

Z1 D41 FRONTIER INTAKE MANIFOLD SPACER INSTALLATION MANUAL



This Installation Manual is intended for the following models:	
2020+	Nissan Frontier (3.8L)

PROLOGUE:

Study these instructions completely before proceeding to assembly. The installer must have a thorough knowledge of automotive systems operation. If unfamiliar with any of the concepts outlined in this instruction, we recommend the installation be completed by a qualified professional.

WARNING!

Extreme caution should be taken when performing maintenance or performance upgrades to your vehicle. Please observe and abide by any Warning or Caution labels placed on the various components and tools used when servicing your vehicle. If you have any questions regarding installation or the various components included with the Z1 Off-Road D41 Frontier Intake Manifold Spacer, consult with a Professional Mechanic or contact Z1 Off-Road for more information.

PARTS INCLUDED:

Item	Quantity	Description
1	1	D41 Billet Manifold Spacer
2	2	Spacer Gasket
3	1	Manifold Support Bracket
4	2	M6 x 25mm Standoff
5	2	M8 x 70mm Stud
6	8	M8 x 60mm Flange Bolt
7	2	M8 x 16mm Flange Bolt
8	4	M8 Flange Nut

TOOLS REQUIRED:

- Ratchet
- Ratchet Extension(s)
- Assorted Metric Sockets
- Assorted Metric Wrenches
- E8 Torx Socket
- 5mm Allen Key/Socket
- Torque Wrench In-Lbs & Ft-Lbs
- Pliers
- Flat-head Screwdriver

SAFETY REQUIREMENTS:

- Always wear safety glasses and any necessary protective garments. If using any fluids, chemicals, or solvents, a respirator is recommended.
- Always use properly rated jack stands when working under your vehicle.
- Always keep limbs and parts away from moving drivetrain parts.
- Always turn the ignition to the OFF position and disconnect the NEGATIVE battery terminal.
- Only operate drivetrain in safe space and well-ventilated areas.

BEFORE YOU BEGIN:

Remove contents from the Z1 Off-Road D41 Frontier Intake Manifold Spacer and verify that ALL necessary hardware is present.

PROCEDURE:

1. Place the transmission in Park position (or in Reverse gear if equipped with a manual transmission). Apply the parking brake.
2. Release hood latch, open hood of vehicle.
3. If equipped, remove engine cover.

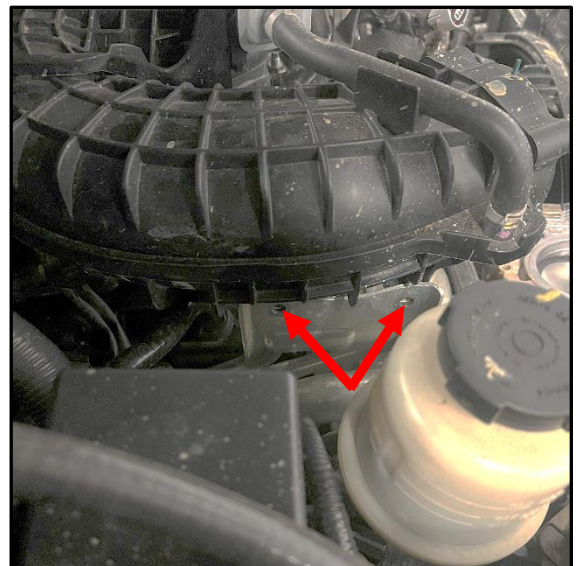
- Loosen clamp and remove the throttle body coupler from the intake. For increased accessibility you can fully remove the intake tube if desired. If you remove the intake tube, make sure to disconnect the MAF sensor wiring harness and the PCV hose. The image below shows a Frontier with the [Z1 intake](#) and IMS installed.



