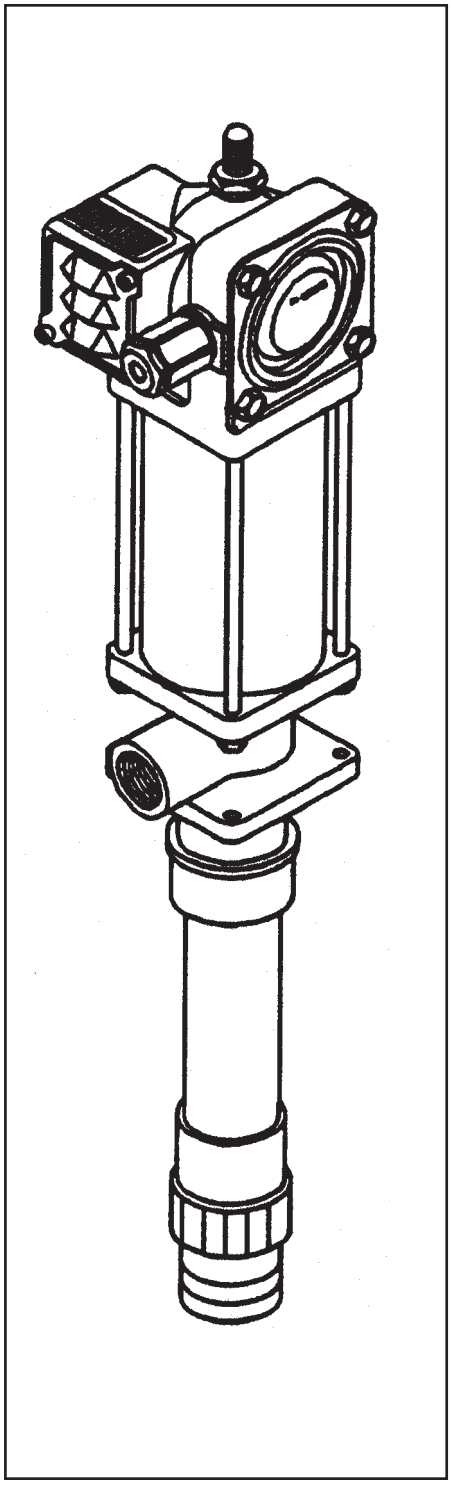
MODELS 282396 AND 282398
STUB PUMP
Series “D”

OWNERS MANUAL



SPECIFICATIONS

Airmotor effective dia. in.	2.0
Stroke, in.	4.8
Air inlet	1/4” NPT
Material outlet	1/2” NPT
Liquid to Air Pressure Ratio	3:1
Delivery output, G.P.M.	6
Delivery in cubic inches per cycle	7.9
Suction head, ft. of oil primed pump	25
Minimum air pressure	40 p.s.i.
Maximum air pressure	200 p.s.i.
Max output pressure	600 p.s.i.
Noise level @ 120 psig	< 85 dBA

DESCRIPTION

Model 282396 is a stub pump designed to pump low and medium viscosity materials. The pump is self-priming and develops a suction head up to 25 ft. of oil after priming.

OWNER/OPERATOR RESPONSIBILITY

It is the owners/operators 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.

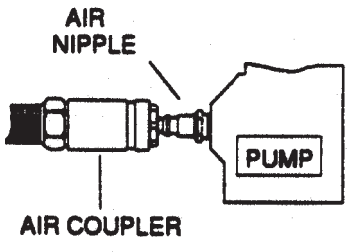
If an owner/operator does not understand English,the contents of this manual shall be explained in the owners/ operators native language to assure the owner/operator comprehends.

It is the owners/operators 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.

SAFETY INFORMATION

Read and understand all warnings, cautions and instructions before operating this equipment. Extreme caution should be used when operating this equipment as personal injury and/ or property damage can result from equipment misuse. Adequate personal protection is recommended to prevent splashing of material on the skin or in the eyes. ALWAYS disconnect air coupler from pump when the pump is not being used.



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⚠ WARNING

FAILURE TO HEED THE FOLLOWING 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.

- Do not exceed the stated maximum working pressure of the pump or of 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 fluid connections are securely tightened 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.
- 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.
- Always follow the pressure relief procedure after shutting off the pump, when checking or servicing any part of the system and when installing, cleaning or changing any part of the system.

⚠ WARNING

Systems which will be dispensing fluids under pressure may need to be protected by using a thermal relief kit, which will safely limit the pressures caused by thermal expansion. Please contact your local Lincoln distributor and refer to Service Page Section K5, Page 31 for more details. Failure to include thermal relief protection may cause damage not covered under Lincoln's warranty policy.

