

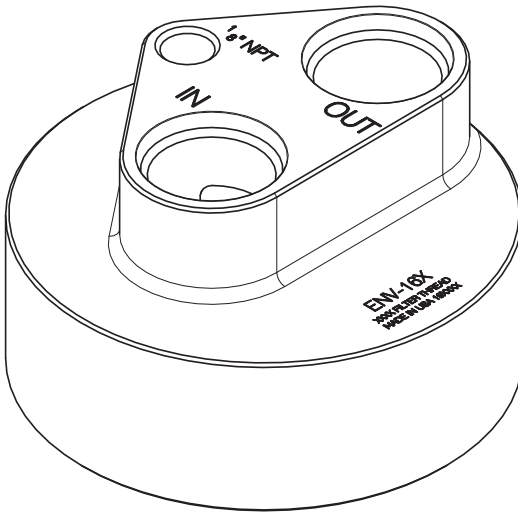
# **IMPROVED**

**R A C I N G** <sup>TM</sup>

## **BILLET REMOTE OIL FILTER ADAPTER PLATE**

**PART NOS. ENV-160, ENV-161,  
ENV-162, ENV-163**

**MADE IN USA**



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

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## TECHNICAL SPECIFICATIONS

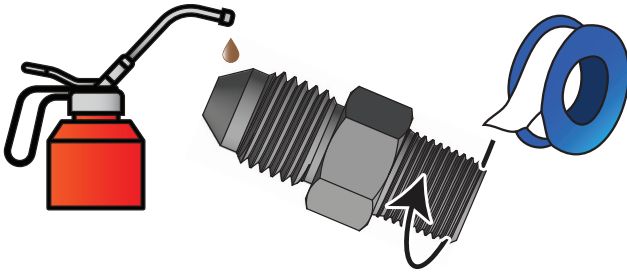
Material	CNC-Machined 6061-T6 Billet Aluminum
Finish	Anodized to MIL-A-8625, Type II, Black
Fitting Ports	-10 SAE J1926-1 Straight Thread O-ring Port, 7/8-14 UNF
Sensor Port Thread	1/8"-27 NPT
O-Ring Dash Size	AS568 -230, Square Cut
O-Ring O.D.	2.762" outer diameter
O-Ring I.D.	2.484" inner diameter
O-Ring Material	Viton Rubber (75A Duro)
Weight	11.0 oz (312 g)

## APPLICATIONS

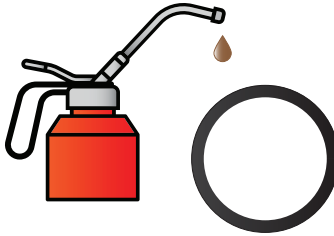
Part Number	Oil Filter Thread Specification
ENV-160	3/4-16 UN
ENV-161	M20x1.50
ENV-162	13/16-16 UN
ENV-163	M22x1.50

## BEFORE YOU BEGIN

-  **WARNING: DO NOT CAP OFF THE OIL PORTS.** 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.
-  **Tip:** Use aluminum tools to avoid damaging fittings.



- 💡 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.

