

Z1 OFF-ROAD '22+ NISSAN FRONTIER COLD AIR INTAKE INSTALLATION MANUAL



This Installation Manual is intended for the following models:

2022+

(D41) 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 Frontier Intake, consult with a Professional Mechanic or contact Z1 Off-Road for more information.

PARTS INCLUDED:

Item	Quantity	Description
1	1	Intake Tube
2	1	Airbox
3	2	Airbox Grommets
4	1	Filter
5	1	Filter Grommet
6	1	Fender Grommet
7	1	Fender Grommet – Velocity Stack
8	1	Throttle Body Coupler
9	2	HD Hoseclamp
10	1	PCV Hose
11	1	MAF Gasket
12	1	MAF Flange
13	2	M4 x 14mm Screws
14	1	Support Bracket
15	3	M6 x 1.0 Bolt
16	2	M6 x 1.0 Flange Nut
Auto Idle Start/Stop (ISS) Supplement Kit (Optional)		
17	1	Relocation Bracket, Relay box
18	1	Insulating Foam

TOOLS REQUIRED:

- Ratchet w/ Extension(s)
- Assorted Metric Sockets
- Flat-head Screwdriver
- Pliers

SAFETY REQUIREMENTS:

- Always wear safety glasses and any necessary protective garments. If using any fluids, chemicals, or solvents, a respirator is recommended.
- Remove jewelry.
- Always keep limbs and parts away from moving drivetrain parts.
- Always turn the ignition to the OFF position and disconnect/secure all **NEGATIVE** battery terminals.
- Only operate drivetrain in safe space and well-ventilated areas.

BEFORE YOU BEGIN:

Remove contents from the Z1 Off-Road Frontier Intake Kit 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. Raise and support the hood of the vehicle.

Use Figure 1 below as reference for the following steps:

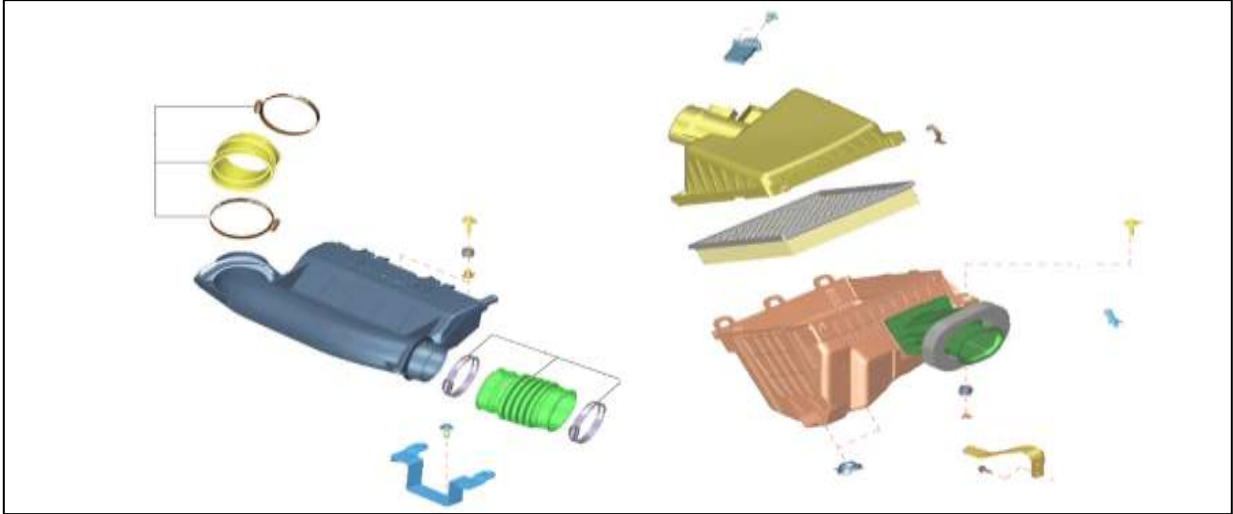


Figure 1

3. Disconnect the MAF Electrical Connector on OEM airbox.
4. Remove clamp and disconnect OEM PCV Hose from OEM Intake Tube Resonance Chamber.
5. Remove the other end of PCV Hose from the Valve Cover.
6. Remove (1) one mounting screw securing OE Airbox to chassis at back right corner of Airbox.
7. Remove (2) two mounting screws securing Resonance Chamber to the top front of engine.
8. Loosen the hose clamp at Throttle Body.
9. Carefully pull up and away to remove the OE Airbox and Intake Tube Assmebly.

