

## Prodigy™ HDLV™ Pump Circuit Board Replacement



**WARNING:** Allow only qualified personnel to perform the following tasks. Follow the safety instructions in this document and all other related documentation.



**WARNING:** Shut off and lock out system electrical power before performing the following tasks. Failure to observe this warning may result in personal injury.



**CAUTION:** Observe the following cautions when removing or installing the circuit board. Failure to observe these cautions may result in equipment damage.

- The circuit board is an electrostatic sensitive device (ESD). Wear a grounding wrist strap connected to the pump panel or other ground.
- Turn off and relieve air pressure to the pumps before removing the circuit board.
- Do not disconnect the air tubing from the circuit board. The transducers are very delicate and will break if the air tubing is removed.

### Replacing the Circuit Board

1. See Figure 1. Close the air supply valve and trigger the guns to relieve air pressure.
2. Turn off power to the pump panel. Disconnect the pump panel from its power source.

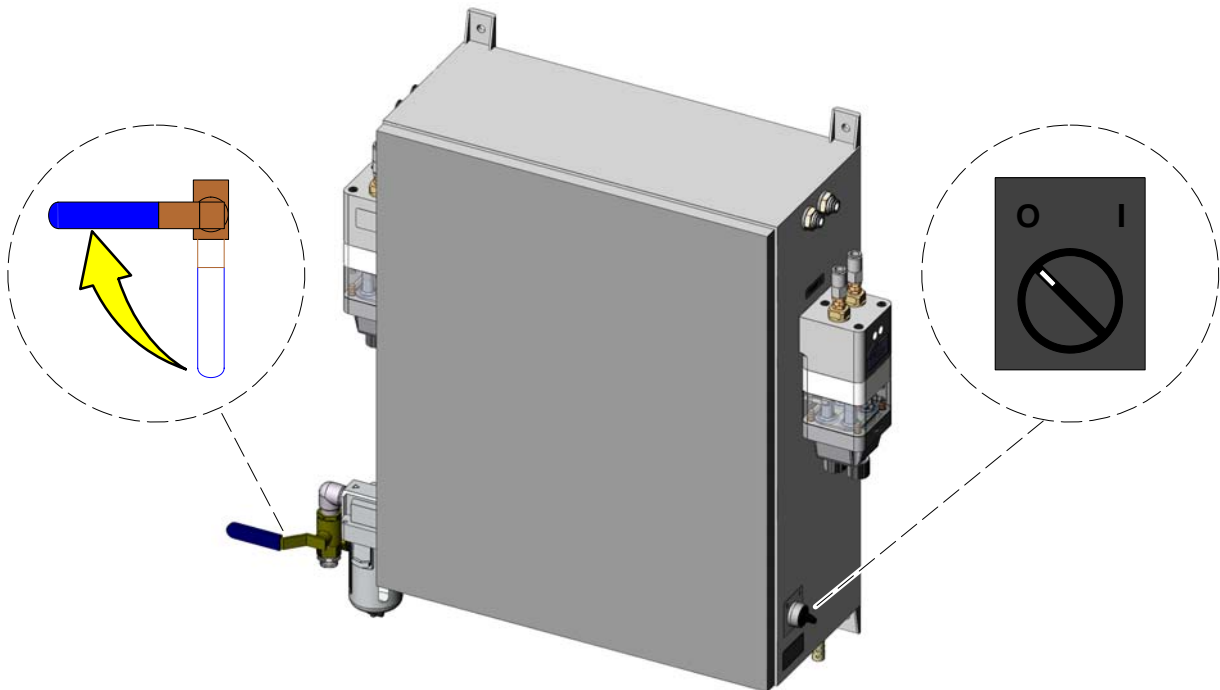


Figure 1 Turning Off Air and Power

### Replacing the Circuit Board *(contd)*



**CAUTION:** Do not disconnect the air tubing from the circuit board. The transducers are very delicate and will break if the air tubing is removed.

3. See Figure 2. Open the pump panel door and disconnect all wiring harnesses from the circuit board.
4. While the circuit board-to-manifold air tubing is still connected, remove the four screws from the circuit board.
5. Carefully pull the transducer air tubes from the fittings on the bottom of each pump manifold.

6. See Figure 3. Connect the new circuit board's eight transducer air tubes to the appropriate fittings on the pump control manifold(s).

**NOTE:** If there is only one pump control manifold, tubes 5-8 are not used.

Create a service loop with any excess tube length.

7. Secure the new circuit board to the pump panel using the four screws.
8. Connect the wiring harnesses to the appropriate connectors on the circuit board.
9. Configure, terminate, and calibrate the new circuit board using the procedures on page 4.



**CAUTION:** Relieve air pressure and remove the screws from the board before you disconnect the air tubing from the manifold.



**CAUTION:** Do not disconnect the air tubing from the circuit board. You will break the fittings off the circuit board transducers.

