

OPERATOR'S MANUAL

651615-X-D

INCLUDING: SPECIFICATIONS, SERVICE KITS AND GENERAL INFORMATION.

INCLUDE MANUALS: S-635 General Information (pn 97999-635).

RELEASED: 5-19-08

REVISED: 8-9-10
(REV. F)

651615-X-D SINGLE POST LIFT / RAM

For use with 5 gallon drums (tapered or straight)



**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.

104302 for repair of R37121-100 regulator.

104326 for repair of F35341-400 filter.

104327 for repair of R37341-100 regulator

116772 for repair of E512LM valve.

SPECIFICATIONS

Model Series 651615-X-D

Maximum Working Pressure 150 p.s.i. (10.3 bar)

Base Dimensions 20" (508 mm) x 24" (609.6 mm)

Height (lowered) 43-5/8" (1107.5 mm)

(raised) 67-5/8" (1717.1 mm)

GENERAL DESCRIPTION

The ARO model 651615-X-D single post lift / ram uses a 3-1/4" air powered cylinder which is welded to a heavy gauge base. It is normally used to raise and lower a fluid handling pump and follower in and out of a standard 5 gallon drum, or when used as a ram, it can force high viscosity flowable material into the pump inlet.

When properly secured, this unit has the ability to raise a pump to clear a standard 5 gallon drum. The operator is then able to easily remove the pump from the drum.

This lift / ram uses a hand lever 4-way control valve which controls the air necessary to raise and lower the lift / ram. This unit includes an auxiliary manual air valve which is used to supply a controlled amount of air pressure to the bottom of the follower plate. When the control valve is in the "up" position, a small amount of air pressure applied under the follower plate will help to raise the follower plate, pump and lift / ram by relieving the vacuum (see page 2).

IMPORTANT

This is one of five documents which support the pump. Replacement copies of these forms are available upon request.

- ☒ **651615-X-D** Model Operator's Manual (pn 97999-1025)
- ☐ **S-635** General Information - Air Operated Lifts and Rams (pn 97999-635)
- ☐ **1251X1-XXX** Miniature F-R-L Operator's Manual (pn 103988)
- ☐ **F252XX-XXX** Filter Operator's Manual (pn 100400-5)
- ☐ **R272X1-XXX** Regulator Operator's Manual (pn 100400-6)

651615-X-D SINGLE POST LIFT / RAM

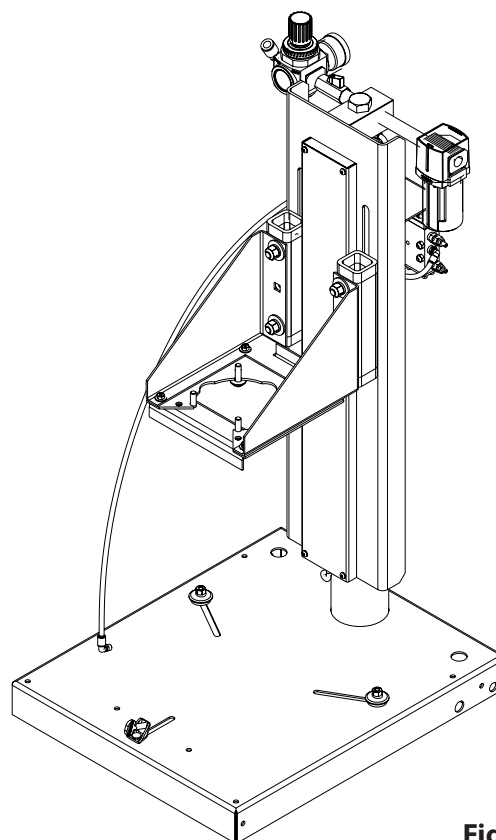


Figure 1

OPERATING AND SAFETY PRECAUTIONS

⚠ WARNING REFER TO GENERAL INFORMATION MANUAL INCLUDED FOR OPERATING AND SAFETY PRECAUTIONS AND OTHER IMPORTANT INFORMATION.