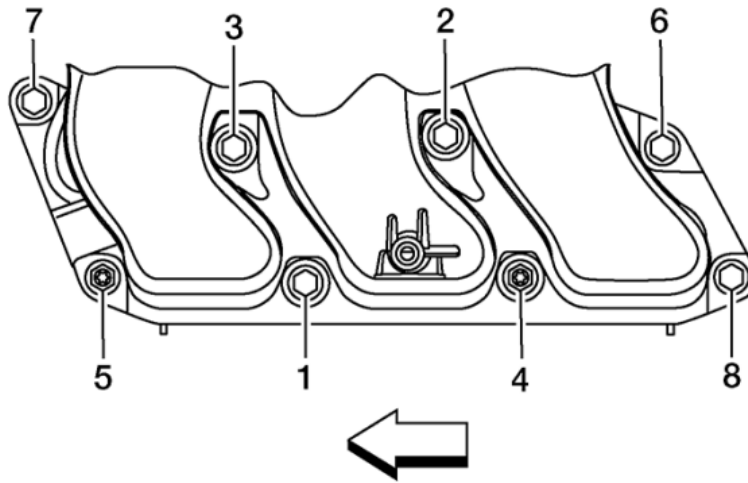
The Z1 D41 Frontier Intake Manifold Spacer includes (2) M8 studs that can be used to help align the spacer and intake plenum but requires more components to be removed in order to install the studs. This was done after we received requests for studs in the D40 Frontier/Xterra intake manifold spacer kit. However, using the studs is optional and you can instead use only bolts to secure everything if desired. Essentially, if you choose to use the studs you will need to remove the intake plenum and other components attached to the plenum; if you choose to just use bolts you can unbolt the plenum, slightly lift it up and slide the spacer underneath. If your engine bay and truck are very dirty and covered in dirt/mud, carefully removing the plenum is recommended. This way you can clean the engine if desired and ensure you are not pushing dirt/mud into the engine when sliding the spacer in place.

Customer's using just bolts should follow steps # 5-21 below:

- Remove the (2) bolts securing the intake plenum to the bracket, on the underside of the plenum just behind the throttle body (shown with arrows at right). Retain these bolts as they will be reused.
- Locate the Z1 intake manifold spacer, both provided spacer gaskets, and (8) M8 x 60mm flange bolts.
- Install the gaskets into the grooves on the bottom side of the spacer.



8. Loosen the (8) nuts and bolts securing the upper intake plenum to the lower intake plenum in reverse order as shown in the image at right ((8) first, (1) last).



9. Using an E8 Torx socket, remove the (2) OE studs in the corners of the lower intake manifold.
10. Fully remove the bolts and carefully lift up on the upper plenum.
11. Slide the Z1 spacer with the gaskets installed between the upper plenum and lower plenum with the Z1 Off-Road logo facing the driver side of the vehicle. (The image below is shown with some EVAP hoses removed to give a clearer view of the spacer.)

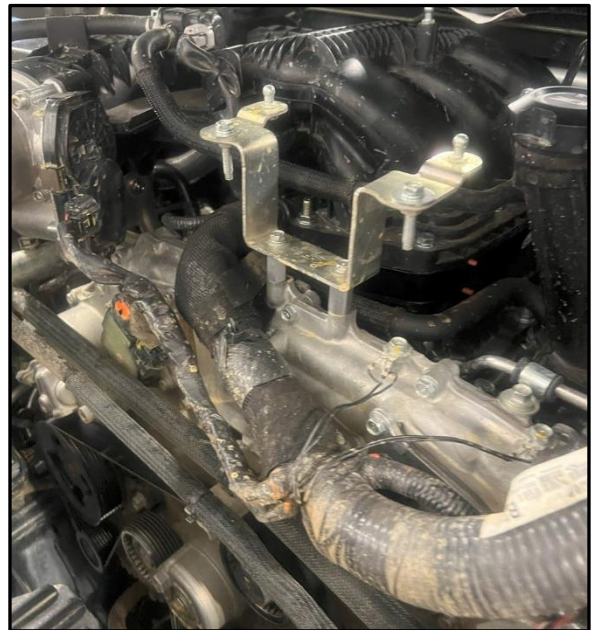
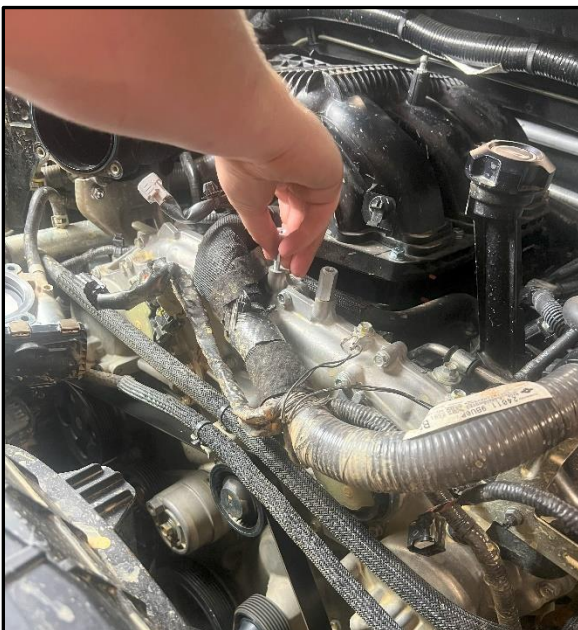