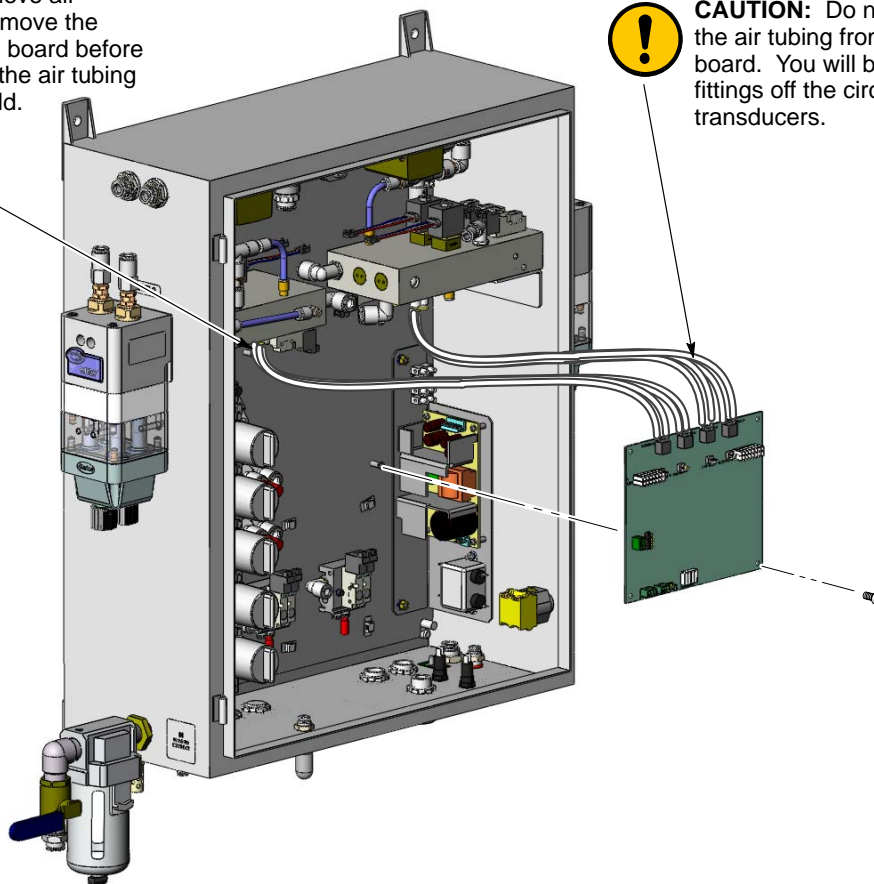


Figure 2 Replacing the Circuit Board

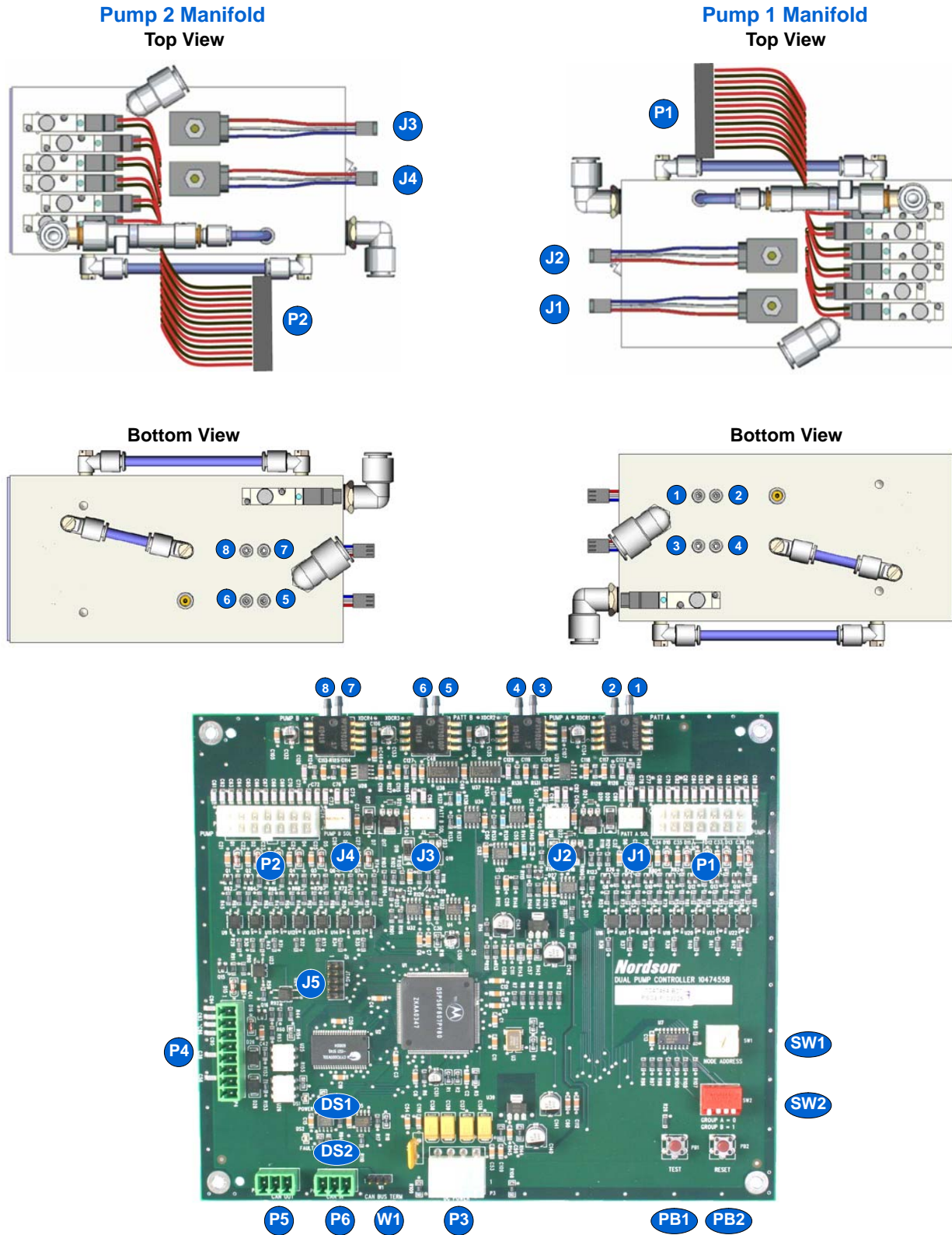


Figure 3 Circuit Board-to-Pump Control Manifold Connections

### Configuring the Circuit Board

See Figure 4. Make sure that SW1 and SW2 are set as illustrated.

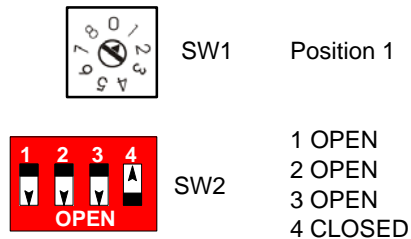


Figure 4 SW1 and SW2 Settings for a Manual Powder Spray Systems

### Terminating the Prodigy Network at the Circuit Board

See Figure 5. The circuit board is shipped with a jumper across pins 2 and 3 of the CAN BUS TERM terminals. Depending on how many pumps are in your pump panel, you may have to move the jumper to pins 1 and 2.

#### Two Pump System:

Leave jumper across pins 2 and 3.

#### One Pump System:

Move jumper to pins 1 and 2.

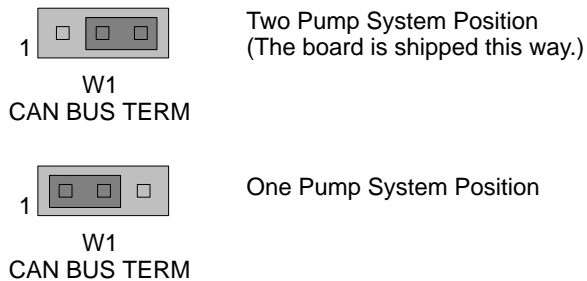


Figure 5 CAN BUS TERM Jumper Settings for Manual Powder Spray Systems

### Calibrating the Circuit Board

When you install a new circuit board, use this procedure to calibrate it to the manifold. If you have a two-gun system, be sure to perform this procedure on both Prodigy Manual Gun Controllers.

