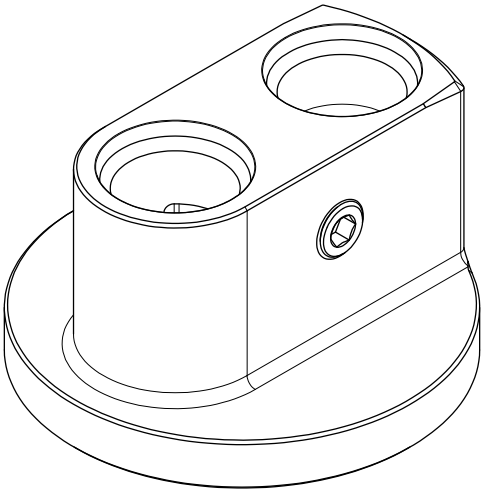
UNIVERSAL FILTER RELOCATION ADAPTER

PART NO. ENV-164-F_

MADE IN USA



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

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Rev 230407

APPLICATIONS

- Relocating remote filters for fluids like engine oil, fuel, coolant, etc.

PART NUMBERS & THREAD SIZES

Part Number	Oil Filter Thread Size
ENV-164-F1	3/4"-16 UNF -2B (Silver, Part No. HNT-5000)
ENV-164-F2	M20x1.5 - 6H (Red, Part No. HNT-5001)
ENV-164-F3	13/16"-16 UN - 2B (Black, Part No. HNT-5002)
ENV-164-F4	M22x1.5 - 6H (Blue, Part No. HNT-5003)

PARTS LIST

Item	Qty	Part Number	Description
1	1	ENV-164-01-C	Filter Adapter
2	1	HNT-500X	Filter Thread Adapter
3	1	HRG-1022	O-ring for ENV-164
4	2	PP-02S	1/8" NPT Plug
5	1	HCM-1271	Red Thread Lock Vial

TECHNICAL SPECIFICATIONS

Max. Operating Temp.	302°F (150°C)
Min. Operating Temp.	-22°F (-30°C)
Max. Operating Pressure	300 psi (20.68 bar)
Dimensions (W x H x D)	Refer to Figure 1
Weight	6 oz (170 g)
Adapter Material	CNC-Machined 6061-T6 Billet Aluminum
Finish	MIL-A-8625 Type II Anodize, Black
Connections	-10 SAE ORB, 7/8"-14 UNF - 2A
Sensor Ports	1/8"-27 FNPT
O-ring	AS568 -230 Size, Square, Viton (FKM) Elastomer
Filter Screw Material	CNC-Machined 7075-T6 Billet Aluminum
Filter Screw Finish	MIL-A-8625, Type II Anodize, Color Varies
Sensor Port Plugs	Zinc-Plated Steel, Pre-Sealed, 3/16" Driver Size
Thread Lock	Loctite 263 Equivalent, Anaerobic Cure, Permanent

