



**INSTALLATION INSTRUCTIONS FOR 2003-2009
TOYOTA 4RUNNER WITH FACTORY X-REAS SUSPENSION
3" SUSPENSION LIFT KIT
PART NUMBER 431X**

WARNING!!! READ AND UNDERSTAND ALL INSTRUCTIONS BEFORE PROCEEDING. MAKE SURE THAT YOU HAVE ALL TOOLS AND PARTS BEFORE BEGINNING THE INSTALLATION.

SPECIAL TOOLS REQUIRED:

“HOOK” TYPE SPRING COMPRESSOR (FOR REAR)

*Tie Rod End Puller.

REVTEK SUSPENSION RECOMMENDS USING RED LOCTITE ON ALL FASTENERS AND HAVING THE FRONT END ALIGNMENT CHECKED AFTER INSTALLATION.

KIT CONTENTS INCLUDE

- ♦ INSTRUCTIONS INCLUDING PARTS LIST
- ♦ PRODUCT SAFETY LABEL (ORANGE)
- ♦ WINDOW DECAL
- ♦ WARRANTY

PARTS LIST INCLUDED IN KIT

<u>FRONT</u>	<u>QTY</u>
PRELOAD SPACER	2
DIFF DROP SPACERS	2
10MM X 1.25MM HARDENED STUDS	6
TOP OUT EXTENDER	2
½-13 X 6" GRADE 5 BOLT	2
½-13 FLANGE NUT	2
M8 X 35MM Hex Head Bolt	4
SKID PAN DROP SPACERS	2
M8 Flat Washer	2
<u>REAR</u>	
LIFT SPACER	2

REAR SHOCK EXTENSIONS	2
SHOCK EXTENSION BOLTS	2
SHOCK EXTENSION NUTS	2
SHOCK EXTENSION WASHERS	4
SHOCKS EXTENSION LARGE WASHER	2
TUBE SPACER	2
M8 X 50MM HEX HEAD BOLT	1
8 X 1.25 MM LOCK NUT	1
REAR BRAKE LINE BRACKET	1
M8 FLAT WASHER	1
9/16 Extra Large Washer	2
9/16 Thick Washer	2

TORQUE SPECIFICATIONS

10MM FASTENERS	30 LBS.
12MM FASTENERS	55 LBS.
17MM FASTENERS	60 LBS.
19MM FASTENERS	75 LBS.
LUG NUTS	100 LBS.

**PRODUCT SAFETY LABEL MUST BE INSTALLED INSIDE CAB
IN PLAIN VIEW OF ALL OCCUPANTS.**

FRONT OF 4RUNNER

1. Park vehicle on level concrete surface.
2. Center and lock the steering wheel.
3. Block the rear wheels of the vehicle to prevent vehicle from moving in either direction.
4. Jack the front of the vehicle up from lift point in Figure A.
5. Support the vehicle with jack stands from the points in Figure A.
6. Remove the front wheels using a socket.
7. Remove sway bar end links from spindle using 17mm socket (both sides). (See Figure B).
8. Remove all sections of the front skid plate. Start by removing the plastic push snaps (be careful removing these, they will be re-used later). Then remove upper plastic shield in front of skid pan using 10mm socket and finally remove the skid pan using 12mm socket.
9. Remove sway bar from frame using 14mm socket. (See Figure C). For vehicles equipped with the KDSS system it is recommended to “strap” the solenoids tight before continuing.
10. Using 19mm socket, remove lower bolt and nut from the bottom of the strut (both sides).
11. Remove cotter key and 19mm nut from outer tie rod end, separate the rack & pinion tie rod ends utilizing a tie rod end puller.
12. Disconnect the XREAS hydraulic line just rear of the shock on the frame (See Figure E.) Be sure you remove the disconnect point and not the banjo bolt. You may see a few drops of fluid this is normal.
13. Be sure to remove and secure the ABS and brake lines to avoid damage.
14. Loosen upper ball joint nut. Leave partially on to separate ball joint. Then remove nut and separate spindle from joint.
15. Remove the three nuts (14mm) from the top of the strut. (See Figure D).
16. Mark the struts vertically with paint pen on all pieces and then remove the struts from the vehicle, making sure that they are marked driver and passenger side respectively for reinstallation.

