



**Instructions - CS-DTSB3-03
2003-12 Torsion Sway Bar**

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Note

Please review the product instructions prior to attempting installation to ensure installer is equipped with all tools and capabilities necessary to complete the product installation. We recommend thoroughly reading the instructions at least twice prior to attempting installation.

Before beginning disassembly of the vehicle, check the "What's Included" section of the instructions to ensure you've received all parts necessary to complete installation. Further, verify that the parts received are PROPER TO YOUR application (year range, motor, etc.) to avoid potential down-time in correcting potential discrepancies. Any discrepancies will be handled by Carli Suspension and the correcting products will be shipped UPS Ground.

Lifetime Product Warranty

Carli Suspension provides a limited lifetime product warranty against defects in workmanship and materials from date of purchase to the original purchaser for all products produced by Carli Suspension. Parts not manufactured by, but made to Carli Suspension's specifications by third party manufacturers will carry a warranty through their respective manufacturer. (i.e. King Shocks, Bilstein Shocks, Fox Shocks). Deaver Leaf Spring's warranty will be processed by Carli Suspension.

Proof of purchase (from the original purchaser only) will be required to process any warranty claims. Carli Suspension products must be purchased for the listed Retail Price reflected by the price listed on the Carli Suspension Website at the time of purchase. Carli Suspension reserves the right to refuse warranty claims made by any customer refusing or unable to present proof of purchase, or presenting proof of purchase reflecting a price lower than Carli Suspension's Retail Price at the time the item was purchased.

Carli Suspension's Limited Lifetime Warranty excludes the following parts which are subject to wear: Track Bar Bushings, Track Bar Heim Joints, Limit Straps, Control Arm Bushings, Radius Arm Bushings, Shock Bushings, Sway Bar End Link Heim Joints, Shock Seals, Shock Bearings, and Corrosion on Shock Shafts or Bodies. These items will be warranted for a period of 60 days from the date of purchase only if determined to be installed properly signifying manufacturing defect. Carli Suspension cannot warrant a product's cosmetic finish due to the varying extreme elements that may be encountered.

Any alterations, modifications, or improper installation, of the product will void this warranty. Products should be inspected for defect upon receipt and approved before installation. Any defect in NEW product will be warranted if returned before installation in its original packaging. Carli Suspension's obligation under this warranty is limited to the repair or replacement of the defective product only. All costs of removal, installation or reinstallation, freight charges, incidental or consequential damage are expressly excluded from this warranty.

Carli Suspension is not responsible for damages and/or warranty of other vehicle parts related or non-related to the installed Carli Suspension product. This warranty shall not apply to any product that has been subjected to accident, negligence, alteration, abuse or misuse as determined by Carli Suspension. Carli Suspension reserves the right to refuse warranty claims if produced parts are combined and/or substituted with other aftermarket suspension products. Combination and/or substitution of other aftermarket suspension components may cause premature wear and/or product failure. Carli Suspension reserves the right to change/alter product without obligation to update any previously purchased products.

Parts Checklist

- (Qty. 1) Torsion Sway Bar
- (Qty. 2) Frame Brackets, Bushings Installed
- (Qty 2) Torsion Sway Bar Arms - Mirrored

Frame Bracket Bolts

- (Qty. 4) M10 x 40 ST100 Bolt

Arm Pinch Bolts

- (Qty. 2) 3/8" – 24 x 2.5" Bolt
- (Qty. 2) 3/8"- 24 C Lock Nut

Arm to Bar Hardware

- (Qty. 2) 5/16" – 24 x 1" Bolt
- (Qty. 2) 5/16" Locking Washer
- (Qty. 2) 5/16" Fender Washers

(Qty 2) Heavy Duty End Links:

Assembled Links:

- (Qty. 2) 5/8" x 18 x 3" All Thread Stud
- (Qty. 4) 5/8" x 5/8" Heim Rod End
- (Qty. 4) 5/8" x 18 Jam Nut

Link Hardware:

- (Qty. 4) 1/2"-13 x 2.5" Flange Head 12pt Cap Screws, Zinc
- (Qty. 4) Carli Stainless Low-Profile Misalignment Spacers
- (Qty. 4) 1/2" SAE Washers
- (Qty. 2) 1/2" Short Top-Lock Nut
- (Qty. 2) 1/2" Tall Top-Lock Nut
- (Qty. 2) Reducer Sleeves for Axle Mount

