

2003-Present Toyota 4Runner | 2007-2014 FJ Cruiser LRT 3" Lift Kit by Low Range Off-Road (SKU# LR-LRFJ4RU)

Installation Instructions



CAUTION: Safety glasses should be worn at all times when working with vehicles and related tools and equipment.



Suggested Tools:

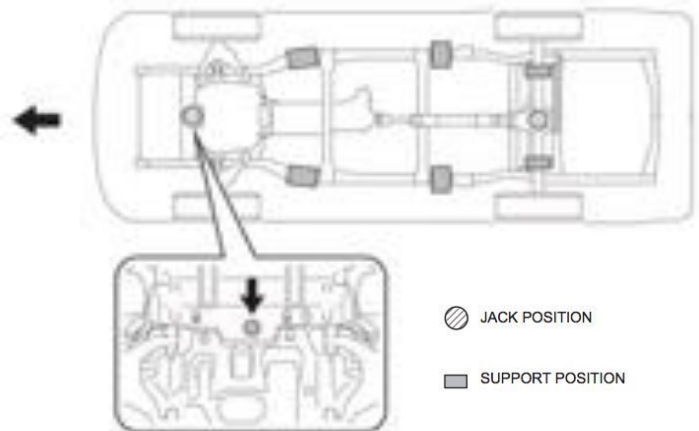
- Floor Jack (or Twin Post Lift)
- 2 Jack Stands (or Under-Hoist Safety Stand)
- Sockets 14, 17, 19 & 22 mm
- Ratchet
- Torque Wrench, Ft. Lb.
- Combination wrench, 14 & 19mm
- Large Adjustable Groove Pliers
- Slip Joint Pliers
- Plastic Tipped (or brass) Hammer
- Large Pry Bar
- Large Tapered Punch
- White (or Yellow) Metal Marker
- Ratcheting Tie-Down Strap

Caution:

This vehicle will require a professional wheel alignment after this lift kit has been installed. Failure to have this vehicle professionally aligned could result in poor vehicle stability, handling, and braking; as well as excessive tread wear. Further, certain aspects of this installation can be dangerous. Therefore, we recommend that a trained professional technician install this kit.

General Note

The photographs for these instructions were taken with the vehicle placed on a twin post lift for a clearer view and better pictures. However, these instructions are written to be used with a floor jack and jack stands to accommodate the majority of our customers. We also used power tools but, manual tools can easily be substituted and work well.



Step 1

Lift the front of the vehicle with a floor jack and support it with (2) jack stands. Refer to **Figure 1** for proper floor jack and jack stand support positions.

Figure 1



Caution:

It is extremely dangerous to perform any work on a vehicle raised on a jack alone, even for work that can be finished quickly. Jack stands must be used to support the vehicle.

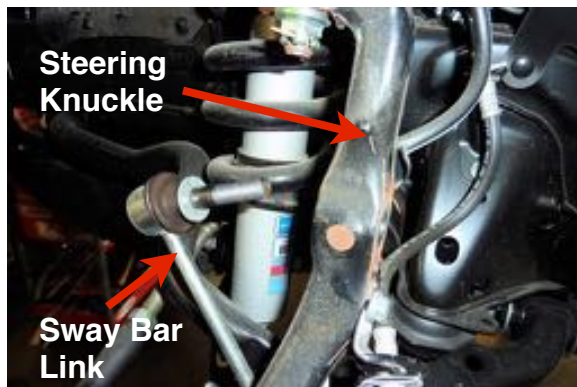


Step 2

Remove the 2 front wheels and set them aside.

Step 3

Remove the skid plate by removing (4) bolts using a 14 mm socket.



Step 4

Disconnect the driver side sway bar link from the steering knuckle using 17 mm socket. Repeat this step on the passenger side of the sway bar as well.

Tech Tip

If the stud turns together with the nut, an allen wrench can be used to hold the stud as shown.





Step 5

Mark the position of the lower control arm bushing/eccentric cam as shown.

Note: This is done to assist in maintaining the wheel alignment as close to the original settings as possible. The vehicle will require a complete wheel alignment when this kit installation is complete.



