MODEL NUMBER

_____

SERIAL NUMBER

_____

LIMITED WARRANTY

PAX PRODUCTS, INC. (the "Company") warrants to the original purchaser of each PAX Lube-System that the System will be free from defects in material and workmanship, under normal and proper installation, use, and maintenance in accordance with the Company's instructions, for a period of 90 days after the date of shipment from the Company's plant.

Purchaser"s exclusive remedy and the Company's sole liability under the above warranty or in connection with any other claim relating to the Pax Lube-System shall be limited to the repair, or at the Company's option, the replacement or refund of the purchase price, of any System or part or component hereof which is returned to the Company freight prepaid and which is defective in material or workmanship. Defective Systems or parts or components thereof which the Company replaces become the property of the Company. All systems or parts or components thereof which are returned to the purchaser will be returned freight collect.

EXCEPT AS EXPRESSLY STATED ABOVE, THE COMPANY MAKES NO WARRANTY, EXPRESS OR IMPLIED, WHETHER OF MERCANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OR USE OR OTHERWISE, ON ANY PAX LUBE-SYSTEM, OR ANY PARTS OR LABOR FURNISHED DURING THE SALE, DELIVERY, OR SERVICING OF ANY PAX LUBE-SYSTEM.

IN NO EVENT SHALL THE COMPANY BE LIABLE TO ANY PURCHASER OR PERSON CLAIMING THROUGH ANY PURCHASER FOR ANY SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF, OR AS THE RESULT OF, THE SALE, DELIVERY, NON-DELIVERY, SERVICING, USE OR LOSS OF USE, OF ANY PAX LUBE-SYSTEM OR ANY PART THEREOF, OR FOR ANY CHARGES OR EXPENSES OF ANY NATURE INCURRED WITHOUT THE COMPANY'S WRITTEN CONSENT, EVEN THOUGH THE COMPANY HAS BEEN NEGLIGENT. IN NO EVENT SHALL THE COMPANY'S LIABILITY UNDER ANY CLAIM MADE BY ANY PURCHASER OR PERSON CLAIMING THROUGH ANY PURCHASER EXCEED THE PURCHASE PRICE OF THE PAX LUBE-SYSTEM OR PART OR COMPONENT THEREOF IN RESPECT OF WHICH DAMAGES ARE CLAIMED.

Purchaser shall promptly inspect each System upon delivery. Claims under the above warranty shall be made by contacting the Company at 5319 Monroe Road, Celina, Ohio 45822, Attn: Service Department (419-586-2337). No claim under the above warranty will be allowed unless made within 10 days after the date of the warranty period on which the defect is or should have been discovered by the purchaser.

Design changes between the unit received and that illustrated in the manual are the result of design improvements or special arrangements contracted for at the time of purchase. PAX PRODUCTS, INC. reserves the right to discontinue or change specifications, designs and materials, without notice, consistent with sound engineering principles and recognized practices.

PAX 2 1/2 & 5 GALLON LUBE SYSTEMS

INSTALLATION

ELECTRICAL REQUIREMENTS

It is necessary to supply the Pax Lube System with an electrical signal to activate the solenoid. The requirements of this signal are as follows:

1. 120 VAC 60 Hz .12A inrush .070 holding*
2. Minimum TIME ON of 50 milli-seconds (coil energized.)
3. Minimum TIME OFF of 50 milli-seconds (coil de-energized.)

NOTE: A cycle consists of I TIME ON and 1 TIME OFF.

*This is standard. Other voltages and cycles are available.

SOURCE OF ELECTRICAL SIGNAL

The electrical activation signal supplied to the Pax Lube System can be obtained from several locations:

1. Rotary switch on press
2. Cam switch on press
3. Limit switch on press
4. Electric relay on press
5. Optional timer

Other sources of the signal are available and each individual installation will dictate the exact source of the signal. Care should be taken that any signal provided will meet the electrical requirements of the system as stated in the "ELECTRICAL REQUIREMENTS" section of this manual.

ELECTRICAL HOOK-UP

When the electrical signal has been acquired, the following connections must be made in the electrical section of the mounting plate on the Pax Lube System. The signal must be wired into the Pax Lube System in the following manner:

1. Terminal #1 on the terminal strip is the 120 VAC 60 HZ hot lead (or signal wire).
2. Terminal #2 on the terminal strip is the neutral lead.
3. A ground screw is supplied on the terminal strip mounting plate for customer use in meeting local, state & national electrical codes.
4. Circuit to be fused at 1 1/2 AMP MAXIMUM.

See Page 14 of this Manual for the electrical schematic of your Pax Lube System.

WARNING

DAMAGE INCURRED DUE TO IMPROPER ELECTRICAL CONNECTIONS WILL VOID WARRANTY. ALL ELECTRICAL CONNECTIONS MADE ON THE PAX LUBE SYSTEM MUST BE MADE BY A QUALIFIED ELECTRICIAN TO KEEP THE WARRANTY IN EFFECT AND PREVENT PERSONAL INJURY.

When all electrical connections are completed, all wires in the electrical section of the mounting plate must be secured in such a manner as to prevent any possible damage. The cover plate should then be aligned and the six remaining screws be replaced and secured. The spray cycle on the Pax Lube System starts when the solenoid coil is de-energized.*

*See "LUBE SYSTEM OPERATION" section of this Manual.

WARNING

FAILURE TO REPLACE THE COVER PLATE MAY CAUSE DAMAGE AND PERSONAL INJURY DUE TO THE EXPOSURE OF ELECTRICAL CONNECTIONS.

PLACEMENT OF PAX 2 1/2 & 5 GALLON LUBE SYSTEMS

1. The Pax Lube System should be located at a point near the press where the unit will not be in the path of vehicles or moving parts of the press and at a point where refilling the reservoir and service of the air regulator assembly can be done conveniently.
2. The Pax Lube System has optional 96" spray nozzle assemblies which can be shortened to the length required for each application. The system should be placed as close as practical to the points to be lubricated. When the spray lines for water soluble oils or equivalent lubricants exceed 96:, serious thought should be given to replacing as much of the flexible tubing as possible with rigid tubing. The use of rigid tubing will help prevent the loss of line pressure, thus helping to assure a good spray pattern. When spraying higher viscosity lubricants, rigid tubing may be needed for lines shorter than 96". Generally speaking, the shorter the line, the better the spray pattern.
3. When locating the unit, some consideration should be given to the routing of air and electrical lines to the unit.
4. A mounting bracket is available to mount the unit on a machine.

WARNING

IMPROPER PLACEMENT OF THE PAX LUBE SYSTEM MAY RESULT IN DAMAGE TO THE PAX LUBE SYSTEM, PRESS AND OTHER EQUIPMENT AND MAY RESULT IN PERSONAL INJURY.

AIR REQUIREMENTS

The air pressure requirements of the Pax Lube System are as follows:

1. THE MAXIMUM SAFE OPERATING AIR PRESSURE IS 125 PSI.
2. The operating air pressure range is 35 PSI to 125 PSI.
3. The minimum recommended input line to be 1/4" pipe or equivalent.
4. Maximum flow requirement = .002 SCFM x no. of pumps (see below).

WARNING

INTRODUCING AIR PRESSURE IN EXCESS OF 125 PSI MAY RESULT IN PERSONAL INJURY, DAMAGE TO THE AIR REGULATOR ASSEMBLY AND WILL VOID THE WARRANTY OF THE PAX LUBE SYSTEM.

CAUTION

THE AIR REGULATOR ASSEMBLY ON THE PAX LUBE SYSTEM IS RATED AT 125 PSI MAXIMUM. WHEN THE AVAILABLE AIR PRESSURE EXCEEDS THE 125 PSI MAXIMUM LIMIT, IT IS NECESSARY TO REGULATE THIS PRESSURE DOWN TO THE OPERATING RANGE OF THE PAX LUBE SYSTEM, WHICH IS 35 PSI to 125 PSI.

The air volume of the Pax Lube System is .002 SCFM (cubic feet per minute of free, uncompressed air) per pump, per cycle.*

NOTE: The air volume rate is based on the following:
An operating pressure of 40 PSI and the volume adjustment of the pump set at full capacity. The usage rate indicated is a mean figure and actual usage of air may vary slightly from unit to unit.

* This volume also includes the spent air of the manifold and solenoid.

LUBE SYSTEM OPERATION

(Refer to Fig. 6A)

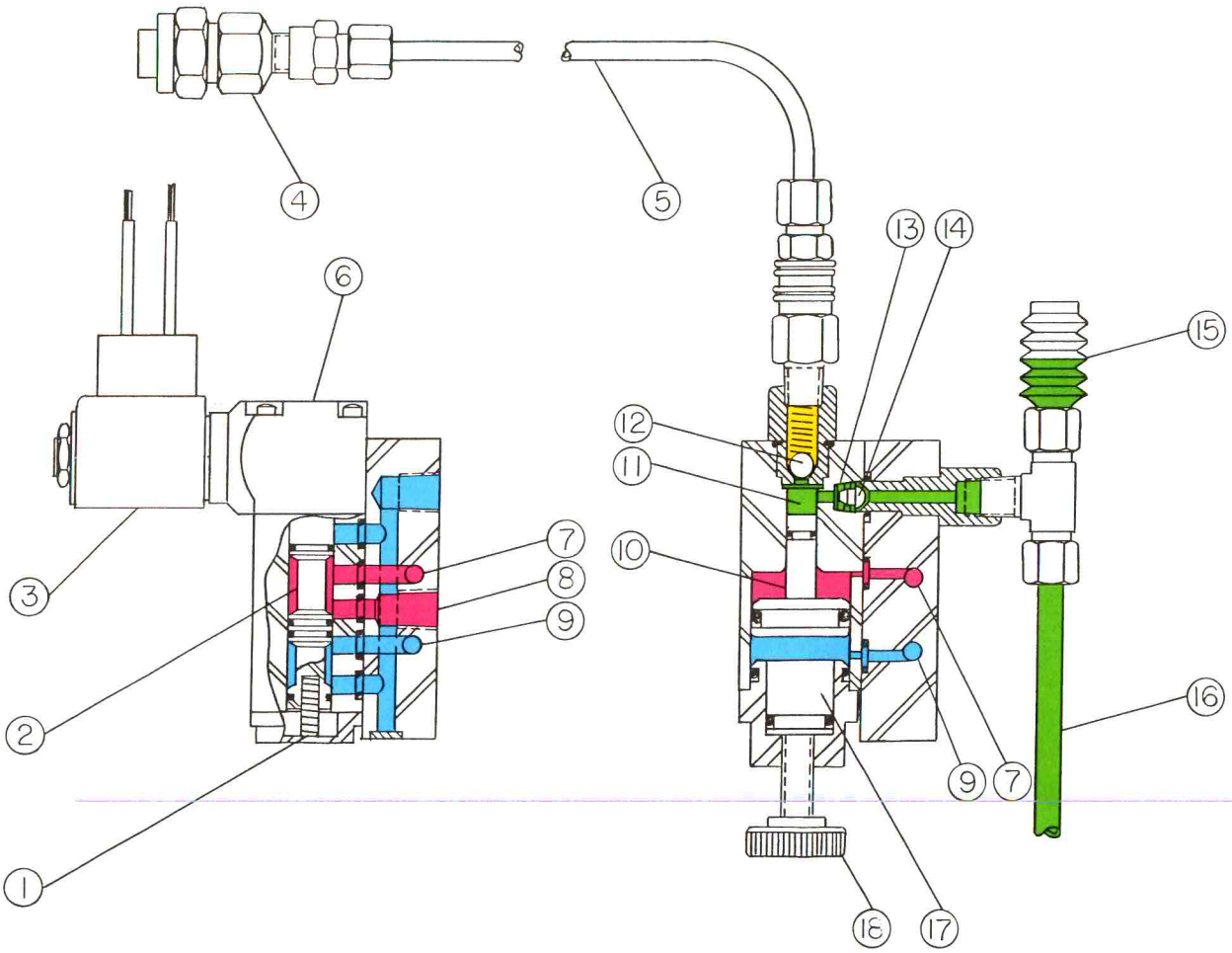
When the coil (3) of the solenoid valve (6) is energized, the spool (2) will move downward, allowing the air under the piston (10) to be exhausted thru the bottom manifold passage (9) while air is flowing from the air inlet (8) thru the top manifold passage (7) and forcing the piston (10) downward. When the piston (10) is moving downward, a void is being created in the chamber (11). This void is filled by lubricant being forced up the suction line (16) from the reservoir, which is at atmospheric pressure. The pressure on the fluid in the reservoir is great enough to overcome the inlet check spring (13) and allow free flow into the voided chamber (11). The accumulator (15) is provided to prevent a secondary spray at the nozzle which is caused by the momentum (kinetic energy) of the incoming lubricant.

(Refer to Fig. 6B)

When the coil (3) is de-energized, the valve spool (2) will return to its normal position by the spring (1) within the solenoid valve. At this time, the air on top of the piston is being exhausted thru the top manifold passage (7) while air is allowed to flow from the inlet (8) to the bottom manifold passage (9). This air flow will cause the piston (10) to move upward and apply a force to the lubricant in the chamber (11). This force seats the inlet check poppet (14) and unseats the outlet check ball (12). The pressurized lubricant in the chamber now can flow out of the pump and apply its force to the lubricant already in the spray line (5). This force displaces lubricant thru the spray nozzle (4) in a desired pattern.

The volume of lubricant is controlled by the adjustment screw (18) which is shown in the maximum volume position. The sealed plunger (17) is attached to adjustment screw (18). When this screw is turned clockwise it will limit the stroke of the piston (10), thereby limiting volume of lubricant in the chamber (11). This allows the pump unit to be adjusted for the volume of lubricant required.

