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OPERATOR'S MANUAL 67072

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(REV. G)

67072 CYCLE CONTROLLER
(PNEUMATIC COUNTDOWN TYPE)
FOR 3/8", 1/2" & 1" DIAPHRAGM PUMPS WITH 1/4" AIR INLETS

67072 CYCLE CONTROLLER RETRO-FIT KIT.

This kit includes additional parts to do a field retro-fit to standard pumps models as follows:

3/8" - PD03P-XXX-XXX (refer to page 3).

1/2" - 66605X-XXX, PD05P-XXX-XXX, PD05P-XXX-XXX-B and PD05R-XXX-XXX-B (non-metallic air motor)(refer to page 3).

1" - 6661AX-XXX-C, 6661BX-XXX-C (refer to page 3), 66610X-XXX-C, 66611X-XXX-C, 66612X-XXX-C and 66613X-XXX-C (refer to page 4).

- **3/8" and 1/2" Pumps** - Pilot plug and replacement "O" ring(s).
- **1" Pumps** - Screws, plate, gaskets, & template for leg modification.

GENERAL DESCRIPTION

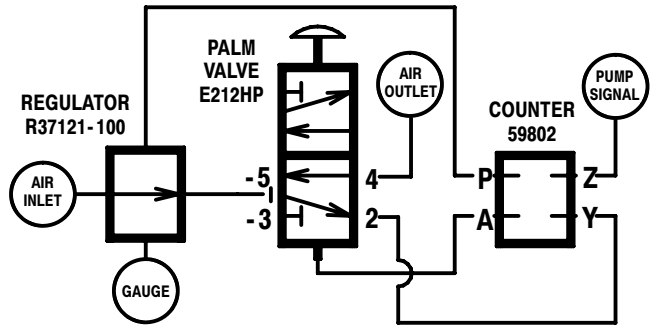
The diaphragm pump Cycle Controller Assembly provides logic control for preset dispensing. When installed on a diaphragm pump, it can monitor the diaphragm pump pulse or cycle and allow the user to accurately control the number of cycles the pump will produce. This will effectively allow a preset and repeatable amount of material to be dispensed through the pumping system.

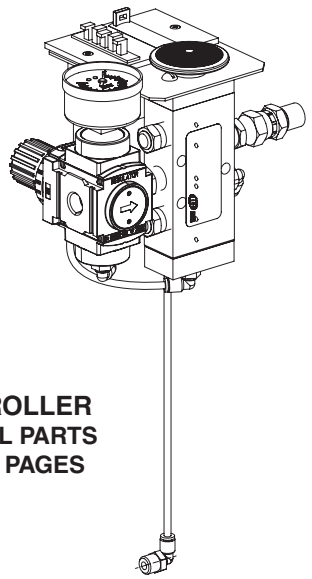
Pumps used with this counter assembly must be retrofitted with special parts. These special parts will allow the pump to output a pilot air signal which is needed to trigger the counter.

The controller assembly, with 1/4" N.P.T. inlet / outlet, includes a pre-assembled countdown counter, palm operated valve, bracket, tubing and an air regulator with air pressure gauge.

NOTE: This kit is intended to be attached directly to the pump air inlet. Mounting it a distance from the pump could result in an air pressure drop in the pilot signal to the counter and may affect the accuracy.

Figure 1 **SCHEMATIC VIEW**





67072
CYCLE CONTROLLER
SEE ADDITIONAL PARTS ON FOLLOWING PAGES

OPERATION

To determine the number of cycles needed to get the desired output, use the following formula: Divide the amount of material desired by the displacement per cycle to get the counter setting that is needed (refer to the pump manual).

NOTE: For best results, operate the pump at 30 - 90 p.s.i. (2.1 - 6.2 bar). Fluctuations in the air pressure can affect the displacement per cycle. Once the desired displacement is achieved, keep the air pressure as constant as possible.

