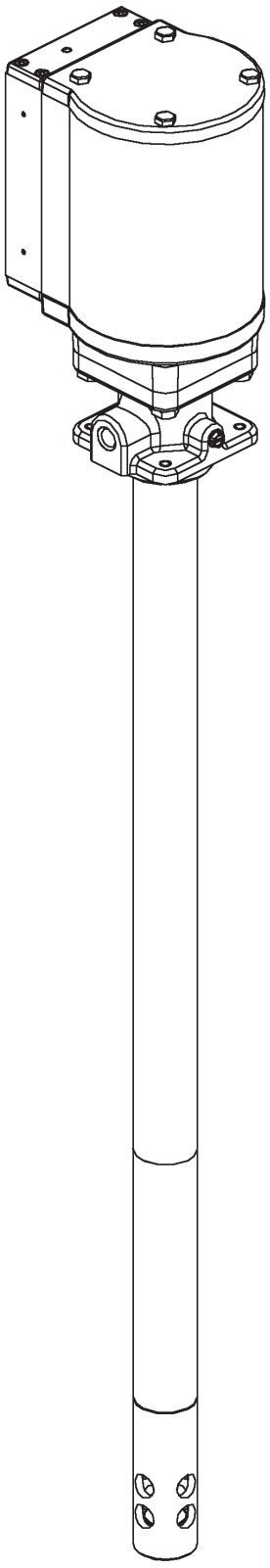


Patent Pending

OWNER/OPERATOR RESPONSIBILITY

It is the owner/operator responsibility 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.

If an owner/operator does not understand English, the contents of this manual shall be explained in the owner/operator native language to assure the owner/operator comprehends.

It is the owner/operator responsibility to maintain the legibility of all warning and instruction labels.

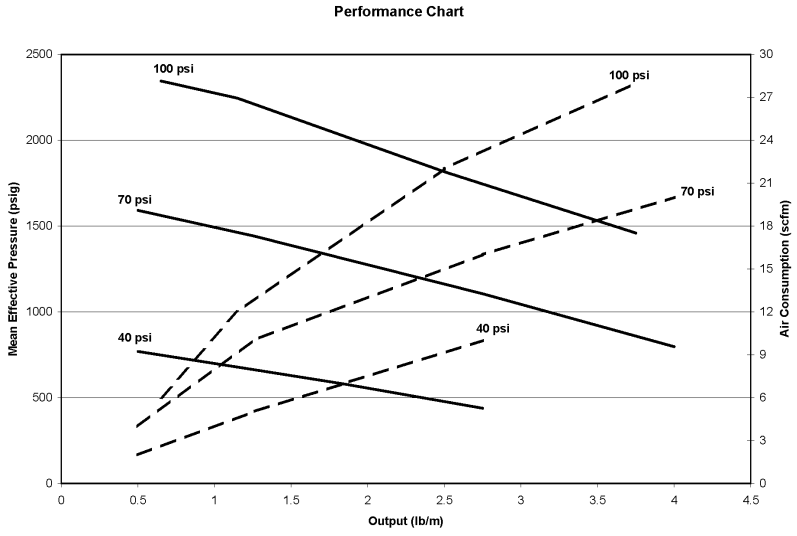
The owner/operator shall retain this manual for future reference to important warnings, operating and maintenance instructions.

⚠ WARNING

If any fluid appears to penetrate the skin, get emergency medical attention immediately. Do not treat injury as a simple cut. Tell attending physician exactly what fluid was injected.

Pump Specifications

Pumping Ratio	- 25:1
Air Pressure	- 40-150 psi [2.7-10.3 bar]
Max. Output Pressure	- 3750 psi [258 bar]
Air Inlet	- 3/8 NPTF
Material Outlet	- 1/4 NPTF
Airmotor Bore Dia.	– 3 in. [76.2 mm]
Stroke	- 3-1/4 in. [82.5 mm]
Output per cycle	– 1.47 cu. in. [24.1 cc]
Wetted Parts	- Carbon Steel, Brass, Zinc, Polyurethane, Nitrile



SAFETY

Read and carefully observe these operating instructions before operating this air operated pump. The pump must be operated, maintained, and repaired exclusively by persons familiar with the operation instructions. Operate the pump only after safety instructions and this operation manual is fully understood.

