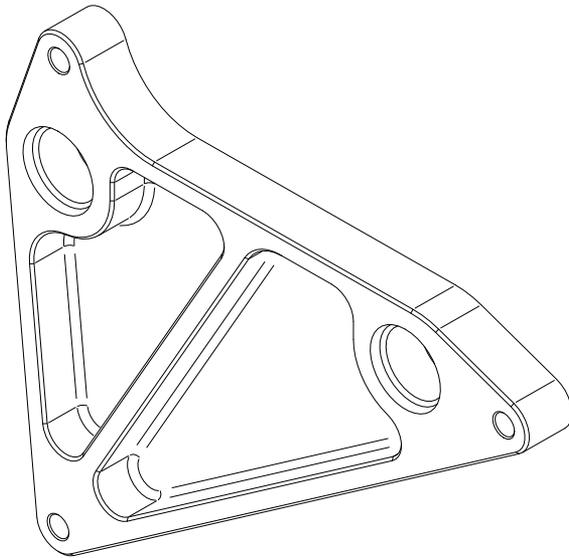




**2016+ Camaro SS/ZL1 & CTS-V Oil  
Cooler Adapter**

**PART NO. EGM-136**

MADE IN USA



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

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# APPLICATIONS

- 2016-2019 Cadillac CTS-V
- 2016+ Chevrolet Camaro V8
- All LT1 / LT4 crate engines with GM oil pan part number 12639931

# SCHEMATIC, PARTS LIST & HARDWARE

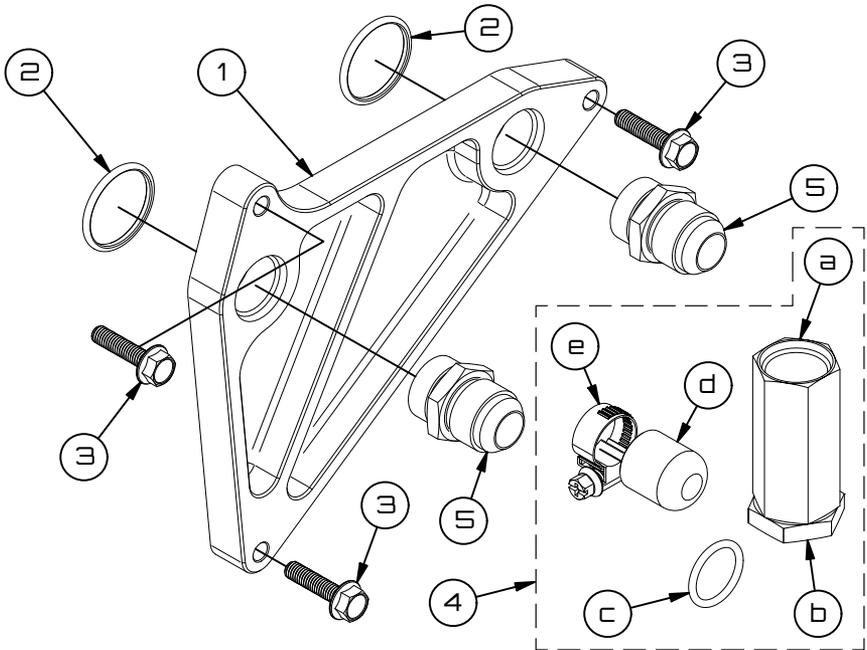


Figure 1 - EGM-136 Schematic

Item	Qty	Part Number	Description
1	1	EGM-136	Oil Pan Adapter
2	2	HRG-1023	Adapter to Oil Pan Viton O-ring
3	3	HSC-1056	Adapter Mounting Screw
4	1	E5G-680	Factory Oil Cooler Line Delete Kit
5	2	OM-10-XX	Optional Adapter Fittings

<b>E6G-680 Hardware Pack Contents</b>			
<b>Item</b>	<b>Qty</b>	<b>Part Number</b>	<b>Description</b>
<b>a</b>	1	FO-10	-10 SAE Straight Thread O-ring Port Union
<b>b</b>	1	PO-10	-10 SAE Straight Thread O-ring Port Plug
<b>c</b>	1	HRG-1010	Replacement O-ring for -10 SAE Fittings
<b>d</b>	1	HPL-1001	$\frac{5}{8}$ in ID Rubber Cap for Radiator Tee
<b>e</b>	1	HCP-1022	Smooth Band Stainless Steel Hose Clamp

