

IMPROVED **R A C I N G**®

OIL COOLER THERMOSTAT UPGRADE FOR 2005-2013 (C6) CHEVROLET CORVETTE

PART NO. EC6-610

MADE IN USA



**Important: Read these instructions in their
entirety prior to installation.**

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APPLICATIONS











- 2005-2013 (C6) Chevrolet Corvette (All Trims)

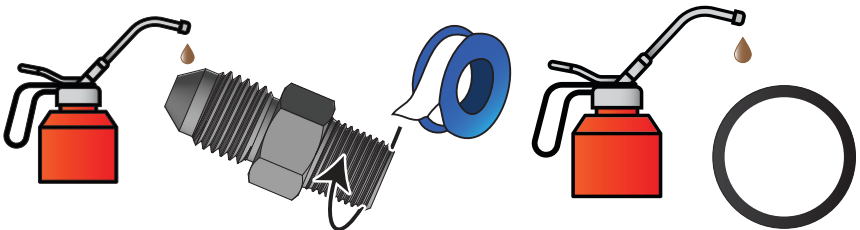
PARTS LIST

Item	Qty	Part Number	Description
1	1	EGM-112-T#	Oil Cooler Adapter w/Thermostat
2	1	EC6-600-51	Cold Oil Line: IN Adapter, OUT Cooler
3	1	EC6-600-52	Hot Oil Line: OUT Adapter, IN Cooler
4	4	OM-08-10	-8 SAE ORB to -8 37° SAE Male Adapter Fitting
5	1	HTD-1006	Push-In Cable Tie
6	2	HTD-1003	Cable Tie

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 EGM-112 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 oil cooler kit.**
-  **WARNING: Improper installation may result in severe engine damage.**
-  Use aluminum tools to avoid damaging fittings.
-  Lubricate all fitting flares before final tightening of connection.
-  Wrap tapered pipe (NPT) threads with Teflon (PTFE) tape or apply thread sealant to seal the threads.
-  Lubricate O-rings prior to installation to prevent damage and ensure a leak-free seal.



REMOVING THE BUMPER COVER

1. Raise and support the vehicle using an automotive-approved car lift, frame stands or ramps.
2. Remove any underbody panels necessary to access the factory oil cooling system.
3. Open the hood of the vehicle.
4. Apply masking tape on the fenders to prevent scratching when removing the bumper cover.
5. Remove the front bumper cover by removing the fasteners listed below, and indicated in Figure 1:
 - a. Four 7 mm bumper cover screws under the nose of the hood (**blue**)
 - b. Ten 7 mm or T15 screws and / or push clips securing the fender liners, five per side (**green**).
 - c. Five 7 mm screws securing the lower front edge of the bumper cover (**red**).
 - d. Four 10 mm nuts securing the inside of the fenders, two per side (**magenta**).
 - e. Two 10 mm nuts securing the rear of the lower bumper cover (**orange**).

 Removing the front wheels makes this step easier.

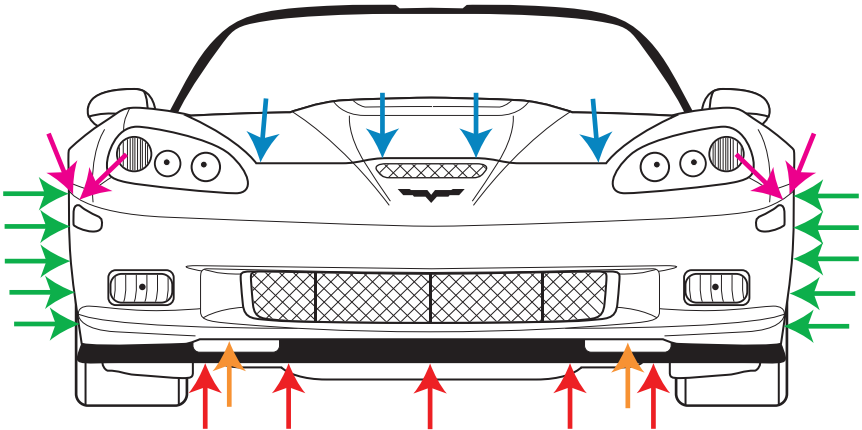


Figure 1 - Front Bumper Fastener Locations

6. Disconnect all indicator and fog light wiring harness connectors.
7. Remove four push pins (two per side) securing the radiator shroud to the core support, shown in Figure 2.

