

Dodge 6.7L Cummins 07-09
Dual CP3 Kit

P/N#	1050452	Without CP3 Pump
P/N#	1050452P	With CP3 Pump

THIS DEVICE CANNOT BE INSTALLED WITHOUT AN EGR BLOCK OFF OR DELETE KIT AS THE EGR CROSS OVER PIPE NEEDS TO BE REMOVED.

UNLESS AN EO# IS LISTED, THIS PRODUCT IS LEGAL IN CALIFORNIA FOR RACING VEHICLES ONLY, WHICH MAY NEVER BE USED UPON A HIGHWAY.

PLEASE READ ALL INSTRUCTIONS BEFORE INSTALLATION

BD Engine Brake Inc.
 Plant Address: 33541 MacLure Rd. Abbotsford, BC, Canada V2S 7W2
 U.S. Shipping Address: 88-446 Harrison St, Sumas, WA 98295 U.S. Mailing Address: P.O. Box 231, Sumas, WA 98295
 Phone: 604-853-6096 | Fax: 604-853-8749 | Internet: www.bd-power.com

KIT CONTENTS:

Please check to make sure that you have all the parts listed in this kit **before** you start the disassembly of your truck.



- | | |
|--|---------------------------------|
| -5/16 x 18 x 2 Bolt (2) | -Z Tab (1) |
| -5/16 x 18 x 2.25 Bolt (1) | -Fuel Return Tube (1) |
| -10 x 1.50 x 25 Bolt (3) | -Coolant Pipe (1) |
| -18 x 1.5 Nut (1) | -Serpentine Belt (1) |
| -18mm Washer (1) | -Dual CP3 Bracket (1) |
| -8 x 1.25 Nut (4) | -Dual CP3 Pulley (1) |
| -5/16 Washer (3) | -Tubing Hose (1) |
| -10mm Washer (1) | -Idler Pulley (1) |
| -8 x 1.25 x 12 Bolt (1) | -Pressure Fuel Line (3) |
| -6mm x 25 Bolt (1) | -Tubing Hose (1) |
| -Fuel Line Bracket (1) | -2.5" x 5/16" Fuel Hose (1) |
| -3 Way Fuel T-Fitting (1) | -4" x 5/16" Fuel Hose (1) |
| -5/16" Brass Barbed Hose T-Fitting (2) | -5" x 5/16" Fuel Hose (1) |
| -5/16" Hose Clamp (12) | -8.5" x 5/16" Fuel Hose (1) |
| -2.25" Hose Clamp (2) | -19" x 5/16" Fuel Hose (1) |
| -2.5" Hose Clamp (2) | -21" x 5/16" Fuel Hose (1) |
| -Self-Tapping Screw (2) | -Dual CP3 Fueler Controller (1) |
| -8" Nylon Cable Ties (3) | -Optional CP3 Fuel Pump (1) |
| -Modified Dipstick Mount Bracket (1) | |

PLEASE NOTE THIS KIT MUST USE A BOSCH CP3 #0445 020 037

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REQUIRED TOOLS

- Air or Manual Ratchet
- 1/4", 5/16, 1/2", 9/16", 1 1/16" sockets
- 8,10,13,17 mm Sockets
- 1/2",9/16" Wrenches
- 13,17,19 mm Wrenches
- 36 mm Fan Hub Wrench
- Torque Wrench
- Coolant Bucket
- Side Cutters
- Phillips Screwdriver
- Spring Clamp Pliers

WELCOME

Thank you for purchasing the Dual CP3 Pump Kit. This manual is divided into different areas to assist you with your installation of your Dual CP3 Pump Kit.

Installation should occur on a vehicle properly secured to prevent rolling.

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INSTALLATION

VEHICLE SHOULD BE SAFELY SECURED BEFORE INSTALLATION.

- 1) Block wheels to secure vehicle and disconnect negative battery terminals.

Then drain about 2 liters of coolant from radiator using a 1/2" wrench to loosen the drain plug.

- 2) Remove the radiator clamps and hose, using spring clamp pliers.



- 3) Disconnect the fan harness connector from under the vehicle and remove the four (13 mm) fan shroud nuts.

Two nuts on the bottom of the fan shroud (below the truck) Two nuts on the top of the fan shroud (under the hood).