⚠ CAUTION

The pump was tested in lightweight oil which was left in to protect the pump from corrosion. Flushing the pump before connecting it to the system might be desired to prevent possible contamination of the fluid you are pumping.

⚠ WARNING

To reduce the risk of injury from splashing or static sparking when flushing the pump with solvents, always hold a metal part of the dispensing valve firmly to the side of a grounded metal pail and operate pump at lowest possible fluid pressure.

INSTALLATION

Typical bulk tank and drum system hookups are shown and described as follows only as a guide in selecting and installing a system. Contact a Lincoln factory representative for assistance in designing a system for a specific requirement.

TYPICAL SYSTEM HOOKUP

See Figure (t). Determine the tank or drum system for your requirement.

See Figure (2). Obtain an air line filter/ regulator/lubricator to use with the inlet air supply and the correct sized air and fluid lines/hoses with any required reducers, connectors and accessories.

Clean/flush the supply reducers, connectors and accessories with mineral spirits or oil based solvent to purge any contaminants such as dirt, moisture, or metal shavings that could damage the pump or system components. Blow dry with air.

Clean/flush the pump with mineral spirits or oil based solvents If necessary.

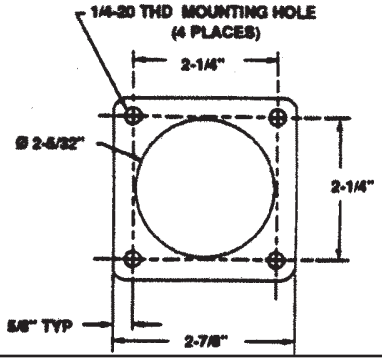
Assemble the cleaned pump and supply line together with any required accessory (low level cut-off).

Mount the assembled pump to the tank or drum.

Connect the material output line/hose to the pump.

Connect the air regulator to the pump.

Make sure all connections are securely tightened.



PRESSURE RELIEF PROCEDURE

Always perform this procedure when the pump is shut off and before checking, servicing, installing, cleaning or repairing any part of this system.

Perform the following procedure:

A. Disconnect the air supply to the pump.

B. Point the dispensing valve away from yourself and others.

C. Open the dispensing valve into an appropriate container until the pressure is relieved.

If the above procedure does not relieve the pressure, the dispensing valve or hose may be restricted. To relieve the pressure, very slowly loosen the hose end coupling. Then loosen completely and clear the dispensing valve and/or hose.

OPERATION

BEFORE USING PUMP

Prior to operation or maintenance a visual inspection shall be made. Check pump system for leaks, worn or missing parts.

Any pump that appears to be damaged in any way, is badly worn or operates abnormally shall be removed from use until repairs are made. Contact a factory authorized service center for repairs.

If overpressurizing of the equipment is believed to have occurred, contact a factory authorized service center for inspection of the pump.

Annual inspection by a factory authorized service center is recommended.

USING PUMP

⚠ WARNING

To prevent personal injury, perform PRESSURE RELIEF PROCEDURE before and after operating the pump.

To start pump, turn on the main air supply. Slowly open the air regulator. Regulate air pressure from 20-40 psig and throttle to prime pump. Open the dispensing valve to allow air to be purged from the system. Allow pump to cycle until fluid without air pockets flows from dispensing valve, then close dispensing valve.

After pump is primed, adjust air pressure to achieve a smooth flow of fluid from the dispensing valve. Do not allow pump to operate when out of material. Pump will accelerate quickly and run too fast, resulting in costly damage to the pump.

If the pump accelerates quickly or is running too fast, stop it immediately. Check the fluid supply and refill it If necessary. Prime the pump to remove all air from the system, or flush the pump and relieve pressure.

In a circulating system, the pump runs continuously and slows down or speeds up as supply demands, until the air supply is shut off.

In a direct supply system, with adequate air pressure supplied to the motor, the pump starts when the gun or dispensing valve is opened and stalls against pressure when it is closed.

Use the air regulator to control pump speed and fluid pressure. Always use the lowest pressure required to achieve the desired results. Higher pressures will cause pump packings to wear prematurely.

MAINTENANCE

⚠ WARNING

To prevent personal injury, perform PRESSURE RELIEF PROCEDURE before and after operating the pump and before performing any maintenance.

LUBRICATION

An air line filter/regulator/lubricator Is recommended for use with your Lincoln pump to remove harmful dirt and moisture from your compressor air supply, and to provide automatic air motor lubrication.

