

Thermo-Bob™

Installation Manual

‘KT35B’ Kit

Watt-man.com

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Thermo-Bob™ Installation: KT35B 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) 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.
- 2) Connect each of the supplied L bends (photoshopped red in Figure 1) to the original barbs that the factory coolant hose was attached to.
- 3) Slide the two large barbs of the Thermo-Bob into the two L-bends as shown in Figure 1. Note that the Thermo-Bob's bolt heads are facing up, and the opening of the brass barb is facing the lower tank of the left radiator. 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.
- 4) Using Figure 1 as a reference for location of the supplied bypass tee, remove a 5/8 inch long section of the factory hose that connects the two lower radiator tanks. Slide the supplied bypass tee into place, with the brass barb facing up and to the left side of the bike. After aiming the bypass tee's brass barb towards the Thermo-Bob's brass tee as shown in Figure 1, secure the tee to the factory hose with the remaining two large clamps.
- 5) Next step: Measure twice, cut once! Cut the supplied bypass hose (colored green in Figure 1 for easy ID) to an appropriate length for it to connect the two brass barbs as shown in Figure 1. **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.**
- 6) Tighten all clamps appropriately. Refill the cooling system. Install the radiator cap.
- 7) 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:

- Figures 2 and 3 display how to correctly index the thermostat in the housing if it is ever replaced. Early kits have potential interference between a boss inside the housing and the thermostat chassis. If so, Figures 2 and 3 guide you to proper installation.
- 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 to allow the engine oil to boil off any water that gets past the rings in the natural occurrence of all running engines.

Figure 1



If you ever replace your thermostat, pay attention to orientation...

(This only affects early Thermo-Bob 4s: most newer housings have clearance and the 'stat can be placed at any angle).



Figure 2: Improperly indexed thermostat
Will not seat properly.

Figure 3: Properly indexed thermostat
Will sit flush.