INDUSTRIAL INJECTION

CP4 to CP3 Conversion Kit

INSTALLATION INSTRUCTIONS

2011-2016 LML Duramax

(No Tuning Required Kit)

Rev: 08.07.26

WARNING – PROFESSIONAL INSTALLATION REQUIRED

The **Industrial Injection LML CP4 to CP3 Conversion Kit** is an advanced installation that requires in-depth mechanical knowledge and expertise. Improper installation may result in severe engine damage, fuel system failure, or voided warranties.

This product **MUST** be installed by a **qualified mechanic at a professional diesel shop** with experience in high-pressure fuel systems. Industrial Injection is not responsible for damage or failures caused by improper installation, misuse, or modifications.

Before beginning the installation, thoroughly read and understand all instructions. If you are unsure about any step of the process, consult a professional diesel technician.

If you have any questions call us at 1-800-955-0476.

STEP 1

Disconnect the negative battery cables from both the passenger side and the drivers side batteries.

STEP 2

Remove the factory intake assembly and resonator.

Note: In order to remove the factory intake, you will need to disconnect the upper coolant hose on the coolant bottle. and disconnect the air intake sensors.

STEP 3

Disconnect all sensors from factory intake horn, and remove factory intake horn from vehicle.

STEP 4

Remove the plastic elbow that connects to the turbo, then continue to remove the EGR system from the vehicle if still equipped.

STEP 5

Remove the factory Y bridge from the valley of the engine.

STEP 6

To gain access to the front of the engine, we recommend removing the fan shroud and fan. Start by disconnecting the upper radiator hose and moving it out of the way. Remove the upper fan shroud and unbolt the fan hub. Remove the serpentine belt, unbolt the AC compressor and move it out of the way. Once that is out of the way you can continue to remove the fan shroud and fan hub from the vehicle.

Note: you will need to remove the TCM from the shroud and set it out of the way before you remove the shroud from the vehicle.

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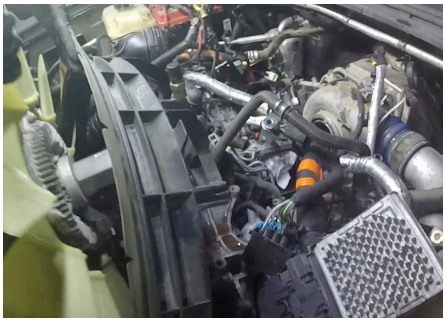
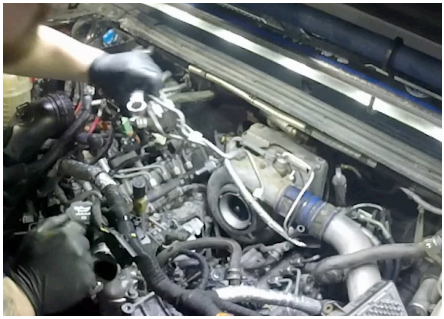


STEP 7

Remove the belt tensioner and the alternator in order to gain access to the front mounting bolts of the CP4.

STEP 8

Remove both of the high pressure fuel lines that route from the top of the CP4 to the passenger side fuel rail.



STEP 9

Remove the low pressure fuel line in the valley of the engine to the fuel filter housing. Disconnect the pressure fitting in the valley and loosen clamp at fuel filter housing to remove.

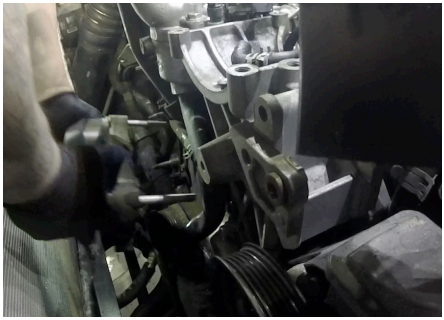
Note: a new fuel line is supplied for increased pump clearance.

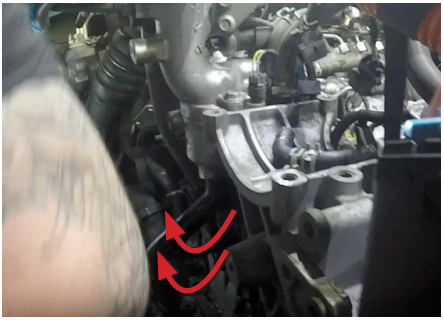
STEP 10

Disconnect and remove the low pressure fuel supply hose and the low pressure fuel return hose from the CP4. Remove banjo bolt from the 9th injector feed line and remove the two bolts securing the feed line assembly to the block.

STEP 11

In order to gain access to the CP4 mounting bolts you will want to remove the fan pulley and mount. Then twist the water pump outlet pipe to gain access to the CP4 mounting bolts.





