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External Oil Filter with Coolant Filter Kit



PACKING LIST:

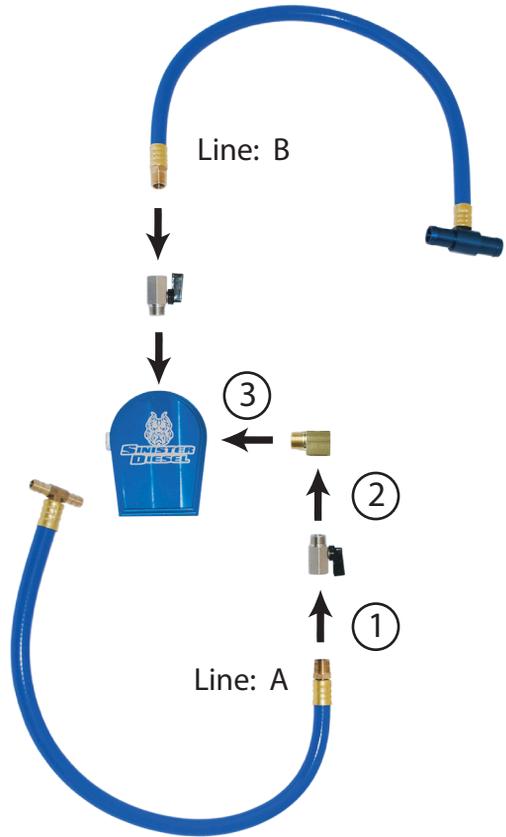
<u>QTY.</u>	<u>Description</u>
1	Oil Filter
1	Coolant Filter
4	Small Brass 90° Fitting
1	Large Brass 90° Fitting
4	3/8 - 16 Bolts/Lock Washers
2	Large Hose Clamps
2	Small Hose Clamps
2	Ball Valves
1	Plastic Hose Clamp with Retaining Clip
1	Oil Fill Cap with Fitting Insert
1	Oil Filter Cap
1	Coolant Line with Blue "T"
1	Coolant Line with Brass "T"
2	Stainless Steel Braided Oil Lines
1	Coolant Filter Block (Small Block)
1	Oil Filter Block (Large Block)
1	Mounting Bracket
1	Thread Seal Tape

Note: Prior to installation, please compare the parts that you have received with the bill of materials provided on this page to assure that you have all the parts necessary for the installation.

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The thread seal tape should be wrapped clock-wise when looking at the fitting from this angle.



COOLANT LINE ASSEMBLY DIAGRAM:

Apply the supplied thread seal tape to all of the threaded coolant line fittings.

NOTE: If any of the fittings that utilize thread seal tape are backed out or removed, make sure to remove all remnants of tape and apply new thread seal tape.

- (1) Attach the ball valves to the coolant lines.
- (2) Thread ball valve into the 90° street fitting.
- (3) Thread 90° street fitting, with ball valve and coolant line "A" already attached, into the port on the right side of the block.
- (4) Thread the ball valve, with line "B" already attached, into the top port of the block.

Note: Tighten fittings so that handles on the ball valves are facing to the right, when looking at the top of the block (see diagram above). If the fittings have to be backed out for any reason, completely remove the fittings and start over.



CAUTION!!! Never work on a hot vehicle. Serious injury in the form of burns can result if the vehicle has been in use. Allow vehicle time to cool prior to installation. Always wear eye protection when working on or under any vehicle.

Note: If coolant filtration system was previously installed remove the coolant filter block from the original mounting point and skip steps six through eight.

Step 1: Disconnect batteries.

Step 2: Drain engine oil and coolant.

Step 3: Assemble coolant filter block with all valves and lines according to the coolant line assembly diagram.

Step 4: Apply thread seal tape to the 90° fittings and thread into oil filter block. (Image 1)

Step 5: Attach both assembled blocks to bracket. (Image 2)

Step 6: Remove the passenger side alternator bolts and install bracket (with assembled blocks). Snug bolts, but do not fully tighten at this time. (Image 3)



