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DUAL HIGH PRESSURE FUEL KIT

6.7L FORD POWER STROKE

INSTALLATION INSTRUCTIONS

TROUBLESHOOTING:

Please read and understand all installation instructions before proceeding with the installation. If you have questions during the installation of this product, please email H&S Motorsports support at tech@hs-motorsports.com

Included parts:

- 1 - New Bosch Cp3 Pump
- 1 - HSM Pulley
- 1 - Serpentine Belt
- 1 - Pump Bracket/ Hardware
- 1 - Injection Pump Harness
- 1 - High Pressure Fuel Line/ Fittings
- 1 - HSM Fuel Filter Conversion Kit/ Fittings

Note: Custom tuning must be used with this product. More information can be found at www.hs-motorsports.com/calibrations. This kit may not work with some factory parts installed.

STEP 1



Disconnect battery terminals, remove air box and tube assembly.

STEP 2



Cut zip ties and remove 2 plastic wiring harness brackets.



STEP 3



Locate and unplug factory Cp4 wire harness connector. Re-route harness toward front of engine exposing for easy access. Remove grey locking connector. The outer tabs must be removed in order to connect to new supplied harness. Re-install locking connector to factory harness.



STEP 4



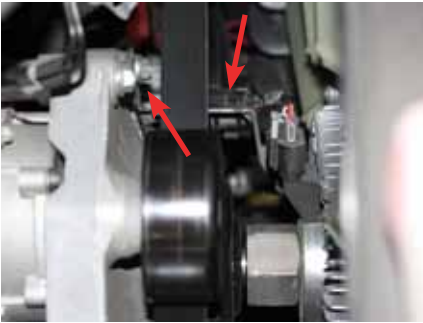
Plug male factory Cp4 harness into new supplied female harness. Plug the opposite male harness into factory Cp4 pump.



STEP 5



Unplug cooling fan speed sensor harness. Loosen and remove bolt holding cooling fan wire harness assembly. Loosen cooling fan Hub nut. **Note:** *May require fan clutch hub tool as shown.*



STEP 6



Remove cooling fan and wire harness assembly. Place fan carefully into fan shroud. **Note:** *Do not need to completely remove fan assembly from truck.*



STEP 7



Remove fan shroud support stud that's attached to the secondary water pump as shown.



STEP 8



Remove Serpentine belt. Remove both upper idler pulleys.



STEP 9



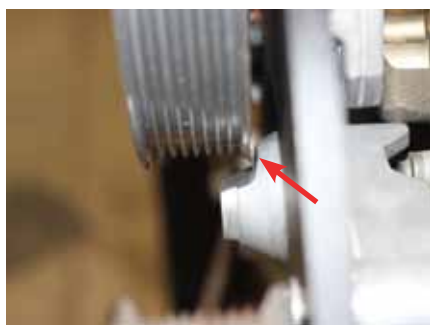
Remove 2 upper fan hub bolts. Remove 1 secondary water pump bolt.



STEP 10



Grind / Cut Idler post down for Cp3 pulley clearance. **Note:** May be necessary to remove Fan Hub assembly multiple times to achieve proper clearance. If the Fan Hub assembly is removed from vehicle make sure rear alignment dowels are reinstalled properly and undamaged.



STEP 11



Remove passenger front fuel rail plug using a 10mm 12 point torx socket. Install supplied rail feed fitting. Torque to 74 ft lbs.



STEP 12



Install supplied Cp3 pump bracket onto New OEM Bosch Cp3 pump with 3 5/16 bolts, washers and nyloc nuts. Torque to 20 ft lbs.



STEP 13



Gather hardware for Pump and bracket installation. 3 M8x1.25x150mm bolts, 3 flat washers, 1 lateral support spacer. Re-use one of the factory fan hub bolts with the lateral support spacer.



STEP 14



Lower pump assembly with bracket into place with the lateral support spacer and factory bolt. Start bolt, but do not tighten.



STEP 15



Before installing fuel line make sure to blow compressed air through line making sure it is free of any debris. Place a dab of oil on tip of each end of the line to help seat fitting later when torqued. With Cp3 mounting bracket bolts still loose install supplied High pressure fuel line loosely to the new Cp3.



STEP 16



Install the 3 m8x1.25x150mm bolts into pump bracket. Tighten evenly while supporting weight of pump to ensure no binding. Torque to 20 ft lbs.



STEP 17



Install supplied Cp3 Pulley, lock washer and nut. Torque to 74 ft lbs. **Note:** Check for clearance where factory idler post was ground/cut down and check clearance between secondary water pump pulley.



STEP 18



Install the lower portion of the high pressure fuel line onto the fuel rail feed fitting. Tighten both upper and lower fuel line fittings. **Note:** *place a dab of oil on tip of line to help seat fitting.*



STEP 19



Remove factory shoulder bolt and spacer from factory Idler pulley. Install 3/8 washer/bolt, nyloc nut and supplied Idler spacer.



