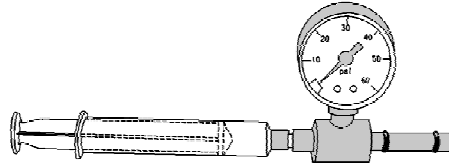




Overview

The Depth Gauge Calibration tool allows you to calibrate the depth gauge in the field.

Refer to the user manual of the submersible for the general calibration procedures. The depth gauge calibration procedures are included here for your convenience.



Depth Gauge Calibration

Calibration of the depth gauge may be necessary when the pressure sensor on the ROV is changed, when mating a different ROV and control box together, or any time you believe the depth gauge is not giving an accurate reading.



The depth gauge's accuracy increases with depth. At shallow depths (less than 5 feet (1.5 m)), you may find that the depth reading is less accurate.

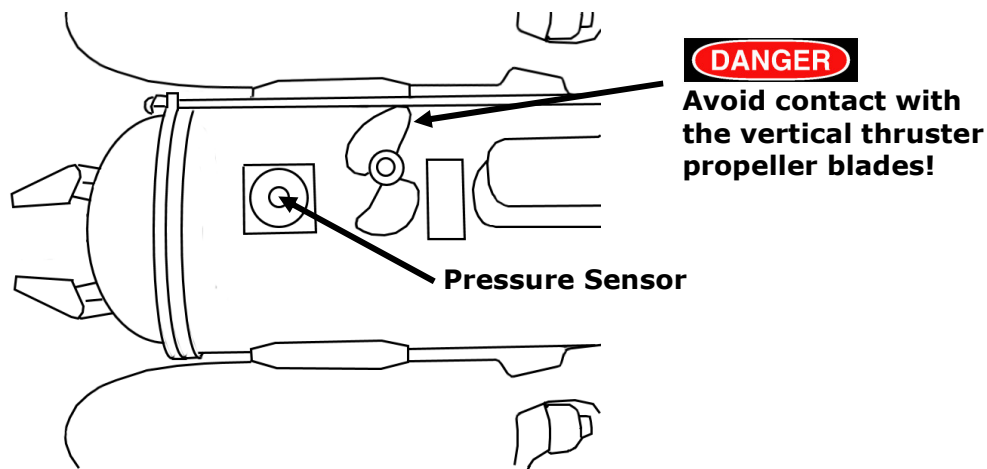
Calibrating the depth requires that an air pressure of 50 psi be applied to the pressure sensor on the submersible, which can be accomplished using the Depth Gauge Calibration Tool.

To calibrate the depth:

1. With the VideoRay control panel off, connect the tether as you would for a normal dive.
2. Remove the float block retaining screw and float block to gain access to the pressure sensor, which is located on the top front of the submersible just in front of the vertical thruster.

DANGER

The vertical thruster may engage without notice while in calibration mode. While the float block is off, be careful when working near the vertical thruster to avoid possible injury by contact with the spinning propeller blades.



Make sure the Depth Gauge Calibration Tool and pressure sensor are free from obstructions or debris before continuing.

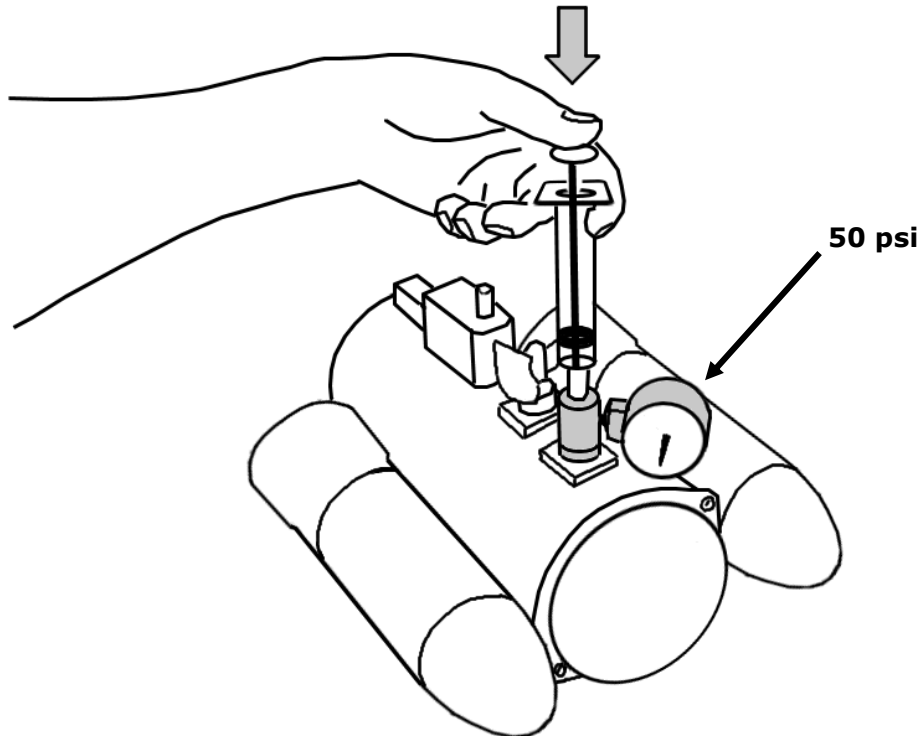
3. Turn the VideoRay on while holding the Mode switch to "Calibrate." Release the Mode switch when the system powers on.
4. To enter the depth calibration mode, you must complete the steps to set the date and time. You do not need to change the date and time, but must proceed through the date and time settings (with or without changing them) in order to reach the depth calibration mode.
5. To calibrate the depth, follow the on-screen instructions and apply the first pressure, typically ambient air pressure, to the pressure sensor. To use ambient air pressure, simply leave the pressure sensor exposed.
6. Momentarily engage the Auxiliary switch to "Off."
7. Prepare the Depth Gauge Calibration tool by retracting the plunger of the syringe to its fullest extent.



The O-rings on the Depth Gauge Calibration tool should be lubricated with a light silicone based lubricant before use.

8. Insert the Depth Gauge Calibration tool into the pressure sensor so that both O-rings are seated inside the pressure sensor.

9. Depress the plunger until a pressure of 50 psi is observed on the gauge. Maintain downward force to keep the Depth Gauge Calibration tool inserted.



10. Momentarily engage the Auxiliary switch to "On."
11. To exit the calibration mode, turn the VideoRay off. Wait at least 5 seconds before turning the VideoRay back on. Or, to continue on to calibrate the compass, momentarily engage the Mode switch to "Calibrate," and follow the steps listed on the LCD panel and in more detail in the user manual of the submersible.

CAUTION The Depth Gauge Calibration tool should be stored carefully in a clean location to avoid damaging the syringe, gauge or O-rings, or getting dirt or debris inside the housing or on the O-rings. The syringe can be unscrewed for storage. Do not over tighten the syringe when reassembling it.