⚠ WARNING DO NOT EXCEED MAXIMUM AIR INLET PRESSURE OF 150 P.S.I. (10.3 BAR).

INSTALLATION

1. Establish the desired location for the lift / ram and pay attention to the work area above. This area above the lift must be open, without obstructions and safely away from any electrical devices.
2. Place the pump on the follower plate and align the pump and follower plate on the base and assemble the pump to the mounting bracket on the ram.
3. Assemble the air hose to the air motor inlet.
4. Install the check and follower plate air hose from the control valve.
5. Assemble the vent plug to the follower plate.

NOTE: The lift / ram was tested at the factory. The unit should be generally checked over for leakage because the fittings on the system may have loosened during shipment.

OPERATING INSTRUCTIONS

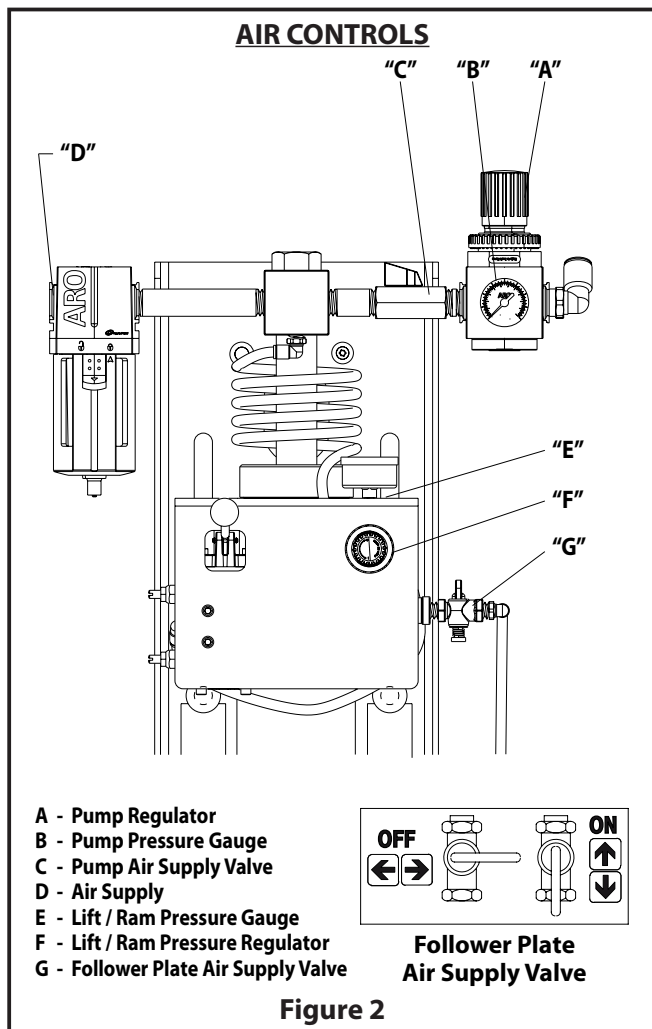


Figure 2

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.

TO LOWER LIFT:

⚠ WARNING PINCH HAZARD. Follower can descend quickly, causing injury. Keep hands clear when aligning with container. Read the warnings in "Lifts and Rams General Information Manual" (pn 97999-635).

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 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 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 in "Lifts and Rams General Information Manual" (pn 97999-635).
2. Connect the air supply (150 p.s.i. / 10.3 bar maximum) 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 / ram's 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. Use the stops on the base to center the 5 gallon drum. Tighten the thumb screw to secure the drum.

TO RAISE LIFT, (normal operation):

1. Adjust the follower plate air valve pressure up to approximately 8 p.s.i.g. (0.55 bar). DO NOT OVER PRESSURIZE THE DRUM to avoid damage. NOTE: Air from this valve will only pass when the control valve lever is in the "up" position.
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 / ram's 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.

