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Boating!*

## DRIVE TEMP LMDTBKBK, LMDTCF, LMDTWW, LMDTPLPL LMDTK1BKBK, LMDTK1CF, LMDTK1WW, LMDTK1PLPL Installation Instructions

### STEP 1: Drilling Through the Transom

Look at the transom of the boat from inside and find a spot that is above the water line and clear of any internal hardware mounted on the inner transom. This spot will preferably be starboard of the drive. You must first determine where the vent plug is located on your drive, as all makes are different. This will determine which side of the transom on which to drill the through-transom hole. You will want to drill this hole on the same side as the vent plug.

**TIP:** On Volvo drives the vent plug is located on the top of the drive, allowing the option of drilling the hole on either side or even directly above.

After locating the vent plug and determining a clear spot on the inner transom, drill a small (1/4") pilot hole through the transom. Now drill the hole for the through hull fitting. Using a 1/2" hole saw, start drilling the hole with the drill in the *forward direction*. Angle the hole to match the angle of the transom. Once the pilot drill bit cuts through, **STOP before bit touches the fiberglass**. *Reverse the drill*. Cut through the gel coat with the drill in reverse. After cutting through the gel coat, put the drill in *forward* and finish drilling the hole.

### STEP 2: Installing the Drive Temp

Feed the sensor cable attached to the temperature probe assembly through the transom fitting hole from the stern forward to the dash.

With all cable pulled through the transom, apply sealer to the through-hull transom fitting. 3M 5200 or a comparable alternative is recommended. Push the through-hull fitting through the hole, tight to the transom. Tighten the nut. If necessary, a second person using a 9/16" wrench can secure the hull fitting on the outside of the boat while the nut is tightened on the inside.

### STEP 3: Installing the Probe

Remove the vent plug. Screw in the replacement probe provided in the Drive Temp Kit along with the new gasket.

**CAUTION:** The gear housing is made of aluminum. **Over-torquing will cause thread damage. Be careful!**

Tighten the probe down until it is just seats in the housing. Using the correct size wrench (11/16" for Volvo, 9/16" for all others), turn the probe 1/4" turn.

#### **STEP 4: Installing the Drive Temperature Gauge**

Livorsi Marine offers a gauge cup kit. This allows external gauge installation without drilling a gauge hole in the dash. If a through-dash gauge mount is preferred, proceed to Step 5.

#### **STEP 5: Drilling Through the Dash**

Select a location on your dash that is easily seen from the driver's seat. Make sure there is room for a 2 5/8" hole and that there is sufficient clearance behind the dash for the gauge in the particular kit being mounted.

You will need a 2 5/8" hole saw. Before drilling the hole, make sure any wires or cables behind the dash are clear of the hole location.

**TIP:** When you begin to drill the hole, drill slowly. As soon as you penetrate the gel coat with the pilot bit and just before the hole saw contacts the surface, STOP the drill and put it in reverse. While turning the drill in reverse, apply pressure on the drill and cut through the gel coat with the drill running backward. This will help to prevent the gel coat from chipping. After cutting through the gel coat in reverse, STOP. Put the drill in forward and continue to drill through the dash.

#### **WIRING:**

The 251 gray sensor cable consists of 3 wires. The red wire is for the sender. It goes to the "S" terminal on the gauge. The black wire is for ground. It goes to the "G" terminal on the gauge. Then the "G" terminal needs to be grounded to the negative side of the battery.

The bare wire is shielding - it may be grounded. 12 volt fused power needs to be connected to the "I" (ignition) terminal.

LMDT.WPD