# OIL LINE ROUTING AND FLOW DIAGRAMS

**⚠ WARNING: Pay close attention to the oil line routing. Incorrect line routing may impede oil flow to the engine.**

1. Note the port identification and directions of flow illustrated in Figure 1

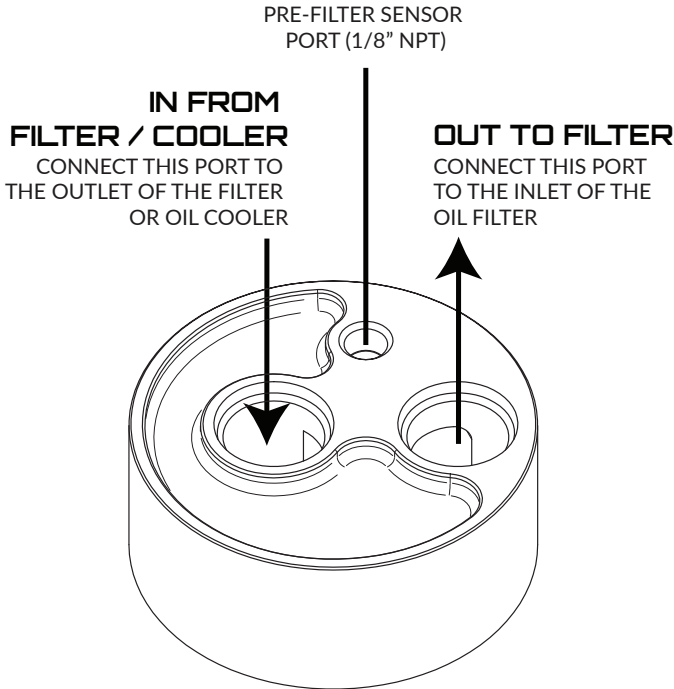


Figure 1 - Port Descriptions

2. Note the three example flow configurations illustrated in Figures 2 through 4. Other filter pedestals will have ports in different configurations. Be sure to carefully identify the IN and OUT ports on your remote filter pedestal to ensure correct line routing.

