



Lingenfelter by Nostrum Stage 2 GM Gen V V8 LT Injector Install Guide
PRODUCT PART SKU#: NOSTRUM H750-1543 LINGENFELTER L730150023

Warning! Please follow all warnings and instructions found in your vehicle owner's manual. The following instructions must be read and fully understood before beginning installation. Failure to follow these instructions may result in vehicle damage, personal injury, or death. If these instructions are not fully understood, do not attempt installation.

Please note that this product does require vehicle calibration. Please ensure provisions are made prior to installation. Contact Lingenfelter Performance Engineering at (260) 724-2552 or your LPE dealer for injector calibration support and tuning guides.

Note that some 2022 and newer model year vehicles use injectors with a different stem diameter (6mm vs 7.5mm). Make sure these are the correct injectors for your application.



Required Tools

- Socket wrench
- 8mm socket
- 10mm socket
- 13mm socket
- 17mm wrench
- 5mm Allen socket
- Trim removal tool
- Injector compression tool
- 3/8th quick disconnect tool
- Safety glasses

Consumables:

- Absorbent towels



SALES, INSTALLATION & SUPPORT



QUESTIONS

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1. In the trunk of the vehicle pull up the passenger side back corner of the carpet to reveal the battery.



Figure 1

2. Use a 10mm socket to remove the negative battery terminal.



Figure 2

3. Remove the driver side engine appearance cover by pulling up on it by hand.



Figure 3

4. Remove the passenger side engine appearance cover by pulling up on it by hand.



Figure 4

5. Use a 10mm socket to remove the bolts holding the intake manifold cover in place. **Torque Spec: 10 Nm**

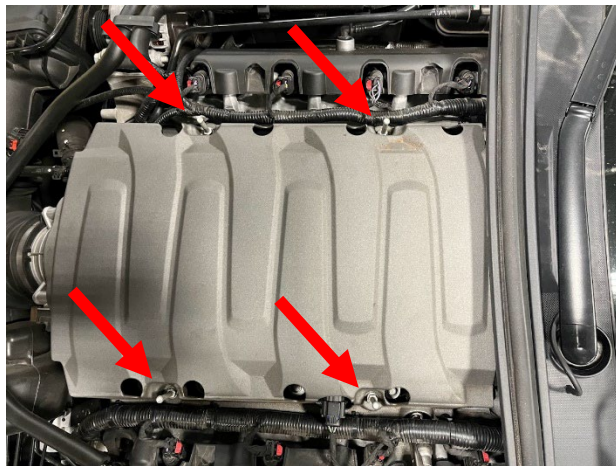


Figure 5

6. Disconnect the manifold absolute pressure sensor.



Figure 6

7. Use a trim removal tool to disconnect the fuel rail wire harnesses from the engine cover on both sides of the intake manifold.



