

Description

See Figure 1. The follower module attaches onto the hydraulic section of the pump (5). It is designed to force material out of straight-sided containers. Standard and PTFE-coated follower plate modules are available to fit the following container inner diameters:

- 280-mm
- 286-mm (5-Gallon US Standard)
- 305-mm
- 310-mm
- 464-mm (30-Gallon US Standard)
- 572-mm (55-Gallon US Standard)

NOTE: PTFE-coated follower plate modules are used on stainless steel pumps when an application requires the use of reactive materials.

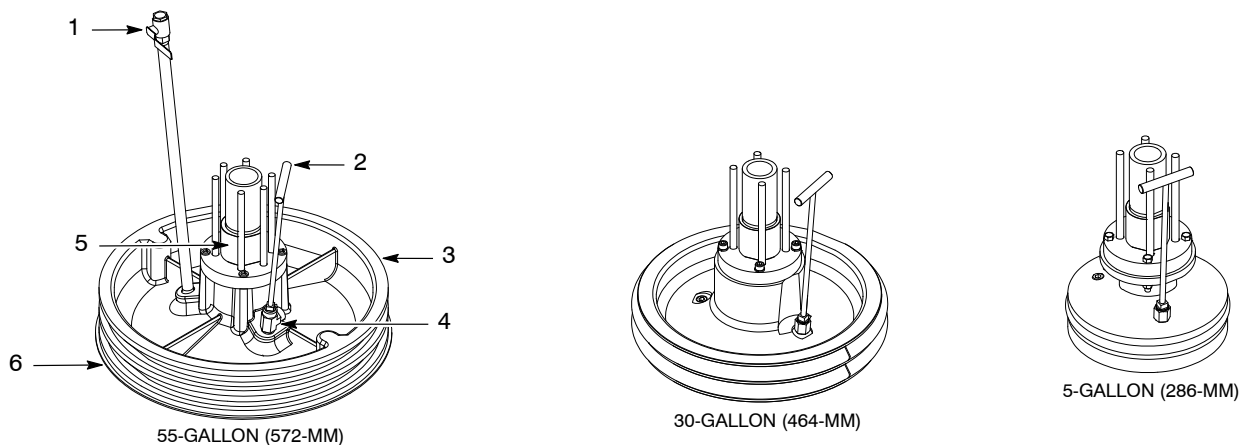
Depending upon the module, follower plates (3) have either one or two rubber seals. When the follower plate is lowered into a container, the rubber seals cause the material to pressurize by creating a tight seal around the inner diameter of the container. When the pump cycles, the follower plate forces the material out of the container and into the pump hydraulic section. The rubber seals also protect the material from moisture and contamination from the surrounding environment.

A PTFE-coated steel ring (6) is used along with a standard follower plate module for high-viscosity urethane materials that are shipped in foil bags. It is sized for a close-tolerance fit to the inner diameter of the container. The ring collapses the foil bag to prevent it from getting wedged between the follower plate module and the container wall.

Lowering the follower plate module into a container will cause air buildup between the bottom of the follower plate (3) and the material. Removing the bleeder stem (2) from the adapter (4) before lowering the follower plate provides a path for the air to vent.

NOTE: The additional NPT port on the bleeder stem adapter for the 464-mm and 572-mm follower plate modules is used to connect an optional depressurization circuit that vents material back to the container. The additional NPT port for connecting a depressurization circuit on 280-mm, 286-mm, 305-mm, and 310-mm follower plate modules is located on the follower plate.

The blowoff tube (1) allows air to enter the area below the follower plate. When the elevator is in the UP position and the blowoff valve is opened, air flows under the follower plate. This pressure forces the container off of the follower plate.



TYPICAL PARTS:

- 1: BLOWWOFF TUBE
- 2: BLEEDER STEM
- 3: FOLLOWER PLATE MODULE
- 4: BLEEDER STEM ADAPTER
- 5: PUMP (PARTIAL PUMP HYDRAULIC SECTION SHOWN)
- 6: PTFE-COATED STEEL RING

Figure 1 Follower Modules

Replacing the Follower Plate Seals

Read and understand this procedure before replacing the follower plate seals. Contact a local Nordson representative if you have questions regarding this procedure.



WARNING: Allow only qualified personnel to perform the following tasks. Follow the safety instructions in this document and all other related documentation.

NOTE:

- Although the 55-Gallon drum unloader is shown, this procedure is typical for a 5-Gallon pail unloader with the exception of the follower seal quantities. The 5-Gallon pail unloader has one follower seal.
- If the material container needs to be removed from the drum unloader, it is important to remember that the NEUTRAL setting on the elevator control valve is not a locked and secured position.

Table 1 lists the items that are required to perform this procedure:

Table 1 Required Items

Item	Use
Support Blocks	Prevent air cylinder pistons from drifting downward during repairs.
Two large screwdrivers or tire irons.	Pry follower plate seals off of the follower plate. NOTE: Follower plate seals are removed in the same manner as a tire from a rim.
O-ring Grease	Lubricate new follower plate seals. NOTE: The O-ring grease must be compatible with material being pumped and the new follower plate seals.

