



The Glutton Pump Conversion Kits

307909 rev.B

Air Valve Conversion Kit 222054

For Pump Models 218061, 218062,
218185 & 218079

Pilot Valve Conversion Kit 221152

For Pump Models 218060, 218061, 218062,
231019, 218185 & 218079

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Read warnings and instructions.

PROVEN QUALITY. LEADING TECHNOLOGY.



Installation

Pressure Relief Procedure

WARNING



INJECTION HAZARD

The system pressure must be manually relieved to prevent the system from starting or spraying accidentally. Fluid under high pressure can be injected through the skin and cause serious injury. To reduce the risk of an injury from injection, splashing fluid, or moving parts, follow the **Pressure Relief Procedure** whenever you:

- are instructed to relieve the pressure,
- stop spraying,
- check or service any of the system equipment,
- or install or clean the spray tips.

1. Engage the spray gun or dispensing valve safety latch.*
2. Disengage the gun or dispensing valve safety latch.*
3. Hold a metal part of the gun or valve firmly to a grounded metal waste container and trigger it to relieve the fluid pressure.*
4. Engage the safety latch again.*
5. Open the pump drain valve (required in system), having a container ready to catch the drainage.
6. Leave the drain valve open until you are ready to spray again.

*Applies only when using a spray gun or dispensing valve.
7. If you suspect that the spray tip, nozzle, or hose is completely clogged or that pressure has not been fully relieved after following the steps above, **very slowly** loosen the hose end coupling and relieve pressure gradually, then loosen completely. Now clear the tip, nozzle, or hose obstruction.

Installation

Installing the Air Valve Conversion Kit 222054

1. Follow the **Pressure Relief Procedure**.
2. Assemble kit as shown in Fig. 1.
3. Remove mufflers and lock rings from old air valve and install them on new air valve. Fig. 1.