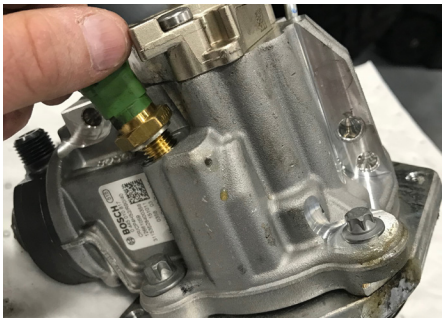
STEP 12

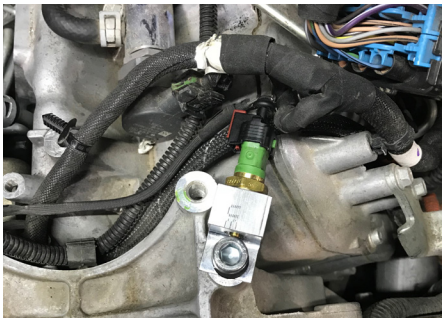
Remove the four CP4 mounting bolts on the front of the engine, then remove the CP4 from the valley of the engine.

Note: you may need to gently pry on the CP4 to help with removal.
Note: make sure all electrical connections are disconnected from the CP4.

STEP 13

Remove the green temperature sensor on the bottom of the CP4. Install the sensor into the supplied mounting block and mount it to the empty hole on the drivers side of the AC compressor mounting location. Re-insert the connection.





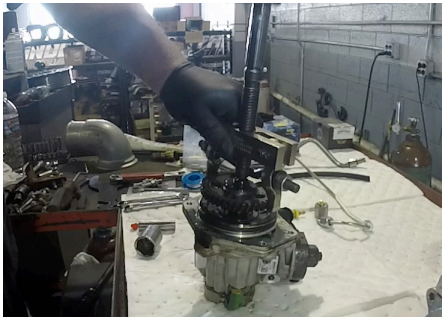
STEP 14

Using the supplied plug and cap, install it onto the rail on the third port and tighten.

STEP 15

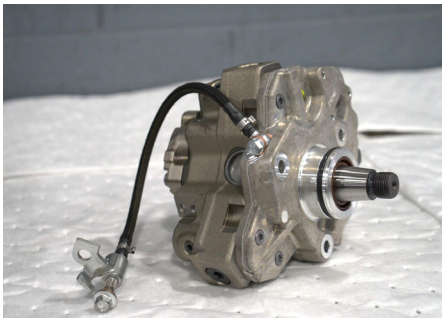
With the CP4 removed from the truck, you can now proceed to remove the gear from the CP4 to re-use on the CP3.

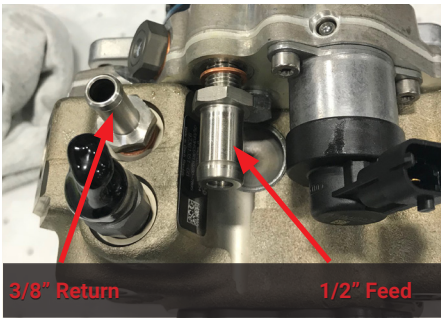
Note: you may need to use a gear puller in order to remove the gear.



STEP 16

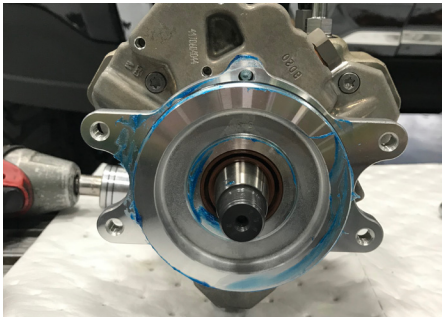
Locate your new CP3 and hardware to prepare for installation. You will first remove the factory return and feed fittings. Replace them with the new supplied return and feed fittings using the supplied copper sealing washers.

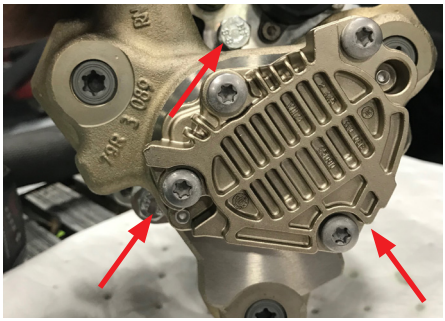




STEP 17

Install supplied CP3 shaft o-ring seal and apply grease. Install supplied CP3 mounting bracket using supplied hardware and lock washers. Then install outer o-ring and apply grease.





STEP 18

Install the CP4 gear onto the CP3 using the factory CP4 nut. Torque to 85 lb ft.

Note: when fully tightened, the nut will not be totally threaded onto the CP3 shaft.

