



Installation Manual
2009 — 2016 Ram 1500 4x4
4" Lift w/upper control arms
Part # 34105

ss09172014

Part # 34105
2009-2016 Ram 1500 4x4
4" suspension system w/upper control arms

<i>Part #</i>	<i>Description</i>	<i>Qty.</i>
34105-01	Driver side upper control arm	1
34105-02	Passenger side upper control arm	1
34105-03	Rear coil spring spacer	2
34105-04	Strut Pre-load spacer	2
32902-01	Upper strut spacer	2
54060-08	Swaybar drop bracket	2
32102-01	Bump stop bracket	2
34105NB	Hardware bag	1
34105NB1	Hardware bag	1
34105INST	Instruction manual	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.

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.

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.

IMPORTANT!

This kit will NOT work on vehicles equipped with Active-Level™ Four-Corner Air Suspension. If your vehicle is equipped with this type of suspension, please contact the company you purchased the lift kit from and arrange for returning the parts.

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 35"x12.50" tire package once part # 34105 has been installed. If larger than a 35"x12.50" tire is installed on your vehicle in conjunction with part # 34105, 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 required once part # 34105 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 28"- 30" 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 Certified Technician.

Hardware bag 34105NB includes:

Description	Quantity
124B 1/2" x 4" bolt	2
716WA 7/16" uss flat washer	4
12UN 1/2" unitorque nut	2
716112B 7/16" x 1 1/2" bolt	6
38WA 3/8" uss flat washer	8
716UN 7/16" unitorque nut	6
38NLN 3/8" nylock nut	8
516WA 5/16" uss flat washer	8

Hardware bag 34105NB1 includes:

Description	Quantity
32102-03 bump stop bracket washer	2
PB6052 Poly bump stop	2
ziptie ziptie	2
TC-002 control arm bushings	8
S10254 sleeve .750" x .560" x 1.950"	4
SERT04 grease fitting	4

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. Working on the driver side, remove the sway bar end link from where it attaches to the lower control arm. Repeat on the passenger side.



3. Working on the driver side, detach the tie rod end from the steering knuckle by removing the nut, and breaking the taper using a hammer or suitable tie rod removal tool. Repeat on passenger side. **Special note: be extra careful to not damage the tie rod end rubber boot or threads while performing this step.**





4. Working on the driver side, remove the lower strut mounting bolt and nut, repeat on passenger side.



5. Now is a good time to have a jack set up under the lower control arms to support the suspension from dropping suddenly.

6. With the lower control arms now being supported, working on the driver side, detach the upper ball joint from the steering knuckle by removing the nut and using a hammer or suitable ball joint removal tool. Repeat on passenger side.



7. Working on the driver side, remove the ABS line clip that is connected to the upper control arm mount. Repeat on passenger side.



8. Working on the driver side, remove the 2 bolts that are holding the upper control arm on the vehicle, then remove the control arm from the vehicle. Repeat on passenger side.





9. Locate the new upper control arms, also locate the (4) grease fittings from hardware bag 34105NB1. Install the grease fittings into each eyelet of the control arms so that they are facing towards the outside of the vehicle. **Special note: Be extra careful not to over tighten these small brass grease fittings.**



10. Locate (8) TC-002 control arm bushings, and (4) S10254 crush sleeves from hardware bag 34105NB1. Install the bushings and sleeves into each control arm. **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. Working on the driver side, Install the new upper control arm into the vehicle using the OE hardware. Torque to 75 ft lbs. Repeat on passenger side.

12. Working on the driver side, re-attach the upper ball joint to the steering knuckle, using the new washer, castle nut, and cotter pin. Repeat on passenger side. Torque nut to 70 ft lbs.



13. Locate (2) 32102-01 bump stop brackets, and (2) 32102-03 bump stop bracket washers from hardware bag 341085NB1. Also locate (2) PB6052 poly bump stops, (2) 5/16" flat washers, and (2) 3/8" nylock nuts from hardware bag 34105NB.

14. Install the poly bump stops into the bump stop brackets using the 3/8" nylock nut and 5/16" flat washer. Tighten nut enough that the poly bump stop just starts to bulge.

