

## High-Pressure Bucket Pump

### Description

The major components of model 6713-4 bucket pump assembly consist of a:

- hand-operated, two-stage pumping mechanism with bleed valve, and pressure relief valve
- 30 pound (13.6 kg) capacity tank
- bolt-down cover with fill port/inspection cover

This high-pressure pump is designed to deliver bulk fibrous and heavy-bodied lubricants. It can also pump light-bodied greases.

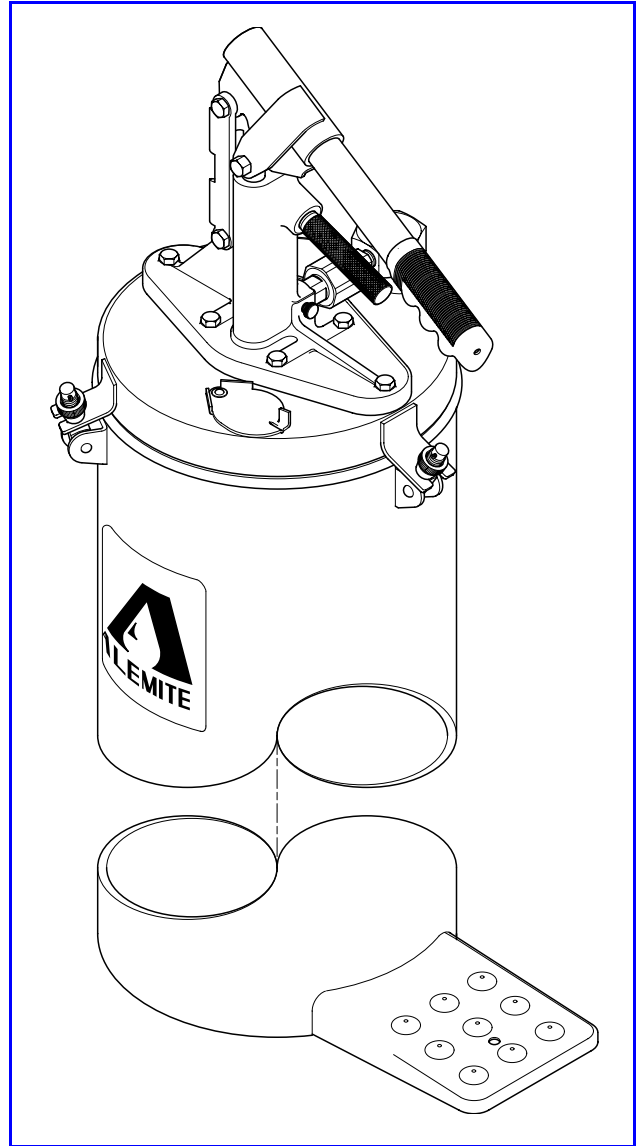
### Pump Delivery

The pump develops 15,000 psi (1034 Bars) and delivers approximately 1 ounce (28.4 g) of product in 16-strokes.

### Accessories

| Component                     | Size                       | Part No. |
|-------------------------------|----------------------------|----------|
| Follower Plate                |                            | 314898   |
| High-Pressure Gauge           | 1/4 " NPTF (m)             | 317150   |
| High-Pressure Hose Assembly   | 1/2 " -27 (f)              | 317875-7 |
| Giant Button-Head Coupler     | 1/4 " PTF (f)              | 319702   |
| Standard Coupler              | 1/8 " NPTF (f)             | B330070  |
| High-Pressure Straight Swivel | 1/4 " NPTF (f) x 1/2 " -27 | B52750   |
| High-Pressure Z-Swivel        | 1/4 " NPTF (f) x 1/2 " -27 | B52752   |

**Table 1** Bucket Pump Model 6713-4 - Accessories



**Figure 1** High-Pressure Bucket Pump Model 6713-4

### Specifications

| Dual Outlet Connections | Max. Operating Pressure |      | Delivery/Stroke |       | Tank Capacity |      | Measurements (LWH) |                  | Weight |      |
|-------------------------|-------------------------|------|-----------------|-------|---------------|------|--------------------|------------------|--------|------|
|                         | psi                     | Bars | Ounce           | Grams | Pounds        | Kg   | Inches             | Cm               | Pounds | Kg   |
| 1/4 " NPTF (f)          | 15,000                  | 1034 | 0.063           | 1.78  | 30            | 13.6 | 13 x 10.5 x 30     | 33 x 26.7 x 76.2 | 30     | 13.6 |

**Table 2** High-Pressure Bucket Pump Model 6713-4- Specifications

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## Model Assembly

Refer to **Figure 2-A** for the assembly of the components that are shipped loose.

## Filling

The pump's container can be filled from a transfer pump or manually.