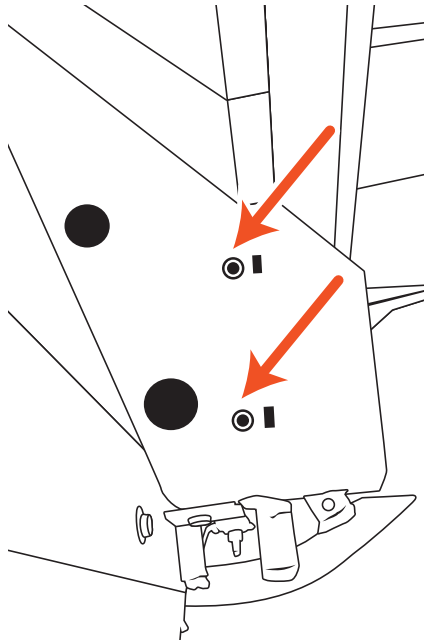


Figure 2 - Radiator Shroud Push Pins

8. Carefully remove the front bumper cover.

💡 The top edges of the bumper cover near the headlights are clipped-in and must be released prior to removal.

REMOVING THE FACTORY OIL COOLER LINES

💡 This section exclusively applies to Z06, Z51, and Grand Touring trims.

1. Place a drain pan under the line fittings and oil cooler.
2. Cut and remove the zip-tie securing the factory oil lines to the radiator shroud.
3. Begin with the lower oil cooler line, and remove the retaining clip from the hard-line fitting using a small prying tool.
4. Repeat for the upper oil cooler line.
5. Remove the lower oil cooler line from the oil cooler and allow the oil to drain.
6. Remove the upper oil cooler line.
7. Use a 10mm tool to remove the factory oil cooler adapter, located above the oil filter.

- 💡 Remove the rear screw first so that the front screw clears the catalytic converter during removal.
- 8. Use a 13mm socket on a long extension to remove the screw securing the oil lines to the engine block.
- 9. Carefully pull the factory oil cooler adapter and oil line assembly out towards the rear of the vehicle.
- 10. Remove the two oil cooler line adapter fittings from the factory oil cooler.

INSTALLING EGM-112

1. Install the included adapter fittings into the oil cooler adapter.
2. Torque the fittings between 23 to 29 lb-ft (31 to 40 N-m).
3. Install the provided NPT plug into the Improved Racing oil cooler adapter sensor port using a $\frac{3}{16}$ " hex key.

💡 Install your choice of sensor when applicable.

⚠️ **DO NOT** overtighten.

4. Relocate the wiring harness to create more space for the new oil lines:
 - a. Remove the screw securing the knock sensor to the block.
 - b. Remove the bracket securing the wiring harness to the block.
 - c. Relocate the bracket to the screw hole directly above it, where the ground strap is secured, shown in Figure 3.
 - d. Reorient and tighten the knock sensor, shown in Figure 3.

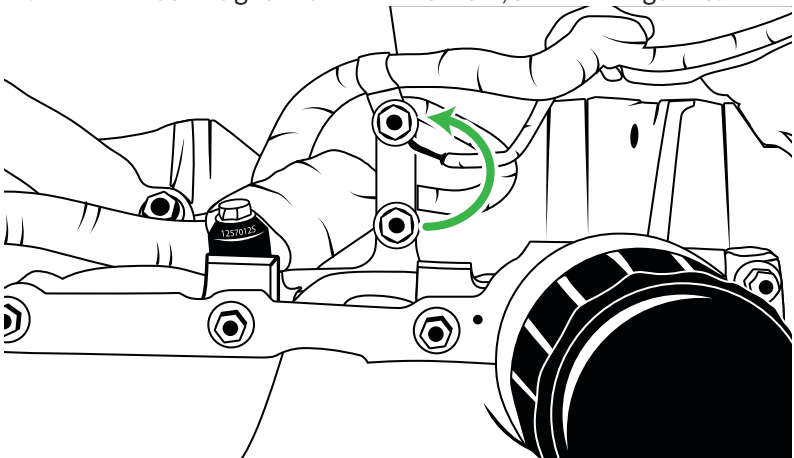


Figure 3 - Relocated Knock Sensor & Bracket

5. Connect the two 90° fittings to the oil cooler adapter side.
6. Orient the 90° hose end fittings as shown in Figure 4 and tighten both hose ends to the oil cooler adapter.