12. Secure the upper plenum using the provided (8) M8 x 60mm flange bolts. Torque the bolts in the order shown in the diagram at the top of this page to 18ft-lbs.
13. Locate the manifold support bracket, (2) M8 x 16mm flange bolts, and (2) M8 flange nuts.

14. Install the manifold support bracket onto the factory support bracket using the (2) M8 bolts and nuts.
15. Secure the upper plenum to the support bracket using the (2) OE bolts that were removed in step #5.



16. Remove the (2) bolts securing the engine cover bracket to the engine. Install the (2) provided M6 standoffs and then reinstall the engine cover bracket onto the standoffs (shown below).

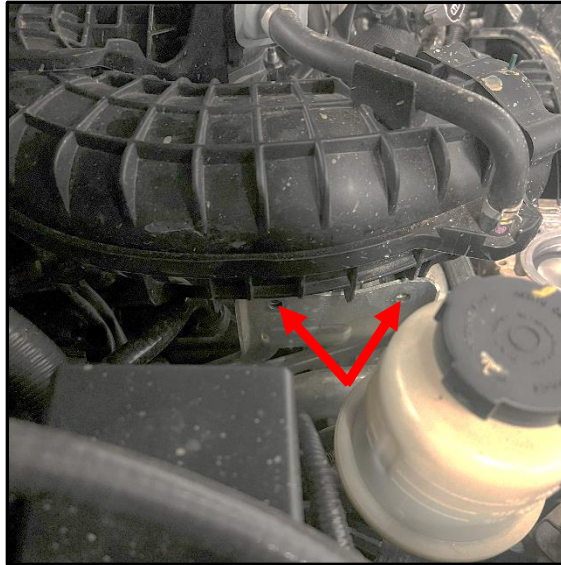


17. Reinstall throttle body coupler and intake tube if removed.

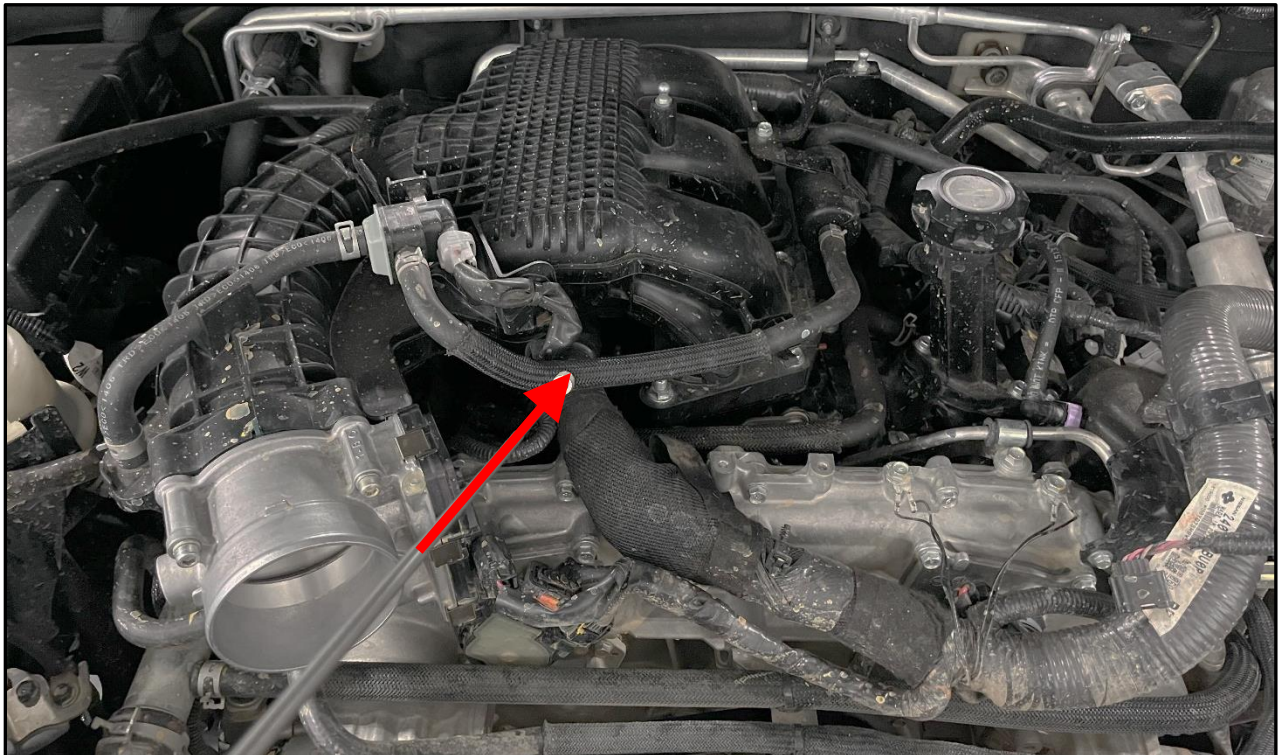
18. Reinstall engine cover if desired.
19. Check vehicle for loose tools/items.
20. Close hood of vehicle.
21. Take vehicle for a test drive.

