

MODEL NUMBER

SERIAL NUMBER

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#### 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 and System or part or component thereof 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 NONDELIVERY, 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 COMPONENT THEREOF IN RESPECT OF WHICH DAMAGES ARE CLAIMED.

Purchaser shall promptly inspect each System upon receipt. Claims under the above warranty shall be made by contacting the Company at 5097 Monroe Rd., Celina, OH 45822, Attn: Service Department (1-800-733-6930) or (419) 586-6948. 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

Consistent with sound engineering principles and recognized practices, Pax Products, Inc. reserves the right to discontinue or change specifications, designs and materials, at any time and without notice.

Design differences or changes that exist between the unit received and the system illustrated in the manual are the result of design improvements or special arrangements contracted for at the time of purchase. Every effort is made to keep the manual consistent with the majority of systems supplied.



#### PAX V-SERIES DIAPHRAGM PUMP TWO-YEAR WARRANTY

Pax Products warrants to the end-user/purchaser of the Pax diaphragm pump that Pax will repair or replace, free of charge, including return shipping costs within the Continental United States of America, any such product which under normal use and service proves defective in material or workmanship, as determined by Pax Products inspection, within TWO YEARS from date of shipment from Pax, the claimed defective product, or part thereof, is promptly returned to the Pax factory with transportation prepaid. This warranty <u>does not cover failure of parts or components</u> <u>due to normal wear or damage</u>, which in the judgment of Pax, arises from misuse, abrasion, corrosion, negligence, accident, substitution of non-Pax parts, faulty installation or tampering. If Pax inspection discloses no defect in material or workmanship, repair or replacement and return will be made at customary charges.

The foregoing warranty supersedes voids and is in lieu of all or any other warranties, express or implied, and no warranty or merchantability or fitness for particular purpose is intended or made. Pax Products' sole obligation and the original end-user/purchaser's sole remedy is as stated above and in no event shall Pax Products be liable for any special, direct, indirect, incidental, consequential or other damages, or expenses of any nature including, without limitation, loss of profits or production time incurred by the original end-user/purchaser of any other party.

Pax Products will stand behind the Pax 2-year warranty and provide their customers, with any repair work, replacement parts, and services deemed necessary to make Pax pumps functional and place them back in service. All Pax pumps brought in or sent back for repair and/or warranty work will be inspected by a factory authorized service representative prior to service. You will then be notified by phone or fax and provided with an estimate as to the repair work and parts required for completing the job. If it is determined that the pump is not repairable, Pax will provide an estimate for replacing the pump with a new or equivalent model.



#### SAFETY

UNDER NO CIRCUMSTANCES SHOULD THE PAX LUBE SYSTEM OR ANY COMPONENT BE PLACED IN SUCH A MANNER THAT WILL CAUSE POSSIBLE PERSONAL INJURY OR DAMAGE TO ANY EQUIPMENT.

PAX PRODUCTS, INC. RECOMMENDS THAT WHENEVER POSSIBLE, PERMANENT FIXTURES WITH QUICK DISCONNECT COUPLINGS SHOULD BE INSTALLED TO INSURE ULTIMATE LOCATION, CONTROL, PERFORMANCE RELIABILITY, AND OVERALL SAFETY.

SYSTEMS SHOULD BE PLACED IN SUCH A WAY SO THAT NO COMPONENT OR COMBINATION OF COMPONENTS INTERFERE WITH THE NORMAL OPERATION OF ANY MACHINE.

**BEFORE OPERATING, INSURE CLEARANCES OF THE SPRAY LINES (NOZZLES INCLUDED), MAGNETIC BASES AND POSTS, AND RELATED COMPONENTS.** 

PRIOR TO SERVICING OR TROUBLESHOOTING ANY PAX LUBE SYSTEM, DISCONNECT THE ELECTRICAL POWER AND THE AIR SOURCE.

NOTICE: AN AIR SHUT-OFF DEVICE CONFORMING TO THE OSHA LOCKOUT/TAGOUT STANDARD IS AVAILABLE AS AN OPTIONAL FEATURE (REF. FIG. 4-PG. 13).



#### SYSTEM INSTALLATION

Please read this manual carefully for information regarding SAFETY, ASSEMBLY, INSTALLATION, OPERATION, MAINTENANCE, TROUBLESHOOTING, AND PARTS SERVICE.

#### PLACEMENT OF THE PAX LUBE SYSTEM



When planning the location of the system, consideration should be given to the routing of air and electrical lines for the unit. If a lubricant return line is to be used, the routing of this line should also be considered. Avoid creating situations that my be hazardous or conditions that may interfere with the operator or cause damage to the return line.

Locate the Pax Lube System at a convenient place as near to the press as possible where the unit will not be in the path of vehicles or moving parts of the press but will permit easy access for servicing the controller and filling or draining the reservoir.

Consideration should also be given for the type of spray lines and the routing of the lines. The optional spray lines are 8 feet long, from the quick connect plug to the end of the spray nozzle assembly. We recommend that these lines be shortened to the length required for each application. Lines may be as long as 16 feet for some applications.

For the most efficient operation of the system, placement should be as close as practical to the points where the lubrication will be applied. It is more efficient to use steel tubing for best transfer of the lubricant over longer distances (longer than 8 feet). The use of rigid tubing will help prevent the loss of line pressure, thus helping to assure the best performance. When spraying higher viscosity lubricants, rigid tubing and short lines (shorter than 8 feet) are strongly recommended. Generally speaking, the shorter the line, the better the spray pattern. The spray pattern may also improve by using the more rigid tubing for less viscous lubricants.

Magnetic base spray assemblies were designed for quick setup and versatility. They also assist with determining the most efficient location for the spray nozzles. Once the best location is determined, it is recommended that a permanent spray line and manifold block be installed. This permits the spray lines to be located in the same position at all times and eliminates setup inconsistencies.



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#### AIR REQUIREMENTS



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

- 1. The maximum safe operating air pressure is 100 PSI.
- 2. The minimum operating air pressure is 40 PSI. (Measured when the solenoid is engaged).
- 3. The minimum recommended input line is  $\frac{1}{4}$ " pipe or equivalent.

NOTE: MAINTAIN OR ADJUST THE AIR PRESSURE AT LOWEST POSSIBLE SETTING (MIN 40 PSI) WHICH PRODUCES A GOOD SPRAY PATTERN SETTING (TYPICALLY 60-80 PSI IS APPROPRIATE FOR MOST WATER SOLUBLE LUBRICANTS), HIGHER PRESSURE MAY BE REQUIRED FOR HEAVIER VISCOSITY LUBRICANTS. FOR LUBRICANTS WITH VISCOSITY GREATER THAN 100 SUS AT 100 DEGREES FAHRENHEIT CONTACT THE FACTORY FOR SUGGESTIONS ABOUT SYSTEMS THAT WILL SPRAY HIGHER VISCOSITY LUBES.





