

OPERATOR'S MANUAL

NPC23XXXXR2-XX-X

INCLUDING: OPERATION, INSTALLATION AND MAINTENANCE.

INCLUDE MANUALS: NM2C23X-A1-XXX Two-Ball Pump (97999-1209), 67409-X Follower Assembly (pn 97999-1396), 67410-X Follower Assembly (pn 97999-1397), 651616-XX Two Post Lift / Ram (pn 97999-613), P293X1-60X Piggyback Filter / Regulator (pn 100400-46) & S-636 General Information (pn 97999-636).

RELEASED: 2-2-09

REVISED:
(REV. 01)

12" AIR MOTOR
23:1 RATIO
6" STROKE

NPC23XXXXR2-XX-X TWO-BALL PUMPING SYSTEM For use with 55 gallon drums



**READ THIS MANUAL CAREFULLY BEFORE INSTALLING,
OPERATING OR SERVICING THIS EQUIPMENT.**

It is the responsibility of the employer to place this information in the hands of the operator. Keep for future reference.
The original language of this manual is English.

SERVICE KITS

- Use only genuine ARO® replacement parts to assure compatible pressure rating and longest service life.
- **104158** for repair of 127122-000 miniature regulator.
- **116772** for repair of E512LM valve.
- **637112** for repair of 66506-B air motor.
- **637444-XXD** for repair of 6737X-XXX lower pump end.

MODEL DESCRIPTION CHART

NP C 23 X XXX R2 - XX - X	
Air Motor Size C - 12"	
Pump Ratio 23 - 23:1	
Check Type / Wetted Materials G - Two-ball / 400 series stainless steel H - Two-ball / 300 series stainless steel	
Lower Pump End Options Refer to pump model operator's manual	
Ram Style R2 - Two Post, 55 gallon	
Follower Assembly	
10 - 67409	31 - 67410-2
11 - 67409-1	32 - 67410-3
12 - 67409-2	33 - 67410-8
20 - 67409-5	40 - 67410-5
21 - 67409-6	41 - 67410-6
22 - 67409-7	42 - 67410-7
30 - 67410-1	43 - 67410-9
Options Included	
1 - 67133	
2 - 104104-F06	
3 - 67327	
4 - 67133 and 104104-F06	
5 - 67133 and 67327	
6 - 67133, 104104-F06 and 67327	
7 - 104104-F06 and 67327	

NPC23XXXXR2-XX-X TWO-BALL SYSTEM

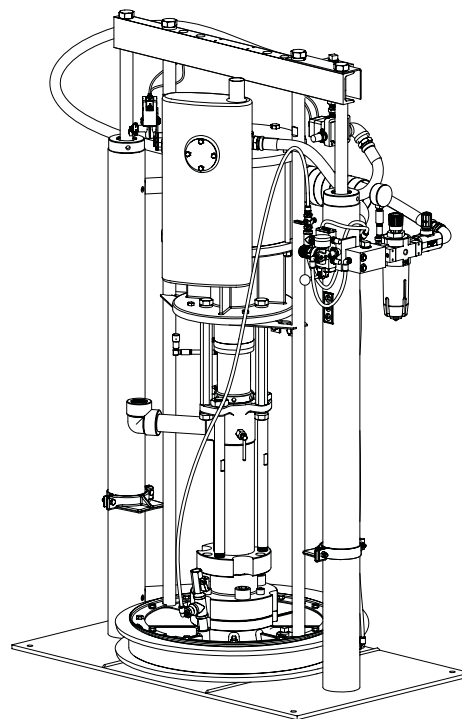


Figure 1

GENERAL DESCRIPTION

By delivering a smooth, continuous bead of the proper size, an ARO system helps the operator maintain both production rate and produce high quality standards. Maintained quality standards assures that the material benefits are realized. To further maximize operator production time, the ARO system has a built-in lift / ram feature for quick and easy drum changeover and easy lifting of the pump assembly from the container.

ARO systems are totally enclosed, sealing the material in the system from air and moisture, preventing premature cure-out of the material. This allows for either continuous or intermittent use of the system and allows the need for daily system clean-up.

INSTALLATION

The NPC23XXXXR2-XX-X Two-Ball Pumping System comes completely assembled. Remove the unit from the crate and place on a level surface. Install the material hose and dispensing device as required.