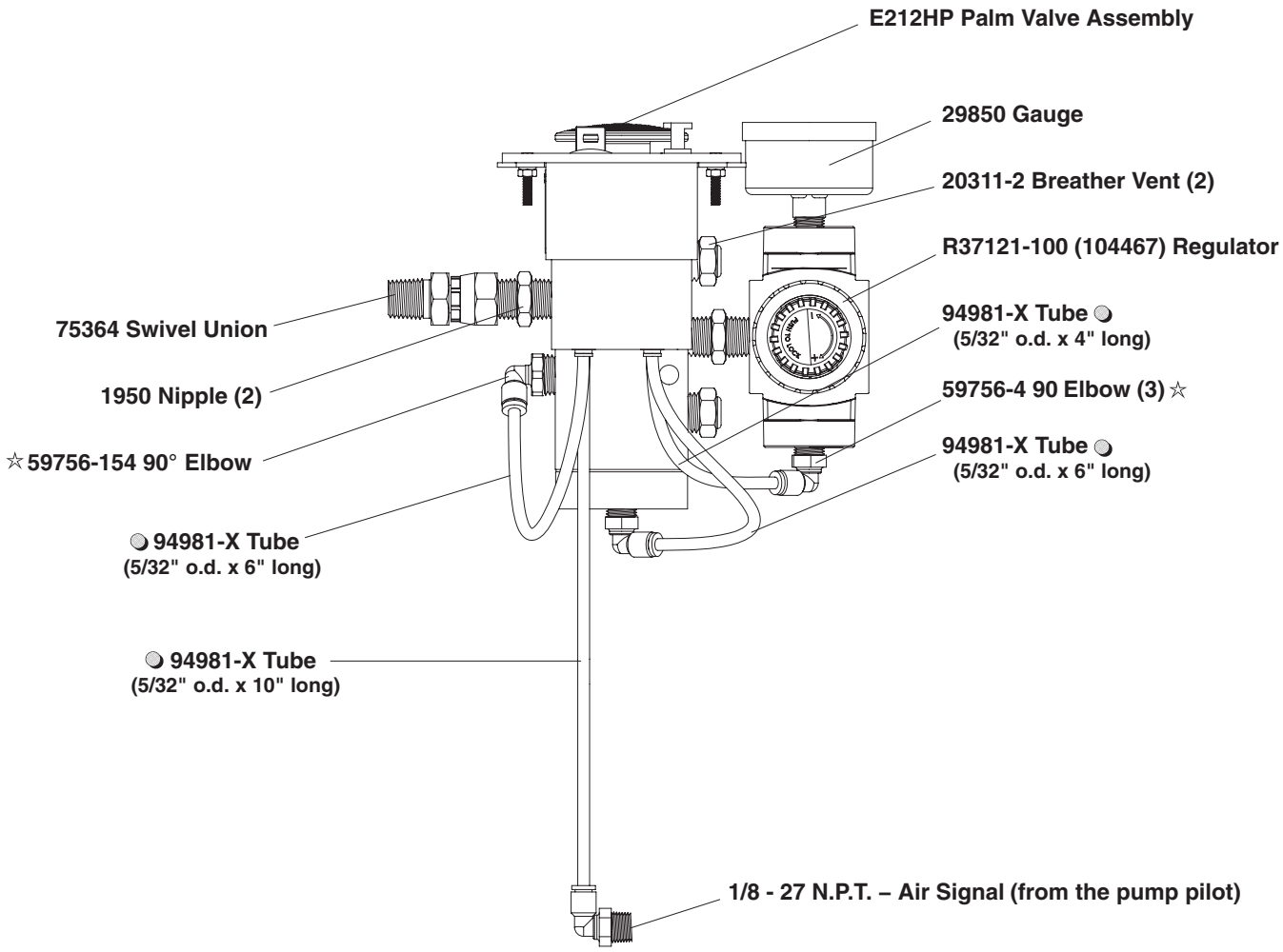
BASIC OPERATION

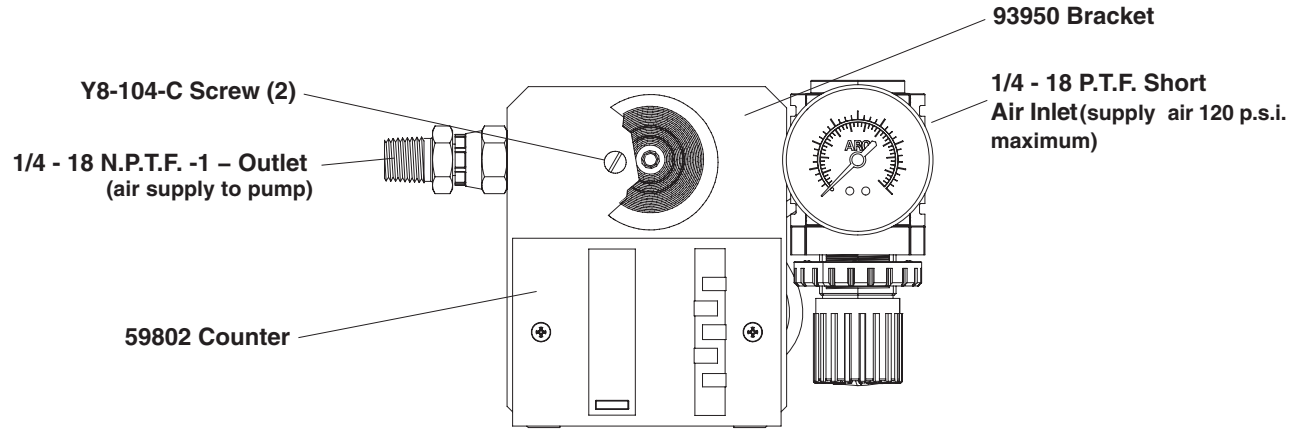
1. Connect air to pump.
2. Set cycle count: Hold the reset button down while entering a new number of cycles on the counter.
3. Press the palm button to start the cycle.
4. The pump will automatically shut off and reset to the count originally set.

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67072 CONTROLLER ASSEMBLY





◒ Available in bulk quantities only (5/32" o.d. x 100' long) – pn 94981-XXX-X.

☆ Available in bulk quantities only (10).

Figure 2

3/8” AND 1/2” DIAPHRAGM PUMP CONTROLLER INSTALLATION

3/8” AND 1/2” DIAPHRAGM PUMPS (see figure 3)

NOTE: Refer to the pump Operator’s Manual.

1. Remove the four long valve block retaining bolts.
2. Remove the 93086 or 96352 plug from the air motor major valve.
3. Models 66605X-X and PD05P-X-X: Install the new 93909 plug (with the threaded hole), use the new Y325-125 “O” ring included in kit. Models PD03P-X-X, PD05P-X-X-B and PD05R-X-X-B: Install the new 96462 plug (with the threaded hole), use the new Y325-29 “O” rings included in kit.
4. Reassemble the valve and replace the major valve bolts, torque to 15 - 20 in. lbs (1.7 - 2.3 Nm).
5. Remove the tubing from the 90° elbow and install the 59756-4 90° tubing elbow into the new pilot port.
6. Attach the kit to the pump inlet as shown and re-attach the tube to the 59756-4 90° elbow.

