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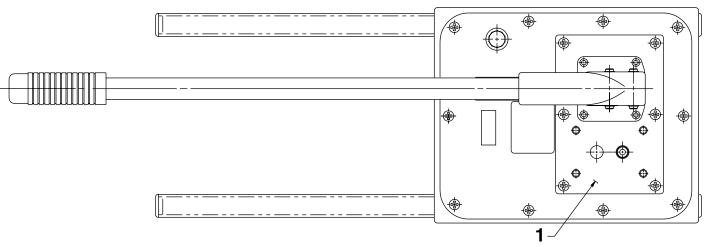
Parts List for:

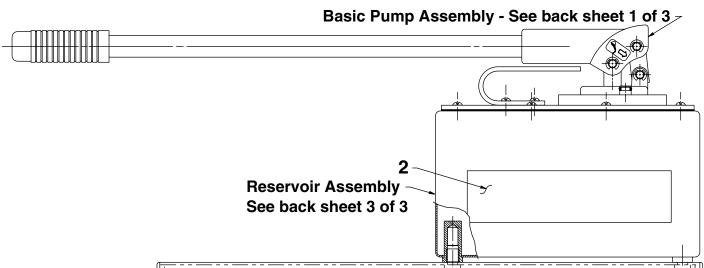
P460 P460D

P460 Series P460D Series

# TWO-STAGE HYDRAULIC HAND PUMP

#### **GENERAL ASSEMBLY**





| Item<br>No. | Part<br>No. | No.<br>Req'd | Description                                   |
|-------------|-------------|--------------|---|
| 1           | 420295      | 1            | Valve (3-way; For P460)                       |
|             | 9500        | 1            | Valve (4-way; For P460D; See Form No. 101913) |
| 2           | 309219CE    | 2            | Trade Name Decal                              |

#### PARTS INCLUDED BUT NOT SHOWN

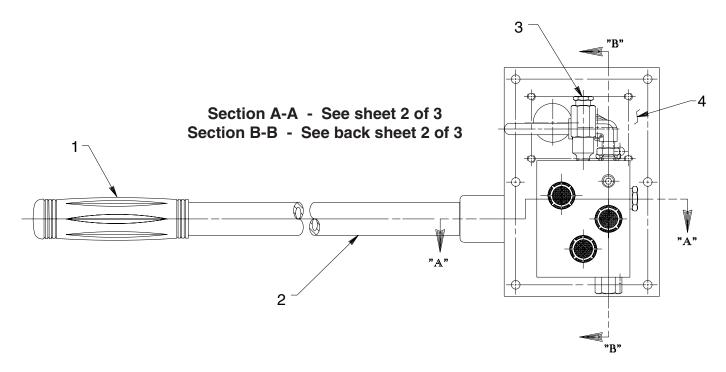
†205724 1 Attention Decal (Viton Seals) •250328 1 Attention Decal (EPR Seals) 253234 1 Decal (Oil Pivot Pins)

Part numbers marked with a dagger (†) are contained in Viton Seal Repair Nit No. 300812.

Part numbers marked with a bullet (•) are contained in EPR Repair Kit No. 300813.

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|-----------|-------------------|
| Rev. 6    | Date: 9 Feb. 2001 |

### **BASIC PUMP ASSEMBLY**



| Item<br>No. | Part<br>No. | No.<br>Req'd | Description                            |
|-------------|-------------|--------------|--|
| 1           | 11390       | 1            | Flex Grip Handle                       |
| 2           | 30708       | 1            | Handle                                 |
| 3           | 21278       | 1            | Relief Valve Assembly (See note below) |
| 4           | 420418GY8   | 1            | Cover Plate                            |

#### **NOTE**

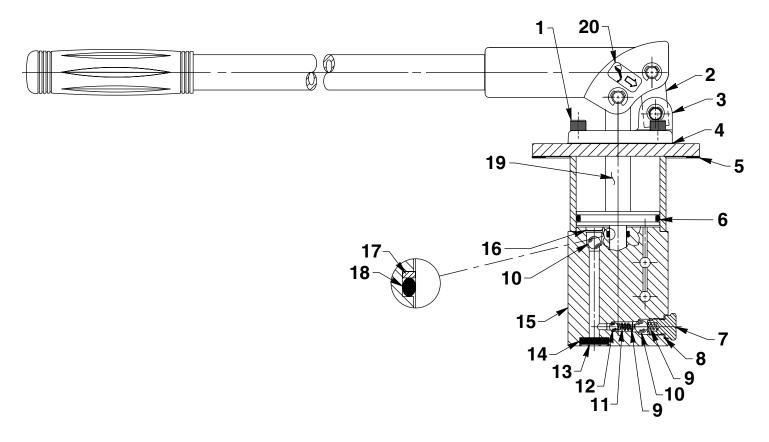
Standard relief valves are set at 10,100/10,700 PSI.

