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2011-2016 LML CP3 Conversion Kit

Installation Instructions



Kit Contents:

- High Pressure Fuel Rail Line
- Fuel Rail Plug and Nut
- CP3 Block Adapter with O-ring
- (3) CP3 Block Adapter Bolts (Flange Head, M8x1.25x35mm)
- CP3 Pump Fittings 3/8"
- CP3 Pump Fittings 1/2"
- (2) Sealing Washers
- Low Pressure Fuel Feed Line
- 3/8"x8" Flexible Fuel Line with Hose Clamps (CP3 Return)
- 1/2"x30" Flexible Fuel Line with Hose Clamps (Filter to CP3)
- 3/4" P-Clamp
- Fuel Return Line Block Off with O-ring
- M20 x 1.5 Doser Valve Plug and Copper Washer
- CP3K or PowerFlo 750 Optional

It is highly recommended to install a new fuel pressure regulator in the driver side fuel rail with every CP3 Conversion install. <u>GM Part # 12611872</u>

WARNING

- This product is not legal in the state of California.
- When used incorrectly this product may violate local, state, and federal laws pertaining to emissions, traffic, registration, and safety.
- Use of this product may damage or destroy mechanical and/or electrical components of this vehicle.
- Use of this product may void or nullify the vehicles factory warranty.
- User understands that motorsports are dangerous, and that installation of this product may subsequently require special driving skills or techniques to safely operate the vehicle.
- User assumes sole responsibility for the safe, proper, and legal 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.
- This product may not work with the EGR cooler installed. It may need to be removed.
- This product MUST be used in conjunction with custom tuning calibrations from Fleece Performance. Failure to install the correct calibrations can result in engine damage.
- Fuel Lines must be cleaned before install.

Visit

http://fleeceperformance.com/resources/installation-videos.html to watch the Installation Video

The following are installation instructions for the LML CP3 Conversion Kit. The instructions are not step-by-step since many trucks will have had various different modifications, or may be in various stages of disassembly/reassembly. Each section will describe where the parts listed are supposed to be installed.



High Pressure Fuel Line Fuel Rail Plug and Nut

Figure 1: Passenger Side Fuel Rail

NOTE: The high pressure fuel line provided should route to the CP3 using the stock line clamps.

CP3 Fittings



Figure 2: CP3 Fittings

NOTE: Install the CP3 fittings with the sealing washers

CP3 Block Adapter with O-ring CP3 Block Adapter Bolts (Flange Head, M8x1.25x35mm)

- 1. Bolt the CP3 to the block adapter using the 3 flange head bolts provided. Torque to <u>20 lb./ft</u>.
- 2. Install the gear and nut from your CP4 onto the CP3. Torque nut to 75 lb./ft. *DO NOT USE AN IMPACT*
- Lubricate the block adapter o-ring and install the CP3 assembly. You will reuse the bolts that held the CP4 in place to hold the CP3 in place. Torque to <u>18 lb./ft</u>.

NOTE: The CP4 nut is longer than the CP3 nut, but will not interfere with the front cover. It will also provide the same amount of thread engagement.

Low Pressure Fuel Feed Line

The low pressure fuel feed line is a modified stock fuel feed line that gives the longer CP3 room to fit in the valley of the block. Disconnect the stock fuel feed line in the middle of the valley and at the fuel filter. Replace with the provided fuel feed line and secure as necessary.

1/2"x30" Flexible Fuel Line with Hose Clamps

Route the 1/2" fuel line from the fuel filter to the 1/2" CP3 feed fitting. Use the 3/4" P-Clamp to secure the fuel line at the top/front of the valve cover.

3/8"x8" Flexible Fuel Line with Hose Clamps

Route the 3/8" hose in a "U" shape from the 3/8" CP3 return fitting to the factory return line, being sure not to kink the hose.



Fuel Return Line Block Off with O-ring

Figure 3: Fuel Return Line (Passenger Side)

TIP: Carefully remove the high pressure fuel line mount in the location shown below.



Figure 4: High Pressure Fuel Line Bracket

Factory Fuel Temperature Sensor

The factory fuel temperature sensor (the green sensor on the bottom of the CP4) must be removed from the CP4 pump, plugged into the factory connector, and secured in a safe location

Fuel Pressure Regulator



Figure 5: Fuel Pressure Regulator



Figure 6: This is why we recommend replacement. This came out of a running truck with a CP4. Notice all the fine metal fragments imbedded in the filter.