**NOTE:** The three steps that follow consider the pump without a follower plate.

### Transfer Pump Loading

**NOTE:** Refer to **Figure 2-A** for component identification on the following procedures.

1. Slide the fill-hole cover away from the pump.
2. Insert the hose from the transfer pump into the opening.
  - Make sure the hose reaches the bottom of Container Assembly (7) or the surface of the product.

*IMPORTANT: Keep the end of the hose (or wand) just underneath the surface of the grease. This prevents air from mixing with the product during the fill process.*

3. Fill the Container within 2-inches (5 cm) from the top.

### Manual Loading (Paddle)

4. Loosen Knobs (3) from the bolts on Container Assembly (7).
  - Swing the bolts away from Cover Assembly (9).

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## CAUTION

**Point the bottom of the pump tube upward. Prevent contamination from foreign material. Damage to components can occur.**

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5. Remove the cover and pump assembly from the Container Assembly.
6. Fill the Container within 2-inches (5 cm) from the top.
  - Do not allow air to be entrapped during the filling process.
7. Place the optional follower plate onto the top of the product.
  - With a wobbling motion, eliminate any air that may be trapped underneath the follower. Force the product through the hole in the center of the plate.

8. Position the cover and pump tube assembly into the follower plate and fit the Cover onto the Container.
9. Secure the Cover to the Container with the Knobs.

## Operation

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### WARNING



**Do not exceed the lowest pressure rating of any component in the system.**

**Ensure all components are in operable condition. Replace any suspect parts prior to operation. Personal injury can occur.**

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### Priming the Pump

**NOTE:** Refer to **Figure 2-B** for component identification on the following procedures.

1. Turn Bleed Valve Screw (26) counterclockwise to open.
2. Make sure Pressure-Relief Valve Screw (29) is closed.
3. Cycle the Lever until product causes the cycling of the Lever to stiffen.

If the pump assembly does not prime, refer to the **Troubleshooting Chart** for details.

4. Close the Bleed Valve Screw until it seats.

### Dispensing

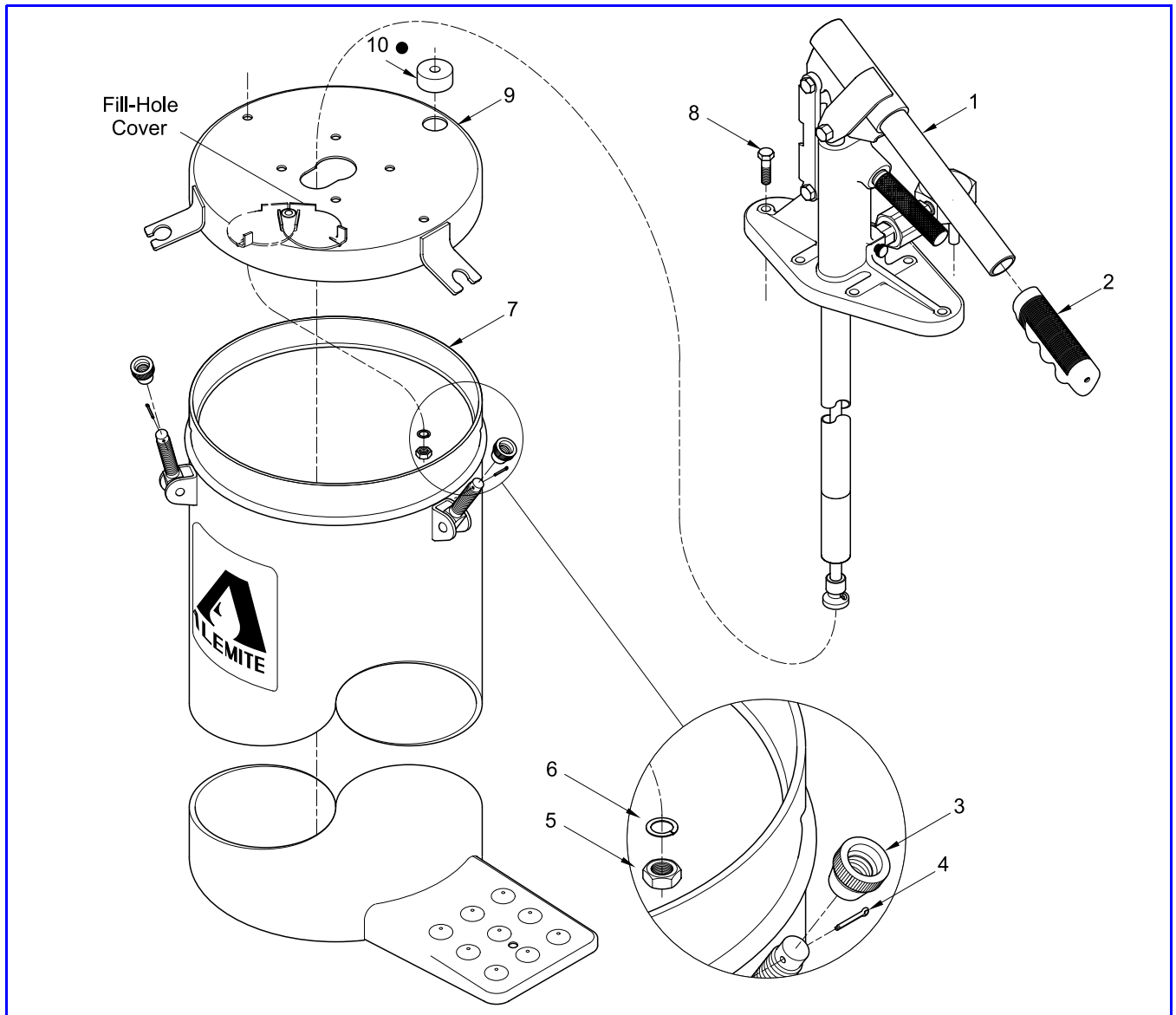
5. Wipe the end of the coupler and the fitting to be lubricated with a clean cloth.
6. Attach the coupler to the lubrication fitting.
7. Operate the lever until the proper amount of lubricant is dispensed.

