



## Trophy Hitch

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### Note

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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.

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### Lifetime Product Warranty

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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.

### NOTES

1. As this hitch fits up to a 38" spare tire, it will require exhaust modification. This modification will be up to the customer and exhaust shop to ensure the exhaust to tire clearance is sufficient to prevent damage to the spare tire. Substantial exhaust modification will likely be required to ensure sufficient clearance with a 38" tire.
2. The exhaust modifications required will depend on Gas vs. Diesel Motor, the factory exhaust configuration (the 2017 and 2022 6.7L we have in the shop were slightly different), tire manufacture and size. Given this wide range of variables, we will show you what WE did for THIS truck as a reference but you'll need to modify your exhaust and heat-shield (or tire proximity to exhaust) however is required by your specific vehicle and tire choice.
3. The Factory Hitch and Trophy Hitch are both Heavy and Awkward. We utilized 3 technicians and several tall jack stands at any time. DO NOT Attempt to install this without assistance!
4. This Hitch uses FACTORY hardware. If you live in, or purchased a truck from, a place where corrosion is an issue, ensure your factory hardware is in proper shape to reuse.
5. This Hitch uses a Factory hitch pin. Shorter, locking hitch pins will not work. Ensure the useable portions of your hitch pin is at least 4.25" long.

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### Parts Checklist

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- (Qty. 1) Hitch Receiver
- (Qty. 1 ) 3-Way Tie-Down to Retain Tire





## Instructions

1. If you have a Key FOB, disassemble your key by depressing the button at the top and sliding the physical key from the Key Fob.



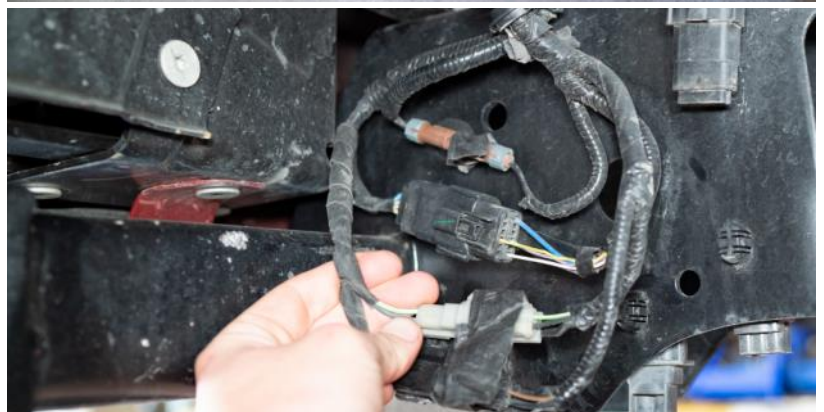
2. Open the cover next to the license plate to expose the key-hole. Use a 1/4-turn of your key to remove the locking mechanism.



3. Assemble your spare tire tool. This can be found under the back-seat on the Driver's side of the truck. The "hook" will need to be inserted into the winch; ensure that piece is on the end.
4. Insert this tool through the hole in the bumper, into the tube and turn until you feel the "hook" engage into the winch. Turn the assembly counter-clockwise to drop the factory spare and remove it.
5. To keep the winch cable out of the way while you're working, pull tension on the cable and turn the tool clockwise to retract the line into the winch.



6. Remove ALL the electrical harnesses/connections, on both sides, from their positions in the factory hitch. As these are large, a standard panel-popper didn't do the trick. We snuck a small hammer into the back side of the connections and knocked them all out without damaging them.



- 8MM Socket — If equipped, remove the spare tire seat plates from the frame rails. These have a clip on the backside; a small prybar will easily dislodge them with the bolt removed.
- Use a flathead screwdriver to remove the capture nut brackets from the frame.



- 13MM Socket—Remove the 2 bolts holding the upper trim piece to the front of the hitch..

**NOTE:**

The 23+ Trucks make removing these bolts complicated as they just spin; it's easier on these trucks to use a panel popper to dislodge the **3 push fittings** that retain this bracket to the bumper assembly, leaving the bracket attached to the hitch.



