



DESCRIPTION

Models 9917, 9917-57, 9946P, and 9989 are air operated grease pumps designed to pump low and medium viscosity materials, (grease) from drums and pails. They are high pressure pumps that are capable of creating a maximum operating pressure of 5000 PSI with 100 PSI air. All models include drum or pail covers, high pressure hose, control valve, grease coupling, and universal follower.

Model 9917 is for use with 120# refinery containers and includes a caster dolly base for portability. (Container drum is not included.) Two high pressure swivels are included, one straight swivel where the hose connects to the pump, and a universal swivel for connection between the hose and the control valve. (See front cover illustration.)

Model 9917-57 is the same as the 9917, above, but does not include the caster dolly base. (See front cover illustration.)

Model 9946P is the same as the 9917, above, but includes a 2-wheel dolly truck for portability instead of the caster dolly base. (See front cover illustration.)

Model 9989 is for use with 35# refinery pails and includes a pail cover with handle for portability. One universal swivel is included for connection between the hose and control valve. No dolly base or truck is included.

SPECIFICATIONS

Models 9917, 9917-57 and 9946P

Pump Pump ratio

Pump Max. Working Pressure

Max. Air Pressure Air Inlet

Lube Outlet (pump)

Hose

Model 9989

Pump

Pump ratio

Pump Max. Working Pressure

Max. Air Pressure Air Inlet

All lillet

Lube Outlet (pump)

Hose

85792 (120# Pump)

50:1

5000 PSI [345 bar] (limited by hose working pressure) 100 PSI [6.9 bar] 3/8 NPT (female) with coupler 1/4 NPT (female) 1/4" ID x 7' SAE 100R2 high pressure hose (5000 PSI [345 bar] working pressure.

85791(35# Pump)

50:1

50.1
5000 PSI [345 bar] (limited by hose working pressure)
100 PSI [6.9 bar]
3/8 NPT (female) with coupler
1/4 NPT (female)
1/4" ID x 7' SAE 100R2
high pressure hose
(5000 PSI [345 bar]
working pressure.

For more specific information on pumps see appropriate owner's manual for the pump.

ASSEMBLY INSTRUCTIONS

MARNING

This pump can develop 7500 PSI working pressure at 150 PSI maximum incoming air pressure. Be sure that all system equipment and accessories are rated to withstand the maximum working pressure of this pump. Do not exceed the maximum working pressure of the lowest rated component in the system.

IMPORTANT: Accessory item 'Whip" hoses for dispensing valve are rated 4500 PSI. DO NOT exceed 90 PSI air pressure to pump when using 'Whip" hoses.

Model 9917

Refer to Illustration #1 in this manual

- Assemble the control valve hanger (item 15) to the side of the drum cover (item 9) using the two hex head screws (item 16) and hex nuts (item 14) through the holes provided in the cover.
- Install the three fillister head screws (item 11) into the side of the drum cover (item 9) as shown. Leave the screws loose. They will be used later to secure the drum cover onto the drum.
- Assemble the pump to the drum cover with the four bolts, item 13, supplied, as shown in the illustration. Tighten securely
- 4. Connect straight swivel (item 7) to pump outlet. (Note that there are two different threads on the swivel. The ¼-18 NPT pipe thread will be a course thread compared with the other thread.) Make sure to place the ¼-18 NPT male end of the swivel into the ¼-18 NPT female outlet on the pump body. Tighten securely.
- Connect one end of the high pressure hose (item 22) to the special (fine pitch) male thread on the straight swivel (item 7) and tighten securely.
- 6. Connect the remaining end of the high pressure hose to the special male thread on the universal swivel (item 6) and tighten securely.
- 7. Connect the ½-18 NPT male thread on the universal swivel (item 6) to the control valve (item 1) and tighten securely.
- 8. Install the grease coupling and extension tube into the outlet end of the control valve, (item 1), and tighten securely.
- 9. Install the air nipple (item 4) into the air inlet of the pump and tighten securely.
- 10. Attach the air coupler (item 5) onto a suitable 3/8" ID (minimum) air hose and tighten securely. Do not apply air pressure at this time.
- Assemble the follower (item 17) per the instructions supplied with the follower.
- 12. Assemble the truck assembly (item 29) as shown in illustration #3. Leave the hex screws, item 24, and set screws, item 26, loose until a container drum is placed on the truck. Install the casters, item 28, into the sockets on the bottom side of the truck base. They should snap into place and not fall out when the truck is lifted from the floor.

