



Installation manual
4" suspension system
2007 - 2016
Toyota Tundra 4WD & 2WD
Part # 54070
 sj02132013rev.01

Part # 54070
2007 - 2016 Toyota Tundra 4WD & 2WD
4" Suspension System

<u>Part #</u>	<u>Description</u>	<u>Qty.</u>
54070-01	DS & PS Upper strut spacer	2
54070-02	Driver Side Upper control arm	1
54070-03	Passenger Side Upper control arm	1
54070-04	DS & PS Pre-load strut spacer	2
54070-05	DS & PS sway bar drop bracket	2
56070-18	Rear emergency brake cable bracket	2
BL201	Rear lifted block	2
5U-247S	9/16" x 2 9/16" x 9 5/8" square u-bolt	4
916NW	Hardware bag	1
54070NB	Hardware bag	1
54070NB1	Hardware bag	1
54070INST	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.

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.

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.

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 35" x 11.50" tire with a wheel that has a back spacing of 5.5" or less. The stock tires and wheels can be used in conjunction with this lift kit. If a wider tire is installed on the stock wheel, contact with the upper control arm will occur, and is not recommended.

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.

The OE shocks will NOT be long enough once this suspension system has been installed. If you have not already ordered your rear shocks, please contact Tuff Country or your local Tuff Country dealer and order your new rear shocks. Tuff Country recommends install a 26" fully extended nitrogen gas shock.

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.

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.

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

Hardware bag 54070NB includes:

<u>Description</u>	<u>Quantity</u>
S10051 (1.750" x .510" x .950" sleeve)	2
S10077 (oversize washer)	4
S10239 (.750" x .625" x 2.348" sleeve)	4
PB69137 (poly bushing)	8

Hardware bag 54070NB1 includes:

<u>Description</u>	<u>Quantity</u>
126B (1/2" 6" bolt)	2
716WA (7/16" USS flat washer)	2
12UN (1/2" unitorque nut)	2
38NLN (3/8" nylon lock nut)	8
516WA (5/16" USS flat washer)	8
5161B (5/16" x 1" bolt)	2
14WA (1/4" USS flat washer)	6
516UN (5/16" unitorque nut)	2
14UN (1/4" Unitorque nut)	2
SUW-916 (9/16" u-bolt harden washer)	2
SERT04 (sert fitting)	4
M1260B1.25 (12 mm x 60 mm bolt)	4
M12WA (12 mm flat washer)	4
M12LWA (12 mm lock washer)	4

Hardware bag 916NW includes:

<u>Description</u>	<u>Quantity</u>
916HN (9/16" u-bolt high nut)	8
SUW-916 (9/16" u-bolt washer)	8

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 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 skid plate from the OE location. Save the hardware and skid plate.



3. Working on the driver side, remove the hardware that attaches the front portion of the differential to the OE mounts. Save the over size washer on the head side of the bolt. Repeat procedure on the passenger side.



4. Locate (2) S10051 sleeves from hardware bag 54070NB.. Also, locate (2) 1/2" x 6" bolts, (2) 7/16" USS flat washers and (2) 1/2" unitorque nuts from hardware bag 54070NB1. Working on the driver side, install the new spacer between the differential and the OE mount and secure using the new 1/2" hardware and the 7/16" USS flat washer on the nut side of the bolt. Also, make sure to use the OE over size washer on the head side of the bolt. Repeat procedure on the passenger side. Move back to the new hardware hardware on the driver and passenger side and add some loctite and torque to **55 ft lbs.**



5. Re-install the skid plate using the OE hardware.

6. Working on the driver side, remove the sway bar from the OE mount on the frame rail. Save the hardware. Repeat procedure on the passenger side. Let the sway bar hang.



7. Place a pair of hydraulic floor jacks under the driver and passenger side lower control arm. Carefully raise up on them until they come into contact with the lower control arm.

8. Working on the driver side, remove the hardware attaching the ABS line to the upper control arm. The hardware may be discarded. Repeat procedure on the passenger side.