VIEW OF 1/2" NON-METALLIC DIAPHRAGM PUMP SHOWING ASSEMBLY OF 67072 CYCLE CONTROLLER

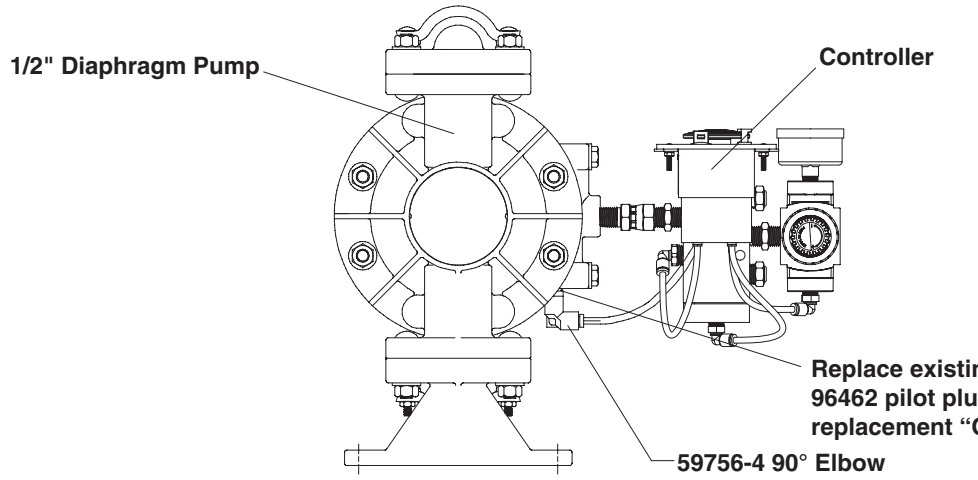


Figure 3

1” NON-METALLIC DIAPHRAGM PUMP CONTROLLER INSTALLATION

1” NON-METALLIC DIAPHRAGM PUMPS ONLY (see figure 4)

NOTE: Refer to the pump Operator’s Manual.

1. Remove four major valve cap screws and plate on the air inlet side of the pump.
2. Remove 92878 gasket.
3. Replace the old 92878 gasket with new 92878 gasket provided in the kit.
4. Install the new 93911 adapter plate with the 1/8 - 27 N.P.T.F - 1 tapered threads outward, secure the plate with four screws and washers.
5. Remove the tubing from the 90° elbow and assemble the 59756-4 90° tubing elbow into the adapter plate. NOTE: The elbow cannot be installed if the plate is reversed.
6. Attach the kit to the pump inlet as shown and re-attach the tube to the 59756-4 90° elbow.

