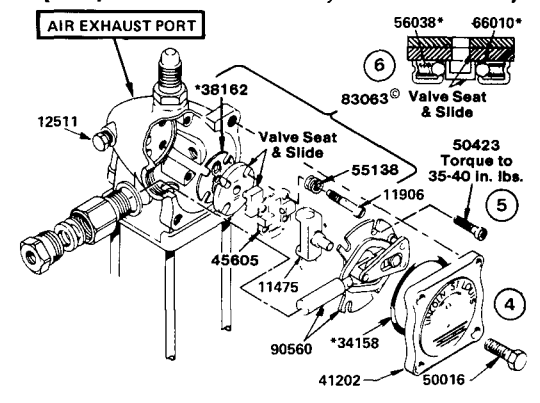
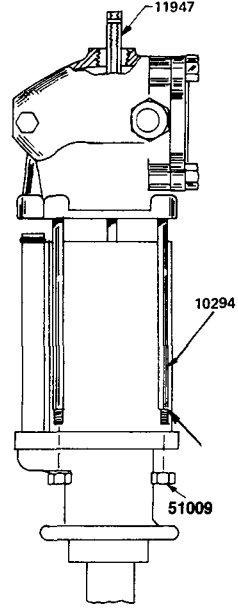
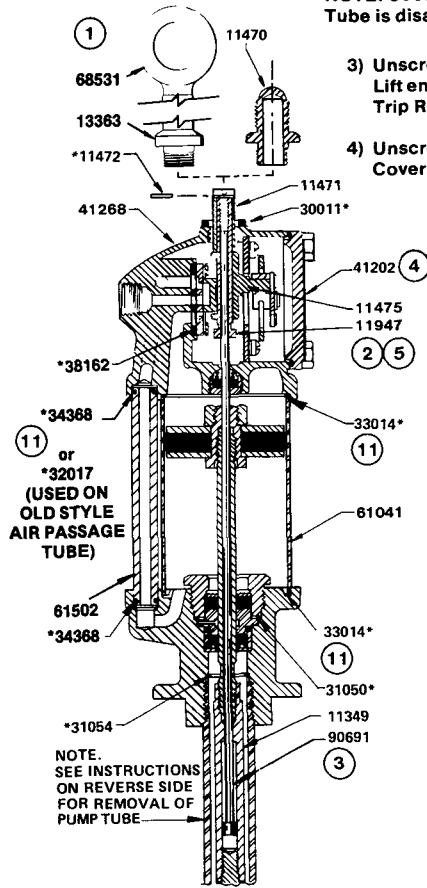


NOTE: PART NUMBERS INDICATED BY * ARE INCLUDED IN 83054 REPAIR KIT.

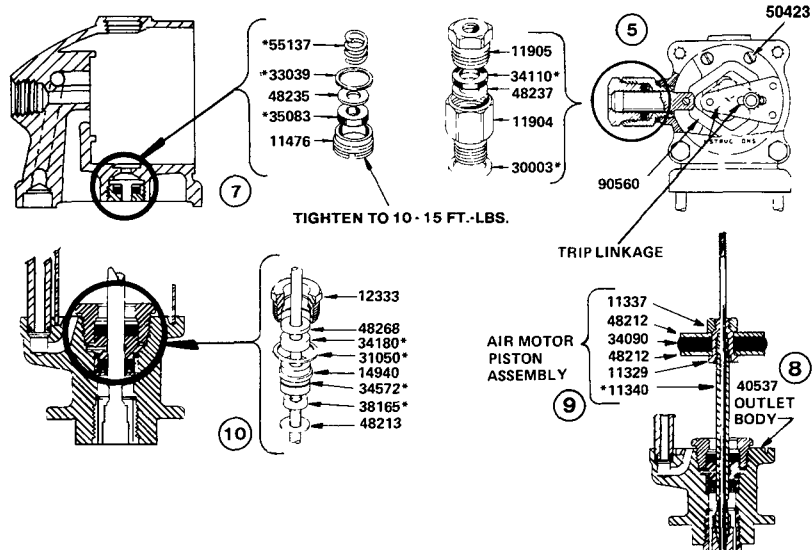
FOR MODELS 81685, 81941, 81985, 82050, 82054, 82716, 83121, 83127, 83513 (2-1/2" AIR MOTOR, 50:1 RATIO)