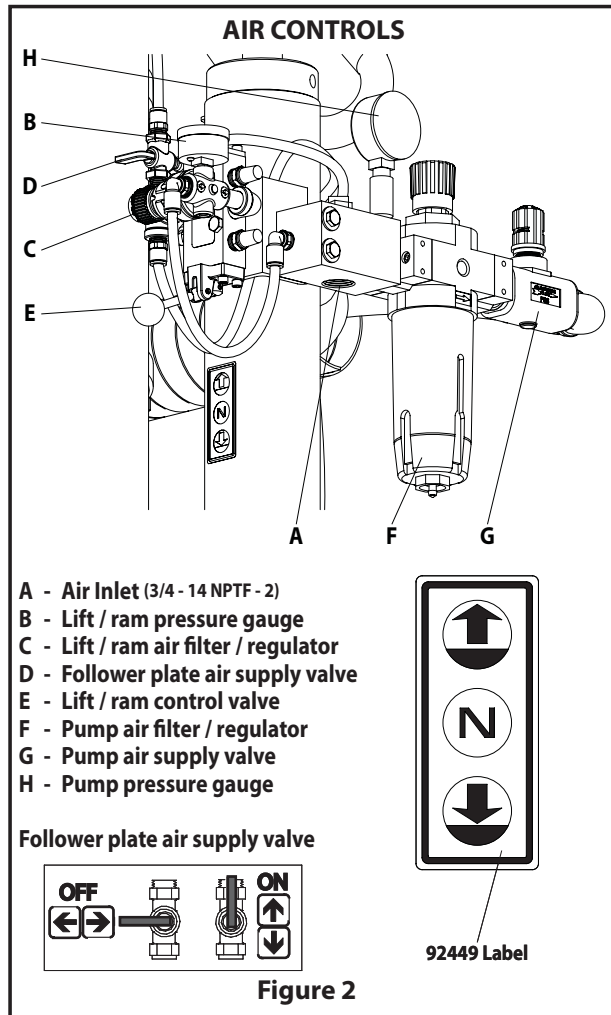
When the following instructions are observed, heavy paste materi-

als can be pumped directly from their original drum without air inclusion or excessive waste. The follower plate creates an air tight seal as well as clean-wiping action in its progressive downward movement into the drum.

OPERATING INSTRUCTIONS

OPERATING INSTRUCTIONS / INITIAL SET-UP PROCEDURE

⚠ WARNING Stand clear when raising or lowering the lift. Read the warnings on page 2 of 651616-XX Two Post Lift / Ram Operator's Manual.



TO RAISE THE LIFT, (the first time):

1. Take note of the pump / drum clearance above. Be certain the lift / ram is clear of any objects above. Also, refer to "Operating and Safety Precautions" found on page 2 of 651616-XX Two Post Lift / Ram Operator's Manual.
2. Connect the air supply (150 p.s.i. max.) to the air inlet. Adjust the air pressure on the lift / ram pressure regulator (turn the knob clockwise) to 20 p.s.i. (1.4 bar).
3. Shift the control valve lever to the "up" position.
4. Raise the lift / ram high enough to clear the height of the drum.

Stop the lift upward travel by moving the control valve lever to the "neutral" (center) position.

5. Once the lift / ram assembly and pump are in the "up" position, place and center an opened drum of material on the lift / ram base.
6. Lubricate the lower follower wiper plate seal with grease. NOTE: Make certain the grease is compatible with the material being dispensed. This ensures a smooth fit into the drum, as well as prevents curing type compounds from bonding to the seal.
7. Check the vent plug on the follower plate to be sure it easily threads in and out. It is recommended to lubricate the threads of the plug to help prevent possible set-up of the compound at this point (see 651616-XX Operator's Manual).

TO LOWER LIFT:

⚠ WARNING PINCH HAZARD. Follower can descend quickly, causing injury. Keep hands clear when aligning with container. Read the warnings on page 2 of 651616-XX Two Post Lift / Ram Operator's Manual.

NOTE: Be certain the follower plate vent plug has been removed so that the air trapped between the follower and the material is allowed to escape from this vent.

