INSTALLATION INSTRUCTIONS

SUBJECT: DODGE CUMMINS DUAL PUMP KIT

FITMENT: 2007.5–2018 Dodge Cummins with 6.7L

KIT P/N: All 6.7 Dual Pump Hardware Kits beginning with: FPE-DPK-67

KIT CONTENTS:

Item	Description	Qty
1	Cummins Common Rail Dual CP3 Bracket	1
2	Cummins Heavy Duty Dual Pump Belt	1
3	Fan Shroud Bracket (07.5-9, 13-18 kits only)	1
4	Upper Radiator Hose (2007.5-2009 kit only)	1
5	Dual Pump Pulley – Idler	1
6	Cummins Dual Pump Idler Pulley Spacer	1
7	Cummins Dual Pump Controller	1
8	High Pressure Dual Pump Line (CP3 to CP3)	1
9	High Pressure CP3 Fitting and Non-Return Valve	1
10	M8x1.25 Flange Nuts	6
11	M8x1.25x50 Carriage Bolts	6
12	M10x1.5x25mm Flange head bolt (07.5-9, 13-18 kits only)	1
13	M8×1.25 Flange Head Cap Screw	1
14	M10x1.5x40mm Flange head	1
15	M10 Locknut (07.5-9, 13-18 kits only)	

Additional components are required to complete the installation of the dual pump kit, these include:

- Injection Pump: CP3k or Powerflo 750 (must be a 6.7L pump to work with this kit in the top location)
- Fuel Filter Distribution Block: FPE-FFD-RF-3G-67
- Hose and Fitting Kit: FPE-FFD-RF-HF-KIT-3G-67

IMPORTANT NOTES:

**This kit will not work with a Factory Intake Horn, an aftermarket one such as a Banks Intake Horn must be used.
**The 2010-2012 kit will not work with factory 68RFE transmission lines. The factory 68RFE transmission lines will interfere with the pump pulley. We offer a replacement transmission cooler line set (P/N: FPE-TL-CUMM-1012) that will allow for the installation.

WARNINGS:

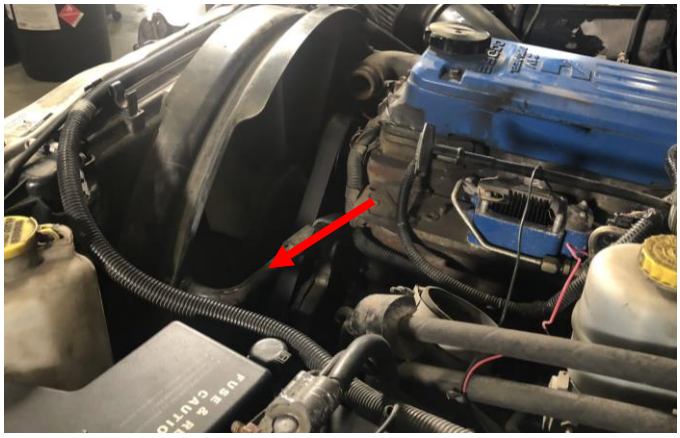
- Use of this product may void or nullify the vehicle's factory warranty.
- User assumes sole responsibility for the safe & proper use of the vehicle at all times.
- The purchaser and end user releases, indemnifies, discharges, and holds harmless Fleece Performance Engineering, Inc. from any and all 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.

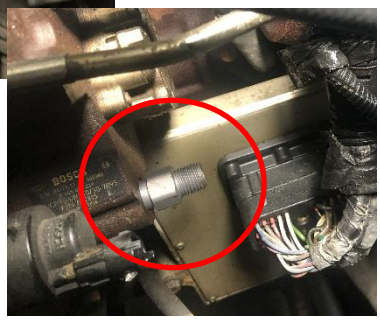
STEP 2: Locate the engine coolant drain, located under the driver's side of the radiator. Drain the coolant system into a clean bucket.

STEP 3: Remove the air intake horn and factory upper radiator hose.



