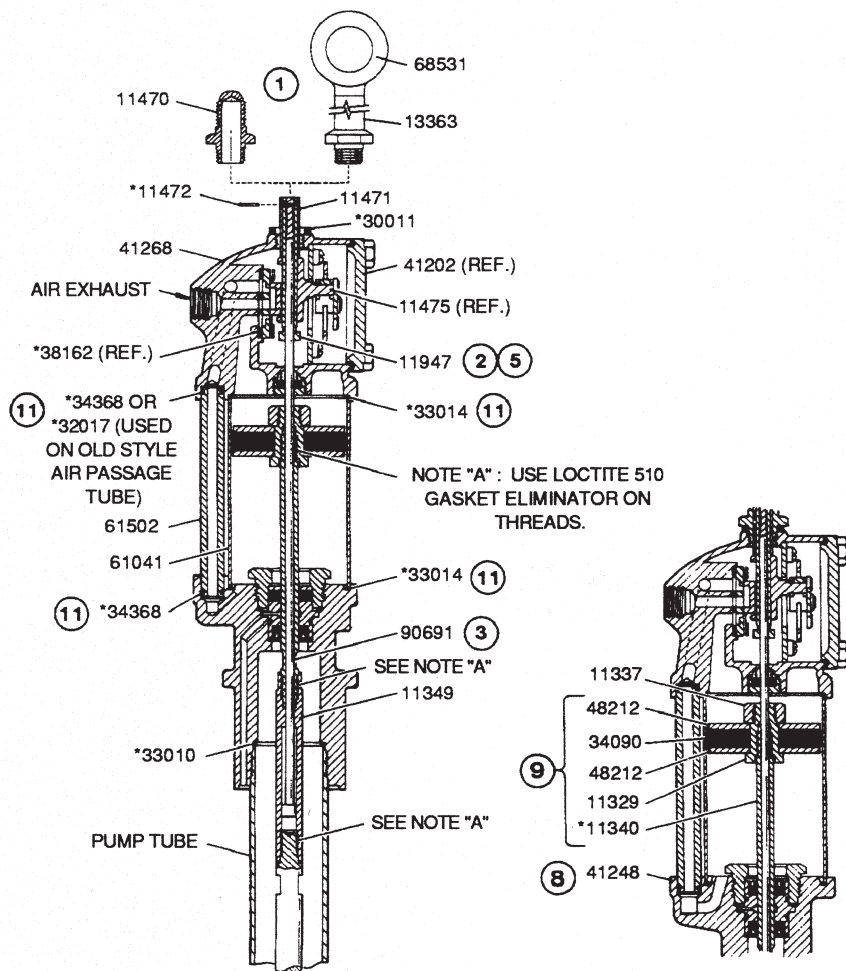
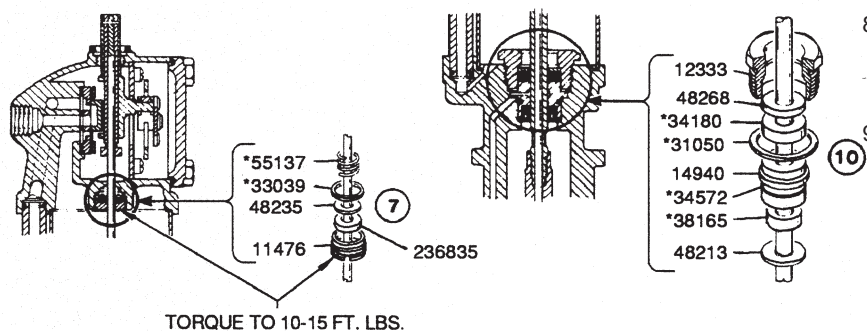


## MODEL 83060 REPAIR KIT FOR MODELS 82133, 81686, 83118, 83130, 84166 - (2-1/2" AIR MOTOR - 3:1 RATIO)

### OLD STYLE



PART NUMBERS MARKED WITH AN  
ASTERISK (\*) ARE INCLUDED IN REPAIR KIT.



1. Unscrew 11470 or 13363 with 68531. Drive pin (11472) from collar (11471). Collar is free to be removed.
2. Turn trip sleeve (11947) counterclockwise by hand to unscrew from trip rod (90691). Note: Trip rod (90691) cannot be removed until pump tube is disassembled.
3. Unscrew four nuts (51009) from tie rods (10294). Lift entire airmotor straight up until free of trip rod (90691). Refer to Step 9.
4. Unscrew four screws (50016) and remove cover plate (41202). Replace the cover gasket (34158).
5. Remove cap (11905) and replace the packing (34110). Coat the inside surface of the nut (11904) and the outside surface of the new packing (34110) with lubricant before assembly. Replace valve cap gasket (30003). Remove four toggle plate screws (50423).  
  