Adequate personal protection is recommended to prevent splashing of material on the skin on in the eyes.

ALWAYS disconnect the air coupler from the pump when the pump is not being used.

ALWAYS wear eye protection.

NEVER kink or bend high-pressure hose.

NEVER point control valve at any portion of the body or at anyone else.

Never dispense lubricant from the control valve into the palm of the hand; injection of lubricant into the body may result in serious injury.

DESCRIPTION

Models V325035000, V325120000 and V325400000 are air operated double acting grease pumps for dispensing automotive greases.

APPROPRIATE USE

The pump is designed to dispense automotive greases directly from the refinery container. It can be used in a system with mutiple hose reels and control valves.

⚠ WARNING

It is dangerous to dispense fluids that are not recommended with this pump. Failure to heed this warning may cause serious damage or injury. These pumps are not intended, nor should it be used to pump fuels, such as gasoline, fuel oil, or Diesel fuels. Many solvents and fluids such as windshield washer solvent, anti freeze, brake fluid, and water will damage pump components and may cause the pump to seize, rendering the pump unusable. Any other use not in accordance with instructions will result in loss of claim for warranty or liability.

⚠ WARNING

These pumps are to be operated with compressed air only. Operation with combustible gasses is prohibited. Maximum air pressures should not be exceeded. Failure to heed this warning may result in serious personal injury, property damage, and failure of the pump.

⚠ WARNING

FAILURE TO HEED THE FOLLOWING WARNINGS INCLUDING MISUSE, OVER PRESSURIZING, MODIFYING PARTS, USING INCOMPATABLE CHEMICALS AND FLUIDS, OR USING WORN OR DAMAGED PARTS, MAY RESULT IN EQUIPMENT DAMAGE AND/OR SERIOUS PERSONAL INJURY, FIRE, OR PROPERTY DAMAGE.

- Do not exceed the stated maximum working pressure of the pump, 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.
- Make sure all grease connections are securely tightened before using this equipment.
- Always read and follow the grease manufacturer's recommendations regarding grease compatibility, and the use of protective clothing and equipment.
- Check all equipment regularly and repair or replace worn or damaged parts immediately.
- Never point the dispensing valve at any part of the body or at another person.
- Never try to stop or deflect material from dispensing valve or leading connection or component with your hand or body.
- Always check equipment for proper operation before each use, making sure safety devices are in place and operating properly.

INSTALLATION

Pumps are tested in light oil before shipment. To avoid system contamination, flush the pump with the lubricant to be dispensed before installing the pump.

Flush all supply lines, hoses, reels and fittings used in the dispensing system with mineral spirits or other petroleum based solvent to remove dirt, chips and other foreign matter that may damage the pump or other system components. The components should be blown dry with air after flushing.

Placement of a low restriction shut-off valve (such as a ball or gate valve) into the system between the pump outlet and overhead delivery system is recommended. This will allow the pump to be isolated from the system and be removed for service.

Lincoln recommends using a filter/regulator (3/8" NPT port size) such as a Lincoln #602136 in the air supply line to the pump to regulate the air pressure to the pump.

Lincoln does not recommend using Teflon tape pipe sealant when making connections to this pump.

⚠ WARNING

FAILURE TO HEED THE FOLLOWING WARNINGS MAY RESULT IN PERSONAL INJURY AND/OR PROPERTY DAMAGE.

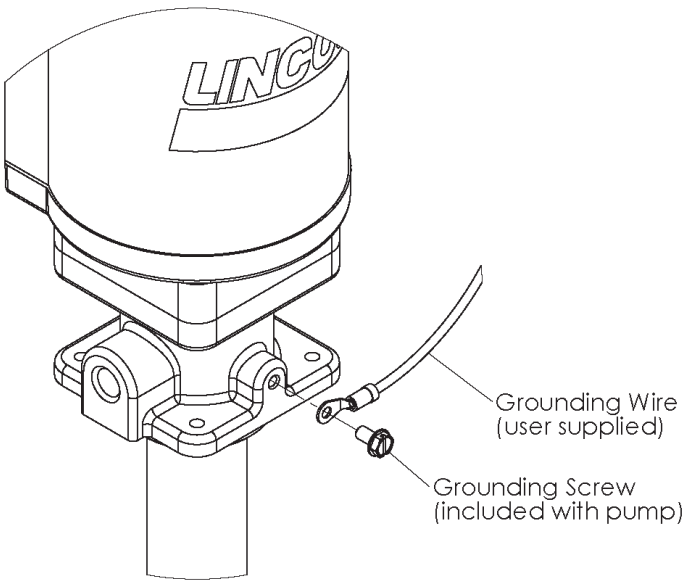
- ALWAYS determine the correct air pressure to operate the lubrication pump. This pump can develop over 7500 PSI. To determine the air pressure to operate the lubrication pump, simply divide the rated pressure of the lowest rated component on the down stream side of the pump by the lubricant to air pressure ratio of the pump.

