

DESCRIPTION

Model G-337081 is a high pressure material pump designed to pump both fluids and semifluids.

An 8-inch diameter air motor, which can be operated at air pressure of up to 125 psi maximum, powers the pump unit. This air motor is isolated from the pump tube to eliminate the possibility of damage to the motor by the material being pumped.

The pump has a double-action feature which enables it to deliver on both the up-stroke and the down-stroke. This assures smooth, even delivery at constant pressure.

SPECIFICATIONS

Material to Air Pressure Ratio	60:1
Maximum Operational Air Pressure	125 psi
Maximum Material Pressure	7500 psi
Pump Displacement	6.28 cu. in. per cycle
Air Inlet	1/2 NPTF
Material Outlet	1/2 NPTF
Weight	85.5 lbs. approx.
Height	34-11/16"

GENERAL SAFETY REQUIREMENTS

Because this unit is used in a high pressure pumping system, the following precautions **MUST** be observed:

1. DO NOT point the dispensing device at oneself or any other person. Accidental discharge of material may result in serious injury.
2. Shut off air supply to air motor and make certain all pressures within the system are relieved before disassembling or removing any part of the pump.
3. DO NOT exceed the maximum pressure rating of any component in the system.
4. If pump is to be used in spraying application, be sure that both the spray equipment and the object to be sprayed are grounded to prevent a static charge. Use conductive airless spray hose.

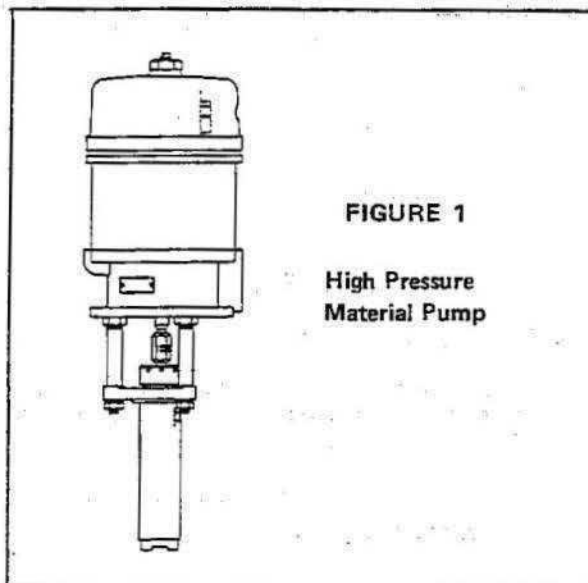


FIGURE 1

High Pressure
Material Pump

5. Protect all material and air lines from puncture or damage.
6. Check hoses and lines for weakness or wear before each use. Make sure all connections are secure.
7. Read all instruction sheets and other explanatory material completely and thoroughly before attempting to assemble, disassemble or operate the pump.

INSTALLATION

1. Mount pump.
 - a. Pump has four 17/32" mounting holes on a 8-3/4" diameter for mounting in place.
 - b. By removing pipe plug 48925 (Figure 3) and replacing with a 3/8 PTF eyebolt, pump can be mounted in a suspended position.
2. Attach air line from air source to air inlet of air motor (Figure 2). The main air supply line should be 3/4" or 1" I.D. pipe. The connecting hose between the main air line and the pump should be 1/2" or 5/8" I.D.
3. Attach material line to material outlet of pump tube (Figure 2).



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OPERATION

1. Submerge pump tube into material container. Pump tube may extend to within 9/16" of bottom of container.
2. Make sure that material line is secure and all material outlets (e.g. spray guns) are closed.
3. Turn regulated air supply on. Adjust air pressure to obtain desired material pressure.

CAUTION: *DO NOT* exceed 125 psi.

MAINTENANCE

A. Cleaning and Storing

If pump is to be stored or shut down long enough for material being pumped to dry, observe the following procedures:

1. Shut off air supply to air motor and bleed pressure from all lines.
2. Remove pump tube from material and place into solvent recommended by material manufacturer.
3. Turn on air supply and flush pump with solvent.

CAUTION: *If pump is used with airless paint spray equipment, set safety lock on gun in closed position and remove spray tip before flushing pump with solvent. Failure to remove tip before flushing may result in explosion or fire. Also, in order to prevent dangerous static sparking, solvent container should be bare metal and gun should be held securely to rim of container during flushing.*

4. Shut off air supply to air motor and bleed pressure from all lines.
5. If pump is to be serviced, proceed to appropriate section under SERVICE.
6. If pump is to be stored, remove solvent and replace with mineral spirits.
7. Flush and fill pump with mineral spirits and wipe all externally wetted parts with oil.

