

CS-DBJP

Carli Suspension: 422 Jenks Circle, Corona, CA 92880 Tech Support: (714) 532-2798

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’s Ball Joint warranty is the industry’s only advanced replacement lifetime warranty. No more down time or waiting for a manufacturer to inspect your damaged product.

Carli Suspension provides a limited lifetime product warranty against defects in workmanship and materials from date of purchase to the original purchaser on part number CS-DBJP. Both Upper and Lower Carli Suspension ball joints must be installed to qualify for the lifetime warranty. Proper installation and maintenance of the Carli Ball Joints is required to maintain the product’s functionality and warranty. Not covered under Carli’s Ball Joint Warranty is a ball joint failure due to:

- **Improper Installation:** i.e. cracked lower ball joint cap. Causation: failure to utilize the installation tool provided with the lower ball joints.
- **Over-Greasing:** i.e. dislodged ball joint o-ring. Causation: forcing grease into the ball joint with pneumatic or hand grease guns
- **Failure to Service:** i.e. excessive tightness or play in a joint with evident maintenance neglect.
- **Disassembly of Lower Ball Joint**

The product is provided with a warranty card to the original purchaser which must be filled out and sent to Carli Suspension to register the product warranty.

Ball Joint Warranty Process:

Should the ball joint(s) develop excessive play, over 40 thousandths of an inch laterally in the upper or laterally/vertically in the lower, three items will be required. First, send a video of the ball joint(s) play to a representative of Carli Suspension. If the ball joint(s) play can be confirmed, the representative will provide the customer with a Return Goods Authorization (RGA). The RGA is to be filled out and returned to Carli Suspension with the original purchase receipt; upon which, the representative of Carli Suspension will authorize the advanced replacement of the customer’s ball joint(s). All recipients of ball joint warranties are required to provide a valid credit card number prior to a claimed defective ball joint(s) being advance replaced. This is to ensure Carli Suspension only replaces defective ball joint(s) that have been properly diagnosed.

Upon receipt of the replacement ball joint(s), the customer will remove the defective joint(s) and replace them with the new ball joint(s). The defective joint(s) are to be returned to Carli Suspension for inspection. If Carli Suspension does not receive the failed ball joint(s) within 45 days of receipt of the provided replacement ball joint(s), Carli Suspension reserves the right to charge the credit card for the current retail price, including shipping, of the replacement ball joint(s) sent. Any products received within the 45 day period following the receipt of replacement ball joint(s) found to be defective will be warranted and documented. Any ball joint(s) found to be functional upon review, or non-functional not by manufacturer defect, after advance replacement will be subject to a charge on the provided credit card for the full retail value of the replacement ball joint(s).



Fitment

2003-2012: DODGE 2500-3500 4X4
2006-2008: DODGE 1500 4x4 (Mega-cab ONLY)

What's included in the Kit

- (2) Assembled Lower Ball Joints
- (2) Assembled Upper Ball Joints
- (1) Lower Ball Joint Cap Load Displacement Tool.
(Looks like a large washer)
- (1) Tube of Red Line grease
- (2) Snap Rings
- (4) Nuts

Installation Time:

- 3-8 Hours - Depending on quality of tools, knowledge and condition of the front end parts.

Tools needed:

- 18mm Socket
- 21mm Socket
- 24mm Sockets
- 7/16" Socket
- 15/16" Socket
- 1-1/8" Wrenches
- Assorted Extensions
- Large Crescent Wrench
- 5mm Allen Wrench
- Pry Bars
- Anti-Seize
- Penetrating Lubricant
- 2lbs Hammer
- Floor Jack
- Jack Stands
- Ball Joint Press:
Miller C4212F, Receiver Kit 8975
(Ball Joint Press Alternate:
OTC: 6530, 8031)

Operational Inspection and Settings

Please note, Carli Ball Joints will require 2,000 miles until the mating surfaces are fully Broken-In. Steering may be "sticky" or lack fluidity for the first thousand miles.