Figure 7

8. Remove the intake manifold cover by hand.



Figure 8

9. Use a 10mm socket to remove the 10 bolts holding the intake manifold to the cylinder head.

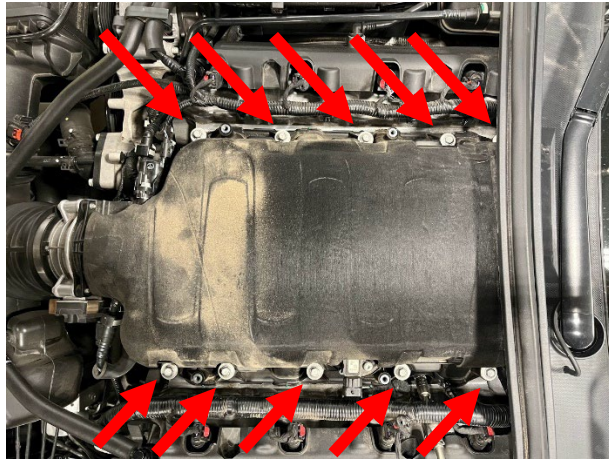


Figure 9

10. Use an 8mm socket to loosen the hose clamp on the coupler connected to the throttle body.

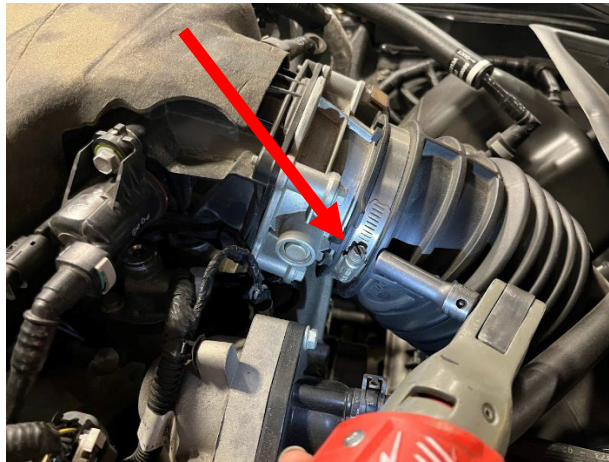


Figure 10

11. Pull the coupler off the throttle body.

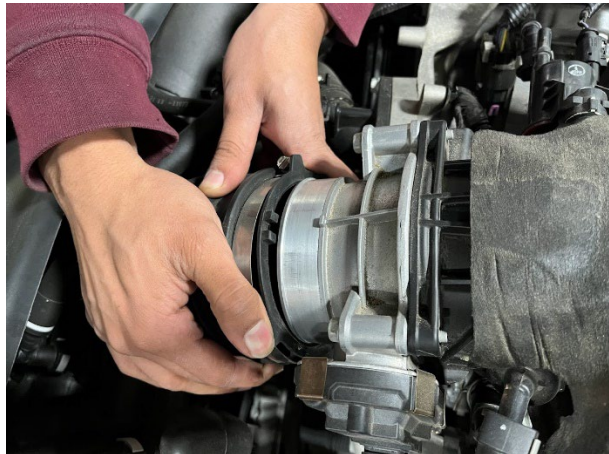


Figure 11

12. Disconnect the engine harness electrical connector from the EVAP canister purge solenoid valve. Slide the grey lockout on the connector body first. Then push on the lockout to release.



Figure 12

13. Disconnect the EVAP canister purge tube quick connect fitting from the EVAP canister purge solenoid valve. Squeeze the white tabs closest to the front of the vehicle to release it when disconnecting.

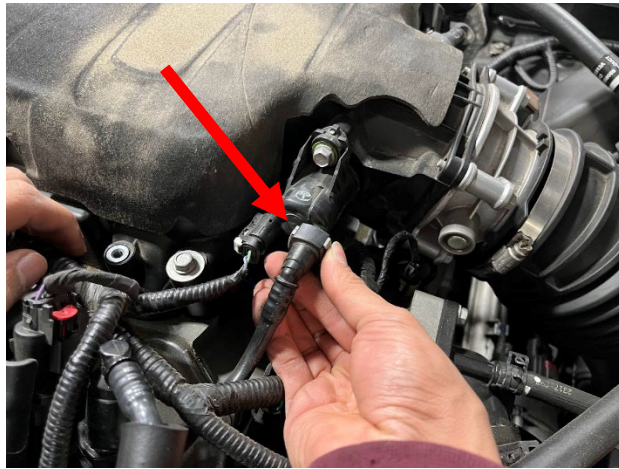


Figure 13

14. Remove the positive crankcase ventilation hose. Squeeze the white tabs on the fitting to release it when disconnecting.



