



Part # 50965 Uniball upper control arm kit

Part #	Description	Qty.
50965-01	Driver side upper control arm	1
50965-02	Passenger side upper control arm	1
50965-03	Driver side knuckle support bracket	1
50965-04	Pass. side knuckle support bracket	1
50965NB	Hardware Bag	1
50965NB1	Hardware Bag	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.

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

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.

Special note: 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.

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.

It is the customers/installers responsibility to read and understand all steps before installation begins. If you have any questions or concerns, please contact our technical department @ (801) 280-2777. Also, the OEM manual should be used as a reference guide.

This vehicles reaction and handling characteristics may

Installation Manual

Uniball Upper Control Arm Kit
 1996 - 2004 Toyota Tacoma 4x4
 1996 - 2002 Toyota 4Runner 4x4
 1999 - 2006 Toyota Tundra 4x4

Part # 50965

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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.

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:

This Suspension kit comes with (1) installation manual and some post installation procedure literature and it is the installers responsibility to make sure that the customer receives the post installation procedure literature. If a customer would like a copy of the installation manual, please have them visit our website at www.tuffcountry.com. Have them go to the customer care section to download these instructions. If you have any questions, please feel free to call us at (801) 280-2777.

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.

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

Recommended tools selection:

- Torque wrench
- Standard socket set
- Standard wrench set
- Metric socket set
- Metric wrench set
- Hydraulic floor jacks
- Air hammer

Hardware bag 50965NB includes:

<u>Part#</u>	<u>Description</u>	<u>Quantity</u>
S10335	Uniball adapter sleeve	2
S10246	Uniball mis-alignment sleeve	4
5u-5161142r	5/16" x 1 1/4" x 2 round u-bolt	4
9165B	9/16" x 5" bolt	2
916UN	9/16" unitorque nut	2
12WA	1/2" flat washer	2
14UN	1/4" unitorque nut	2
14WA	1/4" flat washer	2
516FLN	5/16" flange nut	8
381B	3/8" x 1" bolt	2

Hardware bag 50965NB1 includes:

<u>Part#</u>	<u>Description</u>	<u>Quantity</u>
TC-002	Polyurethane bushing	8
S10140	9/16" oversize fender washer	4
S10254	.750" x .563" x 1.950" Sleeve	4
SERT06	90° threaded grease fitting	4

Please follow instructions carefully:

Ride Height records

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 vehicle with a pair of jack stands. Place a jack stand on both the driver and the passenger side. Next, remove the front wheels and tires from both sides.

2. Remove the small bolt that holds the ABS brake wire harness to the upper control arms



3. Remove the cotter pin from the upper ball joint castle nut.



4. Remove the ball joint castle nut



5. Using a hammer, carefully strike the outer radius of the

upper control arm to break the taper fit of the upper ball joint loose. You can also use a air hammer with a pickle fork attachment.



6. Locate and remove the bracket holding the ABS wire to the very top of the steering knuckle



7. Remove the rubber grease boot from the upper ball joints,



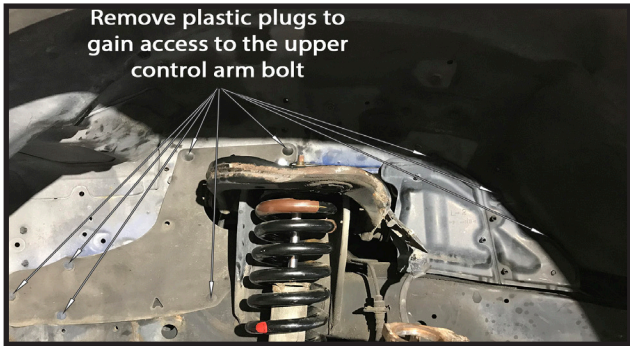
8. Remove the snap ring from the upper ball joints



9. Using an air hammer or ball joint service tool, carefully remove the upper balljoint from the steering knuckles.



10. Carefully remove and save the plastic plugs that are holding the inner fender splash guards in place



11. Remove the upper control arm bolt. **Special note: some vehicles may have a wire harness that is attached to the inner fender that could obstruct the bolt from being completely removed, if you run into this, you will need to unbolt the wire harness bracket temporarily to gain room to remove the bolt.**



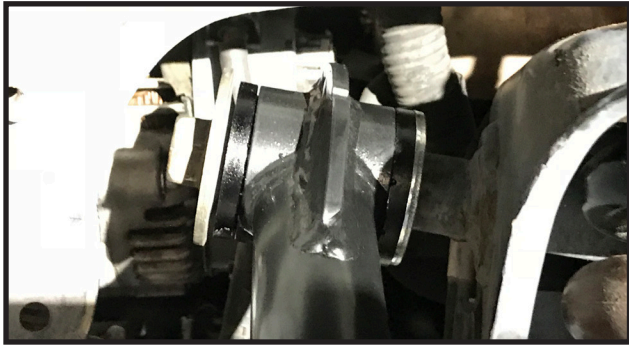
12. Once the bolt has been removed, go ahead and remove the upper control arms from the vehicle.