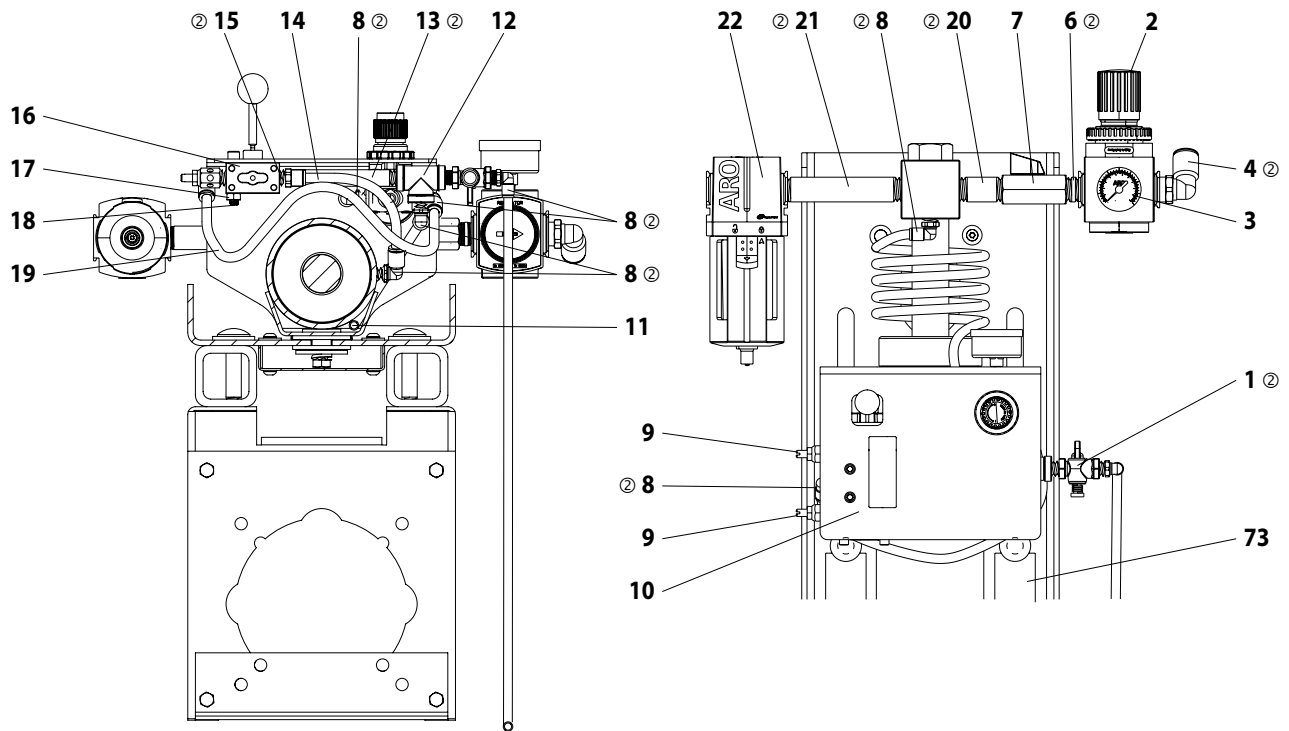
1. Unscrew the thumb screw and remove the old 5 gallon drum.
2. Place and center a new drum into position. Remove the cover. Tighten the thumb screw.

PARTS LIST / 651615-X-D

Item	Description (size)	Qty	Part No.
1	Shut-Off Valve (1/4 - 18 N.P.T.)	(1)	Y28-1
2	Regulator (1/2 - 14 N.P.T.)	(1)	R37341-100
3	Gauge (0 - 160 p.s.i. / 0 - 11 bar)	(1)	104500
4	Elbow (1/2 - 14 N.P.T. x 1/2" o.d. tube)	(1)	59756-362
6	Nipple (1/2 - 14 N.P.T. x 1-1/8")	(1)	Y27-4-C
7	Valve (1/2 - 14 N.P.T.)	(1)	104077-4
8	Elbow (1/4 - 18 N.P.T. x 5/16" o.d. tube)	(8)	59756-158
9	Muffler (1/4 - 18 N.P.T.)	(2)	20313-2
10	Label	(1)	92449
11	Tubing (5/16" o.d. x 35" long)	(1)	94980-(1)
12	Tee Pipe Fitting (1/4 - 18 N.P.T.)	(1)	Y43-32-C
13	Nipple (1/4 - 18 N.P.T. x 4-1/2")	(1)	Y44-16-C
14	Tubing (5/16" o.d. x 6-1/2" long)	(1)	94980-(1)

