

OWNER/OPERATOR MANUAL

It is the responsibility of the Owner/Operator to properly use and maintain this equipment

The Instructions and Warnings contained in this manual shall be read and understood by the Owner/Operator prior to operating this equipment.

It is the responsibility of the Owner/Operator to maintain the legibility of all Warning and Instruction labels

The Owner/Operator shall retain this manual for future reference to important Warnings, Operating and Maintenance Instructions.

! WARNING

DO NOT operate these pumps with 10" airmotor.

DO NOT exceed the stated maximum working pressure of the airmotor or the lowest rated component in your system.

DO NOT alter or modify any part of this equipment.

DO NOT operate this equipment with combustible gas.

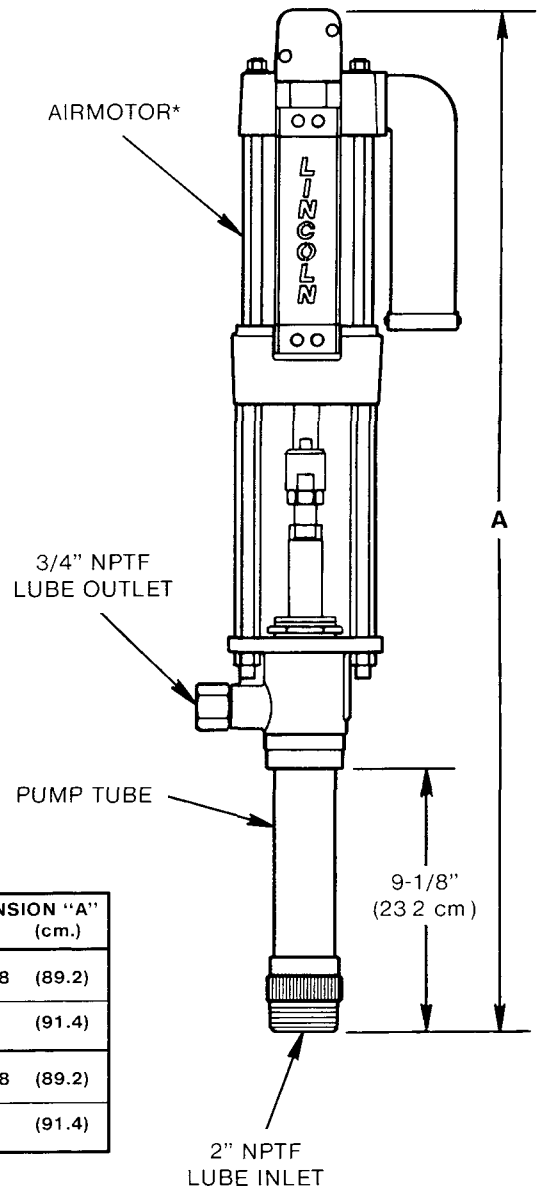
DO NOT attempt to repair or disassemble the equipment while the system is pressurized.

TIGHTEN all fluid connections securely before using this equipment.

ALWAYS read and follow the fluid manufacturer's recommendations regarding fluid compatibility, and the use of protective clothing and equipment.

CHECK all equipment regularly and repair or replace worn or damaged parts immediately.

IMPORTANT: Failure to heed these warnings including misuse, overpressurizing, modifying parts, using incompatible chemicals and fluids, or using worn or damaged parts, may result in equipment damage and/or serious personal injury, fire, explosion, or property damage.



MODEL CHART

PUMP TUBE	PUMP MODEL	AIRMOTOR*	RATIO	MAXIMUM DELIVERY PRESSURE	MAXIMUM AIR PRESSURE	DIMENSION "A" in. (cm.)
84986	2064	84808	42:1	4200 psi (294 bar)	100 psi (7 bar)	35-1/8 (89.2)
	2024	84806	24:1	2400 psi (168 bar)		200 psi (14 bar)
	2014	84804	12:1	2400 psi (168 bar)	36 (91.4)	
	2051	84803	6:1	1200 psi (84 bar)		
84987	2064-9	84808	42:1	4200 psi (294 bar)	100 psi (7 bar)	35-1/8 (89.2)
	2024-9	84806	24:1	2400 psi (168 bar)	200 psi (14 bar)	36 (91.4)
	2014-9	84804	12:1	2400 psi (168 bar)		
	2051-9	84803	6:1	1200 psi (84 bar)		

* Refer to Airmotor Owner/Operator Manual, Section A5 Page 78.

