

3:1 RATIO, OUTPUT - 6 CU. IN./CYL.
MIN. AIR PRESSURE - 30 PSI
MAX. AIR PRESSURE - 200 PSI
MAX. OUTPUT PRESSURE - 600 PSI

OWNERS MANUAL

IT IS THE RESPONSIBILITY OF THE OWNER AND/OR OPERATOR TO PROPERLY USE AND MAINTAIN THIS EQUIPMENT. CAREFULLY READ AND UNDERSTAND THE INSTRUCTIONS AND WARNINGS IN THIS MANUAL BEFORE OPERATING THIS EQUIPMENT.

If the operator is not fluent in English, the instructions and warnings shall be read and discussed in the operator's native language, making sure the operator comprehends the contents.

This equipment complies with OSHA Standards where applicable.

WARNING

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.

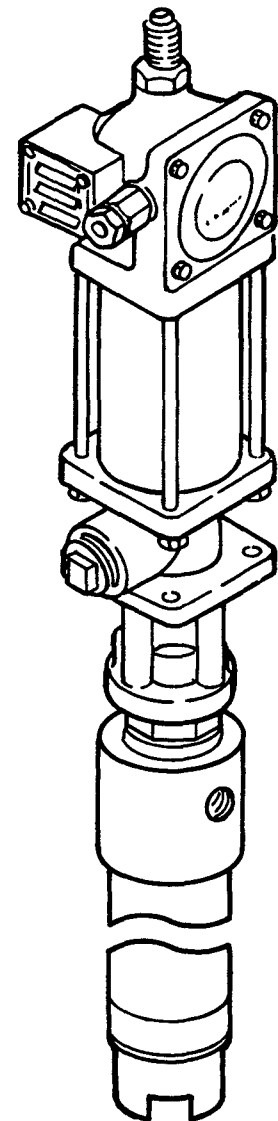
DO NOT attempt to repair or disassemble the equipment while the system is pressurized.

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.



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This manual contains **IMPORTANT WARNINGS** and **INSTRUCTIONS** READ AND RETAIN FOR REFERENCE

SAFETY INSTRUCTIONS

For professional use only. Observe all warnings. Read and understand all instructions before operating equipment. Extreme caution should be used when operating this equipment as personal injury and/or property damage can result from equipment misuse. Adequate protection is recommended to prevent splashing of material onto the skin or into the eyes.



WARNING

NEVER point dispensing valve at any part of the body or at another person.



WARNING

NEVER try to stop or deflect material from dispensing valve or leaking connection or component with your hand or body.



WARNING

ALWAYS check equipment for proper operation before each use, making sure safety devices are in place and operating properly. **DO NOT** alter or modify any part of the equipment as this may cause a malfunction and result in serious bodily injury.



WARNING

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

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



WARNING

PRESSURE RELIEF PROCEDURE

To reduce the risk of serious bodily injury, including splashing into the eyes or onto the skin, always follows this procedure: Whenever you shut off the pump, when checking or servicing any part of the system, and when installing, cleaning or changing any part of the system.

1. Disconnect air to the pump.
2. Point the dispensing valve away from yourself and others.
3. Open the dispensing valve into an appropriate container until pressure is relieved.

If you suspect that the dispensing valve or hose is completely clogged or that pressure has not been fully relieved after following the above procedure, **VERY SLOWLY** loosen the hose end coupling to relieve pressure gradually, then loosen completely. Now clear the valve or hose.

INSPECTION INSTRUCTIONS

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

Specialized equipment and knowledge is required for repair of this pump. Contact the factory authorized warranty and service center nearest you for repair or adjustments other than maintenance specified in this manual.

Annual inspection by the factory authorized warranty and service center nearest you is recommended.

A list of factory authorized warranty and service centers is available upon request.

DAMAGED PUMPS

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 the factory authorized warranty and service center nearest you for repairs.

INSTALLATION

The typical installation shown is only a guide for selecting and installing system components. Contact your Lincoln Representative for assistance in designing a system to suit your specific needs.

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



WARNING

This pump can develop 600 PSI working pressure at 200 PSI maximum incoming air pressure. Be sure that all system equipment and accessories are rated to withstand the maximum working pressure of this pump. **DO NOT** exceed the maximum working pressure of the lowest rated component in the system.