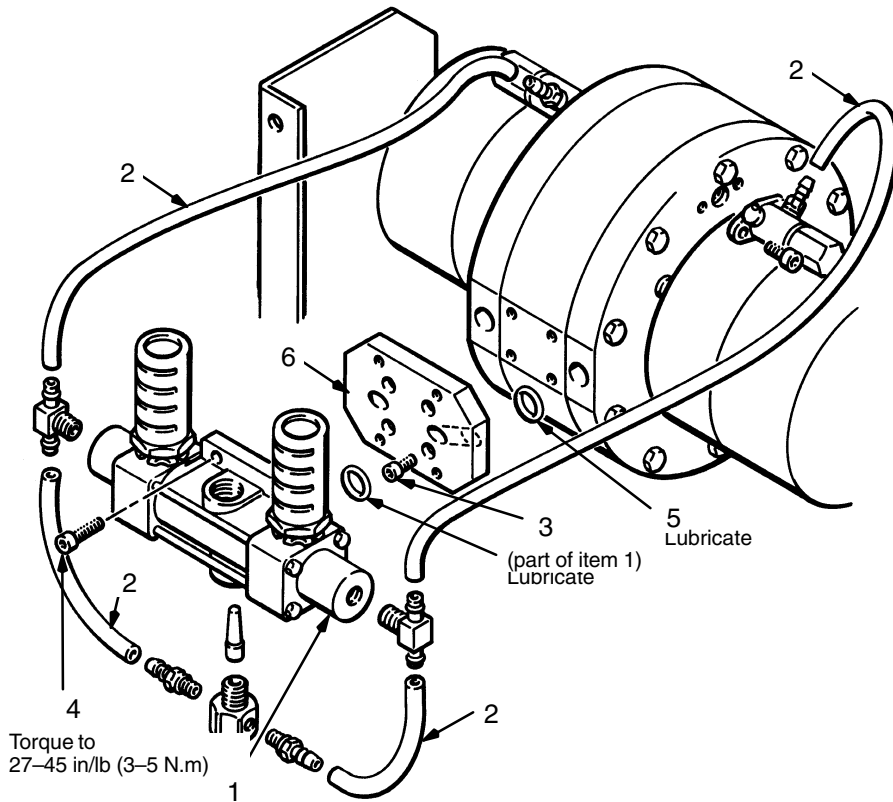


Fig. 1

Installing the Pilot Valve Conversion Kit 221152

1. Follow the **Pressure Relief Procedure**.
2. Assemble kit as shown in Fig. 2.

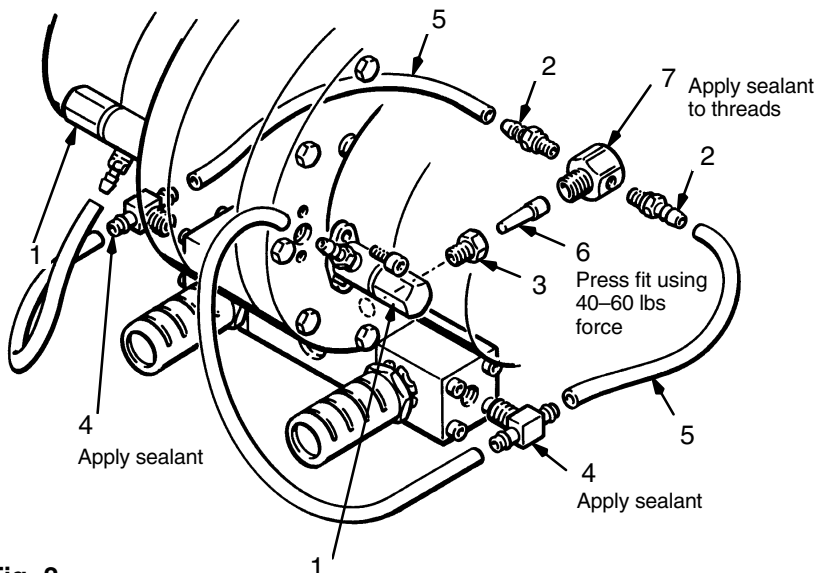


Fig. 2

Repair

Repairing the Air Control Valve

NOTE: An Air Valve and Pilot Valve **Repair Kit** is available, page 5. Parts included in the kit are marked with an asterisk, for example, (106*). Use all the parts in the kit for the best results.

Disassembly

1. Follow the **Pressure Relief Procedure** on page 2.
2. Cut a small slit in the tube ends and disconnect them from the pilot valve fittings, air valve tees (113), and barb fittings (117).
3. Remove the valve end housings (102) by unscrewing the screws (111) and nuts (112). Refer to the **Parts Drawing** on page 8.
4. Center the valve spools (103) in the housing (101). Remove the spools and stem (104) by applying opposing force with wrenches on the spool (103) flats.
5. If the air filter (115) needs cleaning or replacement, unscrew the filter housing (116) and remove the filter. To clean them, soak the filter housing and the filter in solvent until they are clean. Blow them dry with low pressure air [under 30 psi (2.1 bar)]. Press fit the filter into the housing, using 40–60 lbs. of force. Apply sealant to the filter housing threads and screw it into the center housing (101).

Assembly

1. Apply lithium base grease to all o-rings, u-cups, gaskets and to the complete spool assembly before installing them.
2. Remove the seal retainers (105) from each side of the center housing (101). Replace the u-cup (110*), with the lips facing into the housing. Install the retainers with the flat side facing into the housing.

3. Replace the spools (103) if damaged. Replace the o-ring (108*) and u-cup (109*) on each spool, being sure to seat them in the grooves. Install the u-cup with the lips facing towards the housing (101).
4. Apply medium strength thread sealant to the spool stem (104) threads. Remove the excess sealant.

CAUTION

Do not overtighten the spools (103) as this can shear the spool threads.