1. If installed, remove the material container from the drum unloader.
2. See Figure 2. Insert the support blocks (2):
55-Gallon DrumUnloaders: Insert support blocks (2) between the frame cross bar (4) and the top of both air cylinders (3).
5-Gallon PailUnloaders: Insert support blocks (2) between the lower air motor cap (1) and the top of both air cylinders (3).
3. Use either large screwdrivers or tire irons to pry the follower plate seals (5) off of the follower plate grooves (6).
4. Perform the following:
 - a. **All DrumUnloaders:** Clean the follower plate grooves and remove all foreign material.
 - b. **55-Gallon DrumUnloaders:** Inspect the neoprene bands (7) on the 55-Gallon follower plate (6) for damage and replace if necessary.
5. Install the new follower plate seals (5) using either large screwdrivers or tire irons.
6. Apply a compatible O-ring grease to the follower plate seals (5).
7. Remove the support blocks (2) from the drum unloader. Put the drum unloader back into service if desired.

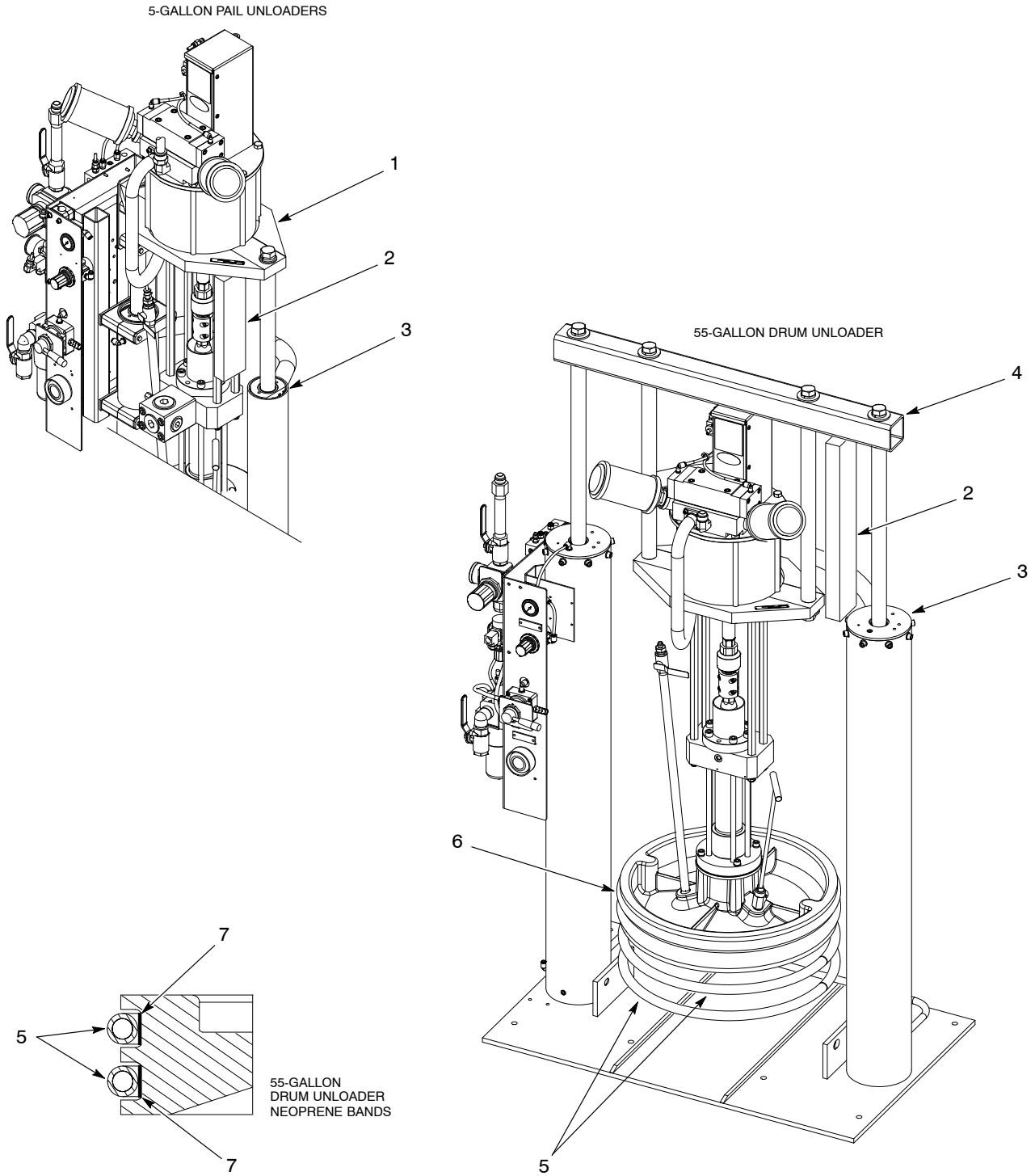


Figure 2 Replacing the Seals

Parts

To order parts, call the Nordson Customer Service Center or your local Nordson representative.