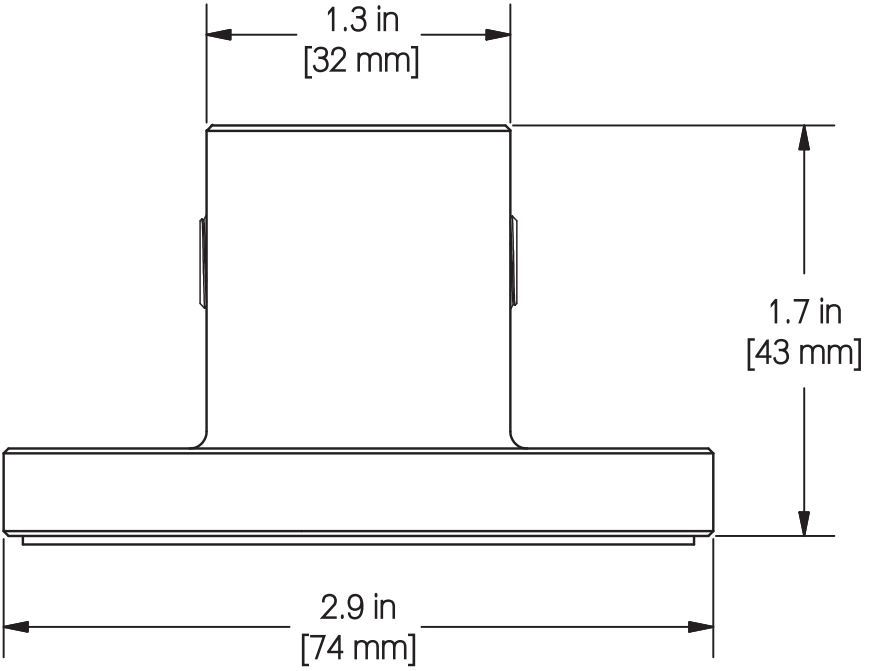


Figure 1 - Dimensions

INSTALLATION INSTRUCTIONS

BEFORE YOU BEGIN

WARNING: NEVER work under a vehicle supported only by a jack.

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

WARNING: NEVER PLUG THE IN AND OUT PORTS ON ENV-164. Plugging the ports blocks fluid flow and will damage the system.

WARNING: ENV-164 must be used with a remote filter.

Refer to Figure 2 and confirm all system lines are correctly plumbed.

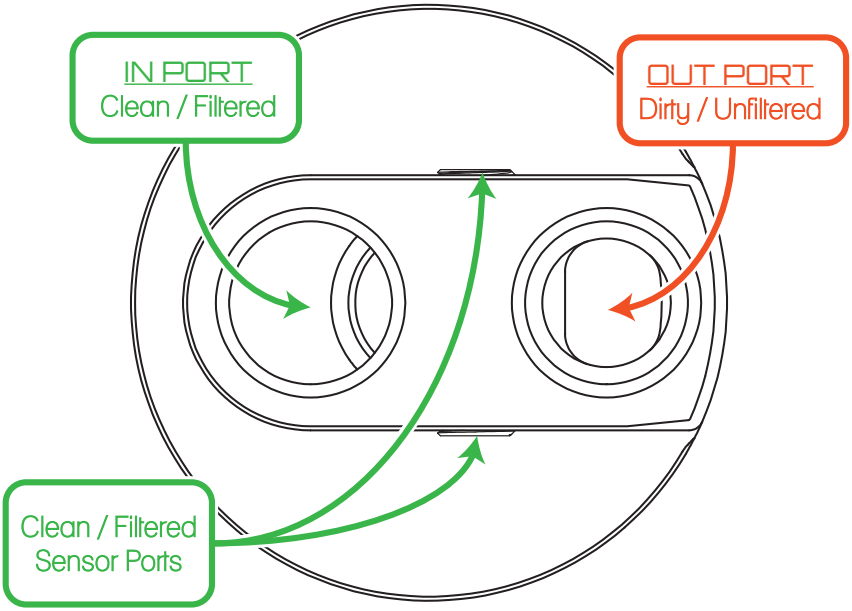
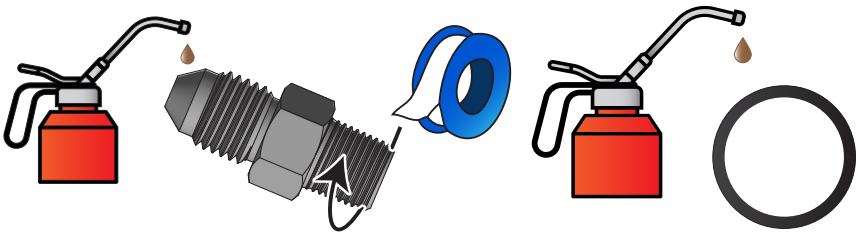


Figure 2 - ENV-164 Port Plumbing

- Lubricate threads and flares on fittings for a reliable seal.
- Refer to the torque specifications on page 6 for proper hose-end-to-adapter-fitting tightening.
- Wrap tapered pipe threads (NPT) with Teflon (PTFE) tape or apply thread sealant to the threads.
- Lubricate every O-ring to prevent damage and ensure a leak-free seal.
- **Never secure hoses to moving components.**
- Use zip-ties and P-clamps to stop oil lines from rubbing against the exhaust, engine, suspension components and chassis.
- Use aluminum tools to avoid damaging fittings.



