

Dodge 5.9L Cummins 03-07 *Dual CP3 Kit*

P/N#	1050450	2003-04 Without CP3 Pump
P/N#	1050450P	2003-04 With CP3 Pump
P/N#	1050451	2005-07 Without CP3 Pump
P/N#	1050451P	2005-07 With CP3 Pump

PLEASE READ ALL INSTRUCTIONS BEFORE INSTALLATION

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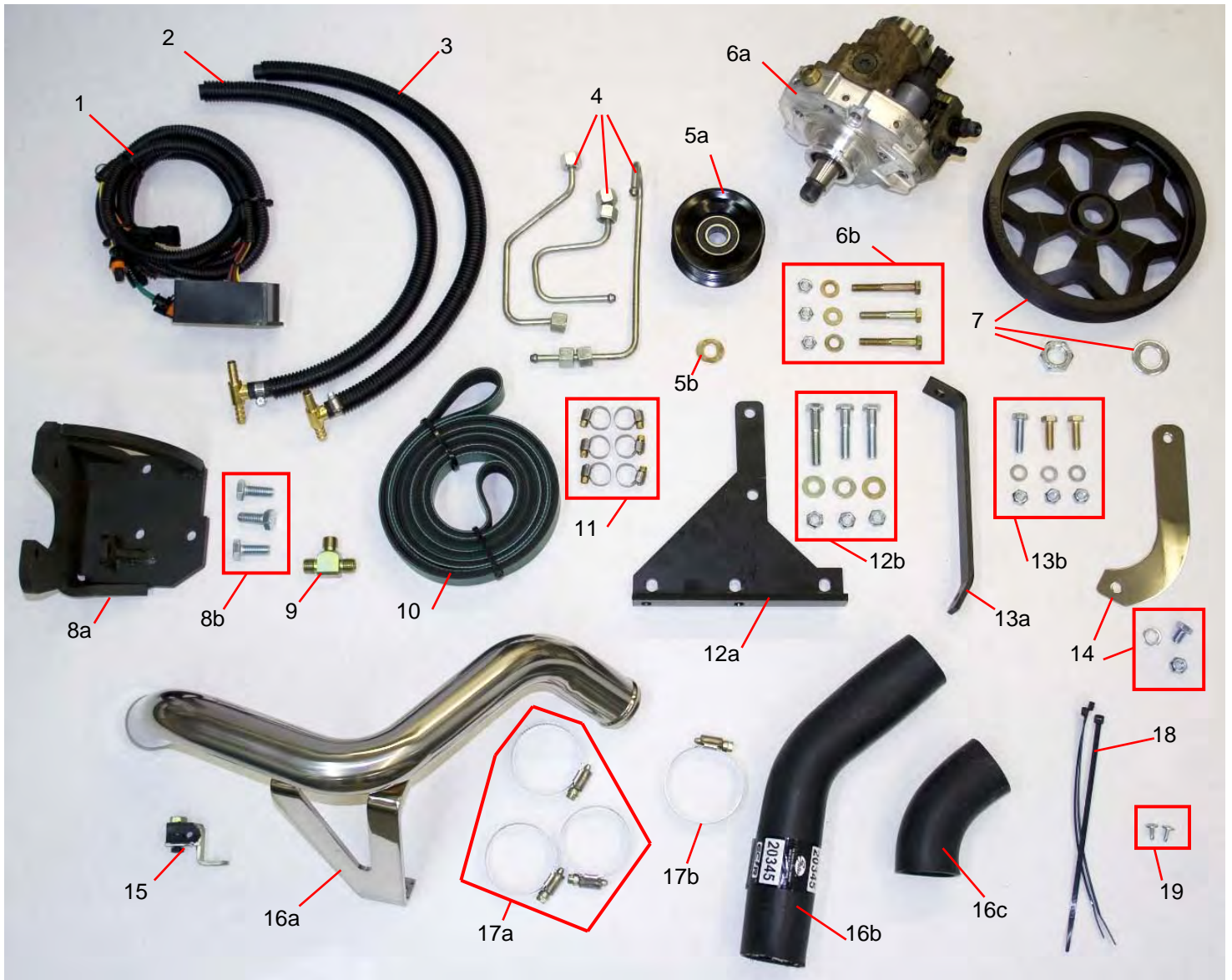
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Phone: 604-853-6096 | Fax: 604-853-8749 | Internet: www.bd-power.com

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.