STEP 4: Remove the fan shroud bracket located between the engine and fan shroud assembly.

STEP 5: Release tension on the serpentine belt using a ½" drive breaker bar to rotate the tensioner located on the right side of the engine. To remove the belt completely, first use a 13mm socket to remove the tensioner from the engine, then remove the belt. The tensioner will be re-installed with a new belt.

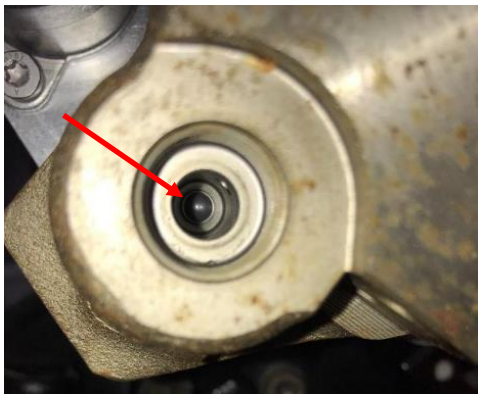


STEP 6: Locate the T50 plug on the bottom rearward facing surface of the OE injection pump. The plug will be to the left of the solenoid looking from above.

Carefully remove the plug and spring assembly from the pump housing. Transfer the spring to the new high pressure fitting that will be installed (item 6). Ensure the ball retained inside the pump housing behind the spring has not been unintentionally removed. Install the original spring and new pressure fitting into the OE pump housing in the same location as the plug was removed using a 17mm socket. The steps for removal / replacement are further detailed in STEPS 6.1-6.4.

STEP 6.1: Remove plug with a T50 Torx bit.

STEP 6.2: Ensure the check ball remains seated in place and does not fall out.



STEP 6.3: Remove spring from the plug and re-install onto the high pressure CP3 fitting.

STEP 6.4: Install the high pressure fitting into the OE pump. Torque to 48 ft-lbs.

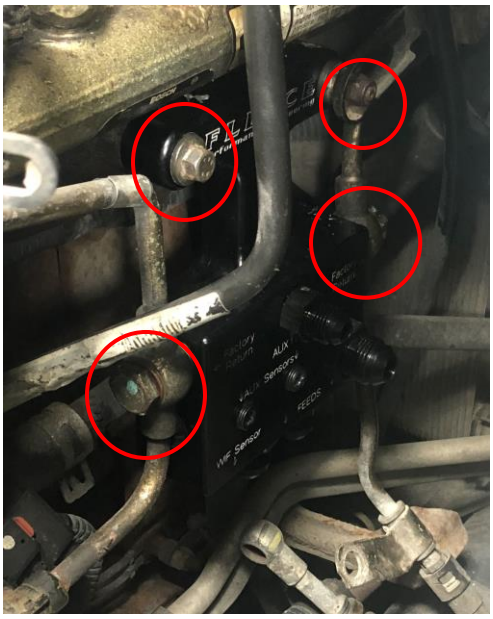
STEP 7: Remove your OE fuel filter housing if the truck is equipped with one. Detailed instructions for the removal of the OE fuel filter are outlined in Fuedl Distribution Block Installation Instruction FPE-2018-16. Remove the two return line connections and the feed connection. Unplug your WIF sensor and remove the two (2) - 10mm mounting bolts that attach the OE fuel filter housing to the cylinder head.

STEP 8: Assemble your Fleece Performance fuel distribution block with the fittings supplied as shown in the image at right. If you choose to delete your WIF sensor you may do that at this time and install the supplied plug. If you have a fuel pressure gauge this would be the time to install it into the block using one of the available AUX sensor ports.

STEP 9: Using the two factory fasteners removed from the head, install the Fleece Performance Fuel Distribution Block to the engine in the same location as factory fuel filter housing.