## DIAPHRAGM PUMP COMPONANTS

1	01-2161-31	DIAPHRAGM PUMP ASSEMBLY
2	01-0117-21	3/8" TUBE
3	07-0995-20	FEMALE CONNECTOR
4	06-1939-20	1/8" NPT STREET ELBOW
5	03-3427-20	1/8" HEX NIPPLE
6	01-2180-30	5 GALLON DIAPHRAGM ADAPTOR PLATE
6	01-2178-30	15 GALLON DIAPHRAGM ADAPTOR PLATE
6	01-2179-30	30 GALLON DIAPHRAGM ADAPTOR PLATE
7	06-0168-10	1/4" FLAT WASHER
8	01-0120-20	1/4-20 HEX NUT
9	01-0983-20	1/8" NPT FEMALE ELBOW
10	01-0177-20	LOCKING NUT
11	01-3327-10	5 GALLON REGULATOR BRACKET
11	01-1837-11	15 GALLON REGULATOR BRACKET
11	01-1838-11	30 GALLON REGULATOR BRACKET
12	01-0984-20	1/8" NPT NIPPLE
13	01-0961-21	FILTER REGULATOR
14	01-0905-20	MALE ELBOW
15	01-0117-21	3/8" TUBE
16	0963-20	AIR GAUGE



## DIAPHRAGM PUMP ASSEMBLY REFERENCE FIGURE 3 P/N 00-2161-31

<u>KEY NO.</u>	PART NO.	DESCRIPTION
1	03-2162-21	DIAPHRAGM PUMP
2	01-0905-20	MALE ELBOW
3	03-3425-20	3/8" NPT COMPRESSION FITTING
4	03-3424-20	90 DEGREE ELBOW
5	01-0919-21	EXHAUST MUFFLER
6	03-3423-20	1/4" NPT STREET ELBOW
7	01-0915-20	BRASS MALE ELBOW
8	01-1218-20	1/4" NPT HEX SOCKET PLUG
9	03-1987-20	1/4" NPT STREET TEE





## DIAPHRAGM PUMP ASSEMBLY 00-2161-31 FIGURE 3





## FILTER/REGULATOR PARTS LIST

KEY NO.	PART NO.	DESCRIPTION
1	01-1932-21	AIR LOCKOUT/TAGOUT VALVE (OPT)
2	01-0961-21	FILTER/REGULATOR
3	01-0963-20	AIR GAUGE
4	01-1803-21	POLY BOWL W/MANUAL DRAIN
5	01-1201-20	1/4" NPT NIPPLE



**AIR FILTER:** Periodically inspect the air filter bowl (Fig. 4.4) to assure the liquid level does not rise more than halfway in the bowl. The air filter bowl is drained by pushing the valve up. The valve is located on the bottom of the air filter bowl. Open until all the visible water has drained. Before operating the system, insure the air filter bowl valve is closed by releasing to its down position.

**AIR REGULATOR AND GAUGE:** The air pressure supplied to the Pax Lube System will be indicated on the pressure gauge (Fig. 4.3), refer to the AIR section of this manual for proper air supply information. Adjustment of the air pressure can be accomplished by pulling up on the adjustment knob (Fig. 4.2). Turn the adjusting knob (Fig. 4.2) in a clockwise rotation to increase the air pressure to the diaphragm pump assembly and in a counterclockwise rotation to decrease the air pressure. Refer to the AIR section of this manual for proper range settings. After the air pressure is adjusted within the recommended range, insure the adjustment knob (Fig. 4.2) is in the locked position by pushing down on the adjustment knob.



## ELECTRICAL REQUIREMENTS

The Pax Lube System requires an electrical supply of 120 VAC 60 HZ at 3 AMP minimum. Contact the factory to determine the availability of other voltages and frequencies.

#### ELECTRICAL POWER



All connections <u>must</u> be made in the electrical section on the backside of the manifold mounting panel. The system <u>must</u> be wired according to electrical schematic on page 16.

When all electrical connections are completed and secured in such a manner as to prevent any possible damage, replace the back cover plate. Align the plate and insert the retaining screws and secure. The system is now ready for operation. The spray cycle on the Pax Lube System starts when the solenoid coil is **ENERGIZED** (Reference the "LUBE SYSTEM OPERATION" section of the manual for a detailed explanation).

#### ELECTRICAL SIGNAL (DRY CONTACT)

The electrical signal required (Dry Contact) to activate the Pax Lube System can be obtained from several sources:

- 1. Rotary switch on press
- 2. Cam switch on press
- 3. Limit switch on press
- 4. Electrical relay on press
- 5. Press programmable controller
- 6. Any type of programmable logic control

Other sources of a contact signal may be available and each individual installation will dictate the exact source. Care should be taken that any signal provided will meet the electrical requirements.



## **ELECTRICAL**

REFERENCE ELECTRICAL SCHEMATIC



#### 15 & 30 GALLON V-SERIES LUBE SYSTEM OPERATION

#### Solenoids, pump, and manifold assembly (figure 3 & 5)

The diaphragm pump (3.1) will draw fluid from the reservoir and supply the manifold (5.1) with pressurized fluid. The pressurized fluid is distributed to the spray nozzles by energizing and de-energizing of the coil.

When the coil (5.9) is energized, the plunger pulls back and allows fluid to pass through the manifold to the quick connect (5.12). The quick connect is sealed and will not allow fluid to pass, unless a spray line is plugged into the quick connect. At this point fluid will be passing through the spray line and out the spray tip.



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#### MANIFOLD SUB. ASSEMBLY **REFERENCE FIGURE 5** P/N 02-3208-30

KEY NO.	PART NO.	DESCRIPTION	QTY.
1	02-0524-10	V 5 MANIFOLD	1
2	02-1206-20	1/8" NPT PIPE PLUG	2
3	01-0219-20	GROMMET	5
4	04-1379-23	110V DIN STYLE CONNECTOR	5
4	04-1379-24	250V DIN STYLE CONNECTOR	5
4	04-1379-22	24 VDC DIN STYLE CONNECTOR	5
5	04-1985-20	SLEEVE ASSEMBLY	5
6	04-0227-20	GASKET	5
7	04-1984-20	PLUNGER ASSEMBLY	5
8	02-0171-20	#10-32 X 2" SHCS	2
9	04-1373-20	120V COIL	5
9	04-1373-21	240V COIL	5
9	04-1373-22	24 VDC COIL	5
10	04-0133-20	NUT	5
11	04-3220-20	120V SOLENOID OPERATOR ASSY	5
11	04-3226-30	24 VDC SOLENOID OPERATOR ASSY	5
12	03-0911-20	QUICK CONNECT COUPLING	5
13	08-0149-20	#10-32 NUT	2

NOTE: 1. Items 4,5,6,7,9 and 10 make up the V-Series solenoid operator assembly (item 11).2. Item 2 location and quantity may vary.





## MANIFOLD SUB. ASSEMBLY 02-3208-30



## TABLE 1.

## SOLENOID VALVE VOLUME ADJUSTMENT DATA

#### THE CONVERSION DATA REFERENCE IS:

#### 1 fl oz = 1.805 cu in = 29.57 cc

## 1000 ml = 1 liter

#### 1 liter = 33.814 fl oz

The volume calculated is based on spraying water using a .031 orifice spray tip at 80 PSI air inlet pressure.