If an air line lubricator is not used, the following procedure should be performed daily:

A. Disconnect air coupler from air fitting.
B. Fill air coupler with NO. 10 SAE motor oil and reconnect to air fitting.
C. Operate pump to distribute lubricant.

MATERIAL RESTRICTION PREVENTION

Flush the system as required with a compatible solvent to prevent material buildup when pumping material that dries or hardens.

CORROSION PREVENTION

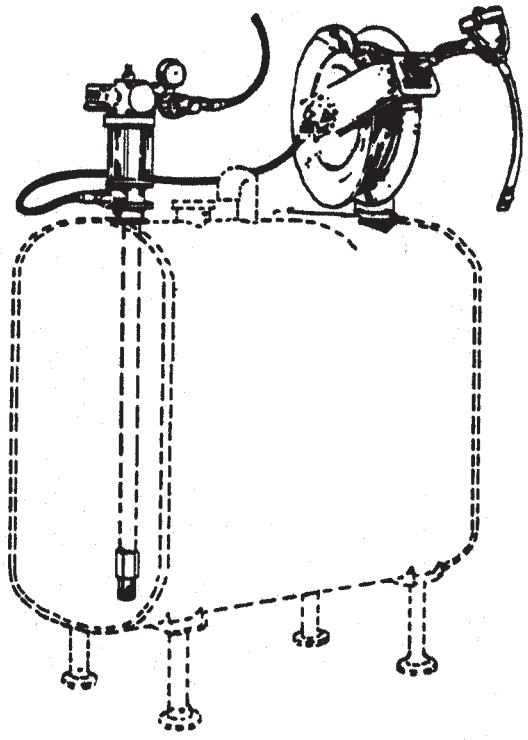
⚠ WARNING

To reduce the risk of injury from splashing or static sparking when flushing the pump with solvents, always hold a metal part of the dispensing valve firmly to the side of a grounded metal pail and operate pump at lowest possible fluid pressure.

To prevent water or air corrosion, never leave the pump filled with water or air. Flush the pump first with a compatible solvent and then again with mineral spirits or oil based solvent.

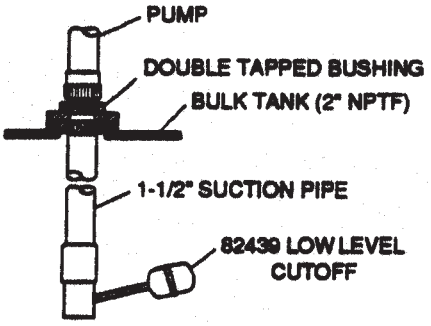
SERVICE PARTS

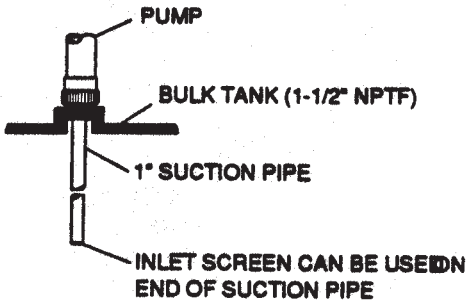
Contact your nearest authorized Lincoln Service Center for service parts and repair.

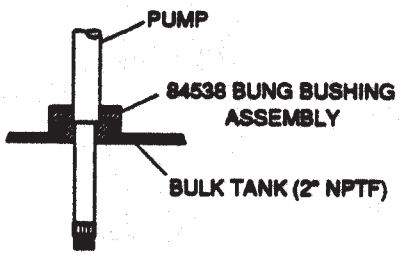


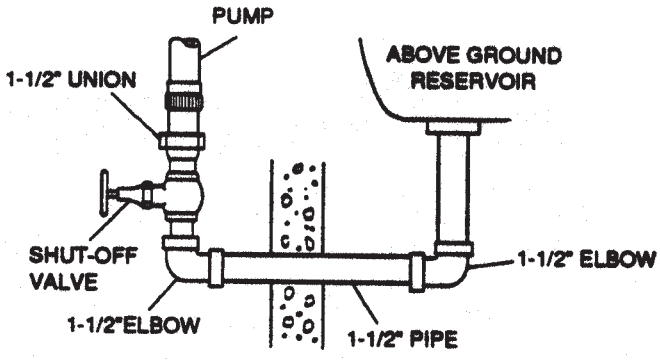
NOTE

When pumping from a bulk tank, use a 82439 low level cutoff to maintain prime and prevent air from being pumped through the meter when the tank is empty.









