5S-6077	2 3/8 in <sup>10</sup>	98.4 mm (3.87 in)
5S-6078	2 1/2 in <sup>10</sup>	104.8 mm (4.13 in)
5S-6080	2 3/4 in <sup>10</sup>	114.3 mm (4.50 in)
5S-6081	3 in <sup>10</sup>	123.8 mm (4.87 in)
5S-6082	3 1/8 in <sup>10</sup>	127 mm (5 in)
5S-6083	3 1/4 in <sup>10</sup>	127 mm (5 in)
5S-6087	4 in <sup>10</sup>	127 mm (5 in)
5S-6084	3 1/2 in <sup>10</sup>	133.4 mm (5.25 in)
5S-6085	3 5/8 in <sup>10</sup>	133.4 mm (5.25 in)
5S-6086	3 3/4 in <sup>10</sup>	136.5 mm (5.37 in)
<b>1 inch Square Drive Standard Length Impact Sockets, 12 Point, Industrial Finish</b>		
168-7955	1 1/2 in	66.5 mm (2.62 in)
<b>1 inch Square Drive Standard Length Impact Sockets, 12 Point, Black Finish</b>		
4C-6994	1 1/2 in	57.2 mm (2.25 in)

(Continued)

## Individual Sockets, 1/4 through 1 1/2 inch Drive (Continued)

Warranty: Lifetime

Part Number	Size	Length
<b>1 inch Square Drive Standard Length Impact Sockets, 6 Point, Industrial Finish</b>		
9U-6548	3/4 in	54 mm (2.13 in)
9U-6549	13/16 in	54 mm (2.13 in)
9U-6550	7/8 in	54 mm (2.13 in)
9U-6551	15/16 in	54 mm (2.13 in)
9U-6552	1 in	57.2 mm (2.25 in)
9U-6553	1 1/16 in	57.2 mm (2.25 in)
9U-6554	1 1/8 in	57.2 mm (2.25 in)
9U-6555	1 3/16 in	57.2 mm (2.25 in)
9U-6556	1 1/4 in	60.3 mm (2.37 in)
9U-6557	1 5/16 in	63.5 mm (2.50 in)
9U-6558	1 3/8 in	63.5 mm (2.50 in)
9U-6559	1 7/16 in	63.5 mm (2.50 in)
9U-6560	1 1/2 in	66.7 mm (2.63 in)
9U-6561 <sup>13</sup>	1 9/16 in	66.7 mm (2.63 in)
258-5686	1 1/2 in	69.9 mm (2.75 in)
9U-6562	1 5/8 in	69.9 mm (2.75 in)
9U-6563	1 11/16 in	73 mm (2.87 in)
9U-6564	1 3/4 in	73 mm (2.87 in)
9U-6565	1 13/16 in	74.6 mm (2.94 in)
9U-6566	1 7/8 in	74.6 mm (2.94 in)
9U-6567	1 15/16 in	74.6 mm (2.94 in)
9U-6568	2 in	82.6 mm (3.25 in)
9U-6569	2 1/16 in	82.6 mm (3.25 in)
9U-6570	2 1/8 in	82.6 mm (3.25 in)
9U-6571	2 3/16 in	84.9 mm (3.34 in)
9U-6572	2 1/4 in	84.9 mm (3.34 in)
9U-6573	2 5/16 in	88.9 mm (3.50 in)
9U-6574	2 3/8 in	92.1 mm (3.63 in)

Part Number	Size	Length
<b>1 inch Square Drive Standard Length Impact Sockets, 6 Point, Industrial Finish (Continued)</b>		
9U-6575	2 7/16 in	92.1 mm (3.63 in)
9U-6576	2 1/2 in	92.1 mm (3.63 in)
9U-6577	2 9/16 in	95.3 mm (3.75 in)
9U-6578	2 5/8 in	95.3 mm (3.75 in)
9U-6579	2 11/16 in	98.4 mm (3.87 in)
9U-6580	2 3/4 in	98.4 mm (3.87 in)
9U-6581	2 13/16 in	101.6 mm (4 in)
9U-6582	2 7/8 in	101.6 mm (4 in)
9U-6584	3 in	111.1 mm (4.37 in)
9U-6583	2 15/16 in	122.2 mm (4.81 in)
<b>1 inch Square Drive Deep Length Impact Socket, 6 Point, Industrial Finish</b>		
4C-9748	2 3/16 in	111 mm (4.37 in)
4C-9787	1 3/16 in	111 mm (4.37 in)
<b>1 1/2 inch Drive, Track Sockets, Impact Sockets</b>		
9U-6734 <sup>14</sup>	1 1/2 in	78 mm (3.07 in)
261-8571	1 13/16 in	84.6 mm (3.33 in)
132-8743	2 9/16 in	102.4 mm (4.03 in)
136-5190	2 3/4 in	107.1 mm (4.22 in)
1U-8586	1 11/16 in	114.3 mm (4.50 in)
1U-8798	1 5/8 in	114.3 mm (4.50 in)
8T-9174	2 1/16 in	114.3 mm (4.50 in)
8T-9175	2 in	114.3 mm (4.50 in)
231-4550 <sup>15</sup>	3 1/4 in	118.3 mm (4.66 in)
234-6041 <sup>16</sup>	4 1/4 in	152.4 mm (6 in)

<sup>1</sup> Deep length socket, 6 point<sup>2</sup> Deep length socket<sup>3</sup> Shoulder bolt socket 12 point<sup>4</sup> Special socket<sup>5</sup> Comes with insert for removing spark plugs<sup>6</sup> Special socket for fast fill fuel adapter<sup>7</sup> Special use for 3406 Engine head service<sup>8</sup> Budd wheel socket<sup>9</sup> Track Bolt Socket, 6 point, Warranty: Six Months<sup>10</sup> Chrome Finish<sup>11</sup> Thin wall track bolt socket, 6 point, Warranty: Six Months<sup>12</sup> Impact Socket, 6 point, Warranty: Six Months<sup>13</sup> Used on 789 Off-Highway Truck cab support assemblies bolts<sup>14</sup> Special for 994 Lift Cylinder<sup>15</sup> Special for 797 Off-Highway Truck Ball Studs<sup>16</sup> Special for 797B Off-Highway Truck Steering Linkages

## 5P-5249 Pin Socket



- Used with 3/8 inch drive speeder handle to remove and install buttons that hold ROPS Cab headliner in position for air conditioning repairs
- Use 3F-4479 Spring Pins as replacements if spring pins (1) become worn or damaged

Part Number	Description
5P-5249	Pin Socket

## 233-1637 Ratchet Set, 3 Piece

Warranty: Lifetime



- Sealed heads protect internal components from outside environment which leads to longer product life and reduced maintenance, and prevents gear slippage
- Heads forged to exact tolerances for longer tool life and greater head strength
- High strength internal mechanism provides longer tool life
- Ergonomic handle reduces user fatigue and has a more comfortable grip
- Reverse lever can be shifted with one hand which saves time when the gear mechanism needs to be reversed in tight places
- Square drive is close to the end of the head, giving maximum accessibility to fasteners in restricted areas
- Nickel chrome plating provides a durable, corrosion resistant coating and a brilliant tool finish

Part Number	Description	Drive	Length	Smallest Working Arc	Repair Kit
233-1637	Ratchet Set	--	--	--	--
<b>Ratchet Set Consists of:</b>					
239-6823	Reversible Ratchet	1/4 in	112.3 mm (4.42 in)	12.0 Degrees	230-0812
239-6824	Reversible Ratchet	3/8 in	187.5 mm (7.38 in)	12.0 Degrees	230-0813
239-6825	Ratchet	1/2 in	261.9 mm (10.31 in)	10.0 Degrees	214-7339

## Ratchets

Warranty: Lifetime



- Sealed heads protect internal components from outside environment which leads to longer product life and reduced maintenance, and prevents gear slippage
- Heads forged to exact tolerances for longer tool life and greater head strength
- High strength internal mechanism provides longer tool life
- Ergonomic handle reduces user fatigue and has a more comfortable grip
- Reverse lever can be shifted with one hand which saves time when the gear mechanism needs to be reversed in tight places
- Square drive is close to the end of the head, giving maximum accessibility to fasteners in restricted areas
- Nickel chrome plating provides a durable, corrosion resistant coating and a brilliant tool finish

(Continued)

**Ratchets (Continued)**

Warranty: Lifetime

Part Number	Description	Size	Length	Smallest Working Arc	Repair Kit
239-6823	Reversible Ratchet	1/4 in	112.3 mm (4.42 in)	12.0 Degrees	230-0812
239-6824	Reversible Ratchet	3/8 in	187.5 mm (7.38 in)	12.0 Degrees	230-0813
194-4944 <sup>1</sup>	Ratchet	3/8 in	260.4 mm (10.25 in)	5.0 Degrees	--
239-6825	Ratchet	1/2 in	261.9 mm (10.31 in)	10.0 Degrees	214-7339
214-7340 <sup>2</sup>	Ratchet	1/2 in	287.3 mm (11.31 in)	4.5 Degrees	214-7341
239-6826	Reversible Ratchet	1/2 in	381 mm (15 in)	10.0 Degrees	214-7339
263-3341 <sup>3</sup>	Ratchet	1/2 in	448.6 mm (17.66 in)	10.0 Degrees	214-7339
Repair Kits for Discontinued Ratchets					
8H-8557	Ratchet	--	--	--	4S-7326
5P-7443	Ratchet	--	--	--	5P-7444 (20 tooth gear) 5P-7445 (30 tooth gear)
9U-6635	Ratchet	--	112.3 mm (4.42 in)	--	9U-6636 (30 tooth gear)
9U-6637	Ratchet	--	--	--	9U-6638 (30 tooth gear)
9U-6639	Ratchet	--	--	--	9U-6640 (30 tooth gear)
214-7333	Flex Head Ratchet	--	--	--	214-7339

<sup>1</sup> Offset round swivel head<sup>2</sup> Round head<sup>3</sup> Long flex handle**Breaker Bars**

Warranty: Lifetime

Part Number	Drive	Length	Repair Kit <sup>1</sup>
214-7316	1/4 in	152.4 mm (6 in)	--
214-7326	3/8 in	242.9 mm (9.56 in)	6V-0112
168-0383	1/2 in	457.2 mm (18 in)	293-0712

<sup>1</sup> Includes head, pin, washer

## Ratchet Heads

Warranty: Lifetime



Part Number <sup>1</sup>	Size	Head Width	Head Length	Head Depth	Smallest Working Arc	Repair Kit
160-6389	3/4 in	63.0 mm (2.48 in)	150.9 mm (5.94 in)	31.2 mm (1.23 in)	11.2 De-grees	160-6390
161-3983	1 in	79.4 mm (3.12 in)	200.0 mm (7.86 in)	38.1 mm (1.50 in)	12.0 De-grees	161-3985

<sup>1</sup>NOTE: A 4S-7327 Ratchet Repair Kit is available for discontinued 8H-8545 Ratchet Head; a 5S-6094 Ratchet Repair Kit is available for discontinued 5S-6091 Ratchet Head.

## Handles

Warranty: Lifetime



Part Number	Drive	Length
162-8716	3/4 in	489 mm (19.25 in)
5S-6089	1 in	736.6 mm (29 in)

Hand Tools

## 8H-8546 Head Breaker Bar, 3/4 inch Drive

Warranty: Lifetime



Part Number	Drive	Length	Width
8H-8546	3/4 in	93.6 mm (3.69 in)	42.1 mm (1.66 in)

## Socket Extensions

Warranty: Lifetime

Part Number	Drive	Length
9S-1720	1/4 in	50.8 mm (2 in)
9S-1721	1/4 in	101.6 mm (4 in)
8H-8574	3/8 in	76.2 mm (3 in)
3P-2240	3/8 in	304.8 mm (12 in)
8H-8575	3/8 in	152.4 mm (6 in)
5P-8676	1/2 in	76.2 mm (3 in)
9S-1732	1/2 in	127 mm (5 in)
8H-8559	1/2 in	279 mm (10.98 in)
271-4722 <sup>1</sup>	1/2 in	76.2 mm (3 in)
271-4723 <sup>1</sup>	1/2 in	127 mm (5 in)
271-4724 <sup>1</sup>	1/2 in	279 mm (10.98 in)
8H-8548	3/4 in	203.2 mm (8 in)
8T-9265 <sup>2</sup>	3/4 in	254 mm (10 in)
8T-5183 <sup>2</sup>	3/4 in	406.4 mm (16 in)
5S-6076	1 in	203.2 mm (8 in)
158-8723 <sup>3</sup>	1 in	476 mm (18.74 in)

<sup>1</sup> Impact

<sup>2</sup> Requires locking pin

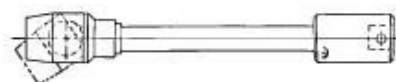
<sup>3</sup> Double hole extension



## Universal Joint Extension Socket

- 1/2 inch drive
- 12 point

Part Number	Size	Length
6V-4058	5/8 in	182.6 mm (7.19 in)





## Sliding T-Handle

Warranty: Lifetime

Part Number	Drive	Length
214-7319	1/4 in	114.3 mm (4.50 in)
213-1985	1/2 in	304.8 mm (12 in)



## Sliding "T" Wrench Head

Warranty: Lifetime

Part Number	Drive	Description	Use
5S-6090	1 in	Sliding T Wrench Head	5S-6089 Handle



Hand Tools

## 8H-8573 Speeder Handle, 3/8 inch Drive

Warranty: Lifetime

Part Number	Drive	Length
8H-8573	3/8 in	447.5 mm (17.62 in)



### Socket Drive Adapters

Part Number	Description	Size	Replacement Bit
213-4437	Socket Adapter	1/4 in Female to 3/8 in male	--
261-0443	Socket Adapter	3/8 in Female to 1/4 in male	261-0446
8H-8576	Socket Adapter	3/8 in Female to 1/2 in Male	--
261-0444	Socket Adapter	1/2 in Female to 3/8 in Male	261-0447
8H-8561	Socket Adapter	1/2 in Female to 3/4 in Male	--
261-0445	Socket Adapter	3/4 in Female to 1/2 in Male	261-0448
2P-8261	Socket Adapter	3/4 in Female to 1 in Male	--
5P-3588	Socket Adapter	1 in Female to 3/4 in Male	--
261-8569	Socket Adapter	1 in Female to 1 1/2 in Male	--
261-8570	Socket Adapter	1 1/2 in Female to 1 in Male	--



### Impact Wrench Socket Adapters

- Heavy-duty adapter and extensions can be used with 1 1/2 inch drive impact wrenches
- Allows the use of 1 inch drive sockets instead of the higher priced 1 1/2 inch drive sockets

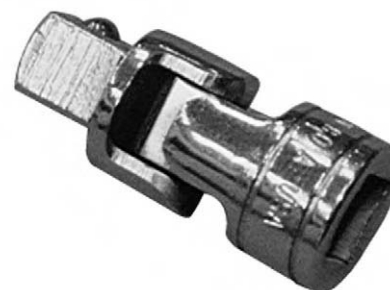
Item	Part Number	Description
1	9S-4028	Extension, 1 in drive both ends, 133.4 mm (5.25 in) long
2	9S-4026	Adapter, 1 1/2 in to 1 in drive
3	9S-4027	Extension, 1 in drive both ends, 60.3 mm (2.38 in) long
Not shown	207-8160	Extension, 1 in drive, 76.2 mm (3 in) long



### Universal Joint

Warranty: Lifetime

Drive	Part Number
1/4 in	9S-1724
3/8 in	6V-0094
1/2 in	8H-8560



Hand Tools

## Universal Drives

Warranty: Lifetime



- Used with Cat torque multipliers as well as other applications
- 5P-1749**
- Use with the 5S-6076 Extension, 5P-1748 Socket, and a suitable torque multiplier to loosen and tighten the nuts which retain 8D and 9D Ripper mounting brackets
- 5P-3534**
- Use with a Torque Multiplier in applications such as tightening the nuts which secure the final drive housings to the rear frame and case of Cat Articulated Motor Graders

Drive	Part Number	Torque Capacity	Angular Rotation
1 in	5P-1749	1,500 ft lb	30 Degrees
3/4 in	5P-3534	1,000 ft lb	30 Degrees

## 1P-0853 Ratchet Adapter



- 3/4 inch female to 3/4 inch male
- Used primarily with the 1P-0850 Torque Multiplier
- Convenient for other applications such as with the 3/4 inch drive 9S-7351 Torque Wrench

Part Number	Capacity
1P-0853	450 lb

## 4C-9818 Hex Shank

Warranty: Manufacturer's



Part Number	O.A.L.	Size
4C-9818	2 3/4 in	7/16 in HEX x 1 1/4 in on one end with 1/2 in square drive (male) with lock button on other end

### 4C-9819 Universal Joint

Warranty: Manufacturer's

Part Number	O.D.	O.A.L.	Size
4C-9819	1 3/18 in	2 1/2 in	1/2 in square drive (female) with lock button hole



### 4C-9600 Combination Wrench Set, Standard Length, 11 Piece

Warranty: See individual part number

- Polished chrome finish
- 271-4700 Wrench Gripper Rack available

Size	Part Number	Description	Length
--	4C-9600	Combination Wrench Set, Standard Length	--
<b>Combination Wrench Set, Standard Length, Consists of:</b>			
3/8 in	4C-9592	Combination Wrench	165.1 mm (6.50 in)
7/16 in	4C-9593	Combination Wrench	184.2 mm (7.25 in)
1/2 in	4C-9594	Combination Wrench	204 mm (8.03 in)
9/16 in	4C-9595	Combination Wrench	222.3 mm (8.75 in)
5/8 in	4C-9596	Combination Wrench	241.3 mm (9.50 in)
11/16 in	4C-9597	Combination Wrench	260.4 mm (10.25 in)
3/4 in	4C-9598	Combination Wrench	280.2 mm (11.03 in)
13/16 in	4C-9599	Combination Wrench	299.2 mm (11.78 in)
7/8 in	4C-9601	Combination Wrench	318.3 mm (12.53 in)
15/16 in	4C-9602	Combination Wrench (2)	338.1 mm (13.31 in)
1 in	4C-9603	Combination Wrench	357.1 mm (14.06 in)



### 4C-9610 Short Length Combination Wrench Set, 9 Piece

Warranty: See individual part number

- Polished chrome finish
- Includes vinyl bag

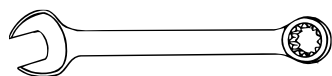
Size	Part Number	Description	Length
--	4C-9610	Short Length Combination Wrench Set	--
<b>Short Length Combination Wrench Set Consists of:</b>			
1/4 in	4C-9604	Combination Wrench	114.3 mm (4.50 in)
5/16 in	4C-9605	Combination Wrench	124 mm (4.88 in)
3/8 in	4C-9606	Combination Wrench	132.6 mm (5.22 in)
7/16 in	4C-9607	Combination Wrench	138.2 mm (5.44 in)
1/2 in	4C-9608	Combination Wrench	146.1 mm (5.75 in)
9/16 in	1S-0254	Combination Wrench	165.1 mm (6.50 in)
5/8 in	4C-9609	Combination Wrench	157.2 mm (6.19 in)
11/16 in	4C-9611	Combination Wrench	167.4 mm (6.59 in)
3/4 in	1S-0253	Combination Wrench	174.8 mm (6.88 in)



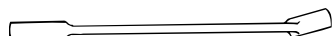
# Hand Tools (Inch)

## Combination Wrenches

Warranty: Lifetime



- 15° angle on open end and 15° offset on box end
- Box end is 12 point except 8H-8502 which is 6 point
- All are polished chrome finish except 9U-5130



Part Number	Size	Length
4C-9604	1/4 in	114.3 mm (4.50 in)
8H-8502 <sup>1</sup>	1/4 in	78.7 mm (3.10 in)
4C-9605	5/16 in	124 mm (4.88 in)
4C-9606	3/8 in	132.6 mm (5.22 in)
4C-9592	3/8 in	165.1 mm (6.50 in)
4C-9607	7/16 in	138.2 mm (5.44 in)
4C-9593	7/16 in	184.2 mm (7.25 in)
4C-9608	1/2 in	146.1 mm (5.75 in)
4C-9594	1/2 in	204 mm (8.03 in)
1S-0254	9/16 in (short)	165.1 mm (6.50 in)
4C-9595	9/16 in	222.3 mm (8.75 in)
4C-9609	5/8 in	157.2 mm (6.19 in)
4C-9596	5/8 in	241.3 mm (9.50 in)
4C-9611	11/16 in	167.4 mm (6.59 in)

Part Number	Size	Length
4C-9597	11/16 in	260.4 mm (10.25 in)
1S-0253	3/4 in (short)	174.8 mm (6.88 in)
4C-9598	3/4 in	280.2 mm (11.03 in)
4C-9599	13/16 in	299.2 mm (11.78 in)
4C-9601	7/8 in	318.3 mm (12.53 in)
4C-9602	15/16 in	338.1 mm (13.31 in)
4C-9603	1 in	357.1 mm (14.06 in)
8H-8516	1 1/16 in	382.8 mm (15.07 in)
8H-8517	1 1/8 in	404.6 mm (15.93 in)
8H-8518	1 1/4 in	433.1 mm (17.05 in)
8H-8519	1 5/16 in	458.5 mm (18.05 in)
8H-8520	1 3/8 in (short)	482.6 mm (19 in)
8H-8424	1 1/2 in	534.5 mm (21.04 in)
8H-8423	1 5/8 in	562.4 mm (22.14 in)
9U-5130 <sup>2</sup>	1 13/16 in	596 mm (23.46 in)

<sup>1</sup> Box end is 6 point

<sup>2</sup> Black oxide finish

Hand Tools

## 248-8810 Fractional Ratcheting Wrench Set, 8 piece

Warranty: Lifetime



- Dual pawl ratcheting box end
- 15 degrees offset box head
- Box ends are reversible
- Durable nickel chrome finish

Part Number	Description	Size	Length
248-8810	Fractional Ratcheting Wrench Set	--	--
<b>Fractional Ratcheting Wrench Set Consists of:</b>			
248-8811	Ratcheting Wrench	5/16 in	135 mm (5 5/16 in)
248-8812	Ratcheting Wrench	3/8 in	160 mm (6 5/16 in)
248-8813	Ratcheting Wrench	7/16 in	170 mm (6 11/16 in)
248-8814	Ratcheting Wrench	1/2 in	180 mm (7 1/16 in)
248-8815	Ratcheting Wrench	9/16 in	190 mm (7 1/2 in)
248-8816	Ratcheting Wrench	5/8 in	210 mm (8 1/4 in)
248-8817	Ratcheting Wrench	11/16 in	230 mm (9 1/16 in)
248-8818	Ratcheting Wrench	3/4 in	250 mm (9 13/16 in)

## Open End Wrenches

Warranty: Lifetime

- Tappet wrench
- For low torque applications

Size	Part Number	Length
1/2 in x 9/16 in	8H-8501	9.50 in



## 1P-3515 Open End Wrench Set, 30° and 60° Offset, 14 Piece

Warranty: Lifetime

- Offset wrenches allow the use of one wrench in four different positions to gain additional turning angles.

Part Number	Description	Size	Length
1P-3515	Open End Wrench Set	--	--
<b>Open End Wrench Set Consists of:</b>			
1P-3501	Angle Wrench	3/8 in	122.9 mm (4.84 in)
1P-3502	Angle Wrench	7/16 in	137.4 mm (5.41 in)
1P-3503	Angle Wrench	1/2 in	151.6 mm (5.97 in)
1P-3504	Angle Wrench	9/16 in	166.6 mm (6.56 in)
1P-3505	Angle Wrench	5/8 in	180.8 mm (7.12 in)
1P-3506	Angle Wrench	11/16 in	197.6 mm (7.78 in)
1P-3507	Angle Wrench	3/4 in	210.3 mm (8.28 in)
1P-3508	Angle Wrench	13/16 in	225.6 mm (8.88 in)
1P-3509	Angle Wrench	7/8 in	239.8 mm (9.44 in)
1P-3510	Angle Wrench	15/16 in	254 mm (10 in)
1P-3511	Angle Wrench	1 in	269 mm (10.59 in)
1P-3512	Angle Wrench	1 1/16 in	283.5 mm (11.16 in)
1P-3513	Angle Wrench	1 1/8 in	298.5 mm (11.75 in)
1P-3514	Angle Wrench	1 1/4 in	327.2 mm (12.88 in)
<b>Optional Wrenches (not included in set)</b>			
127-2277	Open End Wrench	1 3/8 in	356.6 mm (14.04 in)
127-2278	Open End Wrench	1 1/2 in	385.8 mm (15.19 in)
127-2279	Open End Wrench	1 5/8 in	415 mm (16.34 in)
127-2280	Open End Wrench	1 7/8 in	473.2 mm (18.63 in)



## 233-1635 Angle Wrench Set, 7 Piece

Warranty: Lifetime



- Continuous arc open end design evenly distributes applied stress over the entire radius of the open end, enhancing the wrench strength and life of the tool
- Long handles for better reach and greater applied torque
- Highly polished nickel/chrome plating—tough nickel for corrosion resistance and chrome plating for wear resistance and a mirror-like finish

Drive	Part Number	Description	Length
--	233-1635	Angle Wrench Set	--
<b>Angle Wrench Set Consists of:</b>			
3/8 in	1P-3501	Angle Wrench	122.9 mm (4.84 in)
7/16 in	1P-3502	Angle Wrench	137.4 mm (5.41 in)
1/2 in	1P-3503	Angle Wrench	151.6 mm (5.97 in)
9/16 in	1P-3504	Angle Wrench	166.6 mm (6.56 in)
5/8 in	1P-3505	Angle Wrench	180.8 mm (7.12 in)
11/16 in	1P-3506	Angle Wrench	197.6 mm (7.78 in)
3/4 in	1P-3507	Angle Wrench	210.3 mm (8.28 in)

## 233-1636 Angle Wrench Set, Large, 7 Piece

Warranty: Lifetime



- Continuous arc open end design evenly distributes applied stress over the entire radius of the open end, enhancing the wrench strength and life of the tool
- Long handles for better reach and greater applied torque
- Highly polished nickel/chrome plating — tough nickel for corrosion resistance and chrome plating for wear resistance and a mirror-like finish

Drive	Part Number	Description	Length
--	233-1636	Angle Wrench Set, Large	--
<b>Angle Wrench Set Consists of:</b>			
13/16 in	1P-3508	Angle Wrench	225.6 mm (8.88 in)
7/8 in	1P-3509	Angle Wrench	239.8 mm (9.44 in)
15/16 in	1P-3510	Angle Wrench	254 mm (10 in)
1 in	1P-3511	Angle Wrench	269 mm (10.59 in)
1 1/16 in	1P-3512	Angle Wrench	283.5 mm (11.16 in)
1 1/8 in	1P-3513	Angle Wrench	298.5 mm (11.75 in)
1 1/4 in	1P-3514	Angle Wrench	327.2 mm (12.88 in)

**200-8413 Socket Set, 13 Piece, 1/4 inch Drive**

Warranty: See individual part number

- 6 point
- 1/4 inch drive
- Standard length sockets
- Polished chrome finish
- Includes socket bar and clips

Size	Part Number	Description	Length
--	200-8413	Metric Socket Set	--
<b>Socket Set Consists of:</b>			
4.0 mm	200-8415	Socket (1/4 in Drive)	22.2 mm (0.87 in)
5.0 mm	200-8417	Socket (1/4 in Drive)	22.2 mm (0.87 in)
5.5 mm	200-8418	Socket (1/4 in Drive)	22.2 mm (0.87 in)
6.0 mm	200-8419	Socket (1/4 in Drive)	22.2 mm (0.87 in)
7.0 mm	200-8420	Socket (1/4 in Drive)	22.2 mm (0.87 in)
8.0 mm	200-8421	Socket (1/4 in Drive)	22.2 mm (0.87 in)
9.0 mm	200-8422	Socket (1/4 in Drive)	22.2 mm (0.87 in)
10.0 mm	200-8423	Socket (1/4 in Drive)	22.2 mm (0.87 in)
11.0 mm	200-8424	Socket (1/4 in Drive)	22.2 mm (0.87 in)
12.0 mm	200-8426	Socket (1/4 in Drive)	22.2 mm (0.87 in)
13.0 mm	200-8427	Socket (1/4 in Drive)	22.2 mm (0.87 in)
14.0 mm	200-8428	Socket (1/4 in Drive)	22.2 mm (0.87 in)
15.0 mm	200-8429	Socket (1/4 in Drive)	23 mm (0.91 in)



**194-3578 Socket Set, 9 Piece, 1/4 inch Drive**

Warranty: See individual part number

- 6 point
- 1/4 inch drive
- Deep length sockets
- Polished chrome finish
- Includes socket bar and clips

Size	Part Number	Description	Length
--	194-3578	Metric Socket Set	--
<b>Socket Set Consists of:</b>			
6.0 mm	194-3518	Socket (1/4 in Drive)	50.8 mm (2 in)
7.0 mm	194-3519	Socket (1/4 in Drive)	50.8 mm (2 in)
8.0 mm	194-3521	Socket (1/4 in Drive)	50.8 mm (2 in)
9.0 mm	194-3522	Socket (1/4 in Drive)	50.8 mm (2 in)
10.0 mm	194-3523	Socket (1/4 in Drive)	50.8 mm (2 in)
11.0 mm	194-3527	Socket (1/4 in Drive)	50.8 mm (2 in)
12.0 mm	194-3528	Socket (1/4 in Drive)	50.8 mm (2 in)
13.0 mm	194-3529	Socket (1/4 in Drive)	50.8 mm (2 in)
14.0 mm	194-3530	Socket (1/4 in Drive)	50.8 mm (2 in)





## 194-3574 Socket Set, 12 Piece, 3/8 inch Drive

Warranty: See individual part number



- 12 point
- 3/8 inch drive
- Standard length sockets
- Polished chrome finish
- Includes socket bar and clips
- Can be ordered by set or individually

Size	Part Number	Description	Length
--	194-3574	Metric Socket Set	--
<b>Socket Set Consists of:</b>			
8.0 mm	194-3480	Socket (3/8 in Drive)	23 mm (0.91 in)
9.0 mm	194-3483	Socket (3/8 in Drive)	23 mm (0.91 in)
10.0 mm	194-3488	Socket (3/8 in Drive)	23 mm (0.91 in)
11.0 mm	194-3490	Socket (3/8 in Drive)	23 mm (0.91 in)
12.0 mm	194-3492	Socket (3/8 in Drive)	23.8 mm (0.94 in)
13.0 mm	194-3494	Socket (3/8 in Drive)	24.6 mm (0.97 in)
14.0 mm	194-3495	Socket (3/8 in Drive)	26.2 mm (1.03 in)
15.0 mm	194-3496	Socket (3/8 in Drive)	27 mm (1.06 in)
16.0 mm	194-3497	Socket (3/8 in Drive)	27.8 mm (1.09 in)
17.0 mm	194-3498	Socket (3/8 in Drive)	28.6 mm (1.13 in)
18.0 mm	194-3499	Socket (3/8 in Drive)	28.6 mm (1.13 in)
19.0 mm	194-3500	Socket (3/8 in Drive)	30.2 mm (1.19 in)

## 199-9019 Socket Set, 12 Piece, 3/8 inch Drive

Warranty: See individual part number



- 12 point
- 3/8 inch drive
- Deep length sockets
- Polished chrome finish
- Includes socket bar and clips
- Can be ordered by set or individually

Size	Part Number	Description	Length
--	199-9019	Metric Socket Set	--
<b>Socket Set Consists of:</b>			
8.0 mm	199-9023	Socket (3/8 in Drive)	54 mm (2.13 in)
9.0 mm	199-9025	Socket (3/8 in Drive)	54 mm (2.13 in)
10.0 mm	199-9026	Socket (3/8 in Drive)	54 mm (2.13 in)
11.0 mm	199-9027	Socket (3/8 in Drive)	54 mm (2.13 in)
12.0 mm	199-9028	Socket (3/8 in Drive)	54 mm (2.13 in)
13.0 mm	199-9029	Socket (3/8 in Drive)	54 mm (2.13 in)
14.0 mm	199-9030	Socket (3/8 in Drive)	60.3 mm (2.37 in)
15.0 mm	199-9031	Socket (3/8 in Drive)	60.3 mm (2.37 in)
16.0 mm	199-9032	Socket (3/8 in Drive)	60.3 mm (2.37 in)
17.0 mm	199-9033	Socket (3/8 in Drive)	66.7 mm (2.63 in)
18.0 mm	199-9034	Socket (3/8 in Drive)	66.7 mm (2.63 in)
19.0 mm	199-9035	Socket (3/8 in Drive)	66.7 mm (2.63 in)

**214-6620 Socket Set, 12 Piece, 3/8 inch Drive**

Warranty: See individual part number

- 6 point
- 3/8 inch drive
- Standard length sockets
- Chrome finish
- Includes socket bar and clips
- Can be ordered by set or individually

Size	Part Number	Description	Length
--	214-6620	Metric Socket Set	--
<b>Socket Set Consists of:</b>			
9.0 mm	214-6623	Socket (3/8 in Drive)	23 mm (0.91 in)
8.0 mm	214-6621	Socket (3/8 in Drive)	23 mm (0.91 in)
10.0 mm	214-6624	Socket (3/8 in Drive)	23 mm (0.91 in)
11.0 mm	214-6625	Socket (3/8 in Drive)	23 mm (0.91 in)
12.0 mm	214-6626	Socket (3/8 in Drive)	23.8 mm (0.94 in)
13.0 mm	214-6627	Socket (3/8 in Drive)	24.6 mm (0.97 in)
14.0 mm	214-6628	Socket (3/8 in Drive)	26.2 mm (1.03 in)
15.0 mm	214-6629	Socket (3/8 in Drive)	27 mm (1.06 in)
16.0 mm	214-6630	Socket (3/8 in Drive)	27.8 mm (1.09 in)
17.0 mm	214-6631	Socket (3/8 in Drive)	28.6 mm (1.13 in)
18.0 mm	214-6632	Socket (3/8 in Drive)	28.6 mm (1.13 in)
19.0 mm	214-6633	Socket (3/8 in Drive)	30.2 mm (1.19 in)

**241-0873 Twist Socket Set, 13 Piece, 3/8 inch Drive**

Warranty: Lifetime

- SAE / Metric impact sockets quickly and easily remove damaged or rounded nuts and bolts
- 6 fluted sockets grip onto fastener and tighten as more torque is applied (no hammering required to install socket over fastener)
- Applications include oil pan drain plugs, exhaust manifold nuts, studs, pipe nipples, and corroded marine fasteners
- Shallow depth
- Fits sizes from 10 to 19 mm (3/8 to 3/4 inch)
- 3/8 inch square drive
- Standard length
- Industrial black finish
- Includes plastic tray, socket bar, and clips
- Can be ordered by set or individually



Size	Part Number	Description	Length
--	241-0873	Twist Socket Set	--
<b>Twist Socket Set Consists of:</b>			
10 mm	241-0860	Socket (3/8 in Drive)	31.8 mm (1 1/4 in)
12 mm	241-0861	Socket (3/8 in Drive)	31.8 mm (1 1/4 in)
13 mm	241-0862	Socket (3/8 in Drive)	31.8 mm (1 1/4 in)

Size	Part Number	Description	Length
<b>Twist Socket Set Consists of: (Continued)</b>			
14 mm	241-0863	Socket (3/8 in Drive)	31.8 mm (1 1/4 in)
15 mm	241-0864	Socket (3/8 in Drive)	31.8 mm (1 1/4 in)
17 mm	241-0865	Socket (3/8 in Drive)	31.8 mm (1 1/4 in)
3/8 in	241-0866	Socket (3/8 in Drive)	31.8 mm (1 1/4 in)

(Continued)

# Hand Tools (Metric)

## 241-0873 Twist Socket Set, 13 Piece, 3/8 inch Drive (Continued)

Warranty: Lifetime

Size	Part Number	Description	Length
<b>Twist Socket Set Consists of: (Continued)</b>			
11 mm	241-0867	Socket (3/8 in Drive)	31.8 mm (1 1/4 in)
1/2 in	241-0868	Socket (3/8 in Drive)	31.8 mm (1 1/4 in)
9/16 in	241-0869	Socket (3/8 in Drive)	31.8 mm (1 1/4 in)

Size	Part Number	Description	Length
<b>Twist Socket Set Consists of: (Continued)</b>			
16 mm	241-0870	Socket (3/8 in Drive)	31.8 mm (1 1/4 in)
11/16 in	241-0871	Socket (3/8 in Drive)	34.9 mm (1 3/8 in)
19 mm	241-0872	Socket (3/8 in Drive)	34.9 mm (1 3/8 in)

## 214-6634 Socket Set, 8 Piece, 3/8 inch Drive

Warranty: See individual part number

- 6 point
- 3/8 inch drive
- Deep length sockets
- Polished chrome finish
- Includes socket bar and clips
- Can be ordered by set or individually



Size	Part Number	Description	Length
--	214-6634	Metric Socket Set	--
<b>Socket Set Consists of:</b>			
10.0 mm	214-6635	Socket (3/8 in Drive)	54 mm (2.13 in)
11.0 mm	214-6636	Socket (3/8 in Drive)	54 mm (2.13 in)
12.0 mm	214-6637	Socket (3/8 in Drive)	54 mm (2.13 in)
13.0 mm	214-6638	Socket (3/8 in Drive)	54 mm (2.13 in)
14.0 mm	214-6639	Socket (3/8 in Drive)	60.3 mm (2.37 in)
15.0 mm	214-6640	Socket (3/8 in Drive)	60.3 mm (2.37 in)
17.0 mm	214-6641	Socket (3/8 in Drive)	66.7 mm (2.63 in)
19.0 mm	214-6642	Socket (3/8 in Drive)	66.7 mm (2.63 in)

## 271-4622 Impact Socket Set, 14 Piece, 3/8 inch Drive

Warranty: See individual part number

- 6 point
- 3/8 inch drive
- Standard length sockets
- Includes socket bar and clips
- Can be ordered by set or individually



Size	Part Number	Description	Length
--	271-4622	Impact Socket Set	--
<b>Socket Set Consists of:</b>			
8.0 mm	271-4623	Socket (3/8 in Drive)	23 mm (0.91 in)
9.0 mm	271-4624	Socket (3/8 in Drive)	23 mm (0.91 in)
10.0 mm	271-4625	Socket (3/8 in Drive)	23 mm (0.91 in)
11.0 mm	271-4626	Socket (3/8 in Drive)	23.8 mm (0.94 in)
12.0 mm	271-4627	Socket (3/8 in Drive)	23.8 mm (0.94 in)
13.0 mm	271-4628	Socket (3/8 in Drive)	24.6 mm (0.97 in)

Size	Part Number	Description	Length
<b>Socket Set Consists of: (Continued)</b>			
14.0 mm	271-4630	Socket (3/8 in Drive)	27 mm (1.06 in)
15.0 mm	271-4631	Socket (3/8 in Drive)	27 mm (1.06 in)
16.0 mm	271-4632	Socket (3/8 in Drive)	27.8 mm (1.09 in)
17.0 mm	271-4633	Socket (3/8 in Drive)	28.2 mm (1.11 in)
18.0 mm	271-4634	Socket (3/8 in Drive)	29 mm (1.14 in)
19.0 mm	271-4635	Socket (3/8 in Drive)	30.6 mm (1.20 in)
21.0 mm	271-4636	Socket (3/8 in Drive)	29.5 mm (1.16 in)
24.0 mm	271-4637	Socket (3/8 in Drive)	33 mm (1.30 in)

**271-4654 Impact Socket Set, 14 Piece, 3/8 inch Drive**

Warranty: See individual part number

- 12 point
- 3/8 inch drive
- Standard length sockets
- Includes socket bar and clips
- Can be ordered by set or individually



Size	Part Number	Description	Length
--	271-4654	Impact Socket Set	--
<b>Impact Socket Set consists of:</b>			
8.0 mm	271-4655	Socket (3/8 in Drive)	23 mm (0.91 in)
10.0 mm	271-4656	Socket (3/8 in Drive)	23 mm (0.91 in)
11.0 mm	271-4657	Socket (3/8 in Drive)	23.8 mm (0.94 in)
12.0 mm	271-4658	Socket (3/8 in Drive)	23.8 mm (0.94 in)
13.0 mm	271-4659	Socket (3/8 in Drive)	23.8 mm (0.94 in)
14.0 mm	271-4660	Socket (3/8 in Drive)	27 mm (1.06 in)

Size	Part Number	Description	Length
<b>Impact Socket Set consists of: (Continued)</b>			
15.0 mm	271-4661	Socket (3/8 in Drive)	27 mm (1.06 in)
16.0 mm	271-4662	Socket (3/8 in Drive)	27.8 mm (1.09 in)
17.0 mm	271-4663	Socket (3/8 in Drive)	28.2 mm (1.11 in)
18.0 mm	271-4664	Socket (3/8 in Drive)	29 mm (1.14 in)
19.0 mm	271-4665	Socket (3/8 in Drive)	30.6 mm (1.20 in)
20.0 mm	271-4666	Socket (3/8 in Drive)	30.9 mm (1.22 in)
21.0 mm	271-4667	Socket (3/8 in Drive)	32.1 mm (1.26 in)
22.0 mm	271-4668	Socket (3/8 in Drive)	32.9 mm (1.30 in)

**271-4638 Impact Socket Set, 14 Piece, 3/8 inch Drive**

Warranty: See individual part number

- 6 point
- 3/8 inch drive
- Deep length sockets
- Includes socket bar and clips
- Can be ordered by set or individually



Size	Part Number	Description	Length
--	271-4638	Impact Socket Set	--
<b>Impact Socket Set Consists of:</b>			
8.0 mm	271-4639	Socket (3/8 in Drive)	54 mm (2.13 in)
9.0 mm	271-4640	Socket (3/8 in Drive)	54 mm (2.13 in)
10.0 mm	271-4641	Socket (3/8 in Drive)	54 mm (2.13 in)
11.0 mm	271-4642	Socket (3/8 in Drive)	54 mm (2.13 in)
12.0 mm	271-4643	Socket (3/8 in Drive)	54 mm (2.13 in)
13.0 mm	271-4644	Socket (3/8 in Drive)	54 mm (2.13 in)

Size	Part Number	Description	Length
<b>Impact Socket Set Consists of: (Continued)</b>			
14.0 mm	271-4645	Socket (3/8 in Drive)	60.3 mm (2.37 in)
15.0 mm	271-4646	Socket (3/8 in Drive)	60.3 mm (2.37 in)
16.0 mm	271-4647	Socket (3/8 in Drive)	60.3 mm (2.37 in)
17.0 mm	271-4648	Socket (3/8 in Drive)	66.7 mm (2.63 in)
18.0 mm	271-4650	Socket (3/8 in Drive)	66.7 mm (2.63 in)
19.0 mm	271-4651	Socket (3/8 in Drive)	66.7 mm (2.63 in)
21.0 mm	271-4652	Socket (3/8 in Drive)	66.7 mm (2.63 in)
24.0 mm	271-4653	Socket (3/8 in Drive)	73 mm (2.87 in)

## 271-4683 Impact Socket Set, 14 Piece, 3/8 inch Drive

Warranty: See individual part number



- 12 point
- 3/8 inch drive
- Deep length sockets
- Includes socket bar and clips
- Can be ordered by set or individually

Size	Part Number	Description	Length
--	271-4683	Impact Socket Set	--
<b>Impact Socket Set Consists of:</b>			
8.0 mm	271-4684	Socket (3/8 in Drive)	54 mm (2.13 in)
9.0 mm	271-4685	Socket (3/8 in Drive)	54 mm (2.13 in)
10.0 mm	271-4686	Socket (3/8 in Drive)	54 mm (2.13 in)
11.0 mm	271-4687	Socket (3/8 in Drive)	54 mm (2.13 in)
12.0 mm	271-4688	Socket (3/8 in Drive)	54 mm (2.13 in)
13.0 mm	271-4689	Socket (3/8 in Drive)	54 mm (2.13 in)

Size	Part Number	Description	Length
<b>Impact Socket Set Consists of: (Continued)</b>			
14.0 mm	271-4690	Socket (3/8 in Drive)	60.3 mm (2.37 in)
15.0 mm	271-4691	Socket (3/8 in Drive)	60.3 mm (2.37 in)
16.0 mm	271-4692	Socket (3/8 in Drive)	60.3 mm (2.37 in)
17.0 mm	271-4693	Socket (3/8 in Drive)	66.7 mm (2.63 in)
18.0 mm	271-4694	Socket (3/8 in Drive)	66.7 mm (2.63 in)
19.0 mm	271-4695	Socket (3/8 in Drive)	66.7 mm (2.63 in)
21.0 mm	271-4696	Socket (3/8 in Drive)	66.7 mm (2.63 in)
24.0 mm	271-4697	Socket (3/8 in Drive)	73 mm (2.87 in)

## 9U-6124 Universal Metric Socket Set, 9 Piece, 3/8 inch Drive

Warranty: Lifetime

SMCS Code: 1251-010, 0601



- Model: 3066 Engine
- 9U-6128 used to remove and install fuel injection pump
- Standard length, 12 point universal socket set
- Specially forged and heat treated for toughness and long life—meets rigid industry standards
- Includes socket bar and clips
- Can be ordered by set or individually

Size	Part Number	Description	Length
--	9U-6124	Universal Metric Socket Set	--
<b>Metric Socket Set Consists of:</b>			
10.0 mm	9U-6125	Socket (3/8 in Drive)	43.5 mm (1.71 in)
12.0 mm	9U-6126	Socket (3/8 in Drive)	45.5 mm (1.79 in)
13.0 mm	9U-6127	Socket (3/8 in Drive)	45.5 mm (1.79 in)
14.0 mm	9U-6128	Socket (3/8 in Drive)	47.9 mm (1.89 in)
15.0 mm	9U-6129	Socket (3/8 in Drive)	47.9 mm (1.89 in)
16.0 mm	9U-6130	Socket (3/8 in Drive)	47.9 mm (1.89 in)
17.0 mm	9U-6131	Socket (3/8 in Drive)	50.7 mm (2 in)
18.0 mm	9U-6132	Socket (3/8 in Drive)	50.7 mm (2 in)
19.0 mm	9U-6133	Socket (3/8 in Drive)	52.5 mm (2.07 in)

### 227-8209 Crowfoot Wrench

Warranty: Lifetime  
SMCS Code: 1453-010

- Models: TH210 and TH215 Telehandler
- Used to remove and install starter motor bolts
- Proper installation is very difficult without this tool
- Chrome-plated

**Reference:**

REN5153 Service Manual



Part Number	Size	Square Drive	Max. Torque	Center of Square Drive to Center of Wrench
227-8209	15.0 mm	3/8 in	42 N•m (375 in lbs)	18.8 mm (0.74 in)

### 199-6156 Socket Set, 13 Piece, 1/2 inch Drive

Warranty: See individual part number

- 12 point
- 1/2 inch drive
- Standard length sockets
- Polished chrome finish
- Includes socket bar and clips
- Can be ordered by set or individually



Size	Part Number	Description	Length
--	199-6156	Metric Socket Set	--
<b>Socket Set Consists of:</b>			
12.0 mm	199-6149	Socket (1/2 in Drive)	38.1 mm (1.50 in)
13.0 mm	199-6150	Socket (1/2 in Drive)	38.1 mm (1.50 in)
14.0 mm	8T-3041	Socket (1/2 in Drive)	38.1 mm (1.50 in)
15.0 mm	6V-9110	Socket (1/2 in Drive)	38.1 mm (1.50 in)
16.0 mm	6V-9111	Socket (1/2 in Drive)	38.1 mm (1.50 in)
17.0 mm	6V-9112	Socket (1/2 in Drive)	38.1 mm (1.50 in)
18.0 mm	6V-9113	Socket (1/2 in Drive)	38.1 mm (1.50 in)
19.0 mm	6V-9114	Socket (1/2 in Drive)	38.1 mm (1.50 in)
20.0 mm	199-6152	Socket (1/2 in Drive)	38.1 mm (1.50 in)
21.0 mm	6V-9115	Socket (1/2 in Drive)	38.1 mm (1.50 in)
22.0 mm	6V-9116	Socket (1/2 in Drive)	38.1 mm (1.50 in)
23.0 mm	199-6153	Socket (1/2 in Drive)	38.1 mm (1.50 in)
24.0 mm	199-6154	Socket (1/2 in Drive)	38.8 mm (1.53 in)

Hand Tools

## 194-3576 Socket Set, 10 Piece, 1/2 inch Drive

Warranty: See individual part number



- 12 point
- 1/2 inch drive
- Deep length sockets
- Polished chrome finish
- Includes socket bar and clips
- Can be ordered by set or individually

Size	Part Number	Description	Length
--	194-3576	Metric Socket Set	--
<b>Socket Set Consists of:</b>			
16.0 mm	194-3505	Socket (1/2 in Drive)	82.6 mm (3.25 in)
17.0 mm	194-3506	Socket (1/2 in Drive)	82.6 mm (3.25 in)
18.0 mm	194-3510	Socket (1/2 in Drive)	82.6 mm (3.25 in)
19.0 mm	194-3511	Socket (1/2 in Drive)	82.6 mm (3.25 in)
20.0 mm	194-3512	Socket (1/2 in Drive)	82.6 mm (3.25 in)
21.0 mm	194-3513	Socket (1/2 in Drive)	82.6 mm (3.25 in)
22.0 mm	194-3514	Socket (1/2 in Drive)	82.6 mm (3.25 in)
24.0 mm	194-3515	Socket (1/2 in Drive)	82.6 mm (3.25 in)
25.0 mm	194-3516	Socket (1/2 in Drive)	82.6 mm (3.25 in)
26.0 mm	194-3517	Socket (1/2 in Drive)	82.6 mm (3.25 in)

## 213-6923 Impact Socket Set, 12 Piece, 1/2 Inch Drive

Warranty: See individual part number



- 6 point
- 1/2 inch drive
- Black oxide finish
- Standard length impact sockets
- Includes socket bar and clips
- Can be ordered by set or individually

Size	Part Number	Description	Length
--	213-6923	Impact Socket Set	--
<b>Socket Set Consists of:</b>			
10.0 mm	213-6926	Impact Socket (1/2 in Drive)	38.1 mm (1.50 in)
11.0 mm	213-6927	Impact Socket (1/2 in Drive)	38.1 mm (1.50 in)
12.0 mm	213-6928	Impact Socket (1/2 in Drive)	38.1 mm (1.50 in)
13.0 mm	213-6929	Impact Socket (1/2 in Drive)	38.1 mm (1.50 in)
14.0 mm	213-6930	Impact Socket (1/2 in Drive)	38.1 mm (1.50 in)
15.0 mm	213-6932	Impact Socket (1/2 in Drive)	38.1 mm (1.50 in)
16.0 mm	213-6933	Impact Socket (1/2 in Drive)	38.1 mm (1.50 in)
17.0 mm	213-6934	Impact Socket (1/2 in Drive)	38.1 mm (1.50 in)
18.0 mm	213-6935	Impact Socket (1/2 in Drive)	38.1 mm (1.50 in)
19.0 mm	213-6936	Impact Socket (1/2 in Drive)	38.1 mm (1.50 in)
20.0 mm	213-6924	Impact Socket (1/2 in Drive)	38.1 mm (1.50 in)
21.0 mm	213-6937	Impact Socket (1/2 in Drive)	38.1 mm (1.50 in)



**214-6643 Impact Socket Set, 11 Piece, 1/2 inch Drive**

Warranty: See individual part number

- 6 point
- 1/2 inch drive
- Black oxide finish
- Deep length impact sockets
- Includes socket bar and clips
- Can be ordered by set or individually



Size	Part Number	Description	Length
--	214-6643	Impact Socket Set	--
<b>Impact Socket Set Consists of:</b>			
10.0 mm	214-6644	Impact Socket (1/2 in Drive)	82.6 mm (3.25 in)
11.0 mm	214-6645	Impact Socket (1/2 in Drive)	82.6 mm (3.25 in)
12.0 mm	214-6646	Impact Socket (1/2 in Drive)	82.6 mm (3.25 in)
13.0 mm	214-6647	Impact Socket (1/2 in Drive)	82.6 mm (3.25 in)
14.0 mm	214-6648	Impact Socket (1/2 in Drive)	82.6 mm (3.25 in)
15.0 mm	214-6649	Impact Socket (1/2 in Drive)	82.6 mm (3.25 in)
16.0 mm	214-6650	Impact Socket (1/2 in Drive)	82.6 mm (3.25 in)
17.0 mm	214-6651	Impact Socket (1/2 in Drive)	82.6 mm (3.25 in)
18.0 mm	214-6652	Impact Socket (1/2 in Drive)	82.5 mm (3.25 in)
19.0 mm	214-6653	Impact Socket (1/2 in Drive)	82.6 mm (3.25 in)
20.0 mm	214-7346	Impact Socket (1/2 in Drive)	82.6 mm (3.25 in)

**261-8572 Metric Swivel Impact Socket Set, 7 Piece, 3/8 inch Drive**

Warranty: Lifetime

- 6 point
- 3/8 inch square drive
- Includes socket bar and clips
- Can be ordered by set or individually



Size	Part Number	Description	Length
--	261-8572	Metric Swivel Impact Socket Set	--
<b>Metric Swivel Impact Set Consists of:</b>			
10.0 mm	261-8573	Metric Swivel Impact Socket (3/8 in Drive)	50.8 mm (2 in)
12.0 mm	261-8574	Metric Swivel Impact Socket (3/8 in Drive)	53.1 mm (2.09 in)
13.0 mm	261-8575	Metric Swivel Impact Socket (3/8 in Drive)	54.1 mm (2.13 in)
14.0 mm	261-8576	Metric Swivel Impact Socket (3/8 in Drive)	55.4 mm (2.18 in)
15.0 mm	261-8577	Metric Swivel Impact Socket (3/8 in Drive)	56.4 mm (2.22 in)
17.0 mm	261-8578	Metric Swivel Impact Socket (3/8 in Drive)	62.2 mm (2.45 in)
18.0 mm	261-8579	Metric Swivel Impact Socket (3/8 in Drive)	64 mm (2.52 in)



## 246-8199 Metric Universal Impact Socket Set, 10 Piece, 1/2 inch Drive

Warranty: See individual part number



- 6 point
- 1/2 inch square drive
- Black oxide finish
- Standard length impact sockets
- Includes socket bar and clips
- Can be ordered by set or individually

Size	Part Number	Description	Length
--	246-8199	Metric Universal Impact Socket Set	--
<b>Metric Universal Impact Socket Set Consists of:</b>			
10.0 mm	246-8185	Universal Impact Socket (1/2 in Drive)	73.7 mm (2.90 in)
11.0 mm	246-8186	Universal Impact Socket (1/2 in Drive)	73.7 mm (2.90 in)
12.0 mm	246-8187	Universal Impact Socket (1/2 in Drive)	73.7 mm (2.90 in)
13.0 mm	246-8188	Universal Impact Socket (1/2 in Drive)	73.7 mm (2.90 in)
14.0 mm	246-8189	Universal Impact Socket (1/2 in Drive)	73.7 mm (2.90 in)
15.0 mm	246-8190	Universal Impact Socket (1/2 in Drive)	73.7 mm (2.90 in)
16.0 mm	246-8191	Universal Impact Socket (1/2 in Drive)	73.7 mm (2.90 in)
17.0 mm	246-8192	Universal Impact Socket (1/2 in Drive)	77.8 mm (3.06 in)
18.0 mm	246-8194	Universal Impact Socket (1/2 in Drive)	77.7 mm (3.06 in)
19.0 mm	246-8197	Universal Impact Socket (1/2 in Drive)	77.7 mm (3.06 in)

## 9U-6547 Impact Socket Set, 24 Piece, 3/4 inch Drive

Warranty: See individual part number



- 6 point
- 3/4 inch drive
- Black oxide finish
- Standard length impact sockets
- Can be ordered by set or individually

Size	Part Number	Description	Length
--	9U-6547	Impact Socket Set	--
<b>Impact Socket Set Consists of:</b>			
17.0 mm	9U-6523	Impact Socket	44.5 mm (1.75 in)
19.0 mm	9U-6524	Impact Socket	44.5 mm (1.75 in)
20.0 mm	9U-6525	Impact Socket	44.5 mm (1.75 in)
21.0 mm	9U-6526	Impact Socket	47.8 mm (1.88 in)
22.0 mm	9U-6527	Impact Socket	47.6 mm (1.87 in)
23.0 mm	9U-6528	Impact Socket	47.8 mm (1.88 in)
24.0 mm	9U-6529	Impact Socket	47.6 mm (1.87 in)
26.0 mm	9U-6530	Impact Socket	50.8 mm (2 in)
27.0 mm	9U-6531	Impact Socket	50.8 mm (2 in)
28.0 mm	9U-6532	Impact Socket	53.8 mm (2.12 in)
30.0 mm	9U-6533	Impact Socket	53.8 mm (2.12 in)

Size	Part Number	Description	Length
<b>Impact Socket Set Consists of: (Continued)</b>			
31.0 mm	9U-6534	Impact Socket	54 mm (2.13 in)
32.0 mm	9U-6535	Impact Socket	54 mm (2.13 in)
33.0 mm	9U-6536	Impact Socket	53.8 mm (2.12 in)
34.0 mm	9U-6537	Impact Socket	54 mm (2.13 in)
35.0 mm	9U-6538	Impact Socket	57.2 mm (2.25 in)
36.0 mm	9U-6539	Impact Socket	57.2 mm (2.25 in)
38.0 mm	9U-6540	Impact Socket	57.2 mm (2.25 in)
40.0 mm	9U-6541	Impact Socket	66.7 mm (2.63 in)
41.0 mm	9U-6542	Impact Socket	66.5 mm (2.62 in)
42.0 mm	9U-6543	Impact Socket	66.5 mm (2.62 in)
43.0 mm	9U-6544	Impact Socket	66.5 mm (2.62 in)
46.0 mm	9U-6545	Impact Socket	66.7 mm (2.63 in)
50.0 mm	9U-6546	Impact Socket	73.2 mm (2.88 in)

**194-3585 Metric Hex Driver Set, 9 Piece**

Warranty: See individual part number

- Includes socket bar and clips
- Can be ordered by set or individually

Part Number	Description	Hex Size	Drive	Bit Length	Overall Length	Replacement Bit
194-3585	Hex Bit Socket Set	--	--	--	--	--
<b>Set Consists of:</b>						
194-3541	Metric Hex Driver	4.0 mm	3/8 in	25.4 mm	52.3 mm (2.06 in)	--
194-3542	Metric Hex Driver	5.0 mm	3/8 in	25.7 mm	52.6 mm (2.07 in)	--
194-3544	Metric Hex Driver	7.0 mm	3/8 in	25.7 mm	52.6 mm (2.07 in)	--
194-3545	Metric Hex Driver	8.0 mm	3/8 in	25.1 mm	52.1 mm (2.05 in)	--
194-3546	Metric Hex Driver	10.0 mm	3/8 in	25.5 mm	52.5 mm (2.07 in)	--
194-3547	Metric Hex Driver	12.0 mm	1/2 in	--	81 mm (3.19 in)	--
194-3548	Metric Hex Driver	14.0 mm	1/2 in	--	81 mm (3.19 in)	--
194-3549	Metric Hex Driver	17.0 mm	1/2 in	--	93.7 mm (3.69 in)	--
<b>Optional Metric Hex Drivers</b>						
194-3543	Metric Hex Driver	6.0 mm	3/8 in	25.7 mm	52.6 mm (2.07 in)	--
6V-9086	Metric Hex Driver	14.0 mm	1/2 in	35.0 mm	81 mm (3.19 in)	--
168-8395	Metric Hex Driver	17.0 mm	3/4 in	50.8 mm	61.7 mm (2.43 in)	169-0782
9U-7418	Metric Hex Driver	19.0 mm	3/4 in	47.7 mm	111.3 mm (4.38 in)	1U-7419
1U-6151	Metric Hex Driver	17.0 mm	3/4 in	47.0 mm	92 mm (3.62 in)	1U-6152
1U-9474	Metric Hex Driver	22.0 mm	1 in	32.0 mm	84 mm (3.31 in)	1U-9476
129-4552	Metric Hex Driver	27.0 mm	1 in	72.0 mm	129 mm (5.08 in)	129-4553
140-8780 <sup>1</sup>	Metric Hex Driver	24.0 mm	--	50.8 mm	50.8 mm (2 in)	--

<sup>1</sup> Hex bit only

## 243-5182 Metric Hex Ball Driver Socket Set, 8 Piece

Warranty: See individual part number

- Four 1/4 inch drive hex ball sockets and four 3/8 inch drive hex ball sockets
- Material: steel
- Includes socket bar and clips
- Can be ordered by set or individually



Hex Size	Part Number	Description	Drive	Bit Length	Overall Length
--	243-5182	Complete Hex Ball Driver Socket Set	--	--	--
<b>Set Consists of:</b>					
3.0 mm	243-5190	Hex Ball Driver	1/4 in	--	47.7 mm (1.88 in)
4.0 mm	243-5184	Hex Ball Driver	1/4 in	--	47.6 mm (1.87 in)
5.0 mm	243-5185	Hex Ball Driver	1/4 in	--	47.9 mm (1.89 in)
6.0 mm	243-5186	Hex Ball Driver	1/4 in	--	47.9 mm (1.89 in)
7.0 mm	243-5187	Hex Ball Driver	3/8 in	25.6 mm	52.5 mm (2.07 in)
8.0 mm	243-5188	Hex Ball Driver	3/8 in	25.6 mm	52.5 mm (2.07 in)
9.0 mm	243-5189	Hex Ball Driver	3/8 in	25.6 mm	52.5 mm (2.07 in)
10.0 mm	243-5183	Hex Ball Driver	3/8 in	25.6 mm	52.5 mm (2.07 in)
<b>Optional Metric Hex Ball Drivers</b>					
4.0 mm	4C-8996	Hex Ball Driver	3/8 in	--	128.3 mm (5.05 in)
10.0 mm	155-3046	Hex Ball Driver	3/8 in	--	128.3 mm (5.05 in)

## Individual Sockets, 1/4 through 1 1/2 inch Drive

Warranty: Lifetime except impact sockets which are six months

- All sockets are polished chrome finish unless otherwise noted



Size	Part Number	Length
<b>1/4 inch Drive, Standard Length Sockets, 6 Point</b>		
4.0 mm	200-8415	22.2 mm (0.87 in)
5.0 mm	200-8417	22.2 mm (0.87 in)
5.5 mm	200-8418	22.2 mm (0.87 in)
6.0 mm	200-8419	22.2 mm (0.87 in)
7.0 mm	200-8420	22.2 mm (0.87 in)
8.0 mm	200-8421	22.2 mm (0.87 in)
9.0 mm	200-8422	22.2 mm (0.87 in)
10.0 mm	200-8423	22.2 mm (0.87 in)
11.0 mm	200-8424	22.2 mm (0.87 in)
12.0 mm	200-8426	22.2 mm (0.87 in)
13.0 mm	200-8427	22.2 mm (0.87 in)
14.0 mm	200-8428	22.2 mm (0.87 in)
15.0 mm	200-8429	23 mm (0.91 in)

Size	Part Number	Length
<b>1/4 inch Drive, Deep Length Sockets, 6 Point</b>		
6.0 mm	194-3518	50.8 mm (2 in)
7.0 mm	194-3519	50.8 mm (2 in)
8.0 mm	194-3521	50.8 mm (2 in)
9.0 mm	194-3522	50.8 mm (2 in)
10.0 mm	194-3523	50.8 mm (2 in)
11.0 mm	194-3527	50.8 mm (2 in)
12.0 mm	194-3528	50.8 mm (2 in)
13.0 mm	194-3529	50.8 mm (2 in)
14.0 mm	194-3530	50.8 mm (2 in)
<b>3/8 inch Drive, Standard Length Sockets, 12 Point</b>		
8.0 mm	194-3480	23 mm (0.91 in)
9.0 mm	194-3483	23 mm (0.91 in)
10.0 mm	194-3488	23 mm (0.91 in)

(Continued)

## Individual Sockets, 1/4 through 1 1/2 inch Drive (Continued)

Warranty: Lifetime except impact sockets which are six months

Size	Part Number	Length
<b>3/8 inch Drive, Standard Length Sockets, 12 Point (Continued)</b>		
11.0 mm	194-3490	23 mm (0.91 in)
12.0 mm	194-3492	23.8 mm (0.94 in)
13.0 mm	194-3494	24.6 mm (0.97 in)
14.0 mm	194-3495	26.2 mm (1.03 in)
15.0 mm	194-3496	27 mm (1.06 in)
16.0 mm	194-3497	27.8 mm (1.09 in)
17.0 mm	194-3498	28.6 mm (1.13 in)
18.0 mm	194-3499	28.6 mm (1.13 in)
19.0 mm	194-3500	30.2 mm (1.19 in)
<b>3/8 inch Drive, Deep Length Sockets, 12 Point</b>		
8.0 mm	199-9023	54 mm (2.13 in)
9.0 mm	199-9025	54 mm (2.13 in)
10.0 mm	199-9026	54 mm (2.13 in)
11.0 mm	199-9027	54 mm (2.13 in)
12.0 mm	199-9028	54 mm (2.13 in)
13.0 mm	199-9029	54 mm (2.13 in)
14.0 mm	199-9030	60.3 mm (2.37 in)
15.0 mm	199-9031	60.3 mm (2.37 in)
16.0 mm	199-9032	60.3 mm (2.37 in)
17.0 mm	199-9033	66.7 mm (2.63 in)
18.0 mm	199-9034	66.7 mm (2.63 in)
19.0 mm	199-9035	66.7 mm (2.63 in)
<b>3/8 inch Drive, Standard Length Sockets, 6 Point</b>		
8.0 mm	214-6621	23 mm (0.91 in)
9.0 mm	214-6623	23 mm (0.91 in)
10.0 mm	214-6624	23 mm (0.91 in)
11.0 mm	214-6625	23 mm (0.91 in)
12.0 mm	214-6626	23.8 mm (0.94 in)
13.0 mm	214-6627	24.6 mm (0.97 in)
14.0 mm	214-6628	26.2 mm (1.03 in)
15.0 mm	214-6629	27 mm (1.06 in)
16.0 mm	214-6630	27.8 mm (1.09 in)
17.0 mm	214-6631	28.6 mm (1.13 in)
18.0 mm	214-6632	28.6 mm (1.13 in)
19.0 mm	214-6633	30.2 mm (1.19 in)
<b>3/8 inch Drive, Deep Length Sockets, 6 Point</b>		
10.0 mm	214-6635	54 mm (2.13 in)
11.0 mm	214-6636	54 mm (2.13 in)
12.0 mm	214-6637	54 mm (2.13 in)
13.0 mm	214-6638	54 mm (2.13 in)
14.0 mm	214-6639	60.3 mm (2.37 in)
15.0 mm	214-6640	60.3 mm (2.37 in)
17.0 mm	214-6641	66.7 mm (2.63 in)
19.0 mm	214-6642	66.7 mm (2.63 in)

Size	Part Number	Length
<b>3/8 inch Drive, Universal Standard Length Sockets, 12 Point</b>		
10.0 mm	9U-6125	43.5 mm (1.71 in)
12.0 mm	9U-6126	45.5 mm (1.79 in)
13.0 mm	9U-6127	45.5 mm (1.79 in)
14.0 mm	9U-6128	47.9 mm (1.89 in)
15.0 mm	9U-6129	47.9 mm (1.89 in)
16.0 mm	9U-6130	47.9 mm (1.89 in)
17.0 mm	9U-6131	50.7 mm (2 in)
18.0 mm	9U-6132	50.7 mm (2 in)
19.0 mm	9U-6133	52.5 mm (2.07 in)
<b>3/8 inch Drive, Impact Standard Length Sockets, 12 Point</b>		
8.0 mm	271-4655	23 mm (0.91 in)
10.0 mm	271-4656	23 mm (0.91 in)
11.0 mm	271-4657	23.8 mm (0.94 in)
12.0 mm	271-4658	23.8 mm (0.94 in)
13.0 mm	271-4659	23.8 mm (0.94 in)
14.0 mm	271-4660	27 mm (1.06 in)
15.0 mm	271-4661	27 mm (1.06 in)
16.0 mm	271-4662	27.8 mm (1.09 in)
17.0 mm	271-4663	28.2 mm (1.11 in)
18.0 mm	271-4664	29 mm (1.14 in)
19.0 mm	271-4665	30.6 mm (1.20 in)
20.0 mm	271-4666	30.9 mm (1.22 in)
21.0 mm	271-4667	32.1 mm (1.26 in)
22.0 mm	271-4668	32.9 mm (1.30 in)
<b>3/8 inch Drive, Impact Standard Length Sockets, 6 Point</b>		
8.0 mm	271-4623	23 mm (0.91 in)
9.0 mm	271-4624	23 mm (0.91 in)
10.0 mm	271-4625	23 mm (0.91 in)
11.0 mm	271-4626	23.8 mm (0.94 in)
12.0 mm	271-4627	23.8 mm (0.94 in)
13.0 mm	271-4628	24.6 mm (0.97 in)
14.0 mm	271-4630	27 mm (1.06 in)
15.0 mm	271-4631	27 mm (1.06 in)
16.0 mm	271-4632	27.8 mm (1.09 in)
17.0 mm	271-4633	28.2 mm (1.11 in)
18.0 mm	271-4634	29 mm (1.14 in)
19.0 mm	271-4635	30.6 mm (1.20 in)
21.0 mm	271-4636	29.5 mm (1.16 in)
24.0 mm	271-4637	33 mm (1.30 in)
<b>3/8 inch Drive, Impact Deep Length Sockets, 12 Point</b>		
8.0 mm	271-4684	54 mm (2.13 in)
9.0 mm	271-4685	54 mm (2.13 in)
10.0 mm	271-4686	54 mm (2.13 in)
11.0 mm	271-4687	54 mm (2.13 in)
12.0 mm	271-4688	54 mm (2.13 in)
13.0 mm	271-4689	54 mm (2.13 in)
14.0 mm	271-4690	60.3 mm (2.37 in)

(Continued)

# Hand Tools (Metric)

## Individual Sockets, 1/4 through 1 1/2 inch Drive (Continued)

Warranty: Lifetime except impact sockets which are six months

Size	Part Number	Length
<b>3/8 inch Drive, Impact Deep Length Sockets, 12 Point (Continued)</b>		
15.0 mm	271-4691	60.3 mm (2.37 in)
16.0 mm	271-4692	60.3 mm (2.37 in)
17.0 mm	271-4693	66.7 mm (2.63 in)
18.0 mm	271-4694	66.7 mm (2.63 in)
19.0 mm	271-4695	66.7 mm (2.63 in)
21.0 mm	271-4696	66.7 mm (2.63 in)
24.0 mm	271-4697	73 mm (2.87 in)
<b>3/8 inch Drive, Impact Deep Length Sockets, 6 Point</b>		
8.0 mm	271-4639	54 mm (2.13 in)
9.0 mm	271-4640	54 mm (2.13 in)
10.0 mm	271-4641	54 mm (2.13 in)
11.0 mm	271-4642	54 mm (2.13 in)
12.0 mm	271-4643	54 mm (2.13 in)
13.0 mm	271-4644	54 mm (2.13 in)
14.0 mm	271-4645	60.3 mm (2.37 in)
15.0 mm	271-4646	60.3 mm (2.37 in)
16.0 mm	271-4647	60.3 mm (2.37 in)
17.0 mm	271-4648	66.7 mm (2.63 in)
18.0 mm	271-4650	66.7 mm (2.63 in)
19.0 mm	271-4651	66.7 mm (2.63 in)
21.0 mm	271-4652	66.7 mm (2.63 in)
24.0 mm	271-4653	73 mm (2.87 in)
<b>1/2 inch Drive, Deep Length Sockets, 6 Point</b>		
36.0 mm	242-0779	88.9 mm (3.50 in)
<b>1/2 inch Drive, Standard Length Sockets, 12 Point</b>		
12.0 mm	199-6149	38.1 mm (1.50 in)
13.0 mm	199-6150	38.1 mm (1.50 in)
14.0 mm	8T-3041	38.1 mm (1.50 in)
15.0 mm	6V-9110	38.1 mm (1.50 in)
16.0 mm	6V-9111	38.1 mm (1.50 in)
17.0 mm	6V-9112	38.1 mm (1.50 in)
18.0 mm	6V-9113	38.1 mm (1.50 in)
19.0 mm	6V-9114	38.1 mm (1.50 in)
20.0 mm	199-6152	38.1 mm (1.50 in)
21.0 mm	6V-9115	38.1 mm (1.50 in)
22.0 mm	6V-9116	38.1 mm (1.50 in)
23.0 mm	199-6153	38.1 mm (1.50 in)
24.0 mm	199-6154	38.8 mm (1.53 in)
25.0 mm	194-3558	38.8 mm (1.53 in)
26.0 mm	194-3559	41.2 mm (1.62 in)
27.0 mm	194-3562	42.8 mm (1.69 in)
28.0 mm	194-3563	44.4 mm (1.75 in)
29.0 mm	194-3564	44.4 mm (1.75 in)
30.0 mm	194-3565	44.4 mm (1.75 in)
31.0 mm	194-3566	47.6 mm (1.87 in)
32.0 mm	194-3567	47.6 mm (1.87 in)

Size	Part Number	Length
<b>1/2 inch Drive, Deep Length Sockets, 12 Point</b>		
16.0 mm	194-3505	82.6 mm (3.25 in)
17.0 mm	194-3506	82.6 mm (3.25 in)
18.0 mm	194-3510	82.6 mm (3.25 in)
19.0 mm	194-3511	82.6 mm (3.25 in)
20.0 mm	194-3512	82.6 mm (3.25 in)
21.0 mm	194-3513	82.6 mm (3.25 in)
22.0 mm	194-3514	82.6 mm (3.25 in)
24.0 mm	194-3515	82.6 mm (3.25 in)
25.0 mm	194-3516	82.6 mm (3.25 in)
26.0 mm	194-3517	82.6 mm (3.25 in)
<b>1/2 inch Drive, Standard Length Impact Sockets, 6 Point, Black</b>		
10.0 mm	213-6926	38.1 mm (1.50 in)
11.0 mm	213-6927	38.1 mm (1.50 in)
12.0 mm	213-6928	38.1 mm (1.50 in)
13.0 mm	213-6929	38.1 mm (1.50 in)
14.0 mm	213-6930	38.1 mm (1.50 in)
15.0 mm	213-6932	38.1 mm (1.50 in)
16.0 mm	213-6933	38.1 mm (1.50 in)
17.0 mm	213-6934	38.1 mm (1.50 in)
18.0 mm	213-6935	38.1 mm (1.50 in)
19.0 mm	213-6936	38.1 mm (1.50 in)
20.0 mm	213-6924	38.1 mm (1.50 in)
21.0 mm	213-6937	38.1 mm (1.50 in)
<b>1/2 inch Drive, Deep Length Impact Sockets, 6 Point, Black</b>		
10.0 mm	214-6644	82.6 mm (3.25 in)
11.0 mm	214-6645	82.6 mm (3.25 in)
12.0 mm	214-6646	82.6 mm (3.25 in)
13.0 mm	214-6647	82.6 mm (3.25 in)
14.0 mm	214-6648	82.6 mm (3.25 in)
15.0 mm	214-6649	82.6 mm (3.25 in)
16.0 mm	214-6650	82.6 mm (3.25 in)
17.0 mm	214-6651	82.6 mm (3.25 in)
18.0 mm	214-6652	82.5 mm (3.25 in)
19.0 mm	214-6653	82.6 mm (3.25 in)
20.0 mm	214-7346	82.6 mm (3.25 in)
<b>3/4 inch Drive, Standard Length Sockets, 6 Point</b>		
24.0 mm	6V-9117	50.8 mm (2 in)
30.0 mm	6V-9118	57.2 mm (2.25 in)
36.0 mm	6V-9119	58.7 mm (2.31 in)
46.0 mm	6V-9120	73 mm (2.87 in)
<b>3/4 inch Drive, Standard Length Impact Sockets, 12 Point</b>		
20.0 mm	152-1058	55.5 mm (2.19 in)
<b>3/4 inch Drive, Deep Length Impact Sockets, 6 Point</b>		
36.0 mm	175-6797	89 mm (3.50 in)
43.0 mm	6V-7874	88.9 mm (3.50 in)

(Continued)

**Individual Sockets, 1/4 through 1 1/2 inch Drive (Continued)**

Warranty: Lifetime except impact sockets which are six months

Size	Part Number	Length
<b>3/4 inch Drive, Standard Length Impact Sockets, 6 Point, Black</b>		
17.0 mm	9U-6523	44.5 mm (1.75 in)
19.0 mm	9U-6524	44.5 mm (1.75 in)
20.0 mm	9U-6525	44.5 mm (1.75 in)
21.0 mm	9U-6526	47.8 mm (1.88 in)
22.0 mm	9U-6527	47.6 mm (1.87 in)
23.0 mm	9U-6528	47.8 mm (1.88 in)
24.0 mm	9U-6529	47.6 mm (1.87 in)
26.0 mm	9U-6530	50.8 mm (2 in)
27.0 mm	9U-6531	50.8 mm (2 in)
28.0 mm	9U-6532	53.8 mm (2.12 in)
30.0 mm	9U-6533	53.8 mm (2.12 in)
31.0 mm	9U-6534	54 mm (2.13 in)
32.0 mm	9U-6535	54 mm (2.13 in)
33.0 mm	9U-6536	53.8 mm (2.12 in)
34.0 mm	9U-6537	54 mm (2.13 in)
35.0 mm	9U-6538	57.2 mm (2.25 in)
36.0 mm	9U-6539	57.2 mm (2.25 in)
38.0 mm	9U-6540	57.2 mm (2.25 in)
40.0 mm	9U-6541	66.7 mm (2.63 in)
41.0 mm	9U-6542	66.5 mm (2.62 in)
42.0 mm	9U-6543	66.5 mm (2.62 in)
43.0 mm	9U-6544	66.5 mm (2.62 in)
46.0 mm	9U-6545	66.7 mm (2.63 in)
50.0 mm	9U-6546	73.2 mm (2.88 in)

Size	Part Number	Length
<b>1 inch Drive, Standard Length Impact Sockets, 6 Point</b>		
36.0 mm	9U-5089	63.5 mm (2.50 in)
46.0 mm	207-8155	86 mm (3.39 in)
46.0 mm	4C-6724	73.5 mm (2.89 in)
<b>1 inch Drive, Deep Length Impact Sockets, 6 Point</b>		
55.0 mm	4C-8217	111 mm (4.37 in)
<b>1 inch Drive, Tapered Impact Sockets, 6 Point<sup>1</sup></b>		
19.0 mm	1U-7626	89 mm (3.50 in)
22.0 mm	1U-7627	89 mm (3.50 in)
24.0 mm	1U-7628	89 mm (3.50 in)
27.0 mm	1U-7629	89 mm (3.50 in)
30.0 mm	1U-7630	89 mm (3.50 in)
32.0 mm	1U-7631	89 mm (3.50 in)
<b>1 1/2 inch Drive, Standard Length Impact Sockets, 6 Point</b>		
55.0 mm	136-5189	90.4 mm (3.56 in)
65.0 mm	132-8743	102.4 mm (4.03 in)
70.0 mm	136-5190	107.1 mm (4.22 in)
<b>No. 5 Spline, Standard Length Impact Socket, 6 Point</b>		
55.0 mm	159-2833	94.5 mm (3.72 in)