5. Thread one spool (103) onto the stem (104) and insert it into the center housing (101); be careful not to dislodge the u-cups (110) and retainers (105). Thread the other spool onto the stem. With wrenches on the flats of the spools, apply opposing force and tighten until snug; 7–13 in-lb (0.79–1.47 N.m).
6. Replace the gasket (106*) in each end housing (102) and the o-ring (107*) on each end housing shoulder.
7. Install the end housings (102) onto the center housing (101); be careful not to move the spool and dislodge the u-cups (110) and retainers (105). Secure the end housings with the four screws (111) and nuts (112), torquing them to 27–45 in-lb (3–5 N.m).

CAUTION

If the mufflers are replaced, they must be installed with the lock rings to avoid damage to the spool and o-rings during operation.

8. Replace the two o-rings (108*) in the center housing (101).
9. Install the air valve on the pump and connect the tubing as shown in Fig. 1.

Repair

Repairing the Pilot Valve

NOTE: An Air Valve and Pilot Valve Repair Kit is available. See the back cover to order. Parts included in the kit are marked with an asterisk, for example, (210*). Use all the parts in the kit for the best results.

Disassembly

1. Follow the **Pressure Relief Procedure** on page 2.
2. Unscrew the valve cap (203) from each of the valve housings (204) and remove the parts. Clean and inspect the parts for damage. Refer to the **Parts Drawing** on page 9.
3. To replace the rod seal (210*):
 - a. Cut a small slit in the tube ends and disconnect them from the pilot valve fittings (208) and air valve tees.
 - b. Unscrew the cap screws and remove the pilot valve housings (204). Grease the rod seals (210*) and install one on each side of the pump.
 - c. Secure the pilot valve housings (204) to the pump with the cap screws.
 - d. Connect the tubing to the pilot valve fittings (208) and air valve tees as shown in Fig. 2.

Assembly

1. Apply lithium base grease to the inside and outside of the air valve (202) and to the o-rings and seals.

2. Install the o-ring (205), being sure to completely seat it on the flat in the valve housing (204). Install the long end of the valve stem (201) into the housing.
3. Install the small spring (207) over the valve stem (201), the air valve (202) over the spring, and the larger spring over the air valve.
4. With the copper gasket (209*) in place on the valve cap (203), screw the cap onto each of the valve housings (204). Torque the cap to 7.4–12.5 ft-lb (10–17 N.m).