5-Gallon Follower Modules for 5.8 Cubic Inch Pumps

See Figure 3 and refer to the following parts list.

NOTE: These follower modules are designed to fit the following container inner diameters:

- 280-mm
- 286-mm (5-Gallon US Standard)
- 286-mm TFE (5-Gallon US Standard)
- 305-mm
- 310-mm

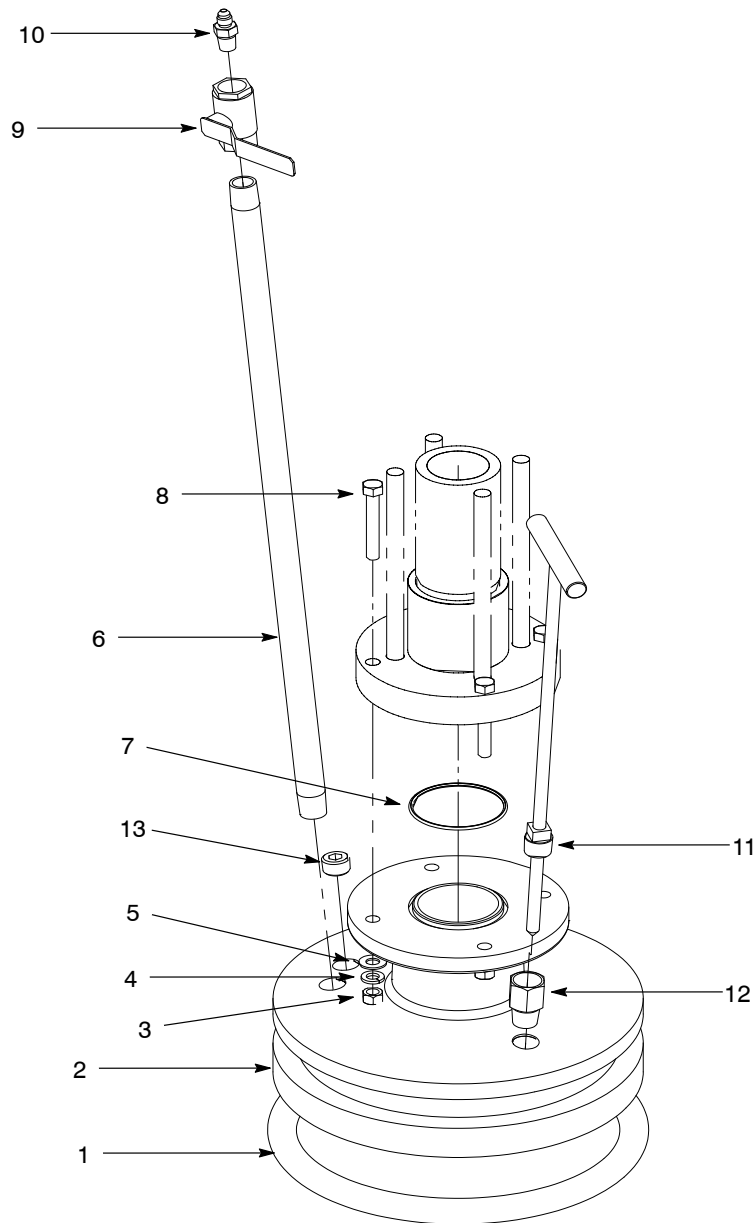


Figure 3 5-Gallon Follower Modules for 5.8 Cubic Inch Pumps

Item	Part	Description	Quantity	Note
—	1070033	280-mm follower plate module, 2.375 throat, 5.8 cubic inch pump	1	
—	1070034	286-mm follower plate module, 2.375 throat, 5.8 cubic inch pump	1	A
—	1070037	286-mm TFE follower plate module, 2.375 throat, 5.8 cubic inch pump	1	A
—	1070035	305-mm follower plate module, 2.375 throat, 5.8 cubic inch pump	1	
—	1070036	310-mm follower plate module, 2.375 throat, 5.8 cubic inch pump	1	
1	274379	• 280-mm: Seal, molded	1	
1	274378	• 286-mm and 286-mm TFE: Seal, molded	1	A
1	124863	• 305-mm: Seal, steam hose	1	
1	179312	• 310-mm: Seal, steam hose	1	
2	1070144	• 280-mm: Follower plate	1	
2	1070152	• 286-mm: Follower plate	1	
2	1070155	• 286-mm TFE: Follower plate	1	
2	1070153	• 305-mm: Follower plate	1	
2	1070154	• 310-mm: Follower plate	1	
3	984152	• Nut, hex regular, 3/8-160	4	
4	983160	• Washer, lock 3/8	4	
5	983061	• Washer, flat, 0.406 x 0.812 x 0.065	4	
6	1043271	• Nipple, pipe, schedule 40, 1/2 NPT, 24 in.	1	
6	1043272	• 286-mm TFE: Nipple, pipe, schedule 40, 1/2 NPT, 24 in. stainless steel	1	
7	941480	• O-ring, Viton, 2.75 x 2.938 x 0.094	1	
8	981624	• Screw, hex, 3/8-16 x 2.5	4	
9	901151	• Valve, ball, 1/2 NPT	1	
10	1042553	• Connector, male, 1/2-20 x 1/2 NPT	1	
11	1042105	• Stem assembly, bleed, 5-gallon	1	
11	1043274	• 286-mm TFE: Stem assembly, bleed, 5-gallon, stainless steel	1	
12	1038038	• Adapter, female, 1/2 x 1/2 NPT	1	
13	973431	• Plug, pipe, socket, 1/2	1	
13	973408	• 286-mm TFE: Plug, pipe, socket, 1/2, stainless steel	1	
14	900439	• Adhesive, Loctite 271	AR	
15	900481	• Adhesive, sealant PST	AR	
16	900344	• Lubricant, Never Seez, 8-oz. can	1	
NOTE A: 5-Gallon US Standard				
AR: As Required				

