

'11-'16 LML Duramax Dual Filter Kit Installation

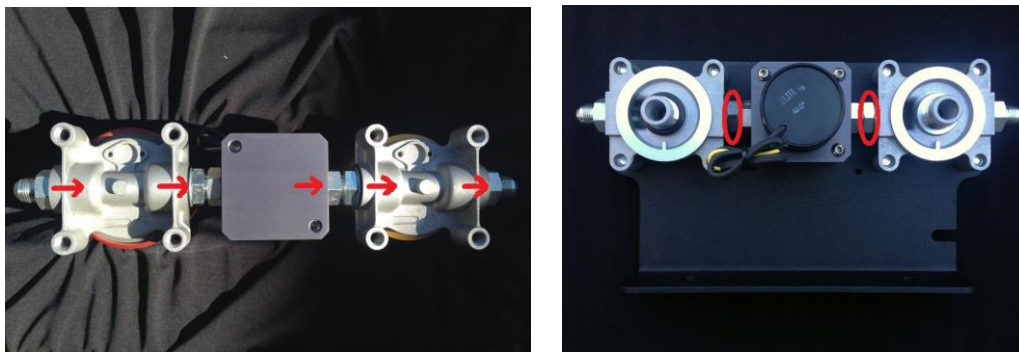


Thank you for your purchase. We appreciate your business, and are confident you made a great decision to protect your fuel system for many future miles! If you have any questions with the install, please email us at info@dieselfuelfilterkits.com and we will respond as quickly as possible to get you taken care of.

Install: Considered moderately easy, and takes 60-90 minutes depending on your mechanical ability.

What's Needed: Basic wrenches, provided tube-cutter, 12v fused source, drip pan and compressed air.

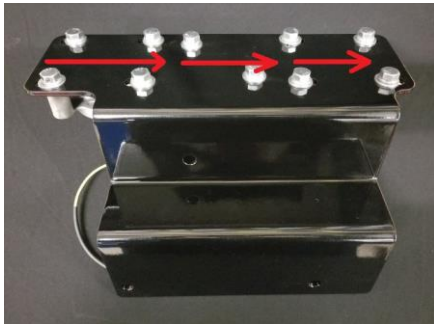
STEP 1. Begin by assembling the pump and filter bases together and installing them to the mounting bracket on a table or workbench. **Make sure all the arrows on the tops align the same direction** as indicated in the left picture below. Use the -10 to -10 joiner fittings to join the pump and filter bases together. One end of the -10 joiners is non-adjustable and the other end is adjustable. Place the adjustable ends away from the pump housing as illustrated in the picture on the right below. Tighten only the non-adjustable ends at this time into both sides of the pump housing. Do not tighten the adjustable end down until after "STEP 2" below.



This next step is very important!

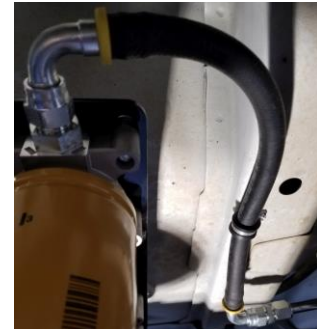
STEP 2. The arrows on the top of the pump and filter bases **must** point towards the driveshaft or center of the truck when mounted on the bracket for proper fuel flow. **Double and triple check this to make sure all arrows point to driveshaft/center of truck when mounted on the truck!** (See picture on the left below for proper bracket mounting orientation.) Use the two shorter 3/8x3/4" bolts with supplied washers into the pump head and the eight longer 3/8x1-1/4" bolts, with supplied washers into the filter bases to firmly mount the pump and bases to the bracket, tightening them down to the bracket with a 9/16" wrench. Now tighten the adjustable end of the -10 joiners from "STEP 1" into the filter bases. Install both of the -10 to -8 fittings on each remaining ends of the filter bases and tighten.

STEP 3. Our bracket will mount under the rear door on the driver side over the top of the unused fuel cooler bracket as in the right picture below. Using the three 3/8x1” bolts, supplied washers and nuts, tighten our bracket up against unused cooler bracket.