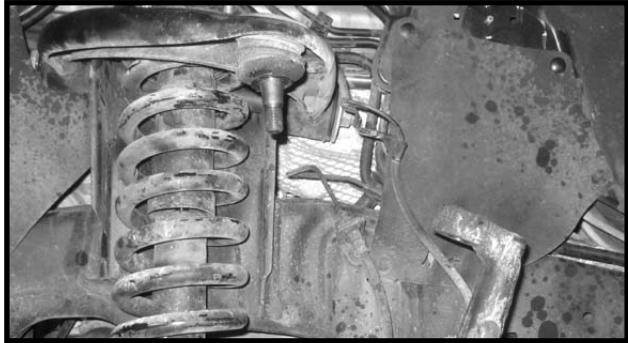
9. Working on the driver side, remove the (4) upper nuts holding the strut into the upper strut pocket. Save the hardware. Repeat procedure on the passenger side.



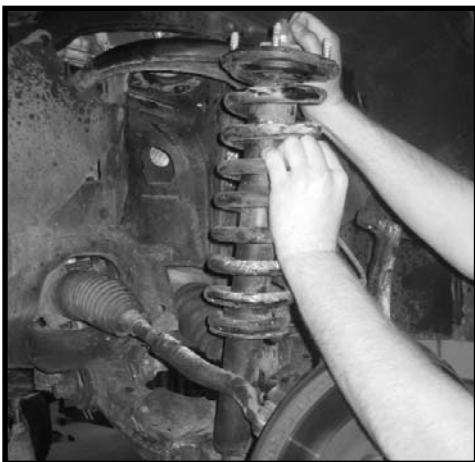
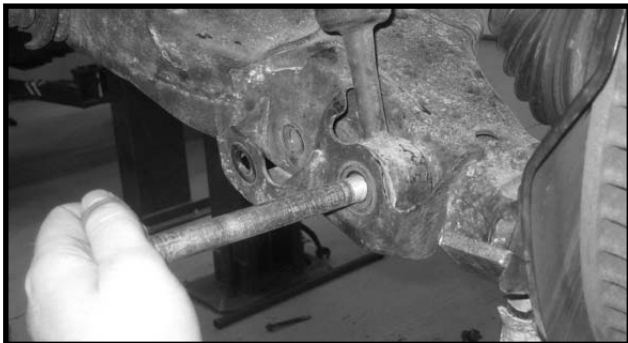
10. Working on the driver side, remove the cotter pin from the castle nut holding the upper control arm to the knuckle. The cotter pin may be discarded. Repeat procedure on the passenger side.



11. Working on the driver side, loosen but do not remove the castle nut holding the upper control arm to the knuckle. With a hammer, hit the knuckle to break the taper. Once the taper has been broken, remove the castle nut and discard. Separate the upper control arm from the knuckle. Repeat procedure on the passenger side.



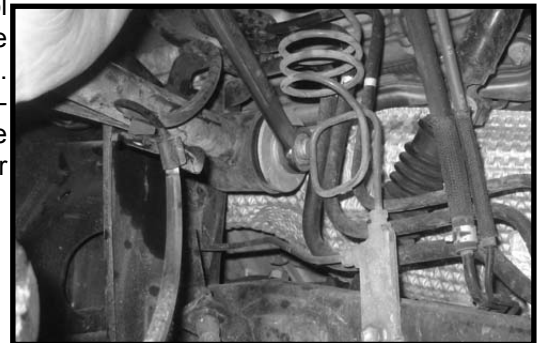
12. Working on the driver side, remove the lower mounting hardware that attaches the strut to the lower control arm. Save the hardware. Carefully lower down on the hydraulic floor jack allowing removal of the strut easier. Remove the strut and set aside. Repeat procedure on the passenger side.

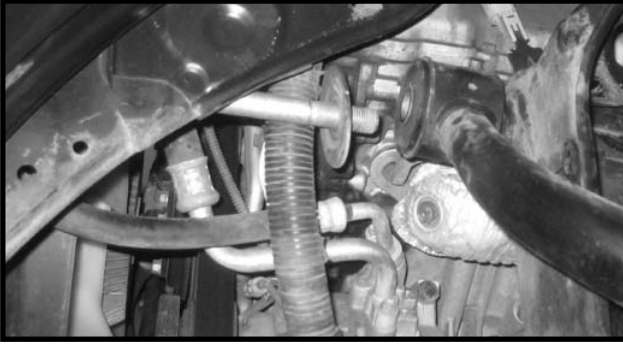


13. Working on the driver side, carefully remove the fender flaps from the body of the vehicle. Save the fender flap plugs. Repeat procedure on the passenger side.