Lift out toggle plate assembly (91331) to inspect. If pins of plates are loose, or if the holes in trip linkage are worn out of round, replace toggle plate assembly. After 91331 is removed, trip shoe (11475) and trip rod sleeve (11947) are free.
6. Remove the four valve seat bolts (11906) and the springs (55138). Remove guide plate (45605), replace the two equalizer balls (66010) and the two springs (56038). Remove valve slide and seat and inspect for wear. Replace with valve slide, seat and gasket (83063) if worn.
7. Remove trip rod packing nut (11476). Packing (236835) and washer (48236) are housed in recess of nut. Grease inside of nut (11476) and fill spring housing in air motor casting with grease before replacing packing (236835), spring (55137) and gasket (33039).
8. Place outlet body (41248) horizontally in a vise. Remove pump tube from outlet body. Refer to Steps 12 through 16.
9. After pump tube has been disassembled, the piston (34090) and two piston washers (48212) can be removed by unscrewing the piston bolt (11329) from the piston rod (11340).

Use wrench on milled flats of rod (11340) to unscrew from packings in outlet body (41248). Use same procedure when installing now rod (11340) to prevent damage to new packings.

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## OLD STYLE (CONT.)

10. Unscrew gland nut (12333). Remove packing (34180) and gland gasket (31050) and replace. Remove and replace O-ring (34572) and U-cup (38165) from gland packing spacer (14940).

11. Replace the two air cylinder gaskets (33014) and the two air passage tube O-rings as the air motor is reassembled.

12. See Fig. A. Lay pump horizontally in vise and grip outlet body tightly in vise jaws. Unscrew foot valve (90406) from pump tube. Unscrew pump tube from outlet body and remove by pulling over the pump piston. Inspect pump tube thoroughly. If the area inside where the piston travels is scored, replace the pump tube.

**Note:** If male threaded end of the pump tube is turned in, use a round rod to work the edge back to straight See Fig. D.

13. See Fig. B & C. Hold piston seat (12341) with a thin open end wrench and remove piston seat cap (10943) and air expeller tube (62110). Hold piston rod by milled flats and remove piston seat. Piston is free to be removed from piston rod.