Item	Description (size)	Qty	Part No.
15	Connector (1/4 - 18 N.P.T. x 5/16" o.d. tube)	(1)	59474-158
16	"E" Series 4-Way Valve	(1)	E512LM
17	Nut (1/4" - 20)	(2)	Y12-4-C
18	Cap Screw (1/4" - 20 x 1-1/2")	(2)	Y99-44
19	Tubing (5/16" o.d. x 12" long)	(1)	94980-(1)
20	Nipple (1/2 - 14 N.P.T. x 2")	(1)	Y44-31-C
21	Nipple (1/2 - 14 N.P.T. x 4-1/2")	(1)	Y44-36-C
22	Filter (1/2 - 14 N.P.T.)	(1)	F35341-400
23	Pipe Plug (1/8 - 27 P.T.F.)(not shown)	(1)	Y227-2-L
24	Pipe Plug (1/4 - 18 P.T.F.)(not shown)	(1)	Y227-3-L
①	Bulk Tubing (5/16" o.d. x 100')	(1)	94980-100

② Apply anaerobic pipe sealant to male threads at assembly.



Bottom View

Figure 3

PARTS LIST / 651615-X-D

Item	Description (size)	Qty	Part No.
25	Washer (9/16" i.d. x 1-3/8" o.d. x 1/8")	(4)	Y13-8-C
26	Lock Washer (1/2")	(4)	Y14-816-C
27	Nut (1/2" - 13)	(4)	Y12-8-C
28	Packing (1-7/8" o.d. x 1/8" thick)	(2)	95643
29	Washer (1-11/16" o.d. x 0.120" thick)	(1)	71151
30	Lock Washer (3/8")	(1)	Y14-616-C
31	Cap Screw (3/8" - 16 x 3/4")	(1)	Y6-63-C
32	Screw (7/8" - 14 x 5")	(1)	94007
33	Stop	(1)	94008
34	Piston	(1)	94005
35	Back-up	(1)	94123
36	Stop	(1)	95172
37	Piston Rod	(1)	95171
38	Regulator (1/4 - 18 N.P.T.)	(1)	R37121-100
40	Gauge (0 - 160 p.s.i. / 0 - 11 bar)	(1)	104493
41	Cap	(1)	95173
42	Bolt (7/8" - 14 x 2")	(1)	95145
43	Channel Assembly	(1)	67312
44	Self-Storing Hose (5/16" o.d. x 52" long)	(1)	628005-(3)
45	Retaining Ring (2.210" o.d.)	(1)	Y147-200
46	Retaining Washer	(1)	90509
47	Seal	(1)	94010
48	Retaining Spring Wire	(1)	90503
49	"O" Ring (3/16" x 3-1/4" o.d.)	(1)	Y325-336
50	Carriage Bolt (1/2" - 13 x 3-1/4")	(4)	Y84-810-C
51	Bracket	(1)	93968
52	Nut (1/4" - 20)	(4)	Y12-4-C
53	Washer (1/4")	(4)	Y13-4-C
54	Cap Screw (1/4" - 20 x 5/8")	(4)	Y6-42-C
55	Tubing (5/16" o.d. x 31" long)	(1)	94980-(1)
56	Adapter Plate (models 651615-D)	(1)	91396
	(models 651615-1-D)	(1)	95748
57	Base Assembly	(1)	67291