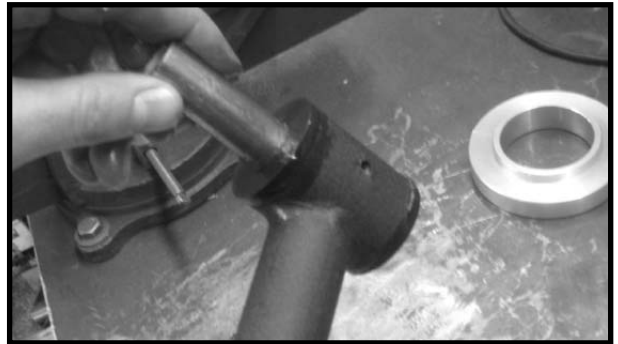


14. Working on the driver side, remove and save the hardware attaching the upper control arm to the OE location. The upper control arm may be discarded. Repeat procedure on the passenger side.





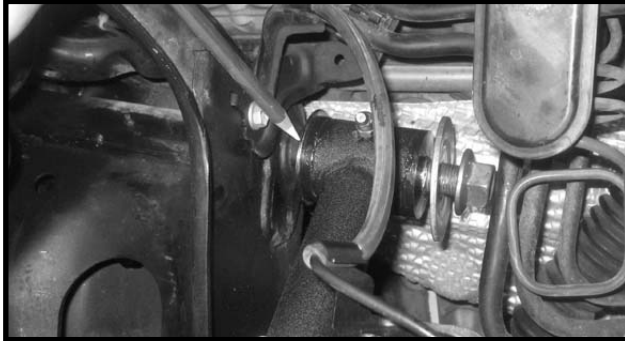
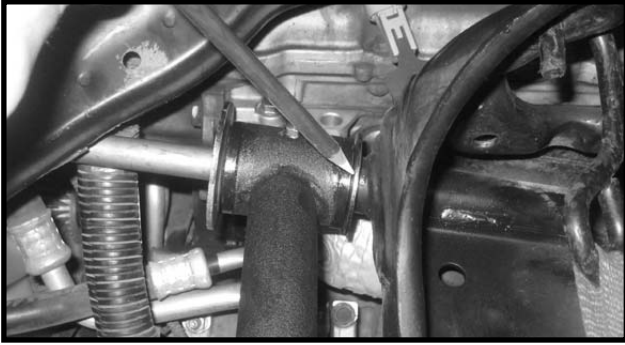
15. Locate the new upper control arms. Locate (8) poly bushings and (4) S10239 sleeves from hardware bag 54070NB. Install the new bushings and sleeves into the new upper control arms. **Special note: Make sure to use a fair amount of lithium or moly base grease before installing the new bushings and sleeves into the control arms. This will increase the life of the bushing as well as help prevent squeaking.**



16. Locate the new sert fittings from hardware bag 54070NB1. 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.**



17. Locate (4) over size washers out of hardware bag 54070NB. Working on the driver side, install the new upper control arm into the OE pocket using the OE hardware along with the new over size washers. **Special note: The over size 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.**

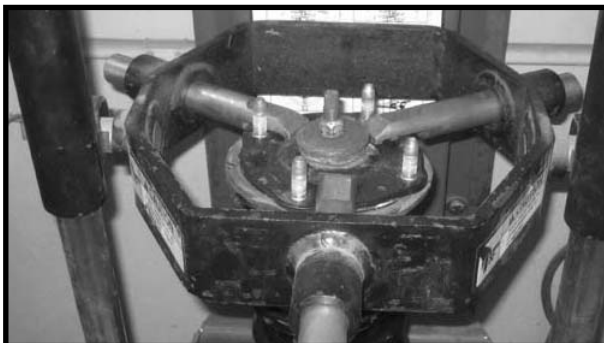


Tuff Country EZ-Ride Suspension recommends a wall mounted strut compressor be used when performing the steps that talk about installing the pre-load spacer into the strut. If you do not have a wall mounted strut compressor, please have these steps performed by your local Toyota Dealership