OLD STYLE

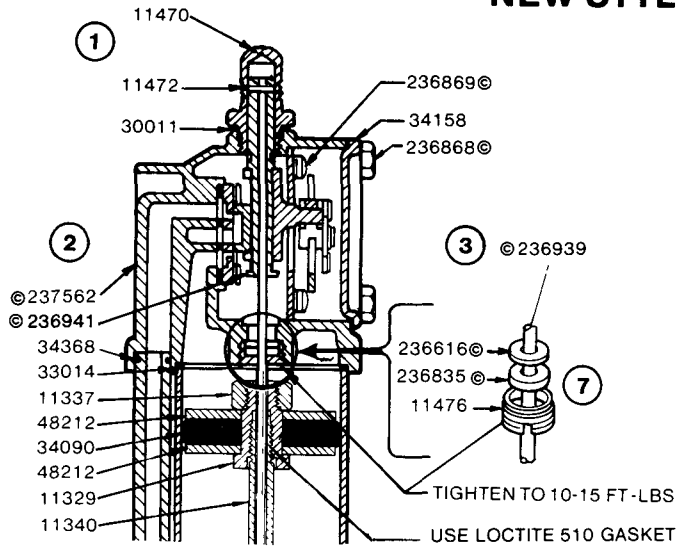
- 1) Unscrew 11470 or 13363 with 68531. Drive 11472 Pin from 11471 Collar. Collar is free to be removed.
- 2) Turn 11947 Trip Sleeve counter-clockwise by hand to unscrew from 90691 Trip Rod.
NOTE: 90691 Trip Rod cannot be removed until Pump Tube is disassembled.
- 3) Unscrew four 51009 Nuts from 10294 Tie Rods. Lift entire Airmotor straight up until free of 90691 Trip Rod. See Step 9.
- 4) Unscrew four 50016 Screws and remove 41202 Cover Plate. Replace the 34158 Cover Gasket.