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- 13. Place the truck assembly on the floor. Place a container drum containing the lubricant to be dispensed onto the truck base. Center the drum on the base and adjust the clamp assemblies close enough to the base of the drum so that the set screws can be adjusted in to secure the drum. They should also be far enough away from the base of the drum, so that the drum can be removed by loosening the set screws (item 26) only. Tighten the hex screws (item 24) securely, 4-places.
- 14. Place the assembled follower (item 17) into the open drum, on top of the lubricant, and push down on the follower until the lubricant flows slightly into the center opening of the follower.
- 15. Place the pump tube, assembled with the drum cover, into the drum by sliding the pump tube into the center hole in the follower and sliding straight into the follower. The pump tube should slide all the way into the drum until the drum cover gasket rests on the top edge of the drum. The follower (item 17) will remain on top of the grease, and will move down with the lubricant as it is consumed, wiping the pail walls clean, and moving the lubricant towards the pump inlet.
- 16. Secure the drum cover to the drum with the three fillister head screws (item 11) by tightening until the screws are snug against the side of the drum.
- 17. Place the control valve grease coupler through the control valve hanger (item 15) on the side of the drum cover for convenient storage. The hose may be coiled around the drum as desired.
- 18. Follow the priming instructions as detailed in the pump operation manual, supplied with the pump.

Model 9917-57

See illustration #1 of this manual and follow assembly instruction steps 1 thru 11 and 14 thru 17. (Ignore steps 12 and 13.)

Model 9946P

See illustration #1 of this manual and follow assembly instruction steps 1 thru 11. Proceed to steps below.

- 12a. Assemble the dolly truck, item 30, as detailed in the dolly truck assembly manual packaged with the dolly truck.
- 12b. Place the drum on the truck and secure per the instructions with the dolly truck.

Complete the assembly process by proceeding with steps 14 thru 17 above.

Model 9989

Refer to illustration #4 of this manual.

- 1. Assemble the pail handle, item 23, to the pail cover, item 10, using four #10-24 x ½" R.H. machine screws, item 19, mating lock washers (item 20), and nuts (item 21). Assemble as shown in illustration #4. Tighten securely.
- Insert snap button, item 31, into hole in cover opposite handle.
- Insert three thumb screws, item 12, loosely into pail cover, as shown.
- 4. Assemble pump to pail cover by sliding the pump tube through the bushing on the pail cover. Slide the cover up to the pump outlet casting as far as it will go. Note that the pump is not firmly attached to the cover, but is allowed to pivot and float inside the cover
- Note that hose adapter, item 8, has two different threads, one finer than the other. Install the fine thread end of the adapter into one end of the high pressure hose, item 22, and tighten securely.
- Install the course thread, ¼-18 NPT, of the adapter, item 8, into the outlet of the pump and tighten securely.
- The universal swivel, item 6, will have a similar fine thread on one end as the adapter above. Assemble the fine thread into the female opening on the opposite end of the hose, item 22, and tighten securely.
- Assemble the control valve per the instructions in Sec. F3, Pg 2 series.
- 9. Attach the 1/4-18 NPT male (course thread) into the control valve, item 1 and tighten securely.
- Attach the air nipple, item 4, to the air inlet of the pump, item 3.
- 11. Attach the air coupler, item 5, to a 3/8" ID minimum air hose. Do not apply air to the pump at this time.
- 12. Assemble the follower, item 18, per the instructions in Sec. K5, Pg 6 Series. Place the assembled follower (item 18) into the open pail, on top of the lubricant, and push down on the follower until the lubricant flows slightly into the center opening of the follower.
- 13. Place the pump and pail cover over the pail, sliding the pump tube into the opening in the center of the follower, item 18. Secure the pail cover to the pail using the three thumb screws, item 12, provided. The pump should slide into the follower until it either rests on the bottom of the pail or the pump outlet casting rests on the top of the cover bushing. The pump will be free to rotate within the pail cover. The follower, item 18, will remain on top of the lubricant in the pail, and will move down with the lubricant as it is consumed, wiping the pail walls clean, and moving the lubricant towards the pump inlet.
- 14. Follow the priming instructions as detailed in the pump operation manual, (Sec. A5, Pg 83 Series) supplied with the pump.



MARNING

FAILURE TO HEED THE FOLLOWING WARNINGS INCLUDING MISUSE, OVER PRESSURIZING, MODIFYING PARTS, USING INCOMPATIBLE CHEMICALS AND FLUIDS, OR USING WORN OR DAMAGED PARTS, MAY RESULT IN EQUIPMENT DAMAGE AND/OR SERIOUS PERSONAL INJURY, FIRE, EXPLOSION, OR PROPERTY DAMAGE.