EXAMPLE: The lowest rated component has a rating of 4000 PSI. If the lubrication pump is a 50:1 pump, divide 4000 PSI by 50 to determine the correct air pressure setting, (4000 PSI/50 = 80 PSI). Set the air regulator that controls the air to the pump to 80 PSI or less.

- NEVER point the control valve at any part of the body or at another person.
- NEVER try to stop or deflect material from the dispensing valve, leaking connection or component with your hand.
- ALWAYS relieve pressure from the system before servicing
- AVOID contact with the nozzle.

GROUNDING THE PUMP

The pump should be grounded to reduce the possibility of static discharge. To ground the pump remove the grounding screw from the pump outlet body and insert the screw through a ring terminal which has been attached to a grounding wire. Securely tighten the screw into the outlet body. The other end of the grounding wire should be securely connected to a true earth ground.



INITIAL PUMP PRIMING

When the pump is operated for the first time, the pump will have to be primed. To prime the pump, remove the grease hose from the pump lube outlet and set aside. Connect the airline to the air inlet of the pump with an air pressure of less than 40 PSIG. Slowly increase the air pressure to the pump until the pump begins to operate very slowly. Allow the pump to operate at the slow speed until lubricant begins to flow out of the pump lube outlet.

After lubricant, free of air begins to flow from outlet, stop the pump. Attach the high pressure hose and control valve to the pump lubricant outlet. Restart the pump and hold the control valve nozzle in a suitable container while holding the control valve open to prime the hose and control valve. Increase the air pressure to the pump as required, keeping it operating.

After the pump and hose have been primed and are free of are, the air pressure may be increased to the desired operating pressure. Check for leaks at all connections.

BASIC PUMP OPERATION

The air pressure should be adjusted so that the pump can overcome the backpressure in the lube system. Too much air pressure can cause the pump to deliver grease very rapidly, causing damage to the equipment being lubricated.

When the pump is not in operation, disconnect the air supply to the pump and relieve all pressure on the control valve and grease hose. **See Pressure Relief Procedure**, below

Followers are recommended with lubricants that do not readily seek their own level, or in cold temperature conditions. They help by keeping the grease on an even level and reduce the air pockets that can form in the grease by the removal of grease by the pump from the bottom of the container.