**NOTE:** Certain applications can create excessive back-pressure at the fitting that inhibits the removal of the coupler. Should this occur:

8. Turn Pressure-Relief Valve Screw (29) counterclockwise to open.
  - This allows the product within the delivery hose to return to the Container.
9. Remove the coupler from the fitting and close the Pressure-Relief Valve Screw.

**NOTE:** Should the Lever be stopped in the upward position:

10. Turn Bleed Valve Screw (26) counterclockwise to open.
  - This allows the Lever to be pushed downward without product discharge.



| Item No. | Part No.  | Description                    | Qty | Notes                 | Numeric Order Part # (Item #) |
|----------|-----------|--------------------------------|-----|-----------------------|-------------------------------|
| 1        | 310750-4  | Pump Assembly                  | 1   | See <b>Figure 2-B</b> | 12369 (6)                     |
| 2        |           | Grip, Handle                   | 1   |                       | 77650 (5)                     |
| 3        | 303087    | Knob                           | 3   |                       | 77736 (8)                     |
| 4        |           | Pin, Cotter                    | 3   |                       | 172212-1 (4)                  |
| 5        |           | Nut                            | 6   |                       | 303087 (3)                    |
| 6        |           | Washer, Lock                   | 6   |                       | 308725-B4 (7)                 |
| 7        | 308725-B4 | Container Assembly (w/o Decal) | 1   |                       | 308726-B4 (9)                 |
| 8        |           | Screw                          | 6   |                       | 310750-4 (1)                  |
| 9        | 308726-B4 | Cover Assembly                 | 1   |                       | 337066 (2)                    |
| 10       |           | Seal                           | 1   | ●                     | 337438 (10)                   |