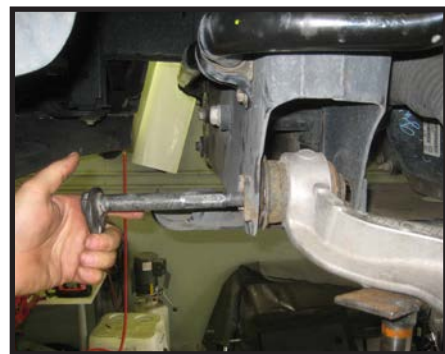


15. Locate (2) 1/2" x 4" bolts, (4) 7/16" flat washers, and (2) 1/2" unitorque nuts from hardware bag 34105NB.

16. Working on the driver side, install the 32102-01 bracket onto the frame rail underneath the upper control arm's rear mounting position. **There will be an oblong shaped hole in the frame that goes all the way through.** Install the 1/2" x 4" bolt through the bracket, through the oblong shaped hole in the frame, and place the 32102-03 bump stop bracket washer on the back side. Secure using the 7/16" flat washer and 1/2" unitorque nut. Torque nut to 45 ft lbs and repeat on the passenger side.



17. Working on the driver side Lower control arm, remove the 2 bolts connecting it to the frame of the vehicle, carefully pry the control arm out of its pockets and let it hang in the air. Repeat on passenger side.





18. Working on the driver side, remove the (3) nuts holding the strut to its upper mounting location and remove the strut from the vehicle. Repeat on 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 Certified Technician.

19. Place the strut into the wall mounted strut compressor and apply slight pressure. It is a good idea to make a mark on the Top plate, rubber isolator, and coil spring so that they can be aligned when it is put back together.



20. Remove the hardware that is attaching the shock to the upper strut plate, then relieve all of the pressure off of the strut so that the top plate can be removed.

21. Remove and discard the OE plastic shock boot from the rubber isolator.



22. Locate the new 34105-04 front strut pre-load spacer and install it into the top strut plate



23. Install the OE rubber isolator onto the newly installed strut pre-load spacer and make sure to line your marks up.



24. Using the wall mounted strut compressor, re-install the strut top plate, preload spacer, and rubber isolator back onto the coil and shock. Secure using the OE hardware and torque to 40 ft lbs.

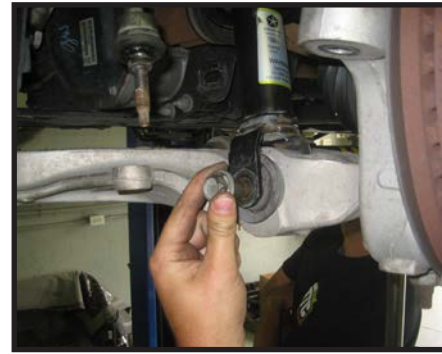


25. Locate the 32902-01 strut spacers and install them on the top of the upper strut plate using the OE hardware. Torque the nuts to 40 ft lbs. **Special note: these strut spacers are not symmetrical and will only install one way onto the strut plates.**



Repeat steps 19 - 25 on the passenger side.

26. Locate (6) 38NLN and (6) 516WA from hardware bag 34105NB. Working on the driver side, install the strut assembly back into the vehicle using the new 3/8" nuts and 5/16" washers on the top mounting point, and the OE hardware on the lower mounting position. Do not tighten hardware at this time. Repeat on Passenger side.



27. Move back the the lower control arm bolts that were removed in step 17 and re-install. Torque to 105 ft lbs.



28. Re-install the tie rod ends on each side of the vehicle back into the steering knuckles. Torque to 80 ft lbs.



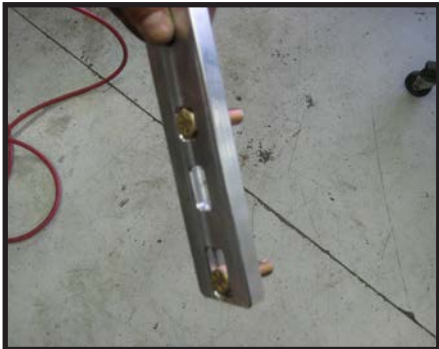
29. Move back to the lower strut mounting hardware and torque to 95 ftlbs.



30. Remove the front sway bar from its mounting locations on the frame. Save the OE hardware.



31. Locate (2) 54060-08 sway bar drop brackets, also locate (4) 7/16" x 1 1/2" bolts, (4) 3/8" flat washers, and (4) 7/16" unitorque nuts from hardware bag 34105NB. Install the 7/16" bolts into the sway bar drop brackets as shown in the picture below.