IMPORTANT: *NEVER* leave material stored in pump. Always fill pump with mineral spirits and wipe externally wetted parts with oil.

8. Shut off air supply to air motor and bleed pressure from all lines.

IMPORTANT: *To prevent packing wear caused by material drying on exposed piston rod, always stop pump with piston fully down.*

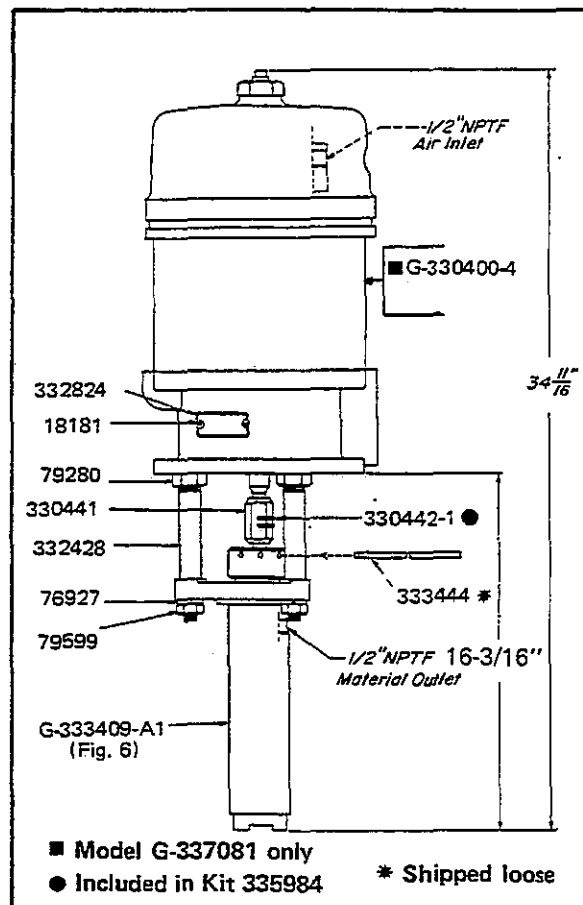


FIGURE 2 Model G-337081 Material Pump

B. Adjusting Packings.

It is necessary to tighten the upper packings of the pump tube after approximately 6 hours of running time in order to adjust for break-in of the packings. This adjustment applies to both new pumps and those that have been repacked. The following procedure should also be used whenever material seeps out through top of pump tube.

To tighten packing, proceed as follows:

1. Shut off air supply to air motor.
2. Bleed pressure from all lines.
3. Insert adjustment bar 333444 into one of the holes in cap 333418 and rotate cap approximately 1/4 turn (Figure 2).
4. Remove adjustment bar.
5. Increase air supply to 15-20 psi. Pump should start to cycle. If pump does not cycle, repeat above steps and back off cap 333418 until pump begins to cycle.

