

# **Thermo-Bob™**

# **Installation Manual**

## **‘KT3’ Kit**

Watt-man.com

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# Thermo-Bob™ Installation: KT3 Kit

Proper installation is critical: if you are not familiar with or feel uncomfortable with heated, pressurized liquid cooling systems, you should have a professional install the kit. Improper installation can cause engine overheating and possible engine damage.

Overview of installation: Drain the engine coolant into a suitable container, don't drain it when it's hot, keep it away from pets as it's toxic, refill the cooling system after all parts are installed, double-check that all clamps are tight, and verify that the radiators are full after the first heat-and-cool cycle.

- 1) Figures 1 and 2 show how a left-side, or right-side installation can be done. Most people do the left-side installation.
- 2) If you have the XC-W model, you have a factory plastic thermostat that dumps its bypass into a common line between the two lower radiator tanks. If so, remove that entire assembly and just buy a straight piece of 3/4" heater hose to connect the two lower radiator tanks together. It's much smarter to have the bypass from the Thermo-Bob connect to the water pump inlet hose (as described below) than where KTM dumped it between the radiators (as some of their bypass flow could go backwards up through the left radiator, then across and down to the right radiator to get to the water pump).
- 3) After draining the coolant, remove the two clamps holding the factory coolant hose that connects the cylinder head to the bottom of the frame tube (this goes to the radiators), then remove the hose.
- 4) Connect each of the supplied L-bends to the original barbs that the factory coolant hose was attached to.
- 5) Slide the two large barbs of the Thermo-Bob into the two L-bends as shown in the Figures. You can shorten the L-bends slightly if this makes things fit better. Once you are comfortable with the placement, you can reinstall your two factory large clamps, along with two of the supplied large clamps, to hold the Thermo-Bob in place. Tighten the four large clamps appropriately.
- 6) Using Figure 2 as a reference for location of the supplied bypass tee, remove a 5/8 inch long section of the factory hose that connects the right side lower radiator tank to the water pump. Slide the supplied bypass tee into place as shown, then secure the tee to the factory hose with the remaining two large clamps.
- 7) Next step: Measure twice, cut once! Cut the supplied bypass hose to an appropriate length for it to connect the two brass barbs. **TIP: After determining the proper length and cutting the hose, slide the supplied small clamps an inch or two up each end of the bypass hose, then dip the ends of the hose in a cup of coolant and wipe off the outside. This will lubricate the inside of the bypass hose, making it easier to slide on to the brass barbs.**
- 8) Tighten all clamps appropriately. Refill the cooling system. Install the radiator cap.
- 9) Re-check that all clamps are tight. Start the engine and let it run for 3 or 4 minutes, running the engine up to 3000 rpm a couple of times over that period to purge any final air into the radiator upper tanks. In this 3-4 minute period, you can inspect the cooling system as it heats for any leaks. Shut off the engine, let the bike completely cool, and remove the radiator cap to top off the system.

## GENERAL NOTES:

- The Thermo-Bob 4 housing has an additional threaded port for a KOSO or TRAIL TECH temperature sending unit (BSPP 1/8-28). Since the sensor uses two wires internally, an external ground is not required so it's best to use Teflon tape or a good Teflon sealant on the temperature sensor threads during installation to avoid leaks.
- Since these bikes do not have a coolant overflow tank, the first heat cycle after radiator filling will purge a few fluid ounces of coolant onto the ground due to thermal expansion, just like a stock bike.
- The Thermo-Bob can be left on the bike year-round, it simply holds up minimum coolant temperatures where you want them to be.

Figure 1



Figure 2