Flush the supply lines and hoses with mineral spirits or oil based solvent and blow dry with air before connecting them to the system. This is to purge any contaminants such as dirt, moisture, or metal shavings that could damage the pump or system components.

The pump was tested in lightweight oil which was left in it to protect the pump from corrosion. Flushing of 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 mineral spirits or oil based solvent, 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.

OPERATION

To start the pump, turn on the main air supply. Slowly open the air regulator until the pump runs smoothly. 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.

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

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

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.



WARNING

To reduce the risk of serious bodily injury or property damage, NEVER exceed the maximum air or fluid working pressure of the lowest rated system component.

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



WARNING

Water or even moist air can cause pump to corrode. To help prevent corrosion, NEVER leave the pump filled with water or air. After normal flushing, flush the pump again with mineral spirits or oil based solvent, relieve pressure and leave mineral spirits in the pump. Be sure to follow all steps of the pressure relief procedure warning.

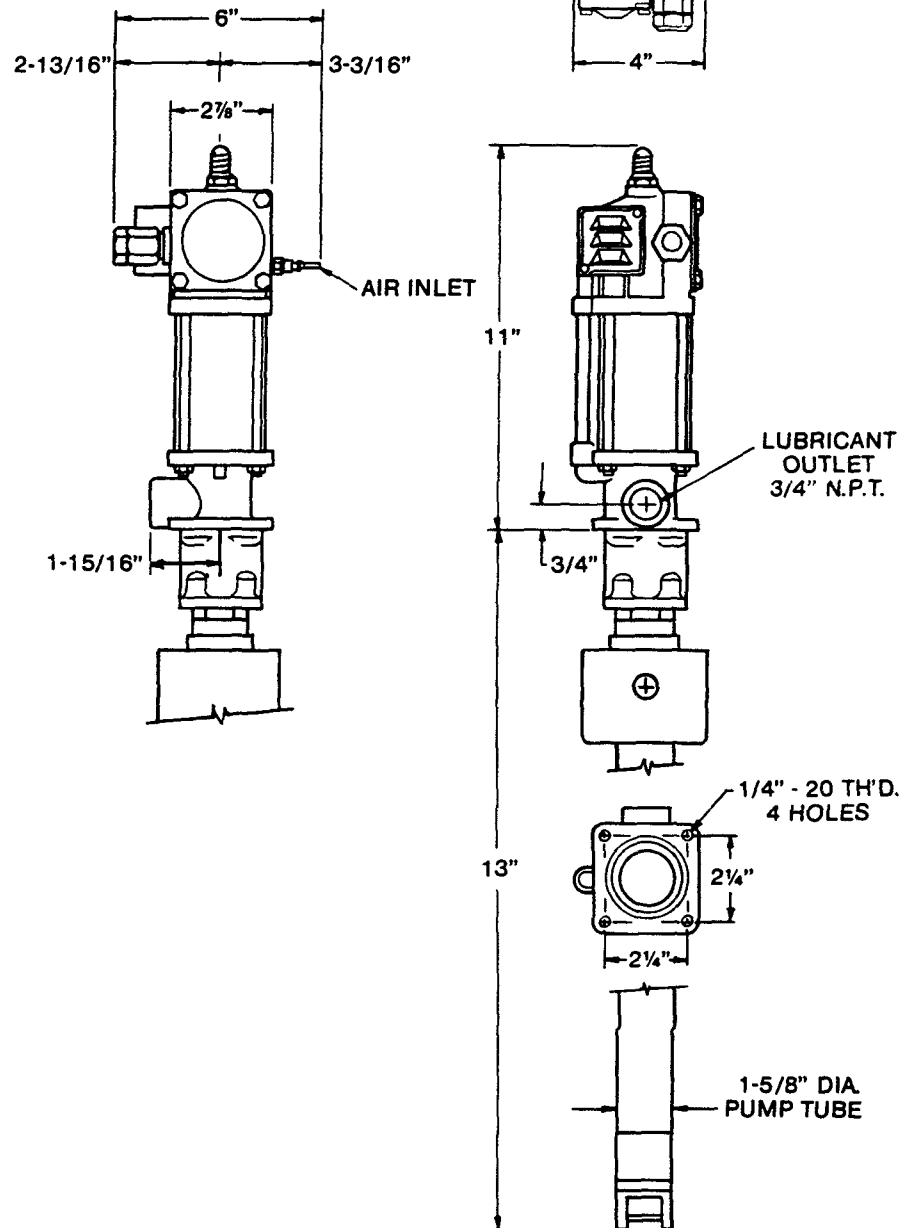
MAINTENANCE



WARNING

To reduce the risk of serious bodily injury, ALWAYS follow the pressure relief procedure warning whenever you stop the pump and before checking or repairing any part of the system.