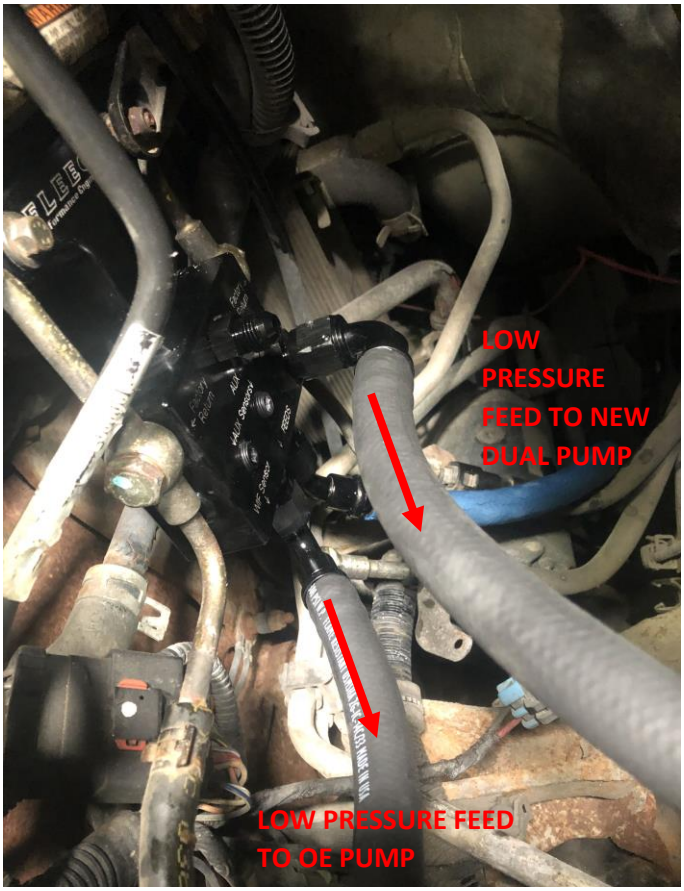
NOTE: Leave the two mounting fasteners loose until the banjo bolts have been installed.

STEP 10: Reinstall your fuel return lines to the distribution block using the original banjo bolts and new 12mm copper sealing washers. Tighten the mounting fasteners.

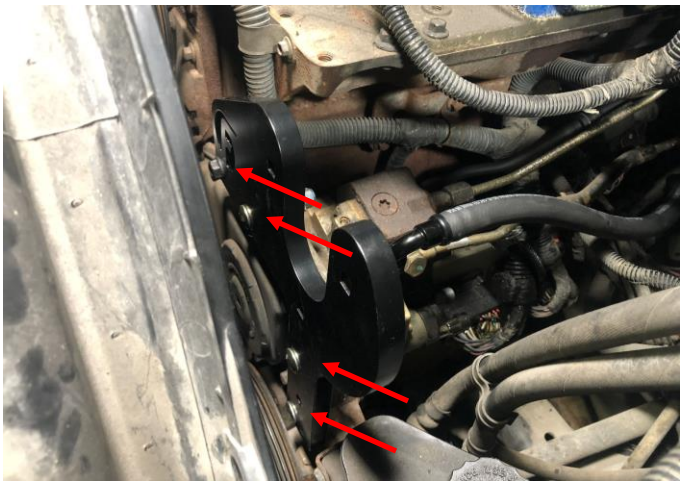


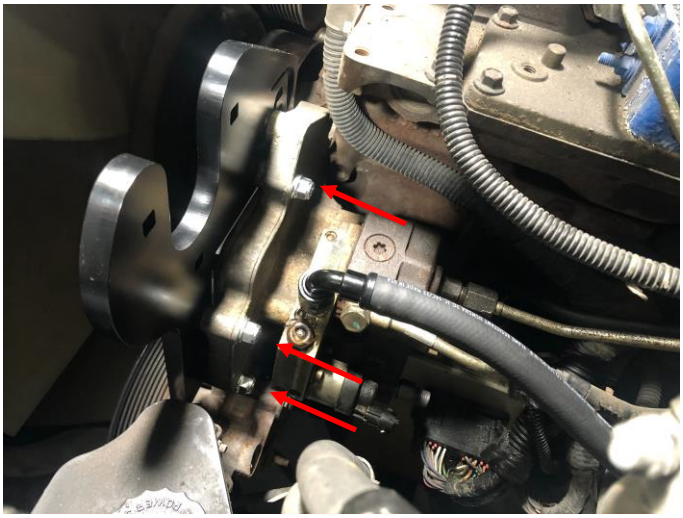
STEP 11: Install a M12 to -8AN fitting into the OEM low pressure feed of the factory CP3, route it using the two (2) -8AN 90 degree fittings to the bottom front feed fitting on the distribution block as shown.