<sup>1</sup>Special design for excavator track bolts; not intended for general use**159-2833 Hex Socket, 55 mm (Spline Drive)**

Model: 797 Off-Highway Trucks

- Used to remove and install tires and rims using M36 bolts with 55 mm hex head
- Used with 4C-9813 Extension, 6V-6080 Torque Multiplier, 8T-5230 Air Regulated Wrench, and 4C-9814 Reaction Bar
- Black industrial finish
- High-strength, impact socket

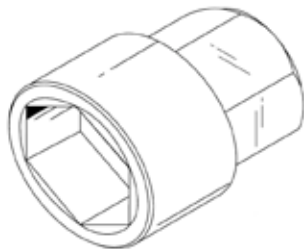
Part Number	Hex Size	Drive	Overall Length	Diameter
159-2833	55 mm (2 3/16 in), six point	#5 spline	94.5 mm (3.72 in)	78.6 mm (3.09 in)



# Hand Tools (Metric)

## Stacking Sockets (Metric)

Models: 777, 785, 789, 793, 797 Off-Highway Trucks



- Used to tighten brake anchor nuts
- Used with hydraulic wrench systems
- Allows access to limited clearance areas
- Ensures accurately tightened anchor nuts

Part Number	Description	Size
203-5431	Stacking Socket	female 1 5/16, male 36 mm
203-5432	Stacking Socket	female 1 1/2, male 36 mm
203-5433	Stacking Socket	female 36 mm, male 36 mm
203-5434	Stacking Socket	female 46 mm, male 46 mm
203-5435	Stacking Socket	female 55 mm, male 46 mm

## 233-1642 Metric Ratchet Set, 17 Piece

Warranty: Lifetime



- Socket contacts the fastener on the flats rather than on the corners, preventing rounding of the fastener and allowing for more torque to be applied
- Concentric or uniform wall thickness eliminates weak spots while allowing for a thin wall design for greater accessibility
- Creates positive engagement with the drive tool for a tight/slop-free driving system. Detents are located on all four inner walls ensuring positive engagement with the drive tool in any orientation.
- Hex and drive ends of the socket are countersunk or funnel-shaped, making engagement with the fastener or drive tool quicker and easier
- Nickel chrome plating provides a durable, corrosion resistant coating and a brilliant tool finish

Hand Tools

Part Number	Description	Length	Size
233-1642	Metric Ratchet Set	--	--
<b>Metric Ratchet Set Consists of:</b>			
200-8415	Socket (1/4 in Drive)	22.2 mm (0.87 in)	4.0 mm
200-8417	Socket (1/4 in Drive)	22.2 mm (0.87 in)	5.0 mm
200-8418	Socket (1/4 in Drive)	22.2 mm (0.87 in)	5.5 mm
200-8419	Socket (1/4 in Drive)	22.2 mm (0.87 in)	6.0 mm
200-8420	Socket (1/4 in Drive)	22.2 mm (0.87 in)	7.0 mm
200-8421	Socket (1/4 in Drive)	22.2 mm (0.87 in)	8.0 mm
200-8422	Socket (1/4 in Drive)	22.2 mm (0.87 in)	9.0 mm

Part Number	Description	Length	Size
<b>Metric Ratchet Set Consists of: (Continued)</b>			
200-8423	Socket (1/4 in Drive)	22.2 mm (0.87 in)	10.0 mm
200-8424	Socket (1/4 in Drive)	22.2 mm (0.87 in)	11.0 mm
200-8426	Socket (1/4 in Drive)	22.2 mm (0.87 in)	12.0 mm
200-8427	Socket (1/4 in Drive)	22.2 mm (0.87 in)	13.0 mm
200-8428	Socket (1/4 in Drive)	22.2 mm (0.87 in)	14.0 mm
200-8429	Socket (1/4 in Drive)	23 mm (0.91 in)	15.0 mm
9S-1720	Socket Extension	50.8 mm (2 in)	50.8 mm (2.00 in)
9S-1721	Socket Extension	101.6 mm (4 in)	101.6 mm (4.00 in)
9S-1724	Universal Joint	--	1/4 in

(Continued)



**233-1642 Metric Ratchet Set, 17 Piece (Continued)**

Warranty: Lifetime

Part Number	Description	Length	Size
<b>Metric Ratchet Set Consists of: (Continued)</b>			
9U-6635	Ratchet	112.3 mm (4.42 in)	1/4 in

**1U-5545 Combination Wrench Set, 14 Piece**

Warranty: Lifetime

- Metric, 6.0 mm through 19.0 mm
- Polished chrome finish
- Includes storage pouch

Size	Part Number	Description	Length
--	1U-5545	Combination Wrench Set	--
<b>Combination Wrench Set Consists of:</b>			
6.0 mm	1U-5546	Wrench	113 mm (4.45 in)
7.0 mm	1U-5547	Wrench	118 mm (4.65 in)
8.0 mm	1U-5548	Wrench	123 mm (4.84 in)
9.0 mm	1U-5549	Wrench	159 mm (6.26 in)
10.0 mm	6V-9090	Wrench	171 mm (6.73 in)
11.0 mm	6V-9091	Wrench	184 mm (7.24 in)
12.0 mm	6V-9092	Wrench	195 mm (7.68 in)
13.0 mm	6V-9093	Wrench	207 mm (8.15 in)
14.0 mm	6V-9094	Wrench	219 mm (8.62 in)
15.0 mm	6V-9095	Wrench	233 mm (9.17 in)
16.0 mm	6V-9096	Wrench	242 mm (9.53 in)
17.0 mm	6V-9097	Wrench	256 mm (10.08 in)
18.0 mm	6V-9098	Wrench	267 mm (10.51 in)
19.0 mm	6V-9099	Wrench	280 mm (11.02 in)



**233-1632 Metric Combination Wrench Set, 10 Piece**

Warranty: Lifetime

- Increased torque — wrench box end contacts the fastener on the flats rather than on the corners, preventing rounding of the fastener and allowing for more torque to be applied
- Concentric or uniform wall thickness on the box end eliminates weak spots while allowing for a thin wall design for greater accessibility
- Continuous arc open end design evenly distributes applied stress over the entire radius of the open end, enhancing the wrench strength and life of the tool
- Long handles for better reach and greater applied torque
- Highly polished nickel/chrome plating — tough nickel for corrosion resistance and chrome plating for wear resistance and a mirror-like finish



(Continued)



# Hand Tools (Metric)

## 233-1632 Metric Combination Wrench Set, 10 Piece (Continued)

Warranty: Lifetime

Drive	Part Number	Description	Length
--	233-1632	Metric Wrench Set	--
<b>Metric Combination Wrench Set Consists of:</b>			
10.0 mm	6V-9090	Wrench	171 mm (6.73 in)
11.0 mm	6V-9091	Wrench	184 mm (7.24 in)
12.0 mm	6V-9092	Wrench	195 mm (7.68 in)
13.0 mm	6V-9093	Wrench	207 mm (8.15 in)

Drive	Part Number	Description	Length
<b>Metric Combination Wrench Set Consists of: (Continued)</b>			
14.0 mm	6V-9094	Wrench	219 mm (8.62 in)
15.0 mm	6V-9095	Wrench	233 mm (9.17 in)
16.0 mm	6V-9096	Wrench	242 mm (9.53 in)
17.0 mm	6V-9097	Wrench	256 mm (10.08 in)
18.0 mm	6V-9098	Wrench	267 mm (10.51 in)
19.0 mm	6V-9099	Wrench	280 mm (11.02 in)

## Individual Combination Wrenches

Warranty: Lifetime

- 15° angle on open end and 15° offset on box end

Size	Part Number	Length
6.0 mm	1U-5546	113 mm (4.45 in)
7.0 mm	1U-5547	118 mm (4.65 in)
8.0 mm	1U-5548	123 mm (4.84 in)
9.0 mm	1U-5549	159 mm (6.26 in)
10.0 mm	6V-9090	171 mm (6.73 in)
11.0 mm	6V-9091	184 mm (7.24 in)
12.0 mm	6V-9092	195 mm (7.68 in)
13.0 mm	6V-9093	207 mm (8.15 in)
14.0 mm	6V-9094	219 mm (8.62 in)
15.0 mm	6V-9095	233 mm (9.17 in)
16.0 mm	6V-9096	242 mm (9.53 in)
17.0 mm	6V-9097	256 mm (10.08 in)
18.0 mm	6V-9098	267 mm (10.51 in)

Size	Part Number	Length
19.0 mm	6V-9099	280 mm (11.02 in)
20.0 mm	6V-9100	292 mm (11.50 in)
21.0 mm	6V-9101	304 mm (11.97 in)
22.0 mm	6V-9102	318 mm (12.52 in)
23.0 mm	214-7214	328 mm (12.91 in)
24.0 mm	6V-9103	338 mm (13.31 in)
25.0 mm	214-7215	356 mm (14.02 in)
26.0 mm	214-7217	364 mm (14.33 in)
27.0 mm	214-7218	376 mm (14.80 in)
29.0 mm	214-7220	395 mm (15.55 in)
30.0 mm	6V-9104	414 mm (16.30 in)
32.0 mm	214-7222	433 mm (17.05 in)
36.0 mm	214-7223	490 mm (19.29 in)
46.0 mm	9U-5130 <sup>1</sup>	596 mm (23.46 in)

<sup>1</sup> Black oxide finish

Hand Tools

## 248-8819 Metric Ratcheting Wrench Set, 12 piece

Warranty: Lifetime

- Dual pawl ratcheting box end
- 15° offset box head
- Box ends are reversible
- Durable nickel chrome finish



Size	Part Number	Description	Length
--	248-8819	Ratcheting Wrench Set	--
<b>Metric Ratcheting Wrench Set Consists of:</b>			
8.0 mm	248-8820	Ratcheting Wrench	135.0 mm (5.5 in)
9.0 mm	248-8822	Ratcheting Wrench	150.0 mm (5.9 in)
10.0 mm	248-8823	Ratcheting Wrench	160.0 mm (6.3 in)
11.0 mm	248-8824	Ratcheting Wrench	170.0 mm (6.7 in)
12.0 mm	248-8825	Ratcheting Wrench	175.0 mm (6.9 in)
13.0 mm	248-8826	Ratcheting Wrench	180.0 mm (7.1 in)
14.0 mm	248-8827	Ratcheting Wrench	190.0 mm (7.5 in)
15.0 mm	248-8828	Ratcheting Wrench	200.0 mm (7.9 in)
16.0 mm	248-8829	Ratcheting Wrench	210.0 mm (8.3 in)
17.0 mm	248-8830	Ratcheting Wrench	230.0 mm (9.1 in)

(Continued)

**248-8819 Metric Ratcheting Wrench Set, 12 piece (Continued)**

Warranty: Lifetime

Size	Part Number	Description	Length
<b>Metric Ratcheting Wrench Set Consists of: (Continued)</b>			
18.0 mm	248-8831	Ratcheting Wrench	240.0 mm (9.4 in)
19.0 mm	248-8832	Ratcheting Wrench	250.0 mm (9.8 in)

**214-7329 Wrench, 41.0 mm**

SMCS Code: 4303-010

Model: Telescoping Material Handlers RT50, RT60, and RTC60; 214B Hydraulic Excavator

- As special application tools, used to remove and install front steering cylinder linkage knuckle on Cat® vehicles listed above
- Forged steel, straight-handled, open end, with black oxide finish

Part Number	Description	Size
214-7329	Open End Wrench	41.0 mm



**4C-4065 Wrench, 55.0 mm**

SMCS Code: 4303-010

Models: Telescoping Material Handlers RT50, RT60 and RTC60

- As special application tools, used to remove and install front steering cylinder linkage knuckle on Cat vehicles listed above
- Forged steel, straight-handled, open end, with black oxide finish

Part Number	Description	Size
4C-4065	Open End Wrench	55.0 mm



**Special Application Wrenches**

Part Number	Description	Size	Offset	Application
9S-9149	Box, offset, chrome	7/16 inch	--	Brake shoe bolt adjustment
128-8824	Wrench	16 mm	18 mm	Fuel system
128-8825	Wrench	17 mm	19 mm	Fuel system
8T-0833	Box, end, chrome, for use with 1/2 inch ratchet	9/16 inch	--	Fuel pump
5P-5195	--	--	--	Fuel line
5P-0167	--	--	--	Brake spring
5P-0144	Socket, 1/2 inch drive	--	--	Fuel line

## 197-3672 Saw Adjustment Wrench

Model: Harvester Head



- Used to adjust saw tension on newer model saw heads
- Designed for easy access of adjustment nut
- Wrench opening: 3 3/4 inch

Part Number	Description	Size
197-3672 <sup>1</sup>	Saw Adjustment Wrench	Wrench opening: 3 3/4 in

<sup>1</sup> Not available for individual sale

## 9U-6517 Ratchet Wrench

Model: 5000 Series Mining Excavators

SMCS Code: 7063-010, 7063-017, 0602

Warranty: Lifetime



- Used to quickly remove and install bolts (Use standard wrench for initial loosening; bolts cannot be tightened to final torque with ratchet wrench.)
- For 30 mm hex bolts
- Fits 46 mm (1 13/16 in) bolt heads
- Ratcheting style wrench greatly decreases time for removing or installing the many bolts required to attach swing bearing/gear (Starting and running bolts down until seated, or removing bolts, can take a large amount of time if done with conventional hand tools.)

### Reference:

SENR6058, 5130 Service Manual Module, Disassembly and Assembly; SENR6108, 5230 Service Manual Module, Disassembly and Assembly; SEHS9721 Special Instruction, Assembly Procedure for Hydraulic Excavator (5130 only)

Part Number	Wrench Type	Bolt Head Size	Torque Specification	Thickness	Head Diameter	Overall Length
9U-6517	Ratcheting box end	46 mm (1.81 in)	up to 490 N•m (366 lb ft)	16 mm (0.63 in)	80.8 mm (3.18 in)	354.0 mm (14.00 in)

## 8T-3120 Straight Handle Wrench Set, 11 Piece

Warranty: Lifetime



- Available in hex sizes from 3/8 inch to 1 inch
- Ratchets in 45° increments (1/8 of a turn)
- Forged steel jaws, heat treated high carbon steel handles, and stainless steel rivets with a black corrosion-resistant finish

(Continued)

**8T-3120 Straight Handle Wrench Set, 11 Piece (Continued)**

Warranty: Lifetime

Part Number	Description	Hex Size	Torque Capacity
8T-3120	Straight Handle Wrench Set	--	--
<b>Straight Handle Wrench Set Consists of:</b>			
8T-3122	Wrench	3/8 in	26 N·m (19.18 ft-lb)
8T-3123	Wrench	7/16 in	29 N·m (21.39 ft-lb)
8T-3124	Wrench	1/2 in	34 N·m (25.08 ft-lb)
8T-3125	Wrench	9/16 in	45 N·m (33.19 ft-lb)
8T-3126	Wrench	5/8 in	68 N·m (50.15 ft-lb)

Part Number	Description	Hex Size	Torque Capacity
<b>Straight Handle Wrench Set Consists of: (Continued)</b>			
8T-3127	Wrench	11/16 in	86 N·m (63.43 ft-lb)
8T-3128	Wrench	3/4 in	97 N·m (71.54 ft-lb)
8T-3129	Wrench	13/16 in	114 N·m (84.08 ft-lb)
8T-3130	Wrench	7/8 in	141 N·m (104 ft-lb)
8T-3131	Wrench	15/16 in	159 N·m (117.27 ft-lb)
8T-3132	Wrench	1 in	170 N·m (125.39 ft-lb)

**8T-3227 Straight Handle Wrench Set, 6 Piece**

Warranty: Lifetime

- Available in hex sizes from 1 1/16 inch to 1 5/8 inch
- Ratchets in 45° increments (1/8 of a turn)
- Forged steel jaws, heat treated high carbon steel handles, and stainless steel rivets with a black corrosion-resistant finish



Part Number	Description	Hex Size	Torque Capacity
8T-3227	Straight Handle Wrench Set	--	--
<b>Straight Handle Wrench Set Consists of:</b>			
8T-3133	Wrench	1 1/16 in	190 N·m (140.14 ft-lb)
8T-3134	Wrench	1 1/8 in	200 N·m (147.51 ft-lb)
8T-3135	Wrench	1 1/4 in	270 N·m (199.14 ft-lb)

Part Number	Description	Hex Size	Torque Capacity
<b>Straight Handle Wrench Set Consists of: (Continued)</b>			
8T-3136	Wrench	1 3/8 in	340 N·m (250.77 ft-lb)
8T-3137	Wrench	1 1/2 in	410 N·m (302.40 ft-lb)
8T-3138	Wrench	1 5/8 in	475 N·m (350.34 ft-lb)

**Individual Wrenches, 3/4 inch Square Drive**

Warranty: Lifetime

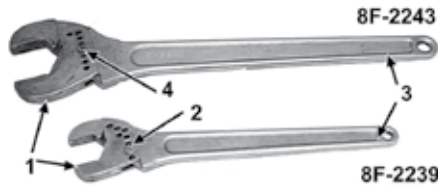
- Not sold as part of any sets - must be ordered individually

Part Number	Description	Hex Size
1U-5732	Wrench Assembly	1 3/4 in
1U-5733	Wrench Assembly	1 7/8 in
1U-5734	Wrench Assembly	2 in
1U-5735	Wrench Assembly	2 1/8 in



Hand Tools

## Heavy-Duty Adjustable End Wrenches



- Designed for heavy-duty work
- Accommodate many of the larger nuts on Cat and other equipment
- Cadmium coated to prevent rusting
- Jaw adjusts in 1/8 inch increments

Item	Part Number	Description	Jaw Range	Jaw Thickness	Length	Weight
--	8F-2239	Heavy Duty Wrench	34.9-73.0 mm (1 3/8 in-2 7/8 in)	22.2 mm (7/8 in)	609.6 mm (24 in)	5.0 kg (11 lb)
--	8F-2243	Heavy Duty Wrench	69.9-120.7 mm (2 3/4 in-4 3/4 in)	28.6 mm (1 1/8 in)	914.4 mm (36 in)	10.0 kg (22 lb)
Service Parts for 8F-2239						
1	8F-2241	Movable Jaw	--	--	--	--
2	8F-2242	Bolt	--	--	--	--
3	8F-2240	Handle	--	--	--	--
4	5B-3254	Nut	--	--	--	--
Service Parts for 8F-2243						
1	8F-2245	Movable Jaw	--	--	--	--
4	5B-3254	Nut	--	--	--	--
--	8F-2246	Bolt	--	--	--	--

## Heavy-Duty Box Wrenches



- Used to tighten large fasteners such as hitch pins

Item	Part Number	Description	Size
1	5P-7320	Box Wrench	38.1 mm (1.50 in)
2	9U-7376	Sledge Wrench	46.0 mm (1.81 in)
3	8T-3196	Offset Box Wrench	47.6 mm (1.88 in)
4	5P-1661	Sledge Wrench	108.0 mm (4.25 in)

## Adjustable Wrenches



Part Number	Jaw Range	Length	Finish
214-7322	24.0 mm (0.94 in)	203.2 mm (8 in)	Black Oxide
214-7323	29.0 mm (1.13 in)	254 mm (10 in)	Black Oxide
214-7330	33.0 mm (1.31 in)	304.8 mm (12 in)	Black Oxide
214-7332	42.0 mm (1.66 in)	381 mm (15 in)	Black Oxide

### 1U-8760 Chain Wrench for Special Applications

- Used for holding cylinders and other irregularly shaped objects—works for parts of most any size and shape
- Special head design for turning wrench in either direction
- Ratcheting action makes it possible to regrip without removal
- Chain wrench capacity: 1/2 inch to 4 3/4 inch O.D

Part Number	Description	Size
1U-8760	Wrench for Special Applications	Chain wrench capacity: 1/2 in to 4 3/4 in O.D.



### 1U-7608 Chain Wrench

SMCS Code: 5102-017

Models: D6H, D7H and motor graders prior to April 1987 G-Series production

- Used to remove and install threaded crowns on hydraulic cylinders
- Grips cylindrical objects for assembly or disassembly
- Black oxide finish, high carbon steel
- Has 19 mm (3/4 in) square drive
- Can be used with breaker bars, ratchets and torque wrenches
- Can be used on threaded crowns up to 203 mm (8 in) in diameter
- Tool is capable of withstanding in excess of 1000 ft-lb of torque

Part Number	Head Length	Head Thickness	Chain Length	Weight	Rated Capacity
1U-7608	2 1/8 in	1 3/8 in	711.2 mm (28.0 in)	.86 kg (1.90 lb)	1,360.0 N.m (1,000 ft-lb)



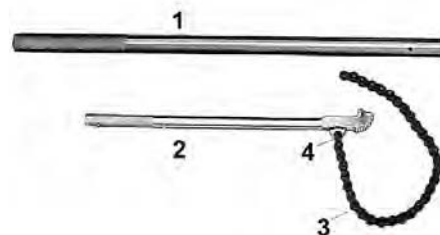
### 3P-1535 Chain Wrench Group

Model: 16G, 518, 613C, 615, 910

SMCS Code: 4303-017, 5105-017, 5309-017, 5102-017

- Used to remove and install threaded crown, which is used to retain head on later hydraulic cylinders
- General purpose tool that can be used in many applications

Item	Part Number	Description
--	3P-1535	Chain Wrench Group
<b>Group Consists of:</b>		
1	3P-1536	Handle
2	1U-8792	Chain Wrench Assembly, Handle Length 482.6 mm (19.00 in)
3	1U-8791	Chain - part of 1U-8792, 76.2 mm (3.00 in) O.D. Minimum and 171.5 mm (6.75 in) O.D. Maximum
4	3P-1537	Pin - part of 1U-8792



Hand Tools

## 187-2718 Filter Wrench

SMCS Code: 5050-011

Various Models - including Skid Steer Loaders, Compact Wheel Loaders, and Mini-Hex Excavators



- Used to remove spin-on oil and fuel filters
- Makes filter removal quick and easy
- Fits filter diameters between 88.9 to 98.6 mm (3.50 to 3.88 in)

Part Number	Description
187-2718	Filter Wrench

## 185-3630 Filter Strap Wrench

SMCS Code: 0602

Marine Engines, Truck Engines, Industrial Engines, Generator Sets, Machine Engines

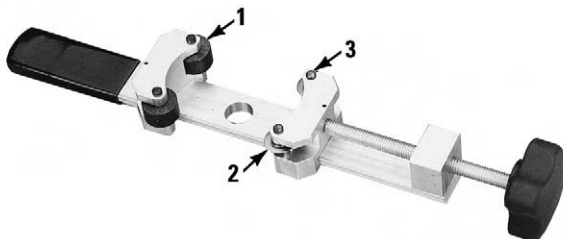


- Provides quick, efficient service when removing or installing all spin-on type fuel and oil filters
- Capable of applying higher torques required on larger filters without denting filter can

Item	Part Number	Description
--	185-3630	Filter Strap Wrench Assembly <sup>1</sup>
<b>Assembly Consists of:</b>		
1	6H-7378	Retaining Ring
2	1P-0551	Spring Pin
3	2P-8253	Strap

<sup>1</sup>Warranty: Six Months

## 175-7546 Oil Filter Cutter Group



- Used to cut open spin-on filters to inspect filter media for contaminants, a common practice when diagnosing potential machine problems and internal contaminants.
- Aluminum frame construction
- Designed to cut all types of filters, including aircraft-style filters, without repositioning cutting wheels
- Heavy-duty double roller and cutting wheel design eliminates binding of filters
- All wear parts are heat-treated steel for added durability
- Cutting wheels are ground with a double-taper edge for easier cutting

Item	Part Number	Description	Required
--	175-7546	Cutter Group	--
<b>Replacement Parts</b>			
1	177-0364	Roller	2
2	177-0365	Cutting Wheel	2
Not shown	177-0366	Spacer	2

Item	Part Number	Description	Required
<b>Replacement Parts (Continued)</b>			
3	177-0367	Pin	4

### Nut Spanner Wrenches

Item	Part Number	Description	Diameter Range
1	1P-2856	Spanner Wrench	155.6-222.3 mm (6.13-8.75 in)
2	1P-2854	Spanner Wrench <sup>1</sup>	114.3-158.8 mm (4.50-6.25 in)
3	1P-2853	Spanner Wrench	50.8-120.7 mm (2.00-4.75 in)
4	1P-2852	Spanner Wrench <sup>1</sup>	31.8-76.2 mm (1.25-3.00 in)
5	1P-2851	Spanner Wrench <sup>1</sup>	19.1-50.8 mm (.75-2.00 in)



<sup>1</sup>Part of 1P-2855 Spanner Wrench Group

### Special Open End Wrenches

- Fit various nuts, bolt heads, etc. that are too large for ordinary hand tools

Size	Part Number
1 5/8 in	9B-1496
1 7/8 in	0V-0455
2 9/32 in	8F-2239
2 3/4 in	9F-3869
3 1/2 in	1B-7412



### 214-7335 Wrench Set, Double End Flare Nut, 3 Piece

Warranty: Lifetime

Size	Part Number	Description	Length
--	214-7335	Wrench Set	--
<b>Wrench Set Consists of:</b>			
1/2 in x 9/16 in	214-7315	Wrench	173 mm (6.81 in)
3/8 in x 7/16 in	214-7314	Wrench	147.6 mm (5.81 in)
5/8 in x 11/16 in	214-7317	Wrench	200.8 mm (7.91 in)





## Individual Offset Wrenches, Double End Flare Nut

Warranty: Lifetime

Size	Part Number	Length
13/32 in and 15/32 in	5P-7254	127 mm (5 in)
17/32 in and 19/32 in	5P-7255	165.1 mm (6.50 in)
25/32 in and 29/32 in	5P-7256	190.5 mm (7.50 in)
3/4 in and 1 in	9S-1743	203.2 mm (8 in)



## Hex Wrenches

SMCS Code: 3200-000, 0721, 3203

Models: All Skid Steer Loaders

Essential Tool

- Used to remove hydrostatic pump assembly mounting bolts

Part Number	Size	Drive	Application
159-3327	21.0 mm hex end	1/2 in square drive	--
242-6163	24.0 mm hex end	1/2 in square drive	Used on 287 Multi-Terrain Loader



Hand Tools

## 200-1931 Hex Bit Set, 7 Piece

- Black oxide finish bits
- Chrome plated case

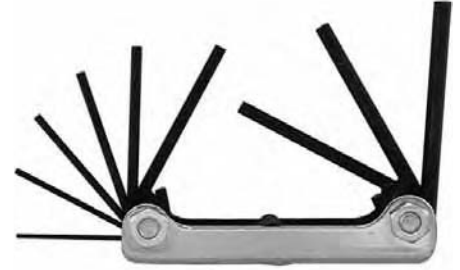
Part Number	Description	Length	Size
200-1931	Metric Hex Key Set	76.2 mm (3.00 in) long bits	1.5 mm, 2.0 mm, 2.5 mm, 3.0 mm, 4.0 mm, 5.0 mm, 6.0 mm



**9S-1742 Hex Bit Set, 9 Piece**

- Black oxide finish
- 3 1/2 inch cadmium case

Part Number	Description	Length	Size
9S-1742	Hex Key Wrench Assembly	3 in bits	9 bits: .05 in, 1/16 in, 5/64 in, 3/32 in, 7/64 in, 1/8 in, 9/64 in, 5/32 in, 3/16 in



**200-1928 Fractional "L" Shaped Hex Key Wrench Set, 13 Piece**

- Cat branded plastic holder included

Part Number	Description	Size
200-1928	Fractional Hex Key Set	.05 in, 1/16 in, 5/64 in, 3/32 in, 7/64 in, 1/8 in, 9/64 in, 5/32 in, 3/16 in, 7/32 in, 1/4 in, 5/16 in and 3/8 in



**293-3025 Fractional Hex Key Wrench Set with Ball End, 13 Piece**

- Cat branded plastic holder included

Part Number	Description	Size
293-3025	Fractional Hex Wrench Set	.05 in, 1/16 in, 5/64 in, 3/32 in, 7/64 in, 1/8 in, 9/64 in, 5/32 in, 3/16 in, 7/32 in, 1/4 in, 5/16 in and 3/8 in



## 200-1929 Metric "L" Shaped Hex Key Wrench Set, 9 Piece



- Cat branded plastic holder included

Part Number	Description	Size
200-1929	Metric Hex Key Set	1.5 mm, 2.0 mm, 2.5 mm, 3.0 mm, 4.0 mm, 5.0 mm, 6.0 mm, 8.0 mm, and 10.0 mm

## 293-3026 Metric Hex Key Wrench Set with Ball End, 9 Piece



- Cat branded plastic holder included

Part Number	Description	Size
293-3026	Metric Hex Wrench Set	1.5 mm, 2.0 mm, 2.5 mm, 3.0 mm, 4.0 mm, 5.0 mm, 6.0 mm, 8.0 mm, and 10.0 mm

## 256-4879 "L" Shaped Torx Wrench T50



Part Number	Description	Length	Flute Length	Material
256-4879	Torx Wrench, T50	95.25 mm (3.75 in)	8.84 mm (0.348 in)	steel

## Hex Key Wrenches, Standard and Metric



- Extra length hex keys
- Inch and metric sizes

Part Number	Size
1U-7559	1.5 mm
1U-7560	2 mm
1U-7561	2.5 mm

Part Number	Size
1U-7562	3 mm
1U-7563	4 mm
1U-7564	5 mm

Part Number	Size
1U-7565	6 mm
1U-7566	8 mm
1U-7567	10 mm

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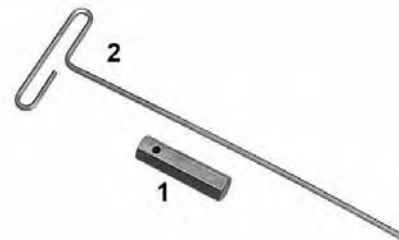
**Hex Key Wrenches, Standard and Metric (Continued)**

Part Number	Size	Part Number	Size	Part Number	Size
1U-7568	12 mm	1U-7574	3/32 in	1U-7581	3/8 in
1U-7569	14 mm	1U-7575	1/8 in	1U-7582	7/16 in
1U-7570	17 mm	1U-7576	5/32 in	1U-7583	1/2 in
1U-7571	19 mm	1U-7577	3/16 in	1U-7584	9/16 in
4C-4067	22 mm	1U-7578	7/32 in	1U-7585	5/8 in
1U-7572	1/16 in	1U-7579	1/4 in	1U-7632	3/4 in
1U-7573	5/64 in	1U-7580	5/16 in	1U-7586	1 in

**Hollow Head Screw Hex Wrenches**

- Used to remove and install hollow head screws

Item	Part Number	Description	Size
1	1P-3566	Hex Bit	9/16 in
1	9U-7419	Hex Bit	3/4 in
2	6V-0115	Wrench	1/8 in
2	6V-2104	Wrench	3/32 in
2	5P-4205	Wrench	5/32 in
2	5P-4206	Wrench	9/64 in



**Special Large Socket Wrenches**

Part Number	Description	Hex Size	Usable Depth
<b>1/2 inch Drive</b>			
4C-6172 <sup>1</sup>	Large Socket Wrench	1.13 in	3.00 in
3B-7012	Large Socket Wrench	2.00 in	4.50 in
<b>3/4 inch Drive</b>			
3B-6352	Large Socket Wrench	2.63 in	4.50 in
1B-4657	Large Socket Wrench	2.75 in	4.50 in
7M-7809	Large Socket Wrench	2.88 in	7.25 in
5P-0954	Large Socket Wrench	3.00 in	4.50 in
2B-1730	Large Socket Wrench	3.39 in	4.50 in
5P-3540	Large Socket Wrench	3.50 in	4.50 in
1U-6689	Large Socket Wrench	3.50 in	6.30 in
2B-1731	Large Socket Wrench	3.63 in	4.50 in
1U-6690	Large Socket Wrench	4.00 in	6.30 in
5P-7367 <sup>2</sup>	Large Socket Wrench	4.29 in	1.50 in
125-5723	Large Socket Wrench	4.50 in	5.75 in
1U-6691	Large Socket Wrench	5.50 in	7.90 in
1U-6692	Large Socket Wrench	5.75 in	7.90 in
<b>Bar Turn</b>			
9F-9963	Bar Turn	1.46 in	8.38 in



<sup>1</sup> Special for removal of solenoid valves on counter shaft transmission

<sup>2</sup> Octagon

Hand Tools

## Lock Removal Socket

- 1/2 inch drive

Part Number	Size
5P-6587	1/2 in Hex
5P-6588	9/16 in Hex
5P-6589	3/4 in Hex



## 2P-5481 Spark Plug Wrench

## 1P-5559 Spark Plug Adapter Wrench

SMCS Code: 1555-011

Model: 5.4 inch Bore Natural Gas Engines

Warranty: Lifetime



- Used to remove spark plugs and adapters on 5.4 inch Bore Natural Gas Engines (G342, G353, G379, G398)
- Especially useful because plugs and adapters are deeply recessed in top of engine
- 1P-5559 Wrench: Large end, 1.25 in; Small end, .75 in

Part Number	Description
1P-5559	Spark Plug Adapter Wrench
2P-5481	Socket

## Spark Plug Sockets

Model: G3516B (50 Hz), G3516B (60 Hz), G3520B (50 Hz), and G3500C

SMCS Code: 1555-010

- Thin wall design eliminates possible socket interference



Part Number	Description	Size	Length	Application
216-1685	Spark Plug Socket	1/2 in drive, 13/16 in, 6 point hex	103 mm overall length	--
4C-4601	Spark Plug Socket	7/8 inch hex, 1/2 inch square drive, 6 point	103.1 mm (4.06 in) long	Special thin wall for use on G3500 and G3600 Engines

**233-1640 Screwdriver Set, 5 Piece**

Warranty: Lifetime

- Exclusive high-tech handle for a more comfortable grip and more powerful performance

Part Number	Size	Description
233-1640	--	Screwdriver Set
<b>Set Consists of:</b>		
6V-7934	No. 2 Phillips tip, 213.6 mm (8.41 in) long	Phillips Screwdriver
6V-7936	No. 1 Phillips tip, 162.9 mm (6.66 in) long	Phillips Screwdriver
6V-7937	239.78 mm (9.44 in) long	Standard Screwdriver
6V-7933	5/16 in tip, 277.11 mm (10.91 in) long	Standard Screwdriver
6V-7932	3/8 in tip, 342.1 mm (13.47 in) long	Standard Screwdriver



**9U-7290 Screwdriver Set**

Warranty: Lifetime

- Exclusive high-tech handle design for a more comfortable grip and more powerful performance

Part Number	Description	Size
9U-7290	Screwdriver Set	Includes a flat 1/4 in tip and #1 Phillips



**162-7804 Black Plastic Handle Screwdriver Set, 6 Piece**

Warranty: Lifetime

- Black plastic handles
- 6-piece set
- Includes vinyl pouch

Part Number	Tip Size	Description
162-7804	--	Complete Screwdriver Set
<b>Complete Set Consists of:</b>		
6V-7932	3/8 in	Standard Screwdriver
6V-7933	5/16 in	Standard Screwdriver
6V-7934	No. 2	Phillips Screwdriver
6V-7936	No. 1	Phillips Screwdriver
6V-7937	3/16 in	Standard Screwdriver



## Black Plastic Handled Screwdrivers

Warranty: Lifetime

- Nickel/chrome-plated blades with vapor-blasted tips for best possible grip on screws
- Heavy duty, high impact handle



Hand Tools

Part Number	Tip Size	Length
<b>Standard Tip, Round Shank Screwdrivers</b>		
6V-9124	1/8 in	120.7 mm (4.75 in)
6V-7938	1/4 in	100.1 mm (3.94 in)
6V-7935	1/4 in	212.8 mm (8.38 in)
6V-7937	3/16 in	239.8 mm (9.44 in)
6V-7933	5/16 in	277.1 mm (10.91 in)
6V-7932	3/8 in	342.1 mm (13.50 in)
277-8790	1/2 in	469.0 (18.47 in)

Part Number	Tip Size	Length
<b>Phillips Tip, Round Shank Screwdrivers</b>		
6V-7936	No. 1	169.2 mm (6.66 in)
6V-7934	No. 2	213.6 mm (8.41 in)
214-7342	No. 3	276.4 mm (10.88 in)

## 9U-7291 Ratcheting Screwdriver, 5 Bits

Warranty: Lifetime

Part Number	Description	Size	Length
9U-7291	Ratcheting Screwdriver	3/16 in and 9/32 in flat tips, #1 and #2 Phillips, and #10 Torx stored in hollow handle	222.25 mm (8 3/4 in) long overall; 96.04 mm (3 25/32 in) stainless steel shank length



**9U-7328 Tool Bit Set, 6 Piece**

- High impact, pocket-sized ABS plastic case
- Convenient magnetic bit holder (to fit power drills or for use with the case as a hand-held screwdriver) is included

Part Number	Description	Contents
9U-7328	Tool Bit Set	Includes #1, #2, and #3 Phillips and 6.5 mm x 1.2 mm, 6.0 mm x 1.0 mm, and 5.5 mm x 0.8 mm flat tips



**Hacksaws**

Part Number	Description	Length	Use	Teeth	Material	Qty.
194-3552	Hacksaw	350.0 mm (13.78 in)	for use with 12 inch blade; blade tensioning device in handle	--	--	--
208-6183	Hacksaw	419.1 mm (16.50 in)	for use with 12 inch blade	--	--	--
Replacement Hacksaw Blade Sets						
1U-9234	Replacement Hacksaw Blade Sets	305.0 mm (12 in)	--	457 mm (18 in)	Bi-Metal	5
1U-9236	Replacement Hacksaw Blade Sets	305.0 mm (12 in)	--	610 mm (24 in)	Bi-Metal	10
1U-9238	Replacement Hacksaw Blade Sets	305.0 mm (12 in)	--	813 mm (32 in)	Bi-Metal	5



Hand Tools

**Pry Bars**

Part Number	Description	Size
1U-7587	Rolling Head Pry Bar	152.4 mm (6.00 in)
194-3553	Rolling Head Pry Bar	304.8 mm (12.00 in)
5F-4764	Rolling Head Pry Bar <sup>1</sup>	406.4 mm (16.00 in) long
194-3556	Rolling Head Pry Bar	533.4 mm (21.00 in)
1U-7591	Pry Bar	.625 mm x 457.2 mm (.63 in x 18.00 in)
1U-7592	Pry Bar	.75 mm x 609.6 mm (.75 in x 24.00 in)
1U-7593	Pry Bar	.875 mm x 762.0 mm (.88 in x 30.00 in)
4F-5166	Pry Bar	762.0 mm (30.00 in)
4C-5742	Pry Bar	1168.4 mm (46.00 in)
4C-5647	Long Pry Bar	1371.6 mm (54.00 in)



<sup>1</sup>Warranty: Six Months



## 244-0910 Pry Bar Display



- Eye-catching addition to the sales floor area
- Sturdy display measures only 406.4 mm x 457.2 mm (16 in x 18 in) at the base but it's 1625.6 mm (64 in) high for extra visual impact
- Holds 1U-7593 (2), 4C-5742 (2), and 4C-5647 (1) Pry Bars
- Pry bars purchased separately

Part Number	Description	Size
244-0910	Pry Bar Display	406.4 mm x 457.2 mm (16 in x 18 in) at the base; 1625.6 mm (64 in) high

## Handled Pry Bars

Warranty: Manufacturer's



- Black chrome striking cap—hit bar without damage to handle
- Available in bar shank lengths of 30, 46, 61, and 91 cm (12, 18, 24, and 36 in)
- Ergonomic handle made from a dual durometer composite for user comfort; reduces hand fatigue
- Polished tip with black oxide finish
- Long-life finish resists rust and wear during use

Part Number	Description	Size
239-4140	Handled Pry Bar Kit includes: 239-4141, 239-4142, and 239-4143	--
239-4141	Handled Pry Bar	12 inch Handled Pry Bar, 30 cm (12 in)
239-4142	Handled Pry Bar	18 inch Handled Pry Bar, 46 cm (18 in)
239-4143	Handled Pry Bar	24 inch Handled Pry Bar, 61 cm (24 in)
239-4255	Handled Pry Bar	36 inch Handled Pry Bar, 91 cm (36 in)

Hand Tools

## Hammers



Item	Part Number	Size	Height	Length	Weight	Material
<b>Ball Peen Hammers</b>						
1	1S-0257	1 1/8 inL	--	298.5 mm (11.75 in)	340 g (12 oz)	--
2	1B-7810	1 5/32 inL	113.5 mm (4.47 in)	406.4 mm (16 in)	680 g ( 1 1/2 lb)	--
3	8H-8577	1 1/4 inL	128.6 mm (5.06 in)	406.4 mm (16 in)	900 g (2 lb)	--
<b>Soft Face Hammers</b>						
4	1S-0258	1 11/16 inL	117.5 mm (4.63 in)	330.2 mm (13 in)	900 g (2 lb)	--
<b>Replacement Tips for 1S-0258</b>						
5	3S-0460	--	--	--	--	Medium tip
6	3S-0459	--	--	--	--	Hard tip

(Continued)

## Hammers (Continued)

Item	Part Number	Size	Height	Length	Weight	Material
<b>Hammer Handles</b>						
--	263-3817	305 mm (12 in)L	--	--	--	Hickory
--	263-3820	458 mm (18 in)L	--	--	--	Hickory
--	263-3819	407 mm (16 in)L	--	--	--	Hickory

## Multiple Use Hammers

Item	Part Number	Description	Face Diameter	Overall Length	Weight	Size	Material
1	223-1697	Double Face Sledge	47.8 mm (1.88 in)	889 mm (35 in)	4.4 kg (9.61 lb)	--	--
2	223-1694	Dead Blow Sledge	69.8 mm (2.75 in)	508 mm (20 in)	2.5 kg (5.51 lb)	--	--
3	223-1693	Hand Drilling (Short Handle)	38.1 mm (1.50 in)	273 mm (10.75 in)	1.8 kg (4.01 lb)	--	--
--	223-1695	Dead Blow Sledge	82.6 mm (3.25 in)	914.4 mm (36 in)	5.4 kg (12.02 lb)	--	--
--	223-1698	Double Face Sledge	54 mm (2.13 in)	905 mm (35.63 in)	5 kg (10.91 lb)	--	--
--	245-9823	Double Face Sledge	73 mm (2.87 in)	914 mm (35.98 in)	7.2 kg (15.98 lb)	--	--
<b>Hammer Handles</b>							
--	263-3821	--	--	--	--	762 mm (30 in)	Hickory
--	263-3822	--	--	--	--	915 mm (36.02 in)	Hickory



## Slide Sledge

One operator can safely and easily maneuver the Slide Sledge Heavy Equipment Repair Tool into hard-to-reach places, simplifying repairs while reducing operator effort.

Slide Sledge is powered by sliding the steel drive bar back and forth, allowing the operator to deliver a precise impact—when and where it's needed. This eliminates inaccurate sledgehammer swings that can damage machinery.

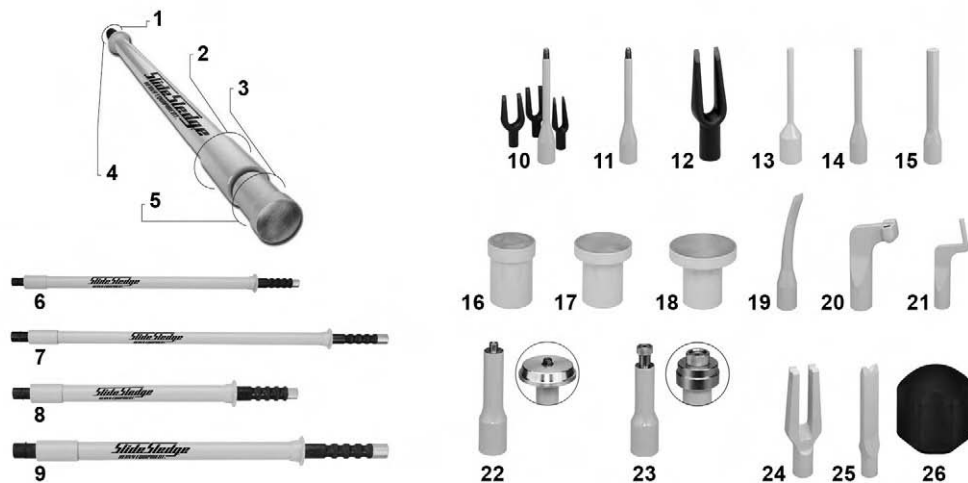
- Eliminates need for special equipment or additional operators
- Reduces preventive and unscheduled maintenance hours
- Used to remove and install pins on almost any equipment
- Cuts through stripped or rusted bolts in seconds
- Reaches between ripper teeth for easy removal and installation
- Drives seals into place, quickly and easily
- Adapts to separator forks for fast, easy changeouts
- Promotes a safer work environment—eliminates flying debris associated with hammer and chisel use
- Minimizes operator effort and reduces muscle strain through finger-pressure control
- Accommodates interchangeable, application-specific tips that allow one tool to do the job of many
- Adapts to quick-change tips engineered to get the job done faster and easier
- Delivers powerful, precise impact; use a 5 lb handle weight for additional impact
- Made of induction-hardened steel for long life

(Continued)

# Miscellaneous Hand Tools

## Slide Sledge (Continued)

Item 1	Item 2	Item 3	Item 4	Item 5
Induction-Hardened Steel Drive Bar	Linear Impact Delivery System	Quick-Change	Ergonomic Handle - provides solid grip	D-Head Design
delivers a powerful impact	maximizes power transfer to tip	secures tips and allows for quick tip changes	Slide Lock - keeps bar in place when tool is not in use	keeps tip from rotating



Item	Part Number	Weight	Length	Description	Use
<b>Slide Sledge</b>					
6	272-1208	9.00 lb	30.00 in	Slide Sledge Heavy Equipment Repair Tool with 272-1237 Pin Driver	For fitting into tight areas
7	272-1212	13.00 lb	46.00 in	Slide Sledge Heavy Equipment Repair Tool with 272-1237 Pin Driver	Ideal for most standard applications
8	272-1215	14.00 lb	30.00 in	Slide Sledge Heavy Equipment Repair Tool with 272-1237 Pin Driver	Larger diameter allows tool to fit into tight areas while delivering Biggest Maximum Force
9	272-1218	21.00 lb	46.00 in	Slide Sledge Heavy Equipment Repair Tool with 272-1237 Pin Driver	Longer length and greater weight deliver Biggest Maximum Force for your toughest applications
<b>Accessories</b>					
10	272-1222	--	--	Tie Rod/Ball Joint Separator 3 Tip Set	Slide Sledge separator adapter and 11/16 in, and 1 1/8 forks
11	272-1223	--	--	Tie Rod/Ball Joint Splitter Adapter	Attach all Slide Sledge separator fork and most common forks available
12	272-1224	--	--	Tie Rod/Ball Joint Separator Fork, 11/18 in	--
12	272-1225	--	--	Tie Rod/Ball Joint Separator Fork, 15/16 in	--
12	272-1226	--	--	Tie Rod/Ball Joint Separator Fork, 1 1/8 in	--
12	272-1227	--	--	Tie Rod/Ball Joint Separator Fork, 1 7/8 in	--
13	272-1228	--	--	Pin Driver, 1/2 in diameter	Recommended for pins and bolts greater than 1/2 in up to 7/8 in diameter
14	272-1230	--	--	Pin Driver, 7/8 in diameter	Recommended for pins greater than 7/8 in up to 1 1/4 in diameter
15	272-1233	--	--	Pin Driver, 1 1/4 in diameter	Recommended for pins greater than 1 1/4 in up to 2 in diameter
16	272-1237	--	--	Pin Driver, 2 in diameter	Recommended for pins greater than 2 in up to 2 1/2 in diameter
17	272-1239	--	--	Pin Driver, 2 1/2 in diameter	Recommended for pins greater than 2 1/2 in up to 3 in diameter

(Continued)

## Slide Sledge (Continued)

Item	Part Number	Weight	Length	Description	Use
<b>Accessories (Continued)</b>					
18	272-1240	--	--	Pin Driver, 3 in diameter	Recommended for pins greater than 3 in up to 4 in diameter
19	272-1241	--	--	Curved Chisel Tip, 1 3/8	For chopping away hardened debris and shearing metal bolts, pins, and rivets up to 3/8 in, grade 8
20	272-1242	--	--	Ripper Tooth Pin Inserter, 3/4 in diameter	Use on pins as small as 3/1 in up to 1 in with minimum tooth spacing of 4 1/2 in
20	272-1244	--	--	Ripper Tooth Pin Inserter, 1/2 in diameter	Use on pins as small as 1/2 in up to 3/4 in with minimum tooth spacing of 3 1/2 in
20	272-1247	--	--	Ripper Tooth Pin Inserter, 3/8 in diameter	Use on pins as small as 3/8 in up to 1/2 in with minimum tooth spacing of 2 3/4 in
21	272-1243	--	--	Ripper Tooth Pin Remover, 3/4 in diameter	Use on pins as small as 3/4 in up to 1 in with minimum tooth spacing of 4 1/2 in
21	272-1245	--	--	Ripper Tooth Remover, 1/2 in diameter	Use on pins as small as 1/2 in up to 3/4 in with minimum tooth spacing of 3 1/2 in
21	272-1246	--	--	Ripper Tooth Pin Remover, 3/8 in diameter	Use on pins as small as 3/8 in up to 1/2 in with minimum tooth spacing of 2 3/4 in
22	272-1249	--	--	Race/Bearing/Seal Adapter	Adapter driver tip to install races, bearings, and seals. Add drive plates to the end in various combinations. Fits plates with a common 9/16 center hole, up to 4/4 in high (plates not included)
23	272-1250	--	--	Bushing Driver Adapter	Adapter driver tip to properly install bushings easily and quickly. Fits drivers with a common 3/4 center hole, up to 7/8 in high (drivers not included)
24	272-1251	--	--	Scarifier Tooth Tip	Removes scarifier teeth on most motor graders. The fork design allows the technician to split the trenching arm were the scarifier tooth is forced to fit.
25	272-1252	--	--	Utility Wedge Tip	All-purpose impact tool designed to separate parts and straighten steel with maximum force.
26	272-1253	--	--	5 Pound Handle Weight	Increases the Slide Sledge striking force by 5 lbs; works with any of the four tools by threading onto tool handle
<b>Not Shown</b>					
--	272-1248	--	--	Bushing/Bearing/Seal Plate Driver	Use with Cat plates (not included)
--	287-2075	--	--	Small Tire Bead Breaker, 2 1/4 in head width	Most standard applications
--	287-2076	--	--	Large Tire Bead Breaker, 2 7/8 in head width	Ideal for tractor trailers, backhoes, motor graders, and other large equipment

## Slide Sledge Tool Bags and Case

Part Number	Description	Size
273-3527	Heavy Nylon Tool Bag with Interior Pockets	38 in long
273-3528	Heavy Nylon Tool Bag with Interior Pockets	52 in long
273-3529	Hard Shell Tool Case with Custom Foam and Wheels	53 x 14 in



## Shovels and Spades

Warranty: Manufacturer's



- Ergonomically engineered for balance and safety
- Latest technology fiberglass handles
- Super-duty, pultruded core with reinforcement sections adds strength
- Molded-exterior, polymer clad jacket for handling comfort

Item	Part Number	Description
1	157-2264	Shovel, Round Point with 122 cm (48 in) long handle
2	157-2276	Spade, Drain with 122 cm (48 in) long handle
3	157-2268	Shovel, Square with 122 cm (48 in) long handle
4	157-2273	Scoop, # 12 Aluminum
5	157-2278	Spade, Drain with 69 cm (27 in) D handle
6	157-2269	Shovel, Square Point with 69 cm (27 in) D handle
7	157-2266	Shovel, Round Point with 69 cm (27 in) D handle

## 9U-7329 Universal Level

Warranty: Manufacturer's



- Made of high-impact ABS
- Has two easy-to-read Plexiglas vials, one a vertical angle dial adjustable from 0° to 180°

Part Number	Description
9U-7329	Universal Level

## Tape Measures



### 5P-3277, 1U-9366, 1U-9367, and 1U-9368

- 2-color
- Handsome, chrome-finished case
- Removable belt clip
- Auto retract
- Tape lock lever

### 232-5041

- Ergonomically designed
- Magnetic tip holds tape in place and makes long distance measuring much easier
- Yellow and black plastic
- Auto retract
- Tape lock lever

Part Number	Blade Width	Blade Length	English Graduations	Metric Graduations	Locking Feature
5P-3277	12.7 mm (1/2 in)	10	1 in, 1/10 in	1.0 cm, 1.0 mm	Yes
1U-9366	19.0 mm (3/4 in)	16	1 in, 1/16 in	1.0 cm, 1.0 mm	Yes
1U-9367	25.4 mm (1 in)	26	1 in, 1/16 in	1.0 cm, 1.0 mm	Yes
1U-9368	25.4 mm (1 in)	30	1 ft, 1 in, 1/16 in	--	Yes
232-5041	25.4 mm (1 in)	26	1 ft, 1 in, 1/16 in	1.0 cm, 1.0 mm	Yes

### Tape Measures

Warranty: Manufacturer's

#### 9U-7326 Tape Measure, 1/4 inch x 6 ft

- Black ABS-encased steel tape
- Slim and contemporary—fits easily in your pocket
- Has auto stop and return
- Readings in mm and inches

#### 9U-7327 Tape Measure, 1/2 inch x 10 ft

- Can read dimensions directly on the tape by looking in a see-through window
- Great for inside measurements such as window dimensions
- Readings in mm and inches



Part Number	Description	Size
9U-7327	Tape Measure	1/2 in x 10 ft
9U-7326	Tape Measure	1/4 in x 6 ft

### Steel Tape Measure

- Heavy-duty vinyl covered welded steel case
- Yellow coated 3/8 inch wide blade, 2-color markings, folded steel hook, folding handle
- Graduation — inches in black, feet and 16 inch centers in red; meters in black, centimeters and millimeters in red
- English on one side, metric on the other side



Part Number	Blade Width	Blade Length	English Graduations	Metric Graduations
1U-9369	3/8 in	50	1 ft 1 in, 1/16 in	1.0 m, 1.0 cm, 1.0 mm

### 4C-8733 Taper Gauge

- Used to quickly and conveniently measure openings for shim packs or spacers
- Used in place of thickness gauges
- Made of quality tool steel
- One side graduated in inches, other side in millimeters

Part Number	Description	Size
4C-8733	Taper Gauge	6.20 in x .40 in (160.0 mm x 11.0 mm)



Hand Tools

## 9U-7289 Stainless Steel Pocket Scale

Warranty: Lifetime

- Shows millimeters and inches on one side
- Has a convenient pocket clip

Part Number	Description	Size
9U-7289	Pocket Scale	6 1/4 in long and 1/2 in wide



## 4C-9798 Block Magnet

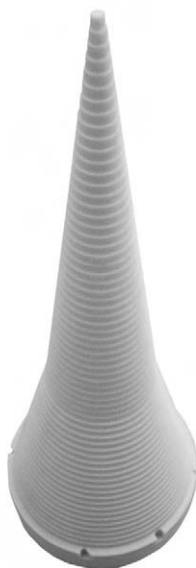


- Measures or checks for straight line dimensions on any large, steel structure using magnet restrained string lines
- Fast, economical means of simplifying inspection of large steel structures for alignment, position, parallelism, dimensional accuracy
- Strong enough to hold a tight string over a steel structure
- Magnets can be stacked to obtain string clearance with structure features
- String not included

Part Number	Description	Size	Weight
4C-9798	Block Magnet	25.0 mm x 25.0 mm x 50.0 mm (1.00 in x 1.00 in x 2.00 in)	0.166 kg (0.366 lbs)

## 9U-5155 O-Ring Measuring Cone

Warranty: Six Months



### Find the correct O-ring replacement faster and easier.

- Designed to measure SAE industry standard O-ring dimensions (cross section and dash size). These dimensions are published by the Society of Automotive Engineers (SAE).
- 457.2 mm (18 in) tall, cone shaped
- Material: high-impact, yellow plastic
- Round base with five industry standard O-ring cross section diameters (widths) cut into the edge
- Cone has 65 steps indicating varying inside diameters

### Reference

NEHS0571 Cross Reference List (identifies the proper Cat O-ring part number), is available through Media Logistics

Part Number	Description
9U-5155	O-Ring Measuring Cone



### Aluminum Pipe Wrenches

- 10 inch through 24 inch
- 35% lighter than cast iron wrenches
- Heat treated titanium — aluminum alloy handle
- Forged hook jaw
- Heat-treated alloy steel parts interchangeable with iron wrenches



Item	Part Number	Description	Pipe Capacity	Length
1	4C-6974	Aluminum Wrench	14.0 mm - 63.0 mm (.25 in - 2.00 in)	356 mm (14.02 in)
2	4C-6975	Aluminum Wrench	14.0 mm - 75.0 mm (.25 in - 2.50 in)	457 mm (17.99 in)
3	4C-6976	Aluminum Wrench	14.0 mm - 90.0 mm (1.25 in - 3.00 in)	610 mm (24.02 in)
Not shown	4C-6973	Aluminum Wrench	10.0 mm - 48.0 mm (.13 in - 1.50 in)	254 mm (10 in)

### Heavy-Duty Pipe Wrenches

- High-tensile ductile iron handle and hardened tool-steel parts
- Designed to withstand heavy demands

Part Number	Pipe Capacity	Length	Weight
4C-6962	10.0 mm - 48.0mm (.13 in - 1.50 in)	254.0 mm (10.00 in)	5.4 kg (12 lb)
4C-6963	10.0 mm - 60.0 mm (.13 in - 2.00 in)	305.0 mm (12.00 in)	8.1 kg (18 lb)
4C-6964	14.0 mm - 63.0 mm (.25 in - 2.00 in)	356.0 mm (14.00 in)	9.5 kg (21 lb)
4C-6965	14.0 mm - 75.0 mm (.25 in - 2.50 in)	457.0 mm (18.00 in)	15.0 kg (33 lb)
4C-6972	14.0 mm - 90.0 mm (.25 in - 3.00 in)	610.0 mm (24.00 in)	27.2 kg (60 lb)



### Quick Release Tubing Cutters

- Offer the best tracking and easiest cutting available anywhere
- Cut copper, aluminum and steel tubing (not steel pipe)
- With a quick wheel change, they also cut a wide variety of plastic pipe and tubing

Item	Part Number	O.D. Capacity	Length	Weight	Wheel for Copper, Aluminum, Brass, Steel	Wheel for Stainless Steel
1	4C-6977	3.0 mm - 33.0 mm (.13 in - 1.31 in)	152 mm (5.98 in)	0.2 kg (0.44 lb)	4C-6980	4C-6981
2	4C-6978	6.0 mm - 60.0 mm (.25 in - 2.63 in)	203 mm (7.99 in)	0.5 kg (1.10 lb)	4C-6980	4C-6981
3	4C-6979	10.0 mm - 90.0 mm (.38 in - 3.50 in)	279 mm (10.98 in)	1.1 kg (2.43 lb)	4C-6982	—



Hand Tools



## 233-1639 Yellow Grip Pliers Set, 3 Piece

Warranty: Lifetime

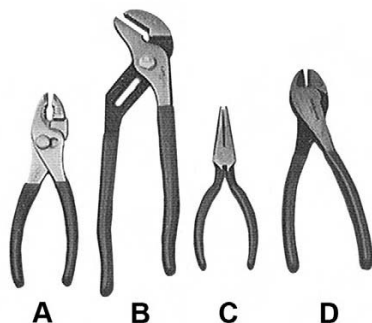


- Hardened cutting edges stay sharper longer and cut with less effort
- Machined cutter heads for matched blades
- Black oxide finish
- Vinyl grip

Part Number	Description	Length
233-1639	Pliers Set	--
<b>Pliers Set Consists of:</b>		
6V-6192	Slip Joint Pliers	190.5 mm (7.50 in)
6V-6193	Heavy-Duty Diagonal Cutter	185.7 mm (7.30 in)
6V-6194	Needle Nose Pliers	181.1 mm (7.13 in)

## Combination and Multiple Position Pliers

Warranty: Lifetime

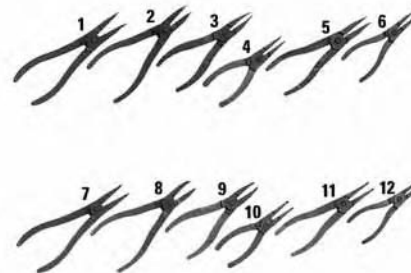


Type	Part Number	Description	Length	Finish	Vinyl Grip
A	1S-0255	Combination Pliers	163.5 mm (6.40 in)	Chrome	No
A	213-1983	Combination Pliers	159.3 mm (6.30 in)	Chrome	Yes
A	6V-6192	Slip Joint Pliers	190.5 mm (7.50 in)	Black Oxide	Yes
B	236-1169	Multiple Position Pliers	400.0 mm (16.00 in)	Chrome	Yes
B	6V-6195	Interlocking Joint Pliers	235.0 mm (9.30 in)	Black Oxide	Yes
B	214-7347	Multiple Position Pliers	304.8 mm (12.00 in)	Chrome	Yes
C	6V-6194	Needle Nose Pliers	181.1 mm (7.13 in)	Black Oxide	Yes
D	6V-6193	Heavy-Duty Diagonal Cutter	185.7 mm (7.30 in)	Black Oxide	Yes
--	8H-8582 <sup>1</sup>	Vise Grip	250 mm (9.80 in)	Chrome	No
--	246-5134	Locking Pliers Set, 5 piece	--	--	--
--	246-5133	Locking Pliers, Straight Jaw	254.0 mm (10.00 in)	Black	No
--	246-5132	Locking Pliers, Curved Jaw w/cotter	254.0 mm (10.00 in)	Black	No
--	246-5131	Locking Pliers, Long Rounded Jaw	254.0 mm (10.00 in)	Black	No
--	246-5129	Locking Pliers, Curved Jaw	177.8 mm (7.00 in)	Black	No
--	246-5128	Locking Pliers, Straight Jaw	127.0 mm (5.00 in)	Black	No
--	212-3607	End Cutter Pliers	187.3 mm (7.40 in)	Black Oxide	Yes
--	214-7348	Vise Grip, Curved Jaw	250.0 mm (9.80 in)	Chrome	No

<sup>1</sup>Not available for individual sale

### Retaining Ring Pliers

Item	Part Number	No.	Tip Size	Type
<b>Straight Tips</b>				
1	1P-1863	No. 26	0.12 in	External
2	1P-1861	No. 25	0.09 in	Internal
3	1P-1857	No. 23	0.07 in	Internal
4	1P-1855	No. 22	0.04 in	External
5	1P-1859	No. 24	0.07 in	External
6	1P-1853	No. 21	0.04 in	Internal
<b>Right Angle Tips</b>				
7	1P-1864	No. 26-90	0.12 in	External
8	1P-1862	No. 25-90	0.09 in	Internal
9	1P-1858	No. 23-90	0.07 in	Internal
10	1P-1856	No. 22-90	0.04 in	External
11	1P-1860	No. 24-90	0.07 in	External
12	1P-1854	No. 21-90	0.04 in	Internal



### 5P-5197 External Pliers

- Use to compress or expand large retaining rings
- A double ratchet locks to hold the handles at any given point without hand pressure
- Gap between the plier tips ranges from 12.7 mm (.50 in) fully closed to 76.0 mm (3.00 in) fully open

Item	Part Number	Description
1	5P-5197	External Pliers
2	136-1452	Internal Pliers
3 and 4	1U-6728	Tip Set
Not Shown	6V-2062	Tip Set, 90 Degrees <sup>1</sup>

<sup>1</sup> Used for 5P-5197



### 1U-8758 Internal Retaining Ring Pliers

- Used to remove and install the large internal retaining rings in power shift transmissions
- Double ratchet lock
- Pliers include 0.15 in (3.8 mm) diameter tips
- Service Part: 1U-8759 Replacement Tips (2 per package)

Part Number	Description	Length
1U-8758	Internal Retaining Ring Pliers	29.00 in (737.0 mm)



Hand Tools

## 2P-8312 External Retaining Ring Pliers



- Used to remove and install tempered steel retaining rings used in many applications
- Right angle tips to provide the necessary clearance where the lock ring is accessible only from a perpendicular position

Part Number	Description
2P-8312	External Retaining Ring Pliers

## 226-1900 Pin Punch Set, 7 Piece

Warranty: See individual part number



- Replaces discontinued 1U-7250 Pin Punch Set, 7 Piece
- Individually heat treated for uniform hardness
- Includes pouch

Part Number	Point Size	Length	Description
226-1900	--	--	Pin Punch Set
<b>Pin Punch Set Consists of:</b>			
226-1901	1/16 in	102 mm (4.0 in)	Punch
226-1902	3/32 in	114 mm (4.5 in)	Punch
226-1903	1/8 in	127 mm (5.0 in)	Punch
226-1904	5/32 in	140 mm (5.5 in)	Punch
226-1905	3/16 in	140 mm (5.5 in)	Punch
226-1906	7/32 in	178 mm (7.0 in)	Punch
226-1907	1/4 in	178 mm (7.0 in)	Punch

Hand Tools

## 227-3129 Drift Punch Set, 5 Piece

Warranty: See individual part number



- Replaces discontinued 1U-7260 Drift Punch Set, 5 Piece
- Material: high carbon steel
- Individually heat treated for uniform hardness
- Includes pouch

Part Number	Point Size	Length	Description
227-3129	--	--	Drift Punch Set
<b>Drift Punch Set Consists of:</b>			
227-3130	1/8 in	229 mm (9.0 in)	Punch
227-3131	3/16 in	279 mm (11.0 in)	Punch
227-3132	7/32 in	305 mm (12.0 in)	Punch
227-3133	1/4 in	305 mm (12.0 in)	Punch
227-3134	5/16 in	305 mm (12.0 in)	Punch

**227-3795 Chisel Group, 5 Piece**

Warranty: See individual part number

- Individually heat-treated for uniform hardness
- Resharpener and polished after blasting for a sharper cutting edge
- Includes pouch



Part Number	Punch Size	Length	Description
227-3795	--	--	Chisel Group
<b>Chisel Group Consists of:</b>			
227-3796	5/16 in	114.3 mm (4.50 in)	Chisel
227-3797	3/8 in	127 mm (5 in)	Chisel
227-3798	7/16 in	139.7 mm (5.50 in)	Chisel
227-3799	1/2 in	146.1 mm (5.75 in)	Chisel
227-3800	5/8 in	152.4 mm (6 in)	Chisel

**Individual Chisels and Punch Pieces**

- Hot-formed from fine alloy steel and heat treated for maximum hardness — they hold their edges and points

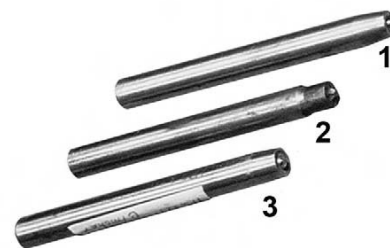
Item	Part Number	Punch Size	Length	Type
1	8H-8578	3/8 in	241.3 mm (9.50 in)	Punch
2	1F-1161	3/4 in	177.8 mm (7.00 in)	Cold Chisel
3	1F-1159	3/16 in	152.4 mm (6.00 in)	Center Punch
--	165-3977	4.95 mm	154 mm (6.06 in)	Radius Punch
--	1F-1160	13/32 in	139.7 mm (5.50 in)	Cold Chisel
--	1U-7296	3/16 in	158.8 mm (6.25 in)	Center Punch
--	8H-8579	5/32 in	203.2 mm (8.00 in)	Punch
--	8T-0832	1/4 in	142.7 mm (5.63 in)	Cape Chisel



**Rivet Sets**

- Available for either “Star” set rivets or “Roll” set rivets
- “Star” set rivets, identified by a star stamped in the head, should be used only where the clinching is done against a non-metallic surface. To form a good clinch, there should be approximately 3/16 inch of rivet extension before the rivet is set.
- “Roll” set rivets, marked with a circle on the head, should be used when clinching is done against metal. To form a good clinch, there should be approximately 1/8 inch of rivet extension before the rivet is set.