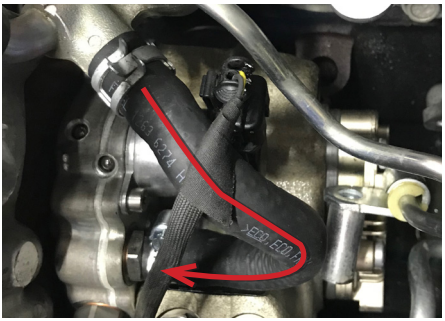
STEP 19

You can now install the new CP3 into the valley of the engine. Utilize the four factory CP4 mounting bolts to install. Be mindful of the routing of the 9th injector feed line hose. Make sure you do not bump the line and accidentally loosen the banjo bolt.

Note: The feed line banjo bolt to cp3 torque is 89 lb-inch

STEP 20

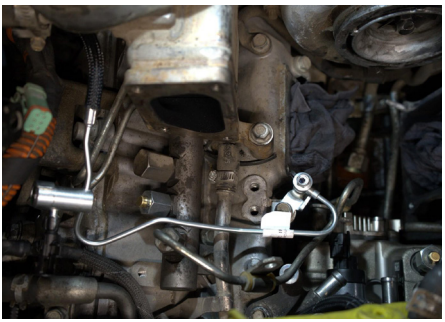
Install the supplied 1/2” fuel feed hose from the filter housing to the CP3.
Reconnect the line that goes from the CP3 to the 9th injector hard line.



STEP 21

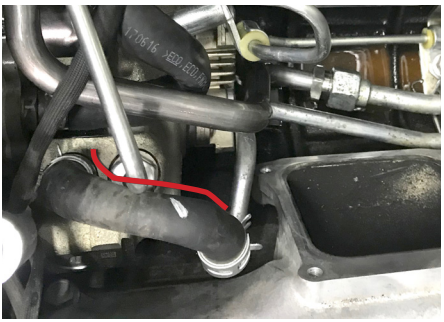
Bolt down the 9th injector hard line assembly. Reconnect the line that goes from the CP3 to the 9th injector hard line.

Note: Torque the banjo bolt to 89 lb-inch



STEP 22

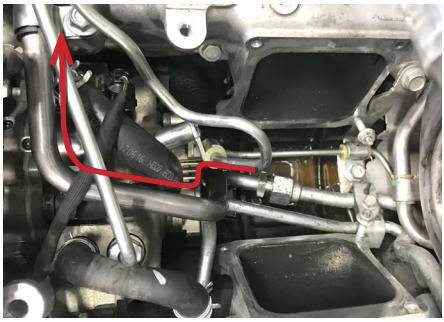
Re-using the factory 3/8” hose, install fuel return hose to the CP3.



STEP 23

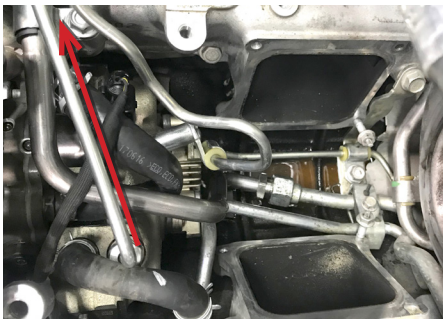
You can now install the supplied low pressure fuel feed hard line in the valley of the engine to the filter housing. Torque to 26 lb-ft.

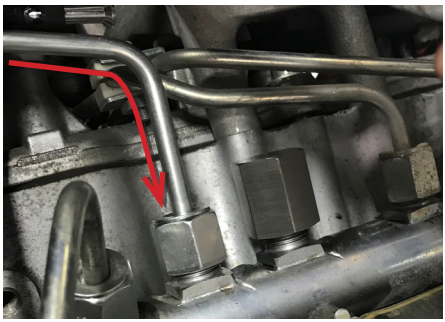
Note: Use the supplied lubricant on the threads of the new low pressure feed line, this will help with sealing and prevent fuel leaks and hard starts.



STEP 24

You can now install the supplied high pressure fuel line from the CP3 to the passenger side fuel rail.





STEP 25

You can now re-assemble the remaining parts of the truck that were removed. Before starting your truck be sure to check all fluid levels and top them off if needed.

Note: before attempting to start your truck, after changing the fuel filter, you will want to bleed the low pressure fuel system.
Note: while truck is running, make sure to check all fuel fittings for leaks.

STEP 26

Affix the EO label in a visible location under the hood for a smog technician to easily view.

WARNING: This is a required step to aid inspection of the vehicle under the California Smog Check Program

Note: Labels may look different depending on the product you purchased.

LML CP3 Conversion Kit W/Pump

Covers Part Numbers: 436401

LML CP3 Conversion Kit without Pump

Covers Part Numbers: 436411

LML CP3 Pump Only

Covers Part Numbers:
0445020105CON
0445020105SHOCON
0445020105DFCON
0445020105DDCON

LML Wire Colors

Fuel Control Actuator Wires at CP3 Pump
• Black & Yellow

Pressure Relief Front Of Drivers Rail
• Purple/White Tracer & Yellow

Fuel Temp Sensor in New Aluminum Block
• Brown/Grey Tracer & Brown/White Tracer

INDUSTRIAL INJECTION

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