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2005 - 2015 Tacoma High Clearance Rear Bumper Install Guide

Congratulations on purchasing your new 4x Innovations Tacoma High Clearance Rear Bumper. Included in this manual are package contents, surface coating recommendations, and installation guide. This document consists of a guide and is not an absolute instruction manual. Professional installation and attention to details is required for best finished results. Cutting of the factory bed sides is required and is performed at the purchaser's sole responsibility. If you have any questions please call us at 1-608-348-4880.

Package Contents:

1 x High Clearance Rear Bumper	10 x 1/2" Flat Washers
1 x License Plate Mounting Plate	2 x 5/16x1 Hex Bolts
2 x White LED Bolt Lights w/ Bullet Quick Connect	2x 1/4x1 Hex Bolts and Nuts
2 x 5/16 Nylon Nuts	1x RV Trailer Wire Harness Mount Bracket
2 x 5/16 Zinc Plated Nuts	2 x 22-3/4" Edge Trim Strips
10 x M12x1.25x35mm Hex Bolts	2 x 10-3/8" Edge Trim Strips

Caution:

1. This installation should be performed by a qualified professional.
2. Always wear proper Personal Protective Equipment, including but not limited to Closed Toed or Safety Shoes, Safety Glasses, Hearing Protection, Face Shield, and Gloves.
3. Always have a fire extinguisher in reach while working in and around your vehicle. Interior panels are made from vinyl and other plastics which burn VERY easily; under carriages can be covered in oil and road grime which also burns easily.
4. Working around vehicles is inherently dangerous. You and the installer are responsible for your actions. Take general care while working on a vehicle.

Coatings: Note: Note: ALWAYS check fitment BEFORE painting parts, painted parts are NOT returnable for any reason! For optimum coating performance follow coating manufacturer's instructions.

- A. On the cheap, quick and easy: Simple spray paint.
This method is an economical method to coat your new Rear Bumper. Any top quality spray paint rated for metals can be used. In our shop we use Rustoleum Professional Metal paint.
- B. POR-15, KBS Coatings or similar moisture cured polymers:
These professional coatings are highly durable and can be touched up if scratched. Most are formed as multi part primer, color, and top coats that are abrasion, and heat resistant. They are available online, usually directly from the manufacturer.
- C. Powder Coating:
Powder coating consists of spraying a powdered paint onto the parts and baking the powder to the part. This process must be performed by a qualified business to have proper adhesion. This process is typically costly. Powder Coat is stronger than typical paint but WILL get scratched on a rear bumper and offers little possibility for quality touch up once scratched. 4x Innovations prefers moisture cured polymer paints over powder coat because of this fact.

List of Required Tools:

White or Silver Permanent Marker	1/2" Box Wrench
Tape Measure	#2 Phillips Head Screwdriver
Straight Edge	2x 12" long 2x4 or other material with equal thickness
Masking Tape	2x C-Clamp
Grinder with Thin Cut Off Wheel	File
Ratchet with 10mm, 19mm, 7/16" and 1/2" Socket	Anti-Seize



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Touch Up Paint

A friend, forklift and jack stands to help lift heavy stuff

Removing Factory Rear Bumper

1. Using a 10mm socket, remove the Brake Light housing assembly by removing the two bolts located inside the tailgate opening.
2. Unplug the license plate and trailer hitch wiring harnesses.
3. Place jack stands under the bumper for support.
4. Using a 19mm socket, remove the 3 bolts on each side of the bumper mounting bracket. Leave one in place on each side to help hold the bumper.
5. If you have the stock hitch, use a 19mm socket to remove the 2 bottom bolts on the bottom of each frame rail.
6. Check to ensure all wiring is free and clear of the bumper.
7. While holding the bumper in place, remove the remaining bolts and slide the bumper straight down to the ground.

Prepare for High Clearance Rear

Perform steps 8-16 on each side of the truck.

