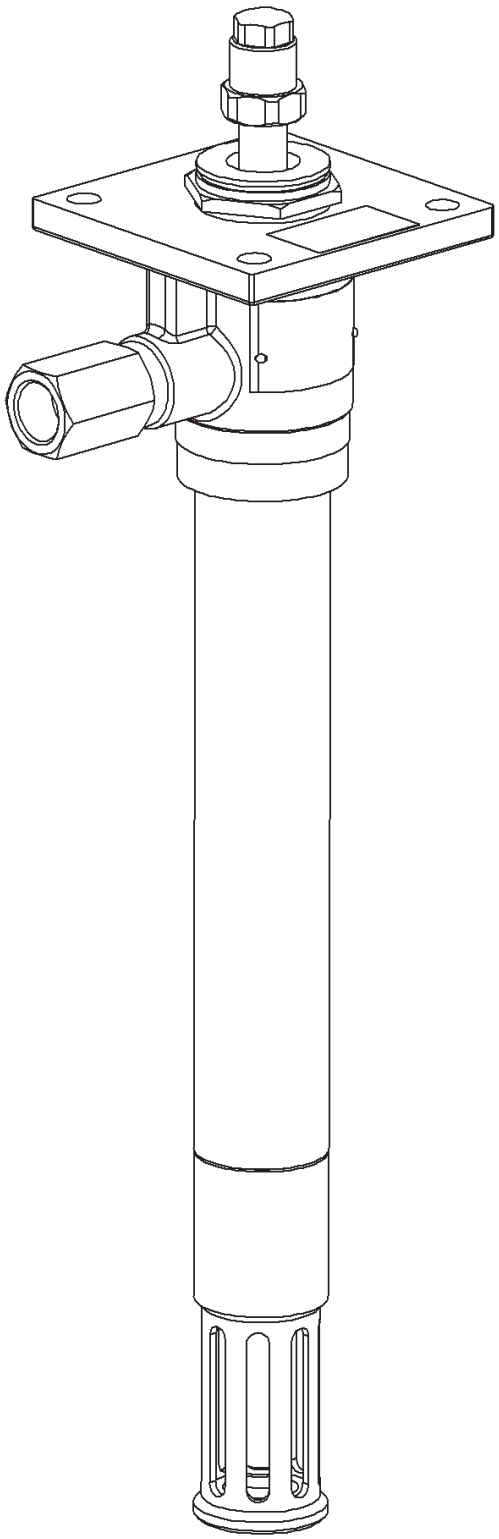


CE

OWNER/OPERATOR RESPONSIBILITY

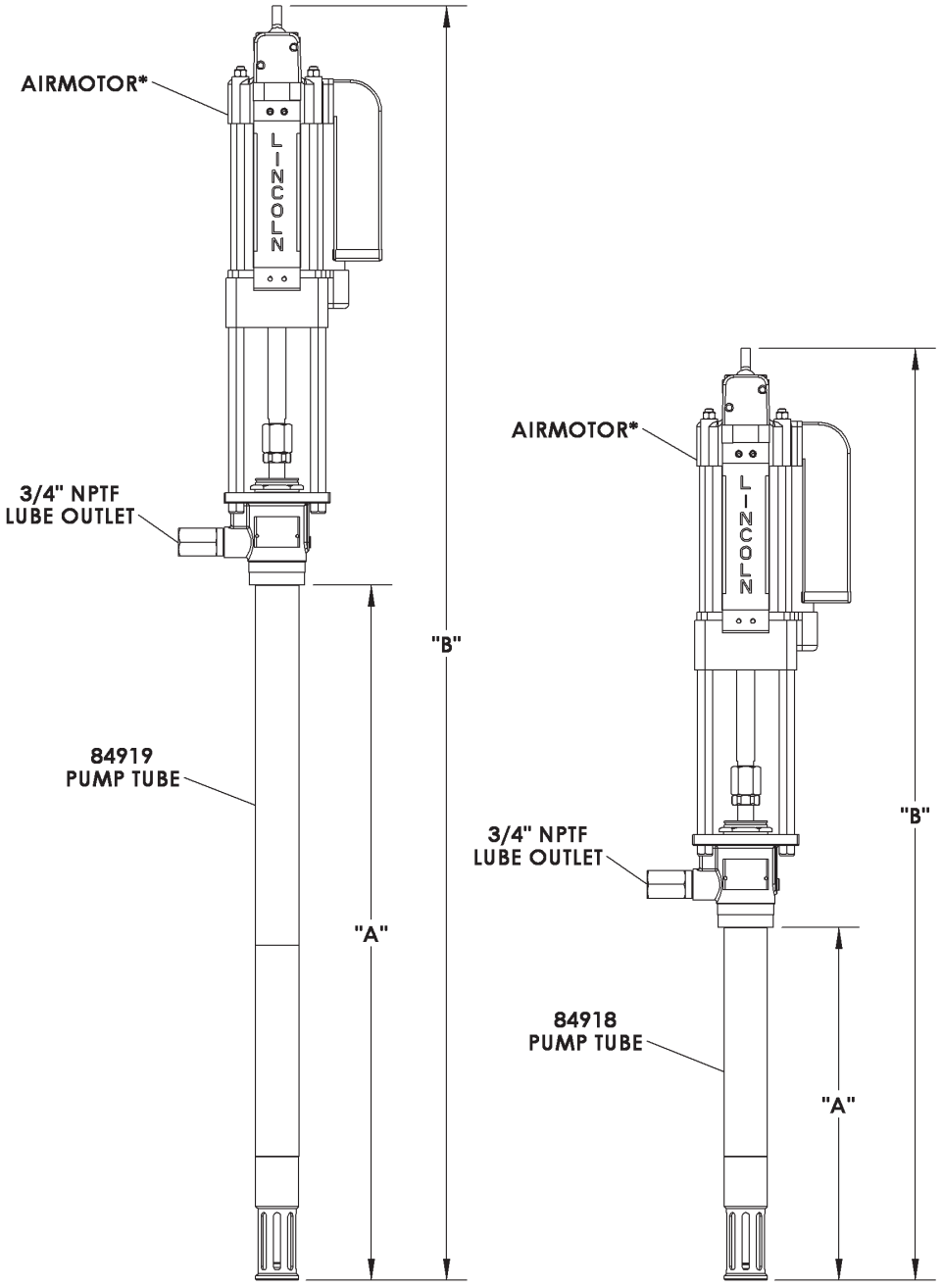
It is the responsibility of the Owner/Operator to properly use and maintain this equipment.
The Instructions and Warnings contained in this manual shall be read and understood by the Owner/Operator prior to operating this equipment
It is the responsibility of the Owner/Operator to maintain the legibility 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” or 8” 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.
THESE PUMPS ARE FOR MATERIAL TRANSFER APPLICATIONS ONLY!
IMPORTANT: Failure to heed these warnings including misuse, over pressurizing, 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.

PUMP TUBE SPECIFICATIONS

Pump Stroke – 6 in. (152 mm)
Output per cycle – 10.9 cu. in. (179 cc)
Max. recommended speed (continuous) – 75 cycles/min.
Approx. cycles per gallon (liter) – 21 (5.5)
Output at 75 cycles/min. – 3.5 gpm (13.2 liter/min.)
Wetted part materials – Steel, Brass, Copper, Polyurethane, Nitrile



MODEL CHART

PUMP TUBE	PUMP MODEL	AIRMOTOR*	RATIO	MAXIMUM DELIVERY PRESSURE psi (bar)	MAXIMUM AIR PRESSURE psi (bar)	DIMENSION "A" in (cm)	DIMENSION "B" in (cm)
84918	2030	84806	24:1	2400 (168)	100 (7)	17-1/4 (44)	45-3/8 (115)
	2028	84804	12:1	2400 (168)	200 (14)		
	---	84803	6:1	1200 (84)	200 (14)		
84919	2031	84806	24:1	2400 (168)	100 (7)	34 (86)	62-1/8 (158)
	2029	84804	12:1	2400 (168)	200 (14)		
	---	84803	6:1	1200 (84)	200 (14)		

*Refer to Airmotor Manual Section A50 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 air motor 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.

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.