Repair Kit

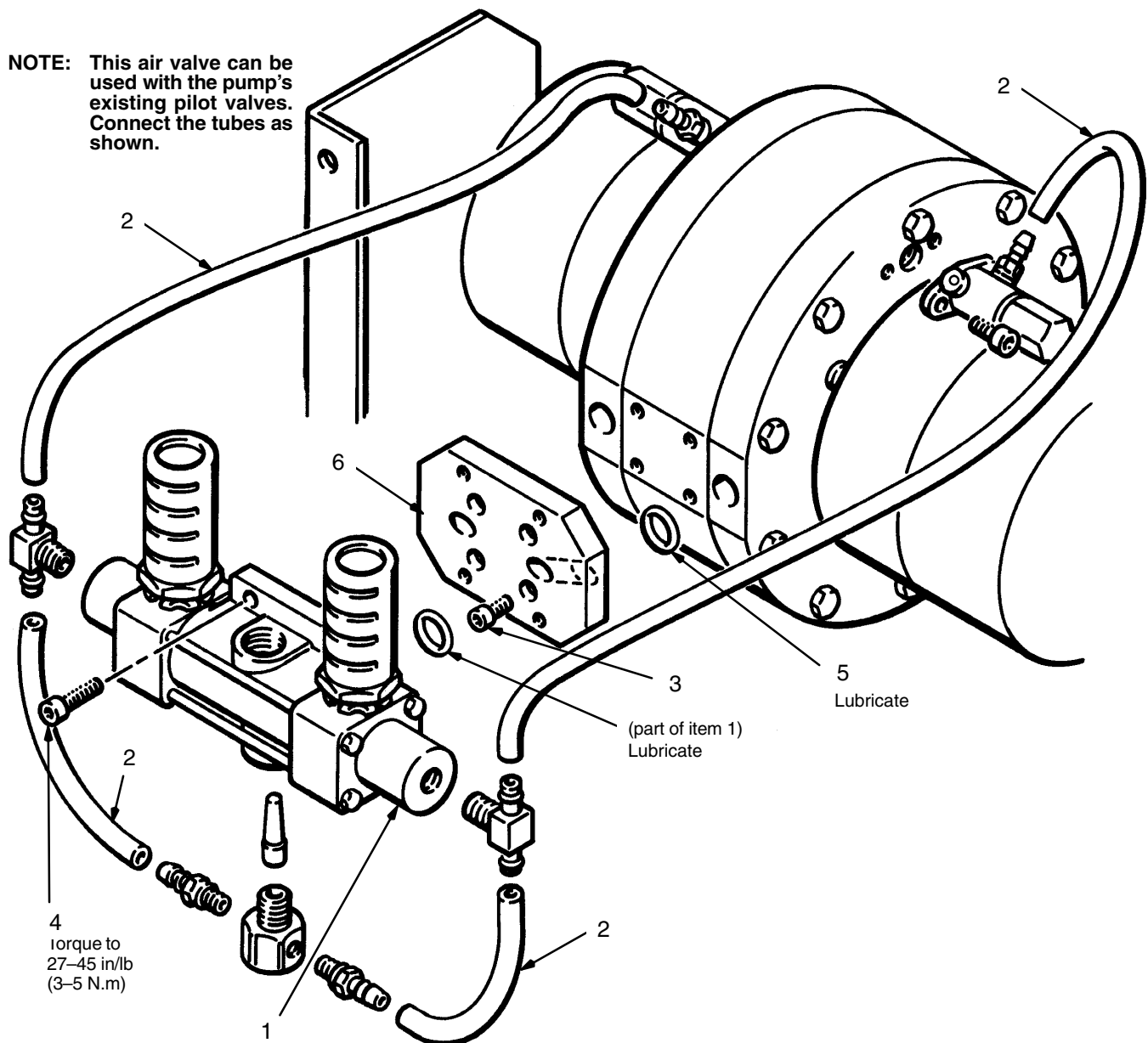
Air Valve and Pilot Valve Repair Kit 220656

Includes:

Ref No.	Part No.	Description	Qty
106	181464	GASKET, polyurethane	2
107	110782	O-RING, buna-n	2
108	107186	O-RING, buna-n	4
109	108781	U-CUP, polyurethane	2
110	108782	U-CUP, polyurethane	2
114	179861	TUBE, polyurethane, 0.25" OD; 6 in.	3
205	159589	O-RING, buna-n	2
209	156766	GASKET, copper	2
210	107161	SEAL, pilot valve rod, buna-n	2
	183384	TUBE, polyurethane, 0.25" OD; 9.5 in.	1
	108754	SEALANT, anerobic, medium strength, 0.5 cc tube	1

Parts

NOTE: This air valve can be used with the pump's existing pilot valves. Connect the tubes as shown.