Part numbers: 12a , 12b , 13a , 13b only apply to years 2003-04
PLEASE NOTE THIS KIT MUST USE A BOSCH CP3 PUMP #0445 020 037
6a = Optional Bosch CP3 Pump

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" Wrench
- 13,17,19 Wrench
- 36 mm Fan Hub Wrench
- Torque Wrench
- Utility Knife
- 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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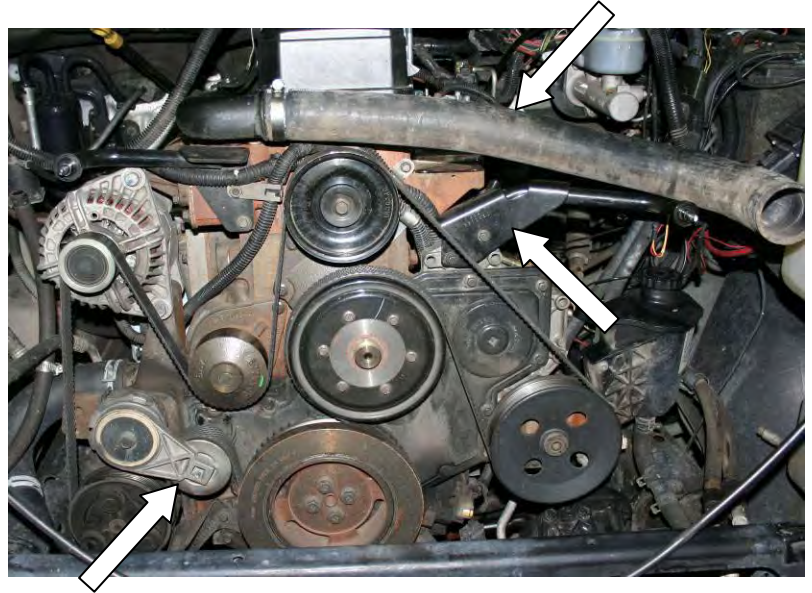
INSTALLATION

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 upper radiator hose. Upper fan shroud bracket located on the driver's side and the serpentine belt.

Note: The tensioner is loosened from under vehicle.

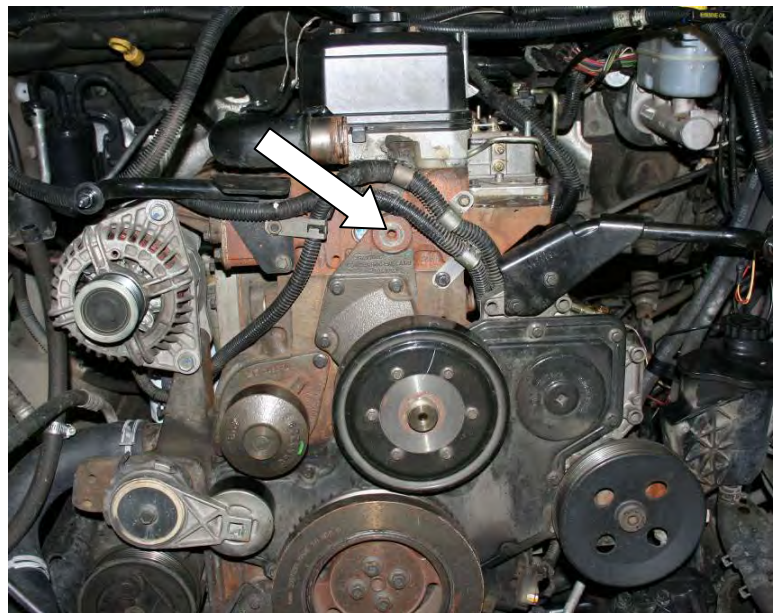


****Optional****

You can remove the fan and shroud for more maneuverability (13 mm socket and 36 mm fan hub wrench). To remove the shroud, disconnect the fan speed sensor from the underside of the engine, and remove the four nuts from the fan shroud.