	# of MS OPEN	fl oz	ml
MAXIMUM	.10 (100 MS)	.0287	.85
	.09 (90 MS)	.0271	.80
	.08 (80 MS)	.0230	.68
	.07 (70 MS)	.0206	.61
	.06 (60 MS)	.0176	.52
	.05 (50 MS)	.0156	.46
	.04 (40 MS)	.0129	.38
	.03 (30 MS)	.0074	.22
MINIMUM	.02 (20 MS)	.0041	.12
OFF	.00 (0 MS)	FULLY	CLOSED

MS = Milliseconds



## MAINTENANCE SCHEDULE

# A DAILY MAINTENANCE SCHEDULE IS RECOMMENDED FOR MAXIMUM OPERATIONAL EFFICIENCY.

# There are several precautions that will assist with the system operation insuring the best operating characteristics. NOTE: FOR THE BEST RESULT, PERFORM THESE PROCEDURES DAILY. THEY ARE:

- 1. Inspect the filter/regulator assembly and perform the following procedures:
  - a. Air filter bowl should be drained
  - b. Check and adjust, as required, the air pressure input by adjusting the regulator as required (Refer to Air Pressure section of this manual Page 9)
- 2. Inspect the Pax Lube System reservoir to insure the lubricant level is sufficient for operating the system. **NOTE: If a water soluble lubricant is used, inspect lubricant to determine if separation has occurred. If it has, mix. An optional air agitation feature may be added to the system.**
- 3. Inspect and clean, if required, the systems filter assembly found in the reservoir. (We recommend a spare filter be utilized to exchange as needed.) The following steps are recommended for cleaning or replacing the filter:
  - a. Turn the system power off and remove the pressurized air supply from the system.
  - b. Remove the filter assembly from the tank.
  - c. Remove the four (4) springs.
  - d. Remove the bottom cover plate.
  - e. Clean or replace the filter element.
  - f. Replace the cover plate.
  - g. Install the four (4) springs.
  - h. Install the filter assembly in the reservoir.

NOTE: A damaged filter should be replaced or the spray nozzle could become clogged.

- 4. 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 about methods of testing. Should the lubricants prove to be incompatible, it will be necessary to remove the filter assembly from the tank and thoroughly clean prior to the introduction of the new lubricant into the Pax Lube System. You must also purge all fluid lines and diaphragm pump of the old lubricant to prevent reaction of the lubricants in the lines, which could cause poor performance, or failure of the Pax Lube System. NOTE: THE FILTER ASSEMBLY WILL RETAIN A SMALL AMOUNT OF LUBRICANT. FLUSH OR RINSE AS NECESSARY.
- 5. Manually operate the system to insure proper spray operation. Purge the spray lines of any trapped air. If the spray lines do not spray properly, follow the procedures outlined in the troubleshooting chart on Pages 23, 24 and 25.



## TROUBLESHOOTING THE V SERIES PAX LUBE SYSTEMS (15 & 30 GALLON)

Review the V-Series "LUBE SYSTEM OPERATION" section on Page 17 of this manual.

<u>PROBLEM</u>	CAUSE	<u>SOLUTION</u>
SYSTEM WILL NOT OPERATE	1. No power.	1. Check the fuse and all electrical connection insure proper connections.
	2. Faulty wiring.	2. Check for correct, loose or faulty wire connections.
	3. Defective solenoid coil.	3. Replace coil.
	4. Air pressure regulator.	4. Adjust within operating range – 40 PSI to 100 PSI.
INSUFFICIENT FLUID IN SPRAY LINES	1. Insufficient fluid in reservoir.	1. Add fluid to reservoir and manually cycle until spray pattern is crisp and no air is in the spray lines.
	2. Fluid supply pump is not supplying fluid to the fluid supply line(s).	2. Clogged filter. Remove, clean, check for damage and replace if it is damaged. After cleaning the filter, install nondamaged filter and manually cycle until the fluid supply line(s) are full and spray tips perform as expected.
	3. Malfunctioning fluid supply pump.	3. Remove fluid supply pump, check the components for damage. Replace any damaged components as required.
INDIVIDUAL SPRAY LINE NOT	1. Solenoid operator assembly not operating	1.1. Check relay on output module. Remove and replace if damaged.
FUNCTIONING	property	1.2. Replace coil.
		1.3. Remove operator assembly, check plunger assembly for damage. Clean and replace components as needed.
	2. Check valve not installed in the spray nozzle body or is not seating properly.	2. Check the nozzle body for the check valve. If not there, clean and install the check valve. If there, inspect for damage or foreign material. Clean or replace as required.



## TROUBLESHOOTING (cont'd)

PROBLEM	CAUSE	SOLUTION
INDIVIDUAL SPRAY LINE NOT FUNCTIONING	3. Spray line fittings not tight.	3. Insure that the fittings are free of burrs, nicks and dirt. Tighten the fittings and test.
DRIPPING NOZZLE BODY SPRAY TIP ASSEMBLY	1. Spray tip retainer is not secure or there may be damage to the surfaces of the tip or to the check valve.	1. Remove the spray tip and check valve from the nozzle body. Clean and inspect for damage. If damaged, replace the damaged part(s). Clean the surfaces of the nozzle body, check valve, and the face of the spray tip. Inspect to insure that all surfaces are free of damage. Install all components securely and test for leaks. If leak persists, replace the tip and check valve. Test again.
SPRAY PATTERN IS NOT GOOD	1. Air pressure not regulated properly.	1. The input air pressure must be at least 40 PSI mini- mum. The more viscous the lubricant, the higher the pressure should be.
	2. Pump is pumping air	2.1. Check the lubricant level and fill if required.
	into the spray lines.	2.2. Check the filter assembly in the reservoir. Clean or replace the filter element as required.
		2.3. Check the reservoir for dirt or sludge. Clean as required.
		2.4. Manually operate the system by depressing the manual button, then enter solenoid number and depress the "ON" button. The "ALL" button can be used to purge multiple lines. If the air does not clear, then follow the procedures for low fluid, clogged or dirty filter, malfunctioning fluid supply pump, and check for loose fittings.
	3. The spray nozzle assembly is contaminated.	3.1. Check the spray nozzle assembly for the check valve. If it is not a part of the nozzle assembly, install and test the system.
		3.2. Check the assembly for damage or foreign material. All surfaces must be clean and free of damage. Clean or replace as required.



## TROUBLESHOOTING (cont'd)

**CAUSE** 

#### PROBLEM

SPRAY PATTERN IS NOT GOOD 4. Flexible (soft) spray lines are too long.

5. Air is trapped in the spray line.

## **SOLUTION**

4. This tubing should not be longer than 16 feet. The shorter the length of tubing, the better the spray pattern should be.

5. The spray lines should be routed in such a way that the spray nozzle is the highest point in the line.



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## Pax V-Series Optional PLC Interface Controller Programming

The controller for the Pax V-Series Lube System contains a manual operation and a programmed operation. The operator interface module consists of a touch screen display. The operator interface module allows the operator to choose between manual and a programmed operation.



When operating the V-Series controller manually start by selecting Manual

	MANUAL MODE	
SINGLE CYCLE CURRENT JOB	All SOL ON	STOP

This operator will have two choices **Single Cycle Current Job** or **All Sol On**. The Single Cycle Current Job button will run the job that is currently selected. The All Sol On button will turn all the solenoids on at the same time and keep them on until the Stop button is pressed. The Back Button will take you back to the main screen.



