

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-gal US Standard)
- 286-mm heated (5-gal US Standard)
- 305-mm
- 310-mm
- 464-mm (30-gal US Standard)
- 572-mm (55-gal US Standard)

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

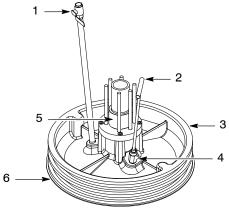
Depending upon the module, follower plates (3) have either one or two rubber seals. When the follower plate is lowered into a container, the rubber seals cause the material to pressurize by creating a tight seal around the inner diameter of the container. When the pump cycles, the follower plate forces the material out of the container and into the pump hydrualic 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 th back to the container. The additional NPT port foe 464-mm and 572-mm follower plate modules is used to connect an optional depressurization circuit that vents material connecting a depressurization circuit on 280-mm, 286-mm, 305-mm, and 310-mm follower plate modules is located on the follower plate.

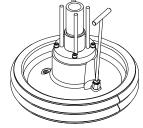
The blow-off tube (1) allows air to enter the area below the follower plate. When the elevator is in the Up position and the blow-off valve is opened, air flows under the follower plate. This pressure forces the container off of the follower plate.



55 GAL (572 MM)

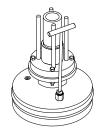
Figure 1 Follower Modules

- 1. Blow-off tube
- 2. Bleeder stem



30 GAL (464 MM)

- 3. Follower plate module
- 4. Bleeder stem adapter



5 GAL (286 MM)

- 5. Pump (partial pump hydraulic section shown)
- 6. PTFE-coated steel ring

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-gal unloader is shown, this procedure is typical for a 5-gal unloader with the exception of the follower seal quantities. The 5-gal unloader has one follower seal.
- If the material container needs to be removed from the 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:

Item	Use
Support blocks	Prevents air cylinder pistons from drifting downward during repairs
Two large screwdrivers or pry bars	Pries follower plate seals off of the follower plate
pry bars	NOTE: Follower plate seals are removed in the same manner as a tire from a rim
O-ring grease	Lubricates new follower plate seals
	NOTE: The O-ring grease must be compatible with material being pumped and the new follower plate seals

Table 1 Required Items

- 1. If installed, remove the material container from the unloader.
- 2. See Figure 2. Insert the support blocks (2).

55-gal Unloaders: Insert support blocks (2) between the frame cross bar (4) and the top of both air cylinders (3).

5-gal Unloaders: 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 pry bars to pry the follower plate seals (5) off of the follower plate grooves (6).
- 4. Perform the following:
 - a. **All Unloaders:** Clean the follower plate grooves and remove all foreign material.
 - b. **55-gal Unloaders:** Inspect the neoprene bands (7) on the 55-gal follower plate (6) for damage and replace if necessary.
- 5. Install the new follower plate seals (5) using either large screwdrivers or pry bars.
- 6. Apply a compatible O-ring grease to the follower plate seals (5).
- 7. Remove the support blocks (2) from the unloader. Put the unloader back into service if desired.

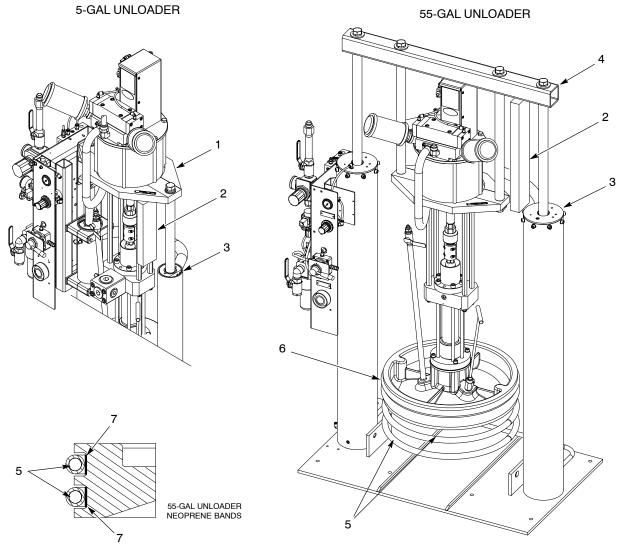


Figure 2 Replacing the Seals

Parts

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

5-Gal Follower Modules for 5.8 Cu-In. 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-gal US Standard)
- 286 mm TFE (5-gal US Standard)
- 305 mm
- 310 mm