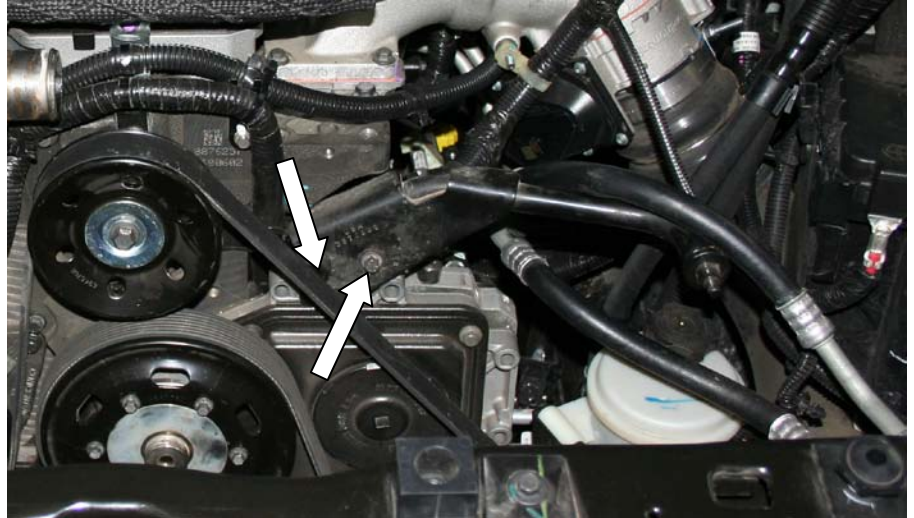
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- 4) Remove the two fan shroud bracket bolts (10 mm), and remove the fan and shroud. Using the 36 mm fan hub wrench



- 5) Remove the EGR pipe clamps and bolt to remove the EGR pipe. (7/16" socket) and (8 mm socket).



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- 6) Remove EGR valve, then remove the intake manifold to gain access the fuel lines. (10 mm socket)



- 7) Loosen the six fan pulley adapter bolts (8 mm socket) from fan pulley adapter.

Remove the belt from the tensioner and then remove the fan pulley to remove the belt completely.



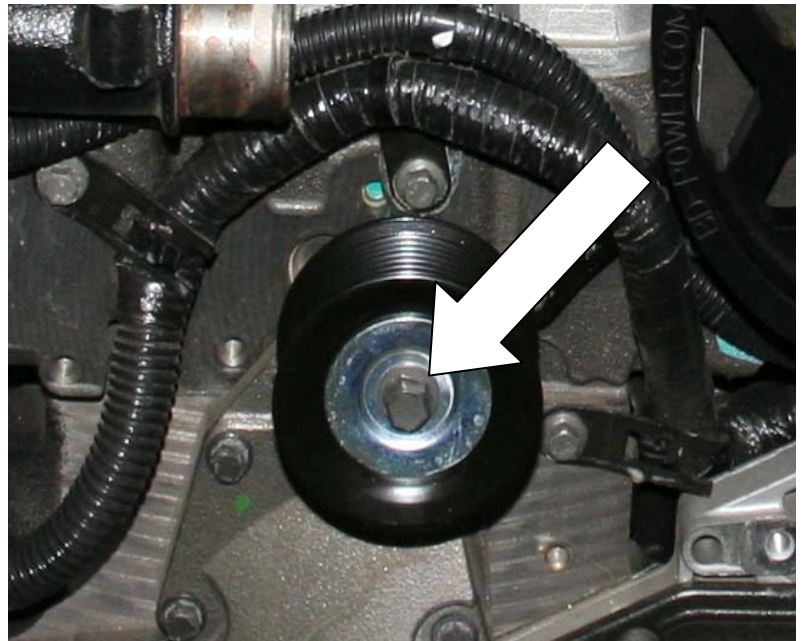
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- 8) Remove stock idler pulley (13 mm socket), Install BD idler pulley provided in kit (use stock bolt, washer and spacer with BD pulley. Install pulley in original location. torque to 32 ft/lbs.