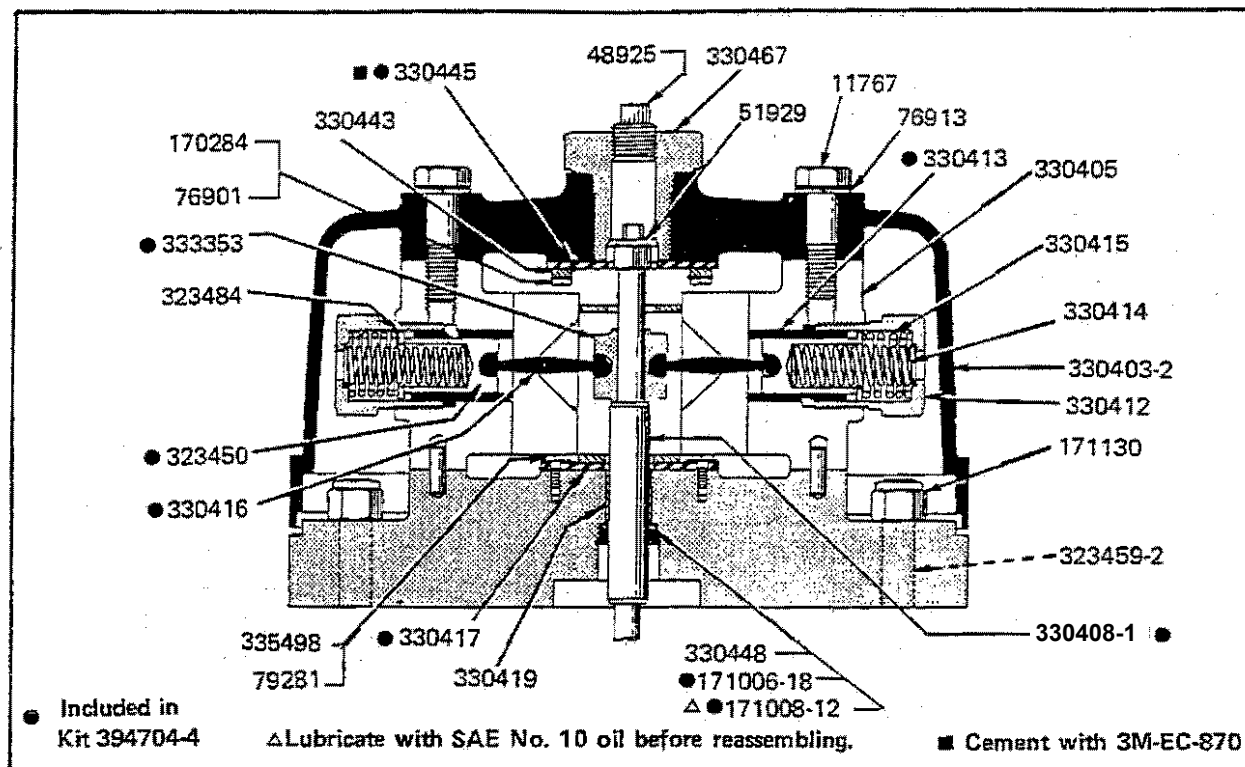


FIGURE 3 Air Motor Assembly G-330400 -4 (Upper End)

SERVICE

A. If pump fails to operate properly, check for the following:

1. Inadequate air pressure.
2. Insufficient material supply.
3. Improper packing adjustment.
4. Foreign matter lodged in check valves or seats of pump tube assembly.
5. Worn or damaged parts in pump tube assembly.
6. Worn or damaged parts in air motor.

B. Prepare pump for service as follows:

1. Clean pump as outlined under Steps 1 through 4 of Section "A" of MAINTENANCE.

CAUTION: Make certain that air pressure to air motor is shut off and all pressures within the lines are relieved before proceeding to Step 2.

2. Pry out upper spring clip 330442-1 and unscrew coupling 330441 from air motor piston rod (Figure 2).
3. Remove three hex nuts 79599 and lockwashers 76927 and pull pump tube assembly free.

C. To disassemble air motor G-330400-4, proceed as follows (Figures 3, 4, & 5):

1. Place air motor in upstroke position.
2. Remove two hex head cap screws 11767 and lockwashers 76913 and lift off cover 330403-2 (Figure 3).
3. Remove four screws 170284, lockwashers 76901, two clamps 330443, and pry bumper 330445 from cover 330403-2. Exercise caution when removing bumper because it is glued in place.
4. Unscrew two compression nuts 328301-4 and remove crossover tube 330431 with sleeves 328302-4 (Figure 4).
5. Remove toggle screw 330412 from body 330405 and pull out spring 330414, washer 323484, and spring 330415 (Figure 3). Repeat procedure on second body 330405.
6. Remove two hex socket head cap screws 170856 and lockwashers 76910 securing body 330405. Remove body 330405 and pull bushing 330413 off. Remove toggle plunger 323450 and toggle 330416 from shuttle 333353. Repeat procedure on second body 330405 (Figures 3 & 4).