## TECHNICAL SPECIFICATIONS

<b>Maximum Operating Temperature</b>	302°F (150°C)
<b>Minimum Operating Temperature</b>	-22°F (-30°C)
<b>Maximum Operating Pressure</b>	300 psi (20.68 bar)
<b>Dimensions (W x H x D)</b>	7.0 in x 6.1 in x 0.6 in (17.8 cm x 15.5 cm x 1.5 cm)
<b>Fitting Ports</b>	-10 SAE J1926-1 Straight Thread O-ring Port, $\frac{7}{8}$ -14 UNF
<b>Weight (Adapter Only)</b>	10.5 oz (298 g)
<b>EGM-136 Material</b>	CNC-Machined 6061-T6 Billet Aluminum
<b>EGM-136 Finish</b>	MIL-A-8625, Type II, Black Anodizing
<b>HSC-1056 Info</b>	JIS 10.9 Class Alloy Steel, M6x1.00x25, Zinc-Plated, 10 mm Wrench Flats
<b>HRG-1023 Info</b>	AS568 -121 Size, OD = 1.255 in, ID = 1.049 in, W = .103 in, Viton Rubber (75A)
<b>FO-10 Info</b>	-10 SAE J1926-1 Straight Thread O-ring Union, Cast Steel, Zinc-Plated, 1- $\frac{3}{16}$ Wrench Flats, $\frac{7}{8}$ -14 UNF
<b>PO-10 Info</b>	CNC-Machined 6061-T6 Billet Aluminum Fittings with Viton O-ring Installed, MIL-A-8625, Type II, Black Anodizing, 1- $\frac{3}{16}$ Wrench Flats, $\frac{7}{8}$ -14 UNF Thread
<b>HRG-1010 Info</b>	AS568 -910 Size, OD = 0.949 in, ID = 0.755 in, W = 0.097 in, Viton Rubber (75A)
<b>HPL-1001 Info</b>	Vinyl Rubber Cap (Dorman P/N: 493-100), ID = $\frac{5}{8}$ in
<b>HCP-1022 Info</b>	SAE #4 (DIN 3017) 430 Stainless Steel Smooth Band, Worm-Drive Hose Clamp, Wrench Flat = $\frac{9}{32}$ in (7 mm), MAX Torque = 20 lb-in (2.3 N-m)

## PREPARING FOR INSTALLATION

**⚠ 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.

**💡 Installation Tip:** Use aluminum tools to avoid damaging the fittings.

1. Raise the vehicle and support it with automotive-use approved 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 radiator.

3. Place a drain pan under the oil filter and remove the filter.

**⚠ Caution: Oil may be hot!**

4. Place a drain pan under the factory oil cooler and use a 10 mm tool to loosen the four M6 screws that secure the factory oil cooler to the oil pan. **DO NOT** remove the screws yet. Allow the oil to drain out.

5. Start at the factory oil cooler on the oil pan and trace the coolant lines to their connections on the vehicle's water pump and lower radiator hose.

6. Use a prying tool to remove the retaining ring from the water pump fitting.

7. Use channel-lock pliers to release the hose clamp on the tee fitting of the lower radiator hose and slide it down the hose.

8. Use a prying tool to remove the retaining rings from the fittings on the factory oil cooler as shown in Figure 2. Save one retaining ring for later.

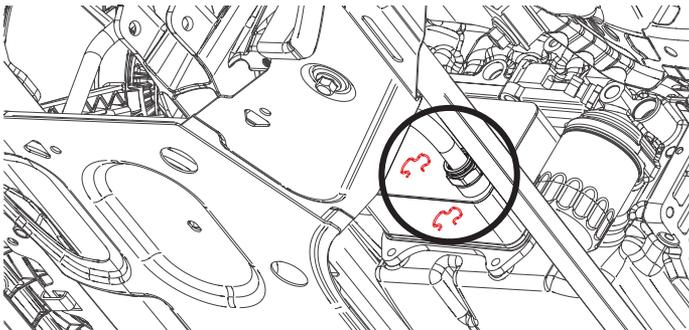


Figure 2 - Removing the Retaining Rings from the Oil Cooler Fittings

9. Place a drain pan underneath the oil cooler and remove both hard tubes from the oil cooler fittings and allow the coolant to drain.
10. Use a  $1\frac{1}{8}$  inch tool to remove one fitting from the oil cooler.
11. Use a 10 mm tool to remove the M6 screws that secure the factory oil cooler to the oil pan and remove the oil cooler.
12. Remove the used O-ring on the factory oil cooler fitting and replace it with the new HRG-1010 o-ring from the hardware kit, as shown in Figure 3.