Customer's using studs and bolts should follow steps # 22-44 below:

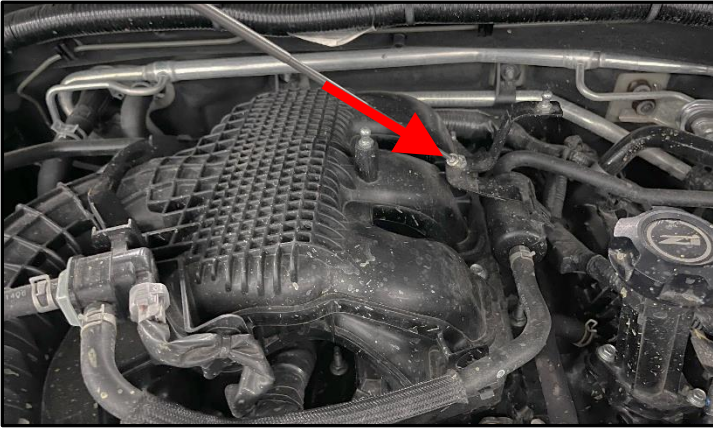
22. Remove the (2) bolts securing the intake plenum to the bracket, on the underside of the plenum just behind the throttle body (shown with arrows below). Retain these bolts as they will be reused.



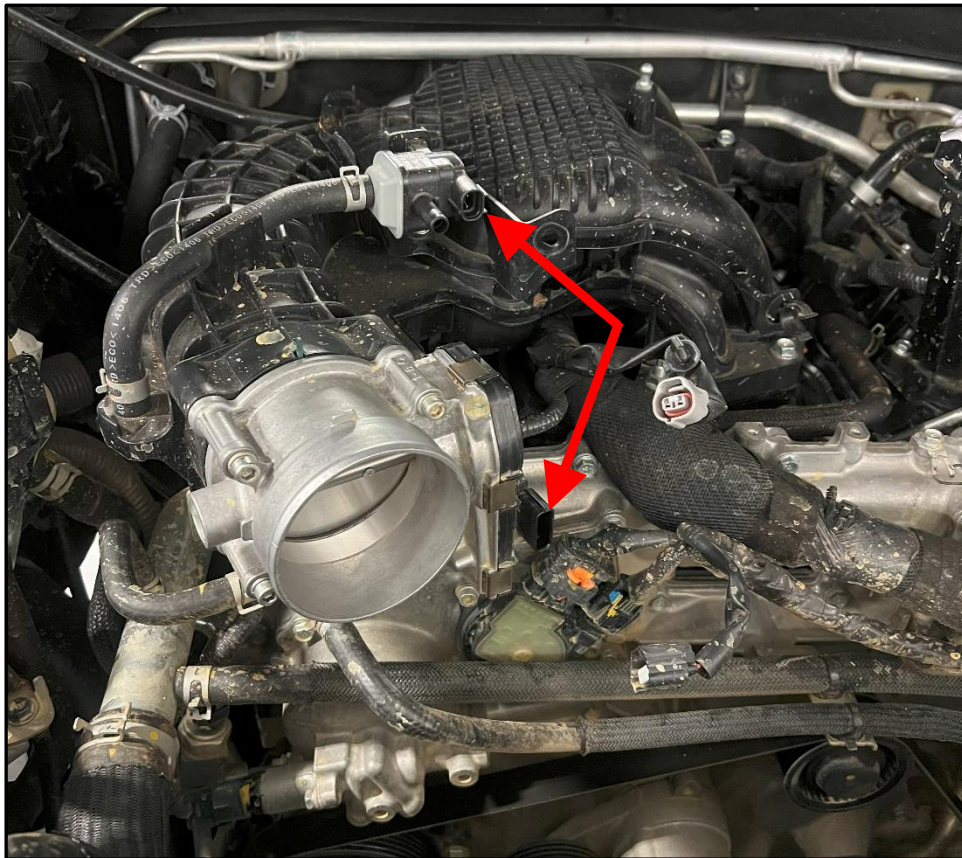
23. Remove EVAP hose from solenoid on top of the intake plenum.