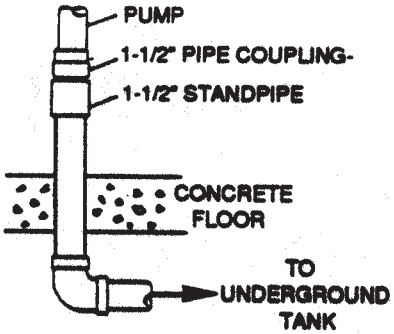
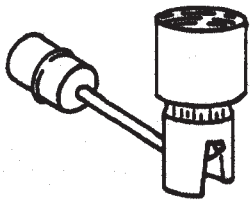


FIGURE (1) TYPICAL INSTALLATIONS

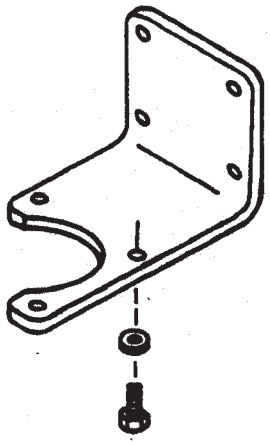
ACCESSORIES (Must be purchased separately)

MODEL 84765 (1" NPT)
FOOT VALVE

MODEL 84946 (1" NPT)
MODEL 82439 (1-1/2" NPT)
LOW LEVEL CUTOFF

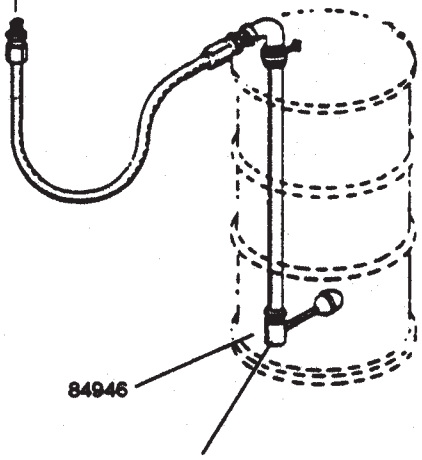


MODEL 84940
WALL MOUNT BRACKET KIT



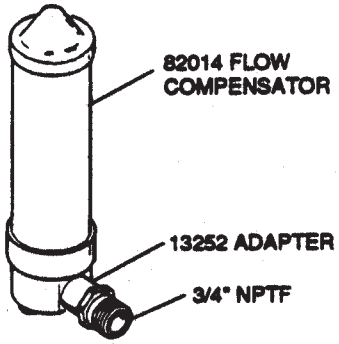
TO PUMP

MODEL 84945 SUCTION KIT
FOR 16 OR 55
GALLON DRUMS



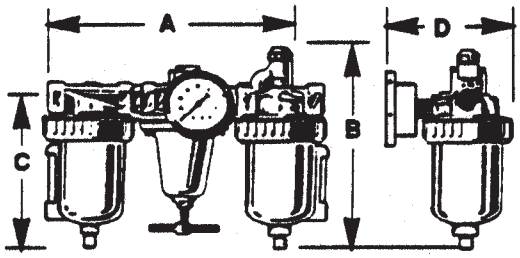
LOW LEVEL CUTOFF IS NOT PART OF MODEL 84945 AND 84946 MUST BE ORDERED SEPARATELY.