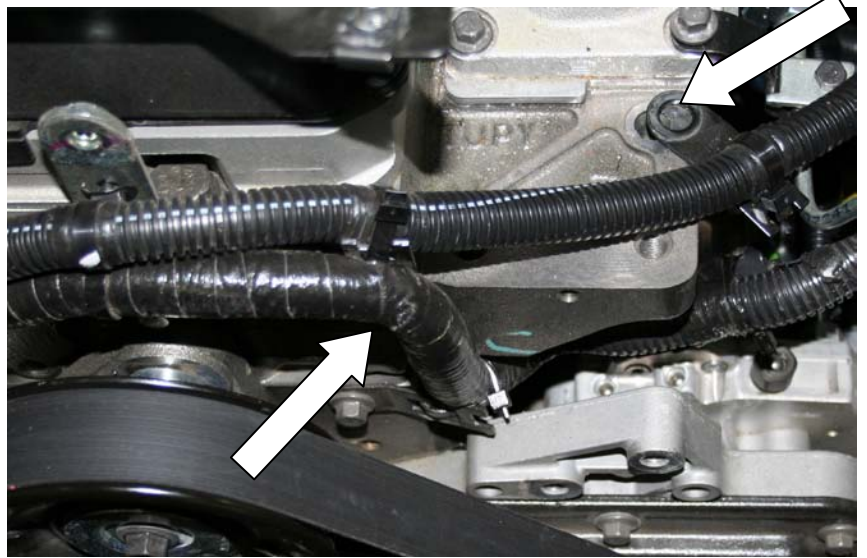
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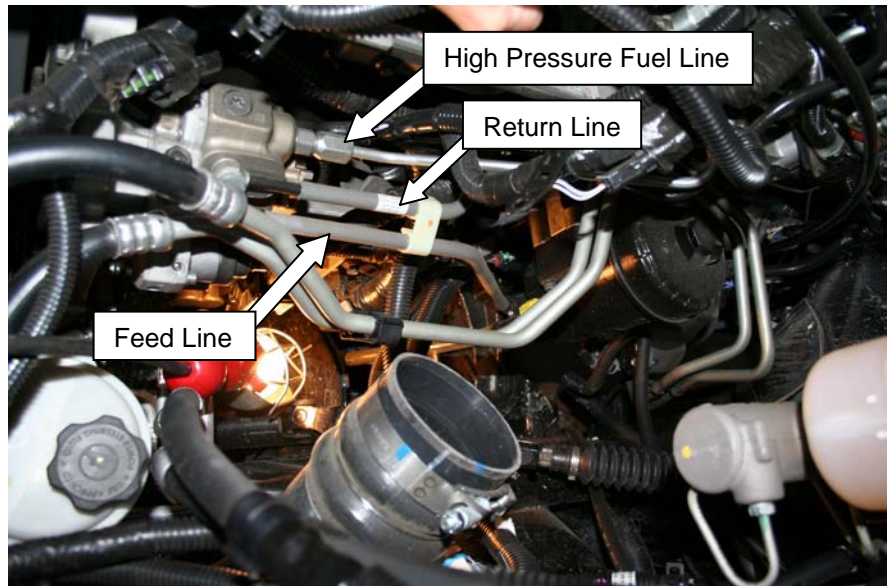
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- 9) Remove harness bracket bolts (8 or 10 mm & 13 mm socket) and move to new location to allow for clearance of pulleys. Use zip straps if necessary. (torque to 89 in/lbs)



- 10) With the EGR/Intake assembly removed, access the fuel feed line and return line from the fuel filter housing.
- 11) Remove stock high pressure fuel line from fuel rail. (19 mm wrench)
- 12) Remove the stock fuel FEED LINE from the filter housing and replace with the BD fuel feed line provided with the kit.



