



CS-DLTB-13-D
Ram Long Travel Airbags, 2013+ 3500

Carli Suspension, Inc.
596 Crane St.
Lake Elsinore, CA 92530
888-992-2754

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 "Parts Checklist" 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 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.

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: Bushings, Heim Joints, Uniballs, Limit Straps. Carli Suspension cannot warrant a product's cosmetic finish due to the varying extreme elements that may be encountered.

Note

- Air bag system was designed to function with a stock exhaust configuration. Aftermarket exhausts may require modification.**
- This Airbag kit needs 1"-2" of lift in the rear, DO NOT RUN this kit on a stock-height truck.**
- Airbags Have internal Bump Stops and should be run at 0 when not in use - Maximum operating pressure is 100PSI.**

Parts Checklist

- | | |
|---|--|
| <input type="checkbox"/> (Qty. 2) Carli Upper Airbag Bracket <ul style="list-style-type: none"><input type="checkbox"/> (Qty. 4) M10 x 40mm Bolts<input type="checkbox"/> (Qty. 4) 1/2" - 13 1.25" Bolt<input type="checkbox"/> (Qty. 8) 1/2" Washer<input type="checkbox"/> (Qty. 4) 1/2" - 13 C-Lock Nut | Parking Brake Routing <ul style="list-style-type: none"><input type="checkbox"/> (Qty. 1) Insulated P-Clamp<input type="checkbox"/> (Qty. 1) 3/8"-16 x 1.25" Bolt<input type="checkbox"/> (Qty. 2) 3/8" Washer<input type="checkbox"/> (Qty. 1) 3/8"-16 C-Lock Nut<input type="checkbox"/> Bearing Spacer (Gold) |
| <input type="checkbox"/> (Qty. 2) Carli Upper Airbag Bracket Support <ul style="list-style-type: none"><input type="checkbox"/> (Qty. 6) 5/16" - 18 Nutsert - 4 Required, 2 Spares<input type="checkbox"/> (Qty. 4) 5/16" - 18 x 1.25" Bolt<input type="checkbox"/> (Qty. 4) 5/16" Split Lock Washer<input type="checkbox"/> (Qty. 4) 5/16" WasherNutsert Tool<ul style="list-style-type: none"><input type="checkbox"/> (Qty. 1) 5/16" - 18 x 1.25" Bolt<input type="checkbox"/> (Qty. 2) 5/16" Washer<input type="checkbox"/> (Qty. 1) 3/8" Nut<input type="checkbox"/> (Qty. 1) 17/32" Drill Bit | <input type="checkbox"/> (Qty. 2) Carli Airbags <ul style="list-style-type: none"><input type="checkbox"/> (Qty. 4) 3/8" - 16 x 1" Bolt<input type="checkbox"/> (Qty. 4) 3/8" Washer<input type="checkbox"/> (Qty. 4) 3/8" Split Lock Washer
<input type="checkbox"/> (Qty. 1) Heat Shield <ul style="list-style-type: none"><input type="checkbox"/> (9ft.) Airline<input type="checkbox"/> (Qty. 2) 90° Air Fittings<input type="checkbox"/> (Qty. 2) Fill Valves |
| <input type="checkbox"/> (Qty. 2) Carli Lower Airbag Bracket <ul style="list-style-type: none"><input type="checkbox"/> (Qty. 2) 1/4-20 x 3/4" Bolt<input type="checkbox"/> (Qty. 2) 1/4-20 Nyloc Nut<input type="checkbox"/> (Qty. 4) 1/4" Washers<input type="checkbox"/> (Qty. 2) Insulated P-Clamp<input type="checkbox"/> (Qty. 2) Lower Bracket U-Bolts<input type="checkbox"/> (Qty. 4) 1/2" Nyloc Flange Nuts for U-Bolts | <input type="checkbox"/> (Qty. 1) Axle Breather Relocation <ul style="list-style-type: none"><input type="checkbox"/> Banjo Bolt<input type="checkbox"/> Washers<input type="checkbox"/> Push Lock Fitting<input type="checkbox"/> Threaded Adapter |