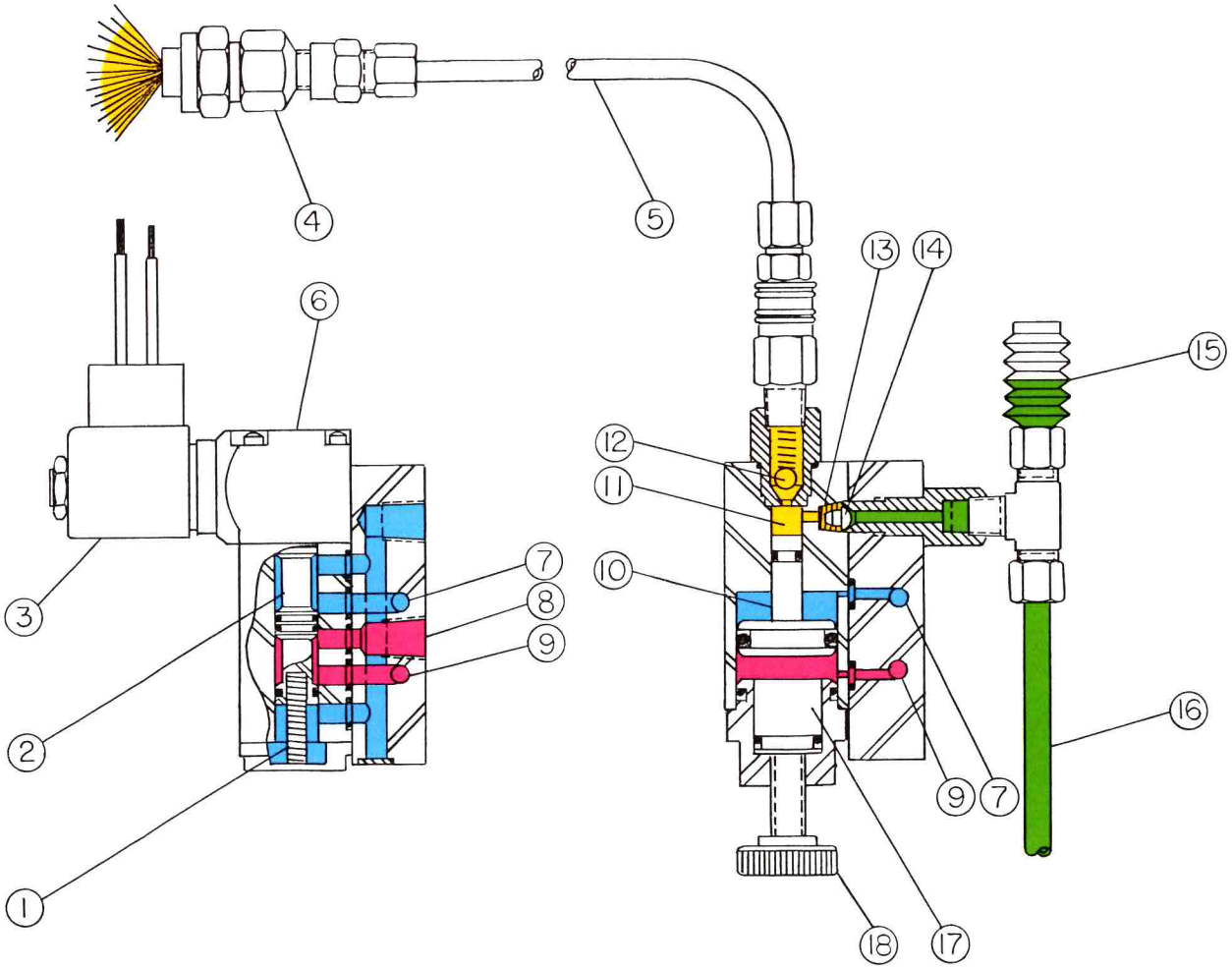
LUBRICANT INTAKE



- EXHAUST AIR
- PRESSURIZED AIR
- PRESSURIZED FLUID
- FLUID AT ATMOSPHERIC PRESSURE

FIGURE 6A

LUBRICANT OUTPUT



- EXHAUST AIR
- PRESSURIZED AIR
- PRESSURIZED FLUID
- FLUID AT ATMOSPHERIC PRESSURE

FIGURE 6B

USE OF THE AIR REGULATOR ASSEMBLY

AIR FILTER / REGULATOR / GAUGE : The air filter must be drained as required to assure the liquid level is maintained below the white baffle. Draining is accomplished by pushing in the valve core located on the bottom of the bowl, until all water has vented. After releasing the valve core the air filter is in an operating status. The air pressure supplied to the Pax Lube System will be indicated on the pressure gauge (see "AIR REQUIREMENTS" section of this manual). Adjustment of the air pressure to the Pax Lube System can be accomplished by raising the red lockring on the adjustment knob, adjusting the air pressure to within the proper recommended range (clockwise rotation increases and counter-clockwise rotation decreases outlet pressure) and returning the red lockring to the "down" position to lock.

CAUTION

MOISTURE OR CONTAMINENTS ENTERING THE SYSTEM WILL CAUSE PREMATURE WEAR AND MALFUNCTIONING OF THE PAX LUBE SYSTEM.

AIR LUBRICATOR : The air lubricator is engineered into the Pax Lube System to supply positive lubrication to all moving parts inside the system via the air supply. On a daily basis the reservoir on the air lubricator must be checked to make sure that the oil is maintained at the proper operating level. The proper operating level of the oil is marked on the side of the reservoir. DO NOT OVERFILL. The drip rate of the air lubricator must be a minimum of 1 drip per 5 cycles of the Pax Lube System.

CAUTION

THE OIL LEVEL IN THE AIR LUBRICATOR RESERVOIR SHOULD NEVER FALL TO THE BOTTOM OF THE WHITE SIPHON TUBE.

Fill the reservoir to maximum fill line on bowl with a high quality light turbine oil, rust inhibited, for use in pneumatic systems and having a viscosity of approximately 150 S.U.S. at 100° F., or ISO viscosity grade 32. Example: Mobil D.T.E. 24, or equal. To fill this reservoir, the following steps must be taken:

1. Disconnect or turn off the supply airline from the front of the air regulator assembly on the Pax Lube System.
2. Remove the oil fill plug located on the top of the air lubricator.
3. Fill the reservoir with the recommended oil to the level marked on the reservoir. DO NOT OVERFILL.
4. Replace the oil fill plug.
5. Connect the supply airline to the air regulator assembly.

WARNING

NEVER ATTEMPT TO FILL THE AIR-LUBRICATOR RESERVOIR WITHOUT FIRST TURNING OFF THE AIR SUPPLY AND RELIEVING ALL PRESSURE. FAILURE TO RELEASE PRESSURE MAY CREATE A HAZARDOUS CONDITION THAT COULD CAUSE SERIOUS INJURY.

It is recommended that the drip rate adjustment be made with the unit cycling at the normal operating speed. To set the drip rate. the following steps must be taken:

1. Pull the red lockring upward (this is located on the black adjustment knob).
2. Look through sightglass under the adjustment knob and count the number of pump cycles between drips of oil.

3. Turn the adjustment knob (counterclockwise to increase the drip rate, clockwise to decrease the drip rate) until the oil drips at least one time for every five cycles of the pumps.
4. Push the red lockring downward to lock the setting.

CAUTION

FAILURE TO MAINTAIN THE AIR LUBRICATOR RESERVOIR WITH THE PROPER LUBRICANT OR DRIP RATE WILL VOID THE WARRANTY OF THE PAX LUBE SYSTEM.

The Pax Lube System is supplied with filters in place, ready for use. Periodically, it will become necessary to either clean the filters in warm soapy water or solvent, or install new filters. The need for cleaning or replacing the filters will be indicated by the tendency of the filters to float in the tank (reservoir) or the presence of air in the pump suction lines.

CAUTION

PERIODICALLY THE FILTERS MUST BE REMOVED FROM THE TANK AND INSPECTED FOR DAMAGE. A DAMAGED FILTER MUST BE REPLACED AT ONCE.

The following steps are recommended for cleaning or replacing the filters:

1. Turn off power & air pressure to the system.
2. Open the tank lid.
3. Remove the quick connect plugs from the top of the filters.
4. Remove the filters from the tank.
5. Obtain new filters or clean the old filters.
6. Place the filters inside the tank.
7. Connect the quick connect plugs to the top of the filters.
8. Close the tank lid.

NOTE: It is recommended that when the filters are cleaned or replaced, the tank be emptied and cleaned with either water or solvent to remove all foreign material from the tank.

CAUTION

THE FILTERS WILL RETAIN A SMALL AMOUNT OF LUBRICANT. SHOULD IT BECOME NECESSARY TO CHANGE LUBRICANTS, IT IS ABSOLUTELY NECESSARY TO RUN COMPATIBILITY TESTS BETWEEN THE TWO LUBRICANTS INVOLVED. CONTACT THE MANUFACTURER OF THE LUBRICANT FOR INFORMATION ON TESTING. SHOULD THE LUBRICANTS PROVE TO BE INCOMPATIBLE, IT WILL BE NECESSARY TO REMOVE THE FILTERS FROM THE TANK AND CLEAN THOROUGHLY PRIOR TO THE INTRODUCTION OF THE NEW LUBRICANT INTO THE PAX LUBE SYSTEM. YOU MUST ALSO PURGE ALL SPRAY LINES OF THE OLD LUBRICANT TO PREVENT REACTION OF THE LUBRICANTS IN THE LINES WHICH WILL CAUSE A FAILURE OF THE PAX LUBE SYSTEM.

CAUTION

DO NOT ATTEMPT TO PURGE THE SUCTION LINES OR SPRAY LINES WHILE ATTACHED TO THE PUMP OR MANIFOLD. BY APPLYING AIR LINE PRESSURE, COMPONENTS OF THE PAX LUBE SYSTEM COULD BE DAMAGED.

DAILY MAINTENANCE SCHEDULE

The following items should be checked at least twice daily to assure proper operation of the Pax Lube System:

1. Check air lubricator for proper oil level and drip rate.
2. Check air filter and drain as needed.
3. Check spray nozzles for good spray pattern.
4. Check filters for build up of foreign materials.
5. Check lubricant level in reservoir, add if required.

TROUBLE SHOOTING

Refer to "LUBE SYSTEM OPERATION" section of this manual.

PROBLEM	CAUSE	SOLUTION
ENTIRE SYSTEM WILL NOT OPERATE.	1) SOLENOID WIRING	1) WIRE CORRECTLY.
	2) AIR REGULATOR PRESSURE	2) ADJUST TO OPERATING RANGE - 35 PSI to 125 PSI.
INDIVIDUAL PUMP WILL NOT OPERATE.	1) OIL WILL NOT RISE IN THE SUCTION LINE.	1A) REMOVE COVER PLATE, BE SURE SUCTION LINES AND ACCUMULATORS ARE TIGHT.
		1B) REMOVE OUTLET VALVE BODY & CHECK FOR PISTON MOTION WITH UNIT OPERATING.
		a) IF THE PISTON IS NOT MOVING, BUMP PISTON TO GET TO TO MOVE & REPLACE OUTLET VALVE BODY.
		b) IF PISTON IS MOVING, SHUT OFF UNIT, PUSH PISTON TO THE BOTTOM OF THE STROKE, FILL CHAMBER WITH OIL TO BE PUMPED, REPLACE OUTLET VALVE BODY & TEST UNIT.
		c) IF PUMP STILL DOESN'T OPERATE, REMOVE PUMP FROM MANIFOLD & CHECK INLET VALVE SEAT, POPPET & SPRING FOR FOREIGN MATERIALS OR DAMAGE. CLEAN OR REPLACE AS REQUIRED.
	2) OIL IN THE SUCTION LINE RISES THEN FALLS WITH EACH STROKE.	2A) REMOVE OUTLET VALVE BODY, PUSH PISTON TO BOTTOM OF STROKE, FILL CHAMBER WITH OIL TO BE PUMPED, REPLACE OUTLET VALVE BODY & TEST UNIT.
		2B) IF PUMP STILL DOES NOT PUMP, REMOVE PUMP FROM MANIFOLD, INSPECT INLET VALVE SEAT, POPPET AND SPRING FOR DAMAGE OR FOREIGN MATERIALS. CLEAN OR REPLACE AS REQUIRED.

TROUBLE SHOOTING

PROBLEM	CAUSE	SOLUTION
	3) SUCTION LINE IS FULL BUT FLUID IN SPRAY LINE RISES & FALLS WITH EACH STROKE.	3) CHECK OUTLET VALVE SPRING, BALL & SEAT FOR DAMAGE OR FOREIGN MATERIALS. CLEAN OR REPLACE AS REQUIRED.
	4) PUMP WILL PUMP FOR A WHILE, STOP, THEN START AGAIN.	4) CHECK OUTLET VALVE SPRINGS, BALL & SEAT FOR DAMAGE OR FOREIGN MATERIALS. CLEAN OR REPLACE AS REQUIRED.
SPRAY PATTERN NOT GOOD	1) AIR REGULATOR PRESSURE	1) UNIT IS TO BE OPERATED AT 35 PSI MIN. THE MORE VISCOUS THE OIL, THE HIGHER THE OPERATING PRESSURE MUST BE.
	2) AIR IS COMING OUT OF PUMP IN THE SPRAY LINE.	2A) CHECK TO SEE IF FILTERS ARE COVERED BY OIL. IF THEY ARE NOT, ADD OIL.
		2B) DEPRESS RED BUTTON ON TOP OF SOLENOID, LOOK FOR AIR RISING IN SPRAY LINE. IF AIR IS RISING, REMOVE PISTON FROM PUMP & CHECK SMALL "O" RING FOR WEAR. REPLACE IF WORN.
	3) SPRAY NOZZLE & STRAINER ARE CONTAMINATED.	3) CLEAN OR REPLACE AS REQUIRED.
	4) FLEXIBLE SPRAY LINES ARE TOO LONG	4) REPLACE FLEXIBLE TUBING WITH RIGID TUBING. THIS IS EXPECIALLY IMPORTANT WHEN SPRAYING HIGH VISCOSITY LUBRICANTS. LENGTH OF SPRAY LINES MUST BE KEPT TO A MINIMUM.

TROUBLE SHOOTING

PROBLEM	CAUSE	SOLUTION
SPRAY PATTERN NOT GOOD (CONT'D)	5) AIR IS TRAPPED IN THE SPRAY LINE.	5) SPRAY LINES SHOULD BE ROUTED TO PREVENT A HIGH POINT BETWEEN THE PUMP AND THE SPRAY NOZZLE WHERE AIR COULD BE TRAPPED. FAST CYCLING OF THE PUMP MAY WASH-OUT TRAPPED AIR. SPRAY LINES SHOULD HAVE A MAXIMUM OF 3/16" INSIDE DIAMETER. 1/8" INSIDE DIAMETER IS RECOMMENDED.

CAUTION

DO NOT ATTEMPT TO PURGE THE SUCTION LINES OR SPRAY LINES WHILE ATTACHED TO THE PUMP OR MANIFOLD. BY APPLYING AIR LINE PRESSURE, COMPONENTS OF THE PAX LUBE SUSTEM COULD BE DAMAGED.