Figure 14

15. Disconnect the engine harness electrical connector from the throttle actuator.

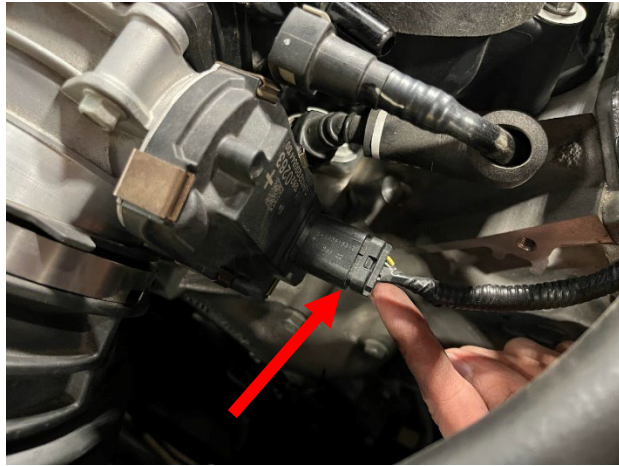


Figure 15

16. Pull up on the intake manifold by hand to begin to remove it from the engine bay.



Figure 16

17. Push in the red tab to release the vacuum hose from the back of the manifold.



Figure 17

18. Remove the intake manifold from the engine bay.

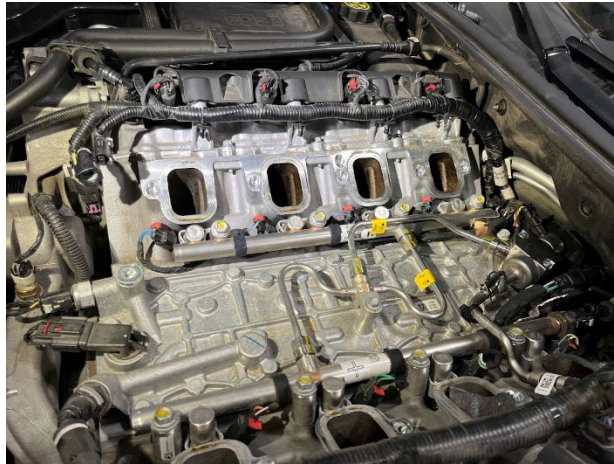


Figure 18

19. Disconnect the solenoid connector on the high-pressure fuel pump.



Figure 19

20. Disconnect the lock over the low-pressure fuel line feeding into the fuel pump using a flathead screwdriver. The lock fingers should easily slide up and over the the fuel line.

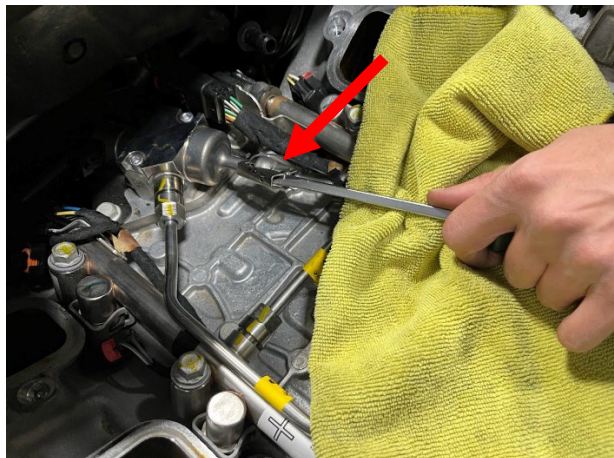


Figure 20



Figure 21

21. Use a 3/8th quick disconnect tool to disconnect the low-pressure fuel line. Make sure to wear eye protect before completing this step. Ensure to cover the fitting with absorbent towels before removing. This will prevent fuel from spraying out. Apply this safety procedure to steps 22 and 23 as well. Ambient temperature engine will minimize fuel leakage.

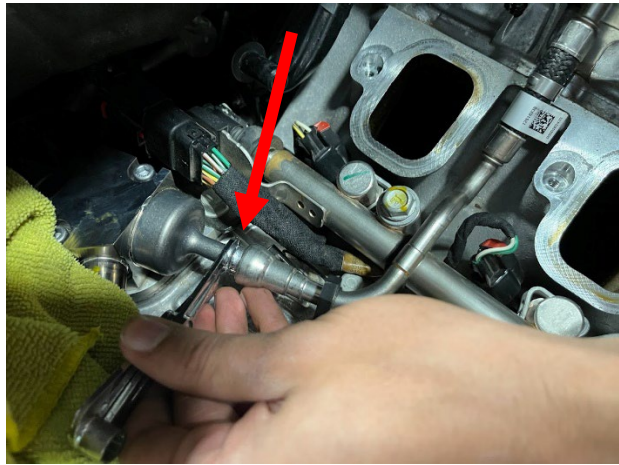


Figure 22

22. Use a 17mm wrench to disconnect the compression nuts on the high-pressure fuel line that connects to the pump.
Torque Spec: 30 Nm

