

OPERATOR'S MANUAL

650967-X

INCLUDING: SERVICE KITS, GENERAL DESCRIPTION & TROUBLESHOOTING
ALSO INCLUDE MANUALS: 66506 AIR MOTOR, 66941-X LOWER PUMP, FORM 3637-2
GENERAL INFORMATION SHEET.

RELEASED:01-25-91
REVISED: 6-9-10
(REV. C) IPP

12" AIR MOTOR
23:1 RATIO
6" STROKE

TWO-BALL PUMP (400 SERIES STAINLESS STEEL)

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

(PACKINGS ARE UPPER AND LOWER UNLESS NOTED)

PACKING MATERIAL

- B UHMW-PE (UPPER)
PTFE (LOWER)
- C UHMW-PE
- E UHMW-PE / LEATHER STG'D (UPPER)
PTFE (LOWER)
- F UHMW-PE / LEATHER STG'D (UPPER)
UHMW-PE (LOWER)
- K C-G FILLED PTFE W / BUNA N E'GIZER
- L MINERAL FILLED TEFLON
- M POLYMYTE POLYPAK
- N LEATHER (UPPER)
PTFE (LOWER)
- P UHMW-PE / PTFE STG'D (UPPER)
UHMW-PE (LOWER)
- R PTFE / UHMW-PE STG'D (UPPER)
PTFE (LOWER)

PUMP OPTION DESCRIPTION CHART 650967-XXX

PACKING MATERIAL

PLUNGER TYPE

SPRING ARRANGEMENT

SPRING ARRANGEMENT

- 3 NO SPRING
- 6 WAVE SPRING

PLUNGER TYPE

- 3 HD SS W / HD CHROME PLATING

SERVICE KITS

- Use only genuine ARO® replacement parts to assure compatible pressure rating and longest service life.
- 637112 for general repair of the Air Motor section.
- 637211-XXX for general repair of the 66941-XXX Two-Ball Lower Pump End.

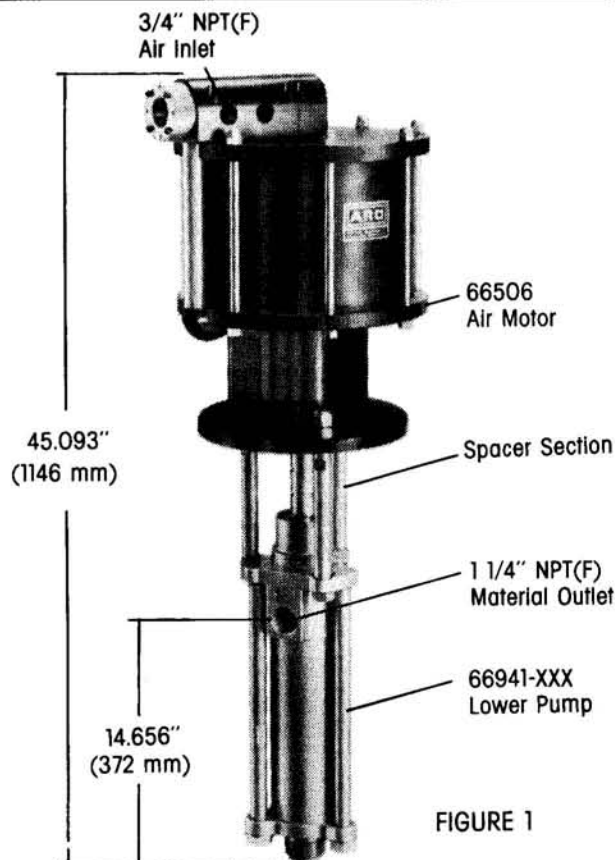
GENERAL DESCRIPTION

⚠ WARNING HAZARDOUS PRESSURE. Do not exceed maximum operating pressure of 2,070 psi (143 bar) at 90 psi (6.3 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. 650XXX-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 Two-Ball pumps are primarily designed for the pumping of medium viscosity fluids compatible with 400 series stainless steel. The lower pump is designed for easy priming and the double acting feature is standard in all ARO industrial pumps. Material is delivered to the pump discharge outlet on both the up and down stroke.
- The motor is connected to the lower pump end by a spacer section. This allows for lubrication of the upper packing gland and prevents motor contamination because of normal wear and eventual leakage through the material packing gland.

PUMP DATA



INGERSOLL RAND COMPANY LTD

209 NORTH MAIN STREET - BRYAN, OHIO 43506

☎ (800) 495-0276 • FAX(800) 892-6276

www.ingersollrandproducts.com

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PUMP DISASSEMBLY

Refer to Figure 2

1. Lay the pump assembly on a workbench.
2. Remove the three (C) nuts from the three (D) spacer rods.
3. Pull the air motor from the lower pump end until air motor piston rod is on "down" position and lower pump end rod is in "up" position.
4. Remove the three (D) spacer rods by unscrewing three (E) cap screws.
5. Remove the two (B) cotter pins from the (A) adapter.
6. Unscrew the (A) adapter from the air motor.

