

# OPERATOR'S MANUAL

# 6711X-X

INCLUDING: SERVICE KITS, GENERAL DESCRIPTION & TROUBLESHOOTING

ALSO INCLUDE MANUALS: 6641X-X(97999-050), 6710X-X(97999-600), FORM 3637-2 GENERAL INFORMATION SHEET.

RELEASED: 2-9-95

REVISED: 6-13-95

(REV. B) IPP/PSE

3" AIR MOTOR  
21.7:1 RATIO  
2 1/4" STROKE

**BASIC PUMP**  
67110-XXX  
(CARBON STEEL)

67111-XXX  
(STAINLESS STEEL)



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

(PACKINGS ARE UPPER AND LOWER UNLESS NOTED)

## PACKING MATERIAL

P UHMW-PE/TEFLON STAG'D (UPPER)  
UHMW-PE (LOWER)

## PUMP MATERIAL

0 CARBON STEEL  
1 STAINLESS STEEL

## SPRING ARRANGEMENT

4 MULTIPLE WAVE SPRING

## PLUNGER TYPE

3 HD SS W/HD CHROME PLATING

## BASIC PUMP OPTION DESCRIPTION CHART

**6711X-XXX**

PUMP MATERIAL

PLUNGER TYPE

PACKING MATERIAL

SPRING ARRANGEMENT

## SERVICE KITS

- Use only genuine ARO® replacement parts to assure compatible pressure rating and longest service life.
- 637066-B for repair of Air Motor section.
- 63729X-XXX for repair of Lower Pump section.

## GENERAL DESCRIPTION

**⚠ WARNING HAZARDOUS PRESSURE.** Do not exceed maximum operating pressure of 3,262 psi (224.9 bar) at 150 psi (10.4 bar) inlet air pressure.

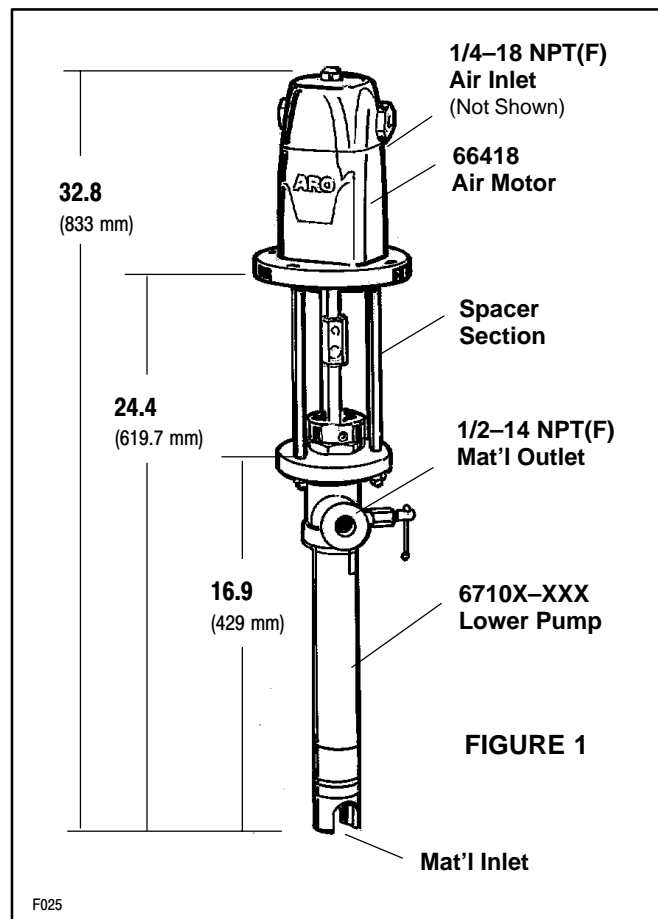
**⚠ WARNING** Refer to general information sheet for additional safety precautions and important information.

- This MODEL MANUAL is one of four documents needed to properly support an ARO pump model. Ref: Part A. 671XX-XXX-X MODEL (OPERATOR'S) MANUAL, Part B. GENERAL INFORMATION, Part C. AIR MOTOR (OPERATOR'S) MANUAL, Part D. LOWER PUMP END (OPERATOR'S) MANUAL. These forms are available from the factory if needed.
- The ARO 21.7:1 ratio basic pump assembly consists of a 3" air motor and chop-check lower pump end.
- The chop-check design provides for easy priming of the lower foot valve. Material is delivered to the pump discharge outlet on both the up and down stroke.

**RATIO x REGULATED AIR PRESSURE = MAXIMUM FLUID  
TO AIR MOTOR PRESSURE.**

- The 21.7:1 ratio is an expression of the relationship between the air motor area and the lower pump end area. When 150 p.s.i. (10 bar) air pressure is supplied to the air motor, the lower pump end will develop a maximum of 3,262 p.s.i. (224.9 bar) fluid pressure (at no flow) – as the fluid control is opened, the flow rate will increase as the air motor cycle rate increases to keep up with the demand.

## PUMP DATA



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## PUMP DISASSEMBLY

**NOTE: Refer to Figure 2.**

1. Lay the pump assembly on a workbench. (Refer to Figure 2.)
2. Remove the three (E) nuts from the three (D) spacer rods.
3. Pull the air motor from the lower pump end until air motor piston rod is in the "down" position and lower pump end rod is in "up" position.
4. Unscrew three (D) spacer rods from air motor assembly.
5. Remove two (C) cotter pins and remove (A) pin and (F) pin. Remove (B) connector.