- 3) Remove stock idler pulley and replace it with #5a Idler Pulley. (13 mm socket)

You will need to reuse stock spacer and bolt as well as add #5b flat washer between bolt and pulley as shown.



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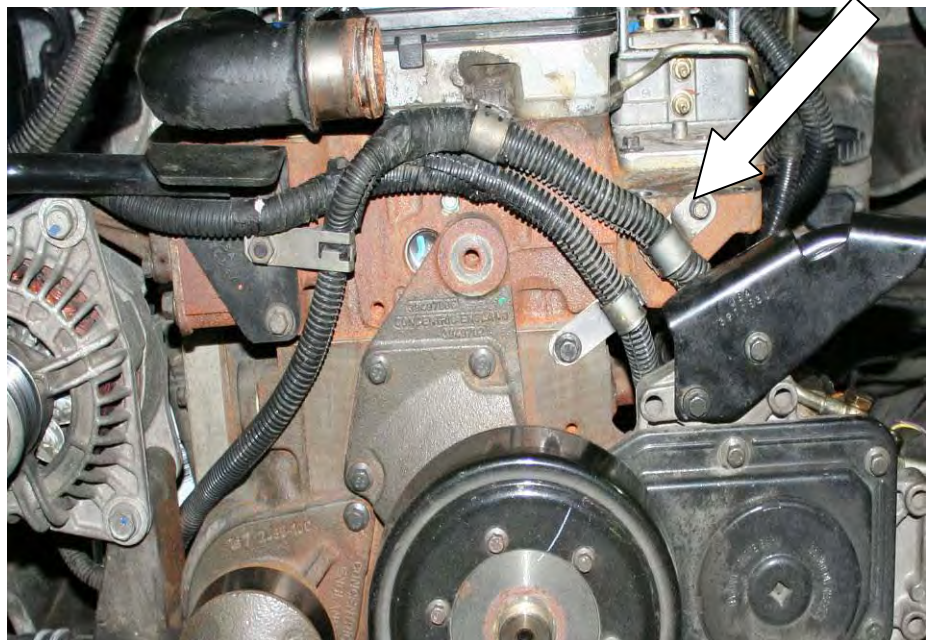
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Insert the washer and bolt assembly into the pulley then insert the spacer into the backside and torque into place at 32 ft/lbs.



- 4) Remove wiring harness bracket bolt (8 or 10 mm socket), and move to the new location as shown in diagram and install bolt to (89 in/lbs).



