



Installation manual 2" front leveling kit 2007 - 2012 Toyota FJ Cruiser Part # 52002

sj11142011rev.02

Part #: 52002
2007 - 2012 Toyota FJ
2" front leveling kit

Parts list:

<u>Part #</u>	<u>Description</u>	<u>Qty.</u>
52907-02	Pre-load spacer	2
52002INST	Instruction manual	2
MIRRORHANGER	Rear view mirror hanger	1
WARNINGDECAL	Warning decal	1

Congratulations on your selection to purchase a Tuff Country EZ-Ride Suspension System. We at Tuff Country EZ-Ride Suspension are proud to offer a high quality product at the industries most competitive pricing. Thank you for your confidence in us and our product.

For a list of all parts, please refer to the Parts Description Page, at the end of the Installation Manual.

Make sure to use loctite on all new and stock hardware associated with the installation of this suspension system.

The Tuff Country EZ-Ride Suspension product safety label that is included in your kit box must be installed inside the cab in plain view of all occupants.

After the original installation, Tuff Country EZ-Ride Suspension also recommends having the alignment checked every 6 months to ensure proper tracking, proper wear on tires and front end components. Tuff Country EZ-Ride Suspension takes no responsibility for abuse, improper installation or improper suspension maintenance.

Important customer information

Tuff Country EZ-Ride Suspension highly recommends that a qualified or a certified mechanic performs this installation.

If you desire to return your vehicle to stock, it is the customers responsibility to save all stock hardware.

It is the responsibility of the customer or the mechanic to wear safety glasses at all times when performing this installation.

It is the customers/installers responsibility to read and understand all steps before installation begins. OEM manual should be used as a reference guide.

This vehicles reaction and handling characteristics may differ from standard cars and/or trucks. Modifications to improve and/or enhance off road performance may raise the intended center of gravity. Extreme caution must be utilized when encountering driving conditions which may cause vehicle imbalance or loss of control. DRIVE SAFELY! Avoid abrupt maneuvers: such as sudden sharp turns which could cause a roll over, resulting in serious injury or death.

It is the customers responsibility to make sure that a re-torque is performed on all hardware associated with this suspension system after the first 100 miles of installation. It is also the customers responsibility to do a complete re-torque after every 3000 miles or after every off road use.

Torque settings:

5/16"	15—18 ft lbs.
3/8"	28—32 ft lbs.
7/16"	30—35 ft lbs.
1/2"	65—85 ft lbs.
9/16"	85—120 ft lbs.
5/8"	95—130 ft lbs.
3/4"	100—140 ft lbs.

Limited lifetime warranty

Notice to all Tuff Country EZ-Ride Suspension customers: It is your responsibility to keep your original sales receipt! If failure should occur on any Tuff Country EZ-Ride Suspension component, your original sales receipt must accompany the warranted unit to receive warranty. Warranty will be void if the customer can not provide the original sales receipt. Do not install a body lift in conjunction with a suspension system. If a body lift is used in conjunction with any Tuff Country EZ-Ride Suspension product, your Tuff Country EZ-Ride Suspension WARRANTY WILL BE VOID. Tuff Country Inc. ("Tuff Country") suspension products are warranted to be free from defects in material and workmanship for life if purchased, installed and maintained on a non-commercial vehicle; otherwise, for a period of twelve (12) months, from the date of purchase and installation on a commercial vehicle, or twelve thousand (12,000) miles (which ever occurs first). Tuff Country does not warrant or make any representations concerning Tuff Country Products when not installed and used strictly in accordance with the manufacturer's instructions for such installation and operation and accordance with good installation and maintenance practices of the automotive industry. This warranty does not apply to the cosmetic finish of Tuff Country products nor to Tuff Country products which have been altered, improperly installed, maintained, used or repaired, or damaged by accident, negligence, misuse or racing. ("Racing is used in its broadest sense, and, for example, without regards to formalities in relation to prizes, competition, etc.) This warranty is void if the product is removed from the original vehicle and re-installed on that or any other vehicle. This warranty is exclusive and is in lieu of any implied warranty of merchantability, fitness for a particular purpose or other warranty of quality, whether express or implied, except the warranty of title. All implied warranties are limited to the duration of this warranty. The remedies set forth in this warranty are exclusive. This warranty excludes all labor charges or other incidental of consequential damages. Any part or product returned for warranty claim must be returned through the dealer of the distributor from whom it was purchased. Tuff Country reserves the right to examine all parts returned to it for warranty claim to determine whether or not any such part has failed because of defect in material or workmanship. The obligation of Tuff Country under this warranty shall be limited to repairing, replacing or crediting, at its option, any part or product found to be so defective. Regardless of whether any part is repaired, replaced or credited under this warranty, shipping and/or transportation charges on the return of such product must be prepaid by the customer under this warranty.