NOTE: The lift / ram may hesitate momentarily before starting downward. The air pressure inside the post air chamber must decrease before it will begin to descend.

1. Shift the control valve lever to the "down" position and proceed to lower the pump.
2. Replace the vent plug once the material begins to ooze from the vent opening.
3. The unit is now ready for operation. Open the pump air supply valve. Adjust the air pressure on the pump filter / regulator (turn the pump regulator knob clockwise) until the pump begins to cycle.
4. Trigger the gun to prime the pump with material.

TO RAISE LIFT, (normal operation):

1. Close the pump air supply valve.
2. Shift the control valve lever to the "up" position.
3. Raise the lift / ram high enough to clear the height of the drum. Stop the lift upward travel by moving the control valve lever to the "neutral" (center) position.

TO CHANGE THE DRUM:

NOTE: The control valve lever must be in the "neutral" position and the pump air supply valve should be closed.

1. To avoid damage, DO NOT OVER PRESSURIZE THE DRUM.
2. Open the follower plate air supply valve to allow air under the follower plate.
3. Shift the control valve lever to the "up" position.
4. Place and center a new drum into position. Remove the cover.

DIMENSIONAL DATA

DIMENSIONS

J - 61-21/32" (1565.9 mm)

K - 37-23/32" (957.6 mm)

L - 99-3/8" (2523.5 mm)