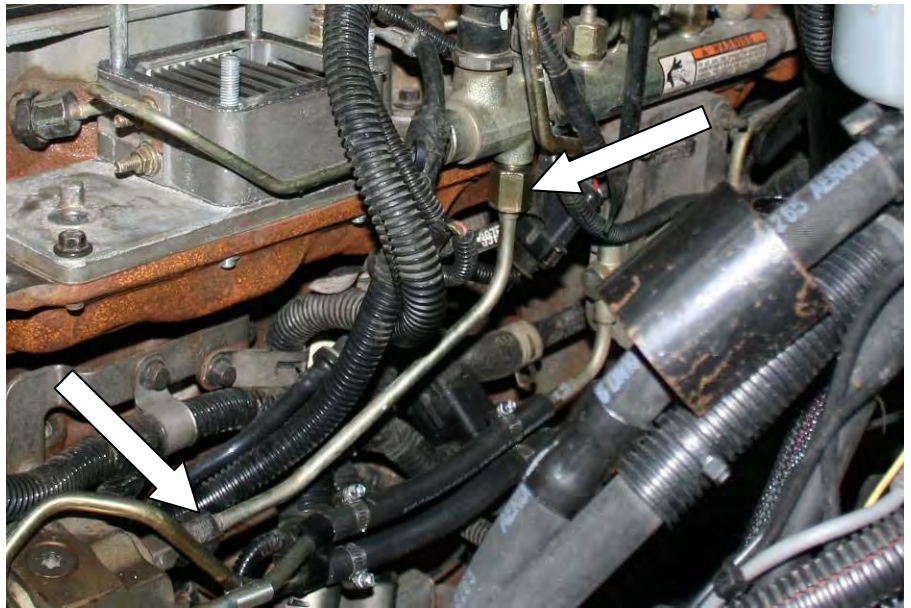
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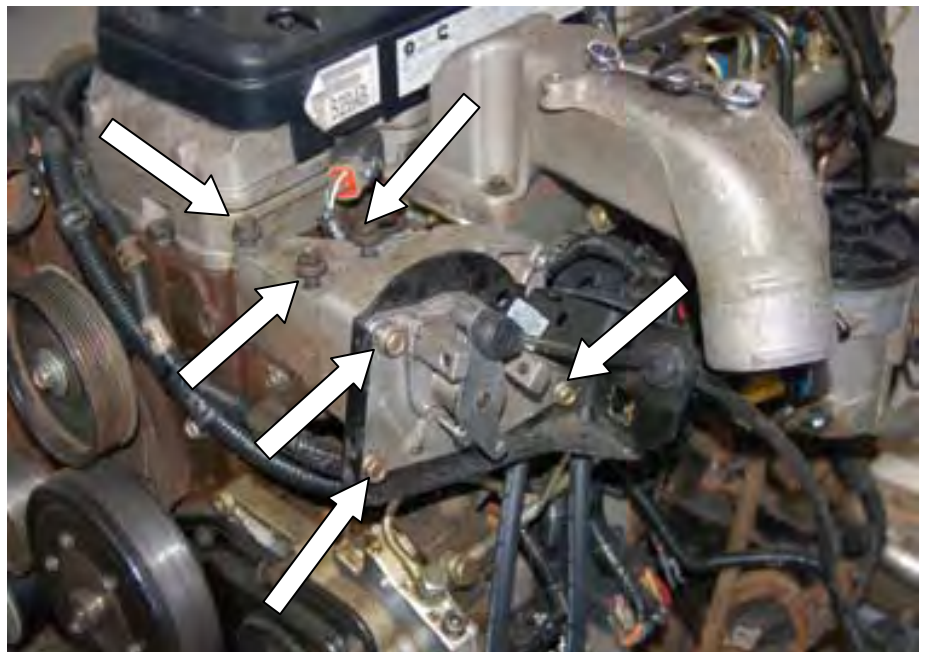
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- 5) Remove high pressure fuel line between stock CP3 pump and fuel rail.
(19 mm Wrench)



03/04 Models Only
If your vehicle is an 04.5-07 Model
please skip ahead to Step 9

- 6) Remove 6 mounting bolts for APPS to allow for relocation.
(13 mm Socket)