MODEL 84918 DISASSEMBLY

Tools Required

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

Procedure

1. Remove Priming Tube (Item 35) from Bushing Tube (Item 25).
2. Remove Cotter Pin (Item 30) from Bushing & Plunger (Item 29).
3. Remove Priming Shovel (Item 34) from Bushing & Plunger (Item 29).
4. Pull on Plunger (Item 29) to remove Check Seat (Item 33), Check (Item 32) and Retainer (Item 31) from Bushing Tube (Item 25).
5. Slide Bushing of Bushing & Plunger (Item 29) down until it clears the Bushing Tube (Item 25).
6. Disconnect Bushing & Plunger (Item 29) from Piston Check (Item 23).
7. Remove Retaining Ring (Item 27) and Guide Washer (Item 28) from Bushing & Plunger (Item 29).
8. Remove Check Stop Insert (Item 26) from Bushing Tube (Item 25).
9. Remove Bushing Tube (Item 25) from Outlet Body (Item 8).
10. Remove O-ring (Item 15) from Outlet Body (Item 8).
11. Remove Bolt Connector (Item 1) and Coupling Nut (Item 2) from Plunger Rod (Item 17).
12. Pull Piston (Item 22) to remove Plunger Rod (Item 17), Piston Rod (Item 20), Piston (Item 22) and Piston Check (Item 23) as an assembly from Outlet Body (Item 8).
13. Remove Gland Nut (Item 3) from Outlet Body (Item 8).
14. Remove Pipe Plug (Item 9) from Outlet Body (Item 8).
15. Remove Outlet Body (Item 14) from Outlet Body (Item 8).

16. Remove Ball (Item 12), Check Seat (Item 11) and Gaskets (Items 10) from Outlet Body (Item 8).
17. Remove Retaining Ring (Item 7), Packing Washer (Item 6) and U-cup Seal (Item 5) from Gland Nut (Item 3).
18. Remove O-ring (Item 4) from Gland Nut (Item 3).
19. Remove Piston Check (Item 23) from Piston Rod (Item 20).
20. Remove Piston (Item 22) from Piston Rod (Item 20).
21. Remove O-rings (Items 21) from Piston (Item 22).
22. Remove Piston Rod (Item 20) from Plunger Rod (Item 17).
23. To re-assemble pump reverse disassembly procedure. (Refer to illustration for torque specifications.)

