2011-2016 LML 3” Y-Bridge Kit *or* High Flow Intake Bundle Package

Covers installation of PN’s: WCF100607; WCF100691; WCF100716: & WCF100353

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

Overview- The LML 3” Y-Bridge kit is a complete High Flow Inlet Kit. The 3” Y-Bridge kit can be complimented with our 3” Driver Side Intercooler pipe to offer a full 3” intake tract from the turbo all the way to the engine. (This is included in the High Flow Intake Bundle Package)

A modified up pipe will be a necessary item to allow installation and proper function of this kit. **It is NOT recommended** to run the “Bolt on up pipe block off plates” that leave the OEM up pipe EGR riser leg intact. These types of block off plates result in cracked up pipe bellows and massive exhaust leaks, always at the most inconvenient of times.

Since you are removing the factory downpipe in the process of installing the Modified up pipe, our 3” Stainless Steel Turbo down pipe also compliments this project. (This is also included in the High Flow Intake Bundle Package)

1. First, locate the Packing list included with the Kit and double check you have all items on the list.
2. Disconnect the negative battery cables from both batteries and remove the left and right side inner fender liners.
3. Remove the factory intake, intake resonator, and plastic turbo inlet horn. Set these parts aside as they do contain components that will be reused later on. (Inlet O-ring, and MAF sensors)
4. Remove the factory plastic intercooler tube from the truck. The connection at the throttle blade requires you to twist the plastic flange at the end of the pipe, which unlocks the clip and allows you to slide the plastic fitting off of the intake inlet.

5. At the lower Intercooler connection, you have to twist the flange and pull it off just as you did at the top side connection in the previous step. The lower connection is much more accessible if you remove the air box tray brace from the core support. Leave this off for now to help with the installation of the new intercooler pipe later on.

6. Before you set aside the factory plastic intercooler tube, remove the temperature sensor from the top end of the pipe and set aside, this will be reused later.

7. Drain the Engine coolant from the lower radiator hose at the radiator connection on the passenger side.

8. Remove the factory cast aluminum inlet pipe that bolts to the factory y-bridge. The throttle blade and Intake Grid heater is connected to this pipe and also will be removed. The grid heater will no longer be in use, so disconnect and remove the positive battery cable that fed the grid heater from the battery terminal on the passenger side battery.

9. On the factory cast aluminum Inlet pipe that bolts to the factory y-bridge, you will see the manifold air pressure (MAP) sensor. Remove this sensor from the factory pipe, it will be reused on the new WCFab Y-Bridge.

10. Disconnect all coolant lines that connect to the EGR cooler. You can then start removing the EGR system. It's easiest to separate the two coolers and remove them individually.

11. Once the EGR cooler is removed, you can start on the y-bridge removal, ¼" drive extensions and swivel socket make this easier. Once the y-bridge is out, remove the two rubber gaskets on each flange of the y-bridge, these will be reused on the new y-bridge. The temperature sensor on the factory y-bridge is for EGR purposes and WILL NOT need to be reused on the new y-bridge.

12. Up pipe removal; two people make this part of disassembly much smoother. First, remove the heat shield from the turbo downpipe and then remove the v-band clamps on the downpipe at the turbo and at the exhaust system. With one person on top of the engine and one person in the fender well, guide the downpipe out through the fender well.

13. The steel coolant pipe that connects to the rear engine cover and used to feed the EGR also needs to be removed to access the up-pipe bolts at the turbo.

14. Removal of the up pipe bolts is best done with a ½" drive flex head ratchet from the fender well area. The second person up top can help you align the socket onto the up pipe bolt and hold the head of the ratchet while you break each bolt free.

15. Once all the up-pipe bolts are off, you can remove the up pipe from the truck. The modified-up pipe, or 2" stainless up pipe, can now be installed. We always recommend using new up-pipe gaskets. Apply high temp anti-seize to the up-pipe bolts before reinstalling the new up-pipe. Torque all up pipe bolts to 39 ft. lbs.

