

Jet Pump and 2-Wire Submersible Pump (No Control Box) Pressure Switch Replacement



Warning: Pumps use hazardous voltage which can shock, burn, or cause death. Disconnect power to the pump before servicing the pump, pressure switch, wiring, tank, or any component. This pressure switch will work on both 115 volt and 230 volt AC circuits

Remove the Existing Switch

1. Disconnect power supply
2. Drain all water pressure from the system
3. Remove existing wires from the pressure switch including the ground wires.



IMPORTANT: Make note of which wires are the power supply wires and the pump motor wires. This will help during the installation of the new switch.

4. Remove the old switch from the system

Checking the Air Pressure

1. Before installing the new pressure switch, first check the air pressure of the pressure tank AFTER draining it of all water. To check the tank's air pressure:
 - a) Disconnect the power supply and drain all water from the tank.
 - b) Locate the air valve (similar to automobile tire air valve) usually near the top of the tank. Check the tank's pressure using an automotive tire pressure gauge.
2. The pressure of the air in your tank **must be 2 psi below the cut-in pressure of your new switch**. If this pressure is not set correctly, the pump will run in short cycles (starting and stopping often), increasing electricity cost and wearing out the pump and/or pressure switch. See the table located to the right.

Switch Model	PSI Air Pressure In Tank (When Drained of All Water)
PPS3050	28
PPSL3050	
PPS4060	38



IMPORTANT:

- **Cut-in Pressure:** Pressure when the pump turns on.
- **Cut-out Pressure:** Pressure when the pump turns off.

3. To adjust the tank's air pressure to 2 PSI below the switch "cut-in" pressure:
 - a) If pressure is too high, bleed air from the tank by using the automotive tire pressure gauge or the end of a screwdriver.
 - b) If pressure is too low, use a compressor or tire pump to add air.
 - c) Recheck the pressure with the tire gauge and continue to add or remove air until the pressure is 2 PSI below the switch "cut-in" setting. (For example, a tank used with a 30/50 Pressure Switch should contain 28 PSI of air.)



IMPORTANT: If your tank is not holding the air pressure that you added, then your tank may be defective. If you check the air pressure and water comes out of the air valve, that is a sure sign that the tank is defective and needs to be replaced. For further tank questions, please contact the tank manufacturer.

Installing the New Switch:

1. Secure the new switch to the jet pump motor or position the switch on the piping for submersible pump system. Use thread tape on pressure switch inlet to prevent leaks. Ensure that no thread tape is blocking the opening of the switch or pipe fitting. Any blockage from the thread tape or debris will cause the switch to malfunction and not shut off the pump.
2. Remove the switch cover and feed wires from the pump motor and power supply through the openings on either side of the switch.
3. Attach motor wires to the terminals marked "LOAD" or "2 and 3" terminals. Attach the ground wire to the Green Ground Screw. See Figures 1 and 2.
4. Attach power supply wires to the terminals marked "LINE" or "1 and 4" terminals. Attach the ground wire to the Green Ground screw. See Figures 1 and 2.



IMPORTANT: For safety, the switch must be grounded by direct metal to metal contact. Motor must be grounded to conform to local electrical codes. CONSULT A LICENSED ELECTRICIAN.

5. Re-install switch cover and reconnect the power. Test the system several cycles for proper operation.

Jet Pump and 2-Wire Submersible Pump (No Control Box) Pressure Switch Replacement (continued)

NOTE: For Switch with Low-Level Cut Off Arm (Model PPSL3050)

To start your pump using a low level cut off pressure switch, you must hold the lever in the start position until the pump has reached the required cut-in pressure. This means your pressure must reach 30 psi before you can release the lever into the automatic position. Failure to follow this step will cause the pump to not work properly. These positions are noted on the side of the pressure switch cover.

