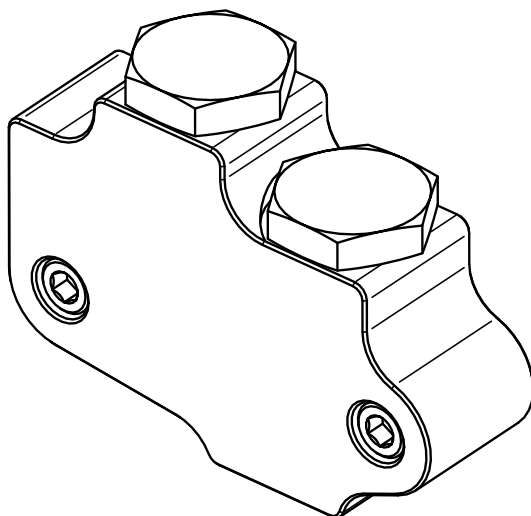




## OIL COOLER ADAPTER FOR GEN 5 LT & VORTEC ENGINES

PART NO. EGM-137

MADE IN USA



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

For contact information, visit [www.improvedracing.com](http://www.improvedracing.com)  
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## APPLICATIONS

- 2015-2019 Chevrolet Corvette
  - ⚠ Factory oil cooler delete required.**
    - Purchase Improved Racing delete kit: EC7-681
- GM oil pan part numbers 12684491, 12696685, and 12696686
- May fit some GM trucks with Gen V Chevrolet small block V8 engines
- May fit other vehicles using the Gen V Chevrolet small block LT1, LT4, LT5, L86 and L83 engines
- ⚠ Does not fit GM truck oil pan part # 12696280**
- ⚠ Does not fit 2016-Present Camaro SS and ZL1 oil pan (see part # EGM-136)**
- ⚠ Does not fit 2014-2019 Cadillac CTS-V oil pan (see part # EGM-136)**
- ⚠ Does not fit 2020-Present Cadillac CT5 Blackwing**

## EGM-137 SCHEMATIC

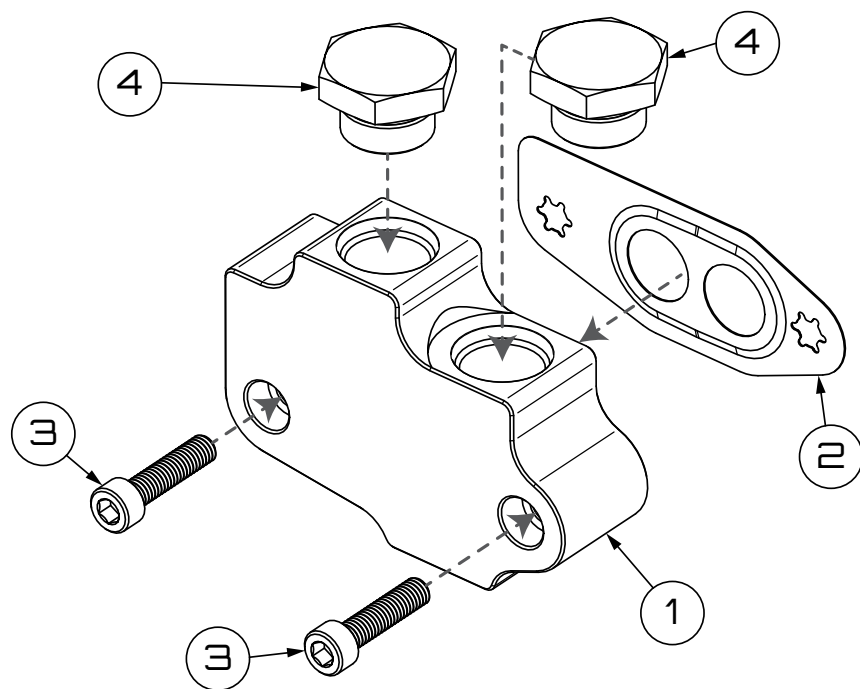


Figure 1 - EGM-137 Schematic (Standard Kit Parts)

## STANDARD KIT PART LIST

Item	Qty	Part Number	Description
1	1	EGM-137-01	Oil Pan Adapter for Generation 5 GM V8 Engines
2	1	12623359	GM Oil Pan Adapter Gasket
3	2	HSC-1004	M6 Socket Screw
4	2	PO-08	-8 SAE ORB Plug

