

INSTALLATION INSTRUCTIONS

SUBJECT: DODGE CUMMINS COOLANT BYPASS KIT

FPE-2018-03
January, 2021
Page 1 of 7

FITMENT: 2003–2005 Dodge Cummins Automatic Transmission Only
KIT P/N: FPE-CLNTBYP-S-CUMMINS-0305 (-SS Optional Stainless Steel line)
ESTIMATED INSTALLATION TIME: 1.5 - 2 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 line (-SS option shown)	1
2	Coolant bypass thermostat housing and O-ring	1
3	Thermostat riser block and O-ring	1
4	M10 x 1.5, 20mm flange head bolt	1
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	16mm Allen head coolant plug with O-ring	1
9	Heater tube & heater hose	1
10	Heat exchanger rubber cap	2
11	Coolant bypass line riser bracket	2
12	Hose Clamp SAE 12	1
13	Hose Clamp SAE 10	1
14	Vinyl coated P-clamp 7/8"	1
15	Scotch-Brite™ pad (not shown)	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 caused by the use or installation of this product.

INSTALLATION INSTRUCTIONS

FPE-2018-03
January, 2021
Page 2 of 7

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: Locate the coolant tube that runs along the back of the engine block connecting the transmission heat exchanger on the driver's side and the heater core/coolant tube on the passenger side. Remove this heater tube and discard.

STEP 4: Install the provided heater tube and heater hose along with hose clamps (items 9, 12, and 13) from the passenger side heater tube outlet to the factory 90° heater hose on the firewall. Use the supplied vinyl coated P-clamp (item 14) to secure the line.

STEP 5: Remove the hose from the transmission heat exchanger to the side of the block and discard. Install the coolant plug (item 8) in the side of the block.

NOTE: If keeping the heat exchanger on the engine, drain out the remaining coolant and cover with the rubber caps (item 10) in the kit.



INSTALLATION INSTRUCTIONS

FPE-2018-03
January, 2021
Page 3 of 7

STEP 6: Using an 8mm Socket, remove the three bolts anchoring 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 7: Remove the stock 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 8: 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.



INSTALLATION INSTRUCTIONS

FPE-2018-03
January, 2021
Page 4 of 7

STEP 9: 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.



STEP 10: 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.

NOTE: Do not hit the plug in the center.



STEP 11: With the freeze plug removed, using a Scotch-Brite™ pad and a degreasing solution, 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 any dirt or foreign debris.



INSTALLATION INSTRUCTIONS

FPE-2018-03
January, 2021
Page 5 of 7

STEP 12: Using a 1" wrench, thread the bypass coolant line (item 1) to the fitting on the coolant bypass thermostat housing (item 2).



STEP 13: With assembly grease or light oil, lubricate the sealing O-ring on the coolant bypass thermostat housing (item 2), and press it into place on the back of the engine block. The bypass coolant line should be oriented towards the passenger side of the vehicle and over the exhaust manifold.



STEP 14: Ensure that the coolant bypass thermostat housing is firmly seated on the back of the engine block and fasten it securely into place using the supplied M12 flange head bolts using a 16mm socket. (item 7).



INSTALLATION INSTRUCTIONS

FPE-2018-03
January, 2021
Page 6 of 7

STEP 15: With the coolant line routed above the exhaust manifold, thread the available end onto the AN style fitting of the installed thermostat riser block.



STEP 16: Utilizing the coolant bypass line riser brackets (item 11) and M8 socket head cap screws (item 5) in your kit; position the clamps over the bypass coolant line 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.



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.



INSTALLATION INSTRUCTIONS

FPE-2018-03
January, 2021
Page 7 of 7

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.

INSTALLED PRODUCT IMAGES:



Visit <https://fleeceperformance.com/resources> for the latest instructions and videos.

For Technical Assistance contact Fleece Performance Engineering at 855-839-5040.