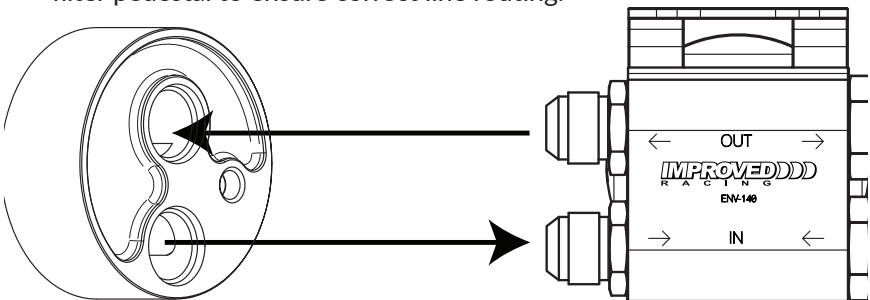


Figure 2 - Remote Oil Filter with No Oil Cooler

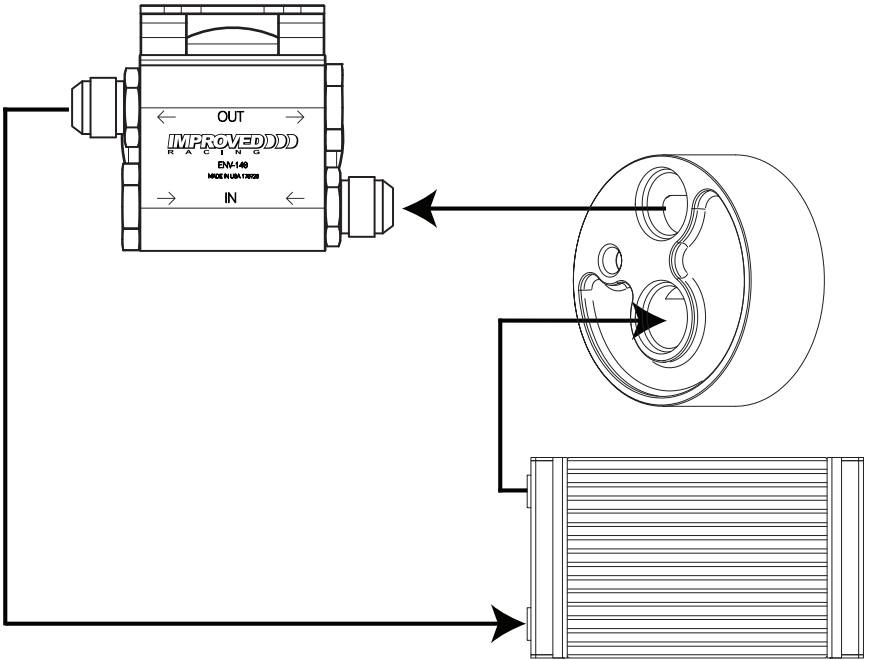


Figure 3 - Non-Thermostatic Remote Oil Filter Pedestal with Oil Cooler

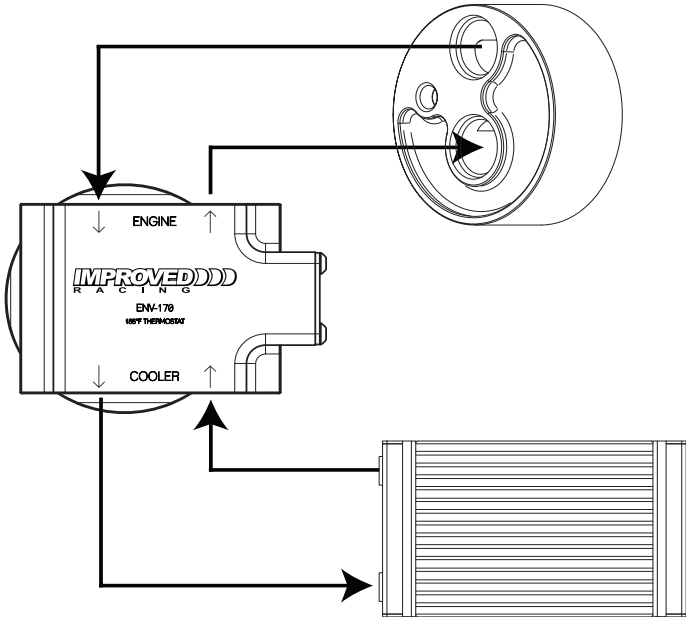



Figure 4 - Thermostatic Remote Oil Filter Pedestal with Oil Cooler


## INSTALLATION INSTRUCTIONS

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

1. Drain the engine oil and remove the oil filter.


 **Caution:** Oil may be hot!

2. Ensure the provided O-ring is properly seated in the gland of the oil filter adapter prior to installation.

 **Tip:** Lubricate the square O-ring with engine oil to protect the O-ring and create a reliable seal.

3. Screw-on the oil filter adapter by hand until snug.

4. If not installing a sensor, install the provided pre-sealed NPT plug using a 3/16" hex tool. **DO NOT** over-tighten.

 **Tip:** Follow the instructions provided with the sensor. Don't forget to use Teflon tape or thread sealant on NPT threads.

5. Install the oil line fittings onto the oil filter adapter.


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

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

6. Connect the oil lines to the filter adapter and remote oil filter pedestal. Refer to the port descriptions in Figure 1 and the routing diagram in Figure 2. Torque the fittings to 20 lb-ft (40 N-m).

 **WARNING:** Ensure that the oil entering the IN port is filtered oil only.

## INSTALLING THE OIL COOLER (OPTIONAL)

 **Tip:** Plan for pre-filling the heat exchanger by leaving the port which is highest from ground level open so that oil can be funneled into the heat exchanger.

1. If necessary, assemble the oil lines that will connect the oil cooler to the remote oil filter pedestal and/or the oil filter adapter plate.

2. Connect the lowest oil cooler port to the OUT TO COOLER port of the oil filter pedestal. Torque the fittings to no more than 20 lb-ft (27 N-m).

3. Connect the second oil line to the IN FROM COOLER port on the oil filter pedestal (for thermostatic filter pedestals) or the IN FROM COOLER port on the filter adapter plate (for non-thermostatic filter pedestals). Leave the other end of the line disconnected from the oil cooler so that the cooler can be pre-filled. Refer to the port descriptions in Figure 1 and the routing diagram in Figures 3 and 4. Torque the fittings to 20 lb-ft (40 N-m).

4. Pre-fill the oil cooler with engine oil using a tube and funnel.
5. Connect the remaining oil line to the cooler. Tighten the fitting to no more than 20 lb-ft (27 N-m).
6. Secure the oil cooler to the vehicle.



**Tip:** Ensure the heat exchanger is isolated from vibration.

## COMPLETING THE INSTALLATION

1. Check the engine oil level and add oil if necessary.
2. Remove the fuel pump fuse.



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

3. Crank the engine over for five seconds to build oil pressure. Repeat this cycle three to five times.
4. Reinstall the fuel pump fuse.
5. Start the vehicle and inspect for leaks.



**IMPORTANT:** Check that the engine has oil pressure immediately after startup. If the oil pressure is abnormal or if the engine makes excessive noise that does not subside within 3-5 seconds, turn off the engine immediately and check the oil line connections for routing for errors or for a kinked oil line.

6. Turn-off the vehicle, inspect the engine oil level and add oil as needed.
7. Reinstall all underbody panels and lower the vehicle back onto the ground.
8. Inspect lines and fittings for leaks after one heat cycle. If any leaks are detected, re-tighten the fittings until the leak is eliminated.

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