PARTS LIST

ORDER REPAIR AND REPLACEMENT PARTS FROM:

PAX PRODUCTS, INC.
5097 MONROE ROAD
P.O. BOX 257
CELINA, OH 45822

PH: (419) 586-6948

Or

1-800-733-6930

and

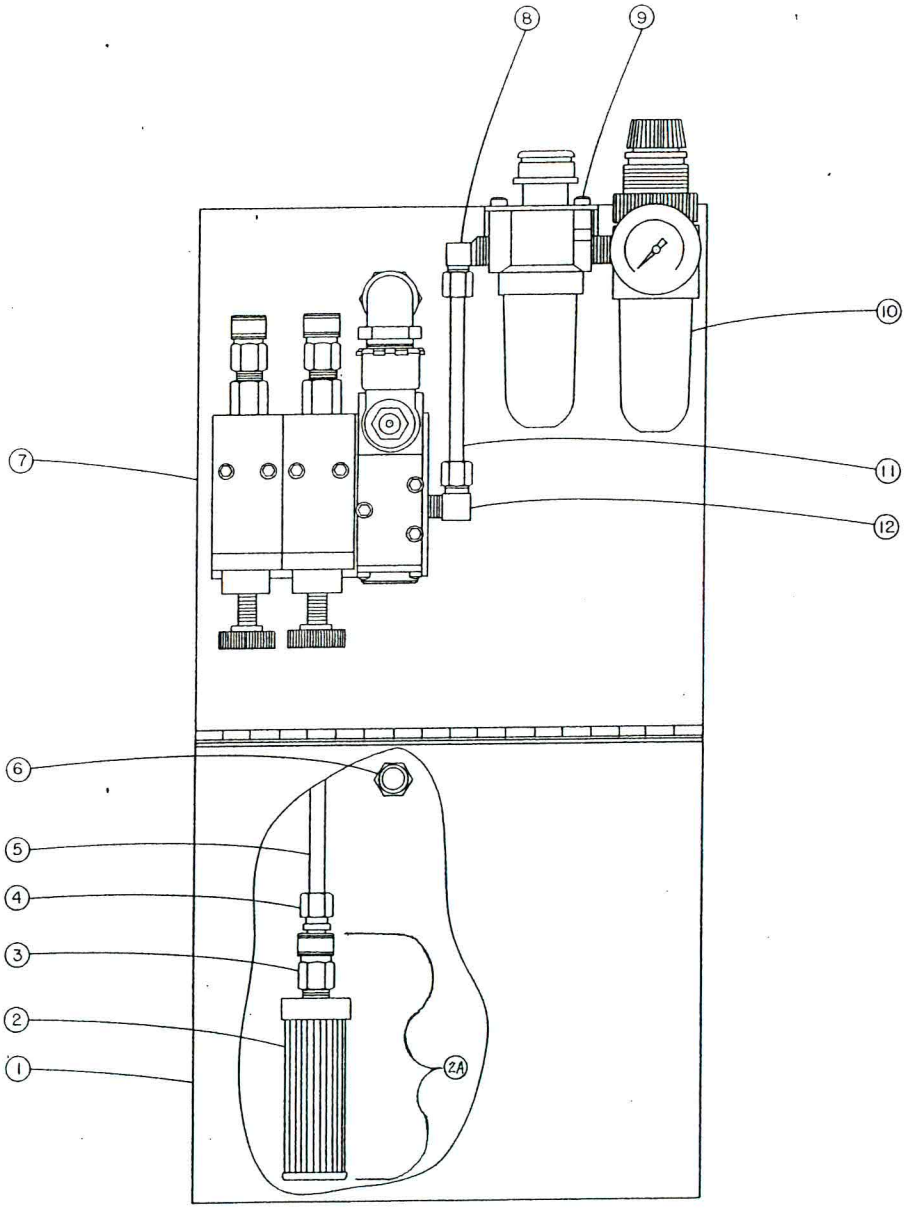
FAX: (419) 586-6932

PLEASE PROVIDE THE MODEL AND SERIAL NUMBER OF THE PAX LUBE SYSTEM.

NOTE: SUBSTITUTING PARTS NOT AUTHORIZED BY PAX PRODUCTS, INC. MAY CAUSE A DETERIORATED PERFORMANCE OF THE PAX LUBE SYSTEM.

KEY NO	PART NO.	DESCRIPTION	QTY
1	01-2015-32	Reservoir – 2 1/2 Gallon	1
2A	01-2034-30	Filter Assembly w/Quick Connect	*
2	01-2017-32	Filter	-
3	01-0927-40	Quick Connect	-
4	06-0928-32	Quick Connect Plug	*
5	01-1112-40	1/4" x 9" Pump Line	*
6	01-0919-21	Exhaust Muffler	1
7	01-2043-30	Mounting Plate 2 Pump Unit	1
8	01-0960-20	Male Elbow	1
9	01-0122-22	Button Head Cap Screw	2
10	01-2147-30	FRL Assembly (Consists of)	
	01-0961-21	Air Filter / Regulator	1
	01-0962-21	Air Lubricator	1
	01-0963-20	Air Gauge	1
	01-1205-20	1/8" NPT Brass Close Nipple	1
11	01-1116-21	1/4" Tubing (Air Inlet Line)	2 1/8"
12	01-0914-21	Male Elbow	1

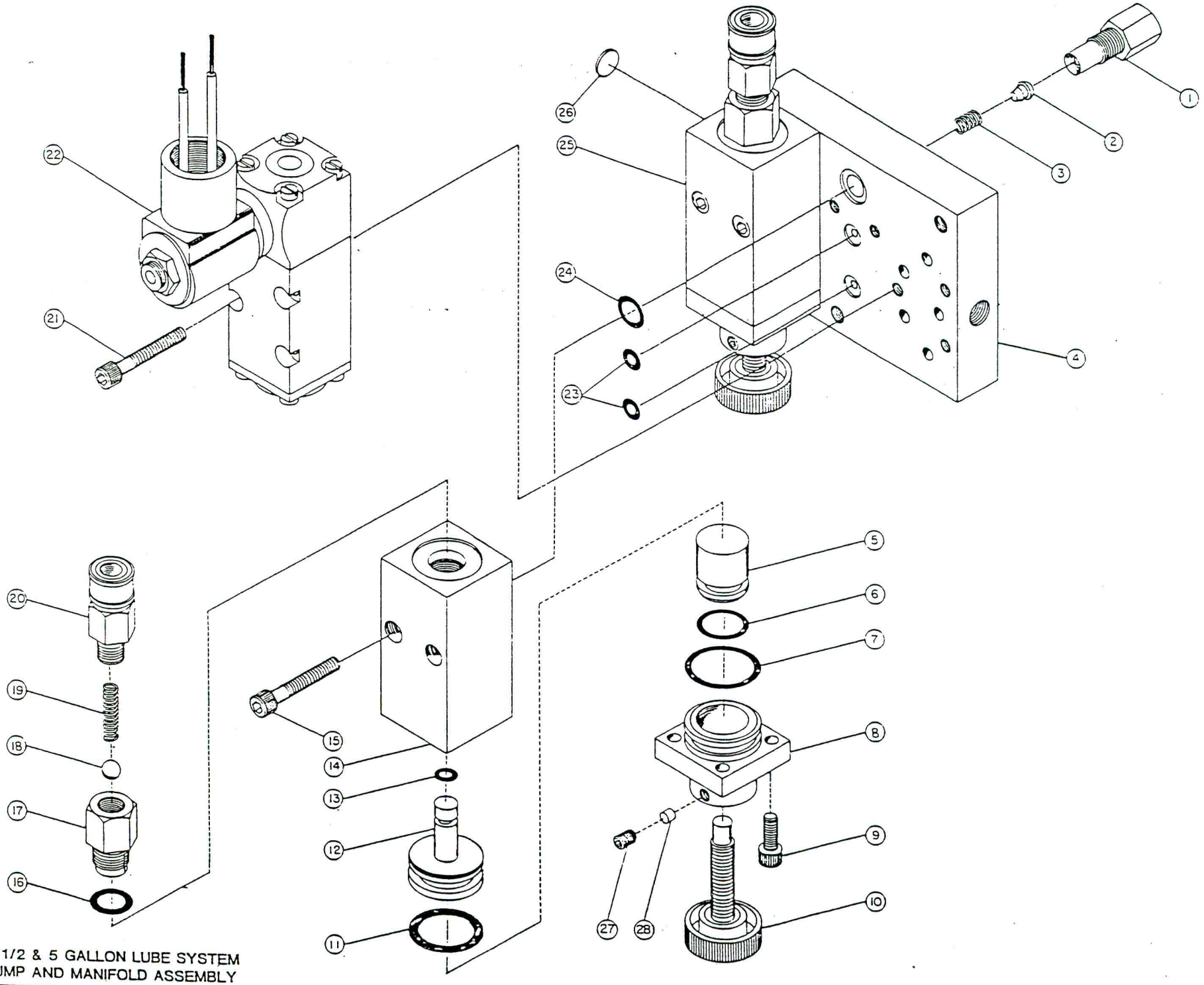
*One required for each pump unit on system



2 1/2 GALLON LUBE SYSTEM ASSEMBLY

KEY NO	PART NO.	DESCRIPTION	QTY
1	02-0501-15	Inlet Valve Seat	*
2**	03-0402-21	Inlet Check Poppet	1
3**	03-0301-20	Inlet Valve Spring	1
4	02-2033-32	2 Pump Manifold	1
5**	03-0606-14	Adjustment Piston	1
6**	03-0205-20	O-Ring	1
7**	03-0206-20	O-Ring	1
8**	03-0605-12	Pump Cap	1
9**	03-0101-20	#8-32 x 1/2" Socket Head Cap Screw	4
10**	03-0104-31	Adjustment Screw	1
11**	03-0201-20	O-Ring	1
12**	03-0601-13	Piston	1
	03-0610-10	Piston (High Volume)	1
13**	03-0202-20	O-Ring	1
	03-0203-20	O-Ring (High Volume)	1
14**	03-0607-13	Pump Body	1
	03-0609-10	Pump Body (High Volume)	1
15	03-0103-20	#10-32 x 1 1/4" Socket Head Cap Screw	2
16**	03-0204-20	O-Ring	1
17**	03-2098-30	Outlet Valve Body Assembly	1
18**	03-0401-20	Outlet Check Ball	1
19**	03-0302-20	Outlet Valve Spring	1
20**	03-0911-20	Quick Connect Coupling	1
	03-0926-20	#143 Valve Stem	1
21	03-0103-20	#10-32 x 1 1/4" Socket Head Cap Screw	3
22	04-2003-41	Solenoid Valve (State Voltage & Cycles)	1
	04-1310-20	Solenoid Valve Coil (State Voltage & Cycles)	1
	04-0966-21	Solenoid Valve Repair Kit	1
23	03-0202-20	O-Ring	2
24	03-0216-21	O-Ring	1
25	03-2110-33	Complete Pump Unit (Includes parts marked**)	*
	03-2111-30	Complete Pump Unit (High Volume) (Includes parts marked **)	*
	03-2053-32	Pump Rebuild Kit	1
	03-2079-31	Pump Rebuild Kit (High Volume)	1
26	02-0502-12	Manifold Plug	3
27**	03-0137-20	#10-32 x 3/16" Set Screw	1
28**	03-0611-10	Brass Lock Insert	1

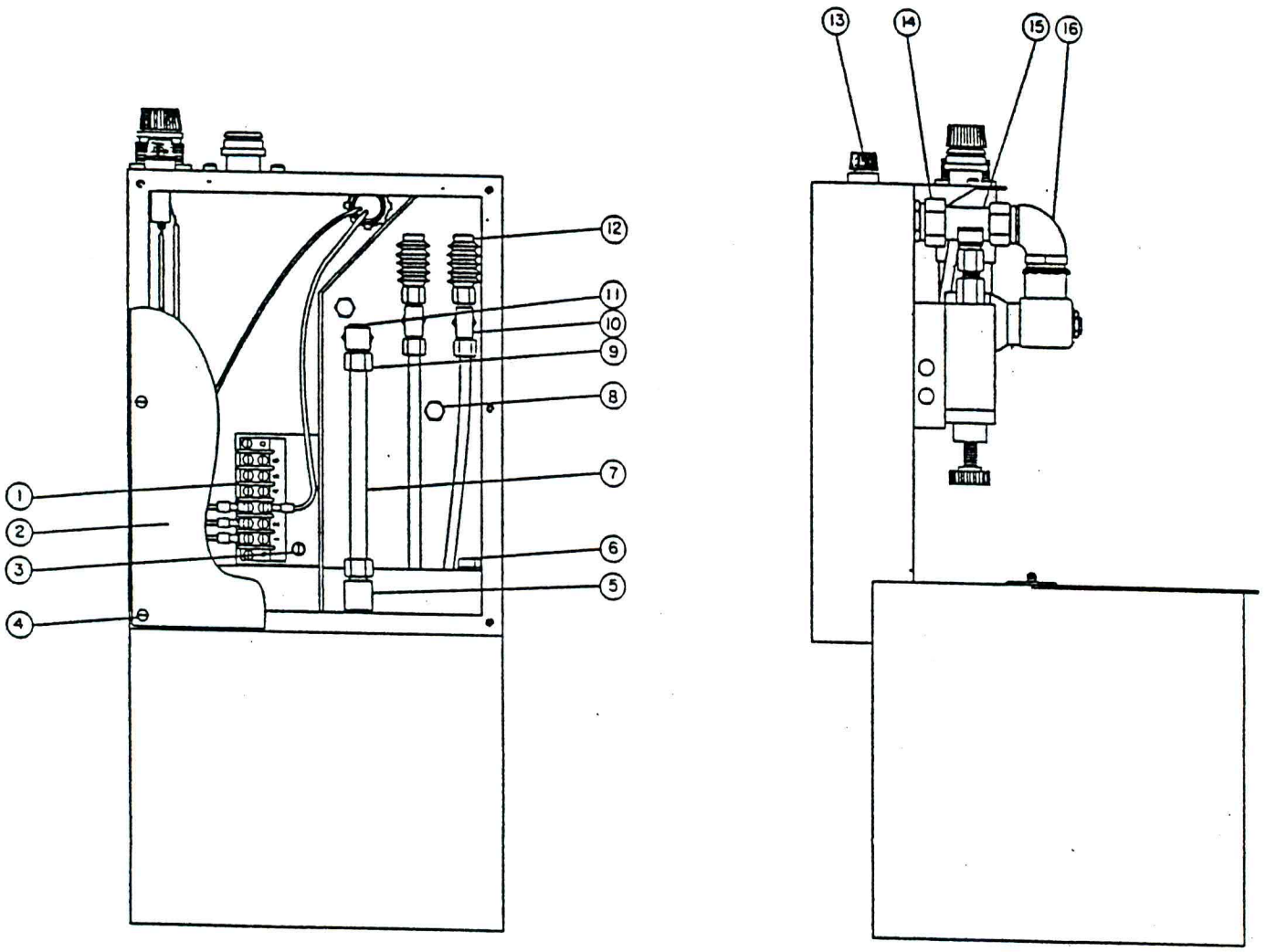
NOTE: **One (1) required for each pump unit on system.