Item	Description (size)	Qty	Part No.
	Stop and Bracket Assembly (includes items 58 - 64)	(1)	67189
58	Bucket Stop	(2)	90419
59	Nut (3/8" - 16)	(3)	Y12-6-C
60	Carriage Bolt (3/8" - 16 x 1")	(2)	Y84-601-C
61	Lock Washer (3/8")	(2)	Y14-616-C
62	Bracket Assembly	(1)	67182
63	Thumb Screw (3/8" - 16 x 1-1/2")	(1)	Y66-378-C
64	Lock Washer (3/8")	(1)	Y117-616
65	Elbow (1/8 - 27 N.P.T. x 5/16" o.d. tube)	(1)	59756-58
66	Cover	(1)	95773
67	Cap Screw (1/4" - 20 x 1/2")	(4)	Y211-143
68	End Block	(2)	95778
69	Support	(2)	95782
70	Cap Screw (1/4" - 20 x 1/2")	(4)	Y211-143
71	Washer (1/4")	(4)	Y13-4-C
72	Brace	(1)	95795
⑤ 73	Bolt Plate (see page 3)	(2)	95801
	(alternate bracket orientation, see page 7)	(2)	95797
74	Spacer Plate (see page 7)	(1)	95805
ITEMS NOT SHOWN			
75	Tubing (1/2" o.d. x 24" long)	(1)	94978-(4)
76	Elbow (1/4 - 18 N.P.T. x 1/2" o.d. tube)	(1)	59756-162
77	Elbow (1/2 - 14 N.P.T. x 1/2" o.d. tube)	(1)	59756-362
⑥ 79	Washer (3/8")	(4)	Y13-6-C
⑦ 81	Nut (1/4" - 20)	(4)	93828
⑥ 82	Cap Screw (3/8" - 16 x 1-1/4")	(4)	Y6-66-C
①	Bulk Tubing (5/16" o.d. x 100')	(1)	94980-100
③	Bulk Tubing (5/16" o.d. x 100')	(1)	628005-100
④	Bulk Tubing (1/2" o.d. x 100')	(1)	94978-100

- ⑤ If both bolts (50) on each side are mounted in the same vertical slot, use 95797 bolt plate (73).
If both bolts (50) on each side are mounted in different vertical slots, use 95801 bolt plate (73).

⑥ Used on models 651615-D only.

⑦ Used on models 651615-1-D only.

⑧ Apply Loctite® 271™ to threads.

