INSTALLATION INSTRUCTIONS

SUBJECT: **Fleece Performance Coolant Bypass™ for 2019+ Ram with 6.7L Cummins**

FITMENT: 2019-2022 RAM 2500/3500 equipped with 6.7L 24V Cummins
KIT P/N: FPE-CLNTBYPS-CUMMINS-19

TOOLS REQUIRED: 18mm ratcheting wrench or socket, 10mm socket, 8mm socket, 15mm socket or wrench, 6mm Allen, 1" wrench, hammer, 5-gallon clean drain pan, 36" pry bar, Scotch-Brite™ pad (included in kit).

KIT CONTENTS:

Item	Description	Qty
1	Coolant bypass hose	1
2	Coolant bypass elbow w/ -10AN fitting	1
3	Coolant bypass rear thermostat housing assembly	1
4	M6 x 1.00, 20mm flange head bolt	3
5	M12 x 1.75, 40mm flange head bolt	2
6	Double hose clamps	3
7	EGR cross over tube gaskets	2
8	Scotch-Brite ™ pad	1

WARNINGS:

- User assumes sole responsibility for the safe & proper use of the vehicle at all times.
- The purchaser and end user releases, indemnifies, discharges, and holds harmless Fleece Performance Engineering, Inc. from any and all claims, damages, causes of action, injuries, or expenses resulting from or relating to the use or installation of this product that is in violation of the terms and conditions on this page, the product disclaimer, and/or the product installation instructions. Fleece Performance Engineering, Inc. will not be liable for any direct, indirect, consequential, exemplary, punitive, statutory, or incidental damages or fines cause by the use or installation of this product.

PROCEDURE:

STEP 1: Disconnect the vehicle batteries.

STEP 2: Remove the cap from the coolant tank. Locate the engine coolant drain, located under the driver's side of the radiator. Drain the coolant into a clean bucket.

NOTE: RAISE THE VEHICLE UP TO ALLOW FOR ACCESS IN FOLLOWING STEP

STEP 3: If your vehicle is equipped with the bracket shown at right, it will need to be removed in order to access the rear freeze plug utilized by this kit. Remove the four bolts using a 15mm socket or wrench.

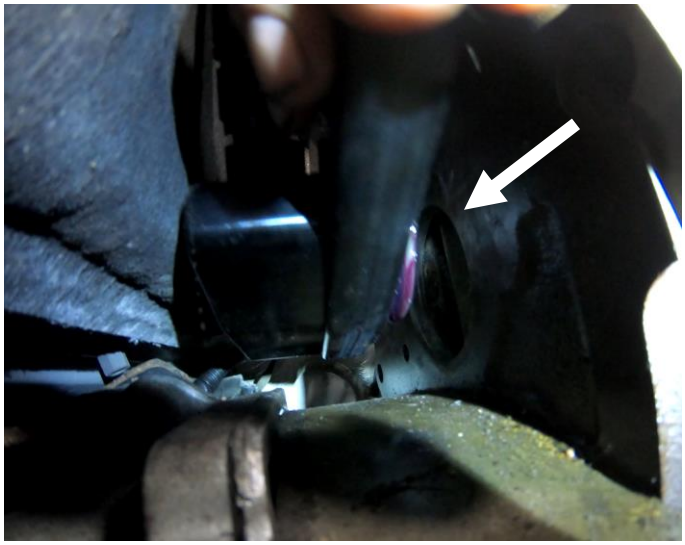
STEP 4: Locate the large 58mm (2 ¼") freeze plug at the rear of the engine block. From underneath the truck, using a 36" pry bar and hammer, drive the outer edge of the freeze plug in to rotate it in its bore. Remove the freeze plug from the block.

IMPORTANT: *DO NOT HIT THE PLUG IN THE CENTER AND USE CAUTION TO NOT KNICK THE BLOCK AS THIS IS A SEALING SURFACE.*

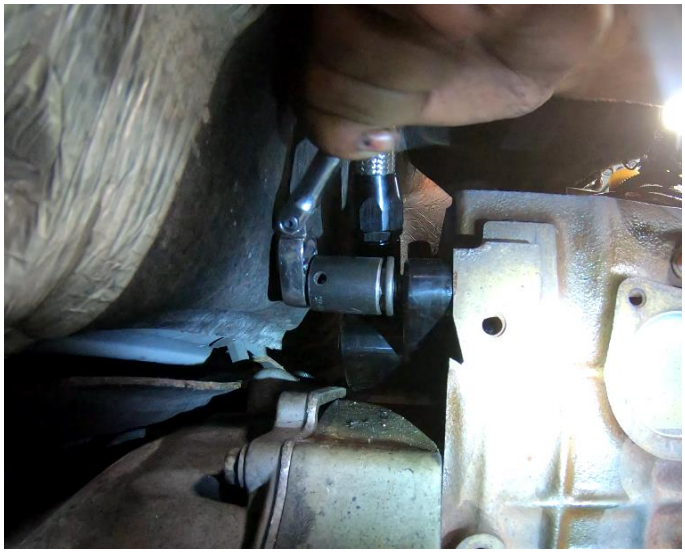
STEP 5: With the freeze plug removed, use a Scotch-Brite™ pad and a degreasing solution to **thoroughly** clean the block surface area from the head down to the rear cover, as well as the bore where the freeze plug was previously installed. Be sure to remove all dirt and foreign debris to allow the coolant bypass thermostat housing to fully seat. If the inner bore where the freeze plug was seated is not thoroughly clean, the O-ring on the coolant bypass housing will not properly seal.