1. Turn off the Prodigy Manual Gun Controller.
2. Press and hold the Nordson key, then turn on power to the Prodigy Manual Gun Controller. The Configuration screen appears.

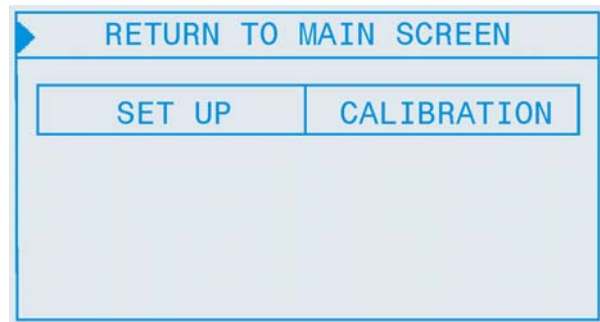


Figure 6 Configuration Screen

3. Using the arrow keys or rotary dial, point to the CALIBRATION selection. Press the  $\downarrow$  key. The Calibration screen appears.

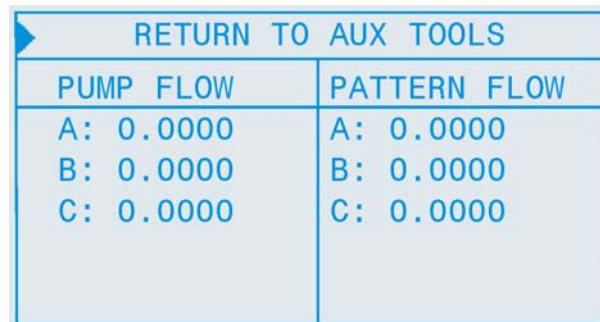


Figure 7 Calibration Screen

**NOTE:** Use the arrow keys or rotary dial to move the cursor to the appropriate setting, then press the  $\downarrow$  key to select it. Use the arrow keys or rotary dial to change that value, then press the  $\downarrow$  key to accept the new value and select a new setting.

4. Enter the PUMP FLOW and PATTERN FLOW A, B, and C calibration numbers from the sticker on the pump control manifold.

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