GENERAL DIMENSIONS



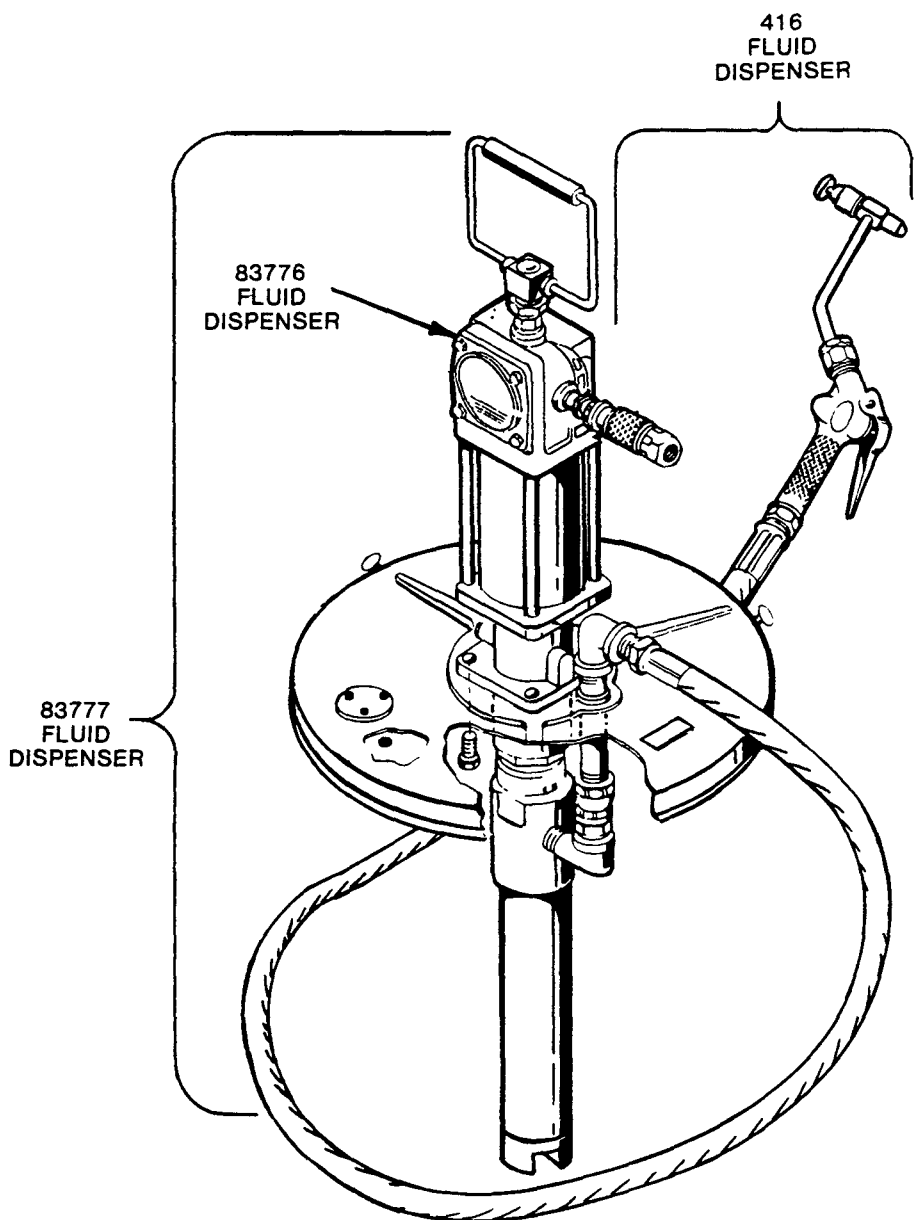
DISASSEMBLY PROCEDURE

1. Remove Valve Cap (11470) and Trip Rod Pin (11472).
2. Unscrew four Tie Rod Nuts (51009) from Tie Rods (10294) and lift Air Valve Casting (237562) off of Air Cylinder (61041).
3. Remove Packing Nut (11904) and Packing Cap (11905) from Air Valve Casting.
3. Remove four Valve Cover Screws (236868) and Cover (236286).
5. Remove four Toggle Plate Screws (236869), Toggle Plate (91331) and Trip Shoe Assembly (236941).
6. Remove four Valve Seat Bolts (236870), Springs (55138), Valve Guide Plate (45605), and Valve Slide, Seat and Gasket (83063).
7. Unscrew Trip Rod Packing Nut (11476) from Air Valve Casting and remove all packing parts.
8. Unscrew Foot Valve Body (13222) from Pump Tube (61528).
9. Unscrew Pump Tube from Pump Tube Adapter (14451).
10. Unscrew Piston Check (16103) from Piston Rod (16446) and remove Pump Piston (92136) and Spring (55336).
11. Loosen Nut (51086) and unscrew Pump Tube Adapter from Outlet Casting (41257).
12. Unscrew Piston Rod from Plunger Rod (14452).
13. Remove Air Cylinder and Air Passage Tube (61502).
14. Place wrenches on Air Piston Bolt (11329) and Air Piston Nut (11337) and unscrew Air Piston Nut allowing removal of Air Piston Washers and Air Piston Packing (34090).
15. Place wrenches on Air Piston Bolt and wrench fast of Piston Rod (11340) and unscrew Piston Rod. Thread Piston Rod through Gland Packing and withdraw with Plunger Rod from bottom of Outlet Casting.
16. Unscrew Gland Nut (12333) from Outlet Casting and remove all gland parts.
17. To reassemble, reverse procedure. Tighten fasteners per torque specifications supplied.

IMPORTANT: To prevent damage to Pump Packings and to help increase Packing life, lube Air Cylinder, Air Piston Rod and Plunger Rod before assembly.

