

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.

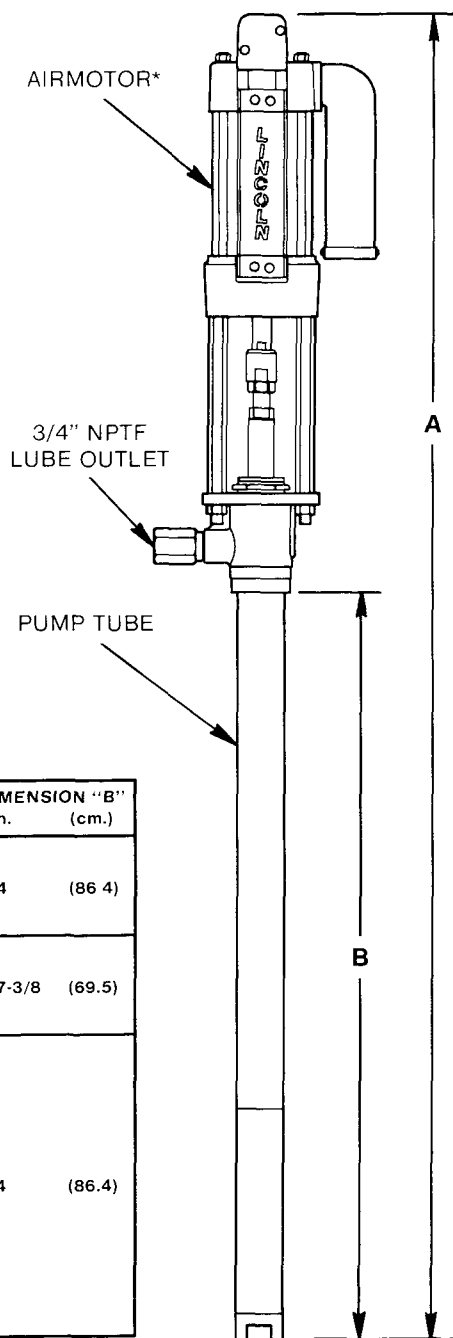
DO NOT attempt to repair or disassemble the equipment while the system is pressurized.

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.)	DIMENSION "B" in. (cm.)
84985	2061	84808	42:1	4200 psi (294 bar)	100 psi (7 bar)	60 (152.4)	34 (86.4)
	2021	84806	24:1	2400 psi (168 bar)	200 psi (14 bar)	60-7/8 (154.6)	
	2001	84804	12:1	2400 psi (168 bar)			
	2052	84803	6:1	1200 psi (84 bar)			
84984	2065	84808	42:1	4200 psi (294 bar)	100 psi (7 bar)	53-3/8 (135.6)	27-3/8 (69.5)
	2025	84806	24:1	2400 psi (168 bar)	200 psi (14 bar)	54-1/4 (137.8)	
	2005	84804	12:1	2400 psi (168 bar)			
	2055	84803	6:1	1200 psi (84 bar)			
84983	2061-7	84808	42:1	4200 psi (294 bar)	100 psi (7 bar)	60 (152.4)	34 (86.4)
	2021-7	84806	24:1	2400 psi (168 bar)	200 psi (14 bar)	60-7/8 (154.6)	
	2001-7	84804	12:1	2400 psi (168 bar)			
	2052-7	84803	6:1	1200 psi (84 bar)			
84982	2061-8	84808	42:1	4200 psi (294 bar)	100 psi (7 bar)	60 (152.4)	34 (86.4)
	2021-8	84806	24:1	2400 psi (168 bar)	200 psi (14 bar)	60-7/8 (154.6)	
	2001-8	84804	12:1	2400 psi (168 bar)			
	2052-8	84803	6:1	1200 psi (84 bar)			
84981	2061-9	84808	42:1	4200 psi (294 bar)	100 psi (7 bar)	60 (152.4)	34 (86.4)
	2021-9	84806	24:1	2400 psi (168 bar)	200 psi (14 bar)	60-7/8 (154.6)	
	2001-9	84804	12:1	2400 psi (168 bar)			
	2052-9	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