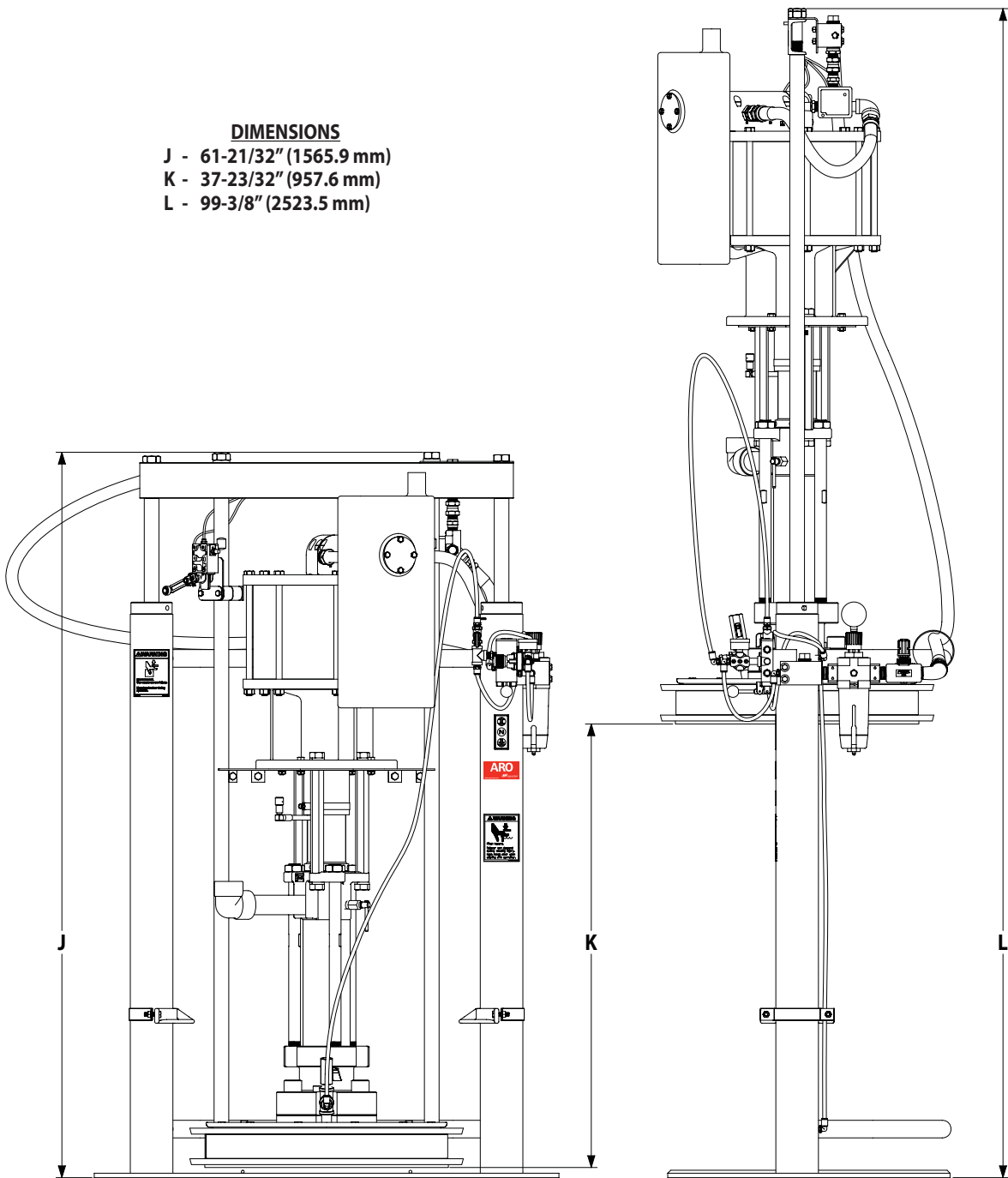


Figure 3

PARTS LIST / NPC23XXXXR2-XX-X

Item	Description (size)	Qty	Part No.
1	Pump Assembly	(1)	NM2C23X-A1-XXX
2	Muffler	(1)	79295
3	Cap Screw (1/4" - 20 x 4")	(4)	Y6-417
4	Tube	(1)	79293
5	90° EMT Short Angle Elbow (3/4 - 14 NPS)	(1)	79294
6	Male Swivel Union (3/4 - 14 NPTF - 1 x 3/4 - 14 NPSM)	(2)	75367
7	3/4" I.D. Hose Assembly (3/4 - 14 NPTF x 18" long)	(1)	622651-1-F
8	Nipple (1-1/4 - 11-1/2 NPT x 6")	(1)	Y44-169-T
9	90° Elbow (1-1/4 - 11-1/2 NPT)	(1)	95849865
10	Two-Post Lift / Ram	(1)	67081-2
11	Follower Assembly (see "Model Description Chart", page 1)	(1)	
12	Cap Screw (1/2" - 13 x 3-3/4")	(3)	Y99-813-C
13	Angle Bracket	(1)	96622
14	Manifold	(2)	96623
15	Pipe Plug (1/4 - 18 NPT x 13/32")	(3)	Y227-3-L
16	Cap Screw (1/4" - 20 x 2-1/2")	(4)	Y6-411-C
17	Washer (1/4")	(4)	Y13-4-C
18	Pipe Plug (3/4 - 14 NPT)	(3)	Y17-14-C
19	Lock Washer (1/4")	(2)	Y14-416-C
20	Nut (1/4" - 20)	(2)	Y12-4-C
21	3/4" I.D. Hose Assembly (3/4 - 14 NPTF x 84" long)	(1)	622651-7
22	Street Elbow (3/4 - 14 NPT)	(1)	Y43-5-C
23	Piggyback Filter / Regulator (3/4 - 14 NPT)	(1)	P29351-600
24	Street Elbow (1/4 - 18 NPT)	(1)	Y43-2-C
