INSTALLATION GUIDE

Coolant Filter Kit

2011-2016 Ford 6.7L Powerstroke

(Install time 1-3 hours)





DISCLAIMER

1) By installing this product onto your vehicle, you assume all risk and liability associated with its use.

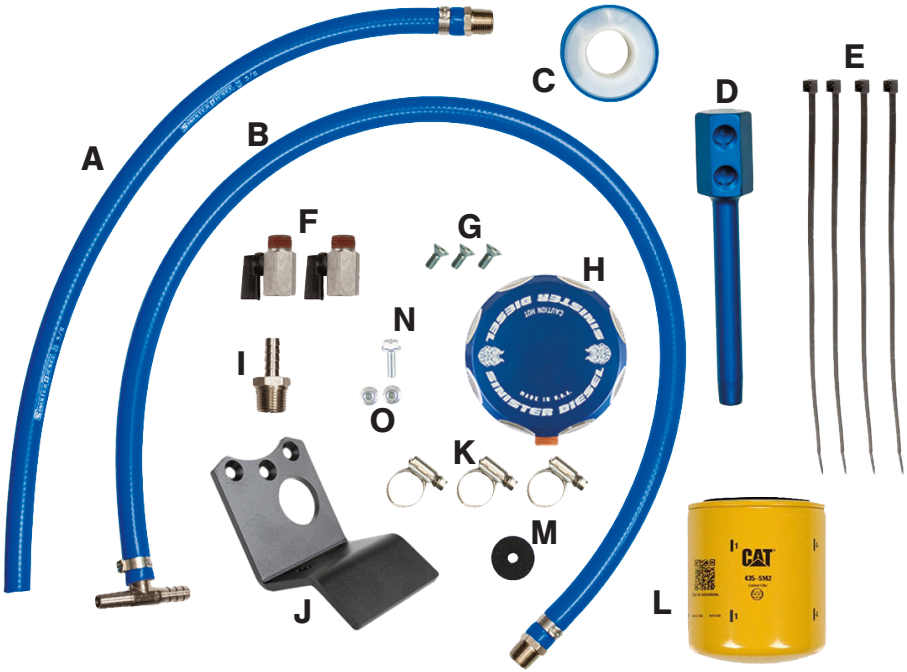
2) It is your responsibility to make sure your vehicle complies with all federal, state, and local emissions laws. Federal and many state and local laws prohibit the removal, modification or rendering inoperative of any part of the design affecting emissions or safety on motor vehicles used on a public street or highway. Violation may result in a fine of up to $32,500 per vehicle (or possibly higher depending on changes in the law). All civil penalties and fines for removing your vehicle's emissions equipment are the sole responsibility of the end user.

3) Due to its high performance nature, this product may void vehicle manufacturer's warranty.

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5) Depending on where you live, restrictions may apply. Check all applicable laws before installing or using!

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PART:	DESCRIPTION:	QTY:
A	15” Coolant Line w/ straight fitting	1
B	24” Coolant Line w/ T fitting	1
C	Roll Thread Seal Tape	1
D	Coolant Riser Manifold	1
E	Zip Ties	4
F	3/8 NPT Ball Valves	2
G	5/8 flat head bolts (1/4-20)	3
H	Coolant Filter Block	1
I	3/8 NPT straight fitting	1
J	Mounting Bracket	1
K	#5 Hose Clamps	3
L	CAT Filter	1
M	Large Washer	1
N	M6 Flange Bolt	1
O	M6 Flange Nut	1

IMPORTANT: READ ALL INSTRUCTIONS PRIOR TO INSTALL. Prior to installation, please compare the parts that you have received with the bill of materials provided on this page to ensure that you have all the parts necessary for the installation.

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 to cool prior to installation. Always wear eye protection when working on or under any vehicle.**

IMPORTANT: Installation of the Sinister Diesel Coolant Filter Kit requires cutting of the coolant lines, resulting in coolant loss. Due to the coolant loss, we suggest draining and flushing the entire system at this time.

1 On the driver's side bottom of the radiator open the petcock valve and drain the engine coolant system. There are about 7 gallons of fluid in the system. Squeeze the upper radiator hose to evacuate coolant from the upper part of the cooling system (Image 1)