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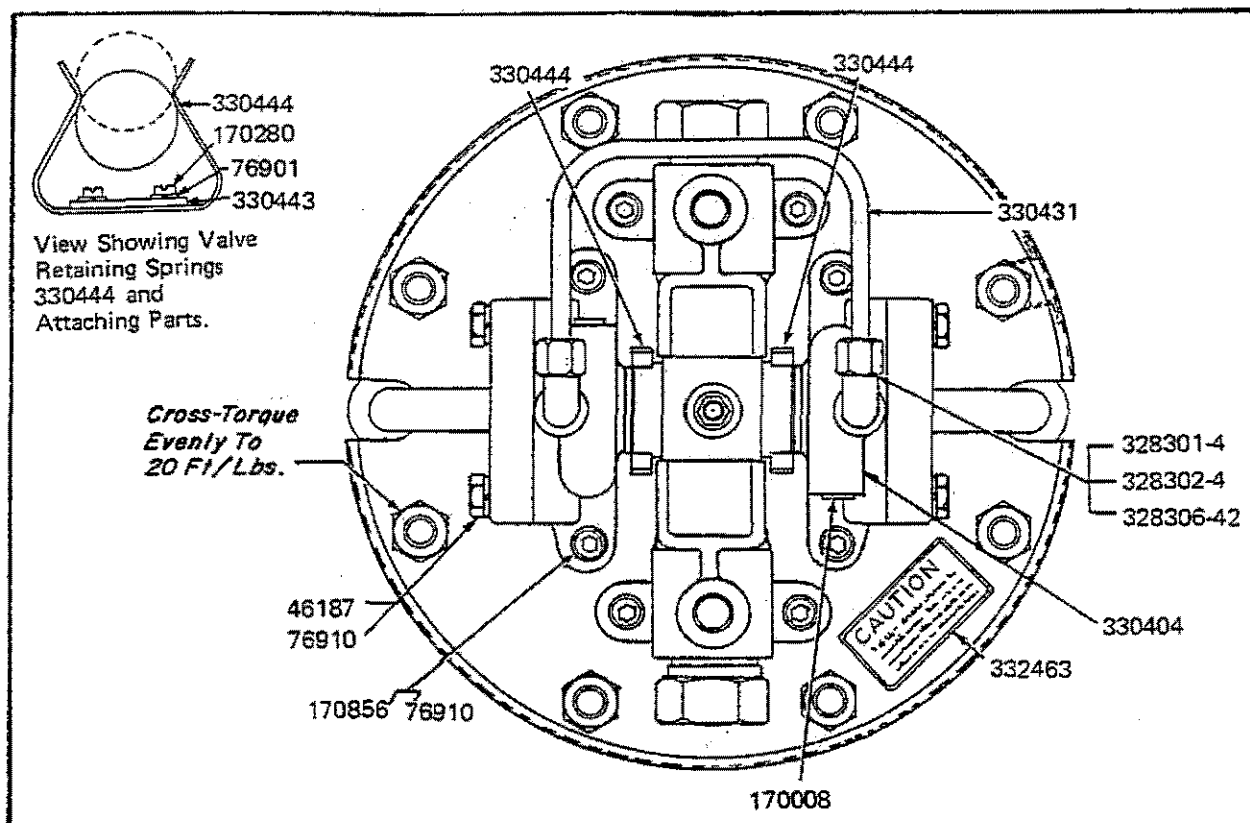


FIGURE 4 Air Motor Assembly G-330400 -4 (Top, Cover removed)

SERVICE (Continued)