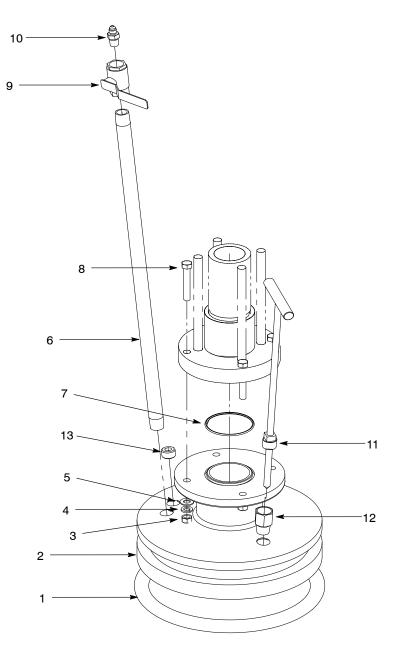


Figure 3 5-Gal Follower Modules for 5.8 Cu-In. Pumps

ltem	Part	Description	Qty	Note
	1070033	FOLLOWER PLATE MODULE, 280 mm, 2.375 throat, 5.8 cu-in. pump	1	
	1070034	FOLLOWER PLATE MODULE, 286 mm, 2.375 throat, 5.8 cu-in. pump	1	А
_	1070037	FOLLOWER PLATE MODULE, 286 mm TFE, 2.375 throat, 5.8 cu-in. pump	1	А
Ī	1070035	FOLLOWER PLATE MODULE, 305 mm, 2.375 throat, 5.8 cu-in. pump	1	
Ī	1070036	FOLLOWER PLATE MODULE, 310 mm, 2.375 throat, 5.8 cu-in. pump	1	
	274379	• 280 mm: SEAL, molded	1	
1	274378	• 286 mm and 286 mm TFE: SEAL, molded	1	А
1	124863	• 305 mm: SEAL, steam hose	1	
	179312	• 310 mm: SEAL, steam hose	1	
	1070144	280 mm: FOLLOWER PLATE	1	
	1070152	286 mm: FOLLOWER PLATE	1	
2	1070155	286 mm TFE: FOLLOWER PLATE	1	
	1070153	305 mm: FOLLOWER PLATE	1	
	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	
0	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 gal	1	
11	1043274	• 286 mm TFE: STEM ASSEMBLY, bleed, 5-gal, 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[®] Threadlocker Red 271[™] 	AR	
15	900481	ADHESIVE, sealant PST	AR	
16	900344	 LUBRICANT, Never-Seez[®], 8-oz. can 	1	
NOTE	A: 5-gal U	S Standard		
AR: As	Required			

5-Gal Follower Modules for 8.1 Cu-In. 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-gal US Standard)
- 286 mm TFE (5-gal US Standard)
- 286 mm heated (5-gal US Standard)
- 305 mm
- 310 mm