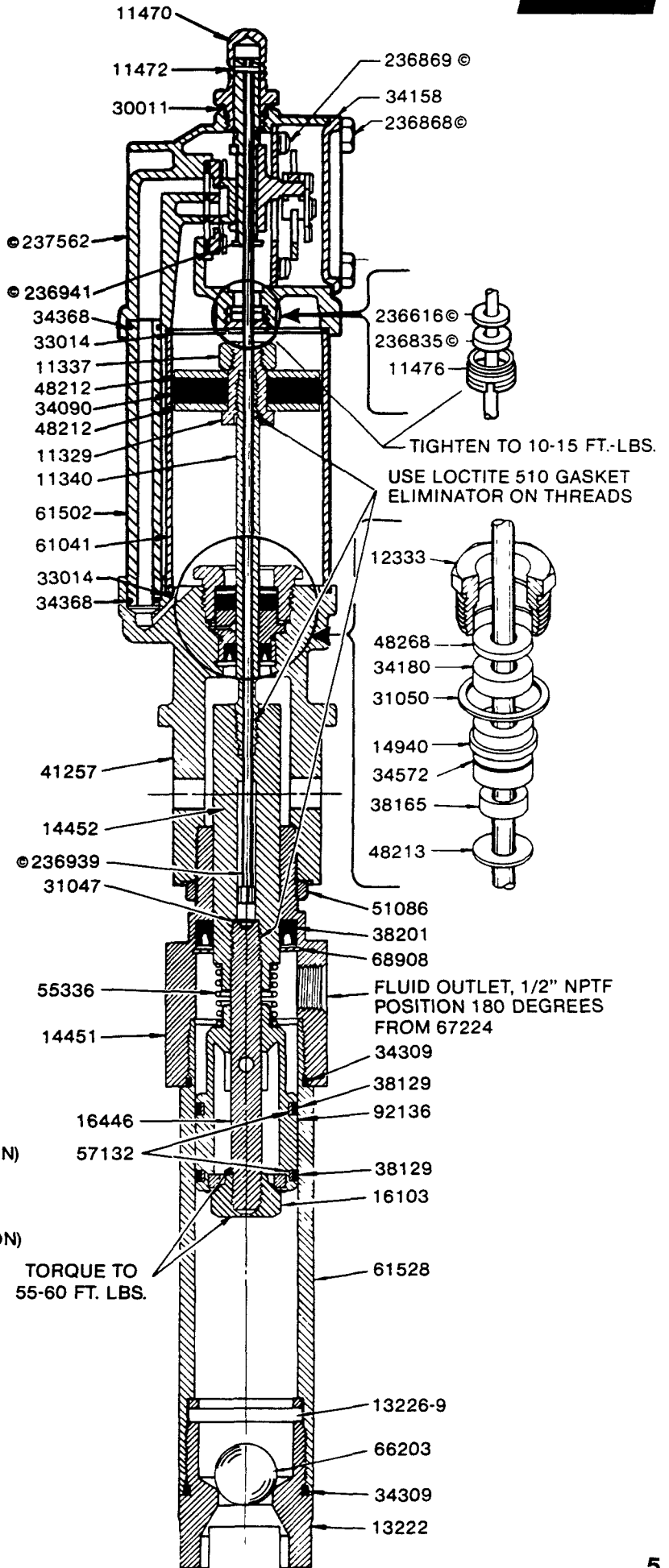
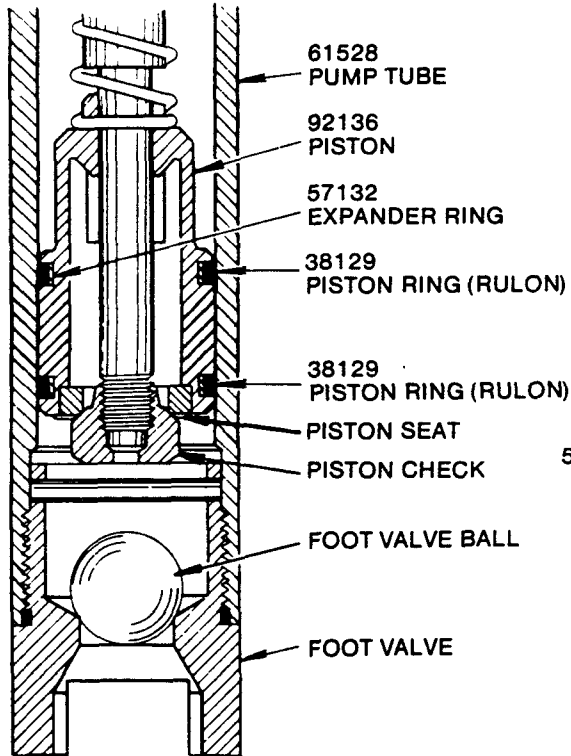
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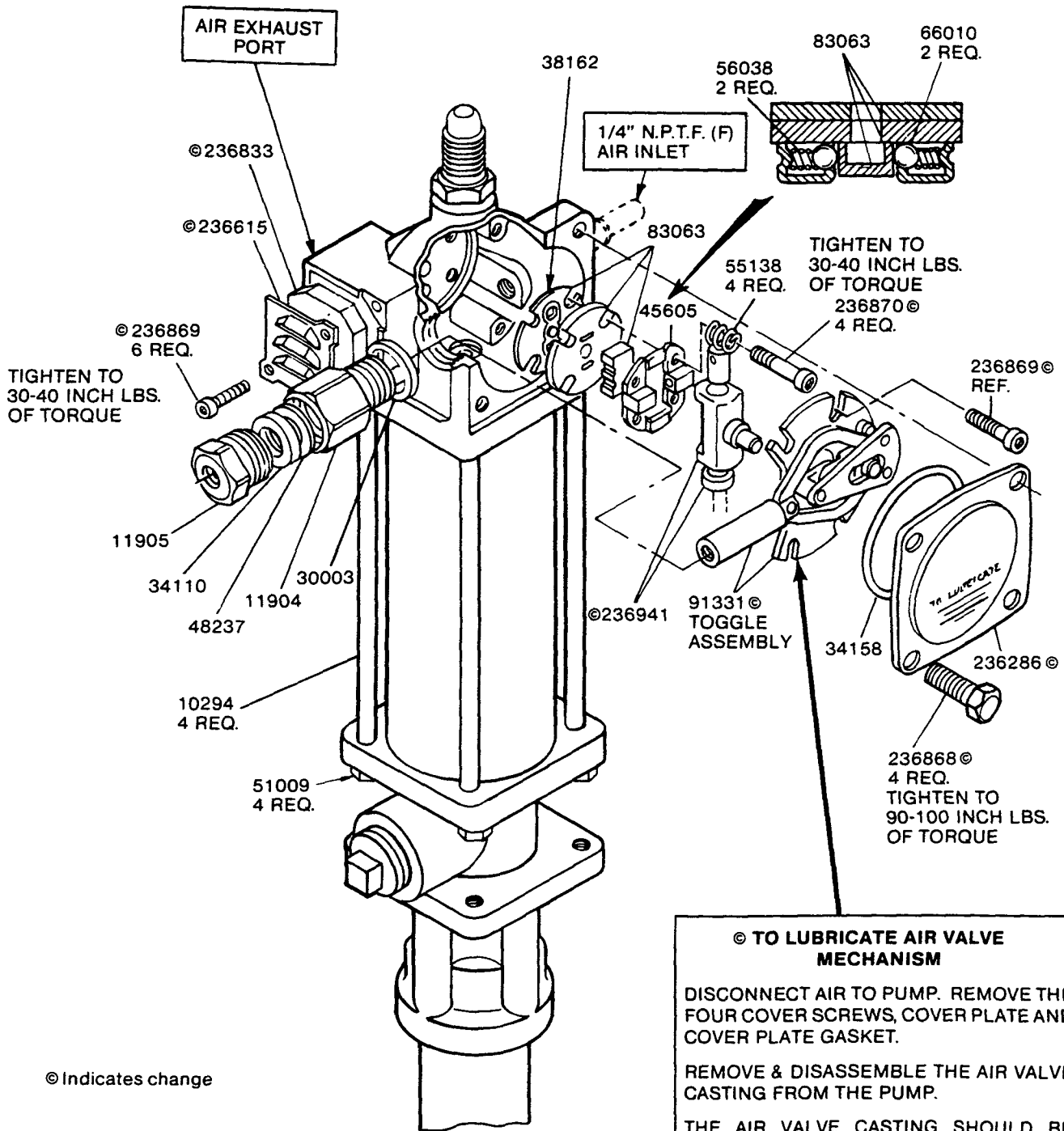
1. Before tightening four Valve Seat Bolts, align the Valve Slide, Seat and Gasket, Valve Seat Gasket (38162) and Air Valve Casting (237562) by placing a rod or ink pen thru the center port hole.
2. Start all fasteners by hand to avoid stripping threads when reassembling.
3. To install Piston Rings:
 - a. Install a Expander Ring (57132) in the lower piston groove of the Pump Piston (92136).
 - b. Install the Piston Ring (38129) over the Expander Ring with their gaps separated 180°.
 - c. Push the Piston into the Pump Tube far enough to retain the lower Piston Ring.
 - d. Repeat procedure to install the upper Piston Ring.