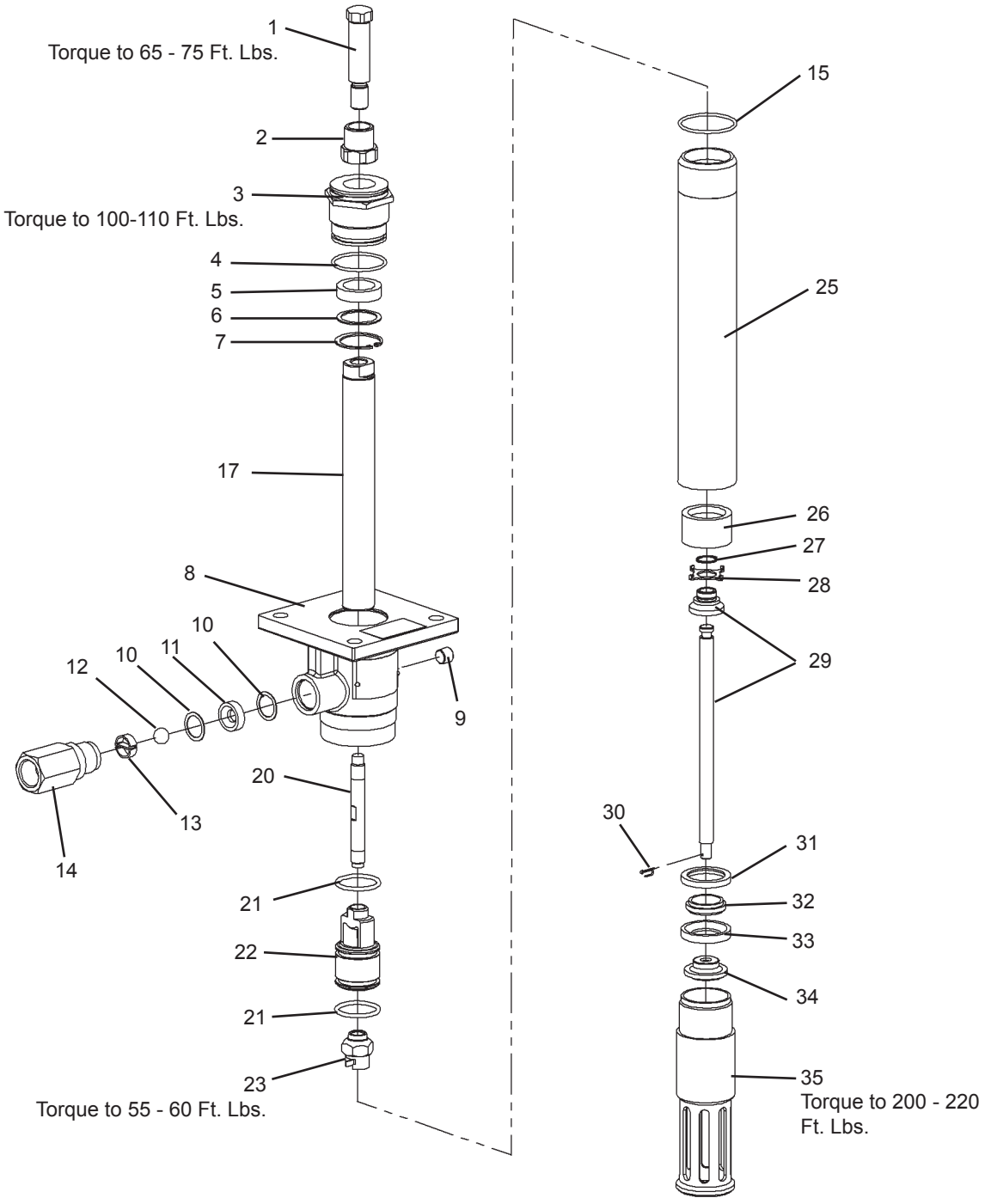
MODEL 84919 DISASSEMBLY

Tools Required

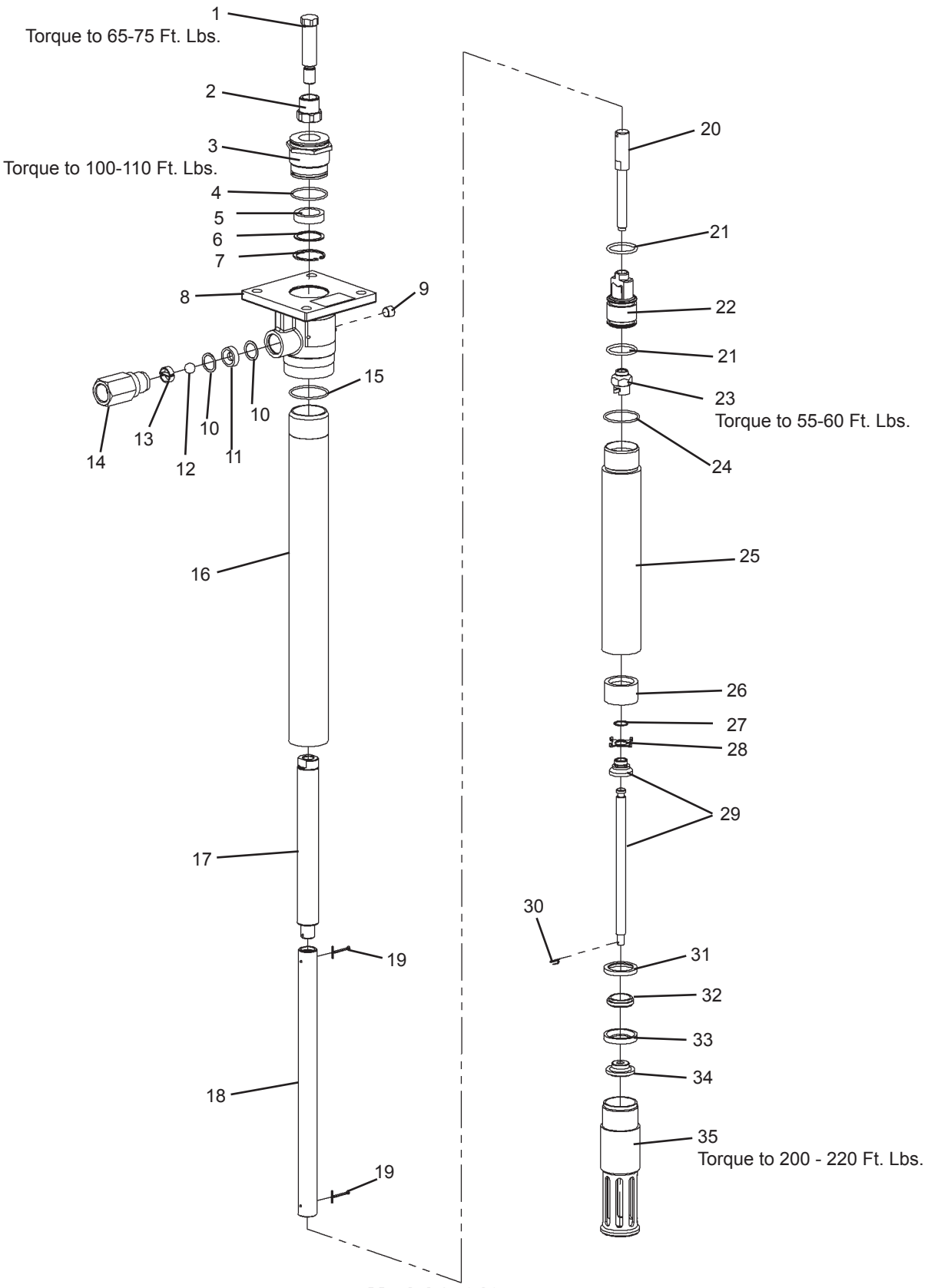
2-1/8” Dia. Strap Wrench
Retaining Ring Pliers (External)
Retaining Ring Pliers (Internal)
1/4” Hex Allen Wrench
5/8” Hex Wrench
7/8” Hex Wrench
1” Hex Wrench
1-3/8” Hex Wrench
2-1/4” Hex Wrench
Pliers

Procedure

1. Remove Priming Tube (Item 35) from Bushing Tube (Item 25).
2. Remove Cotter Pin (Item 30) from Bushing & Plunger (Item 29).
3. Remove Priming Shovel (Item 34) from Bushing & Plunger (Item 29).
4. Pull on Plunger (Item 29) to remove Check Seat (Item 33), Check (Item 32) and Retainer (Item 31) from Bushing Tube (Item 25).
5. Slide Bushing of Bushing & Plunger (Item 29) down until it clears the Bushing Tube (Item 25).
6. Disconnect Bushing & Plunger (Item 29) from Piston Check (Item 23).
7. Remove Retaining Ring (Item 27) and Guide Washer (Item 28) from Bushing & Plunger (Item 29).
8. Remove Check Stop Insert (Item 26) from Bushing Tube (Item 25).
9. Remove Bushing Tube (Item 25) from Pump Tube (Item 16).
10. Remove O-ring (Item 24) from Bushing Tube (Item 25).
11. Remove Bolt Connector (Item 1) and Coupling Nut (Item 2) from Plunger Rod (Item 17).
