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3rd Gen 4 Runner Tire Carrier - Installation Instructions:

Thank you for purchasing a ShrockWorks product. We are confident you will enjoy it for many years and find it to be superior in fit, quality and especially durability. If at any time during the installation you have any questions, please give us a call. We also welcome your feedback and suggestions via phone or email on all of our products.

Tools Required:

- 3/8" Ratchet
- Short 3/8" Extension
- 19 mm Socket
- 14mm Socket
- 19 mm Wrench
- 11 mm Wrench
- 5/32" or 4mm Allen Wrench
- 2 Large Crescent Wrenches
- Drill
- 1/2" drill bit
- Wire Strippers
- Wire Crimpers

Parts Included for 4 Runner Rear Bumper:

- | | | | |
|------|-----------------------------|------|------------------------------------|
| • 1 | - 1" Bolt | • 2 | - 3/8" Stick Nuts |
| • 1 | - 1" Nylock Nut | • 8 | - 1/4" x 3/4" Bolts |
| • 2 | - 1" Yellow Zinc Washers | • 4 | - 1/4" x 1" Flat Head Cap Screws |
| • 2 | - 1" Bronze Washers | • 1 | - 1/4" Carriage Bolt |
| • 2 | - 1/2" x 3 1/2" Bolts | • 11 | - 1/4" Flat Washers |
| • 15 | - 1/2" x 1 1/4" Bolts | • 11 | - 1/4" Lock Washers |
| • 2 | - 1/2" x 1 1/4" Stick Bolts | • 7 | - 1/4" Nuts |
| • 2 | - 1/2" x 2" Carriage Bolts | • 1 | - 1/4" Wing Nut |
| • 4 | - M12-1.25x35mm Bolt | • 1 | - 3/8" Adjustable Rubber Gate Stop |
| • 13 | - 1/2" Serrated Flange Nuts | • 1 | - 1/2" Plastic Gate Stop |
| • 2 | - 1/2" Nuts | • 1 | - 1/4" Plastic Gate Slide |
| • 27 | - 1/2" SAE Washers | • 1 | - Latch |
| • 10 | - 1/2" Washers | • 1 | - T-Handle Pin |
| • 16 | - 1/2" Lock Washers | • 1 | - Aluminum Bump Plate |
| • 2 | - 1/2" Stick Nuts | • 2 | - Grease Packets |
| • 2 | - 1/2" Wing Nuts | • 2 | - Bumper Wing Supports |
| • 6 | - 3/8" x 1" Bolts | • 1 | - Tire Carrier Arm |
| • 2 | - 3/8" x 1 1/4" Bolts | • 1 | - Inner Tire Mount Slide |
| • 18 | - 3/8" Flat Washers | • 1 | - Outer Tire mount Slide |
| • 8 | - 3/8" Lock Washers | • 1 | - LP Mount |
| • 2 | - 3/8" Nuts | • 1 | - LP Light |

Finishing bare steel 4Runner Rear Bumper:

1. Paint or powder coat products before installing to prevent rust.
2. Clean them thoroughly with a solvent like acetone, prime then paint.

3. We recommend Dupli-Color brand Black primer and semi-gloss black paint. It is available at most auto parts store like AutoZone and Napa. Hammerite brand black paint is also an excellent choice. It is more of a dark grey color though.
4. Let the paint dry hard before attempting installation, usually overnight.

Installation Instructions:

1. Remove Stock Bumper.

- a. Remove the plastic step panel covering the hatch relief area by pulling the corner sections back from the top, and unfastening the pop-in plastic clips from the bottom side.
- b. Remove the corner/side sections of the metal bumper shell. There are 2 bolts on the top side that fasten each side to the center section on the top and one on the bottom. You will also have to remove the mud flap section of the ends of the bumper to access the bolts that fasten the wheel well end of the side sections. There are two on the side and one inside the wheel well area.
- c. Remove the center section. There are 2 bolts at each end on the top side fastening the shell into the hatch area, and 4 on the bottom side that fasten the brackets to the bottom of the cargo area.
- d. Once you have removed both side sections, the center section, trailer hitch(if you have one) and all corresponding brackets that may still be bolted to the body, you are ready to install your new bumper.
- e. You'll notice on the driver side that the cabin vent is now exposed. It is the bright colored plastic oval hole in the lower section of the body. We recommend that you shoot it with a layer or two of black spray paint because at some angles it may be slightly visible once our bumper is installed. If you have a light colored vehicle, you may also consider painting the entire area that was previously covered by the stock bumper. There will be about a ½" gap between your quarter panel and the top of the bumper to allow for frame/body flex and a coat of black in that area will help hide this gap.

3. Install Shrockworks Bumper:

- a. Place one of the provided ½" Stick Bolts inside each frame rail. These bolts will drop down through the unthreaded hole in the bottom of your frame rail once the bumper is in place, but for the time being do not actually drop the bolt through the hole. Simply place it inside the frame with 2-3" of the handle hanging out.
- b. Lift your new bumper into place, sliding the brackets in between the frame rails. The C-Shaped bracket welded to the frame brackets of your bumper will rest just inside the open section of the frame at the end of the frame rails, supporting the bumper.
- c. Line up the slots on the bottom of the brackets with the corresponding holes in the frame. You may now drop the stick bolt down through its hole in the frame and bumper bracket (the hole closest to the front of the vehicle. Also thread in the 4 M12 – 1.25x35mm bolts with a SAE washer and lock washer on each bolt. Do not tighten hardware yet.
- d. Adjust the bumper's forward to back position, making sure that the bumper is close to the body, but not contacting. Keep in mind that the bumper will move independently of the body since it is frame mounted, so you'll want to leave some wiggle room.
- e. Once you are satisfied with the forward to back position of the bumper, tighten up the M12 hardware and the stick bolt also with a SAE washer, Lock washer, and ½" nut. At this point you will want to drill the hole for the bottom bolt closest to the rear of the frame and fasten it using one of the ½" x 1 ¼" bolts provided in combination with a ½" serrated flange nut just inside the frame rail.
- f. Snug up the bolts, and check to make sure your bumper wings are level and even with the body. If any adjustment is needed, you can loosen the bolts and place washers between the brackets and frame to shim the bumper in the appropriate direction. IE: If the front of driver side wing is higher than the rear of the driver wing, place washers at forward most hole of bracket on driver side. Tighten bolts and recheck alignment.