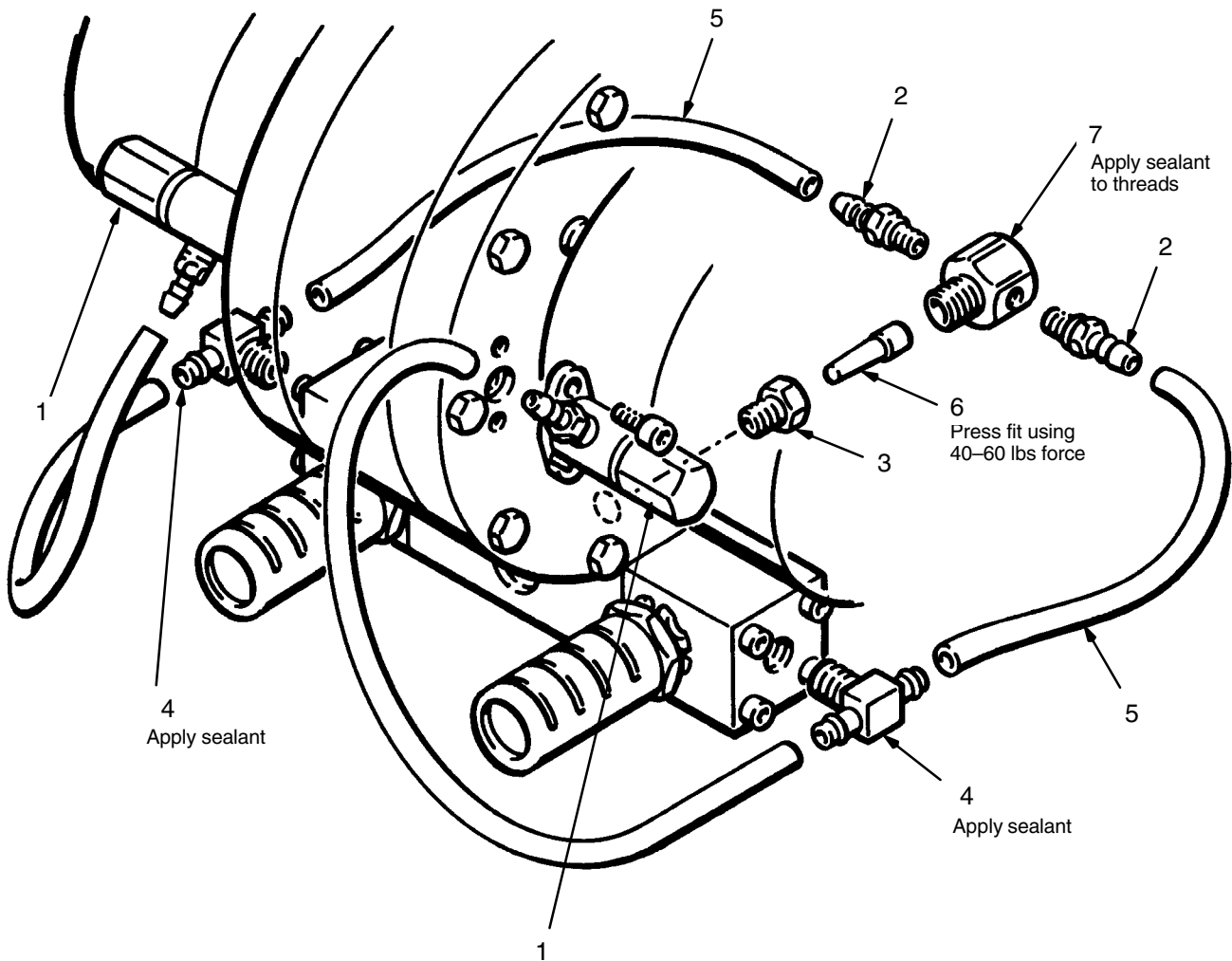


Air Valve Conversion Kit 222054

For Pump Models 218061, 218062,
218185 & 218079
Includes items 1 to 6

REF NO.	PART NO.	DESCRIPTION	QTY	REF NO.	PART NO.	DESCRIPTION	QTY
1	220902	AIR VALVE ASSY. See pages 4 & 5 for parts & service instructions	1	5	107186	O-RING, buna-n	2
2	054138	TUBE, nylon	48 in.	6	183745	PLATE, adapter	1
3	104092	SCREW, cap, sch; 10-24 x 0.625	4				
4	101888	SCREW, cap, sch 10-24 x 0.875	4				