STEP 12: Take your ½" feed from your aftermarket fuel system and route it to the rear lower fitting in the distribution block using the -8AN 45 degree fitting. Take your section of -6 pushlock hose and a 90 degree fitting and put them together and install that end onto the aux return, take your section of -8 pushlock hose and a -8AN 90 degree fitting put them together and install it to the feed fitting that faces the driver's side, these will both be used when the 2nd pump is installed but you have more access to complete the installation before installing the pump.

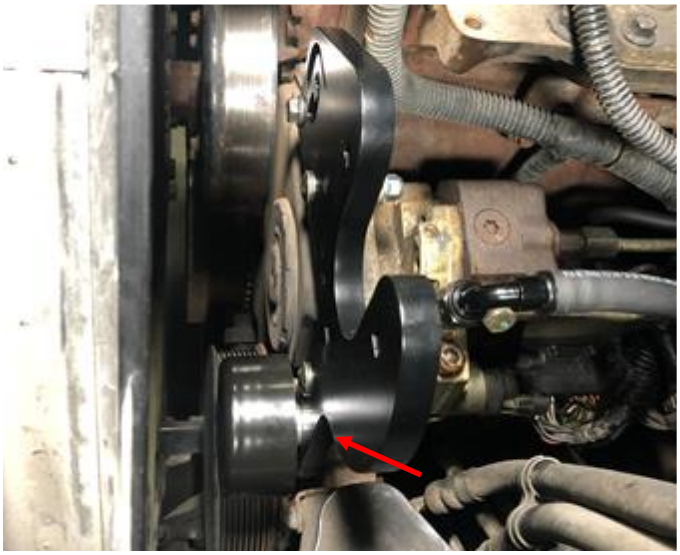


STEP 12: Install your Fleece Performance Engineering Dual CP3 mounting bracket to the front gear housing cover using three (3) M8 carriage head bolts (item 11 with three (3) 13mm nylock nuts (item 12). Install one (1) M8 bolt (item 13), in the far left slot location on the bracket.