Step 7

Repeat step 6 & 7 on the rear lower control arm bushing/eccentric bolt.



Step 6

While holding the eccentric cam with an adjustable end wrench, **LOOSEN** the front lower control arm eccentric cam bolt using a 22mm socket.

Note: This is so the lower control arm can swing down out of the way.



Step 8

While supporting the lower control arm with a floor jack (or under-hoist jack stand), remove the (2) lower ball joint bolts using a 19 mm socket.



Step 9

Mark the outside of the coil spring as shown. The mark should be made directly opposite the engine.

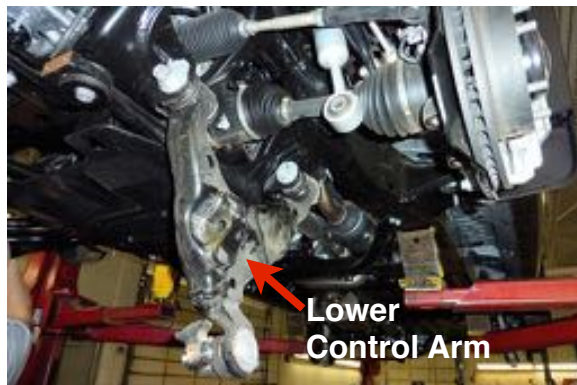
Note: The strut/coil assembly will be reinstalled with the mark directly opposite (180 degrees) from its original position.



Step 10

Remove the lower strut/coil spring assembly attaching bolt using a 19 mm socket.

Note: Take note of the direction the bolt was removed. It must be reinstalled in the same direction.



Step 11

Let the lower control arm swing down as shown.



Step 12

LOOSEN the (3) upper strut/coil spring mounting nuts using a 14 mm socket. Do **NOT** remove these nuts yet.

Note: You may need to use a box end wrench (instead of a socket) to loosen the nut on the engine side of the strut/spring assembly.





Step 13

While holding the strut/coil spring assembly, remove the (3) mounting nuts and remove the strut/coil spring assembly from the vehicle. The strut/spring assembly will drop out of the bottom where the lower control arm was.



Step 14

Install the aluminum spacer supplied with the kit on top of the strut/coil spring assembly.

Note: Position the strut/coil spring assembly so that the mark you made earlier is facing **AWAY** from you. Position the new spacer so that the "Low Range Off Road" label is facing **TOWARD** you and put the two parts (spacer and strut) together.



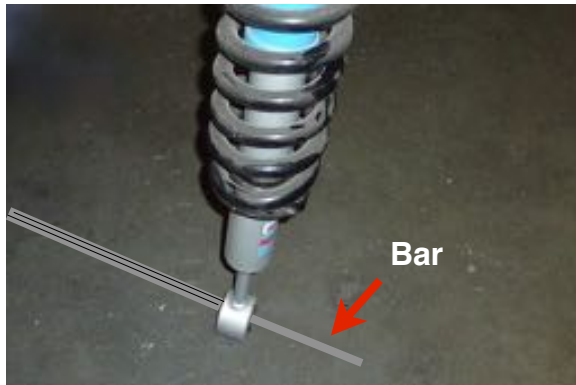
Tech Tip

These aluminum spacers are machined to very close tolerances and may need to be tapped into place with a plastic tipped, brass or dead blow hammer.



Step 15

Install the spacer nuts supplied with the kit and tighten to 33 ft-lbs with a 14 mm socket.



Tech Tip

When tightening the spacer nuts we found it helpful to hold the strut secure, by placing a bar through the lower strut mount bushing as shown.



Step 17

Install the new upper strut nuts supplied with the kit, but **DO NOT** tighten them yet.



Step 16

Re-install the strut, bringing it in from the bottom, opposite the way it came out.

Note: The Low Range Off-Road label should be facing **OUT** away the engine, and the mark you made on the spring, should be facing **IN** toward the engine.



Step 18

Swing the lower control arm back into position and install the lower strut/coil assembly bolt and nut. Then tighten the nut to 61 ft-lbs.

Note: It may be necessary to use a large tapered punch or large phillips screwdriver to help align the hole in the lower strut/coil spring assembly, with the holes in the lower control arm.