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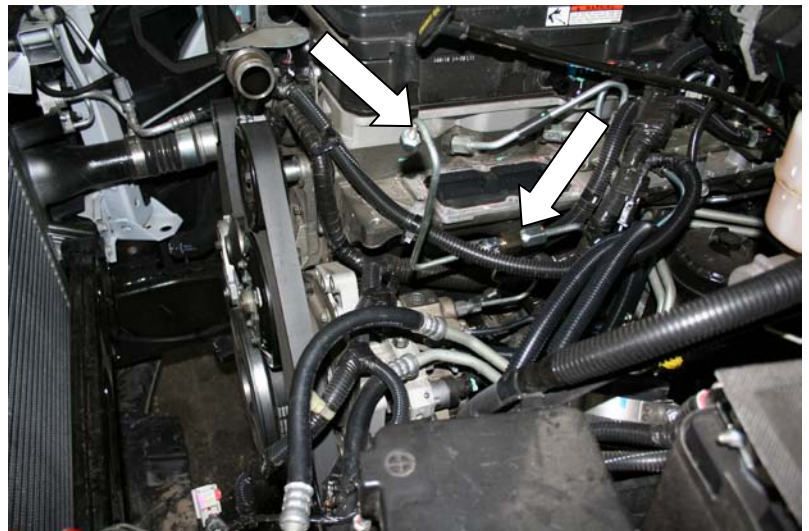
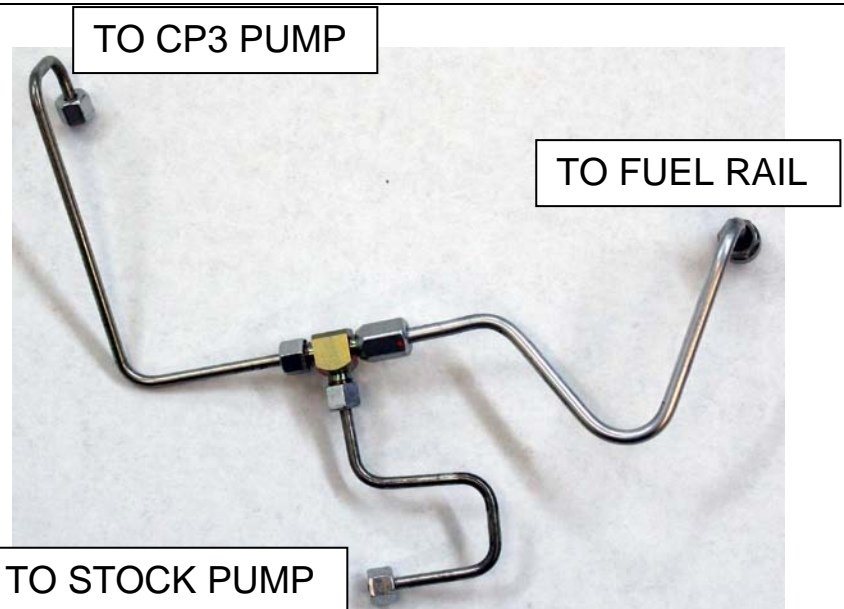
13) Remove stock RETURN LINE from the fuel filter housing and replace with the BD return line using the stock seal and banjo bolt (17 mm socket). At CP3 pump



14) Install new high pressure fuel lines. Tighten with 17 & 19 mm wrenches.

NOTE: High pressure fuel line not connected until the pump is installed.

Leave line to second pump loose at this time



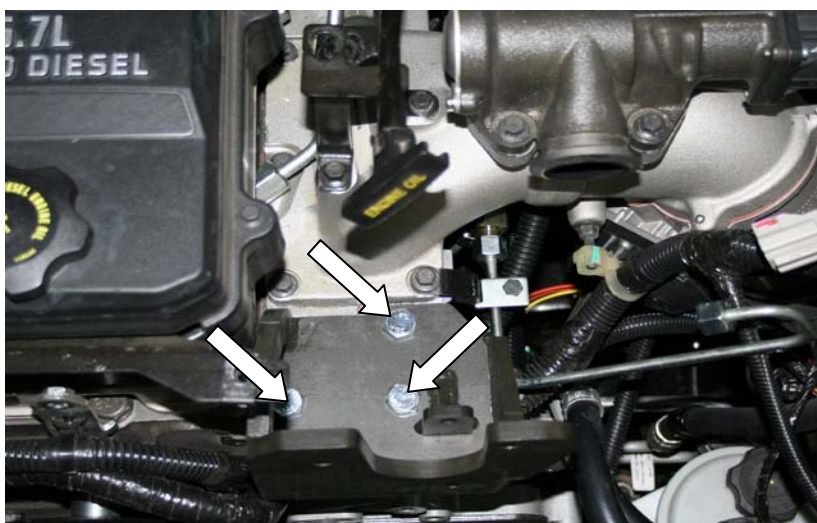
- 15) Install the intake manifold and the EGR valve.

Then install the fuel pressure line mounting bracket, utilizing the intake manifolds mounting hardware.