Relief valves pre-set at special settings are available.

Refer to your pump model number or contact Power Team Technical Services.

Parts List Form No. 101475

## **SECTION A-A**

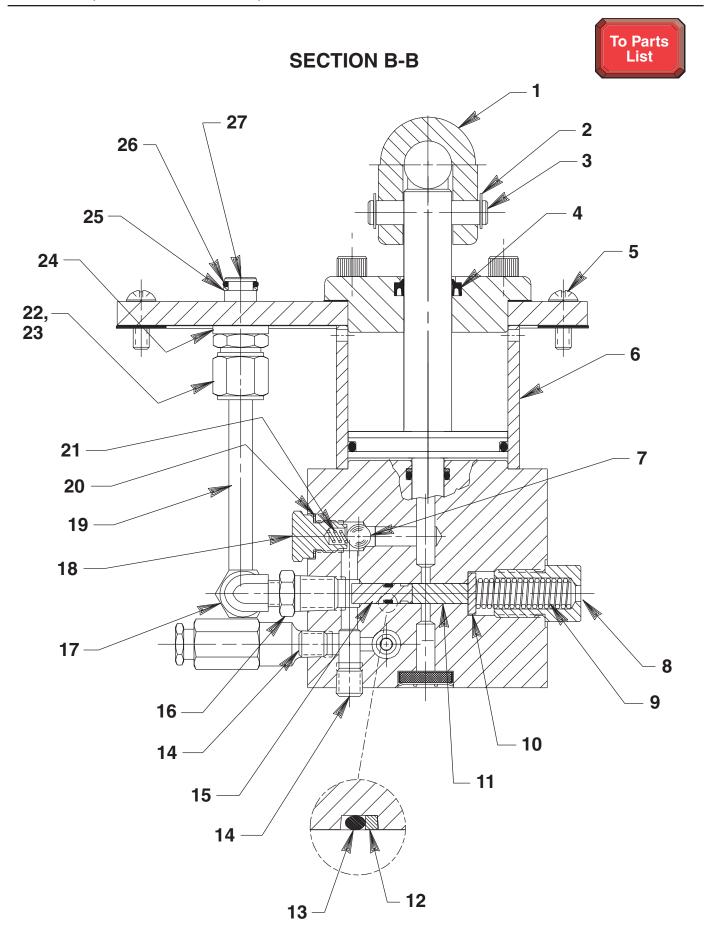


| Iten<br>No. |                    | No.<br>Req'd | Description  | Item<br>No. | Part<br>No.      | No.<br>Req'd | Description   |
|-------------|--------------------|--------------|--|-------------|------------------|--------------|---|
| 1           | 250671             | 4            | Screw (5/16-24 UNF x 3-1/2 Lg.;  | 10          | •†*10378         | 3            | Steel Ball (3/8 dia.)   |
|             |                    |              | Torque to 240/250 in. lbs.)  | 11          | •†*211797        |              | Spring (5/32 O.D. X 5/8 Lg.)                                  |
|             |                    |              | Note: Torque in increments of  | 12          | •†*10375         | 1            | Steel Ball (1/4 dia.)   |
| 0           | 04600              |              | 100 in. lbs.   | 13          | •†*214586        | 3            | Retaining Ring (Internal)                                     |
| · .         | 21603<br>420978BK2 | 1            | Pivot Block<br>End Cap   | 14          | •†*214578        | 3            | Filter (Insert screen with cupped side in.)                   |
| 4           | •†*22143           | 1            | End Cap Gasket   | 15          | 64202            | 1            | Pump Body   |
| 5           | •†*30709           | 1            | Reservoir Gasket   | 16          | •†*250670        | 2            | Retaining Ring  |
| 6           | *10295             | 1            | O-ring (2-1/2 x 2-1/4 x 1/8; Nitrile)                                    | 17          | *12389           |              | Backup Washer   |
|             | †19040<br>•251241  | 1            | O-ring (2-1/2 x 2-1/4 x 1/8; Viton)<br>O-ring (2-1/2 x 2-1/4 x 1/8; EPR) |             | •†213987         | 1            | Backup Washer (Assemble with concave surface towards o-ring.) |
| 7           | 351952             | 1            | Valve Screw  | 18          | *11564           | 1            | O-ring (11/16 X 1/2 X 3/32; Urethane)                         |
| 8           | •†*14874           | 1            | (Torque to 480/500 in. lbs.)<br>Soft Copper Washer                       |             | †11445           | 1            | O-ring (11/16 X 1/2 X 3/32; Viton)                            |
| 0           | 14074              | '            | (.700 X 1/2 X 1/32)  |             | •19406           | 1            | O-ring (11/16 X 1/2 X 3/32; EPR)                              |
| 9           | •†*10444           | 1            | (3/16 I.D. X 13/32 Lg.)  | 19<br>20    | 253372<br>253234 |              | Piston Assembly Oil Pivot Pins Decal                          |