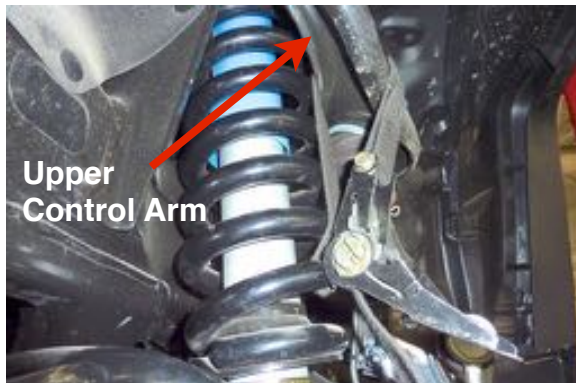
Step 19

Tighten the (3) upper strut/coil spring assembly nuts to 47 ft-lbs.



Step 20

Place a floor jack (or under hoist jack stand) under the lower control arm to lift it into place. Then install the two lower ball joint bolts and torque to 118 ft-lbs.



Tech Tip

It may be helpful to use a ratchet strap connected between the upper control arm and the bottom coil of the spring, to draw the lower control arm closer to the steering knuckle in order to start the lower ball joint bolts.



Step 21

Align the eccentric cam marks made earlier, using an adjustable end wrench. Then tighten the lower control arm cam bolts to 100 ft-lbs using a 22 mm socket.

Note: Aligning the marks will help maintain the original alignment settings so the final alignment will be easier.



Step 22

Repeat step 21 on the rear control arm bushing/ eccentric. Hold the eccentric and tighten the bolt to 100 ft.-Lbs.

Step 23

Repeat steps 5 through 22 at the right front wheel.



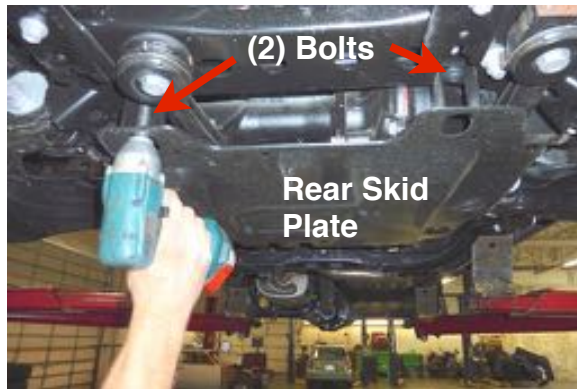
Step 24

Reconnect the driver side of the sway bar to the steering knuckle. Torque the nut to 52 ft-Lbs with a 17 mm socket. Do the same to the passenger side sway bar and torque to specification as well.

Step 25

Check all completed work on the front of this vehicle to be sure everything is in place and torqued properly.

Differential Drop Kit Installation



Step 26

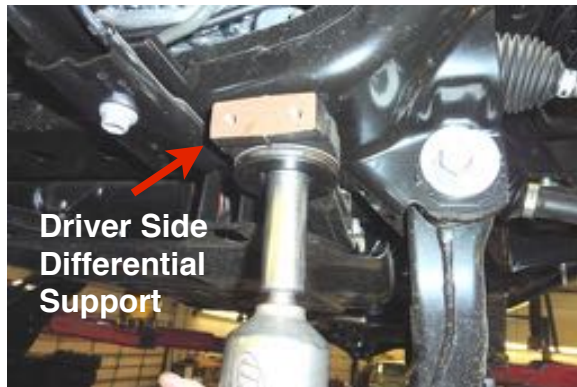
Loosen the two front bolts holding the rear skid plate. Note: It is not necessary to remove the skid plate. Just let it drop down a little so when you lower the differential supports in the next step the skid plate will not be damaged.



Step 27

LOOSEN the passenger side differential support bolt using a 19 mm socket

Note: You may need to hold the nut on the top end of the bolt with a 19 mm wrench. Caution: Do NOT remove the bolts; only loosen them at this point.



Step 28

LOOSEN the driver side differential support bolt using a 19 mm socket.