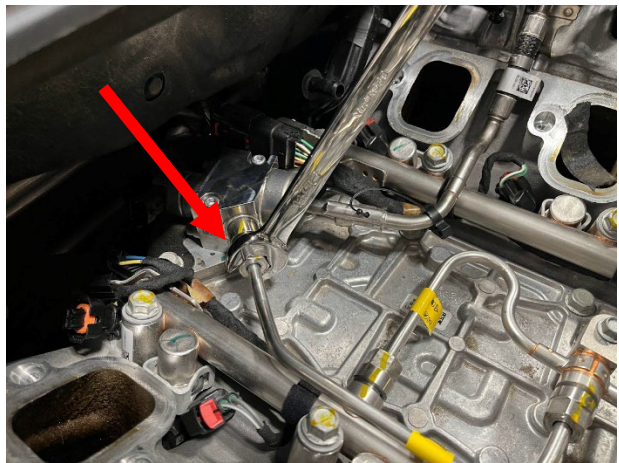


Figure 23

23. Use a 17mm wrench to remove the compression nuts on both ends of the fuel line connecting the fuel rail.
Torque Spec: 30 Nm

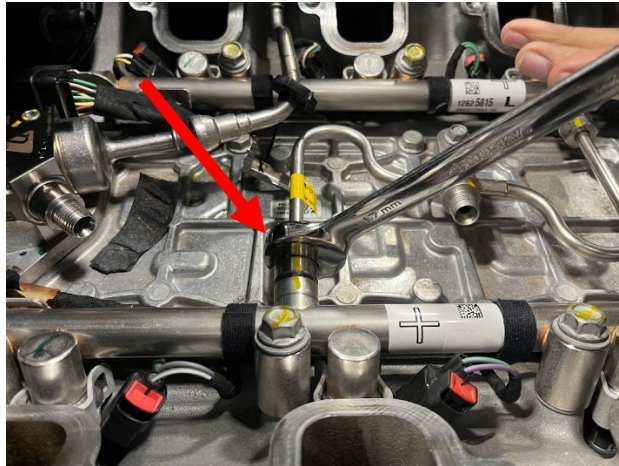


Figure 24

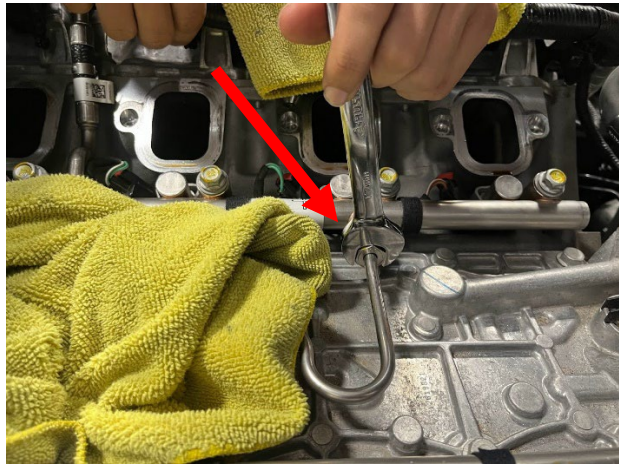


Figure 25

24. Use a 10mm socket to remove the bolt securing the fuel line from step 23. Remove the fuel line from the engine bay.
Torque Spec: 10 Nm