12. Pull Piston (Item 22) to remove Plunger Rod (Item 17), Connecting Rod (Item 18), Piston Rod (Item 20), Piston (Item 22) and Piston Check (Item 23) as an assembly from Pump Tube (Item 16).
13. Remove Pump Tube (Item 16) from Outlet Body (Item 8).
14. Remove O-ring (Item 15) from Outlet Body (Item 8).
15. Remove Gland Nut (Item 3) from Outlet Body (Item 8).
16. Remove Pipe Plug (Item 9) from Outlet Body (Item 8).
17. Remove Outlet Body (Item 14) from Outlet Body (Item 8).
18. Remove Ball (Item 12), Check Seat (Item 11) and Gaskets (Items 10) from Outlet Body (Item 8).
19. Remove Retaining Ring (Item 7), Packing Washer (Item 6) and U-cup Seal (Item 5) from Gland Nut (Item 3).
20. Remove O-ring (Item 4) from Gland Nut (Item 3).
21. Remove Piston Check (Item 23) from Piston Rod (Item 20).
22. Remove Piston (Item 22) from Piston Rod (Item 20).
23. Remove O-rings (Items 21) from Piston (Item 22).
24. Remove Cotter Pins (Items 19) from Connecting Rod (Item 18).
25. Remove Piston Rod (Item 20) from Connecting Rod (Item 18).
26. Remove Plunger Rod (Item 17) from Connecting Rod (Item 18).
27. To re-assemble pump reverse disassembly procedure. (Refer to illustration for torque specifications.)