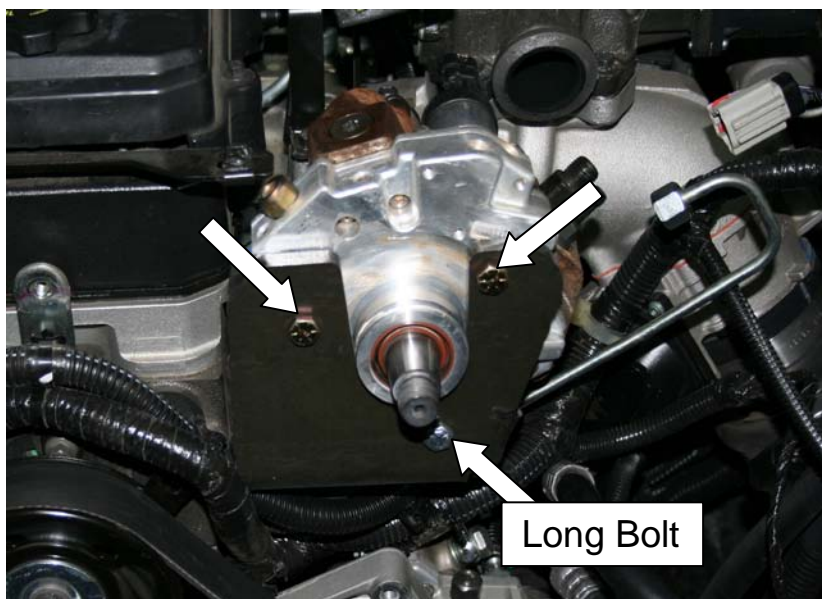
Torque bolts to 18 ft/lbs.



- 16) Install the CP3 pump bracket as shown. Using the 3 provided bolts torqued to 40 ft/lbs (17 mm socket)



- 17) Mount pump on bracket as shown. Using the 3 provided bolts. Longest in the lowest position. Torque to 12 ft/lbs with a 1/2" socket.



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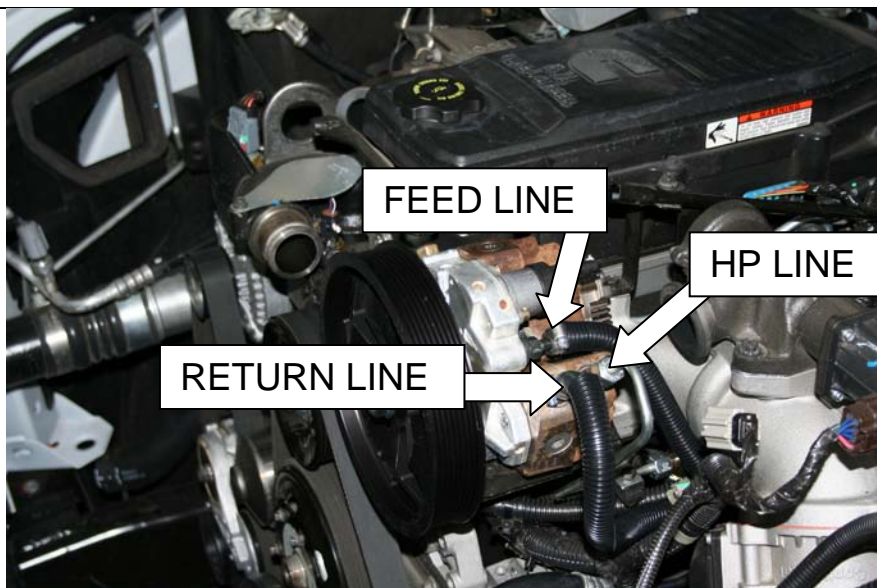
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- 18) Install fuel lines to both CP3 pumps and tighten the gear clamps (1/4" socket).

Connect HP line and tighten at both ends (17 & 19 mm wrenches). Torque to 37 ft/lbs.

Install the pulley, washer and nut to the CP3 Pump.

NOTE: CP3 pump wheel nut will be torqued later when the belt is installed.



- 19) Find a suitable area near the battery or on the power distribution box, to mount module for the harness.