NOTE: The Airbox has (2) two rubber grommets in the bottom that sit on (2) two studs on the inner fender. Some silicone spray will help release these grommets when removing the Airbox. Leave studs in place.

10. Locate the Z1 Fender Grommet and Fender Grommet Velocity Stack.
11. Install the Fender Grommet into the opening of the Driver Side Fender so that the end with a longer lip is facing the engine bay, shown below in *Figure 2*.
12. Remove/pull back the front of the Driver Side Fender Liner. Install the Fender Grommet Velocity Stack onto lip of the Fender Grommet inside the wheel arch. Reinstall the fender liner. *Figure 2*.



Figure 2

NOTE: Proceed to *Step 20* if your vehicle is **NOT** equipped with Factory IDLE Start/Stop (ISS) feature.

13. **For vehicles equipped with Auto Idle Start/Stop (ISS) feature**, remove the Relay Box mounted above the Fender Intake Inlet.
14. Trim the plastic as indicated in *Figure 3* below using Sheet Metal Pliers, Dremel or an alternative cutting tool. Be aware of Relay Box Wiring Harness while trimming and cutting.



Figure 3

15. Locate the Insulated Foam Tape. Peel the application tape and apply the foam to the bottom of the Relay Box.
16. Remove the ISS Fender Mounting Brackets by removing the (2) two bolts. *Figure 3.*
17. Using a vise or work bench, bend the bracket upwards as indicated below. This bend provides clearance for the Relay Box once installed with the Intake Box. *Figure 4.*