**Legend:**

Part numbers left blank (or in *italics*) are not available separately

● designates a repair kit item - See **Figure 2-B** for part number

**Figure 2-A** High-Pressure Bucket Pump Model 6713-4 - Exploded View

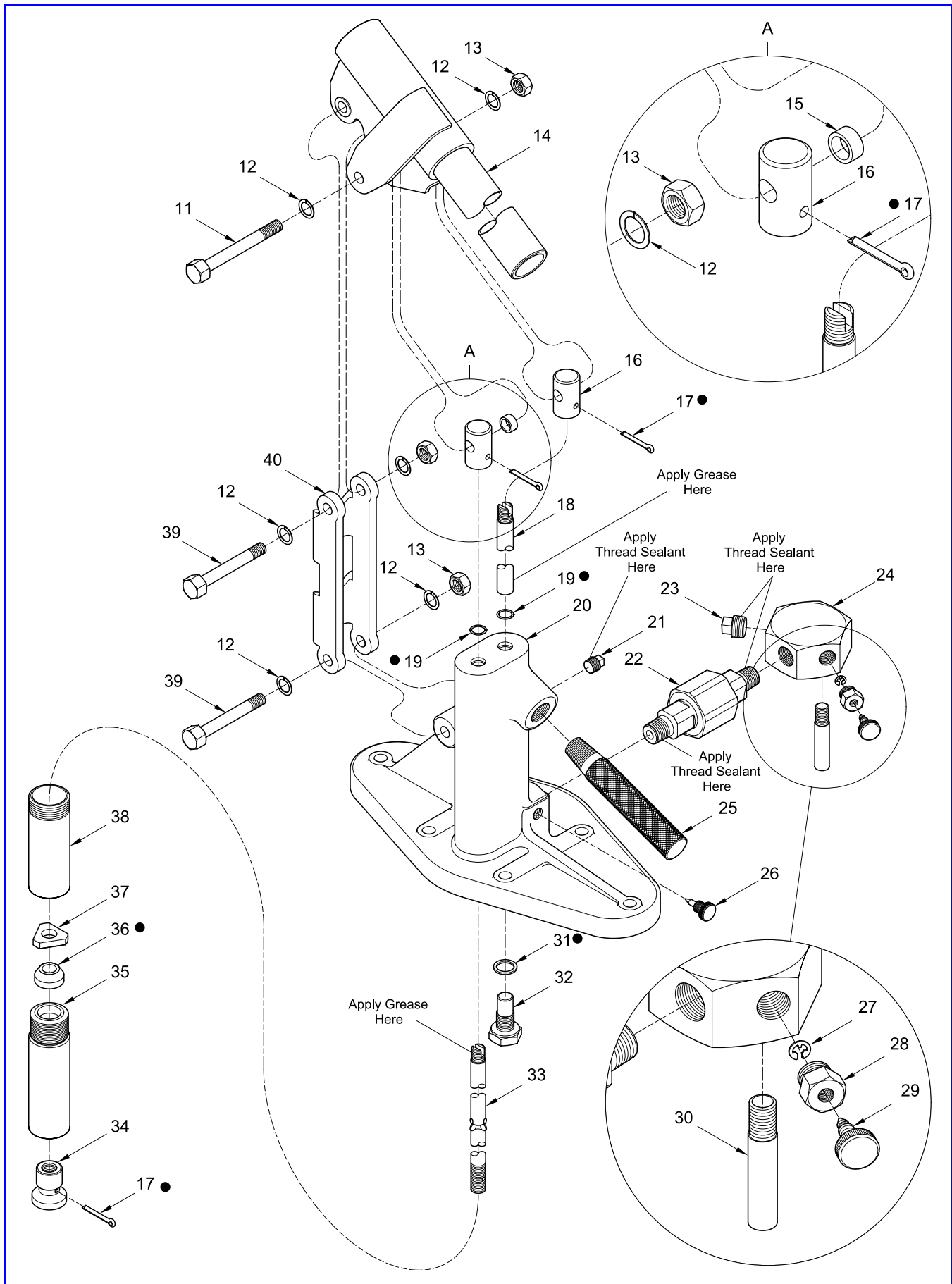


Figure 2-B Pump Assembly Model 310750-4 - Exploded View

| Item No. | Part No.  | Description                           | Qty | Notes                  | Numeric Order Part # (Item #) |
|----------|-----------|---------------------------------------|-----|------------------------|-------------------------------|
| 11       |           | Bolt, Toggle, 1/4 " -28 x 1-15/16 "   | 1   |                        | 1480 (21)                     |
| 12       |           | Washer, Lock                          | 6   |                        | 10522 (23)                    |
| 13       |           | Nut, 1/4 " -28                        | 3   |                        | 47123 (26)                    |
| 14       | 308723-B4 | Handle Assembly                       | 1   |                        | 49801 (31)                    |
| 15       |           | Spacer                                | 1   |                        | 54282 (22)                    |
| 16       | 308714    | Adapter                               | 2   |                        | 77676 (13)                    |
| 17       |           | Pin, Cotter                           | 3   | ●                      | 79312 (12)                    |
|          | 308727-4  | Body and Plunger Assembly             |     |                        | 170705 (27)                   |
| 18       |           | Plunger (Select Fit w/ item 20)       | 1   | Included w/ 308727-4   | 171001-6 (19)                 |
| 19       | 171001-6  | O-Ring, 5/16 " ID x 7/16 " OD         | 2   | ● Included w/ 308727-4 | 172212-11 (17)                |
| 20       |           | Body (Select Fit w/ item 18)          | 1   | Included w/ 308727-4   | 303126 (40)                   |
| 21       | 1480      | Plug, Pipe, 1/8 " NPTF (m)            | 1   |                        | 303817 (37)                   |
| 22       | 54282     | Valve Assembly , High-Pressure Check  | 1   | See <b>Figure 2-C</b>  | 303822 (34)                   |
| 23       | 10522     | Plug, Pipe, 1/4 " NPTF (m)            | 1   |                        | 305336 (25)                   |
| 24       | 322546    | Body, Adapter                         | 1   |                        | 308707-2 (20)                 |
| 25       |           | Handle                                | 1   |                        | 308708 (32)                   |
| 26       | 47123     | Screw, Bleed Valve                    | 1   |                        | 308709 (35)                   |
|          | 322549    | Screw Assembly, Pressure-Relief Valve | 1   |                        | 308710 (38)                   |
| 27       | 170705    | Ring, Retaining                       | 1   | Included w/ 322549     | 308711 (36)                   |
| 28       |           | Bushing                               | 1   | Included w/ 322549     | 308712 (33)                   |
| 29       |           | Screw, Pressure-Relief Valve          | 1   | Included w/ 322549     | 308713 (18)                   |
| 30       | 308720    | Tube, Drain                           | 1   |                        | 308714 (16)                   |
| 31       |           | Gasket (Copper)                       | 1   | ●                      | 308720 (30)                   |
| 32       | 308708    | Plug                                  | 1   |                        | 308723-B4 (14)                |
| 33       | 308712    | Rod, Primer                           | 1   |                        | 308727-4                      |
| 34       | 303822    | Plunger, Priming                      | 1   |                        | 319347 (1)                    |
| 35       | 308709    | Seat, Valve                           | 1   |                        | 319379 (39)                   |
| 36       |           | Valve                                 | 1   | ●                      | 322546 (24)                   |
| 37       | 303817    | Washer, Stop                          | 1   |                        | 322547 (29)                   |
| 38       | 308710    | Tube                                  | 1   |                        | 322548 (28)                   |
| 39       |           | Bolt, Toggle, 1/4 " -28 x 1-5/16 "    | 2   |                        | 322549                        |
| 40       | 303126    | Toggle                                | 1   |                        | 415950-1 (15)                 |