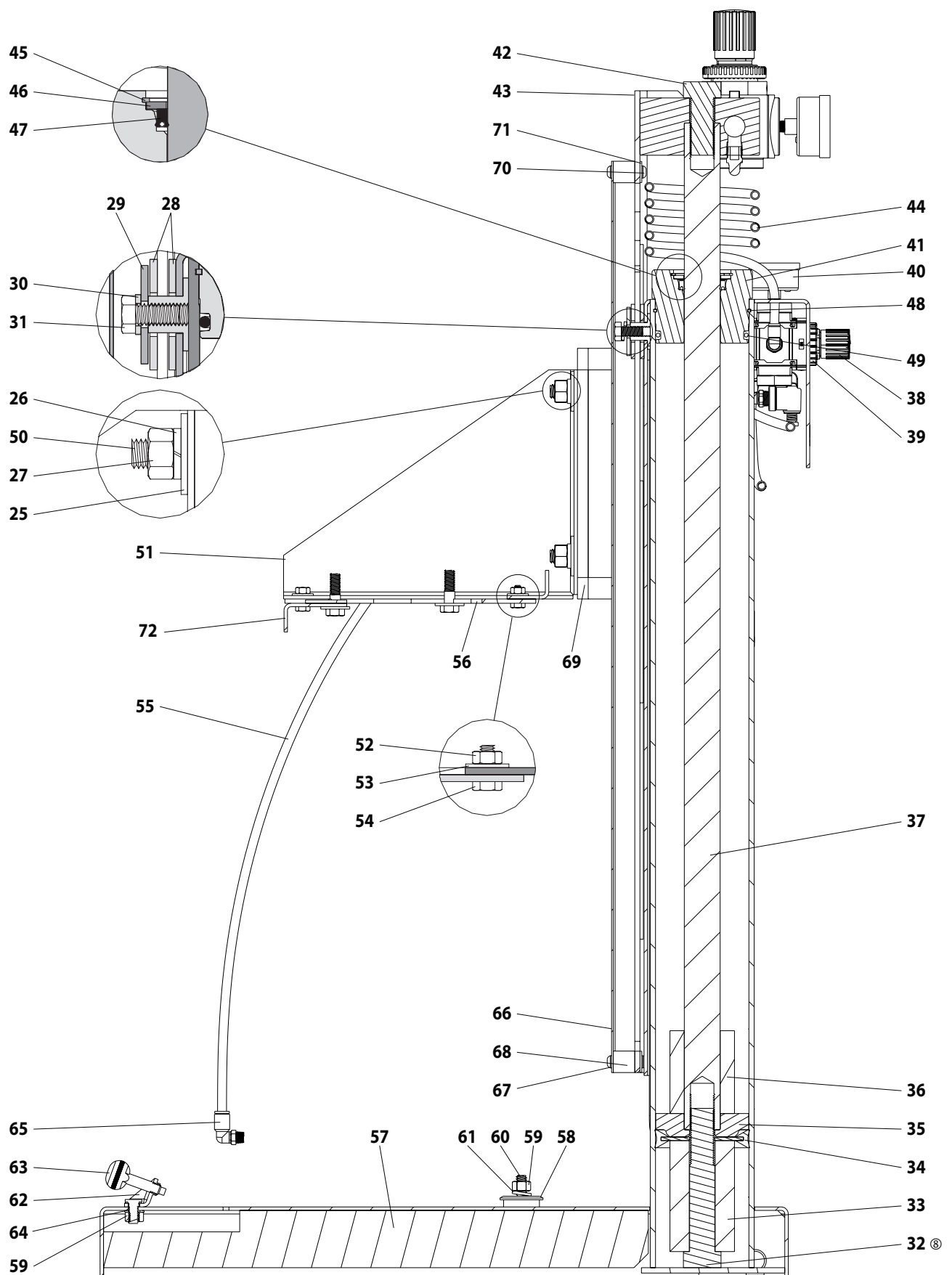
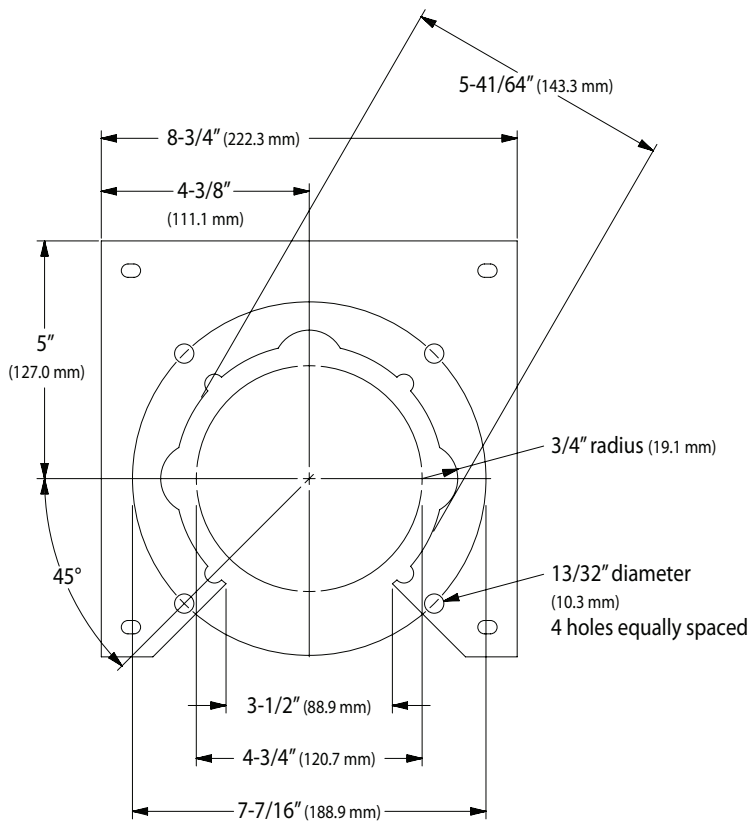


