

Thermo-Bob 4™ Installation Manual 'KT5B' Kit

2017-2019 KTM 450/500 EXC, XC-W
2017-2019 Husqvarna FE450, FE501

Watt-man.com November 2018

IM_KT5B_V2

Thermo-Bob 4™ Installation: KT5B 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) **Figure 1 shows the stock layout and terminology used in this manual. Read all the way through this manual first: there are two different installation approaches shown. Choose which one is best for you: (A) or (B).** Drain the engine coolant.
- 2) Note that some of the stock hose clamps are easily removable with a screwdriver or small socket, and others would have to be cut off to remove the stock plastic thermostat assembly.. To remove those particular clamps, a dremel tool with a cutoff wheel, cutting on a 60 degree angle as shown in Figure 1, works best and will minimize damage to the hose(s) you will re-use.
- 3) Remove the two clamps on the factory hose going from the bottom of the right radiator tank to the engine block. Remove the factory plastic thermostat housing, bypass line, and lower hose as one piece.
- 4) Remove the factory plastic bypass tee from the lower hose and install the supplied aluminum bypass tee in the line instead. If using method (B), note that you'll remove our straight brass barb and instead, install your own 90 degree brass barb in its place.
- 5) Install the Thermo-Bob as shown in your selected method (Figure 2, Figure 4). Do not tighten clamps yet, but think about the orientation of each clamp to facilitate tightening once installed on the bike.
- 6) Reinstall the lower radiator hose, complete with aluminum bypass tee (Figure 3, Figure 5). Install the bypass hose, connecting the brass barb on the Thermo-Bob to the brass barb on the bypass tee. **TIP: After determining the proper length and cutting the hose, slide the supplied small clamps an inch or two up 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 barb on the Thermo-Bob, as well as the radiator barb.**
- 7) Tighten all clamps appropriately. Refill the cooling system. Pour the final 10 fluid ounces in slowly, as air is purging through the small bleed hole in the Thermo-Bob's thermostat. Install the radiator cap.
- 8) 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:

- With either approach (A or B), 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 piston rings in the natural occurrence of all running engines.

Figure 1.

Stock layout prior
to Thermo-Bob
installation.

Carefully remove this clamp —
for EITHER installation
method. ALSO carefully
remove this clamp if you're
using method (A). These
would be carefully removed
with a cutoff wheel as shown
below.