**Legend:**  
Part numbers left blank (or in *italics*) are not available separately  
● designates a repair kit item

### Repair Kit

| Part No. | Kit Symbol | Description  |
|----------|------------|--|
| 398954-1 | ●          | Kit, Repair (Includes items on <b>Figures 2-A, 2-B and 2-C</b> ) |

## Overhaul

Prior to performing any maintenance procedure, the following safety precautions must be observed. Personal injury may occur.



### WARNING

**Do not use halogenated hydrocarbon solvents such as methylene chloride or 1,1,1-trichloroethane in this pump. An explosion can result within an enclosed device capable of containing pressure when aluminum and/or zinc-plated parts come in contact with halogenated hydrocarbon solvents.**

**Read each step of the instructions carefully. Make sure a proper understanding is achieved before proceeding.**

## Disassembly

**NOTE:** Refer to **Figures 2-A** and **2-B** for component identification on the following procedures.

### Separate Pump Tube from Cover

1. Remove Nuts (5) Lock Washers (6), and Screws (8) that secure Pump Assembly (1) to Cover Assembly (9).
  - Separate the Pump Assembly from the Cover Assembly.
2. Remove Seal (10) from the Pump Assembly.

### Pump Tube

3. Remove Check Valve Assembly (22) [with attached components] from Body (20).
4. Remove Nuts (13), Lock Washers (12), and lower Toggle Bolt (39) that secures Toggle (40) to the Body.
5. Remove Nut (13), Lock Washers (12), and Toggle Bolt (11) that secures Handle Assembly (14) to Adapters (16).
  - Remove the Handle Assembly and Toggle from the Adapters.
6. Remove Spacer (15) from the Handle Assembly.
7. Remove Nut (13), Lock Washers (12), and upper Toggle Bolt (39) that secures the Toggle to the Handle Assembly as needed.

8. Remove Cotter Pin (17) that secures the Adapter to Primer Rod (33).
  - Unscrew the Adapter from the Primer Rod.
 

**NOTE:** Grip Priming Plunger (34) to prevent rotation.
9. Unscrew Tube (38) from the Body.
  - Remove the entire pump tube assembly from the Body.
10. Remove Cotter Pin (17) that secures Priming Plunger (34) to the Primer Rod.
  - Unscrew the Priming Plunger from the Primer Rod.
11. Unscrew Valve Seat (35) from Tube (38).
12. Remove Valve (36) and Stop Washer (37) from the Primer Rod.
13. Remove the Adapter and Plunger (18) as an assembly from the Body.
14. Remove both O-Rings (19) from the Body.
  - Use a pick or a small flat-head screwdriver.
15. Remove Cotter Pin (17) that secures the Adapter to the Plunger as necessary.
  - Unscrew the Adapter from the Plunger.
16. Unscrew Plug (32) from the Body as necessary.
  - Remove Gasket (31).
17. Unscrew Handle (25) from the Body as required.

### Check Valve Assembly

18. Unscrew Check Valve Assembly (22) from Adapter Body (24).
19. Unscrew Drain Tube (30) from the Adapter Body as necessary.
20. Unscrew Bushing (28) from the Adapter Body as necessary.
21. Remove Retaining Ring (27) that secures Pressure-Relief Valve Screw (29) to the Bushing.
  - Separate the Valve Screw from the Bushing.
 

**NOTE:** Refer to **Figure 2-C** for component identification on the remaining procedures.
22. Unscrew Coupling Nut (41) from Coupling Adapter (47).
23. Remove Gasket (43) and Coupling Adapter (42) from the Coupling Nut.
24. Unscrew Ball Seat (44) from the Coupling Adapter.
25. Remove Ball (46), Spacer (49), Spring (48), and Washer (45) from the Coupling Adapter.