18. Place the driver side strut into a wall mounted strut compressor. Scribe a line on the bearing plate, rubber isolator, the top coil of the strut, the bottom coil of the strut and bottom strut plate. **Special note: If these steps are not performed properly re-installing the strut back into the vehicle will be difficult.**

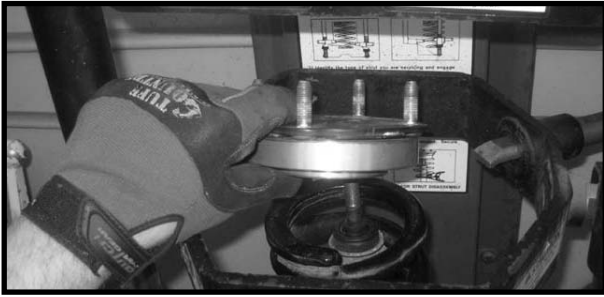
19. Place a clamp on the bottom coil portion of the coil spring and strut plate. This will help keep the coil spring in the proper location.

20. Carefully compress the driver side strut until the upper bearing plate can be removed. Remove the nut and hardware from the upper bearing plate and save the hardware for later re-installation. **Special note: Notice that on top of the bearing plate there is an arrow indicator marking. This marking is so that the coil over can be installed back into the vehicle the same way it was removed, hence the bearing plate needs to be installed the same way it was removed.**

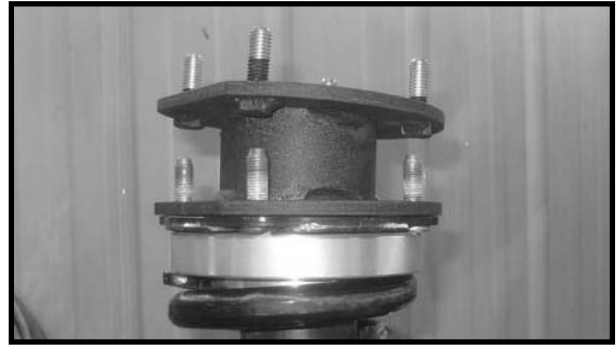


21. Locate the new pre-load spacer. Remove the OE isolator from the bearing plate and discard. Install the new pre-load spacer to the bearing plate install it to the OE coil over using the OE hardware. Make sure to use loctite and torque to 55 ft lbs. **Special note: Make sure that the bearing plate is re-installed back into the same location as it was removed earlier in the installation.**



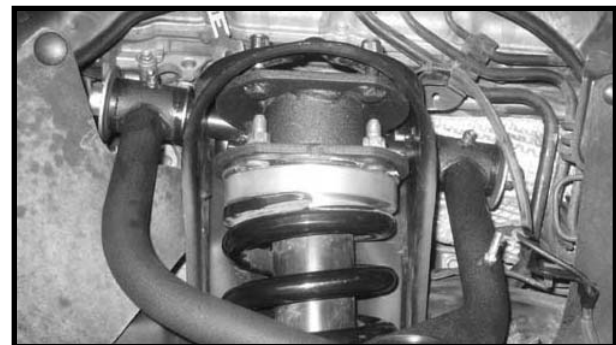


22. Locate the new upper strut spacer. Install the new upper strut spacer to the modified coil over and secure using the OE hardware. Make sure to use loctite and torque to **45 ft. lbs.** **Special note: There is a flat spot on the new spacer and this will be installed on the coil over facing towards the outside of the vehicle.** Place the driver side strut aside for later installation into the vehicle.