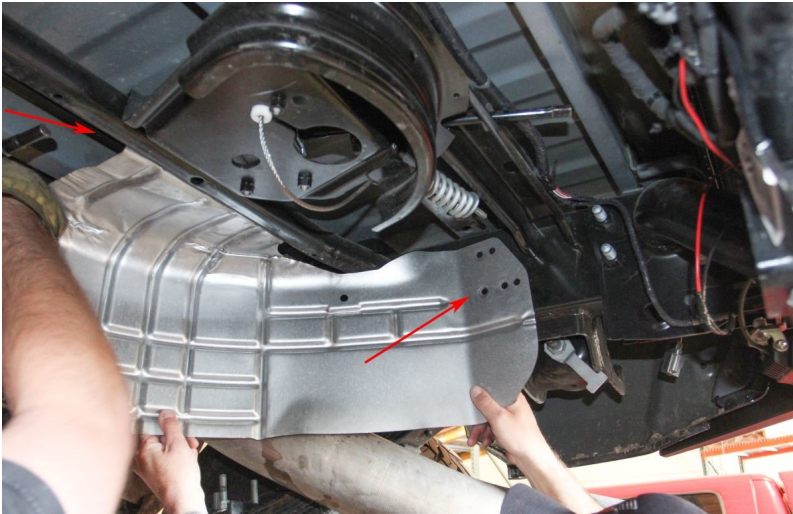


CS-DLTB-13-D
Ram Long Travel Airbags, 2013+ 3500

Carli Suspension, Inc.
596 Crane St.
Lake Elsinore, CA 92530
888-992-2754

Installation Instructions

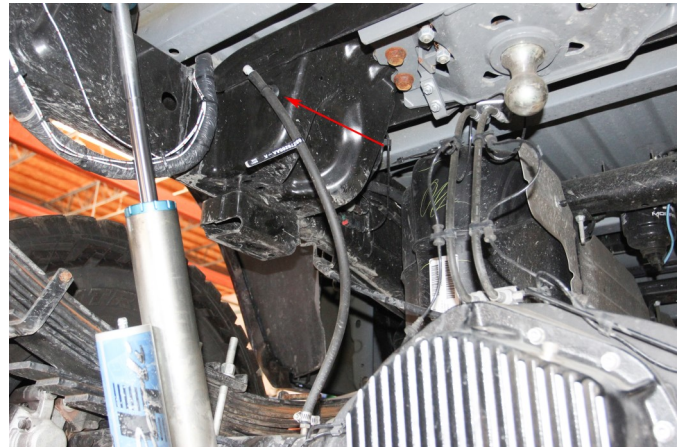
1. Hoist the truck or, if working on the ground, chock the front wheels and lift the truck until the rear tires are off the ground. Support the vehicle by the frame with jack stands and remove the jack.
2. Optional step to make your life MUCH easier... Drop the Spare tire, remove the spare tire heat shield (secured in place by several bolts removed with a 10mm socket) and remove the rearmost section of the factory exhaust (15mm socket). The truck on which we test fitted the bags had an aftermarket exhaust (pictured).



3. 15MM Socket - Remove the factory rear bump stops



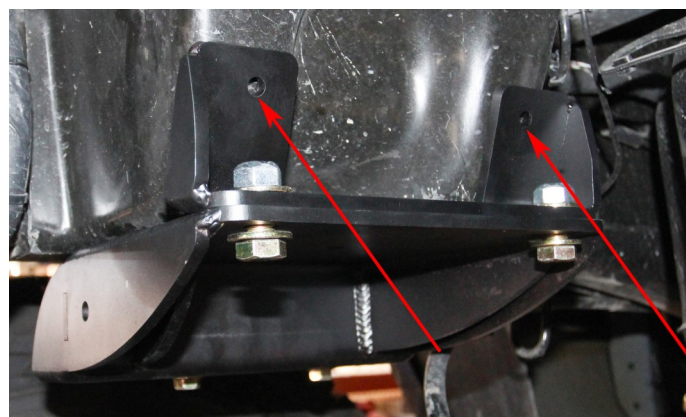
4. Remove the factory axle vent tube from the frame



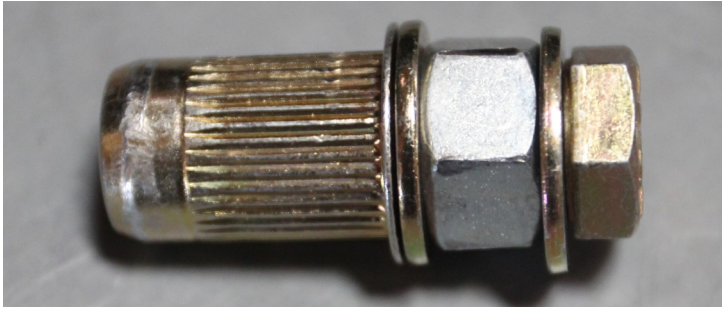
5. Place the first upper bracket against the pad from which the factory bump stop was removed. The brackets are NOT side specific, use the first and third hole in the bracket and the supplied M10 x 40mm Bolts (2 per bracket) to loosely secure the bracket to the frame.



6. Using the provided 1/2" - 13 x 1.25" Bolts, washers (one on each side of the brackets) and nuts, secure the upper bracket brace to the upper bracket. Leave bolts loose.
7. With the brackets assembled together and loosely in place, tighten the M10 bolts to 40lb/ft..
8. While holding the upper support flush against the frame rail,, tighten the 1/2" bolts to secure the position of the support bracket and center punch the holes in the frame.