## Clean and Inspect

**NOTE:** Use the repair kit for replacement parts. Make sure all the components are included in the kit before discarding used parts.

1. Clean all metal parts in cleaning solvent. The solvent should be environmentally safe.
2. Inspect all parts for wear and/or damage.
  - Replace as necessary.
3. Inspect Plunger (18) closely. Use a magnifying glass to detect any score marks.
  - Replace as necessary.
4. Closely inspect the mating surfaces of Valve (36) and Valve Seat (35) for any imperfections. Ensure a smooth and clean contact is obtained when assembled.
5. Inspect the mating surfaces of Check Valve (22).

**EXAMPLE:** Place Ball (46) in Ball Seat (44). While supporting the Ball, fill the Ball Seat with solvent. Make sure no leakage occurs.

## Assembly

**IMPORTANT:** Prior to assembly, lubricate the upper threads (slotted) of Primer Rod (33) in clean grease. Also, lubricate the bottom of Plunger (18) and both O-Rings (19). See **Figure 2-B**.

## Pump Tube

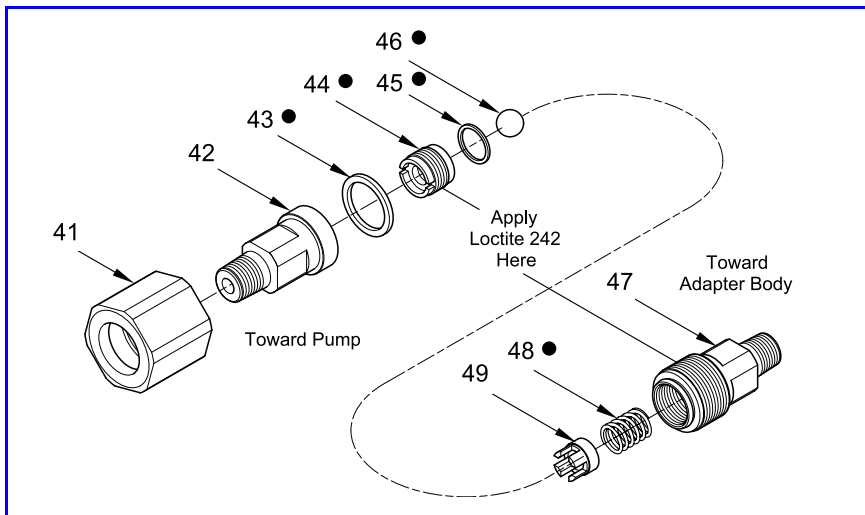
**NOTE:** Refer to **Figure 3** for a section view of the pump tube assembly.

1. Install and seat both lubricated O-Rings (19) into Body (20).

## CAUTION

**Install Plunger (18) and Primer Rod (33) with care. Damage to O-Rings can occur.**

2. Install Plunger (18) [stem end first] into the top of the Body.
  - See **Figure 2-B** for the proper hole.
3. Install Primer Rod (33) [slotted end first] into the bottom of the Body.
  - Gently rotate the Primer Rod past the O-Ring.
4. Screw both Adapters (16) onto the Plunger and Primer Rod.
  - Make sure the cotter pin hole aligns with the slot in the Plunger and Primer Rod.
5. Secure the Adapters to the Plunger and Primer Rod with Cotter Pins (17).



| Item No. | Part No. | Description        | Qty | Notes | Numeric Order Part # (Item #) |
|----------|----------|--------------------|-----|-------|-------------------------------|
| 41       | 317302   | Nut, Coupling      | 1   |       | 54288 (42)                    |
| 42       | 54288    | Adapter, Coupling  | 1   |       | 54290 (43)                    |
| 43       |          | Gasket (Copper)    | 1   | ●     | 54393 (45)                    |
| 44       |          | Seat, Ball         | 1   | ●     | 171700-26 (46)                |
| 45       |          | Washer (Copper)    | 1   | ●     | 300518 (49)                   |
| 46       |          | Ball, 13/32 " Dia. | 1   | ●     | 300519 (44)                   |
| 47       | 300520   | Adapter, Coupling  | 1   |       | 300520 (47)                   |
| 48       |          | Spring             | 1   | ●     | 300596 (48)                   |
| 49       | 300518   | Spacer             | 1   |       | 317302 (41)                   |

**Legend:**

Part numbers left blank (or in *italics*) are not available separately  
 ● designates a repair kit item - See **Figure 2-B** for part number