Image 1

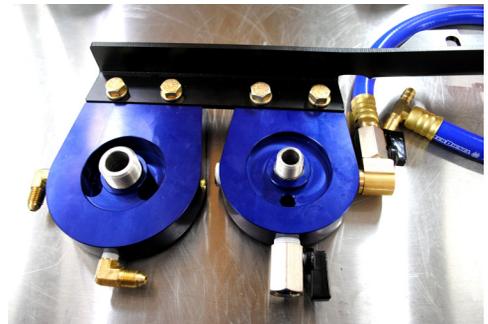


Image 2

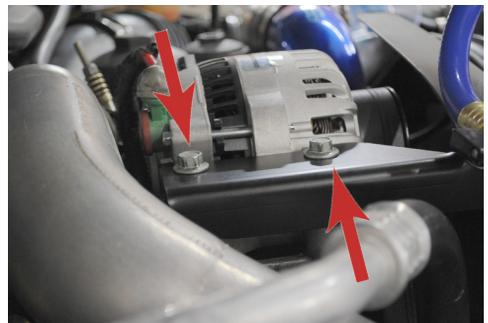


Image 3

Step 7: Route the hose from the side of the coolant filter block across the radiator shroud. Splice the brass "T" into the coolant overflow line that is going into the degas (overflow) bottle and secure with provided small clamps. (Image 4)



Image 4

Step 8: Secure coolant line to radiator shroud by drilling 1/4" hole in the shroud and using plastic hose clamp with retaining clip. (Image 5)



Image 5

Step 9: Route hose from top of the coolant filter block over aluminum charge pipe and around the engine oil fill tube. Splice aluminum "T" into heater core line and secure with provided large hose clamps. If vehicle is equipped with rear air/heat (i.e. valve in heater hose) tee into the motor side of the valve. (Image 6)



Image 6

Step 10: Using a 36mm or crescent wrench remove the OEM filter cap and filter. (Image 7)



Image 7

Step 11: Apply thread seal tape to the two remaining 90° fittings (refer to image 1). Install one 90° fitting into the oil filler cap and the other 90° fitting into the oil filter cap.

Step 12: Remove OEM oil filler cap and replace with new Sinister oil filler cap.

Step 13: Before installing the new oil filter cap, ensure the O-ring is properly seated in the correct O-ring groove. *(Image 8)*

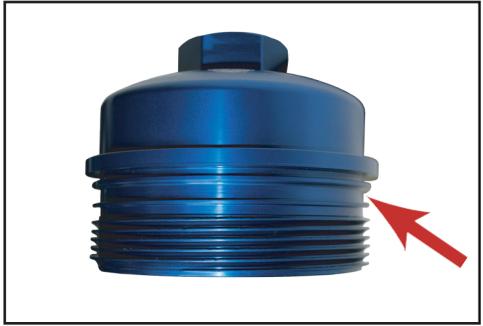


Image 8

Step 14: Snap either a new oil filter or the old filter securely into place in the new Sinister oil cap. Using new engine oil lubricate O-ring and install new oil cap and filter assembly. *(Image 9)*



Image 9

Step 15: Using a 9/16" wrench, attach the long stainless steel oil line to the 90° fitting that is threaded into the "in" (side) port on the oil filter block. Route the oil line to the oil filter cap. Using the same wrench, attach the oil line to the 90° fitting that is threaded into the oil filter cap. *(Image 10)*



Image 10

Step 16: Using a 9/16" wrench, attach the short stainless steel oil line to the 90° that is threaded into the "out" (top) port on the oil filter block. Route the short oil line to the oil filter cap. Using the same wrench, attach the oil line to the 90° fitting that is threaded into the oil filter cap. *(Image 11)*



Image 11

Note: DO NOT use thread sealing tape on the (4) AN fittings that the stainless steel oil lines attach to.

Step 17: Use zip ties to secure stainless steel oil lines together and away from engine components. (Image 12)



Image 12

Note: Before installing the coolant filter or the oil filter, make sure to lubricate the O-rings with the corresponding fluids that will be put into the vehicle. Doing so will ensure a tight seal. If this is not done, the filters will have a high risk of leaking.



Image 13

Step 18: With everything in place and secure, fully tighten alternator bolts.

Step 19: Install the coolant filter and the oil filter. Fill the systems per Ford factory specifications. (Image 13)



Image 14

Step 20: Re-connect the batteries and start the vehicle. After letting the truck run for a few minutes, shut the engine off and inspect for any leaks. Check the oil and coolant level and add fluids accordingly. (Image 14)

Maintenance:

- Regularly check and change both filters.
- Regularly check for leaks and tighten any loose bolts or clamps.
- When changing the OEM oil filter, the stainless steel oil line must be removed from the oil filter cap prior to removing.

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