

## INSTALLATION INSTRUCTIONS

**SUBJECT: DODGE CUMMINS COOLANT BYPASS KIT**

FPE-2018-06  
November, 2020  
Page 1 of 6

**FITMENT:** 2003–2007 Dodge Cummins Manual Transmission Only  
2007.5-2018 Dodge Cummins Manual and Automatic Transmissions

**KIT P/N:** FPE-CLNTBYP-S-CUMMINS-MAN, FPE-CLNTBYP-S-CUMMINS-6.7

**ESTIMATED INSTALLATION TIME:** 2-3 Hours

**TOOLS REQUIRED:** 16mm ratcheting wrench, 10mm socket, 8mm socket, 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 thermostat housing and O-ring	1
3	Thermostat riser block and O-ring	1
4	Coolant bypass hose riser bracket	2
5	M8 x 1.25, 20mm socket head cap screw	2
6	M6 x 1.00 x 60mm flange head bolt	3
7	M12 x 1.75, 40mm flange head bolt	2
8	Scotch-Brite™ pad (not pictured)	1



**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.

# INSTALLATION INSTRUCTIONS

FPE-2018-06  
November, 2020  
Page 2 of 6

## PROCEDURE:

STEP 1: Disconnect the vehicle batteries.

STEP 2: Locate the engine coolant drain, located on the driver's side of the radiator, behind the front grill. Drain the coolant into a clean drain pan.

STEP 3: Using an 8mm socket, remove the three bolts securing the stock thermostat housing. It is not necessary to remove or disconnect the thermostat housing from the upper radiator hose. Move it to the side, out of the way of the exposed thermostat, to allow for access.



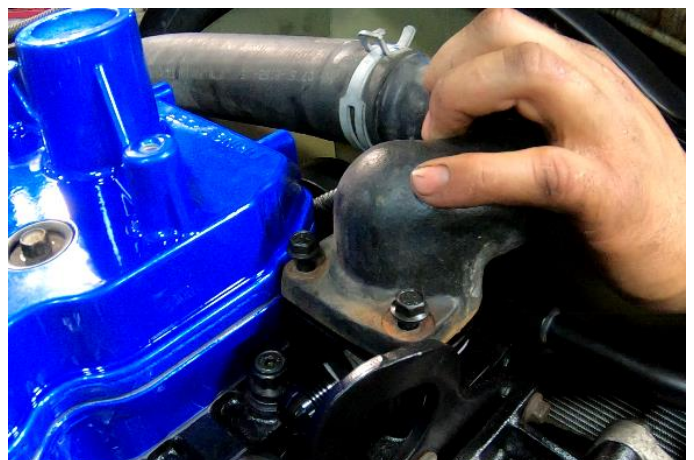
STEP 4: Remove the stock thermostat. Inspect it for wear and proper function. Using a Scotch-Brite™ pad and degreasing solution, thoroughly clean the sealing surface of the stock thermostat and thermostat housing. Be sure to remove any foreign debris.

Reinstall the OE thermostat. We recommend the use of the stock 190° thermostat in the OE location.

Position the thermostat housing riser block (item 3) on top of thermostat. The O-ring should be facing upward with the threaded fitting facing towards the rear of the vehicle.



STEP 5: Place the stock thermostat housing over the thermostat riser block. Using the supplied M6 flange head bolts (item 6), tighten the bolts to 89 in-lbs.



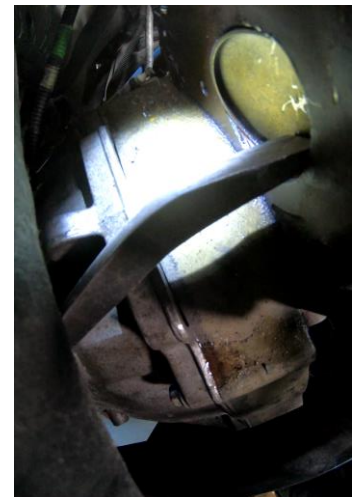
# INSTALLATION INSTRUCTIONS

FPE-2018-06  
November, 2020  
Page 3 of 6

STEP 6: 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.*

*NOTE: To allow for clearance to the freeze plug at the rear of the engine block, remove the "L" shaped bracket located between the engine and top of the transmission.*



STEP 7: 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.

