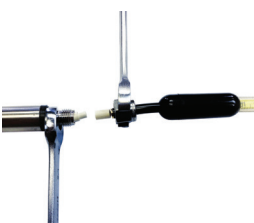
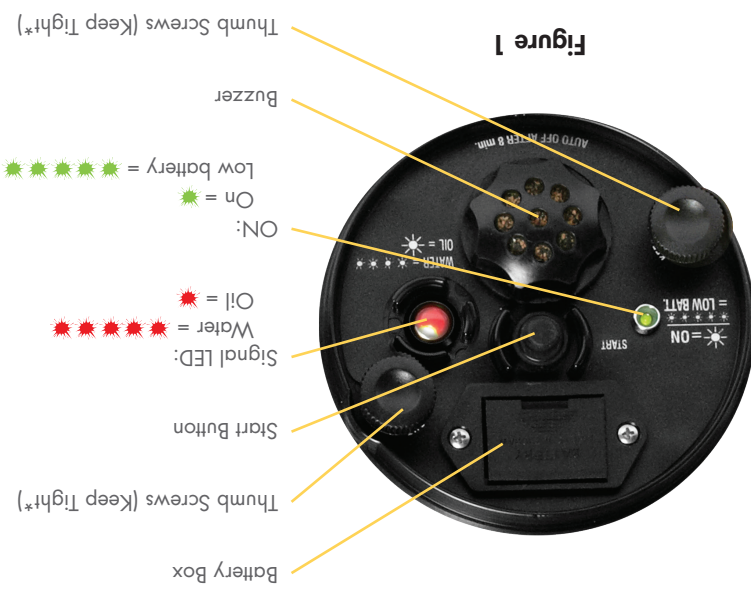




**IMPORTANT: ENSURE THAT THE PANEL RETAINING THUMB SCREWS (NUTS) ARE TIGHT BEFORE USE\***  
 \* not applicable for Sm.OIL

Item	Part Numbers
H.OIL Electronic Panel	3202
Sm.OIL Electronic Panel	3203
H.OIL Probe	3200
Sm.OIL Probe	3201
Ground Lead	3208
Thumb Screws Set (2)	3250



**Figure 2**

**Figure 3**

To remove the probe you will need a 1/2" and 9/16" wrench. Use the wrenches to fully loosen the nut closest to the link and gently separate the link from the probe. Care must be taken to avoid breaking/pinching the wires while removing or replacing the probe. Make sure connections are tight.

**Figure 3**  
**Hanger** to support the meter at the well head.  
**Tape Guide** to protect the tape from sharp edges.

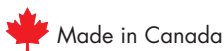
**HERON ALSO MANUFACTURES:**

- Water Level Meters
- Data Loggers
- Conductivity Meters
- Temperature Meters
- Well Casing Indicators
- Well Depth Indicators
- Tag Lines
- Vertical Inspection Cameras

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Please visit our website [www.heroninstruments.com](http://www.heroninstruments.com) for more information on the complete **Heron** product line.



**H.OIL and Sm.OIL Interface & Static Levels**

Operating and Maintenance Instructions



[www.heroninstruments.com](http://www.heroninstruments.com)



# H.OIL and Sm.OIL Interface Meter Instructions

## General Care of the H.OIL/Sm.OIL

The **H.OIL/Sm.OIL** has been designed to provide years of reliable, accurate measurements of floating product (L.N.A.P.L) and sinking layers (D.N.A.P.L.). The **Intrinsically Safe Certification** makes the **H.OIL/Sm.OIL** ideal for use in hazardous environments.

- Avoid sharp edged casing, use the tape guide on the unit to prevent damage to the tape.
- Take care to avoid the tape becoming entangled with other equipment in boreholes or wells, use stilling pipes when possible.
- Neatly rewind and clean the tape after each use.  
Refer to: Cleaning the **H.OIL/Sm.OIL**.

**DO NOT** use the **H.OIL/Sm.OIL** as a guide to backfilling, bentonite sealing or sand packing in wells. This type of material falls through the water column at a much slower rate than the **H.OIL/Sm.OIL** probe and can result in a trapped tape and probe.

**DO NOT** allow the tape to “freefall” down the well, it may become caught in other equipment in the well.

**Warranty is conditional upon adherence to these guidelines.**

## Equipment Check

Switch the **H.OIL/Sm.OIL** on by pushing the start button in the center of the electronic panel. The green LED indicates that the unit is ready for use. If the LED does not light, then replace the battery. The green LED will stay on for approximately 8 minutes. Every time the start button is pressed the 8 minute timer will reset. When the 9 volt battery is almost drained, the green LED will start to blink when the unit is signalling. The battery should be replaced as soon as possible (see Figure 1).

**NOTE:** Accurate battery orientation diagram inside of battery box.

- Inspect the probe lens for any signs of damage or buildup of dirt/residue. The lens should be clean and clear before use.
- To maintain intrinsic safety, ensure the ground lead is securely fastened to the back of the frame and in good condition.
- Ensure the two panel retaining thumb screws (nuts) are tight\* . Test unit by lowering probe into water that is shielded from light (intermittent tone will indicate).