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.

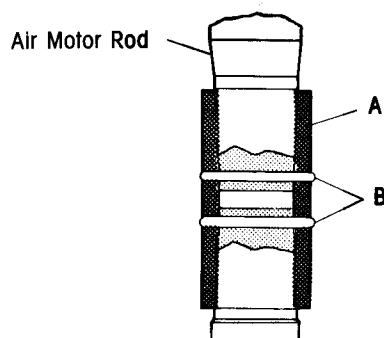
• Pump problems will typically occur in one of two areas:

1. The Air Motor Section.
2. The Lower Pump Section.

___Determine which section is affected.

SPACER SECTION

REF	PART NO.	DESCRIPTION
A	79176	ADAPTER
B	Y15-46-S (2)	COTTER PIN
C	Y108-8-Z (3)	HEX HEAD NUT
D	79179 (3)	SPACER ROD
E	79186 (3)	CAP SCREW



PUMP ASSEMBLY

Note: All threads are right hand.

1. Align Lower End Pump Rod with Air Motor Piston rod. Position air inlet of motor 210° from material outlet of pump.
2. Screw (A) adapter onto air motor piston rod and secure using (B) cotter pin. Screw other end of (A) adapter to lower pump plunger rod and secure using (B) cotter pin.
3. Thread the three (D) spacer rods onto the lower pump using three (E) cap screws.
4. Push air motor and lower pump end together so (D) spacer rods slide thru holes located in air motor base.
5. Secure air motor to lower pump end using three (C) nuts.

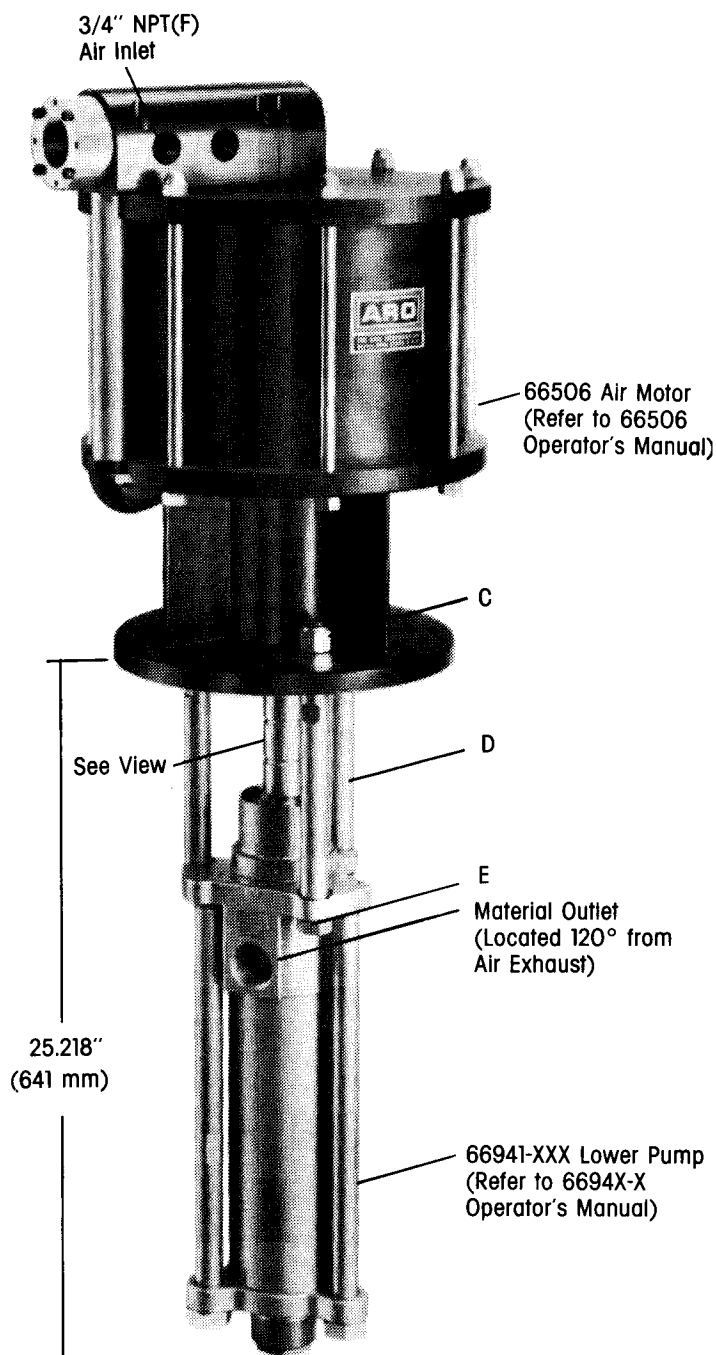


FIGURE 2