STEP 6: Using a 1" wrench, thread the coolant bypass hose end with the straight fitting onto the coolant bypass thermostat housing. Tighten the fitting.

STEP 7: With assembly grease or light oil, thoroughly lubricate the sealing O-ring on the coolant bypass thermostat housing and press it into place on the back of the engine block.



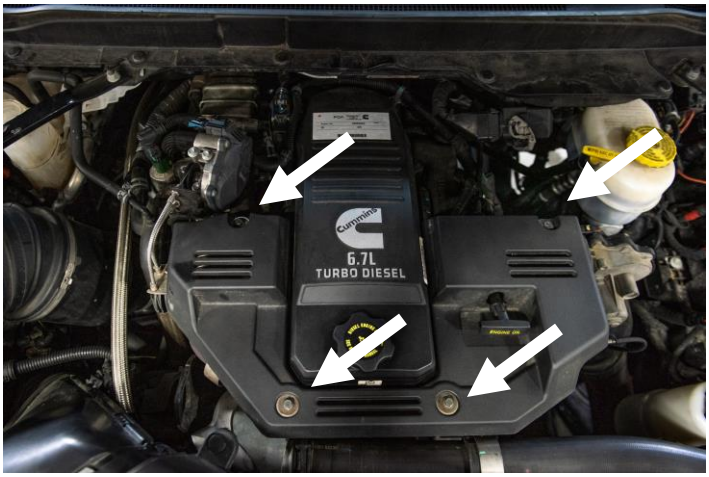
STEP 8: Slide the thermostat housing between the firewall and the back of the engine block. Align the thermostat housing with the original freeze plug hole location and press the housing against the engine to seat the housing. The coolant bypass hose should be oriented towards the passenger side of the vehicle.



STEP 9: Ensure that the coolant bypass thermostat housing is firmly seated onto the back of the engine block and fasten it securely into place using the supplied M12 flange head bolts using an 18mm socket.

STEP 10: Remove the engine oil dipstick.

STEP 11: Remove the 4, 8 mm bolts that retain the engine shroud and remove the engine shroud.

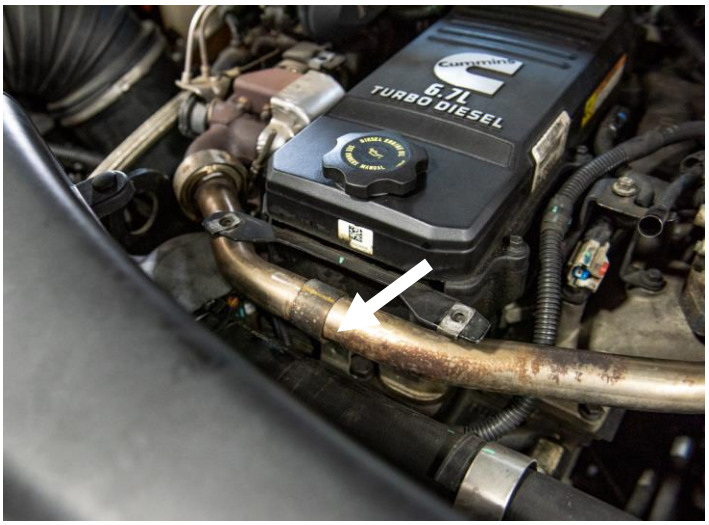


STEP 12: Disconnect the EGR temperature sensor connector and retaining clip. There is no need to remove the sensor from the cross over tube.

STEP 13: Remove the EGR cross over tube.

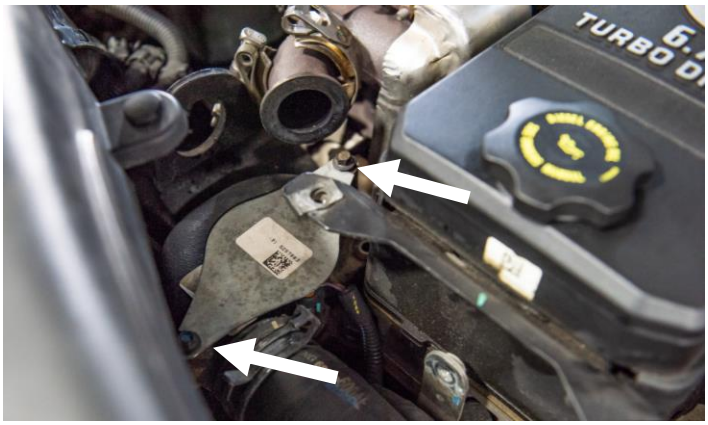
Remove the two V-band clamps at either end of the cross over tube using an 11 mm socket.