## OPTIONAL CONFIGURATION PARTS

Recommended Quantity	Part Number	Description	Notes
2	OM-08-08	-8 SAE ORB to -8 SAE 37° Male Flare Adapter Fitting	Use these fittings to connect to a hose end.  OM adapter fittings can also be installed in the sensor ports to plumb lines that oil turbochargers, fill oil accumulators, etc.
	-OR-	-OR-	
	OM-08-10	-8 SAE ORB to -10 SAE 37° Male Flare Adapter Fitting	
	-OR-	-OR-	
1-2	OM-08-12	-8 SAE ORB to -12 SAE 37° Male Flare Adapter Fitting	Use these fittings to adapt 1/8"-27 NPT sensors.
	OP-08-02	-8 SAE ORB to 1/8"-27 FNPT	
1-2	OF-08-M12	-8 SAE ORB to M12x1.50 Female	<b>This fitting is required to reuse the factory temperature sensor.</b>
1	EC7-681	C7 Corvette Factory Oil Cooler Delete Kit	<b>This kit is required to install EGM-137 on a C7 Corvette.</b>

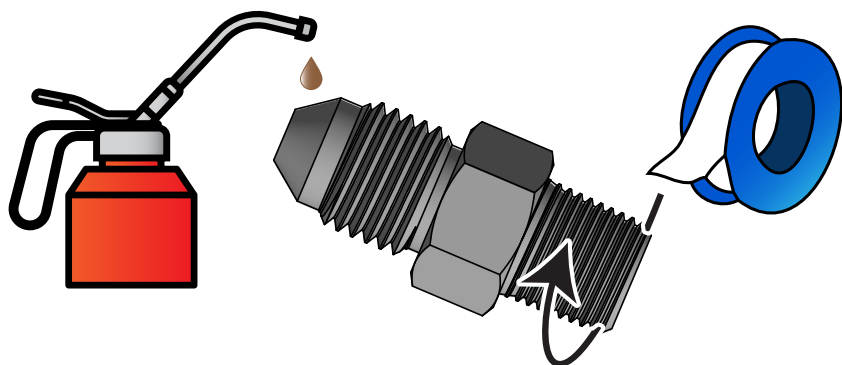
## TECHNICAL SPECIFICATIONS

Maximum Operating Temperature	302°F (150°C)
Minimum Operating Temperature	-22°F (-30°C)
Max. Operating Pressure	300 psi (20.68 bar)
Dimensions (W x H x D)	3.50" x 2.40" x 1.06" (89 mm x 61 mm x 27 mm)

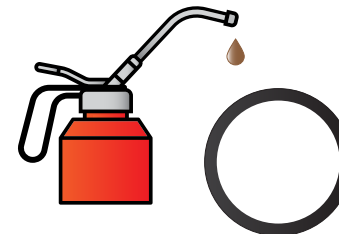
<b>Weight</b>	6.6 ounces (187 grams)
<b>EGM-137-01 Details</b>	CNC-Milled 6061-T6 Billet Aluminum, MIL-A-8625, Type II Anodizing, -8 SAE O-ring Boss Ports, 3/4"-16 Thread
<b>PO-08 Details</b>	CNC-Milled 6061-T6 Billet Aluminum, ISO Black Anodize, -908 Viton (FKM) O-ring, 3/4"-16 Thread, 1 Inch Hex

## BEFORE YOU BEGIN

- ⚠ **WARNING: NEVER work under a vehicle supported only by a jack.**
- ⚠ **WARNING: This product should only be installed by a qualified mechanic. Improper installation could result in severe engine damage.**
- ⚠ **WARNING: DO NOT PLUG BOTH OF THE IN OR OUT PORTS ON EGM-137.**
- ⚠ **WARNING: Running the engine with two of the IN or two of the OUT ports capped will block oil flow and result in catastrophic engine damage.**
- 💡 Loop the lines together to connect the fluid paths if removing the heat exchanger.
- 💡 Lubricate all fitting flares for a better seal.
- 💡 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.



- ⚠ **Never secure hoses to moving components.**
- 💡 Use zip-ties and P-clamps to keep oil lines from abrading against the exhaust, engine, suspension components and chassis.
- 💡 Ensure oil coolers are isolated from vibration.
- 💡 Pre-fill coolers with oil to prevent a dry startup.
- 💡 Use aluminum tools to avoid damaging fittings.

## INSTALLATION INSTRUCTIONS

1. Raise the vehicle and support it with an approved automotive car lift, frame stands or ramps.
2. Remove all body panels required to install the oil cooler in the desired location on the vehicle.
3. Remove any underbody panels necessary to access the oil pan and filter.
4. Place a drain pan under the filter and remove the oil filter.
- 💡 Roughly 1 quart of fluid will drain-out after removing the oil filter.
- ⚠ **Caution: Oil may be hot!**
5. Consult the factory service manual for your vehicle and remove the factory oil cooler system from the vehicle.
- 💡 Have a drain pan ready to collect coolant.
6. Cap the radiator hose barb with the rubber cap and hose clamp from the EC7-681 Delete Kit.
- ⚠ **DO NOT overtighten.**
7. Use a 17mm hex tool to plug the engine block coolant passage with the GM engine block coolant plug supplied with the EC7-681 Delete Kit, shown in Figure 2.