MODEL 84600
FLOW COMPENSATOR KIT



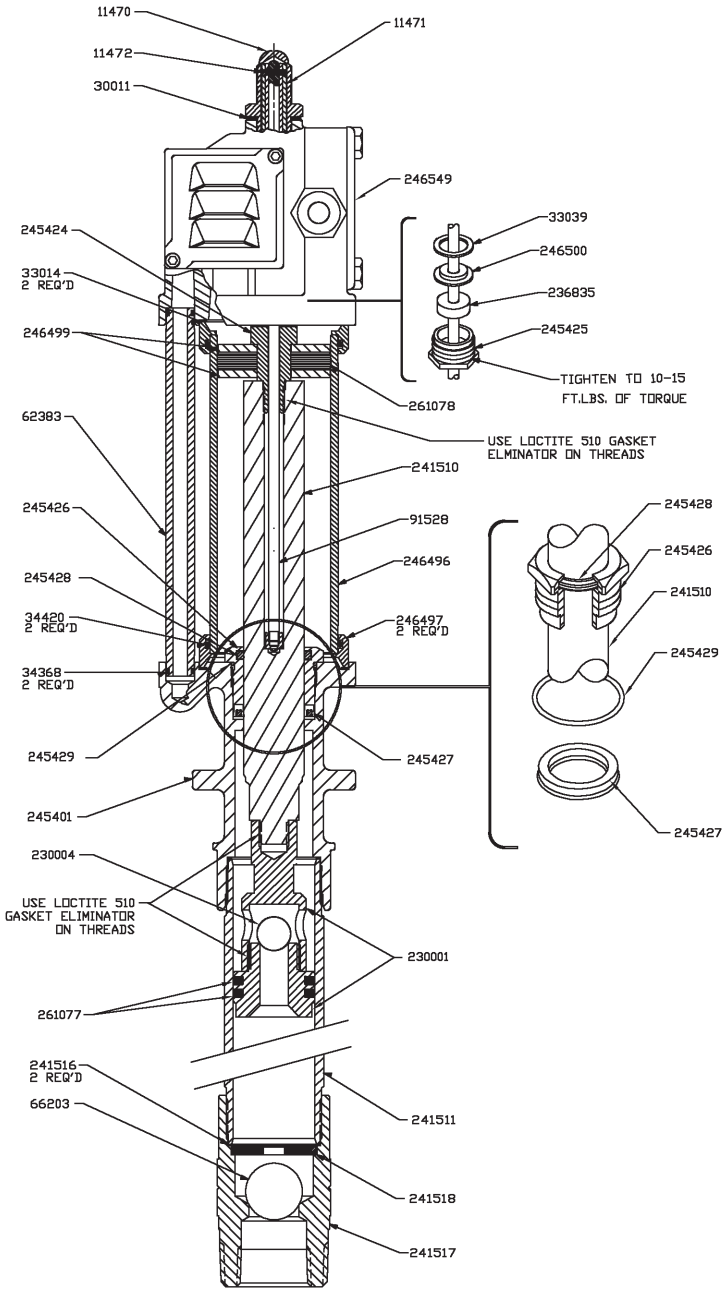
MODEL 84538 (2" NPTF)
BUNG BUSHING ASEMBLY

FILTER-REGULATOR AND GAUGE-LUBRICATOR



MODEL	PIPE SIZE	A	B	C	D	WEIGHT
83387-4	1/4"	8-3/4"	7-5/8"	5-3/8"	4-1/8"	5.5 LBS
83387-6	3/8"	8-3/4"	7-5/8"	5-3/8"	4-1/8"	5.5 LBS
83387-8	1/2"	10-3/4"	8-1/8"	5-3/4"	4-3/4"	8.5 LBS

FIGURE (2) ACCESSORIES



SERVICE PARTS LIST

PARTS	QTY	DESCRIPTION	PARTS	QTY	DESCRIPTION
11470	1	Valve cap	*** *230002	1	Piston seat
11471	1	Trip collar	*** *230003	1	Piston
*11472	1	Trip rod pin	*** *230004	1	Connecting rod
11475	1	Trip shoe	**236615	1	Muffler cover
11659	1	Air nipple	**236833	1	Muffler
11904	1	Packing nut gasket	* **236835	1	Packing (Nitrile)
11905	1	Packing cap	236868	4	Screw
11947	1	Trip sleeve	**236869	4	Screw
*30003	1	Packing nut gasket	236870	4	Valve seat screw
*30011	1	Valve cap gasket	**237562	1	Air valve casting
* **33014	2	Gasket	241510	1	Piston rod
* **33039	1	Gasket	241511	1	Pump tube
*34420	2	0-ring	241512	4	Tie rod
*34110	1	Packing (Nitrile)	*241516	2	Pump tube gasket
*34158	1	O-ring (Neoprene)	241517	1	Foot valve body
*34368	2	O-ring (Nitrile)	241518	1	Ball stop
#38162	1	Valve Gasket	245401	1	Outlet casting
45605	1	Valve guide plate	245424	1	Piston bolt
48237	1	Packing washer	**245425	1	Trip rod packing nut
51009	4	Nut	245426	1	Gland packing nut
#55138	4	Spring	*245427	1	U-cup
*56038	2	Spring	*245428	1	Quad-ring
62383	1	Air passage tube	*245429	1	O-ring
66203	1	Steel ball	246496	1	Air cylinder
69102	2	Steel ball	246497	2	Cylinder ring
69578	1	Warning Plate	261078	l	Air piston patting
83063	1	Slide & Seat Kit	246499	2	Air piston washer
91331S	1	Toggle assembly	*246500	1	Washer
91528	1	Trip rod	*** *261077	2	Packing (Nitrile)
236286	1	Cover	261078	1	Air piston packing