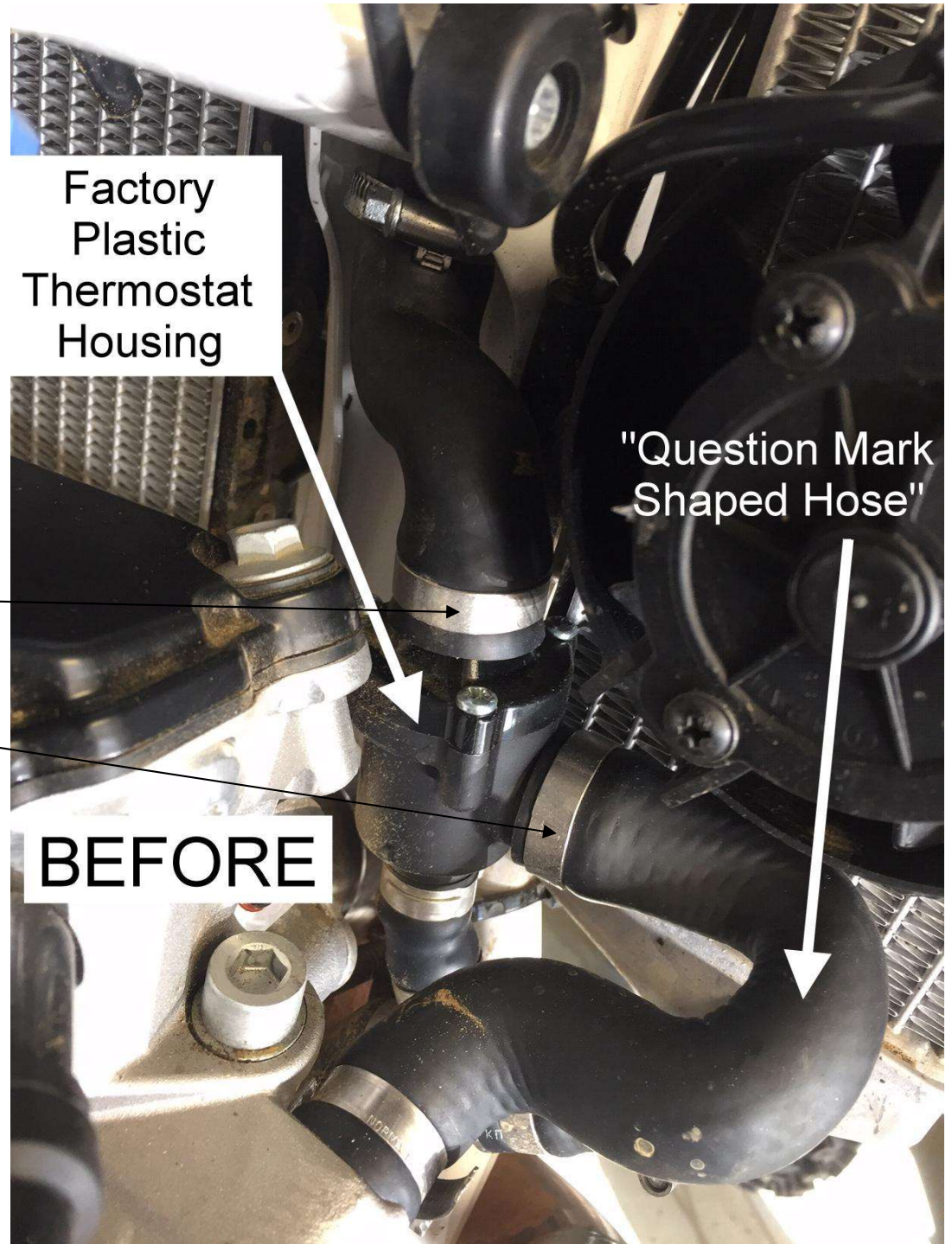


Figure 2.

Installation Method (A) utilizes stock coolant hoses on both large barbs of Thermo-Bob.