Important information that needs to be read before installation begins:

Tuff Country recommends a 285/70/70 tire package. If a larger size tire is installed on your vehicle in conjunction with part # 52002; Tuff Country assumes no liability and the warranty will be VOID.

Before installation begins, Tuff Country EZ-Ride Suspension highly recommends that the installer performs a test drive on the vehicle. During the test drive, check to see if there are any uncommon sounds or vibrations. If uncommon sounds or vibrations occur on the test drive, uncommon sounds or vibrations will be enhanced once the suspension system has been installed. Tuff Country EZ-Ride Suspension highly recommends notifying the customer prior to installation to inform the customer of these issues if they exist.

Before installation begins, it is the customers/installers responsibility to make sure that all parts are on hand. If any parts are missing, please feel free to call one of our customer service representatives @ (801) 280-2777.

Tuff Country EZ-Ride Suspension recommends a wall mounted strut compressor be used when performing the steps that talk about installing the strut spacer into the strut. If you do not have a wall mounted strut compressor, please have these steps performed by your local Toyota Dealership.

Please follow instructions carefully:

Before installation begins, measure from the center of the hub, to the bottom of the fender well, and record measurements below.

Pre-Installation measurements:

Driver side front: _____

Passenger side front: _____

At the end of the installation, take the same measurements and compare to the pre-installation measurements.

Post-Installation measurements:

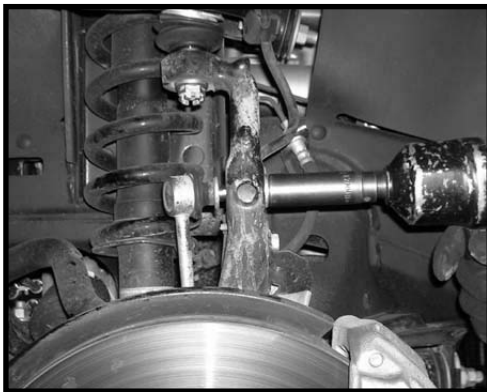
Driver side front: _____

Passenger side front: _____

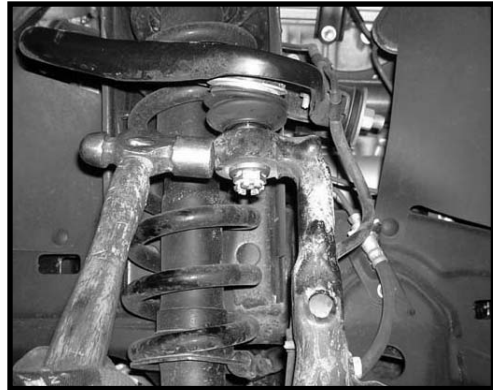
Please follow instructions carefully:

1. To begin installation, block the rear tires of the vehicle so that the vehicle is stable and can't roll backwards. Safely lift the front of the vehicle and support the frame with a pair of jack stands. Place a jack stand on both the driver and passenger side. Next, remove the wheels and tires from both sides.

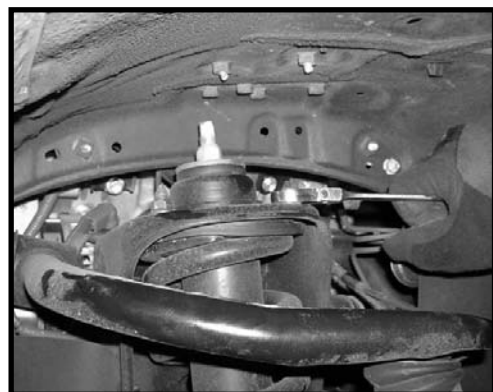
2. Working on the driver side, remove the sway bar end link from the knuckle. Save the hardware for later re-installation. Repeat procedure on the passenger side.



3. Working on the driver side, remove the cotter pin that connects the knuckle to the upper control arm. Save the cotter pin for later re-installation. Loosen but do not remove the castle nut that secures the knuckle to the upper control arm. Carefully break the taper in the upper control arm and the knuckle. **Special note: Using a hammer will help make removal easier. Take special care not to damage the upper ball joint dust boot during removal.** Once the taper has been broke, remove the castle nut and set aside for later re-installation. Repeat procedure on the passenger side.