Figure 4

91396 ADAPTER PLATE



95748 ADAPTER PLATE

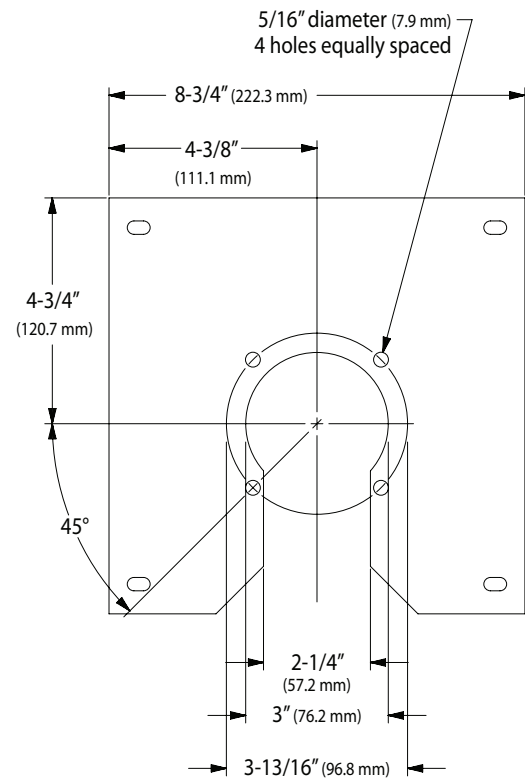


Figure 5

66713 PORTABILITY KIT

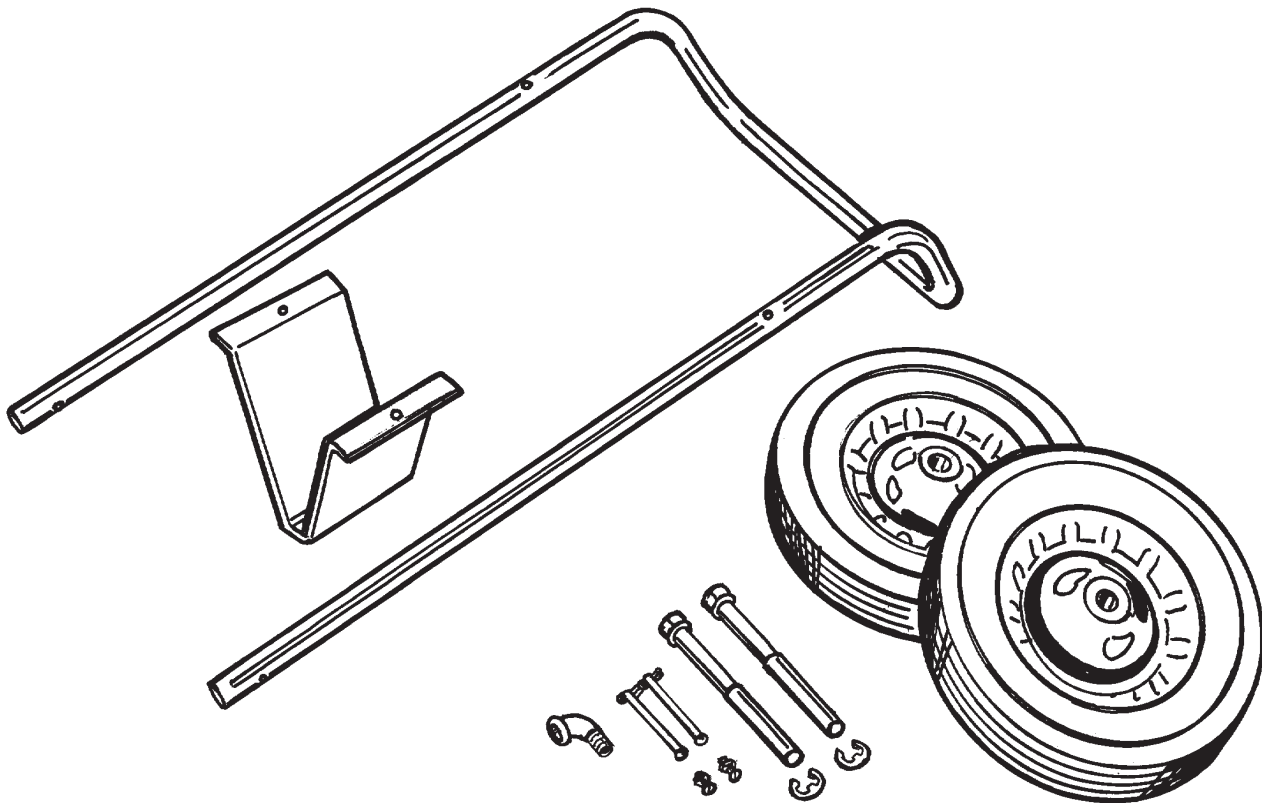
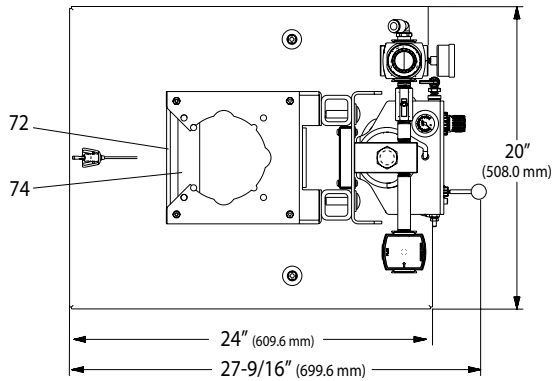