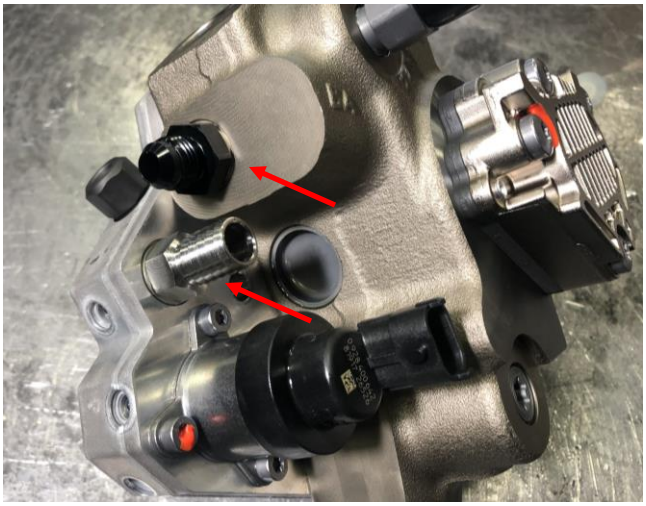




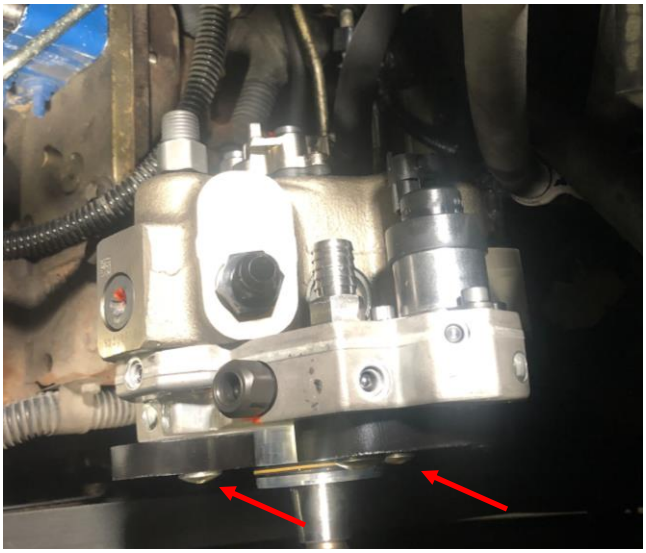
STEP 13: With the bracket securely mounted, install the idler pulley (item 3), aluminum spacer (item 4) and M10 x 40mm bolt (item 8) into the threaded hole in the pump bracket and tighten with a 15mm socket.



STEP 14: Install the high flow CP3 inlet fitting into the pump (item 1) as well as the M12 to -6AN fitting for the return.

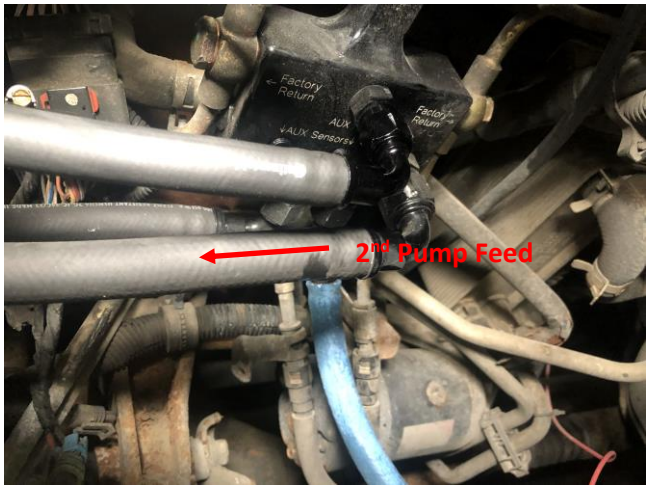


STEP 15: Install the injection pump onto the pump bracket using three (3) carriage bolts (item 12) and three (3) 13mm nylock nuts (item 13).

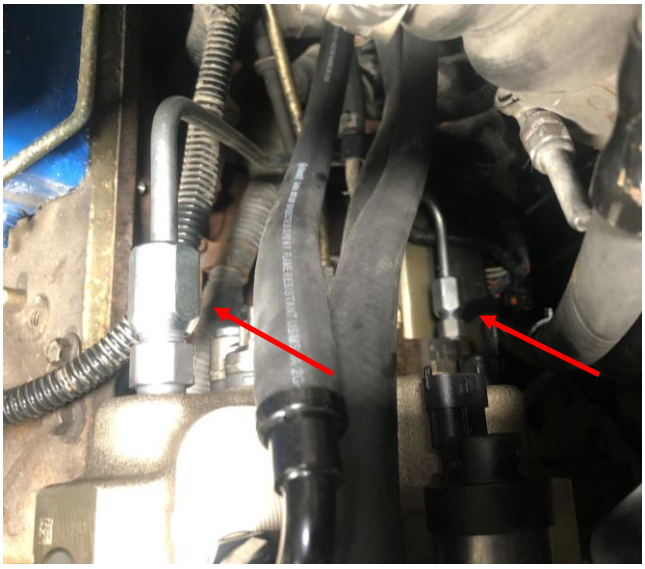


STEP 16: Locate the ½" pushlock hose you installed to the distribution block in STEP 12 and route it neatly alongside the engine and up to the 2nd pump. Cut it to length and install it onto your FPE high flow feed fitting. Using the -6AN 120 degree fitting thread it onto the return side of your 2nd pump and neatly route the ⅜" pushlock hose you installed to the AUX port of the distribution block, cut it to fit and install the remaining -6AN 90 degree fitting.

