

OPERATOR'S MANUAL

NP411XXXXR4-XX

INCLUDING: OPERATION, INSTALLATION AND MAINTENANCE.

INCLUDE MANUALS: 650483-XXX Two-Ball Pump (97999-652), 66731-X Follower Plate (pn 97999-213), 67342-X Follower Assembly (pn 97999-1099), 67345-1 Follower Assembly (pn 97999-1100), 67347-X Follower Assembly (pn 97999-1102), 65184X-X Follower Plate (pn 97999-605), 651613-D Two Post Mini Lift / Ram (pn 97999-1193), & S-636 General Information (pn 97999-636).

RELEASED: 7-16-08

REVISED:
(REV. 01)

4-1/4" AIR MOTOR

11:1 RATIO

6" STROKE

MINI LIFT / RAM SYSTEM



**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.

SERVICE KITS

- Use only genuine ARO® replacement parts to assure compatible pressure rating and longest service life.
- **61268** for repair of 65465-B air motor.
- **104158** for repair of 127122-000 miniature regulator.
- **104176** for repair of F25241-100 filter.
- **104177** for repair of R27241-100 regulator.
- **116772** for repair of E512LM valve.
- **637305-X43** for repair of 66300-XXX lower pump section.

MODEL DESCRIPTION CHART

NP 4 11 B XXX R4 - XX	
Air Motor Size 4 - 4-1/4"	
Pump Ratio 11 - 11:1	
Check Type / Wetted Materials B - 2 Ball / Stainless Steel	
Lower Pump End Options Refer to pump model operator's manual	
Mount Style R4 - Two Post Ram, 5 gallon	
Follower Assembly	
10 - 67342-1	22 - 66732-2
11 - 67342-2	30 - 67347-1
12 - 67342-3	31 - 67347-2
13 - 651842-1	40 - 67347-11
20 - 66732	41 - 67347-12
21 - 66732-1	50 - 67345-1

NP411XXXXR4-XX MINI LIFT / RAM SYSTEM

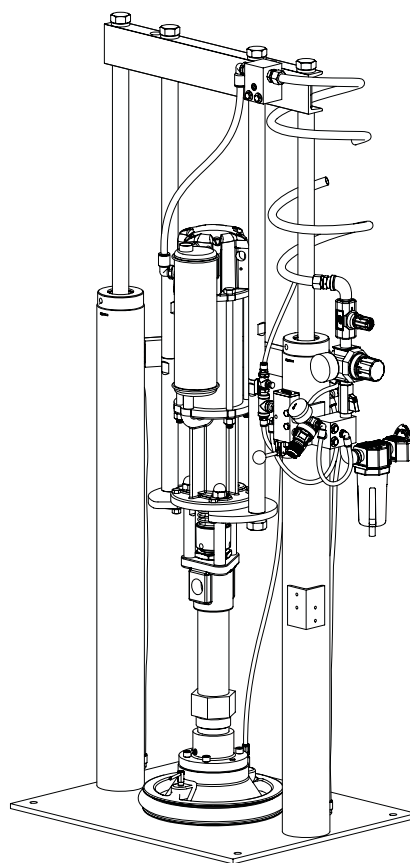


Figure 1

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 NP411XXXXR4-XX Mini Ram 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

materials 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

lift. Read the warnings on page 2 of 651613-D Two Post Lift / Ram Operator's Manual.