25	Nipple (1/4 - 18 NPT x 2")	(1)	Y44-11-C

Item	Description (size)	Qty	Part No.
26	Coupling (1/4 - 18 NPT)	(1)	Y43-42-C
27	Gauge (0 - 160 p.s.i. / 0 - 11 bar)	(1)	29728
28	Nipple (3/4 - 14 NPT x 1-3/8")	(1)	Y27-5-C
29	Male Elbow (1/4 - 18 NPT x 5/16" o.d. tube)	(2)	59756-158
30	Tubing (5/16" o.d. x 12")	(1)	94980-(1)
31	Spiral Cable Wrap (1" wide x 22" long)	(1)	96723-22
32	Bracket Assembly (includes items 33 thru 38) (see figure 9)	(1)	66353-1
33	Bracket	(2)	92362
34	Lock Washer (3/8")	(4)	Y14-616
35	Nut (3/8" - 16)	(4)	Y12-106-C
36	Cap Screw (3/8" - 16 x 1-1/4")	(4)	Y6-66-C
37	Lock Washer (3/8")	(4)	Y14-616
38	Nut (3/8" - 16)	(4)	Y12-6-C
39	Cap Screw (3/8" - 16 x 1")	(4)	Y6-65-C
40	Wet-Sol "Plus" (1 quart) (not shown)	(1)	66333-B
	OPTIONAL ITEMS		
41	Bracket Assembly (includes items 42 thru 45)	(1)	67133
42	Hold Down Lug	(2)	90501
43	Clamp	(2)	90516
44	Cap Screw (5/16" - 18 x 1-1/4")	(4)	Y6-56-C
45	Nut (5/16" - 18)	(4)	Y12-5-C
46	Flow Control (3/4 - 14 NPTF) (requires item 47)	(1)	104104-F06
47	Nipple (3/4 - 14 NPT x 1-3/8")	(1)	Y27-5-C
48	Low Level Cutoff	(1)	67327
1	Bulk Tubing (5/16" o.d. x 100')	(1)	94980-100