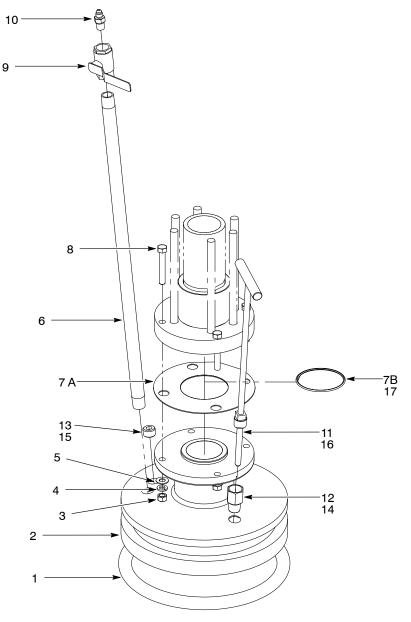


Figure 4 5-Gal Follower Modules for 8.1 Cu-In. Pumps

ltem	Part	Description	Qty	Note
	1037808	FOLLOWER PLATE MODULE, 280 mm, 2.375 throat, 8.1 cu-in. pump	1	
	1037809	FOLLOWER PLATE MODULE, 286 mm, 2.375 throat, 8.1 cu-in. pump	1	А
	1037814	FOLLOWER PLATE MODULE, 286 mm TFE, 2.375 throat, 8.1 cu-in. pump	1	Α
—	1614631	FOLLOWER PLATE MODULE, 286 mm heated, 2.375 throat,	1	А
		8.1 cu-in. pump		
	1037810	FOLLOWER PLATE MODULE, 305 mm, 2.375 throat, 8.1 cu-in. pump	1	
	1037811	FOLLOWER PLATE MODULE, 310 mm, 2.375 throat, 8.1 cu-in. pump	1	
	274379	• 280 mm: SEAL, molded	1	
	274378	286 mm and 286 mm TFE: SEAL, molded	1	A
1	1611443	• 286 mm heated: SEAL, EPDM	1	A
	124863	• 305 mm: SEAL, steam hose	1	
	179312	• 310 mm: SEAL, steam hose	1	
	124807	• 280 mm: FOLLOWER PLATE	1	
-	124778	• 286 mm: FOLLOWER PLATE	1	
2	335706	286 mm TFE: FOLLOWER PLATE	1	
	1070152	286 mm heated: FOLLOWER PLATE	1	
	124860	• 305 mm: FOLLOWER PLATE	1	
	197314	• 310 mm: FOLLOWER PLATE	1	
3		NUT, hex regular, 3/8-16, Grade 5	4	
4		WASHER, lock ¾, per DIN 127	4	
5		WASHER, flat, 0.406 x 0.812 x 0.065, per ISO 7089	4	
6	1043271	NIPPLE, pipe, schedule 40, 1/2 NPT, 24 in.	1	В
	1043272	• 286 mm TFE: NIPPLE, pipe, schedule 40, 1/2 NPT, 24 in. stainless steel	1	
7A	124690	• GASKET, follower	1	В
7B	941480	• 286 mm heated: O-RING, Viton, 2.750 x 2.038 x 0.094	1	
8		• SCREW, hex, 3/8-16 x 2.5, Grade 5	4	
9	901151	VALVE, ball, 1/2 NPT	1	B
10	1042553	CONNECTOR, male, 1/2-20 x 1/2 NPT	1	В
	1042105	STEM ASSEMBLY, bleed, 5-gal	1	
11	1043274	286 mm TFE: STEM ASSEMBLY, bleed, 5-gal, stainless steel	1	
	1614632	286 mm heated: STEM ASSEMBLY, bleed, 5-gal, heated	1	
12	1038038	ADAPTER, female, 1/2 x 1/2 NPT	1	
	1073298	• 286 mm heated: ADAPTER, female, 1/2 x 1/2 NPT, steel zinc	1	
13	973431	PLUG, pipe, socket, 1/2	1/2	С
14	973408	286 mm TFE: PLUG, pipe, socket, 1/2, stainless steel	1	
14	900439	ADHESIVE, Loctite Threadlocker Red 271	AR	
15	900481	ADHESIVE, sealant PST	AR	
16	900344	LUBRICANT, Never-Seez, 8-oz. can	AR	
17 NOTE	1612251	LUBRICANT, O-ring, Parker, 2 oz	AR	
NOTE	A: 5-gal U			
		6 mm heated follower module does not use this part.		
		6 mm heated follower module uses two pipe plugs.		
AR: As	Required			

30-Gal Follower Modules for 5.8 and 8.1 Cu-In. Pumps

See Figure 5 and refer to the following parts list.