⚠ WARNING Stand clear when raising or lowering the

LIFT / RAM, PUMP AND FOLLOWER PLATE AIR CONTROLS

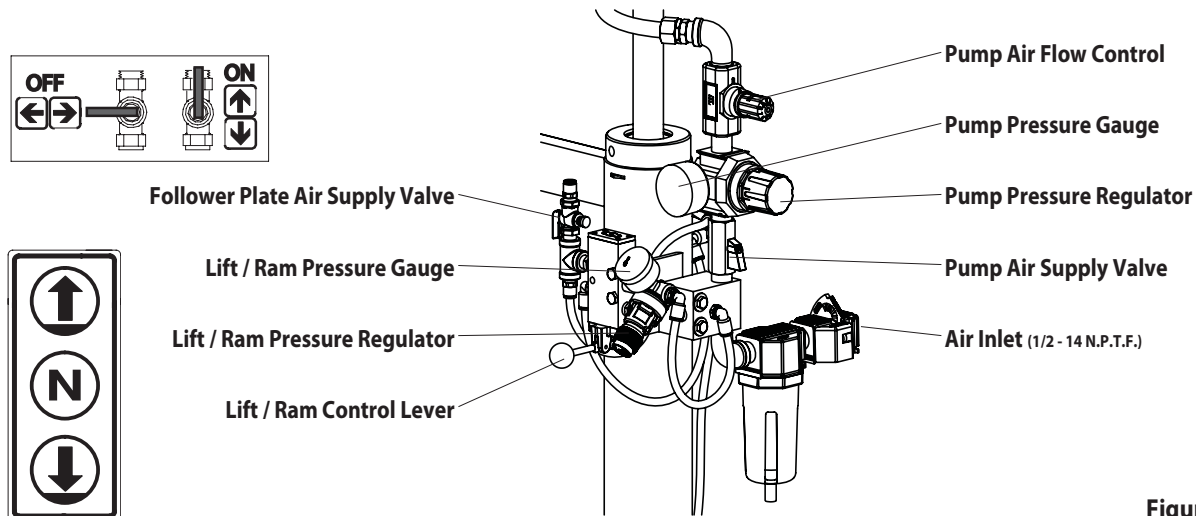


Figure 2

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 651613-D Two Post Lift / Ram Operator's Manual.
2. Connect the air supply (150 p.s.i. / 10.3 bar 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.

REFER TO PAGE 3:

1. Once the lift / ram assembly and pump are in the "up" position, place and center an opened 5 gallon drum of material on the lift / ram base.
2. Lubricate the lower follower wiper plate seal with grease. This ensures a smooth fit into the drum, as well as prevents curing type compounds from bonding to the seal. **NOTE:** Make certain the grease is compatible with the material being dispensed.
3. 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 651613-D 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

651613-D 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. Captured air between the follower plate and drum will escape.

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. 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):

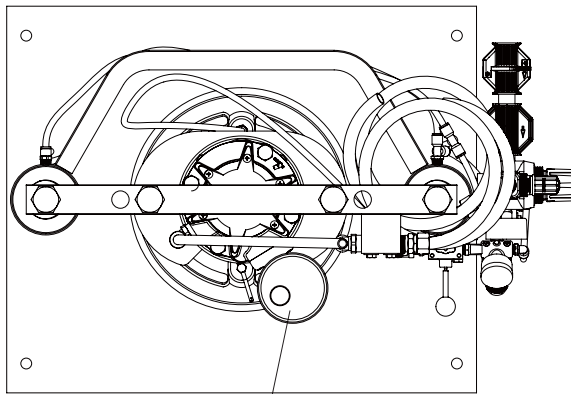
1. To avoid damage, DO NOT OVER PRESSURIZE THE DRUM.
2. Shift the control valve lever to the "up" position.
3. Raise the lift / ram high enough to clear the height of the drum. Stop the lift upward travel by moving the control valve lever to the "neutral" (center) position.

TO CHANGE THE DRUM:

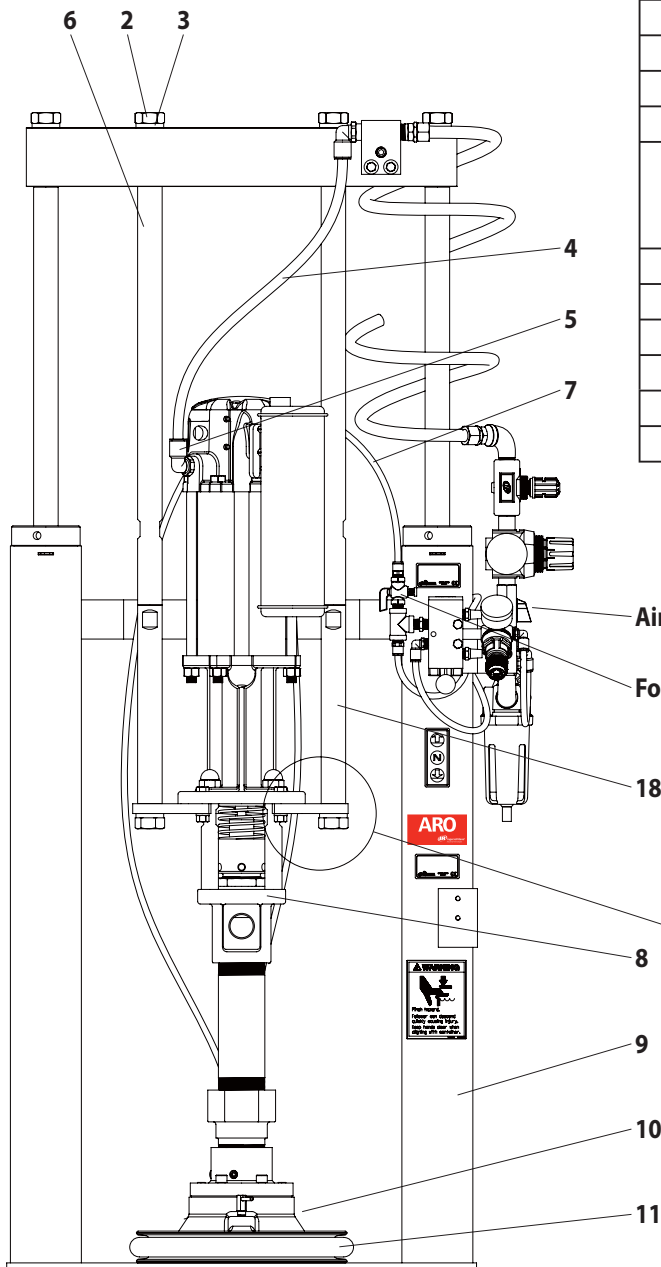
NOTE: The control valve lever must be in the "neutral" position.