- g. Close your hatch to check clearances, and once you are completely satisfied with the bumpers location and alignment, drill the mounting holes for the bolts that go through the outside of the frame using the rear most hole of the bracket as a guide hole. Make sure that your bit is inside both holes, and that you're drilling into the frame, not the bracket. Fasten with the provided $\frac{1}{2}$ " x $3\frac{1}{2}$ " bolt.

4. Install Bumper Wing Supports:

- a. Mount the wing support on the front side of the mounting plate that is inside the bumper wing. Use the provided $\frac{1}{2}$ " x $1\frac{1}{4}$ " bolts with SAE washers and flange nuts to mount the wing support to the mounting plate with the flange nuts toward the front. Do not tighten hardware yet.
- b. Use provided $\frac{3}{8}$ " hardware to mount the support to the frame side. You can use the rectangle hole in the frame just in front of the support bracket as an access hole to fish the $\frac{3}{8}$ " stick nut into the back side of the hole. Push support bracket up so that the tab on the bottom side is flush against the bottom of the frame and snug up all hardware.
- c. Drill the $\frac{1}{2}$ " mounting hole in the bottom side of the frame and fasten with $\frac{1}{2}$ " x $1\frac{1}{4}$ " bolt, corresponding hardware and $\frac{1}{2}$ " stick nut.
- d. Check gap between inside edge of bumper wing and body. You may want to loosen up hardware at the bumper side of the support and either push the bumper in or pull it away from the body while re-tightening hardware. Having an extra set of hands to do this is helpful.
- e. Once you are satisfied with alignment, go back and fully tighten all hardware.



5. Install Tire Carrier Arm:

- a. First, use the provided grease packets to lubricate that T-pin hole and hinge collar. Use one full packet for each. Apply most of the grease for the T-pin through the bottom side of the arm so that it isn't pushed out the top when the T-pin is inserted. On hinge collar, apply grease to inside of brass bushing, and around the top and bottom edge of collar where bronze washers sandwich collar.
- b. Insert T-pin's pin and spring portion through the bottom side of the arm and thread T-handle on at top side.
- c. Install $\frac{1}{2}$ " plastic gate stop pad on face of bumper with $\frac{1}{4}$ " Flat head cap screws and corresponding hardware, and install $\frac{1}{4}$ " plastic gate slide on top side of latch plate so that the tire carrier arm can rest on it in the closed position.
- d. Place the two 1" bronze washers on top and bottom of the hinge collar and slide assembly between hinge support mounting tabs on bumper. You will have to lift the T-handle up so that the pin slides over bottom tab. Let latch side of arm rest on the plastic gate slide.
- e. Drop 1" bolt with a 1" SAE washer in from the top side of hinge support tabs and thread 1" nylock nut with SAE washer on bottom side. Tighten 1" bolt until desired resistance is achieved in tire carrier arm movement. The more you tighten the bolt, the greater resistances will build.
- f. Install latch with $\frac{1}{4}$ " x $\frac{3}{4}$ " bolts and $\frac{1}{4}$ " lock washers.
- g. Install inner slide of tire mount, there are 4 different height settings to choose from. For reference, the truck in the last picture of these instructions is pictured with the tire mount in the second from highest setting with a 32" tire. It can be raised another $1\frac{1}{4}$ " or lowered as much as $2\frac{1}{2}$ ".

- h. Install outer tire mount slide over inner slide snugging up bolts but leaving them loose enough so that the slide can still move back and forth. Hang your spare tire on the tire mount and snug up lug nuts and push tire as close to the tire carrier arm as possible. Remove lug nuts and tire, and crank down all tire slide hardware. Re-install tire.
- i. Install LP/3rd brake light and LP on LP bracket, and mount assembly to tire mount with ¼" carriage bolt and ¼" wing nut.
- j. Remove passenger side tail light assembly and route new LP light harness down tire carrier arm, through hole behind hinge assembly and up to factory harness behind tail light. Tap LP harness into the corresponding colors in OEM harness. Check that all lights are operating as intended, and reinstall tail light making sure not to crimp harness.
 - **Tail/LP light (Green)** -
 - **Brake(Red)** -
 - **Ground(Black)** -
- k. Install the aluminum bump plate in OEM LP location and the adjustable rubber bumper on its bracket in center of tire carrier arm. Adjust it out so that it has a fair amount of preload on the bump plate when tire carrier is in the latched position.
- l. (Optional) Install hi-lift jack with the base pointed down on the driver side using provided ½" carriage bolts and ½" wing nuts
- m. (Optional) Install Jerry can mount with 3/8" hardware. You will need to provide your own lock for the security strap.



6. Final Step:

- a. Make sure all hardware is tight and all parts are secure.
- b. GO WHEELIN!