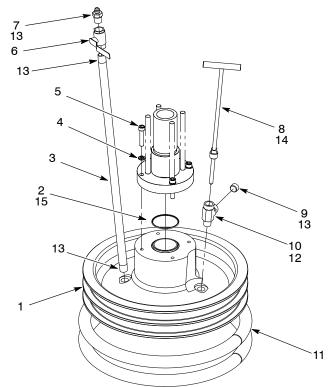


Figure 5 30-Gal Follower Modules for 5.8 and 8.1 Cu-In. Pumps

ltem	Part	Description	Qty	Note
	1070038	FOLLOWER PLATE MODULE, 5.8 cu-in. pump, 2.375 throat	1	А
	1037812	FOLLOWER PLATE MODULE, 8.1 cu-in. pump, 2.75 throat	1	А
1	1070156	 5.8 cu-in. pump: FOLLOWER PLATE, 2.375 throat 	1	
1	281770	8.1 cu-in. pump: FOLLOWER PLATE, 2.75 throat	1	
2	941480	• 5.8 cu-in. pump: O-RING, Viton, 2.75 x 2.938 x 0.094, 2.35 throat	1	
2	940410	• 8.1 cu-in. 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-gal	1	
9	973431	PLUG, pipe, socket, 1/2	1	
10	973547	TEE, street, 1/2 NPT	1	
11	165215	SEAL, follower, 30 gal	2	
12	900439	ADHESIVE, Loctite Threadlocker Red 271	AR	
13	900481	ADHESIVE, sealant, PST	AR	
14	900344	LUBRICANT, Never-Seez, 8-oz can	1	
15	1612251	LUBRICANT, O-ring, Parker, 2 oz	1	
NOTE	plate m	and 2 are specific to each follower plate module. Items 3 through 15 are com odules.	mon to all fo	ollower
AH: As	s Required			

55-Gal Follower Modules for 5.8 Cu-In. Pumps

See Figure 6 and refer to the following parts list.

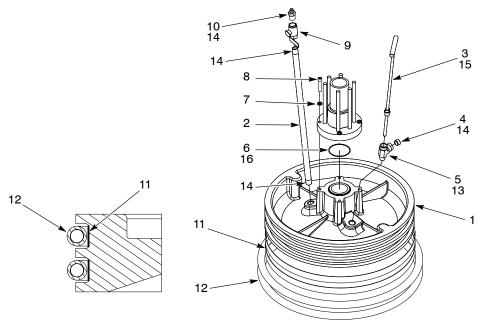


Figure 6 55-Gal Follower Modules for 5.8 Cu-In. Pump	Figure 6	55-Gal Follower Modules for 5.8 Cu-In. Pumps
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Item	Part	Description	Qty	Note
	1069703	FOLLOWER PLATE MODULE, standard, 55 gal, 2.375 throat	1	А
	1070039	FOLLOWER PLATE MODULE, PTFE-coated, 55 gal, 2.375 throat	1	А
1	1058802	Standard: FOLLOWER PLATE	1	
I	1070157	PTFE-coated: FOLLOWER PLATE	1	
	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 Threadlocker Red 271	AR	
14	900481	ADHESIVE, sealant, PST	AR	
15	900344	LUBRICANT, Never-Seez, 8-oz can	1	
16	1612251	LUBRICANT, O-ring, Parker, 2 oz	1	
	followe	through 5 are specific to each follower plate module. Items 6 through 16 are r plate modules.	common to	all
AR: As	Required			

55-Gal Follower Module for 5.8 Cu-In. CE Pumps

See Figure 6 and refer to the following parts list.