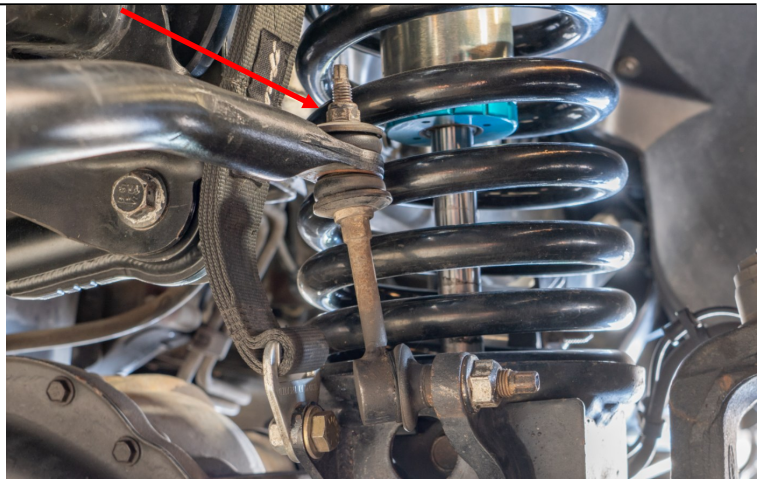
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Instructions

1. Remove the nuts securing the pillow bushings that retain the sway bar to the end link and push the sway bar up to disengage the bar from the factory end link.

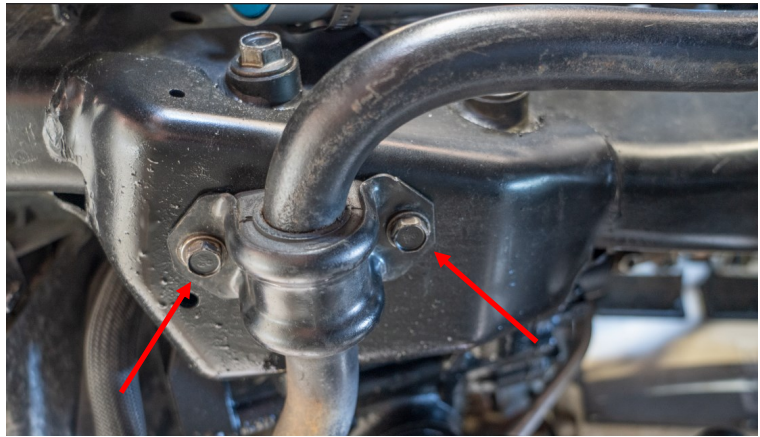
2003-09: This will be a 15mm

2010-12: This will be a 15mm or 18mm



2. Remove the 4 bolts (2 per side) retaining the factory sway bar brackets to the frame and remove the factory sway bar from the truck.

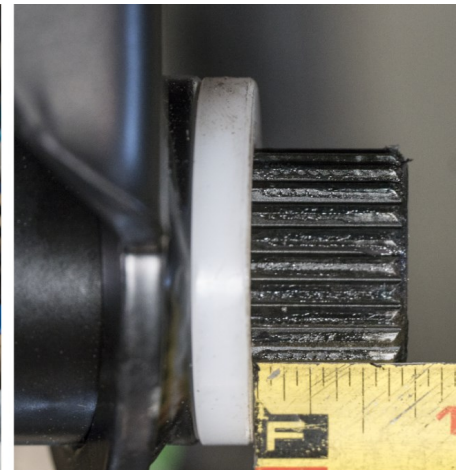
NOTE: These 4 bolts will be re-used to secure the Carli Sway Bar if you're not running an aftermarket steering box brace.



3. 21MM - Remove lower retaining nut attaching the factory sway bar end link to the axle and remove the factory end links.



4. Place a block of wood on the ground and place the end of the torsion bar against it.
5. Lube the end of the bar onto which the bracket will be pressed with a chassis grease to lubricate it.
6. Set the frame bracket onto the end of the bar - **the face of the bushing will be indexed toward the outside (splines) of the sway bar** - ensuring the bar is lined up with the bushing and use a large dead-blow hammer/mallet to start the bracket onto the bar.
7. Use a piece of tube or a large impact socket (we used 1/2 inch drive 1-1/4" Matco deep impact socket) that matches the inner and outer diameter of the bushing - ensure it's deep enough for the bar to slide into while striking. Use the dead-blow mallet to push the bracket down onto the bar until there's 11/16" of splines protruding from the outside of the bushing.