Parts



Pilot Valve Conversion Kit 221152

For Pump Models 218060, 218061, 218062, 231019, 218185 & 218079

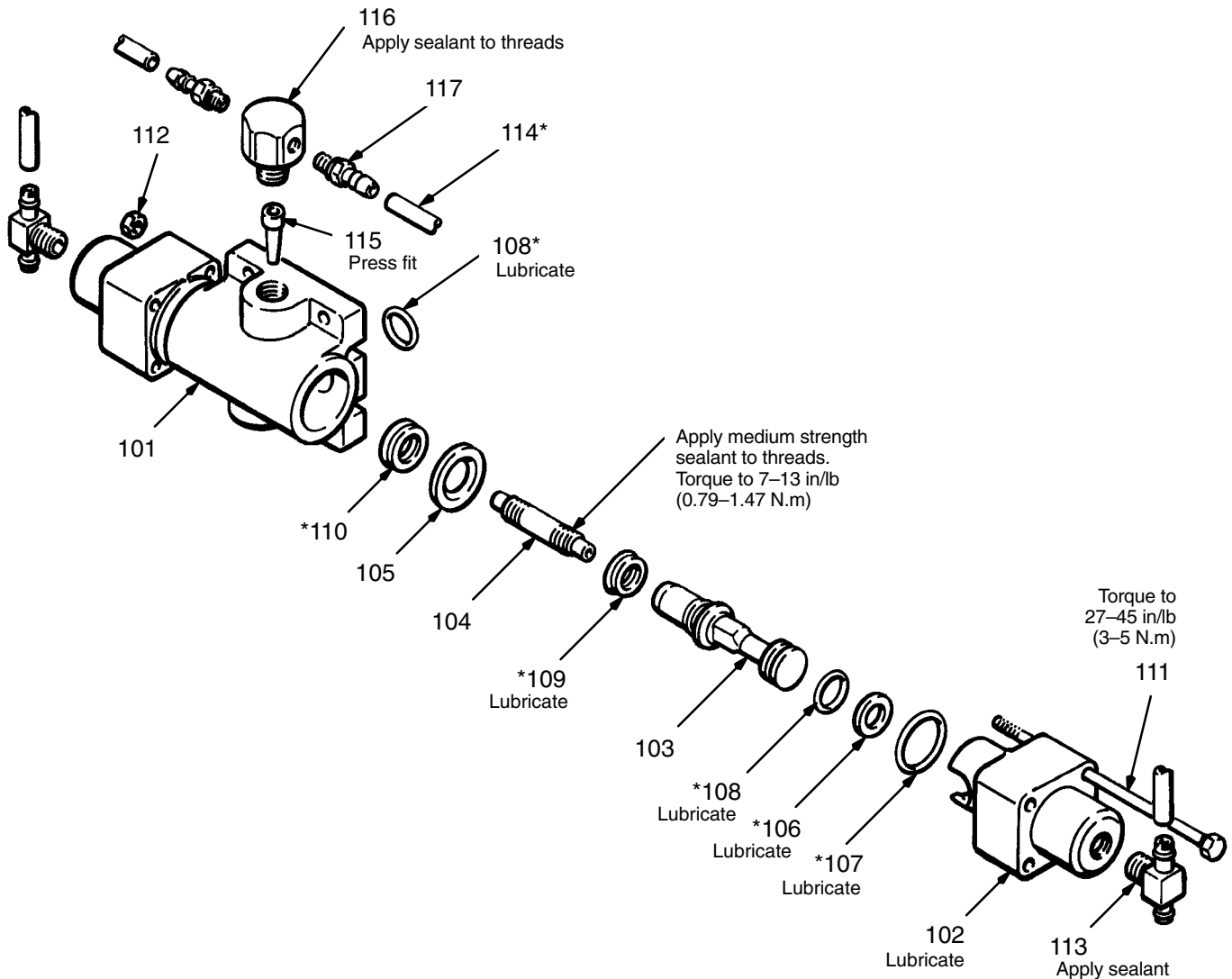
Includes items 1 to 7

REF NO.	PART NO.	DESCRIPTION	QTY	REF NO.	PART NO.	DESCRIPTION	QTY
1	221133	PILOT VALVE ASSY. See pages 6 & 7 for parts & service instructions	2	4	107191	TEE, barbed	2
2	108383	FITTING, seal, o-ring	2	5	054138	TUBE, polyurethane	48 in.
3	159840	BUSHING; 1/4-18 npt(f) x 1/8-27 npt(m)	1	6	160736	FILTER, air	1
				7	183620	HOUSING, filter, air	1