5-Gallon Follower Modules for 8.1 Cubic Inch Pumps

See Figure 4 and refer to the following parts list.

NOTE: These follower modules are designed to fit the following container inner diameters:

- 280-mm
- 286-mm (5-Gallon US Standard)
- 286-mm TFE (5-Gallon US Standard)
- 305-mm
- 310-mm

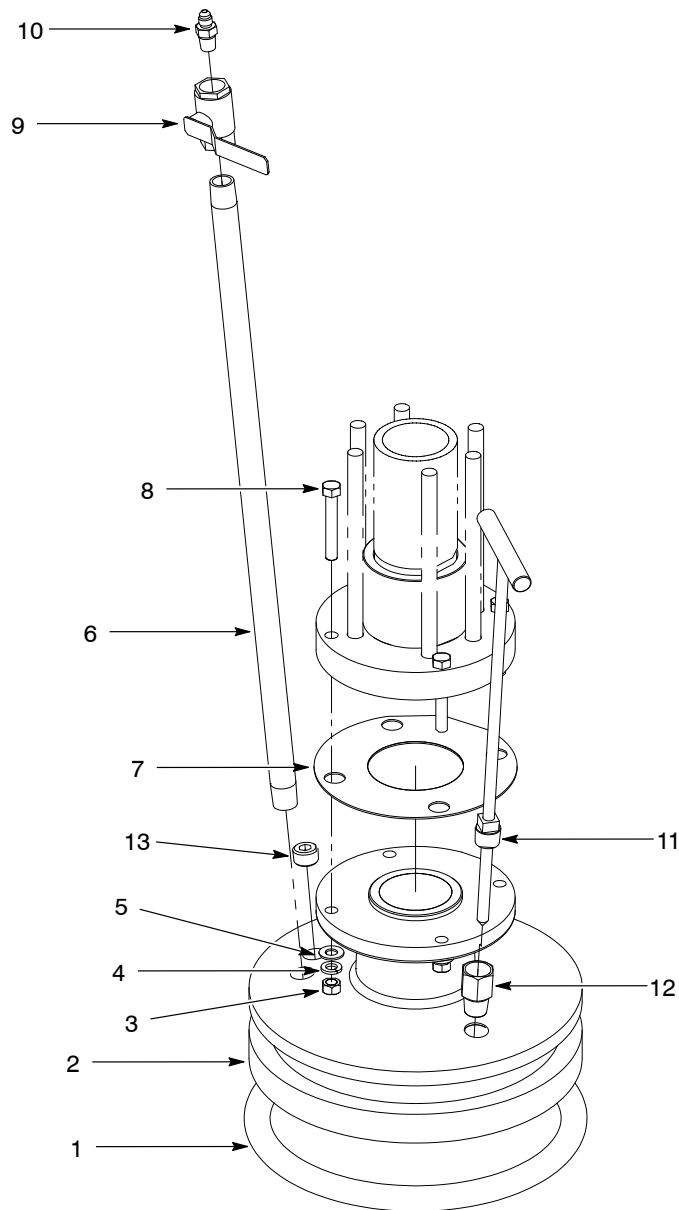


Figure 4 5-Gallon Follower Modules for 8.1 Cubic Inch Pumps

Item	Part	Description	Quantity	Note
—	1037808	280-mm follower plate module, 2.75 throat, 8.1 cubic inch pump	1	
—	1037809	286-mm follower plate module, 2.75 throat, 8.1 cubic inch pump	1	A
—	1037814	286-mm TFE follower plate module, 2.75 throat, 8.1 cubic inch pump	1	A
—	1037810	305-mm follower plate module, 2.75 throat, 8.1 cubic inch pump	1	
—	1037811	310-mm follower plate module, 2.75 throat, 8.1 cubic inch pump	1	
1	274379	• 280-mm: Seal, molded	1	
1	274378	• 286-mm and 286-mm TFE: Seal, molded	1	A
1	124863	• 305-mm: Seal, steam hose	1	
1	179312	• 310-mm: Seal, steam hose	1	
2	124807	• 280-mm: Follower plate	1	
2	124778	• 286-mm: Follower plate	1	
2	335706	• 286-mm TFE: Follower plate	1	
2	124860	• 305-mm: Follower plate	1	
2	197314	• 310-mm: Follower plate	1	
3	984152	• Nut, hex regular, 3/8-16	4	
4	983160	• Washer, lock 3/8	4	
5	983061	• Washer, flat, 0.406 x 0.812 x 0.065	4	
6	1043271	• Nipple, pipe, schedule 40, 1/2 NPT, 24 in.	1	
6	1043272	• 286-mm TFE: Nipple, pipe, schedule 40, 1/2 NPT, 24 in. stainless steel	1	
7	124690	• Gasket, follower	1	
8	981624	• Screw, hex, 3/8-16 x 2.5	4	
9	901151	• Valve, ball, 1/2 NPT	1	
10	1042553	• Connector, male, 1/2-20 x 1/2 NPT	1	
11	1042105	• Stem assembly, bleed, 5-gallon	1	
11	1043274	• 286-mm TFE: Stem assembly, bleed, 5-gallon, stainless steel	1	
12	1038038	• Adapter, female, 1/2 x 1/2 NPT	1	