32. With the new 7/16" bolts installed, install the sway bar drop brackets into the OE sway bar locations on the frame using the OE hardware. Torque OE bolts to 40 ft lbs.



33. Re-install the front swaybar to the newly installed drop brackets and secure using the 7/16" unitorque nuts and 3/8" flat washers. Torque to 40 ft lbs.



34. Install Sway bar endlinks back into the lower control arm and secure using the OE nut. Torque to 45 ft lbs.



35. Move back to the 3/8" upper strut hardware from step #26 and torque to 28 ft lbs.



36. Using the provided zip ties, tie the ABS brake wire harness to the upper control arm so that it does not interfere with the bump stop.



37. Tuff Country highly recommends at this time to grease the (4) grease fittings on each eylet of the upper control arms, this will prevent squeaking and premature wear and tear of the bushings.



Front End Installation Complete!

Rear End Installation:

38. Working on the driver side, remove the plastic inner fender lining to access the shock mount. Repeat on passenger side.



39. Remove the upper shock bolt and nut, save this hardware for later re-installation. Repeat on passenger side
Special note: The nut on this bolt is difficult to get on with any tool, we found it worked best to use a crow foot type wrench to hold the nut.



40. Working on the driver side, remove the bolt that holds the brake line bracket to the frame. This is done to gain slack in the brakeline during the install process, save the OE bolt. Repeat on the passenger side.



41. Working on the driver side, remove the hardware that attaches the swaybar end link to the frame mount, save the hardware and repeat on passenger side.



42. Remove the hardware that is attaching the rear Track bar to the axle bracket, save hardware for later installation.



43. Carefully lower the rear axle down enough that the coil springs become loose and can be removed. **Be extra careful to not over extend any brake lines or ABS wire harnesses.**



44. Locate (2) 34105-03 rear coil spacers, also locate (2) 7/16" x 1 1/2" bolts, (2) 3/8" flat washers, and (2) 7/16" uni-torque nuts from hardware bag 34105NB. Working on the driver side, install the coil spacer into the upper mounting point of the frame and secure it using the new 7/16" hardware. Torque to 42 ft lbs. Repeat on passenger side.



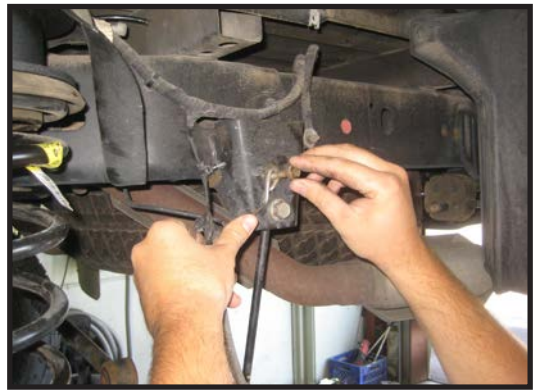
45. Re-install the rear coil springs making sure the OE rubber isolator is between the coil spring and the new coil spring spacer.



46. Re-install the rear track bar back into its OE mounting bracket using the OE hardware. Torque to 85 ft lbs



47. Re-install the brakeline bracket mounting hardware. torque to 8 ft lbs.



48. Re-install the sway bar endlink upper mounting hardware. Torque to 40 ft lbs.



49. At this time if you have not purchased longer rear shocks, you will need to contact your Tuff Country Dealer and order shocks. Tuff Country recommends a shock that is 28" - 30" fully extended for this system.

50. Install new longer rear shocks using the OE hardware and torque to 60 ft lbs.



51. Re-install the rear inner fender liners using the OE bolts.

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 customers responsibility to make sure that a re-torque is performed on all hardware associated with the system after the first 100 miles of installion. It is also the Customers 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.



34105-01 / Qty. 1
Driver side upper control arm



34105-02 / Qty. 1
Passenger side upper control arm



54060-08 / Qty. 2
Sway bar drop brackets



32102-01 / Qty. 2
Bump stop bracket



32902-01 / Qty. 2
Upper strut spacer



34105-04 / Qty. 2
Strut pre load spacer



34105-03 / Qty. 2
Rear coil spacer