2 1/2 & 5 GALLON LUBE SYSTEM
PUMP AND MANIFOLD ASSEMBLY

KEY NO	PART NO.	DESCRIPTION	QTY
1	01-1325-20	Terminal Strip	1
	01-1326-20	Terminal Strip Marker	1
	01-0124-20	#8-32 Round Head Machine Screw	2
2	01-0718-10	Cover Plate	1
3	01-0125-20	#8-32 Grounding Screw	1
4	01-0122-22	Button Head Cap Screw	6
5	01-0918-41	Female Elbow	1
6	01-0117-20	1/4-20 x 1/2" Hex Head Cap Screw	4
	06-0168-10	1/4" Flat Washer	4
	01-0119-20	1/4" Lock Washer	4
	01-0120-20	1/4-20 Hex Nut	4
7	01-1117-20	3/8" Tubing (Air Exhaust Line)	5 5/8"
8	01-0117-20	1/4-20 x 1/2" Hex Head Cap Screw	2
	06-0168-10	1/4" Flat Washer	2
9	01-0903-20	Male Elbow	1
10	01-0904-20	Male Tee	*
11	01-0913-20	Adapter	1
12	01-0702-41	Accumulator Assembly	*
13	05-1313-20	Fuse Holder	1
14	05-1301-20	1/2" Male Conduit Connector	1
15	05-1303-40	1/2" EMT Conduit	1
16	05-1302-20	1/2" EMT Conduit Elbow	1

*One required for each pump unit on system.

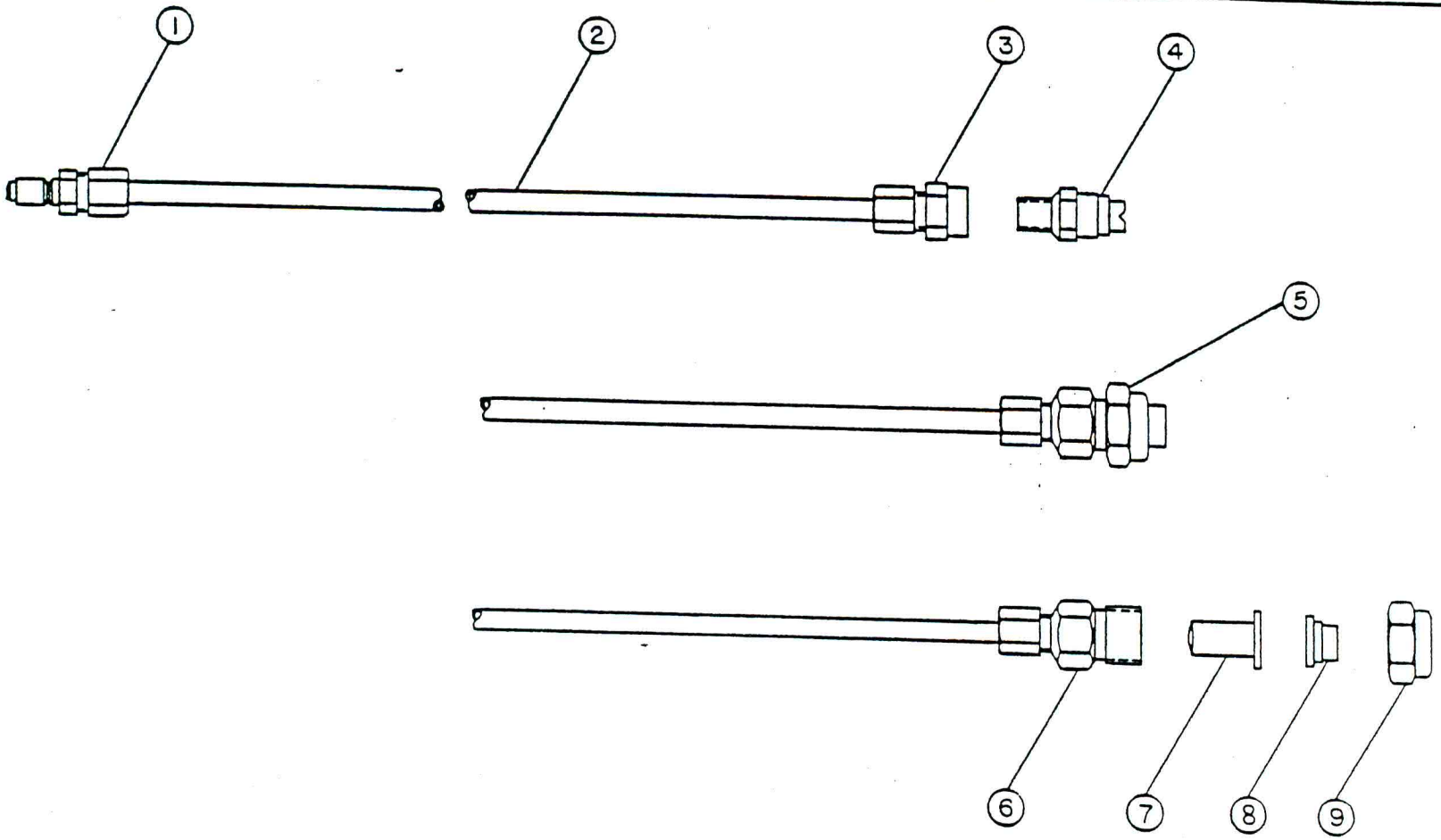


2 1/2 GALLON LUBE SYSTEM PANEL ASSEMBLY

KEY NO	PART NO.	DESCRIPTION	QTY
1	06-0928-32	Quick Connect Plug	1
2	01-1116-20	1/4" Tubing	8'
	01-1116-21	1/4" Semi-Rigid Tubing	8'
3	06-0910-20	Female Connector	1
4	06-0920-20	6 SQ Male Spray Nozzle Assembly Square Spray Pattern	1
	06-0921-20	3.6 SQ Male Spray Nozzle Assembly Square Spray Pattern	1
5	06-3003-30	1/4" Tubing Spray Nozzle Assembly w/Tip	1
6	06-0985-10	Spray Nozzle Body – 1/4" Tubing	1
	06-0931-11	Spray Nozzle Body – 1/8" Male Pipe	1
7	06-0925-20	Check Valve/Strainer Assembly	1
8	06-0950-20	80 Degree Flat Spray Tip	1
	06-0951-20	50 Degree Flat Spray Tip	1
	06-0952-20	110 Degree Flat Spray Tip	1
	06-0958-20	0.3 Cone Spray Tip	1
	06-0953-20	0.5 Cone Spray Tip	1
	06-0959-20	0.7 Cone Spray Tip	1
	06-0954-20	1.0 Cone Spray Tip	1
	06-0955-20	2.0 Cone Spray Tip	1
	06-0956-20	1.5 Deflected Flat Spray Tip	1
9	06-0932-20	Tip Retainer	1

NOTE: Key #4 & #5 – additional types of spray nozzles are available and can be ordered as specials.

06-3007-30	Standard Spray Assembly (See item #8 for spray tip selection)
06-3008-30	Standard Spray Assembly w/Semi-Rigid Tubing (See item #8 for spray tip selection)

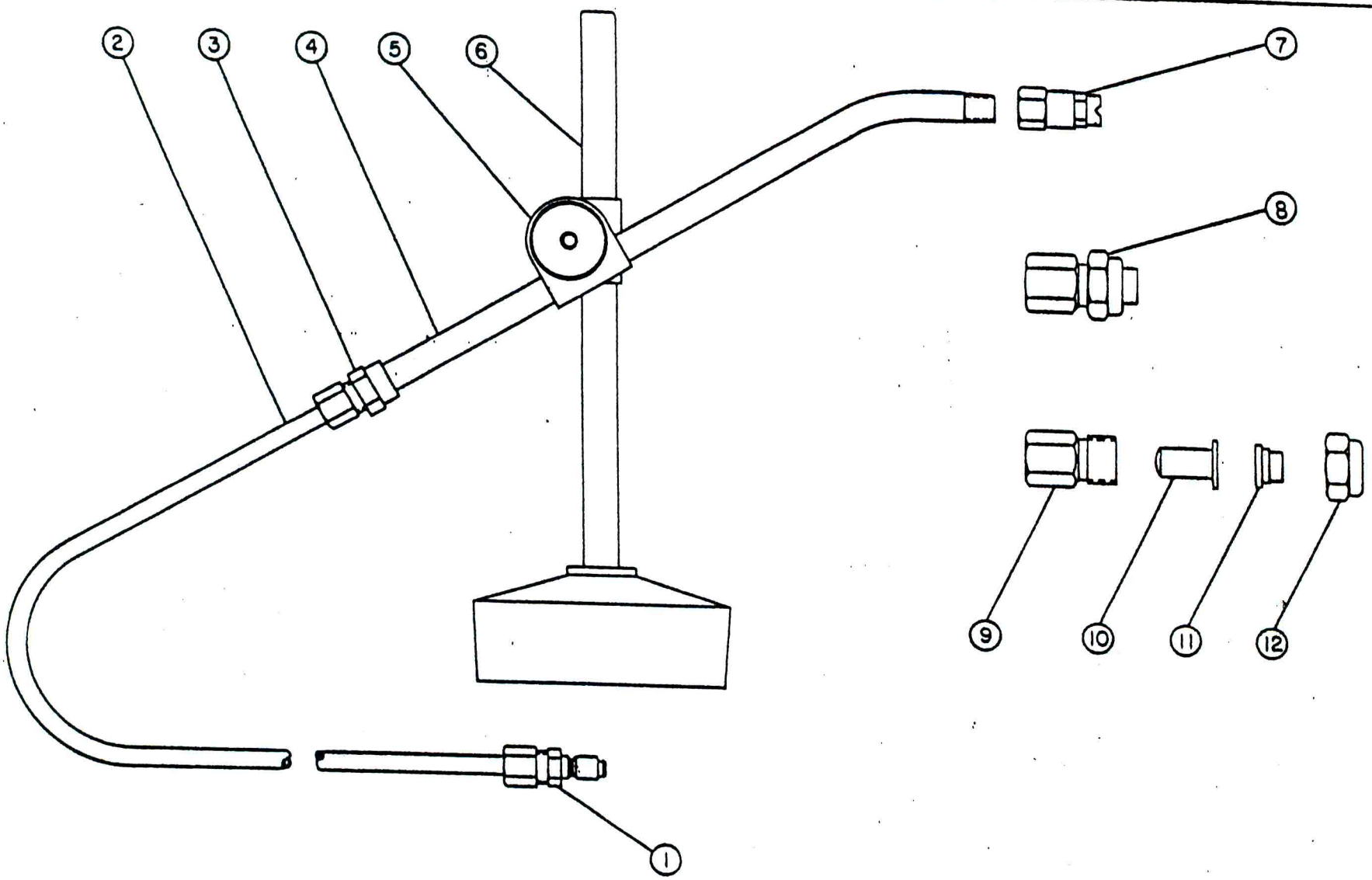


SPRAY NOZZLE ASSEMBLY

KEY NO	PART NO.	DESCRIPTION	QTY
1	06-0928-32	Quick Connect Plug	1
2	01-1116-20	1/4" Tubing	8'
	01-1116-21	1/4" Semi-Rigid Tubing	8'
3	06-0910-20	Female Connector	1
4	06-1612-10	Pipe	1
5	06-1614-30	Clamp Assembly	1
6	06-1640-30	Magnetic Base	1
7	06-0940-20	6 SQ Female Spray Nozzle Assembly Square Spray Pattern	1
	06-0941-20	3.6 SQ Female Spray Nozzle Assembly Square Spray Pattern	1
8	06-3001-30	Female 1/8" NPT Spray Nozzle Assy w/Tip (See Item #11 for Spray Tip Selection)	1
9	06-0937-11	Spray Nozzle Body	1
10	06-0925-20	Check Valve/Strainer Assembly	1
11	06-0950-20	80 Degree Flat Spray Tip	1
	06-0951-20	50 Degree Flat Spray Tip	1
	06-0952-20	110 Degree Flat Spray Tip	1
	06-0958-20	0.3 Cone Spray Tip	1
	06-0953-20	0.5 Cone Spray Tip	1
	06-0959-20	0.7 Cone Spray Tip	1
	06-0954-20	1.0 Cone Spray Tip	1
	06-0955-20	2.0 Cone Spray Tip	1
	06-0956-20	1.5 Deflected Flat Spray Tip	1
12	06-0932-20	Tip Retainer	1

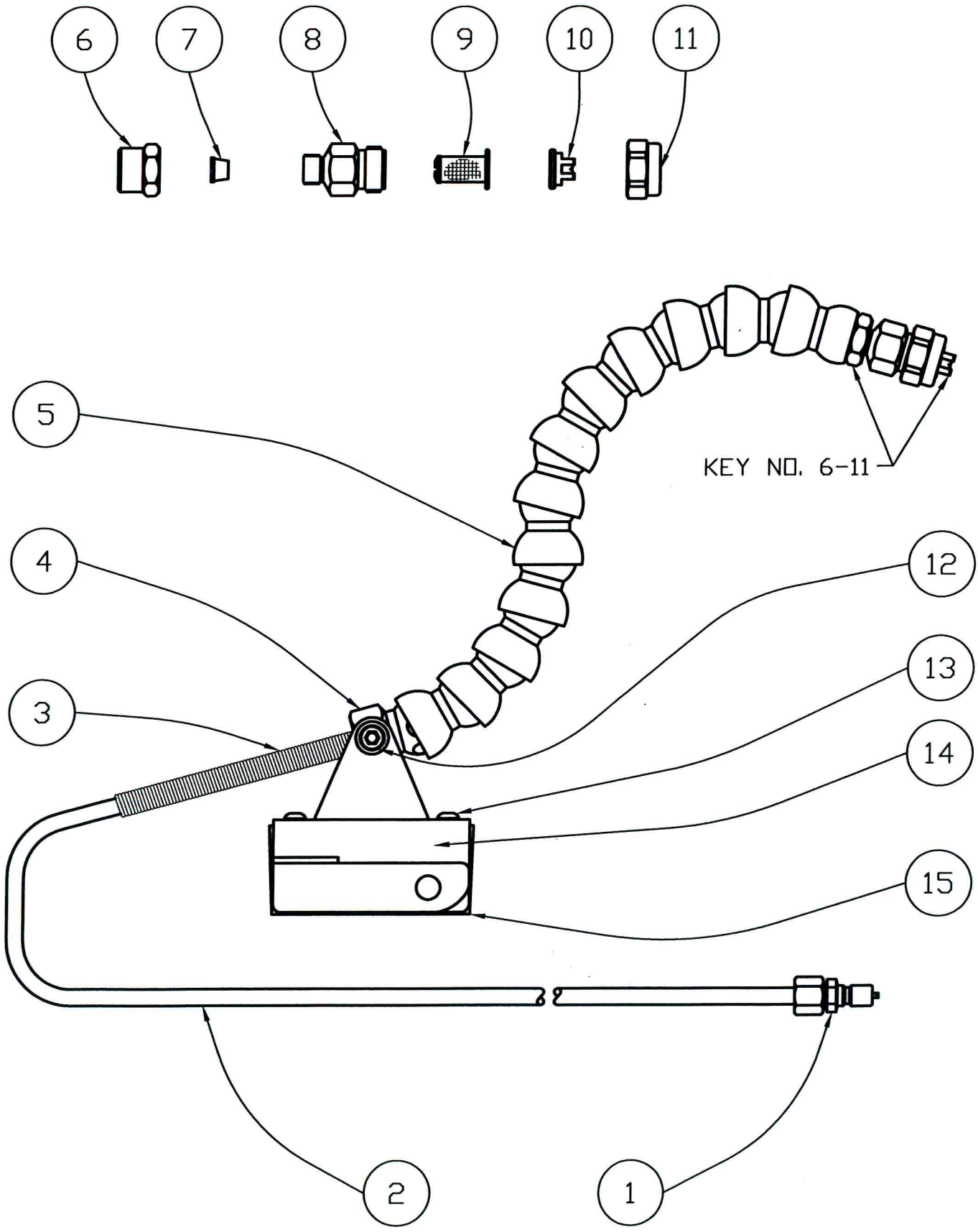
NOTE: Key #7 & #8 – additional types of spray nozzles are available and can be ordered as specials.