Part numbers marked with an asterisk (\*) are contained in Repair Kit No. 300811. Part numbers marked with a dagger (†) are contained in Viton Seal Kit No. 300812. Part numbers marked with a bullet (•) are contained in EPR Seal Kit No. 300813.

Note: Shaded areas reflect last revision(s) made to this form.

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Parts List Form No. 101475

| 6  | Item | Part     | No.   |  |
|--|------|----------|-------|--|
| 2 11032 6 Retaining Ring 3 21609 3 Clevis Pin 4 *251728 1 Rod Wiper (Nitrile) †251729 1 Rod Wiper (Viton) •251730 1 Rod Wiper (EPR) 5 10177 6 Machine Screw (1/4-20 UNC X 3/4 Lg 6 350302 1 Spacer (Position of holes is to be at the 7 •†*10378 1 Steel Ball (3/8 dia.) 8 308430 1 Unloading Valve Fitting 9 •†*10367 1 Compression Spring (1/2 O.D. x 2" L 10 214692 1 Disc 11 250672 1 Dowel Pin 12 •†*15174 1 Backup Ring (5/16 X 3/16 X 3/64) 13 *10265 1 O-ring (5/16 X 3/16 X 1/16; Nitrile) †11437 1 O-ring (5/16 X 3/16 X 1/16; EPR) 14 10427 2 Pressure Plug 15 250658 1 Unloading Valve Piston 16 13269 1 Reducer Bushing 17 10475 1 Tube Elbow 18 305975 1 Valve Screw (Torque to 480/500 in. lbs 19 350340 1 Oil Llne 20 14874 1 Soft Copper Washer (.700 X 1/2 X 1. 21 •†*10444 1 Compression Spring (3/16 I.D. X 13/ 22 10430 1 Tube Sleeve (3/8) 23 10431 1 Tube Nut (Torque to 40/50 ft. lbs.) 24 21484 1 Spacer 25 •†*11863 1 Backup Washer (1/2 X 3/8 X 1/16) 10 Pring (1/2 X 3/8 X 1/16; Nitrile) 10 -ring (1/2 X 3/8 X 1/16; Nitrile) 10 -ring (1/2 X 3/8 X 1/16; Nitrile) 10 -ring (1/2 X 3/8 X 1/16; Nitrile) 11 O-ring (1/2 X 3/8 X 1/16; Nitrile) 11 O-ring (1/2 X 3/8 X 1/16; Viton) 12 O-ring (1/2 X 3/8 X 1/16; Viton) 13 O-ring (1/2 X 3/8 X 1/16; Viton) 14 O-ring (1/2 X 3/8 X 1/16; Viton) 15 O-ring (1/2 X 3/8 X 1/16; Viton)   | No.  | No.      | Req'd | Description                                  |
| 3  | 1    | 30701    | 1     | Lever  |
| 4 *251728  | 2    | 11032    | 6     | Retaining Ring                               |
| †251729  | 3    | 21609    | 3     | Clevis Pin                                   |
| •251730 1 Rod Wiper (EPR)  5 10177 6 Machine Screw (1/4-20 UNC X 3/4 Lg 6 350302 1 Spacer (Position of holes is to be at the 7 •†*10378 1 Steel Ball (3/8 dia.) 8 308430 1 Unloading Valve Fitting 9 •†*10367 1 Compression Spring (1/2 O.D. x 2" L 10 214692 1 Disc 11 250672 1 Dowel Pin 12 •†*15174 1 Backup Ring (5/16 X 3/16 X 3/64) 13 *10265 1 O-ring (5/16 X 3/16 X 1/16; Nitrile) 14 10427 1 O-ring (5/16 X 3/16 X 1/16; Nitrile) 15 250658 1 Unloading Valve Piston 16 13269 1 Reducer Bushing 17 10475 1 Tube Elbow 18 305975 1 Valve Screw (Torque to 480/500 in. lbs 19 350340 1 Oil LIne 20 14874 1 Soft Copper Washer (.700 X 1/2 X 1/2) 21 •†*10444 1 Compression Spring (3/16 I.D. X 13/4) 22 10430 1 Tube Sleeve (3/8) 23 10431 1 Tube Nut (Torque to 40/50 ft. lbs.) 24 21484 1 Spacer 25 •†*11863 1 Backup Washer (1/2 X 3/8 X 1/16; Viton) 1-77716 1 O-ring (1/2 X 3/8 X 1/16; PR)  | 4    | *251728  | 1     | Rod Wiper (Nitrile)                          |
| 5  |      | †251729  | 1     | Rod Wiper (Viton)                            |
| 6 350302 1 Spacer (Position of holes is to be at the 7   |      | •251730  | 1     | Rod Wiper (EPR)                              |
| 7  | 5    | 10177    | 6     | Machine Screw (1/4-20 UNC X 3/4 Lg.)         |
| 8 308430 1 Unloading Valve Fitting 9 •†*10367 1 Compression Spring (1/2 O.D. x 2" L 10 214692 1 Disc 11 250672 1 Dowel Pin 12 •†*15174 1 Backup Ring (5/16 X 3/16 X 3/64) 13 *10265 1 O-ring (5/16 X 3/16 X 1/16; Nitrile) 14 10427 1 O-ring (5/16 X 3/16 X 1/16; Viton) 15 250658 1 Unloading Valve Piston 16 13269 1 Reducer Bushing 17 10475 1 Tube Elbow 18 305975 1 Valve Screw (Torque to 480/500 in. lbs 19 350340 1 Oil LIne 20 14874 1 Soft Copper Washer (.700 X 1/2 X 1/2) 21 •†*10444 1 Compression Spring (3/16 I.D. X 13/2) 22 10430 1 Tube Sleeve (3/8) 23 10431 1 Tube Nut (Torque to 40/50 ft. lbs.) 24 21484 1 Spacer 25 •†*11863 1 Backup Washer (1/2 X 3/8 X 1/16; Nitrile) 26 *10268 1 O-ring (1/2 X 3/8 X 1/16; Nitrile) 27 19775 1 O-ring (1/2 X 3/8 X 1/16; Viton) 28 •17716 1 O-ring (1/2 X 3/8 X 1/16; Viton)  | 6    | 350302   | 1     | Spacer (Position of holes is to be at the to |
