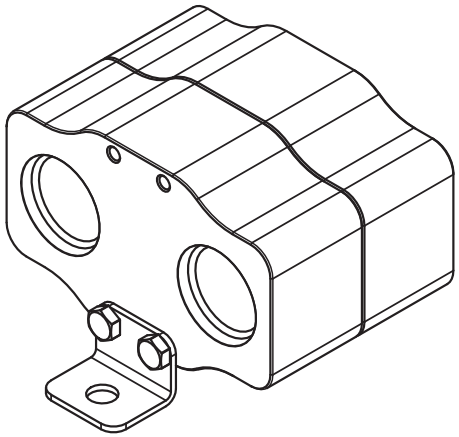
HIGH-FLOW ENGINE & TRANSMISSION OIL COOLER THERMOSTAT

PART NO. FSM-XXX

MADE IN USA



Important: Please read these instructions in their entirety prior to installation.

For contact information, visit www.improvedracing.com

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PARTS CHECK

- Visit the website product page for technical data and to confirm all parts have arrived by checking the images.

DIMENSIONS & MOUNTING BRACKETS

- General dimensions are shown in Figure 1.
- Mounting brackets support multiple configurations, shown in Figure 1.
- Once the brackets are fastened to the thermostat, use 1/4" or M6 hardware to secure the thermostat to the vehicle.

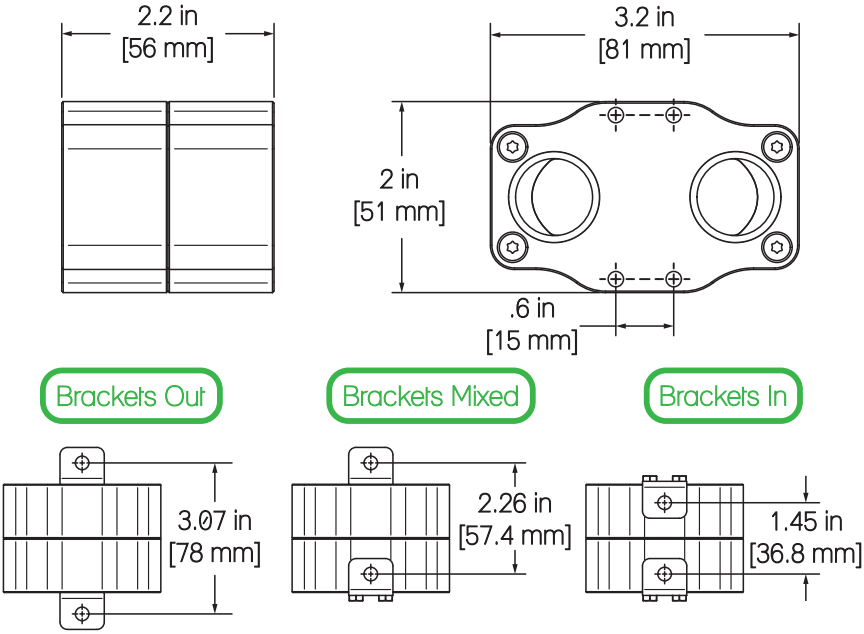


Figure 1 - FSM Dimensions

INSTALLATION INSTRUCTIONS

BEFORE YOU BEGIN

⚠ **WARNING: NEVER work under a vehicle supported only by a jack.**

⚠ **WARNING: NEVER cap / plug the oil ports on the adapter.**

⚠ **WARNING: Capped / plugged oil ports block oil flow in the engine and may result in catastrophic engine damage.**

- Use a union to loop the lines or create a new line to join the ports if servicing or removing the oil cooler from the vehicle.

⚠ **WARNING: Only qualified mechanics should install this part.**

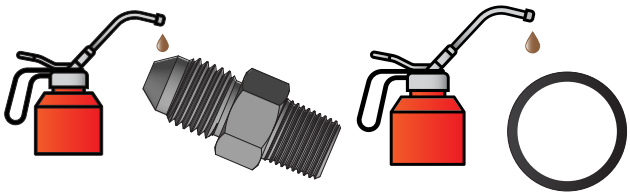
⚠ **WARNING: Improper installation may result in severe engine damage.**

⚠ **This product is not recommended for use with highly corrosive fluids.**

- Lubricate threads and flares on fittings for a reliable seal.
- Lubricate every O-ring to prevent damage and ensure a leak-free seal.

⚠ **Never secure lines to moving components.**

- Use zip-ties and P-clamps to stop oil lines from rubbing against the exhaust, engine, suspension components and chassis.
- Confirm heat exchangers are isolated from vibration.
- Pre-fill heat exchangers to prevent a dry startup.
- Use aluminum tools to avoid damaging fittings.

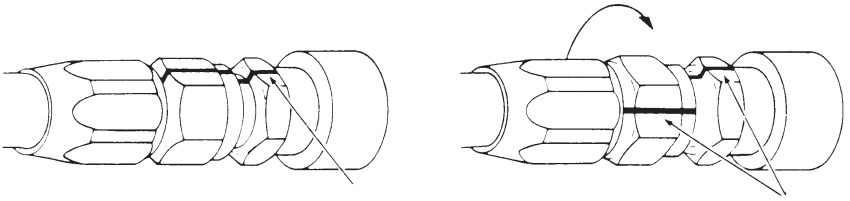


PLAN & DESIGN THE SYSTEM

1. Plan where the heat exchanger will be mounted, then create the holes for the mounting brackets.
2. Plan a line configuration based on the tips explained in the section Before you Begin.
3. Plan where the FSM thermostat will be mounted, then create the holes for the mounting brackets.

INSTALL THE SYSTEM

1. Use a 7mm tool to install the thermostat brackets onto the thermostat using the included hardware.
2. Torque the bracket screws to 25 lb-in (3 N-m).
3. Install all four adapter fittings into the thermostat ports.
4. Torque the fittings between 20 lb-ft (27 N-m) to 25 lb-ft (33 N-m).
5. Install the thermostat and heat exchanger.
6. Create the hydraulic lines for the system.
7. Connect the system lines and torque the hose fittings according to the steps below for your line size:
   a. Hand tighten the fittings.
   b. Mark the flats as shown in Figure 2.
   c. Tighten according to Figure 3.



Mark a line on the nut and adapter before torquing.

Misalignment of the mark shows the amount which the nut was tightened.

Figure 2 - Marking the Fittings for Correct Tightening

Size	Number of Hex Flat Rotations
-6	1.5 to 1.75
-8	1.25 to 1.75
-10	1.25 to 1.75
-12	1 to 1.5

Figure 3 - Hex Flat Rotations vs Line Size

Tighten worm-screw hose clamps to feel.

COMPLETING THE INSTALLATION

1. Check the system oil level and add oil if necessary.
2. Confirm spilled fluids are wiped up.
3. Prime the oiling system according to the factory service manual.
4. Start the system and inspect for leaks.

 Confirm oil pressure is stable and reading the correct value.

5. Turn off the system.
6. Confirm the oil level is within spec.
7. Inspect the hydraulic lines and fitting for leaks after the first drive.
8. Inspect the mounting hardware for loosening after the first drive.

 Installation is now complete. Thank you for purchasing an Improved Racing product!