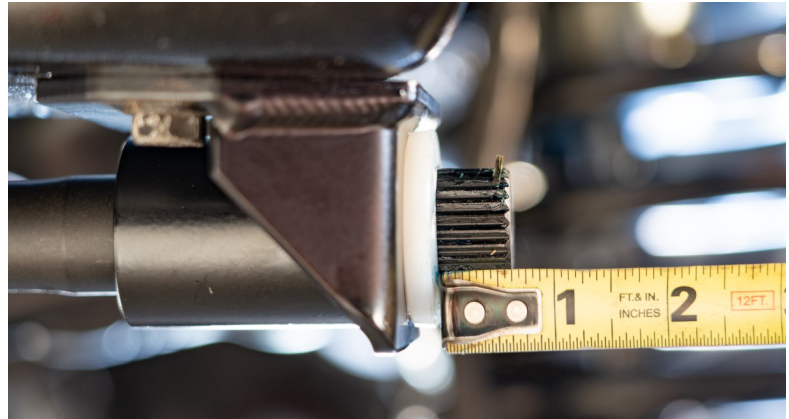
8. Do the same on the other side ensuring the brackets are rotated/indexed symmetrically to install to flat to the frame rail.



9. Use the factory hardware to assemble the bar/brackets to the frame. If it's off a bit, install one side and hit the bar with the dead-blow until the second side lines up and install the hardware.
10. The 3" Brackets are shown; they'll center the bar so the mounts are not side specific. If you're running the 6" mounts, the offset of the bar will be toward the front of the truck but they install the same.
11. Torque both bolt sets to 5lb.ft. using a 15mm socket.

NOTE: If you're running a steering box brace, use the provided M10 x 40 hardware instead of factory bolts.

12. Double check your measurements and ensure both sides have the same amount of bar protrusion. Use the dead-blow to even out the bar protrusion.



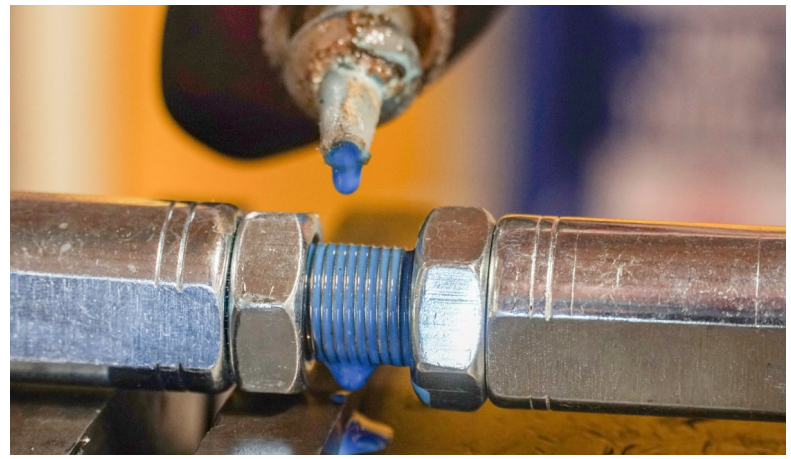
13. Loosely install the 3/8"-24 x 2-1/2" pinch bolts and lock-nuts into the Carli Sway Bar Arms from the top, down. The head of the pinch bolt will need to be on the top, threads down.
14. Slide the arms onto the splines of the sway bar ensuring they're indexed the same on both sides - they should be parallel (side to side)! The arms will go on relatively easy—we line them up with a common reference point (bottom of the frame or certain wind on the coil), place them against the bar and tap them on with a dead-blow. It should go on without a ton of effort. **MAKE SURE THE SPLINES ARE PERFECTLY LINED UP BEFORE USING A MALLET!**
15. With the arms installed, install the 5/16" – 24 x 1" bolt, lock-washer and fender washer.



15. Use a 9/16" socket to start the outside preload bolts until it tightens up while eyeing the slit in the end of the arm. Through this cut-away, you can see the splines of the bar behind the pinch bolt. Ensure the bar isn't being pulled to one side or the other as you torque the assembly; it should seat the bar flush to the preload washers and the arms should sit flush to the bushings in the drop brackets.
16. With the bar seated flush to the preload washers, torque the assembly 5/16" preload bolts to 15lb.ft.
17. 9/16" Socket - Torque the pinch bolt nuts to 49lb.ft.
18. With the arms and pinch bolts final torqued, use a 15mm to torque the (qty. 4) 10mm bolts securing the torsion bar brackets to the frame to 40lb.ft.