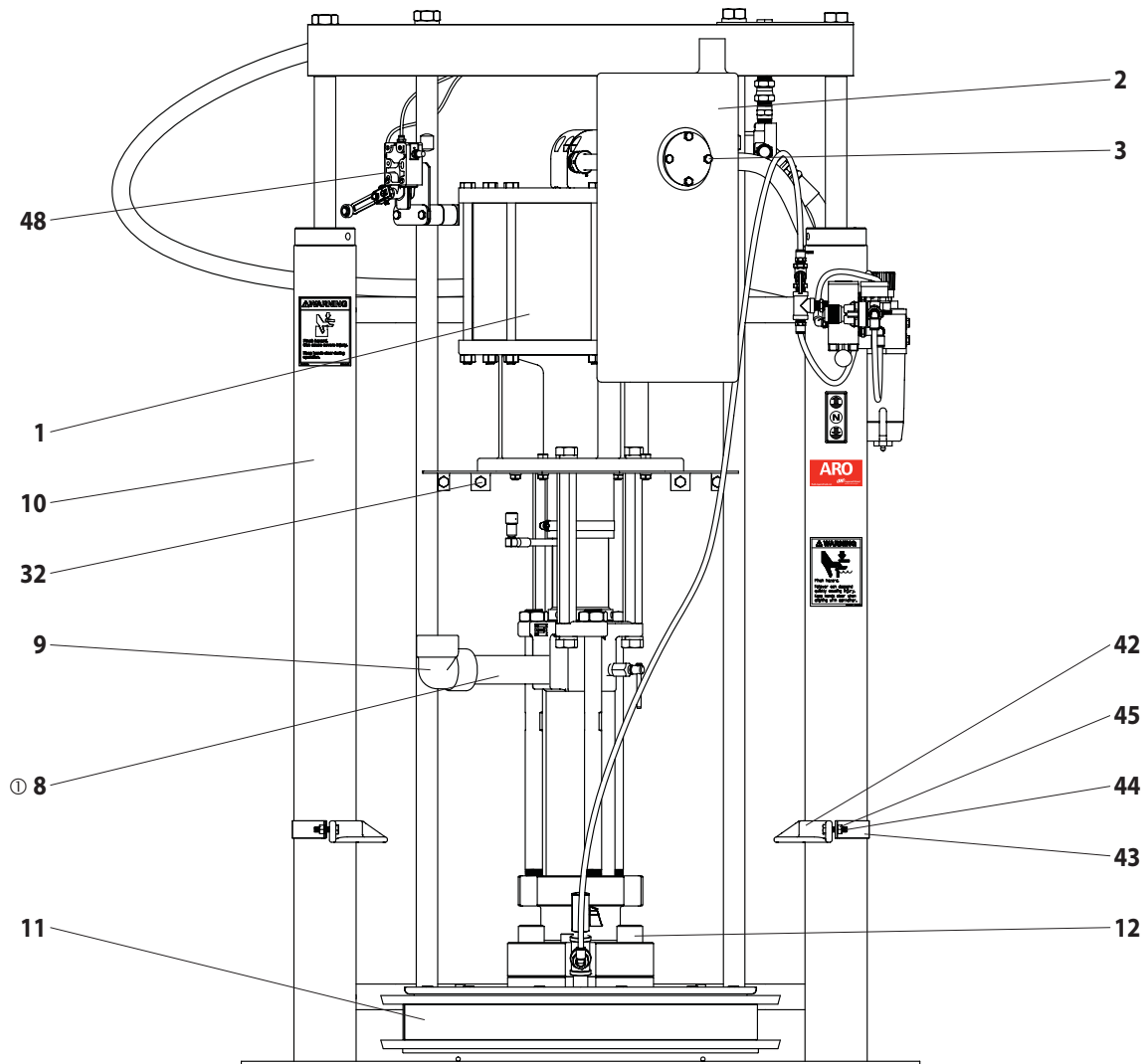
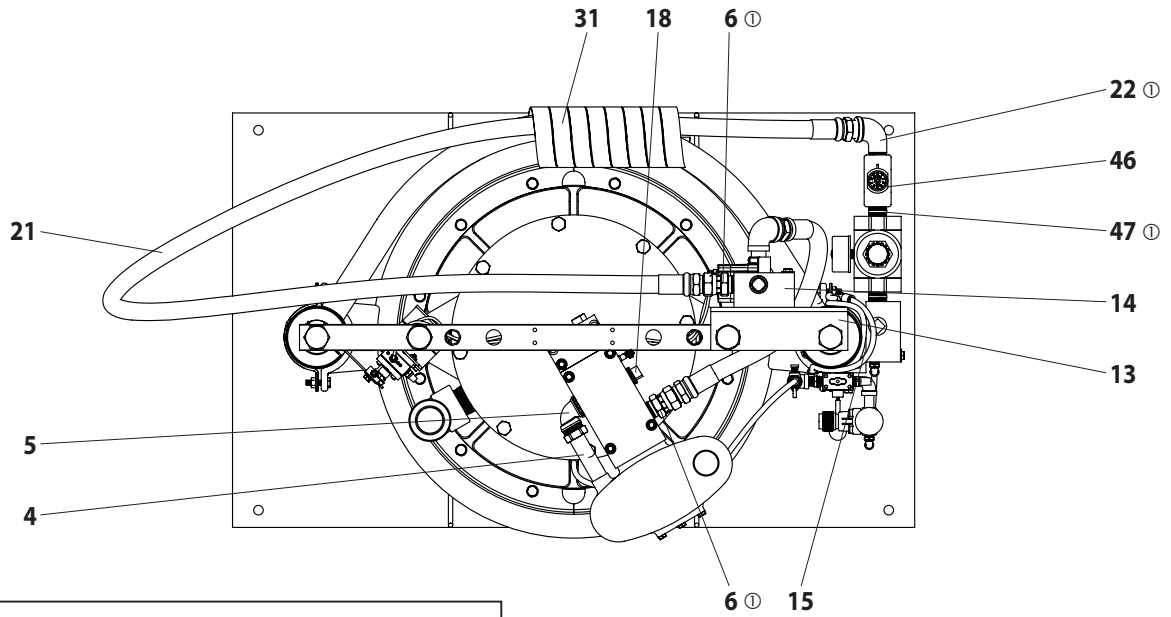