Item	Part Number	Description
1	1P-2874	Roll Set (for 1/4 in rivets)
2	6F-6947	Star Set
3	6F-6946	Roll Set (for 3/16 in rivets)
--	6V-7013	Roll Set (for 5/32 in rivets)



Hand Tools

## 129-1063 Riveter Kit

SMCS Code: 4054

Model: M312 Wheeled Excavators



- Used for miscellaneous repairs requiring rivets
- Comes with three different nose pieces

Part Number	Description	Length
129-1063	Riveter Set	53.0 cm (21.0 in)

## Feeler Gauges



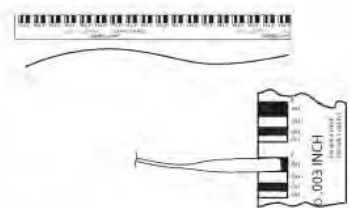
Item	Part Number	Description	Size
1	1U-7234	Feeler Gauge	25 Blade, .0015 in - .040 in
2	8H-8581	Feeler Gauge <sup>1</sup>	25 blade, .0015 in - .025 in

<sup>1</sup>Warranty: Six Months

## Plastic Gauges for Checking Clearance

SMCS Code: 1000-082, 0700, 0701, 0714

Models: All Engines or Clearance Between Any Mating Parts

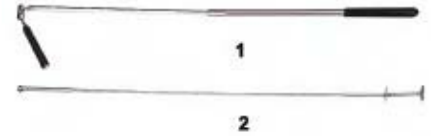


- Used to quickly and easily check clearance between mating parts (main rod and bearing clearance, component side clearance, oil pump cover to gear clearance, etc.)
- Plastigage clearance indicator is an extruded plastic thread that crushes when clamped between two mating parts
- Available in four color-coded sizes for easy identification
- Clearance thickness is determined by holding crushed indicator material against paper packaging (refer to illustration)
- Any plastic residue on parts can be quickly removed with component cleaner
- One indicator per package
- Overall length: 30.0 cm (12.00 in)

Part Number	Color	Clearance Range
198-9142	Green	0.025 to 0.076 mm (.001 to .003 in)
198-9143	Red	0.051 to 0.152 mm (.002 to .006 in)
198-9144	Blue	0.102 to 0.229 mm (.004 to .009 in)
198-9145	Yellow	0.230 to 0.510 mm (.009 to .020 in)

**Retrieval Tools**

Item	Part Number	Description
1	1U-7262	Telescoping Magnet
2	146-2728	Flexible Pickup Tool



**Inspection Mirror**

- The mirror extends to 15 1/4 in long
- The mirror swivels 360 degrees

Part Number	Description
9U-6182	Inspection Mirror

**Putty Knife/Scraper**

Part Number	Description	Size
8H-8580	Straight Blade Scraper <sup>1</sup>	38.1 mm (1.50 in) wide



Hand Tools

<sup>1</sup>Warranty: Six Months

## Filter and Plug Removal and Installation Tools



- Used to remove and install drain and fill plugs
- Most hexagonal plugs can also be removed and installed using the 213-1985 Sliding T-Handle and 8H-8561 Socket

Item	Part Number	Description
1	1S-2475	Wrench, 3/4 in square
2	8H-8559	Socket Extension
3	213-1985	Sliding T-Handle
4	212-8145	Drain Plug Socket
5	212-8146	Drain Plug Socket, 1/2 in Female, 1 in and 1 1/2 in Hex
6	261-0444	Socket Adapter
7	185-3630	Filter Strap Wrench Assembly <sup>1</sup>

<sup>1</sup>Warranty: Six Months

## Cab Glass Installation Tools

- For installing the filler strips around the glass in cabs



Part Number	Description
4C-9946	Filler Strip Tool Assembly
5H-4845	Seal Installation Tool Assembly
5H-4846	Handle
5H-4847	End
5H-4848	Bit

## 5P-1720 Seal Pick



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

Part Number	Description
5P-1720	Seal Pick

**5P-7414 Seal Pick Kit**

Part Number	Description
5P-7414	Seal Pick Kit

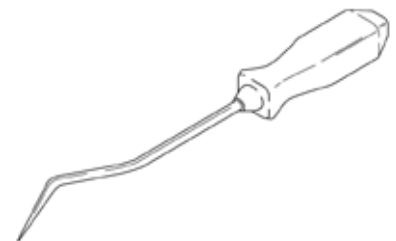


**195-4609 Seal Pick**

Model: All Hydraulic Cylinders

- Used to remove cylinder rod seals
- Large size allows faster and easier removal of seals from large hydraulic cylinders
- Heavy-duty design

Part Number	Description	Length
195-4609	Seal Pick	248.0 mm (9.80 in)



**Utility Knife and Blades**

- "Slick lock" push-button knife that includes 2 blades stored in the handle

Part Number	Description	Length	Thickness	Qty.
4C-4870	Utility Knife	152.4 mm (6 in)	--	1
4C-4871	Utility Knife Blades	--	0.635 mm (0.025 in)	100 blades per box



Hand Tools



## Scratch Brushes



- Hand scratch brushes are excellent for removing rust, scale, old paint, chips and dirt, and for cleaning castings and metal parts
- Provide long, effective service at extremely low cost

Part Number	Description	Size
1U-9915	Curved Handle Brush	.014 in (3 x 19 Row)
1U-9916	Curved Handle Brush	.012 in (4 x 19 Row)
1U-9917	Shoe Handle Brush	.014 in (4 x 16 Row)
1U-9918	Inspection Stainless Brush	.006 in (3 x 7 Row)

## 160-0774 Corner Cleaner Wire Brush

- Quickly removes flaking paint, rust, and scale
- Handy small size with pointed end works well in hard to reach areas
- Full size handle with finger grips and thumb rest provides added control and comfort
- Made of tough polypropylene



Part Number	Description	Overall Length
160-0774	Corner Cleaner Wire Brush	254.0 mm (10.00 in)

## 160-0772 Longneck Wire Brush

- Excellent for removing rust, scale, old paint, chips, or dirt
- Unique wrap-around handle protects your fingers
- Full size handle and molded finger grips add control and reduce fatigue
- Over 80 yards of wire for maximum performance
- Made of tough polypropylene
- Heavy-duty steel scraper has a baked-on, rust resistant finish
- Scraper is permanently secured to brush



Part Number	Description	Width	Overall Length
160-0772	Longneck Wire Brush	76.2 mm (3.00 in)	330.2 mm (13.00 in)

**160-0775 Industrial Wire Scrubber**

- Quickly removes flaking paint, rust, and scale
- Dual grip design reduces fatigue — grasp either the handle or specially molded block
- Made of tough polypropylene

Part Number	Description	Overall Length
160-0775	Industrial Wire Scrubber	177.8 mm (7.00 in)



**Parts Cleaning Brushes**

Item	Part Number	Description	Wire Size	Wire Row
1	1U-9920	11 in O.A.L.	Size #10	Black Polypropylene
2	1U-9919	11 in O.A.L.	Size #10	Tampico
3	2B-4317	10 3/4 in O.A.L.	Paint Style 1 1/2 in	Black Nylon



**Paint Brushes**

- Use with interior or exterior paints, stains, varnishes, and urethanes
- Quantity: one box of 12 brushes
- 262-9752 not available in Australia, New Zealand, Republic of Fiji or Papua New Guinea

Part Number	Width x Length	Material
262-9749	25 mm x 178 mm (1 in x 7 in)	Nylon Brush, Metal Ferrule, Plastic Handle
262-9750	51 mm x 203 mm (2 in x 8 in)	Nylon Brush, Metal Ferrule, Plastic Handle
262-9752	76 mm x 203 mm (3 in x 8 in)	Hog Bristle Brush, Metal Ferrule, Wood Handle



Hand Tools

## Acid Brushes



- Genuine horsehair bristles, crimped with flat tin handle
- Chemical resistant handle

Part Number	Description	Size
1U-9977	Acid Brush	3/8 in
1U-9978	Acid Brush	1/2 in

## 1U-9921 Battery Post Brush



- Stiff wire bristles thoroughly clean posts

Part Number	Description
1U-9921	Battery Post Brush

Hand Tools

## 8F-9866 Lever Grease Gun, Model Pro "L"



- Heavy-duty construction
- Cast iron head equipped with a check valve and an air-bleed valve
- Spring primed
- Two way loading
- Uses standard Cat Grease cartridges (14.5 oz)
- Lever gun will operate with partial lever strokes for use in close quarters
- Zinc plated
- Cat branded

### 8F-9866

- Maximum operating pressure of assembly: 68,948 kPa (10,000 PSI)

### Reference

NEHS0793 Tool Operating Manual

(Continued)

**8F-9866 Lever Grease Gun, Model Pro "L" (Continued)**

Part Number	Description
8F-9866	Grease Gun
<b>8F-9866 Consists of:</b>	
190-1668	Coupler
190-1669	Hose Assembly, 12 in long
<b>Optional</b>	
190-5623	Hose Assembly, 18 in long
<b>Service Parts for Noncurrent 8F-9866 (This model is not marked Pro L and uses the 2M-2689 or 190-1670 Coupler with a check valve)</b>	
190-1670	Coupler (valve with steel insert)
2M-2689	Coupler (valve with rubber insert)
9F-2637	Nipple (part of 9F-2636)
9F-2636	Nozzle Assembly

**190-5622 Pistol Grip Grease Gun**

- Heavy-duty construction
- Cast iron head equipped with a check valve and an air-bleed valve
- Spring primed
- Two way loading
- Uses standard Cat Grease cartridges (14.5 oz)
- Lever gun will operate with partial lever strokes for use in close quarters
- Zinc plated
- Cat branded

**190-5622**

- Maximum operating pressure of assembly: 31,026 kPa (4,500 PSI)

**Reference**

NEHS0793 Tool Operating Manual



Part Number	Description
190-5622	Pistol Grip Grease Gun
<b>Grease Gun Consists of:</b>	
190-1668	Coupler
190-5623	Hose Assembly, 18 in long
<b>Optional</b>	
190-1669	Hose Assembly, 12 in long

**Cordless Electric Grease Gun**

Warranty: Manufacturer's

- 12 Volt cordless, rechargeable grease gun
- Custom carrying case holds grease gun with battery, battery charger, and two grease cartridges (grease not included)
- 12 Volt motor delivers consistent grease flow up to 41368 kPa (6000 PSI)
- Works great in construction and agricultural field conditions
- Provides faster, more effective lubrication (reduces mechanic's fatigue when lubricating large numbers of grease fittings)
- Three-way loading to fit your needs and equipment (suction, filler pump, and cartridge)
- Uses standard 14 ounce cartridges
- Comes with a 76 cm (30.0 in) flex hose with spring guards
- One hour "fast charge" charges batteries quickly; trickle charge keeps batteries fully charged when placed in charger



194-3560

(Continued)

# Miscellaneous Hand Tools

## Cordless Electric Grease Gun (Continued)

Warranty: Manufacturer's

Motor	12 Volt
Battery	high-capacity, 12 Volt NiCad
Pressure capacity	41368 kPa (6000 PSI)
Charge time	1 hour (110 V, 60 Hz)
Front outlet fitting	7/16 inch UNEF
Filler nipple thread	1/8 inch NPT
Lubricating capacity (under normal conditions)	3 cartridges minimum
Battery capacity	1300 m-A hour
Battery charger	110 Volt

Part Number	Description
194-3561	Rechargeable Battery
194-3560	Grease Gun Group with 1 Battery
241-0706	Grease Gun Group with 2 Batteries
207-2736	Hose Assembly, 762 mm (30 in) for Grease Gun 194-3560
274-1677	Battery Charger

## Superior E-Z Thrust Caulker

- Holds any 12 oz. tube designed for use with a caulking gun
- Recommended for all grades of caulks, sealants and adhesives from heavy to light consistencies

Part Number	Description	Cartridge Size
4C-6922	E-Z Thrust Caulker	0 L (0.01 gal)



## Super Ratchet-Type Caulker

- Designed for the professionals who prefer ratchet guns
- Will outlast, outperform all other ratchet guns
- Engineered to withstand heavy use
- Equipped with ladder hook, built-in spout cutter, seal puncture tool, and convenient "D" ring and wrist strap

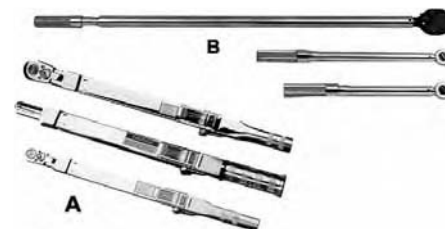
Part Number	Description	Cartridge Size
4C-6923	Ratchet-Type Caulker	1/10 gal



## Click Type Torque Wrenches

### Style A

- Work only in the right-hand or clockwise direction, and are guaranteed to be accurate within 4% of setting of the top 80% of the scale
- Easily adjusted by a small calibrated dial along the wrench arm
- Eliminates the need to reduce the torque setting to the low end of the scale for storage in order to retain accuracy
- The 162-8718 Torque Wrench can be disassembled into three components for storage in a tool box
- Includes a certificate of calibration



### Style B

- Work in both right and left-hand (clockwise and counter-clockwise) directions
- Micrometer handle style adjustment
- These wrenches are labeled in both ft-lbs and N•m
- Includes a certificate of calibration

### Repair Information

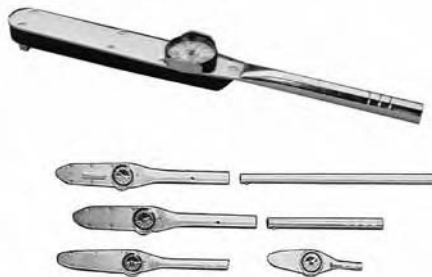
For any questions regarding repairs, calibration or customer service, please contact the Tool Repair Center 1-800-786-6600 extension 6168 (Canada & US only) or 262-656-5200 extension: 6168

Style	Part Number	Minimum Torque Range	Max. Torque Range	Drive	Accuracy	Head Type	Increments	Length	Head Width	Head Depth	Case Included	Kit Part Number	Kit Part Number
A	8T-9293	54.5 N·m (40 ft-lb)	341.7 N·m (252 ft-lb)	1/2 in	±4%	Flex-Ratchet	6.8 N·m (5 ft-lb)	591.97 mm (22 1/8 in)	41.27 mm (1 5/8 in)	19.05 mm (3/4 in)	Yes	5P-7429 <sup>1</sup>	260-3765 <sup>2</sup>
A	162-8718	271 N·m (200 ft-lb)	813.5 N·m (600 ft-lb)	3/4 in	±4%	Detach-Ratchet	13.6 N·m (10 ft-lb)	1219.2 mm (48 in)	60.32 mm (2 3/8 in)	31.75 mm (1 1/4 in)	--	160-6390 <sup>1</sup>	260-3766 <sup>2</sup>
A	4C-5492	27.1 N·m (20 ft-lb)	135.6 N·m (100 ft-lb)	3/8 in	±4%	Flex-Ratchet	2.7 N·m (2 ft-lb)	447.67 mm (17 5/8 in)	28.57 mm (1 1/8 in)	14.28 mm (9/16 in)	Yes	4C-5819 <sup>1</sup>	260-3764 <sup>2</sup>
B	9U-5019	6.8 N·m (5 ft-lb)	101.8 N·m (75 ft-lb)	3/8 in	±6%	Fixed Ratchet	0.7 N·m (0.5 ft-lb)	393.7 mm (15.5 in)	--	--	Yes	--	--
B	9U-5020	13.6 N·m (10 ft-lb)	135.7 N·m (100 ft-lb)	3/8 in	±6%	Fixed Ratchet	0.7 N·m (0.5 ft-lb)	393.7 mm (15.5 in)	--	--	Yes	--	--
B	214-7349	27.1 N·m (20 ft-lb)	203.6 N·m (150 ft-lb)	1/2 in	±6%	Fixed Ratchet	1.4 N·m (1 ft-lb)	469.9 mm (18.5 in)	--	--	Yes	214-7350	--
B	9U-5006	40.7 N·m (30 ft-lb)	339.3 N·m (250 ft-lb)	1/2 in	±6%	Fixed Ratchet	1.4 N·m (1 ft-lb)	539.6 mm (21.25 in)	--	--	Yes	--	--
B	9U-5007	135.7 N·m (100 ft-lb)	814.2 N·m (601 ft-lb)	3/4 in	±6%	Fixed Ratchet	7 N·m (5.2 ft-lb)	1092.2 mm (45 in)	--	--	Yes	--	--

<sup>1</sup> Service Kit for ratchets that have brand on the head

<sup>2</sup> Service Kit for ratchets that do not have brand on the head

## Dial Type Torque Wrenches



- Accuracy within 2% of the reading within the upper 80% of the scale
- Wrenches with follow-up needle use two pointers on the dial which move as one as long as pressure is applied and one remains at the maximum torque reading until reset
- Wrenches with light indicator features a light which comes on when the torque setting is reached
- Work in both right and left-hand (clockwise and counter-clockwise) directions

### Repair Information

For any questions regarding repairs, calibration or customer service, please contact the Tool Repair Center 1-800-786-6600 extension 6168 (Canada & US only) or (262)656-5200 extension: 6168

Part Number	Torque Range	Drive U.S.	Drive	Accuracy	Metric Graduations	English Increments	Length	Needle Included	Light Indicator Included	Case Included
9U-5017	35.0 N-m	300 in-lb	3/8 in	±4%	1.0 N-m	5 in-lb	25.4 cm (10.0 in)	Yes	--	Yes
9S-7351	800.0 N-m	600 ft-lb	3/4 in	±2%	20.0 N-m	10 ft-lb	103.9 cm (40.9 in)	--	Yes	--
9S-7352	480.0 N-m	350 ft-lb	3/4 in	±2%	10.0 N-m	5 ft-lb	75.9 cm (29.9 in)	Yes	--	--
9S-7353	230.0 N-m	175 ft-lb	1/2 in	±2%	10.0 N-m	2.5 ft-lb	47.6 cm (18.75 in)	Yes	--	--
9S-7354	34.0 N-m	300 in-lb	3/8 in	±2%	1.0 N-m	5 in-lb	25.2 cm (9.9 in)	Yes	--	--

## Heavy-Duty Box Wrenches

- Used for fasteners in inaccessible places, such as track roller guard bolts, where a torque wrench and standard socket cannot be used

### Repair Information

For any questions regarding repairs, calibration or customer service, please contact the Tool Repair Center 1-800-786-6600 extension 6168 (Canada & US only) or 262-656-5200 extension: 6168



Part Number	Hex Size	Straight/Config.	Offset	Torque
6V-4165	19 mm	12 pt	straight	650.00 ft-lb
6V-4166	7/8 in	12 pt	straight	650.00 ft-lb
6V-4167	15/16 in	12 pt	straight	650.00 ft-lb
6V-4168	1 1/8 in	12 pt	straight	650.00 ft-lb
6V-4169	1 5/16 in	12 pt	straight	650.00 ft-lb
6V-4171	15/16 in	12 pt	15° offset	--
9U-5612	55 mm	12 pt	offset	1,000.00 ft-lb
9U-7375	46 mm	12 pt	offset	1,000.00 ft-lb
4C-9563	24 mm	12 pt	straight	650.00 ft-lb
4C-9565	36 mm	12 pt	straight	650.00 ft-lb
262-2758	20 mm	12 pt	straight	650.00 ft-lb
262-2759	30 mm	12 pt	straight	650.00 ft-lb
<b>Shown Below</b>				
6V-4154	1 1/2 in	12 pt	straight	650.00 ft-lb

## Torque Wrench Extensions

- Has an effective length of 610 mm (24 in) and a capacity up to 884 N•m (650 ft-lb)
- A slide rule type torque computer, Form SEHS7150, is available to determine the torque wrench dial reading for different extensions



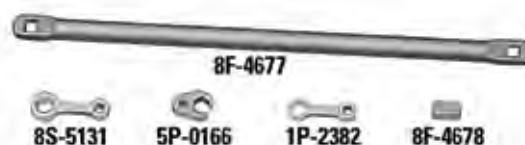
### Repair Information

For any questions regarding repairs, calibration or customer service, please contact the Tool Repair Center 1-800-786-6600 extension 6168 (Canada & US only) or 262-656-5200 extension: 6168

Part Number	Description
6V-3146	Tubular Extension
6V-4170	Adapter, 3/4 inch, Sq. Drive
6V-4154	Heavy-Duty Box Wrench

## Adapters and Extensions for Torque Wrenches

- The 8S-5131 and 1P-2382 Adapters are used with the 9S-7353 or 9U-5014 Torque Wrench
- The 8F-4677 Extension and 8F-4678 Adapter are used with the 9S-7352 or 9U-5015 Wrench to increase the capacity of the wrench



### Repair Information

For any questions regarding repairs, calibration or customer service, please contact the Tool Repair Center 1-800-786-6600 extension 6168 (Canada & US only) or 262-656-5200 extension: 6168

Part Number	Description	Use
8S-5131	Adapter (1/2 inch Drive, 7/8 inch 12 Point Box End)	for front left main bearing cap bolt on 1100 and 3100 Series Engines
1P-2382	Adapter (1/2 inch Drive, 3/4 inch 12 Point Box End)	for universal joint bolts on all tractor-scrappers (except 613) and No. 16 Motor Graders
5P-0166	Crowfoot Wrench (3/8 inch Drive, 3/4 inch Hex)	for torquing fuel line nuts on D3 Tractors, 910 Wheel Loaders and 931 Track Loaders
8F-4678	Adapter Driver (3/4 inch Drive)	for use with 8F-4677 Extension

Part Number	Description	Use
8F-4677	Extension, 3/4 inch Drive, 26 7/8 inch center to center	use to double capacity of 8F-4675 and 9S-7352 Torque Wrenches for torque applications up to 700 ft.lb.
156-2568	Adapter, 3/8 inch drive, 10 mm, 12 point box end	--
8T-3196	Offset Box Wrench	3/4 inch Drive, 1 7/8 inch Hex, 12 pt
9U-5932	Camshaft Torque Extension 3600 Engines	--
9U-6282	Crankshaft Main Bearing on 3054 and 3056 Engines. 1/2 inch Sq. Drive, 15/16 inch Hex, 12 pt	--

## Special Torque Wrench Extensions

- Extensions listed below are used with the 6V-9451 Tubular Arm, and the 9S-7352 Torque Wrench primarily for applications up to 1000 ft-lb (1360 N•m)
- The Torque Computer, Form SEHS7150, can be used to compute the correct torque wrench reading for proper torque application at the fastener



### Repair Information

For any questions regarding repairs, calibration or customer service, please contact the Tool Repair Center 1-800-786-6600 extension 6168 (Canada & US only) or 262-656-5200 extension: 6168

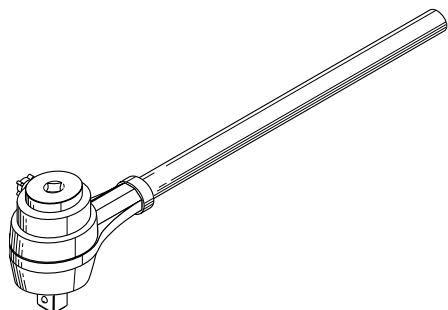
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## Special Torque Wrench Extensions (Continued)

Part Number	Description	Use
6V-9451	Tubular Arm	--
6V-9454	Wrench, 1 7/8 inch	Tighten mounting stud nuts on 55, 56, 57, 58 and 59 Towing Winches.
6V-9455	Wrench, 1 7/8 inch	Tighten mounting stud nuts on 55 and 56 Towing Winches
6V-9456	Wrench, 1 11/16 inch	Tighten steering cylinder tie rod bolt nut on No. 16G Motor Graders.
<b>Not Shown</b>		
9U-7375	Wrench 46 mm (1 13/16 in) Offset - 40 mm (1.56 in)	Remove and install rear axle housing, pivot joint cap bolts on 789 and 793

### 206-8796 Torque Multiplier



- Used to apply torque greater than capability of torque wrench with an accuracy of  $\pm 5\%$
- Specifically used to install and remove counterweight bolts on 5230B Front Shovels or other similar applications
- Designed for use with 1 inch square drive torque wrench
- Provides 360° continuous rotation in both directions
- Built-in, angle-of-turn protractor measures angle of rotation in 5° increments for torque turn specifications
- Overload protection is provided by square output drive which shears at a torque slightly above maximum output rating
- Decals located on multiplier provide torque input and output values

**Reference:**

REN3379 Service Manual, Disassembly and Assembly

Part Number	Input Square Drive	Output Square Drive	Power Ratio	Rated Input Capacity	Max. Output Capacity	Overall Length
206-8796	1 in	1 1/2 in	4.33 to 1	1,470 N·m (1,084.22 ft-lb)	5,440 N·m (4,012.34 ft-lb)	76 mm (2.99 in)

### Torque Multipliers

Warranty: Manufacturer's



6V-7820



6V-6080

- Used to apply torques above the capability of torque wrenches with an accuracy of  $\pm 5\%$
- Overload protection is provided by the square output drive which shears at a torque slightly above the maximum output rating
- Decals providing torque input and output values are located on the multiplier

(Continued)

## Torque Multipliers (Continued)

Warranty: Manufacturer's

Part Number	Description	Input Square Drive	Output Square Drive	Power Ratio	Rated Input Capacity	Max. Rated Output	Weight
6V-7820	Torque Multiplier	1/2 in	3/4 in	6 to 1	271 N·m (199.88 ft-lb)	1,620 N·m (1,194.85 ft-lb)	4 kg (8.82 lb)
6V-6080	Torque Multiplier	1/2 in	1 in	18.5 to 1	240 N·m (177.01 ft-lb)	4,335 N·m (3,197.33 ft-lb)	8.2 kg (18.08 lb)
<b>6V-7820 - Serviceable Parts</b>							
6V-4079	Drive Assembly	--	--	--	--	--	--
8H-0707	Bolt	--	--	--	--	--	--
6V-4081	Pinion	--	--	--	--	--	--
3B-3911	Bearing	--	--	--	--	--	--
6V-4083	Gear	--	--	--	--	--	--
6V-6134	Protractor	--	--	--	--	--	--
<b>6V-6080 - Serviceable Parts</b>							
6L-4082	Race	--	--	--	--	--	--
6V-6135	Gear	--	--	--	--	--	--
6V-6136	Pinion	--	--	--	--	--	--
6V-9137	Pinion	--	--	--	--	--	--
6V-9136	Gear	--	--	--	--	--	--
6V-6134	Protractor	--	--	--	--	--	--
5P-4115	Washer	--	--	--	--	--	--
6V-6137	Dowl	--	--	--	--	--	--
6V-9135	Pin	--	--	--	--	--	--
6V-6139	Pin	--	--	--	--	--	--
6V-6762	Race	--	--	--	--	--	--
2M-1672	Bearing	--	--	--	--	--	--
2H-2213	Bearing	--	--	--	--	--	--
8T-0893	Screw	--	--	--	--	--	--
8T-5181	Input End Assembly	--	--	--	--	--	--
8T-0894	Hardware Kit	--	--	--	--	--	--
<b>Repair Parts for 6V-6080</b>							
280-3451	Reaction Anchor	--	--	--	--	--	--
280-3452	Repair Kit	--	--	--	--	--	--

## 8T-3052 Degree Wheel

- Used for measuring torque turn angles
- The nut or bolt does not have to be marked in order to obtain the correct torque

Part Number	Description	Size
8T-3052	Degree Wheel	1/2 in drive; can be used with any standard 1/2 in drive socket



## 1P-7460 Mechanical Torque Tester



- Torque wrenches can be checked quickly and easily
- Furnished with 3/8 inch, 1/2 inch and 3/4 inch adapters to accommodate Cat torque wrenches
- Certified accuracy is  $\pm 1\%$  or one scale division, whichever is greater

Part Number	Description	Torque Range
1P-7460	Mechanical Torque Tester	680 N·m (502 ft-lb)

## Electronic Torque Testers



### European Union Compliant, CE marked

- Accuracy better than 1% of the indicated value in ranges between 10% to 100% of maximum rating
- Maximum overtorque of 120% of full rating
- Reliable “first-peak” mode for tests of click type torque wrenches without the need for manual sensitivity adjustment—a red light and buzzer indicate capture of first torque peak. Other modes include “peak hold” which records the highest reading during a test and “track” which displays continuously during use.
- Equally accurate in clockwise and counter-clockwise directions
- Automatic or manual display reset
- Unique adjustable head moves for easy reading
- Rechargeable battery with 110 V AC adapter included (not available separately)

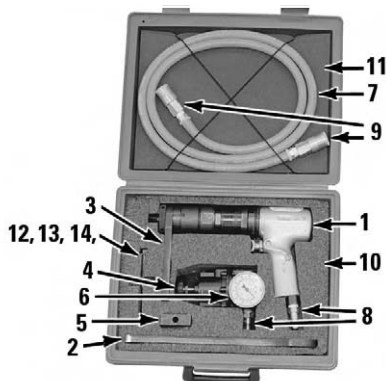
Note: Use 9U-5101 mounting bracket to mount the testers to a bench top. No bracket is required to mount testers to a vertical surfaces.

### Repair Information

For any questions regarding repairs, calibration or customer service, please contact the Tool Repair Center 1-800-786-6600 extension 6168 (Canada & US only) or 262-656-5200 extension: 6168

Part Number	Torque Range	Drive U.S.	Size
9U-5009	12 to 57 N·m	10 to 50 in-lb	1/4
9U-5010	57 to 282 N·m	50 to 250 in-lb	3/8
9U-5011	226 to 1130 N·m	200 to 1000 in-lb	3/8
9U-5012	68 to 339 N·m	50 to 250 ft-lb	1/2

## 8T-5230 Air Regulated Torque Wrench Set



- Allows controlled output torque in a range of 34 to 300 N·m (25 to 220 ft-lb)
- Readily adapts to 6V-7820 or 6V-6080 Torque Multipliers which provide controlled torque values between 300 to 4350 N·m (220 to 3200 ft-lb)
- Output torque of the wrench can be set by adjusting the air supply at the regulator
- Regulator air gauge is calibrated in kPa and PSI
- Air pressure of 620 kPa (90 PSI) is required for the maximum torque setting
- 1/2 inch drive and rotation is reversible

(Continued)

## 8T-5230 Air Regulated Torque Wrench Set (Continued)

- Most effective where there are several hardware items that require the same torque; for example, when tightening the wheel nuts or front strut mounting bolts on off-highway trucks

Item	Part Number	Description
--	8T-5230	Air Regulated Torque Wrench Set
<b>Air Regulated Torque Wrench Set Consists of:</b>		
1	8T-5190	Wrench <sup>1</sup>
2	8T-5191 <sup>2</sup>	Bar
3	8T-5192 <sup>2</sup>	Bar
4	8T-5193	Regulator
5	8T-5194	Block (Spacer)
6	8T-5224	Gauge
7	8T-5225	Hose
8	8T-5226	Nipple (two)

Item	Part Number	Description
<b>Air Regulated Torque Wrench Set Consists of: (Continued)</b>		
9	8T-5227	Coupler (two)
10	8T-5228	Block (base)
11	6V-6105	Block (lid)
12	0T-0065	Bolt, 64 mm (2 1/2 in) long
13	1A-5964	Bolt, 89 mm (3 1/4 in) long
14	5M-2894	Washer (two)
<b>Not shown</b>		
--	1U-5809	Grommet
--	1U-5748	Output Spindle
--	8T-5321	Seal Kit

<sup>1</sup>When the 8T-5190 Wrench is ordered, the 8T-5192 Bar is assembled on the wrench.

<sup>2</sup>Not available for individual sale

## Hydraulic Pumps

Warranty: Manufacturer's

- Includes hydraulic gauge
- Includes high-quality hose, 69,950 kPa (10,000 PSI)



1



2



3

Part Number	Max. Oil Flow	Voltage	Port Type	Hz	Weight	Phase
<b>Electrical (item 1)</b>						
175-7944	8.2 cu liter (500 cu in)	115 VAC	Single	50/60	28.1 kg (62 lb)	Single
175-9412	8.2 cu liter (500 cu in)	230 VAC	Single	50/60	28.1 kg (62 lb)	Single
132-8223	11.8 cu liter (720 cu in)	115 VAC	Dual	50/60	23.6 kg (52 lb)	Single
132-8231	11.8 cu liter (720 cu in)	230 VAC	Dual	50/60	23.6 kg (52 lb)	Single
245-9965	4.9 cu liter (300 cu in)	115 VAC	Dual	50/60	22.2 kg (49 lb)	Single
242-1435	4.9 cu liter (300 cu in)	230 VAC	Dual	50/60	22.2 kg (49 lb)	Single

(Continued)

## Hydraulic Pumps (Continued)

Warranty: Manufacturer's

Part Number	Max. Oil Flow	Voltage	Port Type	Hz	Weight	Phase
<b>Air (item 2)</b>						
132-8232	4.6 cu liter (280 cu in)	230 VAC	Dual	50/60	20.9 kg (46 lb)	Single
<b>Manual (item 3)</b>						
175-7945	2.5 cu liter (152 cu in)	n/a	Single	--	11.8 kg (26 lb)	--

## 5P-2410 Hand Impact Wrench



- Loosen nuts bound by corrosion and tighten nuts to an estimated torque value readily with this impact wrench
- Particularly suited to field use because an air or electric power source is not required
- With a 1 inch square drive and capacity up to 2000 ft-lb torque, the wrench will handle 3/4 inch to 1 3/4 inch bolts
- Wrench action provides impact torque in one direction and free ratcheting in the other
- When turned about 30°, energy stored in a heavy spring in the handle is suddenly released, delivering a torsional impact to the square output drive through a link and rotary hammer arrangement. To reverse the direction of this action, the wrench is merely turned over. The amount of impact is adjustable.

Part Number	Description
5P-2410	Hand Impact Wrench
<b>Hand Impact Replacement Parts</b>	
1A-2209	Bolt
1H-8134	Ring

**Impact Wrenches, 3/8 inch**

Warranty: Manufacturer's

**European Union Compliant, CE marked**

- Reverse bias air motor provides greater power in reverse for extra break away torque
- Molded ergonomic handle grip reduces vibration and operator fatigue
- Built in power regulator allows power output to be adjusted to operating conditions

**Repair Information**

For any questions regarding repairs, calibration or customer service, please contact the Tool Repair Center 1-800-786-6600 extension 6168 (Canada & US only) or 262-656-5200 extension: 6168

Part Number: 222-3048	
Drive size	3/8 in
Recommended air pressure	620 kPa (90 PSIG)
Air consumption, free speed	14 SCFM (1.9 CFM) [53.8 l/min.]
Air consumption, working	25 SCFM (3.5 CFM) [99.11 l/min.]
Free speed, forward	8000 RPM
Free speed, reverse	9000 RPM
Sound level, free speed	84.6 dBa
Sound level, working	95.6 dBa
Blows per minute	1170
Torque range	68-251 N·m (50-185 ft-lb)
Maximum Torque	251- N·m (185 ft-lb) Forward / 285 N·m (210 ft-lb) Reverse
Air inlet thread size	1/4 in - 18 NPT
Recommended hose size, ID min.	10 mm (3/8 in)
Overall length	159 mm (6.25 in)
Height	179 mm (7 in)
Width	57 mm (2.24 in)
Weight	1.70 kg (3.75 lbs)

**Impact Wrenches, 1/2 and 3/4 inch**

Warranty: Manufacturer's

**European Union Compliant, CE marked**

- Aluminum housing reduces weight and provides durable long life
- Steel nose front for extra protection, easy service access
- Power speed regulator allows power output to be adjusted to operating conditions
- Variable speed trigger allows operator versatility over wide range of fasteners

**Repair Information**

For any questions regarding repairs, calibration or customer service, please contact the Tool Repair Center 1-800-786-6600 extension 6168 (Canada & US only) or 262-656-5200 extension: 6168



(Continued)

## Impact Wrenches, 1/2 and 3/4 inch (Continued)

Warranty: Manufacturer's

Part No.	222-3050	222-3053
Drive Size	1/2 in	3/4 in
Recommended air pressure	620 kPa (90 PSIG)	620 kPa (90 PSIG)
Air consumption, free speed	30 SCFM (4.2 CFM) [118.9 l/min.]	41 SCFM (5.8 CFM) [164.2 l/min.]
Free speed forward	8000 RPM	4500 RPM
Free speed reverse	8000 RPM	5000 RPM
Sound level free speed	108 dBa	92 dBa
Torque range	35-408 N·m (25-300 ft-lb)	407-1085 N·m (300-800 ft-lb)
Maximum torque	578 N·m (425 ft-lb) forward	1626 N·m (1200 ft-lb)
Air inlet thread size	1/4 in - 18 NPT	3/8 in - 18 NPT
Recommended hose size, ID min.	8 mm (5/16 in)	10 mm (3/8 in)
Overall length	185 mm (7.3 in)	259 mm (10.2 in)
Weight	2.63 kg (5.8 lbs)	6.59 kg (14.5 lbs)

## Impact Wrenches, 1 inch

Warranty: Manufacturer's

Hand Tools



### European Union Compliant, CE marked

- Power speed regulator allows power output to be adjusted to operating conditions
- Variable speed trigger allows operator versatility over wide range of fasteners

### Repair Information

For any questions regarding repairs, calibration or customer service, please contact the Tool Repair Center 1-800-786-6600 extension 6168 (Canada & US only) or (262)656-5200 extension: 6168

(Continued)

### Impact Wrenches, 1 inch (Continued)

Warranty: Manufacturer's

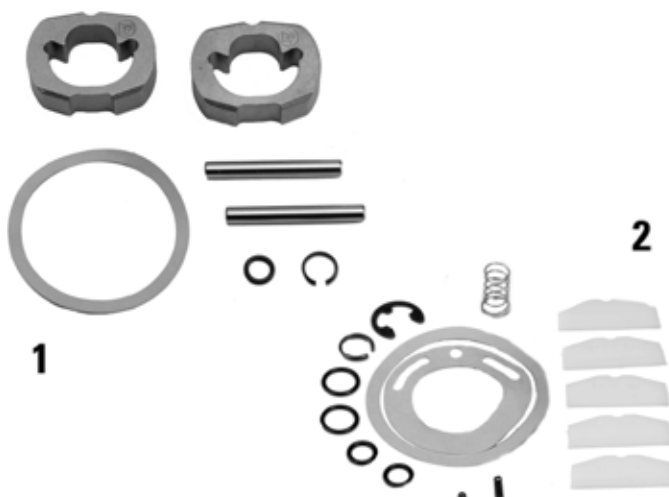
Part No.	222-3054	222-3055
Drive size	1 in	1 in
Recommended air pressure	620 kPa (90 PSIG)	620 kPa (90 PSIG)
Air consumption free speed	60 SCFM (8.3 CFM) [235 l/min]	60 SCFM (8.3 CFM) [235 l/min]
Air consumption working	38 SCFM (5.3 CFM) [150.1 l/min]	38 SCFM (5.3 CFM) [150.1 l/min]
Free speed forward	4000 RPM	4000 RPM
Free speed reverse	4000 RPM	4000 RPM
Sound level free speed	92 dBa	92 dBa
Sound level working	103 dBa	103 dBa
Blows per minute	500	505
Torque range	813-1898 N·m (600-1400 ft·lb)	813-1898 N·m (600-1400 ft·lb)
Maximum torque	3796 N·m (2800 ft·lb)	4067 N·m (3000 ft·lb)
Air inlet thread size	1/2 in - 14 NPT	1/2 in - 14 NPT
Recommended hose size, ID min.	13 mm (1/2 in)	13 mm (1/2 in)
Overall length	302 mm (11.8 in)	535 mm (21 in)
Height	270 mm (10.6 in)	172 mm (6.8 in)
Width	111 mm (4.37 in)	110 mm (4.33 in)
Weight	12.05 kg (26.5 lb)	12.27 kg (27 lb)

### Impact Wrenches Repair Kits

Warranty: Manufacturer's

- Used to repair current Cat branded air-powered impact wrenches
- Reduce air tool repair cost by performing in-house repairs
- Reduced downtime (no need to ship air tool to a repair center)

Typical Anvil Repair Kit Components - 231-6064	
Anvil repair kit for 12.7 mm (1/2 in) Impact Wrench	
Kit Includes:	
2-Hammers	2-Hammer Pins
1-Hammer Case Gasket	1-Retainer O-Rings
1-Socket Retainer	Material: Steel, Rubber, and Plastic
Motor and Throttle Repair Kit - 231-6063, for 12.7 mm (1/2 in) Impact Wrench	
Kit Includes:	
1-Detent Ball	1-Detent Spring
1-Gasket	1-Hammer Case Gasket
1-Retainer O-Ring	Material: Steel, Rubber, and Plastic



(Continued)



## Impact Wrenches Repair Kits (Continued)

Warranty: Manufacturer's

Item	Part Number	Description	Impact Wrench Part Number	Anvil Part Number
<b>Impact Wrench Repair Kits</b>				
1	231-6064	1/2 inch Anvil Repair Kit	222-3050	280-2682
2	231-6063	1/2 inch Motor and Throttle Repair Kit	222-3050	--
--	231-6074	1 inch Anvil Repair Kit	222-3055	280-2684
--	231-6071	1 inch Anvil Repair Kit	222-3054	280-2684
--	231-6073	1 inch Motor and Throttle Repair Kit	222-3054	--
--	231-6098	1 inch Motor and Throttle Repair Kit	222-3055	--
--	280-2680	1/2 inch Anvil Repair Kit	266-3736	--

Item	Part Number	Description	Impact Wrench Part Number	Anvil Part Number
<b>Impact Wrench Repair Kits (Continued)</b>				
--	280-2679	1/2 inch Motor and Throttle Repair Kit	266-3736	--
--	231-6070	3/4 inch Anvil Repair Kit	222-3053	280-2683
--	231-6068	3/4 inch Motor and Throttle Repair Kit	222-3053	--
--	231-6043	3/8 inch Anvil Repair Kit	222-3048	280-2681
--	280-2677	3/8 inch Anvil Repair Kit	266-3737	280-2675
--	231-6041	3/8 inch Motor and Throttle Repair Kit	222-3048	--
--	280-2676	3/8 inch Motor and Throttle Repair Kit	266-3737	--

## Sanders and Polishers

Warranty: Manufacturer's

### European Union Compliant, CE marked

- Aluminum housing reduces weight and provides durable long life
- Compact design for easy maneuvering in restricted areas
- Ball bearing mounted air motor reduces vibration and operator fatigue; prolongs motor life
- Full choice of RPM ranges
- 5 inch and 7 inch HD angle, 2-handed vertical and in-line sanders
- 7 inch polisher

### Repair Information

For any questions regarding repairs, calibration or customer service, please contact the Tool Repair Center 1-800-786-6600 extension 6168 (Canada & US only) or 262-656-5200 extension: 6168



(Continued)

## Sanders and Polishers (Continued)

Warranty: Manufacturer's

Part Number	Recommended air pressure	Free Speed Air Consumption	Horsepower	Free Speed	Sound Level, Free Speed	Spindle Thread Size	Pad/Disc Size, Diameter	Backing Pad	Air Inlet Thread Size	Recommended Hose Size, ID min.	Overall Length	Height	Weight
<b>Palm Sander, 6 in</b>													
222-3063	620kPa (90 PSIG)	36 SCFM (5 CFM) [141.6 l/min.]	--	10000 RPM	83 dBa	5/16 in - 18 UNC	152 mm (6 in)	231-9464	1/4 in - 18 NPT	8 mm (5/16 in)	122 mm (4.8 in)	--	1.36 kg (3 lb)
<b>7 in Angle Sander</b>													
222-3064	620kPa (90 PSIG)	34 SCFM (4.8 CFM) [135.9 l/min.]	1	5100 RPM	84 dBa	5/8 in - 11 UNC	178 mm (7 in)	231-9465	1/4 in - 18 NPT	8 mm (5/16 in)	410 mm (15.75 in)	102 mm (4 in)	3.09 kg (6.8 lb)
<b>7 in Vertical Sander</b>													
222-3065	620kPa (90 PSIG)	31 SCFM (4.3 CFM) [121.8 l/min.]	--	4500 RPM	83 dBa	5/16 in - 11 UNC	178 mm (7 in)	231-9465	1/4 in - 18 NPT	10 mm (3/8 in)	--	190 mm (7.5 in)	2.72 kg (6 lb)
<b>In-line Sander</b>													
222-3067	620kPa (90 PSIG)	16 SCFM (2.3 CFM) [65.13 l/min.]	--	1800 osc/min	87 dBa	--	2 3/4 x 17 1/2	--	1/4 in - 18 NPT	8 mm (5/16 in)	406 mm (16 in)	121 mm (4.75 in)	--
<b>6 in OASander</b>													
222-3068	410kPa (60 PSIG)	11 SCFM (2.1 CFM) [59.47 l/min.]	0.25	10000 RPM	93 dBa	5/16 in - 18 UNC	150 mm (6 in)	231-9468, 246-7509	1/4 in - 18 NPT	8 mm (5/16 in)	260 mm (10.2 in)	--	2.2 kg (4.9 lb)
<b>5 in Compact Sander</b>													
222-3084	620kPa (90 PSIG)	32 SCFM (4.2 CFM) [118.9 l/min.]	0.3	1400 RPM	88 dBa	7/16 in - 20 UNC	127 mm (5 in)	231-9469	1/4 in - 18 NPT	8 mm (5/16 in)	118 mm (4.6 in)	121 mm (4.75 in)	--
<b>7 in Angle Polisher, Air Consumption, working: 31 SCFM (4.3 CFM) [121.8 l/min.], Buffing Pad: 231-9471 (BFS80) included.</b>													
222-3069	620kPa (90 PSIG)	34 SCFM (4.8 CFM) [135.9 l/min.]	1	2600 RPM	84 dBa	5/8 in - 11 UNC	178 mm (7 in)	231-9465	1/4 in - 18 NPT	8 mm (5/16 in)	410 mm (15.74 in)	--	--

Hand Tools

## Air Grinders

Warranty: Manufacturer's

## European Union Compliant, CE marked

- Aluminum housing reduces weight and provides durable long life
- Compact design for easy maneuvering in restricted areas
- Paddle-style, variable speed throttle safety trigger prevents accidental startup; easy to use, versatile
- Ball bearing mounted air motor reduces vibration and operator fatigue; prolongs motor life
- Powerful .2 horsepower motor

(Continued)

# Pneumatic Tools

## Air Grinders (Continued)

Warranty: Manufacturer's

- Angle head zirk grease fitting (right angle only) allows lubrication of gear train, prolongs life of tool

### Repair Information

For any questions regarding repairs, calibration or customer service, please contact the Tool Repair Center 1-800-786-6600 extension 6168 (Canada & US only) or 262-656-5200 extension: 6168



222-3076



222-3074

Hand Tools

Part Num.	Air Pressure	Air Consump, Free Speed	Horse-power	Sound Level, Free Speed	Air Inlet Thread Size	Hose Size, ID min.	Collet Size	Overall Length	Free Speed	Wheel Capacity	Weight	Length	Height	Sound Level	Air Consump Under Load	Spindle Thread Size
<b>7 in Angle Grinder</b>																
222-3071	--	8 l/s (18 cfm)	--	--	--	--	--	--	6000 RPM	175 mm (7 in)	2.7 kg (5.9 lb)	315 mm (12.4 in)	--	85 dBa	17 l/s (35 cfm)	5/8 in - 11
<b>7 in Vertical Grinder</b>																
222-3072	--	28 l/s (60 cfm)	--	--	--	--	--	--	6000 RPM	175 mm (7 in)	4.1 kg (9.1 lb)	--	180 mm (7.1 in)	82 dBa	28 l/s (60 cfm)	5/8 in - 11
<b>Medium Mini Die Grinder</b>																
222-3074	620 kPa (90 PSIG)	25 SCFM (3.5 CFM) [99.11 l/min]	0.2	91 dBa	1/4 in - 18 NPT	8 mm (5/16 in)	1/4 in	165 mm (6.5 in)	--	--	1.09 kg (2.4 lb)	--	--	--	--	--
<b>Right Angle Die Grinder</b>																
222-3076	620 kPa (90 PSIG)	15 SCFM (2.1 CFM) [59.47 l/min]	0.2	93 dBa	1/4 in - 18 NPT	8 mm (5/16 in)	1/4 in	140 mm (5.5 in)	--	--	.64 kg (1.4 lb)	--	--	--	--	--

(Continued)

**Air Grinders (Continued)**

Warranty: Manufacturer's

Part Num.	Air Pressure	Air Con- sump, Free Speed	Horse- power	Sound Level, Free Speed	Air Inlet Thread Size	Hose Size, ID min.	Collet Size	Over- all Length	Free Speed	Wheel Capac- ity	Weight	Length	Height	Sound Level	Air Con- sump Under Load	Spin- dle Thread Size
<b>Extended Die Grinder</b>																
222-3077	620 kPa (90 PSIG)	25 SCFM (3.5 CFM) [99.11 l/min]	0.2	91 dBa	1/4 in - 18 NPT	8 mm (5/16 in)	1/4 in	293 mm (11.5 in)	--	--	1.05 kg (2.5 lb)	--	--	--	--	--

**Air Drills**

Warranty: Manufacturer's

**European Union Compliant, CE marked**

- Aluminum housing reduces weight and provides durable long life
- Compact design for easy maneuvering in restricted areas
- Contoured button style variable speed trigger is easy to use; versatile
- Ball bearing mounted air motor reduces vibration and operator fatigue; prolongs motor life
- Powerful, reversible .3 horsepower motor



**Repair Information**

For any questions regarding repairs, calibration or customer service, please contact the Tool Repair Center 1-800-786-6600 extension 6168 (Canada & US only) or 262-656-5200 extension: 6168

Hand Tools

Part Number	Free Speed Air Con- sump- tion	Working Air Con- sump- tion	Horse- power	Free Speed	Sound Level, Free Speed	Sound Level, Work- ing	Spin- dle Thread Size	Torque Range	Air Inlet Thread Size	Rec- om- mend- ed Hose Size, ID min.	Rec- om- mend- ed air pres- sure	Overall Length	Weight	Drill Chuck (Key)	Drill Chuck (Key-less)
<b>3/8 in Reversible Air Drill: Chuck Range, Diameter: 1/16 in - 3/8 in</b>															
222-3061	71 SCFM (10 CFM) [283.2 l/min.]	43 SCFM (6 CFM) [169.9 l/min.]	0.3	2,200.0 RPM	92 dBa	104 dBa	3/8 in - 24 UNF	0-4 N•m (0-35 in-lb)	1/4 in - 18 NPT	8 mm (5/16 in)	620 kPa (90 PSIG)	199 mm (7.83 in)	.45 kg (2.85 lb)	243-6496	234-0544
<b>1/2 in Reversible Air Drill</b>															
222-3062	71 SCFM (10 CFM) [283.2 l/min.]	43 SCFM (6 CFM) [169.9 l/min.]	0.3	900.0 RPM	97 dBa	109 dBa	3/8 in - 24 UNF	0-6.8 N•m (0-60 in-lb)	1/4 in - 18 NPT	8 mm (5/16 in)	620 kPa (90 PSIG)	224.8 mm (8.85 in)	1.61 kg (3.55 lb)	243-6495	234-0545

## 222-3080 Air Hammer

Warranty: Manufacturer's



### European Union Compliant, CE marked

- Aluminum housing reduces weight and provides durable long life
- Variable speed trigger is easy to use, versatile
- Air directed exhaust
- Air line filter
- Nylon friction plugs
- Long barrel for easier access to hard to reach areas
- QC chuck

### Repair Information

For any questions regarding repairs, calibration or customer service, please contact the Tool Repair Center 1-800-786-6600 extension 6168 (Canada & US only) or 262-656-5200 extension: 6168

Part Number	Recommended Air Pressure	Air Consumption	Sound Level, Free Speed	Blows/Minute	Air Inlet Thread Size	Recommended Hose Size, ID min.	Overall Length	Weight	Spring Retainer Part Number
<b>Long Air Hammer w/QC Chuck</b>									
222-3080	620 kPa (90 PSIG)	28.5 SCFM (4 CFM)	100 dBa	2200	1/4 in - 18 NPT	10 mm (3/8 in)	318 mm (12.5 in)	2.5 kg (5.5 lb)	232-0756

## Air Hammer Accessories



- Used with 222-3080 Air Hammer
- Material: tungsten carbide steel

Part Number	Description	Width	Length	Shank Diameter	Use
223-4352	Sheet Metal Ripper	5/8 in	5 in	--	--
223-4353	Flat Chisel	3/4 in	7 in	--	--
223-4354	Panel Cutter	3/4 in	6 in	--	Slices bushings, cylinder sleeves, etc.
223-4355	Slitting Chisel	1 in	6 7/8 in	--	Cuts exhaust and tail pipes
223-4356	Weld Breaker	5/8 in	6 3/4 in	--	--
226-0102	Punch, 15 Degree	--	228.6 mm (9 in)	10.18 mm (0.4 in)	--
226-0124	Straight Punch	--	228.6 mm (9 in)	10.18 mm (0.4 in)	--

### 222-3059 Air Ratchet

Warranty: Manufacturer's

#### European Union Compliant, CE marked

- Aluminum housing reduces weight and provides durable long life
- Versatile, easy-to-use paddle-style trigger; variable speed trigger
- Ball bearing mounted air motor reduces vibration and operator fatigue; prolongs motor life
- 200 RPM free speed, 250 in-lbs torque output — fast and powerful

#### Repair Information

For any questions regarding repairs, calibration or customer service, please contact the Tool Repair Center 1-800-786-6600 extension 6168 (Canada & US only) or 262-656-5200 extension: 6168



Part Number	Drive	Recommended Air Pressure	Free Speed Air Consumption	Free Speed	Sound Level, Free Speed	Torque Range	Air Inlet Thread Size	Recommended Hose Size	Overall Length	Weight
222-3059	3/8 in	620 kPa (90 PSIG)	22 SCFM (3.0 CFM)	200 RPM	95.1 dBa	7-81 N•m (5-60 ft-lb)	1/4 in - 18 NPT	10 mm (3/8 in)	256 mm (10.43 in)	1.09 kg (2.4 lb)

### 222-3083 Shears

Warranty: Manufacturer's

European Union Compliant, CE marked

#### Repair Information

For any questions regarding repairs, calibration or customer service, please contact the Tool Repair Center 1-800-786-6600 extension 6168 (Canada & US only) or 262-656-5200 extension: 6168



Part Number	Recommended Air Pressure	Average Air Consumption	Horsepower	Sound Level, Free Speed	Sound Level, Working	Cutting Capacity	Cut Width	Cutting Speed	Strokes	Air Inlet Thread Size	Recommended Hose Size, ID min.	Overall Length	Weight
222-3083	620 kPa (90 PSIG)	4 CFM [113.3 l/min.]	0.6	88.1 dBa	99.6 dBa	1.2 mm (3/64 in)	5.6 mm (7/32 in)	4.572 m (15 ft) per minute	2500 per minute	1/4 in - 18 NPT	8 mm (5/16 in)	254 mm (10 in)	1.3 kg (2.8 lb)

## 223-1154 Air Engraver

Warranty: Manufacturer's



European Union Compliant, CE marked

### Air Engraver Needles

- Punch 3/16 inch diameter starting hole
- Material: tungston carbide steel

### Repair Information

For any questions regarding repairs, calibration or customer service, please contact the Tool Repair Center 1-800-786-6600 extension 6168 (Canada & US only) or 262-656-5200 extension: 6168

Part Number	Description	Recommended Air Pressure	Average Air Consumption	Free Speed	Sound Level	Air Inlet Thread Size	Recommended Hose Size, ID min.	Hose Length	Overall Length Without Hose	Weight
223-1154	Air Engraver	620 kPa (90 PSIG)	7 SCFM (1.0 CFM)	14000 RPM	90.0 dBa	1/4 in - 18 NPT	10 mm (3/8 in)	1,511 mm (59.49 in)	140 mm (5.5 in)	.22 kg (.48 lb)
<b>Air Engraver Needles</b>										
223-4357	Needle, Coarse	--	--	--	--	--	--	--	--	--
223-4358	Needle, Medium	--	--	--	--	--	--	--	--	--
223-4359	Needle, Fine	--	--	--	--	--	--	--	--	--

Hand Tools

## 4C-5746 Pneumatic Syphon Spray Gun

Warranty: Manufacturer's



- Ergonomic, rugged, die cast aluminum pistol grip designed for heavy-duty use
- High vacuum syphon delivers up to 60.6 L (16 gal) per hour
- 304.8 mm (12 in) extension for accessing difficult, hard-to-reach areas
- Adjustable trigger and nozzle tip control volume and spray pattern
- 1/4 inch NPT inlet
- Meets OSHA standards

Part Number	Description
4C-5746	Pneumatic Syphon Spray Gun

## Safety Air Guns

Warranty: Manufacturer's



### High Power Extension Air Gun

- Versatile tool ideal for cleaning hard-to-reach locations
- Good for cleaning benchtops, workstations, machinery, and equipment
- Venturi tip increases the power and limits static pressure to less than 207 kPa (30 PSI) when tip is blocked
- Includes durable cast aluminum, pistol-style body, aluminum extension, and aluminum nozzle
- 1/4 inch NPT inlet
- Meets OSHA standards

Part Number	Description	Size
156-0930	Safety Air Gun	61 cm (24.0 in)
156-0931	Safety Air Gun	91 cm (36.0 in)
156-0932	Safety Air Gun	122 cm (48.0 in)

### Jet Guard Safety Air Gun

Warranty: Manufacturer's

- Patented protective air cone protects operator from chip fly-back
- Delivers high thrust with pinpoint accuracy
- Knurled adjusting nut controls air volume
- Ergonomic pistol grip and trigger reduce hand fatigue
- Good for cleaning machine tools and other production equipment
- Built in hanger for easy storage
- Durable cast aluminum body
- 1/4 inch NPT inlet
- Meets OSHA standards



Part Number	Description
156-0927	Jet Guard Safety Air Gun

### Safety Blow Guns

- Supplies non-aspirating, high velocity, sharply defined, collimated air stream particularly suited for cleaning small blind holes and cavities
- Complies with OSHA standard 1910.242(b) for dead-ended nozzle pressure and noise limitation
- For use with inlet pressure up to 150 psig



Part Number	Description	Test Lab Listing
4C-3302	Air Blow Gun w/Nozzle Assembly	UL/FM
4C-3304	Nozzle w/152 mm (6 in) Extension	—

### Gun Vac

Warranty: Manufacturer's

- Rugged aluminum construction
- Uses standard shop compressed air
- No motor, wires, or electrical fields
- Creates twice the vacuum suction of conventional electric shop vacuums
- Reusable collection bag
- Includes brush and crevice tool
- 1/4 inch NPT inlet



Part Number	Description
4C-6774	Gun Vac, 551 x 1034 kPa (80-150 PSI)
4C-6775	Reusable Bag, 190 mm x 343 mm (7 1/2 in x 13 1/2 in)
4C-6776	Extension, 457.2 mm (18 in)

Hand Tools



## Spray Gun Canister

Warranty: Manufacturer's

- 0.94 L (1 qt) canister attaches to spray gun eliminating feed tubes and buckets
- Increased mobility reduces the risks of spills



Part Number	Description
4C-6778	Spray Gun Canister

## Pneumatic Oil Gun

Warranty: Manufacturer's

- Ergonomic, rugged, die cast aluminum construction pistol grip designed for heavy-duty use
- High vacuum syphon delivers up to 49.2 L (13 gal) per hour
- 304.8 mm (12 in) extension for accessing hard-to-reach areas
- Adjustable trigger and nozzle tip control volume and spray pattern
- 0.95 L (1 qt) steel, reusable dispenser eliminates feed tubes and buckets
- Good for lubricating trucks, automobiles, construction equipment, and machinery
- 1/4 inch NPT inlet
- Meets OSHA standards

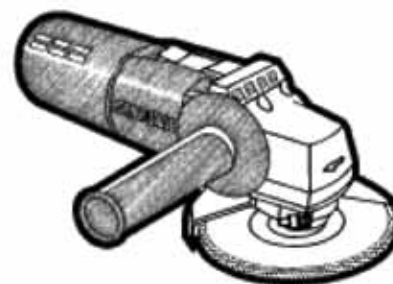


Part Number	Description
4C-6779	Pneumatic Oil Gun

### 288-2512 Heavy-Duty Angle Grinder, 11,000 RPM, 4.5 inch

Warranty: Manufacturer's

- Turns at 11,000 RPM for maximum grinding performance and efficiency
- Vibration-control side handle reduces vibration up to 60%, providing uncompromising comfort for extended periods of work
- AC/DC capability extends the versatility of the tool by working from DC outlets such as welders and generators
- Sealed switch keeps debris out of the switch mechanism and extends switch life
- Service Minder brushes eliminate guesswork, stop the tool when preventative maintenance is required
- Epoxy-coated field windings provide ultimate protection against abrasive dust and metal debris
- 5/8 inch - 11 spindle for mounting most popular accessories
- Tool-free adjustable guard for quick guard installation and adjustments
- Spindle lock for quick wheel changes
- 2-position auxiliary handle specifically designed and angled to a "natural" position for maximum comfort and control
- Double insulated, UL listed, OSHA compliant



Part Number	Power	Motor Amps	No Load Speed (RPM)	Spindle Thread Size	Wheel Size	Length	Net Weight
288-2512	120V AC/DC	7.5	11,000	5/8 in - 11	114.3 mm (4 1/2 in)	285.75 mm (11 1/4 in)	1.95 mm (4.3 lb)

### BIM Saw Blades

Part Number	Length	Teeth	Package Quantity	Teeth Specs
1U-9234	305.0 mm (12 in)	457 mm (18 in)	5	Raker BIM <sup>1</sup>
1U-9236	305.0 mm (12 in)	610 mm (24 in)	10	Wavy BIM
1U-9238	305.0 mm (12 in)	813 mm (32 in)	5	Wavy BIM



<sup>1</sup>BIM — All purpose blade, highly flexible, for the most difficult materials.

### Bi-Metal All-Purpose Tiger Saw Blades

Part Number	Length	Teeth/Inch	Package Quantity	Recommended Use
4C-9942	152 mm (6 in), flexible	18	5	Heavy gauge (non-ferrous metals) — bar and angle stock-stainless-galvanized pipe-tubing (over 18 ga.)
4C-9943	152 mm (6 in), flexible	14	5	Heavy gauge (non-ferrous metals) — bar and angle stock-cast aluminum-copper-brass-galvanized
4C-9944	229 mm (9 in)	5/7	5	General roughing-in wood
4C-9945	305 mm (12 in)	6	5	General roughing-in wood



Hand Tools

## Full-Torque Thread Repair Kits



- Unique threaded insert design repairs damaged threaded holes in cast and ductile iron, steel, and aluminum
- Spiralhook threads engage tapped hole and draw surrounding metal into threads, as bolt or stud is torqued, resulting in a stronger repair
- Thread Repair Solid Plug inserts allow off-center and custom-size thread repairs
- Viable alternative to welding cast and ductile iron, steel, and aluminum
- In many cases parts can be repaired without disassembly
- Six kits with individual written installation instructions for a wide range of repair solutions

Hand Tools

Part Number	Description	Qty.
<b>263-7140 - Thread Repair Kit: 1-8 Thread Insert Kit for ductile iron in Off-Highway Truck and Wheel Loader wheels; can also be used on steel fabricated and cast wheels</b>		
263-7170 <sup>1</sup>	Installation Tool	1
263-7173	Thread Insert, M30	5
263-7160	Drill Bit, 1 9/64 inch	1
263-7161	Rough Tap	1
263-7162	Finish Tap	1
<b>263-7145 - M20 Thread Insert Kit for repair of 3116 block head bolt holes</b>		
263-7174	Thread Insert, M20	5
263-7180 <sup>1</sup>	Drill Bit, 5/764 inch	1
263-7181	Rough Tap	1
263-7182	Finish Tap	1
263-7183	Installation Tool	1
<b>263-7141 - M24 Thread insert Kit for ductile iron in Off-Highway Truck and Wheel Loader wheels; can also be used on steel fabricated and cast wheels</b>		
263-7160	Drill Bit, 1 9/64 inch	1
263-7161	Rough Tap	1
263-7162	Finish Tap	1
263-7167	Installation Tool	1
263-7168	Thread Insert, M24	5

Part Number	Description	Qty.
<b>263-7142 - M30 Thread Insert Kit for ductile iron housing on 797 Off-Highway Truck wheels</b>		
263-7157	Rough Tap	1
263-7158	Finish Tap	1
263-7165 <sup>1</sup>	Installation Tool	1
263-7178	Drill Bit, 1 25/64 inch	1
263-7179 <sup>1</sup>	Drill Fixture	1
263-7173	Thread Insert, M30	5
<b>263-7146 - Thread Repair Solid Plug Insert Kit for drilling and tapping off-center and custom-size threaded holes; used for repairing 797 differential retaining bolt holes in thrust washer halves<sup>2</sup></b>		
263-7175 <sup>1</sup>	Solid Plug Insert	5
263-7177 <sup>1</sup>	Spotfacer	1
263-7255 <sup>1</sup>	Rough Tap	1
263-7256 <sup>1</sup>	Finish Tap	1
263-7258	Tapping Fluid	1
263-7259	Thread Sealant	1
263-7260 <sup>1</sup>	Drill Bit, 21/32 inch	1

<sup>1</sup> Not available for individual sale

<sup>2</sup> Maximum I.D. thread size of original threaded hole is 1/2 inch

### 263-7147 Lock-N-Stitch Crack Repair Kit

- Unique threaded stitching pins and locks repair cracks in cast and ductile iron, steel, or aluminum castings
- L-Series Stitching Pins use an interference fit to seal pressure tight and can be installed at steep angles
- C-Series Stitching Pins feature Spiralhook threads to produce drawing pressure that pulls sides of the crack together for strength
- Locks installed across a crack; drill jigs create precise hole patterns across cracks in castings; locks driven into hole patterns creating additional strength
- Cold process—viable alternative to welding
- In many cases parts can be repaired without disassembly
- Extensive kit features specialized tools, complete instructions including six DVDs covering all aspects of crack repair, and storage case
- Provides a wide range of repair solutions



Part Number	Description	Qty.
263-7147	Crack Repair Kit	--
<b>Tools</b>		
263-7184	Magcheck Kit	1
263-7190	Pneumatic Tapping Tool	1
263-7253	Large Collet for 263-7190	1
263-7254 <sup>1</sup>	Quick Change Tap Adapter	1
263-7249	Trim-Kut 3 inch Discs (includes 1/4 inch mandrel)	10
<b>"L" Series Stitching Pins, 6.3 mm (.248 in) Thread Diameter</b>		
263-7193	Stitch Pin, 6.3 mm (.250 in) length	100
263-7194	Stitch Pin, 9.5 mm (.375 in) length	100
263-7195	Stitch Pin, 15.9 mm (.625 in) length	100
263-7196	Stitch Pin, 25.4 mm (1.00 in) length	100
263-7197	Drill Bit, wire size 7	2
263-7198	Starting Tap	1
263-7199	Bottom Tap	1
263-7200	Piloted Tap	1
263-7201	Drilling Jig	1
<b>"L" Series Stitching Pins, 8.3 mm (.326 in) Thread Diameter</b>		
263-7202	Stitch Pin, 6.3 mm (.250 in) length	100
263-7203	Stitch Pin, 12.7 mm (.500 in) length	100
263-7204	Stitch Pin, 25.4 mm (1.00 in) length	100
263-7208	Drill Bit, letter size L	2
263-7205	Starting Tap	1
263-7206	Bottom Tap	1
263-7207	Piloted Tap	1
263-7250	Drilling Jig	1
<b>"C" Series Stitching Pins, 6.0 mm (.233 in) Thread Diameter</b>		
263-7209	Stitch Pin, 6.3 mm (.250 in) length	100
263-7210	Stitch Pin, 9.5 mm (.375 in) length	100
263-7211	Stitch Pin, 12.7 mm (.500 in) length	100
263-7212	Stitch Pin, 19 mm (.750 in) length	100

Part Number	Description	Qty.
<b>"C" Series Stitching Pins, 6.0 mm (.233 in) Thread Diameter (Continued)</b>		
263-7213	Stitch Pin, 28.6mm (1.125 in) length	100
263-7197	Drill Bit, wire size 7	2
263-7201	Drilling Jig	1
263-7215	Finishing Tap, fine	1
263-7216	Bottom Tap, fine	1
263-7217	Spotfacer	1
263-7218	Drill Stop	1
<b>"C" Series Stitching Pins, 9.5 mm (.375 in) Thread Diameter</b>		
263-7219	Stitch Pin, 15.9 mm (.625 in) length	25
263-7220	Stitch Pin, 22.2 mm (.875 in) length	25
263-7221	Stitch Pin, 34.9 mm (1.375 in) length	25
263-7222	Stitch Pin, 50.8 mm (2.00 in) length	25
263-7226	Drill Bit, letter size O	2
263-7223	Rough Tap	1
263-7224	Bottom Tap	1
263-7225	Bottom Tap	1
263-7251	Drilling Jig	1
263-7228	Drill Stop	1
263-7227	Spotfacer	1
<b>Lock, 20 mm (.793 in) Long</b>		
263-7230	Lock, 3.2 mm (.125 in) thick	10
263-7232	Drill Bit, wire size 15	3
263-7233	Drill Stop	1
263-7234	Drilling Jig	1
<b>Lock, 36 mm (1.409 in) Long</b>		
263-7235	Bottom Lock, 2 mm (.080 in) thick	10
263-7236	Surface Lock, 4 mm (.160 in) thick	10
263-7238	Drill Bit Set, 1/8 and 3/16 inch	3 each
263-7240	Drill Stop, 1/8 inch	1

Hand Tools

(Continued)

## 263-7147 Lock-N-Stitch Crack Repair Kit (Continued)

Part Number	Description	Qty.
<b>Lock, 36 mm (1.409 in) Long (Continued)</b>		
263-7241	Drill Stop, 3/16 inch	1
263-7239	Drilling Jig	1
<b>Lock, 48 mm (1.877 in) Long</b>		
263-7242	Bottom Lock, 5 mm (.190 in) thick	10
263-7243	Surface Lock, 9.5 mm (.375 in) thick	5
263-7244	Drill Bit Set, 1/8 and 1/4 inch	3 each

Part Number	Description	Qty.
<b>Lock, 48 mm (1.877 in) Long (Continued)</b>		
263-7240	Drill Stop, 1/8 inch	1
263-7246	Drill Stop, 1/4 inch	1
263-7245	Drilling Jig	1

<sup>1</sup> Not available for individual sale

**Tool Storage Units - Roller and Side Cabinets**

Warranty: Manufacturer's

- Uniweld modular design increases the durability of cabinets
- Full suspension ball bearing drawers
- 400-pound capacity drawers
- Drawer interior customization (partitions and dividers provided)
- Drawer inserts provided
- 30- and 45-inch roller cabinets have 6 inch, heavy duty, 900-pound-capacity casters
- 60-inch roller cabinet has spring loaded 6 inch, heavy duty, 1200-pound capacity casters
- For the 45- and 60-inch cabinets, drawer bank widths are 20 and 27 inches
- Sturdy locking mechanism included with roller cabinets
- Accessories: hardwood tops, stainless steel tops, side cabinets
- Black is the standard color, and it is available for immediate shipping. Yellow, Red, and Blue are optional colors and require 3-4 weeks lead time.
- For any questions regarding repair or replacement of parts, please contact the sales department: 800-523-9462 Extension: 33944 (Canada & US only) or 610-776-3979 or dklase@stanleyworks.com



Part Number	Description	Color	Width	Depth	Height	Weight	Load Capacity
<b>30 inch, 7 Drawer Roller Cabinets:</b>							
292-2359	30 inch Roller Cabinet	Black	76.2 cm (30 in)	70.5 cm (27.75 in)	83.8 cm (33 in)	161 kg (355 lbs)	1632.93 kg (3600 lbs)
292-2363	30 inch Roller Cabinet	Red	76.2 cm (30 in)	70.5 cm (27.75 in)	83.8 cm (33 in)	161 kg (355 lb)	1632.93 kg (3600 lbs)
292-2364	30 inch Roller Cabinet	Blue	76.2 cm (30 in)	70.5 cm (27.75 in)	83.8 cm (33 in)	161 kg (355 lb)	1632.93 kg (3600 lbs)
312-6483	30 inch Roller Cabinet	Yellow	76.2 cm (30 in)	70.5 cm (27.75 in)	83.8 cm (33 in)	161 kg (355 lb)	1632.93 kg (3600 lbs)
<b>45 inch, 14 Drawer Roller Cabinets:</b>							
292-2365	45 inch Roller Cabinet	Black	114.3 cm (45 in)	70.5 cm (27.75 in)	109.2 cm (43 in)	327 kg (720 lb)	1632.93 kg (3600 lb)
292-2366	45 inch Roller Cabinet	Red	114.3 cm (45 in)	70.5 cm (27.75 in)	109.2 cm (43 in)	327 kg (720 lb)	1632.93 kg (3600 lb)
292-2367	45 inch Roller Cabinet	Blue	114.3 cm (45 in)	70.5 cm (27.75 in)	109.2 cm (43 in)	327 kg (720 lb)	1632.93 kg (3600 lb)
312-6485	45 inch Roller Cabinet	Yellow	114.3 cm (45 in)	70.5 cm (27.76 in)	109.2 cm (42.99 in)	327 kg (720 lb)	1632.93 kg (3600 lb)
<b>Side Cabinets for 292-2365, 292-2366, and 292-2367</b>							
292-2371	Side Cabinet	Black	70.5 cm (27.75 in)	30.5 cm (12 in)	71.2 cm (28.04 in)	13.61 kg (30 lb)	45.36 kg (100 lb)
292-2372	Side Cabinet	Red	70.5 cm (27.75 in)	30.5 cm (12 in)	71.2 cm (28.04 in)	13.61 kg (30 lb)	45.35 kg (100 lbs)
292-2373	Side Cabinet	Blue	70.5 cm (27.75 in)	30.5 cm (12 in)	71.2 cm (28.04 in)	13.61 kg (30 lb)	45.35 kg (100 lbs)
<b>60 inch, 13 Drawer Roller Cabinets:</b>							
292-2368	60 inch Roller Cabinet	Black	152.4 cm (60 in)	70.5 cm (27.75 in)	109.2 cm (43 in)	372 kg (820 lb)	2177.24 kg (4800 lb)
292-2369	60 inch Roller Cabinet	Red	152.4 cm (60 in)	70.5 cm (27.75 in)	109.2 cm (43 in)	372 kg (820 lb)	2177.24 kg (4800 lb)
292-2370	60 inch Roller Cabinet	Blue	152.4 cm (60 in)	70.5 cm (27.75 in)	109.2 cm (43 in)	372 kg (820 lb)	2177.24 kg (4800 lb)
312-6486	60 inch Roller Cabinet	Yellow	152.4 cm (60 in)	70.5 cm (27.76 in)	109.2 cm (42.99 in)	372 kg (820 lb)	2177.24 kg (4800 lb)

Hand Tools

(Continued)

## Tool Storage Units - Roller and Side Cabinets (Continued)

Warranty: Manufacturer's

Part Number	Description	Color	Width	Depth	Height	Weight	Load Capacity
<b>Roller Cabinet Accessories:</b>							
292-2380	Hardwood Top for the 45 in Cabinets	--	114.3 cm (45 in)	71.2 cm (28.04 in)	3.3 cm (1.30 in)	--	--
292-2381	Stainless Steel Top for the 45 in Cabinets	--	114.3 cm (45 in)	71.2 cm (28.04 in)	3.8 cm (1.50 in)	--	--
292-2422	Hardwood Top for the 60 in Cabinets	--	152.4 cm (60 in)	71.2 cm (28.04 in)	3.3 cm (1.30 in)	--	--
292-2423	Stainless Steel Top for the 60 in Cabinets	--	152.4 cm (60 in)	71.2 cm (28.04 in)	3.8 cm (1.50 in)	--	--

## Tool Storage Units - Chests and Roller Cabinets

Warranty: One Year



- 40 inch and 26 inch top chests have a top compartment—gas spring in 40 inch top chest and slide lock on 26 inch top chest allow top compartment to open easily
- Double-wall steel construction provides strength and durability to support loaded drawers so they stay level
- Full length stiffener under the cover is welded to sides of the cover to provide the strongest top cover available and to minimize racking
- Extra deep drawer pulls give more finger room (almost 1 inch) to comfortably pull the drawer
- Rolled edges on drawers add strength, rigidity, and safety
- Ball-bearing slides provide extra weight support with smooth, one-hand operation
- Ergonomic handle design provides comfortable gripping and ease of maneuvering
- Gussets on corners improve cabinet strength so the cabinet stays square
- Drawer liners included
- Caster plates and weldnuts keep casters tight for smooth rolling—caster screws pass through double thick steel plates and pre-threaded weldnuts

### Repair Information

For any questions regarding repairs, calibration or customer service, please contact the Tool Repair Center 1-800-786-6600 extension 6168 (Canada & US only) or 262-656-5200 extension: 6168

Part Number	Description	Width	Depth	Height	Cubic cm (in)	Weight	Load Capacity
<b>26 inch Cabinets</b>							
313-1489	26 Inch Top Chest, 4 Drawers	678.7 mm (26.7 in)	503.2 mm (19.8 in)	492.2 mm (19.4 in)	101 352 cm (6,180 in)	54 kg (119 lb)	--
313-1490	26 inch Roller Cabinet, 7 Drawers	678.7 mm (26.7 in)	503.2 mm (19.8 in)	950.9 mm (37 in)	150 880 cm (9,200 in)	83 kg (183 lb)	508 kg (1,120 lb)
313-1491	26 inch Combo (Roller Cabinet and Top chest) <sup>1</sup>	--	--	--	--	--	--
<b>40 inch Cabinets</b>							
313-1492	40 inch Top Chest	101.6 cm (40 in)	50.29 cm (19.8 in)	49.28 cm (19.4 in)	161 080.8 cm (9,822 in)	83.54 kg (184 lb)	--
313-1493	40 inch Roller Cabinet 7 Drawers	101.6 cm (40 in)	50.29 cm (19.8 in)	102.62 cm (40.4 in)	270 878.8 cm (16,517 in)	127.12 kg (280 lb)	508.48 kg (1,120 lb)
313-1494	40 inch Combo (Roller Cabinet and Top Chest) <sup>1</sup>	--	--	--	--	--	--

(Continued)

**Tool Storage Units - Chests and Roller Cabinets (Continued)**

Warranty: One Year

Part Number	Description	Width	Depth	Height	Cubic cm (in)	Weight	Load Capacity
<b>Accessories: Covers - black with Cat logo printed in yellow and white on the front of the cover</b>							
223-3832	Cover for the 76.2 cm (30 in) combo top chest and roller cabinet	--	--	--	--	--	--
223-3833	Cover for the 101.6 cm (40 in) combo top chest and roller cabinet	--	--	--	--	--	--
223-3834	Cover for the 134.62 cm (53 in) combo top chest and roller cabinet	--	--	--	--	--	--
<b>Accessories: Organizing Foam</b>							
246-7948	Organizing Foam for 214-6146 30 inch Combo for 222-7876 Student Tool Set	--	--	--	--	--	--
246-7950	Organizing Foam for 214-6149 40 inch Combo for 222-7876 Student Tool Set	--	--	--	--	--	--
<b>Accessories: Work Surfaces</b>							
223-3835	Laminated Press Board Top for the 76.2 cm (30 in) roller cabinet	76.2 cm (30 in)	50.80 cm (20.00 in)	0.97 cm (0.38 in)	--	--	--
223-3836	Laminated Press Board Top for the 101.6 cm (40 in) roller cabinet	101.6 cm (40 in)	50.80 cm (20.00 in)	0.97 cm (0.38 in)	--	--	--

<sup>1</sup> Combo part numbers available for sale only in North and South America

**4C-5912 Storage Chest**

	Drawers	Width	Depth	Height
Chest	10	66.35 cm (26 1/8 in)	33.02 cm (13 in)	51.43 cm (20 1/4 in)
Drawer	6	17.78 cm (7 in)	31.43 cm (12 3/8 in)	4.76 cm (1 7/8 in)
	1	17.78 cm (7 in)	31.43 cm (12 3/8 in)	15.55 cm (6 1/8 in)
	2	59.69 cm (23 1/2 in)	31.43 cm (12 3/8 in)	4.76 cm (1 7/8 in)
	1	59.69 cm (23 1/2 in)	31.43 cm (12 3/8 in)	9.84 cm (3 7/8 in)
Top Compartment		50.8 cm (5 1/2 in)	32.06 cm (12 5/8 in)	6.35 cm (2 1/2 in)

Part Number	Total Capacity	Shipping Weight
4C-5912	4,536.01 in <sup>3</sup>	37.2 kg (82.01 lb)



Hand Tools



## 325-1133 Chest



- 6 drawer, drop front tool chest

	Drawers	Width	Depth	Height
325-1133 Chest	Overall (6 drawers)	66.0 cm (26 in)	30.5 cm (12 in)	36.8 cm (14.5 in)
Drawer	3	17.8 cm (7 in)	26.7 cm (10.5 in)	5.1 cm (2 in)
	2	58.4 cm (23 in)	26.7 cm (10.5 in)	5.1 cm (2 in)
	1	58.4 cm (23 in)	26.7 cm (10.5 in)	6.4 cm (2.5 in)
Tray		52.7 cm (20.75 in)	21 cm (8.25 in)	5.1 cm (2 in)

Part Number	Description	Shipping Weight	Color
325-1133	Chest Tool Box	26 kg (57 lb)	Red

## 174-9803 Lock

- Fits discontinued 174-9802 and 188-2095 Six Drawer Tool Chests

Part Number	Description
174-9803	Lock with two keys



## 248-2283 Tool Bag with Carrying Strap

Warranty: One Year

- Nine pockets and ten tool-holding loops on the outside
- Twelve pockets on the inside for holding additional tools

Part Number	Description	Length	Material
248-2283	Tool Bag with Carrying Strap	0.61 m (24 in)	Cloth



### 9U-6219 Tool Box

- Black, steel construction
- Tote tray included

Part Number	Description	Length	Width	Height	Material
9U-6219	Tool Box	508 mm (20 in)	219.08 mm (8.63 in)	219.08 mm (8.63 in)	Steel



### 5P-4724 Lock Kit

- Fits discontinued 9S-1750 and 5F-4763 Tool Chests

Part Number	Description
5P-4724	Lock Kit



### Metal Storage Boxes with Hinged Lids and Socket Trays

Part Number	Description	Length	Width	Height	Storage Capacity (in3)	Color
9S-6332	Utility Box	508 mm (20.0 in)	381 mm (15.0 in)	101.6 mm (4.0 in)	1200.0	Orange
2P-8306	Utility Box	381 mm (15.0 in)	287 mm (11.3 in)	76.2 mm (3.0 in)	506.3	Orange
5P-0946	Tool Box	457.2 mm (18.0 in)	254.0 mm (10.0 in)	127.0 mm (5.0 in)	900.0	Orange
9S-1725	Socket Case <sup>1</sup>	159.5 mm (6.28 in)	103.1 mm (4.06 in)	25.4 mm (1.0 in)	--	Red
5S-6092	Tool Box <sup>1</sup>	788.67 mm (31.06 in)	317.5 mm (22.5 in)	146.05 mm (5.75 in)	--	Red

<sup>1</sup>Warranty: Six Months

### 202-8643 Plastic Tool Box

- Plastic, water-tight container (will not rust or scratch like metal boxes)

Part Number	Description	Dimension	Tool Box Capacity	Color
202-8643	Plastic Tool Box	514.4 x 212.7 x 225.4 mm (20.25 x 8.37 x 8.87 in)	9 kg (20 lbs)	Gray



## 178-2212 Case 178-2213 Dividers

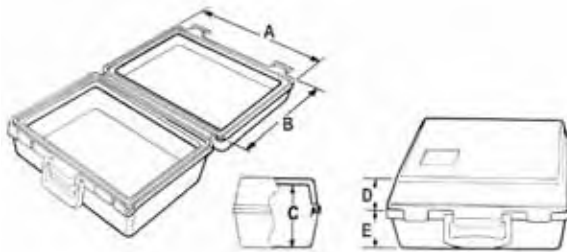


- Uses include organizing fastener groups and other small reusable items such as nuts, bolts, washers
- Convenient to transport to a field site due to compact size
- Overall case dimensions: 457 x 305 x 76 mm (18.0 x 12.0 x 3.0 in)
- Dividers can partition case to a maximum of 48 bins
- Dividers in packages of 12 each

Part Number	Description	Number of Compartments	Outside Dimensions
178-2212	Case	--	457mm L x 305mm W x 127mm D (18in L x 12in W x 3in D)
178-2213	Dividers	48 bins	--

## Plastic Storage Cases with Hinged Lids

- Impact-resistant
- Textured surface to prevent scratches



Hand Tools

Part Number	Length (A) (ex-terior, interior)	Length (B) (ex-terior, interior)	Length (C) (ex-terior, interior)	Depth (D) (exter-ior, interior)	Depth (E) (exter-ior, interior)	Handle Material	Number of Latches	Color
4C-4730	660mm (26.00 in), 622 mm (24.50 in)	421mm (16.56 in), 330 mm (13.00 in)	114 mm (4.50 in), 102 mm (4.00 in)	23 mm (0.90 in), 20 mm (0.78 in)	84 mm (3.31 in), 79 mm (3.12 in)	Yes	Two	Gray
6V-9449	470 mm (18.50 in), 432 mm (17.00 in)	395 mm (15.56 in), 330 mm (13.00 in)	203 mm (8.00 in), 187 mm (7.38 in)	102 mm (4.00 in), 89 mm (3.50 in)	101 mm (3.96 in), 82.5 mm (3.25 in)	Yes	Two	Black
6V-7145	470 mm (18.50 in), 432 mm (17.00 in)	395 mm (15.56 in), 330 mm (13.00 in)	127 mm (5.00 in), 114 mm (4.50 in)	43 mm (1.70 in), 35 mm (1.38 in)	84 mm (3.31 in), 79 mm (3.12 in)	Yes	Two	Black
8T-0841	394 mm (15.50 in), 356 mm (14.00 in)	311 mm (12.25 in), 273 mm (10.75 in)	191 mm (7.50 in), 175 mm (6.88 in)	95 mm (3.75 in), 83 mm (3.27 in)	95 mm (3.75 in), 92 mm (3.63 in)	Yes	Two	Black
4C-3975	394 mm (15.50 in), 356 mm (14.00 in)	311 mm (12.25 in), 273 mm (10.75 in)	140 mm (5.50 in), 127 mm (5.00 in)	44 mm (1.75 in), 35 mm (1.38 in)	95 mm (3.75 in), 92 mm (3.63 in)	Yes	Two	Black
6V-3072	394 mm (15.50 in), 356 mm (14.00 in)	311 mm (12.25 in), 273 mm (10.75 in)	102 mm (4.00 in), 89 mm (3.50 in)	25 mm (1.00 in), 16 mm (0.63 in)	76 mm (3.00 in), 73 mm (2.63 in)	Yes	Two	Black
6V-3073	311 mm (12.25 in), 289 mm (11.38 in)	224 mm (8.81 in), 178 mm (7.00 in)	99 mm (3.88 in), 90 mm (3.56 in)	30 mm (1.19 in), 24 mm (0.94 in)	68 mm (2.69 in), 65 mm (2.56 in)	Yes	Two	Black
148-5675	216 mm (8.50 in), 192 mm (7.56 in)	198 mm (7.81 in), 149 mm (5.88 in)	90 mm (3.56 in), 83 mm (3.25 in)	20 mm (0.78 in), 17 mm (0.67 in)	70 mm (2.75 in), 66 mm (2.60 in)	No	One	Black

(Continued)

**Plastic Storage Cases with Hinged Lids (Continued)**

Part Number	Length (A) (ex-terior, interior)	Length (B) (ex-terior, interior)	Length (C) (ex-terior, interior)	Depth (D) (exte-rior, interior)	Depth (E) (exte-rior, interior)	Handle Material	Number of Latches	Color
6V-6045	191 mm (7.50 in), 173 mm (6.81 in)	102 mm (4.00 in), 81 mm (3.19 in)	41 mm (1.63 in), 33 mm (1.31 in)	10 mm(0.38 in), 3 mm (0.13 in)	31 mm (1.25 in), 30 mm (1.19 in)	No	One	Black
6V-3112	254 mm (10.00 in), 238 mm (9.38 in)	191 mm (7.50 in), 170 mm (6.69 in)	30mm (1.18 in), 24 mm (0.94 in)	--	--	No	None	Black