- · Do not exceed the stated maximum working pressure of the pump, or of the lowest rated component in your system.
- · Do not alter or modify any part of this equipment.
- · Do not operate this equipment with combustible gas.
- Do not attempt to repair or disassemble the equipment while the system is pressurized.
- · Make sure all grease connections are securely tightened before using this equipment.
- Always read and follow the grease manufacturers recommendations regarding grease compatibility, and the use of protective clothing and equipment.
- · Check all equipment regularly and repair or replace worn or damaged parts immediately.
- Never point the dispensing valve at any part of the body or at another person.
- · Never try to stop or deflect material from dispensing valve or leading connection or component with your hand or body.
- Always check equipment for proper operation before each use, making sure safety devices are in place and operating properly.
- Always follow the pressure relief procedure after shutting off the pump, when checking or servicing any part of the system, and when installing, cleaning or changing any part of the system.

Purging and priming the pump

When operating the pump for the first time, or after changing lubricant containers, see the instructions below.

- Make sure there is sufficient lubricant in the drum or pail.
 Make sure that all hose and fitting connections are tight and leak proof.
- 2. The use of an air filter, regulator, and lubricator (F.R.L.) with these pumps is highly recommended to control the pressure of the lubricant and protect the pumping system.
- 3. See the priming instructions in the pump operation manual, (Sec. A5, Pg 83 Series).
- 4. Apply enough air pressure to the pump so that it operates slowly.
- 5. With lubricant in the pail, and the pump operating slowly, direct the control valve grease coupler into a suitable container, and open the control valve. Hold the valve open until grease, free of air, appears in the container.
- 6. Close the control valve. If the pump is properly primed, the pump should stall (stop operating). If the pump continues to run, repeat the above step until it does stall.
- 7. After pump is fully primed, increase air pressure to 100 PSI. As the pressure is increased, the pump will cycle several times as the lubricant pressure increases and the hose expands. This is normal. Check for leaks at all lubricant connections. Be ready to disconnect the air from the pump if a leak appears. Keep clear of all connections and hoses until pressure tightness is assured. Once maximum pressure is reached, the pump should stop cycling.
- 8. Should a leak occur, disconnect the air supply to the pump, relieve all pressure from the pump, hoses, and control valve, and correct the problem. Do not attempt to stop a leak with pressure on the system.

Operation

Inspect the entire lubrication pump and attached hoses and valves before every use. Do not operate this lubrication pump if any damage appears to the pump or associated components. Remove a damaged pump from operation until proper repairs are made. Contact a factory authorized service center for parts or repairs.

MARNING

TO PREVENT PERSONAL INJURY, PERFORM PRESSURE RELIEF PROCEDURE AFTER OPERATING THE PUMP.

- Adjust the air pressure to the pump for an operating pressure required for the job at hand. Too much pressure can damage the pump, associated components, or cause damage to grease seals and other components on the machinery that is to be lubricated.
- 2. Make sure that the pump is fully primed and free of air. Do not operate a pump if the lubricant container is empty or low on lubricant. A pump that runs out of lubricant can cause air to enter the grease system or a pump to run-away, or increase operating speed to the point where pump damage occurs. Air in the lubricant lines under high pressure can cause lubricant to be sprayed or splattered resulting in a hazardous condition.
- Once primed the pump is ready for use. Adjust the air pressure to the pump for a smooth flow of grease into the bearings being serviced.
- 4. After all bearings have been serviced it is important to remove air from the pump and discharge the control valve and hoses at the end of the day. Do not leave the pump under pressure for extended storage periods.

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Pressure Relief Procedure

Always perform this procedure before servicing or when the pump is to be out of service for a period of time.

- Disconnect the air supply from the pump
- Point the dispensing valve away from yourself and others, and direct into a suitable container.
- Open the dispensing valve into the container and hold it open until the flow of lubricant stops, and pressure is relieved.