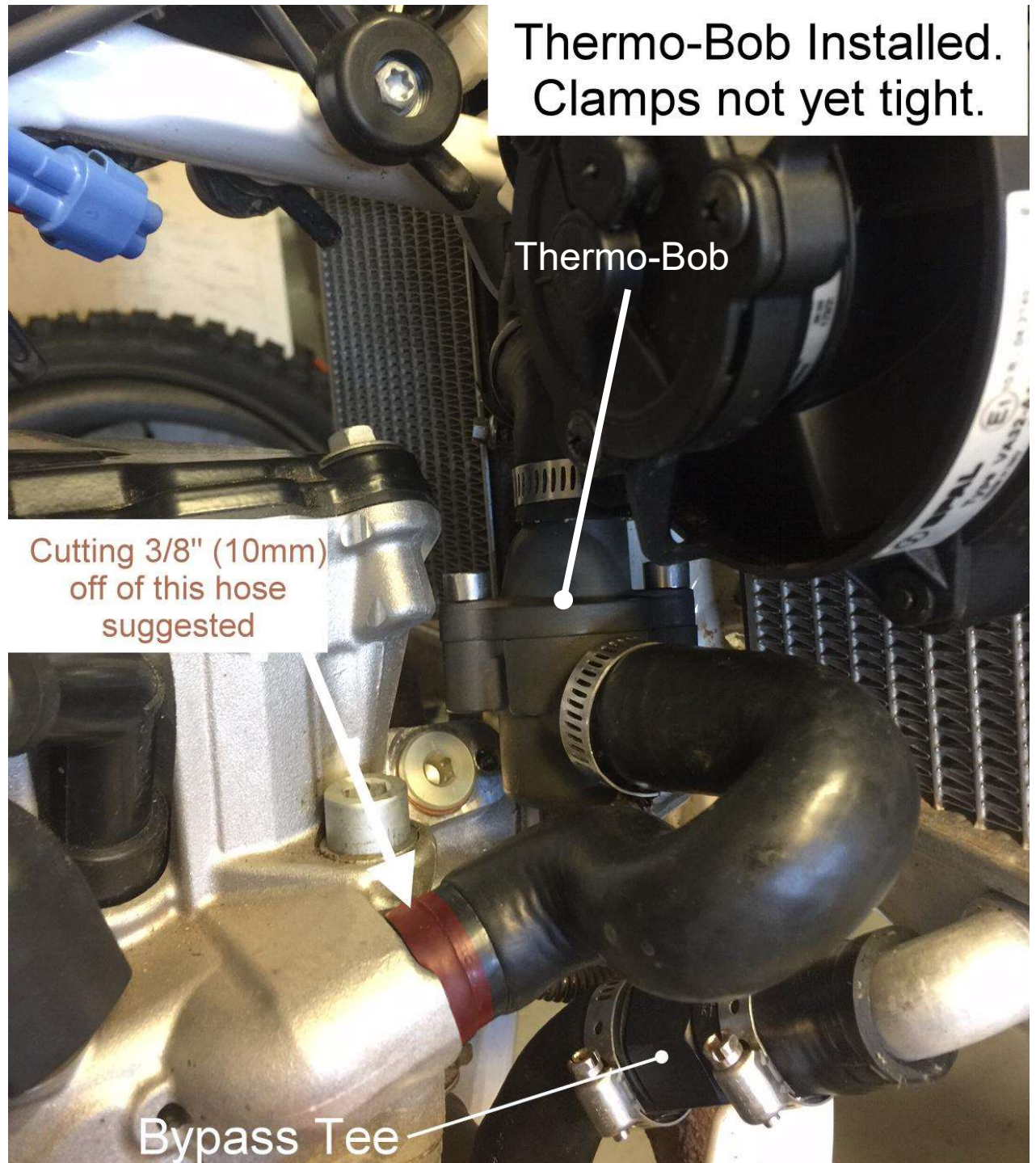


Figure 3.

Installation Method (A) utilizes short bypass hose and straight brass barb on bypass tee which are all supplied in Thermo-Bob™ kit.

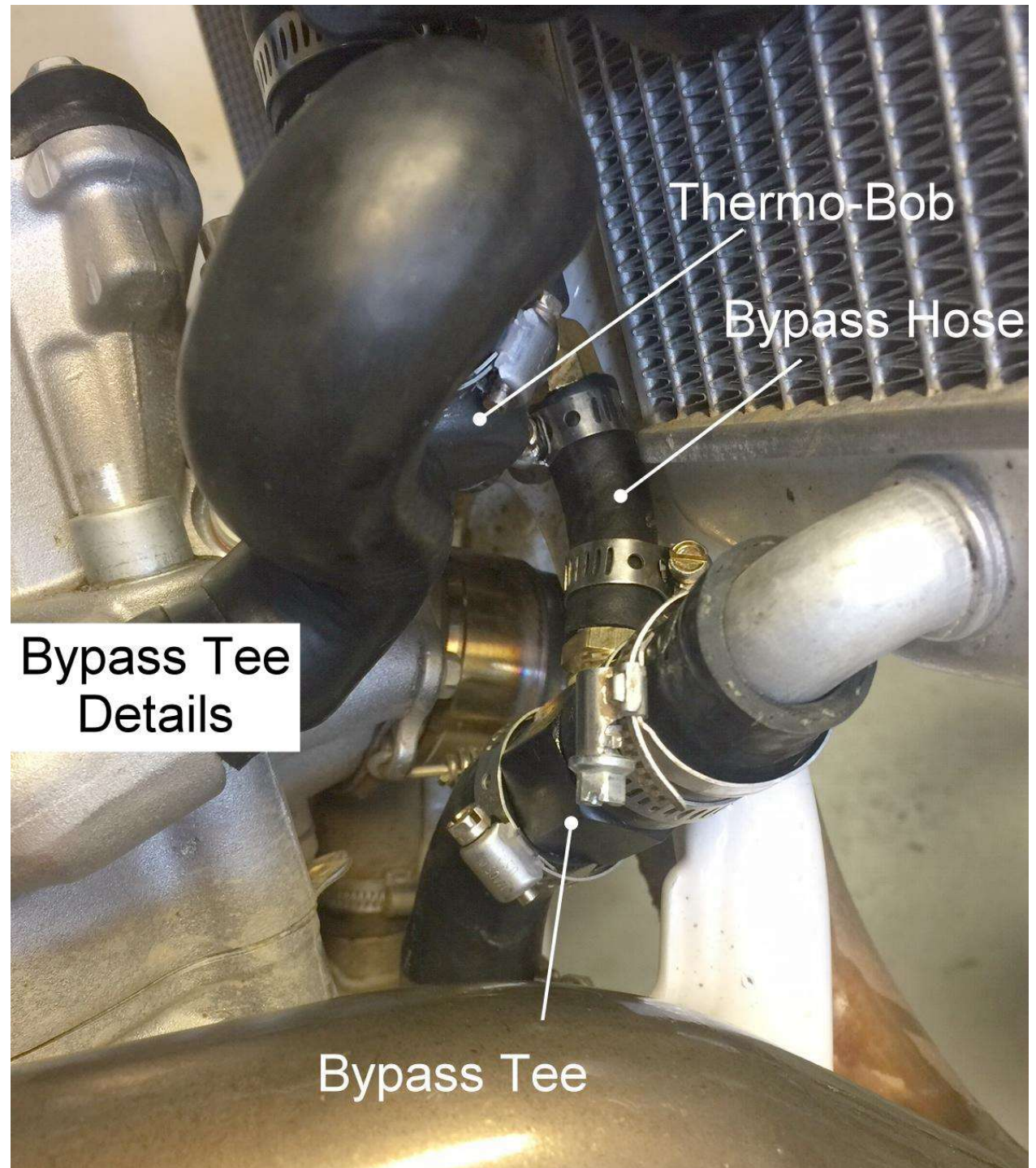


Figure 4.