06-3011-31	Magnetic Base Spray Assembly (See item #11 for spray tip selection)
06-3012-31	Magnetic Base Spray Assembly w/Semi-Rigid Tubing (See item #11 for spray tip selection)



MAGNETIC BASE
SPRAY ASSEMBLY

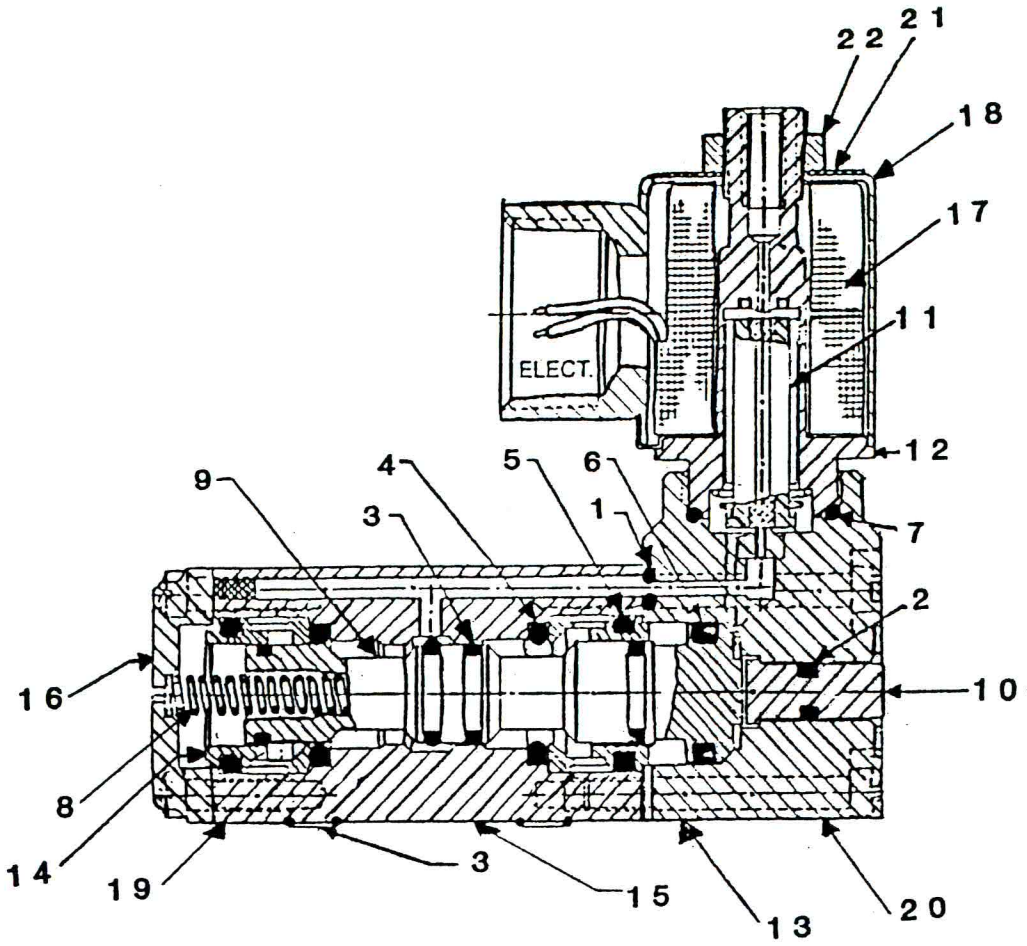
KEY NO	PART NO.	DESCRIPTION	QTY
1	06-0928-32	Quick Connect Plug	1
2	01-1116-20	1/4" Tubing	8'
	01-1116-21	1/4" Semi-Rigid Tubing	8'
3	06-0304-20	Flextube Anti-Kink Spring	1
4	06-1627-10	Flextube Bracket Adapter Segment	1
5	06-1625-20	Flextube Segment	12
6	06-1626-10	Flextube Nozzle Adapter Insert	1
7	01-0929-20	Compression Sleeve	1
8	06-0985-10	Nozzle Body (for 1/4" Tubing)	1
9	06-0925-20	Check Valve/Strainer Assembly	1
10	06-0973-20	25 Degree Flat Spray Tip	1
	06-0951-20	50 Degree Flat Spray Tip	1
	06-0950-20	80 Degree Flat Spray Tip	1
	06-0952-20	110 Degree Flat Spray Tip	1
	06-0958-20	0.3 Cone Spray Tip	1
	06-0953-20	0.5 Cone Spray Tip	1
	06-0959-20	0.7 Cone Spray Tip	1
	06-0954-20	1.0 Cone Spray Tip	1
	06-0955-20	2.0 Cone Spray Tip	1
	06-0956-20	1.5 Deflected Flat Spray Tip	1
11	06-0932-20	Tip Retainer	1
12A	06-0141-20	1/4-28 x 3/8" SHCS	2
12B	06-0168-10	1/4" Flat Washer – Stainless Steel	2
13	01-0122-22	10-32 x 3/8" BHCS	2
14	06-2093-30	Mag Base Release Lever Assy – Flextube	1
15	09-1615-30	Magnetic Base – Flat Top	1
	06-3015-30	Flextube Magnetic Base Spray Assembly (See item #10 for spray tip selection)	
	06-3016-30	Magnetic Base Spray Assy w/Semi-Rigid Tubing (See item #10 for spray tip selection)	



FLEXIBLE TUBE MAGNETIC BASE SPRAY ASSY.

04-2003-41
SOLENOID VALVE SPECIFICATIONS

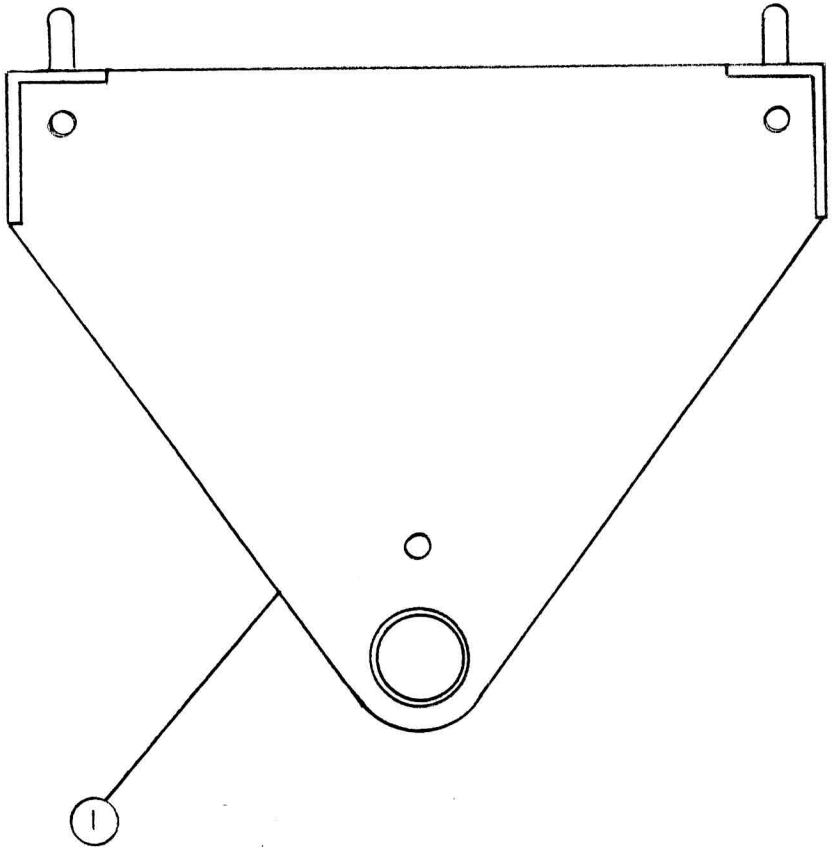
Valve body	See Parts List, opposite
Material, valve bodies, plungers, actuators	machined aluminum
Flow Diameter, K 4.7 valves	4.7mm (3/16 in.)
Cv, K 4.7 valves	0.7
Pilot Pressure, EXPilot and remote pilot minimum, K 4.7 valves	2.4 bar (35 psi)
Operating Pressure, maximum	12.0 bar (175 psi)
Operating Pressure, minimum (Lubricated Air)	2.4 bar (35 psi)
Operating Pressure, minimum (Oil Free)	3.4 bar (50 psi)
Solenoid Voltage	120V, 60Hz standard. Virtually any other AC or DC coil is available. To order other than standard coil, add desired voltage and frequency (or DC) to valve part number.
Solenoid Coil Power, nominal	7W
Temperature, Ambient and Media (Solenoid Valves)	In average AC service: -15°C to 65°C (5°F to 150°F) (For continuous duty above 50°C (120°F), also use "-3BC" Instead of "-3TC".) In average DC service: -15°C to 50°C (5°F to 120°F).
Solenoid Current, 120V, 60 Hz coil (Inrush)	0.12A
(Holding)	0.07A
Coil Insulation	Molded Epoxy
Threads, Electrical Conduit (on coil housings)	½ in. NPT

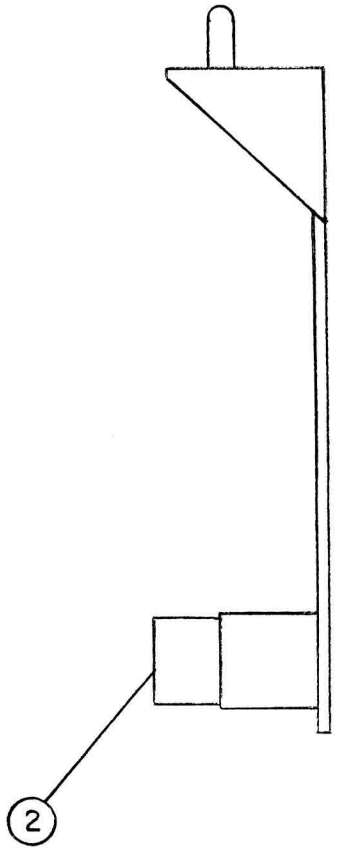


ITEM NUMBER	PART NUMBER	DECRIPTION	QUANTITY
	04-0966-21	Solenoid Valve Repair Kit	
1	04-0208-20	O-Ring	1
2	04-0213-20	O-Ring	1
3	04-0212-20	O-Ring	9
4	04-0210-20	O-Ring	2
5	04-0211-20	O-Ring	2
6	04-0207-20	"U" Cup	1

ADDITIONAL REPAIR PARTS

7	04-0214-20	Gasket	1
8	04-0303-20	Spring	1
9	04-0971-20	Spool	1
10	04-0972-20	Manual Operation Pin	1
11	04-0976-20	Plunger Assembly	1
12	04-0977-20	Sleeve	1
13	04-0978-20	Solenoid Cap	1
14	04-0979-20	Retainer	2
15	04-0980-20	Body	1
16	04-0981-20	End Cap	1
17	04-1310-20	Solenoid Coil (Specify Voltage)	1
18	04-1341-20	Coil Cover	1
19	04-0136-20	Screw	4
20	04-0135-20	Screw	4
21	04-0134-20	Washer	1