| 9 •†*10367 1 Compression Spring (1/2 O.D. x 2" L 10 214692 1 Disc 11 250672 1 Dowel Pin 12 •†*15174 1 Backup Ring (5/16 X 3/16 X 3/64) 13 *10265 1 O-ring (5/16 X 3/16 X 1/16; Nitrile) 11437 1 O-ring (5/16 X 3/16 X 1/16; Viton) 12 •17714 1 O-ring (5/16 X 3/16 X 1/16; EPR) 14 10427 2 Pressure Plug 15 250658 1 Unloading Valve Piston 16 13269 1 Reducer Bushing 17 10475 1 Tube Elbow 18 305975 1 Valve Screw (Torque to 480/500 in. lbs 19 350340 1 Oil LIne 20 14874 1 Soft Copper Washer (.700 X 1/2 X 1. 21 •†*10444 1 Compression Spring (3/16 I.D. X 13/22 10430 1 Tube Sleeve (3/8) 23 10431 1 Tube Nut (Torque to 40/50 ft. lbs.) 24 21484 1 Spacer 25 •†*11863 1 Backup Washer (1/2 X 3/8 X 1/16) 26 *10268 1 O-ring (1/2 X 3/8 X 1/16; Nitrile) 19775 1 O-ring (1/2 X 3/8 X 1/16; Viton) 10 -ring (1/2 X 3/8 X 1/16; Viton) 10 -ring (1/2 X 3/8 X 1/16; Viton) 10 -ring (1/2 X 3/8 X 1/16; Viton)   | 7    | •†*10378 | 1     | Steel Ball (3/8 dia.)                        |
| 10   | 8    | 308430   | 1     | Unloading Valve Fitting                      |
| 11   | 9    | •†*10367 | 1     | Compression Spring (1/2 O.D. x 2" Lg.        |
| 12   | 10   | 214692   | 1     | Disc   |
| 13 *10265 1 O-ring (5/16 X 3/16 X 1/16; Nitrile) †11437 1 O-ring (5/16 X 3/16 X 1/16; Viton) •17714 1 O-ring (5/16 X 3/16 X 1/16; Viton) 14 10427 2 Pressure Plug 15 250658 1 Unloading Valve Piston 16 13269 1 Reducer Bushing 17 10475 1 Tube Elbow 18 305975 1 Valve Screw (Torque to 480/500 in. lbs 19 350340 1 Oil LIne 20 14874 1 Soft Copper Washer (.700 X 1/2 X 1/2 Compression Spring (3/16 I.D. X 13/2 Compression Spr | 11   | 250672   | 1     | Dowel Pin                                    |
| †11437 1 O-ring (5/16 X 3/16 X 1/16; Viton) •17714 1 O-ring (5/16 X 3/16 X 1/16; Viton) 14 10427 2 Pressure Plug 15 250658 1 Unloading Valve Piston 16 13269 1 Reducer Bushing 17 10475 1 Tube Elbow 18 305975 1 Valve Screw (Torque to 480/500 in. lbs 19 350340 1 Oil Llne 20 14874 1 Soft Copper Washer (.700 X 1/2 X 1/2 V | 12   | •†*15174 | 1     | Backup Ring (5/16 X 3/16 X 3/64)             |
| •17714 1 O-ring (5/16 X 3/16 X 1/16; EPR)  14 10427 2 Pressure Plug  15 250658 1 Unloading Valve Piston  16 13269 1 Reducer Bushing  17 10475 1 Tube Elbow  18 305975 1 Valve Screw (Torque to 480/500 in. lbs  19 350340 1 Oil LIne  20 14874 1 Soft Copper Washer (.700 X 1/2 X 1/2 Compression Spring (3/16 l.D. X 13/2 2 10430 1 Tube Sleeve (3/8)  23 10431 1 Tube Nut (Torque to 40/50 ft. lbs.)  24 21484 1 Spacer  25 •†*11863 1 Backup Washer (1/2 X 3/8 X 1/16; Nitrile)  26 *10268 1 O-ring (1/2 X 3/8 X 1/16; Nitrile)  19775 1 O-ring (1/2 X 3/8 X 1/16; EPR)   | 13   | *10265   | 1     | O-ring (5/16 X 3/16 X 1/16; Nitrile)         |
| 14   |      | †11437   | 1     | O-ring (5/16 X 3/16 X 1/16; Viton)           |
| 15   |      | •17714   | 1     | O-ring (5/16 X 3/16 X 1/16; EPR)             |
| 16   | 14   | 10427    | 2     | Pressure Plug                                |
| 17 10475 1 Tube Elbow  18 305975 1 Valve Screw (Torque to 480/500 in. lbs  19 350340 1 Oil Line  20 14874 1 Soft Copper Washer (.700 x 1/2 x 1.2)  21 •†*10444 1 Compression Spring (3/16 I.D. x 13/2)  22 10430 1 Tube Sleeve (3/8)  23 10431 1 Tube Nut (Torque to 40/50 ft. lbs.)  24 21484 1 Spacer  25 •†*11863 1 Backup Washer (1/2 x 3/8 x 1/16; Nitrile)  26 *10268 1 O-ring (1/2 x 3/8 x 1/16; Nitrile)  19775 1 O-ring (1/2 x 3/8 x 1/16; Viton)  197716 1 O-ring (1/2 x 3/8 x 1/16; EPR)  | 15   | 250658   | 1     | Unloading Valve Piston                       |
| 18   | 16   | 13269    | 1     | Reducer Bushing                              |
| 19   | 17   | 10475    | 1     | Tube Elbow                                   |
| 19   | 18   | 305975   | 1     | Valve Screw (Torque to 480/500 in. lbs.)     |
| 21   | 19   | 350340   | 1     |  |
| 22 10430 1 Tube Sleeve (3/8) 23 10431 1 Tube Nut (Torque to 40/50 ft. lbs.) 24 21484 1 Spacer 25 •†*11863 1 Backup Washer (1/2 X 3/8 X 1/16) 26 *10268 1 O-ring (1/2 X 3/8 X 1/16; Nitrile)     †19775 1 O-ring (1/2 X 3/8 X 1/16; Viton)     •17716 1 O-ring (1/2 X 3/8 X 1/16; EPR)  | 20   | 14874    | 1     | Soft Copper Washer (.700 X 1/2 X 1/3         |
| 22   | 21   | •†*10444 | 1     | Compression Spring (3/16 I.D. X 13/3         |
| 23   | 22   | 10430    | 1     |  |
| 24   | 23   | 10431    | 1     |  |
| 25   |      |          | 1     |  |
| 26 *10268 1 O-ring (1/2 X 3/8 X 1/16; Nitrile)<br>†19775 1 O-ring (1/2 X 3/8 X 1/16; Viton)<br>•17716 1 O-ring (1/2 X 3/8 X 1/16; EPR)   | 25   | •†*11863 | 1     | •  |
| †19775 1 O-ring (1/2 X 3/8 X 1/16; Viton)<br>•17716 1 O-ring (1/2 X 3/8 X 1/16; EPR)   |      | •        | 1     | •      |
| •17716 1 O-ring (1/2 X 3/8 X 1/16; EPR)  |      |          |       | _ · · · · · · · · · · · · · · · · · · ·      |
|  |      | •        | 1     | <u> </u>                                     |
|  | 27   |          | 1     | Valve Connector (Torque to 20/30 ft. lb      |