24. Remove 10mm bolt securing EVAP canister to the right side of the intake plenum. Then rotate EVAP canister out of the way.



25. Disconnect electrical connectors at the throttle body and at the EVAP solenoid on the top of the plenum.

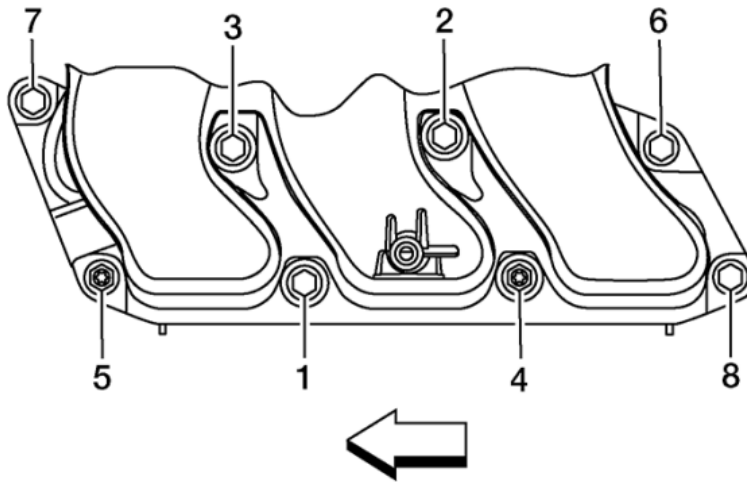


26. Remove the (4) 5mm Allen bolts securing the throttle body to the plenum. Rotate throttle body out of the way.

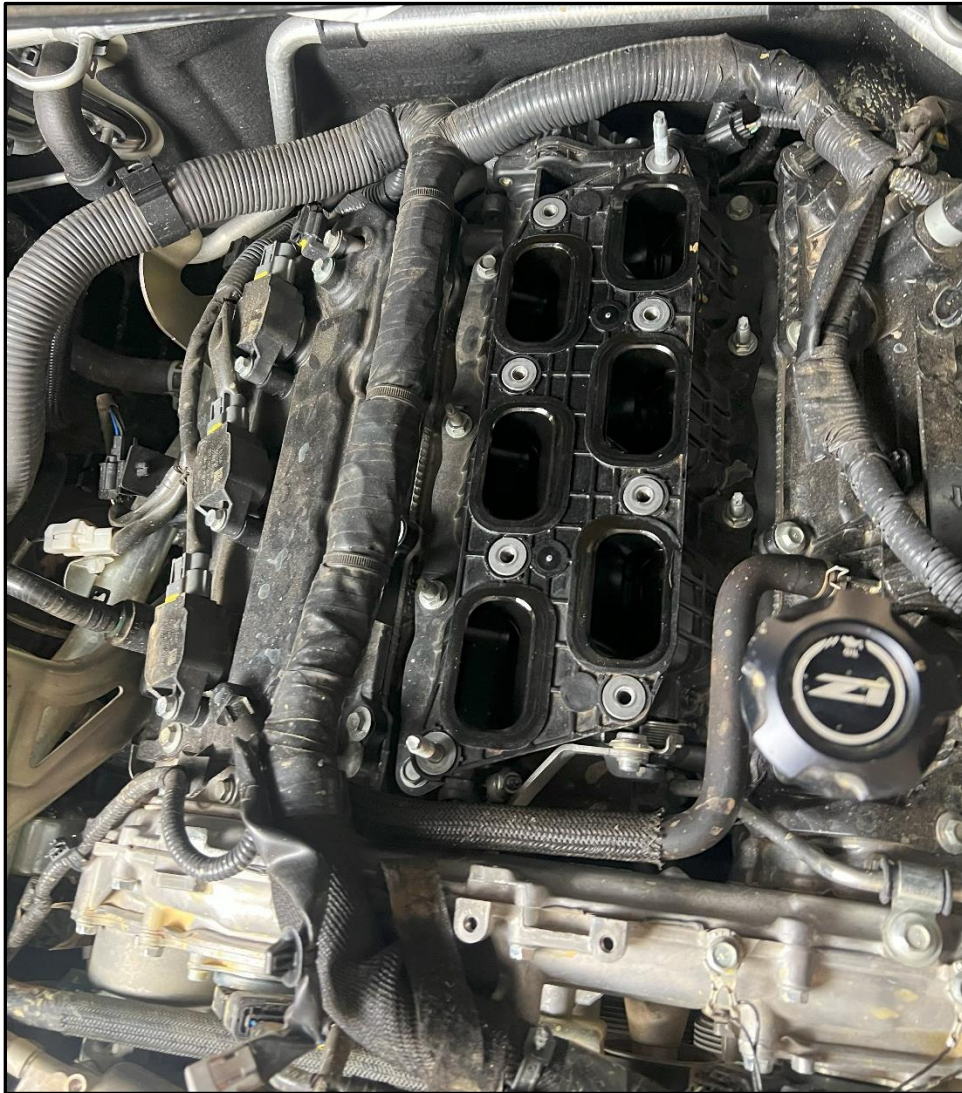