NOTE: AT THIS TIME, IF YOU DO NOT HAVE A SUITABLE SPRING COMPRESSOR, IT IS HIGHLY ADVISED TO EITHER TAKE THE STRUT TO A QUALIFIED SERVICE CENTER OR PURCHASE ONE.

17. Compress strut assembly and remove the nut (17mm) on the top of the strut shaft. BE SURE NOT TO COMPRESS THE SHOCK, JUST THE SPRING.
18. Release the compressor.
19. Remove the spring top plate from the strut.

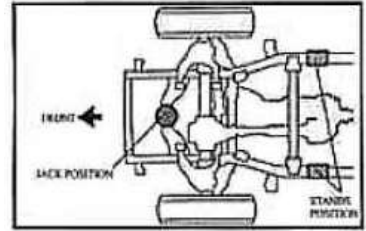


Fig. B



Fig. C



Fig. D

20. Remove and discard the rubber spacer.
21. Remove (hammer) the studs from the spring top plate. See Figure "F."
22. Install (hammer) the LONGER STUDS (10MM) (provided) in the spring top plate. See Figure "G."
23. Install the PRELOAD SPACER between the spring and the spring top plate with the small diameter facing toward the spring and the Revtek logo facing outward. (See Figure H).
24. Compress the strut assembly, making sure you center the strut shaft through the spring top plate hole and that the STUDS line up with the PRELOAD SPACER reliefs. Replace nut on the top of the strut shaft and torque to spec.
25. Place the TOP OUT EXTENDER RING over the STUDS ON THE STRUT. (Figure F).
26. Reinstall the strut by reversing the removal procedure; Torque to spec.
27. When properly installed, Revtek logo will be centered between preload spacer reliefs.
28. Reinstall tie rod ends to knuckle using factory hardware. Torque to specs on page 1.
29. Reinstall the upper ball joint and torque.
30. Reconnect the ABS and brake lines.
31. Reconnect the X-Reas hydraulic line.
32. Reinstall sway bar end links into spindles. Torque to specs.
33. Reinstall sway bar to frame.
34. Reinstall front skid plate.
35. Replace the wheels. Torque to specs.