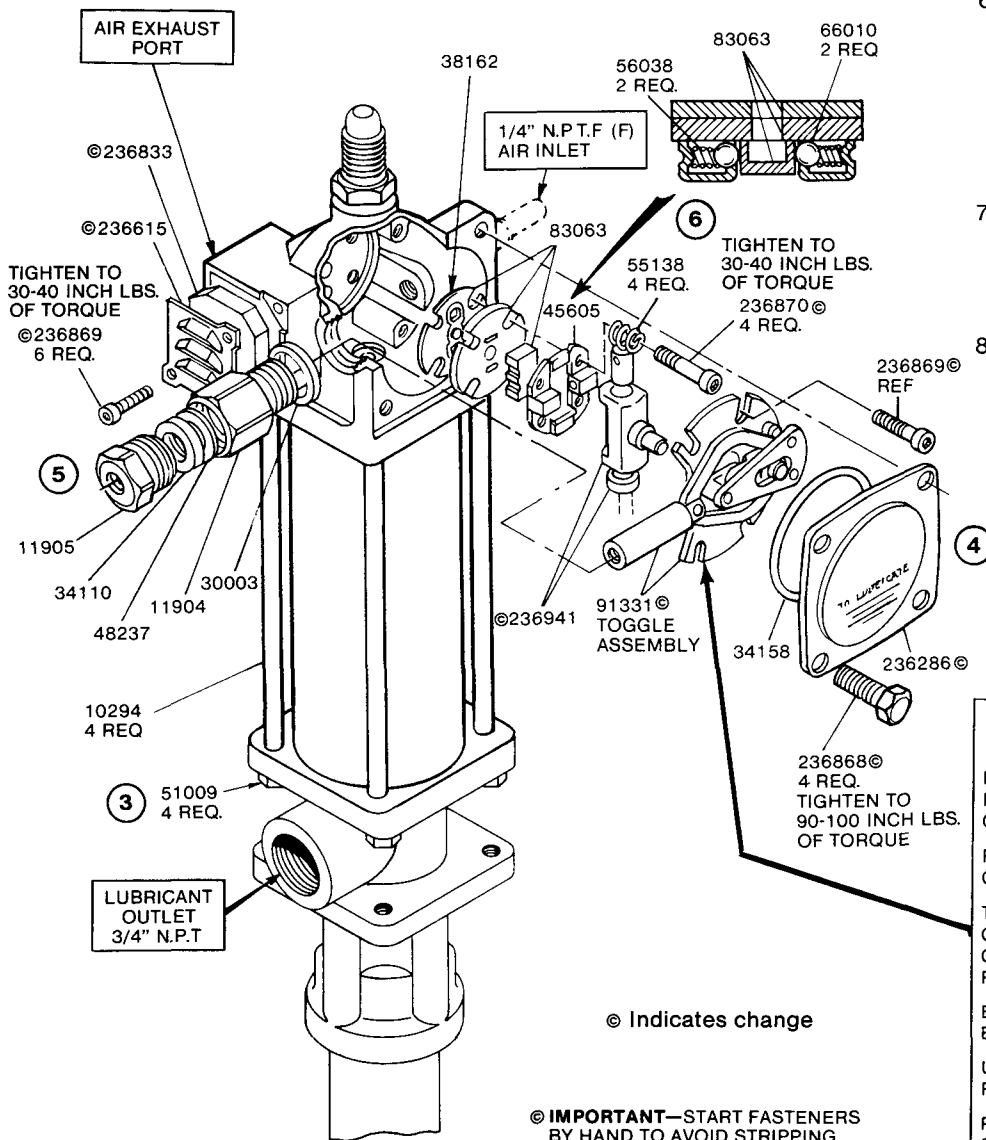
- 5) Remove 11905 Cap and replace the 34110 Packing. Coat the inside surface of the 11904 Nut and the outside surface of the 34110 Packing with lubricant before assembly. Replace 30003 Valve Cap Gasket. Remove four 50423 Toggle Plate Screws.
Lift out 90560 Toggle Plate Assembly to inspect. If pins or plates are loose, or if holes in trip linkage are worn out of round and appear egg-shaped, replace Toggle Plate Assembly. 11475 Trip Shoe and 11947 Trip Rod Sleeve are free after 90560 is removed.
- 6) Remove the four 11906 Valve Seat Bolts and the 55138 Springs. Remove 45605 Guide Plate, replace the two 66010 Equalizer Balls and the two 56038 Springs. Remove Valve Slide and Seat and inspect for wear by sliding the valve block from side to side on the valve plate. If wear is apparent, replace with 83063 Pump Kit.
NOTE: If Seat sticks to Gasket, it can be removed by inserting blade of screw driver between outer edge of Seat and Casting to pry apart.
- 7) Remove 11476 Trip Rod Packing Nut (use a wide blade screw driver). 35083 Packing and 48235 Washer are housed in recess of Nut. Grease inside of 11476 Nut and fill Spring Housing and Air Motor Casting before replacing and installing 35083 Packing and 55137 Spring.
- 8) At this point of repairing Pump, place 40537 Outlet Body in a horizontal position in vise. Remove Pump Tube from Outlet Body of Air Motor. See instructions 12 to 16 on reverse side.
- 9) After Pump Tube has been completely taken apart as illustrated on reverse side, the 34090 Piston and two 48212 Piston Washers can be removed by unscrewing the 11329 Piston Bolt from the 11340 Piston Rod.
To remove 11340 Rod use a threading motion to unscrew from Packings in 40537 Outlet Body. Use wrench on milled flats of 11340 Rod. Use same procedure when installing 11340 Rod in new Packings to prevent the threads on Rod from damaging Packings.
- 10) Unscrew 12333 Gland Nut. Remove and replace 34180 Packing, Remove 14940 Gland Packing Spacer. Remove and replace 34572 O-ring and 38165 U-Cup from 14940 Gland Packing Spacer.
When reassembling 11340 Piston Rod through Packings in 40537 Outlet Body, do not force Rod through Packings as the threaded portion of the rod will damage Packings. Insert Piston Rod and use a threading motion to move the 11340 Rod through the Packings.
- 11) The two 33014 Air Cylinder Gaskets and two 34368 Air Passage Tube O-rings are to be replaced as the Air Motor is reassembled. See illustration in upper left corner.