9. Remove the upper support bracket and drill the center punched holes to 1/8". With the pilot holes in place, drill the 1/8" holes with the 17/32" drill bit provided in the kit.
10. Deburr the holes to ensure the nutserts sit flush to the frame.
11. Assemble the Nutsert tool consisting of a 5/16" - 18 x 1.25" Bolt, (Qty. 2) 5/16" Washers, and a 3/8" Nut.



Nutsert Note

If you've never attempted a Nutsert before, we recommend using the spare nutserts provided and the 17/32" on a piece of scrap steel to test your preferred installation method below.

12. Push this assembly into the hole in the frame until the lip of the nut sits flush to the frame.
13. Using a 9/16" box wrench, hold the 3/8" nut while you use a 1/2" socket to tighten the bolt. You will feel it start to crush the nutsert as you tighten. It will be difficult at first - ensure you're holding the assembly flush to the frame while tightening!! Once it gets a bit easier, continue tightening until it begins to get more difficult again.

Alternate Method

If you're comfortable using an electric impact, it will ease installation of the nutsert as it's much easier to hold the nutsert flush to the frame while tightening. Using the 1/2" socket on an impact, hold the 3/8" nut with a 9/16" box wrench and run the impact. It'll struggle at first then will run quickly while crushing the nutsert and firm up again. DO NOT tighten with the impact - the moment you feel it firming resistance, release the impact.

14. Put the 1/2" socket on a torque wrench and torque the bolt to 20lb/ft. **This applies to both methods of installation.**
15. With the nutserts installed, Place the upper bracket brace back into position and thread the provided hardware (5/16" x 1.25" Bolt, split washer and flat washer) to tighten the support bracket to the nutserts in the frame rail hand tight.
16. Install the 1/2" hardware that secures the support bracket to the upper airbag bracket hand tight.
17. With all hardware in place, torque the 5/16" support bracket hardware to 20lb/ft. (1/2" socket) to ensure the brace is tight to the frame, then torque the 1/2" hardware securing the brace to the bracket to 60lb/ft.
18. Repeat this installation on the passenger's side.



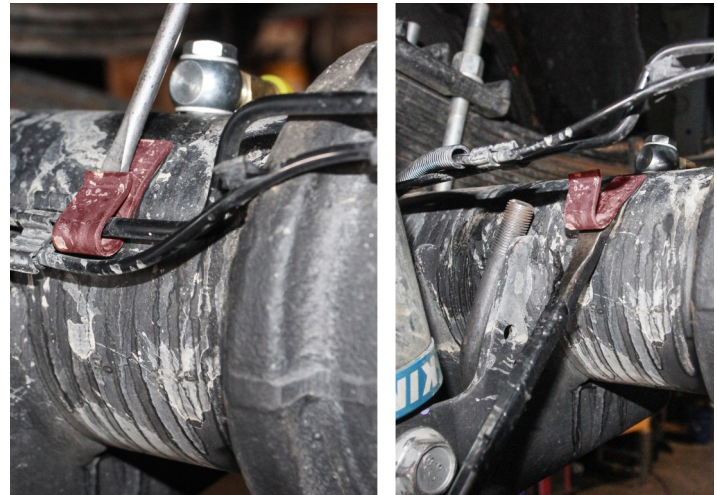
19. 9/16" Socket & Wrench - Use the 3/8"-16 x 1.25" bolt, washers, gold spacer and P-Clamp to mount the e-brake cable to the existing hole in the front of the Driver's side upper airbag bracket. From front to back, orientation will be bolt head, washer, p-clamp (facing forward), spacer, upper bracket, washer nut.

20. 14MM Wrench - separate the flexible axle breather line from the threaded/slip on junction in the axle tube. Remove the threaded axle breather/vent from the axle.
21. Assemble the Carli axle breather to the factory breather location.



The push lock fitting should be threaded onto the Banjo fitting. Place the banjo bolt into the receiver with a washer/seal on each side and thread it into the axle tube facing forward and tighten using a 14mm wrench. **DO NOT OVER TIGHTEN.**

22. Use a small prybar or flathead to pry open the factory brake line retainers from the axle tube and remove the brake lines (both driver and passenger side). We used a prybar and hammer to remove these retainers from the axle tube but you can hammer them flat against the axle tube if preferred - *Highlighted in RED for clarity.*