1
Torque to 65 - 75 Ft. Lbs.
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3
Torque to 100-110 Ft. Lbs.
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23
Torque to 55 - 60 Ft. Lbs.
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32
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34
35
Torque to 200 - 220 Ft. Lbs.

Model 84918


1
Torque to 65-75 Ft. Lbs.
2
3
Torque to 100-110 Ft. Lbs.
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23
Torque to 55-60 Ft. Lbs.
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32
33
34
35
Torque to 200 - 220 Ft. Lbs.

Model 84919

PARTS LIST

Item No.	Description	Qty.	Part Number	
			Model 84918	Model 84919
1	Bolt Connector	1	236225	236225
2	Coupling Nut	1	237051	237051
3	Gland Nut	1	242843	242843
4	O-Ring (polyurethane)	1	242229*	242229*
5	U-Cup Seal (polyurethane)	1	34401*	34401*
6	Packing Washer	1	48614*	48614*
7	Retaining Ring	1	68908*	68908*
8	Outlet Body	1	242216	242216
9	Pipe Plug	1	67359	67359
10	Gasket (copper)	2	31033*	31033*
11	Outlet Check	1	11948	11948
12	Check Ball	1	66285	66285
13	Ball Stop	1	57036	57036
14	Outlet Body	1	12017	12017
15	O-ring (nitrile)	1	34296*	34296*
16	Pump Tube	1	N/A	270036
17	Plunger Rod	1	242841	242839
18	Connecting Rod	1	N/A	270035
19	Cotter Pin	2	N/A	66197*
20	Piston Rod	1	16107	16445
21	O-ring (nitrile)	2	34262*	34262*
22	Piston	1	92136	92136
23	Piston Check	1	270038	270038
24	O-ring (nitrile)	1	N/A	34309*
25	Bushing Tube	1	270039	270034
26	Check Stop Insert	1	270037	270037
27	Retaining Ring	1	68482*	68482*
28	Guide Washer	1	45826*	45826*
29	Bushing and Plunger	1	242546	242546
30	Retainer	1	13227	13227
31	Check	1	13229	13229
32	Check Seat	1	13228	13228
33	Priming Shovel	1	13235	13235
34	Priming Tube	1	242375	242375
35	Cotter Pin	1	66310*	66310*

*Denotes parts included in 86269 Pump Repair Kit

ACCESSORIES AND KITS

86269 Pump Repair Kit – Includes soft parts needed to rebuild pump tube.
86268 Camlock Adapter Kit – To mount pump with camlock coupling.
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 gland and piston seals.
84112 Pump Piston Replacement – With leather v-packings.

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 21) or Piston Check (Items 22 & 23).	Check and replace if needed.
Pump operates on "up" stroke only (missing "down" stroke).	Worn or damaged Inlet Check (Items 32 & 33).	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 32 & 33) is not seating or is damaged	Check and replace if needed.

Declaration by the manufacturer as defined by Machinery Directive 89/392EEC Annex IIB

Herewith we declare that the supplied model of PowerMaster Pumps 84918 and 84919.

Is intended to be incorpoated into machinery covered by this directive and must not be put into service until the machiner into shich it is to be incorpoated has been declared in conformity with the provisions of the directive 91/386/EEC.