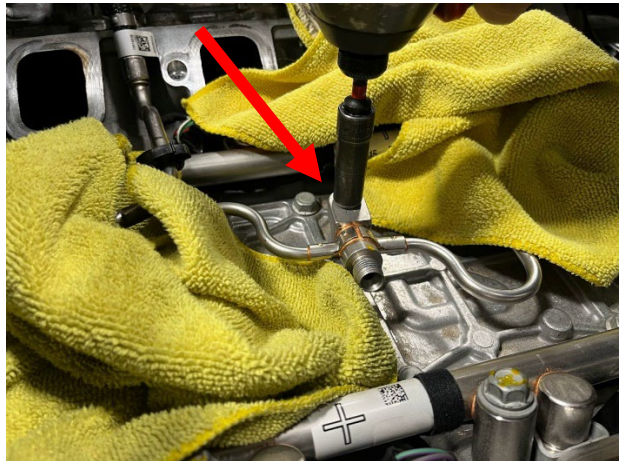


Figure 26

25. Pull out the red tab on the fuel injector wire harness connectors at the back of both fuel rails. Then push on the black tab directly in front of the red tab to disconnect the connector.

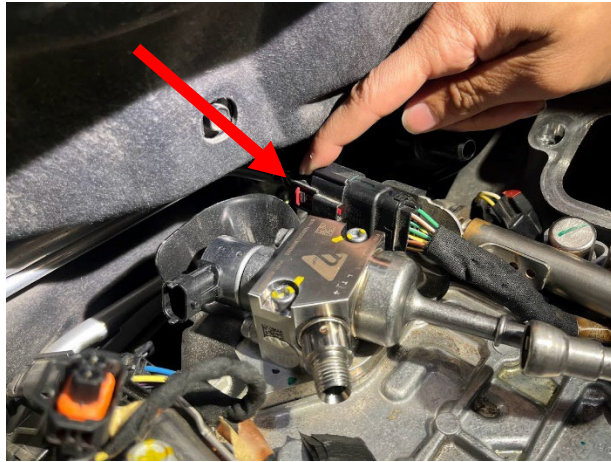


Figure 27

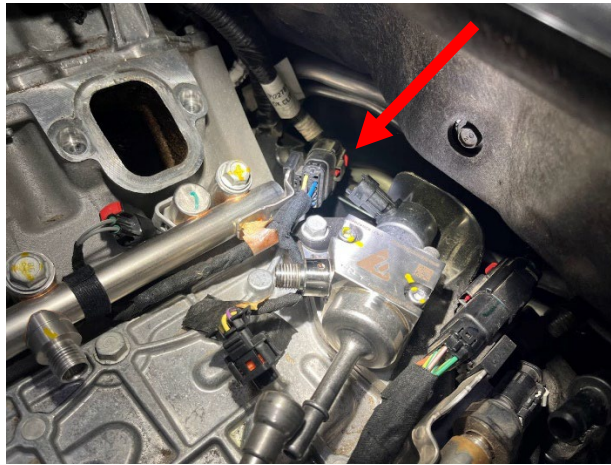


Figure 28

26. Use a 13mm socket to remove the bolts securing the fuel rails.

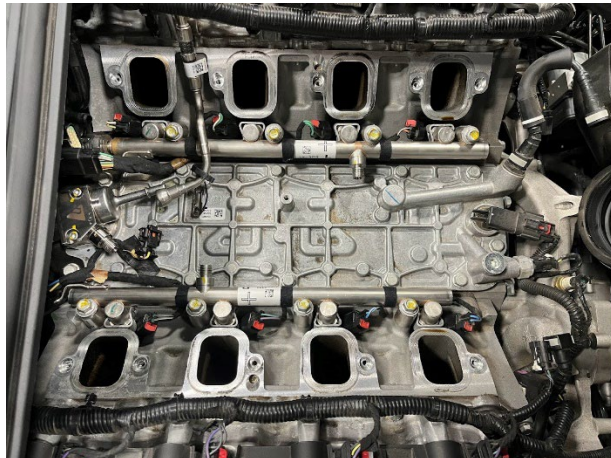


Figure 29