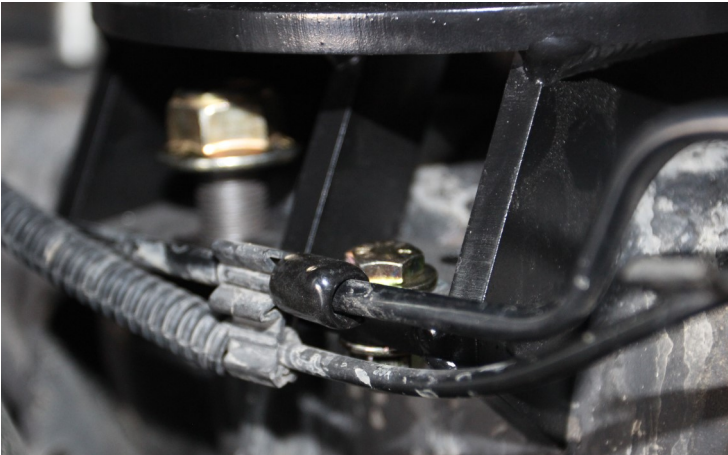


23. Install the push-lock 90° air fitting to the Driver's side airbag. Wrap the threads with a Teflon tape and thread it into the bag until tight. Final indexing of the fitting should be parallel to the upper bag piston facing directly rear.
24. With the brake lines free and factory retainers out of the way, slide the U-bolt through the factory shock mount and around the axle.
25. Place the lower Airbag Bracket on the axle tube, it will index at the shock mount and the remainder of the bracket will be inboard of the shock mount. This will be obvious (for bag alignment) when test fitted. Once it's confirmed that the lower bracket sits correctly on the axle tube and the U-bolt locates the bracket properly (in line with the upper bracket) - remove the test-fitted bracket.
26. Using the provided 3/8" hardware (with split and flat washer),



attach the airbag with the installed air fitting to the lower bracket ensuring the bag is indexed so the air fitting faces inboard with the lower bracket installed. USE ANTISEIZE on this bolt as you're threading Grade 8 into aluminum. Torque to 25lb/ft.

27. Thread the U-bolt Nuts onto the U-bolts to secure the brackets hand tight.



28. Remove the 1/4" P-clamp hardware from the lower airbag brackets and use to secure the factory brake line to the bracket on both sides. The ABS line has a factory bracket tying it to the hard line - ensure it's close proximity to this p-clamp.
29. Pull the airbag up to meet the upper bracket and secure using the provided 3/8" hardware (with split-lock and flat washer). Again, Antiseize is required on this bolt.. Torque to 25lb/ft..
30. Do the same on the passenger side - the only difference, the air fitting should be indexed slightly down from parallel and the bag should be indexed so the air fitting faces back and to the rear vs. inward. This is to clear the included exhaust heat shield to be installed between the upper piston of the bag and the upper airbag bracket.



31. Bring the passenger side airbag up to the upper bracket with the

Running Airlines

1. We provide 9ft of our 1/4" airline
2. Cut perfectly perpendicular with a razor-blade on a flat surface - DO NOT CUT WITH ANGLED CUTTERS, they'll pinch the line
3. The airline provide is an industry standard 1/4", this can be plumbed into any existing air system on the truck if desired.
4. DO NOT "T" the bags to a single air-fitting. This allows pressure transfer. Airbags should be setup to individual valves or dual solenoid compressors ONLY - allowing individual pressure control.
5. We ran the schrader valves to the lower license plate retaining bolts but they can be drilled into anywhere the customer would like. Common locations are behind the fuel door and in the trailer hitch.
6. Both the Fill Schraders and 90° fittings in the bag are push-lock fittings; do NOT use sealants.

heat shield in place and secure with the 3/8" hardware. Ensuring you have access to the airbag's air fitting. Again, Antiseize is required on this bolt.. Torque to 25lb/ft..

32. Run your airlines.
33. With the Upper brackets installed to final torque, lowers installed hand tight (on the U-bolts), and airlines run - finish all loose ends while the rear is still dropped. Make sure all brake lines are secure, attach your factory rubber axle-breather to the Carli relocation push-lock and route it along your brake line harness with zip ties as high as you can get it leaving plenty of slack for full droop. Ensure the parking brake cable does not rub on the airbags after it's relocation, and double check torque on everything to this point.
34. Reinstall the rearmost section of the factory exhaust and check proximity to the heat shield making any necessary adjustments.
35. If removed, reinstall factory spare's heat shield, then the factory spare tire.
36. Lower the truck onto the ground.
37. Once at ride-height, set the position of the airbags as straight as possible. Make any lateral or rotational adjustments necessary for the bag to be as straight as possible at ride height and use a 1/2" box wrench to tighten the U-bolts as tight as you can get them.
38. Use a 1/2" crow's foot to torque the nuts to 50 lb/ft.
39. Inflate both bags to 15psi and spray all fittings with a mixture of soap and water. Look for bubbles that will be present with any air leak - assuming everything checks out and is leak-free, the installation is complete.

Note: The factory bump stops will NOT be reinstalled as the Carli Airbags have internal bump stops. For this reason, they can be run at 0psi when unloaded.

Retorque ALL fasteners after the first 500 miles

Retorque ALL fasteners and inspect the airbags every oil change or once per year for any signs of wear or dry-rot.