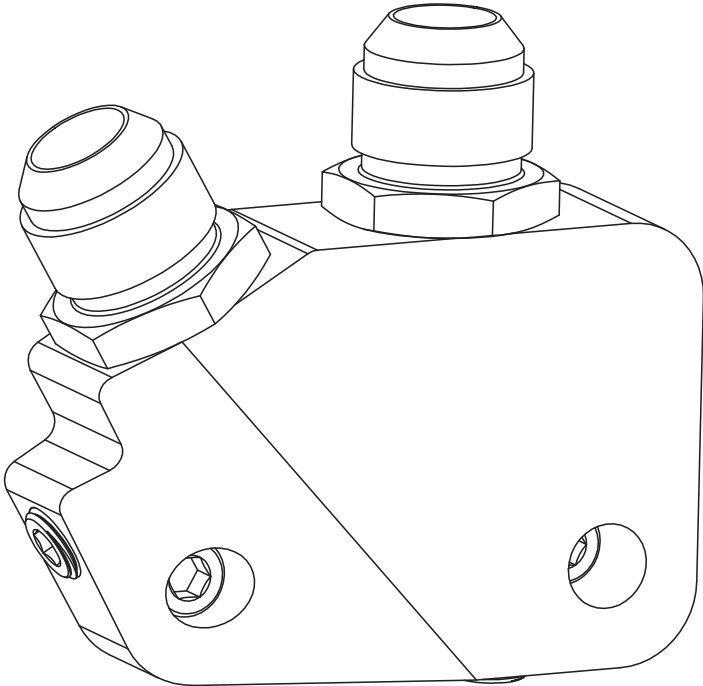




Low-Profile Oil Cooler Adapter for LS Engines, Rear Sump

Part No. EGM-106

Made in USA



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

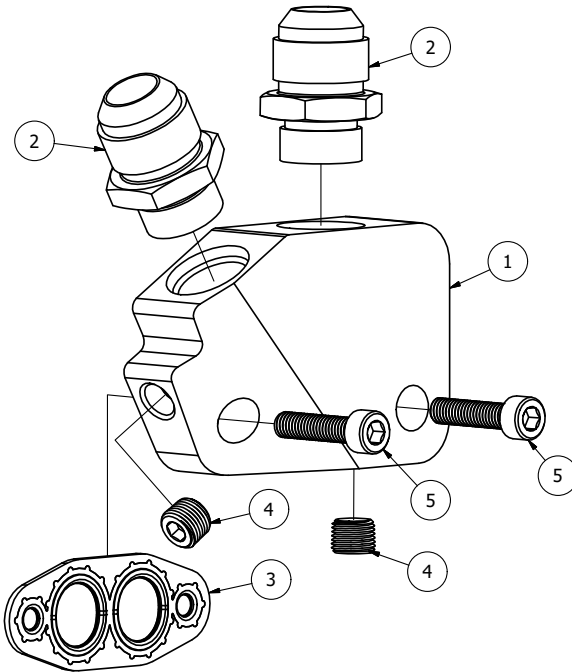
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Applications

- 1997+ aluminum GM LS and Vortec family engines (Gen III & IV) with rear-sump oil pans
- Iron block LS, LSX and Vortec family engines may require some clear-ancing around the left rear oil galley plug for proper fitment
- Not suitable for front-sump oil pans such as the Pontiac GTO or Holden Commodore / Monaro (1999-2006, VT-VZ models)

Parts List

ITEM	QUANTITY	PART #	DESCRIPTION
1	1	EGM-106	LS Oil Cooler Adapter
2	2 (OPTIONAL)	OM-08-XX	-AN Adapter Fitting
3	1	HGA-1000	Bypass Cover Gasket
4	2	PP-02	Pre-Sealed 1/8" NPT Plug
5	2	HSC-1004	M6 Socket Screw



Installation Instructions

⚠ WARNING: DO NOT CAP OFF THE OIL COOLER PORTS after the adapter is installed. Running the engine with the ports capped will block oil flow and result in catastrophic engine damage. If not using an oil cooler, the IN/OUT ports must be looped together to prevent engine damage.

⚠ WARNING: This product should only be installed by a qualified mechanic. Improper installation could result in severe engine damage.