STEP 16 (CONTINUED):



STEP 17: Install your high pressure CP3 to CP3 hard line (item 6), use a 19mm wrench to tighten to 17 ft-lbs.

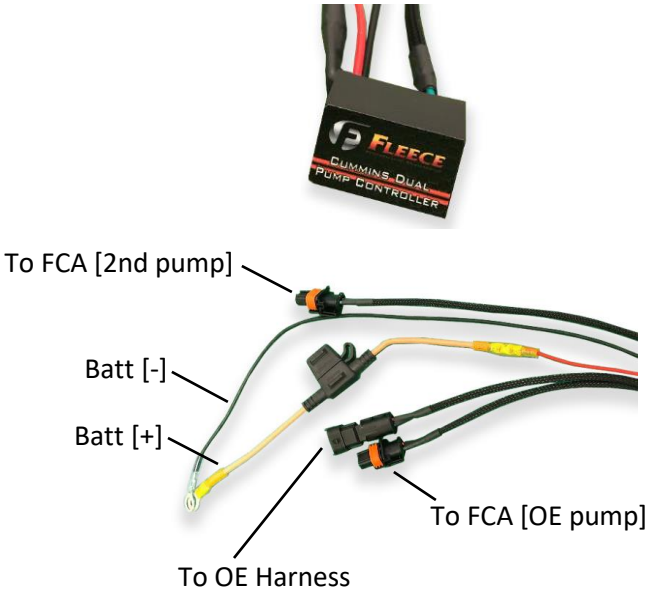


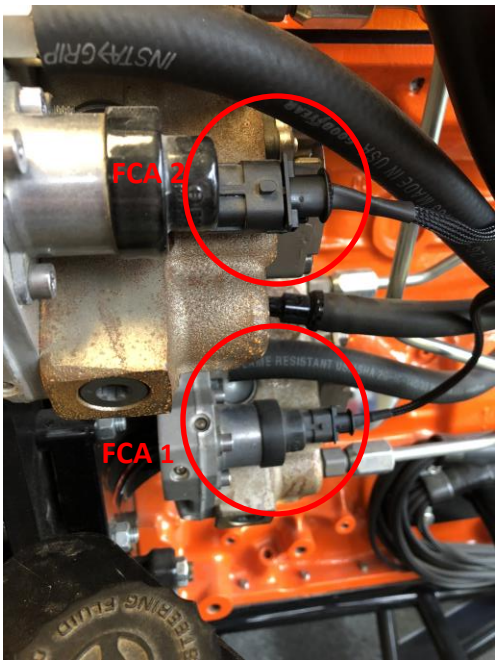
STEP 18: Install the dual pump pulley (item 23) onto the shaft of the 2nd pump using the 1 1/16" nut and torque to 75ft lbs. DO NOT USE AN IMPACT.

STEP 19: Route the new belt (item 11) per diagram. Reinstall the tensioner, make sure the belt is properly located on each pulley.

STEP 20: Install new Fleece upper radiator hose (item 10) using the OE clamps from your factory hose. Tighten the radiator drain and refill the cooling system at this time.

STEP 21: Install your Fleece Performance Dual CP3 controller and harness, carefully unplug the Fuel Control Actuator (FCA) on your OE CP3 and connect it to the mating connector on the Fleece Performance harness. Plug the Fleece Performance controller harness directly into the Fuel Control Actuator (FCA 1) on the factory pump, and the Fuel Control Actuator (FCA 2) on your 2nd pump. Make your battery connections at this time connecting the orange fuse link to the positive terminal and the black to the negative, be sure to run your harnessing in a manner that it avoids rotating components and hot surfaces.





STEP 22: Start the engine and check for leaks.

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

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