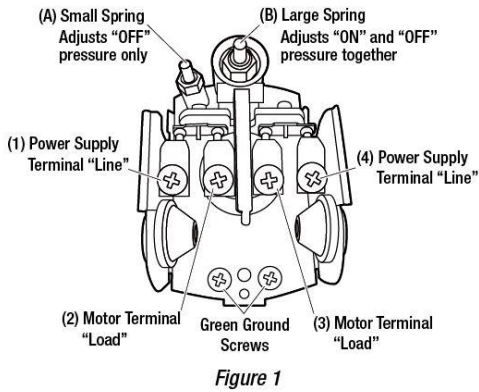


Figure 1

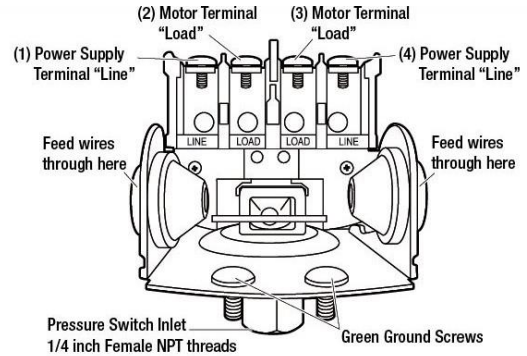


Figure 2

3-Wire Submersible Pump (Control Box) Pressure Switch Replacement

Control Box Installation

3-Wire pumps require a control box. However, replacing the pressure switch on your system does not necessarily mean you need to replace the control box. To replace the switch, complete the steps below. If installing a new control box, disconnect the old wires and reconnect them in the same way to the new box – making sure of the following connections:

- The red, black, and yellow pump wires are connected to the "R", "B", and "Y" terminals in the control box.

IMPORTANT: Your wire colors and control box configuration may vary.

However, if you have a control box, you will always have three wires coming from the pump and two wires coming from the pressure switch. For further control box questions, please contact the control box manufacturer.

- The wires to the pressure switch are connected to the terminals "L1" and "L2".
- The green ground wires from the pump and to the pressure switch are connected to each of the grounding screws provided.
- See REMOVING THE EXISTING SWITCH section on Page 1 for installation instructions.

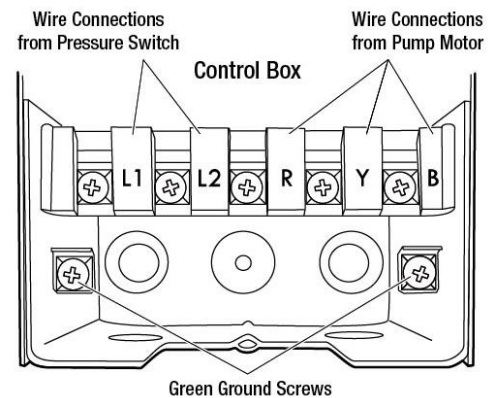


Figure 3

Adjusting Switch and Tank Pressure for Maximum Performance

IMPORTANT: Do not make any adjustments to the springs on the pressure switch without first testing the operation of the pump and the switch at the factory settings. If you are not familiar with well systems, call 1-800-346-7611 for assistance, or consult with a licensed plumber or electrician.

To increase the overall water pressure in your system:

1. Disconnect power supply and drain all water from the tank.
2. Remove the switch cover.

IMPORTANT: When adjusting the pressure switch, it is critical to keep track of exactly how many turns of the nut(s) have been made. If adjustments are made and need to be undone, it will be difficult to adjust back to factory settings

3. Turn the nut on the LARGE adjustment spring (B), clockwise 360° (1 full turn) for each 3 PSI you wish to increase your system's water pressure. If you would like to adjust the "Cut-Out" pressure only, you will need to adjust the nut on the SMALL spring (A) clockwise 360° (1 full turn) for each 3 PSI you wish to increase your system's "Cut-Out" water pressure. For decreasing pressure, turn the nuts counterclockwise. See Figure 1.
4. Check the tank's air pressure with a tire gauge and add or bleed off air (see CHECKING THE AIR PRESSURE section on page 1) until tank pressure is 2 PSI below the new cut-in setting of your pressure switch.
5. Replace the switch cover and reconnect the power. Test the system several cycles for proper operation.
6. If the system has a built-in water pressure gauge, use it, or use a portable water pressure gauge to verify new system pressure.