Adjusting Well Pump Pressure Switches

⚠️ CAUTION ⚠️ Hazardous voltage, Disconnect power before working on the motor or the pressure switch.

The starting and stopping of the pump is controlled by the pressure switch.

**One-Post Pressure Switches**
These allow adjustment of the cut-on and cut-off pressure at the same time. This will keep a 20 PSI differential between the start (cut-on) and stop (cut-off) pressures.

To increase the cut-off and cut-on pressure, turn the nut clockwise. The rate of increase is 2 1/2 PSI for every complete turn of the nut.

(i.e. 4 complete clockwise turns will raise the pressure setting 10 PSI.)

**Two-Post Pressure Switches**
Pressure switches with two posts allow adjustment of the cut-on and cut-off pressure at the same time. The second post allows adjustment of the cut-off pressure independently.

To increase the cut-off and cut-on pressure, turn nut #1 clockwise. The rate of increase is 2 1/2 PSI for every complete turn of the nut. Do not adjust nut #2.

The above adjustments maintain a 20 PSI differential between cut-on and cut-off pressures, which is best for pressure tank performance. Very few applications will need to adjust nut #2.

To raise only the cut-off pressure, turn nut #2 clockwise. To lower any pressure, turn the nut counter-clockwise.

**NOTICE:** The switch should never be adjusted to cut-on below 20 PSI, or cut-off above 60 PSI.

**System Pressure**
The pressures in a well pump system must keep a set relationship.

- **Dead-head pressure:** This is the pressure the pump produces when not moving water, as with a closed outlet valve.

  ⚠️ CAUTION ⚠️ Risk of explosion. Do not run the pump with a closed discharge longer than needed to read the pressure.

- **Cut-Off Pressure:** This is the high pressure that turns off the pump. This should always be at least 5 PSI less than the dead-head pressure.

- **Cut-On Pressure:** This is the low pressure that starts the pump. This is typically 20 PSI less than the cut-off pressure.

- **Tank Precharge Pressure:** This is set 2 PSI less than the cut-on pressure (see chart).

<table>
<thead>
<tr>
<th>Switch Cut-On Pressure</th>
<th>Tank Air Precharge*</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>18</td>
</tr>
<tr>
<td>30</td>
<td>28</td>
</tr>
<tr>
<td>40</td>
<td>38</td>
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*With NO water pressure

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**Figure 1: Pressure Switch Location**
The pressure switch is typically pre-set correctly for the application. If the cut-off or cut-on pressure needs to be changed, follow the procedure below.

These instructions cover one-post and two-post switches.

**Figure 2: Single Post Pressure Switch**
To increase the cut-off and cut-on pressure, turn the nut clockwise. The rate of increase is 2 1/2 PSI for every complete turn of the nut.

**Figure 3: Two Post Pressure Switch**
To increase the cut-off and cut-on pressure, turn nut #1 clockwise. The rate of increase is 2 1/2 PSI for every complete turn of the nut. Do not adjust nut #2.

The above adjustments maintain a 20 PSI differential between cut-on and cut-off pressures, which is best for pressure tank performance. Very few applications will need to adjust nut #2.

To raise only the cut-off pressure, turn nut #2 clockwise. To lower any pressure, turn the nut counter-clockwise.

**NOTICE:** The switch should never be adjusted to cut-on below 20 PSI, or cut-off above 60 PSI.