



Installation manual

3" suspension system

**2005 — 2016 Toyota Tacoma
4x4 and 2WD PreRunner With Upper
Control arms**

Part # 53905

SS05152014

Part # 53905

2005 - 2016 Toyota Tacoma

4x4 and 2WD PreRunner

3" suspension system with upper control arms

Part #	Description	Qty.
52907-01	Upper strut spacer	2
52907-02	Strut pre-load spacer	2
53905-01	Driver side upper control arm	1
53905-02	Passenger side upper control arm	1
BU3000	Strut plate hardware bag	1
TCI-R15	Rear add-a-leaf	2
CB38	add-a-leaf hardware	1
5U-242S	916" x 2 916" x 8 5/8" square u-bolts	4
916NW	U-bolt hardware bag	1
14UN	1/4" uni torque nut	2
14WA	1/4" flat washer	2
S10140	fender washer	4
BU30000	Hardware bag	1
52907NB	Hardware bag	1
52907SL	Sleeve Bag	1
50930PL	Hardware bag	1
53905INST	Instruction sheet	1

Important customer information:

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

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

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.

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.

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.

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.

For a list of parts, please refer to the back of the installation manual for photos of parts that are included in this suspension system.

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

After the completion of the installation a front end alignment is required.

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 or 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:

Due to the different variation of the stock strut spring rate, height after installation of the spacer may vary. Any questions please feel free to contact Tuff Country or your local Tuff Country dealer.

Tuff Country recommends a 32"x11.50" tire package once part # 53905 has been installed. If larger than a 32"x11.50" tire is installed on your vehicle in conjunction with part # 53905; Tuff Country assumes no liability and the warranty will be VOID. Due to different types of tread patterns, some aggressive tires in this size recommendation may require slight trimming of inner fender plastic.

New longer rear shocks are highly recommended once part # 53905 has been installed on your vehicle and the rear shocks need to be ordered as a separate part #. If you have not already ordered your rear shocks, please feel free to contact Tuff Country or your local Tuff Country dealer and order your rear shocks. Tuff Country recommends installing a 26" fully extended shock in the rear.

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.

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

Hardware bag 50930PL includes:

<u>Description</u>	<u>Quantity</u>
PB69137 Poly upper control arm bushings	8
S10248 .750"x.555"x2.280 crush sleeve	4
SERT05 Grease Fitting	4

Hardware bag 52907NB includes:

<u>Description</u>	<u>Quantity</u>
14WA 1/4" USS flat washer	2
M840B 8mm x 40mm bolt	2
126B 1/2" x 6" bolt	2
12UN 1/2" unitorque nut	2
M850HEX 8mm x 50mm hex head bolt	1
916HN 9/16" ubolt high nut	8

Sleeve bag 52907SL includes:

<u>Description</u>	<u>Quantity</u>
S10025 1.250" X .563" X 1.000" Sleeve	2
S10051 1.750" X .510" X .950" Sleeve	2
S10105 1.000" X .325" X 1.300" Sleeve	1

Recommended tools selection:

- Wall mounted strut compressor
- Torque wrench
- Standard socket set
- Standard wrench set
- Metric socket set
- Metric wrench set
- Tape measure
- Hydraulic floor jacks

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: _____

Driver side rear: _____

Passenger side rear: _____

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: _____

Driver side rear: _____

Passenger side rear: _____

Front end installation:

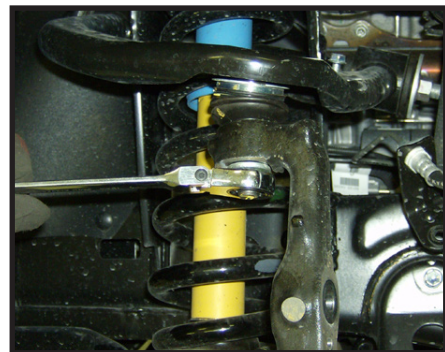
1. To begin installation, block the rear tires of the vehicle so that the vehicle is stable and can't roll backwards. Safely lift the front of the vehicle and support the frame with a pair of jack stands. Place a jack stand on both the driver and passenger side. Next, remove the wheels and tires from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

2. Remove the front skid plate and save the skid plate and hardware for later re-installation.

3. 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.



4. 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 stock taper in the upper control arm and the knuckle. Once the taper has been broke, remove the castle nut and set aside for later re-installation. Repeat procedure on the passenger side.





