

IMPORTANT: ENSURE THAT THE PANEL RETAINING THUMB SCREWS (NUTS) ARE TIGHT BEFORE USE.

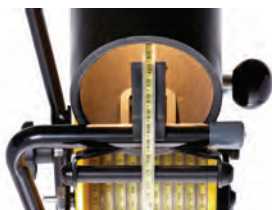
Part Numbers

- 3250 TScrewsx2
- 3208 I/F-Gr.lead
- 3201 Sm.OIL-P
- 3200 H.OIL-P
- 3203 Sm.OIL-EP
- 3202 H.OIL-EP
- H.OIL Electronic Panel
- Sm.OIL Electronic Panel
- H.OIL Probe
- Sm.OIL Probe
- Ground Lead
- Thumbscrews Set (2)

Item

Unique hanger and tape protector supports the meter on the casing and protects the tape from sharp edges on the well casing.

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 2



H.OIL and Sm.OIL Electronic Panel

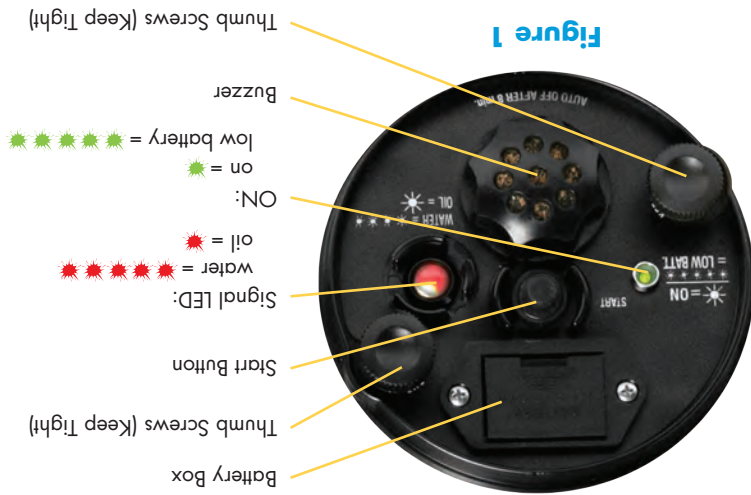


Figure 1

- Battery Box
- Thumb Screws (Keep Tight)
- Start Button
- Signal LED:
 - water = [red starburst]
 - oil = [red starburst]
 - ON: [green starburst]
 - low battery = [green starburst]
- Buzzer
- Thumb Screws (Keep Tight)

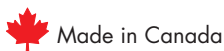
HERON ALSO MANUFACTURES:

- Water Level Meters
- Data Loggers
- Conductivity Meters
- Temperature Meters
- Well Casing Indicators
- Well Depth Indicators

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H.OIL and Sm.OIL Interface Meters

Operating and Maintenance Instructions



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 and built to give years of reliable and accurate thickness 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.
- 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.
- **Do not** use to plumb bore hole depths.
- **Do not** use as guide for back filling sand etc. Instrument may get trapped in sand.

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)

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.

Note: The probe will not work in ambient light conditions.

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 and re-start the unit.

Reel the tape down the well carefully avoiding the edge of the casing. Hang the H.OIL/Sm.OIL on the casing when possible and run the tape over the guide on the frame leg to avoid cuts and nicks to the tape. Swivel the probe holder on the frame to allow the tape free movement down the well. (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 enters the well and 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.

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. Care must be taken to avoid breaking/pinching the wires while removing or replacing the probe. Make sure connections are tight. (See Figure 2)

Cleaning the H.OIL/Sm.OIL

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

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

Note: Do not clean the probe lens with any abrasive cleaners or products that contain alcohol.

Troubleshooting the H.OIL

Q. The unit does not sound when the probe contacts water.

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

Q. The unit continuously sounds when not in water/product

- A.
- Make sure the electronic panel is orientated 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 trouble shooting tips please visit our website at www.heroninstruments.com.

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

Warranty (5 years, probe 1 year)

Heron Instruments Inc. warrants to repair or replace any such defective equipment or part (determined to our satisfaction to be a defect in workmanship or original material) upon receipt and inspection of such defective equipment to Heron Instruments Inc. with all shipping pre-paid by the user.

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

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

Heron 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; as such, have rendered the unit unserviceable
- Parts failure due to neglect in cleaning or incorrect servicing
- Failure of parts caused by misuse

For service information:

- visit www.heroninstruments.com under the **CONTACT** heading
- email service@heroninstruments.com
- call **1-800-331-2032** or **905-628-4999**

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