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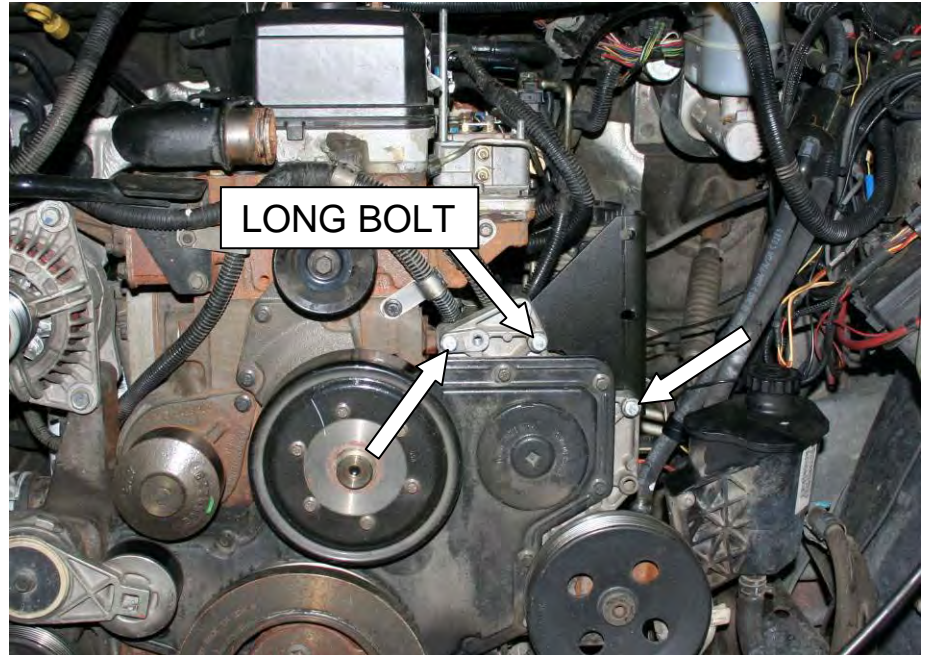
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- 7) Install #12a APPS relocation bracket using the three supplied #12b bolts, washers and nuts. Torque the *short bolts* to 20 ft/lbs. (9/16" Socket) (9/16" Wrench)

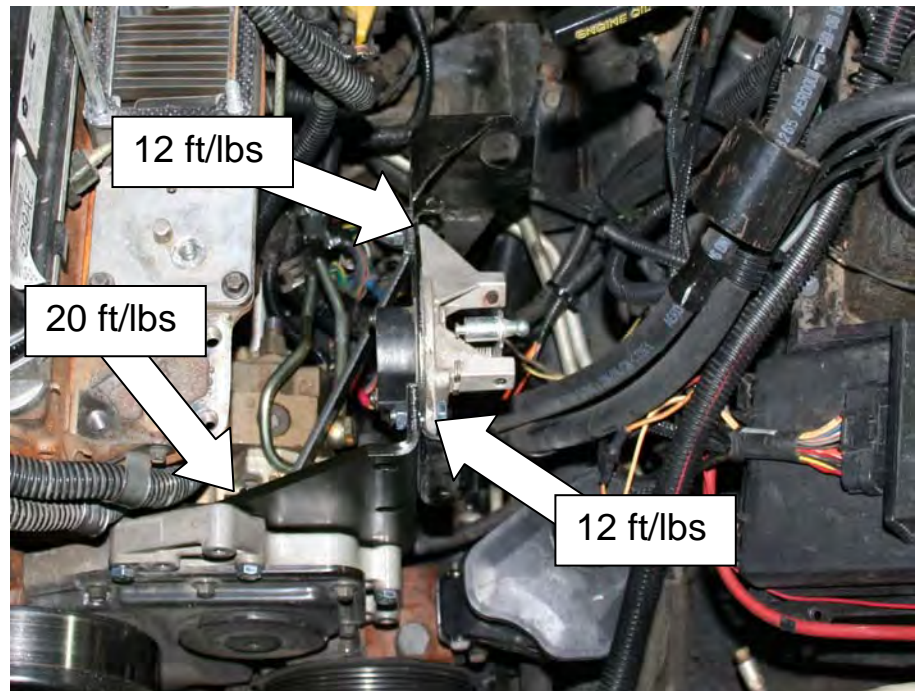
Temporary place the *long bolt* as shown in the diagram (right), tighten the washer and nut assembly finger tight.