Lubrication and Care of the Pump

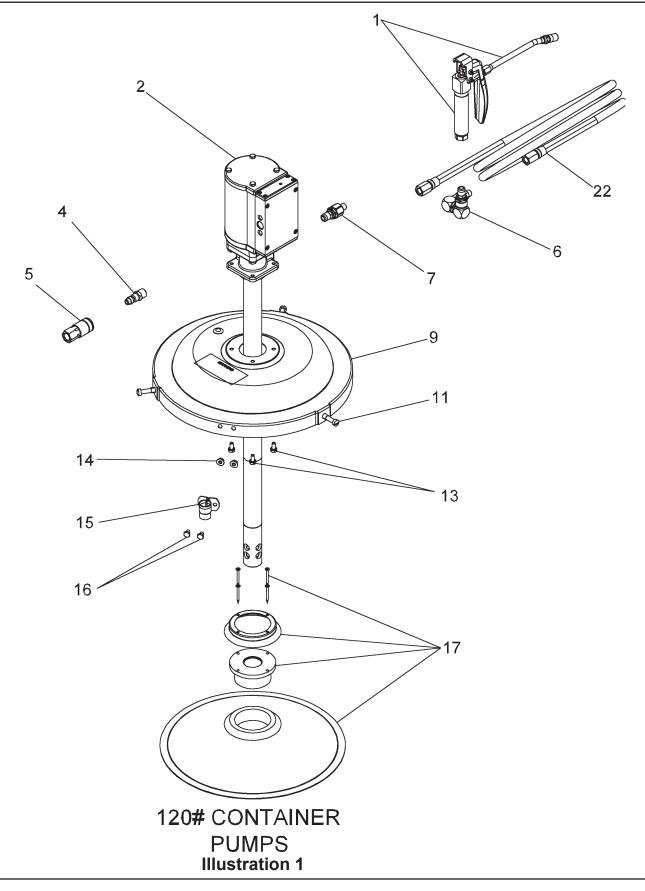
An air line filter, regulator, and lubricator are highly recommended for use with these pumps to prevent harmful dirt and moisture from the compressor from entering the pump's air motor, and to provide for automatic air motor lubrication. If an air lubricator is not used the following procedure must be performed daily:

- · Disconnect the air coupler from the pump air inlet.
- Fill the coupler with SAE 10 motor oil and reconnect the coupler to the air nipple.

To prevent corrosion, never leave water or moist air in the pump's air motor. This will cause corrosion and shorten the life of the air motor.

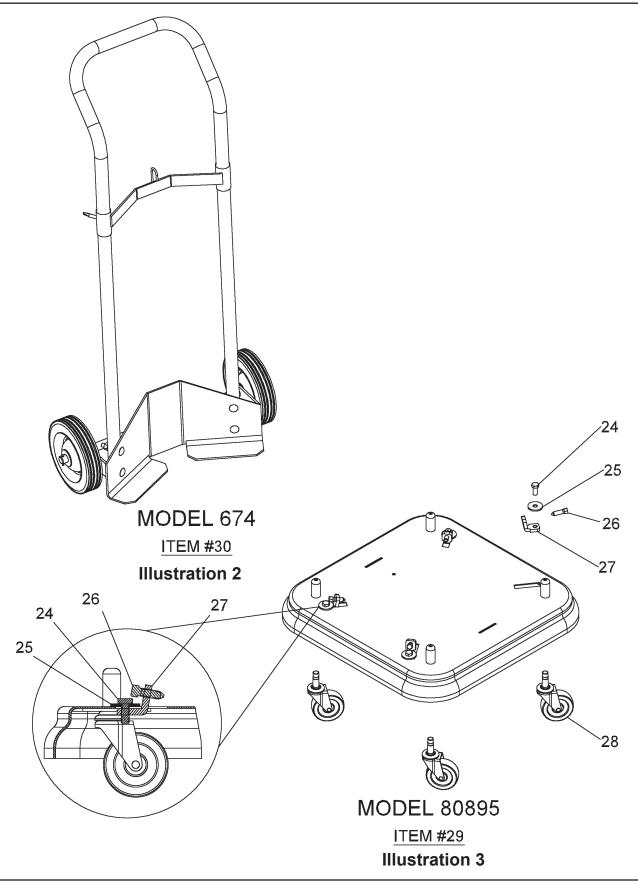
Prevent damage to the hose and control valve by using the control valve hanger, or coiling the hose around the pump when not in use. Never kink the high pressure hose or drive over the hose, as damage may weaken the hose with the possibility of bursting. A burst high pressure hose is a very dangerous occurrence, which can result in severe injuries and or property damage.