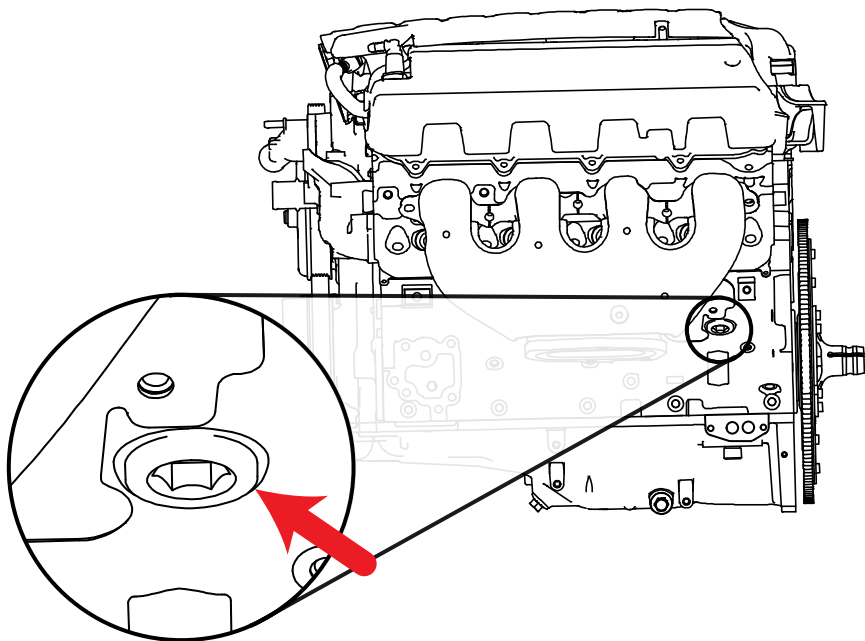


Figure 2 - Plug the coolant port on the engine block

8. Torque the coolant plug to 45 lb-ft (60 N-m), plus a quarter turn.
9. Plan out the oil line routing, then cut the hoses and assemble the lines.
10. Install the oil line adapter fittings into EGM-137. Torque the fittings to 25 lb-ft (34 N-m).
11. Install the -8AN ORB port plug into the sensor port on the oil cooler adapter. Torque the fittings to 25 lb-ft (34 N-m).
- 💡 If installing a sensor, install the sensor into the optional sensor adapter fitting(s).
12. Connect the oil lines to EGM-137. Torque the hose ends to 25 lb-ft (34 N-m).
13. Route the lines back through the car as originally planned in Step 9.
14. Install the oil cooler adapter and gasket onto the oil pan using the M6 socket screws and a 5 mm hex-drive tool. Torque the screws to a maximum of 10 lb-ft (14 N-m).
15. Pre-fill a new oil filter with oil, lubricate the seal and install the oil filter onto the oil pan.
16. Permanently secure the oil cooler to the vehicle. Use rubber isolators to protect the oil cooler from excess vibration and prevent leaks.

17. Connect the oil lines to the oil cooler.
  - 💡 Leave the line disconnected from the highest port on the oil cooler to pre-fill the oil cooler with oil if not using an engine pre-oiler.
  18. Torque the hose ends to 25 lb-ft (34 N-m).
  19. Check that all fittings are connected and tightened.
  20. Check the engine oil level and add oil if necessary.
  21. Refill the engine's coolant system using the manufacturer's approved method for your vehicle.
  - 💡 Consult the vehicle's factory service manual for the correct coolant specifications and refill procedure.
  22. Prime the system to fill the engine, lines and heat exchanger with oil before starting:
    - a. **Preferred Method:** Use an engine oil preluber to perform the priming procedure, such as those made by Melling or Motive.
    - b. **Alternate Method:** Consult the owner's manual and remove the fuel pump fuse prevent starting. Then crank the engine over for five seconds to build oil pressure, repeating this cycle three to five times.
  - ⚠️ **Ensure the starter does not overheat.**
  23. Remove all equipment used for priming / replace all fuses removed for priming.
  24. Start the engine and check for leaks.
  - ⚠️ **Verify engine oil pressure is stable and reading the correct value.**
  25. Turn-off the vehicle, inspect the engine oil and coolant levels and add oil or coolant as needed.
  26. Reinstall all body panels and all underbody panels.
  27. Inspect all parts for loosening or leaks after one heat cycle and 100 miles of driving.
- 🚩 Installation is now complete. Thank you for purchasing an Improved Racing product!