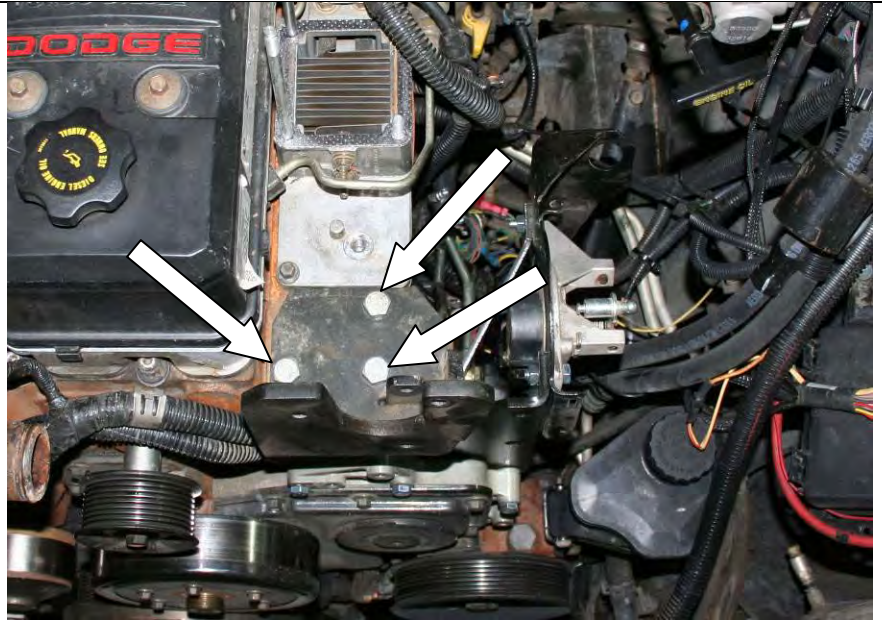
- 8) Install APPS onto the new bracket with the supplied #13b mounting bolts and torque the *shorter bolts* to 12 ft/lbs. (13 mm Socket and Wrench)

The *longer* #13b bolt should be used towards the rear of APPS for the 13a bracket torque to 12 ft/lbs.

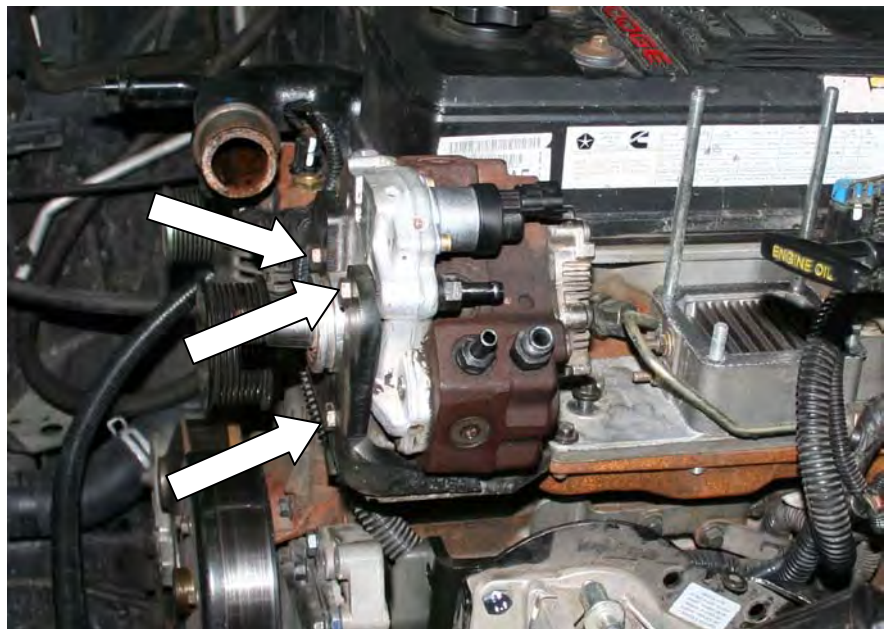
Loosen the *long* 12b bolt and insert the 13a bracket onto the *long* bolt and torque to 20 ft/lbs. (9/16" Socket and Wrench)



- 9) Install #8a CP3 Pump mounting bracket to the 3 threaded holes in front of intake on cylinder head. Using the three supplied #8b bolts (17 mm Socket) torque to 40 ft/lbs.



