



LML CP3 "RACE" Conversion Kit Instructions

Note: This Kit is for off road competition use only!

1. Locate the Packing list included with the Kit and double check you have all items on the list before starting tear down.
2. Disconnect the negative battery cables from both batteries.
3. Remove intake and turbo inlet horn.
4. The factory downpipe and passenger side up pipe need to be removed also, this is easiest done thru the passenger fender well.
5. Release tension on serpentine belt, it does not need to be completely removed.
6. Remove the driver side alternator bolt and loosen the passenger side bolt. Then rotate the alternator up towards the passenger side.
7. Remove the factory Y-bridge, 1/4" drive swivel socket and extensions ease this process.
8. Remove both Cp4 high pressure lines; disconnect from pump and passenger side Rail. These will not be reused.
9. Install the supplied Stainless-steel plugs and nuts onto the passenger side fuel rail where the cp4 lines use to feed the rail.
10. Disconnect the High-pressure fuel line that connects the two rails together. It does not need to be removed completely, just disconnected on the passenger side.

11. In the valley just under the Y-bridge, unbolt the support bracket that holds the fuel lines in place.
12. Disconnect the large fuel line at the compression fitting in the center of the valley and at the rubber hose going to the fuel filter and remove from engine, this will be re-used.
13. Remove the fuel feed line that comes from the fuel filter and feeds the CP4 pump. This also includes removing the fuel pressure test port which bolts to the thermostat housing, this will not be reused.
14. Unbolt the fan shroud and remove the fan from hub. You do not need to take the fan off of truck completely, just remove from the hub so that that hub assembly can be removed for access to the CP4 mounting Bolts (3 bolts and 2 nuts hold the hub assembly on)
15. Once the fan hub is removed and pulled forward you can gain access to the CP4 mount bolts on the front of the engine. Remove the four 13mm hex head bolts holding the CP4 to the engine block. Swivel sockets make the job easier as one bolt is behind a rubber coolant line.
16. Disconnect the wire plugs on the CP4 Pump. Fuel pressure regulator (top of pump) and temperature sensor (bottom of pump).
17. Remove the engine oil fill tube and using a pry bar cautiously, with a hand on the back of the pump, pry and wiggle the pump out of the engine block.
18. Once the CP4 pump is out, remove the green temperature sensor located on the bottom of the pump, this needs to be plugged back into the wire harness and tied up.
19. With an impact remove the nut (27mm) and gear from the pump. A 3-jaw puller works best, but you can also use a pry bar to put pressure between the gear and bracket (not excessive pressure!) and hit the pump shaft with a RUBBER Mallet. This will break the tapered gear free from the shaft.
20. Locate your new CP3 pump. In the box you will find a bag with a small O-ring, this gets installed onto the CP3 housing. This is necessary to seal the pump to the adapter plate, do not skip this step! You will reuse the large O-ring from the original CP4 adapter plate and reinstall it onto the new supplied CP3 adapter plate (outer groove of the plate) this seals the plate to the engine block, do not skip this step!
21. Now Install Supplied CP3 mount plate to the new CP3 pump with supplied M8 Allen bolts. Reinstall the CP4 gear and nut with red Loctite onto the CP3 Pump. Note: The LML CP4 gear is thicker than a CP3 gear; the nut will be 1-2 threads from fully threaded onto the pump, this is fine. Torque the nut to 52 ft lbs. Ignore the keyway groove on the CP4 Pump gear it is not needed. The CP3 Pump DOES NOT need to be timed like a CP4 pump.

22. You can now install the supplied M12 x ½" barb fitting with O-ring seal washer into the CP3 feed port (port next to the regulator) The supplied M12 x 3/8" barb fitting gets installed into the return port of the cp3 pump (port facing upwards next to the high pressure outlet).
23. Apply a healthy amount of grease on the O-ring around the CP3 mount plate and then install the cp3 into the engine block. Ensure that the bracket is started square in the block and tap it in until you can thread in the 4 bolts from the front of the engine. Now work each bolt in evenly until the pump bracket is tight to the block.
24. Reinstall the fan clutch hub.
25. Now the factory fuel feed hardline can be reinstalled in the valley. Lift up slightly on the line that is in the valley still and this will help you start the compression fitting nut on the line.
26. This fuel feed line will need to be bent slightly to clear the back side of the new CP3 pump. Once bent to clear the pump it can be bolted back down with the support bracket and the fuel line to the filter housing can be reconnected.
27. Connect the supplied ½" fuel hose to the factory fuel filter housing outlet (noted by an arrow on housing) and install supplied tension clamp. Opposite end of fuel line connects to the CP3 Feed fitting with tension clamp as well. If you have the factory fuel filter deleted, you can simply connect our supplied ½" fuel hose to the factory hard pipe that originally fed the fuel filter housing. (ultimately bypassing the housing)
28. The supplied 3/8" fuel hose connects to the top port of the CP3 pump (Return port). The hose will loop 180* and connect to the factory hard return line. Use supplied spring clamps.
29. The wire connector for the CP3 regulator can now be reconnected to the new CP3. VERIFY that you connect the proper plug into the regulator as it is the same size plug as several others. The CP3 regulator connector plug should have a Black wire and a Yellow wire.
30. The high-pressure line that connects the driver and passenger side rails can now be reconnected to the passenger rail.
31. On the passenger rail you will need to remove the plug in the end of the rail. This requires a #10 Triple Square drive bit. DO NOT try using a TORX or Allen Socket. Using a ratchet thru the fender well to remove this plug works best.
32. Once plug is removed, install our supplied stainless-steel rail fitting. The fitting needs to be very tight!
33. Our high-pressure fuel line can now be installed from the CP3 fitting to the rear of the rail.

34. On the passenger side valve cover you will see small fuel block with a black sensor, this is the fuel pressure sensor/filter minder. This assembly; sensor, block, and rubber line, can be removed it is no longer needed.
35. Lastly, the 9th Injector feed line plug can be installed. Apply grease to the plug and slide it into the plastic fitting. Push the retainer clip down securing the plug-in place. Be very delicate with this connector it is fragile.
36. The Y-bridge, Alternator, and Intercooler pipe can now be reinstalled along with the reminder of your components of the air intake system.

Any Questions, Comments, or Feedback?

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Or the shop phone- 630-277-8239

Thanks for Purchasing from Wehrli Custom Fab & Diesel!!