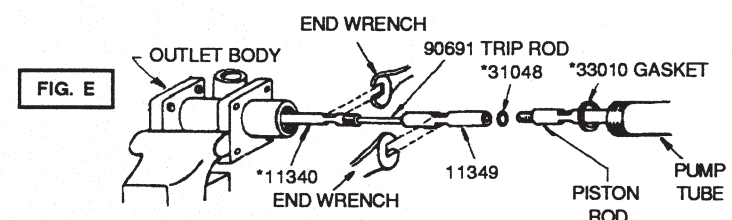
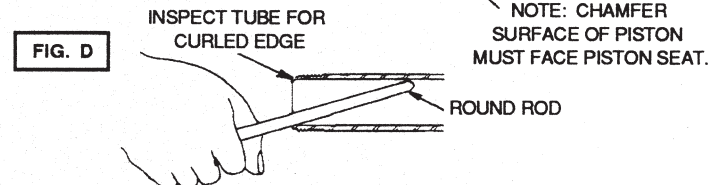
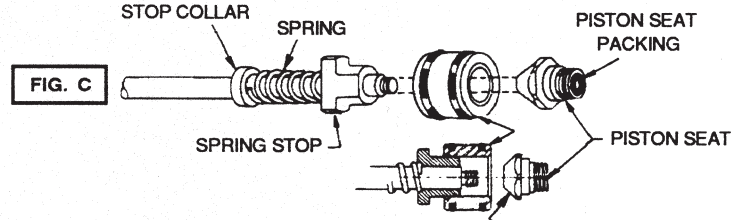
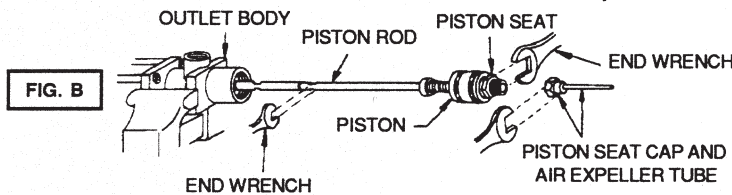
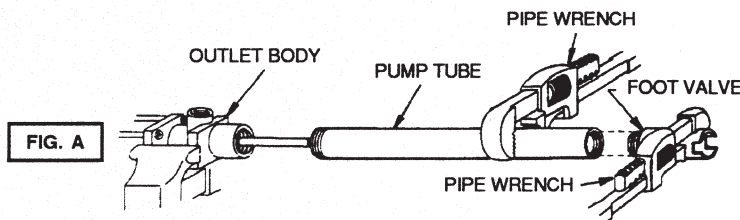
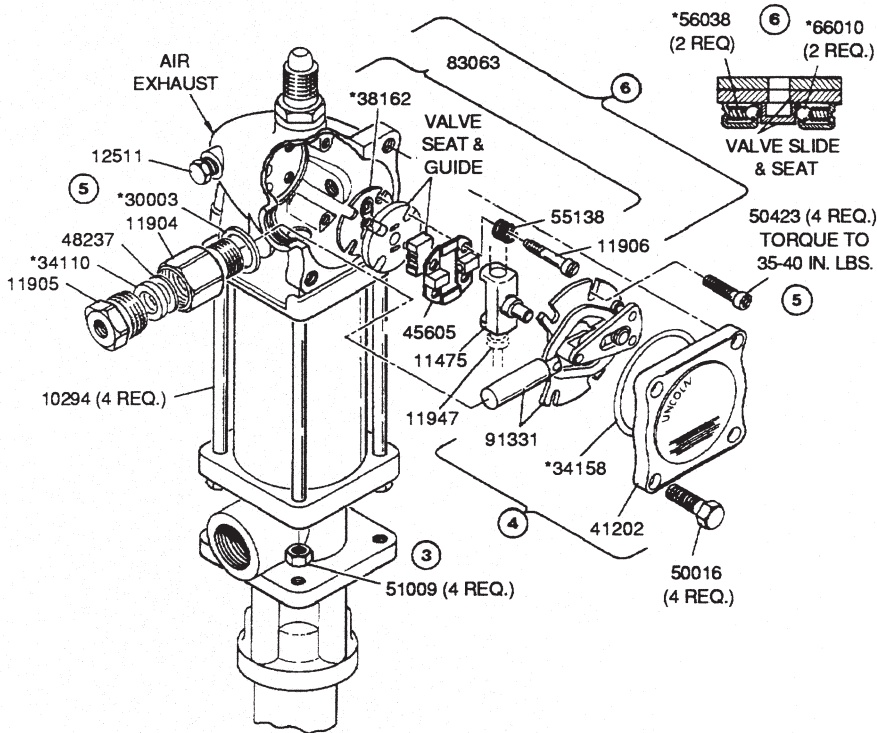
14. (See Fig. E) Using wrenches on milled flats to hold parts, remove piston rod from piston rod connector (11349) and remove piston rod connector and trip rod (90691) from the air motor piston rod (11340). Refer to Step 9 for air motor piston rod removal.

15. See Fig. B & C. Install new piston packings (34189) to new piston. With the chamber surface of piston facing new piston seat, assemble piston and piston seat to piston rod. Replace piston seat packing (34067), then assemble piston seat cap and air expeller tube to piston seat.

16. See Fig. E. Assemble trip arm assembly or trip rod and piston rod connector to air motor piston rod. Replace gasket (31048) and assemble piston rod to piston rod connector. Replace pump tube gasket (33010) Lubricate piston packings, then carefully slide pump tube over piston and piston rod.

**Caution:** Use extreme care to prevent end of pump tube from cutting piston packings.

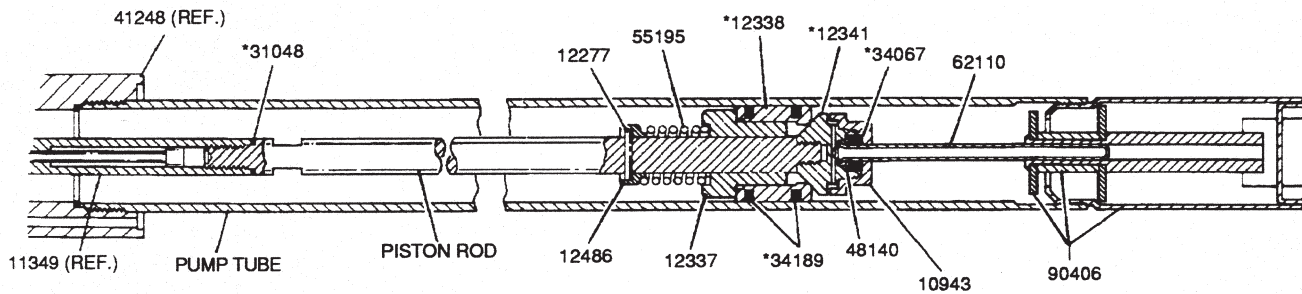
See Fig. A. Assemble pump tube to outlet body and foot valve to pump tube. Tighten to prevent leaks.