16. Reinstall the steel coolant hard pipe into the rear engine cover that you removed in step #13.

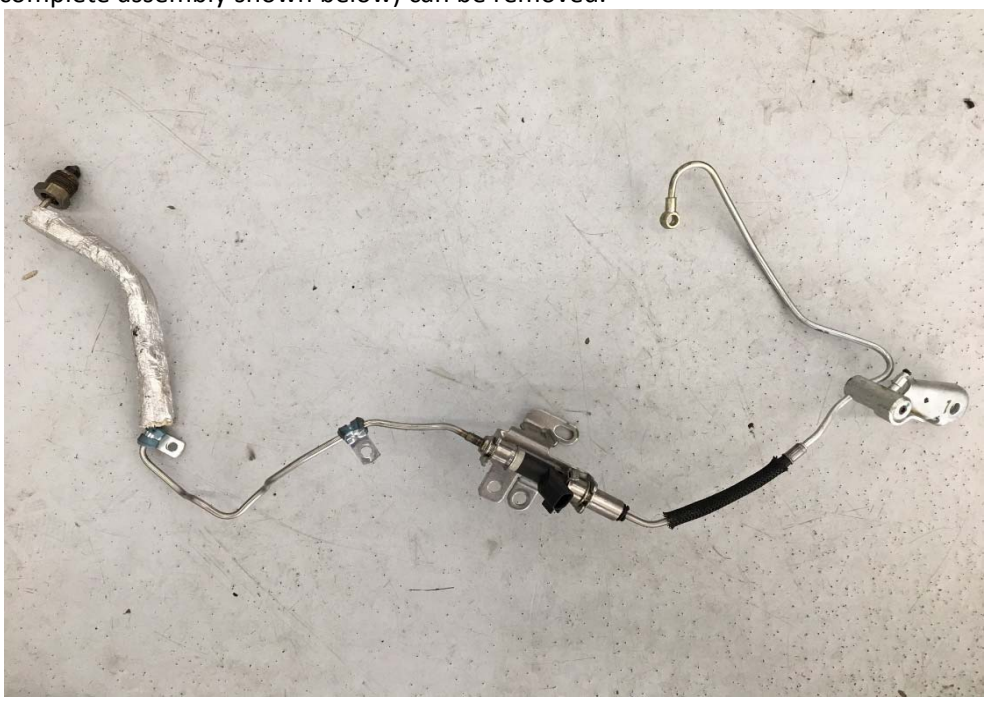
17. Remove the Coolant hose from the firewall, shown below.

18. Connect the supplied 90° heater hose to the coolant hardline behind the turbo that was reinstalled on step #16. The hose connects the coolant pipe to the heater core fitting on the

firewall. *2015 and newer trucks* you must remove the plastic clip on the heater core fitting for the new hose to fit over, shown on right hand picture below.

19. You can now reinstall the factory down pipe, or our 3” Stainless Steel down pipe if you purchased the bundle kit, and tighten the top and bottom v-band clamps. If reusing the factory down pipe, you will need to leave the 9th injector and the other two temperature sensors in place to plug the holes, or weld the holes closed. Our 3” Stainless Steel down pipe does not have any holes/bungs for these sensors as they are no longer in use.

20. On trucks with a CP4 still in the valley, the whole 9th injector assembly on the passenger valve cover (complete assembly shown below) can be removed.



21. Once this is removed you will be left with an open port from the CP4 pump that will need to be plugged. The banjo bolt seal washer from this port will be cut in half so that it becomes only one washer instead of a banjo washer. Using a left over 8mm x 20mm long bolt from tear down of the EGR system, it will be reinstalled with this seal washer, to plug the hole.


22. Locate the small stainless 9th injector line plug from the supplied parts bag.

23. Remove the small o-ring from the assembly that was removed in step 20, and install the o-ring on the supplied stainless plug pictured in step 22.

24. The Stainless plug gets installed into the Injector Return line on the front passenger side as shown in picture below. The plastic clips of the return line are very fragile, so use care when retracting the hold down clip, and pushing the new Stainless plug into place. Make sure the outer plastic lock is pushed back in place so the plug cannot pop out.