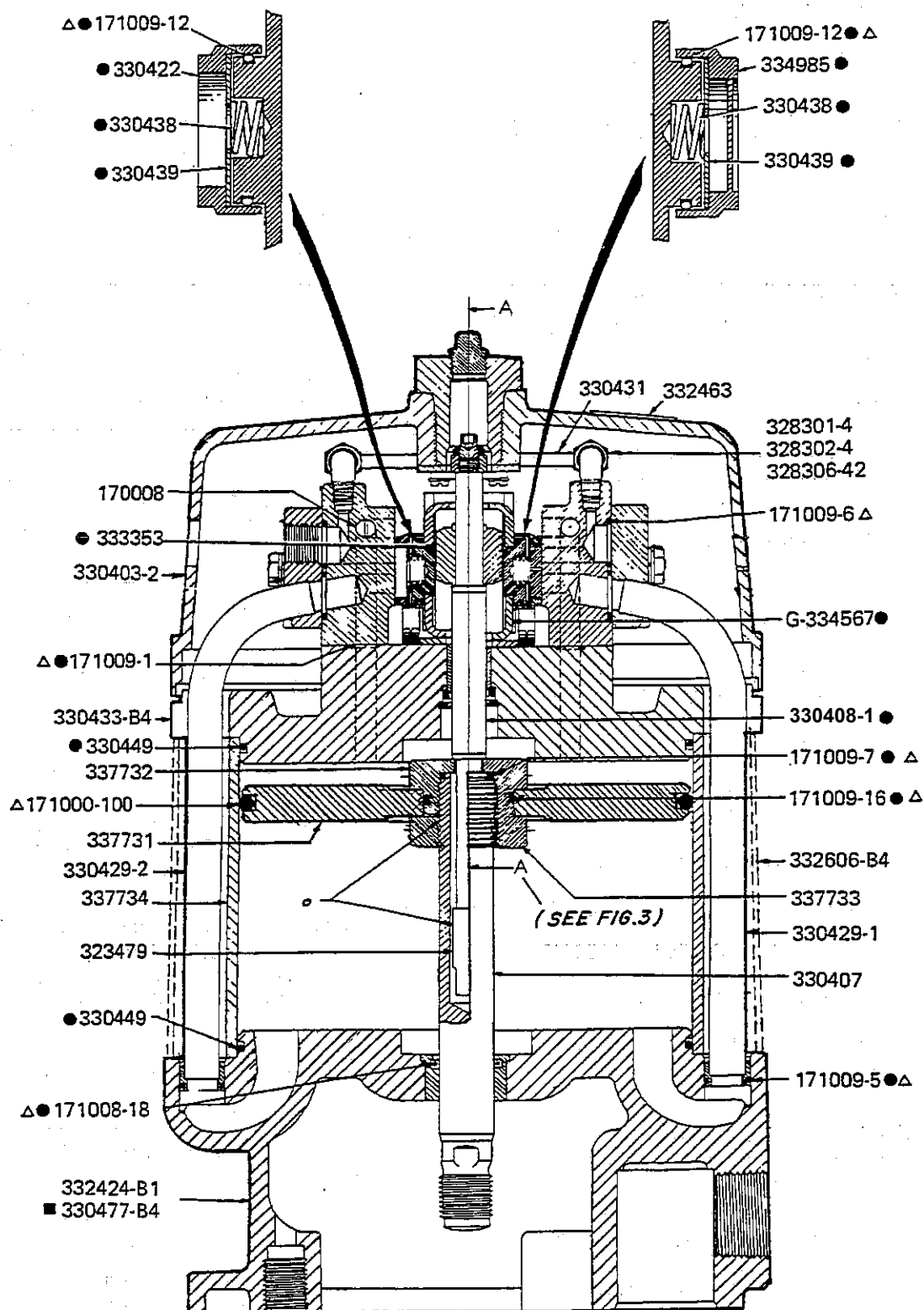
7. Insert allen wrench into hole in top of trip rod 330408-1 and with a 9/16" wrench unscrew elastic stop nut 51929 from trip rod (Figure 3).

CAUTION: DO NOT scratch chrome finish on trip rod 330408-1 or part will be rendered useless.

8. Lift carrier assembly G-334567 and shuttle 333353 very slowly off trip rod. Remove valves 330422 and 334985, springs 330438, washers 330439, and "O" rings 171009-12 (Figure 5).
9. Unscrew two screws 170280 and remove lockwashers 76901, clamp 330443, and valve spring 330444 (Figure 4).
10. Remove four screws 46187 and lockwashers 76910 holding tube assemblies G-330429-1 and G-330429-2 in place. Pull tube assemblies free and remove "O" rings 171009-5 from bottom of tubes. Remove "O" rings 171009-6 from valve bodies 330404 (Figure 5).
11. Remove four remaining socket head cap screws 170856 and lockwashers 76910 and lift valve bodies 330404 free. Remove "O" rings 171009-1 from cylinder head (Figures 4 & 5).
12. Remove two screws 335498 and washers 79281 and pry lower bumper 330417 from cylinder head.

NOTE: Exercise caution when removing lower bumper because it is also glued in place. Excessive prying or scraping may damage trip rod.

13. Unscrew eight cylinder head nuts 171130 from eight tie rods 323459-2. Carefully lift cylinder head assembly G-330433-B4 from cylinder 337734. Remove retaining ring 171006-18, washer 330448, and quad ring 171008-12 from cylinder head. Remove "O" ring 330449 from cylinder head assembly G-330433-B4 (Figures 3 and 5).
 14. Remove trip rod 330408-1 and piston rod 330407 from cylinder 337734. Lift off wrapper assembly G-332606-B4, cylinder 337734, and second "O" ring 330449 from base assembly G-332424-B1 or G-330447-B4 (Figure 5).
 15. Clamp piston hub 337732 in vise and loosen piston nut 337733. Unscrew piston rod 330407 from piston hub 337732. Remove piston nut 337733 from piston rod.
- CAUTION:** DO NOT scratch chrome finish of piston rod 330407 or part will be rendered useless.
16. Grip flats at top of trip rod 330408-1 and unscrew stop nut 323479. Pull trip rod from piston. Push piston hub 337732 from piston 337731 and remove "O" rings 171009-7 and 171009-16 from hub.