* Included in230015 Repair Kit

** Included in 237563 Repair Kit

*** Included in 230001 Piston Replacement Kit

Included in 83063 Valve Seat Assembly

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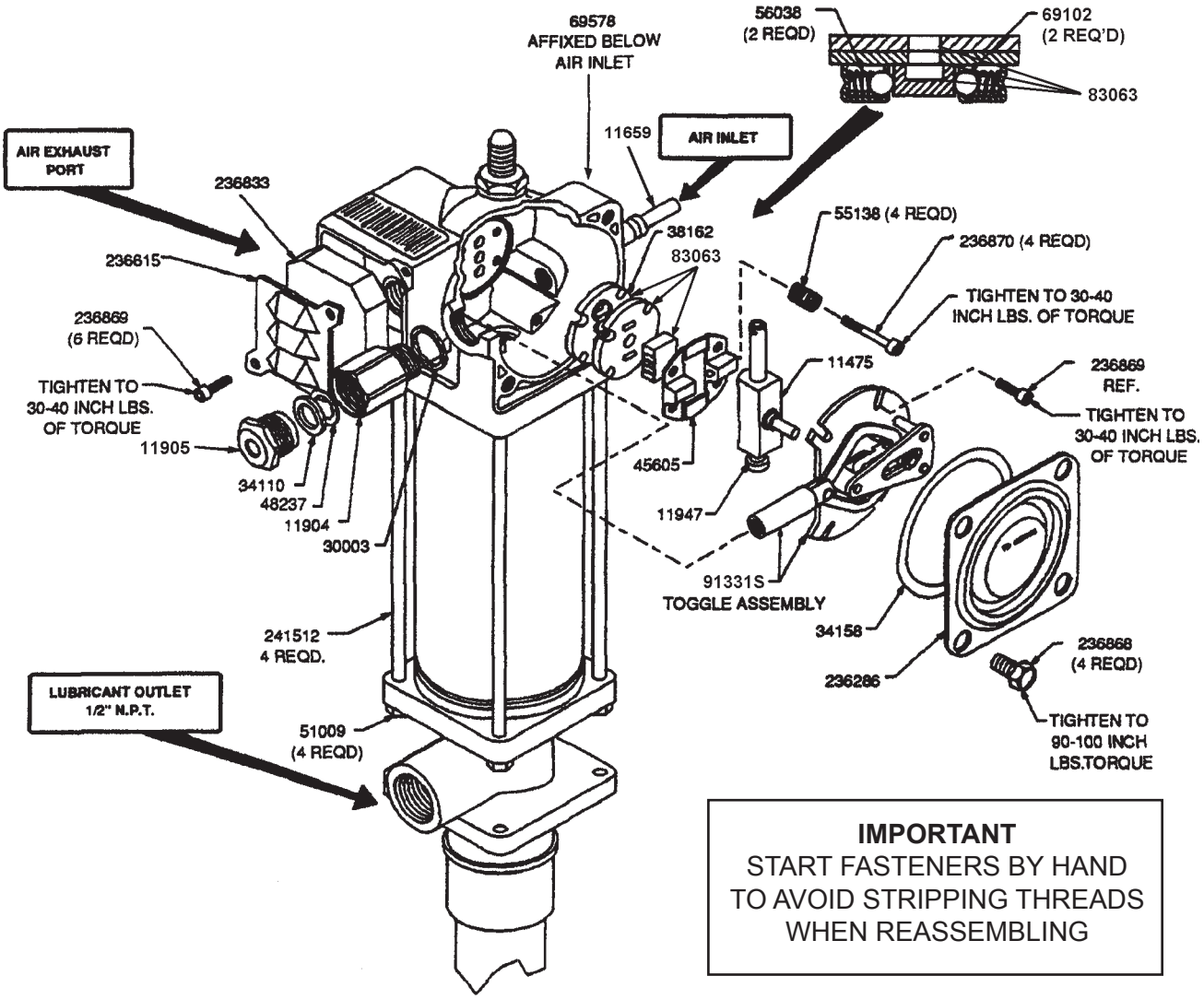
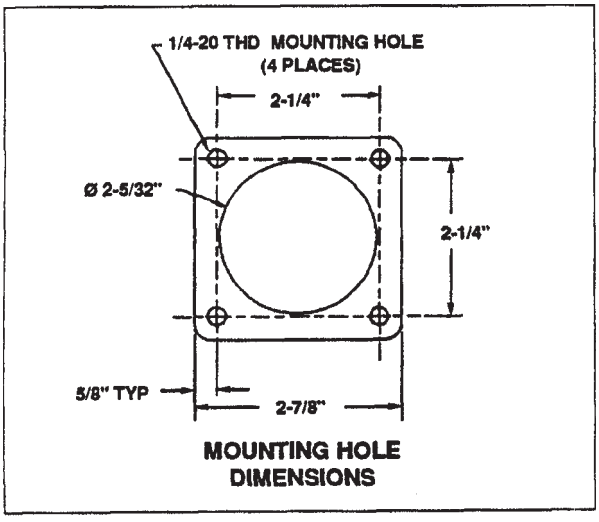


