

# Instruction and Installation Manual

## ANOVA-1G POC

(Firmware Version G.1.1)

5/20/2025

### **Installation**

#### **Mounting-**

POC can be mounted on pumpjack or on separate pole.

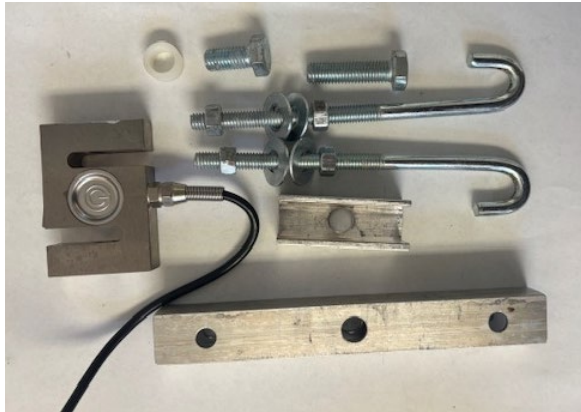
**WARNING- make sure wherever you mount the POC, the wires and box will not catch or be hit by pumpjack when well is in operation.**

#### **Wiring-**

Take the 6' long two-wire lead and run it to your engine. Splice additional wire if required to reach your engine. The two wires form an open circuit when the POC is activated, and a closed circuit when pumped off. The wires should be installed so they ground the coil on the engine when closed to shut off well.

To test wiring, set switch inside of POC enclosure to Manual (down) and start engine. Then, with POC off, switch to Auto (up) and engine should shut down.

## Harness Assembly-



Your box includes 2 J-bolts, 4 steel washers, 4 nuts, 1-nylon spacer washer, 1- long bolt and 1-short bolt, one square tube and one c-channel.



Assemble the harness on the sensor as shown. Use long bolt on square bar side and short bolt and nylon washer on C-channel side. The C-channel does not have to be tight, twist until tight then back off so that channel is aligned with sensor as shown.



To mount harness to well, rest C-channel on top of the polish rod clamp and against polish rod. Hook J-bolts around bridle cables and tighten nuts by hand to keep in place. J-bolts can be turned inward for smaller carrier bars, or outward for larger bars.

It is preferable to mount the harness so that it is on the side closest to pump-jack, pushing the polish rod away from the jack. Always check first that you have space and that harness will not be crushed by horse head when well runs. Harness can be mounted on side away from the jack if necessary.

## **Batteries**

The POC uses 8 AA cell batteries. **Use Alkaline batteries only.**

At startup, if the batteries are low, you will see a “Low Batt.” message. Press switch to right to acknowledge. The POC will still function, but the batteries will need to be replaced ASAP.

If the voltage is very low, you will see a “Bad Batt.” message. The POC will not function until the batteries are replaced.

## **Interacting with POC**

The Override Switch is located inside of the enclosure. Make sure this is set to up (AUTO) position. If you want to pump well without using the POC for any reason, this can be set to down (MANUAL) position.

The POC has a two-way momentary switch at the bottom. Pressing this switch to the right turns POC on and advances the programing, pressing to left turns off the POC and restarts programing.

## **Tighten Harness**

Press switch to right to turn on POC. You will see “Tighten Harness” message. Tighten J-bolt nuts evenly until the message changes to “GOOD!”. Set lock nuts.

## **Operation**

To turn POC on, press switch to right.

### **Pump Record Mode**

The first thing you will see is the prior pump record. Generally, the pump records will simply be the number of minutes that the well ran before pump-off was detected and the POC shut-off well. However, there are other circumstances that will shut well down and create a special pump record:

**ESD** (Emergency Shut Down) occurs when the rods become very light or “float”. This can occur from a blockage in the lines or paraffin in tubing.

**LOP** (Loss of Power) means that POC lost power before it detected pump-off. This could happen if someone turned POC off while it was in PUMP MODE, or the batteries died.

**T.O.** (Time Out) after 16 hours in PUMP MODE without a pump-off detected the POC shuts down and stores a well record of T.O.

**Eng F** (Engine Fail) occurs when the unit detects that the pumpjack has stopped moving while in PUMP MODE. This may occur with engine stall or empty fuel tank.

If you want to proceed to START MODE, press switch to right. If you want to turn off POC, press switch to left.

### **Start Well Mode**

You will see a message “Start Well”. Start your engine and engage the pump jack. When the engine is stable, and your well is pumping normal full strikes, press switch to right to enter LEARN MODE. Do not adjust engine or belt after this point.

### **Learn Mode**

The ANOVA-1 uses an advanced statistical algorithm to determine pump-off. For this algorithm to work, it needs to record data while the well is known to be pumping full strokes, and the engine speed is constant. We call this process “Learning”, and it is performed for the first minute or so each time you start the well. First you will see a message “Learning”, followed by the message “Orienting”. When learning is done, the POC will advance on its own to the Pump Mode.

### **Pump Mode**

A message will show “Unit Ready” and the LED will blink. After this, the screen will show the number of minutes that the well has been pumping, and the LED will light up when the traveling valve is opening on the down stroke.

When pump-off, ESD, T.O. or Eng F is detected, the POC will store the well record and shut itself down.

### **Best practices and tips**

Do not speed up or slow down engine or adjust belt after advancing to LEARN MODE.

You may get the message “Tighten Harness” after you have already done so at install. This is not because the harness is actually getting looser, this is because the position of the horse head is different than when you installed the POC. Just tighten bolts and proceed.

Use only Alkaline batteries. Many AA batteries are now lithium, check battery packaging. Alkaline batteries will work better with the POC and are less expensive.

Always check Override switch. If unit is in manual (down) mode, it will not shut down your engine.

ANOVA-1G POC are built to last and repairable. If your unit fails, contact H&H about repair and warranty options.