Figure 4

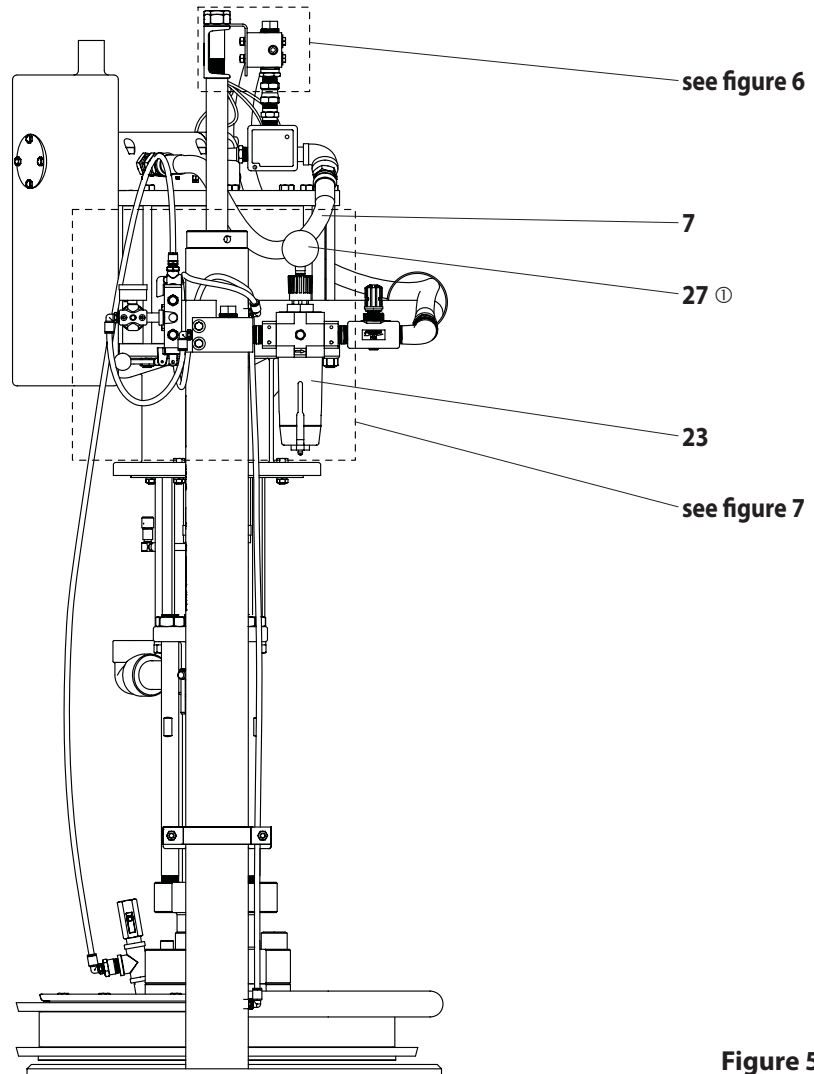


Figure 5

LUBRICATION / SEALANTS

① Apply anaerobic pipe sealant to male pipe threads.

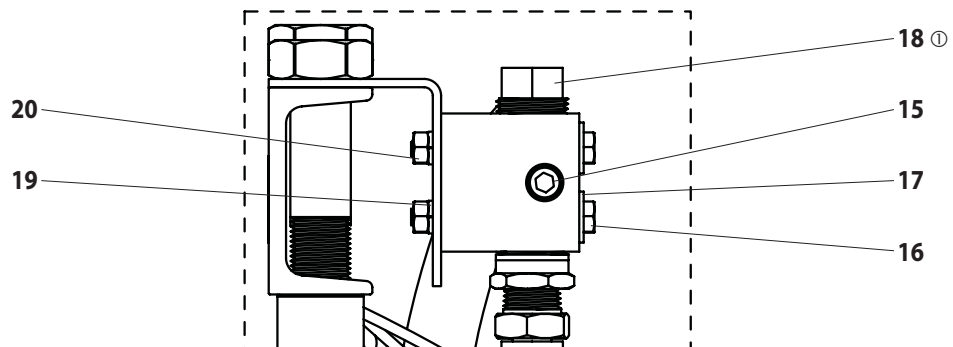


Figure 6

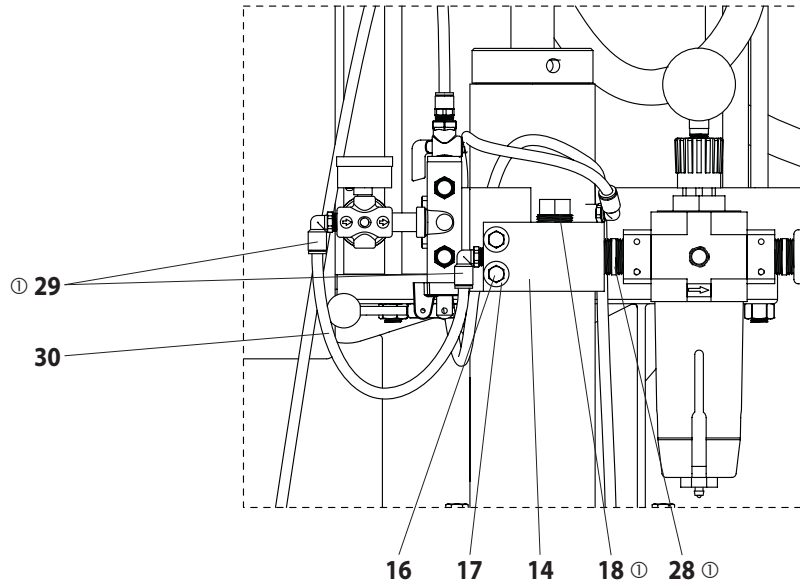


Figure 7

LUBRICATION / SEALANTS

① Apply anaerobic pipe sealant to male pipe threads.