Applied harmonized standards in particular:

EN 292	Safety of machinery - Basic concepts, general principles for design - Part 2: Technical principles and specifications
EN 809	Pumps and pump units for liquids - Common safety requirements
EN 983	Safety of machinery - Safety requirements for fluid power systems and their components - Pneumatics
EN 1050	Safety of machinery - Principles for risk assessment

Paul H. Conley

Paul Conley, Cheif Engineer 8/24/09

Lincoln Industrial Standard Warranty

LIMITED WARRANTY
Lincoln warrants the equipment manufactured and supplied by Lincoln to be free from defects in material and workmanship for a period of one (1) year following the date of purchase, excluding therefrom any special, extended, or limited warranty published by Lincoln. If equipment is determined to be defective during this warranty period, it will be repaired or replaced, within Lincoln's sole discretion, without charge.

This warranty is conditioned upon the determination of a Lincoln authorized representative that the equipment is defective. To obtain repair or replacement, you must ship the equipment, transportation charges prepaid, with proof of purchase to a Lincoln Authorized Warranty and Service Center within the warranty period.

This warranty is extended to the original retail purchaser only. This warranty does not apply to equipment damaged from accident, overload, abuse, misuse, negligence, faulty installation or abrasive or corrosive material, equipment that has been altered, or equipment repaired by anyone not authorized by Lincoln. This warranty applies only to equipment installed, operated and maintained in strict accordance with the written specifications and recommendations provided by Lincoln or its authorized field personnel.

THIS WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE WARRANTY OF MERCHANTIBILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.

In no event shall Lincoln be liable for incidental or consequential damages. Lincoln's liability for any claim for loss or damages arising out of the sale, resale or use of any Lincoln equipment shall in no event exceed the purchase price. Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, therefore the above limitation or exclusion may not apply to you.

This warranty gives you specific legal rights. You may also have other rights that vary by jurisdiction.

Customers not located in the Western Hemisphere or East Asia: Please contact Lincoln GmbH & Co. KG, Walldorf, Germany, for your warranty rights.

Lincoln Industrial Special Limited Warranties

SPECIAL LIMITED 2 YEAR WARRANTY-
SL-V Series, Single Injectors-85772, 85782, and Replacement Injectors-85771, 85781
Lincoln warrants the SL-V Injector series to be free from defects in material and workmanship for two (2) years following the date of purchase. If an injector model (single or replacement) is determined to be defective by Lincoln, in its sole discretion, during this warranty period, it will be repaired or replaced, at Lincoln's discretion, without charge.

SPECIAL LIMITED 5 YEAR WARRANTY-
Series 20, 25, 40 Bare Pumps, PMV Bare Pumps, Heavy Duty and 94000 Series Bare Reels
Lincoln warrants series 20, 25, 40 bare pumps, PMV bare pumps, Heavy Duty (82206), Mini Bench (81133, 81323), and 94000 LFR series (94100, 94300, 94500) bare reels to be free from defects in material and workmanship for five (5) years following the date of purchase. If equipment is determined by Lincoln, in its sole discretion, to be defective during the first year of the warranty period, it will be repaired or replaced at Lincoln's discretion, without charge. In years two (2) and three (3), the warranty on this equipment is limited to repair with Lincoln paying parts and labor only. In years four (4) and five (5), the warranty on this equipment is limited to repair with Lincoln paying for parts only.

SPECIAL LIMITED 5 YEAR WARRANTY-
LFM Series Oil Meters (Lincoln Fluid Meter), LFV (Lincoln Fluid Valves), AOD (Air-Operated Diaphragm Pumps)-
Lincoln warrants the LFM meter series (908/912 series), the Lincoln Fluid valve (708/712 series), our Universal Inline Digital Meters (812/813 series), and our AOD Pump offering to be free from defects in material and workmanship for five (5) years following the date of purchase. If either is determined to be defective by Lincoln, in its sole discretion, during the warranty period, they will be repaired or replaced, at Lincoln's discretion, without charge.

Lincoln Industrial Contact Information

To find Lincoln Industrial's Nearest Service Center call the following number, you may also use our website

Customer Service 314-679-4200
Website lincolnindustrial.com

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One Lincoln Way
St. Louis, MO 63120-1578
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