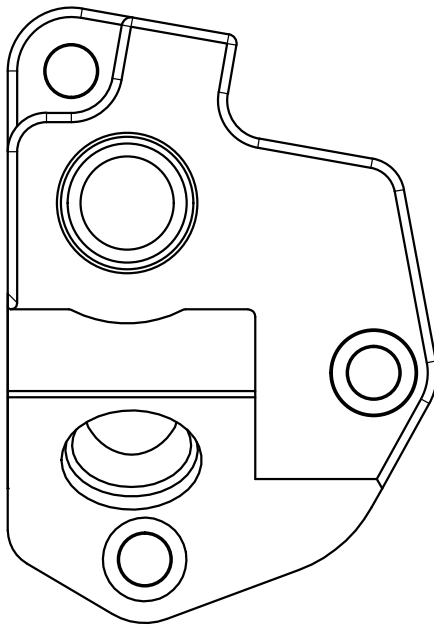




**REMOTE OIL FILTER & COOLER
ADAPTER, SUPERCHARGED 5.0L
FORD COYOTE V8**

PART NO. EFR-101

MADE IN USA



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

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APPLICATIONS

- All supercharged 2nd Generation and newer Ford Coyote V8 engines with oil sump drain-back port.
 - ⚠ **The supercharger kit must relocate the alternator for installation of EFR-101.**
- 💡 Detroit Speed's resto-mod alternator relocation bracket, part number 060436, has been reported to allow alternator clearance for non-supercharged vehicles to install EFR-101.

INSTALLATION NOTES

- EFR-101 requires using a remote oil filter and can be plumbed with or without an oil cooler.
- EFR-101 has one 1/4"-18 NPT port for the factory oil pressure sensor.
- EFR-101 has one 3/8"-18 NPT port for draining oil into the sump from accessories such as turbochargers and superchargers.





PARTS LIST

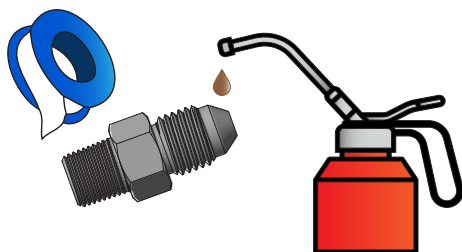
Item	Qty	Part Number	Description
1	1	EFR-101-01	Remote Oil Filter & Cooler Adapter
2	1	HRG-1019	AS568 -119 O-ring for Oil Port
3	1	HRG-1020	AS568 -131 O-ring for Oil & Drain Ports
4	3	HSC-1049	M8x1.25x16 Mounting Screws
5	1	PP-04S	1/4"-18 MNPT Plug, 1/4 Inch Drive
6	1	PP-06S	3/8"-18 MNPT Plug, 5/16 Inch Drive

TECHNICAL SPECIFICATIONS

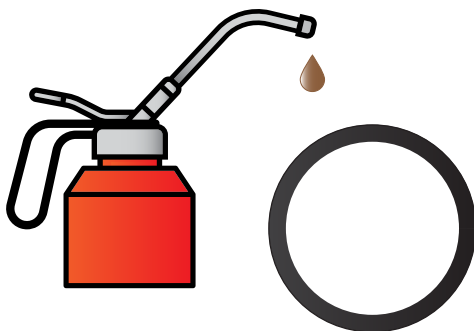
Maximum Operating Temperature	302°F (150°C)
Minimum Operating Temperature	-22°F (-30°C)
Maximum Operating Pressure	150 psi (10.3 bar)
Dimensions (W x H x D)	2.87" x 4.13" x 1.73" (7.3 cm x 10.5 cm x 4.13 cm)
Oil Fitting Ports	-10 SAE Straight Thread J1926-1 (ISO 11926-1) O-ring Port, 7/8-14 UNF - 2B
Sensor Fitting Port	1/4"-18 FNPT
Oil Drain Port	3/8"-18 FNPT
Weight (Adapter Only)	11.7 oz (333 g)
Housing Material	CNC-Machined 6061-T6 Billet Aluminum
Housing Finish	MIL-A-8625, Type II Anodize, Black
Mounting Hardware Info	ISO 4762, 12.9 Class Alloy Steel, Zinc-Plated, M8x1.25x16 Socket Screw, 6 mm Hex-Drive
Adapter O-ring (Oil Port)	AS568 -119 Size, OD = 1.130 inch, ID = 0.924 inch, W = 0.103 inch, Viton Rubber (75A)
Adapter O-ring (Drain Port)	AS568 -131 Size, OD = 1.880 inch, ID = 1.674 inch, W = 0.103 inch, Viton Rubber (75A)
1/4"-18 NPT Plug Info	SAE J531 Class 150 Galvanized Steel National Pipe Thread (NPT) Plug, with Acrylic Sealant, 5/16" Drive
3/8"-18 NPT Plug Info	SAE J531 Class 150 Galvanized Steel National Pipe Thread (NPT) Plug, with Acrylic Sealant, 1/4" Drive

BEFORE YOU BEGIN

-  **WARNING: NEVER work under a vehicle supported only by a jack.**
-  **WARNING: DO NOT CAP OFF THE OIL PORTS** after the adapter is installed. Running the engine with the ports capped will block oil flow and result in catastrophic engine damage. This product is designed to be used with remote oil filter systems only. **DO NOT loop the lines together, or the engine oil will not be filtered.**
-  **WARNING: This product should only be installed by a qualified mechanic.** Improper installation could result in severe engine damage.
-  Use aluminum tools to avoid damaging fittings.



- 💡 Wrap tapered pipe (NPT) threads with Teflon (PTFE) tape or paste to seal the threads.
- 💡 Lubricate all male fitting flares with oil to ensure the flare seats.