1. Remove valve cap (11470).
2. Drive trip rod pin (11472) from collar (11471). Collar is free to be removed, Turn trip sleeve (11947) counter-clockwise by hand to unscrew from trip rod (90691).
3. Unscrew four tie rod nuts (51009) from tie rods (10294) and lift entire air motor straight up until free of trip rod (90691).
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 (11475) and trip sleeve (11947).
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 springs (56038). Remove valve slide, seat and gasket (83063). Inspect for wear and replace if worn.
7. Remove trip rod packing nut (245425), trip rod packing (236835), and trip rod washer (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 Steps 12 through 16 in OLD STYLE instructions.



- A. DISCONNECT AIR TO PUMP.
- B. PERFORM PRESSURE RELIEF PROCEDURE.
- C. REMOVE FOUR COVER SCREWS, COVER PLATE AND COVER PLATE GASKET.
- D. REMOVE AIR VALVE CASTING FROM THE PUMP AND DISASSEMBLE.
- E. CLEAN OR FLUSH THE AIR VALVE CASTING TO REMOVE ANY CHIPS OR OTHER FOREIGN PARTICLES.
- F. BEFORE REPLACING TOGGLE ASSEMBLY, PACK CAVITY WITH GREASE USING APPROXIMATELY 1-1/2 OUNCES OF N.L.G.I. NO. 1 (LIGHT GRADE) WATER REPELLENT GREASE.
- G. REPLACE COVER PLATE GASKET, COVER PLATE AND COVER SCREWS. TIGHTEN TO PREVENT AIR LEAKS.
- H. PERIODIC INSPECTION OF PARTS AT LEAST ONCE A YEAR IS ADVISED.



## LOWER PUMP TUBE

Pump	Piston Rod	Pump Tube
82133	12342	61341
82686	13021	61422
83118	13021	61422
83130	12342	61341
84166	14951	61569

## SERVICE PARTS

PART	DESCRIPTION	PART	DESCRIPTION	PART	DESCRIPTION
10294	Tie rod	*31048	Connector gasket	55138	Valve seat spring
10943	Piston seat cap	*31050	Gland gasket	55195	Spring
11329	Air piston bolt	*32017	Gasket	*56038	Spring
11337	Air piston nut	*33014	Air cylinder gasket	61041	Air cylinder
*11340	Airmotor piston rod	*33039	Gasket	61502	Air passage tube
11349	Piston rod connector	*34067	Piston seat packing	62110	Air expeller tube
11470	Valve cap	34090	Air piston packing	*66010	Steel ball
11471	Trip rod collar	*34110	Plunger packing	68531	Eye bolt
*11472	Trip rod pin	*34158	Cover gasket	83063	Valve slide, seat & gasket
11475	Trip shoe	*34180	Gland packing	90406	Foot valve assembly
11476	Trip rod packing nut	*34368	O-ring	90691	Trip rod
11904	Packing nut	*34572	O-ring	91331S	Toggle assembly
11905	Packing cap	*38162	Valve seat gasket	236286	Cover
11906	Valve seat bolt	*38165	U-cup packing	236615	Muffler cover
11947	Trip sleeve	41268	Air valve casting	*236616	Trip rod washer
12277	Pin	45605	Valve guide plate	236833	Muffler packing
12333	Gland packing nut	48140	Packing washer	*236835	Trip rod packing
12337	Spring stop	48212	Air piston washer	236869	Toggle plate screw
*12338	Piston	48213	Gland packing washer	237563	Outlet body
12341	Piston seat	48235	Packing washer	238868	Screw
12486	Pin retainer	48237	Plunger packing washer	236870	Valve seat screw
12511	Pipe plug	48268	Gland packing washer	236941	Trip shoe assembly
14940	Gland packing spacer	50016	Valve cover screw	237563	Air valve casting
*30003	Packing nut gasket	51009	Tie rod nut	*261077	Piston packing
*30011	Valve cap gasket	*55137	Trip rod packing spring		

Note: Part numbers marked with an asterisk (\*) are included in 83060 Repair Kit.