INSTALLING THE FILTER THREAD ADAPTER

1. Clean HNT-500X with isopropyl alcohol.
2. Clean the threads inside ENV-164 with isopropyl alcohol.
3. Apply the included thread locker onto HNT-500X as Figure 3 shows.

Confirm 1-2 threads are completely covered around HNT-500X.

4. Insert HNT-500X into ENV-164 and finger-tighten until the thread adapter is flush with ENV-164.

The full-cure time is 24 hours, and the setup time is 10 minutes.

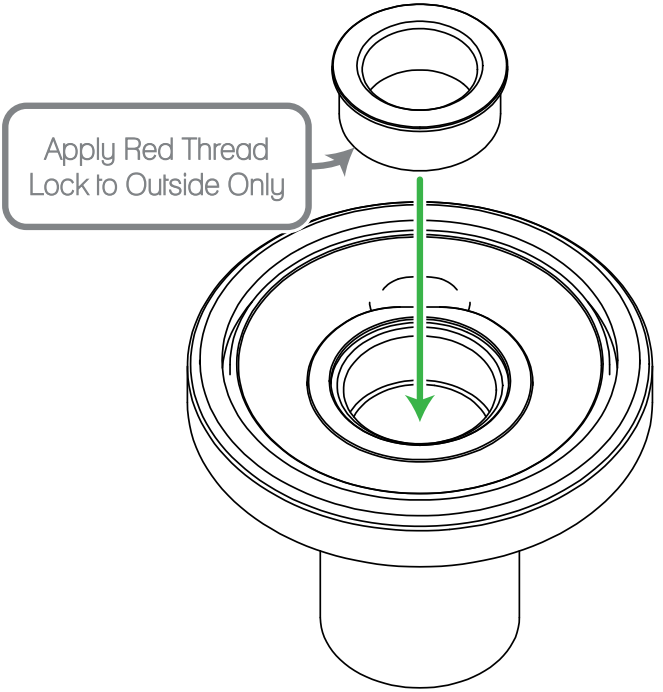


Figure 3 - Installing the Oil Filter Screw Adapter

REMOVE THE ORIGINAL SYSTEM FILTER

1. Place a drain pan under the filter and remove the filter.

Caution: Fluid may be hot!

Allow all fluid to drain after removing the filter.

INSTALLING ENV-164

1. Confirm the O-ring is installed.
2. Clean the sealing surface.
3. Use a $^{3}/_{16}$" hex tool to install the sensor port plugs if not using a sensor.
4. Install ENV-164 in place of the original filter and tighten.

Use an adjustable wrench for final tightening, but do not overtighten.

5. Confirm ENV-164 is completely flush with the sealing surface.

The O-ring should not be visible when properly tightened.

6. Install the adapter fittings into IN and OUT ports.
7. Torque the adapter fittings to 33 lb-ft (45 N-m).

COMPLETING THE INSTALLATION

1. Connect and tighten the system lines. AN fittings may be hand-tightened plus an additional 1/6 turn (one wrench flat), or follow the torque values below:
   a. -6 Lines = 13 to 16 lb-ft (18 to 22 N-m).
   b. -8 Lines = 23 to 29 lb-ft (31 to 40 N-m).
   c. -10 Lines = 30 to 35 lb-ft (41 to 48 N-m).
   d. -12 Lines = 34 to 45 lb-ft (46 to 62 N-m).
   e. Worm Screw Hose Clamps = 25 in-lb (or tight to feel).
2. Check the engine oil level and add oil if necessary.
3. Prime the system when applicable.
4. Start the engine and check for oil leaks.

Confirm oil pressure is stable and reading the correct value.

5. Confirm the fluid levels and top off if needed.
6. Inspect all parts for loosening or leaks after one heat cycle and 100 miles of driving.

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