Fig. F



Fig. G



Fig. E

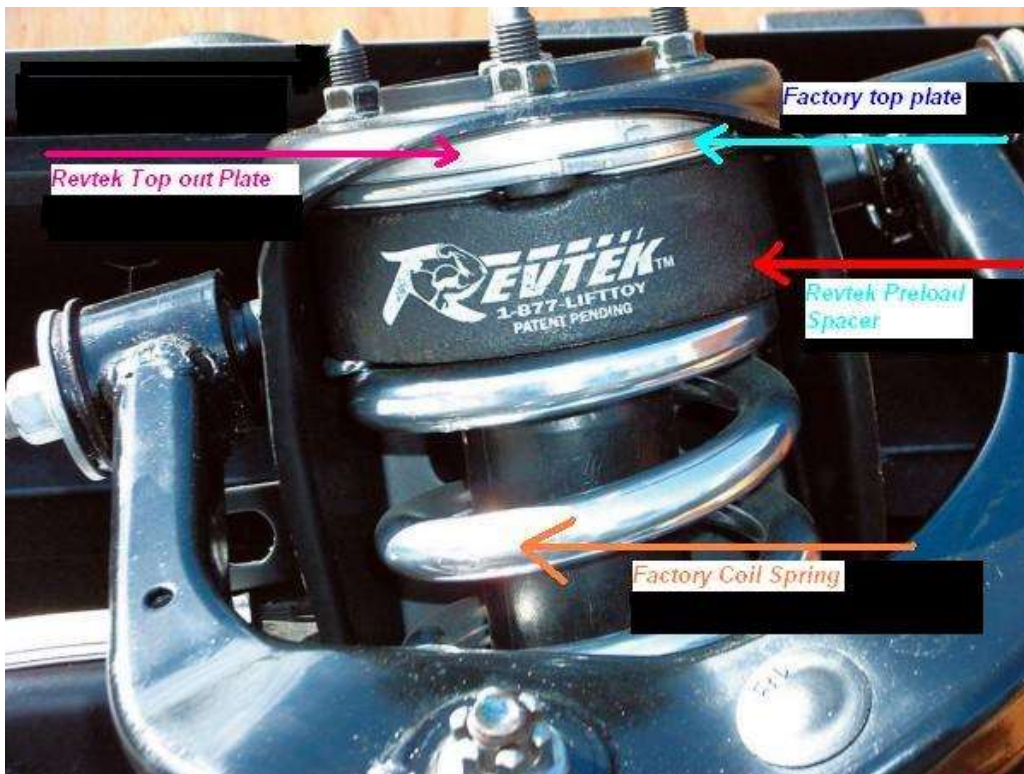


Fig. H

DIFFERENTIAL DROP SPACER KIT

1. Remove skid plate under the front of the vehicle. Save the OEM bolts.
2. Remove factory 19mm x 5" long bolts and nuts, supporting the front differential. (See Figure 1). Save the OEM washers for step 3.
3. Install Revtek differential spacers between the two front differential supports and front cross-member. Fasten to cross-member using new ½ x 6" long bolts and nuts (making sure to reuse the factory washers), (See Figure 2.)
4. Place 2 small spacers on each side of the rear of the front skid plate between plate and frame. This will allow additional clearance for relocated differential. Use the longer 8MM bolts provided. If vehicle has optional differential skid plate then use one small spacer on each side and a longer bolt here as well.
5. Torque skid plate bolts to specs. (You may need to adjust the skid plate holes.)

Figure 1



Figure 2



SPECIAL NOTE: YOU WILL NEED TO ADJUST THE HEADLIGHTS AFTER THE ENTIRE KIT IS INSTALLED!!!

REAR OF 4RUNNER

1. Place vehicle on level concrete surface.
2. Block front wheels to prevent vehicle from moving in either direction.
3. Make sure parking brake is on.
4. Lift the vehicle from the center of the rear differential housing, leaving the jack in place to support the differential.
5. Support the vehicle with jack stands from the points indicated in Figure I. Do not lower rear axle yet!
6. Remove the rear axle lower track bar mount bolt. (Save for reinstallation.)
7. Remove rear wheels.
8. Using 12mm socket, remove sway bar end link nut and end link from frame mount. (See Figure J).
9. Remove upper 12mm bolt holding brake line bracket to frame tube on the driver side and remove ABS wire mounting bracket from the frame tube on passenger side and then push the ABS clip out of the frame mount on passenger side; leave disassembled until later step (see Figures K,L,M).
10. Remove upper shock mount nut. Do not remove the shock or disconnect the XREAS line. Secure shock so it does not overextend the XREAS line.

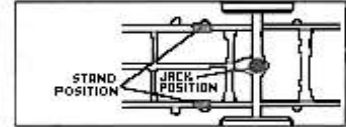


Fig. I



Fig. J



FIG. K



FIG. L



FIG. M

11. Carefully lower the floor jack, until suspension is fully dropped down.
12. Remove rear coil springs.
13. Place lift spacer between the rubber bottoming cone and the rear coil spring with the spacer center locating flange facing downward; you may need to push the poly spacer into coil.
14. Re-install the coil spring making sure that the spacer, the bottoming cone, and the spring are properly positioned.

15. Install new M8x50mm hex head bolt, washer and two (2) aluminum tube spacers between upper ABS line bracket and frame tube. Leave the frame mount push clip undone allowing extra travel. (See Figure N).



FIG. N



FIG. O

16. Install the Revtek rear driver side brake line bracket that has two 90 degree bends in it, to the frame using the factory bolt in the stock location and re-attach the Toyota rear brake line bracket to the Revtek bracket using the factory bolt from the ABS wire mount and the new supplied nut. (See Figure O). Torque to specs on page 1.
17. Lower vehicle to ground.
18. Reinstall sway bar end links. Torque to specs on page 1.
19. Install the new upper shock extensions between the shock and the frame mounting point. Start the hardware on both the shock to extension and the extension to frame. You will have a nylock nut, small washer, and large washer on the top and a bolt and small washer from the bottom. You will need to pry, or cut the factory large upper shock bushing washer off and discard the washer. You will now install the bushing over the shock shaft and then the supplied 9/16 Extra-large washer and then the supplied 9/16 thick washer and then the factory nut. See Fig. R & S. Be sure the tab pointing forward is over the edge of the bracket to prevent the shock from spinning. It may even bend slightly as you tighten it down. That is normal. Tighten the top mount to the frame first. Then tighten the shock to the extension. See Fig. T.
20. Re-Install the lower track bar bolt and tighten using 19mm socket. Torque to specs on page 1.
21. Replace the wheels; torque to spec.