PRESSURE RELIEF PROCEDURE

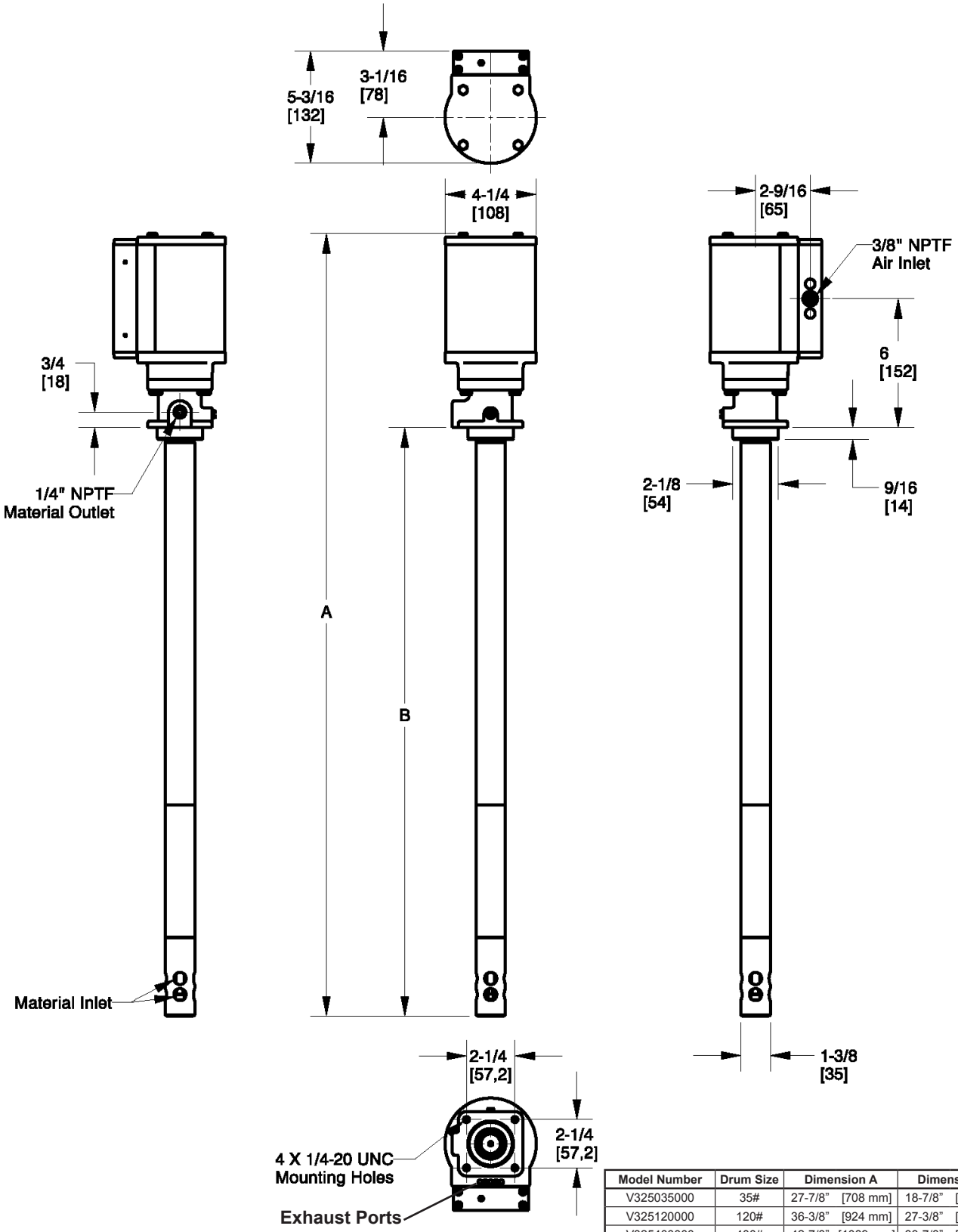
The following procedure should be used whenever it becomes necessary to perform any service on the pump and when the pump is not to be in operation for an extended period.

- Disconnect the air supply from the pump air inlet.
- Direct the grease coupler on the end of the control valve into a suitable container and open the control valve by squeezing the lever. Lubricant pressure will be dissipated as the grease flows out of the grease coupler.
- After all grease flow stops, the pressure has been relieved and the pump can be serviced.
-