One should attempt to grease Carli Ball Joints every 2,000-3,000 miles to ensure trouble-free service. If the Ball Joints will not take grease, **DO NOT FORCE GREASE INTO BALL JOINT!** Doing so by any means will void the warranty of the ball joints as it will likely damage the seals.

Greasing of the Ball Joints should be done at a minimum at every oil change but Carli Suspension recommends greasing all Ball Joints between oil changes staying as close to the service interval mentioned above. Again, Carli Ball Joints will accept only a small amount of grease. The Upper Ball Joints will take 2-3 pumps. And the lower, 1/2 - 1 pump.

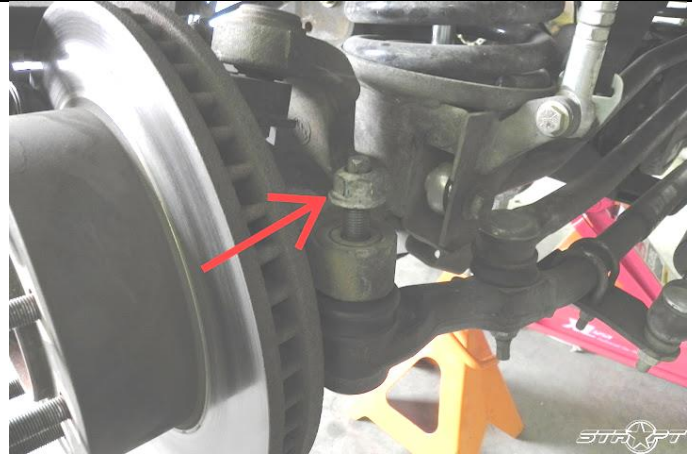
Maintenance Grease Procedure:

1. Jack vehicle and support axle with jack stands to alleviate the weight of the vehicle from the ball joints.
2. Put 1/2 to 1 pump of Synthetic ball joint or chassis grease into each lower and 2-3 pumps into each upper.
3. Ensure the jack stands are free from the full movement of the tire and key on the ignition.
4. While the truck is on the jack stands and greased, cycle the steering from lock to lock 5-6 times to assist the grease migration prior to setting the weight of the vehicle back on the ground.

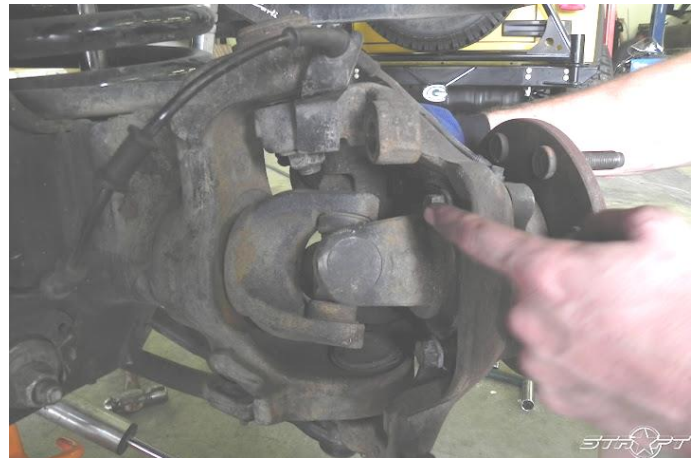
Note: Prior to installation, carefully inspect the vehicles steering and drive train components. Be sure to check the hubs tie rod ends, pan-rod bar, and control arm bushings. Everything must be tight and in good working condition.

Installation Instructions

1. Use a floor jack to remove the weight of the vehicle from the ball joints and support the axle with jack stands
2. Remove the passenger side wheel.
3. Loosen the nut on the steering linkage (21mm socket) so only a few threads remain to completely remove the nut. Do not remove it completely!
4. With a solid tap of the hammer, hit the top of the tie rod end to loosen the linkage. Leaving the nut on will prevent the linkage from dropping to the floor.