© Indicates change

IMPORTANT - Start fasteners by hand to avoid stripping threads when reassembling.





© Indicates change

© **IMPORTANT**—START FASTENERS BY HAND TO AVOID STRIPPING THREADS WHEN RE-ASSEMBLING

ACCESSORIES

Filter/regulator & gauge/lubricator.

© TO LUBRICATE AIR VALVE MECHANISM

DISCONNECT AIR TO PUMP. REMOVE THE FOUR COVER SCREWS, COVER PLATE AND COVER PLATE GASKET.

REMOVE & DISASSEMBLE THE AIR VALVE CASTING FROM THE PUMP.

THE AIR VALVE CASTING SHOULD BE CLEANED OR FLUSHED TO REMOVE ANY CHIPS, OR OTHER FOREIGN PARTICLES PRIOR TO RE-ASSEMBLY.

BEFORE REPLACING THE TOGGLE ASSEMBLY, PACK CAVITY WITH GREASE.

USE N.L.G.I. No. 1 (LIGHT GRADE) WATER REPELLENT GREASE. APPROX. 1½ OUNCES.

REPLACE COVER GASKET, COVER, AND SCREWS. TIGHTEN TO AVOID AIR LEAKS.

PERIODIC INSPECTION OF PARTS AT LEAST ONCE EACH YEAR IS ADVISABLE.

SERVICE PARTS

Part No.	Qty.	Description	Part No.	Qty.	Description
10294	4	Tie rod	41257	1	Outlet casting
11329	1	Air piston bolt	45605	1	Valve guide
11337	1	Air piston nut	48212	2	Air piston washer
*11340	1	Piston rod	48213	1	Washer
11470	1	Air valve cap	48237	1	Plunger packing washer
*11472	1	Trip rod pin	48268	1	Washer
*11476	1	Trip rod packing nut	51009	4	Tie rod nut
11904	1	Packing nut	51086	1	Nut
11905	1	Packing cap	55138	4	Spring
12333	1	Gland nut	55336	1	Spring
*13222	1	Foot valve body	*56038	2	Spring
13226-9	1	Ball retaining pin	*57132	2	Expander ring
14451	1	Pump tube adapter	*61041	1	Air cylinder
*14452	1	Plunger rod	61502	1	Air passage tube
14940	1	Gland packing spacer	61528	1	Pump tube
*16103	1	Piston check	*66010	2	Steel ball
16446	1	Piston rod	*66203	1	Check ball
*30003	1	Packing nut gasket	67224	1	Pipe plug
*30011	1	Valve cap gasket	68908	1	Retaining ring
*31047	1	Gasket	83063	1	Valve slide, seat & gasket
*31050	1	Gland gasket	*91331	1	Toggle plate
*33014	1	Air cylinder gasket	*92136	1	Pump piston
*34090	2	Air piston packing	236286	1	Cover
*34110	1	Plunger packing	236615	1	Muffler cover
*34158	1	Cover gasket	*236616	1	Trip rod packing gasket
*34180	1	Gland packing	236833	1	Muffler
*34309	1	Gasket	*236835	1	Trip rod packing
*34368	2	O-ring	236868	1	Valve cover screw
*34572	2	O-ring	236869	4	Toggle plate screw
*38129	1	Piston ring (Rulon)	236870	6	Valve seat bolt
*38162	2	Valve seat gasket	*236939	4	Trip rod
*38165	1	U-cup packing	236941	1	Trip shoe assembly
*38201	1	U-cup packing	237562	1	Air valve casting

* Recommended service parts inventory.

TROUBLESHOOTING

Problem	Solution
1. Pump does not operate.	Check air supply to pump. Replace 236941 Trip Shoe Assembly and 91331 Toggle Plate.
2. Air seepage from air exhaust port while pump is not operating.	Replace 83063 Valve Slide, Seat & Gasket, 236835 Trip Rod Packing and 236616 Trip Rod Packing Gasket.
3. Loss of pressure, volume or continuous operation of pump when not in normal use.	Clean Piston Seat and Ball Foot Valve. Clean 92136 Piston, Piston Seat, 16103 Piston Check and 38129 Piston Rings. Replace if worn or damaged. Check inside diameter of 61528 Pump Tube, replace if scored. Inspect lubricant supply line for leaks or breaks.
4. Excessive amount of air entrapped in lubricant or excessive amount of lubricant coming from air exhaust. Note: Some lubricant exhausts with air normally.	Replace the 34180 Gland Packing, 31050 Gland Gasket, 34572 O-ring and 38165 U-cup Packing.
5. Pump will not stall against fluid pressure on "down" stroke.	Clean Ball Foot Valve.
6. Pump will not stall against fluid pressure on "up" stroke.	Replace 38129 Piston Rings. Clean Piston Seat and 16103 Piston Check.