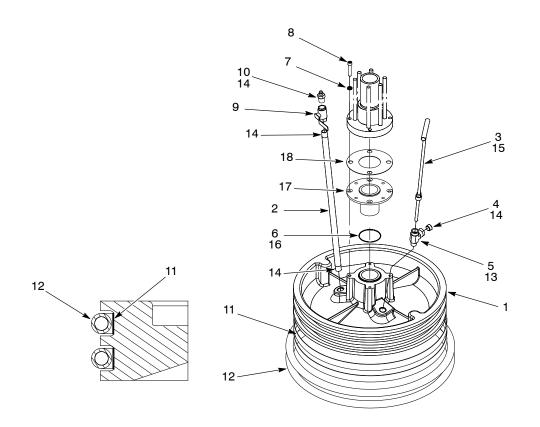


Figure 7 55-Gal Follower Module for 5.8 Cu-In. CE Pump

Item	Part	Description	Qty	Note
	1037804	FOLLOWER PLATE MODULE, standard, 55 gal, 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 deg, 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	1612251	LUBRICANT, O-ring, Parker, 2 oz	1	
17	295970	ADAPTER, follower, 2.38 ID	1	
18	124690	GASKET, follower	1	
AR: As	s Required			

55-Gal Follower Modules for 8.1 Cu-In. Pumps

See Figure 8 and refer to the following parts list.

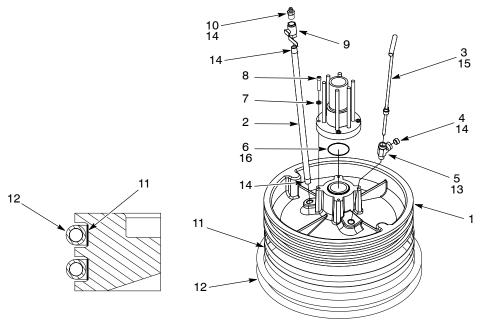


Figure 8 55-Gal Follower Modules for 8.1 Cu-In. Pumps

ltem	Part	Description	Qty	Note
	1037813	FOLLOWER PLATE MODULE, standard, 55 gal, 2.75 throat	1	А
_	1037815	FOLLOWER PLATE MODULE, PTFE-coated, 55 gal, 2.75 throat	1	А
4	1103986	Standard: FOLLOWER PLATE	1	
1	1099994	PTFE-coated: FOLLOWER PLATE	1	
	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 deg, 9/16-18 x 1/2 	1	
11	308796	RING, neoprene, follower	1	
12	124706	SEAL, follower	1	
13	900439	ADHESIVE, Loctite Threadlocker Red 271	AR	
14	900481	ADHESIVE, sealant, PST	AR	
15	900344	LUBRICANT, Never Seez, 8-oz can	1	
16	1612251	LUBRICANT, O-ring, Parker, 2 oz	1	
	followe	through 5 are specific to each follower plate module. Items 6 through 16 are c r plate modules.	ommon to	all
AH: As	s Required			

55-Gal Follower Modules with Steel Ring for 5.8 and 8.1 Cu-In. Pumps

See Figure 9 and refer to the following parts list.

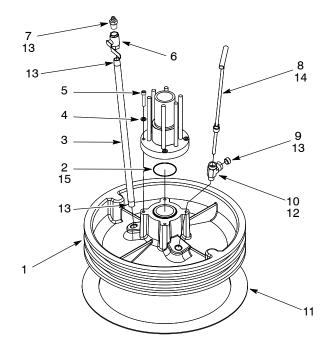
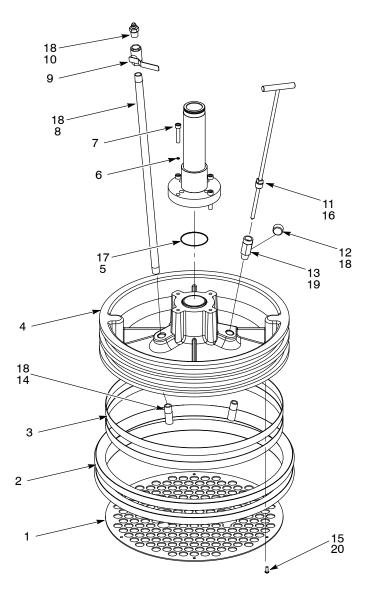