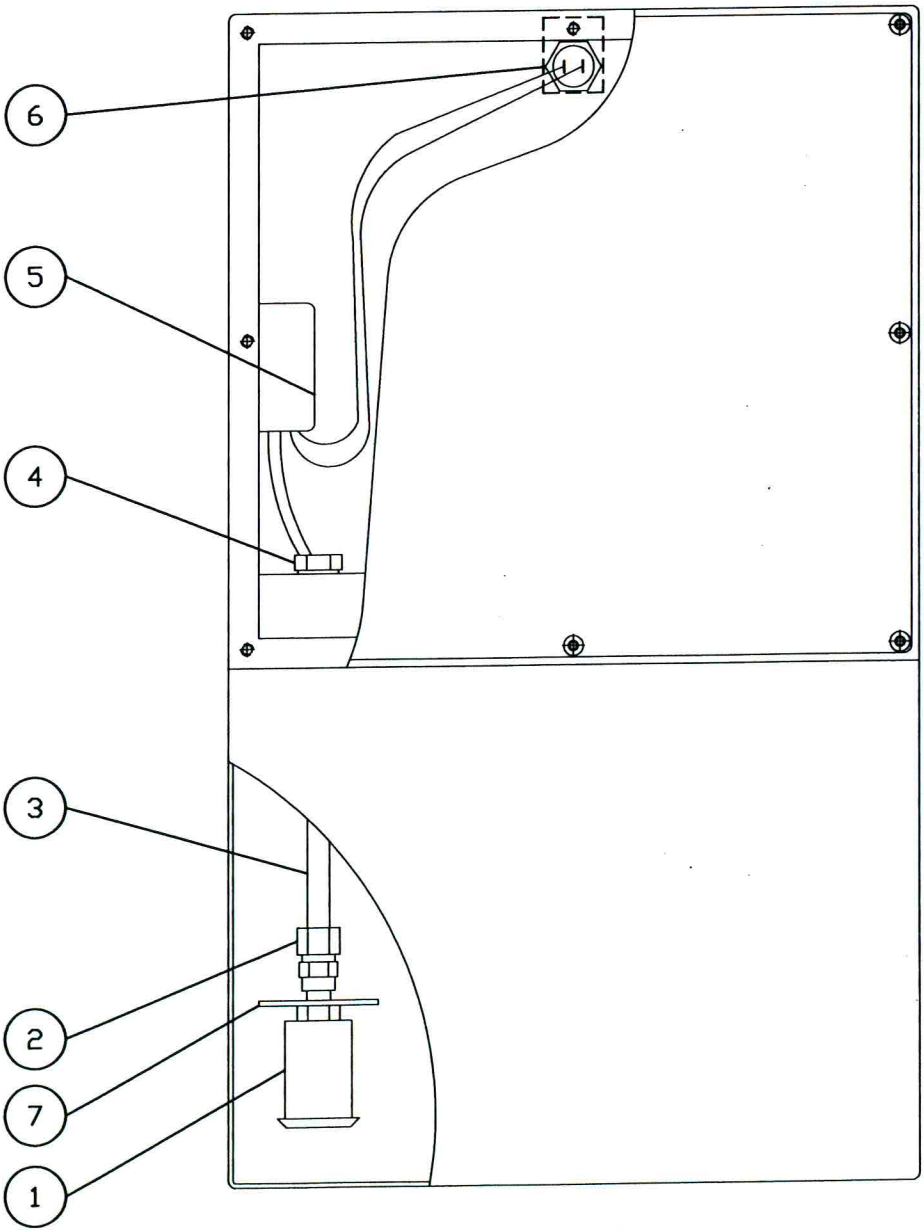




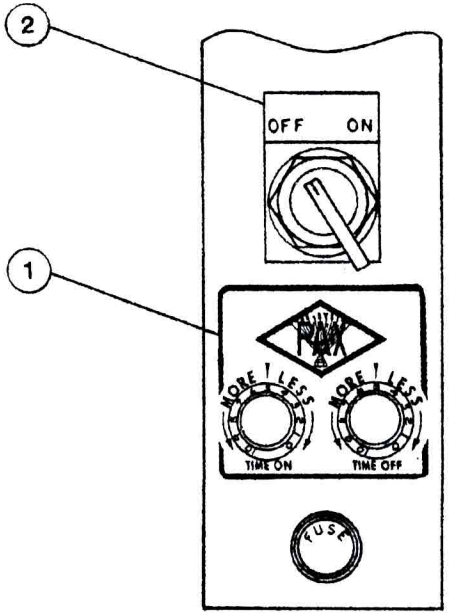
KEY NO.	PART NO.	DESCRIPTION	QTY.
2	01-0731-20	CUSHION	1
1	01-0732-40	BRACKET WELDMENT	1

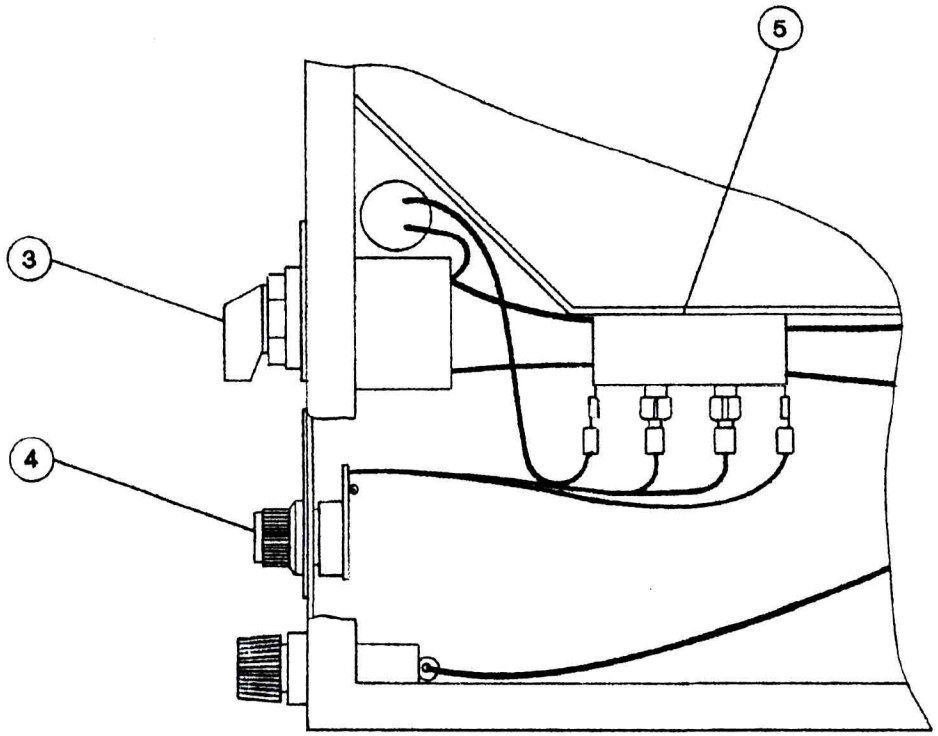
2 1/2 & 5 GALLON LUBE SYSTEM MOUNTING BRACKET

KEY NO.	PART NO.	DESCRIPTION	QTY.
1	07-1501-23	FLOAT SWITCH	1
2	07-0995-20	FEMALE CONNECTOR	1
3	90-9013-20	2-1/2 GAL. WIRE ENCLOSURE	5.25"
4	07-0916-40	FEMALE CONNECTOR	1
5	01-1387-20	RELAY	1
6	07-2094-30	LIGHT ASSY. (CONSISTS OF)	1
	08-1353-20	LEGEND PLATE	1
	08-1356-20	INDICATING LAMP - BASE	1
	08-1357-20	INDICATING LAMP - BULB	1
	08-1361-20	INDICATING LAMP - AMBER LENS	1
	08-1362-20	FEMALE DISCONNECT TERMINAL	2
7	07-1508-10	LOW LEVEL FLOAT WASHER	1



2-1/2 GAL.
PAX LUBE SYSTEM
LOW LEVEL FLOAT CONTROL
WITH LIGHT OPTION



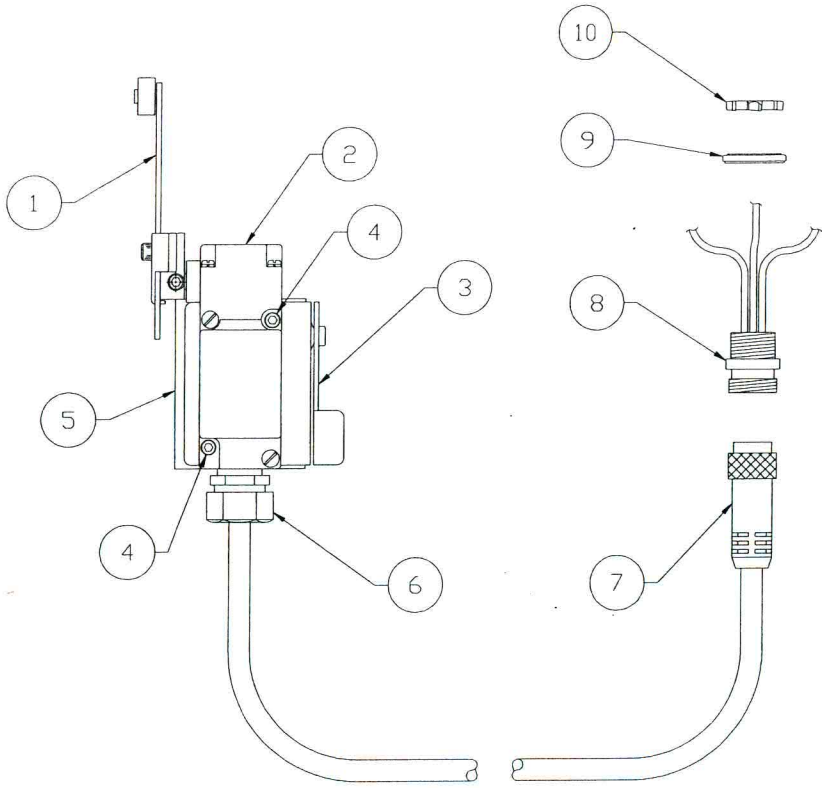


KEY NO.	PART NO.	DESCRIPTION	QTY.
5	08-1308-23	TIMER MODULE	1
4	08-2047-32	POTENTIOMETER ASSEMBLY	1
	08-1321-21	3 POSITION SWITCH	1
3	08-1314-22	2 POSITION SWITCH	1
	08-1332-21	3 POS. NAMEPLATE	1
2	08-1331-21	2 POS. NAMEPLATE	1
1	08-1333-21	TIMER LABEL	1

2 1/2 & 5 GALLON LUBE SYSTEM
TIMER OPTION

Magnetic Base Limit Switch Option
00-1076-32

KEY NO.	PART NO.	DESCRIPTION
1	09-1383-20	Limit Switch Arm
2	09-1382-20	Limit Switch
3	09-2090-30	Limit Switch Release Lever Assy
4	09-0139-20	10-32 x 1 1/2" SHCS
5	09-1615-30	Magnetic Base—for Limit Switch
6	01-1393-20	Cord Connector
7	09-1384-20	10' Molded Cord
8	09-1385-20	Receptacle
9	01-0154-20	Sealing Washer
10	01-0155-20	Lock Nut

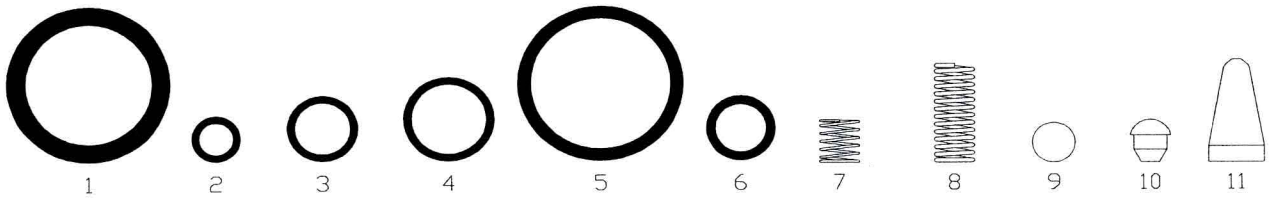


Magnetic Base Limit Switch

PAX LUBE SYSTEMS

P/N 03-2053-32 STD. PUMP REBUILD KIT
P/N 03-2079-31 HIGH VOLUME PUMP REBUILD KIT

KEY	QTY.	P/N	DESCRIPTION
1	1	03-0201-20	O-RING—PISTON—1" DIA. END
2A	1	03-0202-20	O-RING—PISTON—5/16" DIA. END (STANDARD PUMP ONLY)
2B	2	03-0202-20	O-RING—MANIFOLD—AIR PORTS
3	1	03-0203-20	O-RING—PISTON—7/16" DIA. END (HIGH VOLUME PUMP ONLY)
4	1	03-0204-20	O-RING—OUTLET VALVE BODY
5	1	03-0206-20	O-RING—PUMP CAP
6	1	03-0216-21	O-RING—MANIFOLD—INLET VALVE (BLACK)
7	1	03-0301-20	SPRING—INLET VALVE
8	1	03-0302-20	SPRING—OUTLET VALVE BODY
9A	1	03-0401-20	1/4" DIA. TEFLON CHECK BALL (STAINLESS OUTLET VALVE BODY)
9B	1	06-0404-20	1/4" DIA. STAINLESS CHECK BALL (BRASS OUTLET VALVE BODY)
10	1	03-0402-21	CHECK POPPET—INLET VALVE
11	1	03-0608-10	O-RING INSTALLATION CONE (STANDARD PUMP ONLY)



USE OF O-RING INSTALLATION CONE (FOR STANDARD PUMPS ONLY)

REMOVE CONE FROM PACKAGING (HANDLE CAREFULLY—BOTTOM EDGE WILL DAMAGE EASILY)

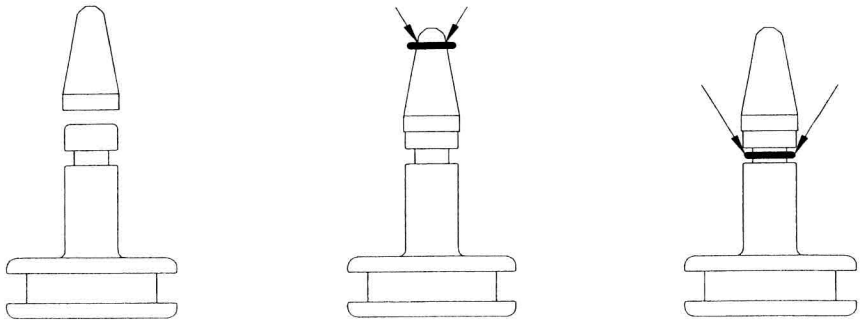
PLACE CONE ON TOP OF PISTON (SEE ILLUSTRATION)

SELECT PROPER O-RING FROM REPAIR KIT (P/N 03-0202-20 KEY #2A)

APPLY A LIGHT WEIGHT OIL TO THE O-RING

PLACE THE O-RING ON THE CONE

FORCE THE O-RING DOWN THE CONE WITH FINGERS UNTIL IT DROPS INTO THE GROOVE



NORGREN L07 Micro-Fog Compressed Air Lubricator — Installation & Maintenance Instructions

NIP-305
December 1992
Supersedes January 1987

SPECIFICATIONS

Maximum Inlet Pressure:
Transparent Reservoir: 150 psig (10.3 bar).
Metal Reservoir: 250 psig (17.2 bar).
Maximum Temperature:
Transparent Reservoir: 125°F (52°C).
Metal Reservoir: 175°F (79°C).
Reservoir Capacity: 1/2 oz. (0.015 liter).
Recommended Operating Flow Range: 0.5 to 10 scfm (0.2 to to 4.7 dm3/s) at 90 psig (6.2 bar).
Port Size: 1/8" or 1/4" NPT. ISO G threads optional.
Recommended Lubricants: Use a misting type oil rated 50 to 200 SSU (ISO Grade 7 to 46) at 100°F (38°C). The oils used must be compatible with materials of construction. Contact your lubricant supplier and the builder of the equipment to be lubricated to obtain specific lubricant recommendations.