NEW STYLE



1. Remove Valve Cap (11470).
2. Drive Trip Rod Pin (11472) from Trip Shoe Assembly (236941).
3. Unscrew four Tie Rod Nuts (51009) from Tie Rods (10294) and lift entire air motor straight up until free of Trip Rod (236939).
4. Unscrew four Screws (236868) and remove Cover (236286). Replace Cover Gasket (34158).
5. Remove Packing Cap (11905) and replace Plunger Packing (34110). Coat the inside surface of Packing Nut (11904) and the outside surface of the new gasket with lubricant before assembly. Replace Packing Nut Gasket (30003). Remove four Toggle Plate Screws (236869). Lift out Toggle Assembly (91331) to inspect. Replace if pins are worn out of round or plates are loose. Remove Trip Shoe Assembly (236941).
6. Remove four Valve Seat Screws (236870) and the Valve Seat Springs (55138). Remove Valve Guide Plate (45605), replace the two Steel Balls (66010) and the two Fitting Springs (56038). Remove Valve Slide, Seat & Gasket (83063). Inspect for wear & replace if worn.
7. Remove Trip Rod Packing Nut (11476), Trip Rod Packing (236835), and Trip Rod Gasket (236616), replace packing and gasket. Coat parts with grease.
8. Place Outlet Body (41248) horizontally in a vise. Remove pump tube from outlet body. Refer to instructions 12 through 16 on back page.



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 NLG1 No. 1 (LIGHT GRADE) WATER REPELLENT GREASE APPROX 1 1/2 OUNCES