Note: Again you may need to hold the nut on the top end of the bolt with a 19 mm wrench.

Caution: Do **NOT** remove the bolts; only loosen them at this point.



Step 29

REMOVE the passenger side differential support bolt and associated hardware. Install the new differential drop bolt, hardened washer, spacer and nut supplied in the kit. Refer to Figure 2 shown below for the exact placement of these parts. Do not tighten the bolt and nut all the way at this point.

Note: You may need to loosen the driver side differential support bolt a little more to allow room for the passenger side spacer.



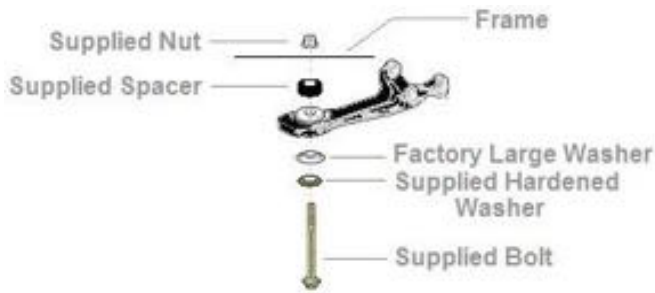


Figure 2

Placing of Differential Drop Hardware.

Step 30

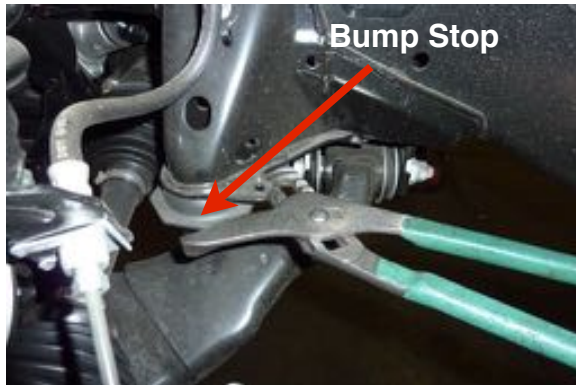
REMOVE the driver side differential support bolt and associated hardware. Install the new differential drop bolt, hardened washer, spacer and nut supplied in the kit. Refer to Figure 2 shown to the left for the exact placement of these parts. Torque the bolt to 101 ft-lbs.



Step 31

Torque the passenger side differential support bolt to 101 ft-lbs.

Bump Stop Spacers



Step 32

Remove the driver side bump stop with large adjustable groove pliers



Step 33

Install the supplied spacer and reinstall the bump stop.

Note: No specified torque is given. Simply tighten the bump as tight as it was originally.



Step 34

Repeat steps 32 and 33 on the passenger side bump stop.



Step 35

Replace the skid plate using the supplied (2) longer bolts and (2) spacers.

Note: This procedure is done so that the skid plate does not hit the differential.



Step 36

Install the (2) front tires, torque them to specification and lower the vehicle.

Note: Factory lug nut torque is 83 ft-lbs.

Rear Suspension Lift Installation



Step 37

Place a floor jack under the center of the rear axle assembly and raise the rear of the vehicle. Place safety stands under a solid, horizontal part of the frame just ahead of the rear wheels. Then, carefully lower the vehicle.

Note: **Figure 1** for floor jack and safety stand positioning.



Step 38

Remove both rear tires.



Step 39

Support the center of the rear axle assembly with a floor jack (or an under-hoist safety stand) and raise the rear axle assembly slightly.



Step 40

Disconnect the sway bar from both sides of the rear axle assembly by removing the (4) 17 mm bolts (2 on each side).



Step 41

Remove the lower shock absorber mounting bolts on both rear shock absorbers using a 19 mm socket. Then disconnect the shock absorbers from the rear axle assembly as shown.

