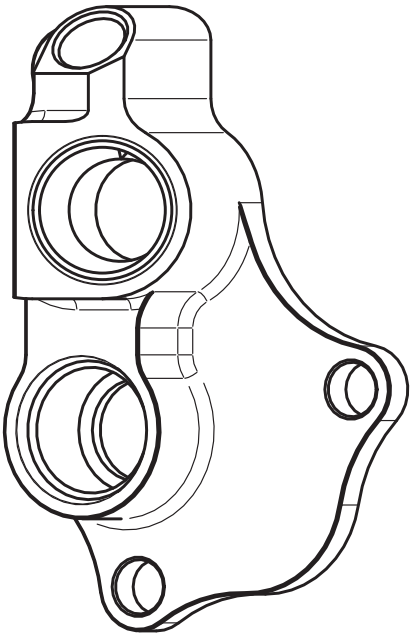
REMOTE OIL FILTER & COOLER ADAPTER, GEN 2 COYOTE V8

PART NO. EFR-104

MADE IN USA



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

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Rev 210121

APPLICATIONS

- 2015-2017 Ford F-150 V8.
  - ⚠ **Factory oil cooler delete required.**
  - ⚠ **Lower radiator hose modification or replacement required.**
- 2015-2017 Ford Mustang GT & GT350.
  - ⚠ **Factory oil cooler delete required.**
  - 💡 Use 2015+ 6th Gen Ford Mustang GT lower radiator replacement hose for oil cooler deletion, Improved Racing Part # RFR-802 (coming soon).

INSTALLATION NOTES

- EFR-104 requires using a remote oil filter.
- EFR-104 can be plumbed with or without an oil cooler after the filter.
- EFR-104 has one 1/4"-18 NPT port for the factory oil pressure sensor.

PARTS LIST

Item	Qty	Part Number	Description
1	1	EFR-104	Remote Oil Filter & Cooler Adapter
2	1	HRG-1019	AS568 -119 O-ring for Oil Port
3	1	HRG-10	AS568 -129 O-ring for Oil & Drain Port
4	3	HSC-1058	M8x1.25x20 Mounting Screws, 6mm Drive
5	1	PP-04S	1/4"-18 MNPT Plug, 1/4 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)	2.59" x 3.96" x 1.50" (6.6 cm x 10 cm x 3.81 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
Weight (Adapter Only)	4.3 oz (121 g)
Housing Material	CNC-Machined 6061-T6 Billet Aluminum
Housing Finish	MIL-A-8625, Type II Anodize, Black
Mounting Hardware	ISO 4762, 12.9 Class Alloy Steel, Zinc-Plated, M8x1.25x20 Socket Screw, 6 mm Hex-Drive
Adapter O-rings	AS568 -119 Size, Viton Rubber (75A) AS568 -129 Size, Viton Rubber (75A)
1/4"-18 NPT Plug	Zinc-Plated Steel, with Acrylic Sealant, 5/16" Drive

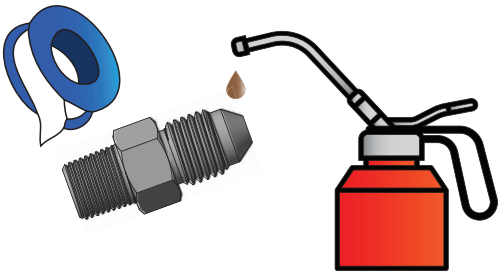
BEFORE YOU BEGIN

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.

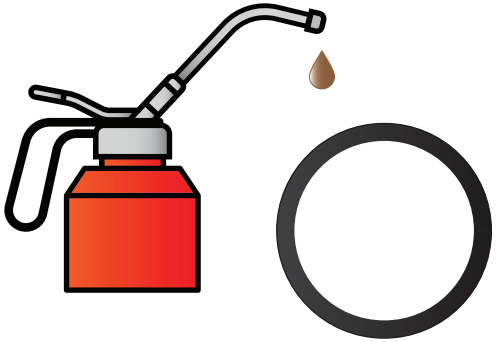
WARNING: This product should only be installed by a qualified mechanic. Improper installation could result in severe engine damage.

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 MANIFOLD, OIL COOLER AND REPLACING / MODIFYING HOSE

1. When necessary, 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 factory oil cooler and lower radiator hose.
5. Release the hose connections at the water pump and the lower radiator port and allow the radiator to drain.

Use plastic tools to release the hose from the barb fittings when stuck.

Ford radiator hoses use a quick release fitting that can be released with a flat screwdriver, or a standard spring clamp that can be released with channel-lock pliers.

6. If necessary, refer to Figure 1 to release and pull-off each quick connect fitting from the factory oil cooler and lower radiator hose.

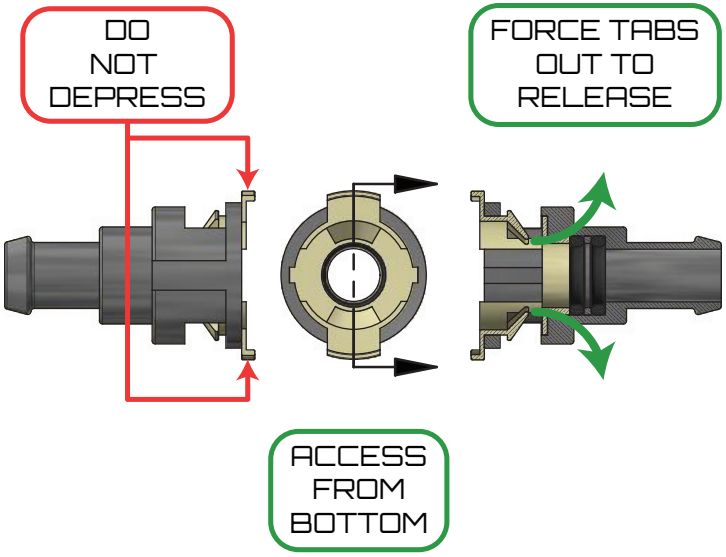


Figure 1 - Releasing the Quick Connect Fittings

7. Replace or modify the lower radiator hose according to the applications list shown on Page 1.
8. Unplug the wire harness from the pressure sensor on the factory oil filter and coolant manifold.
9. Use a $^{13}/_{16}$ inch tool to remove the pressure sensor from the factory manifold.
10. 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.

If necessary, remove the lower screw from the alternator and loosen the top screw, then swing the alternator away from the engine to remove the manifold.

Do not damage the sealing surface.

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

11. 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 the small O-ring is installed into the circle gland.
2. Ensure the large O-ring is installed into the larger oval gland.
3. Install the factory pressure sensor into the 1/4”-18 NPT port, or install the provided 1/4”-18 NPT plug when not using the sensor.
4. Lubricate the adapter fitting O-rings and install the adapter fittings into EFR-104.
5. Torque the adapter fittings to 20 lb-ft (27 N-m).
6. Using a 6 mm hex tool, carefully install EFR-104 onto the engine block using the all three HSC-1058 screws.

⚠ **Do not pinch or damage the O-rings.**

7. Torque all HSC-1058 screws to 18 lb-ft (24 N-m).
8. Install the remaining plumbing components to complete the remote oil filter and / or oil cooler system.
9. When complete, top off the coolant and engine oil levels.

Congratulations! Installation is complete!