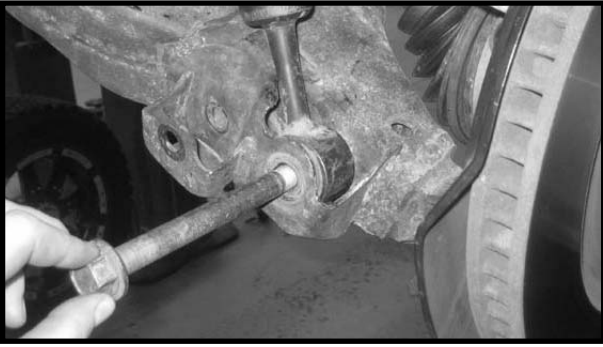


23. Repeat steps # 18 - 22 on the passenger side strut.

24. Locate (8) 3/8" nylon lock nuts and (8) 5/16" USS flat washers from hardware bag 54070NB1. Working on the driver side, install the new modified strut back into the upper OE location and secure using the new hardware. **Special note: There is a flat spot on the new spacer and this will be installed on the coil over facing towards the outside of the vehicle.** Do not tighten at this point. Repeat procedure on the passenger side.



25. Working on the driver side, secure the bottom portion of the strut to the lower control arm using the OE hardware. Make sure to use loctite and torque to **150 ft lbs.** Repeat procedure on the passenger side.

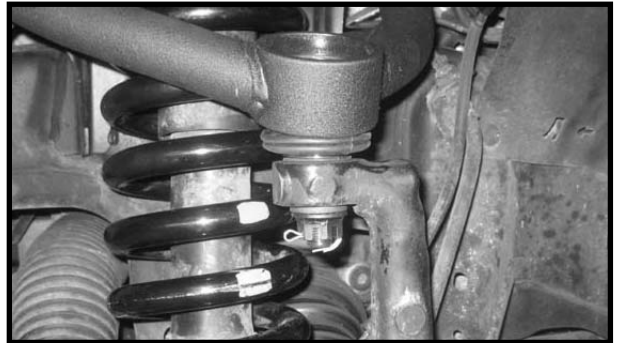
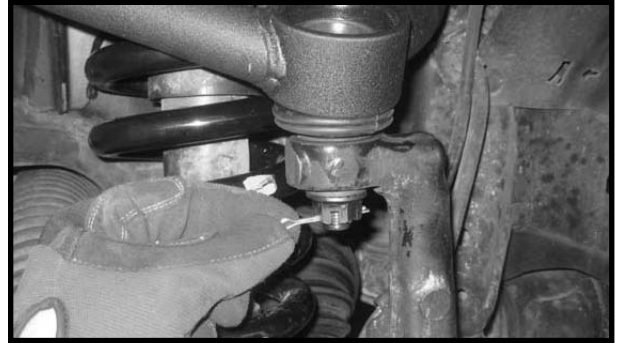
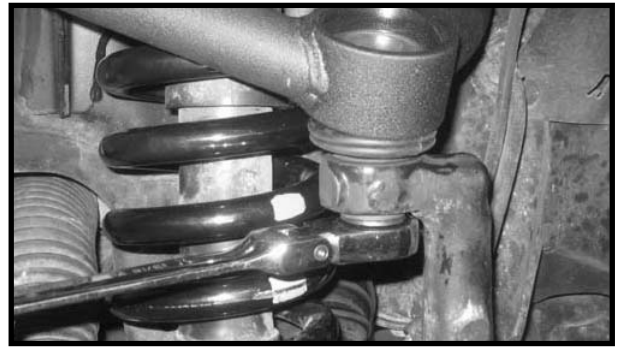
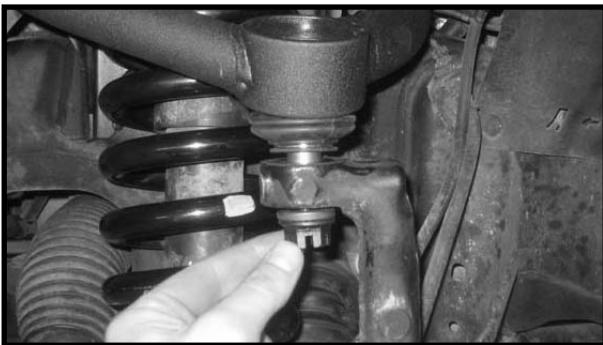


26. Working on the driver side, move back to the upper strut spacer and add some loctite on the bolts holding the modified strut into the upper location and torque to **35 ft lbs.** Repeat procedure on the passenger side.