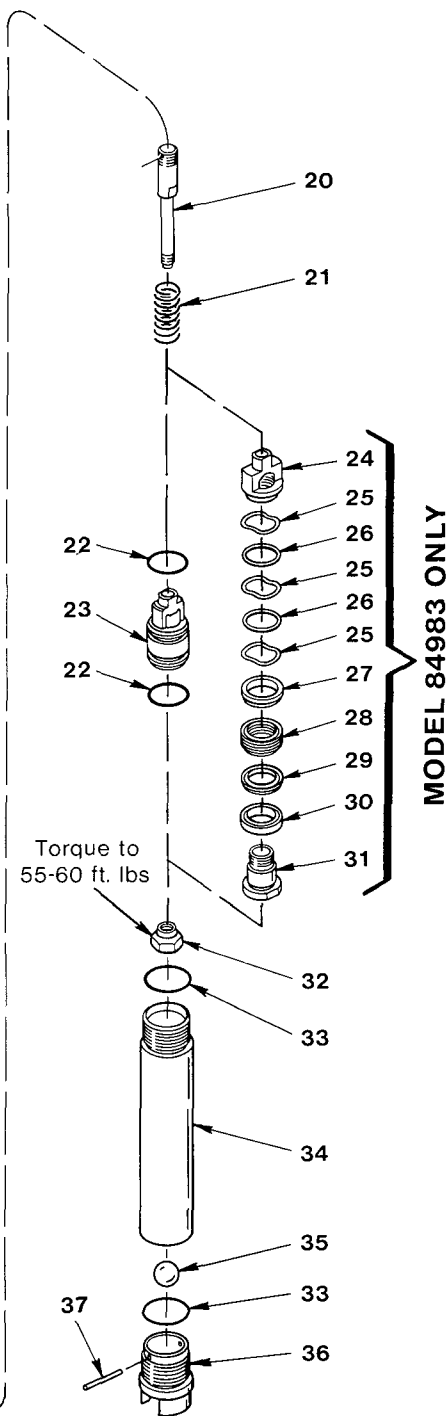
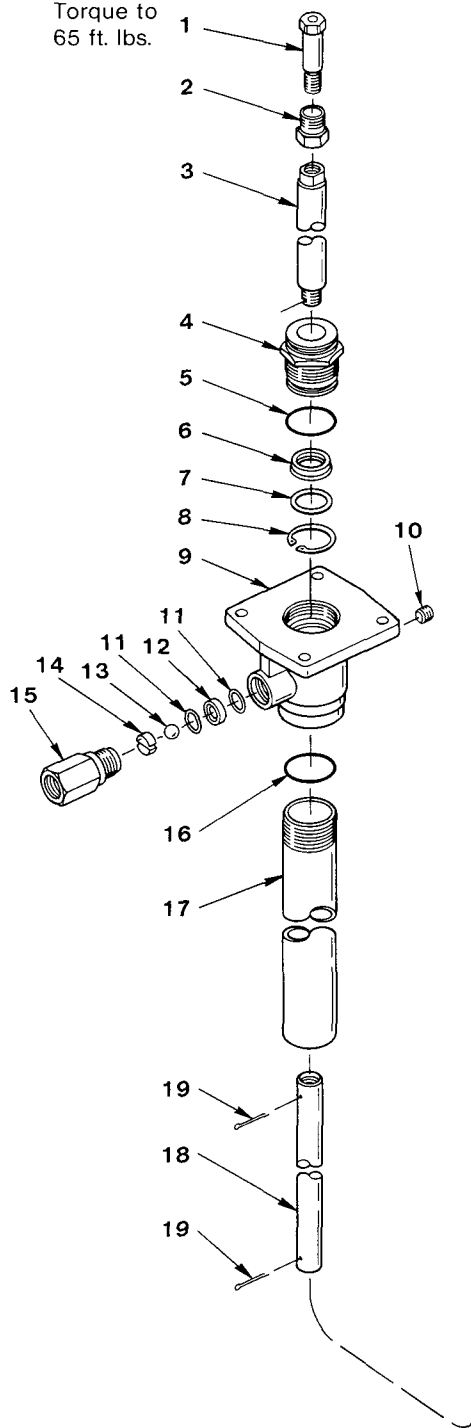


WARNING

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

Torque to 65 ft. lbs.



Torque to 55-60 ft. lbs



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.

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

2-1/8" Dia Strap Wrench
7/8" Hex Wrench
2-1/4" Hex Wrench
1-3/8" Hex Wrench
Retaining Ring Pliers (Internal)
5/8" Hex Wrench
1" Hex Wrench

Procedure

1. Remove Foot Valve Body (Item 36) from Bushing Tube (Item 34).
2. Slide Retaining Pin (Item 37) from Foot Valve Body (Item 36) and remove Ball (Item 35).
3. Unscrew Bushing Tube (Item 34) and slide off of Piston (Item 23).

4. Remove Bolt Connector (Item 1) from Plunger (Item 3).
5. Pull Piston (Item 23) to remove Plunger (Item 3), Connecting Rod (Item 18) and Piston Assembly from Pump Tube (Item 17).
6. Remove Pump Tube (Item 17) from Outlet Body (Item 9).
7. Remove O-ring (Item 16) from Outlet Body (Item 9).
8. Remove Gland Nut (Item 4) from Outlet Body (Item 9).
9. Remove Outlet Body (Item 15) from Outlet Body (Item 9).
10. Remove Ball (Item 13), Check Seat (Item 12) and Gaskets (Item 11) from Outlet Body (Item 9).