You might prefer Installation Method (B) which does not utilize the factory “question mark shaped” hose. This method requires a separate purchase of a short piece of $\frac{3}{4}$ " heater hose, a longer $\frac{3}{8}$ " bypass hose and a 90° brass barb which would be installed in place of the straight brass barb supplied with the kit.

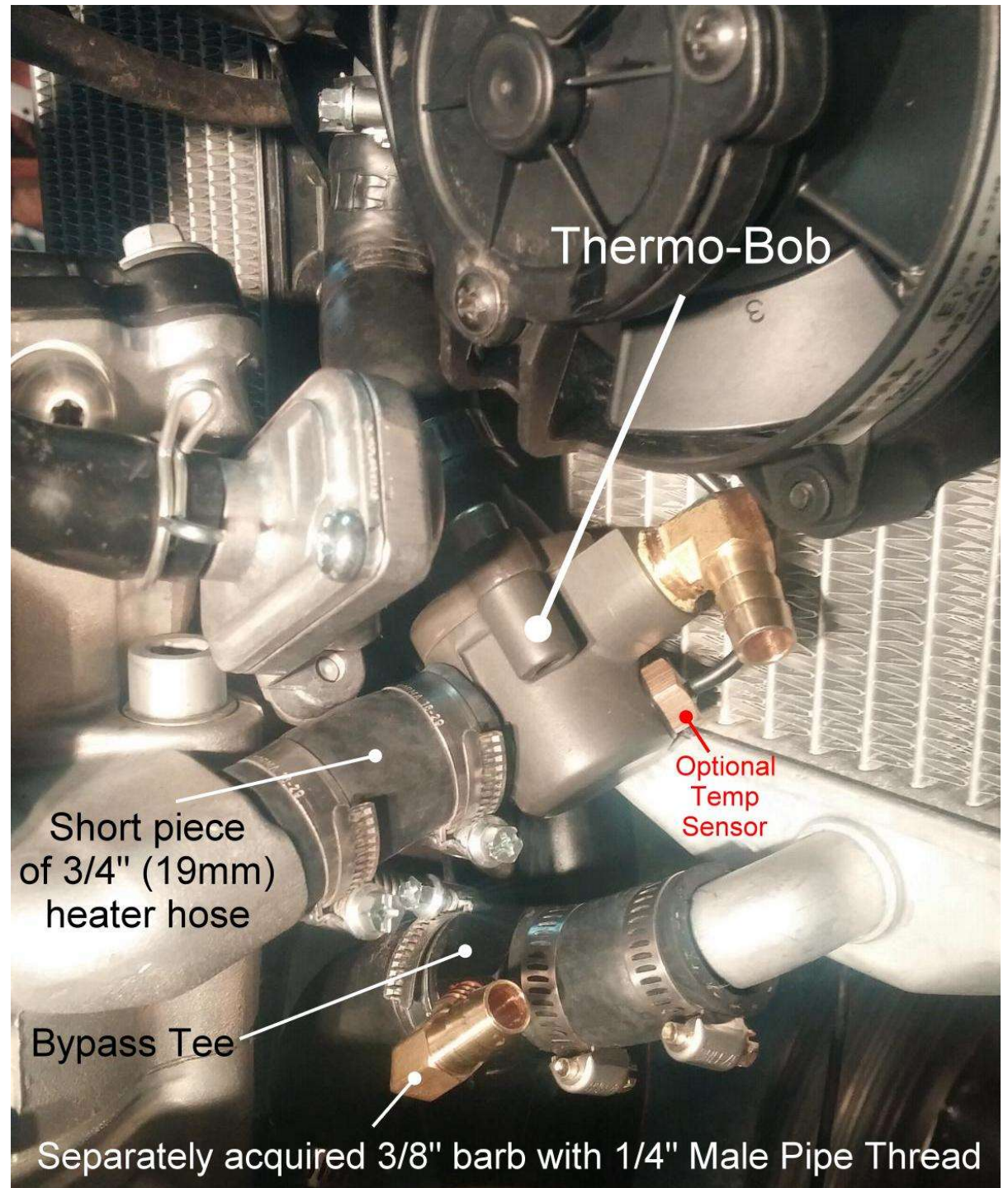


Figure 5.
Installation
Method (B),
completed.