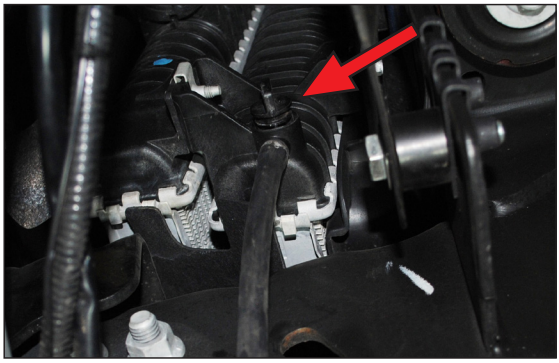
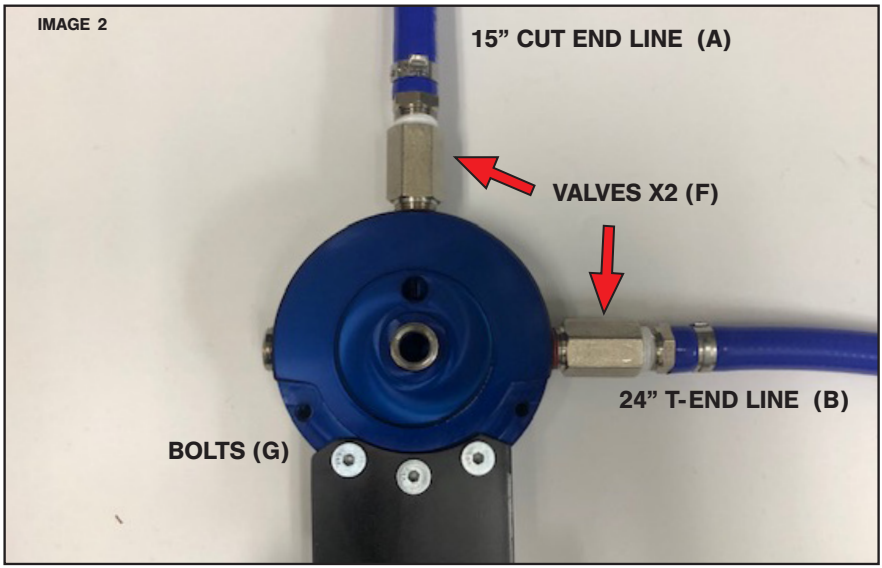


IMAGE 1

Note: Placing ¼" hose onto the petcock valve will help keep the coolant from splashing.

2 Using thread seal tape on any bare threads, assemble coolant block as shown in IMAGE 2. Ball valve handles should be on top for easy access. On all fittings, make sure to tighten into place only, backing off the tension can cause leaks.



3 Remove ground strap from top using 5/16 socket or nut driver (Circled in image 3). Remove metal retainer clip from right hand stud in firewall (indicated by arrow in image 3). Use caution, it can be sharp.



IMAGE 3

4 Install pre-assembled filter head and bracket to the stud in the firewall, put hole in bracket around ground plate. Put M6 flange nut (O) (Circled in image 4) on the stud and hand tighten. Put M6 Flange Bolt (N) through large 3/16" washer (M) and install over hole in bracket upwards through the threaded hole used to retain the ground wire (indicated by arrow in image 4).

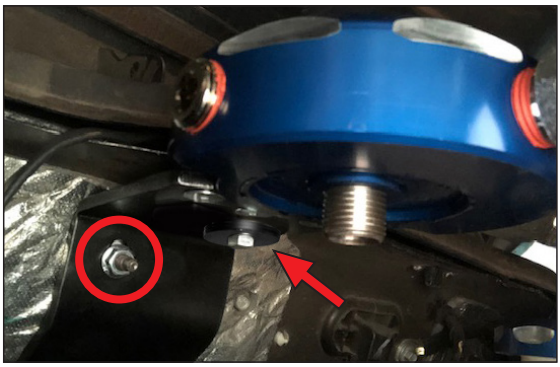


IMAGE 4

5 Run the ground wire under the plastic hood channel to the exposed threads & replace nut.(indicated by arrow in image 5). Now tighten M6 Nut on firewall, M6 Bolt from the bottom and the nut retaining ground.



IMAGE 5

6 Remove the temperature sensor wire, pull up on the plastic retainer clip with a 90-degree pick or similar tool then depress the top on the temperature sensor and pull upward. Once wire is disconnected remove temperature sensor with a 19mm socket and extension.

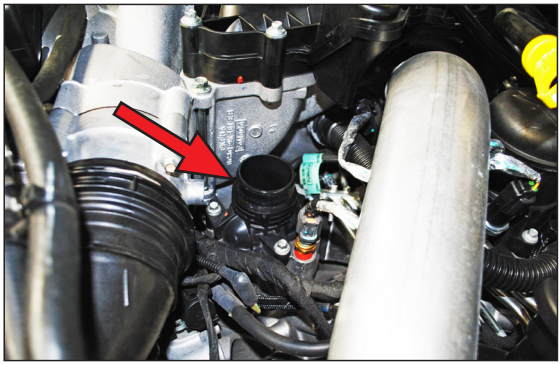


IMAGE 6

Note: Some may find it easier to remove the upper coolant line to gain access (see step 7) When possible it's easier not to; as a substantial amount of coolant will leak out.