27. Pull the fuel rails out of the engine by hand.

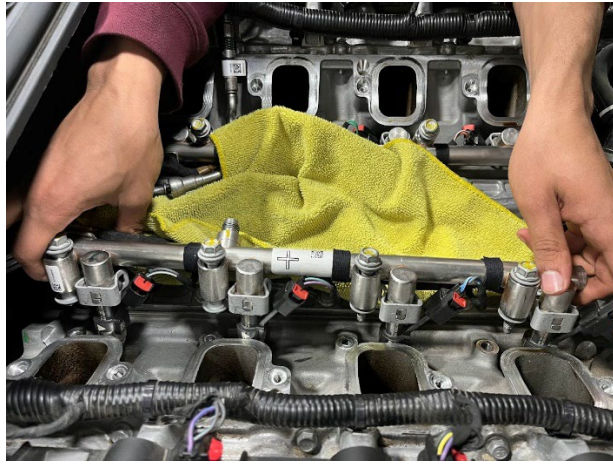


Figure 30

28. Place the fuel rails on absorbent towels in a clean space.



Figure 31

29. Pull the connectors off the injectors by pulling up on the red tabs and then squeezing down on them.

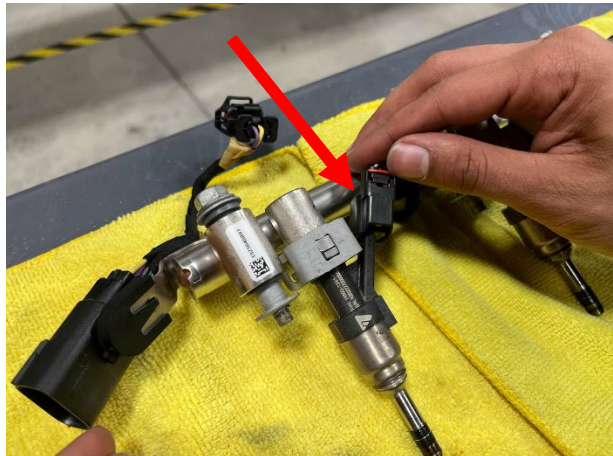


Figure 32

30. Pull on the prongs of the retainment clip on the injectors. Use a flathead screwdriver to pry the retainment clip off the injectors.