MATERIALS OF CONSTRUCTION

Body: Zinc
Reservoir:
Transparent: Polycarbonate Plastic
Metal: Zinc
Elastomers: Neoprene and Nitrile
Sight-Feed Dome: Transparent Nylon

INSTALLATION

1. Air line piping should be same size as ports.
2. Install lubricator vertically (drain at bottom) in air line downstream of filter and regulator and as near as possible to the application point.
3. Air flow must be in direction of arrow on body. Connect piping to proper ports using pipe thread sealant on male threads only. Do not allow sealant to enter interior of lubricator.
4. Remove reservoir and fill with a good quality lubricant (see ***SPECIFICATIONS***) to level indicated by the maximum fill line on the reservoir. DO NOT OVER FILL.
5. Reinstall reservoir and torque to 5-to10 inch pounds before applying air pressure.

ADJUSTMENT

1. Turn lubricator oil drip rate adjusting knob fully clockwise, then turn on system pressure.
2. Adjust lubricator drip rate only when there is a constant rate of air flow thru the lubricator. Monitor drip rate thru sight feed dome.
3. Determine the average rate of flow (scfm) thru the lubricator, then turn the adjusting knob to obtain the recommended drip rate. See ***Drip Rate Chart***. Turn adjusting knob counterclockwise to increase and clockwise to decrease the drip rate. Push red lockring on the adjusting knob downward to lock drip rate setting; to release, pull upward.
4. Monitor the device being lubricated for a few days following initial adjustment. Readjust the drip rate if the oil delivery at the device appears either excessive or low.
5. Drip rate setting can be made tamper resistant by installing a seal wire (see ***ACCESSORIES***) in groove above lockring.

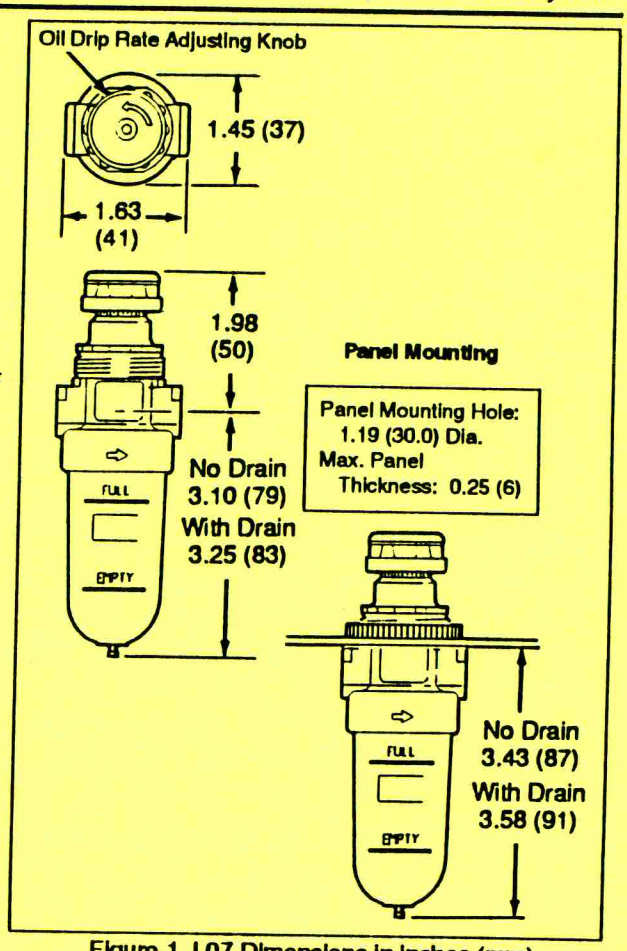


Figure 1. L07 Dimensions in inches (mm)

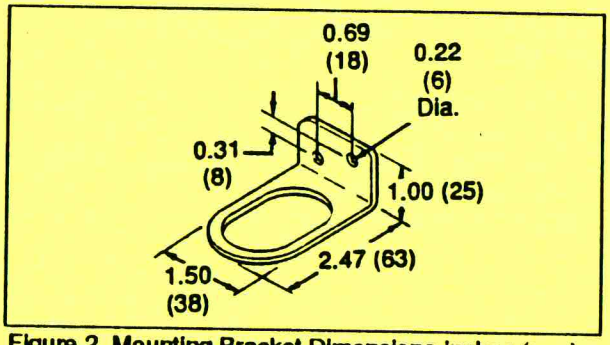
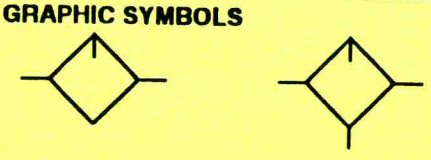


Figure 2. Mounting Bracket Dimensions-inches (mm)

DRIP RATE CHART

Average scfm	.5	1	2	3	4	5	6	7	8	9	10
Drops/ minute	4	5	8	10	12	14	16	19	21	23	25

GRAPHIC SYMBOLS



No Drain — Manual Drain

NORGREN

DISASSEMBLY

1. Shut off inlet pressure and reduce pressure in lubricator to zero. Lubricator can be disassembled without removal from air line.
2. Use a 1-inch deep socket to remove sight feed dome (3 or 11), then disassemble the remaining parts in accordance with the appropriate exploded view. Do not attempt to remove siphon tube from body (5) on early model lubricators, as these parts are permanently assembled.

CLEANING

1. Clean transparent reservoir using warm water only. Clean other parts using warm water and soap.
2. Dry parts and blow out internal passages in body using clean, dry compressed air.
3. Inspect parts and replace those found to be damaged. If polycarbonate reservoir shows signs of cracking or cloudiness, replace with a metal reservoir.

REASSEMBLY

1. Lubricate seal and o-rings (2), (4), (6), (12), (15), (20, 23 or 25) with a small amount of good quality o-ring grease. Apply a small amount of anti-seize lubricant to full length of threads on metal reservoirs.
2. Torque sight feed dome (3 or 11) to 20-to-25 inch pounds. Torque reservoir to 5-to-10 inch-pounds.

REPAIR KITS & ACCESSORIES—EARLY MODELS

Seal kit (items 2, 4, 6): 3795-03
Wall mounting bracket: 5939-08
Tamper resistant seal wire: 2117-01

REPAIR KITS & ACCESSORIES—CURRENT MODELS

Seal kit — Items (12), (15), (20, 23 or 25): 3795-03
Wall mounting bracket: 18-001-053
Wall mounting bracket & plastic panel nut: 18-025-003
Plastic panel nut: 2962-89
Tamper resistant seal wire: 2117-01

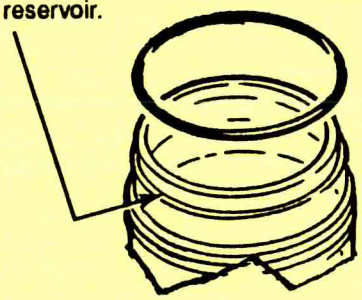
PARTS LIST FOR EARLY MODELS

1. Plug, fill
2. O-ring
3. Red sight feed dome, plastic (Micro-fog)
   Green sight feed dome, plastic (Oil-fog)
4. Seal
5. Body *
6. O-ring *
7. Plastic reservoir with manual drain *
8. Valve, manual drain
9. Plastic reservoir, without drain *
10. Metal reservoir with manual drain * (drain is not replaceable)

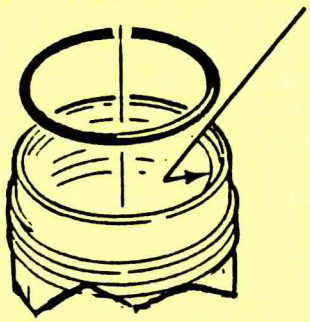
PARTS LIST FOR CURRENT MODELS

11. Red Sight Feed Dome, Plastic (Micro-fog)
12. Seal
13. Body †
14. Cartridge Assy
15. O-ring
16. Cartridge
17. Ball
18. Siphon tube with baffle
19. Plastic reservoir with manual drain †
20. O-ring †
21. Valve, manual drain
22. Plastic reservoir, without drain †
23. O-ring †
24. Metal reservoir with manual drain † (drain is not replaceable)
25. O-ring †

* Reservoirs (7, 9, 10) and the reservoir o-ring (6) can only be used with the early body style (5). The reservoir o-ring fits on a lip the outside diameter of reservoir.



† Reservoirs and reservoir o-rings (19, 20), (22, 23), (24, 25) can only be used with the current body style (13). The reservoir o-ring fits on a lip on the inside diameter of reservoir.



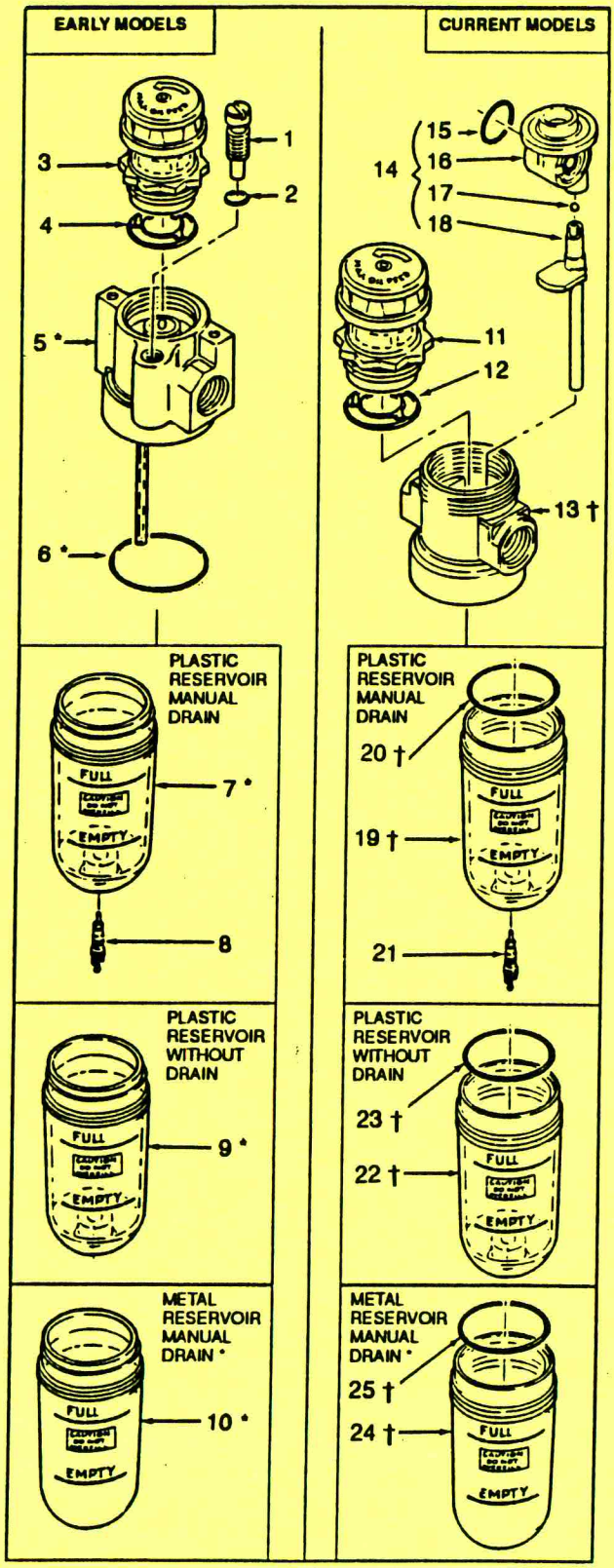


Figure 3. L07 Parts

LIMITED WARRANTY, DISCLAIMER & LIMITATION OF REMEDIES

Items sold by NORGREN are warranted to be free from defects in materials and workmanship for a period of two years from the date of manufacture, provided said items are used according to NORGREN'S recommended usages. NORGREN'S liability is limited to the repair of, refund of purchase price paid for, or replacement in kind of, at NORGREN'S sole option, any items proved defective, provided the allegedly defective items are returned to NORGREN prepaid. The warranties expressed above are in lieu of and exclusive of all other warranties.

There are no other warranties, expressed or implied, except as stated herein. There are no implied warranties of merchantability or fitness for a particular purpose, which are specifically disclaimed. NORGREN'S liability for breach of warranty as herein stated is the exclusive remedy, and in no event shall NORGREN be liable or responsible for incidental or consequential damages, even if the possibility of such incidental or consequential damages has been made known to NORGREN.

NORGREN reserves the right to discontinue manufacture of any product or change product materials, design, or specifications without notice.

WARNING

These products are intended for use in industrial compressed air systems only. Do not use these products where pressures and temperatures can exceed those listed under ***SPECIFICATIONS.***

The polycarbonate plastic reservoir used on these lubricators can be damaged and possibly burst if exposed to such substances as certain solvents, strong alkalies, compressor oils containing ester-based additives or synthetic oils. Fumes of these substances in contact with the polycarbonate reservoir, externally or internally, can also result in damage. Clean with warm water only

Use metal reservoir in applications where a plastic reservoir might be exposed to substances that are incompatible with polycarbonate.

In lubrication applications some oil mist may escape from the point of use to the surrounding atmosphere. Users are referred to OSHA safety and health standards for limiting oil mist contamination and utilization of protecting equipment

Before using these products with fluids other than air, for nonindustrial applications, or for life-support systems consult NORGREN.

NORGREN

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PRINTED IN U.S.A.

Littleton, CO 80120-1663
FAX 303/795-9487

IMI

B07 General Purpose Filter/Regulator
Installation & Maintenance Instructions

NIP-409
February 1993
Supersedes December 1992

SPECIFICATIONS

Fluid: Compressed Air
Maximum Inlet Pressure:
Transparent Bowl: 150 psig (10.3 bar)
Metal Bowl 250 psig (17.2 bar)
Temperature Range:
Transparent Bowl: 0° to 125°F (-18° to 52°C)*
Metal Bowl: 0° to 150°F (-18° to 66°C)*
Outlet Pressure Adjustment Ranges **
1 to 10 psig (0.07 to 0.7 bar)
5 to 50 psig (0.3 to 3.4 bar)
5 to 100 psig (0.3 to 6.9 bar)
Main Ports: 1/8" or 1/4" NPT. ISO G threads optional.
Gauge Ports: Two 1/8" NPT, full flow.
Regulator Type: Diaphragm, relieving or nonrelieving.
Automatic Drain Connection: Slip 1/4" ID flexible tubing over protrusion on bottom of bowl. Automatic drain operates when a rapid change in flow occurs.