- 10) Install the CP3 Pump onto the bracket by sliding from top downward and securing with the three supplied #6b bolts, washers and nuts. The longer bolt is used in the lowest mounting hole, torque to 12 ft/lbs (1/2" Socket and Wrench).



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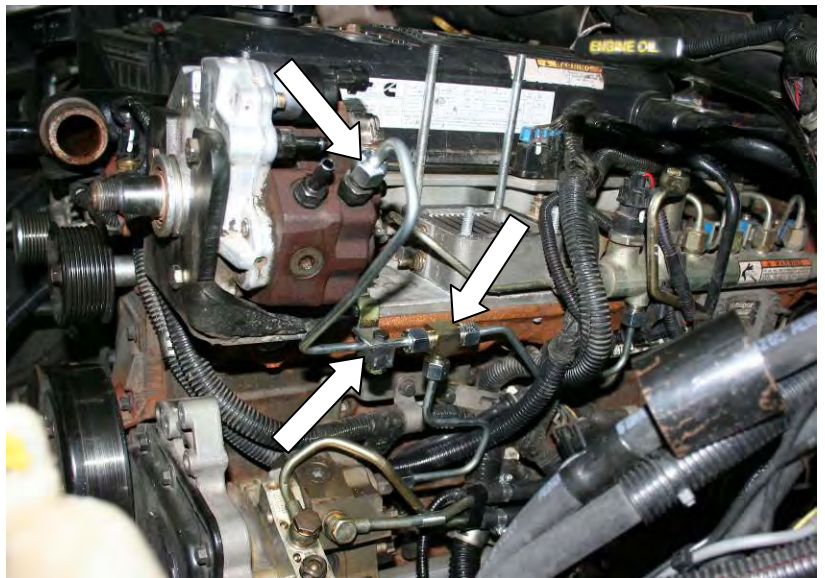
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- 11) Install #16a radiator coolant pipe using the grid heater ground bolt. Be sure to reinstall the ground on top of the pipe bracket as shown. (10 mm Socket) torque to 18 ft/lbs.



- 12) Install #15 isolator bracket using front outer intake manifold bolt. Do not tighten at this time. Install the three supplied #4 high pressure fuel lines with T fitting. Connecting both CP3 pumps and fuel rail together as shown. Tighten lines and secure top CP3 line with isolator install previously. (10 mm Socket at 18 ft/lbs) (17 & 19 mm Wrenches at 37 ft/lbs)



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- 13) Using your utility knife cut a 3/4" section from the rubber feed and return lines between fuel bowl and stock CP3 pump. Insert #2 and #3 T fittings into cut sections of stock lines and secure with #11 gear clamps. Connect #2 Supply Line and #3 Return line to top CP3 Pump and secure with #11 gear clamps(1/4" Socket). Secure lines with zip strips.