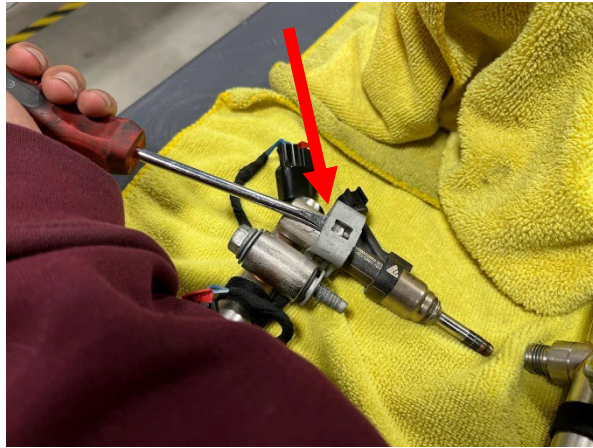


Figure 33



Figure 34

31. Pull the injector out of its seated position in the fuel rail.

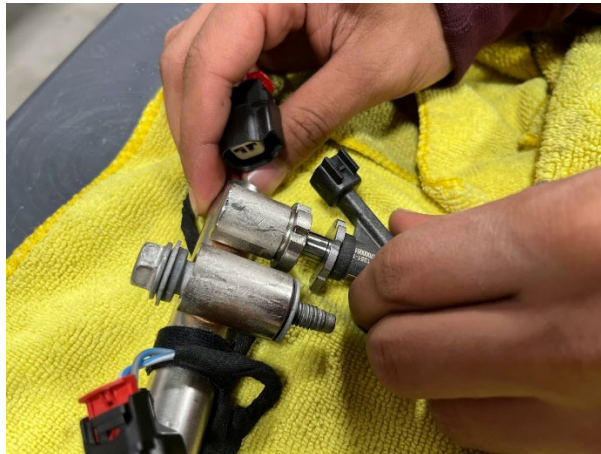


Figure 35

32. Remove the spacer from the OEM injector by hand.

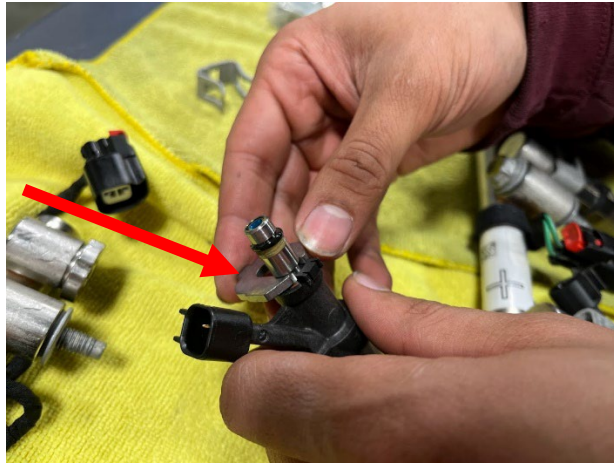


Figure 36

33. Install the spacer removed in step 32 onto the new LPE by Nostrum fuel injectors.



Figure 37

34. Install the new injectors into the seated positions on the fuel rails.

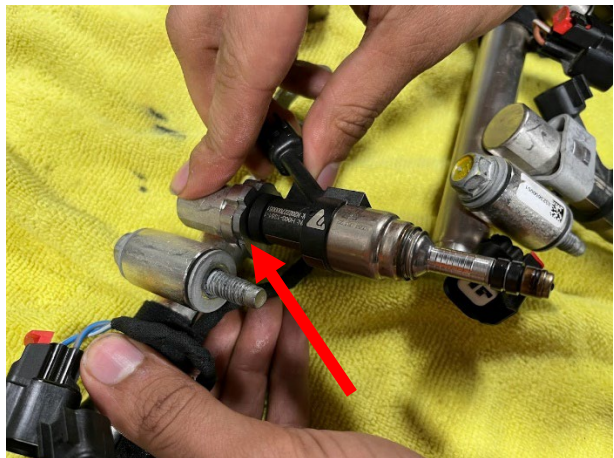


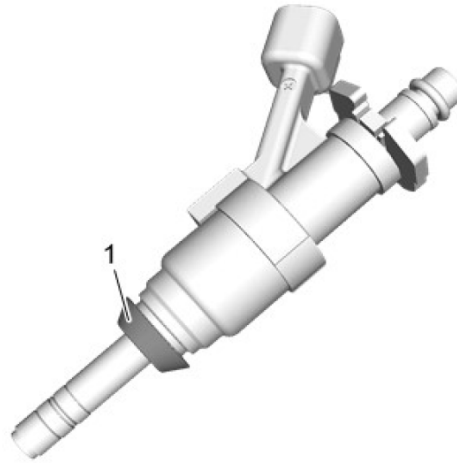
Figure 38

35. Press the retainer clips onto the new injectors in the same location as the OEM injectors. When installing the new injectors use firm pressure to make sure the retaining clips are properly in place.



Figure 39

36. Install the white umbrella seals (dirt seals). These are the white cone shaped seals included in the box with your LPE by Nostrum injectors. Press them on the front of the injectors over the stems. Press them until they are contacting the core of the injector.