11. Remove Retaining Ring (Item 8), Packing Washer (Item 7) and U-cup (Item 6) from Gland Nut (Item 4).
12. Remove Piston Check (Item 32) from Piston Rod (Item 20).
13. Remove Piston (Item 23) and Spring (Item 21) from Piston Rod (Item 20).
14. Remove Cotter Pins (Item 19) from Connecting Rod (Item 18).
15. Remove Piston Rod (Item 20) and Plunger (Item 3) from Connecting Rod (Item 18).
16. 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.	Check air supply pressure and air hose diameter (see Airmotor manual for minimum air supply hose diameter)
	Obstructed material output.	Check output line for restrictions
Erratic or accelerated operation.	Pump is not primed.	Prime pump (see "Pump Priming" instructions)
	Insufficient material supply	Refill material supply.
	Material is too heavy for priming.	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 22) or Piston Check (Items 23 & 32).	Check and replace if needed
Pump operates on "up" stroke only (missing "down" stroke).	Worn or damaged Inlet Check (Items 35 & 36).	Check and replace if needed.
	Insufficient material supply. Pump is not intaking enough material to dispense on both strokes.	Check inlet for restrictions. Lower output with material valve
Pump is operating but not dispensing material.	Inlet Check (Items 35 & 36) 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.
84502 Teflon Packing Kit - For Models 84981, 84982, 84984 & 84985.
86221 Viton Packing Kit - For Models 84981, 84982, 84984 & 84985.
16177 Foot Valve Adapter - Converts pump inlet to 1-1/2" NPTF Female
84112 Pump Piston Replacement - With Leather V-packings (standard on Model 84983).

PUMP REPAIR KITS:

86219 - Includes soft parts for Models 84983*, 84984 & 84985
86220 - Includes soft parts for Models 84981 & 84982.
86222 - Piston rebuild kit for Model 84983*.

*Model 84983 requires Kits 86219 & 86222 for rebuild.

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:

84985 - Steel, Brass, Copper, Polyurethane, Nitrile

84984 - Steel, Brass, Copper, Polyurethane, Nitrile

84983 - Steel, Brass, Copper, Polyurethane, Leather, Teflon, Nitrile

84982 - Chrome Plated Steel, Stainless Steel, Brass, Polyurethane, Nitrile

84981 - Stainless Steel, Polyurethane, Nitrile, Teflon

PARTS LIST

ITEM NO.	DESCRIPTION	QTY.	PART NUMBER				
			Model 84981	Model 84982	Model 84983	Model 84984	Model 84985
1	Bolt Connector	1	236225	236225	236225	236225	236225
2	Coupling Nut	1	237051	237051	237051	237051	237051
3	Plunger	1	242840	242839	242839	242839	242839
4	Gland Nut	1	242844	242843	242843	242843	242843
5	O-ring	1	(Note #2)	(Note #2)	(Note #1)	(Note #1)	(Note #1)
6	U-cup Packing	1	(Note #2)	(Note #2)	(Note #1)	(Note #1)	(Note #1)
7	Packing Washer	1	(Note #2)	(Note #2)	(Note #1)	(Note #1)	(Note #1)
8	Retaining Ring	1	(Note #2)	(Note #2)	(Note #1)	(Note #1)	(Note #1)
9	Outlet Body	1	242223	242223	242216	242216	242216
10	Pipe Plug	1	----	----	67359	67359	67359
11	Gasket	2	----	----	(Note #1)	(Note #1)	(Note #1)
12	Outlet Check	1	----	----	11948	11948	11948
13	Ball	1	----	----	66285	66285	66285
14	Ball Stop	1	----	----	57036	57036	57036
15	Outlet Body	1	----	----	12017	12017	12017
16	O-ring	1	(Note #2)	(Note #2)	(Note #1)	(Note #1)	(Note #1)
17	Pump Tube	1	242228	242228	242232	242235	242232
18	Connecting Rod	1	242243	242243	242245	242244	242245
19	Cotter Pin	2	(Note #2)	(Note #2)	(Note #1)	(Note #1)	(Note #1)
20	Piston Rod	1	16445-9	16445-8	16445	16445	16445
21	Spring	1	55292	55292	55262	55262	55262
22	O-ring	2	(Note #2)	(Note #2)	----	(Note #1)	(Note #1)
23	Piston	1	14611-9	92136-8	----	92136	92136
24	Piston Rod Guide	1	----	----	14994	----	----
25	Wave Washer	3	----	----	(Note #3)	----	----
26	Washer	2	----	----	(Note #3)	----	----
27	Male Adapter	1	----	----	14993	----	----
28	Leather V-packing	4	----	----	(Note #3)	----	----
29	Teflon V-packing	1	----	----	(Note #3)	----	----
30	Female Adapter	1	----	----	14861	----	----
31	Piston Nut	1	----	----	14859	----	----
32	Piston Check	1	16103-9	16103-8	16103	16103	16103
33	O-ring	2	(Note #2)	(Note #2)	(Note #1)	(Note #1)	(Note #1)
34	Bushing Tube	1	242215	242220	242221	242221	242221
35	Ball	1	68785	68649	66203	66203	66203
36	Foot Valve Body	1	13222-9	13222-9	13222	13222	13222
37	Retaining Pin	1	13226-9	13226-9	13226-9	13226-9	13226-9

NOTES:

- 1 Included in 86219 Pump Repair Kit.
- 2 Included in 86220 Pump Repair Kit.
- 3 Included in 86222 Piston 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.