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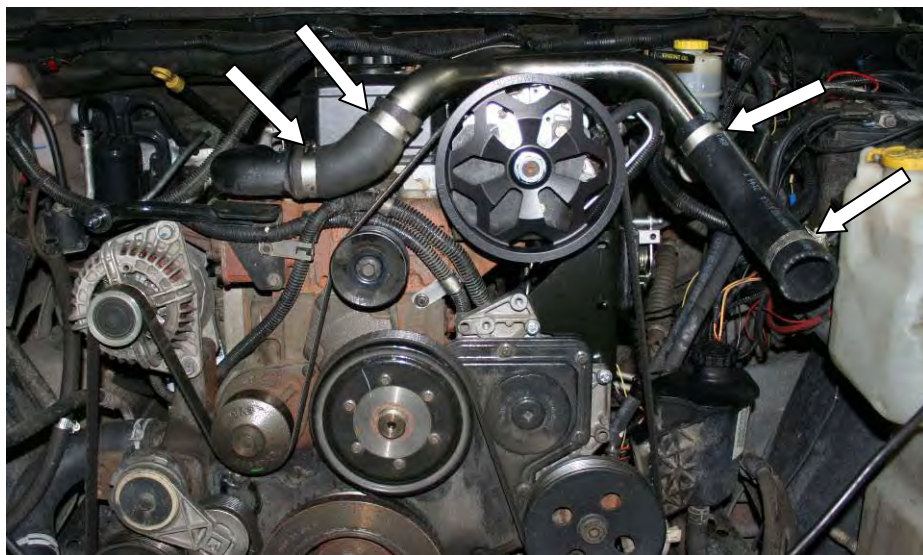
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14) Install BD Pulley onto CP3 Pump with #7 washer and nut (1 1/16" Socket and Torque wrench). The nut can be torqued to 35 ft lbs once belt is installed. Install new serpentine belt and torque CP3 Pulley Nut. Belt routing is as shown.



15) Install new upper radiator hoses #16a and 16c to pipe section and secure with #17a and 17b gear clamps (5/16" Socket).



16) Layout wiring harness with control module.

Disconnect OEM connector from rear of stock CP3 Pump. Connect new harness to OEM connector, stock CP3 and New CP3 Pumps.

Connect red wire to battery positive and black wire to chassis ground (1/2" Wrench and 10 mm Socket).

The module can be secured with the supplied #19 screws or zip strips. Secure harness with zip strips using a Phillips screwdriver or side cutters to trim the zip straps.



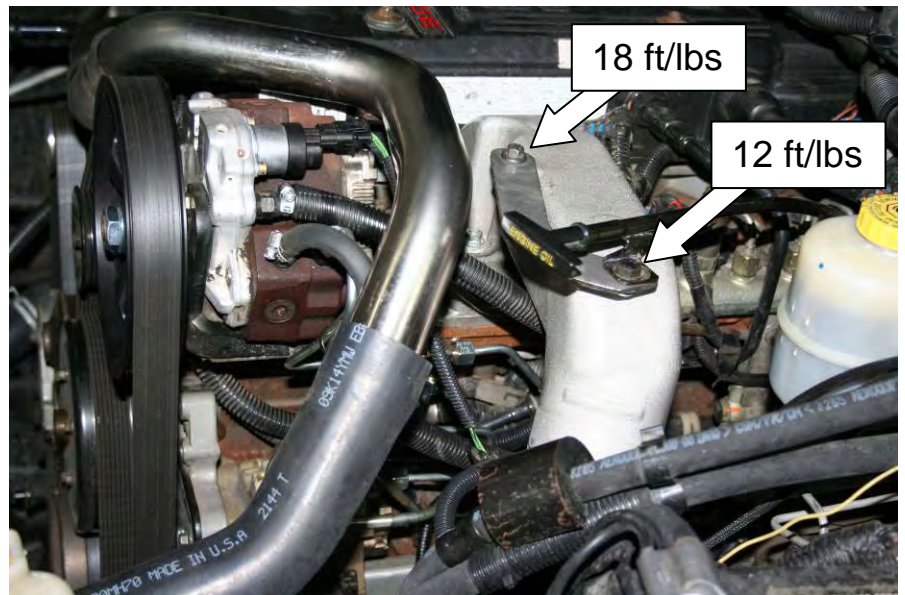
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- 17) Install #14 Oil Dipstick Tube Support Bracket. Use stock bolt to secure bracket at stock location and #14 bolt, washer and nut to secure tube to bracket.
(10 mm Socket)
(13 mm Socket)



- 18) Reconnect negative battery terminals.(1/2" Wrench)



- 19) Refill coolant and start engine. Check over for leaks. Road test and recheck. Top coolant as needed. *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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