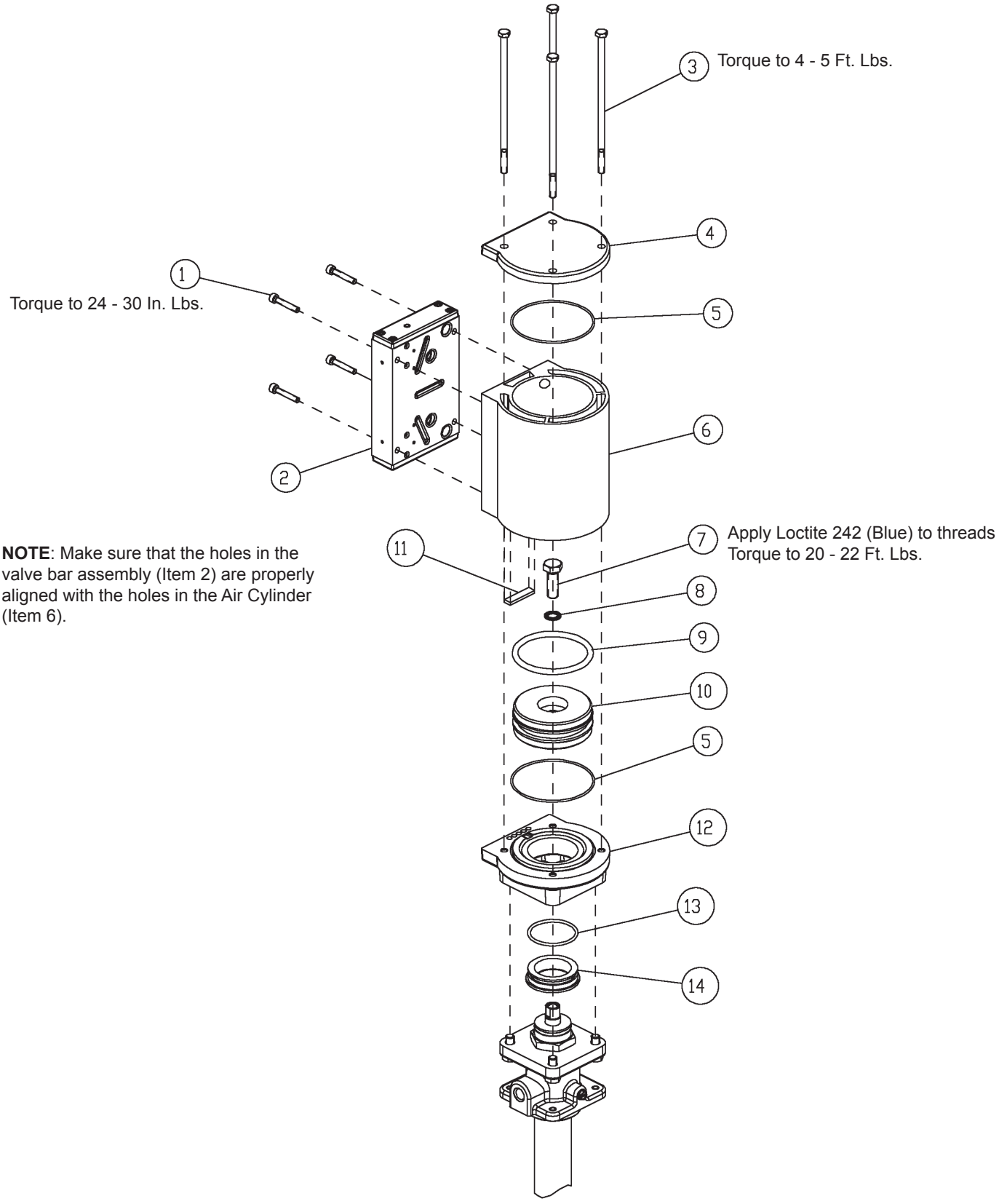
PUMP REPAIR

These pumps are designed for relatively simple repairs. In most cases wear will be limited to the soft parts used in the pump and replacement of these items is all that is necessary. See illustrations on the following pages for the pump break down and service parts. Service kits consisting of the normal wear items are available and listed in the parts list on the following pages.