FIG. R

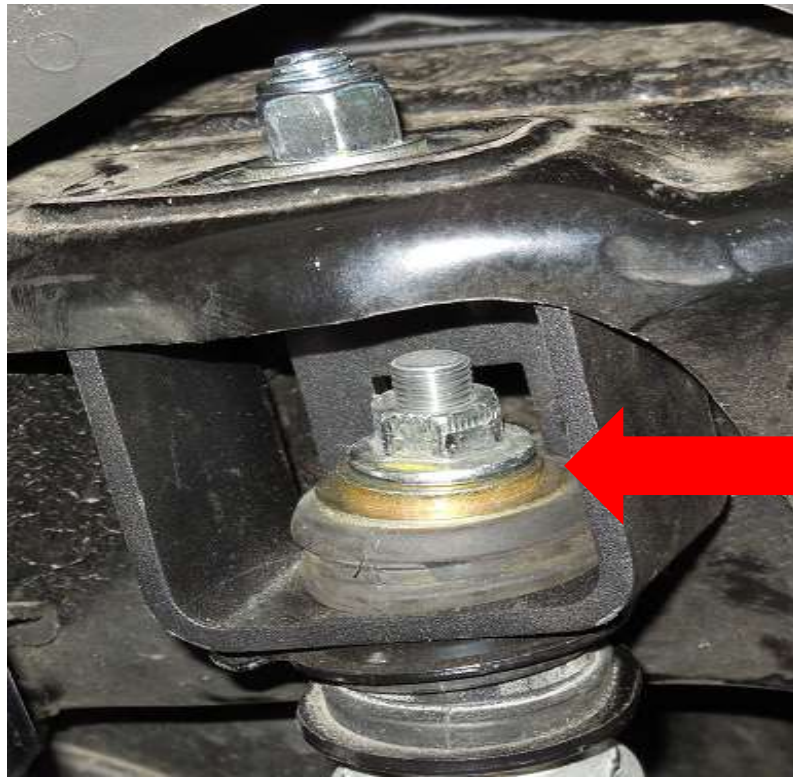


FIG. S



FIG. T

Important Installation Notes:

- Manufacturing tolerances do create certain variations that we cannot fully account for. At times you may need to use a punch, or pry bar to get holes to line up. Also you may need to slightly enlarge a hole to create a proper alignment. These are all normal situations.
- Altering your suspension may change the way your vehicle handles. Care must be taken to operate your vehicle safely.
- Adding large wheels and tires, will change how your suspension operates. It may put extra strain on certain components causing them to wear sooner than normal.
- While every effort is made to design our kits to work within factory geometry, there are situations where additional alignment tools like adjustable or replacement components may be needed. This is normal.
- It is possible when changing the driveline angles that a vibration may occur, and require an adjustment to repair this situation.
- Other modifications may be needed due to optional equipment on the vehicle or other prior modifications that have been made.
- All fasteners should be checked and retightened after 500 miles. After the initial recheck, they should be checked and tightened as needed with every following service.
- Once the installation is complete a thorough road test should be performed to verify proper clearance of all items.
- Revtek Suspension kits are not designed for race applications.
- Altering the suspension on your vehicle may change the characteristics of some systems such as: fuel economy, transmission shift points, etc.
- While Revtek systems are designed to work within all factory specifications and tolerances, there are some situations where exceeding the capability of the vehicle such as load capacity or speed will result in some undesirable results. If you overload your vehicle it will not handle correctly. If you drive or turn with excessive speed your vehicle will handle differently and some onboard vehicle systems may detect this and take appropriate action.
- Our tire and wheel fitments are only a guideline. Different production times or tolerances will vary and this sizes should only be used as a starting point. Each vehicle is different and will need to be treated as such.
- Our lift heights can vary slightly based on manufacturing tolerances. Some vehicles will exhibit slightly different amounts of lift heights and different final heights. Every vehicle is not identical and every vehicle will not be perfectly the same at all four corners.
- Once your vehicle is lifted components may wear faster, this is normal. A lifted vehicle is exerting more stress on most components and therefor causing them to wear faster.
- After altering the height of your vehicle, you should aim the headlights for proper coverage.
- The use of Loctite on fasteners is highly recommended.