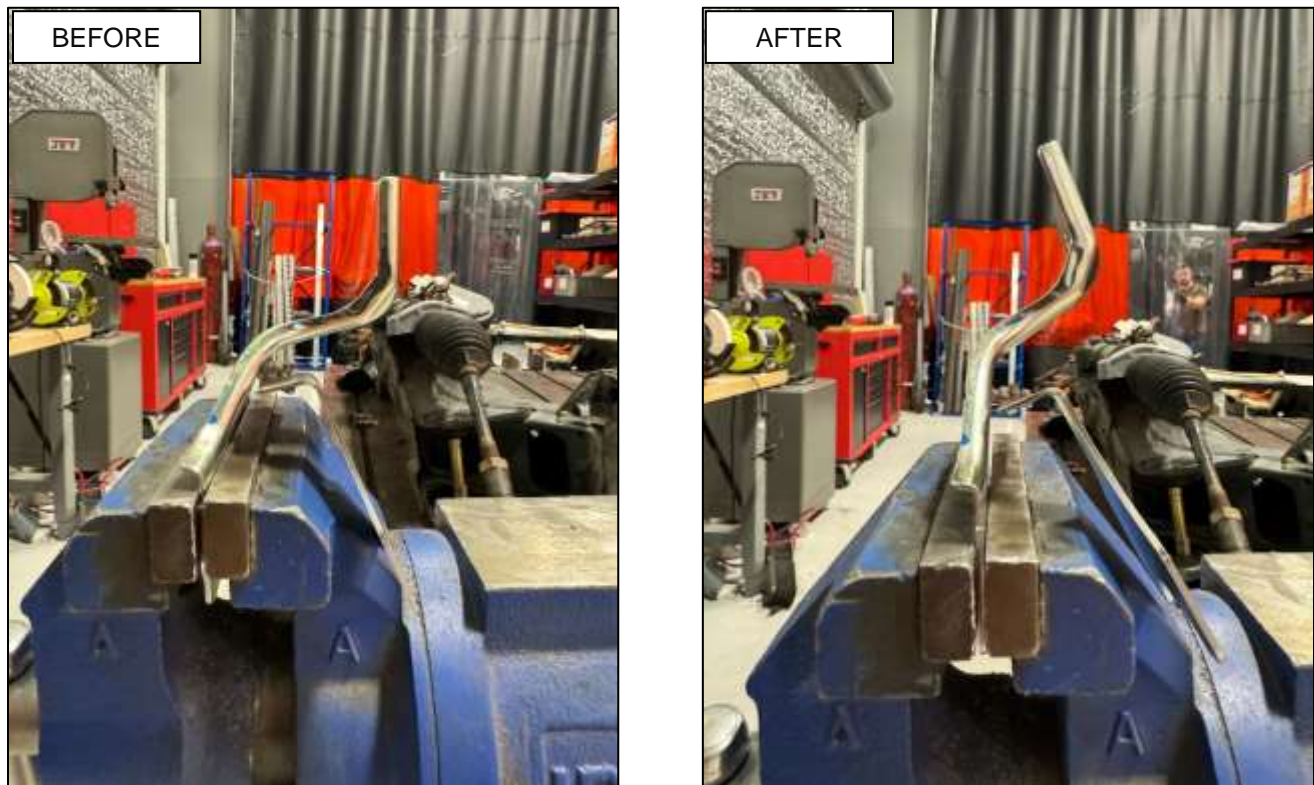


Figure 4

18. Reinstall the Relay Box Bracket using the (2) two previously removed OEM bolts.
19. Remove the (2) two mounting bolts securing the Front Relay Box behind the Driver Side Headlight.

20. With the provided Z1 Relocation Bracket, reinstall the Relay Box using the (2) two bolts previously removed.
Figure 5.



Figure 5

21. Locate the Z1 Airbox, Large Airbox Grommet, and (2) two Small Airbox Grommets. Install the Larger Filter Grommet into large opening inside of Airbox. Install the (2) two Small Airbox Grommets into the holes on the bottom of Airbox. *Figure 6.*



Figure 6

22. Locate the Support Bracket, (2) two M6 x 1.0 Bolts, and (2) two M6 x 1.0 Flanged Nuts. Insert the Bolts through the Support Bracket and the (2) small holes in the side of the Airbox. Secure the Bolts with the Flanged Nuts from inside of the Airbox. *Figure 7.*



Figure 7

23. Install the Airbox Assembly into the vehicle. Make sure the Fender Grommet sits around the inlet port on the Airbox, and the bottom Airbox Grommets sit on the studs in the chassis.
24. Use (1) one M6 x 1.0 Bolt to secure the Airbox Support Bracket to the threaded hole of the Engine Bay. *Figure 8.*



Figure 8

25. Locate the new Z1 PCV Hose. Using the OEM Hose Clamp, attach the Z1 PCV Hose end with the longer bend to the Driver Side Valve Cover. *Figure 9.*