27. Remove the new cotter pin, castle nut and washer from each new upper control arm and set aside.

28. Locate (2) 9/16" u-bolt hardware washers from hardware bag 54070NB1. Working on the driver side, install the newly installed upper control arm to the knuckle and secure using the new harden washer and castle nut. Torque the castle nut to **70 ft lbs.** Install the new cotter pin to the ball joint. **Special note: Do not forget to install the new harden washer before the castle nut is installed. If this washer is not installed, the new upper control arm ball joint will not seat properly and damage will occur. Also, if you are not able to install the cotter pin because the hole in the ball joint does not line up with the castle nut DO NOT loosen the castle nut but tighten it until the cotter pin can be installed.** Repeat procedure on the passenger side.



29. Locate (2) 1/4" unitorque nuts and (2) 1/4" USS flat washers from hardware bag 54070NB1. Working on the driver side, install the ABS line brake to the new upper control arm and secure using the new hardware. Make sure to use loctite and torque to **5 ft lbs.** Repeat procedure on the passenger side.





30. Locate the new sway bar relocation brackets. Also, locate (4) 12 mm x 60 mm bolts, (4) 12 mm flat washers and (4) 12 mm lock washers from hardware bag 54070NB1. Working on the driver side, install the new sway bar relocation bracket between the sway bar and the OE mount and secure using the new 12 mm hardware. **Do not tighten at this point.** Repeat procedure on the passenger side. Once both sides have been attached add loctite on each new 12 mm bolt and torque to **65 ft lbs.**



31. Remove both hydraulic floor jacks from under the lower control arms.

32. Working on the driver side, use a grease gun to grease the newly installed upper control arm bushings. Repeat procedure on the passenger side. **Special note: It is highly recommended to grease these bushings every time you have the oil changed in your vehicle. This will increase the life of the bushing along with helping eliminate squeaking.**

33. Check and double check and check again to make sure all steps have been performed properly with the front end.

34. Install the tires and wheels and carefully lower the vehicle to the ground.

35. To begin installation, carefully block the front tires and wheels so that the vehicle can not roll forward. Safely lift the rear 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 rear wheels and tires from both sides.

36. Place a hydraulic floor jack under the driver and passenger side of the rear axle.

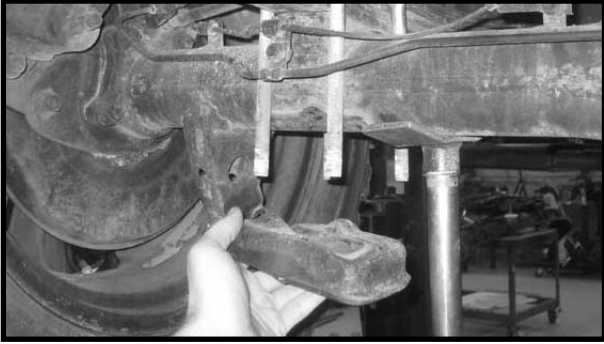
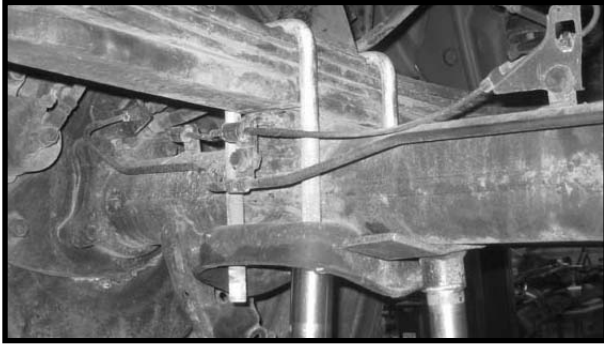
37. Working on the driver side, remove and save the shock

hardware. **Special note: The OE shocks will NOT be long enough once this suspension system has been installed. If you have not already ordered your rear shocks, please contact Tuff Country or your local Tuff Country dealer and order your new rear shocks. Tuff Country recommends install a 26" fully extended nitrogen gas shock.** Repeat procedure on the passenger side.