Apply threadlocker primer, then apply 394009 Sealant at these points when reassembling.

● Included in Kit 394704-4

△ Lubricate with SAE No. 10 oil before reassembling.

■ Model G-330400-4 only.

FIGURE 5 Air Motor Assembly G-330400 -4 (Sectional View)

17. Remove quad ring 171008-18 from base assembly G-330447-B4 or G-332424-B1.
18. Clean all parts and inspect for wear or damage

CAUTION: Worn or damaged parts present a threat to personnel and property. REPLACE any worn or damaged parts.

19. Reassemble by reversing the above steps and observing the following notes:
 - a. The upper threads of piston rod 330407 and the lower threads of trip rod 330408-1 should be cleaned and primed with threadlocker primer, then coat sparingly with 394009 sealant before assembling.
 - b. Bumpers 330417 and 330445 must be cemented in place with 3M Company EC-870 cement or equivalent.
 - c. Cross-torque cylinder head nuts 171130 to 20 ft. lbs.
 - d. Valve 334985 must be installed facing tube assembly G-330429-1.
 - e. The following areas should be lubricated during assembly with 398030 lubricant:
 - Surfaces of valves 330422 and 334985.
 - Toggle sockets in plungers 323450 and shuttle 333353.
 - The inside bore of shuttle 333353.
 - The outside diameter of plungers 323450.
 - Toggle springs 330414 and 330415.
 - All quad rings and packings.
 - f. Lubricate all "O" rings with SAE No. 10 oil before reassembly.

WARNING: After reassembly is complete, cover 330403-2 MUST be in place before air pressure is applied to air motor.

- D. To disassemble pump tube assembly G-333409-A1, perform steps 1 through 4 under Section "B" of SERVICE. Proceed as follows (referring to Figure 6):

1. Unscrew valve seat 335358 and remove dowel pins 333431, washer 335483, spring 335481, steel ball 171700-72, and "O" ring 171259-52 from valve seat.
2. Pry out spring clip 330442-1 and unscrew coupling 330441 from piston rod 333422.

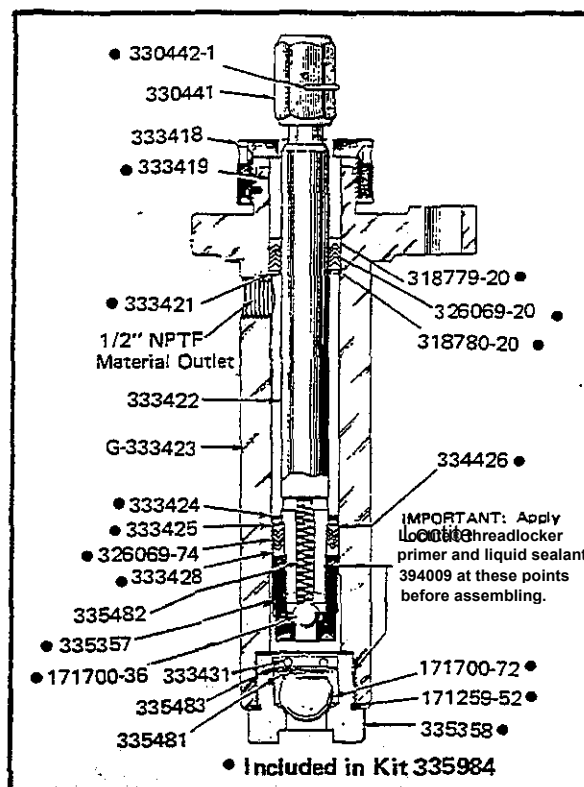


FIGURE 6 Pump Tube Assembly G-333409-A1

Push piston through cylinder G-333423 and push it out from bottom end.

3. Unscrew valve seat 335357 and remove steel ball 171700-36 and spring 335482.
4. Remove female support ring 333428, four packings 326069-74, male support ring 333426, spring washer 333425, and washer 333424.
5. Unscrew cap 333418 from cylinder G-333423 and remove bearing 333419, female support ring 318779-20, four packings 326069-20, male support ring 318780-20, and washer 333421.
6. Clean all parts and inspect for wear or damage.