8. Loosen rear portion of rear inner fender well and flex out of the way for now.
9. With a 10mm socket, unbolt outer fender support. Shown in Figure 1
10. At the rear corner of the bed, measure down 17.5 inches from the outside edge of the bed liner and mark this location.
11. At the front of the fender opening, measure down 18 inches from the outside edge of the bed liner and mark this location.
12. Carefully stretch masking tape between the two marks, with the bottom edge of the tape at the top of each mark. Being sure the tape forms a straight line. Use your straight edge to ensure the line is straight.



Figure 1. Inner fender support bracket



Figure 2. Rear bumper relief cut. Drawn 1 inch lower than first cut should be.



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13. Draw out the pattern shown in Figure 2 for the inner bumper relief area. Note your first cut line will be 1 inch lower than shown.
14. Double check your measurements and that your line is straight.
15. Once comfortable with the layout make the first cut along the edge of the masking tape. Using a grinder with a cut off wheel. Do NOT use a reciprocating saw for this cut! A reciprocating saw will pull the edge of the sheet metal, making for a very jagged cut that will show as ripples in the paint
Caution: the cut edges will be very sharp! Use a file to debur the cut edges.
16. Cut out the rear bumper relief cut area so the top edge is in line with the bed side cut.
17. Place a 2x4 or similar block on the hitch support gusset of the bumper. This block will act as a spacer to space the bumper down from the frame.
18. Put your C-clamps under the back of the truck.
19. Lift the High Clearance Bumper to the frame, and clamp from the bottom frame flange to the bottom of the hitch support gusset to hold the bumper in place. Ensure the gusset plates are parallel with the bottom of the frame.
20. Inspect the all around fit of the bumper with the initial cut. If you're using a 2x4 (1.5" spacer) you should have about 3/4 inch to 1 inch of gap between the top edge of the bumper and the sheet metal.
21. On both bed sides, mark a line that is spaced up from the top edge of the bumper. The spacing for this should be the height of your spacer block plus 3/8 inch. You can use a third spacer block plus another shim, or hold your marker against a square and slide that along the top of the bumper.
22. Carefully remove the bumper.
23. Using masking tape, tape along the top side of the cut line to help protect the paint that will remain.
24. Check that the cut line is straight. This cut line should be about 17 inches down from the outside edge of the factory bed liner at the front, and about 16.5 inches down from the bed liner edge at the rear.
25. This is the final cut, ensure you're happy with the alignment before proceeding!
26. Once happy with the alignment and location of your cut marks, make the final cut. Again use a grinder, not any sort of saw. **Caution:** the cut edges will be very sharp! Use a file to debur the cut edges.
27. Debur the edges using a file.
28. Lightly coat the 10x M12x1.25x35mm bolts with anti-seize. Place bolts and 1/2" washers under the back of the truck.
29. Lift the bumper into position and attach with the bolts and washers, with the washer between the head of the bolt and the mounting plate of the bumper.
30. Check the fitment of the bumper and ensure you are happy with the final result. Make any necessary corrections to the cut line.
31. Touch up the cut edges with paint for corrosion protection.
32. Once happy with the fitment, tighten all bolts to 90ft-pounds.
33. If using the RV trailer wire harness socket, insert the socket into the bracket and secure using 2 or 4 1/4inch hex bolts and nuts.
34. Secure mounting bracket to bumper using 2x 5/16 hex bolts, using the mounting location provided on the inside face of the hitch support tube. The bracket can be mounted facing down for a flush to bottom socket location, or mounted facing up for a recessed socket location.
35. Plug RV socket into wire harness.
36. Place 1x 5/16 steel nut on the LED Bolt Lights. Run this nut to the base of the bolt head to use as a spacer.



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37. Place the LED Bolt Lights through your license plate, through the mounting plate and thread into the bumper.
38. Secure each LED Bolt Light into place with the Nylon nut on the back side. Do not over tighten!
39. Splice each light into the factory wire harness for the license plate lights.
40. The license plate mount and LED Bolt Lights can be removed when off roading to protect both your license plate and the bolt lights.
41. After allowing touch up paint on cut bed sides to dry, install the edge trim for a clean finished look.

Congratulations You're done! Enjoy you new High Clearance Rear Bumper!