13	973431	• Plug, pipe, socket, 1/2	1	
13	973408	• 286-mm TFE: Plug, pipe, socket, 1/2, stainless steel	1	
14	900439	• Adhesive, Loctite 271	AR	
15	900481	• Adhesive, sealant PST	AR	
16	900344	• Lubricant, Never Seez, 8-oz. can	1	
NOTE A: 5-Gallon US Standard				
AR: As Required				

30-Gallon Follower Modules for 5.8 and 8.1 Cubic Inch Pumps

See Figure 5 and refer to the following parts list.

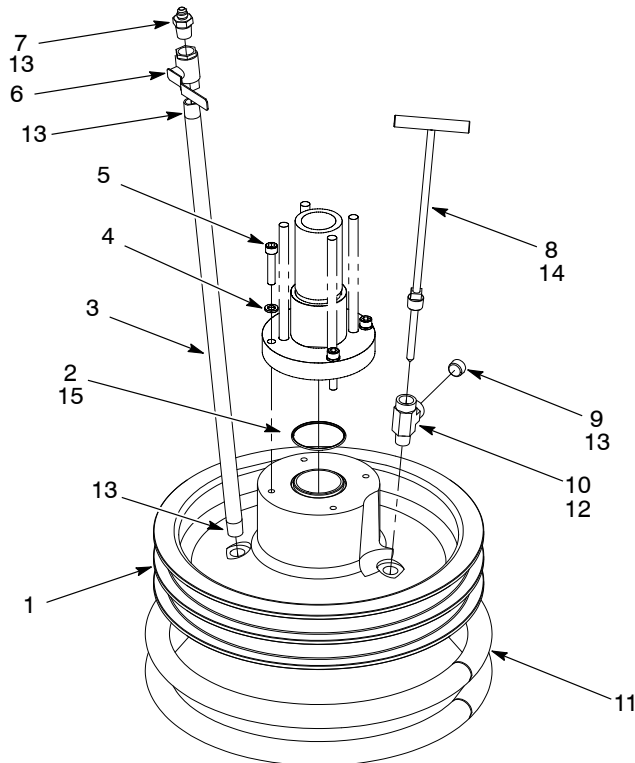


Figure 5 30-Gallon Follower Modules for 5.8 and 8.1 Cubic Inch Pumps

Item	Part	Description	Quantity	Note
—	1070038	5.8 cubic inch pump follower plate module, 2.375 throat	1	A
—	1037812	8.1 cubic inch pump follower plate module, 2.75 throat	1	A
1	1070156	• 5.8 cubic inch pump: Follower plate 2.375 throat	1	
1	281770	• 8.1 cubic inch pump: Follower plate, 2.75 throat	1	
2	941480	• 5.8 cubic inch pump: O-ring, Viton, 2.75 x 2.938 x 0.094, 2.35 throat	1	
2	940410	• 8.1 cubic inch pump: O-ring, Viton, 3 x 3.125 x 0.063, 2.75 throat	1	
3	1043271	• Nipple, pipe, schedule 40, 1/2 NPT, 24 in.	1	
4	983405	• Washer, lock, M10	4	
5	982452	• Screw, socket, M10 x 50	4	
6	901151	• Valve, ball, 1/2 NPT	1	
7	1042553	• Connector, male, 1/2-20 x 1/2 NPT	1	
8	1042470	• Stem assembly, 30-gallon	1	
9	973431	• Plug, pipe, socket, 1/2	1	
10	973547	• Tee, street, 1/2 NPT	1	
11	165215	• Seal, follower, 30-gallon	2	
12	900439	• Adhesive, Loctite 271	AR	
13	900481	• Adhesive, sealant, PST	AR	
14	900344	• Lubricant, Never Seez, 8-oz. can	1	
15	900223	• Lubricant, O-ring, Parker, 4-oz.	1	
NOTE A: Items 1 and 2 are specific to each follower plate module. Items 3 through 15 are common to all follower plate modules.				
AR: As Required				

55-Gallon Follower Modules for 5.8 Cubic Inch Pumps

See Figure 6 and refer to the following parts list.