CAUTION: Worn or damaged parts present a threat to personnel and property. REPLACE any worn or damaged parts.

7. Reassemble by reversing the above steps and observing the following notes:
 - a. When reassembling valve seat 335357 to piston and valve seat 335358 to cylinder, clean all threads and apply threadlocker primer then apply 394009 sealant to male threads before fitting.
 - b. When reassembling cap 333418 to cylinder G-333423, tighten cap only hand tight. After pump tube assembly has been reconnected to air motor, adjust packings as outlined under Section "B" of MAINTENANCE.

MAJOR REPAIR KITS

335984 For Pump Tube Assembly G-333409-A1		
PART NO.	DESCRIPTION	QTY.
171259-52	PTFE "O" Ring	1
171701-36	Steel Ball, 9/16" dia.	1
171701-72	Steel Ball, 1-1/8" dia.	1
318779-20	Female Support Ring, 1-1/2" O.D.	1
318780-20	Male Support Ring, 1-31/64" O.D.	1
326069-20	Packing Ring, 1-1/2" O.D.	4
326069-74	Packing Ring, 1-13/32" O.D.	4
330442-1	Spring Clip	2
333419	Bearing	1
333421	Steel Washer, 1-1/2" O.D.	1
333424	Washer, 51/64" O.D.	1
333425	Spring Washer, 1-7/32" O.D.	1
333426	Male Support Ring	1
333428	Female Support Ring	1
335357	Valve Seat	1
335358	Valve Seat	1

394704-4 For G-330400 -4 Air Motors		
PART NO.	DESCRIPTION	QTY.
171006-18	Retaining Ring	1
171008-12	Quad Ring, 13/16" O.D.	1
171008-18	Quad Ring, 1-3/16" O.D.	1
171009-1	"O" Ring, 9/16" O.D.	4
171009-5	"O" Ring, 13/16" O.D.	2
171009-6	"O" Ring, 7/8" O.D.	4
171009-7	"O" Ring, 15/16" O.D.	1
171009-12	"O" Ring, 1-1/4" O.D.	2
171009-16	"O" Ring, 1-1/2" O.D.	1
323450	Plunger	2
330413	Bushing	2
330416	Toggle	2
330417	Bumper	1
330422	Valve	1
330408-1	Trip Rod	1
330438	Spring, 15/32" O.D.	2
330439	Steel Washer, 1-15/64" O.D.	2
330445	Bumper	1
330449	"O" Ring, 1-5/8" O.D.	2
333353	Shuttle	1
334567	Carrier Assembly	1
334985	Valve	1
394009	Liquid Sealant	1
398030	Lubricant	1

PARTS LIST

PART NO.	FIGURE	DESCRIPTION	QTY.
11767	3	Hex. Head Cap Screw, 1/2-13 x 1-3/4"	2
18181	2	Drive Screw No. 2 x 3/16"	4
46187	4	Hex. Head Cap Screw, 3/8-16 x 1-1/4"	4
48925	3	Pipe Plug, 3/8" NPT	1
51929	3	Elastic Stop Nut, 3/8-24	1
76901	3, 4	Spring Lockwasher No. 8	8
76910	4	Spring Lockwasher, 3/8" O.D.	12
76913	3	Spring Lockwasher, 1/2" O.D.	2
76927	2	Spring Lockwasher, 3/4" O.D.	3
79280	2	Jam Nut, 1-14	3
79281	3	Washer, 1/2" O.D.	2
79599	2	Hex Nut, 3/4-16	3
170008	4, 5	Pipe Plug, 1/4" NPTF	2
170280	4	Slotted Pan Head Machine Screw, 8-32 x 7/16"	4
170284	3	Slotted Pan Head Machine Screw, 8-32 x 5/8"	4
170856	4	Hex. Socket Head Cap Screw, 3/8-16 x 1-1/4"	8
171000-100	5	"O" Ring, 8-1/4" O.D.	1
● 171006-18	3	Retaining Ring	1
● 171008-12	3	Quad Ring, 13/16" O.D.	1
● 171008-18	5	Quad Ring, 1-3/16" O.D.	1
● 171009-1	5	"O" Ring, 9/16" O.D.	4
● 171009-5	5	"O" Ring, 13/16" O.D.	2
● 171009-6	5	"O" Ring, 7/8" O.D.	4
● 171009-7	5	"O" Ring, 15/16" O.D.	1
● 171009-12	5	"O" Ring, 1-1/4" O.D.	2
● 171009-16	5	"O" Ring, 1-1/2" O.D.	1
171130	3	Elastic Stop Nut, 1/2-20	8
● 171259-52	6	PTFE "O" Ring, 5/16" O.D.	1
● 171700-36	6	Steel Ball, 9/16" Dia.	1
● 171700-72	6	Steel Ball, 1-1/8" Dia.	1
● 318779-20	6	Female Support Ring, 1-1/2" O.D.	1
● 318780-20	6	Male Support Ring, 1-31/64" O.D.	1
● 323450	3	Plunger	2
323459-2	3	Tie Rod	8

PARTS LIST (Cont'd.)