CROSS SECTION OF 1" NON-METALLIC DIAPHRAGM PUMP SHOWING ASSEMBLY OF 67072 CYCLE CONTROLLER

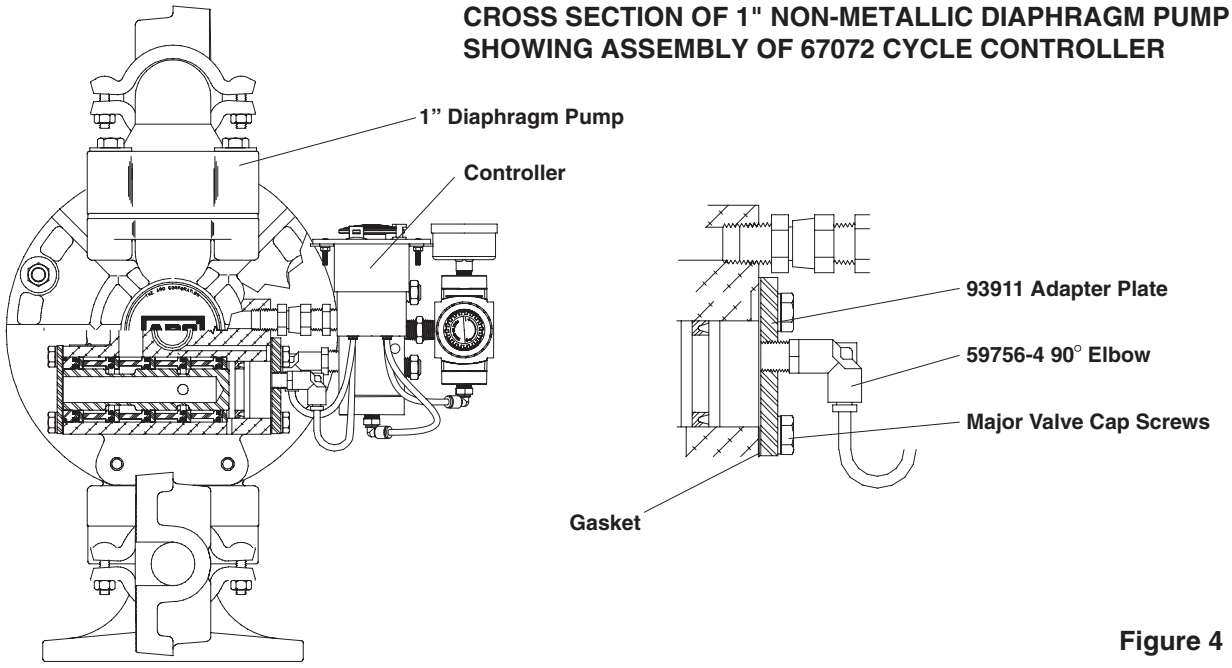


Figure 4

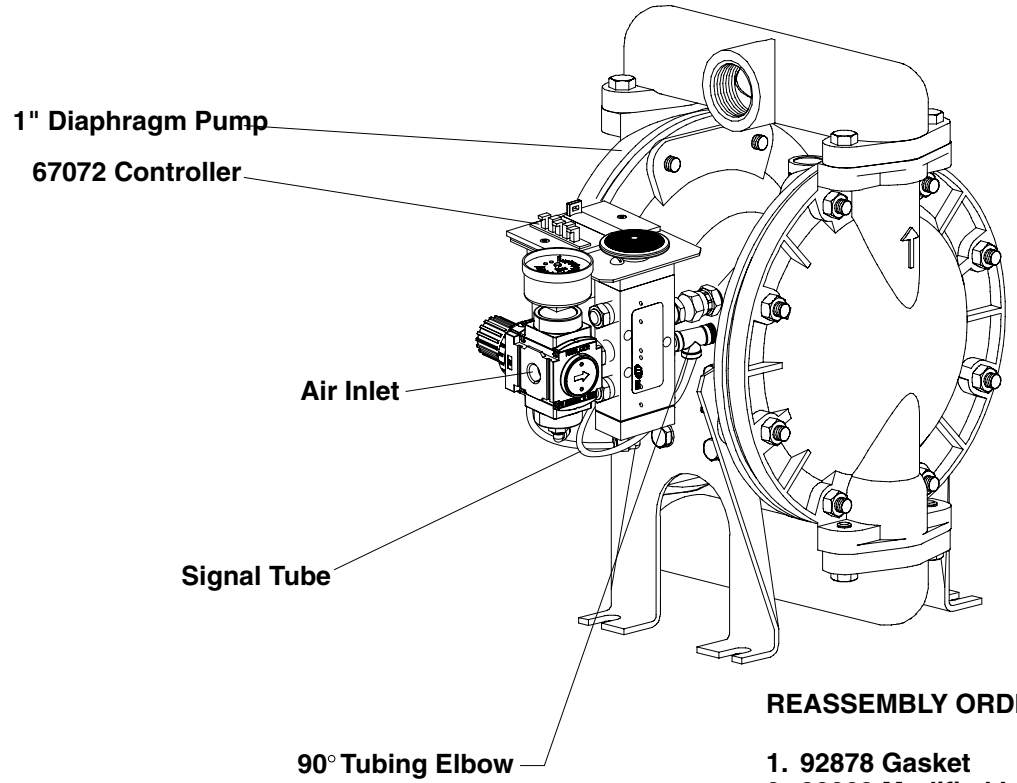
1” METALLIC DIAPHRAGM PUMP CONTROLLER INSTALLATION

1” METALLIC DIAPHRAGM PUMPS ONLY (see figure 5)

NOTE: Refer to the pump Operator’s Manual.

1. On the air inlet side of the pump, remove the four Major Valve cap screws, 92003 leg and 92878 gasket.
2. The leg of a 1” metallic diaphragm pump must be modified. Use the 93913 template included as a guide (drill a 1/2” hole).
3. Replace the old 92878 gasket with new 92878 gasket provided in the kit.
4. Position the modified leg.
5. Place the 92004 gasket on the leg.
6. Install the 93911 adapter plate with the 1/8 - 27 N.P.T.F. - 1 tapered threads outward, secure the plate with four screws and lockwashers. NOTE: The elbow cannot be installed if the plate is reversed.
7. Remove the tubing from the 90° elbow and assemble the 59756-4 90° tubing elbow into the adapter plate.
8. Attach the kit to the pump inlet as shown and re-attach the tube to the 59756-4 90° elbow.

1" METALLIC DIAPHRAGM PUMP



93913 TEMPLATE FOR USE WITH 1" METALLIC LEG



REASSEMBLY ORDER

1. **92878 Gasket**
2. **92003 Modified Leg (with new hole drilled by installer)**
3. **92004 Gasket**
4. **93911 Adapter Plate**
5. **Lockwasher (4)**
6. **Y6-45-C Screw (4)(1/4" - 20 x 1")**

Figure 5