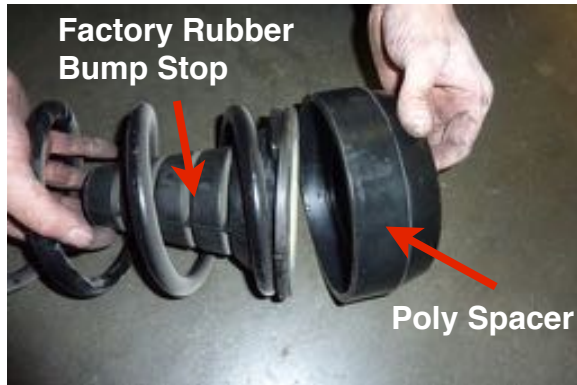


Step 42

Lower the axle by releasing the floor jack (or under-hoist jack stand) and carefully remove the coil springs one side at a time.

Note: Keep the factory rubber bump stops, located on top of the springs, together with the springs.





Step 43

Install the supplied poly spacers on the top of the factory rubber bump stops with the tapered side up.



Step 44

Install the coil springs back in their original position. Install the topside first.

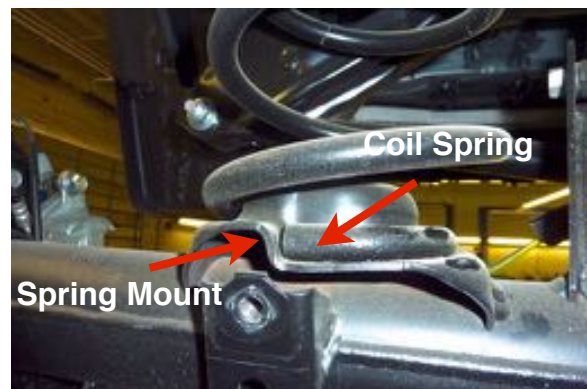


Lift Up Here

Step 45

Using a pry bar, pry the bottom of the spring back into its original location. Be careful not to damage ABS wires, or brake lines.

Note: We found it helpful to lift **UP** on the opposite end of the rear axle assembly with an under-hoist jack stand. A floor jack could be used for the same purpose.



Step 46

Be sure the bottom of the coil spring is seated in the spring mount as shown. If it is not seated properly, rotate the spring until it is.





Step 47

Using the floor jack (or under-hoist Jack stand), lift the rear axle assembly. Then reconnect both rear shock absorbers to the axle. Torque the bolts to 72 Ft. Lbs.



Step 48

With the rear axle assembly still lifted, reposition the sway bar and install the attaching bolts on both sides of the rear axle assembly. Torque the bolts to 22 ft-lbs.



Step 49

Using a pair of slip-joint pliers, bend the park brake cable brackets in-line with the cable.



Correct positioning of the park brake cable.

Step 50

Recheck all the work done on the rear suspension. Be sure all fasteners have been torqued to specification, and wiring, cables and hoses are properly routed and secured.



Step 51

Install the rear tires and torque to specification. Factory wheel lug nut torque is 83 ft. lbs.



Step 52

Using a floor jack, raise the rear of the vehicle by lifting on the center of the rear axle assembly. Remove the jack stands and lower the vehicle to the floor.



CAUTION: Vehicle alignment will NOT be accurate after this installation. Safe handling, braking, and tire tread life will be affected. We strongly recommend having your vehicle professionally aligned as soon as possible.

As always, If you experience any difficulty during the installation of this product please contact Low Range Off-Road Technical Support at 801-805-6644 M-F 8am-5pm MST. Thank you for purchasing from Low Range Off-Road.



These instructions are designed as a general installation guide. Installation of many Low Range Off-Road products require specialized skills such as metal fabrication, welding and mechanical trouble shooting. If you have any questions or are unsure about how to proceed, please contact our shop at 801-805-6644 or seek help from a competent fabricator. Using fabrication tools such as welders, torches and grinders can cause serious bodily harm and death. Please operate equipment carefully and observe proper safety procedures.

Rock crawling and off-road driving are inherently dangerous activities. Some modifications will adversely affect the on-road handling characteristics of your vehicle. All products sold by Low Range Off-Road are sold for off road use only. Any other use or application is the responsibility of the purchaser and/or user. Some modifications and installation of certain aftermarket parts may under certain circumstances void your original dealer warranty. Modification of your vehicle may create dangerous conditions, which could cause roll-overs resulting in serious bodily injury or death. Buyers and users of these products hereby expressly assume all risks associated with any such modifications and use.

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