## TROUBLE SHOOTING

### • PROBLEM

\_ Cause, solution.

### • Pump will not cycle.

\_ No pressure to motor, See motor manual.

\_ Restricted return lines, clean obstruction.

\_ Damaged motor, service motor.

\_ Be sure to eliminate any possible non-pump problems before suspecting pump malfunction and continuing.

### • Pump problems will typically occur in one of two areas:

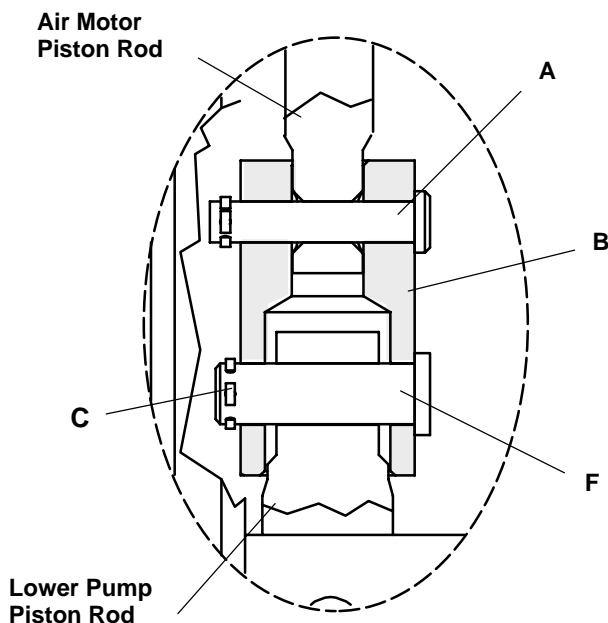
1. The Air Motor Section.

2. The Lower Pump Section.

\_ Determine which section is affected.

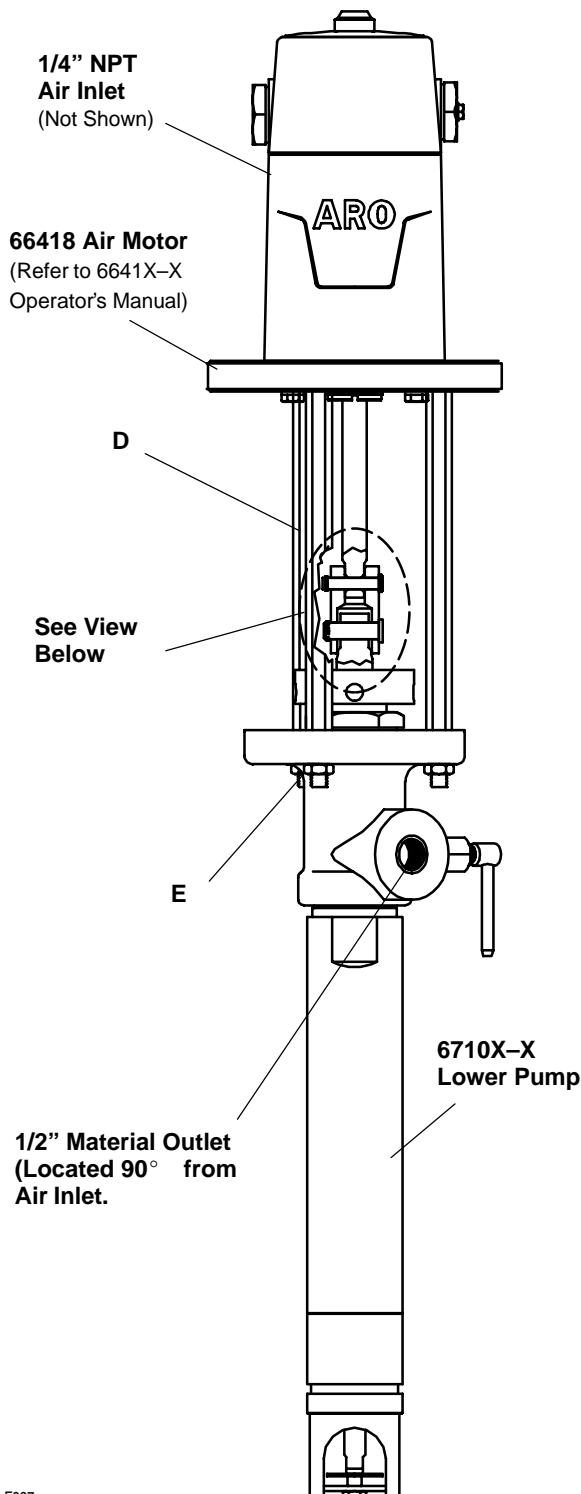
## SPACER SECTION

ITEM	PART NO	DESCRIPTION	QTY.
A	94048	Pin	(1)
B	93961	Connector	(1)
C	Y15-22-S	Cotter Pin	(2)
D	93962	Connecting Rod	(3)
E	Y12-6-C	Nut	(3)
F	93985	Pin	(1)



## PUMP ASSEMBLY

1. Align Lower End Pump Rod with Air Motor Piston Rod. Position air motor inlet approximately 90° from lower pump material outlet, as shown in Figure 2.
2. Position (B) connector in place and insert (A) pin and (F) pin into (B) connector. Use two (C) cotter pins to retain (B) connector.
3. Screw three (D) spacer rods into air motor lower plate.
4. Align holes on lower pump body with three (D) spacer rods and slide into holes. Retain this assembly using three (E) nuts.



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FIGURE 2

PN97999-601

6711X-X