Manual Mode Screen (Figure 2)

	MANUAL MODE	
SINGLE CYCLE CURRENT JOB	All SOL ON	STOP

## **OPTIONS:**

- **SINGLE CYCLE CURRENT JOB** cycles current job program 1 time based on current program settings.
- ALL SOL ON button turns all solenoids on and leaves them on until the STOP button is pressed.
- **STOP** button turns off continuous spray (as mentioned above).
- **BACK ARROW** button returns user to the MAIN screen (Figure 1).

Password Screen (Figure 3)

Passw	ord	Maint V PAX1							
A	В	С	D	E	F	G	Η	1	CAN
J	K	L	М	Ν	0	Р	Q	R	CLR
S	Т	U	V	W	Х	Υ	Ζ	0	
1	2	3	4	5	6	7	8	9	ENT
	8	60 - 63	60 - 63	60 - 63	(d)	60 - 63	88 - 83	00 - 03	

## **OPTIONS:**

• Enter PAX1 for the password followed by the ENTER button



## Setup Screen (Figure 4)



## NOTES:

- 1. Password PAX1 will be required to access this screen
- 2. When screen is first displayed the values that were displayed on the previous Monitor Screen will be displayed.

- **Job** button allows user to tell what program they are wanting to setup. A Numeric screen will automatically be displayed (see Figure 6)
- **DELAY TIME** values can be set for each spray line number as required by user. A Numeric screen will automatically be displayed (see Figure 6)
  - This value is the amount of time the solenoid will be delayed before it starts to spray after the unit sees a signal.
- **SPRAY TIME** values can be set for each spray line number as required by user. A Numeric screen will automatically be displayed (see Figure 6)
  - This value is the amount of time the solenoid will spray once it receives a signal.
- **COUNTER** values can be set for each spray line number as required by user. A Numeric screen will automatically be displayed (see Figure 6)
  - This value is the set to initiate a single spray after receiving the set amount of inputs.
  - **ON/OFF** values will be set by toggling the touchscreen button between Disable and Enable.
- FORWARD / BACK ARROW buttons:
  - Will take you to the next bank of three Spray Lines.
  - If the user uses the back arrow a password will be required to continue (see Figure 3).



## Quick Setup Screen (Figure 5)



## NOTES:

- 1. Password **PAX1** will be required to access this screen
- 2. When screen is first displayed the values displayed for all jobs, even saved ones will be zero.

- **Job** button allows operator to tell what program the operator is wanting to setup. A Numeric screen will automatically be displayed (see Figure 6)
- **FROM / TO #** values allow the operator to quickly set which solenoids the operator wants to turn on. A Numeric screen will automatically be displayed (see Figure 6)
- ON/OFF MODE can be toggled between Disable and Enable.
  This will only change the solenoids that are set in the FROM / TO section above.
- **COUNT** values can be set for each spray line number as required by user. A Numeric screen will automatically be displayed (see Figure 6)
  - This value is set to initiate a single spray after receiving the set amount of inputs.
  - This will only change the solenoids that are set in the FROM / TO section above.
- **SPRAY TIME** value can be set to the length of the spray the operator is wanting for the range of solenoids set in the FROM / TO section above. A Numeric screen will automatically be displayed (see Figure 6)
- **ON DELAY** value can be set for the length of the delay the operator is wanting for range of solenoids set in the FROM / TO section above. A Numeric screen will automatically be displayed (see Figure 6).
- **SAVE** button saves the current changes of the job being setup.
- **BACK ARROW** buttons returns user to the main menu.



Numeric Screen (Figure 6)



**OPTIONS:** 

- This screen is used when user is needed to input a Numeric value.
- The back arrow button will take the user back to the main screen.

## Numeric Screen (Figure 7)



- This screen is used when user needs to input what job number he/she needs to run.
- A numerical screen will automatically be displayed (see Figure 6)
- The back arrow button will take the user back to the main screen.



## Viewing Screen (Figure 8)

VIEWING S	Spray Line #	1	2	3
	Delay Time	0.02	0.02	0.00
	Spray Time	0.04	0.04	0.00
SETUP	Counter	0	0	0
Job 1	ON/OFF	Enable	Enable	Disable

## **OPTIONS:**

- This screen is used when user wants to view saved jobs paramaters.
- The **FORWARD / BACK** arrow button will take the user to next set of spray lines
- **SETUP** button will take the user to the setup screen, where the job parameters can be changed or added.
- **JOB** button will allow the user to switch between jobs to view.

Contact Screen (Figure 9)

To Contact PAX Products	
5097 Monroe Road	
Celina, Ohio 45822	
1-800-733-6930	
419-586-6948	
www.paxproducts.com	

- This screen provides the user with information on how to contact Pax Products.
- The back arrow button will take the user back to the main screen.



## 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.





## LOW LEVEL FLOAT ASSEMBLY 00-3215-30

KEY NO.	PART NO.	DESCRIPTION
1	07-0916-40	MODIFIED FEMALE CONNECTOR
2	01-1117-20	3/8" TUBING
3	01-0982-20	MALE CONNECTOR
4	07-0995-20	FEMALE CONNECTOR
5	90-9013-20	3/8" S.S. TUBING
6	07-1508-10	PROTECTIVE WASHER
7	07-1501-23	FLOAT SWITCH
8	01-1381-20	DPDT RELAY (NOT SHOWN)
9	01-0159-20	#6-32 X 1/4 BHCS (NOT SHOWN)



Rev. 10/22/2004



## AUTO REFILL AND LOW LEVEL FLOAT ASSEMBLY 00-3216-30

PART NO.
07-0916-40
01-1117-20
01-0982-20
07-0995-20
90-9013-20
01-0957-20
01-0983-20
07-1508-10
07-1501-23
01-1381-20
01-0159-20

## DESCRIPTION

MODIFIED FEMALE CONNECTOR 3/8" TUBING MALE CONNECTOR FEMALE CONNECTOR 3/8" S.S. TUBING UNION TEE FEMALE ELBOW PROTECTIVE WASHER FLOAT SWITCH DPDT RELAY (NOT SHOWN) #6-32 X 1/4 BHCS (NOT SHOWN)





# AUTO REFILL SOLENOID VALVE ASSEMBLY 00-3217-31

KEY NO.	PART NO.	DESCRIPTION
1	01-0219-20	GROMMET
2	05-1404-20	DIN STYLE CONNECTOR
3	04-2158-22	AUTO REFILL SOLENOID AND MANIFOLD
4	04-1219-20	HEX NIPPLE
5	04-1208-20	BUSHING
6	04-1211-20	NIPPLE
7	04-1210-20	ELBOW



Rev. 10/22/2004



## AIR AGITATION ASSEMBLY 00-3218-30

KEY NO.	PART NO.	DESCRIPTION
1	01-0974-20	MALE CONNECTOR
2	01-0901-20	MALE CONNECTOR
3	01-1135-40	1/4" STAINLESS STEEL TUBING
4	01-1926-20	NEEDLE VALVE
5	01-0914-21	MALE ELBOW
6	01-1988-10	SPACER
7	01-1116-20	1/4" POLY TUBING
8	01-0902-20	UNION
9	90-9054-20	1/4" STAINLESS STEEL TUBING
10	01-2151-30	AIR AGITATION CLAMP ASSY
11	01-0132-20	1/4-28 NUT
12	01-0745-10	TUBE CLAMP