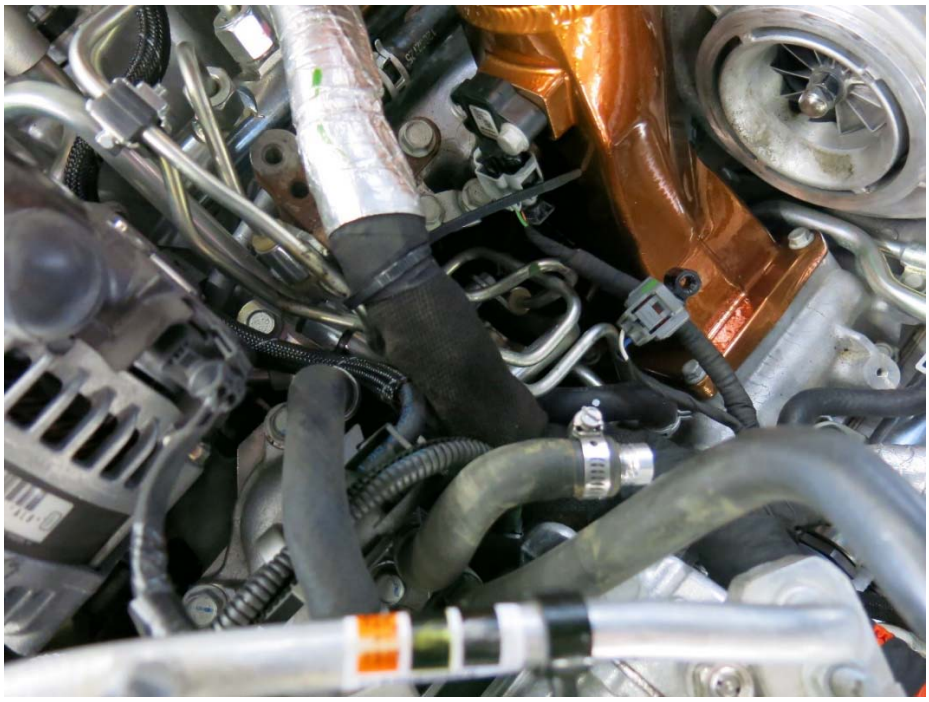
25. Back to the y-bridge install; locate your new 3” y-bridge and install the factory MAP sensor onto the new 3” y-bridge. The factory rubber y-bridge flange seals can also be installed into the new bridge flanges.

26. If you are not using a mechanical boost gauge or boost pressure sensor, you can use the supplied 1/8” NPT pipe plug and block off the boost port on the new y-bridge. (shown in last picture)

27. Now installing the new y-bridge onto the intake runners, we recommend a thin layer of grey rtv silicone on each flange. ¼” drive swivel sockets and extensions help with install. Get the four lower bolts/nuts started first, and tighten them evenly side to side in a cross pattern to ensure

the bridge seats square to the runners. Once the lower bolts/nuts are snug, you can install all the upper bolts. Lower bolts must be installed first to seat the bridge down completely for the upper holes to line up. *NOTE: 2015+ trucks you may need to grind the nipple off the end of the bolts so that they do not bottom out in the intake runner before seating against the y-bridge flange. Picture below shows two un-ground bolts on the left and four shortened bolts on the right. Maximum bolt thread length 1" to prevent bottoming out in the intake runner.*

28. Now you can connect the MAP sensor plug on the engine harness back into the MAP sensor on the new y-bridge. Since this sensor use to be located on the top of the intake pipe much higher up, it will be required to take the engine wire harness and now tie it down on top of the engine while pulling it towards the passenger side slightly in order for the connector to reach the MAP sensor. The wire harness will no longer hang above the engine as it did previously and can be zip tied to the fuel lines.



29. In the small bag of parts supplied, locate the 5/16” Silicone cap and the matching hose clamp. On the passenger side of the engine there is a hard pipe/hose assembly coming from the firewall heater core fitting, forward to a radiator hose. On this pipe you will find a small port that was used to feed the EGR cooler. With the supplied 5/16” cap and hose clamp, block off this port.

30. Also in the parts bag you will have a ½” aluminum hose barb plug and matching hose clamp. On the thermostat housing next to the alternator, you will see a hose that used to connect the thermostat housing to the EGR system. Fully Insert the ½” barbed plug and tighten the hose clamp down over it. *(The picture below illustrates plug NOT INSTALLED all the way just for ease of identification. Be sure the plug is pushed into the hose flush to the end)*

31. Locate the two supplied 3” Intercooler boots and four T-Bolt Clamps. *NOTE: 1 T-Bolt clamp is slightly larger than the other 3 clamps. This clamp is for the passenger side connection at the Intercooler.*

32. Apply a small amount of Vaseline or grease to the inside leading edge of each 3” boot. Slide one boot onto the intercooler and install the larger of the t-bolt clamps over the boot, tighten clamp snug. The second boot needs to be slid onto the y-bridge all the way up to the 1/8” boost port so that only about 1” of the boot is hanging off the end of the Y-Bridge. You **must** have grease or lubricant on this boot, or you will have a very hard time sliding the boot back down in the next step!

33. Install the **temperature sensor** that was removed in step 5 into the bung on your new intercooler pipe. (This is NOT a 1/8” boost port, it is metric straight thread for the temp sensor only!)