5. Working on the driver side, place a 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 stock location. The nuts may be discarded. Repeat procedure on the passenger side.



6. 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 stock location and set aside for further instructions. Repeat procedure on the passenger side.

7. Working on the driver side, Remove plastic clips holding rubber spray gaurds to the inner fender. Only remove enough to get to the upper control arm bolt. Repeat on Passenger side.



8. Using a pair of large channel locks or similar type tool, Bend the pinch welded lip of the inner fender just enough that the upper control arm bolt will be able to be completely removed. Remove bolt and save. Repeat on passenger side.



9. Remove upper control arms from vehicle



10. Locate the new upper control arms. Locate (8) poly bushings and (4) S10248 sleeves from hardware bag 50930PL, Install the new bushings and sleeves into the new upper control arms. **Special note: Make sure to use a fair amount of lithium or moly base grease before installing the new bushings and sleeves into the control arms. This will increase the life of the bushing as well as help prevent squeaking.**



11. Locate the new sert fittings from hardware bag 50930PL. Install the new sert fittings into the new upper control arms. **Special note: Make sure not to over tighten and also make sure that the sert fitting is facing towards the outside of the vehicle. This will make for easier access when using a grease gun.**



12. Locate (4) 9/16" x 2" fender washers out of hardware bag 50930NB. Working on the driver side, install the new upper control arm into the OE pocket using the OE hardware along with the new fender washers. **Torque bolts to 95 ftlbs. Special note: The fender washers will be installed on the inside of the arm as it attaches to both the front and rear mounts. Do not tighten at this point. Repeat procedure on the passenger side.**



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

13. Place the driver side strut into a wall mounted strut compressor. Scribe a line on the top plate, rubber isolator, and the top of the coil spring. Also, scribe a line on the bottom of the coil and the bottom coil seat. **Special Note: if these steps are not performed properly, reinstalling the strut back into the vehicle will be difficult.**



14. Carefully compress the strut until the upper top plate can be removed. Remove the nut and hardware and save for re-assembly.

15. Remove upper top plate and remove rubber isolator, save for re-assembly.

16. Locate (3) 10mm x 2 1/4" strut stud bolts from hardware

bag BU30000. Working on the top plate that was removed from the strut, knock out the 3 OE studs and discard. Now carefully install the new 10mm strut studs.



17. Locate (1) new upper strut spacer, the newly modified top plate, the rubber isolator, the OE strut and hardware. Place the strut spacer onto the strut plate making sure that the cut outs in the spacer fit over the head of the studs, then install the rubber isolator onto the new upper spacer. Place assembled top plate onto the coil spring and carefully compress back together and re-attach OE Nut and hardware. **Torque to 65 ft lbs. Also, make sure that the lines that were scribed on the top plate, rubber isolator, coil spring, and the bottom coil seat are all lined back up together.**



18. Locate (1) new strut pre-load spacer and (3) 10mm nylon lock nuts from hardware bag BU30000. Working on the driver side, install new pre-load spacer on top of upper strut plate, it will go over the 3 new studs. Now install entire strut assembly back into the vehicle OE location and secure using new 10mm nylon lock nuts. **Torque to 36 ft lbs. Special note: It makes things a bit easier to cut off the excess threads on the studs.**



19. Locate the lower strut bolt and hardware. Secure the Strut assembly into the lower control arm mount. **Torque to 75 ft lbs. Special note: when installing the lower bolt, make sure it is installed the same direction that it was removed. Such as the head of the bolt will be towards the rear of the vehicle.**

20. Repeat steps 13-19 on the passenger side.

21. Working on the driver side locate new upper control arms, also locate (2) 9/16" x 2" fender washers from hardware bag 50930NB and install them back into the vehicle using the OE upper bolt and hardware. **Special note: the new fender washers will be installed between the eyelet of the control arm and the mounting point on the vehicle. Torque control arm bolt to 100 ft lbs. Repeat on**

passenger side.



22. Working on the driver side, re-attach the new upper control arm to the steering knuckle using the new castle nut and cotter pin. torque to **90 ft lbs.** Repeat procedure on passenger side.



23. Working on the driver side, locate (1) 1/4" nylock nut and (1) 1/4" USS flat washer. Attach the OE ABS brake wire bracket to the new upper control arm. Repeat on passenger side.



24. Locate Sway bar hardware, re-attach sway bar endlink to the steering knuckle and torque to **65 ft lbs.** Repeat on passenger side.