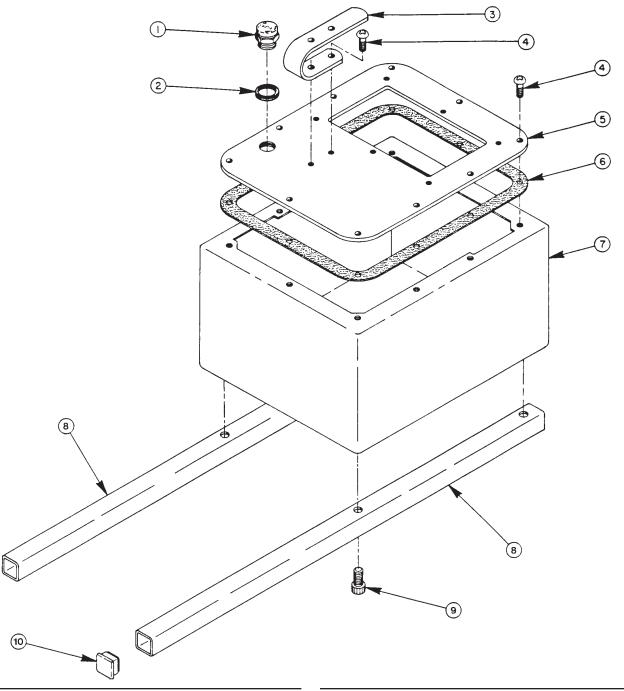
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Note: Shaded areas reflect last revision(s) made to this form.