## MAGNETIC BASE LIMIT SWITCH OPTION 00-1076-32

<u>KEY NO.</u>	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



PURGE OPTION-

**PURGE OPTIONS\*** 00-1420-31 V5 PURGE (120VOLT) 00-1421-31 V10 PURGE (120VOLT) 00-1422-31 V15 PURGE (120VOLT) 00-1423-31 V5 PURGE (24VDC) 00-1424-31 V10 PURGE (24VDC) 00-1425-31 V15 PURGE (24VDC)

**\*OPTION NOT AVAILABLE ON V5-5 SYSTEM** 

## PART NO.

<u>PART NO.</u>	DESCRIPTION
08-1352-20	PURGE LEGEND PLATE
08-1365-20	PUSH BUTTON OPERATOR
08-1366-20	CONTACT BLOCK MOUNTING ADAPTER
08-1368-20	N.O. CONTACT BLOCK
05-1429-20	5 CIRCUIT PURGE-120 VOLT
05-1430-20	10 CIRCUIT PURGE-120 VOLT
05-1431-20	15 CIRCUIT PURGE-120 VOLT
05-1432-20	5 CIRCUIT PURGE- 24 VDC
05-1433-20	10 CIRCUIT PURGE-24 VDC
05-1434-20	15 CIRCUIT PURGE-24 VDC
500-5620-0	10-32 X 1/4" BHCS (2pc)





## STD. FILTER ASSEMBLY 00-3211-30

KEY NO.	PART NO.	DESCRIPTION
1	01-0817-10	BOTTOM PLATE
2	01-0309-21	FILTER ASSEMBLY SPRING (4pc)
3	01-0820-10	FILTER ELEMENT-150 MICRON
4	01-0621-10	FOOT VALVE
5	01-0836-10	TOP PLATE
6	03-0403-20	CHECK BALL
7	03-0308-20	INLET SPRING
8	03-0622-10	OUTLET VALVE ADAPTER
9	01-1997-20	1/2" COMPRESSION SLEEVE
10	01-1998-20	1/2" COMPRESSION NUT
11	01-1136-20	1/2" TUBING
12	03-0218-20	O-RING
13	01-1999-20	1/2" BRASS INSERT (2pc)



#### INSTALLATION OF THE FOOT VALVE INTO THE FILTER ASSEMBLY

## **Reference Figure 12**

The procedures are presented in order of importance for proper assembly of the FILTER ASSEMBLY. Following these procedures will insure proper assembly. Disassembly will follow the reverse order.

- 1. Place the filter element (3) in the bottom cover plate (1). Insure the filter is properly seated inside the cover plate.
- 2. Assemble check ball (6), inlet spring (7), and outlet valve adapter (8) through the top plate (5) and into foot valve (4). Torque outlet valve adapter (8) to 180 in. lbs.
- 3. Place the assembly with the top cover plate into the filter element. Insure the 4 spring clip holes of the top cover plate are in line with the 4 spring clip holes of the bottom cover plate.
- 4. Install the 4 filter assembly springs (2) one at a time following the X pattern.



## <sup>1</sup>/4" DIAPHRAGM PUMP 1:1 RATIO (NON-METALLIC)

## PUMP DATA

Part Number	03-2162-21
Pump Type	. Non-Metallic Air Operated Double Diaphragm
Weight	Polypropylene - 2.86 lbs (1.30 kgs)
Maximum Air Inlet Pressure	125 p.s.i.g. (8.6 bar)
Minimum Air Inlet Pressure	10 p.s.i.g. (.69 bar)
Maximum Outlet Pressure	125 p.s.i.g. (8.6 bar)
Maximum Flow Rate	5.3 g.p.m. (20.0 liters)
Maximum Suction Lift	20 ft. (water)
Maximum Output Per Cycle	0.014 gallons (53 cc's)
Maximum Particle Size	1/16" (1.6mm) clean fluid only
Maximum Temperature Limits	. Polypropylene - $35^{\circ}$ to $175^{\circ}$ F ( $2^{\circ}$ t $79^{\circ}$ C)
-	

## AIR AND LUBE REQUIREMENTS

## WARNING

#### EXCESSIVE AIR PRESSURE. Can cause pump damage, personal injury or property damage.

- A filter capable of filtering out particles larger than 50 microns should be used on the air supply. In most applications there is no lubrication required other than the "O" ring lubricant which is applied during assembly or repair.
- The pump can be rotated 360° to suit the application. It may be mounted upside down or on the wall with no effect on suction lift or operating efficiency. The filter and regulator need to be oriented in a normal vertical direction to function properly.
- Pipe plugs are included for the material inlets. They can be switched to accommodate piping requirements. However, the fluid inlet must always be in the port closest to the mounting base.

#### **INSTALLATION**

- NOTICE: Re-torque fasteners prior to use. Refer to the chart on page 43.
- Apply Teflon tape or pipe sealant to threads upon assembly to prevent leakage.
- Secure the diaphragm pump legs to a suitable surface to insure against damage by vibration.
- To avoid problems, install a particle fluid filter to screen out foreign matter 1/32" (.79 mm) or larger in diameter.
- The pump is not recommended for submerged applications.
- When the diaphragm pump is used in a forced-feed (flooded inlet) situation, it is recommended that a "Check Valve" be installed at the air inlet.

#### **OPERATING INSTRUCTIONS**

- Always flush the pump with a solvent compatible with the material being pumped, if the material being pumped is subject to "setting up" when not in use for a period of time.
- Disconnect the air supply from the pump if it is to be inactive for a few hours.
- The outlet material volume is governed not only by the air supply, but also by the material supply available at the inlet. The material supply tubing should not be too small or restrictive. Be sure not to use hose which might collapse.



**1/4" DIAPHRAGM PUMP** 03-2162-20 43



#### PUMP DISASSEMBLY AND REASSEMBLY





## PUMP DISASSEMBLY AND REASSEMBLY

## PARTS LIST / PX01X-XXX-XXX-AXXX

	COMMON PAR	RTS		
	<u>PX01</u> X-XXX-XXX-	AXXX		
Item	Description	[Mtl]	Qty	Part no
1	Rod Assembly (includes seals)		[1]	24028284
5	Washer, Diaphragm	[P]	[2]	23981541
77	Plate		[2]	93264
206	Caution Label		[1]	93122
207	Warning Label		[1]	93616-1
26	Screw	[SS]	[32]	23981574

# MATERIAL CODE [B] = Nitrile [Co] = Copper [D] = Acetal [E] = E.P.R. / EPDM [G] = Nitrile [GP] = Groundable Polypropylene [H] = Hytrel [K] = Kynar PVDF [N] = Neoprene [P] = Polypropylene [Sp] = Santoprene [SS] = Stainless Steel [T] = PTFE [U] = Polyurethane [V] = Viton