ATTACHING AIRMOTOR TO PUMPTUBE

1. Tightly attach tie rods to the airmotor (use short threaded end of the tie rods).
2. Mount airmotor on top of the pump-tube outlet and tightly connect Coupling Nut (Item 2) to airmotor piston rod.
3. Hand tighten tie rods to the pumptube with four nuts supplied with airmotor.
4. Slowly cycle the pump several times, using just enough air pressure to operate the pump without stalling.
5. Stop the pump on an "up" stroke and tighten the four nuts to securely fasten the airmotor to the pumptube.

OPERATING PRECAUTIONS

- Use Lincoln replacement parts to assure compatible pressure rating.
- HEED ALL WARNINGS
- Be sure material hoses and other components are able to withstand fluid pressures developed by this pump
- Do not operate pump continuously at speeds in excess of 75 cycles per minute.
- Disconnect air line from pump airmotor when system sits idle for long periods of time
- SERVICING. Before servicing or cleaning pump, or removing fluid hose or gun from a unit that has been used, be sure to disconnect air lines and carefully bleed pressure off of the system.



WARNING

PREVENT STATIC SPARKING. If static sparking occurs, fire or explosion could result. Pump, dispensing valve, and containers must be grounded when handling flammable fluids such as petroleum products, paints, lacquers, etc. and wherever discharge of static electricity is hazard.

- Check continuity (a good static wire connection) with an ohmmeter. Place one probe on one hose fitting and the other probe on other hose fitting, continuity or proper grounding through hose is good when a reading is obtained on the ohmmeter.
- PREVENT FIRES. When pumping, flushing or recirculating volatile solvents, the area must be adequately ventilated.
- Keep solvents away from heat, sparks and open flames. Keep containers closed when not in use.



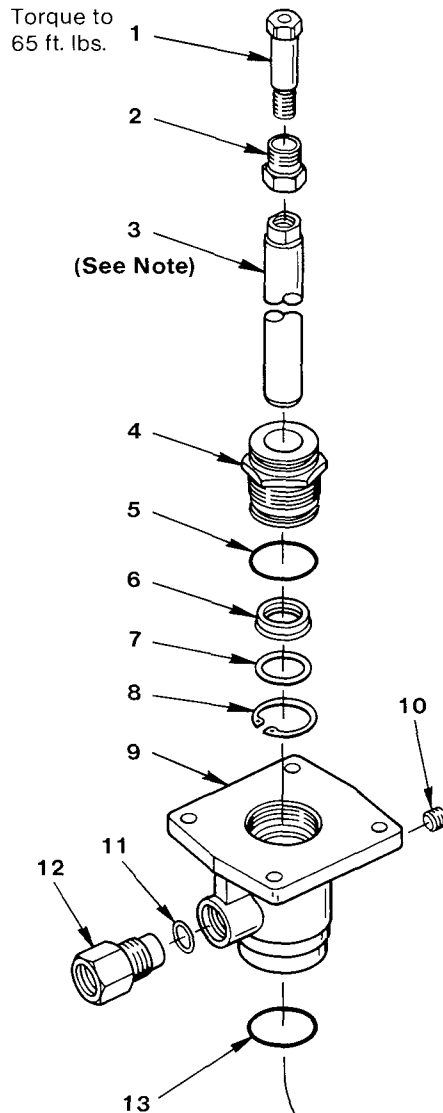
CAUTION

DO NOT allow pump to operate when out of material.