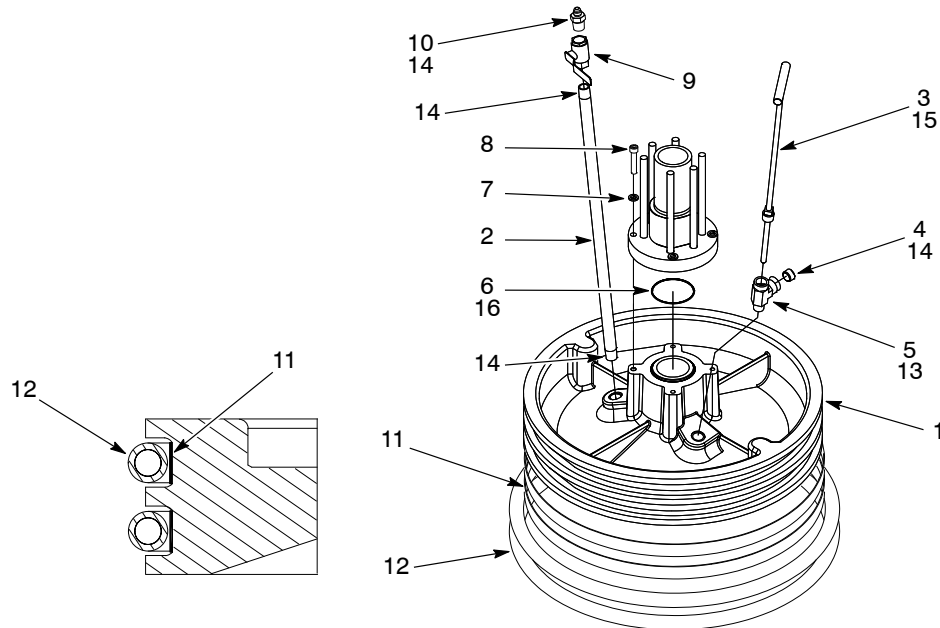


Figure 6 55-Gallon Follower Modules for 5.8 Cubic Inch Pumps

Item	Part	Description	Quantity	Note
—	1069703	Standard follower plate module, 55-gallon 2.375 throat	1	A
—	1070039	PTFE-coated follower plate module, 55-gallon 2.375 throat	1	A
1	1058802	• Standard: Follower plate	1	
1	1070157	• PTFE-coated: Follower plate	1	
2	1043271	• Standard: Nipple, pipe, schedule 40, 1/2 NPT, 24 in., galvanized	1	
2	1043272	• PTFE-coated: Nipple, pipe, schedule 40, 1/2 NPT, 24 in., stainless steel	1	
3	320859	• Standard: Stem, bleeder	1	
3	1043275	• PTFE-coated: Stem, bleeder, stainless steel	1	
4	973431	• Standard: Plug, pipe, socket, 1/2	1	
4	973408	• PTFE-coated: Plug, pipe, socket, 1/2, stainless steel	1	
5	973547	• Standard: Tee, 1/2 NPT	1	
5	1043277	• PTFE-coated: Tee, 1/2 NPT, stainless steel	1	
6	941480	• O-ring, Viton, 2.75 x 2.938 x 0.094	1	
7	983405	• Washer, lock, M10	4	
8	982452	• Screw, socket, M10 x 50	4	
9	901151	• Valve, ball, 1/2 NPT	1	
10	972771	• Connector, male 37 degrees, 9/16-18 x 1/2	1	
11	308796	• Ring, neoprene, follower	2	
12	124706	• Seal, follower	2	
13	900439	• Adhesive, Loctite 271	AR	
14	900481	• Adhesive, sealant, PST	AR	
15	900344	• Lubricant, Never Seez, 8-oz. can	1	
16	900223	• Lubricant, O-ring, Parker, 4-oz.	1	

NOTE A: Items 1 through 5 are specific to each follower plate module. Items 6 through 16 are common to all follower plate modules.

AR: As Required

55-Gallon Follower Module for 5.8 Cubic Inch CE Pump

See Figure 6 and refer to the following parts list.