Parts

Air Control Valve 220902

Includes items 101 to 117



Air Control Valve 220902

Includes items 101 to 117

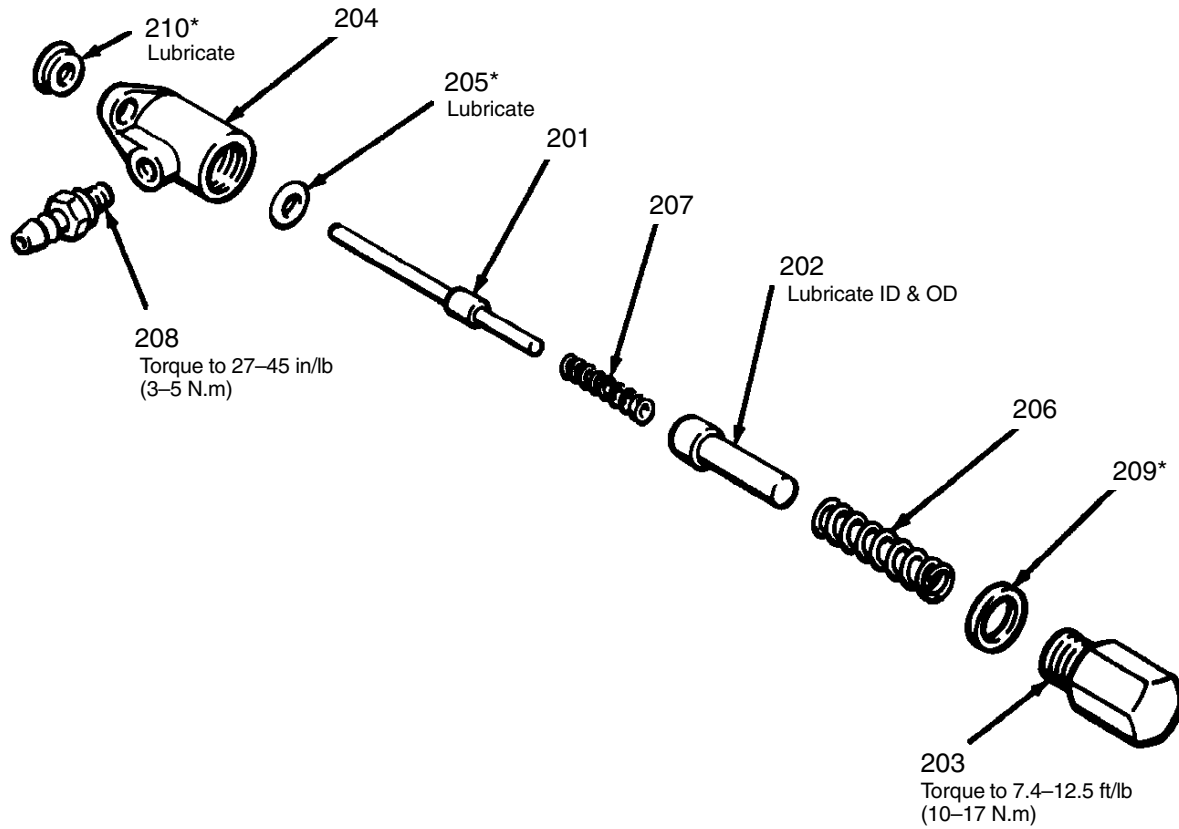
REF NO.	PART NO.	DESCRIPTION	QTY	REF NO.	PART NO.	DESCRIPTION	QTY
101	183370	HOUSING, valve center	1	111	108780	SCREW, cap, hex hd; M5 x 0.8 x 150	4
102	183369	HOUSING, valve end	2	112	100179	NUT, full hex; 10-24 UNC-2A	4
103	183368	SPOOL, differential	2	113	107191	TEE, barbed	2
104	183367	STEM, spool	1	114*	179861	TUBE, polyurethane; 0.25" (6.35 mm) O.D.	2
105	183366	RETAINER, seal	2	115	160736	FILTER, air	1
106*	181464	GASKET, polyurethane	2	116	183620	HOUSING, air filter	1
107*	110782	O-RING, buna-n	2	117	108383	FITTING, barbed, with buna-n o-ring	2
108*	107186	O-RING, buna-n	4				
109*	108781	U-CUP, polyurethane	2				
110*	108782	U-CUP, polyurethane	2				