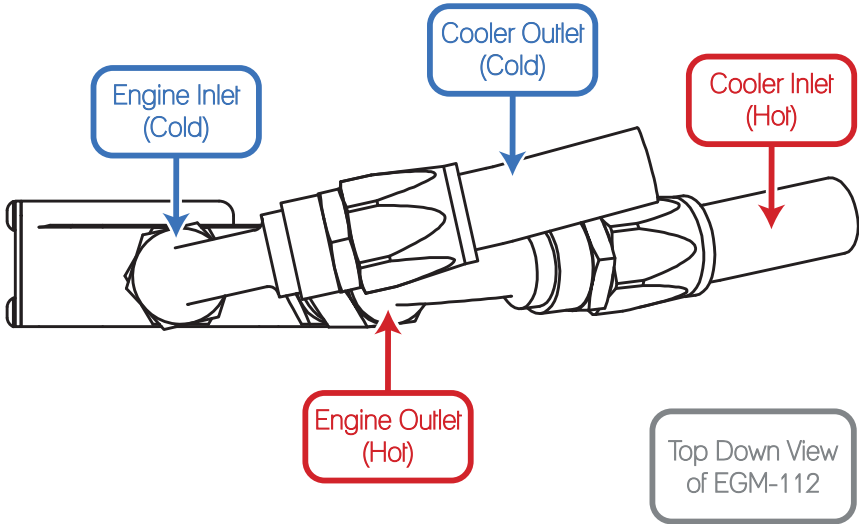







Figure 4 - Hose-End Alignment on EGM-112


7. Route the oil lines between the engine mount, subframe and engine block.
 - 💡 Follow the same path as the factory oil lines.
8. Use a 5mm hex tool and the included socket screws to install the oil cooler adapter and gasket onto the oil pan.
9. Torque the screws to 10 lb-ft (13.6 N·m)
- 💡 Shorten a 5 mm hex key to clear the factory catalytic converter and ease installation.
10. Install the remaining adapter fittings into the factory oil cooler.
11. Torque the fittings between 23 to 29 lb-ft (31 to 40 N·m).
12. Connect the oil lines to the oil cooler.
13. Insert the new push-in zip tie to the radiator shroud and secure the hoses in place.
14. Use the extra zip tie to fasten the oil lines together where appropriate.

PREPARING FOR STARTING

1. Fill a new oil filter with oil and install the oil filter onto the oil pan.
-  Lubricate the oil filter seal with engine oil prior to installation to prevent damage and to ensure a reliable seal.
-  **WARNING: DO NOT overtighten the oil filter.**
2. Verify all hydraulic connections are coupled and properly torqued.
3. Check the engine oil level and add oil if necessary.
4. Prime the system to fill the engine, lines and heat exchanger with fluid before starting:
 - a. Remove the fuel injector fuses.
 -  Consult the vehicle's factory service manual for the fuse locations.
 - b. Crank the engine over for five seconds to build oil pressure, repeating this cycle three to five times.
 - c. Replace the fuel injector fuses removed previously.
 -  Fluid prelubers, such as one made by Melling or Motive, are the preferred method for engine oil priming.
5. Start the vehicle and inspect for oil leaks.
6. Turn-off the vehicle.
7. Inspect the engine oil level.
-  Add oil when necessary.

REINSTALLING THE BUMPER COVER

1. Reinstall the bumper cover onto the vehicle by following the steps listed Removing the Bumper Cover in reverse order.
2. Close the hood and lower the vehicle back onto the ground.
3. Take a test drive to confirm performance is as desired.
4. Check for loosened fittings and leaks after 50 miles of driving.

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