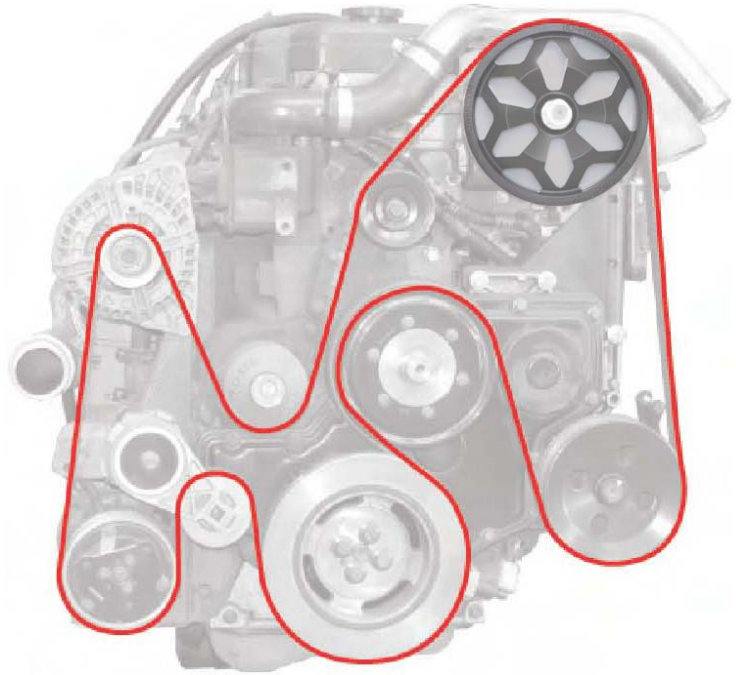
Disconnect the stock CP3 pump plug and connect to the new harness. Then connect the harness plugs to both pumps.



- 20) Install BD drive belt provided with kit. (Use belt routing diagram)

Reinstall fan pulley and set the belt with the tensioner then tighten the fan pulley bolts.

Tighten fan pulley bolts. (8 mm socket) Torque to 89 in/lbs.



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- 21) Torque the pump pulley nut to 35 ft/lbs.



- 22) Install BD coolant pipe, hoses and clamps. (1/4" socket)

Mounting the pipe to the front two EGR valve hold down bolts. (10 mm socket to 18 ft/lbs).



- 23) Install oil dipstick bracket (10 mm socket), 1/2" socket torque to 12 ft/lbs with a 1/2" wrench. Fill coolant system. Connect batteries.



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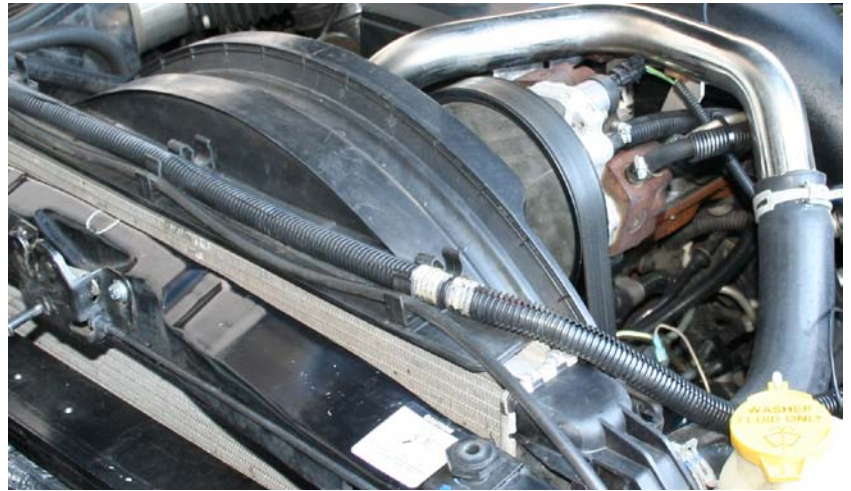
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- 24) Install fan, fan shroud.
Connect the fan speed
sensor.

Installation is complete.

*Please note: you may
experience some extended
cranking on initial startup
due to the disconnection of
the fuel lines.*



Symptom/Resolution

Belt wear or belt noises

Use a long metal straight edge and compare parallelism between CP3 pulley and factory pulleys. Re-align if necessary.

May need to replace belt (Gates K081362).

High Pressure at idle (Slight elevated idle)

Lift pump pressure supplying CP3's no higher than 6-10psi.

Change lift pump spring.

Max Pressure at idle (Elevated idle, 25000psi)

DANGER DO NOT RUN TRUCK

- Check Power and Ground, clean battery terminals
- Check electronic module fuse
- Electronic module bad (very rare)



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If you have any technical difficulties, concerns, comments, or complaints, please phone our Technical Support hotline at (800) 887-5030 between 8:30am-5:00pm PST (Pacific Standard Time) Monday to Friday, or post a message on the BD Discussion Forums located at:

<http://forum.bd-power.com/>