19. Setting up the sway bar end links - **work on one at a time** as one **may** need to be slightly longer than the other.
20. On the first link — Back off the heim joints leaving the jam nuts centered on the all-thread.
21. Back the jam nuts up to the rod ends and coat the center of the all-thread with blue loctite butting them up against each other.
22. Spin the jam nuts back to the center of the all thread into the loctite and spin the rod ends down to meet the jam nuts so it's completely collapsed.



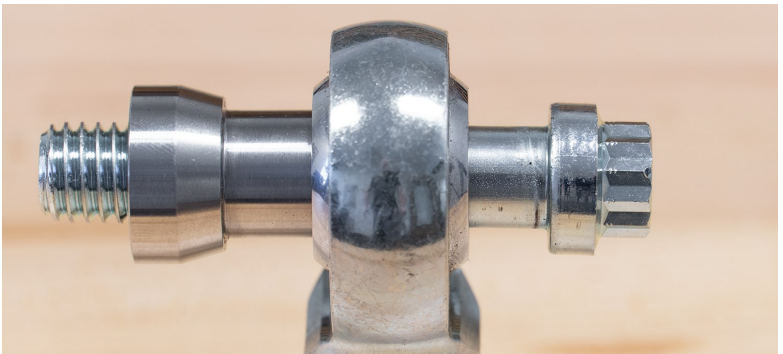
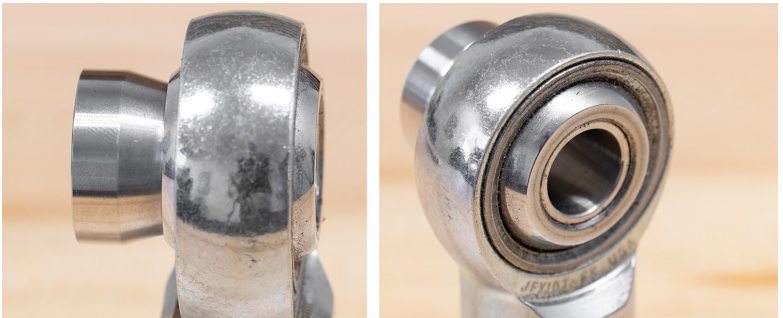
23. Insert the end link into the vice.
24. Using a 7/8" wrench, hold the body of the rod end and use a 15/16" wrench to tighten the jam-nut against the rod end. We recommend using a crow's foot and torque wrench and torquing to 50lb.ft.
25. Remove the link from the vice, flip and secure the other end, repeating the above process to tighten the other jam nut. **ENSURE THE ROD ENDS ARE PERFECTLY PARRALLEL** once torqued.
26. This will set the end link to the most collapsed dimensions (5.75" Center to Center) to work on 0" - 3" lifts.



5.75": center eye to center eye: 0-3" Lift

This measurement will be the same for most all lifts as you'll be utilizing a sway bar drop bracket to properly position the sway bar on taller lifts. This is also correct for our 6" variant using the longer frame brackets to drop the sway bar position.

27. Set the truck onto the ground - **THE GROUND MUST BE LEVEL.**
28. Index the sway bar so one side is 5.75" from the center of the sway bar arm mounting hole to the axle mount, again, on LEVEL ground.
29. Measure the other side.
30. Install the assembled link into whichever side has the shorter measurement. For example: If you set one side to 5.75" center to center and the opposite side measures 6", install the end link on the 5.75" side. However, if you set one side to 5.75" center to center and the opposite side measures 5.5", install the end link on the 5.5" side.
31. To Install: Place the provided misalignment spacer to the **INSIDE** of the link on the arm side and outside of the link on the axle side. The "sleeve" portion of the spacer will travel all the way across the internal diameter of the heim joint and will be visible on the opposite side.
32. Place the bolt into the sleeve from the opposite side until fully seated.