**Foam Block for Plastic Storage Cases**

Part Number	Length	Width	Thickness	Material	Color	Convolved
6V-6105	350.52 mm (13.8 in)	254 mm (10.0 in)	12.7 mm (0.5 in)	Etherfoam <sup>1</sup>	Charcoal	No
8S-5128	520.7 mm (20.5 in)	223.52 mm (8.8 in)	50.8 mm (2.0 in)	Esterfoam <sup>2</sup>	Charcoal	Yes
2P-8289	457.2 mm (18.0 in)	254 mm (10.0 in)	50.8 mm (2.0 in)	Esterfoam <sup>2</sup>	Charcoal	Yes
6V-4094	279.4 mm (11.0 in)	170.18 mm (6.7 in)	38.1 mm (1.5 in)	Esterfoam <sup>2</sup>	Charcoal	Yes
9S-8105	482.6 mm (19.0 in)	431.8 mm (14.0 in)	38.1 mm (1.5 in)	Ethafoam <sup>3</sup>	Charcoal	Yes
3P-1549	386.08 mm (15.2 in)	279.4 mm (11.0 in)	12.7 mm (.05 in)	Ethafoam <sup>3</sup>	Black	No
6V-6126	365.76 mm (14.4 in)	276.86 mm (10.9 in)	73.7 mm (2.9 in)	Ethafoam <sup>3</sup>	Black	No
6V-4873	360.68 mm (14.2 in)	279.4 mm (11.0 in)	12.7 mm (0.5 in)	Ethafoam <sup>3</sup>	Black	No
6V-6044	353.06 mm (13.9 in)	264.16 mm (10.4 in)	25.4 mm (1.0 in)	Ethafoam <sup>3</sup>	Black	No
8T-3153	322.58 mm (12.7 in)	238.76 mm (9.4 in)	10.16 mm (0.4 in)	Ethafoam <sup>3</sup>	Black	No
6V-6107	190.5 mm (7.5 in)	149.86 mm (5.9 in)	27.94 mm (1.1 in)	Ethafoam <sup>3</sup>	Black	No
6V-6096	190.5 mm (7.5 in)	149.86 mm (5.9 in)	12.7 mm (0.5 in)	Ethafoam <sup>3</sup>	Black	No
148-5677	165 mm (6.5 in)	200 mm (7.9 in)	38 mm (1.5 in)	Etherfoam <sup>1</sup>	Charcoal	No

<sup>1</sup>Lightweight

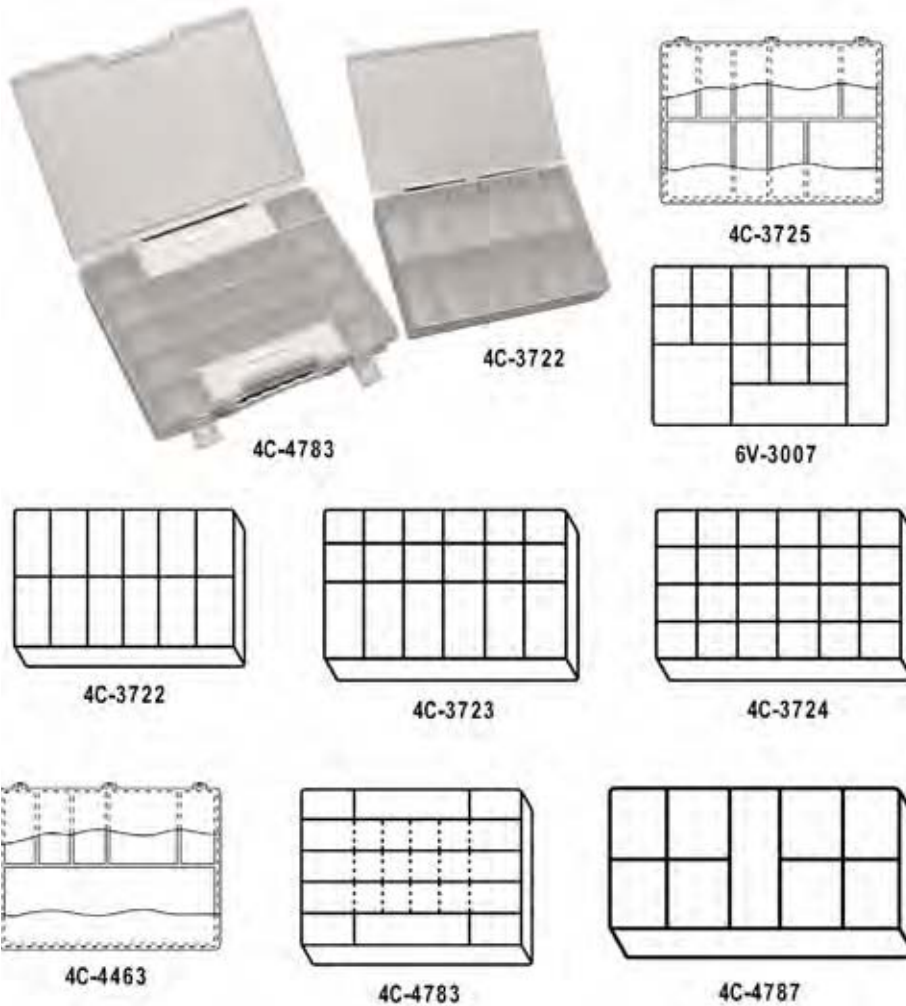
<sup>2</sup>General purpose

<sup>3</sup>Dense

**Plastic Divided Utility Boxes with Hinged Lids**

- Heavy-duty plastic boxes for organizing, storing, and protecting small parts
- Yellow polypropylene material—resistant to oils, solvents and common chemicals
- Rustproof, dentproof, spark proof, and non-conductive

## Plastic Divided Utility Boxes with Hinged Lids (Continued)



Hand Tools

Part Number	Length	Width	Thickness	Color	Number of Compartments	Size
4C-3722	332.74 mm (13.10 in)	228.60 mm (9.00 in)	58.42 mm (2.30 in)	Yellow	12	50.80 x 104.14 mm (2.00 x 4.10 in)
4C-3723	332.74 mm (13.10 in)	228.60 mm (9.00 in)	58.42 mm (2.30 in)	Yellow	6, 12	50.80 x 101.60 mm (2.00 x 4.10 in), 50.80 x 50.80 mm (2.00 x 2.00 in)
4C-3724	332.74 mm (13.10 in)	228.60 mm (9.00 in)	58.42 mm (2.30 in)	Yellow	24	50.80 x 50.80 mm (2.00 x 2.00 in)
4C-3725	332.74 mm (13.10 in)	228.60 mm (9.00 in)	58.42 mm (2.30 in)	Yellow	3, 6	104.14 x 104.14 mm (4.10 x 4.10 in), 50.80 x 104.14 mm (2.00 x 4.10 in)
4C-4463	332.74 mm (13.10 in)	228.60 mm (9.00 in)	58.42 mm (2.30 in)	Yellow	4, 1, 1	50.80 x 104.14 mm (2.00 x 4.10 in), 104.14 x 104.14 mm (4.10 x 4.10 in), 104.14 x 317.50 mm (4.10 x 12.50 in)
4C-4783	381 mm (15.00 in)	298.5 mm (11.75 in)	63.50 mm (2.50 in)	Gray/See-through Smoke Gray	9-24	15 Removable Dividers
4C-4787	177.80 mm (7.00 in)	95.3 mm (3.75 in)	31.75 mm (1.25 in)	Opaque	8, 1	35.05 x 41.15 mm (1.38 x 1.62 in), 28.45 x 82.55 mm (1.12 x 3.25 in)

(Continued)

Plastic Divided Utility Boxes with Hinged Lids (Continued)

Part Number	Length	Width	Thickness	Color	Number of Compartments	Size
4C-4789	209.55 mm (8.25 in)	114.3 mm (8.66 in)	35.05 mm (1.38 in)	Opaque	12	31.75 x 50.80 mm (1.25 x 2.00 in)
6V-3007	332.74 mm (13.10 in)	220 mm (8.66 in)	58.42 mm (2.30 in)	Opaque	13, 1, 1, 1	50.80 x 50.80 mm (2.00 x 2.00 in), 50.80 x 158.75 mm (2.00 x 6.25 in), 50.80 x 212.85 mm (2.00 x 8.38 in), 104.65 x 104.65 mm (4.12 x 4.12 in)
152-7997	470.0 mm (18.5 in)	332 mm (13.07 in)	77 mm (3.03 in)	Yellow	21	--

Protector Cases - Pelican Line

Warranty: Manufacturer's

- Make an excellent lockable storage vault when equipment is not in use - just apply a lock
- Strong, double-throw latches - easier to open with a light pull
- Watertight, airtight, dustproof - Pelican cases feature an exclusive 6.5 mm (1/4 in) neoprene "O" ring, to guarantee a perfect seal. Neither dust nor water can penetrate this barrier to harm your equipment. These cases are so airtight and watertight they float even when loaded. The "O" ring is easily replaced if damaged.
- Purge valve - The exclusive built-in "O" ring purge valve is sealed for pressure allowing for quick equalization after changes in altitude or temperature.
- Dentproof - The tough, cushioned, protective shell eliminates damage from bumping, jarring, and even airline shipments
- Protect contents inside - Multiple layers of industrial grade photographic foam secure and cushion equipment
- Custom fit for tooling - The "Pick-N'Pluck" center foam section is prescored for quick and clean custom fitting. The case lid is lined with the same convoluted foam for maximum shock protection
- Lightweight - easy to carry by using the comfortable, molded handle (4C-9650 and 4C-9658 have fold-down handles.)
- All cases are gray



Hand Tools

(Continued)

## Protector Cases - Pelican Line (Continued)

Warranty: Manufacturer's

Part Number	Description	Outside Length	Outside Width	Outside Depth	Inside Length	Inside Width	Inside Depth	Weight	Shipping Weight	Replacement Foam Set	Replacement O-Ring
4C-9650 <sup>1</sup>	Pelican Mini S Case (Fold-down handle)	273 mm (10 3/4 in)	247.7 mm (9 3/4 in)	127 mm (5 in)	241 mm (9 1/2 in)	191 mm (7 1/2 in)	114 mm (4 1/2 in)	.91 kg (2 lb)	1.6 kg (3 lb)	4C-9651, 3 Pc.	4C-9739
4C-9652	Pelican Mini D Case	273 mm (10 3/4 in)	247.7 mm (9 3/4 in)	177.8 mm (7 in)	241 mm (9 1/2 in)	191 mm (7 1/2 in)	165 mm (6 1/2 in)	1.13 kg (2 1/2 lb)	1.59 kg (3 1/2 lb)	4C-9653, 3 Pc.	--
4C-9654	Pelicase	343 mm (13 1/2 in)	327 mm (12 7/8 in)	152 mm (6 in)	311 mm (12 1/4 in)	235 mm (9 1/4 in)	133 mm (5 1/4 in)	1.8 kg (4 lb)	2.5 kg (5 1/2 lb)	4C-9655, 3 Pc.	4C-9741
4C-9656	Pelican Case	470 mm (18 1/2 in)	387 mm (15 1/4 in)	175 mm (6 7/8 in)	432 mm (17 in)	299 mm (11 3/4 in)	152 mm (6 in)	3.2 kg (7 lb)	3.9 kg (8 1/2 lb)	4C-9657, 3 Pc.	4C-9742
4C-9658 <sup>1</sup>	Pelican Pro Case (Fold-down handle)	521 mm (20 1/2 in)	425 mm (16 3/4 in)	216 mm (8 1/2 in)	483 mm (19 in)	356 mm (14 in)	197 mm (7 3/4 in)	4.5 kg (10 lb)	6.2 kg (14 lb)	4C-9659 4 Pc.	4C-9743
4C-9660	King Pelican Case	591 mm (23 1/4 in)	527 mm (20 3/4 in)	229 mm (9 in)	559 mm (22 in)	432 mm (17 in)	203 mm (8 in)	6 kg (13 lb)	11.5 kg (25 lb)	4C-9661 4 Pc.	4C-9744
4C-9662	Pelican Travel Vault II	940 mm (37 in)	445 mm (17 1/2 in)	152 mm (6 in)	914 mm (36 in)	343 mm (13 1/2 in)	127 mm (5 in)	6.8 kg (15 lb)	7.7 kg (17 lb)	4C-9663, 3 Pc.	4C-9745
4C-9664 <sup>2</sup>	Pelican Travel Vault	1321 mm (52 in)	445 mm (17 1/2 in)	152 mm (6 in)	1289 mm (50 3/4 in)	323 mm (13 1/2 in)	127 mm (5 in)	11.8 kg (26 lb)	13 kg (29 lb)	4C-9665 3 Pc.	4C-9746

<sup>1</sup>Fold-down handle

<sup>2</sup>Supplied with regular foam; Pick-N'Pluck is not available

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## Abrasives — Safety and Storage

### Safety

To avoid injury always wear impact-resistant protective glasses, full face shield, safety shoes, arm guards, leather gloves and apron for all grinding operations.

#### For Abrasive Disc Grinding:

- Never grind without a proper backing pad
- Never use another grinding disc as backing pad
- Never use a larger diameter disc than specified by manufacturer
- Check all backing pads for signs of irregularities; Check for concentricity; Do not exceed maximum RPM
- Always use the grinder's safety pad. Check spindle for wobble
- Check disc retainer nut for thread wear; Check for snug fit and full three-thread contact (except with quick change or non-wrench systems)

#### For Abrasive Belt Grinding and Polishing:

- Never run an abrasive belt on unfamiliar machinery.
- Inspect for safe operating conditions: the abrasive belt, idler assembly and contact wheel should be enclosed within sheet metal hood; adjustable deflector should be installed within 1/4 inch of abrasive belt working surface; use adequate exhaust system; employ special precautions with inflammable or other hazardous materials.
- Use workpiece fixture whenever possible.
- Always check: grinder spindle for run-out (wobble); contact wheel for balance, face trueness and run-out; idler pulley spindle for run-out and balance.

#### Proper Storage of Coated Abrasives

Follow these guidelines to prolong life and maintain the efficiency of coated abrasives.

- Keep stockroom at constant levels of humidity (35-50%) and temperature [12.8-21.1°C (55-70°F)].
- Keep cartons away from damp or cold walls and floor where they may absorb moisture.
- Store coated abrasives away from any heat source.
- Keep products in original packages for easy handling and stacking.
- Store bulk rolls flat on shelves or pallets—not on edge.
- Belts removed from packing case should be rolled up and stood on edge on a clean shelf. They may be draped over a large cylinder but NEVER hang a belt from a nail or peg (the backing will crease and the abrasive may crack).
- Precondition coated abrasive product in a chamber of controlled temperature and humidity before use for maximum efficiency.

## Brushes — Safety Requirements

All operators must read this information thoroughly and completely before using the brush.

### Operators and Work Area

Osborn Power Brushes are built to rigid manufacturing specifications that combine the finest in design, materials and workmanship. The product you receive will give you maximum work performance, and safe operation if used properly.

All power brushes, like other rotating cutting tools, demand that certain operating precautions be observed to assure operator and work area safety.

### Inspection

Brushes should be carefully checked when removed from original carton. Do not use if rusted or damaged.

### Storage and Handling

Store brushes in original boxes. Wire brushes should not be exposed to heat, high humidity, acids fumes or liquids that can result in deterioration of wire filaments, and subsequently, premature failure of the wires. Also, check for distortion of brush fill that can cause imbalance and excessive vibration when brush is run. Do not allow foreign material to accumulate in brush face.

### Machine Condition

Proper maintenance of machines is essential to keep them in safe operating condition. Special operating instructions furnished with a machine should be closely followed. Hoods and safety guards must be kept in place at all times. Use adequate spindle diameter for the brush - do not use brush larger than the machine was designed for. Brushing machines should have sufficient power to maintain rated spindle speeds.

Provide proper ventilation and/or exhaust systems on all brushing operations.

### Mounting Brushes

Brushes should be inspected for rust, oxidation and other damage. Do not use the brush if it is not in good condition. Check spindle speed RPM. Do not mount and operate brush if spindle RPM exceeds MAXIMUM SAFE FREE SPEED (MSFS) for which brush is rated.

(Continued)

## Brushes — Safety Requirements (Continued)

Brush arbor hole and spindle diameter should be the same for free fit. Spindle length should be sufficient to permit a full nut mounting. Direction of spindle nut thread should be in such relation to the direction of rotation that the nut will tend to tighten as spindle revolves. When flanges are used, they should be identical in size and radial bearing surface to avoid cross-bending pressure on the brush.

### Work Rest

On single or double end pedestal machines, work rests of rigid and adjustable design should be used to support the work piece while brushing. Adjust the work rest for a maximum opening of 1/8 inch to the brush face. This will prevent the work from being forced between the brush and rest. The work rest should be adjusted only when the brush is not in motion.

### Speed

MAXIMUM SAFE FREE SPEED (MSFS) is the maximum RPM at which the brush should be operated with no work applied (spinning free). It is not the recommended operating speed. The application determines the recommended operating speed, which should never exceed the MSFS brush ratings marked on the brush and/or shown in this catalog. Periodic speed checks of the spindle are the responsibility of the operator and user.

In all cases where MSFS is not indicated, and on special brushes, contact Shop Supplies and Tools group for specific operating speed details.

### Protective Equipment

The potential of serious injury exists for both the brush operator and others in the work area (possibly 50 or more feet from the brush). To protect against this hazard, before rotating the brush during rotation, and until rotation stops operators and others in the area must wear SAFETY GOGGLES or FULL FACE SHIELDS WORN OVER SAFETY GLASSES WITH SIDE SHIELDS. Comply with the requirements of ANSI Z87.1-1979 "Operational Eye and Face Protection."

Appropriate protective clothing and equipment (such as gloves, respirators, etc.) shall be used where there is probability of injury that can be prevented by such clothing or equipment.

Certain brushing operations, because of their nature and location, may require an enclosure to isolate the operation from other personnel.

### Machine Guards

Rotating power brushes should be used only on machines that are equipped with safety guards, and these guards must be kept in place at all times.

### Starting the Brush

Jog the machine before starting to determine if it is ready to use, and that the brush is fastened securely. Run the brush at operating speed with the safety guards in place for at least one minute before applying work. Do not stand in front of or in line with the brush during this time.

### Brush Pressure

Avoid excessive pressure against the work. This reduces the efficiency of the brush and could cause premature failure during operation.

Comply with the Safety Standards of the Industrial Division of the American Brush Manufacturers Association and the American National Standards Institute B 165.1-1985 "Safety Requirements for the Design, Care and Use of Power Driven Brushing Tools," and B 165.2-1982 "Safety Requirements for the Design, Care and Use of Power Driven Brushing Tools constructed with wood, plastic, or composition hubs and cores."

## Brushes — Terminology

### Outside Diameter

A larger brush diameter results in a more efficient finishing tool. Production economies are obtained through lower end-of-service costs. Wire brushes 304.8 mm (12 in) O.D. are a practical size whereas 304.8 to 406.4 mm (12 in to 16 in) O.D. is usually best for non-metallic types. Sizes for portable tools (6,000 RPM maximum) should not exceed 152.4 mm (6 in) O.D. in any material.

### Inside Diameter

Diameter of brush back. Increasing the inside diameter of a brush while maintaining the outside diameter results in a stiffer, less flexible brush face.

### Trim Length

Length of fill material extending beyond brush back or face plates. A short trim makes a stiff fast cutting brush, while a long trim gives a brush the flexibility to contact irregular surfaces.

### Fill Density

Brushes with high density are used to produce finer surface finishes, and also where fast cutting action is required; for example, burr removing operations.

Brushes with low density offer greater brush flexibility. The relatively high degree of freedom of the brush wires makes for quick and efficient removal of rust, scale and other incrustations from surfaces by the impact resulting from the whip-like impingement of the wires on the surface.

(Continued)

## Brushes — Terminology (Continued)

### Flexibility

That quality of a brush which determines resiliency and ability to reach into confined areas and conform to uneven or contoured surfaces.

### Brushing Speed and Pressure

RPM speed specified for Osborn Power Brushes are Maximum Safe Free Speeds. In most operations, a lower speed than that specified will prove more efficient for you. Lower speeds and lighter pressures give longer brush life, generate less heat in the work, and require less power. It is important to remember that the TIPS of the wire filaments do the actual work. Where high brush pressures and speeds are required, it is recommended that a more aggressive brush be used. This may be done by increasing wire size, decreasing trim length or in some instances changing to another brush type.

## Brush and Operating Adjustments to Obtain the Desired Results

### Observed Result:

Brush works too slowly.

### Corrections Suggested:

1. Increase surface speed by increasing O.D. or RPM.
2. Decrease trim length and increase fill density.
3. Increase filament diameter.

### Observed Result:

Brush works too fast.

### Corrections Suggested:

4. Reduce surface speed by reducing RPM or O.D.
5. Reduce filament diameter.
6. Reduce fill density.
7. Increase trim length.

### Observed Result:

Action of brush peens burr adjacent surfaces.

### Corrections Suggested:

8. Decrease trim length and increase fill density.
9. If wire brush tests indicate metal too ductile (burr is peened rather than removed), change to non-metallic brush such as treated Tampico used with burring compound.

### Observed Result:

Finer or smoother finish required.

### Corrections Suggested:

10. Decrease trim length and increase fill density.
11. Decrease wire diameter.
12. Try treated Tampico or cord brushes with suitable compounds at recommended speeds.
13. Use auxiliary buffing compound with brush.

### Observed Result:

Finish too smooth and lustrous.

### Corrections Suggested:

14. Increase trim length.
15. Reduce brush fill density.
16. Reduce surface speed.
17. Increase filament diameter.

### Observed Result:

Brushing action not sufficiently uniform.

### Corrections Suggested:

18. Increase trim length and decrease fill density.
19. Devise hand-held or mechanical fixture, or machine to avoid irregular offhand manipulation.

**Radial Knot Brushes — Stringer Bead-Type Wheels**



- Designed for heavy duty cleaning, scale, spatter and rust removal
- High quality oil tempered wire gives long life on pipe and plate weld cleaning

Part Number	Package Quantity	Diameter	Arbor Hole (A.H) Threaded Size	Wire Size	Max. Safe Free Speed (RPM)
1U-9957	1	76.2 mm (3 in)	9.5 mm (3/8 in) A.H.	0.36 mm (0.014 in)	25,000

**Bench Grinder Wire Brushes**



- General purpose wire brushes that provide fine to medium brushing action
- Excellent for brushing uneven surfaces or areas not easily reached by wider brushes
- Will remove light scale, dirt, rust, corrosion or light burrs

Part Number	Package Quantity	Wheel Diameter	Arbor Hole	Wire Size	Face Width	Max. Safe Free Speed (RPM)
1U-9971	1	152.4 mm (6 in)	12.7 - 15.9 mm (1/2 - 5/8 in)	0.36 mm (0.014 in)	15.88 mm (5/8 in)	6,000
1U-9972	1	152.4 mm (6 in)	12.7 - 15.9 mm (1/2 - 5/8 in)	0.36 mm (0.014 in)	25.40 mm (1 in)	6,000
1U-9974	1	203.2 mm (8 in)	15.9 mm (5/8 in)	0.36 mm (0.014 in)	25.40 mm (1 in)	4,500

**End Wire Brushes, 6.4 mm (1/4 in) Shank**



- Suited for use on portable air and electric tools for jobs where space limitation is a factor
- For a majority of operations, higher speeds are required for effective brushing action

**NOTE:**

As a safety precaution, end brush shanks must be fully inserted into the chuck or collet, and tightened securely.

(Continued)

## End Wire Brushes, 6.4 mm (1/4 in) Shank (Continued)

Part Number	Package Quantity	Description	Wire Size	Diameter	Max. Safe Free Speed (RPM)
1U-9939	1	Knot Style	0.510 mm (0.0201 in)	25.4 mm (1 in)	20,000
1U-9942	1	Circular End	0.510 mm (0.0201 in)	38.1 mm (1 1/2 in)	15,000
1U-9943	1	Knot Style	0.510 mm (0.0201 in)	19.0 mm (3/4 in)	20,000
1U-9946	1	Galvanized	0.360 mm (0.0142 in)	76.2 mm (3 in)	5,000
4C-6157	1	Crimped Encapsulated Flair-Flex	0.264 mm (0.0104 in)	38.1 mm (1 1/2 in)	25,000
4C-6158	1	Knot Style	0.360 mm (0.0142 in)	25.4 mm (1 in)	20,000

## Wire Brushes

- Used to clean large metal surfaces
- Remove burrs, weld scale, and rust
- Good for edge blending and surface preparation



Part Number	Qty.	Description	Size	Wire Gauge	Speed (RPM)	Arbor	Length x Width	Shank Size	Material
262-9720	--	Brush, Cup Knot Double Row	152.4 mm (6 in)	.023	6,000	5/8 -11	76.2 mm x 152.4 mm (3 in x 6 in)	--	Steel
262-9721	1 box of 10 brushes	Brush End, Straight Wire	12.7 mm (1/2 in)	.006	22,000	--	--	1/4 in	Steel
262-9722	1 box of 10 brushes	Brush End, Straight Wire	19.0 mm (3/4 in)	.006	20,000	--	76.2 mm x 63.5 mm (3 in x 2 1/2 in)	1/4 in	Steel
262-9723	1 box of 10 brushes	Brush End, Straight Wire	25.4 mm (1 in)	.006	20,000	--	76.2 mm x 63.5 mm (3 in x 2 1/2 in)	1/4 in	Steel
262-9724	1 box of 10 brushes	Brush Cup, Straight Wire	152.4 mm (6 in)	.014	6,000	5/8 -11	76.2 mm x 152.4 mm (3 in x 6 in)	--	Steel
262-9725	--	Brush Cup, Knot Single Row	152.4 mm (6 in)	.014	6,000	5/8 -11	76.2 mm x 152.4 mm (3 in x 6 in)	--	Steel
262-9726	1 box of 10 brushes	Brush End, Straight Wire	12.7 mm (1/2 in)	.020	22,000	--	76.2 mm x 63.5 mm (3 in x 2 1/2 in)	1/4 in	Steel
262-9727	1 box of 10 brushes	Brush End, Straight Wire	19.0 mm (3/4 in)	.020	20,000	--	76.2 mm x 63.5 mm (3 in x 2 1/2 in)	1/4 in	Steel
262-9728	1 box of 10 brushes	Brush End, Straight Wire	25.4 mm (1 in)	.020	--	--	76.2 mm x 63.5 mm (3 in x 2 1/2 in)	1/4 in	Steel

(Continued)

Wire Brushes (Continued)

Part Number	Qty.	Description	Size	Wire Gauge	Speed (RPM)	Arbor	Length x Width	Shank Size	Material
262-9729	1 box of 10 brushes	Brush End, Knot	19.0 mm (3/4 in)	.014	--	--	76.2 mm x 63.5 mm (3 in x 2 1/2 in)	1/4 in	Steel

Crimped End Wire Brushes, 6.4 mm (1/4 in) Shank



- For cleaning, deburring, or removing hard deposits
- Used with portable air and electric tools for jobs where space limitation is a factor
- For a majority of operations, higher speeds result in more effective brushing action
- Material: crimped wire, except for 1U-9945 which is galvanized coated crimped wire

**NOTE:**

As a safety precaution, end brush shanks must be fully inserted into the chuck or collet, and tightened securely.

Part Number	Diameter	Wire Size	Max. Speed (RPM)
1U-9940	25 mm (1 in)	0.510 mm (0.0201 in)	20,000
1U-9941	19 mm (3/4 in)	0.510 mm (0.0201 in)	20,000
1U-9945	76 mm (3 in)	0.360 mm (0.0142 in)	5,000
249-5284	38 mm (1 1/2 in)	0.264 mm (0.0104 in)	25,000
249-5285	51 mm (2 in)	0.299 mm (0.0118 in)	25,000
249-5286	64 mm (2 1/2 in)	0.299 mm (0.0118 in)	25,000
4C-6153	25 mm (1 in)	0.150 mm (0.0059 in)	20,000
4C-6154	25 mm (1 in)	0.264 mm (0.0104 in)	20,000

Cylinder Washing Brushes

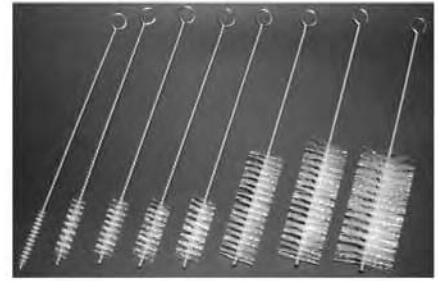
- Brush Research Mfg. Co. Inc.



Part Number	Brush Diameter
4C-6342	88.9 mm (3 1/2 in)
4C-6343	101.6 mm (4 in)
1U-7429	114.3 mm (4 1/2 in)
1U-9788	127.0 mm (5 in)
4C-6344	139.7 mm (5 1/2 in)
4C-6345	152.4 mm (6 in)
4C-6346	165.1 mm (6 1/2 in)
4C-6347	177.8 mm (7 in)
4C-6348	190.5 mm (7 1/2 in)
4C-6349	203.2 mm (8 in)
4C-6350	241.3 mm (9 1/2 in)

**Nylon Cleaning Brushes**

- Used in a variety of cleaning applications, such as spray paint equipment and parts washers for cleaning tubes, valves cylinders, etc.
- Nylon bristles clean dirt without damaging surface
- Available in several brush diameters to meet cleaning task requirements
- Nylon bristles with a 25 cm (10 in) metal handle
- Long handle for cleaning hard to reach dirt and debris



Part Number	Brush Diameter	Brush Length	Qty.
266-2281	6.4 mm (1/4 in)	51 mm (2 in)	48
264-4355	12.7 mm (1/2 in)	51 mm (2 in)	48
266-2282	15.9 mm (5/8 in)	51 mm (2 in)	48
264-4357	19.0 mm (3/4 in)	51 mm (2 in)	48
264-4358	22.2 mm (7/8 in)	102 mm (4 in)	48
266-2283	31.8 mm (1 1/4 in)	102 mm (4 in)	48
264-4372	38.1 mm (1 1/2 in)	102 mm (4 in)	48
264-4352	50.8 mm (2 in)	102 mm (4 in)	48

**Tube Brush**



Part Number	Package Quantity	Description	O.D.	Wire
4C-6161	1	76.2 mm (3 in) Brush Face, 609.6 mm (24 in) O.A.L.	9.53 mm (3/8 in)	.13 mm (.005 in), Carbon Steel



**Brass Bristle Cleaning Brush**



- Use to clean tire beads prior to mounting
- Also good for other applications where steel or nylon bristles will not work
- Foam plastic handle will not crack when left in cleaning solution
- Dense brass bristles clean well and will not rust

Part Number	Length x Width	Bristle Length	Package Quantity
262-4868	216 x 9 cm (8.5 x 3.5 in)	16 mm (.62 in)	12

**Parts Cleaning Brush**



- For general cleaning—works great in parts washers
- Will not rust or damage the surface of the part being cleaned
- All poly handle and ferrule with natural fiber bristles
- Tapered handle for better grip
- Long bristles reach hard to clean areas

Part Number	Diameter	Overall Length	Bristle Length	Package Quantity
264-4359	25 mm (1 in)	25 cm (10 in)	64 mm (2.5 in)	12

**Spindle Mounted Flap Brush**



- Used to clean curved and irregular shaped parts with hard to reach areas
- Use in place of wire wheels, hand scrapers, and wire brushes
- Typical applications include cleaning up both hydraulic cylinders and engine lower bores
- Can also be used to clean rust, carbon deposits, adhesives, and tough coatings

Part Number	Package Quantity	Description	Diameter	Maximum Operating Speed	Optimum Operating Speed	Used with
4C-8630	1	CPFBS A Medium	76.2 mm x 44.5 mm x 6.35 mm (3 in x 1 3/4 in x 1/4 in)	8,500	8,500	Grinder/Hand Drill

**Flap Brush with Non-Woven Surface Conditioning Material**

- Non-woven surface conditioning material and aluminum-oxide abrasive flaps with cloth backing
- Epoxy filled center with 6.4 mm (.25 in) shank
- Used to clean curved and irregular shaped parts with hard to reach areas
- Use in place of wire wheels, hand scrapers, and wire brushes
- Typical applications include cleaning up both hydraulic cylinders and engine lower bores
- Can also be used to clean rust, carbon deposits, adhesives, and tough coatings



Part Number	Size	Grade	Grit
254-5310	38 x 25 mm (1.5 x 1 in)	Coarse	60
254-5311	38 x 25 mm (1.5 x 1 in)	Medium	120
254-5312	38 x 25 mm (1.5 x 1 in)	Very Fine	240
254-5313	76 x 51 mm (3 x 2 in)	Coarse	60
254-5314	76 x 51 mm (3 x 2 in)	Medium	120
254-5315	76 x 51 mm (3 x 2 in)	Very Fine	240

**Type 29 Zirconium Flap Discs**



- Grind and finish in one operation—good for heavy stock removal as well as finishing—reduces downtime
- Three popular grits ideal for iron, aluminum, stainless steel, sheet metal, copper, brass, fiberglass, masonry, and even wood
- Unique design allows for consistent sharp edge as wheel wears away
- Has a built-in angle for less operator fatigue
- Fiberglass reinforced backer
- Long lasting Zirconia grain cloth-backed flaps

Part Number	Size	Grade	Package Quantity
236-8105	114.3 x 22.23 mm (4 1/2 x 7/8 in)	ZIR24	10
236-8106	114.3 x 22.23 mm (4 1/2 x 7/8 in)	ZIR36	10
236-8107	114.3 x 22.23 mm (4 1/2 x 7/8 in)	ZIR60	10
236-8109	114.3 x 22.23 mm (4 1/2 x 7/8 in)	ZIR80	10
236-8111	114.3 x 22.23 mm (4 1/2 x 7/8 in)	ZIR120	10
236-8112	152.4 x 22.23 mm (6 x 7/8 in)	ZIR24	10
236-8113	152.4 x 22.23 mm (6 x 7/8 in)	ZIR36	10
236-8114	152.4 x 22.23 mm (6 x 7/8 in)	ZIR60	10
236-8115	152.4 x 22.23 mm (6 x 7/8 in)	ZIR80	10
236-8116	152.4 x 22.23 mm (6 x 7/8 in)	ZIR120	10
254-5336	178 x 22.23 mm (7 x 7/8 in)	ZIR36	10
254-5337	178 x 22.23 mm (7 x 7/8 in)	ZIR60	10
254-5338	178 x 22.23 mm (7 x 7/8 in)	ZIR80	10

**Type 29 Zirconia Flap Disc with 5/8 -11 Hub**



- Long lasting Zirconia cloth backed flaps
- Fiberglass reinforced backer
- Three popular grades
- Grind and finish in one operation
- Permanently attached metal hub

Part Number	O.D.	Hub Thread	Grade	Package Quantity
254-5339	144 mm (4.5 in)	5/8 -11	36G	10
254-5340	144 mm (4.5 in)	5/8 -11	60G	10
254-5341	144 mm (4.5 in)	5/8 -11	80G	10
254-5342	178 mm (7 in)	5/8 -11	36G	10
254-5343	178 mm (7 in)	5/8 -11	60G	10
254-5344	178 mm (7 in)	5/8 -11	80G	10

Shop Supplies

### Hi-Density Zirconia Flap Disc with 5/8 -11 Hub

- Hi-density flap disc with 5/8 -11 permanently attached metal hub
- Good for stock removal as well as finishing
- Fiberglass reinforced backer
- Available in four popular grades
- Made with long-life Zirconia grain



Part Number	O.D.	Hub Thread	Grade	Package Quantity
254-5345	114 mm (4.5 in)	5/8 -11	36 grit	10
254-5346	114 mm (4.5 in)	5/8 -11	60 grit	10
254-5347	114 mm (4.5 in)	5/8 -11	80 grit	10
254-5348	114 mm (4.5 in)	5/8 -11	120 grit	10
254-5349	178 mm (7 in)	5/8 -11	36 grit	10
254-5350	178 mm (7 in)	5/8 -11	60 grit	10
254-5351	178 mm (7 in)	5/8 -11	80 grit	10

### Surface Reconditioning Discs

Conditioning surfaces with conventional abrasive discs often results in dimensioning, gouging, or undercutting. Wire brushes don't thoroughly remove contaminants which can lead to rework. Their wires can become loose, fly off, and injure an operator. Surface reconditioning discs can help reduce or eliminate these problems. They deliver superior, consistent finishes when you need to clean, deburr, blend or finish.

- Use disc coming off the edge—better finish results
- Aluminum Oxide
- Use for gasket removal
- Use for deburring, cleaning and rust removal
- Use instead of wire brushes or sand paper when you don't want to remove any stock



Part Number	Package Quantity	Description	Diameter	Maximum Operating Speed (RPM)	Optimum Operating Speed (RPM)	Associated Tool
5P-9709	25	Surface Conditioning Disc, A-Coarse	177.8 mm (7 in)	6,000	4,500	Grinder
6V-0185	25	Surface Conditioning Disc, A-Coarse	127.0 mm (5 in)	10,000	10,000	Grinder
1U-7622	25	Surface Conditioning Disc, A-Coarse	101.6 mm (4 in)	13,000/18,000 <sup>1</sup>	10,000	Grinder/Hand Drill
4C-4384	25	Surface Conditioning Disc, A-Coarse	76.2 mm (3 in)	13,000	15,000	Grinder/Hand Drill
4C-4383	50	Surface Conditioning Disc, A-Coarse	50.8 mm (2 in)	13,000	18,000	Grinder/Hand Drill

<sup>1</sup> Maximum speed is 13,000 if used with 4C-4763 Disc Pad Holder or 4C-4764 Disc Pad Holder and 155-3595 Adapter; maximum speed is 18,000 if used with 1U-7623.

**Surface Reconditioning Discs — Superior Edge Wear**



- Surface reconditioning disc used on right angle tools
- The edges of an abrasive on a right angle grinder tend to wear faster than the center and thus the disc is never fully used up. Superior edge wear discs have longer overall life than standard discs.
- Ideal for gasket removal, rust removal and general cleaning on steel parts
- Retained by hook and loop type fasteners or 7/8 inch bolt thru application
- Brown disc with gray backing

Part Number	Package Quantity	Description	Diameter	Maximum Operating Speed (RPM)	Optimum Operating Speed	Associated Tool
9U-6921	10	SE Disc — A Coarse	177.8 mm (7 in)	6,000	4,500	Grinder
9U-6922	10	SE Disc — A Coarse	127.0 mm (5 in)	10,000	10,000	Grinder
9U-6923	10	SE Disc — A Coarse	127.0 x 22.23 mm center hole (5 x 7/8 in)	10,000	10,000	Grinder
9U-6924	10	SE Disc — A Coarse	101.6 mm (4 in)	13,000/18,000 <sup>1</sup>	10,000/15,000	Grinder/ Hand Drill
9U-6925	10	SE Disc — A Coarse	101.6 x 22.23 mm center hole (4 x 7/8 in)	13,000	10,000	Grinder/ Hand Drill
9U-6926	10	Roloc — A Coarse	76.2 mm (3 in)	18,000	15,000	Die Grinder/ Hand Drill
9U-6927	10	Roloc — A Coarse	50.8 mm (2 in)	25,000	21,000	Die Grinder/ Hand Drill

<sup>1</sup> Maximum speed is 13,000 if used with 4C-4763 Disc Pad Holder or 4C-4764 Disc Pad Holder and 155-3595 Adapter; maximum speed is 18,000 if used with 1U-7623.

**Disc Pad Holders**

**Safety Tip**  
Place holder on table before turning tool on—prevents pad from flying off.



Shop Supplies

(Continued)

## Disc Pad Holders (Continued)

Part Number	Package Quantity	Used With	Description	Diameter	Hub/Shank	Maximum Operating Speed (RPM)
5P-9718	--	5P-9709	Pad Holder	177.8 mm (7 in)	5/8 in-11	6,000
6V-0186 <sup>1</sup>	--	150-1244	Pad Holder	127.0 mm (5 in)	5/8 in-11	10,000
4C-4763	--	1U-7622	Pad Holder 914	101.6 mm (4 in)	M14 x 2	13,000
4C-4764	--	1U-7622	Pad Holder 914	101.6 mm (4 in)	5/8 in-11	13,000
1U-7623	--	1U-7622	Pad Holder 925	101.6 mm (4 in)	6.35 mm shaft (1/4 in)	18,000
4C-4382	--	4C-4384	Pad Holder	76.2 mm (3 in)	6.35 mm shaft (1/4 in)	20,000
4C-4381	--	4C-4383	Pad Holder	51.0 mm (2 in)	6.35 mm shaft (1/4 in)	23,000
1U-5520	1	9U-6926	Roloc Holder for Bristle Discs	76.2 mm (3 in)	--	20,000
1U-5519	1	9U-6927	Roloc Holder for Bristle Discs	51.0 mm (2 in)	--	--
1U-5518	1	1U-5519 or 1U-5520	Roloc Threaded Shaft	--	--	--

<sup>1</sup>Female, 5/8 in-11; use 1U-9381 to adapt it

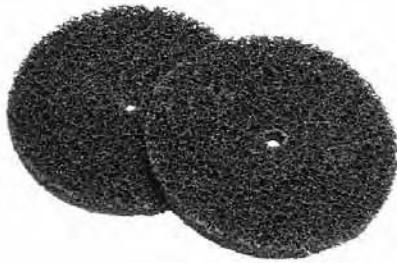
## Roloc Surface Conditioning Discs

- Uses a more positive retention method than the “hook and loop” fasteners system
- R-style discs have a quarter turn male fastener embedded into the disc. The disc holder has the corresponding female fastener.
- Typically used at smaller sizes where the higher maximum operating speed requires a more positive retention system
- The disadvantage of this system is that the surface conditioning operation must always be conducted in one direction only. Reversing the tool will “unspin” the disc from the holder.
- Aluminum oxide
- Use for gasket removal, deburring, cleaning, and rust removal
- Use instead of wire brushes or sand paper when you don’t want to remove any stock



Part Number	Package Quantity	Description	Diameter	Maximum Operating Speed (RPM)	Optimum Operating Speed (RPM)	Associated Tool	Used With
<b>Roloc Surface Conditioning Discs</b>							
1U-5516	25	Roloc Surface Conditioning Disc	50.8 mm (2 in)	25,000	18,000	Die Grinder, Hand Drill	1U-5519 or 1U-5518
1U-5517	25	Roloc Surface Conditioning Disc	76.2 mm (3 in)	15,000	15,000	Die Grinder, Hand Drill	1U-5520 or 1U-5518
<b>Disc Holders</b>							
1U-5520	1	Roloc Holder for Bristle Discs	76.2 mm (3 in)	20,000	15,000	Die Grinder, Hand Drill	1U-5518
1U-5519	1	Roloc Holder for Bristle Discs	50.8 mm (2 in)	--	25,000	Die Grinder, Hand Drill	1U-5518
1U-5518	1	Roloc Threaded Shaft	6.4 mm (1/4 in)	--	--	Die Grinder, Hand Drill	1U-5520 or 1U-5519

Discs



- Flexible discs can be used to remove corrosion and surface deposits
- Clean/strip designation indicates a coarse version of cutting/polishing disc
- Typical applications are clean up of hydraulic cylinders and engine lower bores
- Can be used in stacks of two or three, for whatever width is required to clean the surface in the most efficient manner
- Aluminum oxide
- Use for gasket removal, deburring, cleaning, and rust removal
- Use instead of wire brushes or sand paper when you don't want to remove any stock
- 279-2267 material is more aggressive so has a better cleaning and polishing effect than 6V-4086

Part Number	Package Quantity	Description	Diameter	Maximum Operating Speed (RPM)	Optimum Operating Speed (RPM)	Associated Tool
6V-4086	1	Cutting and Polishing Disc, A-Medium	152.4 x 6.35 mm (6 x 1/4 in)	4,000	3,200	Straight Grinder and Hand Drill
8T-3054	1	Clean 'N Strip Disc, Extra Coarse	152.4 x 12.7 mm (6 x 1/2 in)	4,000	3,200	Straight Grinder and Hand Drill
4C-3868	1	Clean 'N Strip Disc, Extra Coarse	101.6 x 6.35 mm (4 x 1/4 in)	6,000	4,500	Straight Grinder and Hand Drill
279-2267	1	Cutting and Polishing Disc	152.4 x 6.35 mm (6 x 1/4 in)	4,000	3,200	Straight Grinder and Hand Drill

Surface Reconditioning Discs for Aluminum Surfaces



- The ideal disc for aluminum
- Uses the same holders and grinders as other surface reconditioning discs

**Fine Grade**

- Very fine grade minimizes the chance of changing the surface profile
- Identified by blue/green color both front and back of disc

**Medium Grade**

- Medium grade material used much like coarse but is less aggressive in performance—used when very fine surface condition material is not quite aggressive enough
- Ideal for work requiring less pressure such as grind marks, surface rust, and mild coatings
- Brown disc with gray backing



Shop Supplies

Part Number	Package Quantity	Description	Diameter	Maximum Operating Speed (RPM)	Optimum Operating Speed (RPM)	Used With	Qty.	Actual Diameter	Max. Hub/Shank	Associated Tool
150-1197	10	Scuffing Disc — A Fine, N.H.	177.8 mm (7 in)	6,000	4,500	--	--	--	--	Grinder
150-1244	10	Scuffing Disc — A Fine, N.H.	127.0 mm (5 in)	10,000	10,000	--	--	--	--	Grinder
150-1246	10	Scuffing Disc — A Fine	101.6 mm (4 in)	13,000/18,000 <sup>1</sup>	10,000/15,000	--	--	--	--	Grinder/ Hand Drill

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## Surface Reconditioning Discs for Aluminum Surfaces (Continued)

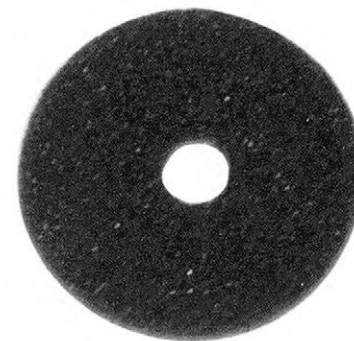
Part Number	Package Quantity	Description	Diameter	Maximum Operating Speed (RPM)	Optimum Operating Speed (RPM)	Used With	Qty.	Actual Diameter	Max. Hub/Shank	Associated Tool
150-1248	10	Roloc Scuffing Disc — A Fine	76.2 mm (3 in)	18,000	15,000	--	--	--	--	Die Grinder/ Hand Drill
150-1250	10	Roloc Scuffing Disc - A Fine	50.8 mm (2 in)	25,000	21,000	--	--	--	--	Die Grinder/ Hand Drill
236-8092	25	Scuffing Disc Medium	76.2 mm (3 in)	23,000 rpm	23,000 rpm	--	--	--	--	Grinder
<b>Holders</b>										
5P-9718	--	Pad Holder	177.8 mm (7 in)	6,000	4,500	150-1197	1	174.63 mm (6 7/8 in)	5/8 in-11	--
6V-0186 <sup>2</sup>	--	Pad Holder	127.0 mm (5 in)	10,000	10,000	--	1	120.65 mm (4 3/4 in)	5/8 in-11	--
4C-4763	--	Pad Holder 914	101.6 mm (4 in)	13,000	10,000	150-1246	1	95.25 mm (3 3/4 in)	M14 x 2	--
4C-4764	--	Pad Holder 914	101.6 mm (4 in)	13,000	10,000	150-1246	1	95.25 mm (3 3/4 in)	5/8 in-11	--
1U-7623	--	Pad Holder 925	101.6 mm (4 in)	18,000	10,000	150-1246	1	98.43 mm (3 7/8 in)	1/4 in Shaft	--
1U-5520	1	Roloc Holder for Bristle Discs	76.2 mm (3 in)	20,000	15,000	150-1248	1	69.85 mm (2 3/4 in)	--	Die Grinder, Hand Drill
1U-5519	1	Roloc Holder for Bristle Discs	51.0 mm (2 in)	--	25,000	150-1250	1	44.45 mm (1 3/4 in)	--	Die Grinder, Hand Drill
4C-4382	--	Pad Holder	76.2 mm (3 in)	20,000	15,000	150-1252	1	78.03 mm (2 7/8 in)	--	--
4C-4381	--	Pad Holder	51.0 mm (2 in)	23,000	20,000	150-1251	1	44.45 mm (1 3/4 in)	--	--

<sup>1</sup> Maximum speed is 13,000 if used with 4C-4763, (4C-4764, 155-3595); maximum speed is 18,000 if used with 1U-7623.

<sup>2</sup> Female, 5/8 in-11; use 1U-9381 to adapt it

## Surface Reconditioning Discs — Bolt-On Style

- Holders for these discs have a hook and loop type fastening system; not all the grinders in the shop will accept this kind of holder
- For Blue Point AT425A Right Angle Grinder or similar model, a 7/8 inch center hole is needed



(Continued)



**Surface Reconditioning Discs — Bolt-On Style (Continued)**

Part Number	Package Quantity	Description	Diameter x Center Hole	Maximum Operating Speed (RPM)	Optimum Operating Speed (RPM)	Associated Tool
9U-6928	10	Disc — A Coarse	127.0 x 22.23 mm (5 x 7/8 in)	10,000	10,000	Grinder
9U-6929	10	Disc — A Coarse	101.6 x 22.23 mm (4 x 7/8 in)	13,000	10,000	Grinder

**Roloc Holders and Threaded Shaft Bristle Discs**



- Bristle design and 3-dimensional abrasives enable bristle discs to remove carbon buildup, coatings, sealants, gaskets and weld discoloration quickly, leaving a clean surface ready for subsequent operations or inspection
- Used with rotary tool such as drill or small angle grinder
- Designed to compete with crimped wire and bristle cup brushes
- Extends range of surface reconditioning operations where conformability and flexibility are most critical
- Provides exceptional finish, outstanding performance and a safer workplace by eliminating flying metal wires
- Come in 3 sizes and 3 grades
- All Roloc holders use 1U-5518 Threaded Shaft

Shaft size	6.4 mm (.25 in)
Disc package quantity	10
50 grit discs	carbon removal, weld discoloration clean up or where coating removal discs are used
80 grit discs	corrosion removal, sealant removal and general maintenance repair operations
120 grit discs	aluminum parts

Item	Part Number	Description	Diameter	Size	Package Quantity	Grit	Color	Maximum Operating Speed (RPM)	Optimum Operating Speed
<b>Roloc Bristle Discs</b>									
1	138-4523	Roloc Bristle Disc	25 mm (1.0 in)	1	10	50	Green	30,000	25,000
1	138-4524	Roloc Bristle Disc	25 mm (1.0 in)	1	10	80	Yellow	30,000	25,000
1	151-8101	Roloc Bristle Disc	25 mm (1.0 in)	1	10	120	White	30,000	25,000
1	138-4528	Roloc Bristle Disc	51 mm (2.0 in)	2	10	50	Green	25,000	18,000
1	138-4529	Roloc Bristle Disc	51 mm (2.0 in)	2	10	80	Yellow	25,000	18,000
1	138-4530	Roloc Bristle Disc	51 mm (2.0 in)	2	10	120	White	25,000	18,000
1	138-4534	Roloc Bristle Disc	76 mm (3.0 in)	3	10	50	Green	20,000	15,000
1	138-4535	Roloc Bristle Disc	76 mm (3.0 in)	3	10	80	Yellow	20,000	15,000
1	138-4536	Roloc Bristle Disc	76 mm (3.0 in)	3	10	120	White	20,000	15,000
2	151-8102	Holder for Bristle Discs	25 mm (1.0 in)	--	--	--	--	--	--
2	1U-5519	Roloc Holder for Bristle Discs	51 mm (2.0 in)	--	1	--	--	--	25,000
2	1U-5520	Roloc Holder for Bristle Discs	76 mm (3.0 in)	--	1	--	--	20,000	15,000
3	1U-5518	Roloc Threaded Shaft	--	--	1	--	--	--	--
Not shown	150-5431	Holder for Bristle Discs	51 mm (2.0 in)	--	--	--	--	--	--

Shop Supplies

## Bristle Discs

- Bristle design and 3-dimensional abrasive filled fingers enable bristle disc to remove carbon buildup, coatings, sealants, gaskets, and weld discoloration quickly, leaving a clean surface ready for subsequent operations or inspection
- Used with rotary tool such as drill or right angle grinder
- Used for coating removal, weld preparation, and general cleaning
- Increased safety during use—bristles are mounted securely to backing, virtually eliminating flying wires common with wire brushes
- Flexible, abrasive-filled bristles conform to part's surface and clean without removing base material, helping reduce damage and rework
- Unique bristle shape resists excessive edge wear and loading with coatings, dirt, and debris to extend disc life and performance
- Resists heat build-up to reduce potential tempering or work surface damage
- Threaded 5/8 -11 inch core quickly threads onto shaft of an electric or pneumatic right angle grinder
- Color coding makes abrasive grade selection quick and easy

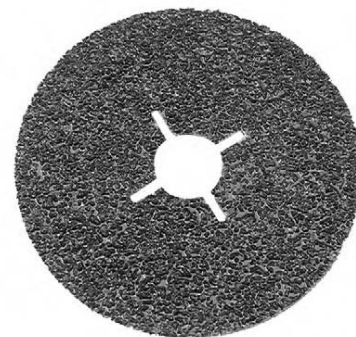


Maximum operating speed	12,000 rpm
Internal thread	5/8 -11

Part Number	Size	Grit	Color	Maximum Operating Speed (RPM)	Optimum Operating Speed	Application
165-3945	4 1/2	50	Green	12,000	10,000	Carbon removal, weld discoloration cleaning, coating removal
165-3946	4 1/2	80	Yellow	12,000	10,000	Corrosion removal, sealant removal, general maintenance repair operations
165-3947	4 1/2	120	White	12,000	10,000	Aluminum parts

## Fiber Discs

- Requires use with rib-flow backing pad noted in table below
- Aluminum oxide with resin fiber back
- 22 mm (7/8 in) center hole for use with 5/8 -11 arbor (except 236-8069 which has 16 mm (5/8 in) center hole)
- Resin bond with fiber backing for strength
- Used for medium and heavy stock removal on right-angle sanding equipment for:
  - Cutting down and blending weld lines
  - Cutting down filler metal, rust and scale removal, as well as deburring



Part Number	Grit	Pad Diameter	Package Quantity	Backing Pad
<b>5/8 inch Arbor Hole</b>				
236-8069	36	178.0 mm (7 1/64 in)	25	--
<b>7/8 inch Arbor Hole</b>				
268-8709 <sup>1</sup>	16	114.0 mm (4 31/64 in)	25	254-5307
1U-6827	24	114.0 mm (4 31/64 in)	25	254-5307
1U-6828	36	114.0 mm (4 31/64 in)	25	254-5307
1U-6829	50	114.0 mm (4 31/64 in)	25	254-5307
1U-6830	60	114.0 mm (4 31/64 in)	25	254-5307
1U-6831	80	114.0 mm (4 31/64 in)	25	254-5307
1U-6832	100	114.0 mm (4 31/64 in)	25	254-5307

(Continued)

Fiber Discs (Continued)

Part Number	Grit	Pad Diameter	Package Quantity	Backing Pad
<b>7/8 inch Arbor Hole (Continued)</b>				
1U-6833	120	114.0 mm (4 31/64 in)	25	254-5307
1U-6834	24	127.0 mm (5 in)	25	254-5308
1U-6835	36	127.0 mm (5 in)	25	254-5308
1U-6836	50	127.0 mm (5 in)	25	254-5308
1U-6837	60	127.0 mm (5 in)	25	254-5308
1U-6838	80	127.0 mm (5 in)	25	254-5308
1U-6839	100	127.0 mm (5 in)	25	254-5308
1U-6840	120	127.0 mm (5 in)	25	254-5308
1U-6841	24	178.0 mm (7 1/64 in)	25	254-5309
1U-6842	36	178.0 mm (7 1/64 in)	25	254-5309
1U-6843	50	178.0 mm (7 1/64 in)	25	254-5309
1U-6844	60	178.0 mm (7 1/64 in)	25	254-5309
1U-6845	80	178.0 mm (7 1/64 in)	25	254-5309
1U-6846	100	178.0 mm (7 1/64 in)	25	254-5309
1U-6847	120	178.0 mm (7 1/64 in)	25	254-5309

<sup>1</sup> Disc is aluminum oxide grain

Rib-flow Backing Pads for Fiber Disc



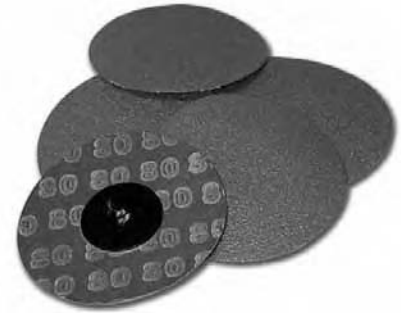
- Rib-flow backing pads allow air flow through the ribs extending disc life from 20 to 50%
- Polyimide construction with steel insert and arbor nut
- Shipped in poly bag with 5/8 -11 arbor flange nut
- Available in three popular diameters
- For use with angle grinders with a 5/8 -11 spindle thread
- 254-5309 will fit 222-3064 or 222-3065 Pneumatic Angle Grinders

Part Number	O.D.	Max. Speed (RPM)	Package Quantity	Associated Tool <sup>1</sup>
254-5307	114.3 mm (4.5 in)	13,000	1	1U-6827 Fiber Disc
254-5308	127 mm (5 in)	11,900	1	1U-6834 Fiber Disc
254-5309	177.8 mm (7 in)	8,600	1	1U-6841 Fiber Disc

<sup>1</sup> 24 grit fiber disc listed. Other grits are available.

### Roloc Mini Grinding Discs

- Aluminum oxide with resin fiber back
- Manufactured with non-carcinogenic bonding agents—safer for the environment and dissipate heat while providing cooler cut for longer product life
- More coarse grits (24/36) best for weld removal, grinding, and deburring
- 50 grit best for blending; finer grits best for smooth sanding
- Resists stretching, shedding, and grain loss
- Maintains flexibility to work in contours
- Use with 1U-5519, 150-5431, and 1U-5520 R-Type Disc Holders



Part Number	Diameter	Grit	Package Quantity
236-8072	50.8 mm (2 in)	24	50
236-8073	50.8 mm (2 in)	36	50
236-8074	50.8 mm (2 in)	50	50
236-8075	50.8 mm (2 in)	80	50
236-8076	50.8 mm (2 in)	120	50
236-8078	76.2 mm (3 in)	24	25
236-8079	76.2 mm (3 in)	36	25
236-8081	76.2 mm (3 in)	50	25
236-8082	76.2 mm (3 in)	80	25
236-8083	76.2 mm (3 in)	120	25

### Discs

- Excellent for cleaning welds, removing tough coatings, carbon deposits, adhesives and rust
- Conformable so there is less chance of under-cutting or gouging
- Open web resists loading even from soft coatings and is non-metallic so it will not contaminate the surface with metallic residues
- Will work at low RPM's, such as on a 6.35 mm (1/4 in) drill @ 1750 RPM
- Works well on other substrates such as wood, aluminum and even plastic



**PSA Stick-It Discs**



- Aluminum oxide, resin bond adhesive backed paper discs
- Special coating resists loading
- Excellent for sanding paint, primer, metal, wood, fiberglass, and plastic
- Paper weight: E
- Color: gold
- Material: aluminum oxide

Part Number	Size	Grit	Qty.
262-9736	(5 in)	40	100 per box

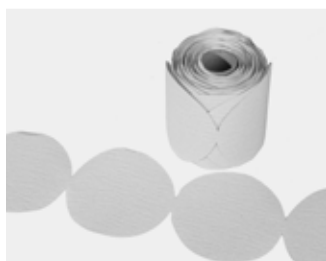
**PSA Discs, Glue Backed, PSA/No Hole**



- These discs have glue on the back and are used with backing pads to deburr, blend, etc.
- Pressure sensitive adhesive on disc back makes changes fast and easy
- Efficient on flat and contoured metal surfaces and hard to reach areas

Part Number	Grit	Description	Diameter x Hole	Package Quantity
4C-3809	36	Cloth Backed Disc	50.8 mm (2 in)	50
4C-3810	50	Cloth Backed Disc	50.8 mm (2 in)	50
4C-3811	60	Cloth Backed Disc	50.8 mm (2 in)	50
4C-3813	100	Cloth Backed Disc	50.8 mm (2 in)	50
4C-3817	80	Cloth Backed Disc	76.2 mm (3 in)	50
4C-3819	60	Cloth Backed Disc	101.6 mm (4 in)	50
4C-3821	100	Cloth Backed Disc	101.6 mm (4 in)	50
4C-3822	120	Cloth Backed Disc	101.6 mm (4 in)	50
4C-3834	80	Cloth Backed Disk	304.8 mm (12 in)	25

**PSA Sanding Discs**



- Ideally used on dual action (DA) air and electrical random orbit sanders
- Used on metal, plastic, fiberglass, wood, and painted surfaces
- Anti-clog release agents are an additive process for long life
- Quality full resin-over-resin bond
- Each disc has protective backing to protect the adhesive in dusty environments before use
- Priced per roll

Shop Supplies

(Continued)

## PSA Sanding Discs (Continued)

Part Number	Diameter	Grit	Package Quantity	Part Number	Diameter	Grit	Package Quantity
236-8039	127 mm (5 in)	A/O 60	100	236-8048	152.4 mm (6 in)	A/O 60	100
236-8040	127 mm (5 in)	A/O 80	100	236-8049	152.4 mm (6 in)	A/O 80	100
236-8041	127 mm (5 in)	A/O 100	100	236-8050	152.4 mm (6 in)	A/O 100	100
236-8042	127 mm (5 in)	A/O 120	100	236-8051	152.4 mm (6 in)	A/O 120	100
236-8043	127 mm (5 in)	A/O 150	100	236-8052	152.4 mm (6 in)	A/O 150	100
236-8044	127 mm (5 in)	A/O 180	100	236-8053	152.4 mm (6 in)	A/O 180	100
236-8045	127 mm (5 in)	A/O 220	100	236-8054	152.4 mm (6 in)	A/O 220	100
236-8046	127 mm (5 in)	A/O 320	100	236-8055	152.4 mm (6 in)	A/O 320	100
236-8047	127 mm (5 in)	A/O 400	100	236-8056	152.4 mm (6 in)	A/O 400	100

## Backing Pads for PSA Discs

- Use stick and sand disc backing pads with all PSA discs
- Made of flexible rubber that tapers at the edge
- Come with 6.4 mm (1/4 in) steel shank for fast mounting into portable tool chunks

Part Number	Diameter	Shank Size	Package Quantity
4C-3837	50.8 mm (2 in)	6.4 mm (1/4 in)	1
4C-3838	76.2 mm (3 in)	6.4 mm (1/4 in)	1
4C-3840	127 mm (5 in)	5/16 in-24 Thread Shank	1



## Hook and Loop Sanding Discs

- Extremely tear resistant
- Resists loading on metal, paint and wood surfaces
- Strong backing
- Use with hook and loop sanding pads
- Material: aluminum oxide, film back resin bond
- Color: blue

Part Number	Diameter	Grit	Package Quantity
281-8271	127 mm (5 in)	100	50
281-8272	127 mm (5 in)	180	50
281-8273	152.4 mm (6 in)	100	50
281-8274	152.4 mm (6 in)	180	50
281-8275	152.4 mm (6 in)	220	50
281-8282	203.2 mm (8 in)	80	50



**Hook and Loop Sanding Pads**



- Molded hook and loop sanding pad with plastic hub
- Use with hook and loop sanding discs

Part Number	Diameter	Size	Max. Speed (RPM)
275-5264	127 mm (5 in)	5/16 -24	10,000
275-5265	152.4 mm (6 in)	5/16 -24	10,000
275-5266	203.2 mm (8 in)	5/8 -11	4800

**HOLDERS**

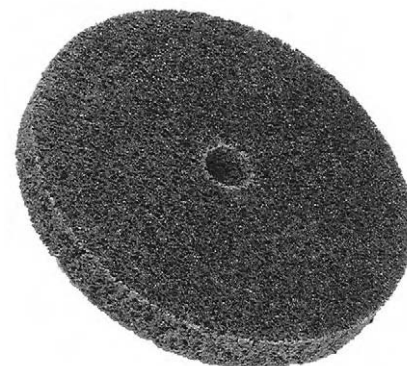


Part Number	Description	Package Quantity	Used with	Diameter	Hub/Shank	Maximum Operating Speed (RPM)
8T-3055	Mandrel #934	1	8T-3054	12.7 mm (1/2 in)	6.35 x 70.5 mm Dia. (1/4 x 2 1/2 in)	4,000
6V-4087	Mandrel #933	1	6V-4086/4C-3868/279-2267	6.4 mm (1/4 in)	6.35 shank x 25.4 mm Dia. (1/4 x 1 in)	6,000



**Clean 'N Strip Unitized Wheels**

- Constructed of the most advanced material, Clean 'N Strip Unitized Wheels meet the demand for aggressive and durable cleaning products
- Designed to compete with power tool wire brushing, this product provides a cleaner, burr-free surface quicker than any wire fiber product
- Constructed of a non-woven nylon web, there is no opportunity for metal contamination or rusting in this product. It can be used on a variety of ferrous and non-ferrous metal surfaces
- Used extensively in weld cleaning and conditioning applications to provide the proper surfaces for high integrity welding and cleaned polish surfaces for non-destructive testing
- Use this product for heavy-duty cleaning of rust, corrosion and coatings of all types
- Aluminum oxide
- Use for gasket removal, deburring, cleaning, and rust removal
- Clean up to 4 times faster than wire brushes, runs smoothly and resists loading
- Use instead of wire brushes or sand paper when you don't want to remove any stock



Density	7
Mineral type	S
Color	Black
Grade	XCS

Part Number	Package Quantity	Wheel Size	Hole Size	Maximum Operating Speed (RPM)	Optimum Operating Speed	Used with
<b>Clean 'N Strip Unitized Wheels</b>						
8T-7769	40	38.1 x 25.4 mm (1 1/2 in x 1 in)	4.8 mm (3/16 in)	18,000	16,000	Die Grinder with 8T-7768

**Light Deburring Wheel**

- Widely used for fine deburring and polishing applications
- Designed to allow for removal of burrs without changing the dimension of the workpiece
- An excellent blending and radiusing tool
- Used in a variety of hand and automatic deburring and finishing applications including centerless polishing



Density	6
Mineral type	S
Color	Gray
Grade	Fine
6V-2032 Adapter	
Maximum operating speed	4,000
Number required	2

Part Number	Package Quantity	Description	Wheel Size	Hole Size	Maximum Operating Speed (RPM)	Optimum Operating Speed	Used with
8T-7748	3	Light Deburring Wheel	203.2 x 25.4 mm (8 in x 1 in)	76.2 mm (3 in)	4,500	4,500	Bench and Stand Grinder



**SST Deburring Wheels**



- Designed to be a clean, safe, economical tool
- Advanced construction results in long unit life
- Use for deburring, radiusing and polishing stainless steel and titanium as well as other ferrous and non-ferrous metals

Density	8
Mineral type	S
Color	Gray
Grade	Fine
6V-2032 Adapter	
Maximum operating speed	4,000
Number required	2

Part Number	Package Quantity	Wheel Size	Hole Size	Maximum Operating Speed (RPM)	Optimum Operating Speed	Used with
8T-7749	1	203.2 x 25.4 mm (8 in x 1 in)	76.2 mm (3 in)	4,500	4,500	Bench and Stand Grinder

**Type 27 Zirconium 4 inch Grinding Wheels**



- Ideal for the toughest applications
- Provides extremely long life
- High performance Zirconium offers very fast stock removal and longer life
- Cool running
- Smoother, more consistent performance for operator
- Best choice for stainless, castings, welding seams, and hard metal grinding

Part Number	Size	Grade	Package Quantity
236-8070	100 mm x 6 mm x 9.53 mm (4 in x 1/4 in x 3/8 in)	4997, ZG	50
236-8071	100 mm x 6 mm x 15.88 mm (4 in x 1/4 in x 5/8 in)	4997, ZG	50
237-3653	100 mm x 6 mm x 22.23 mm (4 in x 1/4 in x 7/8 in)	4997, ZG	50

**Type 27 Aluminum Oxide 4 inch Grinding Wheel**



- Designed for grinding applications on ferrous metal such as grinding/smoothing weld seams and cleaning/shaping metal surfaces
- Material: aluminum oxide and resin

Part Number	Size	Type	Grade	Max. Speed (RPM)
262-9738	101.6 x 6.35 x 9.53 mm (4 x 1/4 x 3/8 in) hole	27	A24	15,000

Shop Supplies

**Level Cut Unitized Wheel**

- Made from an advanced material
- An excellent blending and polishing tool
- Used frequently in weld cleaning where high quality surface appearance is desirable

Density	5
Mineral type	A
Color	Tan
Letter color	Red
Grade	Fine



Part Number	Package Quantity	Wheel Size	Hole Size	Maximum Operating Speed (RPM)	Optimum Operating Speed	Used with
8T-7767	50	25.4 x 25.4 mm (1 in x 1 in)	4.8 mm (3/16 in)	35,100	22,000	Die Grinder with 8T-7768

**Finishing Flap Brush Wheel**

- Fine grade flap brush replaces fine wire power brushes for removing carbon buildup, light rust and corrosion

Density	5
Mineral type	A
Color	Maroon
Grade	Fine
6V-2032 Adapter	
Maximum operating speed	4,000
Number required	2



Part Number	Package Quantity	Wheel Size	Hole Size	Maximum Operating Speed (RPM)	Optimum Operating Speed	Typical Application
6V-2033	2	203.2 x 50.8 mm (8 in x 2 in)	76.2 mm (3 in)	3,200	3,200	Bench Grinder, Stand Grinders, Straight Grinders

**Flap Wheels (Thread Style)**

- Flap wheels consist of a series of coated abrasive pieces (forming the spokes of the wheel) which are mounted around a steel hub
- Supplied with a 1/4 in-20 thread mandrel designed for fast mounting
- Can be used on higher speed machines popular in today's market
- Delivers smooth, chatter-free grinding
- Use with portable and benchstand grinders

**NOTE:**

Best speed ranges from 6,000 to 9,000 SFPM (surface feet per minute). Wheels should be operated in direction of arrow. Never exceed maximum operating speed.



Shop Supplies

(Continued)

Flap Wheels (Thread Style) (Continued)

Optimum Surface Feet per Minute Speed	Type Material
5,500	Aluminum
4,000	Hardwood
5,000	Non-ferrous metals
5,000	Steel (alloy)
5,000	Steel (mild)
6,500	Steel (stainless)

Part Number	Package Quantity	Size	Grit	Max. Speed (RPM)	Description
4C-8511	10	1 in x 1 in	60	25,000	--
4C-8512	10	1 in x 1 in	120	25,000	--
4C-8513	10	1 in x 1 in	180	25,000	--
4C-8514	10	2 in x 1 in	60	20,000	--
4C-8515	10	2 in x 1 in	120	20,000	--
4C-8516	10	2 in x 1 in	180	20,000	--
4C-8517	10	3 in x 1 in	60	20,000	--
4C-8518	10	3 in x 1 in	120	20,000	--
4C-8519	10	3 in x 1 in	180	20,000	--
Adapters					
4C-8520	--	1/4 inch x 1 inch	--	--	Adapter
4C-8521	--	1/4 inch x 4 inch	--	--	Adapter

Large Flap Wheel Sander



- Flap wheel sander consists of a series of coated abrasive pieces (forming the spokes of the wheel) which are mounted around a steel hub
- Delivers smooth, chatter-free grinding
- Used on bench grinder, stand grinder, or straight grinder with 25.4 mm (1 in) spindle
- Material: aluminum oxide

**NOTE:**

Wheel should be operated in direction of arrow. Never exceed maximum operating speed (RPM).