PART NO.	FIGURE	DESCRIPTION	QTY.
323479	5	Stop Nut, 3/8-24	1
323484	3	Steel Washer, 1-7/64" O.D.	2
● 326069-20	6	Packing Ring, 1-1/2" O.D.	4
● 326069-74	6	Packing Ring, 1-13/32" O.D.	4
328301-4	4, 5	Hex Compression Nut, 1/2"	2
328302-4	4, 5	Sleeve	2
328306-42	4, 5	Male Elbow	2
G-330400-4	2,3,4,5	Air Motor Assembly (Model G-337081)	1
330403-2	3, 5	Cover	1
330404	4	Valve Body	2
330405	3	Body	2
330407	5	Piston Rod	1
330412	3	Screw, 3/8-16	2
● 330413	3	Bushing	2
330414	3	Spring, 41/64" O.D.	2
330415	3	Spring, 1-5/64" O.D.	2
● 330416	3	Toggle	2
● 330417	3	Bumper	1
330419	3	Bearing	1
● 330422	5	Valve	1
G-330429-1	5	Tube Assembly	1
G-330429-2	5	Tube Assembly	1
330431	4, 5	Crossover Tube	1
G-330433-B4	5	Cylinder Head Assembly	1
● G-330435-1	3, 5	Trip Rod Assembly	1
● 330438	5	Spring, 15/32" O.D.	2
● 330439	5	Steel Washer, 1-15/64" O.D.	2
330441	2, 6	Coupling	1
● 330442-1	2, 6	Spring Clip	2
330443	3, 4	Clamp	4
330444	4	Spring	2
● 330445	3	Bumper	1

PARTS LIST (Cont'd.)

PART NO.	FIGURE	DESCRIPTION	QTY.
G-330447-B4	5	Base Assembly	1
330448	3	Steel Washer, 1" O.D.	1
● 330449	5	"O" Ring, 1-5/8" O.D.	2
330467	3	Screw, 1-1/4-12	1
G-332424-B1	5	Base Assembly	1
332428	2	Stud	3
332463	4, 5	Nameplate	2
G-332606-B4	5	Wrapper Assembly	1
● 333353	3, 5	Shuttle	1
G-333409-A1	2, 6	Pump Tube Assembly	1
333418	6	Cap	1
● 333419	6	Bearing	1
● 333421	6	Steel Washer, 1-1/2" O.D.	1
333422	6	Piston Rod	1
G-333423	6	Cylinder Assembly	1
● 333424	6	Washer, 61/64" O.D.	1
● 333425	6	Spring Washer, 1-7/32" O.D.	1
● 333426	6	Male Support Ring	1
● 333428	6	Female Support Ring	1
333431	6	Dowel Pin, 3/16 x 1-3/4"	2
333444	2	Adjustment Bar	2
332824	2	Nameplate	1
● G-334567	5	Carrier Assembly	1
● 334985	5	Valve	1
● 335357	6	Valve Seat	1
335481	6	Tapered Spring	1
335482	6	Spring	1
335483	6	Washer, 1-23/64" O.D.	1
335498	3	Nylok Screw, 8-32 x 7/16"	2
● 335358	6	Valve Seat	1
336898	Not Illust.	Label	1
337731	5	Piston	1
337732	5	Hub	1
337733	5	Hex Nut, 1-20	1
337734	5	Cylinder	1

● Repair Kit Part

NOTE: All parts listed in this instruction sheet are for reference identification in instructions and illustrations. They will not necessarily be available unless listed in current parts price list or used on current model. Purchase bolts, nuts and other standard items from local hardware supplier. Refer to current parts price lists and bulletins for availability before ordering parts. ALWAYS mention part number, quantity, description and model used on.

PART CHANGES SINCE LAST PRINTING

G333390, G-330400-A1 and G-330435-1

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