



CS-FSHACKLE-11 - Ford Leaf Spring Shackle

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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. 2) Fabricated Shackles Preinstalled with:
 - (Qty. 4) AP-LSB1 — Bushing
 - (Qty. 2) MP-FSPCRUSH-16 — Crush Sleeve
 - (Qty. 2) AP-ZERK-1/4-90

NOTE:

These instructions are written as a complete guide to install the Carli Shackle. If you're adding Carli leaf springs at the same time, you'll follow those instructions and simply install the Carli Shackle instead of swapping the factory shackle to the new springs.

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Instructions

1. The leaf springs should be removed from the vehicle to perform this installation.
 - a) Raise the rear of the truck and place floor jacks underneath rear axle. Place safety jack stands under the frame to support the truck and lower the truck onto jack stands.
 - b) Remove lug nuts with a 13/16" Socket, then rear wheels.
 - c) Using an 18mm socket for the upper mount and 21mm for the lower mount, remove the rear shocks.
 - d) Using a ratchet strap, support the driveshaft/pinion to the closest exhaust hanger. (very important if you're doing both sides at the same time)
 - e) We recommend working on one side at a time, remove Passenger side rear U-bolts using a 15/16" socket and set the Upper & Lower U-Bolt Plates to the side.
 - f) Carefully lift the truck from the frame to droop the rear axle and separate the leaf springs from the factory 3.25" Block.
 - g) **DO NOT ALLOW AXLE TO HANG FROM ANY HOSES OR CABLES**
 - h) Remove the factory block assembly.
 - i) **1-3/16" Socket**—Remove front hanger bolt and nut .
 - j) **24mm Socket**—Remove rear shackle to hanger bolt **PAY ATTENTION TO ORIENTAION OF BOLT/NUT**; it's imperative these bolts/nuts are installed the same way.
 - k) Remove the assembled factory leaf spring pack with the shackle still attached.
 - l) **24mm Socket**—Remover the Shackle from the Leaf Springs.

NOTE:

The Driver's side on the 2017+ is a bit more complicated as the fuel tank is in the way of the factory bolt. There are a few options here:

- Order a new front Leaf Spring bolt from your local ford Dealer - FORD MPN: W718336S439 - Loosen the front hanger bolt and push it out as much as possible to access the shoulder with a reciprocating saw and cut off the head of the bolt. Remove the remainder of the bolt. Remove the remainder of the bolt. Cut your new factory bolt to 5" length and install the opposite direction to make it easier should you ever need to remove/replace the leaf springs (to avoid dropping the fuel tank a second time).
- Drop the fuel tank, remove the factory bolt, install new spring/shackle, reinstall fuel tank.
- **OUR RECOMMENDATION:** Drop the tank enough to remove the factory bolt then re-install the tank. Cut your factory bolt to 5" length and install the opposite direction to make it easier should you ever need to remove/replace the leaf springs (to avoid dropping the fuel tank a second time). This avoids cutting near the fuel tank.

2. Grease the shackle through the installed zerk fitting and smear grease on the exposed bushing faces.
3. Grease the inside of the frame hanger that will make contact with the bushing faces, then grease the shackle bushings and crush sleeve.



4. Install the shackle onto the leaf springs with the factory bolt and nut, hand tight. The Carli Logo plate will face the rear, the zerk fitting will face the leaf spring. **The bolt will install from the INSIDE-OUT. The head of the bolt should face the frame when installed (passenger's side shown). If you flip the bolt, the threads will contact the frame as the shackle moves.**



5. Reinstall the leaf springs into the truck and secure with the factory hardware, all hand tight.

NOTE:

This picture shows the shackle installed—the UPPER bolt shows the factory flange-nut spun onto the thread of a properly inserted bolt, the lower shows a bolt-head.

Again, the upper shackle to leaf spring bolt should be inserted from the inside-out.

The lower hardware should be inserted outside-in!!



6. Use your grease gun to grease the zerk fittings one more time while the rear is at full droop and the bolt is loose. Don't over-do this as it'll unseat the bushings, a few pumps in each will do.
7. Lower the rear end so the springs seat to the axle and the suspension is bearing the load (axle still on jack stands).
8. Re-install your U-Bolts—Torque incrementally ensuring even tension to 110lb.ft. in a cross pattern.
9. Remove the pinion jack-stand/strap
10. Reattach the rear shocks, upper mounts torque to 40lb.ft, lower mounts and torque to 100lb.ft.
11. Apply Red-Loctite to the front leaf spring hanger bolt; torque to 400lb/ft.
12. Torque both shackle bolts to 180lb/ft.
13. Reinstall the Wheels and tires and torque to 150lb.ft.