Part Number	Size	Grit	Max. Speed (RPM)	Package Quantity
262-9739	6 in x 1 in	120	6000	1

**Surface Condition Brush**

- Non-woven surface condition material with epoxy-filled center
- Available in three grades — very fine, medium, and coarse
- Shank size: 6.35 mm (.25 in)

Part Number	Size	Grade	Package Quantity
254-5316	38.1 x 25.4 mm (1.5 x 1 in)	Coarse	1
254-5317	38.1 x 25.4 mm (1.5 x 1 in)	Medium	1
254-5318	38.1 x 25.4 mm (1.5 x 1 in)	Very Fine	1
254-5319	76.2 x 50.8 mm (3 x 2 in)	Coarse	1
254-5320	76.2 x 50.8 mm (3 x 2 in)	Very Fine	1



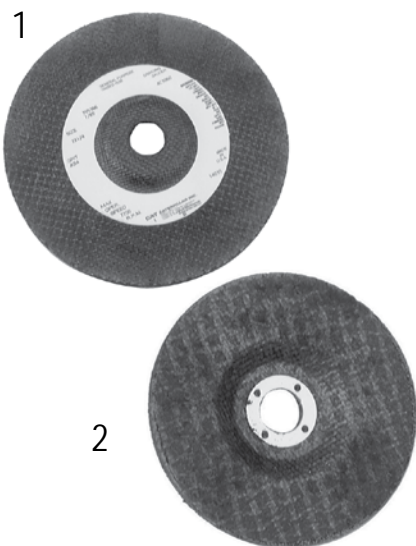
**Abrasive Flap Wheels 1/4 inch shank style**

- Aluminum-oxide coated abrasive flaps with cloth backing
- Delivers smooth, chatter-free grinding
- Use with handheld grinders
- Mounted on 6.35 mm (.25 in) shank
- Available in five popular grits and three sizes

Part Number	Diameter x Thickness	Grit	Package Quantity
254-5321	25.4 x 25.4 mm (1 x 1 in)	60	10
254-5322	25.4 x 25.4 mm (1 x 1 in)	80	10
254-5323	25.4 x 25.4 mm (1 x 1 in)	120	10
254-5324	25.4 x 25.4 mm (1 x 1 in)	180	10
254-5325	25.4 x 25.4 mm (1 x 1 in)	240	10
254-5326	50.8 x 25.4 mm (2 x 1 in)	60	10
254-5327	50.8 x 25.4 mm (2 x 1 in)	80	10
254-5328	50.8 x 25.4 mm (2 x 1 in)	120	10
254-5329	50.8 x 25.4 mm (2 x 1 in)	180	10
254-5330	50.8 x 25.4 mm (2 x 1 in)	240	10
254-5331	76.2 x 25.4 mm (3 x 1 in)	60	10
254-5332	76.2 x 25.4 mm (3 x 1 in)	80	10
254-5333	76.2 x 25.4 mm (3 x 1 in)	120	10
254-5334	76.2 x 25.4 mm (3 x 1 in)	180	10
254-5335	76.2 x 25.4 mm (3 x 1 in)	240	10



**Raised Hub Wheels**



- Designed for use on electrical or air powered right angle or vertical shaft grinders
- Designed for rough grinding applications, including:
  - - grinding/smoothing weld seams
  - - cleaning metal surfaces
- Wheels fit 114.3 mm, 177.8 mm and 228.6 mm (4 1/2 in, 7 in and 9 in) grinders
- Type 28 wheels have built-in 15° angle for out of position work
- Wheels comply with ANSI safety code B-7.1

Part Number	Type	Grit Spec.	Max. Speed (RPM)	Wheel Size (O.D. x Thickness x I.D./Thread Size)	Package Quantity
<b>Image 2 - Type 27</b>					
1U-6788	Std.	A24	15,300	101.6 x 3.18 x 15.88 mm (4 x 1/8 x 5/8 in)	10
1U-6789	Std.	A24	15,300	101.6 x 6.35 x 15.88 mm (4 x 1/4 x 5/8 in)	10
1U-6790	Std.	A24	13,300	114.3 x 3.18 x 22.23 mm (4 1/2 x 1/8 x 7/8 in)	10
1U-6791	Std.	A24	13,300	114.3 x 6.35 x 22.23 mm (4 1/2 x 1/4 x 7/8 in)	10
9U-6382	Std.	A24	12,220	127 x 6.35 mm x 5/8 -11 (5 x 1/4 in x 5/8 -11)	1
1U-6792	Std.	A24	8,500	177.8 x 3.18 x 22.23 mm (7 x 1/8 x 7/8 in)	10
1U-6793	Std.	A24	8,500	177.8 x 6.35 x 22.23 mm (7 x 1/4 x 7/8 in)	10
1U-6794	Std.	A24	8,500	177.8 x 6.35 mm x 5/8 -11 (7 x 1/4 in x 5/8 -11)	10
1U-6795	Std.	A24	6,600	228.6 x 6.35 x 22.23 mm (9 x 1/4 x 7/8 in)	10
1U-6796	Std.	A24	6,600	228.6 x 6.35 mm x 5/8 -11 (9 x 1/4 in x 5/8 -11)	10
9U-6383	Hi Perf.	Z/A24 <sup>1</sup>	12,220	127 x 6.35 mm x 5/8 -11 (5 x 1/4 in x 5/8 -11)	1
4C-3769	Hi Perf.	Z/A24 <sup>1</sup>	8,500	177.8 x 6.35 x 22.23 mm (7 x 1/4 x 7/8 in)	5
4C-3770	Hi Perf.	Z/A24 <sup>1</sup>	8,500	177.8 x 6.35 mm x 5/8 -11 (7 x 1/4 in x 5/8 -11)	5
4C-3772	Hi Perf.	Z/A24 <sup>1</sup>	6,600	228.6 x 6.35 mm x 5/8 -11 (9 x 1/4 in x 5/8 -11)	5
<b>Image 1 - Type 28 (built-in 15 degree angle)</b>					
4C-3863	Std.	A24	6,600	228.6 mm x 6.35 mm x 5/8 in-11 (9 in x 1/4 in x 5/8 in-11)	10
4C-3773	Hi Perf.	Z/A24 <sup>1</sup>	8,500	177.8 mm x 6.35 mm x 22.23 mm (7 in x 1/4 in x 7/8 in)	5
4C-3774	Hi Perf.	Z/A24 <sup>1</sup>	8,500	177.8 mm x 6.35 mm x 5/8 in-11 (7 in x 1/4 in x 5/8 in-11)	5
4C-3776	Hi Perf.	Z/A24 <sup>1</sup>	6,600	228.6 mm x 6.35 mm x 5/8 in-11 (9 in x 1/4 in x 5/8 in-11)	5

<sup>1</sup>Zirconia-Alumina

**Type 27, 6 inch Grinding Wheels**

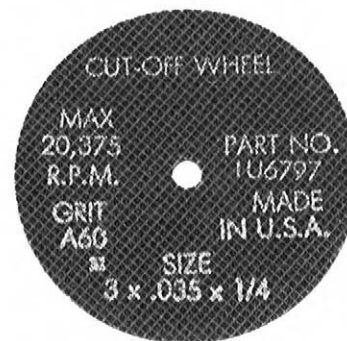
- Designed for rough grinding applications on ferrous metal such as grinding/smoothing weld seams and cleaning/shaping metal surfaces

Part Number	Size	Grade	Max. Speed (RPM)	Package Quantity
236-8061	152.4 mm x 6 mm x 22.23 mm (6 in x 1/4 in x 7/8 in)	A/O 24	10,000	Bulk



**Cut-Off Wheels**

- Fully reinforced cut-off wheels for heavy-duty cut off jobs on ferrous metals
- Wheels comply with ANSI Safety Code B-7.1
- Use A60 for burr-free, cool cutting of metal
- Use A36 for rough cutting applications
- Offers quality at a competitive price



Part Number	Grit Spec.	Max. Speed (RPM)	Wheel Size (O.D. x Thickness x I.D.)	Package Quantity
174-8900	A60	25,000	76.2 mm x .89 mm x 6.35 mm (3 in x .035 in x 1/4 in)	25
174-8901	A60	25,000	76.2 mm x .89 mm x 9.53 mm (3 in x .035 in x 3/8 in)	25
174-8902	A36	25,000	76.2 mm x 1.59 mm x 6.35 mm (3 in x 1/16 in x 1/4 in)	25
174-8903	A36	25,000	76.2 mm x 1.59 mm x 9.53 mm (3 in x 1/16 in x 3/8 in)	25
174-8904	A36	25,000	76.2 mm x 3.2 mm x 6.35 mm (3 in x 1/8 in x 1/4 in)	25
174-8905	A36	25,000	76.2 x 3.2 x 9.53 mm (3 in x 1/8 in x 3/8 in)	25
174-8906	A60	20,000	101.6 mm x .89 mm x 6.35 mm (4 in x .035 in x 1/4 in)	25
174-8907	A60	20,000	101.6 mm x .89 mm x 9.53 mm (4 in x .035 in x 3/8 in)	25
174-8908	A36	20,000	101.6 mm x 1.59 mm x 6.35 mm (4 in x 1/16 in x 1/4 in)	25
174-8909	A36	20,000	101.6 mm x 1.59 mm x 9.53 mm (4 in x 1/16 in x 3/8 in)	25
174-8910	A36	20,000	101.6 mm x 3.2 mm x 6.35 mm (4 in x 1/8 in x 1/4 in)	25
174-8911	A36	20,000	101.6 mm x 3.2 mm x 9.53 mm (4 in x 1/8 in x 3/8 in)	25
1U-6809	A36	5,100	304.8 mm x 2.8 mm x 25.4 mm (12 in x 7/64 in x 1 in)	25
1U-6810	A36	4,400	355.6 mm x 2.8 mm x 25.4 mm (14 in x 7/64 in x 1 in)	25
1U-6811	A24	3,000	406.4 mm x 3.97 mm x 25.4 mm (16 in x 5/32 in x 1 in)	10

Shop Supplies



**Thin Cut Abrasive Cutting Wheels**



- High quality treated grain for long life
- Ideal for sheet metal, steel tubing, and solid stock
- Great for cutting off bolts and rusted fasteners
- Used on portable angle grinders
- Available in 1/32 and 1/16 inch thickness for fast cutting

Part Number	Size	Grade	Max. Speed (RPM)	Package Quantity
236-8066	114.3 mm x .889 mm x 22.23 mm (4 1/2 in x .035 in x 7/8 in)	A60	17,902	Bulk
236-8067	127 mm x .889 mm x 22.23 mm (5 in x .035 in x 7/8 in)	A60	12,223	Bulk
236-8068	152.4 mm x .889 mm x 22.23 mm (6 in x .035 in x 7/8 in)	A60	10,186	Bulk

**Mandrel for Small Abrasive Wheels**



- Simple, quick change design
- Used with small cut-off wheels with either a 1/4 inch or 3/8 inch hole
- Not recommended for wheels thicker than 1/8 inch
- Safe to use in die grinders up to 30,000 RPM
- Flush head for confined work
- Stress relieved, high tensile steel
- Includes two screws, one for 1/4 inch and one for 3/8 inch holes

Part Number	Description	Dimensions	Package Quantity
236-8038	Mandrel	2 inch OAL x 1/4 inch shank	Bulk

**Drill Sharpening Wheels (Type 1)**



- Used on drill sharpening machines to form or resharpen drills
- Use aluminum oxide for all types of steel
- Use silicone carbide for tungsten carbide, non-ferrous metals such as brass, bronze and aluminum

Part Number	Grit Spec.	Wheel Size (O.D. x Thickness x I.D.)	Package Quantity
4C-3766	A80-H Aluminum Oxide	152.4 mm x 19 mm x 15.88 mm (6 in x 3/4 in x 5/8 in)	1
4C-3768 <sup>1</sup>	C80-I Silicon Carbide	152.4 mm x 19 mm x 15.88 mm (6 in x 3/4 in x 5/8 in)	1

<sup>1</sup>Used to sharpen cobalt or carbide drill bits and tools

**Portable Wheels — Reinforced (Type 1)**

- These reinforced wheels are to be used on grinders to clean up and blend
- Straight wheels are to be used on portable horizontal shaft or straight shaft machines



4C-3777

Part Number	Grit Spec.	Max. Speed (RPM)	Wheel Size (O.D. x Thickness x I.D.)	Package Quantity
4C-3777	A36	27,120	50.8 mm x 12.7 mm x 9.53 mm (2 in x 1/2 in x 3/8 in)	10
4C-3864	A24	27,120	50.8 mm x 12.7 mm x 9.53 mm (2 in x 1/2 in x 3/8 in)	10
4C-3865	A36	18,080	76.2 mm x 9.53 mm x 9.53 mm (3 in x 3/8 in x 3/8 in)	10

**Bench and Pedestal Wheels (Type 1)**

- Cover a broad range of general bench grinding jobs
- Offer custom quality
- Choose aluminum oxide wheels for all types of steel
- 152.4 mm, 177.8 mm, 203.2 mm, and 254 mm (6 in, 7 in, 8 in and 10 in) wheels are supplied with additional arbor bushings so one specification can meet the needs of several machines with different arbor sizes



Arbor Adapter Bushings included (Stock one size — use it on two different grinding machines.)						
Diameter	Center Hole	12.7 mm (1/2 in)	15.88 mm (5/8 in)	19 mm (3/4 in)	22.23 mm (7/8 in)	25.4 mm (1 in)
152.4 mm (6 in)	25.4 mm (1 in)	•	•	•		
177.8 mm (7 in)	25.4 mm (1 in)	•	•	•		
304.8 mm (8 in)	25.4 mm (1 in)		•	•	•	
254 mm (10 in)	31.75 mm (1 1/4 in)			•		•

Part Number	Grit Spec.	Max. Speed (RPM)	Wheel Size (O.D. x Thickness x I.D.)	Package Quantity
1U-6780	A36	4,140	152.4 mm x 12.7 mm x 25.4 mm (6 in x 1/2 in x 1 in)	1
1U-6781	A60	4,140	152.4 mm x 12.7 mm x 25.4 mm (6 in x 1/2 in x 1 in)	1
1U-6782	A36	4,140	152.4 mm x 25.4 mm x 25.4 mm (6 in x 1 in x 1 in)	1
1U-6783	A60	4,140	152.4 mm x 25.4 mm x 25.4 mm (6 in x 1 in x 1 in)	1
1U-6784	A36	3,600	177.8 mm x 25.4 mm x 25.4 mm (7 in x 1 in x 1 in)	1
1U-6786	A36	3,600	203.2 mm x 25.4 mm x 25.4 mm (8 in x 1 in x 1 in)	1
1U-6787	A60	3,600	203.2 mm x 25.4 mm x 25.4 mm (8 in x 1 in x 1 in)	1
1U-8285	A36	2,485	254 mm x 25.4 mm x 31.75 mm (10 in x 1 in x 1 1/4 in)	1
1U-8286	A60	2,485	254 mm x 25.4 mm x 31.75 mm (10 in x 1 in x 1 1/4 in)	1
1U-8289	A36	2,070	304.8 mm x 50.8 mm x 31.75 mm (12 in x 2 in x 1 1/4 in)	1



**Flaring Cup Snagging Wheels (Type 11)**



1U-6817

- Use on right angle or vertical machines
- Use for grinding welds, cleaning castings, or grinding fins and parting lines from rough castings
- Use for smoothing of weld seams and metal preparations prior to plating/painting

Part Number	Grit Spec.	Max. Speed (RPM)	Large O.D. / Small O.D. x Thickness x I.D.	Package Quantity
1U-6817	A16	9,075	101.6/76.2 mm x 50.8 mm x 5/8 in-11 (4/3 in x 2 in x 5/8 in-11)	10
1U-6818	A16	7,260	127/95.3 mm x 50.8 mm x 5/8 in-11 (5/3 3/4 in x 2 in x 5/8 in-11)	10
1U-6819	A16	6,000	152.4/120.7 mm x 50.8 mm x 5/8 in-11 (6/4 3/4 in x 2 in x 5/8 in-11)	5

**Mandrell #936**

Part Number	Package Quantity	Maximum Operating Speed
8T-7768	5	22,000



**Abrasive Hand Pads**

- Every workplace has uses for non-woven nylon abrasive hand pads—whenever surfaces must be conditioned or cleaned by hand
- Used to clean surfaces or remove rust, oxides, paint discoloration, and other surface contaminants
- Impart and blend cosmetic finishes on metal or highlight wood finishes
- Hand deburr metals and plastics quickly and economically
- Used with optional 4C-4175 Hand Pad Holder
- Size: 152 x 229 mm (6 x 9 in)



Part Number	Description	Grade	Color	Package Quantity
241-9512	Cleaning and Finishing	Fine	Gray	20
8T-7751	Heavy-Duty Cleaning	Medium	Green	20
8T-7765	General Purpose	Medium	Maroon	20
8T-7752	Long Life Production	Coarse	Black	20
262-9980	Heavy-Duty Aggressive	Extra Coarse	Tan	20

**Cutting and Polishing Rolls**

- A unique and aggressive material for cleaning, finishing deburring
- Ideal as a utility bench roll
- Used in similar application as Emery Rolls, but does not load up with material

Mineral type	Aluminum oxide
Color	Tan
Grade	Very fine, medium



Part Number	Package Quantity	Size	Grade	Used with
1U-5514	1	51 mm x 9 m (2 in x 30 ft)	Very Fine	Hand application or hand drill with 8T-7766 mandrel
1U-5515	1	51 mm x 9 m (2 in x 30 ft)	Medium	Hand application or hand drill with 8T-7766 mandrel
1U-5512	1	25.4 mm x 9 m (1 in x 30 ft)	Very Fine	Hand application or hand drill with 8T-7766 mandrel
1U-5513	1	25.4 mm x 9 m (1 in x 30 ft)	Medium	Hand application or hand drill with 8T-7766 mandrel

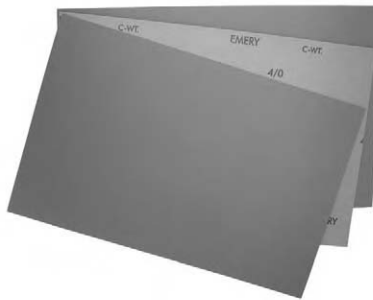
**Adapter Mandrel #935**

- Tear off strip and insert in the mandrel to use in corners and other hard to reach areas
- Use on air drills

Part Number	Maximum Operating Speed	Package Quantity
8T-7766	6000 RPM with 25.4 x 38.1 mm (1 in x 1 1/2 in) flat stock (roll or hand pad)	5



**Emery Paper**



- High quality, emery paper required for salvage or cleaning of numerous Cat® parts
- Light duty, fine polishing

Part Number	Sheet Size	Grit	Qty.
266-3452	22.86 x 34.93 cm (9 x 13.75 in)	4/0	100 sheets/package

**Polishing Stone**



- Use this fine grade polishing stone to remove the sharp, raised edges of nicks and burrs on machine components
- More useful than the emery paper where a burr or raised edge is large
- Should always be used with a lightweight oil

Part Number	Dimensions	Package Quantity
6V-2010	100 mm x 25 mm x 6 mm (4 in x 1 in x .25 in)	1

**Sanding Cloth Rolls**



- These cloth shop rolls are cut in various widths and can be torn to the desired length for hand deburring
- For contour sanding, stripping, deburring, rust removal, cutdown prior to polishing, and all general maintenance work

Part Number	Grit	Width x Length	Package Quantity
262-9732	180J	25 mm x 45.7 m (1 in x 50 yd)	1
262-9737	320J	25 mm x 45.7 m (1 in x 50 yd)	1
262-9740	400J	25 mm x 45.7 m (1 in x 50 yd)	1
269-7255	80J	25 mm x 45.7 m (1 in x 50 yd)	1
269-7256	100J	25 mm x 45.7 m (1 in x 50 yd)	1
269-7257	120J	25 mm x 45.7 m (1 in x 50 yd)	1
269-7258	220J	25 mm x 45.7 m (1 in x 50 yd)	1
269-7259	280J	25 mm x 45.7 m (1 in x 50 yd)	1
269-7260	500J	25 mm x 45.7 m (1 in x 50 yd)	1

Part Number	Grit	Width x Length	Package Quantity
1U-6848	60J	38.1 mm x 45.7 m (1 1/2 in x 50 yd)	1
4C-8522	80	38.1 mm x 22.7 m (1 1/2 in x 25 yd)	1
4C-8523	120	38.1 mm x 22.7 m (1 1/2 in x 25 yd)	1
4C-8524	180	38.1 mm x 22.7 m (1 1/2 in x 25 yd)	1
1U-6849	80J	38.1 mm x 45.7 m (1 1/2 in x 50 yd)	1
1U-6850	120J	38.1 mm x 45.7 m (1 1/2 in x 50 yd)	1
1U-6851	180J	38.1 mm x 45.7 m (1 1/2 in x 50 yd)	1
1U-6852	240J	38.1 mm x 45.7 m (1 1/2 in x 50 yd)	1
1U-6853	320J	38.1 mm x 45.7 m (1 1/2 in x 50 yd)	1

(Continued)

## Sanding Cloth Rolls (Continued)

Part Number	Grit	Width x Length	Package Quantity	Part Number	Grit	Width x Length	Package Quantity
1U-8274	60J	50.8 mm x 45.7 m (2 in x 50 yd)	1	1U-8278	180J	50.8 mm x 45.7 m (2 in x 50 yd)	1
1U-8275	80J	50.8 mm x 45.7 m (2 in x 50 yd)	1	1U-8279	240J	50.8 mm x 45.7 m (2 in x 50 yd)	1
1U-8276	100J	50.8 mm x 45.7 m (2 in x 50 yd)	1	1U-8280	320J	50.8 mm x 45.7 m (2 in x 50 yd)	1
1U-8277	120J	50.8 mm x 45.7 m (2 in x 50 yd)	1	262-9741	400J	50.8 mm x 45.7 m (2 in x 50 yd)	1

## Sanding Sheets

- These sheets are used for sanding and metal surface preparation
- Engineered for maximum economy, fast cutting and smoothing action
- Excellent for scouring, deburring, scale and rust removal

Part Number	Grit	Abrasive	Size	Package Quantity
1U-6854	60J	Aluminum Oxide	228.6 x 279.4 mm (9 in x 11 in)	25
1U-6855	80J	Aluminum Oxide	228.6 x 279.4 mm (9 in x 11 in)	25
1U-6856	120J	Aluminum Oxide	228.6 x 279.4 mm (9 in x 11 in)	50
1U-6857	180J	Aluminum Oxide	228.6 x 279.4 mm (9 in x 11 in)	50
1U-6858	240J	Aluminum Oxide	228.6 x 279.4 mm (9 in x 11 in)	50
1U-6859	320J	Aluminum Oxide	228.6 x 279.4 mm (9 in x 11 in)	50
1U-8281	400A	Silicon Carbide	228.6 x 279.4 mm (9 in x 11 in)	50
1U-8282	500A	Silicon Carbide	228.6 x 279.4 mm (9 in x 11 in)	50
1U-8283	600A	Silicon Carbide	228.6 x 279.4 mm (9 in x 11 in)	50
4C-8510	Crocus	Ferrous Oxide	228.6 x 279.4 mm (9 in x 11 in)	50



1U-6854

## Surface Conditioning Belts

- Excellent tool to polish crankshafts
- Ideal for high tension applications
- Unique, reinforced construction delivers a uniform, consistent finish that can be applied with abrasive belt machinery
- Surface conditioning belts are reinforced which allows the material to be spliced into a continuous belt
- Open construction resists loading and heat buildup that normally affects belt life and performance
- As it wears, the surface conditioning material exposes fresh abrasive mineral to the work surface, providing consistent results throughout the belt's life
- Density: 5



Part Number	Package Quantity	Wheel Size	Maximum Operating Speed	Optimum Operating Speed	Grade	Color	Used with
6V-3044	12	25.4 mm x 165.1 cm (1 in x 65 in)	6500 SFPM	5500 SFPM	Super Fine	Tan	Abrasive belt machinery

**Sanding Belts**



- Used with any 7.62 x 53.34 cm (3 x 21 in) belt sander
- Material: aluminum oxide with cloth back

Part Number	Grade	Color
262-9742	36 grit - coarse	Tan
262-9743	80 grit - medium	Tan
262-9744	120 grit - fine	Tan
262-9745	220 grit - super fine	Tan

**Cleaning and Polishing Stars**



- Perfect choice for cleaning and polishing the inside diameters of pipe, tubing, cylinders and other interior spaces
- Star shape allows the star tips to provide constant outward pressure on the walls to produce uniform and consistent results
- Can be mounted singly or in multiples for efficient inside diameter cleaning and polishing operations
- Adapter: 4C-8629 Mandrel

Part Number	Package Quantity	Diameter	Maximum Operating Speed	Optimum Operating Speed	Used with
4C-8624	25	38.1 mm (1 1/2 in)	24,000	18,000	Straight-shaft Tools
4C-8625	25	50.8 mm (2 in)	24,000	18,000	Straight-shaft Tools
4C-8626	10	76.2 mm (3 in)	18,000	15,000	Straight-shaft Tools
4C-8627	10	101.6 mm (4 in)	18,000	15,000	Straight-shaft Tools
4C-8628	10	114.3 mm (4 1/2 in)	18,000	15,000	Straight-shaft Tools

**Surface Reconditioning Flex-Hone Tools**



1U-9787

- The FLEX-HONE process (Superfinishing) produces a controlled surface condition that will result in:
  - - Lowered oil consumption
  - - Less blow-by
  - - Less friction
  - - Plateaued finish over 50%
  - - Finish free from cut, and folded metal
- All abrasive is silicone carbide
- Resilient, flexible, honing tool with soft cutting action
- Abrasive (points) globules each have independent suspension that assures the hone to be self-centering, self-aligning to the bore, and self-compensating for wear

Shop Supplies

(Continued)

**Surface Reconditioning Flex-Hone Tools (Continued)**

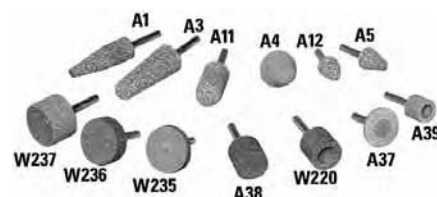
- A low temperature abrading process that exposes the undisturbed base metal structure to produce a long wearing surface
- Method of developing a surface on a metal part which is optically smooth and metallurgically free of any fragmented, amorphous or smeared metal from previous operations
- Accomplished at a low pressure where the “stones” float
- Hone crosshatch is extremely efficient in providing a multiplicity of oil grooves or valleys for oil retention as opposed to the uni-directional or uneven valleys common to the conventional type rigid hone. A crosshatch that usually remains as the cylinder wall has been wear-reduced by the hone.

Part Number	Package Quantity	Engine Bore Size	Grit
4C-6322	1	101.6 mm (4 in)	180
4C-6323	1	107.95 mm (4 1/4 in)	180
4C-6324	1	117.3 mm (4 1/2 in)	180
1U-9787	1	120.65-127 mm (4 3/4 in-5 in)	180
4C-6325	1	133.5-137.16 mm (5 1/4 in-5.4 in)	180
4C-6326	1	146.05-152.4 mm (5 3/4 in-6 in)	180
4C-6327	1	158.75 mm (6 1/4 in)	180
4C-6328	1	169.92-177.8 mm (6.69 in-7 in)	180
4C-6329	1	190.5 mm (7 1/2 in)	180
4C-6330	1	203.2 mm (8 in)	180
4C-6331	1	241.3 mm (9 1/2 in)	180

Part Number	Package Quantity	Engine Bore Size	Grit
4C-6332	1	60.33 mm (2 3/8 in)	240
4C-6333	1	79.38 mm (3 1/8 in)	240
4C-6334	1	92.08 mm (3 5/8 in)	240
1U-7428	1	101.6 mm (4 in)	240
4C-6335	1	104.78 mm (4 1/8 in)	240
4C-6336	1	114.3 mm (4 1/2 in)	240
4C-6337	1	12.7 mm (1/2 in)	320
4C-6338	1	15.88 mm (5/8 in)	320
4C-6339	1	19 mm (3/4 in)	320
4C-6340	1	25.4 mm (1 in)	320
4C-6341	1	38.1 mm (1 1/2 in)	320

**Mounted Points**

- Mounted wheels are used with horizontal or straight shaft, die and pencil grinders on jobs where larger wheels will not fit
- Offer maximum performance for grinding ferrous metals
- Accurate spindles ensure precision grinding and minimize run-out
- A-shaped wheels are for medium to heavy-duty blending and contouring
- W-shaped wheels are for off-hand and precision grinding of medium to heavy stock



Part Number	Shape	Grit Spec.	Diameter x Length	Mandrel Diameter	Package Quantity
1U-6820	A1	A36	19 mm x 63.5 mm (3/4 in x 2 1/2 in)	6.4 mm (1/4 in)	25
1U-6821	A1	A60	19 mm x 63.5 mm (3/4 in x 2 1/2 in)	6.4 mm (1/4 in)	25
1U-6822	A3	A36	25.4 mm x 69.85 mm (1 in x 2 3/4 in)	6.4 mm (1/4 in)	25
1U-6823	A3	A60	25.4 mm x 69.85 mm (1 in x 2 3/4 in)	6.4 mm (1/4 in)	25
4C-3845	A4	A60	31.75 mm x 31.75 mm (1 1/4 in x 1 1/4 in)	6.4 mm (1/4 in)	25
4C-3846	A5	A36	19 mm x 28.58 mm (3/4 in x 1 1/8 in)	6.4 mm (1/4 in)	25
1U-6824	A11	A36	22.23 mm x 50.8 mm (7/8 in x 2 in)	6.4 mm (1/4 in)	25
1U-6825	A11	A60	22.23 mm x 50.8 mm (7/8 in x 2 in)	6.4 mm (1/4 in)	25
4C-3849	A12	A36	26.9 mm x 31.75 mm (11/16 in x 1 1/4 in)	6.4 mm (1/4 in)	25
4C-3850	A12	A60	26.9 mm x 31.75 mm (11/16 in x 1 1/4 in)	6.4 mm (1/4 in)	25
6V-4802	A37	A60	31.75 mm x 31.75 mm (1 1/4 in x 1 1/4 in) (with hub)	6.4 mm (1/4 in)	25
1U-6826	A38	A60	25.4 mm x 25.4 mm (1 in x 1 in)	6.4 mm (1/4 in)	25
4C-3852	A39	A60	19 mm x 19 mm (3/4 in x 3/4 in)	6.4 mm (1/4 in)	25
4C-3853	W220	A60	25.4 mm x 25.4 mm (1 in x 1 in)	6.4 mm (1/4 in)	25

(Continued)

**Mounted Points (Continued)**

Part Number	Shape	Grit Spec.	Diameter x Length	Mandrel Diameter	Package Quantity
4C-3854	W235	A60	38.1 mm x 6.35 mm (1 1/2 in x 1/4 in) (with hub)	6.4 mm (1/4 in)	25
4C-3855	W236	A60	38.1 mm x 12.7 mm (1 1/2 in x 1/2 in) (with hub)	6.4 mm (1/4 in)	25
4C-3856	W237	A60	38.1 mm x 25.4 mm (1 1/2 in x 1 in)	6.4 mm (1/4 in)	25

**Cones and Plugs**



- Use on horizontal shaft and vertical shaft grinders
- Choose these for welding shop jobs such as:
  - Grinding and smoothing fillets and corners
  - Internal grinding
  - Blending contours
  - Work in confined areas
- Center holes have molded-in bushings, available in 5/8 inch-11 threads to fit most popular grinder spindles

**Available in four shapes:**

- Type 16 with rounded tip for grinding mild contours or flat surfaces
- Type 17 with square tip for beveling workpiece edges prior to welding
- Type 18 square plugs for use on straight shaft grinders for work on flat surfaces
- Type 18R also called pot balls, for work requiring straight sides and rounded tips

Item	Part Number	Grit Spec.	O.D. x Length x Thread Size	Package Quantity
Type 18	1U-6814	A24	38.1 mm x 63.5 mm x 5/8 in-11 (1 1/2 in x 2 1/2 in x 5/8 in-11)	10
Type 18R	1U-6815	A24	38.1 mm x 63.5 mm x 5/8 in-11 (1 1/2 in x 2 1/2 in x 5/8 in-11)	10
Type 16	1U-6812	A24	38.1 mm x 76.2 mm x 5/8 in-11 (1 1/2 in x 3 in x 5/8 in-11)	10
Type 18R	1U-6816	A24	50.8 mm x 76.2 mm x 5/8 in-11 (2 in x 3 in x 5/8 in-11)	10
Type 17	1U-6813	A24	63.5 mm x 76.2 mm x 5/8 in-11 (2 1/2 in x 3 in x 5/8 in-11)	10

**Carbide Burs**



- Ideally used on high speed die grinders for steel, iron and composites
- "Double cut" designed burs provide rapid stock removal in tough applications
- Produces small chips
- A variety of shapes for most applications
- Excellent for grinding and shaping most metallic and non-metallic materials

Part Number	Size	Shape	Shank Size	Package Quantity
236-8093	9.53 mm x 15.88 mm (3/8 in x 5/8 in)	Egg	6.35 mm (1/4 in)	1
236-8094	9.53 mm (3/8 in)	Ball	6.35 mm (1/4 in)	1
236-8095	9.53 mm x 19 mm (3/8 in x 3/4 in)	Pointed Tree	6.35 mm (1/4 in)	1
236-8096	9.53 mm x 19 mm (3/8 in x 3/4 in)	Cylindrical	6.35 mm (1/4 in)	1
236-8097	9.53 mm x 19 mm (3/8 in x 3/4 in)	Round Nose	6.35 mm (1/4 in)	1
236-8098	9.53 mm x 26.99 mm (3/8 in x 11/16 in)	Cone Radius End	6.35 mm (1/4 in)	1
236-8100	3.18 mm x 14.29 mm (1/8 in x 9/16 in)	Flat End Cut	3.18 mm (1/8 in)	1

(Continued)



## Carbide Burs (Continued)

Part Number	Size	Shape	Shank Size	Package Quantity
236-8101	3.18 mm x 14.29 mm (1/8 in x 9/16 in)	Round End	3.18 mm (1/8 in)	1
262-9746	6.35 mm x 19 mm (1/4 in x 3/4 in)	Cylindrical	6.35 mm (1/4 in)	1
262-9747	12.7 mm x 25.4 mm (1/2 in x 1 in)	Cylindrical	6.35 mm (1/4 in)	1
262-9748	6.35 mm x 19 mm (1/4 in x 3/4 in)	Cylindrical	6.35 mm (1/4 in)	1

## Carbide Burs

- For use with aluminum non-ferrous metals and non-metallic materials
- Wide clearance and end mill type geometry of the flutes promotes fast stock removal with minimum loading
- Material: tungsten carbide

Part Number	Size	Shape	Package Quantity
236-8104	9.53 mm x 19 mm (3/8 in x 3/4 in)	Cylindrical	1
236-8103	9.53 mm x 19 mm (3/8 in x 3/4 in)	Round Nose	1

## Spira Bands and Mandrels

- Ideal for grinding, blending, deburring, finishing and polishing flat and contoured surfaces
- Design eliminates lap bumping marks, provides chatter free operation
- Good alternative tools for flap wheels

Part Number	Grit	Size	Package Quantity
4C-3778	60	19 mm x 25.4 mm (3/4 in x 1 in)	1
4C-3779	60	25.4 mm x 25.4 mm (1 in x 1 in)	1
4C-3780	60	38.1 mm x 38.1 mm (1 1/2 in x 1 1/2 in)	1
4C-3781	60	50.8 mm x 25.4 mm (2 in x 1 in)	1
4C-3782	Mandrel 1/4 in	19 mm x 25.4 mm (3/4 in x 1 in)	1
4C-3783	Mandrel 1/4 in	25.4 mm x 25.4 mm (1 in x 1 in)	1
4C-3784	Mandrel 1/4 in	38.1 mm x 38.1 mm (1 1/2 in x 1 1/2 in)	1
4C-3785	Mandrel 1/4 in	50.8 mm x 25.4 mm (2 in x 1 in)	1



## Screen-Bak Durite Rolls

- Use for superfast makeready of copper pipe joints
- Removes scale, corrosion and oxidations without clogging — sanding residue falls through the backing
- Long abrasive life and clean, tight connections are ensured
- Silicon carbide abrasive grain is coated on both sides of an open weave, cloth backing

Part Number	Grit	Size
4C-8522	80	11/2 in x 25 ft
4C-8523	120	11/2 in x 25 ft
4C-8524	180	11/2 in x 25 ft





**Decal Remover**



- Fast and easy method to remove vinyl decals, graphics, tapes, films and adhesives without damaging paint — no fire danger because the discs are non combustible
- Unique construction of the disc assures long life and allows easy conformability to contours
- Discs are flexible and have no sharp edges — will not damage acrylic, enamel or urethane paint. (Not recommended for use on acrylic lacquer paints or plexi-glass.)
- Faster and cleaner to use than solvent or chemical adhesive removers
- RPM is critical for product performance — maximum RPM is 4000; recommended RPM is 3,000 to 4,000

Part Number	Description	Package Quantity	Diameter	Shank Length	Used with
226-0125	Decal Removal Disc	1	120 mm x 15.9 mm (4 in x 5/8 in)	--	Electric or Air Drill
226-0126	Retainer Roloc and Holder	1	25.4 mm x 44.5 mm (1 in x 3/4 in)	9 mm (0.35 in)	--

**Single Edge Razor Blades**

- Industrial quality
- Ideal for scraping paint and glass, cutting, and trimming
- Fits all standard razor blade tools
- Gauge: 0.009



Part Number	Qty.
264-4353	100 per carton

**File Set, 8 piece**



- Files meet Federal Specification #GGG-F-325B
- Manufactured under ISO 9002 Certification
- Files and wood file handles can be ordered separately
- Material: high carbon steel

Part Number	Description
264-0414	8 piece File Set
<b>264-0414 consists of</b>	
263-9067	Aluminum File, 254 mm (10 in)
263-9069	Half Round Bastard File, 254 mm (10 in)
263-9070	Mill Bastard File, 203.2 mm (8 in)
263-9071	Round File, 4.8 mm (3/16) diameter x 203.2 mm (8 in) long
263-9072	Slim Taper File, 152.4 mm (6 in)
263-9074	Mill Bastard File, 152.4 mm (6 in)
263-9075	Wood File Handle for file lengths between 152.4 mm (6 in) to 203.2 mm (8 in)
263-9076	Wood File Handle for file lengths between 203.2 mm (8 in) to 254 mm (10 in)

The Shop Supplies and Tools Group has a comprehensive line of high quality drill bits. The product offering includes drills ranging from standard jobber length, general purpose drills, to high quality, long lasting cobalt drills, 118° and 135° split point configurations.

**Standard Drills**

These roll forged jobber length drills are designed with a 118° point. Made with M-2 high speed steel. A dependable general purpose drill designed to perform in a broad range of materials in the iron and steel families. Ideal for production, maintenance, or portable drilling jobs. Surface treated with abrasion resistant black oxide.



Part Number	Size
<b>1U-5889 Drill Set (Plus Index), 13 Piece</b>	
1U-5589	1/16 in
1U-5590	5/64 in
1U-5591	3/32 in
1U-5592	7/64 in
1U-5593	1/8 in
1U-5594	9/64 in
1U-5595	5/32 in
1U-5596	11/64 in
1U-5597	3/16 in
1U-5598	13/64 in
1U-5599	7/32 in
1U-5600	15/64 in
1U-5601	1/4 in
<b>1U-5714 Drill Set (Plus Index), 29 Piece</b>	
1U-5589	1/16 in
1U-5590	5/64 in
1U-5591	3/32 in
1U-5592	7/64 in
1U-5593	1/8 in
1U-5594	9/64 in
1U-5595	5/32 in
1U-5596	11/64 in
1U-5597	3/16 in
1U-5598	13/64 in
1U-5599	7/32 in
1U-5600	15/64 in
1U-5601	1/4 in

Part Number	Size
<b>1U-5714 Drill Set (Plus Index), 29 Piece (Continued)</b>	
1U-5602	17/64 in
1U-5603	9/32 in
1U-5604	19/64 in
1U-5605	5/16 in
1U-5606	21/64 in
1U-5607	11/32 in
1U-5608	23/64 in
1U-5609	3/8 in
1U-5610	25/64 in
1U-5611	13/32 in
1U-5612	27/64 in
1U-5613	7/16 in
1U-5614	29/64 in
1U-5615	15/32 in
1U-5616	31/64 in
1U-5617	1/2 in
<b>Individual Drills</b>	
1U-5586	1/64 in
1U-5587	1/32 in
1U-5588	3/64 in
1U-5589	1/16 in
1U-5590	5/64 in
1U-5591	3/32 in
1U-5592	7/64 in

Part Number	Size
<b>Individual Drills (Continued)</b>	
1U-5593	1/8 in
1U-5594	9/64 in
1U-5595	5/32 in
1U-5596	11/64 in
1U-5597	3/16 in
1U-5598	13/64 in
1U-5599	7/32 in
1U-5600	15/64 in
1U-5601	1/4 in
1U-5602	17/64 in
1U-5603	9/32 in
1U-6700	19/64 in
1U-5604	19/64 in
1U-5605	5/16 in
1U-5606	21/64 in
1U-5607	11/32 in
1U-5608	23/64 in
1U-5609	3/8 in
1U-5610	25/64 in
1U-5611	13/32 in
1U-5612	27/64 in
1U-5613	7/16 in
1U-5614	29/64 in
1U-5615	15/32 in
1U-5616	31/64 in
1U-5617	1/2 in

**Reduced Shank Drills**



S & D drills, as they are often called, are designed with a 118° point. Made with M-2 high speed steel. Expands the size range capacity of a 1/2 portable drill chuck. Common flute and overall length for minimal adjustment during tool changes. Precision ground for high degree of concentricity between shank and body diameter. Ideal for drilling in low and medium tensile strength materials.

Part Number	Size
<b>Individual Drills</b>	
1U-7433	33/64 in
1U-5682	17/32 in
1U-5683	9/16 in
1U-7434	37/64 in
1U-5684	19/32 in
1U-5685	5/8 in
1U-5686	21/32 in
1U-5687	1 1/16 in
1U-7435	45/64 in
1U-5688	23/32 in
1U-5689	3/4 in

Part Number	Size
<b>Individual Drills (Continued)</b>	
1U-5690	25/32 in
1U-5691	13/16 in
1U-7436	53/64 in
1U-5692	27/32 in
1U-5693	7/8 in
1U-5694	29/32 in
1U-5695	15/16 in
1U-5696	31/32 in
1U-5697	1 in
1U-5698	1 1/32 in
1U-5699	1 1/16 in

Part Number	Size
<b>Individual Drills (Continued)</b>	
1U-5700	1 3/32 in
1U-5701	1 1/8 in
1U-5702	1 5/32 in
1U-5703	1 3/16 in
1U-5705	1 1/4 in
1U-5707	1 5/16 in
1U-5709	1 3/8 in
1U-5711	1 7/16 in
1U-5713	1 1/2 in
1U-7437	1 9/16 in (3/4 inch Shank)
1U-7438	1 13/26 in (3/4 inch Shank)

**Heavy-Duty Drills, 135° Split Point**



These drills are designed with a 135° split point for self centering and reducing thrust. Can reduce drill time by 50% compared to 118° point. Manufactured from premium M-2 grade high speed steel. Gold and black surface treated for use in stainless and other hard metal drilling. Sizes smaller than 1/16" have the 118° standard point.

Shop Supplies

(Continued)

**Heavy-Duty Drills, 135° Split Point (Continued)**

Part Number	Size
<b>1U-5892 Drill Set (Plus Index), 13 Piece</b>	
1U-5621	1/16 in
1U-5622	5/64 in
1U-5623	3/32 in
1U-5624	7/64 in
1U-5625	1/8 in
1U-5626	9/64 in
1U-5627	5/32 in
1U-5628	11/64 in
1U-5629	3/16 in
1U-5630	13/64 in
1U-5631	7/32 in
1U-5632	15/64 in
1U-5633	1/4 in
<b>1U-5893 Drill Set (Plus Index), 29 Piece</b>	
1U-5621	1/16 in
1U-5622	5/64 in
1U-5623	3/32 in
1U-5624	7/64 in
1U-5625	1/8 in
1U-5626	9/64 in
1U-5627	5/32 in
1U-5628	11/64 in
1U-5629	3/16 in
1U-5630	13/64 in
1U-5631	7/32 in
1U-5632	15/64 in

Part Number	Size
<b>1U-5893 Drill Set (Plus Index), 29 Piece (Continued)</b>	
1U-5633	1/4 in
1U-5634	17/64 in
1U-5635	9/32 in
1U-5636	19/64 in
1U-5637	5/16 in
1U-5638	21/64 in
1U-5639	11/32 in
1U-5640	23/64 in
1U-5641	3/8 in
1U-5642	25/64 in
1U-5643	13/32 in
1U-5644	27/64 in
1U-5645	7/16 in
1U-5646	29/64 in
1U-5647	15/32 in
1U-5648	31/64 in
1U-5649	1/2 in
<b>Individual Drills</b>	
1U-5620	3/64 in
1U-5621	1/16 in
1U-5622	5/64 in
1U-5623	3/32 in
1U-5624	7/64 in

Part Number	Size
<b>Individual Drills (Continued)</b>	
1U-5625	1/8 in
1U-5626	9/64 in
1U-5627	5/32 in
1U-5628	11/64 in
1U-5629	3/16 in
1U-5630	13/64 in
1U-5631	7/32 in
1U-5632	15/64 in
1U-5633	1/4 in
1U-5634	17/64 in
1U-5635	9/32 in
1U-5636	19/64 in
1U-5637	5/16 in
1U-5638	21/64 in
1U-5639	11/32 in
1U-5640	23/64 in
1U-5641	3/8 in
1U-5642	25/64 in
1U-5643	13/32 in
1U-5646	29/64 in
1U-5644	27/64 in
1U-5645	7/16 in
1U-5647	15/32 in
1U-5648	31/64 in
1U-5649	1/2 in

**Extra Heavy-Duty Cobalt Drills, 135° Split Point**

These drills are designed with a 135° split point for self centering and reducing thrust. Can reduce drill time by 50% compared to 118° point. Made of high resistant M 42 cobalt. They display higher red hardness which permits speeds up to 30% greater than high speed drills. Cobalt drills are especially effective in drilling tough, high tensile strength materials like stainless steel, inconec, and titanium.



Shop Supplies

(Continued)

**Extra Heavy-Duty Cobalt Drills, 135° Split Point (Continued)**

Part Number	Size
<b>1U-5890 Drill Set (Plus Index), 13 Piece</b>	
1U-5393	11/64 in
1U-5394	3/16 in
1U-5395	13/64 in
1U-5396	7/32 in
1U-5397	15/64 in
1U-5398	1/4 in
1U-5386	1/16 in
1U-5387	5/64 in
1U-5388	3/32 in
1U-5389	7/64 in
1U-5390	1/8 in
1U-5391	9/64 in
1U-5392	5/32 in
<b>1U-5891 Drill Set (Plus Index), 29 Piece</b>	
1U-5386	1/16 in
1U-5387	5/64 in
1U-5388	3/32 in
1U-5389	7/64 in
1U-5390	1/8 in
1U-5391	9/64 in
1U-5392	5/32 in
1U-5393	11/64 in
1U-5394	3/16 in
1U-5395	13/64 in
1U-5396	7/32 in
1U-5397	15/64 in

Part Number	Size
<b>1U-5891 Drill Set (Plus Index), 29 Piece (Continued)</b>	
1U-5398	1/4 in
1U-5399	17/64 in
1U-5400	9/32 in
1U-5401	19/64 in
1U-5402	5/16 in
1U-5403	21/64 in
1U-5404	11/32 in
1U-5405	23/64 in
1U-5406	3/8 in
1U-5407	25/64 in
1U-5408	13/32 in
1U-5409	27/64 in
1U-5410	7/16 in
1U-5411	29/64 in
1U-5412	15/32 in
1U-5413	31/64 in
1U-5414	1/2 in
<b>Individual Drills</b>	
1U-5386	1/16 in
1U-5387	5/64 in
1U-5388	3/32 in
1U-5389	7/64 in
1U-5390	1/8 in
1U-5391	9/64 in

Part Number	Size
<b>Individual Drills (Continued)</b>	
1U-5392	5/32 in
1U-5393	11/64 in
1U-5394	3/16 in
1U-5395	13/64 in
1U-5396	7/32 in
1U-5397	15/64 in
1U-5398	1/4 in
1U-5399	17/64 in
1U-5400	9/32 in
1U-5401	19/64 in
1U-5402	5/16 in
1U-5403	21/64 in
1U-5404	11/32 in
1U-5405	23/64 in
1U-5406	3/8 in
1U-5407	25/64 in
1U-5408	13/32 in
1U-5409	27/64 in
1U-5410	7/16 in
1U-5411	29/64 in
1U-5412	15/32 in
1U-5413	31/64 in
1U-5414	1/2 in
1U-8764	5/8 in (1/2 inch Shank)
1U-8765	3/4 in (1/2 inch Shank)

**Aircraft Drills**

These drills are designed with a 135° split point for self centering and reducing thrust. Made with M-2 high speed steel. Can reduce drill time by 50% compared to 118° point. Ground from solid, ideal for drilling in mild steel where extra length is required. They have a black oxide surface treatment that is abrasion resistant.



Shop Supplies

(Continued)

**Aircraft Drills (Continued)**

Part Number	Size
<b>Individual Drills (set not available)</b>	
4C-4411	1/16 in
4C-4412	3/32 in
4C-4413	1/8 in
4C-4414	5/32 in
4C-4415	3/16 in

Part Number	Size
<b>Individual Drills (set not available) (Continued)</b>	
4C-4416	7/32 in
4C-4417	1/4 in
4C-4418	9/32 in
4C-4419	5/16 in

Part Number	Size
<b>Individual Drills (set not available) (Continued)</b>	
4C-4420	11/32 in
4C-4421	3/8 in
4C-4422	13/32 in
4C-4423	7/16 in
4C-4424	15/32 in
4C-4425	Drill, 1/2 in

**Left Hand Drills**

These drills are designed with a 135° split point for self centering and reducing thrust. Made with M-2 high speed steel. Ground from solid features a left hand helix for screw machine applications and drilling out broken bolts.

- Index set not available



Part Number	Size
4C-3335	1/16 in
4C-3336	5/64 in
4C-3337	3/32 in
4C-3338	7/64 in
4C-3339	1/8 in
4C-3340	9/64 in
4C-3341	5/32 in
4C-3342	11/64 in
4C-3343	3/16 in

Part Number	Size
4C-3344	13/64 in
4C-3345	7/32 in
4C-3346	13/64 in
4C-3347	1/4 in
4C-3348	17/64 in
4C-3349	9/32 in
4C-3350	19/64 in
4C-3351	5/16 in
4C-3352	21/64 in
4C-3353	11/32 in

Part Number	Size
4C-3354	23/64 in
4C-3355	3/8 in
4C-3356	25/64 in
4C-3357	13/32 in
4C-3358	27/64 in
4C-3359	7/16 in
4C-3360	7/16 in
4C-3361	15/32 in
4C-3362	31/64 in
4C-3363	1/2 in

**Metric Standard Drills**

These roll forged drills are designed with a 118° point. Made with M-2 high speed steel. A dependable general purpose drill designed to perform in a broad range of material in the iron and steel families. Ideal for production, maintenance, or portable drilling jobs.



(Continued)

**Metric Standard Drills (Continued)**

Part Number	Size
1U-8121	1.00 mm
1U-8122	1.20 mm
1U-8123	1.35 mm
1U-8124	1.50 mm
1U-8125	1.70 mm
1U-8126	1.80 mm
1U-8127	1.90 mm
1U-8128	2.00 mm
1U-8129	2.10 mm
1U-8130	2.20 mm
1U-8131	2.30 mm
1U-8132	2.40 mm
1U-8133	2.50 mm
1U-8134	2.60 mm
1U-8135	2.70 mm
1U-8136	2.80 mm
1U-8137	2.90 mm
1U-8138	3.00 mm

Part Number	Size
1U-8139	3.20 mm
1U-8140	3.40 mm
1U-8141	3.50 mm
1U-8142	3.60 mm
1U-8143	3.90 mm
1U-8144	4.00 mm
1U-8145	4.10 mm
1U-8146	4.30 mm
1U-8147	4.50 mm
1U-8148	4.60 mm
1U-8149	4.70 mm
1U-8150	4.80 mm
1U-8151	5.00 mm
1U-8152	5.20 mm
1U-8153	5.50 mm
1U-8154	5.60 mm
1U-8155	5.80 mm
1U-8156	6.00 mm

Part Number	Size
1U-8157	6.50 mm
1U-8158	6.80 mm
1U-8159	7.00 mm
1U-8160	7.50 mm
1U-8161	8.00 mm
1U-8162	8.20 mm
1U-8163	8.50 mm
1U-8164	8.60 mm
1U-8165	8.70 mm
1U-8166	9.00 mm
1U-8167	9.50 mm
1U-8168	10.00 mm
1U-8169	10.50 mm
1U-8170	11.00 mm
1U-8171	11.50 mm
1U-8172	12.00 mm
1U-8173	12.20 mm
1U-8174	12.50 mm

**4C-3385 Drill Index**



- Empty drill index for storing 29 different sizes of jobber length drill bits from 1/16 inch to 1/2 inch in 1/64 inch increments
- Typical use: left hand drills

Part Number	Description
4C-3385	Drill Index

**4C-4426 Drill Extension**



- Extends drill reach 304.8 mm (12 in)
- Accepts up to 1/4 inch diameter shank

Part Number	Description
4C-4426	Drill Extension

Shop Supplies

**Recommended Drill Sizes for Metric Thread**

Thread Size	Drill Diameter	Part Number
M1.6	1.4 mm	1U-8123
M2	1.7 mm	1U-8125
M2.5	2.2 mm	1U-8130
M3	2.6 mm	1U-8134
M4	3.4 mm	1U-8140
M5	4.3 mm	1U-8146

Thread Size	Drill Diameter	Part Number
M6	5.2 mm	1U-8152
M8	7.0 mm	1U-8159
M10	8.7 mm	1U-8165
M12	10.5 mm	1U-8169
M14	12.2 mm	1U-8173
M20	18.0 mm	1U-8184
M27	23.0 mm	214-3634



**Abbreviations Used for Taps and Dies**

NF	American National Fine Thread Series
NC	American National Coarse Thread Series
NS	American National Thread — Special
H1	Tolerance Limit of Ground Thread Tap
H2	Tolerance Limit of Ground Thread Tap
H3	Tolerance Limit of Ground Thread Tap
PD	Pitch Diameters
D5	Tolerance Limit of Ground Thread Metric Tap
D7	Tolerance Limit of Ground Thread Metric Tap
D9	Tolerance Limit of Ground Thread Metric Tap
NPT	National Standard Pipe Form
NPTT	American Standard Dryseal Pipe Form

**Hand Taps**

Made of high speed M-7 steel for longer life

These are ground thread taps providing tolerance designed for Class 2 Thread, exceeds quality of carbon steel taps

Offered in tapered, plug and bottoming versions

**Cat® offers five types of hand taps, available by individual part numbers and in sets (indexes).**

- Machine screw
- Fractional
- Taper pipe
- Special thread taps
- Metric

Nominal Size (in)	Threads/Inch	Pitch Diameter Limits	Number of Flutes	Taper	Plug	Bottoming	Thread Length	Overall Length
3	56 NF	H2	3	--	1P-3007	--	1/2 in	1 13/16 in
4	40 NC	H2	3	4C-5008	1P-3008	4C-5015	9/16 in	1 7/8 in
5	40 NC	H2	3	--	1P-3010	--	5/8 in	1 15/16 in
6	32 NC	H3	3	4C-5009	1P-3012	4C-5016	11/16 in	2 in
8	32 NC	H3	4	4C-5010	1P-3014	4C-5017	3/4 in	2 1/8 in
8	36 NF	H2	4	--	1P-3015	--	3/4 in	2 1/8 in
10	24 NC	H3	4	4C-5011	1P-3016	4C-5018	7/8 in	2 3/8 in
10	32 NF	H3	4	4C-5012	1P-3017	4C-5019	7/8 in	2 3/8 in
12	24 NC	H3	4	4C-5013	1P-3018	4C-5020	15/16 in	2 3/8 in
12	28 NC	H3	4	4C-5014	1P-3019	4C-5021	15/16 in	2 3/8 in

### 1P-3020 Machine Screw Set

- Contains plug taps from 0-80 through 12-28 in National Fine and 1-64 through 12-24 in National Coarse Threads
- Includes plastic index



Nominal Size (in)	Threads/Inch	Pitch Diameter Limits	Number of Flutes	Taper	Plug	Description	Bottoming	Thread Length	Overall Length
--	--	--	--	--	1P-3020	Complete Machine Screw Set	--	--	--
<b>Machine Screw Set Consists of:</b>									
1/4	20 NC	H3	4	4C-4989	1P-3021	Taps and Dies	4C-4971	1 in	2 1/2 in
1/4	20 NF	H3	4	4C-4990	1P-3022	Taps and Dies	4C-4972	1 in	2 1/2 in
5/16	18 NC	H3	4	4C-4991	1P-3023	Taps and Dies	4C-4973	1 1/8 in	2 23/32 in
5/16	24 NF	H3	4	4C-4992	1P-3024	Taps and Dies	4C-4974	1 1/8 in	2 23/32 in
3/8	16 NC	H3	4	4C-4993	1P-3025	Taps and Dies	4C-4975	1 1/4 in	2 15/16 in
3/8	20 NF	H3	4	4C-4994	1P-3026	Taps and Dies	4C-4976	1 1/4 in	2 15/16 in
7/16	14 NC	H3	4	4C-4995	1P-3027	Taps and Dies	4C-4977	1 7/16 in	3 5/32 in
7/16	20 NF	H3	4	4C-4996	1P-3028	Taps and Dies	4C-4978	1 7/16 in	3 5/32 in
1/2	13 NC	H3	4	4C-4997	1P-3029	Taps and Dies	4C-4979	1 21/32 in	3 3/8 in
1/2	20 NF	H3	4	4C-4998	1P-3030	Taps and Dies	4C-4980	1 21/32 in	3 3/8 in
9/16	12 NC	H3	4	--	1P-3031	Taps and Dies	--	1 21/32 in	3 19/32 in
9/16	18 NF	H3	4	--	1P-3032	Taps and Dies	--	1 21/32 in	3 19/32 in
5/8	11 NC	H3	4	4C-4999	1P-3033	Taps and Dies	4C-4981	1 13/16 in	3 13/16 in
5/8	18 NF	H3	4	4C-5000	1P-3034	Taps and Dies	4C-4982	1 13/16 in	3 13/16 in
3/4	10 NC	H3	4	4C-5001	1P-3035	Taps and Dies	4C-4983	2 in	4 1/4 in
3/4	16 NF	H3	4	4C-5002	1P-3036	Taps and Dies	4C-4984	2 in	4 1/4 in
7/8	9 NC	H4	4	4C-5003	1P-3037	Taps and Dies	4C-4985	2 7/32 in	4 11/16 in
7/8	14 NF	H4	4	4C-5004	1P-3038	Taps and Dies	4C-4986	2 7/32 in	4 11/16 in
1	8 NC	H4	4	4C-5005	1P-3039	Taps and Dies	4C-4987	2 1/2 in	5 1/8 in
1	12 NF	H4	4	4C-5006	1P-3040	Taps and Dies	4C-4988	2 1/2 in	5 1/8 in
1 1/8	12 NF	H4	4	--	1P-3041	Taps and Dies	5P-3012	2 9/16 in	5 7/8 in
1 1/4	12 NF	H4	6	--	1P-3042	Taps and Dies	--	2 9/16 in	5 3/4 in
1 3/8	12 NF	H4	6	--	1P-3043	Taps and Dies	5P-3013	3 in	6 1/16 in
1 1/2	12 NF	H4	6	--	1P-3044	Taps and Dies	--	3 in	6 3/8 in
1	14 NF	H4	4	4C-5007	1P-7421	Taps and Dies	5P-3011	2 1/2 in	5 1/8 in
1 1/16	12 NF	H4	4	--	1U-6539	Taps and Dies	--	2 1/2 in	5 1/8 in
1 5/16	12 NF	H4	6	--	1U-6540	Taps and Dies	--	2 9/16 in	5 3/4 in
1 1/8	7 NC	--	4	--	1U-9707	Taps and Dies	--	2 1/2 in	5.4 in
1 3/8	6 NC	--	--	--	1U-9709	Taps and Dies	--	--	--
3/4	12 NF	--	--	--	2B-2526	Taps and Dies	--	--	--
1 1/4	7 NC	--	--	--	4C-5051	Taps and Dies	--	1 1/4 in	--
9/16	14 NF	--	--	--	2B-9256 <sup>1</sup>	Taps and Dies	--	1 21/32 in	--

(Continued)

**1P-3020 Machine Screw Set (Continued)**

Nominal Size (in)	Threads/Inch	Pitch Diameter Limits	Number of Flutes	Taper	Plug	Description	Bottoming	Thread Length	Overall Length
<b>Machine Screw Set Consists of: (Continued)</b>									
2 1/2 in	12 NC	H6	6	199-3947	199-3947 <sup>1</sup>	Taper	--	3 in	7 in

<sup>1</sup> Not available for individual sale

**1P-3070 Fractional Size Tap Set**

- Contains 10 plug taps
- Includes plastic index



Nominal Size (inch)	Threads Per Inch
1/4	20 NC
1/4	28 NF
5/16	18 NC
5/16	24 NF
3/8	16 NC
3/8	24 NF
7/16	14 NC
7/16	20 NF
1/2	13 NC
1/2	20 NF

Part Number	Description
1P-3070	Fractional Size Tap Set

**1P-3050 Fractional Size Tap Set**

- Contains 20 plug taps
- Includes 1P-3047 and 1P-3048 Tap Wrenches



Nominal Size (inch)	Threads Per Inch
1/4	20 NC
1/4	28 NF
5/16	18 NC
5/16	24 NF
3/8	16 NC
3/8	24 NF
7/16	14 NC
7/16	20 NF
1/2	13 NC
1/2	20 NF
9/16	12 NC
9/16	18 NF
5/8	11 NC
5/8	18 NF
3/4	10 NC
3/4	16 NF
7/8	9 NC
7/8	14 NF
1	8 NC
1	14 NF

(Continued)

**1P-3050 Fractional Size Tap Set (Continued)**

Part Number	Description
1P-3050	Fractional Size Tap Set
<b>Fractional Size Tap Set Includes:</b>	
1P-3047	Solid Handle Tap Wrench
1P-3048	Solid Handle Tap Wrench

**Special Thread Taps**

- Used for cleaning up damaged threads
- Not readily obtainable on the market because the threads are not common standards

Part Number	Size	Part Number	Size
6V-2091	3/8 inch-16 Spiralock	1U-6600	1 1/8 inch-7 Spiralock
7S-7093	7/8 inch-12 UN	1U-9708	1 1/4 inch-7 Spiralock
5P-3012	1 1/8 inch-12 NF Bottom	1U-6725	1 3/8 inch-12 Buttress Bottoming Tap
1P-7422	2 inch-12 UN	1U-6726	1 3/4 inch-12 Buttress Bottoming Tap

**Rethreading Dies**

- Cat® offers three types of rethreading dies, available by individual part number and in sets (indexes).
- Used to clean-up existing thread—not recommended to cut new threads
- Made of conventional carbon steel (unless otherwise specified)
- Conform to industry standards

**1P-3000 Hexagon Rethreading Fractional Die Set**

- Contains 10 fractional, coarse thread dies
- Contains 10 fractional, fine thread dies
- Includes plastic index



Nominal Size (in)	Threads/Inch	Part Number	Description	Dimensions across flat	Thickness
--	--	1P-3000	Complete Hexagon Rethreading Fractional Die Set	--	--
<b>Hexagon Rethreading Fractional Die Set Consists of:</b>					
1/4	20 NC	1P-2979	Taps and Dies	19/32 in	1/4 in
1/4	28 NF	1P-2980	Taps and Dies	19/32 in	1/4 in
5/16	18 NC	1P-2981	Taps and Dies	11/16 in	5/16 in
5/16	24 NF	1P-2982	Taps and Dies	11/16 in	5/16 in
3/8	16 NC	1P-2983	Taps and Dies	25/32 in	3/8 in
3/8	24 NF	1P-2984	Taps and Dies	25/32 in	3/8 in
7/16	14 NC	1P-2985	Taps and Dies	7/8 in	7/16 in
7/16	20 NF	1P-2986	Taps and Dies	7/8 in	7/16 in

(Continued)

**1P-3000 Hexagon Rethreading Fractional Die Set (Continued)**

Nominal Size (in)	Threads/Inch	Part Number	Description	Dimensions across flat	Thickness
<b>Hexagon Rethreading Fractional Die Set Consists of: (Continued)</b>					
1/2	13 NC	1P-2987	Taps and Dies	1 1/16 in	1/2 in
1/2	20 NF	1P-2988	Taps and Dies	1 1/16 in	1/2 in
9/16	12 NC	1P-2989	Taps and Dies	1 1/16 in	1/2 in
9/16	18 NF	1P-2990	Taps and Dies	1 1/16 in	1/2 in
5/8	11 NC	1P-2991	Taps and Dies	1 1/4 in	5/8 in
5/8	18 NF	1P-2992	Taps and Dies	1 1/4 in	5/8 in
3/4	10 NC	1P-2993	Taps and Dies	1 7/16 in	3/4 in
3/4	16 NF	1P-2994	Taps and Dies	1 7/16 in	3/4 in
7/8	9 NC	1P-2995	Taps and Dies	1 5/8 in	7/8 in
7/8	14 NF	1P-2996	Taps and Dies	1 5/8 in	7/8 in
1	8 NC	1P-2997	Taps and Dies	1 13/16 in	1 in
1	14 NS	3P-2213	Taps and Dies	1 13/16 in	1
<b>Optional Rethreading Fractional Dies</b>					
1	12 NF	1P-2998	Taps and Dies	1 13/16 in	1 in
1 1/8	12 NF	4C-5494	Taps and Dies	2 in	1 in
1 1/4	12 NF	4C-5495	Taps and Dies	2 3/16 in	1 in
1 3/8	12 NF	4C-5496	Taps and Dies	2 3/8 in	1 in
1 3/4	5 NF	5P-4238	Taps and Dies	3 in	1 1/4 in
M4 x 0.70	--	8T-3062	Taps and Dies	19/32 in	1/4 in
M5 x 0.80	--	8T-3063	Taps and Dies	19/32 in	1/4 in
M7 x 1.00	--	8T-3065	Taps and Dies	11/16 in	5/16 in
M9 x 1.00	--	8T-3067	Taps and Dies	25/32 in	3/8 in
M9 x 1.25	--	8T-3068	Taps and Dies	25/32 in	3/8 in
M10 x 1.25	--	8T-3069	Taps and Dies	7/8 in	7/16 in
M11 x 1.50	--	8T-3071	Taps and Dies	7/8 in	7/16 in
M12 x 1.25	--	8T-3072	Taps and Dies	1 1/16 in	1/2 in
M12 x 1.50	--	8T-3073	Taps and Dies	1 1/16 in	1/2 in
M13 x 1.50	--	8T-3075	Taps and Dies	1 1/16 in	1/2 in
M15 x 1.50	--	8T-3076	Taps and Dies	1 1/4 in	5/8 in
M16 x 1.50	--	8T-3077	Taps and Dies	1 1/4 in	5/8 in
M14 x 1.50	--	9F-9398	Taps and Dies	--	--
1 1/2	12 NF	4C-5497	Taps and Dies	2 9/16 in	1 in

**4C-4963 Hexagon Rethreading Metric Die Set**

- Includes plastic index

Nominal Size (in)	Part Number	Description	Dimensions across flat	Thickness
--	4C-4963	Complete Hexagon Rethreading Metric Die Set	--	--
<b>Hexagon Rethreading Metric Die Set Consists of:</b>				
M14 x 2.00	4C-4961	Taps and Dies	1 1/16 in	1/2 in
M20 x 2.50	4C-4962	Taps and Dies	1 5/8 in	7/8 in
M6 x 1.00	8T-3064	Taps and Dies	19/32 in	1/4 in
M8 x 1.25	8T-3066	Taps and Dies	11/16 in	5/16 in
M10 x 1.50	8T-3070	Taps and Dies	7/8 in	7/16 in
M12 x 1.75	8T-3074	Taps and Dies	1 1/16 in	1/2 in
M16 x 2.00	8T-3078	Taps and Dies	1 1/4 in	5/8 in
M16 x 1.00	4C-4182 <sup>1</sup>	Taps and Dies	1 1/4 in	7/16 in

(Continued)

Shop Supplies

**4C-4963 Hexagon Rethreading Metric Die Set (Continued)**

Nominal Size (in)	Part Number	Description	Dimensions across flat	Thickness
<b>Optional</b>				
M16 x 1.00	4C-4181	Taps and Dies	1 1/4 in	5/8 in
M30 x 3.50	4C-6722	Taps and Dies	2 3/16 in	1 in

<sup>1</sup> Not available for individual sale

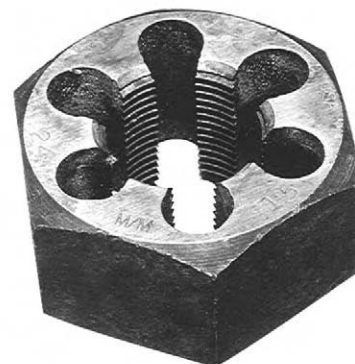
**Hexagon Rethreading Pipe Dies - Individual**

Nominal Pipe Size (in)	Threads/Inch	Part Number	Dimensions across flat	Across Thickness
1/8	27	4C-4957	1 1/16 in	3/8 in
1/4	18	4C-4958	1 1/4 in	5/8 in
3/8	18	4C-4959	1 7/16 in	5/8 in
1/2	14	4C-4960	1 5/8 in	3/4 in

**Special Rethreading Dies**

- Used for cleaning up damaged external threads
- Not readily obtainable on the market because the threads are not common standards

Part Number	Size
9F-9398	14 mm x 1.5 mm Pitch
1P-2998	1 in-12 UNF
5P-4238	1 3/4 in-5 NC
6V-7052	1 5/16 in-12 NF



**Universal Outside Thread Chasers**

- Precision dies restore threads to their original condition to make reassembly of matching parts easier
- Eliminates the need for expensive thread-cutting equipment
- Tighten the tool slightly on the good threads, then back off over the damaged thread area to restore the threads



Part Number	OTC Number	Per Capacity	Description	Weight
1U-7521	7402	4, 5, 6, 7, 7 1/2, 8, 9, 10, 11, 11 1/2, 12, 14, 16, 18, 20, 24	Standard Thread Chaser (complete with 6 dies)	1.4 kg (3 lb)
1U-7610	202817	1 mm-1.25 mm-1.5 mm-1.75 mm; 2 mm-2.5 mm; 3.0 mm-3.5 mm; 4 mm	Dies only (3 dies)	0.4 kg (0.99 lb)

154-9315 Thread File Group



Model: 311, 312, 312B, 315B, and 318B Excavators (Grenoble Version)

SMCS Code: 4050-006, 0671

Reference

REN1113 Service Manual, 312B Excavators Machine Systems Disassembly and Assembly

- Used to renew damaged external threads on any diameter shaft (right or left handed)
- Cross-cut and thread proportional to thread pitch (helps eliminate file skipping or jumping out of fine pitches)
- Each file has eight separate pitches
- Makes thread repairs without using a thread die
- Red plastic handle protects hands
- Each file is individually packaged in a plastic tube
- Carrying pouch keeps files together
- Files can also be ordered separately

Part Number	Description	Pitch
154-9315	Complete Thread File Group	9, 10, 12, 16, 20, 27, 28, and 32 tpi
<b>Thread File Group Consists of:</b>		
154-9316	Metric Thread File	0.75, 1.00, 1.25, 1.50, 1.75, 2.00, and 3.00
154-9317	Inch Thread File	11, 12, 13, 14, 16, 18, 20, and 24 tpi
154-9318	Inch Thread File	9, 10, 12, 16, 20, 27, 28, and 32 tpi
154-9319	Pipe Thread File	8, 10, 11 1/2, 14, 16, 18, 24, and 27 tpi
160-1749	Roll-up Pouch	--

2P-5530 Taper Pipe Tap Set



NOTE: These are ground thread taps meeting requirements of right hand American Standard Pipe Form (NPT) and American Standard Dryseal Pipe Form (NPTF). Dryseal taps are used to tap fittings which will give a pressure tight joint without use of a "sealer".

- Contains 4 taper pipe taps 1/8 inch, 1/4 inch, 3/8 inch and 1/2 inch NPTF, shown here
- Includes plastic index

Nominal Pipe Size (in)	Threads/Inch	Number of Flutes	Part Number	Thread Length	Overall Length
<b>2P-5530 Set Contains</b>					
1/8	27	4	2P-5531	3/4 in	54.1 mm (2.13 in)
1/4	18	4	2P-5532	1 1/16 in	62 mm (2.44 in)
3/8	18	4	2P-5533	1 1/16 in	65 mm (2.56 in)
1/2	14	4	2P-5534	1 3/8 in	79.5 mm (3.13 in)
<b>Taper Pipe Taps — Individual</b>					
1/16	27	4	4C-9747	--	54.1 mm (2.13 in)
3/4	14	5	214-3635	1 3/8 in	82.6 mm (3.25 in)

Shop Supplies

**Metric Size Taps - Individual**

Nominal Size	Pitch Diameter Limits	Number of Flutes	Part Number
<b>Plugs</b>			
M22 x 1.5	D6	4	156-8166
M14 x 2	D7	4	4C-4965
M18 x 2.5	D7	4	4C-4966
M20 x 2.5	D7	4	4C-4967
M24 x 3.0	D8	4	4C-4968
M30 x 3.5	D9	4	4C-4969
M36 x 4	D9	4	4C-4970
M4 x 0.7	--	4	8T-3079
M5 x 0.8	D4	4	8T-3080
M6 x 1	D5	4	8T-3081
M7 x 1.0	--	4	8T-3082
M8 x 1.25	D5	4	8T-3083
M9 x 1.0	--	4	8T-3084
M9 x 1.25	--	4	8T-3085
M10 x 1.25	--	4	8T-3086
M10 x 1.50	D6	4	8T-3087
M11 x 1.50	--	4	8T-3088

Nominal Size	Pitch Diameter Limits	Number of Flutes	Part Number
<b>Plugs (Continued)</b>			
M12 x 1.25	--	4	8T-3089
M12 x 1.50	--	4	8T-3090
M12 x 1.75	D6	4	8T-3091
M13 x 1.50	--	4	8T-3092
M14 x 1.50	--	4	8T-3093
M15 x 1.50	--	4	8T-3094
M16 x 1.50	--	4	8T-3095
M16 x 2	D7	4	8T-3096
M20 x 1.5	D7	4	9U-5794
M48 x 5	D5	6	9U-6503
M42 x 4.5	D5	4 or 6	9U-6901
M64 x 6.0	D5	4 or 6	9U-6902
M18 X 1.5	D6	4	9U-7283
<b>Bottoming</b>			
M10 x 1	D6	4	4C-5894
M14 x 1	D7	4	4C-6924
M16 x 2	D6	4	4C-9645

**Tap Wrenches**

- Designed for use in hand tapping but can also be used with reamers, drills, screw extractor or other hand cutting tools
- Jaws are made of carefully hardened and tempered steel
- Ruggedly built yet nicely furnished
- Cat® offers two types of tap wrenches:
- - T-Handle
- - Straight

Part Number	Description	Usage
4C-5026	Slip Handle	The T-Handle may be "slipped" from side to side to permit a complete turn in close quarters.
4C-5028	Long Shank	The long shank permits tapping in hard to reach places encountered in machine and automobile repair work.
4C-5029	Ratchet	The combination of ratchet and slip handle make this an all around wrench capable of handling most hand tapping jobs.
1P-3047	Solid Handle	These wrenches have solid handles, one of which is forged integral with the center. Adjustment is made by turning the movable handle.



(Continued)



Tap Wrenches (Continued)

Description	Part Number	Length	Used with Fractional Taps	Machine Screw Taps	Metric Taps	Pipe Taps
<b>T-Handle Tap Wrenches</b>						
Slip Handle	4C-5026	69.8 mm (2.75 in)	1/16 in - 1/4 in	0-14	1 - 6 mm	--
Long Shank	4C-5028	222.2 mm (8.75 in)	1/16 in - 1/4 in	0-14	1 - 6 mm	--
Ratchet	4C-5029	95.2 mm (3.75 in)	1/16 in - 1/4 in	0-14	1 - 6 mm	--
<b>Straight Tap Wrenches</b>						
Solid Handle Tap Wrench	1P-3047	279.4 mm (11 in)	5/32 in - 1/2 in	7-14	4 - 13 mm	1/8
Solid Handle Tap Wrench	1P-3048	482.6 mm (19 in)	1/4 in - 1 1/8 in	--	6 - 24 mm	1/8 - 3/4

## Heli-Coil Inserts

- Effective and universally accepted method of thread repair
- Quickly and permanently restore stripped, worn or damaged threads to their original size and condition
- Inserts work in any material: aluminum, magnesium, cast iron, bronze, etc.
- Increasing use of lightweight (and soft) materials means more thread damage—there is a Heli-Coil repair for virtually every application
- Stainless steel
- Provide leak tight joints (ex. spark plugs)



### Stainless Steel Heli-Coil inserts eliminate:

- Thread wear
- Corrosion
- Galling
- Rust

### and provide...

- Stronger assemblies
- High quality and reliability
- Fastening integrity superior to the original

## Master Thread Repair Sets

### Master Thread Repair Sets

- Both sets contain repairs for the most commonly used thread sizes
- Two Master Sets for inch sizes are available: one for Inch Coarse (4C-8364) and one for Inch Fine (4C-8365)
- The coarse set contains six sizes: 1/4 inch, 5/16 inch, 3/8 inch, 7/16 inch, 1/2 inch and 5/8 inch
- The fine set has six sizes: #10, 1/4 inch, 5/16 inch, 3/8 inch, 7/16 inch and 1/2 inch
- Each set has a drill, tap, installation tool, a quantity of inserts for each size, and complete instructions

### Optional Inch Coarse Thread Repair Kits

- Kits include insert, tap, installation tool, tang break-off tool, and drill
- Tang break-off tool included in 1/4 -20 through 1/2 -13 only
- Insert package contains inserts only

### Optional Inch Fine Thread Repair Kits

- Kits include insert, tap, installation tool, tang break-off tool, and drill
- Tang break-off tool included in 10-32 through 1/2 -20 only
- Insert package contains inserts only

### NOTE:

Installation tools, precwinder and mandrel included in Fine Series only.



