

INSTALLATION INSTRUCTIONS

SUBJECT: Fleece Performance Coolant Bypass™ for 1994-1998 Ram with 5.9L 12V Cummins

FPE-2018-05
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Page 1 of 6

FITMENT: 1994 – 1998 12V Dodge Cummins

KIT P/N: FPE-CLNTBYP-S-CUMMINS-12V and FPE-CLNTBYP-S-CUMMINS-12V-SS

ESTIMATED INSTALLATION TIME: 2-3 Hours

TOOLS REQUIRED: 18mm ratcheting 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 line (black nylon braided line shown)	1
2	Coolant bypass thermostat housing and O-ring	1
3	M12 x 1.75, 40mm flange head bolt	2
4	M8 x 1.25, 20mm socket head cap screw	2
5	3/8" NPT to -10AN 90Deg	1
6	3/8" Female x 1/4" Male Pipe adaptor	1
7	1/8" NPT to 1/4" Hose Barb 45Deg	1
8	13/16" vinyl P-clamps	2
9	Loctite® 545 thread sealant (not shown)	1
10	Scotch-Brite™ pad (not shown)	1



IMPORTANT NOTICES:

For California customers: An E.O. identification label is required for Smog Check inspection. The E.O. identification label included with the kit MUST be placed in the engine compartment so that smog check technicians can verify the E.O. number.

WARNINGS:

- Use of this product may void or nullify the vehicle's factory warranty.
- 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: Locate the engine coolant drain, located under the driver's side of the radiator. Drain the coolant system into a clean drain pan.

STEP 3: Remove the factory coolant hose and fitting from the top side of the thermostat housing.



STEP 4: Install the 3/8" to 1/4" NPT adapter (item 6) onto the thermostat housing. Use the included thread sealant to ensure a proper seal. Torque to 16 in-lbs.

STEP 5: Install the 90-degree NPT to -10AN adapter (item 5) onto item 6. Use the included thread sealant as well as a backup wrench on item 6 to keep from overtightening the fitting. Torque to 23 in-lbs.

OE 1/4" Coolant Line



STEP 6: Install the 45-degree ¼" hose barb adapter (item 7) into the threaded hole on the side of item 5 using the included thread sealant. Align the fitting so that it is oriented towards the rear of the engine as shown at right.

STEP 7: Reconnect the OE ¼" coolant line to the hose barb adapter. Reinstall the OE hose clamp.



STEP 8: Remove the large 58mm (2 ¼") diameter freeze plug at the rear of the engine block. This can be done from underneath the truck, using a 36" pry bar and hammer, drive the outer edge of the freeze plug in on the edge to rotate it in its bore. Remove the freeze plug from the block.

NOTE: Do not hit the freeze plug in the center.

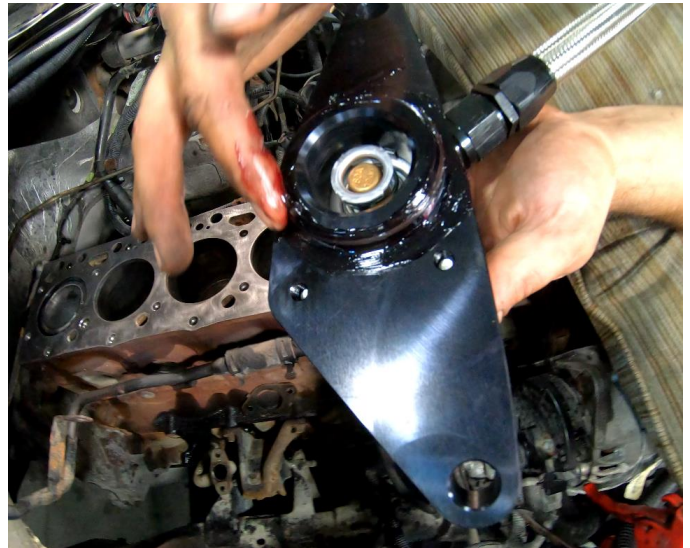


STEP 9: With the freeze plug removed, use a Scotch-Brite™ pad and a degreasing solution to **thoroughly** clean the block surface area from the head down to the rear cover, as well as the bore where the freeze plug was previously installed. Be sure to remove all dirt and foreign debris to allow the coolant bypass thermostat housing to fully seat.



STEP 10: Using a 1" wrench, thread the coolant bypass hose onto the fitting on the coolant bypass thermostat housing. Tighten the fitting.

STEP 11: 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 12: 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 and over the exhaust manifold.



STEP 13: 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 14: Fit the vinyl P-clamps (item 8) over the coolant bypass line and fasten the clamps to the coolant tubes running parallel to the engine using the supplied M8 fasteners (item 4).

NOTE: Ensure the coolant line does not contact the exhaust manifold.



STEP 16: Connect the coolant bypass hose to the -10AN 90 degree adapter and tighten the fitting.



STEP 17: 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 18: Re-connect the vehicle batteries.

STEP 19: 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.