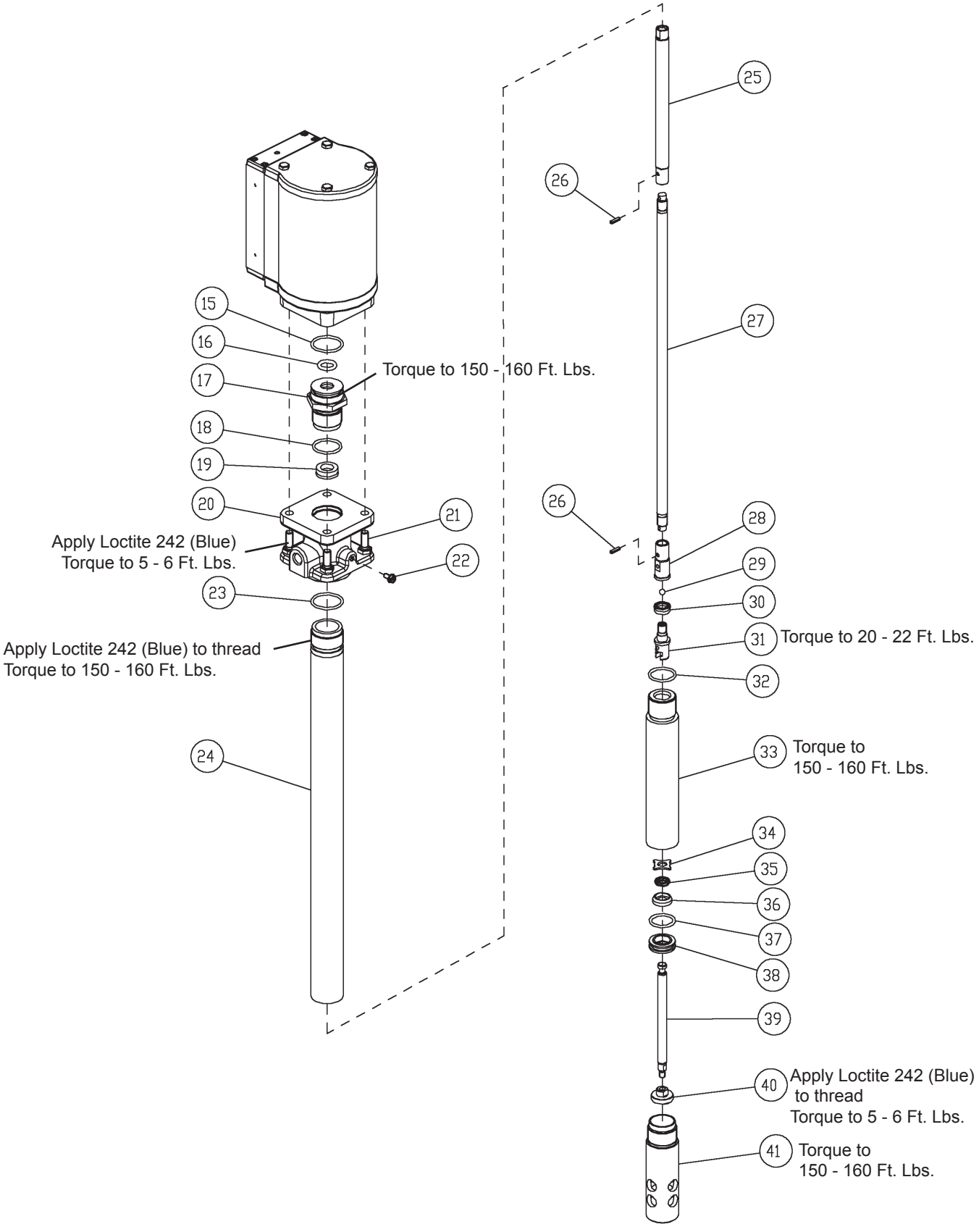
Contact your nearest authorized Lincoln Service Dealer or Lincoln Technical Services Department for assistance.



Model Number	Drum Size	Dimension A	Dimension B
V325035000	35#	27-7/8" [708 mm]	18-7/8" [480 mm]
V325120000	120#	36-3/8" [924 mm]	27-3/8" [695 mm]
V325400000	400#	42-7/8" [1089 mm]	33-7/8" [860 mm]



NOTE: Make sure that the holes in the valve bar assembly (Item 2) are properly aligned with the holes in the Air Cylinder (Item 6).


25
26
27
15
16
17
Torque to 150 - 160 Ft. Lbs.
18
19
20
21
Apply Loctite 242 (Blue)
Torque to 5 - 6 Ft. Lbs.
22
23
Apply Loctite 242 (Blue) to thread
Torque to 150 - 160 Ft. Lbs.
24
26
28
29
30
31
Torque to 20 - 22 Ft. Lbs.
32
33
Torque to
150 - 160 Ft. Lbs.
34
35
36
37
38
39
40
Apply Loctite 242 (Blue)
to thread
Torque to 5 - 6 Ft. Lbs.
41
Torque to
150 - 160 Ft. Lbs.