**Master Thread Repair Sets (Continued)**

Thread Size x Length	Insert Package Part Number	Qty.	Tap Part Number	Drill Size	Installation Tool Part Number	Inserts/Kit	Insert Package Part Number	Drill Part Number
<b>4C-8364 - Inch Coarse Master Thread Repair Set</b>								
1/4 in-20 x .375 in	4C-8419	12	4C-9681	17/64 in	8T-2692	--	--	--
5/16 in-18 x .469 in	4C-8420	12	4C-9682	21/64 in	8T-2695	--	--	--
3/8 in-16 x .562 in	4C-8421	12	4C-9683	25/64 in	8T-2698	--	--	--
7/16 in-14 x .656 in	4C-8422	6	4C-9684	29/64 in	--	--	--	--
1/2 in-13 x .750 in	4C-8423	6	4C-9685	17/32 in	8T-2706	--	--	--
5/8 in-11 x .938 in	4C-8425	6	4C-9686	21/32 in	6V-9083	--	--	--
<b>4C-8365 - Inch Fine Master Thread Repair Set</b>								
10-32 x .285 in	4C-8433	12	4C-9687	13/64 in	8T-2727	--	--	--
1/4 in-28 x .375 in	4C-8434	12	4C-9688	17/64 in	8T-2730	--	--	--
5/16 in-24 x .469 in	4C-8435	12	4C-9689	21/64 in	--	--	--	--
3/8 in-24 x .562 in	4C-8436	12	4C-9690	25/64 in	--	--	--	--
7/16 in-20 x .656 in	4C-8437	6	4C-9691	29/64 in	--	--	--	--
1/2 in-20 x .750 in	4C-8438	6	4C-9692	33/64 in	8T-2742	--	--	--
<b>Optional Inch Coarse Thread Repair Kits</b>								
1/4 -20 x .375 <sup>1</sup>	4C-8368	12	4C-9681	17/64	8T-2692	24	4C-8419	1U-5634
5/16 -18 x .469 <sup>1</sup>	4C-8369	12	4C-9682	21/64	8T-2695	24	4C-8420	1U-5638
3/8 -16 x .562 <sup>1</sup>	4C-8370	12	4C-9683	25/64	8T-2698	12	4C-8421	1U-5642
7/16 -14 x .656 <sup>1</sup>	4C-8371	6	4C-9684	29/64	--	12	4C-8422	1U-5646
1/2 -13 x .750 <sup>1</sup>	4C-8372	6	4C-9685	17/32	8T-2706	12	4C-8423	1U-5682
9/16 -12 x .844	4C-8373	6	4C-9700	19/32	--	6	4C-8424	1U-5684
5/8 -11 x .938 <sup>1</sup>	4C-8374	6	4C-9686	21/32	6V-9083	6	4C-8425	1U-5686
3/4 -10 x 1.125	4C-8375	4	4C-9725	25/32	--	4	4C-8426	1U-5690
7/8 -9 x 1.312	4C-8376	1	4C-9724	29/32	8T-2712	6	4C-8427	1U-5694
1-8 x 1.500	4C-8377	1	4C-9723	1 1/32	8T-2715	6	4C-8428	1U-5698
1 1/8 -7 x 1.688	4C-8378	1	4C-9722	1 5/32	8T-2718	5	4C-8429	1U-5702
1 1/4 -7 x 1.875	4C-8379	1	4C-9721	1 9/32	8T-2721	4	4C-8430	--
1 1/2 -6 x 2.250	4C-8381	1	4C-9720	1 17/32	--	4	4C-8432	--
<b>Optional Fine Thread Repair Kits</b>								
10-32 x .285 <sup>1</sup>	4C-8382	12	4C-9687	13/64	8T-2727	24	4C-8433	1U-5630
1/4 -28 x .375 <sup>1</sup>	4C-8383	12	4C-9688	17/64	8T-2730	24	4C-8434	1U-5634
5/16 -24 x .469 <sup>1</sup>	4C-8384	12	4C-9689	21/64	--	24	4C-8435	1U-5638
3/8 -24 x .562 <sup>1</sup>	4C-8385	12	4C-9690	25/64	--	12	4C-8436	1U-5642
7/16 -20 x .656 <sup>1</sup>	4C-8386	6	4C-9691	29/64	--	12	4C-8437	1U-5646
1/2 -20 x .750 <sup>1</sup>	4C-8387	6	4C-9692	33/64	8T-2742	12	4C-8438	1U-7433
9/16 -18 x .844	4C-8388	6	4C-8469	37/64	4C-8486	6	4C-8497	1U-7434
5/8 -18 x .938	4C-8389	6	4C-9701	41/64	--	6	4C-8439	4C-8480
3/4 -16 x 1.125	4C-8390	4	4C-9702	49/64	6V-9082	4	4C-8440	4C-8481
7/8 -14 x 1.312	4C-8391	1	4C-9703	57/64	8T-2748	6	4C-8441	4C-8482

Shop Supplies

(Continued)

**Master Thread Repair Sets (Continued)**

Thread Size x Length	Insert Package Part Number	Qty.	Tap Part Number	Drill Size	Installation Tool Part Number	Inserts/Kit	Insert Package Part Number	Drill Part Number
<b>Optional Fine Thread Repair Kits (Continued)</b>								
1-14 x 1.500	4C-8392	1	4C-9704	1 1/64	8T-2751	6	4C-8442	4C-8483
1-12 x 1.500	4C-8393	1	4C-8470	1 1/64	4C-8487	6	4C-8443	4C-8483
1 1/8 -12 x 1.688	4C-8394	1	4C-9706	1 5/32	--	5	4C-8444	1U-5702
1 1/4 -12 x 1.875	4C-8395	1	4C-9707	1 9/32	--	4	4C-8445	--
1 3/8 -12 x 2.062	4C-8396	1	--	1 13/32	--	4	4C-8446	--
1 1/2 -12 x 2.250	4C-8397	1	--	1 17/32	8T-2760	4	4C-8447	--

<sup>1</sup>Also included in Master Thread Repair Set - 4C-8365

**4C-8366 Metric Master Thread Repair Set**

- Contains repairs for the most commonly used thread sizes: M5, M6, M8 and M10 x 1.50
- Set has a drill bit, tap, installation tool, a quantity of inserts for each size, and complete instructions

Thread Size x Length	Part Number	Description	Qty.	Tap Part Number	Drill Size	Installation Tool Part Number
--	4C-8366	Complete Metric Master Thread Repair Set	--	--	--	--
<b>Metric Master Thread Repair Set Consists of:</b>						
M5 x 0.8 7.5	4C-8448	Threaded Inserts	12	4C-9727	13/64	8T-3121
M6 x 19.0	4C-8449	Threaded Inserts	12	4C-9728	1/4	8T-2784
M8 x 1.25 12.0	4C-8451	Threaded Inserts	12	4C-8475	21/64	8T-2790
M10 x 1.515.0	4C-8452	Threaded Inserts	12	4C-9730	13/32	8T-2793

**Metric Master Thread Repair**

- Contains repairs for the most commonly used thread sizes: M5, M6, M8 and M10 x 1.25
- Set has a drill bit, tap, installation tool, a quantity of inserts for each size, and complete instructions

Thread Size x Length	Part Number	Qty.	Tap Part Number	Drill Size	Installation Tool Part Number	Inserts/Kit	Insert Package Part Number	Drill Part Number
M10 x 1.25 15.0	4C-8410	12	4C-9715	13/32	8T-2763	12	4C-8460	1U-5643
M5 x 0.8 7.5	4C-8448	12	4C-9727	13/64	8T-3121	--	--	--
M6 x 19.0	4C-8449	12	4C-9728	1/4	8T-2784	--	--	--
M8 x 1.25 12.0	4C-8451	12	4C-8475	21/64	8T-2790	--	--	--

**Metric Thread Repair Kits**

**Metric Coarse Thread Repair Kits**

- Kits include insert, tap, installation tool, tang break-off tool, and drill
- Tang break-off tool included in M5 through M12 only

**Metric Fine Thread Repair Kits**

- Kits include insert, tap, installation tool, tang break-off tool, and drill
- Tang break-off tool included in M5 through M12 only

(Continued)

**Metric Thread Repair Kits (Continued)**

Thread Size x Length	Part Number	Qty.	Tap Part Number	Drill Size	Installation Tool Part Number	Inserts/Kit	Insert Package Part Number	Drill Part Number
<b>Metric Coarse Thread Repair Kits</b>								
M5 x 0.8 7.5 <sup>1,2</sup>	4C-8398	12	4C-9727	13/64	8T-3121	12	4C-8448	1U-5630
M6 x 1 9.0 <sup>1,2</sup>	4C-8399	12	4C-9728	1/4	8T-2784	12	4C-8449	1U-5633
M7 x 1 10.5	4C-8400	12	4C-9705	9/32	--	12	4C-8450	1U-5635
M8 x 1.25 12.0 <sup>1,2</sup>	4C-8401	12	4C-8475	21/64	8T-2790	12	4C-8451	1U-5638
M10 x 1.5 15.0 <sup>1</sup>	4C-8402	12	4C-9730	13/32	8T-2793	12	4C-8452	1U-5643
M12 x 1.75 18.0	4C-8403	6	4C-9731	15/32	8T-2796	12	4C-8453	1U-5647
M14 x 2 21.0	4C-8404	6	4C-8472	37/64	4C-8489	12	4C-8454	1U-7434
M16 x 2 24.0	4C-8405	6	4C-9732	21/32	8T-2799	6	4C-8455	1U-5686
M18 x 2.5 27.0	4C-8406	6	4C-8473	47/64	--	6	4C-8456	—
M20 x 2.5 30.0	4C-8407	3	4C-8474	13/16	4C-8491	4	4C-8457	1U-5691
<b>Metric Fine Thread Repair Kits</b>								
M8 x 1 12.0	4C-8408	12	4C-9729	21/64	--	12	4C-8458	1U-5638
M10 x 1 15.0	4C-8409	12	4C-8476	13/32	--	12	4C-8459	1U-5643
M12 x 1.25 18.0	4C-8411	6	4C-9716	15/32	--	12	4C-8461	1U-5647
M12 x 1.5 18.0	4C-8412	6	4C-9717	15/32	--	12	4C-8462	1U-5647
M14 x 1.5 21.0	4C-8413	6	4C-9718	9/16	8T-2772	12	4C-8463	1U-5683
M16 x 1.5 24.0	4C-8414	6	4C-9719	21/32	8T-2775	6	4C-8464	1U-5686
M18 x 1.5 27.0	4C-8415	6	4C-8477	23/32	--	6	4C-8465	1U-5688
M10 x 1.25 15.0	4C-8410	12	4C-9715	13/32	8T-2763	12	4C-8460	1U-5643

<sup>1</sup>Also included in 4C-8366 Master Thread Repair Set

<sup>2</sup>Also included in 4C-8367 Master Thread Repair Set

**Spark Plug Thread Repair**

**Preferred method of repair specified by virtually all U.S. and foreign vehicle manufacturers.**

- Kits are available in sizes M14, M18, and 7/8 inch
- Each kit contains a piloted tap (no drilling necessary), an installation tool, and a quantity of inserts
- The M14 Kit contains several insert lengths to accommodate all spark plug reaches



4C-8416

Shop Supplies

(Continued)

Spark Plug Thread Repair (Continued)

Thread Size	Reach	Part Number	Inserts/Kit	Tap Part Number	Installation Tool Part Number	Qty.
<b>Kit Part Numbers</b>						
14 - 1.25 mm	3/8 in	4C-8416	6	--	--	6
18 - 1.50 mm	1/2 in	4C-8417	24	4C-8478	--	6
7/8 in - 18	1/2 in - 5/8 in	4C-8418	10	4C-8479	4C-8496	5
<b>Insert Package Part Numbers for 4C-8416</b>						
14 - 1.25 mm	3/8 in	9U-5121	6	--	--	6
14 - 1.25 mm	7/16 in	9U-5122	6	--	--	6
14 - 1.25 mm	1/2 in	9U-5123	6	8T-2801	8T-2802	6
14 - 1.25 mm	3/4 in	9U-5124	6	--	--	6
14 - 1.25 mm	.472 in	9U-5125 <sup>1</sup>	6	--	--	6
<b>Insert Package Part Number for 4C-8417</b>						
18 - 1.50 mm	1/2 in	4C-8466	24	--	--	6
<b>Insert Package Part Number for 4C-8418</b>						
7/8 - 18 in	1/2 in - 5/8 in	4C-8467 <sup>1</sup>	10	--	--	5

<sup>1</sup>Not available for individual sale

Carded Inserts

- Inserts are carded according to thread size for easy handling and display
- Contained in a vial marked with part number, thread size, and length
- The length of insert in Inch and Metric packages is 1 1/2 times the diameter of the bolt—providing sufficient strength in most applications
- Spark Plug Inserts are packaged in lengths corresponding to the various spark plug reaches



4C-8421

Thread Size	Thread Length	Part Number	Qty.
<b>Inch Coarse</b>			
1/4-20	.375	4C-8419	12
5/16-18	.469	4C-8420	12
3/8-16	.562	4C-8421	12
7/16-14	.656	4C-8422	6
1/2-13	.750	4C-8423	6
9/16-12	.844	4C-8424	6
5/8-11	.938	4C-8425	6
3/4-10	1.125	4C-8426	4
7/8-9	1.312	4C-8427	1
1-8	1.500	4C-8428	1
1 1/8-7	1.688	4C-8429	1

Thread Size	Thread Length	Part Number	Qty.
<b>Inch Coarse (Continued)</b>			
1 1/4-7	1.875	4C-8430	1
1 3/8-6	2.062	4C-8431	1
1 1/2-6	2.250	4C-8432	1
<b>Inch Fine</b>			
10-32	.285	4C-8433	12
1/4-28	.375	4C-8434	12
5/16-24	.469	4C-8435	12
3/8-24	.562	4C-8436	12
7/16-20	.656	4C-8437	6
1/2-20	.750	4C-8438	6
5/8-15	.938	4C-8439	6

(Continued)

**Carded Inserts (Continued)**

Thread Size	Thread Length	Part Number	Qty.
<b>Inch Fine (Continued)</b>			
3/4-16	1.125	4C-8440	4
7/8-14	1.312	4C-8441	1
1-14	1.500	4C-8442	1
1-12	1.500	4C-8443	1
1 1/8-12	1.688	4C-8444	1
1 1/4-12	1.875	4C-8445	1
1 3/8-12	2.062	4C-8446	1
1 1/2-12	2.250	4C-8447	1
9/16-18	.844	4C-8497	6
<b>Metric Coarse</b>			
M5 x 0.8	7.5	4C-8448	12
M6 x 1	9.0	4C-8449	12
M7 x 1	9.0	4C-8450	12
M8 x 1.25	12.0	4C-8451	12
M10 x 1.5	15.0	4C-8452	12
M12 x 1.75	18.0	4C-8453	6
M14 x 2	21.0	4C-8454	6
M16 x 2	24.0	4C-8455	6
M18 x 5.25	27.0	4C-8456	6

Thread Size	Thread Length	Part Number	Qty.
<b>Metric Coarse (Continued)</b>			
M20 x 5.25	30.0	4C-8457	3
<b>Metric Fine</b>			
M8 x 1	12.0	4C-8458	12
M10 x 1	15.0	4C-8459	12
M10 x 1.25	15.0	4C-8460	12
M12 x 1.25	18.0	4C-8461	6
M12 x 1.5	18.0	4C-8462	6
M14 x 1.5	21.0	4C-8463	6
M16 x 1.5	24.0	4C-8464	6
M18 x 1.5	27.0	4C-8465	6
<b>Spark Plug</b>			
18 - 1.50 mm	1/2 in	4C-8466	6
14 - 1.25 mm	3/8 in	9U-5121	6
14 - 1.25 mm	7/16 in	9U-5122	6
14 - 1.25 mm	1/2 in	9U-5123	6
14 - 1.25 mm	3/4 in	9U-5124	6

**Inserts for Specific Engine Applications**

Engine Bore Size mm (inch)	Drill Size	Thread Size	Tap	Tap Guide	Pre-Winder	Sleeve Assembly	Insert	Nib
95.29 (3.75)	1.0 in			8F-5574		9F-7143		
101.60 (4.00)	1.0 in					9F-7143		
107.95 (4.25)	1 1/8 in		8F-5577	8F-5575		9F-7143	8F-5574	
114.30 (4.50)	1 1/8 in		8F-5577			9F-7143	8F-5574	
101.60 (4.00)	51/64 in	3/4 -12				9F-7143	8M-8292	
114.30 (4.50)	51/74 in	3/4 -12			9F-7143	8M-8292		
114.30 (4.50)	29/32 in	7/8 -12	9M-6595			9F-7143	9M-6593	9M-6596
114.30 (4.50)	29/32 in		9M-6595				8S-6400	

Thread Size x Length	Part Number	Tap Part Number	Installation Tool Part Number
<b>Special Length Inserts</b>			
3/4-16 x 1.500	6V-9074	4C-9702	6V-9082
5/8-11 x 1.250	6V-9076	4C-9686	6V-9083
M8-1.25 x 16 mm	9U-5177	4C-8475	8T-2790
M16-2 x 32 mm	9U-5604	4C-9732	8T-2799

Shop Supplies

### Inserts for Specific Engine Applications

Engine Bore Size mm (inch)	Drill Size	Thread Size	Tap	Sleeve Assembly	Insert	Nib
120.65 (4.75) V8	29/83 in		9M-6595	8S-6034	8S-6400	
120.65 (4.75) 2-Valve	29/32 in		9M-6595	8S-6034	8S-6400	
130.75 (5.12)	1 1/8 in		8F-5577	9F-7143	5H-8146	
130.75 (5.12) Series F	1.0 in			9F-7143		
137.31 (5.40) D343, 1693 90del- taV8	29/32 in	7/8 - 12	9M-6595	9F-7143	9M-6593	9M-6595
137.31 (5.40) 3400 Series	29/32 in	7/8 - 12	9M-6595	9F-7143	8S-6400	9M-6595
137.31 (5.40) 60deltaV8, V12, V16	29/32 in	7/8 - 12	9M-6595	9F-7143	9M-6593	9M-6595
146.05 (5.75)	1 1/4 in	1 1/4 - 12		9F-7143	8F-5575	
146.05 (5.75)	1 1/8 in	1 1/8 - 12	8F-5577	9F-7143	5H-8146	
158.75 (6.25)	1.0 in	1 - 12		9F-7143	8S-6402	

### Thread Inserts

Strong, permanent, metal threads — coarse or fine

Master kits contain a selection of various size inserts, drivers, and complete instructions in one package. These master kits provide convenient storage and easy access to inserts and driver tools.

**Refill kits contain only one size of thread insert and instructions (no driver tool).**

- Installed with standard drills and taps
- No pre-winder tool required
- Impossible to cross thread while installing
- No tang to break-off
- Positive mechanical lock against rotation
- May be used in virtually any material including aluminum, magnesium, cast iron, cold rolled steel, or plastic
- Provides high strength, reliability, and maximum pullout strength
- Easy to remove
- No special skills required—installation procedures can be learned in minutes

#### Typical Applications

- Buses
- Trucks
- Heavy equipment
- Marine equipment
- Machinery
- Tooling
- Power tools
- Recreational vehicles
- Small engines

#### Easy Installation/Four Simple Steps

1. Drill out old threads using specified drill size.
2. Tap new threads using specified tap size.
3. Screw in insert until slightly below surface. Lock-tabs act as depth stop.
4. Drive lock-tabs into the surrounding base material with several light taps on installation tool to securely lock the insert against rotation.



(Continued)



**Thread Inserts (Continued)**

English Thread Insert Removal Data			
Internal Thread Size	Drill Size	Drill Depth	Drill Part No.
10-24	9/32 in	3.2 mm (.12 in)	1U-5603
10-32			
1/4 -20	11/32 in	4.8 mm (.19 in)	1U-5607
1/4 -28			
5/16 -18	13/32 in	4.8 mm (.19 in)	1U-5611
5/16 -24			
3/8 -16	15/32 in	4.8 mm (.19 in)	1U-5615
3/8 -24			
7/16 -14	17/32 in	4.8 mm (.19 in)	1U-5682
7/16 -20			
1/2 -13	21/32 in	4.8 mm (.19 in)	1U-5686
1/2 -20			
9/16 -12	21/32 in	4.8 mm (.19 in)	1U-5686
9/16 -18			
5/8 -11	25/32 in	4.8 mm (.19 in)	1U-5690
5/8 -18			
3/4 -10	31/32 in	7.9 mm (.31 in)	1U-5696
3/4 -16			
7/8 -9	1 3/32 in	7.9 mm (.31 in)	1U-5700
7/8 -14			
1-8	1 7/32 in	7.9 mm (.31 in)	--
1-14			
1 1/8 -7	1 11/32 in	7.9 mm (.31 in)	--
1 1/8 -12			
1 1/4 -7	1 15/32 in	7.9 mm (.31 in)	--
1 1/4 -12			
1 1/2 -6	1 23/32 in	7.9 mm (.31 in)	--
1 1/2 -12			
Metric Thread Insert Removal Data			
Internal Thread Size	Drill Size	Drill Depth	Drill Part No.
M6	7.50 mm	4.3 mm (.17 in)	1U-8160
M8	9.50 mm	4.3 mm (.17 in)	1U-8167
M10	11.50 mm	4.3 mm (.17 in)	1U-8171
M12	13.50 mm	4.3 mm (.17 in)	1U-8171
M16	17.75 mm	6.3 mm (.25 in)	--
M20	25.75 mm	6.3 mm (.25 in)	--
M24	28.75 mm	6.3 mm (.25 in)	--

### English and Metric Thread Insert Master Kits

- Solid key-locking inserts are used for repairing damaged threads
- Not affected by vibration or torsion providing added strength and reliability
- All kits are contained in rugged metal boxes with individual compartments for each size of insert and driver
- Each kit contains different-sized inserts and drivers ranging from M6 to M24 or 1/4 inch to 1 1/2 inch threaded size



**Reference**

Special Instruction SEHS8792, Using Cat® Replacement Threads

Part Number	Size Range
9S-3500	#10 through 1 1/2 inch, fine thread
9S-3700	#10 through 1 1/2 inch, course thread
247-9662	M6 through M12
247-9663	M8 through M24

### Insert Kits and Replacement Kits

**Insert Kits (Item 1)**

- Used to repair threads of one specific size
- These insert kits include inserts of one size, a driver, and installation instructions
- Insert kits come in both English and metric threads

**Replacement Kits (Item 2)**

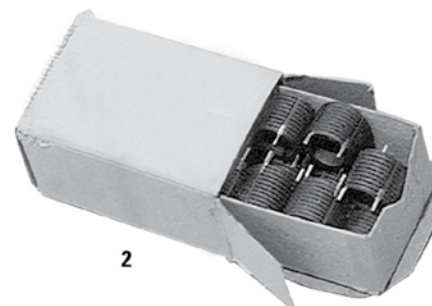
- Replacement kits provide inserts for restocking master kits such as 9S-3500, 9S-3700, 247-9662, and 247-9663
- Kits include one size insert and installation instructions
- Replacements kits come in both English and metric threads

**Reference**

Special Instruction SEHS8792; Using Cat® Replacement Thread Inserts



1



2

Internal Thread Size	Insert Kit Part Number	In-serts/Kit	Replace-ment Kit Part Number	External Thread Size	Insert Length	Tap Drill Diameter	Drill Part Number	Countersink Diameter <sup>1</sup>	Tap Size	Inserts/ Replace-ment Kit	Tap Part Number
10-24	9S-3510	15	9S-3674	3/8 -16	7.8 mm (0.31 in)	Q	1U-5606	9.6 mm (0.38 in)	3/8 -16	45	1P-3025
10-32	9S-3509	15	--	3/8 -16	7.8 mm (0.31 in)	Q	1U-5606	9.6 mm (0.38 in)	3/8 -16	45	1P-3025
1/4 -20	9U-5053	13	9U-5054	7/16 -14	9.4 mm (0.37 in)	X	1U-5610	11 mm (0.43 in)	7/16 -14	40	1P-3027
1/4 -28	9U-5055	13	9U-5056	7/16 -14	9.4 mm (0.37 in)	X	1U-5610	11 mm (0.43 in)	7/16 -14	40	1P-3027
5/16 -18	9U-5057	8	9U-5058	1/2 -13	11 mm (0.43 in)	27/64	1U-5614	13 mm (0.51 in)	1/2 -13	25	1P-3029
5/16 -24	9U-5059	8	9U-5060	1/2 -13	11 mm (0.43 in)	27/64	1U-5614	13 mm (0.51 in)	1/2 -13	25	1P-3029
3/8 -16	9S-3618	6	9S-3651	9/16 -12	13 mm (0.51 in)	33/64	1U-7433	14 mm (0.55 in)	9/16 -12	20	1P-3031
3/8 -24	9S-3515	6	9S-3641	9/16 -12	13 mm (0.51 in)	33/64	1U-7433	14 mm (0.55 in)	9/16 -12	20	1P-3031

Shop Supplies

(Continued)

**Insert Kits and Replacement Kits (Continued)**

Internal Thread Size	Insert Kit Part Number	In-serts/Kit	Replacement Kit Part Number	External Thread Size	Insert Length	Tap Drill Diameter	Drill Part Number	Countersink Diameter <sup>1</sup>	Tap Size	Inserts/Replacement Kit	Tap Part Number
7/16 -14	9S-3620	6	9S-3652	5/8 -11	16 mm (0.63 in)	37/64	1U-7434	16 mm (0.63 in)	5/8 -11	18	1P-3033
7/16 -20	9S-3619	6	9S-3642	5/8 -11	16 mm (0.63 in)	37/64	1U-7434	16 mm (0.63 in)	5/8 -11	18	1P-3033
1/2 -13	9S-3622	5	9S-3653	3/4 -16	16 mm (0.63 in)	45/64	1U-7435	19 mm (0.75 in)	3/4 -16	15	1P-3036
1/2 -20	9S-3621	5	9S-3643	3/4 -16	16 mm (0.63 in)	45/64	1U-7435	19 mm (0.75 in)	3/4 -16	15	1P-3036
9/16 -12	9S-3624	3	9S-3654	3/4 -16	20 mm (0.79 in)	45/64	1U-7435	19 mm (0.75 in)	3/4 -16	10	1P-3036
9/16 -18	9S-3623	3	9S-3644	3/4 -16	20 mm (0.79 in)	45/64	1U-7435	19 mm (0.75 in)	3/4 -16	10	1P-3036
5/8 -11	9S-3626	2	9S-3655	7/8 -14	22 mm (0.87 in)	53/64	1U-7436	22 mm (0.87 in)	7/8 -14	9	1P-3038
5/8 -18	9S-3625	2	9S-3645	7/8 -14	22 mm (0.87 in)	53/64	1U-7436	22 mm (0.87 in)	7/8 -14	9	1P-3038
3/4 -10	9S-3628	2	9S-3656	1 1/8 -12	28 mm (1.10 in)	1 1/16	1U-5699	29 mm (1.14 in)	1 1/8 -12	6	1P-3041
3/4 -16	9S-3627	2	9S-3646	1 1/8 -12	28 mm (1.10 in)	1 1/16	1U-5699	29 mm (1.14 in)	1 1/8 -12	6	1P-3041
7/8 -9	9S-3630	2	9S-3657	1 1/4 -12	32 mm (1.26 in)	1 3/16	1U-5703	32 mm (1.26 in)	1 1/4 -12	5	1P-3042
7/8 -14	9S-3629	2	9S-3647	1 1/4 -12	32 mm (1.26 in)	1 3/16	1U-5703	32 mm (1.26 in)	1 1/4 -12	5	1P-3042
1-8	9S-3632	2	9S-3658	1 3/8 -12	35 mm (1.38 in)	1 5/16	1U-5707	35 mm (1.38 in)	1 3/8 -12	4	1P-3043
1-14	9S-3631	2	9S-3648	1 3/8 -12	35 mm (1.38 in)	1 5/16	1U-5707	35 mm (1.38 in)	1 3/8 -12	4	1P-3043
1 1/8 -7	9S-3633	2	9S-3675	1 1/2 -12	41 mm (1.61 in)	1 7/16	1U-5711	39 mm (1.54 in)	1 1/2 -12	3	1P-3044
1 1/8 -12	9S-3634	2	9S-3676	1 1/2 -12	41 mm (1.61 in)	1 7/16	1U-5711	39 mm (1.54 in)	1 1/2 -12	3	1P-3044
1 1/4 -7	9S-3635	2	9S-3677	1 5/8 -12	46 mm (1.81 in)	1 9/16	1U-7437	41 mm (1.61 in)	1 5/8 -12	2	--
1 1/4 -12	9S-3636	2	9S-3678	1 5/8 -12	46 mm (1.81 in)	1 9/16	1U-7437	41 mm (1.61 in)	1 5/8 -12	2	--
1 1/2 -6	9S-3637	2	9S-3679	1 7/8 -12	51 mm (2.01 in)	1 13/16	1U-7438	48 mm (1.89 in)	1 7/8 -12	2	--
1 1/2 -12	9S-3638	2	9S-3680	1 7/8 -12	51 mm (2.01 in)	1 13/16	1U-7438	48 mm (1.89 in)	1 7/8 -12	2	--
M6-1	246-7511	10	246-7520	M10-1.25	10 mm (0.39 in)	8.8 mm	1U-8165	10.2 mm (0.40 in)	M10-1.25	25	8T-3086
M8-1.25	246-7513	10	246-7521	M12-1.25	12 mm (0.47 in)	10.8 mm	1U-8169	12.2 mm (0.48 in)	M12-1.25	25	8T-3089
M10-1.5	246-7514	10	246-7522	M14-1.5	14 mm (0.55 in)	12.8 mm	1U-8173	14.2 mm (0.56 in)	M14-1.5	20	8T-3093
M10-1.25	246-7515	5	246-7523	M14-1.5	14 mm (0.55 in)	12.8 mm	1U-8173	14.2 mm (0.56 in)	M14-1.5	10	8T-3093
M12-1.75	246-7516	5	246-7524	M16-1.5	16 mm (0.63 in)	14.7 mm	--	16.2 mm (0.64 in)	M16-1.5	10	8T-3095
M16-2	246-7517	3	246-7525	M22-1.5	22 mm (0.87 in)	20.5 mm	--	22.2 mm (0.88 in)	M22-1.5	5	156-8166
M20-2.5	246-7518	3	246-7526	M30-2	30 mm (1.18 in)	28 mm	--	30.2 mm (1.19 in)	M30-2	5	--
M24-3	246-7519	2	246-7528	M33-2	33 mm (1.30 in)	31 mm	--	33.2 mm (1.31 in)	M33-2	5	--

<sup>1</sup>Use a standard countersink tool with an angle from 82 to 100 degrees. The diameter listed in the chart is the measurement at the top of the counterbore. The tolerance for this diameter is -0 mm (.0 in) 0.25 mm (.010 in).

**Installation Tools and Thread Inserts**

SMCS Code: 7564

Models: 141-7250-416C, 426C, 428C, 436C, and 438C Backhoe Loader; 178-7635—E529, E523, E530, E524, E531, E525, and various other models; 179-3571-various

**141-7250 Installation Tool**

- Used to install M6 x 1 threaded insert
- Used with standard hand tools to make repair
- Allows convenient field repair of stripped or damaged threads
- Compact design allows installation of insert in confined areas
- Used in applications such as repair of threaded M6 x 1.0 mounting holes inside cab of C-Series Backhoe Loaders

**140-9921 Threaded Insert**

- Used to repair stripped threads
- Used in material thickness of 0.7 to 3.0 mm (.028 to .118 in)

**178-7635 Installation Tool**

- Used to install 8-32 threaded insert
- Used with standard hand tools to make repair
- Allows convenient field repair of stripped or damaged threads
- Compact design allows installation of insert in confined areas

**176-1691 Fastener**

- Used to repair stripped threads
- Used in material thickness of .76 mm to 4.75 mm (.030 to .187 in)

**179-3571 Installation Tool**

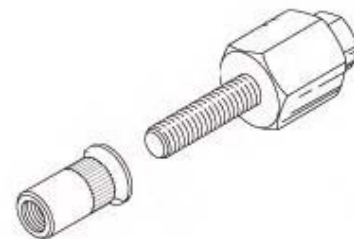
- Used to install all 1/4 -20 threaded insert
- Used with standard hand tools to make repair
- Allows convenient field repair of stripped or damaged threads
- Compact design allows installation of inserts in confined area

**178-1628 Fastener**

- Used to repair stripped threads
- Used in material thickness of .76 mm to 4.75 mm (.030 to .187 in )

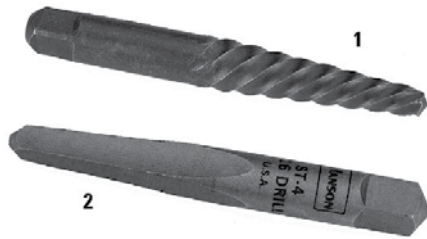
**Reference**

NEHS0677 Tool Operating Manual containing installation instructions



Part Number	Description	Hex Size	Length	Bolt Thread	Body Diameter	Flange Diameter	Thread
<b>Installation Tools</b>							
206-4499	Installation Tool (M6)	9/16 in	12.7 mm (0.50 in)	M6 x 1.0	--	--	--
206-4496	Installation Tool (M4)	9/16 in	12.7 mm (0.50 in)	M4 x 0.7	--	--	--
141-7250	Installation Tool	9/16 in	12.7 mm (0.50 in)	M6 x 1.0	--	--	--
178-7635	Installation Tool	9/16 in	10.2 mm (0.40 in)	8-32	--	--	--
179-3571	Installation Tool	9/16 in	13.3 mm (0.52 in)	1/4 -20	--	--	--
<b>Threaded Inserts</b>							
140-9921	Threaded Insert	--	14 mm (0.55 in)	--	9.5 mm (0.37 in)	10 mm (0.39 in)	M6 x 1.0
176-1691	Fastener	--	9.4 mm (0.37 in)	--	6.3 mm (0.25 in)	6.8 mm (0.27 in)	8-32
178-1628	Threaded Insert	--	13.1 mm (0.52 in)	--	9.5 mm (0.37 in)	10.2 mm (0.40 in)	1/4 -20

Individual Extractors



- Useful in maintenance departments, machine shops, garages, workshops, etc., to remove broken screws, bolts or other threaded parts
- First, drill a hole into the broken part. Insert the extractor. By twisting to the left, the extractor will grip into the wall of the hole and the broken part can be backed out without damaging threads.

Extractor Size	Part Number	Used with Drill Size	Used to Remove Screws and Bolts	Used to Remove Pipe
<b>Left Hand Spiral Tapered Flutes (Item 1)</b>				
1	4C-3364	5/64 in	2.5 mm - 6.0 mm (3/16 in - 1/4 in)	--
2	4C-3365	7/64 in	6.0 mm - 8.0 mm (1/4 in - 5/16 in)	--
3	4C-3366	5/32 in	8.0 mm - 12.0 mm (5/1 in - 7/16 in)	--
4	4C-3367	1/4 in	12.0 mm - 14.0 mm (7/16 in - 9/16 in)	--
5	4C-3368	17/64 in	14.0 mm - 20.0 mm (9/16 in - 3/4 in)	1/8 in
6	4C-3369	13/32 in	20.0 mm - 24.0 mm (3/4 in - 1 in)	--
7	4C-3370	17/32 in	24.0 mm - 35.0 mm (1 in - 1 3/8 in)	--
8	4C-3371	13/16 in	35.0 mm - 44.0 mm (1 3/8 in - 1 3/4 in)	3/4 in
9	4C-3372	1 1/16 in	44.0 mm - 54.0 mm (1 3/4 in - 2 1/8 in)	1 in
10	4C-3373	1 5/16 in	54.0 mm - 63.0 mm (2 1/8 in - 2 1/2 in)	1 1/4 in
<b>Straight Tapered Flutes (Item 2)</b>				
1	4C-3374	9/64 in	2.5 mm - 8.0 mm (1/4 in - 5/16 in)	--
2	4C-3375	3/16 in	9.0 mm - 10.0 mm (3/8 in)	--
3	4C-3376	15/64 in	12.0 mm (7/16 in)	1/8 in
4	4C-3377	5/16 in	13.0 mm - 14.0 mm (1/2 in - 9/16 in)	1/4 in
5	4C-3378	3/8 in	15.0 mm - 16 mm (5/8 in)	3/8 in
6	4C-3379	15/32 in	17.0 mm - 19.0 mm (3/4 in)	1/2 in
7	4C-3380	9/16 in	22.0 mm (7/8 in)	--

Extractor Sets

- For removing broken screws and bolts (eliminates re-drilling and re-tapping for a larger screw)



Part Number	Used to Remove
<b>4C-3383 Extractor Set, Straight Tapered, Consists of:</b>	
4C-3374	3/16 in to 5/16 in
4C-3375	3/8 in
4C-3376	7/16 in and 1/8 in Pipe
4C-3377	1/2 in to 9/16 in and 1/4 in Pipe
4C-3378	5/8 in and 3/8 in Pipe
4C-3379	3/4 in and 1/2 in Pipe
<b>4C-3382 Extractor Set, Left Hand Spiral, Consists of:</b>	
4C-3364	3/32 in to 5/32 in
4C-3365	5/32 in to 7/32 in
4C-3366	7/32 in to 9/32 in
4C-3367	9/32 in to 3/8 in and 1/8 in Pipe
4C-3368	3/8 in to 5/8 in and 1/4 in Pipe
4C-3369	5/8 in to 7/8 in and 3/8 in Pipe
4C-3370	7/8 in to 1 1/8 in and 1/2 in Pipe

Shop Supplies

(Continued)

Extractor Sets (Continued)

Part Number	Used to Remove
<b>4C-3382 Extractor Set, Left Hand Spiral, Consists of: (Continued)</b>	
4C-3371	1 1/8 in to 1 3/8 in and 3/4 in Pipe
4C-3372	1 3/8 in to 2 in and 1 in Pipe
<b>4C-3381 Extractor Set, Left Hand Spiral, Consists of:</b>	
4C-3364	3/32 in to 5/32 in
4C-3365	5/32 in to 7/32 in
4C-3366	7/32 in to 9/32 in
4C-3367	9/32 in to 3/8 in and 1/8 in Pipe
4C-3368	3/8 in to 5/8 in and 1/4 in Pipe
4C-3369	5/8 in to 7/8 in and 3/8 in Pipe
<b>4C-5530 Extractor Set, Straight Tapered, Consists of:</b>	
4C-3374	3/16 in to 5/16 in
4C-3375	3/8 in
4C-3376	7/16 in and 1/8 in Pipe
4C-3377	1/2 in to 9/16 in and 1/4 in Pipe
4C-3378	5/8 in and 3/8 in Pipe
<b>4C-3384 Extractor Set, Left Hand Spiral, in vinyl pouch, Consists of:</b>	
4C-3364	3/32 in to 5/32 in
4C-3365	5/32 in to 7/32 in
4C-3366	7/32 in to 9/32 in
4C-3367	9/32 in to 3/8 in and 1/8 in Pipe
4C-3368	3/8 in to 5/8 in and 1/4 in Pipe

**1B-9925 Left Hand Spiral Screw Extractor**

- Originally used for the removal of burner tubes in the D70, D65 Tractors and D9900 Power Units
- Used to remove broken screws and bolts
- Eliminates redrilling and retapping for larger screw

Part Number	Turn	Spiral Length	Taper/Foot	Square Drive	Overall Length
1B-9925	1/2 in	1 3/4 in	1 3/8 in	5/8 in	10 1/2 in



**282-2108 Extractor Set, 10 piece**

SMCS Code: 0671



- Standard extractors for righthand pipe and studs
- Four-point grip assures strong bite
- Works with shallow grip which lessens expansion and jamming
- Pulls rather than reams
- Releases from bite instantly after job completed
- Designed for strength, durability, and easy handling
- Rust resistant, black oxide finish
- Complete set of only 10 extractors fits every size and class of pipe from 1/8 to 2 inch
- Also fits every stud and screw from 3/8 to 3 1/2 inch
- Comes in sturdy plastic case
- Can also be ordered individually

Part Number	Description	Broken Pipe Length (in)	Broken Stud/Screw Length (in)
282-2108	Complete Extractor Set	--	--
<b>Extractor Set Consists of:</b>			
282-2109	Extractor	1/8	3/8
282-2110	Extractor	1/4	1/2
282-2111	Extractor	3/8	5/8 or 3/4
282-2112	Extractor	1/2	--
282-2113	Extractor	--	7/8 or 1
282-2115	Extractor	3/4	1 1/8 or 1 1/4
282-2116	Extractor	1	1 1/2 or 1 3/4
282-2117	Extractor	1 1/4	2
282-2118	Extractor	1 1/2	2 1/4 or 2 1/2
282-2119	Extractor	2	3 or 3 1/2

**2P-5535 Stud Remover Set**



- Extractors are not threaded and thus will accommodate studs with either coarse or fine threads
- Saves time when removing a number of studs and eliminates thread damage

**Reference**  
GMG02078 Special Instruction

Item	Part Number	Description
--	2P-5535	Complete Stud Remover Set
<b>Stud Remover Set Consists of:</b>		
4	2P-5497	Body
1	2P-5527	Extractor, 3/4 in
2	2P-5528	Extractor, 7/8 in

Item	Part Number	Description
<b>Stud Remover Set Consists of: (Continued)</b>		
3	2P-5529	Extractor, 1 in
6	2P-5537	Washer
5	2P-5538	Bolt

Shop Supplies

**8S-1378 Stud Remover and Resetter Tool Set, 1/4 through 5/8 in**

Part Number	Description	Size
8S-1378	Complete Stud Remover and Resetter Tool Set, 1/4 through 5/8 in	--
<b>Stud Remover and Resetter Tool Set, 1/4 through 5/8 in, Consists of:</b>		
8S-1346	Collet	5/8 in - 11
8S-1364	Box	--
8S-1365	Collet	1/4 in - 20
8S-1366	Collet	1/4 in - 28
8S-1368	Collet	5/16 in - 24
8S-1369	Collet	3/8 in - 16
8S-1370	Collet	3/8 in - 24
8S-1371	Collet	7/16 in - 14
8S-1372	Collet	7/16 in - 20
8S-1373	Collet	1/2 in - 13
8S-1375	Collet	9/16 in - 12
8S-1376	Collet	9/16 in - 18
8S-1377	Collet	5/8 in - 18
<b>Not Shown</b>		
8S-1374	Collet	1/2 in - 20
8S-1347	Housing	--

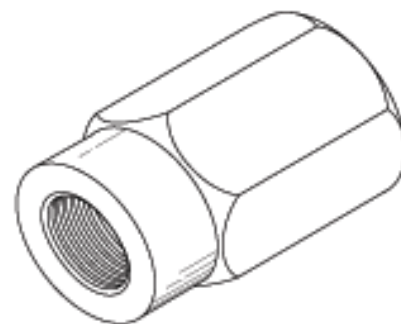


**Metric Stud Installers**

Essential Tool

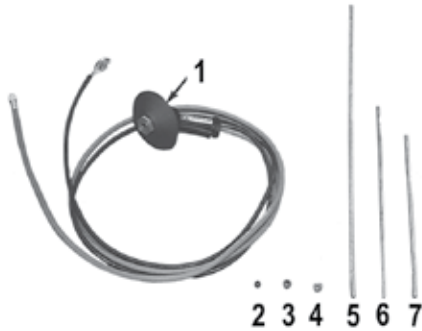
- Used to quickly and easily install metric studs (not for stud removal)
- Can be used with standard wrench or impact wrench
- Reduces possible damage to threads
- Designed to easily release from stud after installation
- Ensures reliable bolted joint (reduces chance of stud backout)

Part Number	Size
204-7932	M16 x 2.0
204-7933	M20 x 2.5
204-7934	M24 x 3.0
204-7935	M30 x 3.5
204-7936	M36 x 3.0





8T-7792 Mini Cutting Torch



- Will cut cast iron, stainless steel, high alumina refractory, and slag
- Can be used indoors, because the noise and smoke levels are very low
- Faster and less expensive than carbon arc and requires oxygen only
- Durable, comfortable, and less fatiguing to use
- Large squeeze trigger-type handle control delivers oxygen precisely
- Excellent tool for gouging hard facing. Unlike carbon arc, the rods contain no carbon, thus reducing the grinding requirement

Reference

Form SEHS8923

Rod Sizes Used by Mini Cutting Torch
General purpose rods for removing small bolts and pins by piercing
4.76 mm x 55.24 cm (3/16 in x 21 3/4 in)
6.35 mm x 55.24 cm (1/4 in x 21 3/4 in)
Rods for piercing track pins, washing away welds, and gouging hard facing
9.52 mm x 46.67 cm (3/8 in x 18 3/8 in)
Cut off and gouging rod for piercing longer pins and rough cutting
9.52 mm x 91.44 cm (3/8 in x 36 in)

Item	Part Number	Description
1	8T-7792	Complete Mini Cutting Torch
<b>Mini Cutting Torch Consists of:</b>		
2	8T-9110	Washer
3	8T-7795	Collet, 4.76 mm ( 3/8 in)
4	8T-7794	Collet, 6.35 mm ( 1/4 in)
Not shown	8T-9202	Collet, 4.76 mm ( 3/16 in)
Not shown	8T-7793	Striker Plate
Not shown	8T-9287	Washer
<b>Purchase separately</b>		
5	8T-7697	Rod, 9.52 mm x 91.4 mm ( 3/8 in x 36 in)
6	8T-7696	Rod, 6.35 mm x 55.24 cm ( 1/4 in x 21 3/4 in)
7	8T-7698	Rod, 4.76 mm x 45.72 cm ( 3/8 in x 18 in)
Not shown	8T-9201	Rod, 4.76 mm x 55.24 cm ( 3/16 in x 21 3/4 in)
Not shown	8T-7699	Igniter
Not shown	9U-5614	Shield
Not shown	9U-5615	Collet Nut-Brass

**9A-1593 Surface Texture Replica (Comparison)**

- Used as a reference tool for metal surface reconditioning during reuse and salvage of major components
- Provides user with a physical representation of surface finish specifications that are called out in Reuse and Salvage Guidelines
- Provides 12 examples of F, H, K, and N surface textures for cast iron and steel

**Reference**

SEBF8271, Guideline for Reusable Parts

Part Number	Description
9A-1593	Metal Surface Texture Replica



## Cap and Plug Kit 276-7018



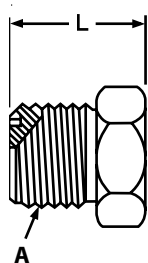
- Protects against damage, dirt, moisture and corrosion during storage, shipping and repair
- Tapered caps/plugs are designed to plug multiple inner diameters and cap multiple outside diameters
- Three individual plastic boxes all found in one kit to keep caps/plugs organized and clean

Part Number	Index Description
276-7018	Cap and Plug Complete Kit
<b>Cap and Plug Kit Consists of:</b>	
9U-7090	Cap/Plug - Tapered
9U-7091	Cap/Plug - Tapered
9U-7067	Cap/Plug - Tapered
9U-7068	Cap/Plug - Tapered
9U-7069	Cap/Plug - Tapered
9U-7070	Cap/Plug - Tapered
9U-7071	Cap/Plug - Tapered
9U-7073	Cap/Plug - Tapered
276-0748	Cap-Plug
276-0749	Cap-Plug
9U-7074	Cap/Plug - Tapered
9U-7075	Cap/Plug - Tapered

Part Number	Index Description
<b>Cap and Plug Kit Consists of: (Continued)</b>	
9U-7076	Cap/Plug - Tapered
9U-7077	Cap/Plug - Tapered
9U-7078	Cap/Plug - Tapered
9U-7079	Cap/Plug - Tapered
9U-7080	Cap/Plug - Tapered
9U-7081	Cap/Plug - Tapered
276-0750	Cap-Plug
276-0751	Cap-Plug
9U-7082	Cap/Plug - Tapered
9U-7085	Cap/Plug - Tapered
9U-7087	Cap/Plug - Tapered
9U-7088	Cap/Plug - Tapered
9U-7089	Cap/Plug - Tapered

Part Number	Index Description
<b>Cap and Plug Kit Consists of: (Continued)</b>	
276-0747	Cap-Plug
276-0752	Cap-Plug
276-0753	Cap-Plug
276-0754	Cap-Plug
276-0755	Cap-Plug
276-0756	Cap-Plug
276-0757	Cap-Plug
276-0731	Cap-Plug
276-0740	Cap-Plug
276-0741	Cap-Plug
276-0742	Cap-Plug
276-0743	Cap-Plug
276-0744	Cap-Plug
276-0745	Cap-Plug
276-0746	Cap-Plug

## ORFS Plugs



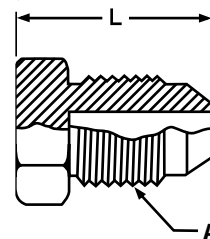
- Used to help protect against damage, dirt and moisture contamination, and corrosion during shipping and storage

Part Number	Thread Dash Size (A)	Thread Size (A) (in - TPI)	L Length
6V-9507	-4	9/16 - 18	0.67 in, 17 mm
6V-9510	-10	1 - 14	1.02 in, 26 mm
231-3942	-24	2-12	1.10 in, 28 mm
6V-9508	-6	11/16 - 16	0.75 in, 19 mm
6V-9509	-8	13/16 - 16	0.87 in, 22 mm
6V-9511	-12	1 3/16 - 12	1.06 in, 27 mm
6V-9512	-16	1 7/16 - 12	1.10 in, 28 mm
6V-9513	-20	1 11/16 - 12	1.10 in, 28 mm

### JIC 37° Plugs

- Used to help protect against damage, dirt and moisture contamination, and corrosion during shipping and storage

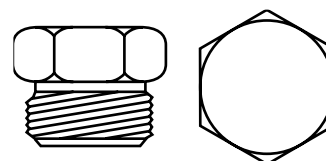
Part Number	Thread Dash Size (A)	Thread Size (A) (in - TPI)	L Length (In)
5P-2299	-16	1 5/16 - 12	1.34
9S-5518	-4	7/16 - 20	0.79
9S-8895	-12	1 1/16 - 12	1.26
9S-8927	-6	9/16 - 18	0.83
5P-4996	-5	1/2 - 20	0.79
5P-2909	-8	3/4 - 16	0.94
2P-9697	-10	7/8 - 14	1.10
5P-4299	-14	1 3/16 - 12	1.30



### Straight Thread O-Ring - Hex Head Plugs

- Used to help protect against damage, dirt and moisture contamination, and corrosion during shipping and storage

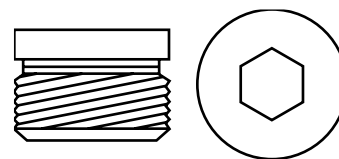
Part Number	Thread Size (in - TPI)	O-Ring Seal
9S-4180	5/16 - 24	4J-7533
9S-4181	1 5/16 - 12	7M-8485
9S-4182	7/16 - 20	3J-7354
9S-4183	1 1/16 - 12	3D-2824
9S-4188	1 3/16 - 12	4K-1388
9S-6130	1 5/8 - 12	2S-4078
9S-7583	2 1/2 - 12	030-4606
1N-5998	1 7/8 - 12	6K-6307
1N-5999	3/8 - 24	7J-0204
3K-8460	1/2 - 20	1J-9671
9S-4190	7/8 - 14	2M-9780
9S-4185	3/4 - 16	3K-0360
9S-4191	9/16 - 18	3J-1907



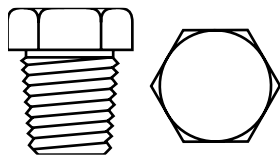
### Straight Thread O-Ring - Hex Drive Plugs

- Used to help protect against damage, dirt and moisture contamination, and corrosion during shipping and storage

Part Number	Thread Size (in - TPI)	O-Ring Seal
5P-7684	1 7/8 - 12	6K-6307
9S-8001	5/16 - 24	4J-7533
9S-8002	7/16 - 20	3J-7354
9S-8003	1/2 - 20	1J-9671
9S-8004	9/16 - 18	3J-1907
9S-8005	3/4 - 16	3K-0360
9S-8006	7/8 - 14	2M-9780
9S-8007	3/8 - 24	7J-0204
9S-8008	1 1/16 - 12	3D-2824
9S-8009	1 3/16 - 12	4K-1388
9S-8010	1 5/8 - 12	2S-4078
9S-9334	1 5/16 - 12	7M-8485



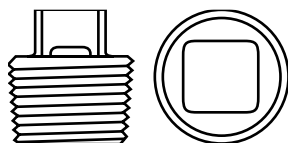
## Pipe - Hex Head Plugs



- Used to help protect against damage, dirt and moisture contamination, and corrosion during shipping and storage

Part Number	Thread Size (in - TPI)
090-9019	1 - 11 1/2
2S-7905	1/16 - 27
3J-5390	3/8 - 18
3M-7045	3/4 - 14
4J-4382	1/2 - 14
5M-6213	1/4 - 18
5M-6214	1/8 - 27

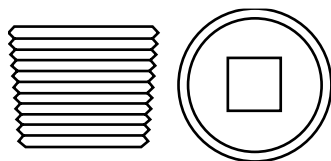
## Pipe - Square Head Plugs



- Used to help protect against damage, dirt and moisture contamination, and corrosion during shipping and storage

Part Number	Thread Size (in - TPI)
068-0710	1 1/4 - 11 1/2
2B-7408	1/8 - 27
2B-7409	1/4 - 18
2B-7457	3/8 - 18
5P-3320	3/4 - 14
5B-9169	1/2 - 14
7L-2505	1 - 11 1/2

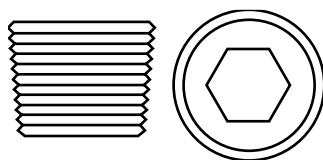
## Pipe - Square Drive Plugs



- Used to help protect against damage, dirt and moisture contamination, and corrosion during shipping and storage

Part Number	Thread Size (in - TPI)
1B-5170	1 1/4 - 11 1/2
1B-5174	3/4 - 14
2B-0858	1/2 - 14
3B-0551	1 - 11 1/2
4B-4845	3/8 - 18
6V-1897	2 - 11 1/2
6V-3280	2 1/2 - 8
7B-9665	1 1/2 - 11 1/2
7F-9504	1/4 - 18

## Pipe - Hex Drive Plugs

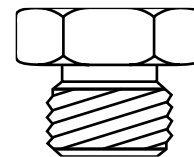


- Used to help protect against damage, dirt and moisture contamination, and corrosion during shipping and storage

Part Number	Thread Size (in - TPI)
2R-5657	1 - 11 1/2
4D-0514	1/16 - 27
7H-3171	1/4 - 18
7M-7410	3/8 - 18
9F-2247	1/8 - 27

## JIS - BSPP Shipping Plugs

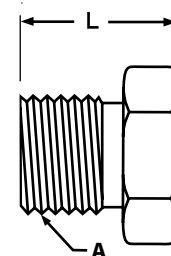
- Used to help protect against damage, dirt and moisture contamination, and corrosion during shipping and storage



Part Number	JIS-BSPP Thread Size (in - TPI)
093-1321	1/4 - 19
093-1322	1/2 - 14
093-1323	3/4 - 14
096-3829	1 - 11
096-6073	3/8 - 19

## Metric Plugs

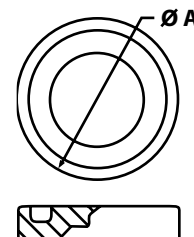
- Used to help protect against damage, dirt and moisture contamination, and corrosion during shipping and storage



Part Number	Light Duty Tube O.D. (mm)	Heavy Duty Tube O.D. (mm)	L Length (In) (mm)
2Y-5841	10	8	0.63 in, 16 mm
2Y-6461	10	8	0.71 in, 18 mm
2Y-6462	8	6	0.63 in, 16 mm
8C-4424	14	14	1.06 in, 27 mm
9T-6322	8	6	0.87 in, 22 mm

## SAE Code 61 Flange Port Cover

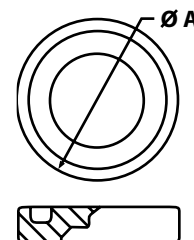
- Used to help protect against damage, dirt and moisture contamination, and corrosion during shipping and storage



Part Number	Head Size (A) (in)	Flange (mm)
2J-2668	2.38	60.3
2J-5608	2.81	71.4
5H-4017	1.19	30.2
5H-4018	1.50	38.1
5H-4019	1.75	44.5
5H-4020	2.00	50.8

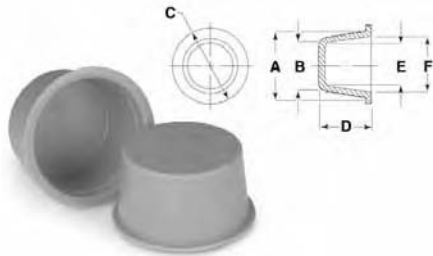
## Cat® Flange Port Cover

- Used to help protect against damage, dirt and moisture contamination, and corrosion during shipping and storage



Part Number	Head Size (A) (in)	Flange (mm)
5P-0045	1.25	31.8
5P-0046	1.63	41.3
5P-0047	1.88	47.6
5P-0048	2.12	54.0
5P-0049	2.50	63.5
5P-0050	3.13	79.4

## Tapered Dual-Function Caps and Plugs



To assure a proper fit, dimension “E” should be approximately .020 in smaller than the opening diameter of the part to be protected, or dimension “A” should be approximately .020 in larger than the opening diameter of the part to be protected.

- The tapered design allows the part to plug multiple inner diameters or cap multiple outside diameters
- Protects against damage, dirt, moisture and corrosion during storage and shipping
- Material: Low-Density Polyethylene
- Color: Blue
- Applicable Spec: NAS 834 (supercedes MIL-C-5501/7, MIL-C-52078)
- Tapered Dual-Function Caps and Plugs

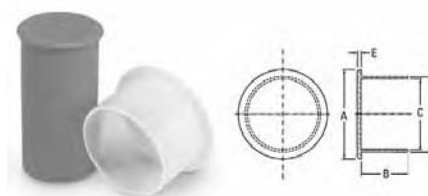
Part Number	Package Quantity	Length (A) (in)	Length (A) (mm)	Length (B) (in)	Length (B) (mm)	Length (C) (in)	Length (C) (mm)	Length (D) (in)	Length (D) (mm)	Length (E) (in)	Length (F) (in)	Supplier Part Number
<b>Tapered Dual-Function Caps and Plugs</b>												
276-0731	250	0.18	5	0.11	3	0.31	8	0.40	10	0.05	0.11	1 T-0-X
276-0740	250	0.24	6	0.17	4	0.37	10	0.37	10	0.10	0.17	2 T-1
276-0741	250	0.27	7	0.20	5	0.43	11	0.37	10	0.15	0.20	4 T-1-X
276-0742	250	0.30	8	0.24	6	0.46	12	0.37	10	0.17	0.24	5 T-2
276-0743	250	0.33	9	0.26	7	0.46	12	0.37	10	0.20	0.27	6 T-2-X
276-0744	250	0.36	9	0.30	8	0.53	13	0.37	10	0.23	0.30	7 T-3
9U-7067	250	0.40	10	0.33	8	0.56	14	0.38	10	0.27	0.33	8 T-3-X
9U-7068	250	0.43	11	0.36	9	0.59	15	0.38	10	0.30	0.37	9 T-4
276-0745	250	0.46	12	0.39	10	0.62	16	0.37	10	0.32	0.39	10 T-4-X
9U-7069	250	0.49	12	0.42	11	0.59	15	0.38	10	0.36	0.42	11 T-5
276-0746	250	0.51	13	0.44	11	0.62	16	0.40	10	0.38	0.44	12 T-5-X
9U-7070	250	0.55	14	0.49	12	0.72	18	0.50	13	0.41	0.49	13 T-6-5
276-0747	250	0.56	14	0.50	13	0.75	19	0.43	11	0.43	0.50	14 T-6-X
9U-7071	250	0.62	16	0.53	13	0.75	19	0.50	13	0.47	0.55	16 T-7-X
9U-7072	250	0.63	16	0.55	14	0.78	20	0.50	13	0.49	0.57	17 T-8
276-0748	250	0.67	17	0.58	15	0.87	22	0.53	13	0.52	0.60	18 T-8-X
276-0749	250	0.69	18	0.61	15	0.84	21	0.50	13	0.54	0.63	20 T-9
9U-7073	250	0.73	18	0.64	16	0.88	22	0.50	13	0.58	0.67	21 T-9-X
9U-7074	250	0.75	19	0.67	17	0.88	22	0.63	16	0.62	0.69	22 T-10
9U-7075	250	0.79	20	0.69	18	0.94	24	0.63	16	0.63	0.72	23 T-11
9U-7076	250	0.85	22	0.75	19	1.03	26	0.63	16	0.69	0.79	27 T-12
9U-7077	250	0.91	23	0.80	20	1.09	28	0.75	19	0.74	0.85	28 T-12-X
276-0750	250	0.93	24	0.82	21	1.12	29	0.62	15	0.75	0.86	29 T-13-A
9U-7078	250	0.98	25	0.87	22	1.11	28	0.63	16	0.81	0.92	31 T-13-X
9U-7079	250	1.04	26	0.90	23	1.16	29	0.75	19	0.83	0.98	35 T-14
9U-7080	250	1.09	28	0.97	25	1.25	32	0.75	19	0.90	1.03	40 T-14
9U-7081	250	1.15	29	1.00	25	1.31	33	0.75	19	0.94	1.08	41 T-14-X
9U-7082	250	1.23	31	1.11	28	1.52	39	0.75	19	1.04	1.18	42 T-15-X
7E-8716	250	1.29	33	1.18	30	1.44	37	0.75	19	1.11	1.22	44 T-15-S
276-0751	250	1.35	34	1.22	31	1.50	38	0.75	19	1.16	1.29	45 T-16
9U-7084	250	1.35	34	1.24	31	1.50	38	0.75	19	1.17	1.30	46 T-16
276-0752	250	1.45	40	1.29	33	1.62	41	1.00	25	1.22	1.39	48 T-17
276-0753	250	1.46	37	1.31	33	1.62	41	0.75	19	1.24	1.40	49 T-17
9U-7085	250	1.60	41	1.45	37	1.75	44	0.75	19	1.39	1.54	53 T-18
9U-7086	100	1.60	41	1.52	39	1.75	44	0.75	19	1.46	1.54	54 T-18-X
9U-7087	100	1.68	43	1.56	40	1.88	48	0.75	19	1.50	1.62	55 T-19
276-0754	100	1.75	44	1.60	41	1.93	49	0.75	19	1.56	1.68	56 T-19

(Continued)

## Tapered Dual-Function Caps and Plugs (Continued)

Part Number	Package Quantity	Length (A) (in)	Length (A) (mm)	Length (B) (in)	Length (B) (mm)	Length (C) (in)	Length (C) (mm)	Length (D) (in)	Length (D) (mm)	Length (E) (in)	Length (F) (in)	Supplier Part Number
<b>Tapered Dual-Function Caps and Plugs (Continued)</b>												
9U-7088	100	1.88	48	1.75	44	2.03	52	0.75	19	1.69	1.82	57 T-210
9U-7089	100	1.94	49	1.81	46	2.13	54	1.00	25	1.75	1.88	58 T-21
276-0755	100	2.02	51	1.84	47	2.12	54	1.00	25	1.78	1.93	60 T-22-S
276-0756	100	2.16	55	1.98	50	2.25	57	1.00	25	1.91	2.11	63 T-25-A
276-0757	100	2.25	57	2.06	52	2.43	62	1.03	26	2.00	2.17	66 T-240
9U-7090	50	2.26	57	2.23	57	2.50	64	0.50	13	2.17	2.20	68 T-240
9U-7091	50	2.47	63	2.30	58	2.63	67	1.00	25	2.24	2.40	71 T-43-A
276-0758	50	2.60	66	2.39	61	2.62	67	1.00	25	2.33	2.54	73 T-44
276-0759	50	2.69	68	2.56	65	2.87	73	0.75	19	2.50	2.62	77 T-44
9U-7092	50	2.79	71	2.65	67	3.00	76	0.50	13	2.58	2.73	78 T-45-A
6V-7494	50	3.00	76	2.74	70	3.13	79	1.00	25	2.68	2.94	81 T-57-A
276-0760	50	3.24	82	2.98	76	3.37	86	1.00	25	2.90	3.16	85 T-501
9U-7094	50	3.45	88	3.32	84	3.63	92	0.50	13	3.24	3.37	87 T1050
9U-7095	50	3.58	91	3.24	82	3.94	100	1.00	25	3.16	3.49	88 T1051
276-0761	50	3.75	95	3.55	90	4.00	102	1.00	25	3.47	3.67	K-851 T-502
276-0762	50	3.92	100	3.80	97	4.12	105	0.68	17	3.71	3.84	91 T-1063
9U-7096	50	4.46	113	4.22	107	5.00	127	1.00	25	4.14	4.38	94 T1076
6V-7496	50	4.62	117	4.37	111	5.00	127	1.00	25	4.29	4.50	95 T-1076

## Straight Cap



Part Number	Package Quantity	Material	Length (A) (in)	Length (A) (mm)	Length (B) (in)	Length (B) (mm)	Length (C) (in)	Length (C) (mm)	Length (D) (in)	Length (D) (mm)	Length (E) (in)
217-1591	50	1	1.25	31.65	0.67	17	1	25.22	1.06	26.82	0.05

## Non-threaded Caps

Part Number	Package Quantity	Material <sup>1</sup>	Diameter (A) (in)	Length (B) (in)	Length (B) (mm)
9U-7166	250	1	0.13	0.63	16
9U-7167	250	1	0.25	0.88	22
9U-7168	250	1	0.30	0.88	22
9U-7169	250	1	0.38	0.88	22
9U-7170	250	1	0.44	0.88	22
9U-7171	250	1	0.50	0.88	22
9U-7172	250	1	0.56	0.88	22
9U-7173	250	1	0.63	0.88	22
9U-7174	100	1	0.69	0.88	22
9U-7175	100	1	0.75	0.88	22
9U-7176	100	1	0.81	0.88	22
9U-7177	100	1	0.88	0.88	22



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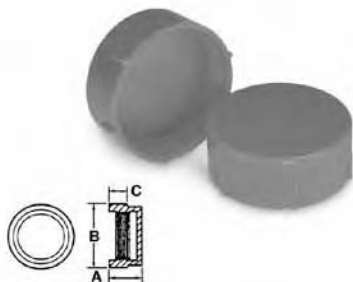
# Caps and Plugs

## Non-threaded Caps (Continued)

Part Number	Package Quantity	Material <sup>1</sup>	Diameter (A) (in)	Length (B) (in)	Length (B) (mm)
9U-7178	100	1	1.00	0.75	19
9U-7179	100	1	1.06	0.88	22
9U-7180	100	1	1.19	1.00	25
9U-7181	100	1	1.25	0.88	22
9U-7182	100	1	1.31	0.88	22
9U-7183	100	1	1.38	0.88	22
9U-7184	100	1	1.44	0.88	22
9U-7185	100	1	1.50	0.88	22
9U-7186	100	1	1.63	1.00	25
9U-7187	100	1	1.69	0.88	22
9U-7188	100	1	1.75	0.88	22
9U-7189	100	1	1.88	0.88	22
9U-7190	100	1	2.00	0.88	22
9U-7191	100	1	2.13	0.88	22
9U-7192	100	1	2.38	0.88	22
9U-7193	100	1	2.50	0.88	22
9U-7194	50	1	3.13	1.38	35

<sup>1</sup> 1 - Grade 1 Virgin Polyethylene; 2 - Low Density Polyethylene; 3 - High Density Polyethylene

## Metric Threaded Cap Protectors



Part Number	Package Quantity	Material <sup>1</sup>	Diameter x Pitch	Length (A) (in)	Length (A) (mm)	Length (B) (in)	Length (B) (mm)	Length (C) (in)	Length (C) (mm)
9U-7145	100	2	M10 x 1.0	0.39	10	0.54	14	0.29	8
9U-7146	100	2	M12 x 1.5	0.47	12	0.62	16	0.37	10
9U-7147	100	2	M14 x 1.5	0.47	12	0.70	18	0.37	10
9U-7148	100	2	M16 x 1.5	0.47	12	0.78	20	0.37	10
9U-7149	100	2	M18 x 1.5	0.55	14	0.85	22	0.45	12
9U-7150	100	2	M20 x 1.5	0.55	14	0.92	24	0.37	10
9U-7151	50	2	M22 x 1.5	0.54	14	1.02	26	0.45	12
9U-7152	50	2	M24 x 1.5	0.55	14	1.14	29	0.45	12
9U-7153	50	2	M26 x 1.5	0.55	14	1.18	30	0.45	12

<sup>1</sup> 1 - Grade 1 Virgin Polyethylene; 2 - Low Density Polyethylene; 3 - High Density Polyethylene

## Metric Threaded Plug Protectors



Part Number	Package Quantity	Material <sup>1</sup>	Diameter x Pitch	Length (A) (in)	Length (A) (mm)	Length (B) (in)	Length (B) (mm)	Length (C) (in)	Length (C) (mm)
9U-7137	100	2	M12 x 1.0	0.66	17	0.73	19	0.42	11
9U-7138	50	2	M14 x 1.5	0.68	17	0.73	19	0.37	10
9U-7139	50	2	M16 x 1.5	0.68	17	0.87	22	0.50	13
9U-7140	50	2	M18 x 1.5	0.72	18	0.96	24	0.54	14
9U-7141	50	2	M20 x 1.5	0.72	18	1.04	26	0.55	14
9U-7142	50	2	M22 x 1.5	0.72	18	1.11	28	0.54	14
9U-7143	50	2	M24 x 1.5	0.73	19	1.23	31	0.54	14
9U-7144	50	2	M26 x 1.5	0.73	19	1.46	37	0.54	14
9U-7136	100	2	M10 x 1.0	0.57	15	0.60	15	0.41	10

<sup>1</sup>1 - Grade 1 Virgin Polyethylene; 2 - Low Density Polyethylene; 3 - High Density Polyethylene

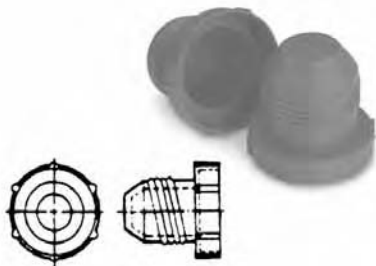
## Threaded and Slotted Plug Protectors



Part Number	Package Quantity	Material <sup>1</sup>	Thread Size (in - TPI)	Tube Diameter (in)	Length (A) (in)	Length (A) (mm)	Length (B) (in)	Length (B) (mm)	Length (C) (in)	Length (C) (mm)	Length (D) (in)	Length (D) (mm)
9U-7104	250	3	7/16 - 20	--	0.43	11	0.62	11	0.18	5	0.30	5
9U-7105	100	3	1/2 - 20	--	0.50	13	0.68	13	0.18	5	0.36	5
9U-7106	100	3	9/16 - 18	--	0.50	13	0.75	13	0.18	5	0.33	5
9U-7107	100	3	3/4 - 16	--	0.68	17	0.94	17	0.19	5	0.44	5
9U-7108	100	3	7/8 - 14	--	0.75	19	1.06	19	0.24	6	0.50	6
9U-7109	100	3	1 1/16 - 14	--	0.87	22	1.31	22	0.25	6	0.62	6
9U-7110	50	3	1 3/16 - 12	--	1.00	25	1.50	25	0.30	8	0.70	8
9U-7111	50	3	1 5/16 - 12	1.00	1.07	27	1.62	27	0.30	8	0.70	8
9U-7112	50	3	1 7/8 - 12	--	1.13	29	1.88	29	0.30	8	0.75	8
9U-7113	50	3	1 7/8 - 12	--	1.50	38	2.13	38	0.30	8	0.75	8

<sup>1</sup>1 - Grade 1 Virgin Polyethylene; 2 - Low Density Polyethylene; 3 - High Density Polyethylene

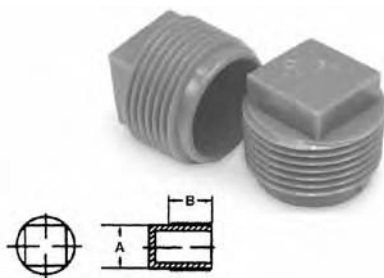
## Threaded Plug Protectors for Flared Fittings



Part Number	Package Quantity	Material <sup>1</sup>	Thread Size (in - TPI)	Tube Diameter (in)
9U-7114	250	1	7/16 - 20	0.25
9U-7115	250	1	9/16 - 18	0.38
9U-7116	250	1	3/4 - 16	0.50
9U-7117	100	1	7/8 - 14	0.63
9U-7118	100	1	1 1/16 - 12	0.75
9U-7119	100	1	1 5/16 - 12	1.00

<sup>1</sup> 1 - Grade 1 Virgin Polyethylene; 2 - Low Density Polyethylene; 3 - High Density Polyethylene

## Plug Protectors for NPT Thread - Square Head



Part Number	Package Quantity	Material <sup>1</sup>	Thread Size (in - TPI)	Length (A) (in)	Length (A) (mm)	Length (B) (in)	Length (B) (mm)
9U-7098	250	3	1/8 - 27	0.28	7	0.38	10
9U-7099	250	3	1/4 - 18	0.38	10	0.44	11
9U-7100	250	3	3/8 - 18	0.44	11	0.50	13
9U-7101	250	3	1/2 - 14	0.56	14	0.56	14
9U-7102	100	3	3/4 - 14	0.69	17	0.63	16

<sup>1</sup> 1 - Grade 1 Virgin Polyethylene; 2 - Low Density Polyethylene; 3 - High Density Polyethylene

## Plug Protectors for NPT Thread - Knurled Head



Part Number	Package Quantity	Material <sup>1</sup>	Thread Size (in - TPI)	Length (A) (in)	Length (A) (mm)	Length (B) (in)	Length (B) (mm)	Length (C) (in)	Length (C) (mm)	Length (D) (in)	Length (D) (mm)
9U-7103	100	3	1 - 11 1/2	0.50	13	1.57	40	0.25	6	1.18	30

<sup>1</sup> 1 - Grade 1 Virgin Polyethylene; 2 - Low Density Polyethylene; 3 - High Density Polyethylene

## Tear Cap Protectors for Standard Thread

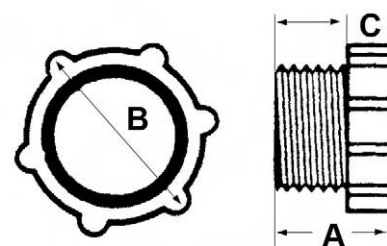


Part Number	Package Quantity	Material <sup>1</sup>	Thread Size (in - TPI)	JIC/SAE Fitting	Length (A) (in)	Length (A) (mm)	Length (B) (in)	Length (B) (mm)
9U-7120	250	1	7/16 - 20	4-TS	0.46	12	0.43	11
9U-7121	250	1	1/2 - 20	5-TS	0.46	12	0.49	12
9U-7122	250	1	9/16 - 18	6-TS	0.48	12	0.55	14
9U-7123	250	1	11/16 - 16	7-TS	0.48	12	0.67	17
9U-7124	250	1	3/4 - 16	8-TS	0.56	14	0.74	19
9U-7125	250	1	13/16 - 16	9-TS	0.56	14	0.80	20
9U-7126	250	1	7/8 - 14	10-TS	0.65	17	0.87	22
9U-7127	250	1	1 - 14	11-TS	0.65	17	0.99	25
9U-7128	250	1	1 1/16 - 12	12-TS	0.75	19	1.05	27
9U-7129	250	1	1 3/16 - 12	13-TS	0.75	19	1.17	30
9U-7130	100	1	1 5/16 - 12	16-TS	0.75	19	1.30	33
9U-7131	100	1	1 7/16 - 12	17-TS	0.75	19	1.43	36
9U-7132	100	1	1 9/8 - 12	20-TS	0.83	21	1.62	41
9U-7133	100	1	1 11/16 - 12	21-TS	0.83	21	1.67	42
9U-7134	100	1	1 7/8 - 12	24-TS	0.95	24	1.87	48
9U-7135	50	1	2 1/2 - 12	32-TS	1.20	30	2.49	63

<sup>1</sup> 1 - Grade 1 Virgin Polyethylene; 2 - Low Density Polyethylene; 3 - High Density Polyethylene

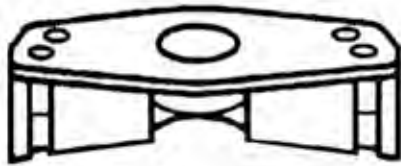
## British Thread - BSP/GAS Plug Protectors

Part Number	Package Quantity	Material <sup>1</sup>	Thread Size (in - TPI)	Length (A) (in)	Length (A) (mm)	Length (B) (in)	Length (B) (mm)	Length (C) (in)	Length (C) (mm)
9U-7195	100	2	1/8 - 28	0.41	11	0.65	16	0.16	4
9U-7196	100	2	1/4 - 19	0.50	13	0.74	19	0.26	7
9U-7197	100	2	3/8 - 19	0.47	12	0.90	23	0.27	6
9U-7198	100	2	1/2 - 14	0.68	17	1.10	28	0.41	10
9U-7199	50	2	5/8 - 14	0.72	18	1.23	31	0.51	13
9U-7200	50	2	3/4 - 14	0.67	17	1.27	32	0.43	11
9U-7201	50	2	7/8 - 14	0.71	18	1.50	38	0.53	14
9U-7202	50	2	1 - 11	0.66	17	1.57	40	0.42	11



<sup>1</sup> 1 - Grade 1 Virgin Polyethylene; 2 - Low Density Polyethylene; 3 - High Density Polyethylene

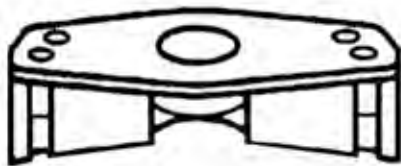
## SAE Code Flange 61 Bolted Protectors



Part Number	Package Quantity	Material <sup>1</sup>	Thread Size (in - TPI)
9U-7154	25	1	1/2 NPT
9U-7155	25	1	3/4 NPT
9U-7156	25	1	1 NPT
9U-7157	25	1	1 1/4 NPT
9U-7158	25	1	1 1/2 NPT
9U-7159	25	1	2 NPT
9U-7160	25	1	2 1/2 NPT

<sup>1</sup>1 - Grade 1 Virgin Polyethylene; 2 - Low Density Polyethylene; 3 - High Density Polyethylene

## SAE Code 62 and Cat<sup>®</sup> Flange Bolted Protectors



Part Number	Package Quantity	Material <sup>1</sup>	Thread Size (in - TPI)
9U-7161	25	1	3/4 NPT
9U-7162	25	1	1 NPT
9U-7163	25	1	1 1/4 NPT
9U-7164	25	1	1 1/2 NPT
9U-7165	25	1	2 NPT

<sup>1</sup>1 - Grade 1 Virgin Polyethylene; 2 - Low Density Polyethylene; 3 - High Density Polyethylene

**Tradesman Vises**

Warranty: Manufacturer's

- Replaceable, hardened steel serrated jaw inserts and replaceable pipe jaws
- Precision, machined keyed slide bar
- Built for maximum quality and performance
- Straight line design means no wear on spindle or nut
- 360° swivel base, double lockdowns
- Side play eliminated by precision machined slide bar—keyed for precision
- Fully enclosed design keeps dirt and contaminants out



Part Number	Jaw Width	Pipe Capacity	Throat Depth	Max. Opening Width	Shipping Weight	Replacement Jaw Insert Kits	Replacement Pipe Jaw Inserts	Replacement Jaw Insert
233-8146	5 in	1/4 in- 2 1/2 in	3 3/4 in	5 1/4 in	50.0 lb	236-2655	236-2654	--
233-8147	6 in	1/4 in- 3 1/2 in	4 1/8 in	5 3/4 in	64.0 lb	236-2648	236-2654	--
233-8145	4 in	1/4 in-2 in	3 7/16 in	4 1/2 in	37.0 lb	--	236-2654	--
188-2163	8 in	1/8 in- 3 1/2 in	4 3/4 in	7 in	109.0 lb	--	--	--
Replacement Parts for Non Current Vises								
188-2143	4 1/2 in	--	--	--	--	--	4C-4400	--
188-2145	5 1/2 in	--	--	--	--	--	4C-4400	188-2167
188-2147	6 1/2 in	--	--	--	--	--	4C-4400	188-2170
4C-3741	4 in	--	--	--	--	--	4C-4400	--
4C-3742	5 in	--	--	--	--	--	4C-4400	4C-4392
4C-3743	6 in	--	--	--	--	--	4C-4400	4C-4393

**Machinist Vises**

Warranty: Manufacturer's

- Stressed parts made of 60,000 PSI tensile strength ductile iron
- Straight line design guarantees a lifetime spindle and nut
- Precision slide bar is moveable, maintained with hardened steel key, insuring a .002 mm fit
- 360° slip proof swivel base—serrated teeth and double lockdowns
- Largest anvil of any machinists' vise



Shop Supplies

(Continued)

## Machinist Vises (Continued)

Warranty: Manufacturer's

Part Number	Wilton Part Number	Jaw Width	Throat Depth	Max. Opening Width	Shipping Weight	Replacement Jaw Insert
4C-3751	350S	3 1/2 in	2 3/4 in	5 1/4 in	46.00 lb	--
4C-3752	400S	4 in	3 1/2 in	6 1/2 in	66.00 lb	--
4C-3753	450S	4 1/2 in	4 3/16 in	7 1/2 in	73.00 lb	4C-4394
4C-3754	500S	5 in	4 1/4 in	8 in	97.00 lb	4C-4399

## Combination Pipe and Bench Vises

Warranty: Manufacturer's



- Stressed parts made of 60,000 PSI tensile strength ductile iron
- Replaceable hardened steel jaw inserts
- Hardened, replaceable steel pipe jaws
- Alloy steel slide bar

Part Number	Wilton Part Number	Jaw Width	Pipe Capacity	Throat Depth	Max. Opening Width	Shipping Weight	Replacement Jaw Insert
4C-3744	C-1	4 1/2 in	1/8 in- 3 1/2 in	4 3/4 in	6.00 in	80.0 lb	4C-4394
4C-3745	C-2	5 in	1/8 in- 4 1/2 in	5 5/16 in	7.00 in	113.0 lb	4C-4395
4C-3746	C-3	6 in	3/8 in-6 in	6 5/8 in	9.00 in	209.0 lb	4C-4396

## Model R — Rubber Face Magnefix Jaw Caps



- Aluminum alloy with synthetic rubber cover
- Jaw cap conforms to workpiece and grips firmly without slipping
- Designed to prevent cushioning during use
- Use in combination with Prism Jaw Caps to clamp taper pins or tapered workpieces
- Mar-free
- Jaw caps sold separately

Part Number	Jaw Width	Use with these Vises or any other with the same Jaw Width
4C-6830	4 in	4C-3752
4C-6831	4 1/2 in	4C-3753, 4C-3744
4C-6832	5 in	4C-3754, 4C-3745
4C-6833	6 in	4C-3746

### Model P — Prism Magnefix Jaw Caps

- Jaw construction includes a 120° horizontal Vee-Groove, 3 vertical Vee-Grooves and a 90° groove for marking out and center punching
- Ideal for light tapping and thread cutting applications
- Capable of clamping a block of material in a vise to be utilized as a surface plate for light duty work
- Jaw caps sold separately



Part Number	Jaw Width	Use with these Vises or any other with the same Jaw Width
4C-6835	4 1/2 in	4C-3753, 4C-3744
4C-6836	5 in	4C-3754, 4C-3745
4C-6837	6 in	4C-3746

### Jaw Caps

- Designed to avoid marring the surface of softer metals and to protect jaw faces
- Made to fit any size vise
- Polished faces and pliable copper extensions for a sure-grip fit on any make vise

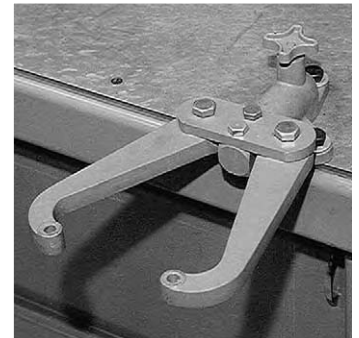
Part Number	Description	Width
4C-3750	Jaw Cap	4 in
4C-3749	Jaw Cap	4 1/2 in
4C-3748	Jaw Cap	5 in
4C-3747	Jaw Cap	6 in



### Holding Fixture

- Mounts on workbench
- Use to secure components during assembly and disassembly
- Capable of holding small transmissions, differentials, hydraulic pumps, water pumps and electrical components

Part Number	Capacity
2P-8338	250.0 lb





## Yoke Pipe Vise



- Used to brace pipe for cutting and machining
- Used for pipe from 10 through 102 mm (1/8 through 3 1/2 in)

Part Number	Weight
127-1909	7.4 kg (16.23 lb)

## Regular Duty, Standard Throat C-Clamps



- Recommended for regular-duty work not requiring unusual throat depth
- Drop forged from specially selected steels
- Light enough for production line use
- Equipped with Wilton Permapad and lifetime lubricated spindles of through-hardened steel
- Finished in grey enamel

Part Number	Capacity	Throat Depth	Spindle Diameter	Minimum Proof Test	Weight
4C-3755	0 - 2 in	1 13/16 in	9/16 in	2.00 lb	1 3/8 lb
4C-3756	0 - 3 in	1 15/16 in	9/16 in	3.00 lb	1 43/64 lb
4C-3757	0 - 4 in	2 5/16 in	5/8 in	3.00 lb	2 3/4 lb
4C-3758	0 - 6 in	2 15/16 in	5/8 in	4.00 lb	3 3/4 lb
4C-3759	2 in - 8 in	3 7/16 in	3/4 in	5.00 lb	7 lb
4C-3760	1 1/2 in - 10 in	3 3/4 in	3/4 in	6.00 lb	8 3/8 lb
4C-3761	1 1/8 in - 12 in	3 7/8 in	3/4 in	8.00 lb	12 lb

