

## CS-RASYSTEM-03

## CS-RASYSTEM-10

### 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.

## WHAT'S INCLUDED IN THE KIT

### Radius Arm Crate

- (2) Radius Arms
- (2) Radius Arm Drop Brackets

### Radius Arm Hardware Kit

- **Crush Sleeves:**
  - (2) Oval Sleeves
  - (4)  $\frac{3}{4}$ " OD Round Sleeves
- **Radius Arm Pivot:**
  - (2)  $\frac{3}{4}$ " x 5.5" Bolts
  - (4)  $\frac{3}{4}$ " Flat Washers
  - (2)  $\frac{3}{4}$ " Nyloc Nuts
- **Rear Frame:**
  - (2)  $\frac{3}{4}$ " x 4.5" Bolts
  - (4)  $\frac{3}{4}$ " Flat Washers
  - (2)  $\frac{3}{4}$ " Nyloc Nuts:
  - (4)  $\frac{1}{2}$ " x 4"
  - (8)  $\frac{1}{2}$ " Flat Washers
  - Top Lock Nuts

### Axle Control Shock & Hardware:

- **Factory Control Arm Mount:**
  - (2) Large Misalignment Spacers
  - M14mm x 100mm Bolt
  - (2) 14MM Washers
  - (1) 14MM Nut
- **Arm Pocket Mount:**
  - (2) Short Misalignment Spacers
  - M14mm x 80mm Bolt
  - (2) 14MM Washers
  - (1) 14MM Nut

### 2 Short or 1 Long Crossmember

- **Hardware**
  - (4)  $\frac{1}{2}$ " x 7" Bolts
  - (8)  $\frac{1}{2}$ " x 1.25" Bolts
  - (16)  $\frac{1}{2}$ " Flat Washers
  - (4)  $\frac{1}{2}$ " Nuts

## NOTES

- Front end alignment is necessary upon completion of install.
- This instruction is intended to be a continuation of a modular, full kit installation; if you're just installing this product, there may be additional steps involved not mentioned in this document.
- 6" Systems Require a Drop Pitman Arm, 08.5+ "T" Style Steering & Driveshaft to be lengthened 2"
- **WORK ON ONE SIDE OF THE CONTROL ARMS AND RADIUS ARMS AT ONE TIME!!!**

### RADIUS ARM ASSEMBLY:

1. Place Passenger Side Radius Arm Drop so that it straddles the frame. The oval hole at the rear of the Radius Drop will match up perfectly with the oval hole in the frame. This is how the Radius Arm Drops are indexed. Notice the 4 threaded holes for the crossmember will be facing inboard on the Radius Arm Drop.

**NOTE:** 6.7L Vehicles will need to relocate the Bosch Exhaust Module located outside of the frame on the passenger side. Remove the 4 bolts and cut down the bolt hole ears by  $\frac{1}{4}$ ", or enough to not contact the body. Reinstall the Module placing the bottom holes of the unit over the 2 upper holes in the frame, using 2 bolts only. This is adequate to hold the Module.

2. Place oval crush sleeve into the oval hole in frame and radius arm drop. Some trucks might need some slight grinding on the oval frame hole, the radius drop oval hole, or both to allow the oval crush sleeve to go all the way through. **BE CAREFUL WHEN GRINDING.** Use a rotary file or stone, and only grind a little at a time. The oval crush sleeve needs to have a tight fit in the oval hole. It is preferable to have to tap the Oval Crush Sleeve into the frame.
3. Once the crush sleeve is inside the frame and radius drop, insert the  $\frac{3}{4}$ " x 4.5" bolt with washers and nut.
4. Place a jack under the front of the radius arm drop and press up slightly to allow the drop to completely seat against the bottom of the frame.
5. Once fully seated, tighten the  $\frac{3}{4}$ " bolt with an impact gun until tight. You will loosen them again later.
6. Using the supplied  $\frac{3}{4}$ " holesaw and arbor, use the  $\frac{3}{4}$ " holes in the radius drop as a guide and drill out the frame to  $\frac{3}{4}$ ". One side of the Radius Arm Drop is  $\frac{3}{4}$ ", the other is  $\frac{1}{2}$ ". A right-angle drill makes this job extremely easy.
7. Mark the center of the  $\frac{1}{2}$ " holes on the outside of the radius drop and drill the frame to  $\frac{1}{2}$ ". It is recommended to start with a pilot drill and open up the hole incrementally.
8. Insert two  $\frac{3}{4}$ " x 2.75" crush sleeves into the two  $\frac{3}{4}$ " holes.



9. Insert the ½" x 4" Bolts with washers and nuts. Leave the bolts loose.
10. Mount the Radius Arm WITH the shock mount into the radius arm drop. Use the supplied ¾" x 5" Bolt.
11. Install the front of the Radius Arm into the lower axle pocket and re-using the factory cam-bolt eccentric.
12. Tighten the ¾" pivot bolt to 250lb/ft. Just barely snug up the cam bolt, but leave it loose to facilitate the driver side install.
13. Repeat radius drop install for driver side, same as passenger side. The driver's side radius arm does not have a shock pocket.
14. Once both radius arms are bolted in, reinstall exhaust system.



- NOTE: 6.7L Vehicles, be sure to reconnect all lines and harnesses removed during disassembly.**
15. Reinstall factory transmission crossmember into the pockets
  16. Install the 1-piece or 2-piece Carli Crossmember(s) over the factory crossmember.
  17. Insert the (4) ½" x 7" bolts, washers and nuts to install both the factory and Carli crossmember. Hand tight for now
  18. Insert the (8) ½" x 1.25" bolts and washers through the crossmember(s) (4 on each side) and thread them in hand tight.
  19. Once all crossmember bolts are in, torque **ALL** ½" bolts on the crossmembers and radius drops to 90 lb/ft.
  20. Torque the ¾" bolts on the Radius Drops and Pivots to 250 lb/ft.
  21. Reinstall 3 nuts on transmission bracket, and reinstall exhaust bracket on transmission if you haven't already done so.



- NOTE: If you DO NOT have access to Nitrogen, it is advised to install the Axle Control Shock into the Radius Arm at this time. Disconnect the Radius Arm that has the shock mount from the Radius Arm Frame Drop. Install the Body end of the axle control shock into the mounting tabs with the schrader valve pointing up. Use the supplied Reducing/Misalignment Spacers (Thick spacers on the inside offsetting the shock to the outside, toward the tire), then install the rod end of the Axle Shock into the factory control arm pocket on the axle, again, offset shock toward the outside. You can pull up or down and apply leverage to the Radius Arm to align the shock with the holes. Once the 14mm bolt is through the Radius Arm and Axle Shock, you can then reattach the Radius Arm to the Radius Drop. Torque the ¾" bolt.**
22. Ensure the eccentric bolts on the lower axle mount are indexed toward the 12 o' Clock position and torque the arms.
  23. Torque
    - a. ¾" Pivot Bolt: 250lb/ft.

**b. Factory, Axle Control Arm Hardware:**

**i. 2003-2009:**

1. Upper Control Arm hardware, 14mm hardware: 148.4 lb/ft.
2. Lower Control Arm hardware, 16mm Hardware: 225 lb/ft.

**ii. 2010-13**

1. Upper Control Arm hardware, 14mm hardware: 148.4 lb/ft.
2. Lower Control Arm hardware, 18mm Hardware: 275 lb/ft.

24. Continue to the next step of the kit installation instructions