			FLUID	CONN	IECTION		ets s f	Kill Markey		1.00
		P)	(01X- <u>)</u>	<u>(X</u> X-X	XX-AXXX	and the second se				
PX01X-HDS PX01X-HKS						PX01X	PX01X-HPS			
ltem	Description	Part no	[Mtl]	Qty	Part no	[Mtl]	Qty	Part no	[Mtl]	Qty
6	Diaphragm Screw	93810-2	[D]	(2)	93810-3	[K]	(2)	93810-1	[P]	(2)
15	Fluid Cap	23981640	[D]	(2)	23981657	[K]	(2)	23981632	[P]	(2)
60	Inlet Manifold	23981681	[D]	(1)	23981699	[K]	(1)	23981673	[P]	(1)
61	Outlet Manifold	23981723	[D]	(1)	23981731	[K]	(1)	23981715	[P]	(1)
43	Ground Lug	93004	[Co]	(1)						

SE PX01X	SEAT OPTIONS PX01X-XXX- <u>X</u> XX-AXXX					BALL PX	/ FLEX ( 01X-XX	CHECK OPTIC X-X <u>X</u> X-AXX)	ONS (		
	"21"				"22" (5/8" o	.d)			"42″		
- <u>X</u> XX	Seat	Qty	[Mtl]	-x <u>x</u> x	Ball	Qty	[Mtl]	-X <u>X</u> X	FLEX CHECK	Qty	[Mtl]
-DXX	96580-2	(4)	[D]	-XAX	96481-A	(4)	[Sp]	-XJX	96744-2	(4)	[B]
-KXX	96580-3	(4)	[K]	-XCX	96481-C	(4)	[H]	-XNX	96744-3	(4)	[N]
-PXX	96580-1	(4)	[P]	-XGX	96481-G	(4)	[B]	-XLX	96744-4	(4)	[V]
-HPS-0XX	96745	(4)	[P]	-XTX	96481-4	(4)	[T]	-XKX	96744-1	(4)	[E]
-HKS-2XX	96745-1	(4)	[K]			-			•	•••••	
-HDS-1XX	96745-2	(4)	[D]								

	DIAPHRAGM OPTIONS PX01X-XXX-XXXA								
	11	7"		1	19"		1	'64"	
-хх <u>х</u>	Diaphragm	Qty	Mtl	Seal	Qty	Mtl	"O" Ring	Qty	Mtl
-XXA	93808	(2)	[Sp]	93761	(4)	[E]			
-XXC	93808-C	(2)	[H]	Y325-119	(4)	[B]			
-XXG	93808-G	(2)	[B]	Y325-119	(4)	[B]			
-XXT	93898	(2)	[T]	96514	(4)	[T]	93947		[B]

Note: Item (19) O-ring is not used with Flex Check Options.



## PUMP DISASSEMBLY AND REASSEMBLY

## PARTS LIST / PX01X-XXX-AXXX

## AIR SECTION PARTS

Item	Description	Part no	Qty	[Mtl]
101	Center Body			
	(PD01X)	23981392	(1)	[P]
	(All PE01X without Diaphragm Failure Detection)	23981392	(1)	[P]
	(PE01X With Diaphragm Failure Detection)	23981608	(1)	[P]
	(PD01E and PE01E) (not available with Diaphragm Failure Detection)	24243354	(1)	[GP]
107	Valve Block Plug			
	(PD01X, PE01X-XXX-XXX-X <u>0</u> XXX)	23981434	(1)	[P]
	(All PE01X with Solenoid)	23981848	(1)	[P]
111	Major Valve Spool Asm (includes seals)	0		
	(PD01X, PE01X-XXX-XXX-X <u>0</u> XX)	24028268	(1)	[D]
	(All PE01X with Solenold)	24086779	(1)	[D]
129	Muffler Baffle			
	(PD01X, PE01X-XXX-XXX-XX <u>0</u> XX)	23981475	(1)	[P]
	(PE01X-XXX-XXX-XX <u>N</u> XX)	24110926	(1)	[P]
	(PE01X-XXX-XXX-XX <u>P</u> XX)	24110926	(1)	[P]
	(PE01X-XXX-XXX-XX <u>E</u> XX)	24110934	(1)	[P]
	(PE01X-XXX-XXX-XX <u>F</u> XX)	24110934	(1)	[P]
	(PE01X-XXX-XXX-XXLXX)	23981475	(1)	[P]
132	Gasket	23981525	(1)	[B]
135	Valve Block Assembly			
	(PD01X, PE01X-XXX-XXX-X <u>0</u> XXX)	24243388	(1)	[P]
	(All PE01X with Solenoid)	24340275	(1)	[P]
137	O-Ring (0.070 CS x 0.676 ID)	Y-325-17	(1)	[B]
167	Pilot Valve Spool Assembly (includes seals)	24028276	(1)	[D]
173	O-Ring	24243313	(1)	[U]
283	Diaphragm Failure Detector			
	(PE01X-XXX-XXX-XX <u>E</u> XX)	96270-1	(2)	
	(PE01X-XXX-XXX-XXLXX)	96270-1	(2)	
	(PE01X-XXX-XXX-XX <u>N</u> XX)	96270-1	(2)	

n pa	RTS			
ltem	Description	Part no	Qty	[Mtl]
403	Valve (All PE01X with Solenoid)	114102	(1)	
413	Coil Nut (All PE01X with Solenoid)	119380	(1)	
414	Coil ,120 VAC (PE01X-XXX-XXX-X <u>A</u> XXX)	116218-33	(1)	
	Coil ,24 VAC , 12VDC (PE01X-XXX-XXX-X <u>B</u> XXX)	116218-38	(1)	
	Coil ,240 VAC (PE01X-XXX-XXX-X <u>C</u> XXX)	116218-35	(1)	
	Coil ,48 VAC, 24VDC (PE01X-XXX-XXX-XXXX)	116218-39	(1)	
a e e	Coil, ATEX, 12VDC (PE01X-XXX-XXX-XGXXX)	117345-38	(1)	
	Coil, ATEX, 24VDC (PE01X-XXX-XXX-X <u>H</u> XXX)	117345-39	(1)	
	Coil, ATEX, 220VAC (PE01X-XXX-XXX-X <u>K</u> XXX)	117345-35	(1)	
415	O-Ring (All PE01X with Solenoid)	114103	(1)	[B]
416	O-Ring (All PE01X with Solenoid)	114104	(1)	[B]
417	Screw (All PE01X with Solenoid)	96728647	(2)	
418	Tube (All PE01X with Solenoid)	15309974	(1)	[ <b>SS</b> ]
419	Seal (All PE01X with Solenoid)	96957	(1)	[B]
420	Snap Ring (All PE01X with Solenoid)	Y147-43	(1)	
421	Retainer (All PE01X with Solenoid)	96954	(1)	[B]
429	Solenoid Muffler (All PE01X with Solenoid)	116464	(1)	

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## **SPRAY TIP TABLE 2**

# NOTE: TEST FOR SPRAY PATTERNS WERE CONDUCTED USING TELLUS #10 OIL (60 SUS) AND WATER MAINTAINING A 6" VERTICAL DISTANCE AND 70 PSI AIR PRESSURE.