Parts List

Item No.	Description	Qty.	Part No.
1	Socket Head Screw (M5x0.8x30mm)	4	275045
2	Valve Bar Assembly	1	275408
3	Hex Head Screw (M6x1x150mm)	4	275039
4	Cylinder Head	1	275051
5	O-ring (nitrile)	2	275037*
6	Air Cylinder	1	275047
7	Hex Head Screw (M10x1.5x30mm)	1	275035
8	Seal (nitrile)	1	275036*
9	O-ring (nitrile)	1	34358*
10	Piston	1	275054
11	Muffler Element	1	275178*
12	Cylinder Base	1	275053
13	O-ring (nitrile)	1	34309*
14	Adapter	1	275127
15	O-ring (nitrile)	1	34314*
16	O-ring (nitrile)	1	275096*
17	Gland Nut	1	275074
18	O-ring (polyurethane)	1	275095*
19	U-cup (polyurethane/nitrile)	1	275098*
20	Outlet Body	1	275065
21	Hex Head Screw (M8x1.25x20mm)	4	275066
22	Grounding Screw (#10-32x3/8 in)	1	275129
23	O-ring (polyurethane)	1	275123*
24	Pump Tube	1	See Tube / Rod List
25	Plunger Rod	1	275070
26	Spring Pin	2	275126*
27	Connecting Rod	1	See Tube / Rod List
28	Piston Adapter	1	275117
29	Check Ball	1	275125
30	U-cup (polyurethane/nitrile)	1	275102*
31	Piston Body	1	275116
32	O-ring (polyurethane)	1	275122*
33	Bushing Tube	1	275100
34	Check Stop	1	275113
35	U-cup (polyurethane/nitrile)	1	275104*
36	Check	1	275111
37	O-ring (polyurethane)	1	275121*
38	Check Seat	1	275110
39	Priming Plunger	1	275105
40	Priming Shovel	1	275106
41	Priming Tube	1	275112

*Denotes parts supplied in 276650 Seal Kit

Tube / Rod List

Model Number	Drum Size	Item 24	Item 27
V325035000	35#	275109	275120
V325120000	120#	275108	275119
V325400000	400#	275107	275118

Troubleshooting

Condition	Possible Cause	Corrective Action
Pump does not operate	No air or low air to pump.	Make sure air pressure to pump is adequate to operate pump
	Muffler Element (Item 11) clogged.	Remove muffler element and clean or replace.
	Damaged Air Valve Bar Assembly (Item 2).	Replace Air Valve Bar Assembly.
Erratic operation or short stroking	Pump is not primed.	Prime pump. See “Initial Pump Priming”
	Insufficient material supply.	Refill material supply.
	Damaged Air Valve Bar Assembly (Item 2).	Replace Air Valve Bar Assembly.
Pump operates but dispenses material on only one stroke.	Worn or damaged Piston U-cup (Item 30) or Piston Check Items 29 and 31).	Inspect and replace if needed.
	Worn or damaged Inlet Check (Items 36 and 38).	Inspect and replace if needed.
	Insufficient material supply. Pump is not intaking enough material to dispense on both strokes.	Check inlet for restrictions. Decrease air pressure to reduce pump speed.
Pump is operating but not dispensing material.	Inlet Check (Items 36 and 38) is not seating or is damaged.	Inspect and replace if needed.

Declaration of Conformity as defined by Machinery Directive 98/37/EG Annex II A

This is to declare that the design of the PMV 25:1 Grease Pumps (Models V325035000, V325120000, V32540000) complies with the provisions of Directive 98/37/EG

Applied Standards:

EN 292-1 Safety of Machinery - Basic Concepts, General Principles and Design - Part 1: Basic Terminology, Methodology

EN 292-2 Safety of Machinery - Basic Concepts, General Principles and Design - Part 2: Technical Principles and Specifications - Incorporates amendments 1 (1995) and 2 (1997)

EN 809 Pumps and Pump Units for Liquids - Common Safety Requirements

EN 349 Safety of Machinery - Minimum Gaps to Avoid Crushing of Parts of the Human Body

Paul H. Conley

St. Louis, MO 03/15/07, Paul Conley, Chief Engineer

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 there from 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

PMV Bare Pumps, Series 20, 25, 40 Bare Pumps, Heavy Duty and 94000 Series Bare Reels

Lincoln warrants PMV Bare Pumps, Series 20, 25, 40 bare pumps, and Heavy Duty and 94000 series (94300, 94500, 94100) 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.

Lincoln Industrial Contact Information

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

Customer Service 314-679-4200
Website lincolnindustrial.com

Americas:
One Lincoln Way
St. Louis, MO 63120-1578
USA
Phone +1.314.679.4200
Fax +1.800.424.5359

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Lincoln GmbH
Heinrich-Hertz-Str. 2-8
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www.lincolnindustrial.com