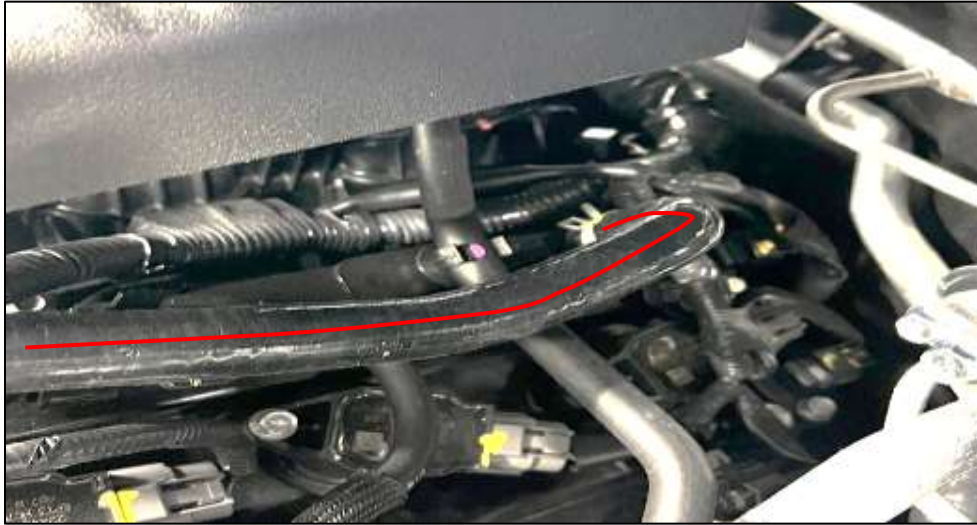


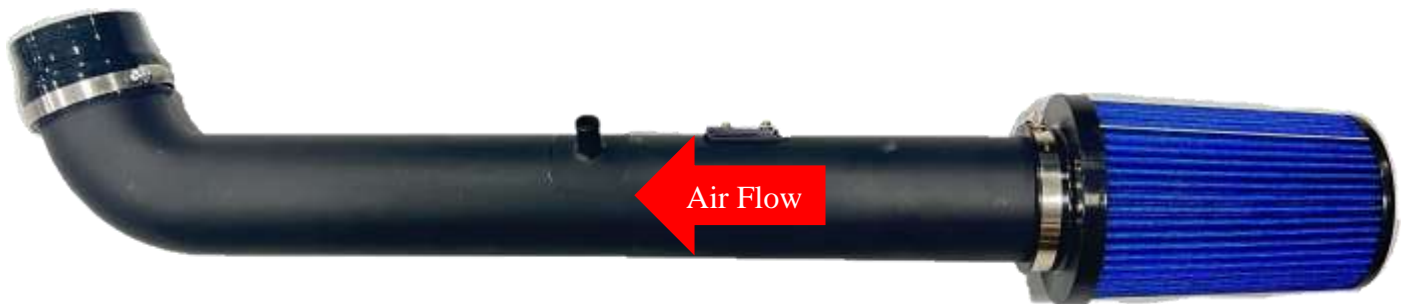
Figure 9

26. Locate the Z1 Intake Tube, Air Filter, (2) two HD Hose Clamps, Throttle Body Coupler, MAF Gasket, MAF Flange, and (2) two M4 x 14mm screws.
27. Remove the (2) two screws in OE Intake that secure the MAF Sensor.
28. Transfer the MAF sensor from OEM Air Intake Tube to new Z1 Air Intake Tube. Use the provided M4 x 14mm screws, as well as the provided MAF Gasket and Flange, as shown below in *Figure 10*.



Figure 10

NOTE: Ensure the arrow on the MAF is pointing in the direction of airflow. Screws used in pictures are samples and may differ from production.



29. Attach the Air Filter to the straight end of the Air Intake Tube with a hose clamp. Tighten hose clamp. *Figure 9.*
30. With (1) one Hose Clamp, attach the larger side of the Throttle Body Coupler to other end of Air Intake Tube (as shown). Tighten hose clamp.
31. Install the Air Filter and Intake Tube Assembly into the Airbox making sure the Filter is seated on the Filter grommet in the airbox. *Figure 11.*



Figure 11

32. With (1) HD Hose Clamp, install the Throttle Body Coupler onto the Throttle Body. Do not tighten the clamp yet.
33. Using the OEM Hose Clamp, attach the PCV hose to Z1 air intake tube.
34. Reconnect the MAF Sensor Connector that was removed in *Step 3*.
35. Tighten the hose clamp at the Throttle Body.
36. Inspect vehicle for loose tools/items.
37. Start vehicle. While at idle, check for leaks or faulty operation of Z1 Air Intake system.

38. Locate the C.A.R.B. exemption sticker. The sticker must be readily visible under the hood in order for an emissions inspector to easily see it when the vehicle is required to be tested for emissions. It is **NOT** recommended to affix the label to any equipment that is easily removable from the vehicle. *Figure 12.*

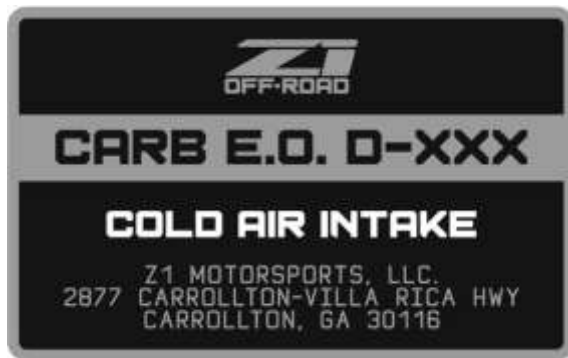


Figure 12

39. Select a suitable location (strut tower, underside of hood, radiator shroud or core support, etc.). Clean the area to remove all debris and dust. Apply the sticker to vehicle.
40. Account/remove tools from engine bay.
41. Lower hood of vehicle.
42. Perform a final test drive of vehicle.

END

Additional Technical Support:

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