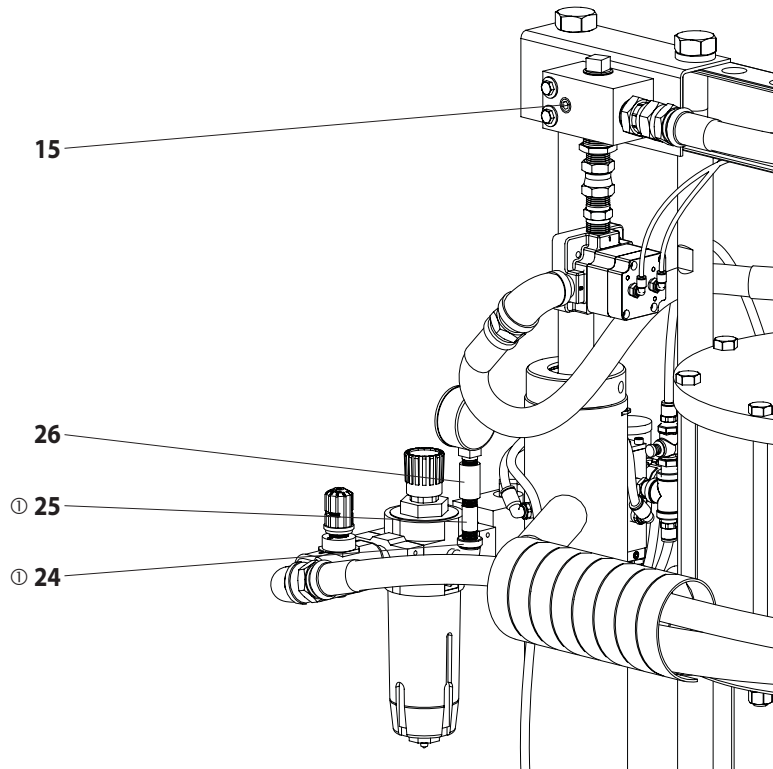


Figure 8

66353-1 Bracket Assembly

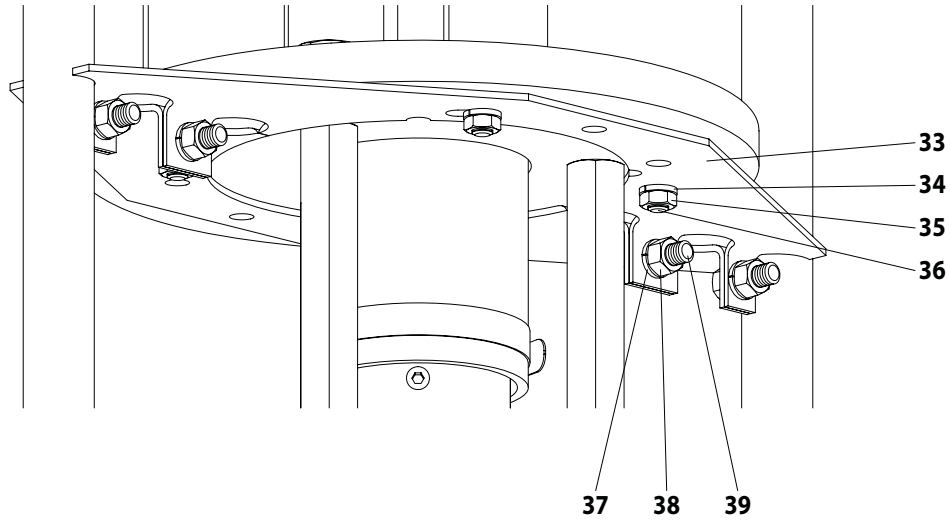


Figure 9