34. The intercooler pipe can now be installed from the top of the engine. Slide the pipe into the lower intercooler boot first, as far as it will go, and then push the pipe against the top boot that is on the y-bridge, with a radiator hose pick or screwdriver, work the intercooler pipe into the boot. Once it’s in, you can slide the boot back down further onto the pipe so that the boot length is split evenly between the two pipes.

35. You can now install the T-bolt clamps on both boots and tighten. Once the lower t-bolts are tight, you can reinstall the air box tray brace to the core support, and the passenger side fender well.

36. Locate your new turbo Inlet pipe if you have the standard 3” y-bridge kit (WCF100607). If you purchased the y-bridge kit with one-piece intake (WCF100691) or the high flow bundle kit (WCF100776) skip to step #38. Remove the green seal from the factory plastic turbo inlet horn and install it into your new inlet pipe. Install the factory v band clamp onto the inlet of the turbo,

it is easiest to install this clamp by fully disconnecting it and “rolling” it onto the turbo v-band to sneak it past the y-bridge as it is a tight fit against the bridge. Then reconnect the clamp, but leave it loosened all the way and slide the new turbo inlet horn into place. Now tighten the v-band clamp, only snug for now so that you can still adjust the inlet horn.

37. Locate your OEM intake or WCF 4” intake and install. Adjust the new turbo inlet pipe (by twisting up or down) to line up with the intake. Be sure to tighten the clamp at the turbo inlet once it is lined up. Completed picture below. Now move to step #43.

If you purchased the y-bridge kit with one-piece intake (WCF100691) or the high flow bundle kit (WCF100776) continue below;

38. Locate your new 4” Intake pipe. Remove the green seal from the factory plastic turbo inlet horn and install it into your new intake pipe flange.

39. Locate the four supplied M4 socket head allen screws and reinstall your factory MAF and Humidity sensors in the new intake now. On 2011 and 2012 trucks you will install the supplied aluminum block off plate on the rectangle sensor port as these model years do not have a Humidity sensor.

40. Install the factory v-band clamp onto the inlet of the turbo, it is easiest to install this clamp by fully disconnecting it and “rolling” it onto the turbo v-band to sneak it past the y-bridge as it is a tight fit against the bridge. Then reconnect the clamp, loosely for now.

41. Loosen the passenger side alternator bolt 3-4 turns, you do not need to completely remove it. Install the new 4” intake in the v-band at the turbo first and then rotate the mount bracket onto the alternator bolt that you just loosened. Once the v-band flange is aligned properly at the

turbo, you can first tighten the v-band clamp and then retighten the alternator bolt that holds the intakes support bracket.

42. Install supplied air filter and outerwear's filter cover. Completed picture below.

43. Refill the engine coolant and start up. After a few initial test drives it is a good idea to check and retighten all t-bolt and v-band clamps and top off the engine coolant.

3" Driver Side Intercooler Pipe Supplement

WCF100353 *(Included in High Flow Intake Bundle Package)*

1. Remove the driver side inner fender liner.

2. Remove the factory driver side intercooler pipe.

3. On the turbo side of the factory pipe, you will reuse the t-bolt clamp that connected the boot to the turbocharger. This requires cutting the rubber of the boot that encases the clamp with a razorblade.

4. Install the supplied 3" silicone boot and t-bolt clamp onto the intercooler.

5. Install the supplied silicone reducer boot onto the turbo charger with the OEM t-bolt clamp.

6. It is a good idea to leave the bubble wrap on the new intercooler pipe while installing to prevent scratching the powder coat. Just remove the wrap from each end so that you can install the pipe into the boots.

7. From the TOP SIDE of the engine begin installing the new 3” intercooler pipe. It will slide down into place with a twisting motion. Having a second person in the fender well to guide the pipe past the upper control arm and around the wire harness and into the intercooler boot will be a large help.

8. Install the pipe into the lower boot first, and then with the aid of a radiator hose pick or screwdriver slide the pipe into the boot that is already clamped to the turbo. Be sure the pipe is pushed into the boot at the turbo as far as it can go, and install the t-bolt clamp up against the edge of the beadroll to prevent the pipe from moving out of the boot under boost load.

9. Inspect and verify that none of the engine harness or any other hoses or wires are laying against the new intercooler pipe. These pipes see very high temperatures and can melt the wire loom and harness, so you do not want any contact of these items anywhere. Tie up these such items as necessary to prevent this from happening.

10. Reinstall the inner fender liner. Double check all of the t-bolt clamps after a few heat cycles.