NOTE

Water vapor will pass through these filter/regulators and could condense into liquid form downstream as air temperature drops. Install a NORGREN air dryer if water condensation could have a detrimental effect on the application.

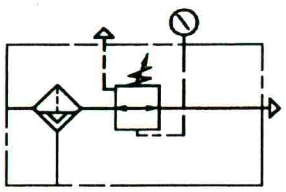
* With dewpoint less than air temperature below 35°F (2°C).

** Outlet pressure adjustment ranges are not minimum or maximum outlet pressure limits. Filter/Regulators can be adjusted to zero psig outlet pressure, and generally, to pressures in excess of those specified. The use of the filter/regulators to control pressures outside of the specified ranges is not recommended.

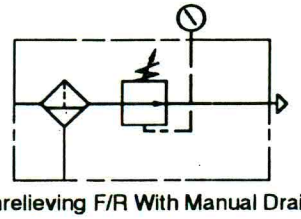
MATERIALS OF CONSTRUCTION

Body: Zinc
Bonnet : Acetal
Valve: Brass/Nitrile or Geolast ®
Valve Seat: Acetal
Bowl:
Transparent: Polycarbonate
Metal: Zinc
Element Porous Polypropylene
Elastomers: Nitrile

GRAPHIC SYMBOL



Relieving F/R With Automatic Drain



Nonrelieving F/R With Manual Drain

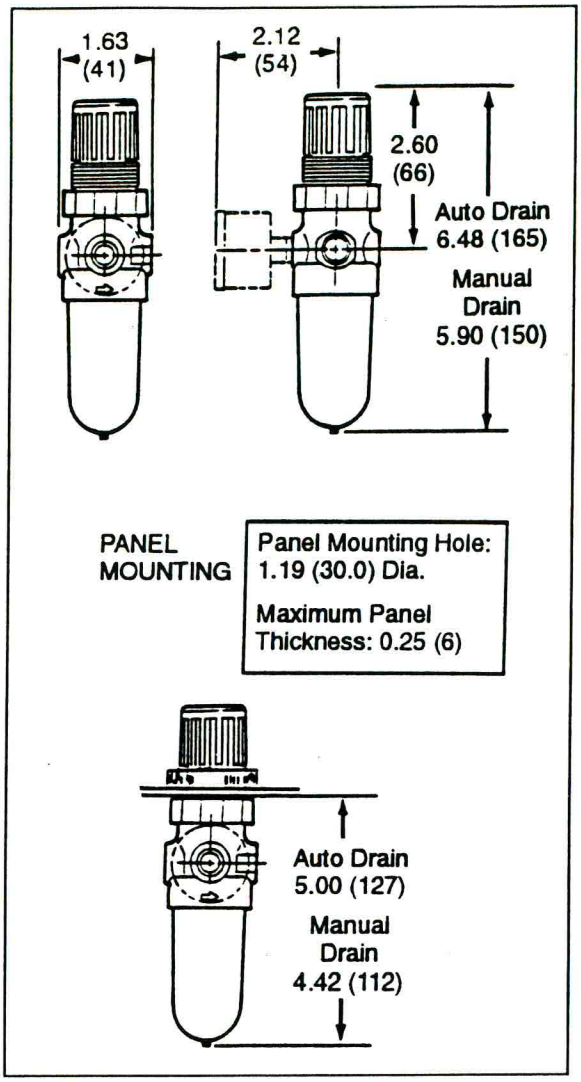


Figure 1. B07 Dimensions in inches (mm)

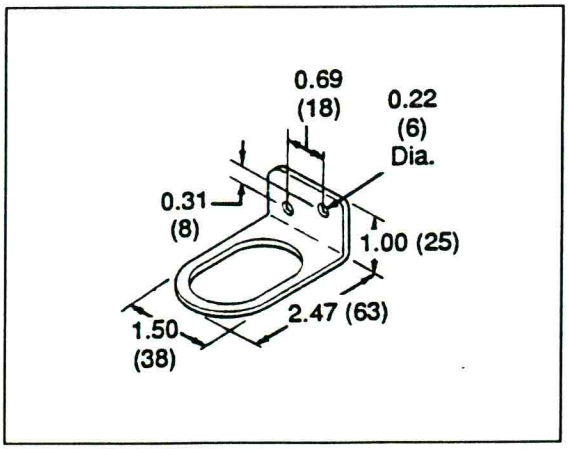


Figure 2. Mounting Bracket Dimensions in inches (mm)

NORGREN

INSTALLATION

1. Install filter/regulator vertically in air line with drain at bottom and as close as possible to the device being serviced.
2. In systems with a cyclic demand, locate filter/regulator upstream of cycling control valves.
3. Air line piping should be same size as filter/regulator ports.
4. Air flow must be in direction of arrow on body. Connect piping to proper ports using pipe thread sealant on male threads only. Do not allow sealant to enter interior of filter/regulator.
5. If desired, connect an outlet pressure gauge to one of the gauge ports. Gauge ports can also be used as additional outlets for regulated air. Plug unused gauge ports.
6. On filter/regulators equipped with an automatic drain, slip 1/4" ID flexible tube over protrusion on bottom of bowl to pipe away expelled liquids. Avoid restrictions in the drain line.

ADJUSTMENT

1. Before turning on system air pressure, turn filter/regulator adjustment counterclockwise until all load is removed from the regulating spring.
2. Turn on system pressure.
3. Turn filter/regulator adjustment clockwise until the desired outlet pressure is reached.
4. To avoid minor readjustment after making a change in pressure setting, always approach the desired pressure from a lower pressure. When reducing from a higher to a lower setting, first reduce to some pressure less than that desired, then bring up to the desired pressure.
5. Push adjusting knob downward to lock pressure setting. To release, pull knob upward. Pressure setting can be made tamper resistant by installing a thread forming screw in the top center of the knob. See *Accessories* paragraph.

SERVICING

Filter/regulators with manual drain must be drained as frequently as necessary to keep accumulated liquids below element. Liquid will be carried downstream if it is allowed to reach the element. Replace the filter element when plugged.

DISASSEMBLY

1. Shut off inlet pressure and reduce pressure in inlet and outlines to zero. Turn filter/regulator adjustment knob counterclockwise until all load is removed from regulating spring (2). Filter/regulator can be disassembled without removal from air line.
2. Unscrew bonnet (1 or 1A), then remove spring (2), slipring (3), and diaphragm (4). Unscrew valve seat (5 or 5B). Remove valve (6) and spring (7).
3. Remove bowl by turning counterclockwise. Unscrew filter element (11A) or stud (13). Remove manual drain valve (20) on plastic bowl (18) only if replacement is necessary. The manual drain valve can not be removed on metal bowls (25).

CLEANING

1. Clean plastic bowls (18 & 21) with warm water only. Clean other parts with warm water and soap.
2. Dry parts and blow out internal passages in body (8 or 9) using clean dry compressed air. Blow air through filter element (11A or 12) from inside to outside to dislodge surface contaminants. Replace filter element when plugged.
3. Inspect parts. Replace those found to be damaged. If plastic bowl shows signs of cracking or cloudiness, replace with a metal bowl.

REASSEMBLY

1. Lubricate o-rings and the lip of the auto drain valve (23 or 29) with a light coat of good quality o-ring grease. Lubricate threads on metal bowls with a small amount of anti-seize compound.
2. Assemble the filter/regulator as shown on the exploded view.
3. Torque valve seat (5 or 5B) to 4-to-6 inch pounds. Diaphragm valve pin must slide freely thru the valve seat after seat is torque into body. Torque bonnet (1 or 1A) to 65-to-75 inch pounds.
4. Torque element (11A), stud (13), and bowl (18, 21, 25 or 27) to 5-to-10 inch pounds. Torque manual drain valve (20) to 1.5-to- 2.5 inch pounds.

REPAIR PARTS, KITS & ACCESSORIES

Regulating Spring (item 2)

- 1 to 10 psig (brown) 2069-02
- 5 to 50 psig (green) 613-03
- 5 to 100 psig (yellow) 2960-04

Repair Kit-Items (3), (4), (5)†, (5A)†, (5B)††, (5C)††, (6), (7), (10), (11A), (19, 22, 26 or 28)

Filter Element	Relieving Regulator	Nonrelieving Regulator
5-micron, polypropylene	3820-02	3820-01
25-micron, polypropylene	3820-04	3820-03
100-micron, polypropylene	—	3820-10

Wall mounting bracket 18-001-053
Wall mounting bracket & plastic panel nut 18-025-003
Plastic panel nut 2962-89
Metal panel nut 2962-04
Tamper resistant screw (current models) ..6483-04
Tamper resistant wire (early models) 2117-01
Automatic drain (items 23, 24 or 29, 30) ...3654-02

† Use valve seat and seal (5, 5A) only with body style (8).

†† Use valve seat and seal (5B, 5C) only with body style (9).

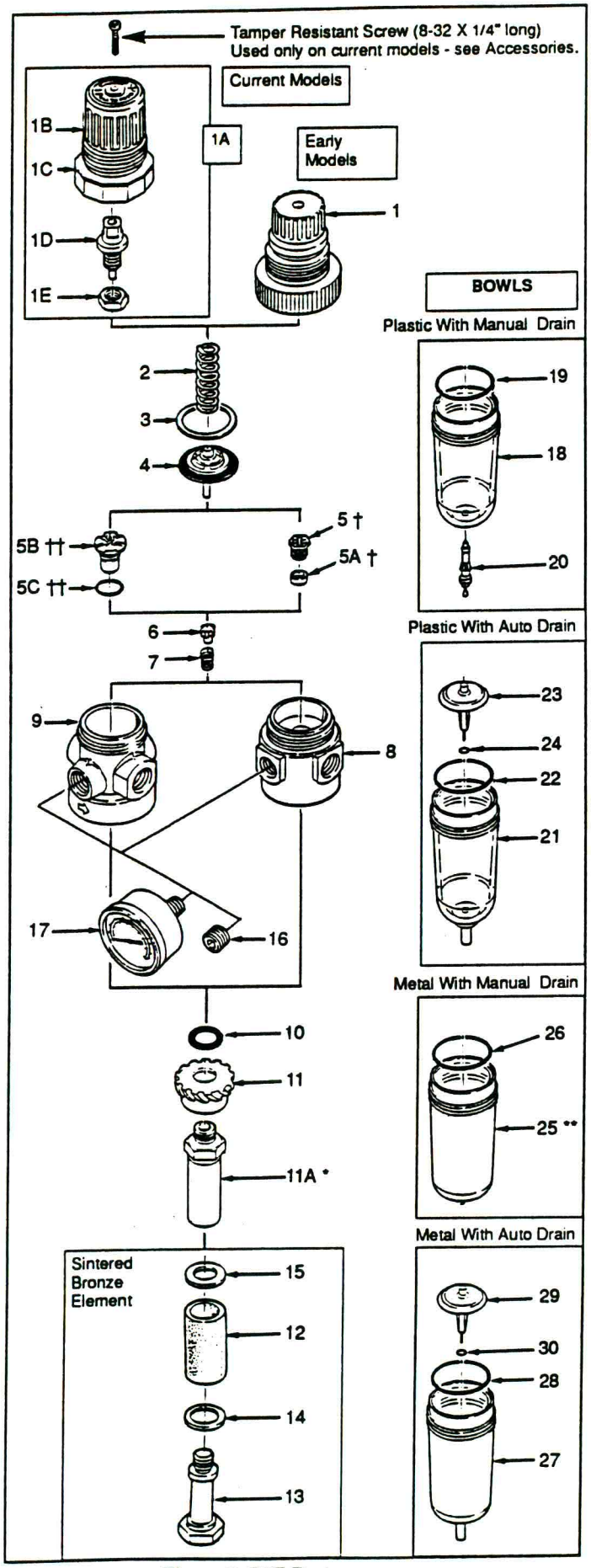


Figure 3. B07 Parts

PARTS LIST FOR EXPLODED VIEW

1. Bonnet (early models)
1A. Bonnet Assy (current models)
1B. Knob
1C. Bonnet
1D. Screw, adjusting
1E. Nut, pressure
2. Spring, regulating
3. Slipring
4. Diaphragm
5. Valve seat (early models) †
5A. Seal †
5B. Valve seat (current models) ††
5C. O-ring ††
6. Valve
7. Spring, valve
8. Body (early models)
9. Body (current models)
10. Gasket
11. Louver
11A. Element, polypropylene *
12. Element, sintered bronze
13. Stud
14. Gasket, lower
15. Gasket, upper
16. Plug, pipe
17. Gauge, pressure
18. Plastic bowl with manual drain
19. O-ring †††
20. Valve, manual drain
21. Plastic bowl with automatic drain
22. O-ring †††
23. Valve, automatic drain
24. O-ring, automatic drain
25. Metal bowl with manual drain **
26. O-ring †††
27. Metal bowl with automatic drain
28. O-ring †††
29. Valve, automatic drain
30. O-ring, automatic drain

* Early B07 filter/regulators used a polypropylene element (11A) that was similar to the sintered bronze element (12). Stud (13) secured the early polypropylene element to body (8). The current polypropylene element (11A) is interchangeable with and is a direct replacement for the early element and mounting stud.

** Manual drain can not be replaced.

† Use valve seat and seal (5, 5A) only with body style (8).

†† Use valve seat and o-ring (5B, 5C) only with body style (9).

††† Current bowls use a lip on the bowl ID to retain bowl o-ring. Early bowls had a lip on the bowl OD and used a larger o-ring.

WARNING

These products are intended for use in industrial compressed air systems only. Do not use these products where pressures and temperatures can exceed those listed under ***Specifications.***

The polycarbonate plastic bowl used on the filter/regulators can be damaged and possibly burst if exposed to such substances as certain solvents, strong alkalies, compressor oils containing ester-based additives or synthetic oils. Fumes of these substances in contact with the polycarbonate bowl, externally or internally, can also result in damage. Clean with warm water only.

Use metal bowl in applications where a plastic bowl might be exposed to substances that are incompatible with polycarbonate.

If outlet pressure in excess of the filter/regulator pressure setting could cause downstream equipment to rupture or malfunction, install a pressure relief device downstream of the filter/regulator. The relief pressure and flow capacity of the relief device must satisfy system requirements.

The accuracy of the indication of pressure gauges can change, both during shipment (despite care in packaging) and during the service life. If a pressure gauge is to be used with these products and if inaccurate indications may be hazardous to personnel or property, the gauge should be calibrated before initial installation and at regular intervals during use. For gauge standards refer to ANSI B40.S.

Before using these products with fluids other than air, for nonindustrial applications, or for life-support systems consult NORGREN.

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