Figure 6

DIMENSIONAL DATA

View showing alternate bracket (51) orientation.



- ⑤ If both bolts (50) on each side are mounted in the same vertical slot, use 95797 bolt plate (73).
 If both bolts (50) on each side are mounted in different vertical slots, use 95801 bolt plate (73).

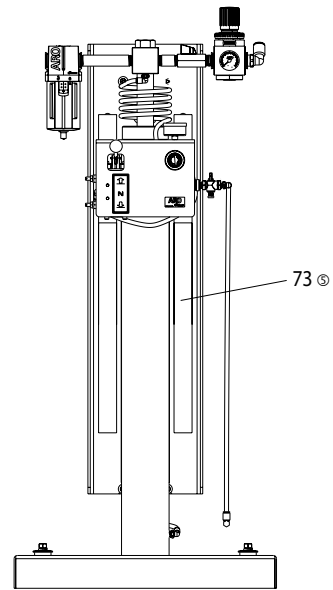
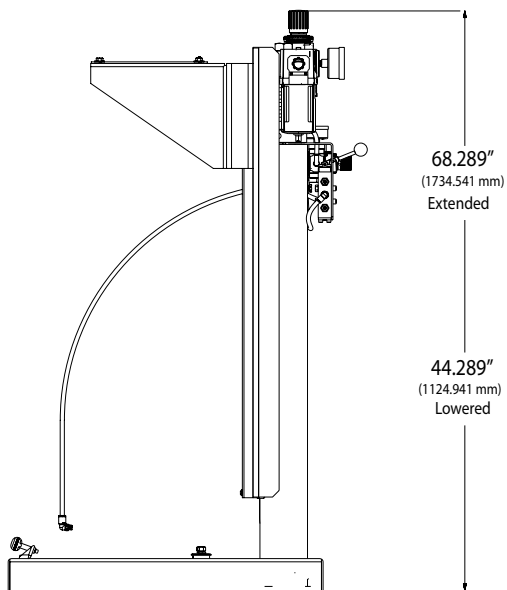


Figure 7