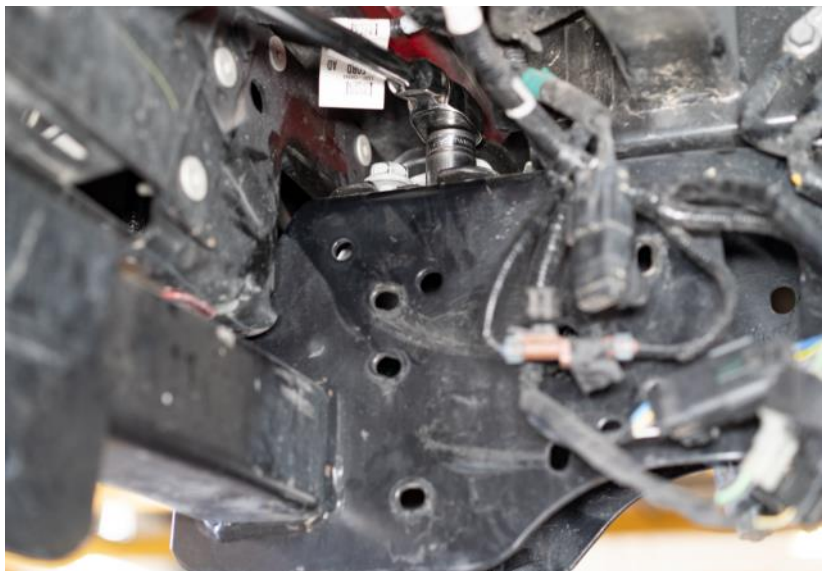
- 24MM Socket— With the hitch supported, remove the bolts - **5 or 6 Per Side, depending on model/year** - securing the Factory Hitch to the frame. The front-most 4 (toward the front of the truck) are easy; we used heat to break the loctite (torch) and they came right out with a 1/2" impact and 24mm socket.

**NOTE:**

The factory hitch is heavy and awkward. **It needs to be supported when you remove the bolts to avoid it falling out of the truck.** We installed this on a lift and used exhaust jack-stands to support the hitch to the frame rail while the hardware was removed.



- The rear-most 1 — **or 2** — bolts (toward the back of the truck) are inserted from the top. These required our 24" Snap-On 1/2" Drive, Flex Head with a shallow 24mm Socket to access and remove these bolts from the top as room is tight. Again, HEAT will break the factory Loctite and make these way easier to remove.



**2023+ Addendum:**

The 23+ Trucks have 5 bolts on each side securing the hitch to the frame (the 17-22 have 6).

Secondly, the 23+ have lateral braces from the frame to the bumper. The bumper-side of this bracket should be loosened (21mm socket), the hitch side will need to be removed (15mm socket). Save the factory hardware as you'll reuse it with the Trophy hitch.



12. With all hardware removed, triple check and ensure no bolts or electrical connections were missed.
13. Safely ease the support on the factory hitch and remove it.
14. With the hitch out, remove the top cover plate that secured over the receiver (from which you removed the two bolts with the 13mm socket). This is held in with three push-lock fittings. Neither this plate, nor the hardware that retained it to the factory hitch, will be reused.



15. With the factory hitch out, the exhaust can be modified. As we're running a 38" tire and spare on this truck, substantial exhaust modification will be required to ensure sufficient clearance. A 37" may fit a bit better but the modifications required will depend on Gas vs. Diesel Motor, the factory exhaust configuration (the 2017 and 2022 6.7L we have in the shop were slightly different), tire manufacture and size. Given this wide range of variables, we will show you what WE did for THIS truck as a reference but you'll need to modify your exhaust and heat-shield (or tire proximity to exhaust) however is required by your specific vehicle and tire choice.



16. We marked a line on this 2022 F250 (6.7L Diesel) right after the resonator and slightly into the heat-shield.

17. We cut along this line with a saw-zall, ground out the weld on the remainder of the heat-shield and pulled it off. The hanger (from the tip we removed) was then repurposed to grab the remaining pipe after the resonator and insert from the front side of the existing hanger.



18. With the exhaust clearanced (or temporarily removed after the muffler to be modified later), the new hitch can be installed.
19. For this, we reuse all the factory hardware. We recommend using a wire-wheel to clean the factory Loctite from the hardware and reapply new Blue Loctite to the bolts now that they've been heat-cycled.
20. The Factory nuts are ALL captured nut brackets making reinstallation a breeze. Ensure all the nut brackets are clean of debris and threads are good and reinstall them into their factory locations in the frame.



21. To make life easier, we flip the rearmost bolts (toward the rear of the truck) when reinstalling. This way, all hardware now installs from the bottom. **On a 2023+, If flipping the hardware, ensure the nut-captures are clear of ALL wiring before tightening.**
22. Once you've cleaned your hardware, reposition all capture nut brackets into the frame to prepare for the hitch.

**NOTE:**

The Carli hitch is **EXTREMELY** heavy (140lbs.) and awkward. **It needs to be properly supported during the installation process.** We installed this with 3 technicians on a lift and used exhaust jack-stands to raise the hitch to the frame rail while the hardware was installed.