STEP 4. Spin on, but do not tighten, 90-degree fittings with hose on each end of the filter bases. Determine how much of the steel fuel line you want to remove by holding the hose up to the 1/2” factory steel fuel supply line running inside the frame rail. Once located, mark the steel line with a marker. Once you have both of your cut-lines marked, remove the 90-degree fittings w/ hose, pull the steel line out of the frame holders and away from the frame and cut that section out between your marks using the small tube-cutter provided. You can always cut hoses shorter if needed. See notes below before cutting.

Note: When cutting the steel line, you might get fuel flow from the venturi or siphon effect from the tank end because the CP4 pump pulls fuel from the tank on the Duramax. The best way to stop this is to remove the fuel filler cap before cutting the steel line, and blow a small amount of compressed air back up the tube towards the tank after making your first cut. This will stop it from flowing. Be sure to remove your filler cap first to avoid pressure and blow-back or it will spray you.



STEP 5. Discard the steel line you cut out and slide the nuts first and compression sleeves second onto the steel line. (NOTE: *The shoulder on the compression sleeve faces the nut if it happens to fall out and you are not sure which direction it goes on the fuel line*).

Now insert the steel line as far down inside the compression fitting as it will go and hand tighten the nut on the fitting being sure to hold the steel lines down inside the fitting bottomed out. When it is finger tight, mark the nut and the fitting as shown in the center picture above. You will tighten the nut to the compression fitting 1-1/4 turns to compress the compression sleeve inside. Now reinstall the 90-degree fittings with hoses and tighten all fittings being sure not to twist your factory lines during tightening. Install the rubber “P” clamp with self-tapping screw to hold the fuel hose against cab brace.

STEP 6. Install both filters and hand tighten them being sure to lube the top rubber gasket on each filter so they're easier to remove next time. Install the FS1212 filter closest to the frame using the O-ring it came with. The FF5814 filter does not require an O-ring for installation.

**** BE CAREFUL NOT TO CROSS-THREAD OR OVERTIGHTEN THE FILTERS. ****

WIRING THE PUMP: This is as simple as wiring a new accessory on your truck (aux. lights, radar detector, CB radio, etc). We recommend you do your own research online for this, as there are several options available for the LML Duramax. The pump wiring is at your own discretion for your vehicle and personal safety. We used a Lumision Add-a-Circuit ATR Micro2 fuse-tap (Amazon) into slot #26 on our 2016 in the fuse box with a 5-amp micro-fuse. The pump draws less than 2 amps on start up. You need to find a fused circuit that only provides power when the key is in the start/run position. Your truck may be different. Be sure to test circuits with a multi-meter/test light to verify power during start/run.

NOTE: Positive wire will always be yellow. Ground wire will always be black.

Priming the Pump and System

Once the kit is completely installed and everything is tightened down, you will need to re-prime the fuel system and run the truck for a few minutes **before** applying your 12v power to the new pump. The pump is centrifugal, **non-priming** on its own and **cannot** run dry or damage to it may occur. The pump is also almost totally silent in operation, so the best way to verify it is working is to feel it and test pressure at the stock bleeder screw up front periodically to ensure it is functioning properly.

Note: Priming MUST be done correctly to ensure proper pump function!

On the Duramax, the best way we have found to prime it is by removing the bleeder screw on the stock filter housing up front and slightly pressurizing the fuel tank with compressed air through the fuel tank filler neck until fuel flows clean out of the bleeder. Be careful to not actually pressurize the tank with more than a couple pounds of air to get it flowing. What we do in the shop is hold a rag over the filler neck and just give a couple quick blasts of air with the nozzle every few seconds, holding this pressure until fuel runs clean out of the bleeder. *(Remember the new filters will need to fill so this can take up to a couple minutes to get it up to the bleeder).* This method works great to remove the air! We have found the Duramax is pretty good about pulling remaining air through the system returning it to the tank. After tightening the bleeder screw back down after priming, start and run the truck for a few minutes **before** applying your 12-volt power to the pump on the new kit. This method should pull all of the air out of the pump to function properly. Cracking the bleeder screw with key-on, engine off will verify pump function.

***We recommend along with this kit that you run a good fuel additive with every fill up for lubrication in the CP4.*

*** Replace filters approximately every 15,000 +/- miles depending on fuel conditions in your area.*