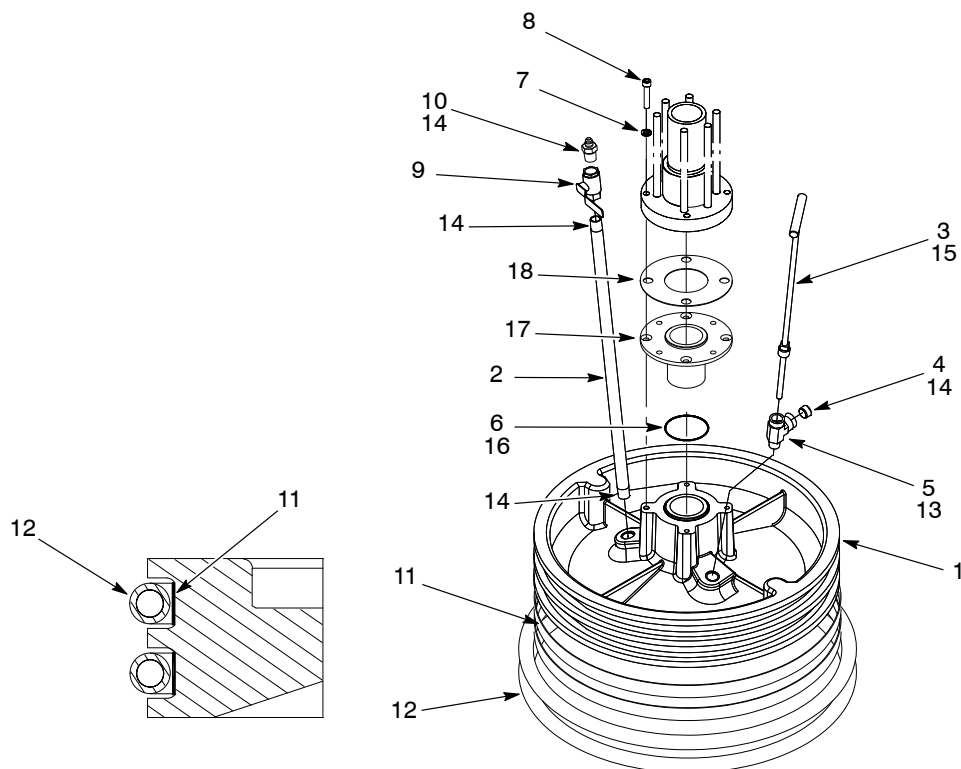


Figure 7 55-Gallon Follower Module for 5.8 Cubic Inch CE Pump

Item	Part	Description	Quantity	Note
—	1037804	Standard follower plate module, 55-gallon 2.375 throat	1	
1	186126	• Follower plate	1	
2	1043271	• Nipple, pipe, schedule 40, 1/2 NPT, 24 in., galvanized	1	
3	320859	• Stem, bleeder	1	
4	973431	• Plug, pipe, socket, 1/2	1	
5	973547	• Tee, 1/2 NPT	1	
6	940410	• O-ring, Viton, 3 x 3.125 x 0.063	1	
7	983405	• Washer, lock, M10	4	
8	345503	• Screw, socket, M10 x 55	4	
9	901151	• Valve, ball, 1/2 NPT	1	
10	972771	• Connector, male 37 degrees, 9/16-18 x 1/2	1	
11	308796	• Ring, neoprene, follower	2	
12	124706	• Seal, follower	2	
13	900439	• Adhesive, Loctite 271	AR	
14	900481	• Adhesive, sealant, PST	AR	
15	900344	• Lubricant, Never Seez, 8-oz. can	1	
16	900223	• Lubricant, O-ring, Parker, 4-oz.	1	
17	295970	• Adapter, follower, 2.38 ID	1	
18	124690	• Gasket, follower	1	
AR: As Required				

55-Gallon Follower Modules for 8.1 Cubic Inch Pumps

See Figure 8 and refer to the following parts list.