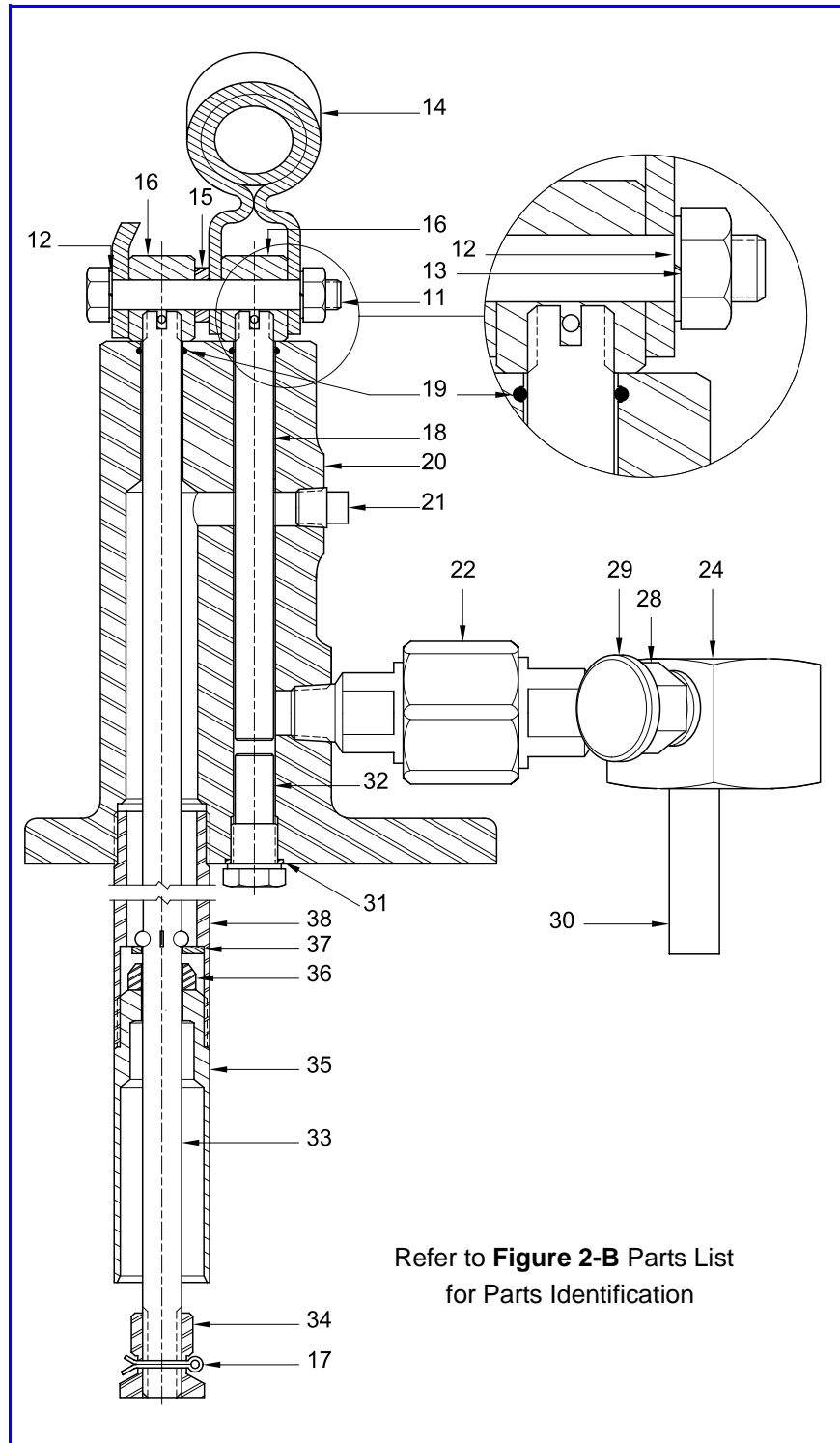
**Figure 2-C** Check Valve Assembly Model 54282 - Exploded View

6. Install and seat Gasket (31) into the bottom of the Body.
7. Install Plug (32) into the Body.
  - Tighten the Plug securely.
8. Screw Tube (38) into the Body.
  - Do not tighten at this time.
9. Install Stop Washer (37) and Valve (36) [small diameter first] onto the Primer Rod.
10. Screw Valve Seat (35) into the Tube.
  - Tighten the components securely.
11. Screw Priming Plunger (34) onto the Primer Rod.
  - Make sure the holes are aligned.
12. Install Cotter Pin (17).
13. Screw Handle (25) into the Body as required.
14. Install Bleed Valve Screw (26) into the Body as required.
20. Screw Ball Seat (44) [with Loctite 242] into the Coupling Adapter.
  - Tighten the Ball Seat to 200 inch-pounds (22.6 Nm).
21. Install Gasket (43) onto the Coupling Adapter.
22. Install Coupling Adapter (42) into Coupling Nut (41).