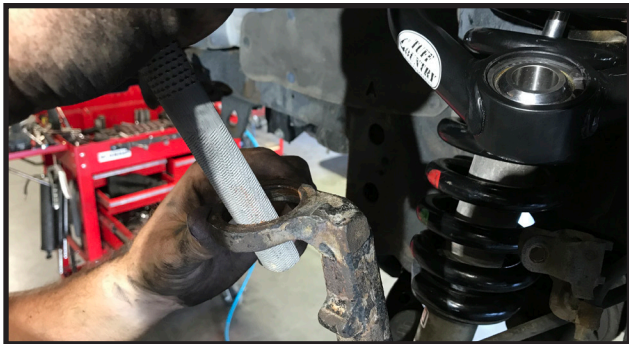
13. Locate the new upper control arms, driver side is part # 50965-01 and passenger side is 50965-02. Also locate (8) poly bushings, (4) S10254 crush sleeves, and (4) SERT06 grease fittings from hardware bag 50965NB1. Carefully install the grease fittings into each eyelet of the new control arms. Take extra care to not over tighten these as they are small brass fittings. Make sure they are facing towards the outside of the vehicle for proper greasing access.

14. Install the new poly bushings and crush sleeves into the eyelets of the new upper control arms

15. Locate (4) S10140 oversized fender washers from hardware bag 50965NB1, These will be installed in-between the upper control arm mount and the new upper control arm inner bushings. Go ahead and install the new upper control arms at this time using the OE bolt, washers, and nuts, but making sure to install the new oversized washers. **Torque bolt to 95 ft lbs.**



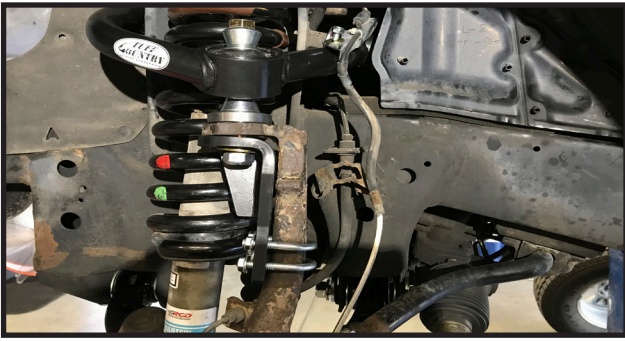
16. With the new upper control arms installed, Locate the S10335 uniball adapter sleeves from hardware bag 50965NB. Install these into the top of the steering knuckles where the OE ball joints were removed from. **Note: It may be necessary to use a file or similar tool to clean up the inside of the OE ball joint hole at the top of the knuckle.**



17. Using the photos below as a guide, locate the S10246 uniball mis-alignment sleeves, 9/16" x 5" bolts, 1/2" flat washers, 9/16" unitorque nuts, knuckle support brackets, and install the upper control arms to the steering knuckles. Leave the 9/16" bolt and hardware loose for now.



18. Now locate the 5/16" x 1 1/4" x 2" round u-bolts, and 5/16" flange nuts. Install the u-bolts around the neck of the steering knuckle and through the support bracket mounting holes. Do not tighten the 5/16" flange nuts yet.



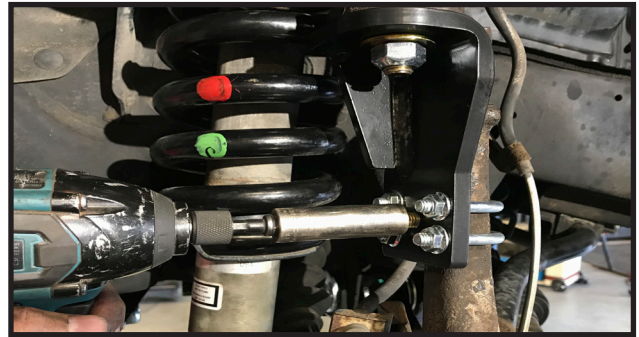
19. Move back to the 9/16" x 5" bolts and tighten to **125 ft lbs.**



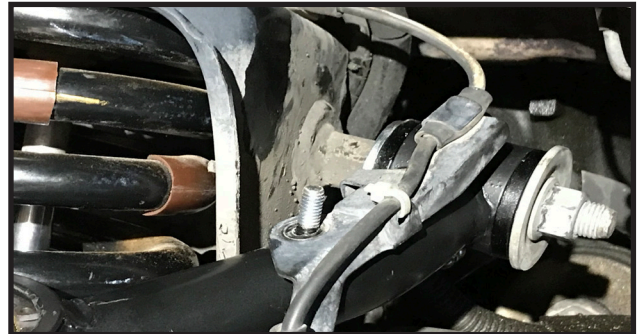
20. Now you can tighten the 5/16" flange nuts so that it closes the gap between the knuckle support bracket and the neck of the steering knuckle.



21. Locate and install the 3/8" x 1" bolts into the center threaded hole of the knuckle support brackets. This bolt is intended to thread in and put pressure against the steering knuckle to prevent the flange nuts from ever loosening. Torque the 3/8" bolt to **25 ft lbs.**



22. Re-install the ABS wire harness bracket over the welded on bolt on the new upper control arms. Secure using the new 1/4" nut, and 1/4" flat washers from hardware bag 50965NB.



23. Locate the OE ABS wire bracket that was removed from the steering knuckle in Step #6. Using a flat screwdriver, carefully pry open the bracket and remove it from the ABS wire. **Take extra care to not damage the wire.**



24. At this time, using a grease gun, apply grease to the 4 grease fittings located at each upper control arm eyelet. We recommend greasing until you start to see greas squeeze out of the bushings.

25. Re-install the inner fender splash guards using the OE plastic plugs.

26. Re-install the tires and wheels and carefully lower the vehicle back down 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.