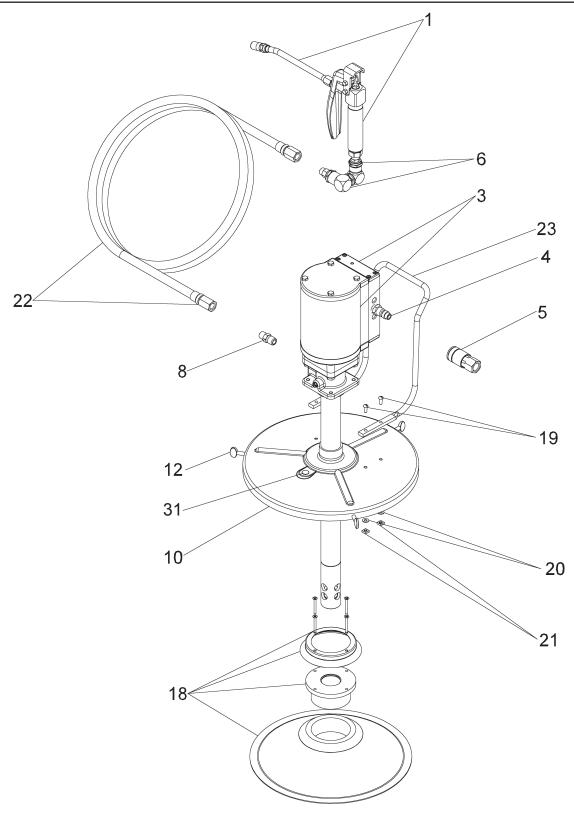


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Model 9989 - 35# Container, 50:1 Ratio Illustration 4

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ITEM NO	DESCRIPTION	PART NO	QUAN. PER MODEL				REFER TO SEPARATE
			9917	9917-57	9946P	9989	INSTRUCTIONS
1	CONTROL VALVE, HIGH PRESSURE	740	1	1	1	1	SEC. F3, PG2 SERIES
2	50:1 BASIC PUMP, 120#	85792	1	1	1	NA	SEC. A5, PG 83 SERIES
3	50:1 BASIC PUMP, 35#	85791	NA	NA	NA	1	SEC. A5, PG 83 SERIES
4	AIR NIPPLE, 3/8 NPT MALE	5875	1	1	1	1	
5	AIR COUPLER, 3/8 NPT FEMALE	5874	1	1	1	1	
6	UNIVERSAL SWIVEL	81387	1	1	1	1	SEC. F1, PG 2 SERIES
7	STRAIGHT SWIVEL	82399	1	1	1	OPT	SEC. F1, PG 2 SERIES
8	HOSE ADAPTER	10198	NA	NA	NA	1	
9	DRUM COVER, 120# (INCL ITEM 11)	46007	1	1	1	NA	
10	PAIL COVER, 35#	275370	NA	NA	NA	1	
11	FILLISTER HD SCREW, 5/16-18 X 1-1/4"		3	3	3	NA	
12	THUMB SCREW, 1/4-20 X 3/4"	66130	NA	NA	NA	3	
13	HEX HD SCREW SEMS, 1/4-20 X 9/16"	50060	4	4	4	NA	
14	LOCK NUT, 1/4-20	50754	2	2	2	NA	
15	CONTROL VALVE HANGER	45761	1	1	1	NA	
16	HEX HD SCREW, 1/4-20 X 3/8"	50113	2	2	2	NA	
17	UNIVERSAL FOLLOWER, 120#	84780	1	1	1	NA	SEC. K5, PG 6 SERIES
18	UNIVERSAL FOLLOWER, 35#	84775	NA	NA	NA	1	SEC. K5, PG 6 SERIES
19	RH MACHINE SCREW, 10-24 X 1/2"		NA	NA	NA	4	
20	#10 LOCK WASHER		NA	NA	NA	4	
21	#10-24 NUT		NA	NA	NA	4	
22	HIGH PRESSURE HOSE, 1/4" X 84"	75084	1	1	1	1	
23	HANDLE, PAIL	63088	NA	NA	NA	1	
24	HEX HD SCREW, 5/16 X 3/4"		4	NA	NA	NA	
	5/16 FLAT WASHER	48238	4	NA	NA	NA	
26	5/16 X 1" SQ HD SET SCREW	11123	4	NA	NA	NA	
27	CLAMP, DRUM	360266	4	NA	NA	NA	
28	CASTER, 2-1/2" SWIVEL	66060	4	NA	NA	NA	
29	TRUCK ASSEMBLY	80895	1	OPT	NA	NA	
30	DOLLY TRUCK ASSEMBLY	674	OPT	OPT	1	NA	SEC. B3, PG 24 SERIES
31	SNAP BUTTON	66057	N/A	N/A	N/A	1	

NA NOT APPLICABLE TO MODEL

OPT MAY BE USED, BUT NOT SUPPLIED WITH MODEL SHOWN

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