STEP 20



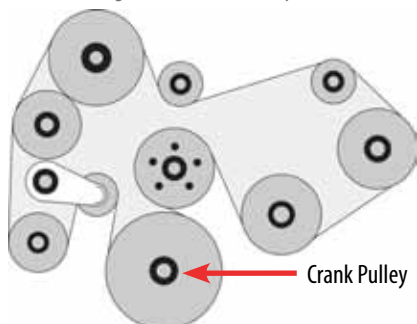
Install factory Idler into upper bracket hole.



STEP 21



Install Serpentine belt. **Note:** If you have a factory dual sided Serpentine belt you must re-use. If the Serpentine belt is single sided it must be replaced with the new supplied belt.



STEP 22



Re-install cooling fan. Bolt fan speed sensor into lower hole on pump bracket with 1/4 bolt washers and nyloc nut. Reconnect speed sensor wire harness. **Note:** some wire harness brackets may require some bending in order to fit properly.



STEP 23



Connect new harness and install fuel feed and return fittings with O-ringed washers into Cp3.

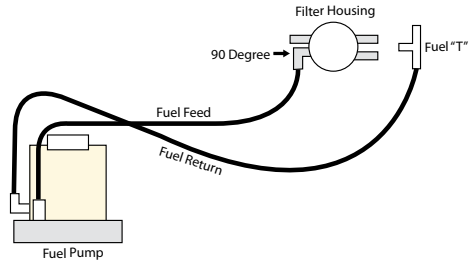
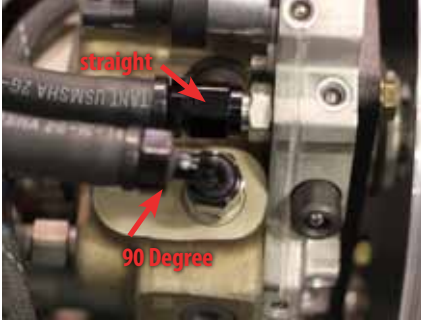


STEP 24



Install a 3/8 straight and a 90 degree pushlock fitting onto fuel feed and return fittings. Route two 3/8 inch fuel lines toward factory fuel filter location. These fuel lines will need to be cut to length. The straight pushlock fitting hose line will be connecting to the rear of the fuel filter conversion kit while the 90 degree line will be connecting to the 3/8 barb on the Fuel "T".

Note: Push-lock fittings do not require hose clamps. Put a dab of oil on hose barb end and push hose on to barb. Route Fuel lines away from heat or any places where the lines will rub. Routing may vary due to different fueling and turbo setups.



STEP 25



Unclip and remove 3 factory fuel line connectors. The lines are push lock only, so no tools are required. Remove factory fuel filter.



STEP 26



Gather hardware for fuel filter conversion installation. Using Teflon tape or thread sealant install all fittings as shown. Make sure to install the larger diameter of the two fuel line posts on the right side of the filter housing.



STEP 27



Install the main filter post in the center of the housing. Make sure that shorter end of the threads are facing toward the housing, thread filter post into housing until tight against the knurled stops. No sealant needed on the main filter post.



STEP 28



Lubricate fuel filter gasket with a dab of oil and install onto filter housing. Install protective boot onto filter.



STEP 29



Place the fuel filter conversion back into the factory location. Attach the factory fuel line push lock fittings onto the supplied fuel line posts as shown.

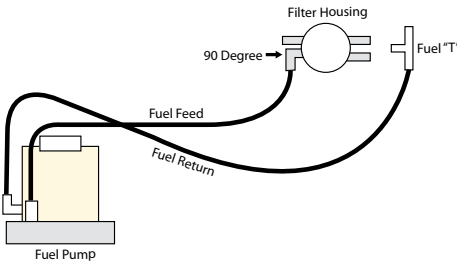


STEP 30



Route the 3/8 inch hose from the 90 degree hose barb fitting on the rear of the fuel filter conversion kit to the rear of the Cp3 low pressure/return straight push lock fitting.

Note: Push-lock fittings do not require hose clamps. Put a dab of oil on hose barb end and push hose on to barb. Hose will need to be cut to length.



STEP 31



Gather hardware for low pressure return fuel system as shown. Assemble fittings using Teflon tape or thread sealant. The 90 degree 1/2" fitting will have to be clocked correctly as shown in picture for the return "T" assembly to fit correctly.



STEP 32



Install supplied parts on the driver side low pressure fuel lines. Place the new supplied Grey push lock clip onto the fuel line where the factory Blue push lock clip was located. Attach the Blue push lock clip to the supplied push lock fitting as shown. Route the 3/8 inch hose from the 3/8 inch straight barb fitting to the 90 degree push lock fitting on the rear of the Cp3 pump. Tighten clamps



STEP 33



Tighten all clamps and fittings. Turn key on, allow fuel system to prime. Check for any leaks.

STEP 34



Please install your custom tuning. More information can be found at www.hs-motorsports.com/calibrations



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