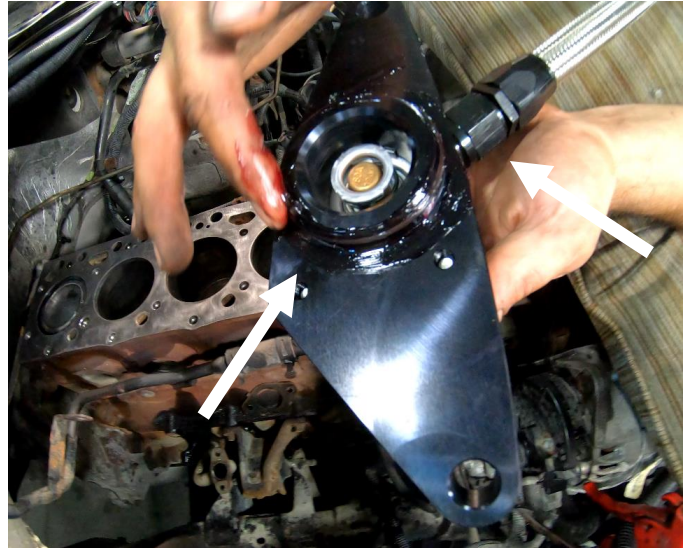


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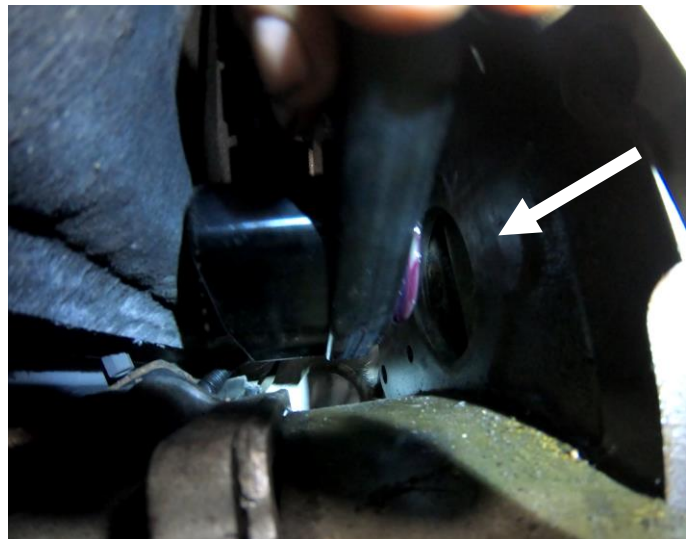
FPE-2018-06  
November, 2020  
Page 4 of 6

STEP 8: Using a 1" wrench, thread the coolant bypass hose onto the fitting on the coolant bypass thermostat housing. Tighten the fitting.

STEP 9: 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 10: 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 11: 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.



# INSTALLATION INSTRUCTIONS

FPE-2018-06  
November, 2020  
Page 5 of 6

STEP 12: Route the coolant bypass hose above the exhaust manifold and thread the hose fitting onto the coolant riser block fitting. Using a backup wrench, tighten the fitting.



STEP 13: Utilizing the coolant bypass hose brackets and M8 socket head cap screws in your kit; position the clamps over the bypass coolant hose and fasten them to the cylinder head in the available tapped holes between cylinder numbers 2 & 3 as well as between cylinder numbers 4 & 5.

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



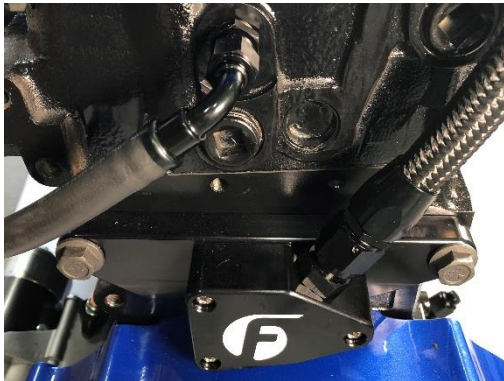
# INSTALLATION INSTRUCTIONS

FPE-2018-06  
November, 2020  
Page 6 of 6

STEP 14: Ensure that the coolant drain plug has been reinstalled in the radiator and proceed to re-fill the cooling system. Re-use or replace coolant as necessary to properly fill the system with clean fluid.

STEP 15: Re-connect the vehicle batteries.

STEP 16: 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.



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For technical assistance contact Fleece Performance Engineering at 855-839-5040.