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

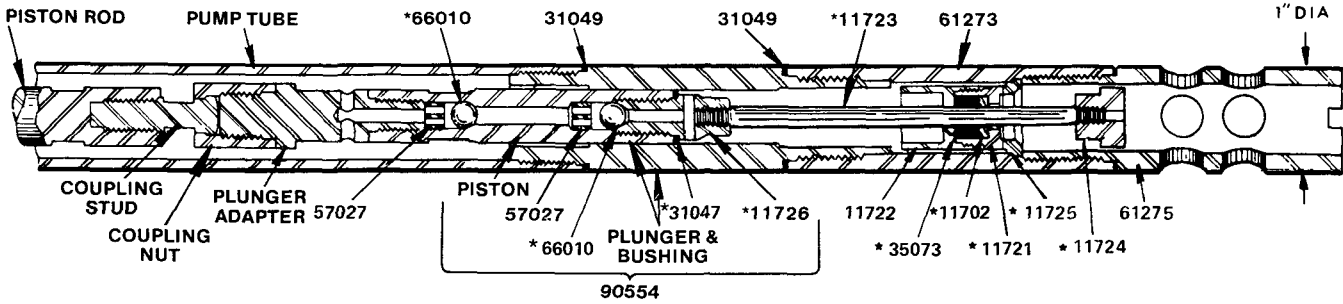
PERIODIC INSPECTION OF PARTS AT LEAST ONCE EACH YEAR IS ADVISABLE

Ⓞ Indicates change

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

83054 REPAIR KIT

INSTRUCTIONS FOR LOWER PUMP TUBE



SERVICE PARTS

Part	Description	Part	Description	Part	Description
10294	Tie rod	*31048	Connector gasket	51009	Tie rod nut
11329	Air piston bolt	31049	Bushing gasket	*55137	Trip rod packing spring
11337	Air piston nut	*31050	Gland gasket	55138	Valve seat spring
*11340	Airmotor piston rod	*31054	Pump tube gasket	*56038	Fitting spring
11349	Piston rod connector	*32107	Gasket	57027	Ball stop
11470	Valve cap	*33014	Air cylinder gasket	61041	Air cylinder
11471	Trip rod collar	*33039	Packing nut gasket	61273	Bushing extension
*11472	Trip rod pin	34090	Air piston packing	61275	Priming tube
11475	Trip shoe	*34110	Plunger packing	61502	Air passage tube
11476	Trip rod packing nut	*34158	Cover gasket	*66010	Steel ball
*11702	Check washer	*34180	Gland packing	68531	Eye bolt
*11721	Priming check	*34368	O-ring	83063	Pump kit
11722	Check stop	*34572	O-ring	90554	Plunger & bushing ass'y
*11723	Plunger rod	*35073	Swivel packing	90560	Toggle plate ass'y.
*11724	Priming plunger	*35083	Trip rod packing	90691	Trip arm ass'y.
*11725	Priming check seat	*38162	Valve seat gasket	91331	Toggle ass'y.
*11726	Check seat	*38165	U-cup packing	236286	Cover
11904	Packing nut	40537	Outlet body	236615	Muffler cover
11905	Packing cap	41202	Cover casting	*236616	Trip rod gasket
11906	Valve seat bolt	41268	Air valve casting	236833	Muffler packing
11947	Trip sleeve	45605	Valve guide plate	*236835	Trip rod packing
12333	Gland packing nut	48212	Air piston washer	236868	Screw
12511	Pipe plug	48213	Gland packing washer	236869	Screw
13363	Valve cap	48235	Packing washer	236870	Screw
14940	Gland packing spacer	48237	Plunger packing washer	236939	Trip rod
*30003	Valve cap gasket	48268	Gland packing washer	236941	Trip shoe ass'y.
*30011	Check seat gasket	50016	Valve cover screw	237562	Air valve casting
*31047	Check seat gasket	50423	Toggle plate screw		

Pump	Piston Rod	Pump Tube	Coupling Stud	Coupling Nut	Plunger Adapter
81685	11799	61293	11346	11345	11344
81941	—	61321	12209	12211	12210
81985	11727	61272	11346	11345	11344
82050	13020	61407	11346	11345	11344
82054	11761	61285	11346	11345	11344
82716	—	61321	12209	12211	12210
83121	13020	61407	11346	11345	11344
83127	11761	61285	11346	11345	11344
83513	11799	61293	11346	11345	11344