37. Install the electrical connector to the solenoid connectors on the new injectors.

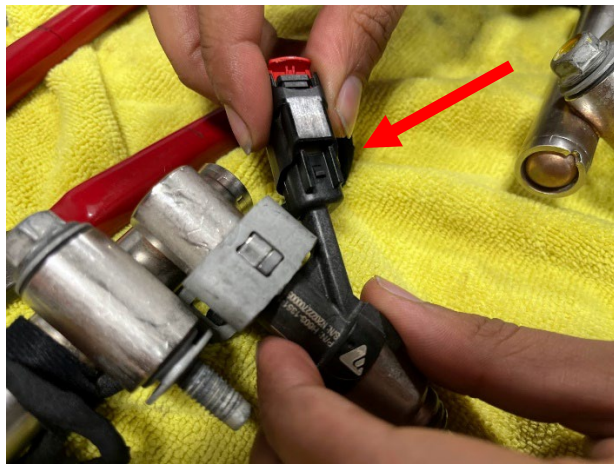


Figure 40

38. Use an injector combustion seal compression tool to compress the seals on the injectors. Keep the compression tool on the stem of each injector for 15 seconds. Do this step for one rail at a time. Once one rail is complete move to step 39.



Figure 41



Figure 42

39. As soon as you have completed step 37 for one rail install that rail back into the cylinder head right away using a **torque spec of 25 Nm**. Repeat step 38 and 39 for the other rail once you have installed the first one.

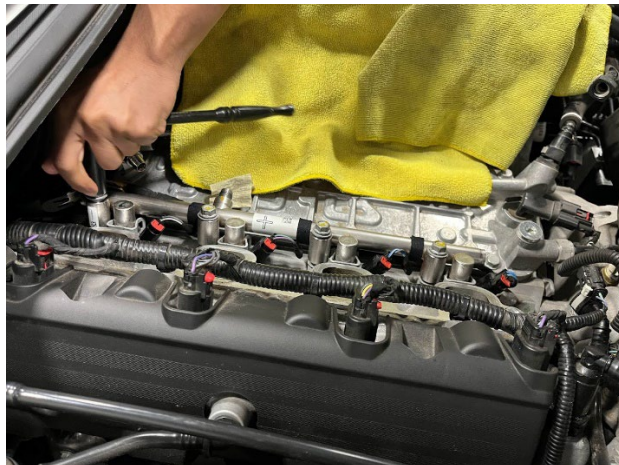


Figure 43

40. Once the fuel rails have been reinstalled reassembly of the vehicle can begin.

Repeat steps in reverse starting with step 25. Follow all Torque specs that are included in each step where applicable. If torque spec is not included in a step where it seems applicable assume snug fit with a wrench or socket wrench.

It is recommended that you replace the used stock fuel lines taken off in steps 22-24 with new fuel lines. These can be obtained from your local dealer.

Hardware installation is complete.

Calibration

Do not start your vehicle, this product requires calibration. Once calibration is complete, please proceed to the next step.

First Start-Up

1. Be sure to remove all installation tools and loose items from the engine compartment. Follow good, safe practices when working on your vehicle. Be sure to reassemble all parts and components according to your OE maintenance manual.
2. Key cycle the vehicle into the "Accessory On" position (do not go to Ignition position). The low- pressure fuel pump will activate and the low-pressure side of the pump will pressurize. Check the high-pressure fuel pump and the low-pressure side for leaks. If ok, proceed to step 3.
3. Cycle the key to the ignition position and let the car attempt several start cycles. Remember that the fuel lines, pump, and part of the fuel rail are filled with air, therefore this step is necessary to evacuate that air and get the system charged. If it starts, OK. If it does not, key off the vehicle. Check the high-pressure lines to the fuel rail, to the pump, and the pump itself for leaks. If OK, proceed to step 4.
4. Key cycle one more time all the way to ignition. The engine should start up and idle. If not, proceed with steps 2-4 again.
5. Let the car idle for a few minutes. Check for leaks on low and high-pressure portions again.
6. Installation is complete!

NOTE: a fault code may appear at the first key cycle due to the extended cranking time or the low pressure in the fuel rail, both due to the air in the fuel system.

This code should self-clear after the OEM defined quantity of key cycles.

NOTE: Please check for fuel leaks after driving the car and letting it cool for an extended period of time, fittings may loosen after the first heat cycle due to thermal expansion and contraction. Retighten fittings if needed.

For additional technical and software support please contact your LPE dealer or Lingenfelter Performance Engineering directly at (260) 724-2552 or Sales@Lingenfeler.com