IMPORTANT
START FASTENERS BY HAND
TO AVOID STRIPPING THREADS
WHEN REASSEMBLING



MOUNTING HOLE
DIMENSIONS

TO LUBRICATE AIR VALVE MECHANISM

A. DISCONNECT AIR TO PUMP.

B. PERFORM PRESSURE RELIEF PROCEDURE.

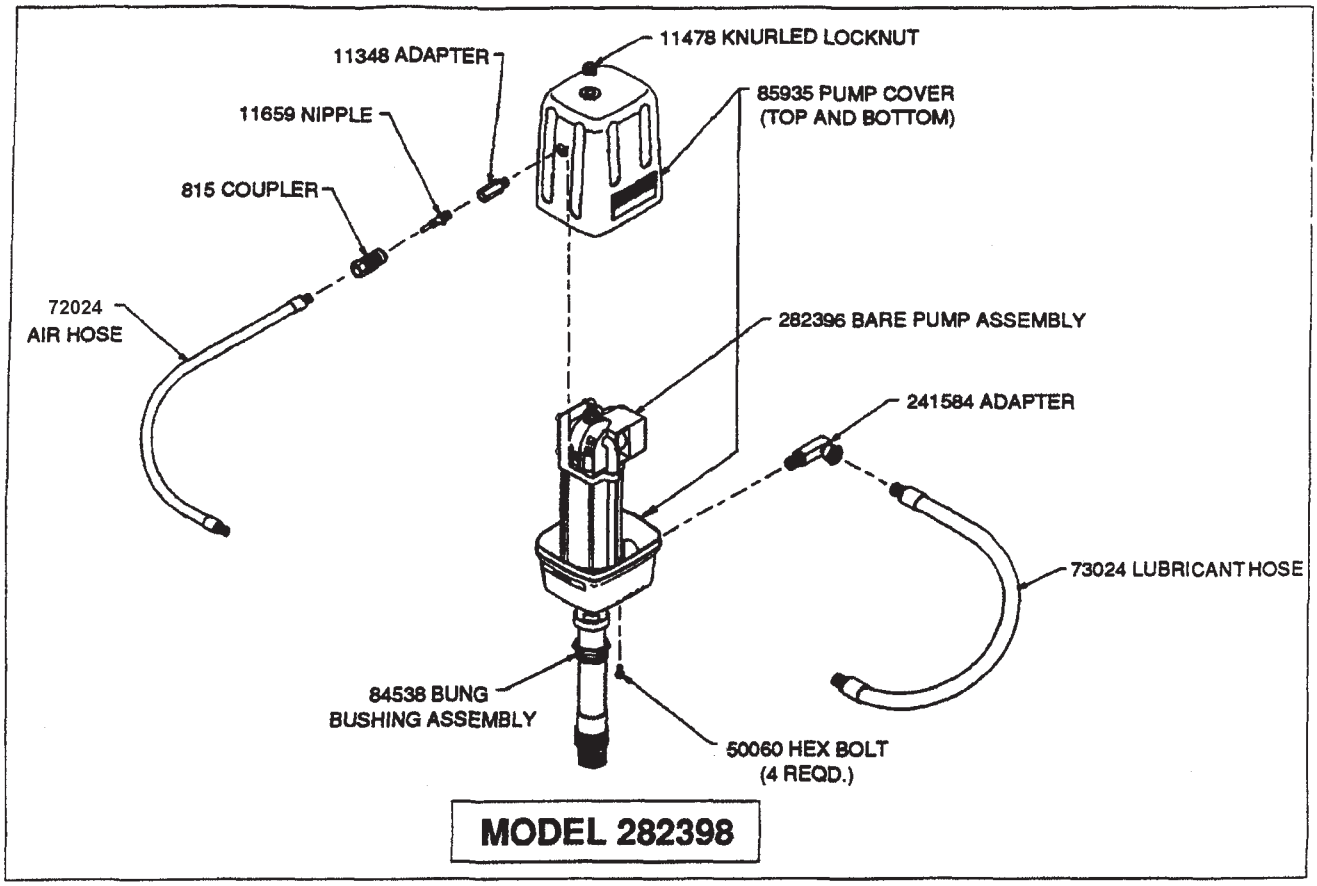
C. REMOVE FOUR COVER SCREWS, COVER PLATE AND COVER PLATE GASKET.