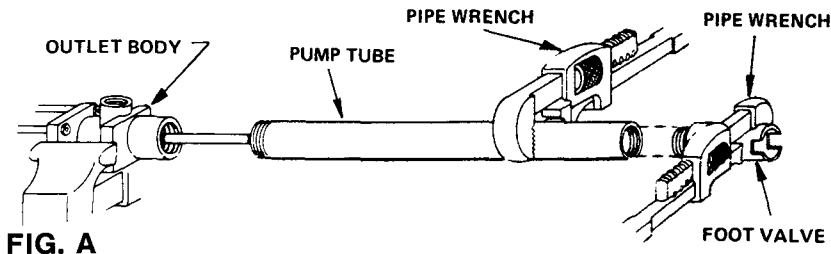


FIG. A

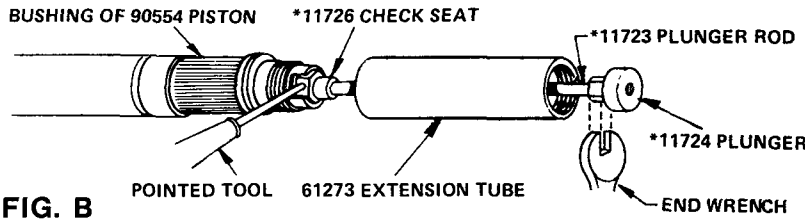


FIG. B

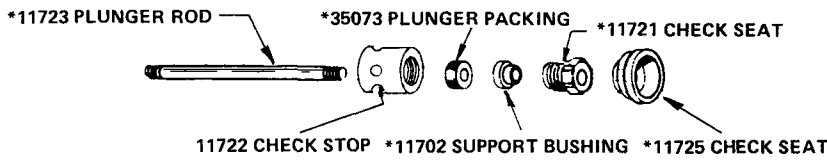


FIG. C

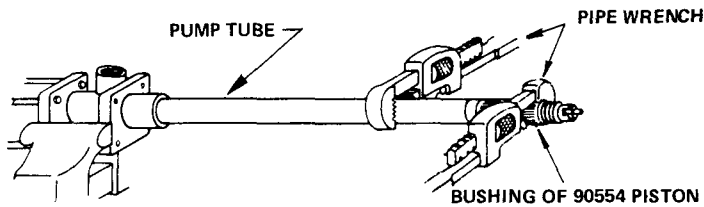


FIG. D

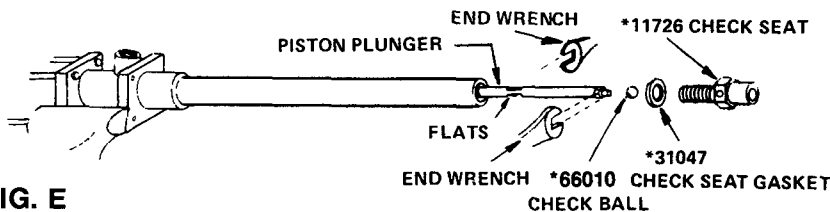


FIG. E

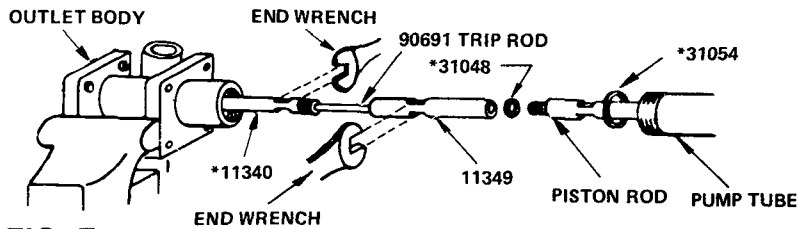


FIG. F

12. (See Fig. A) Lay pump horizontal in vise and grip outlet body tightly in vise jaws. Hold Extension Tube (61273) and unscrew Priming Tube (61275).

13. (See Fig. B) Pull Plunger (11724) straight out until Plunger Rod (11723) is extended as far as possible out of the Extension Tube (61273). Hold bushing of Piston (90554) and unscrew Extension Tube (61273).

Center Extension Tube (61273) between end of piston bushing and Plunger (11724). Insert any pointed tool in crosser.

Note: Plunger may unscrew from Plunger Rod (11723) or plunger rod may unscrew from Check Seat (11726). Extension Tube (61273) can be removed from free end of Plunger Rod (11723).

14. (See Fig. C) Removal of Extension Tube (61273) exposes the Check Seat (11725), Priming Check (11721), Check Stop (11722), Support Bushing (11702) and Plunger Packing (35073).

Note: Unscrew Priming Check (11721) from Check Stop (11722) to remove Support Bushing (11702) and Plunger Packing (35073).

15. (See Fig. D-E) Hold pump tube and unscrew bushing of Piston (90554). Grip two flats at top of piston plunger with an end wrench and remove Check Seat (11726).

Note: Check Ball (66010) may remain in plunger after Check Seat (11726) is removed. To remove check ball tilt pump in vise and gently tap top of plunger at location of two flats.

16. (See Fig. F) Remove pump tube from outlet body. Remove piston rod from Piston Rod Connector (11349). Milled flats are provided so that parts can be held with open end wrenches. Remove Piston Rod Connector (11349) and trip rod from the Air Motor Piston Rod (11340) in the same manner. Remove Air Motor Piston Rod (11340) as outlined in Step No. 8 on reverse side. Replace Gasket (31048) between piston rod and Piston Rod Connector (11349). Replace Pump Tube Gasket (31054).

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.