5. Spray the back of the wheel bearing with some penetrating lubricant to assist with the wheel bearing being removed from the knuckle.
6. While giving the penetrating lubricant a chance to soak, remove the ABS sensor from the top of the wheel bearing. This is held on with a small 5mm Allen head bolt.
7. Remove brake caliper by removing two bolts on the backside (18mm socket). Ensure to properly suspend caliper as to not have it hang from the brake line.
8. Remove Brake Rotor
9. With the brakes out of the way, remove the 4 bolts on the back of the wheel bearing (18mm socket).



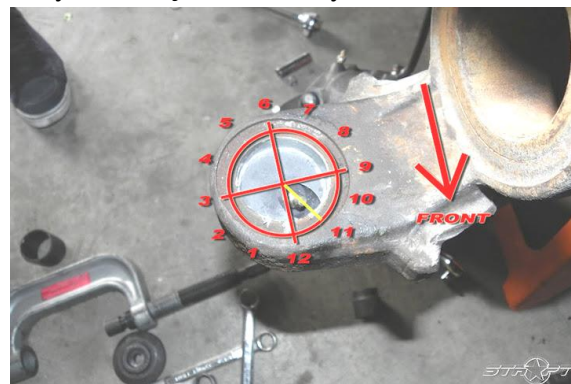
10. Use a pry bar between axle housing and the U-Joint step to remove axle shaft and wheel bearing assembly. Ensure to support the axle shaft as it's removed as to not tear the internal axle shaft seal.
11. Loosen the top ball joint bolt. Do not remove as it will hold the knuckle in place when the other nut is removed. ABS Sensor wire bracket pictured.



12. Remove the lower nut.
13. A solid tap with a hammer and the knuckle should drop from the ball joint. Remove the top nut and set ABS Sensor Bracket to the side to reinstall later.
14. Remove the knuckle.
15. Remove the snap ring on the lower ball joint.
16. Use OTC 6503 ball joint Press: coat the screw of the press generously with anti-seize. This will help save the tool and ensure smooth operation.
17. Ensure the cups are properly setup to remove the ball joint and remove the upper ball joint.
18. After removal, clean all debris from the ball-joint bore.
19. Soak lower ball joint with penetrating lubricant and ensure the snap ring has been removed.
20. Assemble the proper stack for lower ball-joint removal and remove the lower ball joint
21. Remove an upper ball joint from the box and disassemble. You should have a pin, cap and cup. Set the cap and pin aside for installation later in the instructions.
22. Lightly coat the ball joint bore on the axle with anti-seize. The upper ball joint cup will be pressed down into the bore.
23. Ensure the ball joint press is setup properly and operate the press until the ball joint cup is flush with the mounting surface of the "Outer C."



24. Remove the Zerk fitting from the lower ball joint to prevent damage during installation. **DO NOT DISASSEMBLE ANYTHING OTHER THAN REMOVING THE AERK;** this will void the ball joint warranty.
25. As with the upper, line the bore with antiseize.
26. In the ball joint package, a large load displacement washer is installed on one of the lower ball joints. **THIS MUST BE USED TO DISTRIBUTE THE LOAD ON THE CAP DURING ISTALLATION OF BOTH LOWER BALL JOINTS.** Cracking the cap due to improper installation will not be covered by the ball joint warranty.
27. The lower ball joint is pressed upward into the housing
28. The orientation of the ball joint is very important: standing behind the axle, facing forward, you want to aim the Zerk inbound to 11 o'clock. On the driver side, point inbound to 1 o'clock. This will ensure that the joint accessibility for service intervals.