**NOTE:** The probe will not work in ambient light conditions.

## Use in the Field

Before using the **H.OIL/Sm.OIL**, ensure the two panel retaining thumb screws (nuts) are tight\* and the ground lead is connected to a grounding source. Switch the unit on by pushing the start button in the center of the electronic panel (see Figure 1). The unit will now be active for 8 minutes (the unit switches itself off automatically). The green LED indicates that the unit is ready for use. If the green LED switches off while the meter is being used, push the center start button again to re-start the unit.

- To avoid damaging the tape on the side of the casing, hang the **H.OIL/Sm.OIL** on the casing and run the tape over the guide on the frame leg (see Figure 3). If you cannot hang the unit, hold the **H.OIL/Sm.OIL** away from the side of the casing and guide the tape down the center of the well.
- Swivel the probe holder on the frame to allow the tape free movement down the well (see Figure 3).
- Note the inverted triangle on the probe holder serves as a datum point indicating “top of casing” (see Figure 3).
- When taking measurements, it is suggested to lower the probe down the well until the top of the water/product is reached. **Water is indicated by an intermittent tone and product is indicated by a solid tone.** Note the depth marking on the tape. **DO NOT** try to measure the product/water interface at this stage. Allow the probe to pass through any product into the water below (indicated by the intermittent tone). Now slowly withdraw the probe until the tone changes from intermittent to solid. This point indicates the base of the product layer. Note the depth marking on the tape. This method avoids having the product drawn down into the water giving false interface readings.
- In cold weather, condensation may form on the lens as it contacts the warmer moist air in the well, this causes the unit to falsely sound as product. To overcome this, allow the probe to acclimatize in the well or lower the probe into the water, then take readings.
- When rewinding the tape, remove as much water and debris as possible from the tape and probe.

## Removing the Probe

To remove the probe you will need a 1/2” and 9/16” wrench. Use the wrenches to fully loosen the nut closest to the link and gently separate the link from the probe (see Figure 2). Care must be taken to avoid breaking/pinching the wires while removing or replacing the probe.

Make sure connections are tight.

## Cleaning the H.OIL/Sm.OIL

Always clean the **H.OIL/Sm.OIL** after use in the field to maintain optimal performance and extend the life of the unit.

If the electronic panel is removed first, the reel and tape can be washed gently with a power washer. Remove the retaining thumb screws (nuts) (see Figure 1) to release the panel\*. Take care not to lose the thumb screws as the unit will not work without them\*.

We strongly recommend using biodegradable household dishwashing liquid. The reel, tape and probe may be cleaned and de-greased with the following:

- |                 |              |                |
|-----------------|--------------|----------------|
| • Soap solution | • Fantastic® | • Windex®      |
| • Joy®          | • Top Job®   | • Mr. Clean®   |
| • Formula 409®  | • GOO-GONE®  | • Green Clean® |

**NOTE: DO NOT** clean the probe lens with any abrasive cleaners or products that contain alcohol.

## Troubleshooting the H.OIL/Sm.OIL

### Q. Why doesn't the unit sound when the probe contacts water?

- A.
- **Do not** test in ambient light conditions.
  - Make sure retaining thumb screws are tight (**H.OIL**) (Figure 1).
  - Make sure the connection of the male and female connectors in the probe/link are connected tightly (see Figure 2).

### Q. Why does the unit continuously sound when the probe is not in water/product?

- A.
- Make sure the electronic panel is oriented in the correct position on the unit (battery box should be under the **Heron** Logo).
  - Make sure probe lens is clean and clear.

For more troubleshooting tips please visit our website at [www.heroninstruments.com](http://www.heroninstruments.com)

**Contact Heron Instruments or your Heron Distributor if you cannot isolate the problem.**

## Warranty (5 years, probe 1 year)

**Heron Instruments Inc.** warrants to repair or replace any defective equipment or part upon inspection by a **Heron** service technician. Warranty will be determined to our satisfaction to have a defect in workmanship or original material. The customer is responsible for all shipping fees to return the item to **Heron**.

This warranty shall not apply to damage of equipment caused by improper installation, usage, storage, alteration or inadequate care.

In no event shall **Heron** be held liable for any direct, indirect or consequential damages, abuse, acts of third parties (rental equipment), environmental conditions or expenses which may arise in connection with such defective equipment.

**Heron Instruments Warranty** coverage does not extend to the following:

- Tape, bag or batteries used with the product.
- Products used as rental equipment.
- Products contaminated by materials which are known to be hazardous and have rendered the unit unserviceable.
- Parts failure due to neglect in cleaning or servicing.
- Failure of parts caused by misuse.

For service information:

- visit [www.heroninstruments.com](http://www.heroninstruments.com) under the **CONTACT** heading
- email [service@heroninstruments.com](mailto:service@heroninstruments.com)
- call 1-800-331-2032 or 905-628-4999

**Warranty is conditional upon adherence to these guidelines.**