- 💡 Apply a drop of oil to every O-ring to prevent damage during installation.

REMOVING THE FACTORY OIL COOLER

1. Raise the vehicle and support with any automotive-use-approved frame stands, lift, or ramps.
 2. Remove any underbody panels necessary to access the oil filter.
 3. Place a drain pan under the filter, remove the oil filter and allow the oil to drain.
- ⚠️ **Oil may be hot!**
4. Place a large drain pan under the hose circuit with connections at the factory oil cooler and lower radiator hose.
 5. Use Figure 1 to help understand how to release and pull-off each quick connect fitting from the factory oil cooler and lower radiator hose.

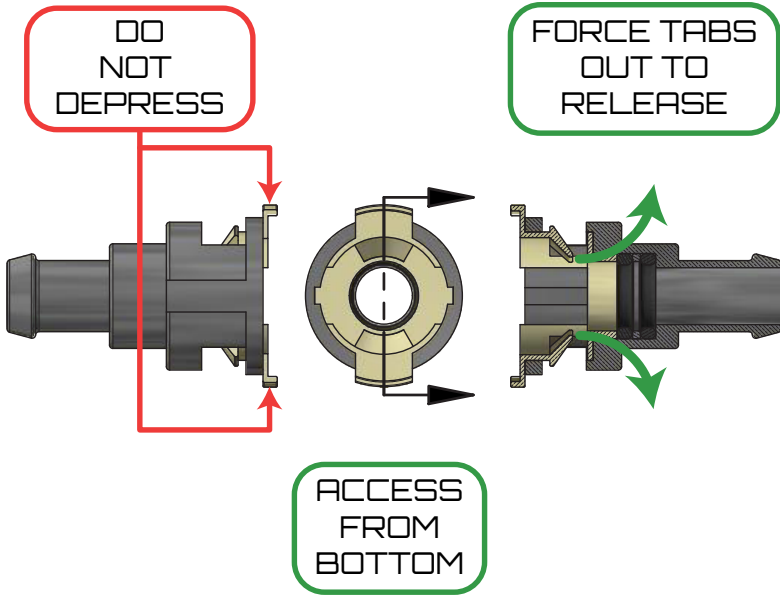


Figure 1 - Releasing the Quick Connect Fittings

6. Unplug the wire harness from the pressure sensor on the factory oil filter and coolant manifold.
7. Use a $\frac{13}{16}$ inch tool to remove the pressure sensor from the factory manifold.
8. Use a 10 mm tool to remove all three screws from the factory manifold, then carefully remove the oil filter manifold from the engine block.

⚠️ Do not damage the sealing surface.

💡 Have a rag handy to wipe up the additional oil that will drain.

9. Inspect the engine block's sealing surface for pitted or raised corrosion.

💡 Clean any corrosion or residual gasket material from the sealing surface with steel wool, wire brush, or scraping with a chisel / razor blade.

⚠️ The sealing surface must be clean and smooth for proper O-ring sealing.

INSTALLING THE IMPROVED RACING ADAPTER

1. Ensure that two O-rings are installed into the glands of EFR-101 prior to installation. HRG-1019 and HRG-1020 should be inserted into the glands as shown in Figure 2.

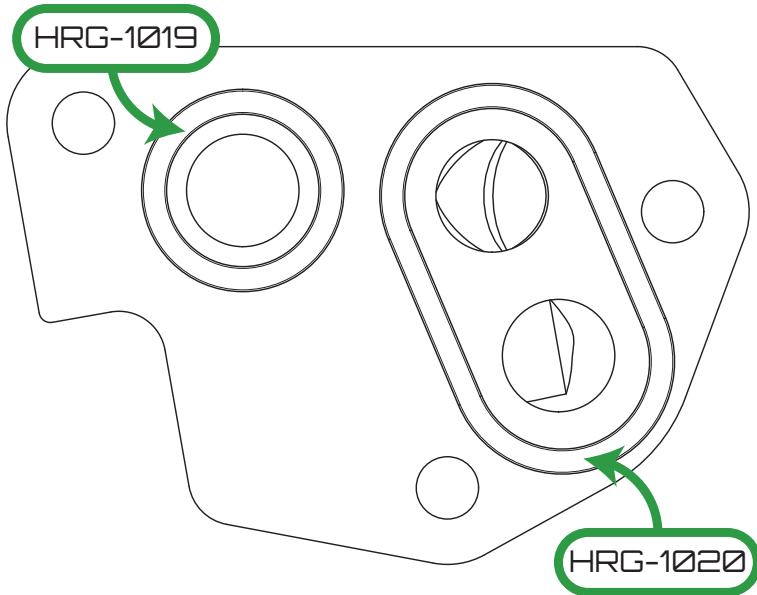


Figure 2 - HRG-1019 and HRG-1020 O-ring Glands

2. Install the factory pressure sensor into the FEED / SENSOR port, or install the provided $\frac{1}{4}$ "-18 NPT plug when not using the sensor.
 3. Install the provided $\frac{3}{8}$ "-18 NPT plug into the DRAIN port when no drain is being plumbed.
 4. Lubricate the fitting O-rings and install the adapter fittings into EFR-101. Torque the adapter fittings to 20 lb-ft (27 N-m).
 5. Using a 6 mm hex tool, carefully install EFR-101 onto the engine block using the all three HSC-1049 screws.
- ⚠ Use caution not to pinch or damage the O-rings.**
6. Torque all HSC-1049 screws to 18 lb-ft (24 N-m).
 7. Install the remaining plumbing components to complete the remote oil system.

Congratulations! Installation is complete!