Figure 9	55-Gal Follower Modules with Steel Ring for 5.8 and 8.1 Cu-In. Pumps

Item	Part	Description	Qty	Note
_	1070060	FOLLOWER PLATE MODULE, w/ ring, 5.8 cu-in. pump, 55 gal, 2.375 throat	1	A
	1613387	FOLLOWER PLATE MODULE, w/ ring, 5.8 cu-in. pump, 55 gal, 2.375 throat, UHMW, polyethylene	1	А
	1037816	FOLLOWER PLATE MODULE, w/ ring, 8.1 cu-in. pump, 55 gal, 2.75 throat	1	А
4	1103920	5.8 cu-in. pump: FOLLOWER PLATE	1	
1	1103986	8.1 cu-in. pump: FOLLOWER PLATE	1	
2	941480	• 5.8 cu-in. pump: O-RING, Viton, 2.75 x 2.938 x 0.094	1	
2	940410	• 8.1 cu-in. 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 deg, 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	• 5.8/8.1 cu-in. pump: RING, 571 mm	2	
11	1088997	• 5.8 cu-in. UHMW PE pump: RING, platen, 55 gal, XD2H, UHMW, PE	2	
12	900439	ADHESIVE, Loctite Threadlocker Red 271	AR	
13	900481	ADHESIVE, sealant, PST	AR	
14	900344	LUBRICANT, Never-Seez, 8-oz can	1	
15	1612251	LUBRICANT, O-ring, Parker, 2 oz	1	
	A: Items 1 plate m s Required	and 2 are specific to each follower plate module. Items 3 through 15 are commo odules.	on to all fo	ollower

55-Gal Follower Modules with Grid Plate for 5.8 and 8.1 Cu-In. Pumps

See Figure 10 and refer to the following parts list.



1092845

Figure 10 55-Gal Follower Modules with Grid Plate for 5.8 and 8.1 Cu-In. Pumps

ltem	Part	Description	Qty	Note
	1092620	FOLLOWER PLATE MODULE, w/ grid plate, 5.8 cu-in. Pump, 55 gal, 2.375 throat	1	А
—	1092589	FOLLOWER PLATE MODULE, w/ grid plate, 8.1 cu-in. pump, 55 gal, 2.75 throat	1	А
1	1098706	RETAINER, grid plate, 55gal	1	
2	1090252	SEAL, follower, 55 gal, one piece	2	
3	308796	RING, neoprene, follower	2	
4	1103920	• 5.8 cu-in. pump: PLATE, follower, 55 gal, 2.375 in. throat, SD2	1	
4	1103986	8.1 cu-in. pump: PLATE, follower, 55 gal, 2.75 in. throat	1	
5	941480	• 5.8 cu-in. pump: O-RING, Viton, 2.750 x 0.938 x 0.094	1	
5	940410	 8.1 cu-in. pump: O-RING, Viton, 3.0 x 3.125 x 0.063 	1	
6	983405	WASHER, lock, M10, steel, zinc	4	
7	982452	SCREW, socket, M10 x 50, blue	4	
8	1043271	NIPPLE, pipe, schedule 40, ½ NPT, 24 in., galvanized	1	
9	901151	VALVE, ball, ½ NPT	1	
10	975771	 CONNECTOR, male, 37, 9/16 x 18 ½, steel 	1	
11	320859	STEM, bleeder, follower, long	1	
12	973431	PLUG, pipe, socket, standard, ½, zinc	1	
13	973547	• TEE, street, S, ½ NPT	1	
14	1603104	 NIPPLE, follower, hex, ½ NPT x 5 deg cut, stainless steel 	2	
15	982641	 SCREW, button, socket, ¼ – 10 x 0.500, blue 	6	
16	900344	LUBRICANT, Never-Seez, 8-oz can	AR	
17	1612251	LUBRICANT, O-ring, Parker, 2 oz	1	
18	900481	ADHESIVE, sealant, PST	AR	
19	900439	ADHESIVE, Loctite Threadlocker Red 271	AR	
20	900464	ADHESIVE, Loctite Threadlocker Blue 242, removable, 50 m	1	
	A: Items 4 plate m Required	and 5 are specific to each follower plate module. The remaining items are co odules.	ommon to all	follower

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