STEP 14: Remove the 8 mm bolt that retains the cross over tube at the front of the engine.



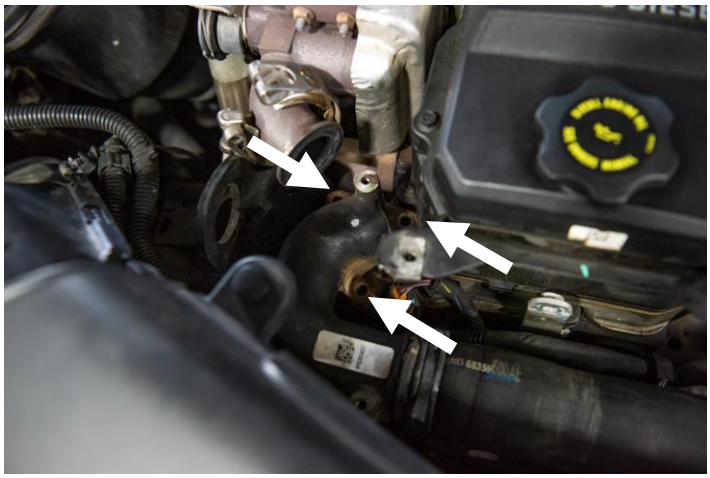
STEP 15: Remove the cross over tube and EGR cross over tube gaskets from each end of the tube. Discard the gaskets, new gaskets are provided in the kit.

STEP 16: Remove the two, 8mm bolts that retain the heat shield to the top of the cooler elbow. Remove the heat shield.

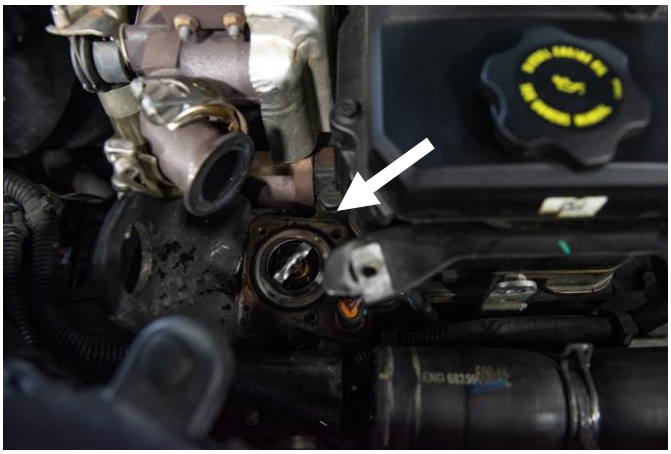


STEP 17: Using a pair of channel locks, loosen the clamp that retains the coolant hose to the coolant elbow. Slide it down the coolant hose to allow for removal of the hose from elbow.

STEP 18: Remove the three, 8mm bolts that retain the cooler elbow to the cylinder head. Remove the cooler elbow. The three bolts will be reused for installation of the Fleece coolant bypass elbow.



STEP 19: Remove the thermostat. Inspect it for wear and proper function. With a Scotch-Brite™ pad and degreasing solution, thoroughly clean the sealing surface of the stock thermostat and thermostat housing. Be sure to remove any foreign debris and reinstall the OE thermostat.



STEP 20: Install the new Fleece coolant bypass elbow into the same location as the factory coolant elbow. Install the three new M6 bolts included in the kit that retain the coolant elbow to the cylinder head. Reinstall the coolant hose and clamp.

STEP 21: Install the coolant bypass hose to the coolant bypass elbow.

STEP 22: Reinstall the heat shield over the coolant bypass elbow.

STEP 23: Use the double hose clamps provided in the kit to secure the coolant bypass hose to the coolant riser line.

STEP 24: Reinstall the EGR cross over tube. Ensure the new gaskets included with the kit are utilized. Install the V-band clamps and the bolt that retains the cross over tube to the front of the engine.

STEP 25: Plug in the EGR temp sensor and install the upper engine shroud. Insert the dipstick. Ensure that the coolant drain plug has been reinstalled in the radiator and proceed to re-fill the coolant system. Re-use or replace coolant as necessary to properly fill the system with clean fluid.

STEP 26: Re-connect the vehicle batteries

STEP 27: Start the truck and allow the engine to idle. Inspect all fittings and split-lines for possible leaks. If no leaks are observed, bring the engine to a normal operating temperature and confirm that no leak is present. Repair any observed leaks.