## Cat® Battery Tester

Warranty: Manufacturer's

### 4C-4911

- 1000 Amp Load Tester is ideal for battery distributors, high volume testing and fleet use.
- High resolution carbon pile assembly ensures maximum contact, reduces hot spots, prevents edge burning and provides smoother operation and longer life.
- High rpm fan cools for continuous battery testing

Part Number	Load	Ammeter	Voltmeter	Leads	Clamps	Limited Warranty	Weight	Shipping Dimensions (H x W x D)
4C-4911	1000A	0 - 1999 Amps	0 - 19.99 V DC	5 ft - 2 AWG	Vinyl insulated steel with flexi-spring and copper jaw	1 year	34 lb (15.4 kg)	16 in x 15 in x 15 in (.40 m x .38 m x .38 m)

## Multi-Battery Parallel Chargers

Warranty: Manufacturer's

### 4C-4913

- Charges 1 - 10, 12 Volt Batteries, in parallel, in less than 24 hours
- 16 charge rates offer precise charging
- Alternate model 4C-4914 charges 1 - 36, 12 Volt batteries in parallel
- Digital control panel (Eric please verify with AE) shows testing efficiency results
- UL Listed (Eric please verify with AE for CE compliance)
- Can be mounted on wall or bench

Additional accessories available:

- 4C-4917 Buss Bar ensures convenient way to hook up 10 batteries in parallel. Buss Bar includes 10 pairs of leads with insulated fiberglass backboard, with 300 Amp insulated safety clamps.
- 9U-5784 Charging Rack that stores up to 15 batteries

### 4C-4914

- Charges 1 - 36, 12 Volt Batteries, in parallel, in less than 24 hours
- Designed for 190 – 262 Vac 50/60Hz electrical environments
- Includes a patented multi-diode rectifier with a deep reserve capacity
- Circuit breaker protection and isolated transformer provides added safety
- Can be mounted on a wall or bench
- UL Listed

Additional accessories available:

- 4C-4917 Buss Bar ensures convenient way to hook up to 10 batteries in parallel, includes 10 pairs of leads with insulated fiberglass backboard
- 9U-5784 Charging Rack that stores up to 15 batteries

### 4C-9799

- Charges 1 – 10, 12 Volt Batteries, in parallel, in less than 24 hours
- Designed for 220 VAC 50/60Hz electrical environments
- Includes a patented multi-diode rectifier with a deep reserve capacity
- Circuit breaker protection and isolated transformer provides added safety
- Can be mounted on a wall or bench
- Is the 6068 UL listed and CE Approved? (Eric must find out from AE)

Additional accessories available:

- 4C-4917 Buss Bar ensures convenient way to hook up to 10 batteries in parallel, includes 10 pairs of leads with insulated fiberglass backboard
- 9U-5784 Charging Rack (Eric please verify this information with AE)



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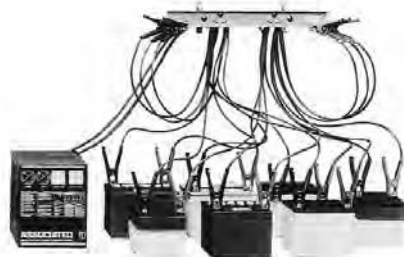
## Multi-Battery Parallel Chargers (Continued)

Warranty: Manufacturer's

Part Number	DC Output	AC Input	Battery Capacity	Charge Rates	Digital Voltmeter	Digital Ammeter	DC Leads	AC Cord	Weight	Shipping Dimensions (H x W x D)
4C-4913	30 Amps, 14.9 Volts	108-132/VAC, 7.5A 60 Hz	Up to 10, 12 Volt Batteries	16	11 - 17 Volts	0 - 50 Amps	1.8 m (6 ft)	6.5 ft	18 kg (40 lb)	16 in x 19 in x 16 in
4C-4914	110 Amps, 15.5 Volts	190-262/VAC, 13.8A 50/60Hz	Up to 36, 12 Volt Batteries	16	0 - 19.99 Volts	0 - 199 Amps	1.5 m (5 ft) 1AWG	No AC cord, must be hard wired	38 kg (83 lb)	26 in x 17 in x 14 in
4C-9799	30 Amps, 14.9 Volts	210 - 250/VAC, 4A, 50/60Hz	Up to 10, 12 Volt Batteries	16	11 - 17 Volts	0 - 50 Amps	m (6.5 ft) 6 1/2 AWG	16A, 2m length (No Plug)	18 kg (40 lb)	16.5 in x 19 in x 16.5 in

## Bus Bar Set

Warranty: Manufacturer's



- Bus Bar Set for parallel charging
- Ten Battery Capacity
- Use one or combine additional bars for additional capacity
- Insulated fiberglass backboard with 10 pairs of DC Charging leads, 4 AWG (36 in) long with 300 Amp insulated safety clamps
- Comes with (3 ft) 4 AWG cables to connect to charger or additional batteries
- Can be mounted on wall or bench
- Ensures convenient way to hook up to 10 batteries in parallel

Part Number	Capacity	Leads	Clamp	Material	Weight	Dimension
4C-4917	Connects for 10 Batteries	10 sets - 4 AWG, (36 in) long	300 Amp Insulated Safety	Insulated Fiberglass Backboard	11 kg (24 lb)	31.25 in x 15.25 in x 5.25 in

## Battery Charging Rack

Warranty: Manufacturer's



- Stores up to 1C batteries
- Three-shelf, heavy gauge steel construction
- Includes 10 pairs of charging leads

Part Number	Description
9U-5784	Battery Charging Rack

## Heavy-Duty Commercial Fast Chargers

Warranty: Manufacturer's

### 4C-4920

- Highest performance fast chargers on the market
- 16 rates of charge and 75 amps
- 75 amps of continuous charge with 375 amps crank assist at 12 Volts
- Fan cooling prevents overheating enhancing unit's life span significantly
- UL and CSA listed with "Safe in Any Weather" Operation
- Patented "Stop / Go" Light
- Automatic reset AC and DC circuit breakers
- Automatic timer

### 4C-4921

- The highest performance fleet charger on the market
- 33% more engine start than the previous model
- 80 amp continuous charge with 400 amp crank assist at 12 Volts
- Fan cooling prevents overheating enhancing unit's life span significantly
- 500 Amp, fully insulated, "Flexi-Spring" clamps
- UL and CSA listed with "Safe in Any Weather" operation
- Patented "Stop / Go" Light
- Automatic reset AC and DC circuit breakers
- Automatic timer

### 4C-4910

- Charges all standard & maintenance free 6/12/24 V batteries
- High Output 220VAC Charger
- Cranking assist rating of 325 amps at 6 Volts
- Fan cooling mechanism prevents overheating enhancing the unit's life span significantly
- Certified for outdoor use, safe in any weather
- Cautions against incorrect polarity with patented "stop-go-light" technology
- CE Approved



Part Number	Electrical Requirements	Battery Voltage	UL Continuous Rating	Weight	UL Cranking Assist Rate	MFGS Boost Rating	AC Cord	DC Leads	Clamp Rating	Shipping Dimension (H x W x D)	Timer
<b>4C-4920 Specifications</b>											
4C-4920	--	6/12 Volt	100/75 Amp	26 kg (58 lb)	375 Amp	625 Amp	10 ft 14-3	8 ft 4 AWG	500 Amp	26 in x 16 in x 14 in	--
<b>4C-4921 Specifications</b>											
4C-4921	--	6/12/18/24 Volt	100/80 Amp	32 kg (70 lb)	400 Amp	725 Amp	10 ft 14-3	8 ft 4 AWG	500 Amp	26 in x 16 in x 14 in	--
<b>4C-2910 Specifications</b>											
4C-4910	230 VAC; 50/60 Hz	6/12/24 Volt	90/75/55 Amp	33 kg (73 lb)	325/270/180 Amp	300/500/700 Amp	2.4m (8 ft)	3 ft 4 AWG	500 Amp	26 in x 16.5 in x 14 in	90 minute auto

## Portable Chargers

Warranty: Manufacturer's



### 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	Con- tinuous Rating	Amps Boost Rating	Cranking Assist Rating	Timer	Weight	AC Cord	DC Leads	Clamp Rating	Shipping Dimen- sions (H x W x D)
<b>4C-4924 Specifications</b>											
4C-4924	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) 16-3 m	7 ft 4/ AWG	500 Amp	--
<b>200-6319 Specifications</b>											
200-6319	12 Volt	120VAC, 2.2A, 60Hz	10 Amp	--	--	--	5 kg (11 lb)	(6 ft) 18-3 m	6 ft 16/ AWG	50 Amp	10 in x 9 in x 9 in

## Extra Heavy-Duty Plug-In Starting System

Warranty: Manufacturer's



- More truck starting power than 8hp gas starter
- Extra heavy duty plug-in starting system ideal for volume car starting in extremely cold climates
- Heavier 1 AWG cable has half the voltage drop as Model 4C-4929 (6139)
- Anti-spark delay timer protection for safety during hook-up
- Circuit breaker protection
- Polarity protection
- 30 foot of tangle-free cables
- For the flush mount version, combine with XX-XXXX (610321)

(Continued)

## Extra Heavy-Duty Plug-In Starting System (Continued)

Warranty: Manufacturer's

Part Number	Description	Total Length	Vehicle Connection Length	Gauge	Cir. Mil. Copper, Jacket	Amp Clamp	Side Terminal Adapters	SAE Rating	Weight	Shipping Dimensions
4C-4930	Extra Heavy-Duty Plug-In Starting System	30 ft	5 ft	1 AWG	83,600 T-94	800 A	No	Super Heavy-Duty	26 lb	9 in x 12 in x 12 in
<b>Service Part</b>										
4C-9917	Power Socket with Battery Cable	--	--	--	--	--	--	--	--	--

## Heavy-Duty Plug-In Starting System

Warranty: Manufacturer's

- Stainless Steel receptacle mounts onto a truck bumper and connects directly to a battery
- Reaches stalled vehicles from front, back or side
- Polarized LEXAN plug won't break in coldest weather
- Solid copper jaw, with patented insulated clamps with "flexi-spring" cable guard
- Patented "stop-go safety light"
- 30 ft of tangle-free cables
- For the flush mount version, combine with 4C-4931 (6125)



Part Number	Description	Total Length	Vehicle Connection Length	Gauge	Cir. Mil. Copper, Jacket	Amp Clamp	Side Terminal Adapters	SAE Rating	Weight	Shipping Dimensions
4C-4929	Heavy-Duty Plug-In Starting System	30 ft	5 ft	4 AWG	41,300 T-94	500 A	Yes	Heavy-Duty	17 lb	6 in x 12 in x 12 in
<b>Service Parts</b>										
4C-4943	Power Socket with battery cable	--	--	--	--	--	--	--	--	--
4C-4946	Polarized Lexan Plug, .45 kg (1 lb)	--	--	--	--	--	--	--	--	--
4C-4944	Plug-in Cable (includes clamps)	--	--	--	--	--	--	--	--	--

## Flush Mount Power Socket

Warranty: Manufacturer's

- Alternative to cabinet style socket — stainless steel plate mounts flush on service vehicle
- For a complete starting system, order 4C-4931 and 4C-4944 Plug-In Cables



Part Number	Description
4C-4931	Flush Mount Power Socket

## Booster Cables

Warranty: Manufacturer's

- 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
<b>Heavy Duty and Super Heavy Duty Cables</b>							
4C-4934 <sup>1</sup>	4 m (12 ft)	5 AWG	32,900	T-94 <sup>2</sup>	500 A	Yes	3.6 kg (7.94 lb)
4C-4938	5 m (15 ft)	1/0 AWG	106,400	T-94 <sup>2</sup>	800 A	No	7.3 kg (16.09 lb)
<b>Booster Cables</b>							
300-5899	6 m (20 ft)	2 AWG	62,450	T-94	600P	No	6.4 kg (14.11 lb)
4C-4933	4 m (12 ft)	4 AWG	37,360	T-94 <sup>2</sup>	500E	No	2.7 kg (5.95 lb)
4C-4935	5 m (16 ft)	4 AWG	37,360	T-94 <sup>2</sup>	500E	No	3.6 kg (7.94 lb)
4C-4936	6 m (20 ft)	4 AWG	37,360	T-94 <sup>2</sup>	500E	No	4.1 kg (9.04 lb)

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

<sup>2</sup> T-94: flexible to 4°C (-40°F)

## Replacement Clamps

Warranty: Manufacturer's

- Designed to grip securely to side terminal and/or post terminal batteries for maximum current carrying capacity
- Color coded (Red/Black) for safety and visual appeal

Part Number	Description	Amps	Jaws	Insulation	Weight/Master
4C-4942	Batteries and Battery Chargers	600	Heavy Gauge Copper	Bonded Vinyl	4.5 kg (9.92 lb)
4C-4940	Replacement clamp for use with 3, 4, and 6 ga cable	500	Copper	Bonded Vinyl	4 kg (8.82 lb)



## Battery Post Set

Warranty: Manufacturer's

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



## Cables

Warranty: Manufacturer's

- Polarized plug on both ends
- Mates with either 4C-9917 or 4C-4943 Power Socket

Part Number	Description	Mates with
4C-9802	3.66 m (12 ft) 1 AWG	4C-9917 Power Socket
4C-9801	3.66 m (12 ft) 4 AWG	4C-4943 Power Socket





**Mini-Maglite Flashlight**

Warranty: Manufacturer's

- For people on-the-go, can be carried on the hip in its own nylon belt holster
- Includes two AA batteries

Part Number	Description	Length
9U-7231	Mini-Maglite Flashlite	5 3/4 inches



**Heavy-Duty Professional Flashlights**

Warranty: Manufacturer's



- High quality
- Designed and manufactured in the U.S.A.
- Precision machined, high strength aluminum exterior components
- Anodized internally and externally for optimum corrosion resistance
- Water resistant O-ring seals throughout protecting an internal self-actuating switch
- Hi-impact, scratch resistant Lexan lens
- Fast action Linear-Focusing flood-to-spot beam with a twist of the wrist
- Extra long lamp life, equivalent of 3 or 4 sets of batteries
- Approximately 5 to 6 hours operating time per set of batteries
- Ambient candle mode for hands free operation
- Spare lamp in tail cap
- Includes two AA size alkaline batteries (4C-9463), available worldwide
- All flashlights have Cat logo

Item	Part Number	Description	Length	Batteries
1	1U-7321	Flashlight	254 mm (10 in) long	2 D cell batteries (replacement lamp 4C-9464)
2	1U-7322	Flashlight	310 mm (12 3/16 in) long	3 D cell batteries (replacement lamp 4C-9465)
3	4C-9442	Flashlight	375 mm (14 3/4 in) long	4 D cell batteries (replacement lamp 4C-9466)
<b>Accessories (Warranty: Six Months)</b>				
4	4C-9448	Mounting Clamp kit for all D cell flashlights, 2 clamps and screws	--	--

**Heavy-Duty Professional Rechargeable Flashlight Accessories**

Warranty: Manufacturer's

Part Number	Description
4C-9470	Halogen Replacement Bulb
4C-9449	Battery Pack, 140 mm (5 1/2 in) D cell, 6 Volt Nicad

Shop Supplies

**Heavy-Duty Flashlights**

Warranty: Manufacturer's

- Water-resistant, made of high impact plastic, with corrosion resistant contact parts and a belt ring to prevent loss
- Battery barrier protects bulb and head contacts from impact force
- Comes with spare bulb
- 4C-9620 meets military standards
- Batteries not included



Part Number	Size	Batteries	Switch	Comes with
1U-7319	210 mm (8 1/4 in) long	2 D cell batteries	—	—
1U-7320	279 mm (11 in) long	3 D cell batteries	—	—
4C-9620	203 mm (8 in) high	2 D cell batteries	3 position switch	Belt clip

**Continuity Tester/Flashlight**

- Made of high impact plastic
- Can be used as a flashlight or continuity tester
- Yellow with black cap
- Uses 2 D cell batteries (not included)
- 1.82 m (72 in) length continuity wires shipped inside flashlight
- Magnet allows your hands to be free for testing



Part Number	Description	Length
1U-7318	Continuity Tester / Flashlight	210 mm (8 1/4 in)
<b>Service Part</b>		
1U-9532	D-Cell Alkaline Battery	--

**Inspection Light**

Warranty: Manufacturer's

- Molded in Lexan, designed to stand up to almost any punishment
- Lightweight, super compact light source
- Water-tight to 609.6 m (2000 ft)
- Shock proof, corrosion proof
- Economical, 30-hour long life lamp module
- Handy shirt clip
- Includes two AA batteries
- Includes 90° light bender



Part Number	Description
141-1655	Inspection Light
<b>Service Part</b>	
4C-6741	Lamp Module (Qty. 12)

**Pen Light**

Warranty: Manufacturer's



**European Union Compliant, CE marked**

- Made from tempered aircraft aluminum
- 100,00 hour lifetime, hi-intensity light emitting diode (LED) bulb
- Batteries last up to 60 hours
- Includes 3 AAAA batteries
- Handy shirt clip
- Push end of pen light to momentarily illuminate or twist end clockwise for constant "on"
- Waterproof

Part Number	Description
238-8244	Pen Light, White LED
269-3123	Pen Light, Blue LED
Replacement Batteries	
245-3224	AAAA-Cell Alkaline Battery

**Flashlight Bulbs**

Warranty: Manufacturer's

- Ultra high intensity Krypton
- Use for increased brightness and visibility
- Built with integral lens providing an even distribution of light with excellent focusing characteristics
- Use with alkaline batteries for best economy

Part Number	Description	Application
4C-9464	Bulb	2 cell C and D flashlights
4C-9465	Bulb	3 cell C and D flashlights
4C-9466	Bulb	4 cell C and D flashlights

Part Number	Description	Application
Special Flashlight Bulbs		
4C-9463	Mini MagLite (Qty. 2)	--
4C-9470	Halogen Replacement Bulb	--
4C-6741	Lamp Module (Qty. 12)	--

**Industrial Batteries**

Warranty: Manufacturer's



**Alkaline**

- Top-of-the-line for maximum service life
- Best for use in high-drain, continuous use situations

**Heavy-Duty**

- Ideally suited for normal industrial use

Part Number	Description	Voltage	Package Quantity
1U-9532	D-Cell Alkaline Battery	1.5	72
1U-9531	C-Cell Alkaline Battery	1.5	72
1U-9533	AA-Cell Alkaline Battery	1.5	96
1U-9534	9 Volt Alkaline Battery	9	72
1U-9535	AAA-Cell Alkaline Battery	1.5	96
1U-9536	C-Cell Heavy-Duty Battery	1.5	72
1U-9537	D-Cell Heavy-Duty Battery	1.5	72

(Continued)

Shop Supplies

**Industrial Batteries (Continued)**

Warranty: Manufacturer's

Part Number	Description	Voltage	Package Quantity
1U-9538	AA-Cell Heavy-Duty Battery	1.5	96
1U-9539	9 Volt Heavy-Duty Battery	9	72
245-3224	AAAA-Cell Alkaline Battery	1.5	6

**Hi-Energy Battery Charger**

Warranty: Manufacturer's

- Charges one to four AA or AAA NiMH batteries in 30 minutes (up to 1850 mAh)
- "Smart Charger" — individually monitors cell condition and terminates charging current when charged
- Includes "Trickle Charge" — low rate charge to retain charge level that would otherwise be lost due to self-discharge and storage
- Illuminated LED monitoring lights
- Ideal for high-drain applications
- DC input 11-16V, 3A (AC adapter included)
- Should not be used to charge any other battery type other than NiMH
- Only charges one size of battery at a time (do not mix AA and AAA in same charge)
- Includes 4 AA rechargeable batteries



Part Number	Charge Capacity	AA Charge Capacity	AAA Charge Capacity	Charging Current	Trickle Charge	Charging Time	AC Input Rating
261-0022	Charge capacity	up to 2100 mAh	up to 750 mAh	Charging current	Trickle charge	30 minutes (up to 1850 mAh)	110 volts (110 volts)

**AA Rechargeable Batteries**

Warranty: Manufacturer's

- Nickel-metal hydride (NiMH) batteries
- Ideal for the most advanced high-drain devices — digital cameras, personal digital assistants (PDA's), voltmeters, flashlights, borescopes, analyzers, and many other diagnostic service tools
- High-capacity cells provide exceptional power per charge and up to 1000 recharges
- Recharge to full power at any time
- New batteries should be charged for 24 hours before first use
- Good economic and environmental choice



Part Number	Size	Designation	Voltage	Average Capacity	Qty.
261-0024	AA, 1.2 Volt	ANSI-1.2H2	1.2 volts (1.20 volts)	2300 mAh	4 per package

**Lantern Battery**

Warranty: Manufacturer's



- Offers dependable high performance for portable lighting uses
- Recommended for all industrial lanterns

Part Number	Description	Package Quantity
1U-9547	Lantern Battery, Spring Terminal, 6 Volt	12

**Portable Fluorescent Work Lights**

Warranty: Manufacturer's

- 13 Watt fluorescent lamp is equivalent in light output to a 60 Watt incandescent, but four times more efficient and will last up to 10 times longer (10,000 hours)
- Built with the Saf-T-Lite design concept which places light and all electrical components inside a closed chamber for user safety
- Protected on-off switch can be operated by depressing domed end of the light
- Entire light double insulated for user safety
- Oil resistant power cord , UL listed and meets OSHA standards
- Durable and shatter resistant butyrate outer tube gives long life
- 4C-6478 and 4C-6479 include magnetic mounts and vapor clips



Part Number	Description	Length	Cord Type	Voltage/Watt	Standard Color
4C-6477	Portable Florescent Work Light	7.62 m (25 ft) Cord	SJTO 18/2	110V/13 Watt	Yellow
4C-6478	Portable Florescent Work Light	15.24 m (50 ft) Cord	SJTO 18/2	110V/13 Watt	Yellow
4C-6479	Portable Florescent Work Light	12.19 m (40 ft) Reel	SJT 18/2	110V/13 Watt	Yellow
9U-7203	Portable Florescent Work Light	9.5 m (30 ft) Cord	SJTOW-A 18/2	12V/13 Watt	Yellow
Service Parts for 9U-7203					
9U-6712	Replacement Lamp, 12V, 13 Watt	--	--	--	--
9U-6708	Clear Outer Tube	--	--	--	--
9U-6709	Switch Assembly	--	--	--	--

**Accessories for Light Assemblies**

Warranty: Manufacturer's

Part Number	Description	Material
9U-6009	Fluorescent Lamp, 110V/13 Watt	Twin Tube, cool white light emission
9U-6010	Magnetic Mount 26.3 kg (58 lb) pull	Nickel plated magnet
9U-6011	Vapor Clamp Kit (improves water resistance)	Consists of 2 large vinyl clamps and 1 small clamp



**Fluorescent Light Kit**

Warranty: Manufacturer's



- 110V kit which includes 13 Watt lamp, outer tube, switch assembly and installation instructions
- Install onto any Saf-T-Lite reel or cordset which was originally equipped with a 110V/13 Watt "Stubby" light head, such as 4C-6477, 4C-6478 or 4C-6479

Part Number	Description
9U-6710	Fluorescent Light Kit
Replacement Parts	
9U-6009	Fluorescent Lamp, 110V/13 Watt
9U-6708	Clear Outer Tube
9U-6709	Switch Assembly
9U-6711	Ballast
9U-6714	Ballast Box Kit

**Ratchet Light**

Warranty: Manufacturer's



- 120 Volt/60 Hz light made from yellow, unbreakable aerospace plastic with a 10 amp tool-tap-plug
- 10,000 hour life, 13 Watt rough-service fluorescent bulb delivers output of a 60 Watt incandescent bulb
- STOW type cord — used for heavy duty service and with oil-resistant, thermo-plastic jacket, is weather resistant for outdoor use
- Two year warranty on workmanship and material defects (not including bulb)
- Handy magnetic base so you can position the light where you need it
- UL Approved

Part Number	Description	Cord Type
179-7043	Ratchet Light	STOW Type Cord - 7.62 m (25 ft) long, made from 16/3 wire
Parts <sup>1</sup>		
179-7044	Bulb	--
179-7045	Lens	--

<sup>1</sup> Sold Separately

**Angle Light Reel**

Warranty: Manufacturer's



- 120 Volt/60 Hz light (yellow) includes shatter/scratch resistant lens, 10 amp tool-tap-plug, and velcro magnet
- 10,000 hour life, 13 Watt rough service fluorescent bulb delivers output of a 60 Watt incandescent bulb
- Black reel made from shatter resistant ABS plastic
- STOW type cord — used for heavy duty service and with oil-resistant, thermo-plastic jacket, is weather resistant for outdoor use
- Two year warranty on workmanship and material defects (not including bulb)
- UL Approved

Shop Supplies

(Continued)

**Angle Light Reel (Continued)**

Warranty: Manufacturer's

Part Number	Description	Cord Type
179-7046	Angle Light Reel	STOW Type Cord - 15.2 m (50 ft) long, made from 16/3 wire
<b>Parts<sup>1</sup></b>		
179-7048	Lens	--
179-7049	Bulb	--
179-7050	Velcro Magnet	--

<sup>1</sup> Sold Separately

**Angle Light**

Warranty: Manufacturer's

- 120 Volt/60 Hz light includes shatter/scratch resistant lens, 10 amp tool-tap-plug, and velcro magnet
- 10,000 hour life, 13 Watt rough service fluorescent bulb delivers output of a 60 Watt incandescent bulb
- Yellow case is made from unbreakable aerospace plastic
- STOW type cord — Used for heavy duty service and with oil-resistant, thermo-plastic jacket, is weather resistant for outdoor use
- Two year warranty on workmanship and material defects (not including bulb)
- UL Approved



Part Number	Description	Cord Type
179-7047	Angle Light	STOW Type Cord - 7.62 m (25 ft) long, made from 16/3 wire
<b>Parts<sup>1</sup></b>		
179-7049	Bulb	--
179-7050	Velcro Magnet	--
179-7048	Lens	--

<sup>1</sup> Sold Separately

**Triple-Tap Extension Cord**

Warranty: Manufacturer's

- 120 Volt/60 Hz reel extension cord is 15.2 m (50 ft) long, made from 16/3 wire with a built-in 10 amp circuit breaker
- Case is made from shatter resistant ABS plastic
- Two year warranty on workmanship and material defects
- UL Approved

Part Number	Description
179-7053	Triple-Tap Extension Cord



Shop Supplies



**Light Rover**

Warranty: Manufacturer's



- 120 Volt/60 Hz light has large, shock-absorbent, easy-grip end caps and a scratch/shatter resistant lens
- 10,000 hour life, 13 Watt rough service fluorescent bulb delivers output of a 60 Watt incandescent bulb
- Unique plug base converts any extension cord into a light
- Two year warranty on workmanship and material defects (not including bulb)
- UL Approved

Part Number	Description
179-7054	Light Rover
Parts <sup>1</sup>	
179-7049	Bulb

<sup>1</sup> Sold Separately

**Work Light**

Warranty: Manufacturer's



- 120 Volt/60 Hz light includes large, shock-absorbent, easy-grip end caps, and a scratch/shatter resistant lens
- 15 Watt rough service fluorescent bulb delivers output of an 80 Watt incandescent bulb
- STOW type cord — Used for heavy duty service and with oil-resistant, thermo-plastic jacket, is weather resistant for outdoor use
- Two year warranty on workmanship and material defects (not including bulb)
- UL Approved

Part Number	Description	Cord Type
179-7058	Bulb	--
179-7056	Work Light	STOW type Cord - Cord is 7.62 m (25 ft) long, made from 18/2 wire

**Electrical Cord Definitions**

Abbreviations	
U.L.	Underwriters Laboratories
C.U.L.	Canadian Underwriters Laboratories
O.S.H.A.	Office of Safety and Health Administration
NEMA	National Electrical Manufacturers Association
Cord Designation by Letter	
"S"	Hard surface, flexible cord, general use
"J"	300 Volt cord or smaller
"E"	Elastic synthetic rubber, good low temp cord
"W"	Watertight cord
"O"	Oil resistant
"A"	Low-temperature rated
"T"	Thermo-grade plastic

Shop Supplies

**Heavy-duty Contractor and Industrial Application Extension Cords**

- Designed for heavy-duty use by contractors and industrial applications
- Outer jacket protects against rough handling and extreme weather conditions
- Provides superior resistance to sunlight, ozone, cracking, oils chemicals, and moisture
- All cords have CAT logo printed on cord
- All extension cords are UL (Underwriters Laboratory) listed and meet OSHA (Office of Safety and Health Administration) requirements
- All plugs and outlets are NEMA (National Electrical Manufacturers Association) designated — 5-15P plug and 5-15R outlet



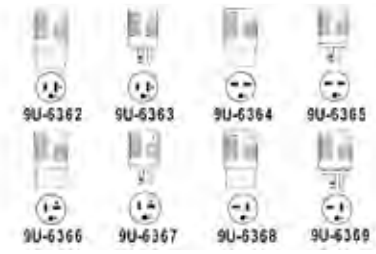
Part Number	Length	Material	Outlet	Wire Size	Rating <sup>1</sup>	Voltage Rating	Operating Temperature
241-8522	25.00 ft	all-weather vinyl	single	12 gauge, 3 conductor	SJTOW	300 volts	-35 to 60°C (-31 to 140°F)
241-8529	50.00 ft	all-weather vinyl	single	12 gauge, 3 conductor	SJTOW	300 volts	-35 to 60°C (-31 to 140°F)
241-8530	100.00 ft	all-weather vinyl	single	12 gauge, 3 conductor	SJTOW	300 volts	-35 to 60°C (-31 to 140°F)
243-1874	25.00 ft	all-weather vinyl	triple	12 gauge, 3 conductor	SJTOW	300 volts	-35 to 60°C (-31 to 140°F)
243-1875	50.00 ft	all-weather vinyl	triple	12 gauge, 3 conductor	SJTOW	300 volts	-35 to 60°C (-31 to 140°F)
243-1876	100.00 ft	all-weather vinyl	triple	12 gauge, 3 conductor	SJTOW	300 volts	-35 to 60°C (-31 to 140°F)
243-1877	25.00 ft	all-weather vinyl	triple	10 gauge, 3 conductor	SJTOW	300 volts	-35 to 60°C (-31 to 140°F)
243-1878	50.00 ft	all-weather vinyl	triple	10 gauge, 3 conductor	SJTOW	300 volts	-35 to 60°C (-31 to 140°F)
243-1879	100.00 ft	all-weather vinyl	triple	10 gauge, 3 conductor	SJTOW	300 volts	-35 to 60°C (-31 to 140°F)

<sup>1</sup> (S) Hard Surface, Flexible Cord, General Use; (J) 300 Volt cord or smaller; (E) Elastic Synthetic Rubber, Good Low Temperature Cord; (W) Watertight Cord; (O) Oil Resistant; (A) Low Temperature Rated; (T) Thermo Grade Plastic

**Straight Blade Plugs and Connectors**

Warranty: Manufacturer's

- For use in construction sites, industrial, dusty, and damp environments
- For use with tools, motors, grinding machines, high pressure washers, outdoor lighting
- UL and CSA listed

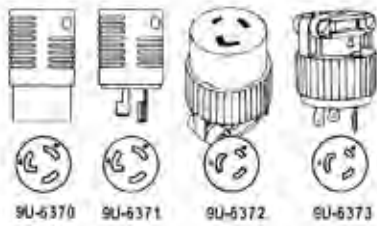


Part Number	Type	Description
9U-6362	15 Amp, 125V AC Connector	2 Pole, 3 Wire, NEMA 5-15P
9U-6363	15 Amp, 125V AC Plug	2 Pole, 3 Wire, NEMA 5-15P
9U-6364	15 Amp, 250V AC Connector	2 Pole, 3 Wire, NEMA 6-15P
9U-6365	15 Amp, 250V AC Plug	2 Pole, 3 Wire, NEMA 6-15P
9U-6366	20 Amp, 125V AC Connector	2 Pole, 3 Wire, NEMA 5-20P
9U-6367	20 Amp, 125V AC Plug	2 Pole, 3 Wire, NEMA 5-20P
9U-6368	20 Amp, 250V AC Connector	2 Pole, 3 Wire, NEMA 6-20P
9U-6369	20 Amp, 250V AC Plug	2 Pole, 3 Wire, NEMA 6-20P

Shop Supplies

**Turnlock Plugs and Connectors (15-20 Amp)**

Warranty: Manufacturer's



- For use in construction sites, industrial, dusty, and damp environments
- For use with tools, motors, grinding machines, high pressure washers, outdoor lighting
- UL and CSA listed

Part Number	Type	Description
9U-6370	15 Amp, 125V AC Heavy-Duty Connector	2 Pole, 3 Wire, Grounded NEMA L5-15
9U-6371	15 Amp, 125V AC Heavy-Duty Plug	2 Pole, 3 Wire, Grounded NEMA L5-15
9U-6372	20 Amp, 250V AC Heavy-Duty Connector	2 Pole, 3 Wire, Grounded NEMA L5-20
9U-6373	20 Amp, 250V AC Heavy-Duty Plug	2 Pole, 3 Wire, Grounded NEMA L5-20

**Heavy-Duty Connectors and Plugs (20-30 Amps) with Insulating Cord Grip**

Warranty: Manufacturer's



- For use in construction sites, industrial, dusty, and damp environments
- For use with tools, motors, grinding machines, high pressure washers, outdoor lighting
- UL and CSA listed

Part Number	Type	Description	Cord Diameter
9U-6374	20 Amp, 125/250V Connector	Yellow High Impact, with Insulating Cord Grip	14.27 - 26.97 mm (.562 in - 1.062 in)
9U-6375	20 Amp, 125/250V Plug	Yellow High Impact, with Insulating Cord Grip	14.27 - 26.97 mm (.562 in - 1.062 in)
9U-6376	20 Amp, 250V Connector	Yellow High Impact, with Insulating Cord Grip	14.27 - 26.97 mm (.562 in - 1.062 in)
9U-6377	20 Amp, 250V Plug	Yellow High Impact, with Insulating Cord Grip	14.27 - 26.97 mm (.562 in - 1.062 in)
9U-6378	30 Amp, 125V Connector	Yellow High Impact, with Insulating Cord Grip	15.875 - 28.575 mm (.625 in - 1.125 in)
9U-6379	30 Amp, 125V Plug	Yellow High Impact, with Insulating Cord Grip	15.875 - 28.575 mm (.625 in - 1.125 in)
9U-6380	30 Amp, 250V Connector	Yellow High Impact, with Insulating Cord Grip	15.875 - 28.575 mm (.625 in - 1.125 in)

### Rubber Splicing Compound

- Linerless rubber tape
- Use for insulating and sealing on electrical cable installation and repair

Part Number	Description	Size	Qty.
4C-6393	Rubber Splicing Compound	19 mm (3/4 in) wide x 0.8 mm (0.030 in) thick x 4.6 m (15 ft) long rolls	1 roll per package



### Wire Marker Tape Dispenser

- Provides a fast, convenient system for marking wire or cable
- Helps eliminate errors in the disassembly and assembly of hydraulic lines, wiring harness, generator sets and panels
- Ten refillable compartments with numbers from 0 to 9 let you choose the exact number/letter combinations needed
- Easy to use, easy to carry; convenient rolls — easy cutoff, no waste
- Tapes are an epoxy film with an acrylic adhesive
- Highly resistant to oils and solvents



Part Number	Description
6V-7939	Wire Marker Tape Dispenser
<b>Marker Tape Replacement Rolls (10 rolls per box)</b>	
8T-5209	Tape No. 0
8T-5211	Tape No. 1
8T-5212	Tape No. 2
8T-5213	Tape No. 3

Part Number	Description
<b>Marker Tape Replacement Rolls (10 rolls per box) (Continued)</b>	
8T-5214	Tape No. 4
8T-5215	Tape No. 5
8T-5216	Tape No. 6
8T-5217	Tape No. 7
8T-5218	Tape No. 8
8T-5219	Tape No. 9

### Crimping Tools

- For insulated and uninsulated ferrules

Part Number	Wire Gauge
139-2788	24-12 AWG
139-2789	10-6 AWG



### Heat Shrinking Tubing



- Made from polyolefin
- Effectively resists abrasion, scoring, cut-through, and the effects of long term aging
- Easy to install
- Use on inline electrical splices to provide mechanical protection as well as corrosion and moisture seal

Part Number	Expanded I.D.	Recovered I.D.	Recovered Length	Package Quantity
4C-6387	10 mm (.400 in)	3.8 mm (0.15 in)	152 mm (6 in)	25
4C-6388	20 mm (.800 in)	5 mm (0.20 in)	152 mm (6 in)	5
4C-6389	28 mm (1.10)	9.4 mm (0.37 in)	229 mm (9 in)	5
4C-6390	388 mm (1.50 in)	12.7 mm (0.50 in)	229 mm (9 in)	5
4C-6391	51 mm (2.00 in)	16.5 mm (0.65 in)	229 mm (9 in)	1

### Heat Shrinking Butt Connector



- One piece, pre-insulated
- Use on inline electrical splice where moisture and corrosion are a concern
- Easy application

Part Number	Wire	Barrel Length (L)	I.D.	Color	Package Quantity
4C-6394	#22 to 18 AWG	.28	.062	Red	100
4C-6395	#16 to 14 AWG	.30	.095	Blue	100
4C-6396	#12 to 10 AWG	.38	.142	Yellow	100

### Cold Shrink Insulators



- Rubber insulators can be used on cable to insulate as well as to protect from moisture and corrosion while remaining flexible
- Resists fungus, acids and alkalis, ozone and ultra-violet light
- Easy to install (no flame/torch needed) — unwind the expander core by pulling the insulator and tubing will shrink to cable diameter
- When shrunk, connection is water resistant
- Very portable since no heat source is required

Part Number	Minimum Diameter	Tube Max.	Relaxed Package Length	Qty.
4C-6382	2.5 mm (0.10 in)	21.6 mm (0.85 in)	203 mm (8 in)	1
4C-6383	10.6 mm (0.42 in)	21.6 mm (0.85 in)	203 mm (8 in)	1
4C-6384	13 mm (0.51 in)	25.4 mm (1 in)	229 mm (9 in)	1
4C-6385	17.5 mm (0.69 in)	33 mm (1.30 in)	304.8 mm (12 in)	1
4C-6386	24.1 mm (0.95 in)	48.3 mm (1.90 in)	304.8 mm (12 in)	1

### Wedge Removal Tool

- Use to remove wedges from DT series Deutsch connectors

Part Number	Description
147-6456	Wedge Remover

**First Aid Kit**

- Small, portable kit for service trucks, tool boxes, or for personal use in family home, car, camper, or boat
- Soft shell case made of water resistant nylon
- Uses “Book Style” construction with zippered internal compartments (makes it easy to access items)

150-1578 Consists of:		
Description	Size	Quantity
Water resistant nylon container	190.5 x 38.1 x 107.95 mm (7.5 x 1.5 x 4.25 in)	1
Scissors	102 mm (4.0 in)	1
Tweezers	76.2 mm (3 in)	1
First aid booklet		1
Band-aids	19.05 x 76.2 mm (.75 x 3 in)	20
Alcohol swabs		4
Wet wipes		4
Sting stop swabs		2
Antiseptic swabs		12
Adhesive tape	2.3 m x 12.7 mm (2.5 yd x .5 in)	1
Sterile gauze pads	50.8 x 50.8 mm (2 x 2 in)	4
Sterile gauze pads	101.6 x 101.6 mm (4 x 4 in)	2
Sterile abdominal pad	127 x 228.6 mm (5 x 9 in)	1
Sterile pressure bandage	50.8 mm (2 in)	1
Conform gauze roll	4.57 m x 50.8 mm (5 yd x 2 in)	1
Triangular bandage		1
Safety pins		6
Vinyl gloves		1 pair
Acetaminophen		1 (2 per pack)



Part Number	Description
150-1578	First Aid Kit

**First Aid Kit**

- Small, portable kit for service trucks, tool boxes, or for personal use in family home, car, camper, or boat
- Soft shell case made of water resistant nylon
- Uses “Book Style” construction with zippered internal compartments (makes it easy to access items)



Shop Supplies

(Continued)

First Aid Kit (Continued)

150-1579 Consists of:		
Water resistant nylon container	228.6 x 76.2 x 127 mm (9 x 3 x 5 in)	1
Scissors	152.4 mm (6 in)	1
Stainless steel splinter forceps	114 mm (4.5 in)	1
First aid booklet		1
Cloth bandaids	22.2 x 76.2 mm (.87 x 3 in)	10
Finger tip bandaids		5
Knuckle bandaids		5
Alcohol swabs		18
Wet wipes		6
Sting stop swabs		6
Antiseptic swabs		16
Adhesive tape	4.6 m x 25.4 mm (5 yd x 1 in)	1
Sterile gauze pads	50.8 x 50.8 mm ( 2 x 2 in)	8
Sterile gauze pads	101.6 x 101.6 mm (4 x 4 in)	2
Sterile abdominal pad	127 x 228.6 mm (5 x 9 in)	2
Sterile pressure bandage	101.6 mm (4 in)	1
Conform gauze roll	4.57 m x 50.8 mm (5 yd x 2 in)	2
Triangular bandage		1
Safety pins		6
Vinyl gloves		1 pair
Multi-purpose pad	431.8 x 609.6 mm (17 x 24 in)	1
Tensor bandage	50.8 mm (2 in)	1
Instant cold pack (in box)	1016 x 152.4 mm (4 x 6 in)	1
Emergency mylar blanket		1

Part Number	Description
150-1579	First Aid Kit

First Aid Kits, 25 and 50-person

- Kits for your safety and first aid requirements
- Comply with OSHA 1910.151 for industry, and OSHA 1926.50 for construction
- 163-0798 contains supplies for 25 people; 163-0799 contains supplies for 50 people
- Soft shell case

Shop Supplies

(Continued)

**First Aid Kits, 25 and 50-person (Continued)**

Contents	163-0798 25-person	163-0799 50-person
Adhesive Strips, 3/4 in x 3 in	50	100
Adhesive Tape Roll, 1/2 in x 5 yd	1	1
Alcohol Wipes	10	20
Ammonia Inhalants	3	3
Instant Cold Pack	1	1
Combine Pad, 5 in x 9 in	1	1
Sterile Cotton, 1/2 oz roll	1	1
Disposable Gloves	1 pr	2 pr
Eye Irrigate Solution, 1 oz bottle	1	1
Eye Pads, oval, 1.75 in x 2.5 in	2	4
Gauze Pads, 4 in	2	4
Gauze Pads, 3 in	4	8
First Aid Cream, 7/8 oz	1	2
Sting Relief Pads	3	3
Triangular Bandage	1	1
Gauze Bandage, 2 in x 5 yd	2	2
Gauze Bandage, 4 in x 5 yd	—	1
Elastic Bandage, 2 in	—	1
Scissors	1	1
Tweezers	1	1

Part Number	Description
163-0798	25-Person First Aid Kit
163-0799	50-Person First Aid Kit



**Disposable Ear Plugs**



**European Union Compliant, CE marked**

- Tapered disposable plug for excellent fit
- Light comfortable foam
- Smooth surface to repel dirt
- Excellent protection at NRR29

Part Number	Package Quantity
239-1090	1

**Reusable Uncorded Ear Plugs**



**European Union Compliant, CE marked**

- Super-soft washable reusable plugs
- Flip-top case included
- Non-toxic FDA-approved material
- Excellent protection at NRR28

Part Number	Package Quantity
239-1089	1

**Disposable Foam Ear Plugs**



**European Union Compliant, CE marked**

- Bell-shaped polyurethane foam for maximum comfort
- Smooth soil-resistant skin
- Noise reduction rating: 33dB
- Color: neon

Part Number	Description	Qty.
260-4783	Uncorded Disposable Plugs	200 per box/10 boxes per case
260-4785	Corded Disposable Plugs	100 per box/10 boxes per case

**Corded Disposable Foam Ear Plugs**



**European Union Compliant, CE marked**

- Tapered disposable plug for excellent fit
- Light comfortable foam
- Smooth surface to repel dirt
- Corded for long wear and cost savings
- Excellent protection at NRR29

Part Number	Package Quantity
237-8092	1

**Band Ear Plugs**

**European Union Compliant, CE marked**

- High-density construction, lightweight and durable
- Non-toxic FDA approved material earplugs
- Comfortable and cool on hot days
- Noise reduction rating: 23 dB
- Engineered angled earplug for maximum sound protection and comfort



Part Number	Description
233-8585	Rad Band
233-8586	Replacement Plugs

**Silencer Ear Muffs**

**European Union Compliant, CE marked**

- Comfortable adjustable padded headband
- Soft foam padded ear cups—comfortable when wearing with glasses
- Rugged and lightweight
- Dielectric
- Excellent protection at NRR26



Part Number	Description
233-8587	Silencer Ear Muffs

**Ear Muffs**

**European Union Compliant, CE marked**

- Hard hat-mounted ear muffs feature large, lightweight ear cups that attach to a variety of hard hats for convenience
- Recommended for moderately high noise situations (up to 95 dBA TWA)
- Noise reduction rating: 23 dB



Part Number	Description	Package Quantity
4C-6581	Ear Muffs	2 pair

**Multipositional Ear Muff**

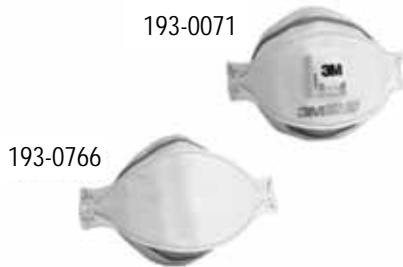


**European Union Compliant, CE marked**

- Adjustable steel headband
- Foam filled ear cushions with a soft breathable surface
- NRR at various positions:
  - NRR26 over-the-head
  - NRR26 behind-the-head
  - NRR23 under-the-chin

Part Number	Description	Package Quantity
239-1088	Multipurpose Ear Muff	1

**Particulate Respirator**



- Replaces 4C-8761 Dust/Mist Respirator
- 193-0766 and 193-0071 meet NOISH 42 CFR 84 N95 requirements. TC-84A2668 and TC-84A2669
- Three-panel respirator with innovative design allows better visibility and conforms to a wide range of face sizes
- Soft cover web on inner panel is comfortable against face and helps provide a custom fit and secure seal
- Individually packaged to help prevent contamination
- 193-0071 features the Cool Flow exhalation valve for easy exhalation and cool dry comfort
- Suggested applications: grinding, sanding, sweeping, bagging, general maintenance, dusty operations and operations involving liquid or non-oil based particle from sprays that do not emit harmful vapors

Part Number	Description	Qty.
193-0766	Particulate Respirator	20 respirators per box
193-0071	Particulate Respirator	10 respirators per box

**Welding Respirator**



- Meets NOISH 42 CFR 84 N95 requirements. TC-84A0454
- Cool flow exhalation valve promotes worker comfort by offering easy exhalation for cooler, dry comfort
- Contours easily to provide a comfortable, good seal
- Economical all-filter design with no spare parts to clean
- Suggested applications: welding, brazing, soldering, torch cutting, metal pouring, grinding, sanding, sweeping, bagging, general maintenance and operations involving liquid or non-oil based particle from sprays that do not emit harmful vapors

Part Number	Description	Qty.
237-5181	Welding Respirator	10 respirators per box

**Dust Mask**

- Adjustable metal nose bridge, single strap, and contour-fit design to ensure best coverage
- Lightweight and disposable
- Non-irritating to the skin
- Not NIOSH approved
- Material: polyester

Part Number	Description	Qty.
262-4866	Dust Mask	50 per box



**Welding Helmet**

- 51 mm x 108 mm (2 in x 4 1/4 in), “shade 10” lens
- Ratcheting headgear adjusts to fit any head size
- Nylon material is lightweight and durable

Part Number	Description
1U-8097	Welding Helmet



**Welding Helmet**

- Features a shade 10 lens but in a larger size — 114 mm x 133 mm (4 1/2 in x 5 1/4 in)
- Has ratcheting head gear
- Made of sturdy nylon material

Part Number	Lens Type	Lens Use For:
1U-8100	Welding Helmet	--
Replacement Lens for 1U-8097 and 1U-8100 Welding Helmets		
1U-8099	Plastic Cover Plates <sup>1</sup>	1U-8097
1U-8101	Shade 10 Tinted Glass <sup>2</sup>	1U-8100
1U-8102	Plastic Cover Plates <sup>1</sup>	1U-8100
1U-8209	Shade 10 Tinted Glass <sup>2</sup>	1U-8097



<sup>1</sup>Two needed, one inside and one outside of your tinted glass lens

<sup>2</sup>Shade 10 lens used for welding with manual weld electrodes

Shop Supplies

**Welding Goggles**



- Feature a shade 5 lens, good ventilation, and a light-tight fit

Part Number	Description
1U-8103	Welding Goggles

**Welding Goggles with Lift Front Lens**



- Feature the shade 5 lens with a hinged front-lift door

Part Number	Description
1U-8104	Welding Goggles with Lift Front Lens

**Welding Jacket**



- Made of flame resistant, sturdy 269 g (9 oz) sateen fabric treated for permanent fire retardant
- Finished in a dark green color
- Lightweight and provides excellent protection from flash, flame, and sparks
- Black no-glare snaps
- Adjustable snaps at the cuff
- Roll collar can be turned up
- Flame retardant good up to 50 washes in mild soap

Part Number	Description	Size
1U-6586	Welding Jacket	Large
1U-6587	Welding Jacket	Extra Large

**Welding Blanket**

Warranty: Manufacturer's

- Made of a fiberglass textile material
- Light gold neoprene coating on one side to reduce fraying
- Hemmed and seamed with Kevlar thread
- Retains heat
- Protects welding area

Part Number	Description	Dimensions
4C-9616	Blanket	183 cm x 183 cm (6 ft x 6 ft)
4C-9617	Blanket	183 cm x 244 cm (6 ft x 8 ft)
4C-9618	Blanket	183 cm x 305 cm (6 ft x 10 ft)



**Wraparound Safety Glasses**

- Visitor disposable safety glasses
- Can be worn over prescription glasses
- 99.9% UVA and UVB protection
- Meets or exceeds all ANSI, CSA, and CE specifications

Part Number	Description	Package Quantity
239-1085	Wraparound Safety Glasses	1



**Safety Glasses**

- Polycarbonate lens
- Universal bridge, plastic frame
- Meets ANSI Z87.1-1979 and CE specifications

Part Number	Package Quantity	Lens Type	Frame Color	Size	Lens Features
4C-8093	10	Clear	Mocha	54	Eyeblink and side shield
4C-8351	10	Gray	Mocha	58	Eyeblink and side shield



**Safety Glasses**

- Sporty wraparound look
- Soft non-slip rubber nosepiece
- Adjustable temple length
- Full UVA and UVB protection
- Meets or exceeds all ANSI, CUL and CE specifications

Part Number	Lens Type	Package Quantity
233-8576	Clear (packaged for retail)	1
233-8577	Clear	1
233-8578	Gray (packaged for retail)	1
233-8579	Gray	1



Safety Glasses



- 5-position ratchet and 4-position telescoping temples
- Soft non-slip rubber nosepiece
- Anti-scratch hard-coated lenses
- 99.9% UVA and UVB protection
- Ventilation between lens and frame
- Meets or exceeds all ANSI and CUL specifications

Part Number	Lens Type	Package Quantity
233-8580	Gray (packaged for retail)	1
249-7265	Clear (packaged for industrial; 12 per package)	1

Safety Glasses



European Union Compliant, CE marked

- 5-position ratchet and 4-position telescoping temples
- Stylish one-piece lens with shields
- Hard-coated lenses
- 99.9% UVA and UVB protection
- Meets or exceeds all ANSI, CSA, and CE specifications

Part Number	Lens Type	Frame	Package Quantity
239-1079	Clear	Black	1
239-1082	Clear	Yellow/black	1
239-1083	Gray	Black	1
239-1084	Gray	Yellow/black	1
233-8581	Blue	Mirror-black	1
233-8582	Blue	Mirror-yellow/black	1

Safety Glasses



- 9.75 base lens provide excellent optics and protection
- Gel nosepiece allows for all day comfort
- 4 - position telescoping temples for superior fit
- All lens are hard coated for scratch resistance
- Meets ANSI Z87.1 + standards and protects against 99% harmful UV rays

Part Number	Lens Tint	Package Quantity
<b>Industrial Packaging</b>		
307-3013	Clear	12 per package
307-3014	Smoke	12 per package
307-3015	Indoor/Outdoor	12 per package
307-3016	Amber	12 per package

Part Number	Lens Tint	Package Quantity
<b>Retail Packaging (Clamshell)</b>		
308-6368	Clear	Clamshell
308-6369	Smoke	Clamshell
308-6370	Indoor/Outdoor	Clamshell
308-6372	Amber	Clamshell

**Safety Glasses**

- Polarized lens provides superior glare control
- 5 position ratchet plus 4-position telescoping temples for superior fit
- Ventilation channel between lens and frame helps reduce fogging
- Meets ANSI Z87.1 + standards and protects against 99% harmful UV rays



Part Number	Package Quantity	Lens Type
<b>Industrial Packaging</b>		
309-4932	12 per package	Polarized
<b>Retail Packaging (Clamshell)</b>		
309-4934	Clamshell	Polarized

**Safety Glasses**

- Rubber tipped temples for comfortable fit
- Soft rubber nosepiece
- Tough polycarbonate lens provides superior protection
- Meets ANSI Z87.1 + and CUL standards and protects against 99% harmful UV rays



Part Number	Package Quantity	Lens Tint
<b>Industrial Packaging</b>		
307-3017	12 per package	Clear
307-3018	12 per package	Smoke
307-3019	12 per package	Indoor/Outdoor
<b>Retail Packaging (Clamshell)</b>		
308-6373	Clamshell	Clear
308-6374	Clamshell	Smoke
308-6376	Clamshell	Indoor/Outdoor

**Safety Glasses**

- Rubber tipped temples for comfortable fit
- Lightweight, popular style frame
- Tough, polycarbonate lens provides superior protection
- Meets ANSI Z87.1 + standards and protects against 99% harmful UV rays



Part Number	Package Quantity	Lens Tint
<b>Retail Packaging (Clamshell)</b>		
308-6377	Clamshell	Clear
308-6378	Clamshell	Smoke
308-6379	Clamshell	Indoor/Outdoor

Part Number	Package Quantity	Lens Tint
<b>Retail Packaging (Clamshell) (Continued)</b>		
308-6380	Clamshell	Amber



Safety Glasses



- Rubber tipped temples for comfortable fit
- Lightweight, popular style frame
- Tough, polycarbonate lens provides superior protection
- Meets ANSI Z87.1+, CSA and CE standards and protects against 99.9% harmful UV rays

Part Number	Package Quantity	Lens Tint
<b>Industrial Packaging</b>		
330-9787	12 per package	Clear
330-9790	12 per package	Smoke
330-9792	12 per package	Indoor/Outdoor

Part Number	Package Quantity	Lens Tint
<b>Industrial Packaging (Continued)</b>		
330-9795	12 per package	Amber

Safety Glasses



- Sleek, sporty style frame
- Soft, rubber temples provide superior comfort
- Rubber nosepiece allows for all day comfort
- Comes standard with neck cord
- Meets ANSI Z87.1 + standards and protects against 99% harmful UV rays

Part Number	Package Quantity	Lens Tint
<b>Industrial Packaging</b>		
308-6389	12 Per Package	Indoor/Outdoor
308-6385	12 Per Package	Smoke
307-3028	12 Per Package	Clear
<b>Retail Packaging (Clamshell)</b>		
308-6384	Clamshell	Clear
308-6386	Clamshell	Smoke
308-6390	Clamshell	Indoor/Outdoor

Safety Glasses



**Bi Focal Safety Glass**

- Magnification diopter molded into lens
- Soft, rubber nosepiece
- Cushioned, non-slip rubber temple pads
- Meets ANSI Z87.1 + standards and protects against 99% harmful UV rays

Part Number	Package Quantity	Lens Type
<b>Industrial Packaging</b>		
309-2458	12 Per Package	Clear 3.0
309-2456	12 Per Package	Clear 2.5
308-6391	12 Per Package	Clear 1.0
308-6393	12 Per Package	Clear 1.5
309-2454	12 Per Package	Clear 2.0

Part Number	Package Quantity	Lens Type
<b>Retail Packaging (Clamshell)</b>		
308-6392	Clamshell	Clear 1.0
309-2455	Clamshell	Clear 2.0
309-2457	Clamshell	Clear 2.5
309-2459	Clamshell	Clear 3.0
310-4016	Clamshell	Clear 1.5

**Safety Glasses**

- Sleek, sporty, lightweight wraparound frame
- Gel nosepiece allows for all day comfort
- High gloss painted frame
- Comes standard with neck cord
- Cushioned, non-slip rubber temple pads
- Meets ANSI Z87.1 + standards and protects against 99% harmful UV rays



Part Number	Package Quantity	Lens Tint
<b>Industrial Packaging</b>		
307-3024	12 Per Package	Clear
307-3025	12 Per Package	Smoke
307-3027	12 Per Package	Indoor/Outdoor
<b>Retail Packaging (Clamshell)</b>		
308-6381	Clamshell	Clear
308-6382	Clamshell	Smoke
308-6383	Clamshell	Indoor/Outdoor

**Zircon-Style Safety Glasses**

- Zircon-style safety glasses feature a contoured impact resistant polycarbonate lens
- Dark green tinted lens absorbs 99% of harmful UV rays
- Meets ANSI Z87.1-2003 impact standards



Part Number	Description	Package Quantity
263-0866	Zircon-Style Safety Glasses	1 Pair

**Safety Goggles**

- Provides excellent ventilation and indirect protection
- Fits over most prescription eyewear
- Clear optical-grade polycarbonate lens
- Adjustable headband
- Meets or exceeds all ANSI specifications



Part Number	Description	Package Quantity
233-8584	Safety Goggles	1

**Safety Goggles**



- Perforated goggle with excellent ventilation and protection
- Fits over most prescription eyewear
- Clear optical-grade polycarbonate lens
- Adjustable headband
- Meets or exceeds all ANSI specifications

Part Number	Description	Package Quantity
233-8583	Safety Goggles	1

**All-purpose Wipers**



- Cleaning tissues for safety glasses
- Pop-up style box

Part Number	Description	Qty.	Size
263-0867	All-purpose Wipers	300 tissues per box, 60 boxes per case	127mm x 203 mm (5 in x 8 in) wipers

**Lens Cleaning Towelettes**



**European Union Compliant, CE marked**

- Excellent disposable moisturized towels for lens cleaning
- Can be used on plastic, glass and polycarbonate lenses, face shields, and goggles
- Towelettes are pre-moistened with anti-fog, anti-static formula
- Individually foil wrapped towelettes are great for service trucks and tool boxes
- Dispenser features pull out bottom for easy dispensing and built in tab for hanging
- Each dispenser contains (100) 127 mm x 203 mm (5 in x 8 in) towelettes

Part Number	Description
239-1086	Lens Cleaning Towelettes

### Lens Cleaning Station

**European Union Compliant, CE marked**

- May be used on safety glasses, face shields, goggles, and full face respirators
- Economical lens cleaning station provides lens cleaning needs in shop or office
- Promotes proper lens cleaning, extending life of safety glasses
- Specially formulated solution cleans greasy and oily glasses while providing an anti-fog/anti-static coating
- Low lint non-abrasive tissues leave lenses clear and streak free
- Easily mounted on wall or table top
- Each station contains 8 oz. anti-fog/anti-static solution and 600 low lint, non-abrasive tissues



Part Number	Description
239-1087	Lens Cleaning Station

### Hard Hats

Warranty: Manufacturer's

- Replaces canceled 173-1941 Protective Hard Hat, White and 173-1942 Protective Hard Hat, Yellow
- High density, polyethylene protective hard hats with Cat logo
- Self-sizing, four-point suspension with brow pad
- Rain trough brim provides extra protection against snow, rain, dust, and dirt
- Accessory slots provide attachment points for earmuffs, face shields, flashlights, etc.
- 239-4964 and 239-4966 meets or exceeds ANSI Z89.1-1997 Standard for Industrial Head Protection, Type 1, Class E, helmet requirements
- 239-4965 and 239-4967 meets or exceeds EN 397:1995 Amendment (A1 2000 Standard) for Industrial Safety Helmets, Optional Classes -20° C, 440 VAC requirements



Part Number	Description	Color
239-4964	Hard Hat, U.S. Version (ANSI standard)	White
239-4965	Hard Hat, European Version (EN standard)	White
239-4966	Hard Hat, U.S. Version (ANSI standard)	Yellow
239-4967	Hard Hat, European Version (EN standard)	Yellow

### Hard Hat Winter Liner

**European Union Compliant, CE marked**

- Wear with 239-4964, 239-4965, 239-4966, and 239-4967 Hard Hats
- Dark blue cotton twill with fleece lining
- Comes with a hook and loop chin strap fastener
- Will work with other similar hard hats

Part Number	Description
1U-8091	Hard Hat Winter Liner



Shop Supplies

**Heavy-Duty Headgear**



**European Union Compliant, CE marked**

- Headgear has precision ratchet head size adjustment for a comfortable snug fit
- Floating window suspension distributes weight and reduces shock of impact
- Five position pinlock crown band provides additional adjustment for proper support and a firm fit
- Crown protector made of a new high-performance thermoplastic offers excellent impact resistance over a wide range of temperatures
- Soft vinyl headband to cushion the forehead
- Packaged individually. Headgear and windows must be ordered separately.

**4C-8096 and 4C-8097 Features**

- 229 mm x 368 mm x 2.0 mm (9 in x 14 1/2 in x 0.080 in) thickness
- Polycarbonate for heavy-duty impact protection against flying particles
- Good heat resistance
- Provide excellent general face and eye protection
- Windows can be replaced in seconds
- Windows mount inside crown protector for greater splash protection
- Spring loaded pivot assemblies maintain proper friction and prevent annoying window drop
- Blue color and matte finish resist smudges and show less daily grime
- Packaged in quantities of 10

Part Number	Description
4C-8095	Heavy Duty Headgear
Accessories for 4C-8095	
4C-8096	Window - Clear Polycarbonate
4C-8097	Window - Dark Green for Glare Reduction

**Face Shield**



- Clear 203 mm x 305 mm x 1 mm (8 in x 12 in x .040 in) window
- Comfortable and durable
- Provide excellent general face and eye protection

Part Number	Description
1U-8095	Face Shield
Replacement Windows for 1U-8095 Face Shield (Also fit Glendale 5000, Huntsman K, K3, K4 and K10, Norton 6300 and Jackson J-10 face shields)	
1U-8096	Clear replacement window
4C-4404	Green replacement window

**Safety Vests**

**262-9301 Lime Green Mesh Safety Vest**

- Non-reflective, lime green color
- Front hook and loop closure with black cloth binding
- One size fits all
- Material: 100% polyester mesh

**262-9176 Orange Mesh Safety Vest**

- Non-reflective, dayglow orange color
- Front hook and loop closure
- Elastic side straps
- One size fits all
- Material: 100% polyester mesh



Part Number	Description	Color	Material
262-9176	Safety Vest	Orange	Polyester Mesh
262-9301	Safety Vest	Lime Green	Polyester Mesh

**Safety Vest with Cat® Logo**

- Reflection tape
- Velcro front closure
- X-tra Large
- ANSI Class II
- CE Standard EN471 Class 2

Part Number	Description	Color
271-3599	Safety Vest with Cat Logo	Orange



**Tyvek Coveralls**

- White coveralls with zipper front
- For general maintenance work, fiberglass handling, spray painting, and sand blasting
- Offers splash protection against many liquids
- Lightweight and soft
- Strong, whether wet or dry
- Resistant to abrasion, tears, and punctures
- 100% Polyethylene construction
- Unaffected by most chemicals
- Blocks out 99.9% of all dry particulate down to 0.5 microns

Part Number	Size	Qty.
267-8539	Large	25
267-8540	Medium	25
267-8541	Small	25
267-8542	X Large	25
267-8543	XX Large	25



(Continued)

Tyvek Coveralls (Continued)

Part Number	Size	Qty.
267-8544	XXX Large	25
267-8545	XXXX Large	25

Rain Jackets and Pants



- Made with a 0.35 mm (.014 in) PVC exterior laminated to a polyester interior [PVC is a synthetic thermoplastic elastomer (TPE) which provides excellent ozone and weather resistance]
- Double-lapped heat-welded construction
- Non-conductive hardware
- Meets California Proposition 65

**Rain Jacket**

- Yellow rain jacket with a detachable hood and two patch pockets
- Full snap front
- Inner storm fly prevents rain and debris from penetrating front opening
- Corduroy collar
- Raglan sleeves for maximum mobility (a raglan sleeve is attached to a garment body at a 45 degree angle helping it to stretch from neckline to underarm)
- Take-up snaps at cuff
- Back yoke ventilation

**Rain Pants**

- Yellow rain pants with fly front overall and pockets with flaps
- Fabric/elastic suspender and elastic waist band
- Take-up snaps at ankle

Part Number	Chest Size	Waist Size	Size
<b>Rain Jacket</b>			
311-2983	Medium, 101.6-106.68 cm (40-42 in)	--	--
311-2984	Large, 111.76-116.84 cm (44-46 in)	--	--
311-2985	XLarge, 121.92-127 cm (48-50 in)	--	--
<b>Rain Pants</b>			
311-2986	--	Medium, 91.44-96.52 cm (36-38 in)	--
311-2987	--	Large, 101.6-106.68 cm (40-42 in)	--
311-2988	--	XLarge, 111.76-116.84 cm (44-46 in)	--
<b>2 Pc Suits</b>			
311-2979	--	--	Medium
311-2980	--	--	Large
311-2981	--	--	XLarge

### Utility Gloves

Warranty: Manufacturer's

- Help protect from heat, cold, nicks, cuts, and bruises
- Split-palm design ensures long life in high-wear areas
- Hidden seam design eliminates snagging
- Tough spandex top material resists snags
- Snug, comfort fit assures greater dexterity
- NOT flame-proof or fire retardant
- Machine washable, air dry (Do NOT machine dry)



Part Number	Size	Qty.
276-0491	Medium	Bulk - 6 pair
276-0492	Large	Bulk - 6 pair
276-0493	Extra Large	Bulk - 6 pair
276-0494	XX Large	Bulk - 6 pair

### Impact Gloves

Warranty: Manufacturer's

- Design features improved dexterity and glove life
- Compression-molded Airprene knuckle and index finger protection
- Seamless index finger for great fingertip control
- Streamlined thermal plastic rubber (TPR) hook and loop fastening on cuff
- Split palm design puts 1 mm material in all high wear areas
- 3 mm gel palm padding reduces vibrations
- NOT flame-proof or fire retardant
- Machine washable, air dry (do NOT machine dry)



Part Number	Size	Qty.
276-0499	Medium	Bulk - 6 pair
276-0500	Large	Bulk - 6 pair
276-0501	Extra Large	Bulk - 6 pair
276-0502	XX Large	Bulk - 6 pair

### Insulated Gloves

Warranty: Manufacturer's

- Improved thermal protection
- Waterproof glove insert to keep hands dry
- Unique combination of Velboa and micro fleece layer closest to skin for warmth
- Neoprene cuff design with streamlined thermal plastic rubber (TPR) hook and loop fastening
- Compression-molded neoprene knuckle and index finger protection
- Durable synthetic leather palm
- NOT flame-proof or fire retardant
- Machine washable, air dry (do NOT machine dry)



Part Number	Size	Qty.
276-0495	Medium	Bulk - 6 pair
276-0496	Large	Bulk - 6 pair
276-0497	Extra Large	Bulk - 6 pair
276-0498	XX Large	Bulk - 6 pair



**Fingerless Gloves**

Warranty: Manufacturer's



- Protect hands while having full fingertip access
- Palm padding of 3 mm shock-absorbing gel
- Hidden seam design eliminates snagging
- Tough spandex top material resists snags
- Snug, comfort fit assures greater dexterity
- NOT flame-proof or fire retardant
- Machine washable, air dry (do NOT machine dry)

Part Number	Size	Qty.
276-0487	Medium	Bulk - 6 pair
276-0488	Large	Bulk - 6 pair
276-0489	Extra Large	Bulk - 6 pair
276-0490	XX Large	Bulk - 6 pair

**Unlined Grain Leather Driver's Gloves**



- For drivers, utility and warehouse workers
- Gunn cut pattern
- Keystone thumb
- Pull-strap closure

Part Number	Size	Qty.
282-9529	Large	12 Pair with Hang Tags
282-9530	Extra Large	12 Pair with Hang Tags

**Lined Leather Driver's Gloves**



- For drivers, utility and warehouse workers
- Extra warmth
- Elastic shirred back holds glove securely to hand
- Gunn cut pattern

Part Number	Size	Qty.
246-5151	Medium	12 Pair with Hang Tags
246-5149	Large	12 Pair with Hang Tags
246-5147	Extra Large	12 Pair with Hang Tags
246-5152	Medium	Bulk - 12 Pair
246-5150	Large	Bulk - 12 Pair
246-5148	Extra Large	Bulk - 12 Pair

**Split Leather Driver's Gloves**

- For drivers, utility and warehouse workers; light welding
- Elastic shirred back holds glove securely to hand
- Gunn cut pattern

Part Number	Size	Qty.
246-5153	Large	12 Pair with Hang Tags
246-5154	Large	Bulk - 12 pair



**Split Leather Palm Gloves**

- For tough rugged jobs
- Full leather index finger
- Lined palm and leather tips
- Gauntlet cuff style
- Elastic on back with knuckle strap

Part Number	Size	Qty.
246-5155	Large	12 Pair with Hang Tags
246-5156	Large	Bulk - 12 Pair



**Split Leather Palm Gloves**

- Grain leather palm with palm patch
- Gunn cut
- Waterproof safety cuff
- Wing thumb
- Full leather index finger and tips with elastic

Part Number	Size	Qty.
268-8795	Men's Large	12



**Split Cowhide Palm Gloves**



- For medium- to heavy-duty work
- Gunn cut pattern
- Full leather index finger
- Wing thumb

Part Number	Size	Qty.
282-9531	Medium	Bulk - 12 Pair
282-9532	Large	Bulk - 12 Pair
282-9533	Extra Large	Bulk - 12 Pair

**Traditional All-purpose Gloves**



- For general work
- Cotton blend
- Knit wrist cuff
- Plastic dots on inner side and back of index finger

Part Number	Size	Qty.
246-5163	Large	Bulk - 12 Pair

**Jersey Gloves**



- For general purpose use
- Soft knit fabric
- Stretch to provide excellent fit

Part Number	Size	Qty.
246-5165	Large	12 Pair with Hang Tags
246-5166	Large	Bulk - 12 Pair

**Fleeced Gloves**

- For outside work
- Knit wrist cuff
- Double layer of fabric
- Added warmth

Part Number	Size	Qty.
246-5167	Large	Single Pair
246-5168	Large	Bulk - 12 Pair



**Reversible Gloves**

- For work where grip is important
- String knit glove
- Black dots on both sides
- Knit wrist

Part Number	Size	Qty.
246-5169	Large	Bulk - 12 Pair



**Leather Welding Gloves**

- One piece back fully welted
- Color: gold

Part Number	Size	Qty.
185-0153	Large	Single Pair
247-4447	Large	Single Pair
247-6410	Large	Bulk - 12 Pair

**Chemical-resistant Nitrile Gloves**



NOTE: When using gloves as Personal Protection Equipment (PPE), always consult the Material Safety Data Sheet (MSDS) for the chemical that is being handled for the most appropriate glove.

- Protect against cuts, abrasions, punctures, and snags
- Embossed texture improves grip
- Will not swell or weaken like rubber or neoprene in solvents and fats

Part Number	Size	Qty.	Application	Chemical Resistance
4C-5522	9	Bulk - 12 Pair	Chemical Handling Acids, Solvents, Caustics, Oils, Grease, Degreasing Machine operations using cutting oil, metal fabrication	Sodium Hydroxide, Freon, Xylene, Hydro-chloric Acid, Stoddard Solvent, Potassium Hydroxide, Perchloroethylene, Phosphoric Acid
4C-5523	10	Bulk - 12 Pair	Chemical Handling Acids, Solvents, Caustics, Oils, Grease, Degreasing Better protection than 4C-5522 due to thickness.	Sodium Hydroxide, Freon, Xylene, Hydro-chloric Acid, Stoddard Solvent, Potassium Hydroxide, Perchloroethylene, Phosphoric Acid

**Neoprene-coated Gloves**



- For working with acids, solvents, oils, caustics and greases
- High cut resistance compared to rubber and vinyl
- Good from 46°C to 149°C (-50°F to 300°F)

Part Number	Size	Qty.
246-5164	Large	12 Pair

**Nitrile-coated Knit-lined Gloves**



- For dry and light oil applications
- Superior resistance to cuts and abrasions
- Porous coating is soft and flexible
- Excellent grip

NOTE: When using gloves as Personal Protection Equipment (PPE), always consult the Material Safety Data Sheet (MSDS) for the chemical that is being handled for the most appropriate glove.

Part Number	Size	Qty.	Application	Chemical Resistance
4C-5526	Large	12 pair per package	Light to Med. duty, general purpose, fabrication, assembly, maintenance, shipping and receiving. Superior abrasion. Excellent grip in light oil appl.	Oil, Grease

### Neox Gloves with Neoprene Coating

- Resistance to cuts, abrasions, and chemicals
- Interlock knit lining enhances puncture and snag resistance
- Two-piece lining eliminates irritating seams

NOTE: When using gloves as Personal Protection Equipment (PPE), always consult the Material Safety Data Sheet (MSDS) for the chemical that is being handled for the most appropriate glove.

Part Number	Size	Qty.	Application	Chemical Resistance
4C-5527	One size fits most	12 pair per package	Resists Heat, Cutting, Use in Plating, Galvanizing, Degreasing, Petrochemicals	Acids, Solvents, (Ex.:Glycol Ether), Oils, Caustics, Soaps, Alcohols



### Neoprene-coated Knit-lined Gloves

- For full-arm protection when using chemicals
- Broad protection against cuts and abrasions
- Resist oils, caustics, acids, alcohol, and solvents
- Fabric lining enhances puncture and snag resistance

NOTE: When using gloves as Personal Protection Equipment (PPE), always consult the Material Safety Data Sheet (MSDS) for the chemical that is being handled for the most appropriate glove.