29. Install Lower Ball joint and insert the snap ring.
30. Reinstall the Zerk fitting into the lower ball joint.



31. Drop in the upper ball joint kingpin.



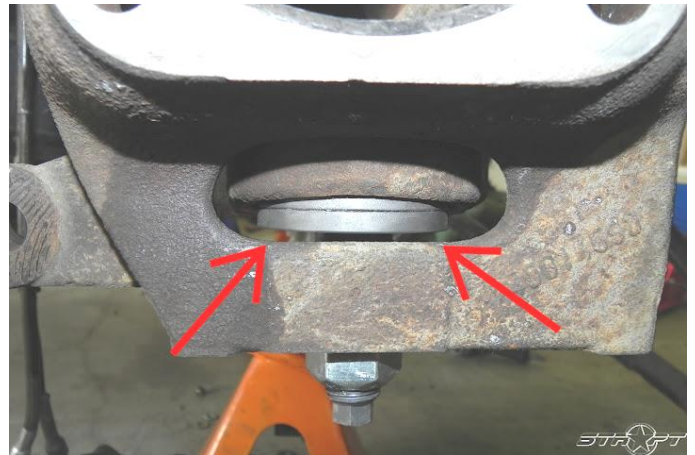
32. Screw on the cap **hand tight**, then back out 1/4 turn.



33. Clean the hub bearing bore on the knuckle while it's accessible and off the truck and apply a light coat of antiseize.

34. Slide the knuckle onto the joints

35. Once the knuckle is slid into place, ensure you have lock to lock turning without contact; if contact exists, grind the knuckle until no contact with the lower ball joint cap exists. The knuckle is cast and doesn't need paint but feel free to coat with paint to prevent rust.



36. Slide the ABS sensor bracket on to the upper ball joint and thread the nut on hand tight.

37. Install the lower nut hand tight

38. Torque the nuts. Each ball joint shaft has a hex head on the end to hold it in place. Seat them with a pair of wrenches and use a torque wrench to tighten to spec. For the upper ball joint, the wrenches needed are a 15/16" and 7/16". For the lower ball joint, the wrenches needed are 1/2" and 1 1/8".

a. **Torque the Lower Ball Joint stud to 35 ft. lbs.**

b. **Torque the Upper Ball Joint to 70 ft. lbs.**

c. **Torque the Lower Ball Joint to the final 160ft. lbs.**

39. **DOUBLE CHECK KNUCKLE CLEARANCE LOCK TO LOCK FROM STEP 35 AFTER TORQUING.**

40. Lightly coat the wheel bearing surface with antiseize and slide dust shield over the shaft.

41. Apply CV2 grease to axle splines and to the spot on the axle shaft that makes contact with the internal axle seal (should be the only polished spot on the axle tube).

42. Gently slide axle shaft assembly back in. DO NOT FORCE the axle in; ensure the assembly remains parallel with the axle housing during insertion to prevent damage to the internal seal.
43. Once the wheel bearing is within 1/4" of the knuckle, tap it until the two make contact.
44. Insert the 4 bolts that hold it in place ensuring to align the dust shield with the tab on the top.
45. Torque the wheel bearing bolts.
(Torque Spec: 150 ft/lbs for all 4.)
46. Install ABS sensor with the small Allen head bolt. Be sure to loop the wire into the bracket that's in place on the upper ball joint shaft.
47. Reinstall Brake Rotor
48. Install brake caliper and torque the two large bolts to 250 ft. lbs.
49. Repeat on the other side following the same directions.
Lower ball joint will be position to 1 o'clock on the driver side.
50. Once the installation is complete, pre-lube the ball joints. Keep the weight of the vehicle off the ball joints until greasing is complete.
51. Pack the upper ball joint with grease (equivalent to 5-6 pumps) and screw the top on hand tight.
52. Torque the top cap to 20 ft/lbs. This will force the grease into all the crevasses. It will be a little messy so don't be concerned if it seeps grease... it's normal.
53. The lower joint will only take a pump or two.
Please note, initial greasing will allow 1-2 pumps; normal maintenance intervals will not allow more than 1/2-1 pump of grease. This is normal and grease should NEVER be forced into the ball joint. If the seal slips due to a pneumatic grease gun or any other means of pressurized greasing; the ball joint warranty will be void on the joint in which it was used.