D. PACK GREASE BEHIND TOGGLE PLATE. USE APPROX. 1-1/2 OUNCES OF N.L.G.I. NO 1 (LIGHT GRADE) WATER REPELLENT GREASE 220, SP2.

E. IF TOGGLE PLATE HAS BEEN REMOVED FROM AIR VALVE CASTING, PACK CAVITY WITH GREASE BEFORE REPLACING TOGGLE PLATE.

F. REPLACE COVER PLATE GASKET, COVER PLATE AND COVER SCREWS. TIGHTEN TO PREVENT AIR LEAKS.

G. PERIODIC INSPECTION OF PARTS AT LEAST ONCE A YEAR IS ADVISED.



DISASSEMBLY

⚠ WARNING

To prevent personal injury perform PRESSURE RELIEF PROCEDURE before and after operating and before performing any disassembly or assembly.

NOTE

If complete disassembly is required, order the repair kit and replace ALL gaskets, O-rings and packings.

A. Remove valve cap (11470), trip rod pin (11472) and trip collar (11471).

B. Remove four tie nuts (51009) from tie rods (241512).

C. Unscrew trip sleeve (11947) from the trip rod (91528) and lift air valve casting (237562) off of air cylinder (246496).

D. Remove packing nut (11904) and packing cap (11905) from air valve casting. Remove the packing (34110) and packing washer (48237).

E. Remove four screws (236868) and cover (236286) with the O-ring (34158).

F. Remove four screws (236869), toggle plate (91331S), trip shoe (11475) and trip sleeve (11947).

G. Remove four valve seat screws (236870), four springs (55138), valve guide plate (45605) with two springs (56038), two balls (69102) and valve slide and seat kit (83063) with gasket (38162).

H. Unscrew trip rod packing nut (245425) from air valve casting and remove all packing and gaskets.

I. Unscrew foot valve body (241517) and pump tube (241511) from outlet casting (245401).

J. Remove air cylinder (246496) and air passage tube (62383) from outlet casting.

© K. Place wrench on piston (230002) and piston connector (20003). Remove piston (230002) with two packings (261077) and ball check (230004).

L. Place wrench on piston bolt (245424) and piston rod (241510) and remove piston bolt (245424), piston packing (261708), two washers (246499) and trip rod (91528).

M. Unscrew gland packing nut (245426) from outlet casting and remove all gland seal parts.

© Indicates change

TROUBLESHOOTING

If the following procedures do not correct the problem, contact a factory authorized service center. When submitting equipment to be repaired, be sure to state the nature of the problem and indicate if a repair cost estimate is required.

PROBLEMS

AIRMOTOR DOES NOT OPERATE.

- Check air supply to pump.
- Check trip rod pin (11472), trip rod (91528) and toggle assembly (91331) for break-age or loose parts.

AIR SEEPAGE FROM AIR EXHAUST WHILE PUMP IS NOT OPERATING

- Check valve slide and seat kit (83063) and gasket (38162), trip rod packing (236835) and washer (246500). Replace if necessary.

LOSS OF PRESSURE, VOLUME OR CONTINUOUS OPERATION OF PUMP WHEN NOT IN NORMAL USE.

- Clean piston seat and ball foot valve.
- © If worn or damaged, replace piston (230002), ball check (230004) and piston packings (261077).
- Check inside diameter of pump tube (241511). If scored, replace pump tube.

EXCESSIVE AMOUNT OF AIR IN LUBRICANT OR EXECSSIVE AMOUNT OF LUBRICANT COMING FROM AIR EXHAUST.

NOTE
Some lubricant exhausts with air normally.

- Replace U-cup (245427), O-ring (245429) and Quad-ring (245428).

ASSEMBLY

To reassemble, perform DISASSEMBLY procedures in reverse.

REPAIR

Repair is limited to replacement of listed service parts. Special procedures and tools are required. Contact Lincoln Customer Service, One Lincoln Way, St. Louis, MO 63120-1578, (314) 679-4300 for your nearest authorized service center.

When ordering replacement parts, list: part number, description, model number and series letter.

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 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

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