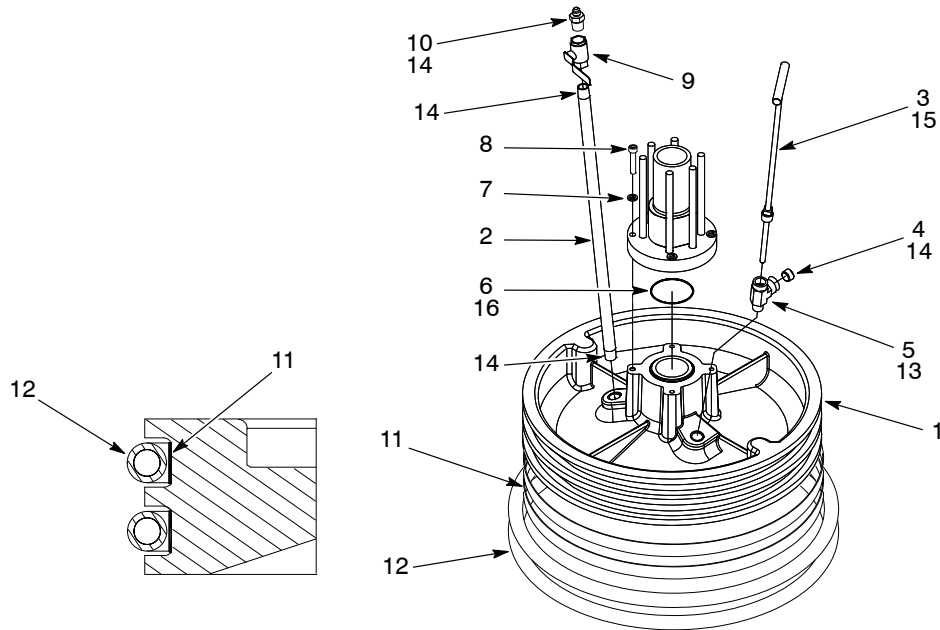


Figure 8 55-Gallon Follower Modules for 8.1 Cubic Inch Pumps

Item	Part	Description	Quantity	Note
—	1037813	Standard follower plate module, 55-gallon 2.75 throat	1	A
—	1037815	PTFE-coated follower plate module, 55-gallon 2.75 throat	1	A
1	186126	• Standard: Follower plate	1	
1	236866	• PTFE-coated: Follower plate	1	
2	1043271	• Standard: Nipple, pipe, schedule 40, 1/2 NPT, 24 in., galvanized	1	
2	1043272	• PTFE-coated: Nipple, pipe, schedule 40, 1/2 NPT, 24 in., stainless steel	1	
3	320859	• Standard: Stem, bleeder	1	
3	1043275	• PTFE-coated: Stem, bleeder, stainless steel	1	
4	973431	• Standard: Plug, pipe, socket, 1/2	1	
4	973408	• PTFE-coated: Plug, pipe, socket, 1/2, stainless steel	1	
5	973547	• Standard: Tee, 1/2 NPT	1	
5	1043277	• PTFE-coated: Tee, 1/2 NPT, stainless steel	1	
6	940410	• O-ring, Viton, 3 x 3.125 x 0.063	1	
7	983405	• Washer, lock, M10	4	
8	982452	• Screw, socket, M10 x 50	4	
9	901151	• Valve, ball, 1/2 NPT	1	
10	972771	• Connector, male 37 degrees, 9/16-18 x 1/2	1	
11	308796	• Ring, neoprene, follower	1	
12	124706	• Seal, follower	1	
13	900439	• Adhesive, Loctite 271	AR	
14	900481	• Adhesive, sealant, PST	AR	
15	900344	• Lubricant, Never Seez, 8-oz. can	1	
16	900223	• Lubricant, O-ring, Parker, 4-oz.	1	

NOTE A: Items 1 through 5 are specific to each follower plate module. Items 6 through 16 are common to all follower plate modules.

AR: As Required

55-Gallon Follower Modules with Steel Ring for 5.8 and 8.1 Cubic Inch Pumps

See Figure 9 and refer to the following parts list.

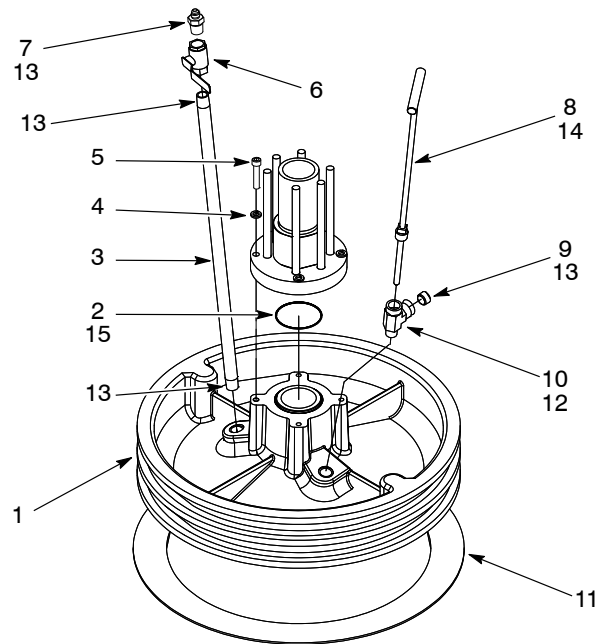


Figure 9 55-Gallon Follower Modules with Steel ring for 5.8 and 8.1 Cubic Inch Pumps

Item	Part	Description	Quantity	Note
—	1070060	5.8 cubic inch pump follower plate module with ring, 55-gallon 2.375 throat	1	A
—	1037816	8.1 cubic inch pump follower plate module with ring, 55-gallon 2.75 throat	1	A
1	1058802	• 5.8 cubic inch pump: Follower plate	1	
1	186126	• 8.1 cubic inch pump: Follower plate	1	
2	941480	• 5.8 cubic inch pump: O-ring, Viton, 2.75 x 2.938 x 0.094	1	
2	940410	• 8.1 cubic inch pump: O-ring, Viton, 3 x 3.125 x 0.063	1	
3	1043271	• Nipple, pipe, schedule 40, 1/2 NPT, 24 in., galvanized	1	
4	983405	• Washer, lock, M10	4	
5	982452	• Screw, socket, M10 x 50	4	
6	901151	• Valve, ball, 1/2 NPT	1	
7	972771	• Connector, male 37 degrees, 9/16-18 x 1/2	1	
8	320859	• Stem, bleeder	1	
9	973431	• Standard: Plug, pipe, socket, 1/2	1	
10	973547	• Tee, 1/2 NPT	1	
11	282846	• Ring, 571 mm	2	
12	900439	• Adhesive, Loctite 271	AR	
13	900481	• Adhesive, sealant, PST	AR	
14	900344	• Lubricant, Never Seez, 8-oz. can	1	
15	900223	• Lubricant, O-ring, Parker, 4-oz.	1	
NOTE A: Items 1 and 2 are specific to each follower plate module. Items 3 through 15 are common to all follower plate modules.				
AR: As Required				