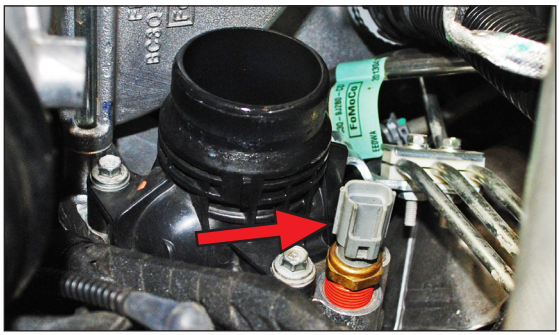


IMAGE 7

7 Using a 90-degree pick, release the retainer clip on the motor side of the upper radiator hose. The clip will not come completely off, disconnect the hose from the motor. The image shows the hose disconnected from the fitting. (Image 7)



IMAGE 8

8 Apply thread seal tape to the coolant riser manifold threads. (C & D) (Image 8)

9 Install the Sinister coolant riser manifold (D) hand tight. Be careful not to cross the threads. Also push the clip back in place on the top radiator hose and reconnect the hose to the motor if removed. (Image 9)

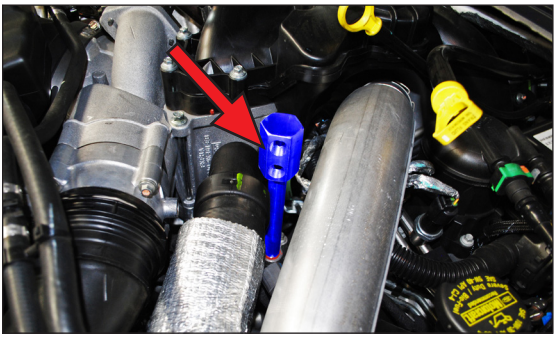


IMAGE 9

10 Using an adjustable wrench, tighten up the riser manifold so that the threaded ports are facing the driver's front corner of the vehicle. Only tighten into position. Any loosening may cause coolant to leak at the threads.
(Image 9)

Note: Using painters tape on your wrench will protect your Sinister Blue anodized finish.

11 Clean the threads on the temp sensor and reapply new thread seal tape.

12 Install the temp sensor to the bottom port of the riser manifold. Take precaution and support the riser manifold when tightening the temp sensor or coolant hose. Reconnect the temp sensor. (Image 10)

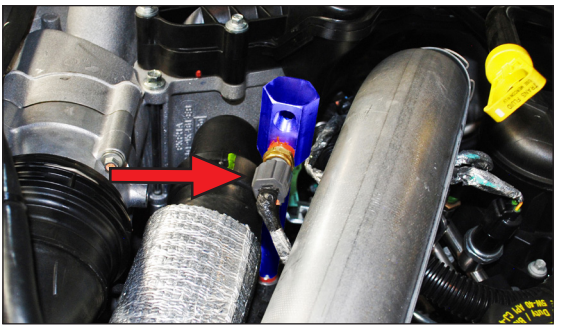


IMAGE 10

13 Install the provided 3/8 NPT fitting (I) into the top port of the riser manifold (D) above factory temperature sensor. Make sure to use thread seal tape if threads are bare. Put a supplied #5 hose clamp (H) on the Sinister coolant line (A) from the front of the block and press it onto the fitting in the riser and tighten hose. (Image 11).

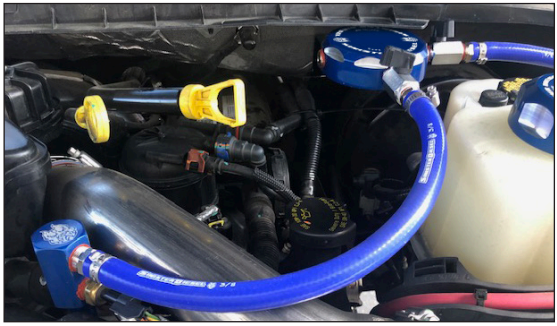


IMAGE 11

14 Route the Sinister coolant line (B) around the driver side of the degas bottle and lay fitting over factory degas line, mark and cut factory line (make sure to leave 3-4", enough space for the hose barb and clamp). Add hose clamps, install T fitting and tighten hose clamps. Zip tie (E) in place. (Image 12)



IMAGE 12

15 Add a small amount of petroleum jelly, or similar, to the O-ring, this helps with removal later. MAKE SURE THE INSTALLED FILTER DOES NOT CONTACT THE FACTORY FUEL LINE. Zip tie the outer line to the inner to add additional clearance if they are close.
(Image 13).

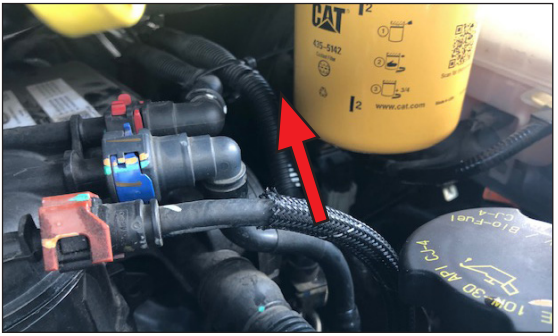


IMAGE 13

16 Make sure ball valve handles are in-line with hose, this is "ON" position, 90 degrees is the "OFF" position.

17 Refill the engine coolant system to factory specifications and check for leaks with the engine running and warmed up. Recheck and top off after first drive.

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