*Included in **Repair Kit 220656** on page 5

Parts

Pilot Valve 221133

Includes items 201 to 210



Pilot Valve 221133

Includes items 201 to 210

REF NO.	PART NO.	DESCRIPTION	QTY	REF NO.	PART NO.	DESCRIPTION	QTY
201	183604	STEM, valve	1	207	108960	SPRING, compression	1
202	183603	VALVE, air	1	208	108383	FITTING, barbed, buna-n o-ring seal; 10-32 UNF-2A	1
203	183605	CAP, valve	1	209*	156766	GASKET, copper	1
204	183606	HOUSING, valve	1	210*	107161	SEAL, pilot valve rod, buna-n	1
205*	159589	O-RING, buna-n	1				
206	108961	SPRING, compression	1				

*Included in **Repair Kit 220656** on page 5.

Graco Standard Warranty

Graco warrants all equipment manufactured by Graco and bearing its name to be free from defects in material and workmanship on the date of sale by an authorized Graco distributor to the original purchaser for use. With the exception of any special, extended, or limited warranty published by Graco, Graco will, for a period of twelve months from the date of sale, repair or replace any part of the equipment determined by Graco to be defective. This warranty applies only when the equipment is installed, operated and maintained in accordance with Graco's written recommendations.

This warranty does not cover, and Graco shall not be liable for general wear and tear, or any malfunction, damage or wear caused by faulty installation, misapplication, abrasion, corrosion, inadequate or improper maintenance, negligence, accident, tampering, or substitution of non-Graco component parts. Nor shall Graco be liable for malfunction, damage or wear caused by the incompatibility of Graco equipment with structures, accessories, equipment or materials not supplied by Graco, or the improper design, manufacture, installation, operation or maintenance of structures, accessories, equipment or materials not supplied by Graco.

This warranty is conditioned upon the prepaid return of the equipment claimed to be defective to an authorized Graco distributor for verification of the claimed defect. If the claimed defect is verified, Graco will repair or replace free of charge any defective parts. The equipment will be returned to the original purchaser transportation prepaid. If inspection of the equipment does not disclose any defect in material or workmanship, repairs will be made at a reasonable charge, which charges may include the costs of parts, labor, and transportation.

THIS WARRANTY IS EXCLUSIVE, AND IS IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.

Graco's sole obligation and buyer's sole remedy for any breach of warranty shall be as set forth above. The buyer agrees that no other remedy (including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss) shall be available. Any action for breach of warranty must be brought within two (2) years of the date of sale.

Graco makes no warranty, and disclaims all implied warranties of merchantability and fitness for a particular purpose in connection with accessories, equipment, materials or components sold but not manufactured by Graco. These items sold, but not manufactured by Graco (such as electric motors, switches, hose, etc.), are subject to the warranty, if any, of their manufacturer. Graco will provide purchaser with reasonable assistance in making any claim for breach of these warranties.

In no event will Graco be liable for indirect, incidental, special or consequential damages resulting from Graco supplying equipment hereunder, or the furnishing, performance, or use of any products or other goods sold hereto, whether due to a breach of contract, breach of warranty, the negligence of Graco, or otherwise.

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612-378-3505 Fax

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PRINTED IN USA 307909 04/1988, Revised 08/2002