Part Number	Size	Qty.	Application	Chemical Resistance
4C-5529	One size fits most	Single Pair	Resists Heat, Cutting, Use in Plating, Galvanizing, Sand-blasting Cabinet	Acids, Solvents, (Ex.:Glycol Ether), Oils, Caustics, Soaps, Alcohols



### Disposable Nitrile Gloves

- Perfect for people allergic to rubber latex
- Resistant to punctures and chemicals
- Fits either hand
- 6 mil thick, 241.3 mm (9 1/2 in) long

Part Number	Description	Size	Qty.
260-1776	Powdered	Small	100 per box
259-7005	Powdered	Medium	100 per box
246-5179	Powdered	Large	100 per box
259-7006	Powdered	Extra Large	100 per box
260-1802	Powder-Free	Small	100 per box
259-7007	Powder-Free	Medium	100 per box
246-5180	Powder-Free	Large	100 per box
259-7008	Powder-Free	Extra Large	100 per box



**Disposable Latex Gloves**



- For working with chemicals
- Extra stretch for best fit
- Excellent sensitivity touch
- Seamless construction
- Rubber latex
- 5 mil thick, 10 in long

Part Number	Size	Qty.
260-1777	Small	100 per box
260-1778	Medium	100 per box
246-5181	Large	100 per box
260-1779	Extra Large	100 per box

**Nylon Gloves with Nitrile Coating**



- For maintenance/assembly and shipping/receiving
- Excellent cut and abrasion resistances
- Good alternative to heavy cotton-coated gloves

Part Number	Size	Qty.
247-6412	Large	12 Pair with Hang Tags
247-6413	Extra-Large	12 Pair with Hang Tags
247-4449	Large	Bulk - 12 Pair
247-4450	Extra-Large	Bulk - 12 Pair

**285-1145 Combination Padlock**

- Cat part number engraved on side of padlock

Part Number	Combina-tion Type	Lock Mechanism	Width	Shackle Diameter	Horizontal Shackle Clearance	Vertical Shackle Clearance
285-1145	resettable	4-digit dialing	50.8 mm (2 in)	7.9 mm (5/16 in)	25.4 mm (1 in)	25.4 mm (1 in)



**285-1146 Combination Padlock**

- Cat part number engraved on back of padlock

Part Number	Combina-tion Type	Lock Mechanism	Width	Shackle Diameter	Horizontal Shackle Clearance	Vertical Shackle Clearance
285-1146	fixed	3-digit dialing	47.6 mm (1 7/8 in)	7.1 mm (9/32 in)	20.6 mm (13/16 in)	19.0 mm (3/4 in)



**285-1147 High Security Brass Padlock**

- Lock body and shackle black with Cat logo on both sides of bumper, Cat part number on side of bumper

Part Number	Number of Pin Tumblers	Width	Shackle Diameter	Horizontal Shackle Clearance	Vertical Shackle Clearance
285-1147	5	44.4 mm (1 3/4 in)	7.1 mm (9/32 in)	20.6 mm (13/16 in)	22.3 mm (7/8 in)



**285-1148 High Security Brass Padlock**

- Lock body and shackle black with Cat logo on both sides of bumper, Cat part number on side of bumper

Part Number	Package Quantity	Number of Pin Tumblers	Width	Shackle Diameter	Horizontal Shackle Clearance	Vertical Shackle Clearance
285-1148	2	5	44.4 mm (1 3/4 in)	7.1 mm (9/32 in)	20.6 mm (13/16 in)	22.3 mm (7/8 in)





**285-1149 High Security Brass Padlock**



- Lock body and shackle black with Cat logo on both sides of bumper, Cat part number on side of bumper

Part Number	Number of Pin Tumblers	Width	Shackle Diameter	Horizontal Shackle Clearance	Vertical Shackle Clearance
285-1149	5	44.4 mm (1 3/4 in)	7.1 mm (9/32 in)	20.6 mm (13/16 in)	63.5 mm (2 1/2 in)

**285-1150 High Security Brass Padlock**



- Lock body and shackle black with Cat logo on both sides of bumper, Cat part number on side of bumper

Part Number	Package Quantity	Number of Pin Tumblers	Width	Shackle Diameter	Horizontal Shackle Clearance	Vertical Shackle Clearance
285-1150	4	5	44.4 mm (1 3/4 in)	7.1 mm (9/32 in)	20.6 mm (13/16 in)	63.5 mm (2 1/2 in)

### Oil Absorbent Pads

- Exclusive “micro-webs” absorbs up to 100% more oil than other leading melt-blown oil absorbents
- Improved absorbency means more liquid pickup, with less product, which can result in lower costs for the user
- Very little lint to minimize contamination
- Supplier-branded product



Part Number	Description	Size	Absorption/Pad	Qty.
245-5836	Oil Absorbent Pads	43.2 x 48.3 cm (17 x 19 in)	25 gallons of oil	50

### Absorbent Socks

Warranty: Manufacturer’s

- Tubular absorbent socks absorb and contain leaks and spills around machinery (hydraulic oil, coolants, non-aggressive fluids, water, and even hazardous fluids, such as PCB oils and solvents)
- Superior diking and damming capability (hugs the floor, creating an effective barrier or dike that holds back fluids, in emergency situations, even after total absorption)
- Used primarily for everyday housekeeping around machines that leak, seep, or spill fluids
- Fits snugly against machine bases and wrap-around corners, keeping work area safe and dry
- Fine-grade vermiculite filler (non-biodegradable) quickly soaks up leaks and drips
- Durable, stitch-bonded polypropylene skin improves strength
- Self-contained, no messy cleanup (no loose absorbents to spread, sweep, scatter, shovel, or track around)
- Reusable for water spills only
- Meets OSHA regulation 29 CFR 1910.22(a)(2) for dry and clean workplace floors
- Material Safety Data Sheets (MSDS) available
- Supplier-branded product



**Reference**  
NELG5036

Part Number	Quantity/Box	Absorption/Box	Absorption/Sock	Size	Shipping Weight
235-0844	40	113 L (30 gal)	2.8 L (.7 gal)	8 cm x 122 cm (3 in x 48 in)	23 kg (50.71 lb)
254-3969	8	57 L (15 gal)	6.8 L (1.8 gal)	75 mm (3 in) diameter x 3 m (10 ft) long	11 kg (24.25 lb)

### Absorbent Pillows

Warranty: Manufacturer's



- Absorbent pillow soaks up small to medium-size spills of oil and other non-aggressive fluids (works best once a spill has been contained)
- Fast, effective way to control leaks
- Use only as many as required (pillow's large surface area and superior wicking ability speeds cleanup time)
- High absorption/fast-wicking cellulose fibers begin to work when pillow contacts liquid and continue until fully saturated
- Strong, polypropylene cover will not tear when handling
- Easy cleanup (simply pick up and place into proper disposal container)
- Meets OSHA regulation 29 CFR 1910.22(a)(2) for dry and clean workplace floors
- Material Safety Data Sheets (MSDS) available
- Supplier-branded product

**Reference**

NELG5036

Part Number	Quantity/Box	Absorption/Box	Absorption/Sock	Size	Shipping Weight
235-0845	40	76 L (20 gal)	1.9 L (64 oz)	25 x 25 x 5 cm (10 x 10 x 2 in)	10 kg (23 lbs)
193-0768	14	53 L (14 gal)	3.7 L (1 gal)	51 x 20 x 3.8 cm (20 x 8 1.5 in)	6.8 L (15 lbs)

### Heavyweight Absorbent Material for Most Oil, Water-Based Fluids and Chemicals

Warranty: Manufacturer's

Absorbs the following fluids and chemicals:

Acetone, Acetonitrile, Aluminum Salts, Ammonium Hydroxide, Barium Salts, Benzyl Alcohol, Boric Acid, Butanol, Calcium Chlorite, Carbon Disulfide, Carbon Tetrachloride, Chloroform, Cupric Chloride, Cyclohexanone, Dichloromethane, Diethylamine, Dimethylformamide, Ethyl Acetate, Formaldehyde, Gasoline, Glycol Ether, Hexane, Hydrazine, Anhydrous, Hydrochloric Acid (37%), Hydrogen Peroxide (30%), Hydrofluoric Acid (48%), Isopropanol, Jet Fuel (JP-5), Kerosene, Methanol, Methyl Ethyl Ketone, Mineral Oil, Mineral Spirits, Naphtha, Nitric Acid (70%), Nitric Acid fuming (90%), Nitrobenzene, Perchloroethylene, Phenol, Potassium Hydroxide 50%, Propylene Glycol, Sodium Hydroxide (50%), Styrene, Sulfuric Acid (50%), Sulfuric Acid (98%), Tetrachloroethylene, Tetrahydrofuran, Thionyl Chloride, Toluene, 1, 1, 1-Trichloroethane, Trichloroethylene, Triethylamine, Turpentine, Water

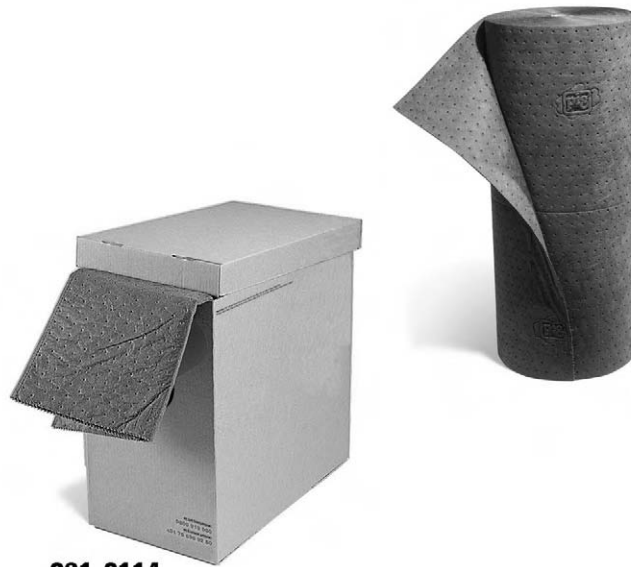
- Heavyweight, gray, absorbent material designed to absorb chemicals, solvents, oils, coolants, petroleum products, water, water-based fluids, and even acids and bases
- Multiple uses in maintenance, repair, and operating (MRO) areas; cover areas prone to overspray and spills, leaving a cleaner, safer work area; ideal for heavy, concentrated machine leaks and large, spreading spills; keep floors and walk areas safer by absorbing leaks, spills, drips, and overspray
- Dark gray color hides dirt and grime of foot traffic
- Thin profile slides into hard-to-reach areas
- Made from flame-resistant material which can be used around spark-prone areas, such as welding or grinding equipment
- Material will not degrade or have a chemical reaction to a wide variety of chemicals and strong solvents
- Absorbs 10 times its weight, reducing material purchase and disposal costs
- Dimple design helps absorb more liquid in less time (material retains liquid, even when fully saturated)
- Roll material cuts easily with scissors or razor knife — easily shaped to fit virtually any area
- Material: 100% polypropylene
- Multiple layers are held together with thermal bond points for added strength and durability—will not fall apart or leave behind residue, even when fully saturated
- Meets OSHA regulation 29 CFR 1910.22(a)(2) for dry and clean workplace floors
- Material Safety Data Sheets (MSDS) available
- Supplier-branded product unless otherwise indicated

Shop Supplies

(Continued)

**Heavyweight Absorbent Material for Most Oil, Water-Based Fluids and Chemicals (Continued)**

Warranty: Manufacturer's



**261-0114**

Part Number	Description	Quantity/Box	Absorption/Box/Roll	Absorption/Pad	Size	Ply	Shipping Weight
235-0847	Absorbent Roll	1 roll	155 L (41 gal)	—	76 cm (30 in) wide 46 m (150 ft) long perforated to 25 cm (10 in) x 38 cm (15 in)	8	14 kg (30.86 lb)
261-0114	Absorbent Mat	1 roll	53.06 L (14 gal)	—	76.2 cm (30 in) wide 15.25 m (50 ft) long	8	5 kg (11.02 lb)
307-9927	Absorbent Roll	1 roll	163 L (43 gal)	--	76 cm (30 in) wide 46 m (150 ft) long	3	15 kg (33.07 lb)
307-9925	Absorbent Roll	1 roll	163 L (43 gal)	--	76 cm (30 in) wide 46 m (150 ft) long perforated every 25 cm (10 in)	3	15 kg (33.07 lb)
307-9919	Absorbent Pad	100 pads	80 L (21 gal)	798 ml (27 oz)	38 x 48 cm (15 x 19 in)	3	8 kg (17.64 lb)
307-9920	Absorbent Pad	100 pads	91 L (24 gal)	917 ml (31 oz)	38 x 51 cm (15 x 20 in)	8	9 kg (19.84 lb)
307-9922	Absorbent Pad	100 pads	80 L (21 gal)	798 ml (27 oz)	38 x 48 cm (15 x 19 in)	3	8 kg (17.64 lb)

**High-Visibility Absorbent Mat**

Warranty: Manufacturer's

- Absorbs oils, coolants, solvents and water
- Ideal for any leak-, spill-, or drip-prone areas
- Absorbs a wide range of chemicals without degrading or causing a dangerous chemical reaction
- High-visibility yellow color alerts workers to potential dangers where work or repairs are taking place
- Flame-resistant - safe for spark-prone areas such as welding robots
- Comes with a variety of socks and pillows along with a roll of universal mat
- Low profile — slides into hard-to-reach areas
- Supplier-branded product



Shop Supplies

(Continued)

### High-Visibility Absorbent Mat (Continued)

Warranty: Manufacturer's

Part Number	Absorbent Capacity	Length	Width	Weight	Material	Ply
261-0115	125 L (33 gal) per bag	46 m (151 ft)	61 cm (24 in)	11 kg (24 lb)	100% polypropylene	8

### Oil-Only Absorbent Material

Warranty: Manufacturer's



- Heavyweight, white, absorbent material used for spill cleanup and everyday maintenance absorption of non-flammable petroleum products and petroleum-based fluids, such as oil, gasoline, kerosene, diesel fuel, solvents, etc.
- Absorbs petroleum-based fluids only—ideal for situations where water absorption is not necessary
- Roll material works great for factory floors saturated with oils or other petroleum-based fluids
- Less expensive than a universal absorbent (ideal for oil-only spills or drips)
- Material will not degrade or have a chemical reaction to petroleum-based fluids
- Absorbs 10 times its weight, reducing material purchase and disposal costs
- Dimple design helps absorb more liquid in less time (material retains liquid even when fully saturated)
- Roll material cuts easily with scissors or razor knife — easily shaped to fit virtually any area
- Material:100% polypropylene
- Multiple layers are held together with thermal bond points for added strength and durability—will not fall apart or leave behind residue, even when fully saturated
- Material can be incinerated with less than 0.1% ash while producing 21,000 Btu/lb
- Meets OSHA regulation 29 CFR 1910.22(a)(2) for dry and clean workplace floors
- Material Safety Data Sheets (MSDS) available
- Supplier-branded product unless otherwise indicated

Part Number	Description	Quantity/Box	Absorption/Box/Roll	Absorption/Pad	Size	Shipping Weight	Ply	Color
235-0850	Oil-Only Absorbent Roll	1 roll	155 L (41 gal)	—	76 cm (30 in) wide 46 m (150 ft) long	14 kg (30.86 lb)	8	White
307-9923	Oil-Only Absorbent Pad	100 pads	76 L (20 gal)	739 ml (25 oz)	38 x 48 cm (15 x 19 in)	8 kg (17.64 lb)	3	White
307-9921	Oil-Only Absorbent Pad	50 pads	45 L (12 gal)	917 ml (31 oz)	38 x 51 cm (15 x 20 in)	4 kg (8.82 lb)	8	White
307-9924	Oil-Only Absorbent Roll	1 roll	151 L (40 gal)	--	76 cm (30 in) wide 46 m (150 ft) long	15 kg (33.07 lb)	3	White
307-9926	Oil-Only Absorbent Roll	1 roll	151 L (40 gal)	--	76 cm (30 in) wide 46 m (150 ft) long	15 kg (33.07 lb)	3	White
307-9928	Oil-Only Absorbent Pad	100 pads	76 L (20 gal)	739 ml (25 oz)	38 x 48 cm (15 x 19 in)	8 kg (17.64 lb)	3	White

Shop Supplies

### Lightweight Absorbent Roll

Warranty: Manufacturer's

- Lightweight, gray, absorbent mat designed to cover areas prone to overspray and spills, leaving a cleaner, safer work area
- Ideal for light machine overspray and small, annoying leaks of oils, coolants, solvents, and water
- Great for day-to-day housekeeping and repair work
- Cross roll perforations — easily and quickly tear to any size sheet, as small as 25 x 61 cm (10 x 24 in)
- Works well in narrow walkways
- Multiple layers are held together with thermal bond points for added strength and durability—will not fall apart or leave behind residue
- Absorbs 10 times its weight, reducing purchase and disposal costs
- Dark gray color hides dirt and grime
- Dimple design absorbs more liquid in less time and greater liquid retention holds liquid even when roll is saturated
- Meets OSHA regulation 29 CFR 1910.22(a)(2) for dry and clean workplace floors
- Material Safety Data Sheets (MSDS) available
- Supplier-branded product



Part Number	Quantity/Box	Absorption/Box	Size	Material	Ply	Shipping Weight
235-0849	1 roll	125 L (33 gal)	61 cm (24 in) wide by 91 M (300 ft) long	100% polypropylene	8	11 kg (24.25 lb)

### Sorbent Spill Kits

- Most versatile spill kit on today's market
- Chemical Sorbent Folded Spill Kit is a non-selective sorbent which will "sorb" most aggressive chemicals
- 170-8604 fits into small places where accessibility is important; unique construction and compressibility allows storage behind or under seats and/or lab benches where other spill kits will not fit
- 170-8605 is packaged in a 20 gallon drum and can be placed in key locations throughout a facility
- Most complete spill kit in a roll (material can be used as a pillow, pad, roll, or boom)
- Scrim coating on one side increases strength and eliminates linting
- Each kit contains a containment bag and tie
- Molded handles makes transportation easier



#### 170-8604 Spill Kit, 5 Gallon

- Absorb 5 gallons of petroleum-based fluid
- Roll of folded sorbent, 13 x 66 cm (5 x 26 in); fully opened 48 x 66 cm (19 x 26 in); Qty 1
- Disposal bag and tie, Qty 1

#### 170-8605 Spill Kit, 31 Gallon

- Absorb 31 gallons of petroleum-based fluid
- 20 gallon drum with lid and plastic closure ring, Qty 1
- Roll of folded sorbent, 13 x 127 cm (5 x 50 in); fully opened, 48 x 127 cm (19 x 50 in), Qty 2
- Sorbent pads, 43 x 48 cm (17 x 19 in), Qty 30
- Disposal bags and ties, Qty 3

Part Number	Description	Size
170-8604	Sorbent Spill Kit	5 gal
170-8605	Sorbent Spill Kit	31 gal

### Small Spill Response Bag

Warranty: Manufacturer's



- Highly-visible wall mounted bag
- Absorbs oils, coolants, solvents, and water
- Can absorb up to 38 liters (10 gallons)
- Water resistant bag with hook and loop closure opens and closes easily
- Compact size — can be mounted throughout the shop where spills are most likely to occur
- Weight: 6.4 kg (14 lbs)
- Helps to comply with 40 CFR 263.30 (a)
- Material Safety Data Sheets (MSDS) available
- Supplier-branded product

Part Number	Description	Weight	Size	Qty.
254-3767	Small Spill Response Bag	6.4 kg (14.11 lb)	--	--
<b>Consists of:</b>				
235-0848 <sup>1</sup>	Universal mat pads	--	51 cm x 41 cm (20 in x 16 in)	50
235-0844	Absorbent sock	--	8 cm x 122 cm (3 in x 48 in)	4

<sup>1</sup> Not available for individual sale

### Small Spill Response Cart

Warranty: Manufacturer's



- Absorbs oils, coolant, solvents, and water
- Ideal for spill-prone areas
- Comes with a variety of socks, mat pads, pillows, and wipers
- Products in cart can absorb up to 59 liters (15.5 gallons)
- Eight-inch rubber wheels and handles on both top and bottom for carrying
- Cleanup instructions on cart door
- Cart can be locked for security
- Helps to comply with 40 CFR 112.7(c) (1) (vii) where absorbents can be used to control oil discharges
- Material Safety Data Sheets (MSDS) available
- Supplier-branded product

(Continued)



**Small Spill Response Cart (Continued)**

Warranty: Manufacturer's

Consist	Qty.	Reorder Part No.
Absorbent sock, 8 cm x 122 cm (3 in x 48 in)	3	235-0844
Absorbent sock, 8 cm x 250 cm (3 in x 10 ft)	2	254-3969
Universal mat pads, 38 cm x 22 cm (15 in x 8.5 in)	52	307-9919
Absorbent pillows, 25 cm x 25 cm (10 in x 10 in)	10	235-0845
Wipers, 33 cm x 30 cm (13 in x 12 in)	56	
Disposal bags and ties	5	
Nitrile gloves	1	4C-5522, 4C-5523, or 4C-5526
Safety goggles	1	233-8583
Disposable boots	1	
Repair putty, 178 mm (7 in) tube	2	
Emergency response guidebook	1	
Instruction Manual	1	

Part Number	Description	Weight
254-3768	Small Spill Response Cart	29.5 kg (65.04 lb)

**Small Spill Response Cart**

Warranty: Manufacturer's

- Absorbs oils, coolant, solvents, and water
- Ideal for spill-prone areas
- Comes with a variety of socks and pillows along with a roll of universal mat
- Products in cart can absorb up to 53 liters (14 gallons)
- Eight-inch rubber wheels on board and handles on both top and bottom
- Cleanup instructions on cart door
- Shelves and compartments inside cart for easy organization
- Cart can be locked for security
- Helps to comply with 40 CFR 112.7(c) (1) (vii) where absorbents can be used to control oil discharges
- Material Safety Data Sheets (MSDS) available
- Supplier-branded product



(Continued)



**Small Spill Response Cart (Continued)**

Warranty: Manufacturer's

Consist	Qty.	Reorder Part No.
Absorbent socks, 8 cm x 122 cm (3 in x 48 in)	5	235-0844
Universal mat pads, 38 cm x 18 m (15 in x 60 ft)	1	
Absorbent pillows, 25 cm x 25 cm (10 in x 10 in)	4	235-0845
Disposable bags and ties	5	
Nitrile gloves	1	4C-5522, 4C-5523, or 4C-5526
Safety goggles	1	233-8583
Repair putty, 178 mm (7 in) tube	1	
"When the Spill Strikes" poster	1	

Part Number	Description	Weight
254-3770	Small Spill Response Cart	18 kg (39.68 lb)

**Large Spill Response Kit**

Warranty: Manufacturer's



- Absorbs oils, coolants, solvents, and water
- Comes with a variety of socks, mats, pillows, and loose absorbents
- Products in cart can absorb up to 144 liters (38 gallons)
- Polyethylene container with hinged lid stores and protects absorbents from moisture, dirt, and damage
- Equipped with eight-inch rubber wheels and built-in handles for easy mobility in tight spaces
- Helps to comply with 40 CFR 112.7(c) (1) (vii) where absorbents can be used to control oil discharges
- Material Safety Data Sheets (MSDS) available
- Supplier-branded product

Consist	Qty.	Reorder Part No.
Absorbent sock, 8 cm x 122 cm (3 in x 48 in)	4	235-0844
Absorbent sock, 8 cm x 250 cm (3 in x 10 ft)	1	254-3969
Absorbent pillows, 53 cm x 43 cm (21 in x 17 in)	2	235-0845 or 193-0768 {1}
Universal mat pads, 51 cm x 41 cm (20 in x 16 in)	50	
Disposal bags and ties	5	
Shop floor sweep material	1	
Loose absorbent material	2	
Tamper-proof labels	6	
Instructions	1	
{1} Equivalent - not an exact replacement		

Shop Supplies

(Continued)

**Large Spill Response Kit (Continued)**

Warranty: Manufacturer's

Part Number	Description	Weight
254-3769	Large Spill Response Kit	48.5 kg (106.92 lb)

**DRC Quarter-Fold Wipers**



- Highly absorbent material—cleans up oil, grease, water, and other messy fluids
- Strong and abrasion-resistant—resists tearing even when wet
- Offers a low-lint alternative
- Economical alternative to shop rags or towels
- Soft cloth-like feel

Part Number	Size	Color	Qty.
288-4209	31.75 x 33.02 cm (12.5 x 13 in)	White	56 wipers per bundle, 18 bundles per case

**DRC Pop-Up Shop Towels**



- Highly absorbent material—cleans up oil, grease, water, and other messy fluids
- Soft cloth-like feel
- Strong and abrasion-resistant—resists tearing even when wet
- Offers a low-lint alternative in a handy pop-up container

Part Number	Size	Color	Qty.
288-4210	24.13 x 41.91 cm (9.5 x 16.5 in)	White	100 towels per box, 9 boxes per case
288-4211	24.13 x 41.91 cm (9.5 x 16.5 in)	Blue	100 towels per box, 9 boxes per case

**DRC Center-Pull Roll Dry Shop Towels**



- Highly absorbent material—ideal for use on grease, oils, and other messy fluids
- Strong and abrasion-resistant—resists tearing even when wet
- Center-pull wiper wrapped in clear plastic film with re-closeable top tab for easy dispensing

Part Number	Size	Color	Qty.
288-4212	22.86 x 33.02 cm (9.0 x 13.0 in)	White	300 towels per roll, 1 roll per pack

**DRC Center - Pull Shop Towels**



- Economical alternative to shop cloths, without the mess
- Works like cloth but at a fraction of the cost
- Packaging keeps your shop towels clean and dry until needed
- Won't color bleed and no thread gaps
- Made with the strongest and heaviest DRC material on the market
- New center pull design allows for one towel to come out at a time
- Center-pull design holds until the last three towels
- Absorbs fluids on contact and lint free

Part Number	Description	Size	Qty.
303-9339	DRC Red Shop Towels	30.7 x 42.7 cm (12.1 x 16.8 in)	140 per roll

### DRC Jumbo Roll Shop Towels

- Highly absorbent material—cleans up oil, grease, water, and other messy fluids
- Soft cloth-like feel
- Strong and abrasion-resistant—resists tearing even when wet

Part Number	Description	Size	Color	Qty.
301-9696	DRC Jumbo Roll Shop Towels	31.75 x 33.02 cm (12.5 x 13 in)	White	692 towels per roll, 1 roll per case
311-3136	Holder for 301-9696	--	--	5



### All-Purpose Wipers

Warranty: Manufacturer's

- Highly absorbent—cleans up oil, grease, water and other messy fluids
- Strong and abrasion resistant—great wet-strength for scrubbing
- Pliable for reaching into tight places
- Soft for personal cleaning
- Low lint and won't leave a residue
- Economical alternative to shop rags or towels

Part Number	Size	Color	Qty.
265-2255	30.5 x 33 cm (12 x 13 in) quarter-folded	blue	56 wipers per pack, 18 packs per case



### Wipers

- Designed to outperform rags with Hydroknit technology in lightweight wiper
- Reinforced for extra scrubbing and cleaning power
- Leaves no residue
- Good on grease and oil, adhesive cleaning and cable lubricant removal
- Good for applying thinners and solvents

Part Number	Size	Color	Qty.
254-3422	23.1 x 42.7 cm (9.1 x 16.8 in)	white	126 wipers per box, 10 boxes per case

### Low Lint Task Wipers

- For lab environments where clean rooms require low lint
- Excellent for surface wiping in clean manufacturing environments—fuel systems, hydraulics, diagnostic equipment and precision instruments
- Continuous filament rayon/polyester spun-like blend for cloth-like feel
- Excellent absorption rate and capacity
- Solvent resistant
- Double wrapped in anti-stat packaging

Part Number	Size	Color	Qty.
265-2256	20.3 x 20.3 cm (8 x 8 in)	white	100 wipers per pack, 5 packs per case



**Manufactured Rags**



- HydroKnit fast-absorbing material—highly absorbent
- Cleans up oil, grime, and solvents
- Good for applying thinner and solvents
- Pound for pound absorbs more oil and water than shop rags
- Use with 1U-5432 Paper Wiper Dispenser

Part Number	Size	Color	Qty.
267-6532	31.8 x 36.6 cm (12.5 x 14.4 in)	white	76 wipers per bundle, 12 bundles per case

**Manufactured Pop-up Rags**



- HydroKnit fast-absorbing material—highly absorbent
- Reinforced for heavy maintenance cleaning and long-lasting performance that also reduces waste
- Cleans up oil, grime, and solvents
- Good for applying thinner and solvents
- Pound for pound absorbs more oil and water than shop rags
- Packaged in sturdy corrugated pop-up dispenser cartons
- Can also use with 269-3368 Dispenser

Part Number	Wiper Size	Color	Qty.
267-6535	23.1 x 42.7 cm (9.1 x 16.8 in)	white	100 rags per carton, 10 cartons per case
267-6536	23.1 x 42.7 cm (9.1 x 16.8 in)	blue	100 rags per carton, 10 cartons per case

**Dispensers for Manufactured Rags and Paper Wipers**



1U-5432

Part Number	Description	Usage
1U-5432	Paper Wiper Dispenser, Plastic	use for 267-6532 Manufactured Rags and 162-5791 Shop Towel
269-3368	Dispenser, White Metal	use for 267-6535 and 267-6536 Manufactured Rags

**Hard Roll Towels**

- Towels compressed on roll so more towels fit in same space — no sacrifice in performance, change roll less often
- Material: paper

Part Number	Description	Size	Color	Package Quantity
263-0892	Hard Roll Towels	20.3 cm x 304.8 m (8 in x 1000 ft) roll	White	12 rolls



**Shop Towel**

- Excellent absorbency
- Perfect to use on grease or oil
- Low-lint, 100% polypropylene construction
- Good for cleaning and disinfecting surface
- Stands up well to spirits and solvents

Part Number	Size	Qty.
162-5791	30.7 x 42.7 cm (12.1 x 16.8 in)	180 per box



**Paper Cups**



- Two-piece construction with tightly rolled rim
- Fully wax coated inside and out with a satin finish

Part Number	Description	Capacity	Qty.
263-0884	Paper Cups	238.8 ml (8 oz)	2000 per case

**Engine Cover**



- Protects engine from dirt and debris
- Can be used as drop cloth or dust cover
- Affordable and disposable

Part Number	Size	Qty.
1U-7427	122 x 183 cm (48 x 72 in)	50 sheets per case

**Seat Covers**



- These seat covers drape over the seats and are disposable when the job is finished
- They are produced from a specially formulated resin that has a built-in stretch to help prevent tool punctures and rips. These covers are made of a clear non-slip surface on both sides that helps hold it in place while providing safe usage.

Part Number	Description
274-7454	Roll of 250 seat covers
274-7455	Case of 250 seat covers

**Wall Mount Dispenser**



- Space saver wall dispenser mounts with ease to accommodate seat cover rolls
- This dispenser will help keep your interior protection products clean and easy to reach

Part Number	Description
274-7458	Seat cover roll dispenser

## Floor Cover

- Interior service soils are the single most frequent complaint by service customers. Help keep the inside clean with these floor covers that stay in place. These covers have a high absorption paper on top and a plastic bottom that won't soak through

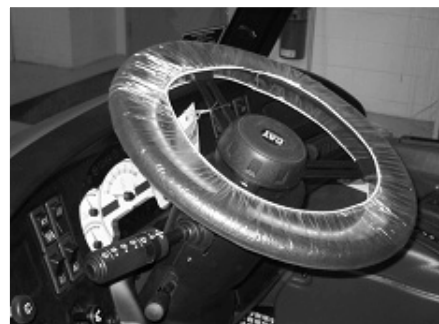
Part Number	Description
274-7456	Case of 500 floor covers



## Steering Wheel Covers

- The see-thru steering wheel cover protects your customer's steering wheel from oily prints. It is elasticized on both sides providing protection for the wheel and the customer's hands. Impervious to grease, these afford maximum protection for the wheel.

Part Number	Description
274-7457	Case of 500 covers



## Dust Cap for 55 Gallon Drum

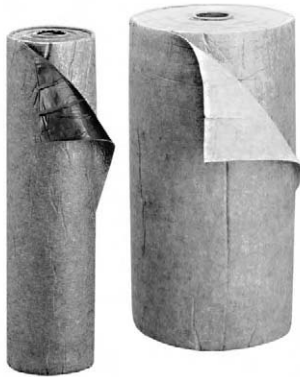
- Excellent for covering open drum containers
- Ideal for most industrial, food, chemical, and pharmaceutical applications
- Low cost protection from dirt, dust, and moisture
- Prevents contamination and evaporation
- Elastic around entire opening helps keep cover in place
- Provides easy access to contents
- Fits a 208.2 L (55 gal) drum

Part Number	Size	Qty.
270-5347	863.6 mm (34 in) diameter	100 per box





Rugs



- Keep shop floors cleaner and safer
- Absorb most shop fluids and oils
- Tough and tear resistant—won't break down
- Durable enough to withstand heavy traffic
- Coated rug has a poly-backed coating to provide extra protection to shop floors

Part Number	Description	Size	Absorbent Capacity
159-5155	Rug	91 x 91.5 m (36 x 300 in)	121 L (32 gal) per roll
159-5160	Rug (Coated)	91 x 254 cm (36 x 100 in)	40 L (10.5 gal) per roll

Diamond Plate Sponge Cote Floor Mats



- Tough vinyl surface tile bonded to non-absorbent sponge base
- Diamond plate surface tread is durable and slip resistant
- 9.5 mm (3/8 in) vinyl sponge base reduces fatigue and strain
- Grease and chemical resistant, non-flammable
- Edges beveled for maximum safety

Part Number	Size
4C-8102	51 x 76 cm (2 ft x 3 ft)
4C-8103	76 x 127 cm (3 ft x 5 ft)

Safety-Zone Interlock Floor Mats



- The first molded, two-color interlocking runner matting
- Slip-resistant deck-plate surface ensures safe footing
- Thousands of buoyant air pockets cushion feet, reducing strain to legs and back
- Sections interlock to create runners of any length, zip apart easily for removal and cleaning
- 12.7 mm (1/2 in) thick non-marking, non-staining high quality rubber

Part Number	Size	Unit
4C-8104	61 W x 91.4 cm L (24 in x 36 in)	Center
4C-8105	61 cm W x 91.4 cm L (24 in x 36 in)	End
4C-8106	91.4 W x 61 cm L (36 in x 24 in)	Center
4C-8107	91.4 W x 61 cm L (36 in x 24 in)	End

**Ultra-Tred Armor Cote Floor Mats**

- Long-lasting comfort and safety all in one
- Urethane coating protects against chemicals, abrasions, dirt and moisture
- Wears five times longer than comparable uncoated products
- Yellow beveled edges maximize safety
- 9.5 mm (3/8 in) thick vinyl compound for buoyancy underfoot

Part Number	Size
4C-8112	61 cm x 91.4 cm (2 ft x 3 ft)
4C-8113	91.4 cm x 152.4 cm (3 ft x 5 ft)
4C-8114	61 cm x 18.3 m (2 ft x 60 ft)
4C-8115	91.4 cm x 18.3 m (3 ft x 60 ft)



**TileTop Sponge-Cote Floor Mats**

- Ultimate cushioned support for employees who stand at work
- Unlimited uses in industrial, professional, laboratory and commercial settings
- Buoyant sponge dramatically reduces stress and back fatigue, improving efficiency
- Comfortable 12.7 mm (1/2 in) thickness is beveled for safety
- Marbleized rubber stays beautiful, is easy to maintain
- Not for use with spike heels, casters or stool legs

Part Number	Size
4C-8108	45.7 cm x 76.2 cm (18 in x 30 in)
4C-8109	45.7 cm x 121.9 cm (18 in x 48 in)
4C-8110	61 cm x 91.4 cm (24 in x 36 in)
4C-8111	91.4 cm x 152.4 cm (36 in x 60 in)

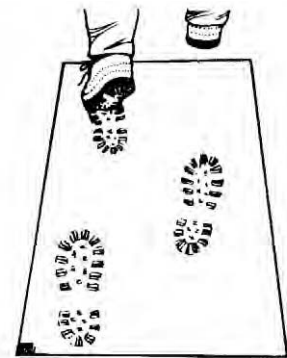


**Clean Walk Mats**

SMCS Code: 7951-580

- Used to remove dirt and contamination from shoes, wheels, and other passing objects — keeps dirt and grease from being tracked into office area
- Comes in three sizes
- Provides an inexpensive way to keep carpets and office areas clean
- Ideal for shop-to-office, paint, or cleaning areas
- Mat has 30 peelable layers, providing a fresh cleaning surface with each exposed layer

Part Number	Size
138-3852	457.2 mm x 914.4 mm (18 in x 36 in)
138-3855	457.2 mm x 1143 mm (18 in x 45 in)
138-3856	635 mm x 1143 mm (25 in x 45 in)



**Eye Loupe**

Warranty: Manufacturer's



- 25.4 mm (1 in) depth
- 12X power
- Extremely portable

Part Number	Description
8S-2257	Eye Loupe

**Metal Etching Pen**



- Leaves distinctive, smudge-proof, black markings
- Indispensable anyplace where metals, hardened or thin-walled, have to be marked or identified
- Strong effect on heavy metals, stainless steel, iron, copper, brass, nickel, tin, lead
- No electrical flux necessary; special acid solution flows like ink in a felt-tip pen and a permanent etch is produced on the metal
- Ideal for toolroom use and marking in the machine shop
- Apply on clean surface; after application wipe dry with oily cloth.

Part Number	Description
9U-7377	Metal Etching Pen

**Tie Down Straps**



- Elastic rubber tie down straps with a hook at each end
- Excellent for general tie down applications such as tarps and covers
- Material: SBR Rubber

Part Number	Size
262-9304	8 x 12.6 x 381 mm (.31 x .50 x 15 in)
262-9305	10 x 13 x 533 mm (.39 x .50 x 21 in)

### Black Wire

- Black annealed mechanics tie wire
- Soft and pliable—makes a perfect tie every time

Part Number	Size	Material	Qty.	Length
262-9959	18 gauge (18 gauge)	Black iron	1 Roll	177 m (580.71 ft)



### Creeper

- Rugged, one-piece, plastic body construction
- Easy-to-clean surface is resistant to solvents, greases, and fuels
- Body-fitting design, contoured to provide optimum comfort
- Low profile, gives maximum workspace but still clears air hoses
- Six pop-in urethane wheels resist corrosion and provide a smooth ride

Part Number	Description	Dimensions	Wheel Size	Clearance
172-0852	Creeper	965 x 445 x 102 mm (38.0 x 17.5 x 4.0 in)	51 mm (2 in)	22.2 mm (0.87 in)
172-0853	Replacement wheel	--	51 mm (2 in)	--



### Cat® Mudflaps

- Yellow on black rubber fiber
- Sold individually

Part Number	Size
9U-7309	12 inch wide x 18 inch high
9U-7310	20 inch wide x 14 inch high



### Diesel Power Mudflaps



- White or black rubber fiber

Part Number	Size	Color	Use
7X-2986	61 cm x 91.4 cm (24 in x 36 in)	Black	Large, on-highway trucks
154-6564	61 cm x 76.3 cm (24 in x 30 in)	Black	Large, on-highway trucks
7X-2982	61 cm x 35.6 cm (24 in x 14 in)	Black	Pickups, campers, trailers, and vans
7X-2984	61 cm x 91.4 cm (24 in x 36 in)	White	Large, on-highway trucks
7X-2983	61 cm x 35.6 cm (24 in x 14 in)	White	Pickups, campers, trailers, and vans

### Triangular Highway Warning Kit

- Three reflective triangles in a sturdy plastic case
- Compact, fold-flat design
- Durable spring steel base
- Complies with Federal Motor Vehicle Safety Standard Number 1
- Great for day or night visibility

Part Number	Description	Case Dimensions	Size	Qty.
262-4862	Triangular Warning Kit	(L x W x H): 45.7 x 13 x 13 cm (18 x 5 x 5 in)	43 cm (17 in)	3 per case

### Fluid Sampling Extraction Tools for Pressurized Compartments

Warranty: Manufacturer's

- Valve locations provide oil sample confidence and continuity—comparative data of pressurized oil samples is more reliable because the sample is taken from a continuous flow of oil at a known location.
- A probe is provided that allows the valve to be quickly flushed prior to taking the oil sample
- The sample bottle group is packaged, and sealed in a plastic bag to insure cleanliness
- Pressurized oil sampling is a fast, economical and clean method of obtaining oil samples from pressurized systems
- Better represents oil condition because the oil is continually mixed and circulated
- 10 to 20 times faster than sampling oil from non-pressurized systems
- Mailing container is available so the oil sample can be conveniently mailed to the testing laboratory

#### 169-8373 Bottle Group (Package Qty. - 300)

This bottle group is sealed in a plastic bag with sampling instructions included. The bottle group is ready to use when it is removed from the bag after the valve has been purged and the sample is ready to be taken. The bottle included in this group (169-7372) has the capacity to provide a 114 g (4 oz) sample. The 169-7372 can also be ordered by itself, 200 per case.

After the sample is obtained, the probe and tube are removed from the bottle cap and holder, and discarded, and the cap-cover seals the bottle. Labels for identifying the sample (obtained locally) can then be attached to send the oil for identification purposes. The 4C-4600 mail tube is available to send the oil sample to the laboratory. The laboratory also provides a mailing label.

#### 177-9343 Probe and Cap Group (package Qty. - 500)

The probe and cap group provides the same probe and cap that are used in the 169-8373 Bottle Group, however, without the bottle. This group is also sealed in a plastic bag with sampling instructions included. This group allows the dealer the flexibility to use other bottles such as the smaller 71 g (2 1/2 oz) 169-7373 bottle assembly (which must be ordered separately). (The cap requires that the bottles have a 38 M thread).

#### 169-7373 Bottle Assembly (Package Qty. - 200)

This smaller bottle assembly (169-7373) can be used with the 177-9343 Probe and Cap Group and reduces mailing expense by approximately one-half for dealers whose oil sample labs can provide effective full service analysis with 71 g (2 1/2 oz) or less of oil. These bottles can be used for engine samples since particle count is not used for engine samples. This bottle can also be used with the 1U-5718 Vacuum Pump used for non-pressurized oil sampling.

#### 8T-9208 Probe Assembly (package Qty. - 1)

Shop Supplies

(Continued)

**Fluid Sampling Extraction Tools for Pressurized Compartments (Continued)**

Warranty: Manufacturer's

The 8T-9208 Probe Assembly can be attached to a 6.35 mm (1/4 in) I.D. rubber hose (6K-0713 Hose - 228.6 mm (9 in) long or any desired length cut from bulk 5P-6442 hose or equivalent 100R6 type high temperature - low pressure hose). The 8T-9208 Probe and hose connected to a locally obtained waste container provide a method to purge or flush the 8C-3446, 8C-3345, or 7X-3387 sample valves prior to obtaining the desired oil sample using either the 169-7373 Bottle Group or 177-9343 Probe and Cap Group with the desired bottle. Approximately 14.8 cm to 29.6 cm (1/2 to 1 ounce) of expelled fluid purges the valves.

Pressurized systems on many Cat products are equipped with sampling valves to quickly extract oil samples with the above tools. Special Instruction SEHS9043 details retrofitting some earlier models with oil sampling valves, as well as pointing out the respective valve locations on models currently factory equipped with the oil sample valves.

The following valves, fittings and adapters are required or are commonly used for retrofitting the sampling valves to pressurized systems:

**321-0659 8oz (240ml) Bottle and Cap (package Qty. - 1)**

The 321-0659 Bottle and Cap can be used with the 293-8413 Hydac Contamination Monitor and the 202-2301 Portable Contamination Instrumental Kit.



Item	Part Number	Description	Package Quantity
1	169-8373	Bottle Group	300 per box
2	162-8873	Probe, Holder	--
3	177-9343	Probe and Cap Group	500 per box
4	4C-4600	Mailer Container - reusable tube	--
5	1U-8757	Tube, 6.35 mm (1/4 inch) O.D. by 30.5 m (100 ft) length	5 rolls per box
6	4C-4056	Tube, 7.9 mm (5/16 inch) O.D. by 30.5 m (100 ft) lengths	5 rolls per box
7	169-7373	Clear Bottle, 71g (2 1/2 oz)	200 per box
8	169-7372	Clear Bottle, 114 g (4 oz)	200 per box
9	1U-5718	Vacuum Pump	--
9	1U-5719	Seal Kit for 1U-5718 Vacuum Pump	--
10	8T-9208	Purging Probe	--
11	1U-7648	Tube Cutter	--
11	1U-8589	Replacement Blades	--
12	8C-8456	Sealed Cap	--
13	8C-3446	Oil Sampling Valve (7/16 inch-20 ext. thread)	--
13	3J-7354	SAE Straight Thread O-Ring Seal	--
14	7X-3387	Oil Sampling Valve (1/4 in-18 NPTF ext. thread)	--
15	8C-3345	Oil Sampling Valve (Mid X1 ext. thread)	--
15	8T-7876	ISO (Metric) Straight Thread O-Ring Seal	--

(Continued)

**Fluid Sampling Extraction Tools for Pressurized Compartments (Continued)**

Warranty: Manufacturer's

Item	Part Number	Description	Package Quantity
16	8C-3445	Dust Cap (Engine)	--
16	8C-3447	Dust Cap (Transmission)	--
16	8C-3451	Dust Cap (Hydraulic)	--
16	6V-0852	Dust Cap (Blank)	--
<b>Not shown</b>			
--	4C-4055	Tube, 6.35 mm (1/4 inch) O.D. by 2.1 m (7 ft) length	250 per box
--	4C-4057	Tube, 7.9 mm (5/16 inch) O.D. by 2.1 m (7 ft) length	250 per box
--	321-0659	Bottle and Cap (8oz/240ml)	1
<b>Oil Sampling Valves and O-Ring Seals</b>			
13	8C-3446	Oil Sampling Valve (7/16 inch-20 ext. thread)	--
13	3J-7354	SAE Straight Thread O-Ring Seal	--
15	8C-3345	Oil Sampling Valve (Mid X1 ext. thread)	--
15	8T-7876	ISO (Metric) Straight Thread O-Ring Seal	--
14	7X-3387	Oil Sampling Valve (1/4 in-18 NPTF ext. thread)	--
<b>Protective Dust Caps for Oil Sampling Valves (These are rubber caps with embossed symbols to indicate system being sampled.)</b>			
16	8C-3445	Dust Cap (Engine)	--
16	8C-3447	Dust Cap (Transmission)	--
16	8C-3451	Dust Cap (Hydraulic)	--
16	6V-0852	Dust Cap (Blank)	--
12	8C-8456	Sealed Cap	--
<b>Miscellaneous fittings and adapters commonly used for oil sampling valve retrofit installations</b>			
--	3B-7722	NPT Bushing	--
--	8C-6427	Adapter 1/4 inch-18 NPTF external to 7/16 inch-20 SAE internal	--
--	6V-7529	Adapter 1/8 inch-27 NPTF external to 7/16 inch-20 SAE internal	--
--	7J-8611	Adapter 90°uFFFD street elbow 1/4 inch-18 NPTF	--
--	5P-9617	Adapter Reducer 9/16 inch-18 SAE external to 7/16 inch-20 SAE internal	--
--	3J-1907	SAE Straight Thread O-Ring Seal	--
--	3J-5390	Adapter Reducer 3/8 inch-18 NPTF external to 1/8 inch-27 NPTF internal	--
--	9T-6865	Adapter Plug 5/8 inch-12 SAE external to 7/16 inch-20 SAE internal	--
--	2S-4078	SAE Straight Thread O-Ring Seal	--
--	5P-3501	Adapter 9/16 inch-18 SAE external to 1/4 inch-18 NPTF internal	--
--	3L-6521	Adapter Tee 1/4 inch-18 NPT (two internal and one external)	--
1	6V-3966	Nipple	--
--	7M-8489	Adapter 90°uFFFD elbow 9/16 inch-18 SAE external to 1/4 inch-18 internal	--
--	5P-3413	Cat Pipe Sealant with Teflon	--

**Fluid Sampling Extraction Tools for Non-Pressurized Compartments**

Warranty: Manufacturer's

Fluid sampling extraction tools are used to obtain fluid samples from non-pressurized vehicle compartments such as final drives, differential compartments, transfer cases, axle housings, etc.

The 1U-5718 Vacuum Pump is capable of pulling 25 inch (7.62 mm) Mercury (vacuum). The pump is compact and accepts the 169-7372, 114 g (4 oz), and 169-7373 Bottle Assembly, 71 g (2 1/2 oz), bottles, or any 38 M threaded plastic bottle, and 6.35 mm (1/4 inch) O.D. and/or 7.9 mm (5/16 inch) O.D. plastic tube.

The 1U-5719 Kit provides replacement seals for the vacuum pump.

(Continued)

Shop Supplies



**Fluid Sampling Extraction Tools for Non-Pressurized Compartments (Continued)**

Warranty: Manufacturer's

The 169-7372 bottle has 4 oz (114 g) capacity. The bottle is marked showing fluid full range at 3/4 capacity. The fill range provides a reminder to not overfill the bottle. Partially filling the bottle satisfies both mailing and lag requirements. Full bottles expand because of temperature changes and can possibly rupture within the mailing container. The partially filled bottle also allows the lab to shake the fluid sample prior to extracting fluid for testing. Labels identifying the fluid are obtained locally. The label is processed locally and attached to the sample bottle.

The 169-7373 bottle is the same as the 169-7372 bottle except the capacity is 71 g (2 1/2 oz) rather than 114 g (4 oz). Both are clear high performance plastic rated at 91° C (195° F).

1U-8757 Tubing consists of five 30.5 m (100 ft) rolls of 6.35 mm (1/4 inch) O.D. plastic tubing. Random lengths of tubing can be easily dispensed from the tubing package. This tubing permits extraction of heavier oils when using the vacuum pump.

Both tubing sizes are also available in pre-cut 2.1 m (7 ft) lengths that are packaged 250 pieces per box. This eliminates cutting the tube for each sample.

The 4C-4055 Tubing contains 250 pieces of 6.35 mm (1/4 inch) O.D. tubing each 2.1 m (7 ft) long.

The 1U-7648 tube cutter is a convenient tool that easily cuts the desirable length of either 6.35 mm (1/4 inch) or 7.9 mm (5/8 inch) plastic tubing. The cutter can cut the tubing at 90° or at a bias. The 1U-8589 blades are available as replacement blades for the cutter.

The following summarizes various sampling tools available through the Cat® Parts Distribution System:

Part Number	Description	Part Number	Description
4C-4056	Tube, 7.9 mm (5/16 inch) O.D. by 30.5 m (100 ft) lengths	169-8373	Bottle Group
4C-4057	Tube, 7.9 mm (5/16 inch) O.D. by 2.1 m (7 ft) length	8T-9208	Purging Probe
4C-4055	Tube, 6.35 mm (1/4 inch) O.D. by 2.1 m (7 ft) length	1U-5718	Vacuum Pump
177-9343	Probe and Cap Group	1U-5719	Seal Kit for 1U-5718 Vacuum Pump
8C-3345	Oil Sampling Valve (Mid X1 ext. thread)	169-7372	Clear Bottle, 114 g (4 oz)
8C-3446	Oil Sampling Valve (7/16 inch-20 ext. thread)	169-7373	Clear Bottle, 71g (2 1/2 oz)
8C-3445	Dust Cap (Engine)	4C-4600	Mailer Container - reusable tube
8C-3447	Dust Cap (Transmission)	1U-7648	Tube Cutter
8C-3451	Dust Cap (Hydraulic)	1U-8589	Replacement Blades
8C-8456	Sealed Cap	1U-8757	Tube, 6.35 mm (1/4 inch) O.D. by 30.5 m (100 ft) length
3J-7354	SAE Straight Thread O-Ring Seal	6V-0852	Dust Cap (Blank)
8T-7876	ISO (Metric) Straight Thread O-Ring Seal	7X-3387	Oil Sampling Valve (1/4 in-18 NPTF ext. thread)



## Oil Safe Containers

Warranty: Manufacturer's



- Prevents oil contamination
- Speeds up lubrication jobs
- Dispenses easily to awkward points
- Reduces spills and resulting accidents
- Expedites filling and refilling
- Leads to an organized workspace
- Pump fits 3L, 5L and 10L drums when coupled with a Utility Lid

Part Number	Description
310-5744	Contamination Prevention Kit
<b>310-5744 Consists of:</b>	
310-5677	Drum (3 l)
310-5678	Drum (5 l)
310-5679	Drum (10 l)
310-5682	Pump
310-5711	Stretch Hose Extension
310-5715	Stumpy Spout Lid (Yellow)
310-5720	Stretch Spout Lid (Blue)
310-5725	Utility Lid (Red)
<b>Accessories</b>	
310-5675	Drum (1.5 l)
310-5676	Drum (2 l)
310-5712	Stumpy Hose Extension
310-5713	Stumpy Spout Lid (Red)

Part Number	Description
<b>Accessories (Continued)</b>	
310-5714	Stumpy Spout Lid (Blue)
310-5716	Stumpy Spout Lid (Lt. Green)
310-5717	Stumpy Spout Lid (Black)
310-5718	Stumpy Spout Lid (Purple)
310-5719	Stretch Spout Lid (Red)
310-5721	Stretch Spout Lid (Yellow)
310-5722	Stretch Spout Lid (Lt. Green)
310-5723	Stretch Spout Lid (Black)
310-5724	Stretch Spout Lid (Purple)
310-5726	Utility Lid (Blue)
310-5728	Utility Lid (Yellow)
310-5730	Utility Lid (Lt. Green)
310-5733	Utility Lid (Black)
310-5734	Utility Lid (Purple)

## Pump Oil Can

Part Number	Capacity	Size
1B-7763	0.3 L (10 oz)	76.2 mm (3 in) diameter, 254 mm (10 in) tall



## Funnel Kit

Warranty: Manufacturer's

### Includes:

- - one 1-pint funnel
- - two 1-quart funnels

Part Number	Description
268-5809	Funnel Kit



## Funnel

Warranty: Manufacturer's

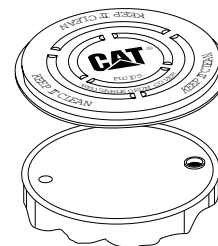
Part Number	Description	Length	Material
268-5814	Funnel	457.2 mm (18 in)	Plastic



## Barrel Cover

- Used to cover open or closed top drums — cover snaps onto top of drum
- Supports the Cat contamination control efforts
- Protects drum contents from water induction when stored outside
- Keeps drum top clean and contents ready for use
- Made of long lasting, low density polyethylene — resistant to petroleum-based fluids and ultraviolet rays
- 10 covers per package

Part Number	Material Thickness	I.D.	Color
1U-6156	1.5 mm (0.06 in)	571 mm (22.48 in)	Yellow



**General Purpose Masking Tape**



- Can be used for holding, bundling, sealing, tabbing non-critical masking and many other miscellaneous applications where an economical grade of paper tape is needed

Part Number	Size in 55 m (60 Yd) Rolls	Rolls/Case
4C-6570	19.0 mm (3/4 in)	48
4C-6571	25.4 mm (1 in)	36
4C-6572	50.8 mm (2 in)	24
4C-6573	76.2 mm (3 in)	12

**Masking Paper**



- Specially formulated, high density masking paper that helps reduce labor cost, decreases rework, and minimizes cleanup
- Its unique, virtually “pinhole-free” construction delivers exceptional paint and solvent resistance to help eliminate bleed-through
- For protection, each roll is individually wrapped
- The paper’s balanced construction offers conformability, strength, and easy handling

Part Number	Description	Size	Rolls/Case
1U-9731	Masking Paper	76.2 mm x 304.8 m (3 in x 1000 ft)	6
1U-9732	Masking Paper	304.8 mm x 304.8 m (12 in x 1000 ft)	3
1U-9733	Masking Paper	609.6 mm x 304.8 m (24 in x 1000 ft)	1
1U-9734	Masking Paper	914.4 mm x 304.8 m (36 in x 1000 ft)	1

**Masking Tape**



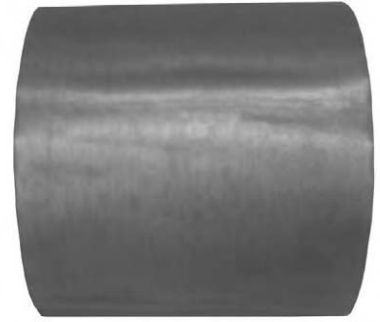
- Six sizes available—13 mm (1/2 in) to 76.2 mm (3 in) wide, 60 yd. roll
- Clean removal—less adhesive transfer reduces residue which can stick to work surface
- Sharp paint edge—thin, smooth backing gives a superior, straight paint line with no jagged edges
- One-piece removal—balanced construction allows for one-piece removal
- Heat resistant—will generally function well in conditions up to 93° C (200° F)

Part Number	Size in 55 m (60 Yd) Rolls	Rolls/Case
1U-6705	12.7 mm (1/2 in)	72
1U-6706	19.0 mm (3/4 in)	48
1U-6707	25.4 mm (1 in)	36
1U-6708	50.8 mm (2 in)	24
1U-6709	63.5 mm (2 1/2 in)	12
1U-6710	76.2 mm (3 in)	12

### Label Protection Tape

- Used for covering address labels, packing lists, and sales slips when protection against rough handling is needed
- Aggressive water-based acrylic adhesive
- Resistant to UV light and chemicals
- Adhesion to steel: 17.9 N/cm (16 oz/in)
- Tensile strength: 0.32 kg/mm (18 lb/in)
- Thickness: 0.04 mm (1.6 mils)
- Material: polypropylene

Part Number	Size	Rolls/Case
263-0881	96.01 mm x 659.9 m (3.78 in x 216.5 feet) roll	18



### Filament Tape

- Stain resistant and transparent with reinforced continuous glass yarn filaments
- Used for closure and reinforcement of corrugated fiberboard boxes and performs well in holding, reinforcing, combining, bundling, and unitizing applications

Part Number	Size	Package Quantity
4C-4094	19 mm (3/4 in) x 55 m (60 yd) roll	48



### Filament Tape

- Fiberglass reinforced tape excellent for light-duty applications such as strapping, palletizing, and packaging
- Adhesion to steel: 8.5 g/mm (78 oz/in)
- Elongation: 8%
- Tack: 12.7 cm (5 in)
- Tensile strength: 1.71 kg/mm (95.6 lb/in)
- Thickness: 0.099 mm (3.9 mils)

Part Number	Size	Rolls/Case
263-0883	8.89 mm x 548.64 m (0.35 in x 180 feet)	96



**Transparent Tape**



- Good for general purpose packaging needs
- Was developed primarily for single strip closure of regular slotted containers
- Has very good resistance to edge tear and splitting due to shock from impact
- Adhesive sticks at a touch to fiberboard

Part Number	Size	Package Quantity
4C-4095	48 mm (2 in) x 100 m	36

**Double-faced Tape**



- Multipurpose tape for general mounting and holding
- Can be used to reattach interior cab material or head liners, sound proofing material, etc.
- Extremely aggressive adhesive
- Silicone-coated polyethylene release liner makes unwinding easy
- Peels clean leaving minimum residue
- Adhesion to steel: 44 g/mm (40 oz/in)
- Tack: 5.1 cm (2 in)
- Tensile strength: 0.36 kg/mm (20 lb/in)
- Thickness: 0.28 mm (11 mils)

Part Number	Size	Rolls/Case
263-0877	51 mm x 22.9 m (2 in x 25 yards) roll	24

**Thread Seal Tape**



- Multipurpose non-adhesive thread seal tape used for many maintenance applications
- Polytetrafluoroethylene (PTFE) self lubricates joints for a leak-proof seal
- Easy to assemble and disassemble threaded joints when tape is applied
- Thickness: 0.09 mm (3.5 mils)
- Material: polytetrafluoroethylene

Part Number	Size	Rolls/Case	Color
263-0879	13 mm x 76.2 m (0.5 in x 250 feet) roll	200	White

**Duct Tape**

Warranty:

- Use this silver, polyethylene-coated, cloth tape for sealing and/or waterproofing applications
- Has an extremely tough rubber adhesive

Part Number	Size	Package Quantity
190-9792	51 mm (2 in) wide and 55 m (60 yds) long	1



**High Performance Duct Tape**

- Use this olive drab, polyethylene-coated, cloth tape for sealing and/or waterproofing applications
- Conforms to mil spec PPP-T-60D
- Rubber adhesive adheres securely
- Thickness: 12 mils
- Tensile strength: 42 lbs per inch

Part Number	Size	Package Quantity
9U-5922	51 mm wide x 55 mm long (2 in wide x 60 yd long)	1



**Electrical Tape**

- Premium quality vinyl tape with many electrical insulation applications

Part Number	Size	Package Quantity
1P-0810	19 mm x 20.12 m long (3/4 in wide x 66 ft long)	10



**Electrical Tape**

Warranty: Manufacturer's



- Quality, black, vinyl tape with excellent electrical insulation properties

Part Number	Size	Package Quantity
235-8598	19 mm x 18.3 m long (3/4 in wide x 60 ft long)	10

**Aluminum Tape**



- A variety of sizes of aluminum tape that can be used to seal openings of various machine components such as cylinder assembly tubes during shipping and storage
- Also useful to seal pump ports and other openings
- 3.5 Mil thick
- Tough but flexible
- Hi-tack
- Waterproof

Part Number	Description	Size
9U-6910	Aluminum Tape	63.5 mm x 45.7 m (2 1/2 in x 50 yds)
9U-6911	Aluminum Tape	101.6 mm x 45.7 m (4 in x 50 yds)
9U-6912	Aluminum Tape	152.4 mm x 45.7 m (6 in x 50 yds)
9U-7042	Aluminum Tape	304.8 mm x 45.7 m (12 in x 50 yds)

**Box Sealing Tape Dispenser**



- Provides quick, easy method for dispensing 4C-4095 Transparent Tape, or any other film-backed box sealing tape directly from the roll
- Hand-held and portable—excellent on center seam sealing of regular slotted boxes
- Sturdy, durable, easy to load and operate; handles tape widths from 38 mm (1 1/2 in) to 51 mm (2 in)

Part Number	Package Quantity
4C-4099	1

Shop Supplies

**Filament Tape Dispenser**

- Fast and economical clips of 4C-4094 Filament Tape can be applied
- Dispenser cuts and buffs tape with one-hand motion
- Features hand brake in the core that allows operator to adjust tension for tighter box reinforcement and bundling applications
- High impact plastic and one piece construction makes the dispenser very durable
- Handles filament tapes up to 19 mm (3/4 in) wide

Part Number	Package Quantity
4C-4100	1



**Filament Tape Dispenser**

- Features a hand brake in the core that allows operator to adjust tension for tighter box reinforcement and bundling applications
- Made from high impact, durable plastic
- Handles 4C-4094 Filament Tape

Part Number	Package Quantity
4C-4101	1



**Filament Tape Dispenser**

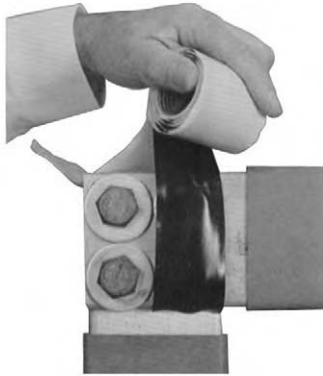
- Durable metal dispenser for carton taping
- Holds 55 m (60 yd) roll of filament tape
- Portable, refillable in seconds

Part Number	Package Quantity
4C-4102	1





**Rubber Mastic Tape**



- Great for quick buildup for moisture seal, for insulation, and for cushion on cable harness and wires
- Sticks fast, seals fast and stays tight
- Molds easily around irregular surfaces while holding its position through a range of temperatures

Part Number	Size	Package Quantity
4C-6392	51 mm (2 in) wide X 1.7 mm (.065 in) thick by 3 m (10 ft) long rolls	1 Roll

**Handwrappers**

- Full rolls to 558.8 mm (22 in) wide
- Fits 76.2 mm (3 in) core
- Heavy duty mast
- Ball bearings
- Adjustable tension
- Ring rotates freely
- Foam grip

Part Number	Description	Use
4C-4776	Handwrapper	all 279 mm (11 in), 400 mm (15.75 in), 457 mm (18 in) films with 76 mm (3 in) cores
4C-4777	Handwrapper	all 279 mm (11 in), 692 mm (27.25 in), 457 m (18 in) films with 57 mm (2.25 in) and 76 mm (3 in) cores



**Adjustable Stretch Band-it Tool**

- Fully mechanical
- Adjustable stretch control
- No spare parts—no parts to replace or wear out
- Use with 4C-4880 Film

Part Number	Description
4C-4779	Adjustable Stretch Band-it Tool



**Stretch Band-it Tool**

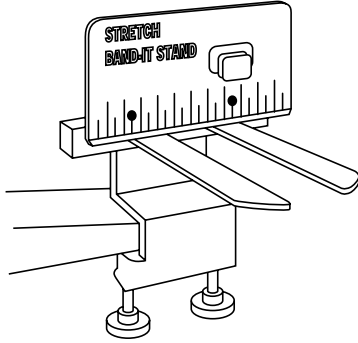
- “Hand Squeeze” control
- No assembly, no maintenance, no additional adhesives
- Use with 4C-4880 Film

Part Number	Description
4C-4780	Stretch Band-it Tool



Shop Supplies

**Stretch Band-it Stand**



- Portable
- Mounts on any table surface
- Accommodates up to 16 kg (35 lbs)
- Adjustable zinc-plated support
- Allows wrapping of smaller items using 4C-4880 Film and 4C-4779 or 4C-4780 Stretch Band-it Tools

Part Number	Description
4C-4781	Stretch Band-it Stand

**Heavy-Duty Master Wrap Film**



- Holds anything, any shape, anywhere
- Applicator packed in all cases
- Heavy-duty gauge

Part Number	Rolls/Case	Film Gauge	Film Width	Roll Length	Film Color
4C-4880	12	135	127 mm (5 in)	198 m (649.60 ft)	Blue

**Stretch Film**



- Revolutionary performance standard—one of the strongest films in the industry
- Cast formula
- Stiff high force
- No neck-down films
- Has highest holding-force-to-load possible without breaks
- Visually able to see through to wrapped product

Part Number	Rolls/Case	Film Width	Roll Length	Film Color
291-6711	4	279.4 mm (11 in)	457 m (1,499.34 ft)	Clear
291-6710	4	457.2 mm (18 in)	457 m (1,499.34 ft)	Clear

### Hand Wrap Standard-Duty Stretch Film

- Convenient stretch film system
- Extra wide—508 mm (20 in) compared to 457.2 mm (18 in)
- Standard-duty gauge

Part Number	Rolls/Case	Film Width	Roll Length	Film Color
293-2978	4	508 mm (20 in)	305 m (1,000.65 ft)	Clear



### Heat Shrink Bags

- Strong durable plastic excellent for pallet unitization and load retention
- Ensures product will arrive at destination clean and undamaged
- To determine the size of opening for gusseted bags, add the width and depth
- UVI protection will protect bag from sun damage in outdoor storage.

Part Number	Width x Depth x Height	Thickness	Qty.
<b>Gusseted Heat Shrink Bag</b>			
270-5329	800 x 495 x 710 mm (31.5 x 19.5 x 28 in)	5.0 mm	135 bags/roll
270-5331	1257 x 495 x 1370 mm (49.5 x 19.5 x 54 in)	5.0 mm	65 bags/roll
<b>Flat Heat Shrink Bag</b>			
270-5332	2438 x 1829 mm (96 x 72 in)	5.0 mm	35 bags/roll
270-5333	3810 x 2970 mm (150 x 117 in)	5.0 mm	15 bags/roll



### Heat Shrink Sheeting

- Strong durable plastic excellent for pallet unitization and load retention
- Ensures product will arrive at destination clean and undamaged
- 5% UVI protection will protect bag from sun damage in outdoor storage

Part Number	Roll Size	Thickness	Color	Qty.
270-5334	5.5 x 61 m (18 x 200 ft)	7.0 mm	white	1 roll
270-5335	914 mm x 198 m (36 in x 650 ft)	5.0 mm	clear	1 roll
270-5336	1.37 x 198 m (54 in x 650 ft)	5.0 mm	clear	1 roll



**Cardboard Boxes with Cat® Logo**



- Material: corrugated paper

Part Number	Length x Width x Depth	Edge Crush Number (ECT)	Qty.
270-5348	213 x 213 x 210 mm (8.4 x 8.4 x 8.3 in)	32 lb	25 per package
270-5349	254 x 203 x 170.8 mm (10 x 8 x 7 in)	32 lb	25 per package
270-5350	300 x 300 x 190 mm (11.8 x 11.8 x 7.5 in)	32 lb	20 per package
270-5351	318 x 315 x 224 mm (12.5 x 12.4 x 8.8 in)	32 lb	25 per package
270-5352	356 x 356 x 229 mm (14 x 14 x 9 in)	32 lb	10 per package
270-5353	648 x 648 x 503 mm (25.5 x 25.5 x 19.8 in)	— <sup>1</sup>	5 per package

<sup>1</sup>400 pounds per square inch bursting test

**Maintenance Products Box**



A new, attractive yellow and black box with a Cat® logo is now available for packaging sale items to customers. Designed to support dealer promotional campaigns and over-the-counter part sales. The Maintenance Products box can also be used to kit preventive maintenance items, such as filters and grease, for machine service intervals. The box can be used to gift items for a machine purchase and it will continue to promote the Cat brand while in the customer's location. The carton assembles easily and has a convenient carrying handle.

- Made of recyclable heavy duty cardboard
- Practical handle for easy transport
- Includes blank lines for recording box contents
- Simple assembly
- Bundled unassembled in quantities of 20
- Dimensions: 16" x 14" x 12"

Part Number	Description	Qty.
332-1471	Unassembled boxes	20 per bundle

**Plastic Bags with Cat Logo**



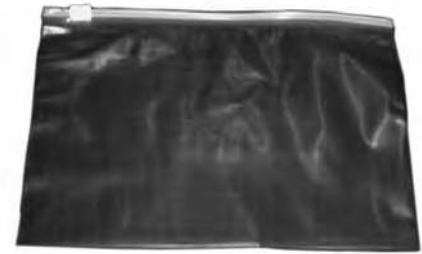
- Two-color Cat logo on front, clear on the back
- Great for parts storage and shipping
- Exceptional strength
- Material: linear low density polyethylene (LLDPE)

Part Number	Bag Size	Thickness	Qty.
270-5337	30.48 cm x 45.72 cm (12 x 18 in)	1.75 ml	1000 bags/carton
270-5338	45.72 cm x 61 cm (18 x 24 in)	1.75 ml	500 bags/carton

**Zipper-Top, Clear Bags for Contamination Control**

- Exceptional strength
- Plastic slider top for easy opening and closing
- Material: linear low density polyethylene (LLDPE)

Part Number	Size	Thickness	Qty.
270-5341	203 x 178 mm (8 x 7 in)	2.0 mm	250 bags/carton
270-5342	229 x 305 mm (9 x 12 in)	2.0 mm	250 bags/carton



**High Performance Steel Strapping**

- Great for stabilizing heavy loads during transportation
- Break strength: 972.2 kg (2150 lbs)

Part Number	Size	Thickness
270-5343	19 mm x 624.8 m ( 3/4 in x 2050 ft)	0.5 mm (0.02 in)



**Strapping Seals**

- Easy to use strapping buckles
- Holds tension strong for nylon poly strapping
- Used with 270-5345 Nylon Cord Strapping, 12.7 mm (1/2 in) wide

Part Number	Size	Qty.
270-5344	12.7 mm (1/2 in)	1000 buckles per carton



**High Performance Nylon Cord Strapping**

- Economical alternative to steel strapping
- Easy to use on a wide range of products
- Used with 270-5344 Strapping Seals, 12.7 mm (1/2 in)
- Breaking strength: 272.1 kg (600 lbs)

Part Number	Size	Color	Qty.
270-5345	12.7 mm x 1188.7 m (1/2 in x 3900 ft)	White	4 rolls per box



### Shrinkfast Shrink Gun

Warranty: Manufacturer's



- Portable — 3.5 lbs
- Fast — shrinkwrap a 1016 mm x 1219.2 mm x 1524 mm (40 in x 48 in x 60 in) pallet in less than two minutes
- UL listed
- Fast shrinkwrapping — the shrink gun is faster and holds more securely than either stretch-wrapping or banding
- Versatile — the shrink gun can be used on machinery, bagged products, boxes, pallets, construction materials, chemicals, petroleum containers, metals cabinets, and shelving
- Safe — operates with a safety latch trigger to prevent unintentional firing and shuts off automatically when put down
- Product support — repair parts are available through the Cat® Parts Distribution system

Part Number	Description	Heat Capacity	Propane Usage	Operating Pressure	Air Consumption
4C-4515	Shrinkfast Shrink Gun	--	2.6 kg/hr (5.71 lb/hr)	22.00 psi	21 CFM
<b>Repair Parts (Warranty: Six Months)</b>					
4C-4511	Fuel Line	--	--	--	--
4C-4512	Valve Assembly	--	--	--	--
4C-4513	Hose Adapter	--	--	--	--
4C-4514	Spark Plug	--	--	--	--
4C-4516	Regulator Assembly	--	--	--	--
4C-4517	Gauge (Pressure)	--	--	--	--
4C-4518	U.L. Guard	--	--	--	--

### Masking Paper

- Excellent adhesion to all masking tapes
- Standard production grade 40 pound basis weight, pinhole free
- One inch core fits standard masking paper dispensers



Part Number	Description	Size
263-0880	Masking Paper	914.4 mm x 304.8 m (36 in x 1000 feet) roll

### Poly Coat Paper

- Used for protecting metal parts and tools, metal sheeting interleaving, protecting goods on pallets from moisture and debris
- Fifty pound virgin kraft paper with 10 pound polycoating
- Heavy duty protection from water, grease, and oil
- Fits standard dispenser — 3-inch core with plugs that reduce it to 1 inch

Part Number	Description	Size
263-0891	Poly Coat Paper	914.4 mm x 274.3 m (36 in x 900 feet) roll

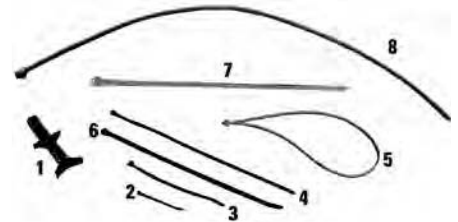


### Cable Ties and Applicators

Warranty: Six Months (applicators)

- Used to secure wires, cables, tubes, etc.

Item	Installer Part Number	for Part Number (below)
1	1U-5228	1S-9593, 8L-8413, 3S-2093, & 6K-0806
1	1U-5227	7K-1181



Item	Part Number	Bundle Diameter Range	Strap Width	Package Quantity	Installer
2	1S-9593	1.5 mm to 15.7 mm (.06 in to .62 in)	2.5 mm (0.10 in)	100	1U-5228
2	8L-8413	1.5 mm to 28.4 mm (.06 in to 1.12 in)	3.8 mm (0.15 in)	200	1U-5228
3	3S-2093	1.5 mm to 44.5 mm (.06 in to 1.75 in)	4.9 mm (0.19 in)	500	1U-5228
4	6K-0806	1.5 mm to 101.6 mm (.06 in to 4.00 in)	4.9 mm (0.19 in)	250	1U-5228
5	034-1432	1.5 mm to 203 mm (.06 in to 8.00 in)	--	1	—
6	7K-1181	4.8 mm to 101.6 mm (.19 in to 4.00 in)	7.9 mm (0.31 in)	100	1U-5227
7	5P-5148	44.5 mm to 120.6 mm (1.75 in to 4.75 in)	12.7 mm (0.50 in)	100	—
8	6V-7555	44.5 mm to 305 mm (1.75 in to 12.00 in)	12.7 mm (0.50 in)	1	—
Not shown	240-1678	12.7 mm to 79.4 mm (0.5 in to 3.125 in)	4.8 mm (0.19 in)	1000	—

### Electric Tie Strap Tightener

- Tightens cable ties and cuts off excess when preset tension is attained
- Used with straps, harnesses, and hoses
- Has a comfortable grip and handle for all hand sizes
- Tightens up to 12.7 mm (1/2 in) wide straps
- Weight: 454 g (16 oz)

Part Number	Description
4C-5877	Electric Tie Strap Tightener



**Label Maker Kit**

Warranty: Manufacturer's



- Create metal labels that stand up to harsh weather, temperature and corrosion
- For tagging hoses, castings, engine components, pipes, etc.
- Heavy-duty cast aluminum body construction
- Built-in hole punch
- Front scissors cut-off—cuts tape exactly where required
- Tape advance and rewind control
- Wheel characters-selection window helps reduce embossing errors
- Also embosses 12.6 mm (1/2 in) vinyl tape
- 306-9601 tags will fit hose up to 3.25 inches in diameter

Part Number	Description	Size	Qty.
9U-7918	Label Maker Kit	--	--
<b>9U-7918 Label Maker Kit</b>			
9U-7920	Aluminum Tape Roll, no adhesive	12.7 mm (1/2 in) x 4.88 m (16 ft) x 0.1524 mm (0.006 in thick)	10 per box
<b>Optional</b>			
9U-7920	Aluminum Tape Roll, no adhesive	12.7 mm (1/2 in) x 4.88 m (16 ft) x 0.1524 mm (0.006 in thick)	10 per box
9U-7921	Aluminum Tape Roll, with adhesive	12.6 mm (1/2 in) x 3.66 m (12 ft) x 0.33 mm (0.13 in thick)	10 per box
9U-7922	Stainless Steel Tape Roll, no adhesive	12.7 mm (1/2 in) x 6.41 m (21 ft) x 0.127 mm (.005 in thick)	10 per box
306-9601	Aluminum Hose Tag	12.7 mm (1/2 in) x 279.4 mm (11 in) x .305 mm (.012 in) thick	500 per box

**Date/Time Stamp**

Warranty: Manufacturer's



**Multi-functional date/time stamp is also a full-featured digital alarm clock and a quick-reference desk calendar.**

**Comprehensive Stamping Functions**

- Prints any combination of date, time, and 7 different status messages (IN, OUT, PAID, FILE, REF, CFMD, RCVD) providing many varied options for identifying documents
- Prints 4-digit or 6-digit sequential numbers as part of date/time/message, or independently, for even more versatility
- Programmable security code prevents tampering, ensures stamping accuracy

**Easy-Read Digital Alarm Clock**

- Displays hour, minute, AM/PM in large characters for at-a-glance reference
- "Bell" icon indicates when daily alarm is activated

**Pre-Programmed Calendar**

- Gives month, date, year, day of week
- Programmed 200 years into the future with automatic leap-year adjustment

Part Number	Description	Size
9U-7923	Date/Time Stamp	76.2 mm (3 in) H x 104.8 mm (4 1/8 in) W x 44.45 mm (1 7/8 in) D

Shop Supplies

**Brooms**

**Push Broom**

- 100% Select black tampico
- Clear lacquered half-round hardwood block
- Recommended for dry sweeping semi smooth floors
- Handle not included

**Handle**

- Selected hardwood with clear lacquered finish
- One end rounded and other end equipped with crimped on metal thread to fit standard floor brush blocks

**Whisk Broom**

- Made of selected fine broom corn
- Sewn twice for strength
- Plated ring cap



Part Number	Description	Size	Qty.
263-0794	Push Broom	609 mm (24 in) wide	1
263-0796	Broom Handle	23.8 x 1524 mm ( 15/16 x 60 in)	1
263-0799	Whisk Broom	138 cm (15 in) long	1

**Janitorial Equipment**

**Janitorial Bucket**

- Side pressure wringer
- 7.6 cm (3 in) casters
- Color: yellow
- Size: (L x W x H) 33 x 33 x 68.6 cm (13 x 13 x 27 in)

**Mop Heads**

- Lay-flat style
- Screw-type mount
- Use with 264-4364 Mop Handle

**Mop Handle**

- Lay-flat style
- Screw-type mount
- Metal cap



Part Number	Description	Material	Size	Qty.
264-4360	Janitorial Bucket	rubber	33.1 L (35 qt) capacity	1
264-4361	Rayon Mop Head	4-ply rayon	0.9 kg (32 oz)	1
264-4363	Cotton Mop Head	4-ply cotton	0.68 kg (24 oz)	1
264-4364	Mop Handle	hardwood	152.4 cm (60 in) long	1

**Trash Can or Waste Receptacle Liners**



- Plastic, super durable trash can liners with superior stretch and tear resistance
- Bottom designed for added strength and greater leak resistance

Part Number	Strength	Capacity	Liner Size	Quantity/Roll
263-0885	Medium (10-12 micron)	57 L (15 gal)	60.96 cm x 81.28 cm (24 in x 32 in)	500
263-0886	Heavy (12-14 micron)	125 L (33 gal)	83.82 cm x 99.06 cm (33 in x 39 in)	250
263-0887	Extra-Heavy (15-17 micron)	208 L (55 gal)	91.44 cm x 144.78 cm (36 in x 57 in)	200

**Heavy Duty Garbage Bags**



- Made from the highest quality raw materials
- Mineral reinforced to enhance physical properties
- Exceptional strength
- Performance bottom seal resists leakage
- Individually-folded in space-saving packaging

Part Number	Size	Capacity	Color	Qty.
270-5346	1092 x 1193.8 cm (43 x 47 in) 212 L (56 gallon)	22.7 kg (50.04 lb)	HMW-HDPE Gray	100 bags/case

## Step Ladders and Shelf Ladders

### Step Ladder

- Fiberglass nonconductive industrial step ladder designed for everyday use
- Extra heavy-duty, 136 kg (300 lb) weight rating
- Thick non-marring rubber tread provides a slip resistant footing
- Wide back braces provide maximum stiffness and discourages unsafe climbing
- Full channel fiberglass rails are covered with a polyester veil for years of service
- Double-rivet step construction with tubular steel rivets for maximum strength
- Nonconductive structural molded top with tool slots is extremely durable (slots help keep tools close at hand)
- Spreader braces are located inside rails to help protect them from getting hooked or damaged in transit
- Reinforced bottom back brace provides additional strength to bottom of ladder



### Shelf Ladder

- Aluminum industrial shelf ladder for everyday industrial use
- Extra heavy-duty, 136 kg (300 lb) weight rating
- Steps are level when ladder is set at 72 degrees
- Equipped with thick rubber bumpers extending 152 mm (6.0 in) from top of ladder down side rails
- Two pair of heavy duty steel gussets support bottom step
- Angled feet with thick rubber tread on both legs provide sure footing
- Each step is secured with solid aluminum rivets for maximum strength

Part Number	Description	Height	Step Size	Bottom Width	Approx. Spread	Approx. Weight
263-1030	Step Ladder	1.2 m (3.94 ft)	7.6 cm (2.99 in)	45.7 cm (18 1/64 in)	71 cm (27.95 in)	5.9 kg (13.01 lb)
263-1031	Step Ladder	2.4 m (7.87 ft)	7.6 cm (2.99 in)	61.0 cm (24 1/64 in)	132 cm (51.97 in)	12.2 kg (26.90 lb)
263-1019	Shelf Ladder	1.8 m (5.91 ft)	7.6 cm (2.99 in)	38.1 cm (15 1/64 in)	--	4.5 kg (9.92 lb)
263-1022	Shelf Ladder	2.4 m (7.87 ft)	7.6 cm (2.99 in)	38.1 cm (15 1/64 in)	--	7.7 kg (16.98 lb)



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PECJ0003-03  
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