38. Working on the driver side, remove the OE emergency brake cable bracket from the axle. Save the hardware. Repeat procedure on the passenger side.

39. Working on the driver side, remove the u-bolts from the OE location. The u-bolts and hardware may be discarded. Place the lower u-bolt plate aside. Repeat procedure on the passenger side.

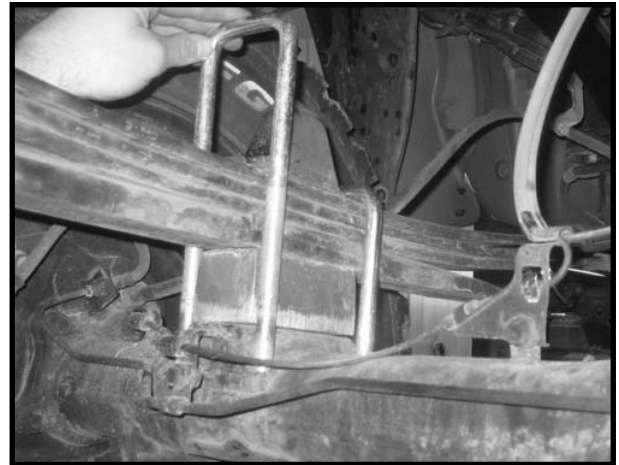


40. Carefully lower down on both hydraulic floor jacks at the same time allowing enough room for the rear blocks to be installed. **Special note: Take special care not to over extend any brake lines and/or hoses.**

41. Locate (2) new 2" lifted blocks. Working on the driver side, install the new 2" lifted block into the stock location. Repeat procedure on the passenger side. Carefully raise up on both hydraulic floor jacks at the same time until the spring assembly sits flush with the newly installed 3" lifted block.



42. Locate (4) 9/16" x 2 9/16" x 9 5/8" square u-bolts. Locate (8) 9/16" u-bolt high nuts and (8) u-bolt washers from hardware bag 916NW. Also, locate the lower u-bolt plates. Working on the driver side, install the new u-bolts into the stock location and secure using the new 9/16" high nuts and washers. **Special note: If need be, cut off the excess threads off each leg of the newly installed u-bolts.** Torque to **120 ft lbs.** Repeat procedure on passenger side.



43. Locate the new emergency brake cable extension brackets. Working on the driver side, install the new emergency brake cable bracket to the rear axle using the OE hardware. Do not tighten at this point. Repeat procedure on the passenger side.

44. Locate (2) 5/16" x 1" bolts, (4) 1/4" USS flat washers and (2) 5/16" unitorque nuts from hardware bag 54070NB1. Working on the driver side, secure the OE emergency brake cable to the newly installed emergency brake cable bracket using the new 5/16" hardware. Make sure to use loctite and torque to **12 ft lbs.** Repeat procedure on the passenger side. Move back to the OE hardware attaching the new bracket to the axle on the driver and passenger side and torque to **8 ft lbs.**



Special note: The OE shocks will NOT be long enough once this suspension system has been installed. If you have not already ordered your rear shocks, please contact Tuff Country or your local Tuff Country dealer and order your new rear shocks. Tuff Country recommends install a 26" fully extended nitrogen gas shock.

45. Working on the driver side, install the shock into the upper and lower location using the OE hardware. Make sure to use loctite and torque to lower hardware to **85 ft lbs.** and the upper hardware to **24 ft lbs.** Repeat procedure on the passenger side.

46. Carefully remove the (2) hydraulic floor jacks from under the rear differential.

47. Check and double check and check again to make sure all steps have been performed properly with the rear end.

48. Install the tires and wheels and 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.

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



54070-01 / Qty (2)
DS & PS Upper Strut Spacer



54070-02 / Qty (1)
Driver Side Upper Control Arm



54070-03 / Qty (1)
Passenger Side Upper Control Arm



54070-04 / Qty (2)
DS & PS Pre-load Spacer



54070-05 / Qty (2)
Front Sway Bar Bracket



56070-18 / Qty (2)
Emergency Brake Cable Bracket