PUMP PRIMING

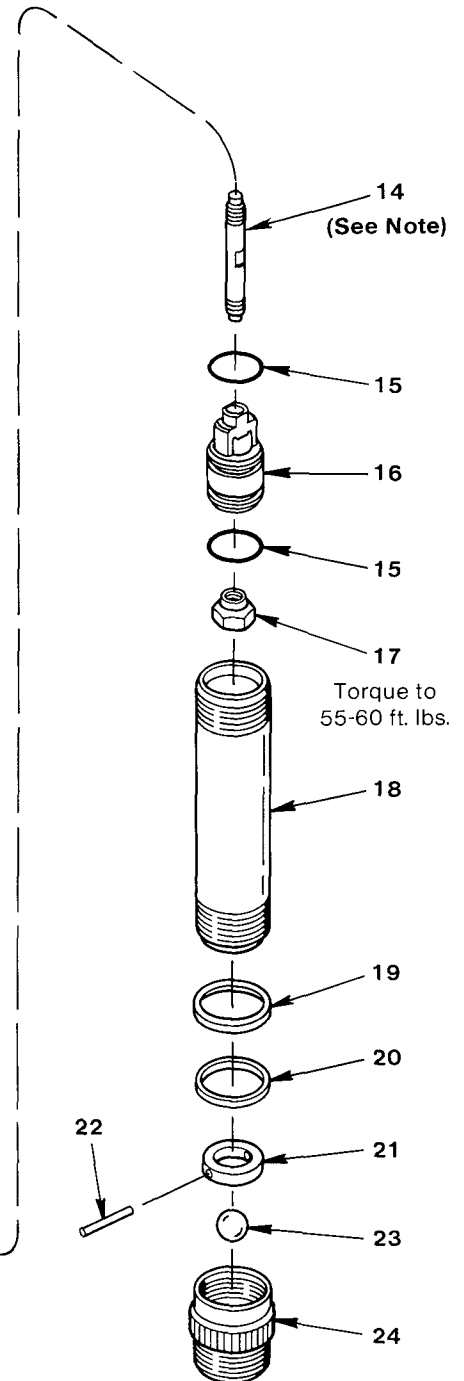
To begin operation, the pump has to be primed with the pumped material. The Power-Master III pump is a double acting (pumps material on "up" & "down" stroke) positive displacement reciprocating pump and as such intakes material only on the "up" stroke.

Torque to 65 ft. lbs.



NOTE:

Install Item 14 with 5/16" long thread relief toward Item 3. Assemble with Loctite Threadlocker #271 (Red) or equivalent. Torque to 55-60 ft lbs



To prime pump, open output line (material valve) and slowly open air supply valve until pump starts. Allow pump to cycle very slowly until all air is pushed out of lines and material fills up pump and lines. Close output line (material shut-off valve) - pump should stall against pressure.

Note: Pumps are factory tested with light oil and some of it is left in to protect pump parts during storage and transportation. To prevent contamination of material to be pumped, flush pump before using.

DISASSEMBLY

Tools Required

Pipe Wrench
 2-1/8" Dia. Strap Wrench
 7/8" Hex Wrench
 2-1/4" Hex Wrench
 1-3/8" Hex Wrench
 Retaining Ring Pliers (Internal)
 7/16" Hex Wrench
 1" Hex Wrench

Procedure

1. Remove Foot Valve Body (Item 24) from Bushing Tube (Item 18)
2. Remove Retainer (Item 21) and Retaining Pin (Item 22) from Foot Valve Body (Item 24) and remove Ball (Item 23).
3. Remove Packing (Item 20) and Packing Retainer (Item 19) from end of Bushing Tube (Item 18).
4. Unscrew Bushing Tube (Item 18) and slide off of Piston (Item 16).
5. Remove Bolt Connector (Item 1) from Plunger (Item 3).
6. Pull Piston (Item 16) to remove Plunger (Item 3) and Piston Assembly from Gland Nut (Item 4)
7. Remove O-ring (Item 13) from Outlet Body (Item 9).
8. Remove Gland Nut (Item 4) from Outlet Body (Item 9).
9. Remove Outlet Adapter (Item 12) and Gasket (Item 11) from Outlet Body (Item 9).
10. Remove Retaining Ring (Item 8), Packing Washer (Item 7) and U-cup (Item 6) from Gland Nut (Item 4).
11. Remove Piston Check (Item 17) from Piston Rod (Item 14).
12. Remove Piston (Item 16) from Piston Rod (Item 14).
13. To re-assemble pump, reverse disassembly procedure. (Refer to illustration for torque specifications.)