27. Disconnect the rear PCV hose from the back of the intake plenum.



28. Loosen the (8) nuts and bolts securing the upper intake plenum to the lower intake plenum in reverse order as shown in the image at right ((8) first, (1) last).



29. Fully remove the bolts then, carefully lift up on the upper plenum to remove it.



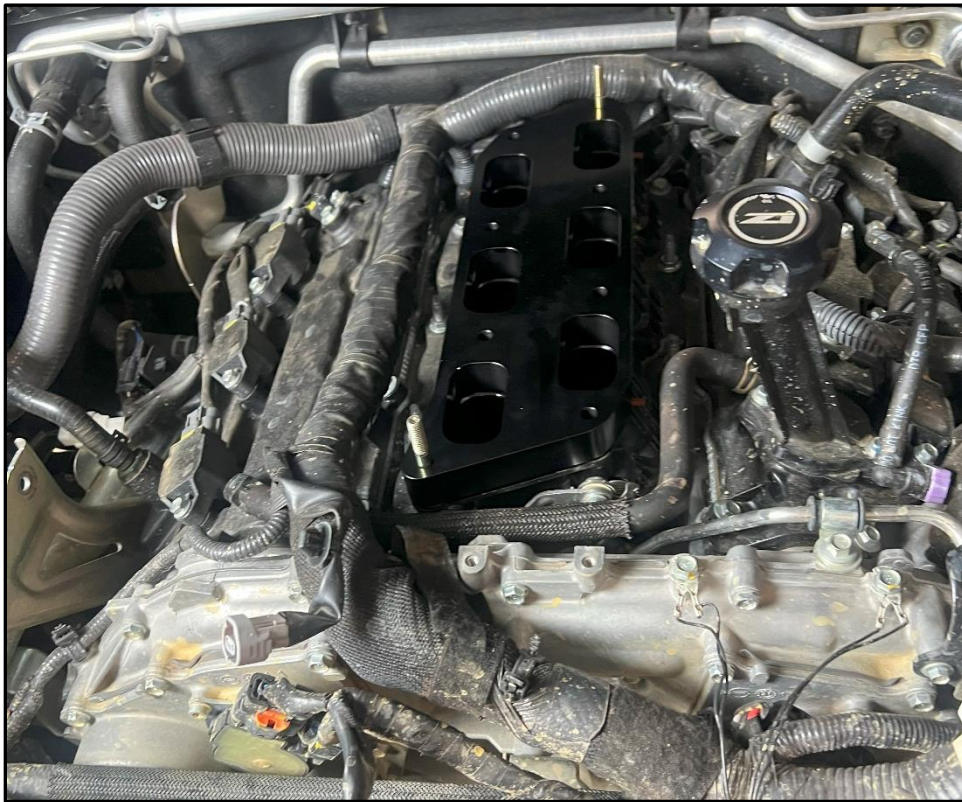
30. Using an E8 Torx socket, remove the (2) OE studs in the lower intake manifold.

