

# Z1 XTERRA & FRONTIER LIFT / LEVELING KIT INSTALLATION MANUAL



This Installation Manual is intended for the following models:	
2005-2015	Nissan Xterra
2005-2021	Nissan Frontier
2022+	Nissan Frontier

## 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 Xterra & Frontier Lift / Leveling Kit, consult with a Professional Mechanic or contact Z1 Off-Road for more information.

## **PARTS INCLUDED:**

Item	Quantity	Description
1	2	Strut Spacer
2	12	M10 Flange Nuts

## **TOOLS REQUIRED:**

- Hydraulic Jack
- (2) 2-Ton (or greater) Jack Stands
- Ratchet
- Ratchet Extension(s)
- Assorted Metric Sockets (up to 21mm)
- Assorted Metric Wrenches (up to 21mm)
- Torque Wrench
- Hammer

## **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 Xterra & Frontier Lift / Leveling 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. Loosen lug nuts on front wheels.
3. Locate proper jacking points on vehicle's chassis (refer to vehicle's Owner Manual). Raise and support vehicle using jack & jack stands.
4. Remove front lug nuts and wheels.

Refer to the diagram below for steps # 5 - 10:

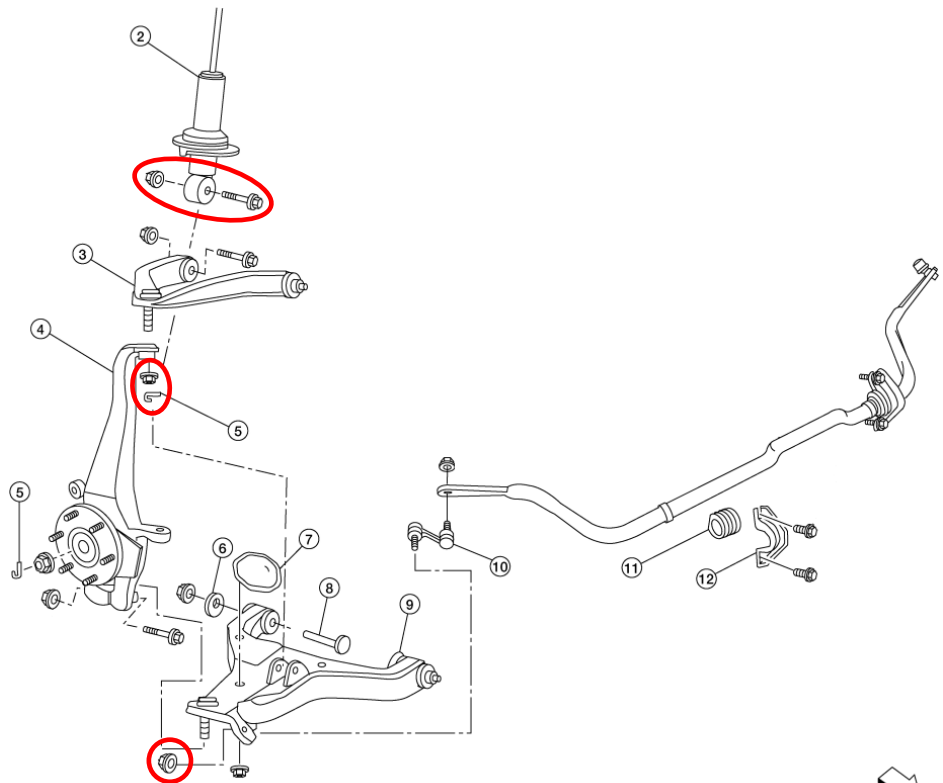
5. Disconnect the sway bar end links (10) from both front lower control arms. The passenger side nut is circled in the image at right.

6. Remove the cotter pin (5) from each upper control arm ball joint.

7. Remove the castle nut securing each upper control arm ball joint to the wheel upright/knuckle.

8. Using a hammer or ball joint separator tool, unseat each ball joint from the wheel upright/knuckle.

9. Rotate the control arm up and out of the way. Using a strong zip tie or metal cable tie, secure the upright/knuckle to the chassis to prevent stress on the brake lines.



10. Remove the nut and bolt securing the bottom of each strut to the lower control arm (circled above).

11. Remove the (3) nuts securing the top of each strut assembly to the chassis (circled below).



12. Rotate the sway-bar endlink towards the front of the vehicle and rotate the sway bar down as much as possible to provide room to remove the strut.

13. Remove the strut assembly from the vehicle.

14. Locate the Z1 strut spacer. Remove the (3) nuts from the bolts in the spacer.

15. Place the spacer on top of the strut. Secure with (3) supplied flange lock nuts. Torque nuts to 22ft-lbs.

Note: To prevent the strut from rotating when torquing down the nuts, slide a long screwdriver through the mounting hole at the bottom of the strut.

Note: If you purchased the Z1 +5mm Fine Tuning Lift Spacers and want to fine tune your ride height, place them on top of the stage 1/2/3 spacer at this time.

Note: With the Z1 lift / leveling kit, depending on other mods and mileage, it is possible for the front upper control arm to contact the spring bucket at full suspension droop. Each vehicle will have slight variances. This is common for these vehicles and some customers may choose to create clearance by removing some material from the spring bucket or the control arm. However, most will have no issues by leaving these parts alone.



16. Position the strut assembly back in the lower control arm and chassis.

17. Carefully align the top bolts with the chassis and lift the strut up so that the bolts go through the top strut mount on the chassis. Secure the top of the strut with (3) supplied flange lock nuts. Torque nuts to 22ft-lbs.

18. After installing the spacer on the top mount, the lower mount will need to be re-locked to line it up with the control arm. Using a long screwdriver, socket extensions, or other leverage/pry tool in the bottom mount bolt hole, rotate the strut to line it up with the lower control arm.

19. Reattach the bottom of the strut to the lower control arm using the nut and bolt removed in step # 12. Torque nut to 98ft-lbs.

20. Remove the zip tie or metal cable from the wheel upright/knuckle and position the upper control arm ball joint in the top of the wheel upright/knuckle.

21. Secure the ball joint with the castle nut that was removed in step # 7. Torque nut to 58ft-lbs. Inspect and if good, install the cotter pin. Nissan recommends replacing the cotter pins after each disassembly.

22. Repeat steps # 10-19 on opposite side of vehicle.

23. Reconnect the sway bar end links to the lower control arms.

24. Reattach wheels and lug nuts.

25. Properly lower vehicle from jack stands.

26. Perform a final test drive of vehicle.

**END**

**Additional Technical Support:**

Contact Z1 Off-Road at [info@z1offroad.com](mailto:info@z1offroad.com)  
Or call 678-839-8019 between 9am and 6pm ET