Preparing for Installation

1. Raise the front of the vehicle and support with approved automotive frame stands, lift, or ramps.

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

2. Remove any underbody panels necessary to access the oil pan and filter.

3. Remove the oil filter.

⚠ Caution: Oil may be hot!

a. Be sure to place a drain pan under the filter. Roughly 1 quart of fluid will drain out after removing the oil filter.

4. Remove the two bypass cover flange screws with a 10 mm socket or wrench. Be sure to remove the factory gasket shown in Figure 1.

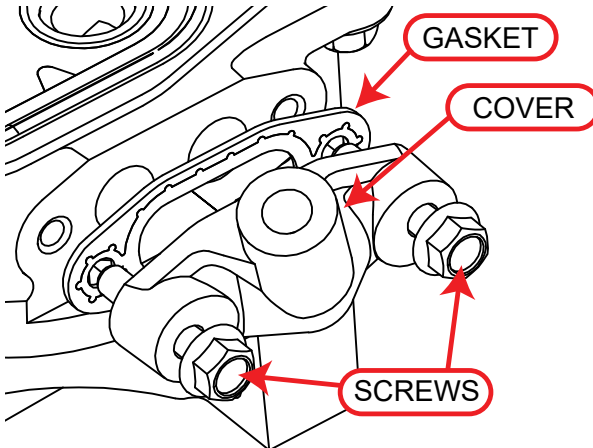




Figure 1 - Removing the oil port cover, retaining screws and gasket

5. Measure and assemble oil cooler system lines. Leave the lines disconnected from the adapter and oil cooler.

- a. Improved Racing recommends using a 60°, 90° or 120° fitting for the OUT port and a 90° fitting for the IN port.

Installing the Oil Cooler Adapter

1. Install the provided NPT plugs into the oil cooler adapter using a 3/16" hex-drive key/bit if not using a sensor. **DO NOT** overtighten.
 - a. *If installing a sensor*, follow the instructions provided with the sensor.
 2. Connect the -AN fittings and lines to the adapter in the desired configuration.
-  **Tip:** Lubricate the -AN fitting O-rings with motor oil before installing to ensure the O-ring does not pinch.
-  **Tip:** Use aluminum -AN fitting wrenches to avoid damaging the fittings.
3. Use a 5 mm hex-drive bit/key to secure the gasket and adapter onto the oil pan with the M6 socket screws as shown in Figure 2. Torque part to a maximum of 120 lb-in (10 lb-ft).

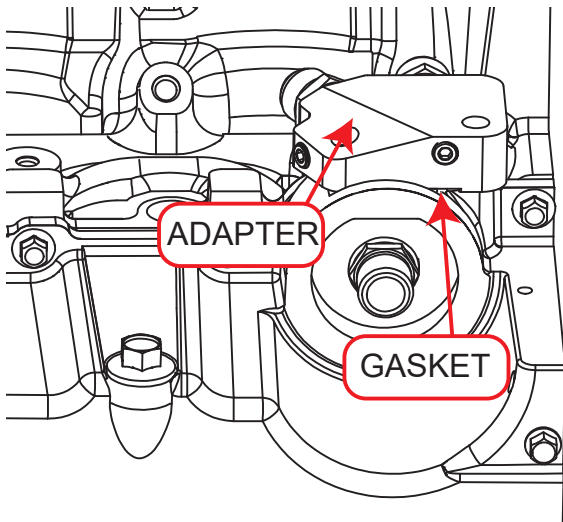



Figure 2 - Installed Adapter, Gasket and Screws

Completing the Installation

1. Replace the engine oil filter.
2. Fill the oil cooler with oil.
3. Connect and tighten the system lines.


 **Tip:** Use aluminum -AN fitting wrenches to avoid damaging the fittings.

4. Secure the oil cooler to the vehicle if not completed previously.

 **Tip:** Ensure the oil cooler is isolated from vibration.

5. Check the engine oil level and add oil if needed.

6. Remove the fuel pump fuse.

 **Tip:** Consult the vehicle's factory service manual for the fuse location.

7. Crank the engine over to build oil pressure.

8. Replace the fuse removed in Step 6.

9. Start the vehicle and inspect for leaks.

10. Turn off the vehicle and inspect the engine oil level; top-off if necessary.

11. Reinstall any underbody panels and lower the vehicle back onto the ground.

Congratulations! The installation of your oil cooler adapter is now complete.