	P/N	DESCRIPTION	PATTERN	SIZE
			TELLUS #10	WATER
FLAT	06-0952-20	110° (.031 Orifice)	1.50" x 9.00"	2.00" x 17.00"
	06-1909-20	95° (.031 Orifice)	1.25" x 7.00"	1.75" x 13.50"
	06-0950-20	80° (.031 Orifice)	1.25" x 5.00"	1.50" x 11.00"
	06-1908-20	65° (.031 Orifice)	1.25" x 3.00"	1.50" x 8.50"
	06-0951-20	50° (.031 Orifice)	1.25" x 2.00"	1.25" x 6.00"
	06-0973-20	25° (.031 Orifice)	1.00" x 1.00"	1.00" x 4.00"
CONE	06-0959-20	.030" Orifice TG0.7	2.50" Dia.	6.50" Dia.
	06-0953-20	.024" Orifice TG0.5	2.00" Dia.	5.50" Dia.
	06-0958-20	.020" Orifice TG0.3	1.75" Dia.	5.00" Dia.
DEFLECTED	06-0956-20	.041" Orifice TK1.5	None	1.00" x 24.00"

#### SELECTING SPRAY TIPS

There are many variables that impact the performance of the system to provide a specific spray pattern. Consideration should be given to:

1.	VISCOSITY -	is that characteristic of any liquid which resists the forces of
		movement. Viscosity is the measure of the internal resistance of a
		fluid to shear and is related to the internal friction of the fluid.
2.	SURFACE TENSION -	is the characteristic of any liquid where the surface tends to assume
		the smallest size possible. The higher the surface tension the more
		resistance to flow.
3.	TEMPERATURE -	may affect viscosity, surface tension, and specific gravity. Therefore,
		temperature may affect spray patterns. The chemical configuration of
		the fluid is the determining factor. Moderate changes in temperature
		may not have any effect on some fluids.

NOTE: Spray patterns will also be affected by tip orifice wear. The spray patterns will change size and the droplet size will increase. Spray coverage will change and may not be as even as when the tip was new.



## SELECTING THE COMBINATION OF NOZZLE AND TIP

Determine the type of tip configuration required for your application and select from Table 2. Select the nozzle body style from Figure 13.



STANDARD SPRAY NOZZLE ASSEMBLIES



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## SPRAY ASSEMBLY OPTIONS





## 1/8" V-SERIES SPRAY ASSEMBLY 06-3049-30

KEY NO.	PART NO.	DESCRIPTION
1	06-1989-30	1/8" QUICK CONNECT PLUG ASM.
2	01-1133-20	1/8" TUBING (8' SEMI-RIGID)
3	06-1945-20	COMPRESSION NUT
4	06-1944-20	COMPRESSION SLEEVE
5	06-1982-10	1/8" STD. TUBING NOZZLE BODY
6	06-0925-20	CHECK VALVE STRAINER
7		SPRAY TIP
8	06-0932-20	TIP RETAINER

NOTE: When ordering spray assemblies specify tip (Ref. Table 2.) If tip is not specified a 110 deg. fan tip will be supplied.





## 1/8" V-SERIES MAGNETIC BASE SPRAY ASSEMBLY 06-3050-30

<u>KEY NO.</u>	PART NO.	DESCRIPTION
1	06-1989-30	1/8" QUICK CONNECT PLUG ASM.
2	01-1133-20	1/8" TUBING (8' SEMI-RIGID)
3	06-0311-20	ANTI-KINK SPRING
4	06-1628-10	1/8" TUBING GUIDE
5	06-1612-10	12" S.S. TUBE
6	06-1614-30	CLAMP ASSEMBLY
7	06-1640-30	MAGNETIC BASE WITH POST
8	06-1947-10	1/8" TUBING NOZZLE BODY ADAPTER
9	06-1944-20	COMPRESSION SLEEVE
10	06-1982-10	1/8" STD. TUBING NOZZLE BODY
11	06-0925-20	CHECK VALVE STRAINER
12		SPRAY TIP
13	06-0932-20	TIP RETAINER

NOTE: When ordering spray assemblies specify tip (Ref. Table 2.) If tip is not specified a 110 deg. fan tip will be supplied.





# 1/8" V-SERIES FLEXTUBE MAGNETIC BASE SPRAY ASSEMBLY 06-3051-30

KEY NO.	PART NO.	DESCRIPTION
1	06-1989-30	1/8" QUICK CONNECT PLUG ASM.
2	01-1133-20	1/8" TUBING (8' SEMI-RIGID)
3	06-0304-20	ANTI-KINK SPRING
4	06-1627-10	FLEXTUBE BKT. ADAPTER SEGMENT
5	06-1625-20	FLEXTUBE SEGMENT (12pc)
6	06-1629-10	FLEXTUBE NOZZLE ADAPTER INSERT
7	06-1944-20	COMPRESSION SLEEVE
8	06-1982-10	1/8" STD. TUBING NOZZLE BODY
9	06-0925-20	CHECK VALVE STRAINER
10		SPRAY TIP
11	06-0932-20	TIP RETAINER
12	06-0168-10	1/4" S.S. FLAT WASHER (2pc)
13	06-0141-20	1/4-28 x 3/8" SHCS (2pc)
14	01-0122-22	10-32 x 3/8" BHCS (2pc)
15	06-2093-30	MAGNETIC BASE RELEASE LEVER
16	09-1615-30	MAGNETIC BASE-Flat Top

NOTE: When ordering spray assemblies specify tip (Ref. Table 2.) If tip is not specified a 110 deg. fan tip will be supplied.

## FIGURE 16



## V-SERIES BRACKET MOUNT STD. SPRAY ASSEMBLIES REFERENCE FIGURE 17

<u>KEY NO.</u>	PART NO.	DESCRIPTION
1	06-0932-20	TIP RETAINER
2		SPRAY TIP
3	06-0925-20	CHECK VALVE STRAINER
4	06-1971-10	1"-2" NOZZLE BRACKET
4	06-1972-10	2"-3" NOZZLE BRACKET
4	06-1973-10	3"-4" NOZZLE BRACKET
4	06-1974-10	4"-5" NOZZLE BRACKET
4	06-1975-10	5"-6" NOZZLE BRACKET
4	06-1976-10	6"-7" NOZZLE BRACKET
4	06-1977-10	7"-8" NOZZLE BRACKET
4	06-1978-10	8"-9" NOZZLE BRACKET
4	06-1979-10	9"-10" NOZZLE BRACKET
5 *	06-0167-10	1 1/8" x 1/4" S.S. WASHER
6	500-5619-0	1/4-20 x 5/8" SHCS (3pc)
7	06-0168-10	9/16" x 1/4" S.S. WASHER (2pc)
8	06-1981-10	BRACKET MOUNT STD. SPRAY NOZZLE
9	01-0999-20	MALE ELBOW
9 **	01-0914-21	MALE ELBOW

\*P/N 06-0167-10 IS USED WITH 06-1971-10 (1"-2" NOZZLE BRACKET) ONLY \*\*P/N 01-0914-21 MALE ELBOW IS FOR 1/4" SPRAY ASSEMBLIES

NOTE: When ordering spray assemblies specify tip (Ref. Table 2.) If tip is not specified a 110 deg. fan tip will be supplied.