31. Install the provided studs in the same locations the OE studs were removed.

32. Locate the Z1 intake manifold spacer, both provided spacer gaskets, and (8) M8 x 60mm flange bolts.

33. Install the gaskets into the grooves on the bottom side of the spacer.

34. Install the spacer onto the studs with the Z1 Off-Road logo facing the drivers side of the vehicle.

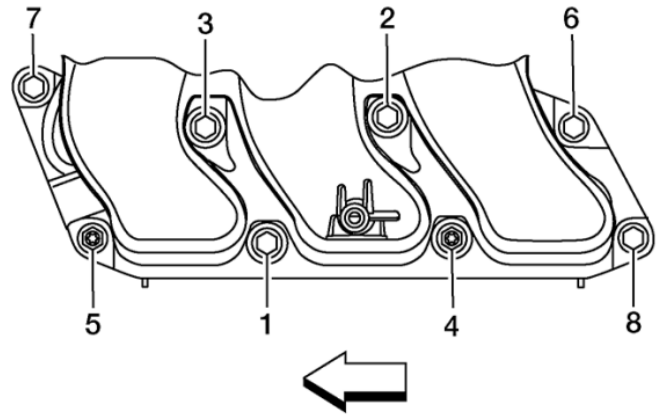
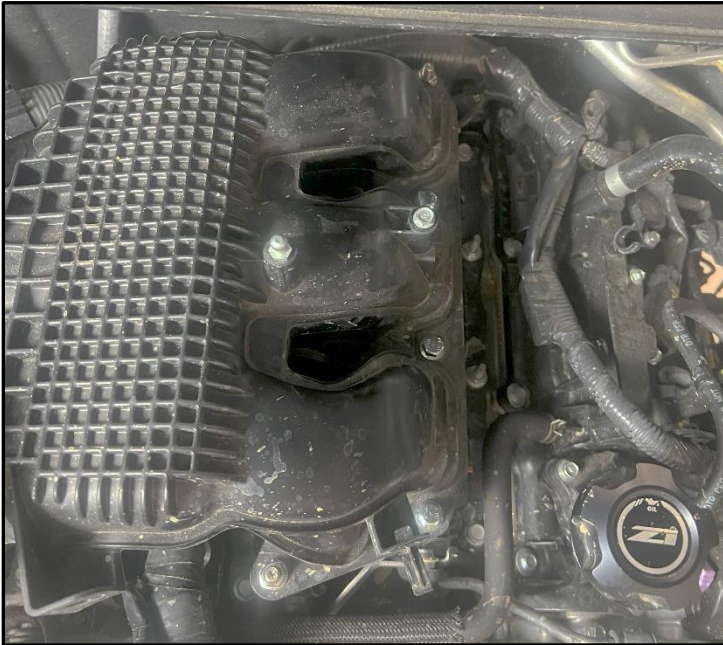


35. Locate the manifold support bracket, (2) M8 x 16mm flange bolts, and (2) M8 flange nuts.

36. Install the manifold support bracket onto the factory support bracket using the (2) M8 bolts and nuts.



37. Reinstall the upper plenum onto the plenum spacer lining it up with the (2) studs. Loosely secure the studs with (2) provided flange nuts. Then install the (6) M8 x 60mm flange bolts. Torque bolts and nuts in the order shown in the diagram below. Torque hardware to 18ft-lbs.



38. Secure the upper plenum to the support bracket using the (2) OE bolts that were removed in step #5.



39. Remove the (2) ball studs on the engine cover bracket. Install the (2) provided M6 standoffs and then reinstall the ball studs onto the standoffs.

40. Reinstall other components onto upper plenum that were removed in steps # 22-26. Torque throttle body bolts to 74-in-lbs.

41. Reinstall engine cover if desired.

42. Check vehicle for loose tools/items.

43. Close hood of vehicle.

44. Take vehicle for a test drive.

END

Additional Technical Support:

Contact Z1 Off-Road at info@z1offroad.com
Or call 678-839-8019 between 9am and 6pm ET