TROUBLESHOOTING

Problem	Possible Cause	Solution
Pump does not operate	Restricted or inadequate air supply Obstructed material output.	Check air supply pressure and air hose diameter (see Airmotor manual for minimum air supply hose diameter) Check output line for restrictions.
Erratic or accelerated operation.	Pump is not primed. Insufficient material supply. Material is too heavy for priming.	Prime pump (see "Pump Priming" instructions) Refill material supply Lower output with material valve. Increase pressure to pressure primer (if in use) Check for inlet restrictions.
Pump operates on "down" stroke only (missing "up" stroke).	Worn or damaged Piston O-rings (Item 15) or Piston Check (Items 16 & 17).	Check and replace if needed
Pump operates on "up" stroke only (missing "down" stroke).	Worn or damaged Inlet Check (Items 23 & 24). Insufficient material supply. Pump is not intaking enough material to dispense on both strokes.	Check and replace if needed Check inlet for restrictions. Lower output with material valve
Pump is operating but not dispensing material.	Inlet Check (Items 23 & 24) is not seating or is damaged	Check and replace if needed

ACCESSORIES AND PACKING KITS

86214 Gland Protection Sleeve - To increase life of gland seal
86213 Lube Cup - For solvent, to prevent material from drying on pump rod.
84112 Pump Piston Replacement - With Leather V-packings
84502 Teflon Packing Kit
86221 Viton Packing Kit

PUMP REPAIR KITS:

86219 - Includes soft parts for Model 84986.
86220 - Includes soft parts for Model 84987.

SPECIFICATIONS

Pump stroke - 6 in. (152 mm)

Output per cycle - 11.9 cu. in. (195 cc)

Max. recommended speed (continuous) - 75 cycles/min.

Approx. cycles per gallon (liter) - 20 (5)

Output at 75 cycles/min. - 3.9 gpm (14.6 liter/min.)

Wetted part materials:

84986 - Steel, Brass, Copper, Polyurethane, Nitrile

84987 - Stainless Steel, Polyurethane, Nitrile, Teflon

PARTS LIST

ITEM NO.	DESCRIPTION	QTY.	PART NUMBER	
			Model 84986	Model 84987
1	Bolt Connector	1	236225	236225
2	Coupling Nut	1	237051	237051
3	Plunger	1	242841	242842
4	Gland Nut	1	242843	242844
5	O-ring	1	(Note #1)	(Note #2)
6	U-cup Packing	1	(Note #1)	(Note #2)
7	Packing Washer	1	(Note #1)	(Note #2)
8	Retaining Ring	1	(Note #1)	(Note #2)
9	Outlet Body	1	242216	242223
10	Pipe Plug	1	67359	----
11	Gasket	1	(Note #1)	----
12	Outlet Adapter	1	16101	----
13	O-ring	1	(Note #1)	(Note #2)
14	Piston Rod	1	16107	242696
15	O-ring	2	(Note #1)	(Note #2)
16	Piston	1	92136	14611-9
17	Piston Check	1	16103	16103-9
18	Bushing Tube	1	242237	242694
19	Packing Retainer	1	(Note #1)	(Note #2)
20	Packing	1	(Note #1)	(Note #2)
21	Retainer	1	16108	242695
22	Retaining Pin	1	13226-9	13226-9
23	Ball	1	66728	69218-9
24	Foot Valve Body	1	16105	242697

- NOTES:**
1. Included in 86219 Pump Repair Kit.
 2. Included in 86220 Pump Repair Kit.

RETAIN THIS INFORMATION FOR FUTURE REFERENCE

When ordering replacement parts, list: Part Number, Description, Model Number and Series Letter.

LINCOLN provides a Distributor Network that stocks equipment and replacement parts.