V-SERIES B	RACKET MOUNT STD. 1/4" SPRAY ASSEMBLIES
06-3109-30	1"-2" BRACKET MOUNT STD. SPRAY ASSEMBLY
06-3110-30	2"-3" BRACKET MOUNT STD. SPRAY ASSEMBLY
06-3111-30	3"-4" BRACKET MOUNT STD. SPRAY ASSEMBLY
06-3112-30	4"-5" BRACKET MOUNT STD. SPRAY ASSEMBLY
06-3113-30	5"-6" BRACKET MOUNT STD. SPRAY ASSEMBLY
06-3114-30	6"-7" BRACKET MOUNT STD. SPRAY ASSEMBLY
06-3115-30	7"-8" BRACKET MOUNT STD. SPRAY ASSEMBLY
06-3116-30	8"-9" BRACKET MOUNT STD. SPRAY ASSEMBLY
06-3117-30	9"-10" BRACKET MOUNT STD. SPRAY ASSEMBLY

06-3040-30 1"-2" BRACKET MOUNT STD. SPRAY ASSEMBLY 06-3041-30 2"-3" BRACKET MOUNT STD. SPRAY ASSEMBLY **3"-4" BRACKET MOUNT STD. SPRAY ASSEMBLY** 06-3042-30 4"-5" BRACKET MOUNT STD. SPRAY ASSEMBLY 06-3043-30 06-3044-30 5"-6" BRACKET MOUNT STD. SPRAY ASSEMBLY 6"-7" BRACKET MOUNT STD. SPRAY ASSEMBLY 06-3045-30 7"-8" BRACKET MOUNT STD. SPRAY ASSEMBLY 06-3046-30 06-3047-30 8"-9" BRACKET MOUNT STD. SPRAY ASSEMBLY 06-3048-30 9"-10" BRACKET MOUNT STD. SPRAY ASSEMBLY

V-SERIES BRACKET MOUNT STD. 1/8" SPRAY ASSEMBLIES







## 1/4" V-SERIES SPRAY ASSEMBLY 06-3008-30

<u>KEY NO.</u>	PART NO.	DESCRIPTION
1	06-0928-32	1/4" QUICK CONNECT PLUG ASM.
2	01-1116-21	1/4" TUBING (8' SEMI-RIGID)
3	01-0930-20	COMPRESSION NUT
4	01-0929-20	COMPRESSION SLEEVE
5	06-0985-10	1/4" STD. TUBING NOZZLE BODY
6	06-0925-20	CHECK VALVE STRAINER
7		SPRAY TIP
8	06-0932-20	TIP RETAINER

NOTE: When ordering spray assemblies specify tip (Ref. Table 2.) If tip is not specified a 110 deg. fan tip will be supplied.





## 1/4" V-SERIES MAGNETIC BASE SPRAY ASSEMBLY 06-3012-31

<u>KEY NO.</u>	PART NO.	DESCRIPTION
1	06-0928-32	1/4" QUICK CONNECT PLUG ASM.
2	01-1116-21	1/4" TUBING (8' SEMI-RIGID)
3	06-0910-20	FEMALE CONNECTOR
4	06-1612-10	12" S.S. TUBE
5	06-1614-30	CLAMP ASSEMBLY
6	06-1640-30	MAGNETIC BASE WITH POST
7	06-0937-11	FEMALE NOZZLE BODY
8	06-0925-20	CHECK VALVE STRAINER
9		SPRAY TIP
10	06-0932-20	TIP RETAINER

NOTE: When ordering spray assemblies specify tip (Ref. Table 2.) If tip is not specified a 110 deg. fan tip will be supplied.



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# 1/4" V-SERIES FLEXTUBE MAGNETIC BASE SPRAY ASSEMBLY 06-3016-30

KEY NO.	PART NO.	DESCRIPTION
1	06-0928-32	1/4" QUICK CONNECT PLUG ASM.
2	01-1116-21	1/4" TUBING (8' SEMI-RIGID)
3	06-0304-20	ANTI-KINK SPRING
4	06-1627-10	FLEXTUBE BKT. ADAPTER SEGMENT
5	06-1625-20	FLEXTUBE SEGMENT (12pc)
6	06-1626-10	FLEXTUBE NOZZLE ADAPTER INSERT
7	01-0929-20	COMPRESSION SLEEVE
8	06-0985-10	1/4" STD. TUBING NOZZLE BODY
9	06-0925-20	CHECK VALVE STRAINER
10		SPRAY TIP
11	06-0932-20	TIP RETAINER
12	06-0168-10	1/4" S.S. FLAT WASHER (2pc)
13	06-0141-20	1/4-28 x 3/8" SHCS (2pc)
14	01-0122-22	10-32 x 3/8" BHCS (2pc)
15	06-2093-30	MAGNETIC BASE RELEASE LEVER
16	09-1615-30	MAGNETIC BASE-Flat Top

NOTE: When ordering spray assemblies specify tip (Ref. Table 2.) If tip is not specified a 110 deg. fan tip will be supplied.

## **FIGURE 20**





## 4 PORT STACKABLE DIE MANIFOLD ASSEMBLY FOR 1/4" TUBING 02-3222-30 FOR 1/8" TUBING 02-3223-30

KEY NO.	PART NO.	DESCRIPTION	<u>QTY</u> .
1	06-1980-10	4 Port Stackable Die Manifold	1
2	01-0901-20	Male Connector	4
2*	06-1943-20	Male Connector	4
3	06-0967-20	Quick Connect Plug	4

## \*P/N 06-1943-20 MALE CONNECTOR TO BE USED WITH 1/8" TUBING



KEY NO.	PART NO.	DESCRIPTION
1	05-1313-20	PANEL MOUNT FUSE HOLDER
	01-1323-21	3 AMP FUSE
2	00-1406-20	CONTROLLER ASSEMBLY
3	01-0737-20	MODEL # / SERIAL NUMBER TAG
4	01-0122-22	#10-32 X 3/8" BHCS
5	01-0791-10	15 GALLON COVER PLATE
	01-3304-10	30 GALLON COVER PLATE
6	01-0221-20	1/2" CORK GASKET (ORDER BY LINEAR FT.)
7	01-3306-10	15 GALLON BACK WELDMENT
	01-3301-10	30 GALLON BACK WELDMENT
8	01-2126-30	15 GALLON TANK ASSEMBLY
	01-2129-30	30 GALLON TANK ASSEMBLY
9	01-1201-20	HEX NIPPLE
10	01-0117-20	1/4-20 X 1/2" HHCS
11	06-0168-10	S.S. WASHER
12	01-0120-20	1/4-20 HEX JAM NUT
13	02-0526-10	MANIFOLD TAG 1
	02-0527-10	MANIFOLD TAG 6
	02-0528-10	MANIFOLD TAG 11
14	00-3211-30	FOOT VALVE FILTER ASSEMBLY
15	01-1837-10	FILTER REGULATOR BRACKET
16	08-0149-20	#10-32 NUT (2 PC)





## SYSTEM CONFIGURATION MODELS 15 AND 30

NOTE: WHEN MAXIMUM NUMBER OF MANIFOLDS ARE NOT USED, THE MANIFOLD COVER AND BACKPLATE (NOT SHOWN) SHOULD BE INSTALLED.

02-0529-10	MANIFOLD COVER
02-0531-10	BACKPLATE
01-0122-22	#10-32 X 3/8" BHCS