25. Locate the front differential mounting points, carefully remove the (2) OE bolts that connect the front differential brackets to the front crossmember, save the oversized washer and discard the bolt and nut.

26. Locate (2) new S10247 Diff drop sleeves, (2) 1/2" x 6" bolts, and (2) 1/2" unitorque nuts from hardware bag 54910NB. Also locate the OE oversize washers removed earlier, Install the front differential drop spacers between the OE brackets and front crossmember. Secure using new 1/2" x 6" bolts and 1/2" nuts. Torque to **80 ft lbs.**



27. Locate (2) S10025 sleeves from sleeve bag 52907SL, and (2) 8mm x 40mm bolts, and (2) 8mm flat washers from hardware bag 52907NB. Also locate the skid plate and OE skid plate hardware, Re-install the skid plate using original hardware in the front and new bolts and spacer sleeves in the rear. Torque 8mm bolts to **12 ft lbs.**



28. Re-install the tires and wheels and torque the lug nuts to the proper torque specifications.

Front Installation complete!

Rear end installation:

29. To begin installation, block the front tires of the vehicle so that the vehicle is stable and cannot roll. Safely lift the rear of the vehicle and support the frame with jack stands. Make sure the parking brake is NOT set, then remove the tires and wheels.

30. Working on the driver side, remove the shock from its upper and lower mounts. Repeat on passenger side. **New longer shocks are not required but highly recommended once part number 52907 has been installed on your vehicle, and the rear shocks may need to be ordered as a separate part #. If you have not already ordered your shocks, please feel free to contact Tuff Country or your local Tuff Country dealer and order shocks. Tuff Country recommends installing a 26" fully extended shock in the rear.** Repeat on passenger side.

31. Working on the driver side, remove the brakeline bracket from the axle housing, the bolt may be discarded

32. Position a pair of hydraulic floor jacks under the rear differential. Place one jack on the driver side and one on the passenger side, raise up on both jacks at the same time until they make contact with the rear differential. Working on the driver side, remove the bolts and discard bolts and nuts. Save the OE bolt washers to re-install. Place the bolt plate and the bump stop aside for later re-installation. Repeat procedure on the passenger side.

33. Carefully lower down both hydraulic floor jacks at the same time until the rear spring assembly separates from the rear axle to allow enough room for the new rear add-a-leaf to be installed.

34. Working on the driver side, place a pair of "C" clamp vise grips on each side of the center bolt, carefully remove the center bolt and nut and discard. Carefully remove the "C" clamp vise grips that are holding the springs together. **Special note: Be careful when removing the "C" clamps, the springs are under tension and can be dangerous.** Repeat procedure on passenger side.

35. Locate (2) new rear add-a-leaves. Locate (2) 3/8" center bolts and (2) 3/8" fine nut from hardware bag CB38. Install the new rear add-a-leaf into the spring assembly, secure using the new 3/8" center bolt and nut. **Special note: if the new add-a-leaf that you are installing into the OE spring assembly has an offset center hole, place the longest side of the leaf towards the rear of the vehicle. Also the new add-a-leaf should be installed into your springs in progressive order, from longest to shortest. The new add-a-leaf should be installed between the OE overload**

spring and the rest of the spring pack. The overload spring is usually a thicker spring on the bottom of the OE spring pack. Tuff Country recommends spraying a form of lubricant on the threads of the new centerbolt before tightening, this will help against it overheating and stripping.



32. Locate (1) S10105 from sleeve bag 52907SL, and (1) 8mm x 50mm bolt, and (1) 8mm flat washer from hardware bag 52907NB. Install new spacer sleeve between the brake-line bracket and the axle mount.



33. Re-install rear shocks

34. Re-install the tires and wheels and torque the lug nuts to the proper torque specifications. Carefully remove vehicles from any jack stands.

Installation Complete!

Check and double check to make sure that all steps were performed properly. After the completion of this install, Tuff Country Recommends taking the vehicle in for a complete front end alignment.

Tuff Country EZ-Ride Suspension recommends that a complete re-torque is done on all bolts associated with this suspension system. It is the customer's responsibility to make sure that a re-torque is performed on all hardware associated with the system after the first 100 miles of installation. It is also the customer's responsibility to do a complete re-torque after every 3,000 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.



52907-02 / Qty. 2
Strut Pre-load spacer



52907-01 / Qty. 2
Upper Strut Spacer



53905-01 / Qty. 1
Driver side upper control arm



53905-02/ Qty. 1
Passenger side upper control arm