### Check Valve Assembly

15. Install Pressure-Relief Valve Screw (29) into Bushing (28).
16. Install Retaining Ring (27) that secures the Valve Screw to the Bushing.
17. Screw the Pressure-Relief Valve Screw Assembly into Adapter Body (24) [port with the drain hole].
18. Screw Drain Tube (30) into the Adapter Body.
 

**NOTE:** Refer to **Figure 2-C** for component identification on procedures 19-25.
19. Install and seat Spring (48), Spacer (49) [large diameter first], Washer (45), and Ball (46) into Coupling Adapter (47).



**Figure 3** Pump Assembly Model 310750-4 - Section View

23. Screw the Coupling Adapter [with Loctite 242] into the Coupling Nut.
  - Tighten the Coupling Nut securely.
24. Screw the Check Valve Assembly [with thread sealant] [coarse thread first] into the Body.
  - Tighten the Check Valve securely.
25. Screw the Adapter Body assembly [with thread sealant on Check Valve] onto the Check Valve.
  - Tighten the Adapter Body securely.
29. Install upper Toggle Bolt (**39**), Lock Washers (**12**), and Nut (**13**) that secures Toggle (**40**) to the Handle Assembly.
  - Do not tighten the Nut at this time.
30. Install lower Toggle Bolt (**39**), Lock Washers (**12**), and Nut (**13**) that secures the Toggle to the Body.
  - Tighten both Toggle Nuts securely.

### Attach Pump Tube to Cover

**NOTE:** Refer to **Figure 2-A** for component identification on the following procedures.

26. Position Handle Assembly (**14**) properly on Adapters (**16**). See **Figure 2-B**.
27. Hold Spacer (**15**) between the Adapter and the Handle Assembly. See **Figure 2-B**.
28. Install Toggle Bolt (**11**), Lock Washers (**12**), and Nut (**13**) that secures the Handle Assembly to the Adapters.
  - Tighten the Nut securely.
31. Install Seal (**10**) onto the Drain Tube.
32. Install Nuts (**5**) Lock Washers (**6**), and Screws (**8**) that secure the Pump Assembly to Cover Assembly (**9**).
  - Tighten the Screws securely in a crisscross pattern.

### Pump Tube (Continued)

## Troubleshooting Chart

| Gun Indications  | Possible Problems   | Solution  |
|--|---|---|
| Pump will not prime  | <ol style="list-style-type: none"> <li>1. Foreign material between Valve (36) and Valve Seat (35)</li> <li>2. Worn or damaged Valve (36) and/or Valve Seat (35)</li> </ol>  | <ol style="list-style-type: none"> <li>1. Disassemble Pump Tube and eliminate foreign material</li> <li>2. Replace Valve (36) and/or Valve Seat (36)</li> </ol>   |
| Pump lacks pressure  | <ol style="list-style-type: none"> <li>1. Bleed Valve Screw (26) in the open position (not seated)</li> <li>2. Pressure Relief Valve Screw (29) in the open position (not seated)</li> <li>3. Worn Plunger (18) and/or bore in Body (20)</li> </ol> | <ol style="list-style-type: none"> <li>1. Tighten Bleed Valve Screw (26) into Body (20)</li> <li>2. Tighten Pressure Relief Valve Screw (29) into Bushing (28)</li> <li>3. Replace Plunger (18) and/or Body (20)</li> </ol> |
| Pump does not hold pressure (pressure falls when lever is raised)                    | <ol style="list-style-type: none"> <li>1. Foreign material between Ball (46) and Ball Seat (44) in Check Valve Assembly (22)</li> <li>2. Worn or damaged Ball (46) and/or Ball Seat (44)</li> </ol>   | <ol style="list-style-type: none"> <li>1. Disassemble Check Valve Assembly (22) and eliminate foreign material</li> <li>2. Use Repair Kit 398954-1</li> </ol>   |
| <b>External Leakage</b>  |   |   |
| Product leakage visible at top of Body (20)  | Worn or damaged O-Ring(s) (19)  | Use Repair Kit 398954-1   |
| Product leakage at Check Valve Assembly (22)   | Check Valve Assembly (22) not sufficiently tight and/or incorrect or no sealant   | Apply thread sealant * to Check Valve Assembly (22) and tighten into Body (20)  |
| Product leakage visible at Plug (32)   | <ol style="list-style-type: none"> <li>1. Plug (32) loose</li> <li>2. Worn or damaged Gasket (31)</li> </ol>  | <ol style="list-style-type: none"> <li>1. Tighten Plug (32)</li> <li>2. Replace Gasket (31)</li> </ol>  |
| Product leakage visible at delivery system components                                | Initial tightening of components not sufficient and/or incorrect or no sealant  | Apply thread sealant* to component and tighten securely   |
| * Do not apply thread sealant to the first two (2) threads. Contamination can occur. |   |   |

**Changes Since Last Printing**

Revised Exploded View