1. Place and center a new drum into position. Remove the cover.

PARTS LIST / NP411XXXXR4-XX



1



Item	Description (size)	Qty	Part No.
1	Muffler	(1)	91790-ZZ
2	Screw (7/8" - 14 x 4")	(2)	94009
3	Lock Washer (7/8")	(2)	Y14-875
4	Tubing (1/2" o.d. x 22")	(1)	94978-(①)
5	90° Male Fitting (1/2 N.P.T. x 1/2" o.d.)	(1)	59756-362
6	Rod	(2)	96136
7	Tubing (5/16" o.d. x 57")	(1)	94980-(②)
8	Pump Assembly	(1)	650483-XXX
9	Two-Post Lift / Ram	(1)	651613-D
10	90° Male Fitting (1/4 N.P.T. x 5/16" o.d.) (models NP411XXXXR4-2X only)	(1)	59756-158
11	Follower Assembly (see "Model Description Chart", page 1)	(1)	
12	Mounting Plate	(1)	96133-B
13	Lock Washer (7/8")	(2)	Y14-875
14	Bolt (7/8" - 14 x 2")	(2)	95145
15	Lock Washer (3/8")	(4)	Y14-616-C
16	Cap Screw (3/8" - 16 x 1-1/2")	(4)	Y6-67-C
17	Nut (3/8" - 16)	(4)	Y12-6-C
18	Extension Rod		
	models NP411XXXXR4-X0, -X1, -X2 (11.219" long)	(2)	96540-5
	models NP411XXXXR4-X3 (14.093" long)	(2)	96540-3
19	Pipe Plug (1/8 - 27 N.P.T.)	(2)	Y17-50-S
20	Adapter (models NP411XXXXR4-X0, -X1, -X2)	(1)	67136-1
21	Wet-Sol "Plus" (1 quart) (not shown)	(1)	66333-B
①	Bulk Tubing (1/2" o.d. x 100')	(1)	94978-100
②	Bulk Tubing (5/16" o.d. x 100')	(1)	94980-100

Air Controls (see page 2)

Follower Plate Air Supply Valve

NOTE: Apply anaerobic pipe sealant to all male pipe threads.

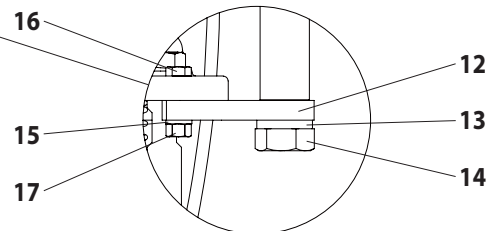
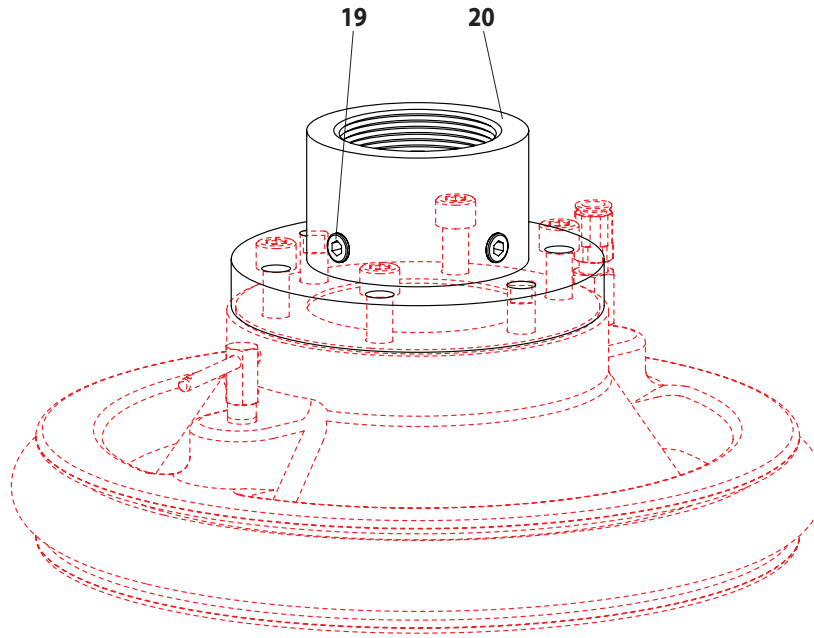


Figure 3

**Figure 4**