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| Rev. 6    | Date: 9 Feb. 2001 |

## TWO GALLON RESERVOIR ASSEMBLY



| Item | n Part   | No.   |                                    | Item | Part     | No.   |  |
|------|----------|-------|------------------------------------|------|----------|-------|--|
| No.  | No.      | Req'd | Description                        | No.  | No.      | Req'd | Description                            |
| 1    | 251689   | 1     | Filler/Vent Cap                    | 6    | 420484   | 1     | Cover Gasket (Assemble gasket          |
| 2    | *200415  | 1     | O-ring (.81 x .62 Nitrile)         |      |          |       | [with adhesive in contact with         |
|      | †18999   | 1     | O-ring (.81 x .62 Viton)           |      |          |       | reservoir]. Apply Permatex [or equiv.] |
|      | •250157  | 1     | O-ring (.81 x .62 EPR)             | _    |          |       | between gasket and cover plate.)       |
| 3    | 24066    | 1     | Handle (Apply Permatex [or equiv.] | /    | 40063OR9 | 1     | Reservoir                              |
| Ü    |          | •     | between handle and cover plate.)   | 8    | 307569   | 2     | Support Tube                           |
| 1    | 10177    | 12    | Machine Screw                      | 9    | 213836   | 4     | Soc. Hd. Cap Screw                     |
| 4    | 10177    | 12    | (1/4-20 UNC x 3/4 Lg.)             | 10   | 12126    | 4     | Plastic Tube Insert                    |
| 5    | 41810WH2 | 1     | Cover Plate                        |      |          |       |  |

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