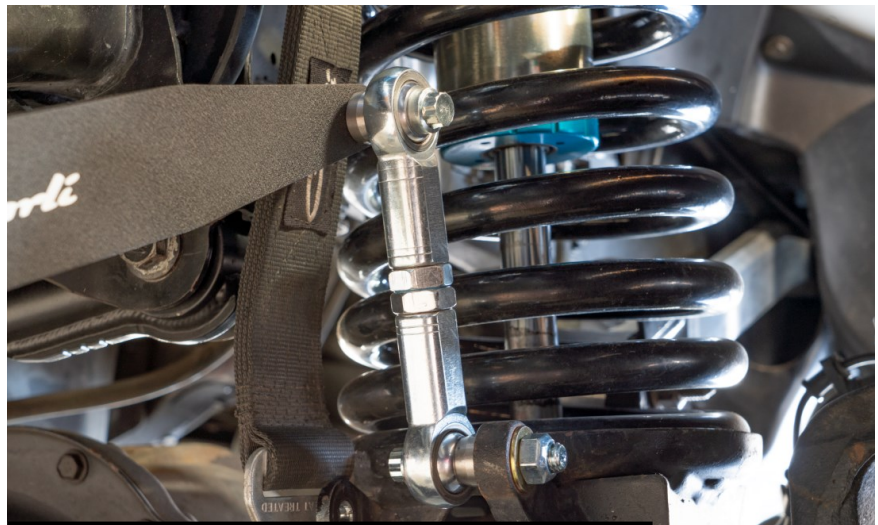
Note: the bolts should be facing opposite directions for the 03-12 configuration. Below is the Driver's link.



33. Install the link to the OUTSIDE of the sway bar arm and INSIDE of the axle mount. The washer will go on the nut -side of the arm and axle mount
34. **At the arm (Outside, in)** - Bolt, Link, Spacer, ARM, Washer, SHORT Crimp Nut.
35. **At the Axle (Inside Out, In)** - Bolt, Link, Spacer, Reducer Sleeve (In axle), Washer, TALL Crimp Nut.

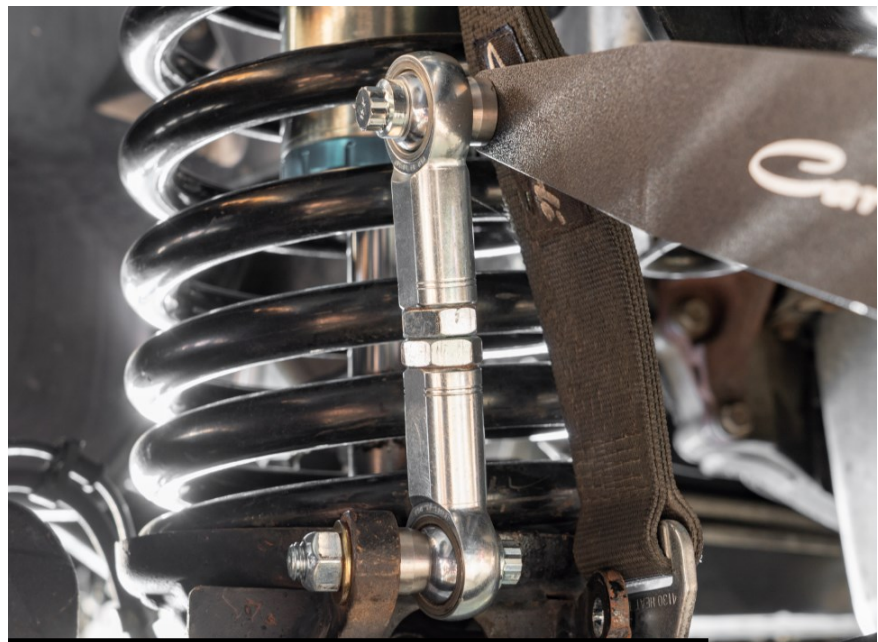
NOTE: Provided Reducer Sleeve

- **2003-05 Rams:** Have a tapered receiver in the axle mount. This will need to be drilled using a 1/2" Drill Bit to accept the provided hardware. Once drilled, this will NOT require the provided reducer sleeve as the axle mount will be a direct fit to the hardware.
- **2006-12 Rams:** The reducer is utilized to reduce the 14mm axle mount to the 1/2" hardware.



Driver's Side — View from Front

36. With the end link installed on the shorter side. Measure the long side center to center and adjust the other end link using the same procedure as the installed end link. Adjusting the link to fit each side, at ride height on level ground will ensure the sway bar is unloaded when the suspension is centered side to side. The truck in the instructions required no adjustment; both links were set to 5.75" center to center.
37. With both links installed, use a 3/4" box wrench and 12-point 9/16" Socket to torque the hardware to 60 lb.ft.



Passenger's Side — View from Front

NOTE: Crimp Nuts

Above, we reference a short crimp nut and tall crimp nut. The Short nut goes on the arm assembly, the tall nut goes to the axle assembly. MAKE SURE the crimps face outward. The crimps are indicated by the 3 indentations on the back-side of the nut. If you attempt to thread these on crimp-side first, you can damage and/or cross thread the hardware. This is obvious on the standard crimp but should be noted on the short nut.



After 1,000 Miles, Retorque ALL bolts to the specs listed in this instruction.