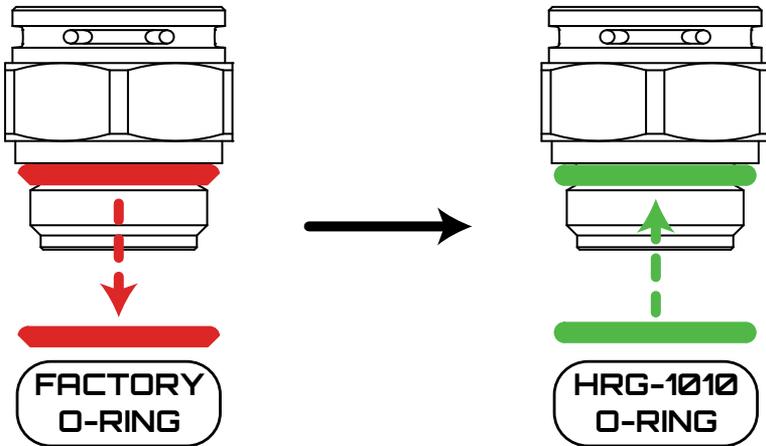


Figure 3 - Installing the HRG-1010 Replacement O-Ring on Factory Fitting

13. Assemble FO-10 and PO-10 from the E6G-680 Hardware Kit, as shown in Figure 4, then thread the factory fitting into FO-10. Torque all fittings to 20 lb-ft (27 N-m) using a vise and  $1\frac{1}{8}$  inch tool.

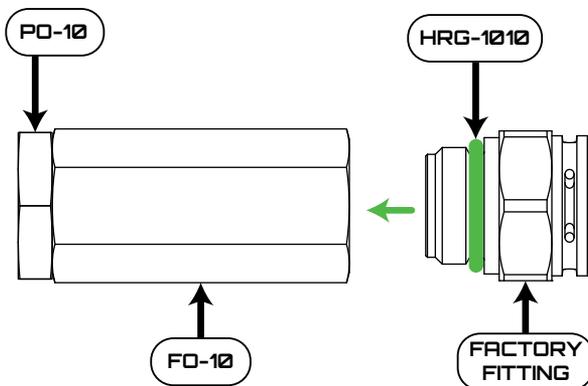


Figure 4 - Installing the Factory Fitting into FO-10

14. Remove the rigid coolant tube from the water pump barb and quickly cap the barb with the fittings assembled in Step 13 of this section.
15. Reinstall the saved retaining ring into the fitting to secure the cap to the water pump.
16. Remove the factory oil cooler line assembly from the lower radiator hose tee, followed by quickly capping the tee's barb with the supplied rubber cap and stainless steel hose clamp (Part Numbers HPL-1001 and HCP-1022 from the E6G-680 Hardware Kit).
17. Use a 7 mm ( $\frac{9}{32}$  inch) tool to secure the rubber cap onto the tee's barb permanently by tightening the stainless steel hose clamp to no more than 20 lb-in (2.3 N-m). DO NOT over-tighten.

## INSTALLING THE OIL COOLER ADAPTER

1. Ensure that two HRG-1023 O-rings are inserted into the glands of EGM-136 prior to installation.

 **Tip:** Refer to Figure 1.

2. Use a 10 mm tool to secure EGM-136 to the oil pan using the three HSC-1056 M6 flange screws. Torque to 11.8 lb-ft (16 N-m).
3. Install the adapter fittings into EGM-136. Torque to 20 lb-ft (27 N-m).

 **Tip:** Lubricate the adapter fitting O-rings with engine oil to prevent O-ring damage.

## COMPLETING THE INSTALLATION

1. Pre-fill and install a new engine oil filter after lubricating the seal with engine oil.
2. Secure the new oil cooler to the vehicle.

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

3. Measure and assemble the oil cooler system lines.
4. Apply some oil to the flare fittings and connect both system lines to EGM-136. Torque to 20 lb-ft (27 N-m).
5. Apply some oil to the lowest oil cooler fitting flare and connect the lowest line on the oil cooler first. Torque to 20 lb-ft (27 N-m).
6. Pre-fill the oil cooler with engine oil using a tube and funnel.
7. Apply some oil to the remaining flare fitting and connect the remaining oil line to the oil cooler and torque to 20 lb-ft (27 N-m).
8. Check the engine oil level and add oil if necessary.

9. Check the engine coolant level and add coolant if necessary.  
 **Tip:** Consult the vehicle's factory service manual for the correct inspection and filling procedures.
10. Remove the fuel pump fuse.  
 **Tip:** Consult the vehicle's factory service manual for the fuse location.
11. Crank the engine over for five seconds to build oil pressure, repeating this cycle three to five times.
12. Replace the fuse removed in Step 10.
13. Start the vehicle and inspect the system for leaks.
14. Turn off the vehicle, inspect the engine oil level and top-off when necessary.
15. Reinstall all underbody panels and lower the vehicle back onto the ground.
16. Reinspect for leaks after one heat cycle and re-tighten fittings if necessary.

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