23. Jack the Carli Trophy hitch into position guiding the wiring harnesses through the structure of the hitch toward the back. You'll see where the wiring goes as there are 4 holes in the rear gussets of the hitch to which the harnesses will resecure later.
24. With the hitch in position, ensuring you've triple checked and all wiring is clear of the hitch, coat all bolts with blue Loctite and hand thread the hardware into the captured nut brackets in the frame rail on **BOTH** sides.
25. With all bolts installed, use a 24MM Socket to torque the hardware to 270lb/ft.

***Note:** The bolt to which the arrow is pointing will not be accessible with a torque wrench. For this, we used a 24mm socket and cheater bar capable of reaching the stated spec.*

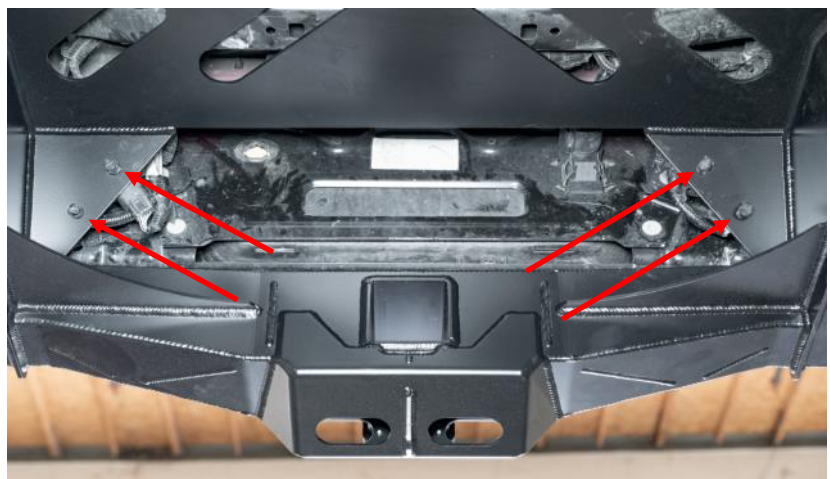
26. With all bolts torqued, secure the electrical connections to the 4 holes in the gussets of the hitch tying up any excess slack behind the drilled panels of the hitch using cable-ties.



**NOTE: 2023+ Trucks**

Re-install the lateral support braces using the factory hardware. These are used to align the bumper and support the outer bumper steps.

Hand-thread the hardware, lift the bumper into position, then tighten the 4 bolts that retail each bracket.



27. Use the Factory tool to drop the winch and spare tire retaining plate, load the spare tire and crank it into position. With the tire in place, check your proximities and ensure you don't need to adjust your exhaust position.

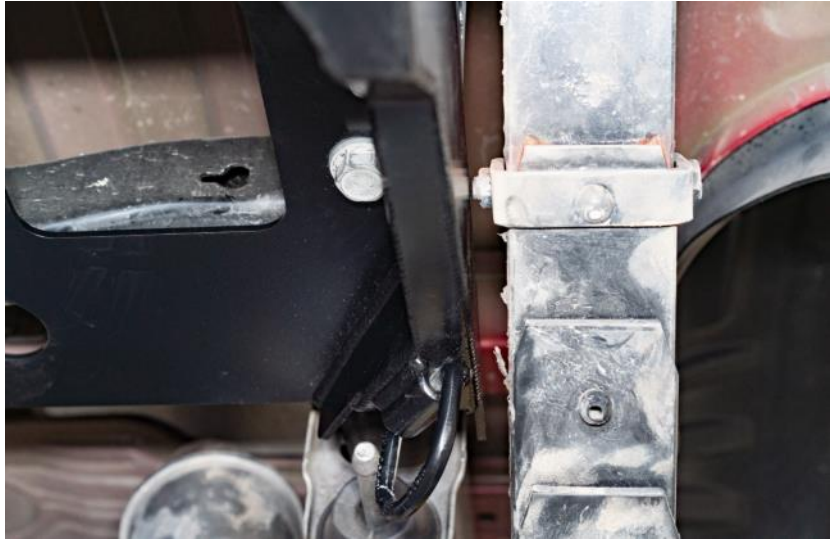


28. With all confirmed, adjust and provided strap to your tire and secure the ratchet. The ratchet pictures is different than the one provided; this is a pre-production unit we used to refine the production version.



**NOTE:**

If you're using Carli/Deaver leaf springs, we recommend removing the bolt/crush sleeve from the rear-most spring guide to avoid contact with your new hitch. This will not affect the performance of the guide. If you'd like to leave it in place, you're free to do so but it's likely to contact the hitch.



29. This concludes the installation of the Trophy hitch — we recommend heading to the exhaust shop to refine the exhaust/spare tire clearance to prevent damage to your tire.
30. Retorque all fasteners after 500 miles and periodically check torque, thereafter.