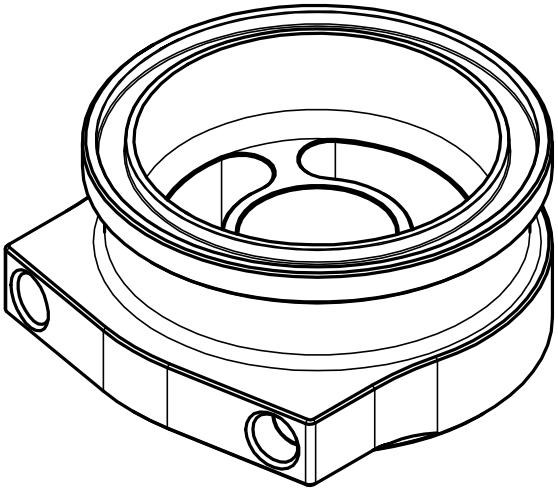
OIL FILTER SPACER WITH SENSOR PORTS

PART NO. ENV-117

MADE IN USA



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

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APPLICATIONS

- All vehicles and craft using canister style oil filters with gaskets matching the gasket dimensions shown in Figure 1.
- Specific solution for FA20 and FA24 engines wanting to install oil cooler take off adapters and oil filter sandwich adapters.

Subaru Part # 15018AA090 is required when deleting the factory water-to-oil cooler on some FA20 and FA24 engines.

PARTS LIST & HARDWARE

Item	Qty	Part Number	Description
1	1	ENV-117-01	Spacer & Sensor Adapter
2	1	HRG-1022	O-ring for ENV-117
3	2	PP-02S	Pre-Sealed $^1/_8$"-27 NPT Plug
3	1	HSC-104X	Adapter Screw (Select Size Matching Filter Thread)

TECHNICAL SPECIFICATIONS

Max. Operating Temp.	400°F (204°C)
Min. Operating Temp.	-22°F (-30°C)
Max. Operating Pressure	Refer to oil filter specs: ENV-117 is not the limiting part.
Dimensions (W x H x D)	Refer to Figure 1
Assembly Weight	10 oz (284 g)
Housing Material	CNC-Milled 6061-T6 Billet Aluminum
Housing Finish	MIL-A-8625, Type II Anodizing, Black
Seals	Viton (FKM) Elastomer
Filter Screw Material	CNC-Milled 410 Stainless Steel
Sensor Ports	2 ports: $^1/_8$"-27 NPT
Sensor Port Plugs	Zinc-Plated Steel, Acrylic Sealant
Max. Sensor Length	Max. Length After Thread = 1-$^1/_2$" (38.1 mm)

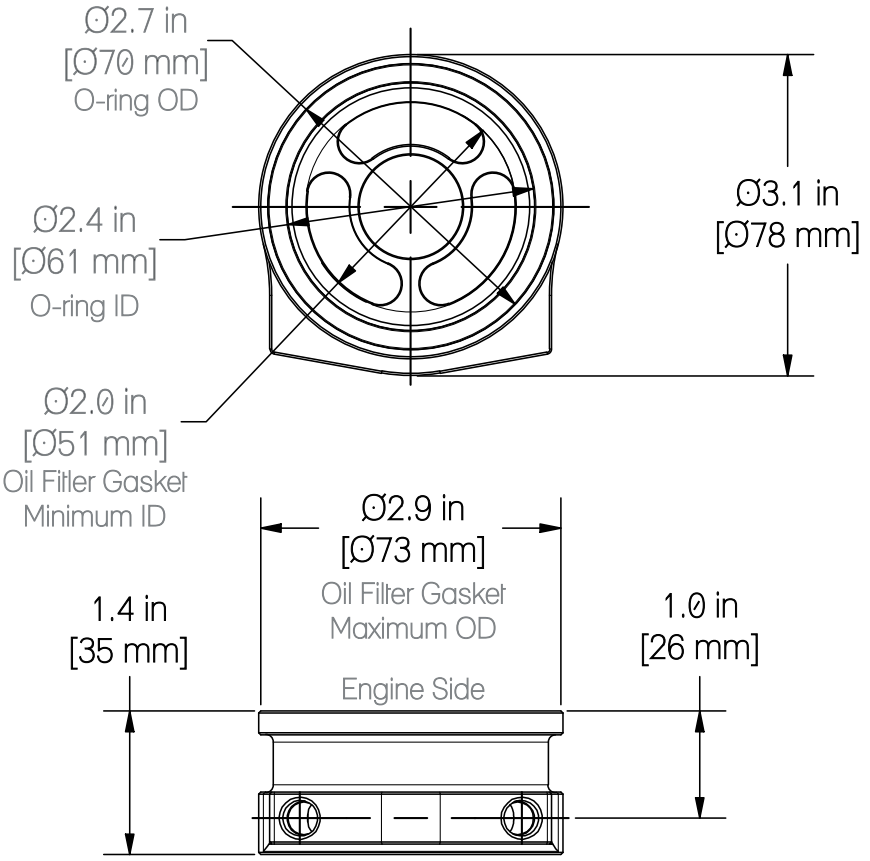


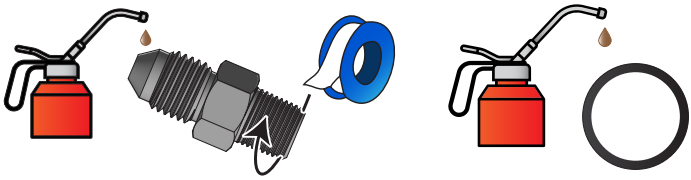
Figure 1 - ENV-117 Dimensions

BEFORE YOU BEGIN

⚠ **WARNING: Before installation, verify ENV-117 fits your engine and oil filter dimensions by referencing the dimensions shown Figure 1.**

⚠ **WARNING: Oil will leak when the O-ring on ENV-117 is not fully compressed. Ensure ENV-117 is torqued to the specification in this manual.**

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



- 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.

INSTALLATION INSTRUCTIONS

1. Drain the engine oil filter 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 spacer prior to installation.
3. Install the oil filter thread adapter by hand until snug.
4. Position the sensor ports for your installation.
5. Use a 1-$^{1}/_{8}$" tool to torque the oil filter screw to 10.4 lb-ft (14 N-m).
6. When not installing a sensor, install the provided pre-sealed NPT plugs using a $^{3}/_{16}$" hex tool.

DO NOT over-tighten.

7. Pre-fill a new oil filter, lubricate the seal and install the oil filter according to the proper manufacturer specification.

Never overtighten an oil filter.

8. Prime the oiling system before starting the engine.
9. Start the engine and inspect for leaks.
10. Turn off the engine and top-off the engine oil level if needed.

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