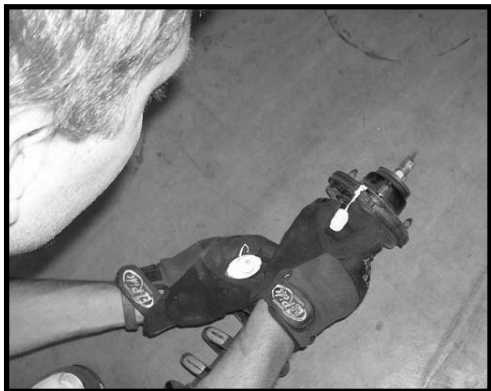
4. Working on the driver side, place an reference mark on the driver side strut. This is done so that the driver side strut will be put back into the driver side of the vehicle. Working on the driver side, remove the (3) upper nuts that connect the strut into the OE location. Save the nuts for later re-installation. Repeat procedure on the passenger side. **Special note: At this time, do not remove the center nut holding the strut together.**



5. Working on the driver side, remove the lower bolt that connects the strut to the lower mounting location and save the hardware for later re-installation. **Special note: During removal of the bolt, take special care not to damage the CV boot. Also, make a mental note on which way the bolt is removed, it needs to be re-installed the same way that it was removed.** Remove the strut assembly from the vehicle and set aside for further instructions. Repeat procedure on the passenger side.



6. Locate the driver side strut assembly. Working on the driver side strut, scribe a line down the entire strut from the top of the strut to the bottom. **Special note: If this step is not performed properly re-installing the strut back into the vehicle will be difficult.**



Tuff Country EZ-Ride Suspension recommends a wall mounted strut compressor be used when performing the steps that talk about installing the pre load spacers into the struts. If you do not have a wall mounted strut compressor, please have these steps performed by your local Toyota Dealership.

7. Using a wall mounted strut compressor, carefully compress the driver side strut until the upper bearing plate can be removed. Remove the nut and hardware from the top of the strut assembly and save the hardware for later re-installation.



8. Working on the driver side strut, remove the upper strut bearing plate from the strut assembly. Remove the rubber isolator from the upper strut bearing plate and set the upper strut bearing plate and isolator aside.



9. Locate (1) new pre load strut spacer and the isolator. Install the isolator onto the new pre load spacer.



10. Locate the upper bearing plate. Install the new pre load strut spacer and isolator into the strut and secure the upper bearing plate to strut assembly using the upper strut hardware. Make sure to use loctite and torque to **65 ft lbs.** **Special note: Make sure that the lines that were scribed down the strut line up now that the pre load spacer has been installed.**



11. Locate the (3) upper strut nuts. Working on the driver side, install the newly modified strut into the upper location and secure using the hardware. Make sure to use loctite and torque to **42 ft lbs.**

12. Locate the lower strut bolt and hardware. Secure the strut assembly into the lower location using the hardware. Make sure to use loctite and torque to **75 ft lbs.** **Special note: When installing the lower bolt, make sure that the bolt is installed the way it was removed. Facing towards the front of the vehicle. Also, take special care not to damage the CV boot when re-installing the hardware.**

Repeat steps 6 - 12 on the passenger side strut assembly.

13. Locate the castle nut and cotter pin. Working on the driver side, secure the knuckle to the upper control arm using the hardware. Torque and install the cotter pin. **Special note: If the cotter pin can not be installed because the hole in the castle nut does not line up with the hole in the ball joint, DO NOT loosen the castle nut so that the cotter pin can fit, tighten the castle nut some more so that the cotter pin can be installed.** Repeat procedure on the passenger side.

14. Locate the sway bar hardware. Working on the driver side, secure the sway bar to the knuckle using the hardware and torque to **65 ft lbs.** Repeat procedure on the passenger side.

15. Check and double check to make sure that all steps were performed properly.

16. Re-install the tires and wheels and torque to proper torque settings. Carefully lower the vehicle to the ground.

Congratulations installation complete!

Special note: After the completion of the installation, Tuff Country EZ-Ride Suspension recommends taking the vehicle to an alignment shop and having a proper front end alignment performed.

Tuff Country EZ-Ride Suspension recommends that a complete re-torque is done on all bolts associated with this suspension system. It is the customers responsibility to make sure that a re-torque is performed on all hardware associated with this suspension system after the first 100 miles of installation. It is also the customers responsibility to do a complete re-torque after every 3000 miles or after every off road use. Neglect of following these steps could cause brackets to come loose and cause serious damage to the suspension system and to the vehicle.

Tuff Country EZ-Ride Suspension packages (2) sets of instruction sheets with this box kit. (1) is for the installer and (1) is for the customer. The (1) for the customer has some post installation procedure literature and it is the installers responsibility to make sure that the customer receives a copy of the installation manual along with the literature.

If you have any questions or concerns, please feel free to contact Tuff Country or your local Tuff Country dealer.



Part # 52907-02 / Qty (2)
Front pre-load spacer