



“TrailGator” REAR BUMPER INSTALLATION INSTRUCTIONS

2010+ 4Runner

Version 3.1.0 - December 2018

Thank you for purchasing the Southern Style OffRoad Toyota 4Runner 5th Gen Modular Rear Plate Steel Bumper. It will be necessary to make adjustments to the vehicle to ensure proper fitment and strength.

Tools required:

- 10,12,13,17 mm and 5/8" socket/impact
- Socket extension and knuckle
- Flat and Phillips screwdriver
- 12-14 16-gauge butt connectors
- 2 - 16 gauge quick taps
- Wire stripper and terminal pliers
- Grinder with cut off wheel and flap/tiger disk (depending on irregularity of OEM welds on frame)
- Optional car jack and 2 ft 2x4 to help with alignment

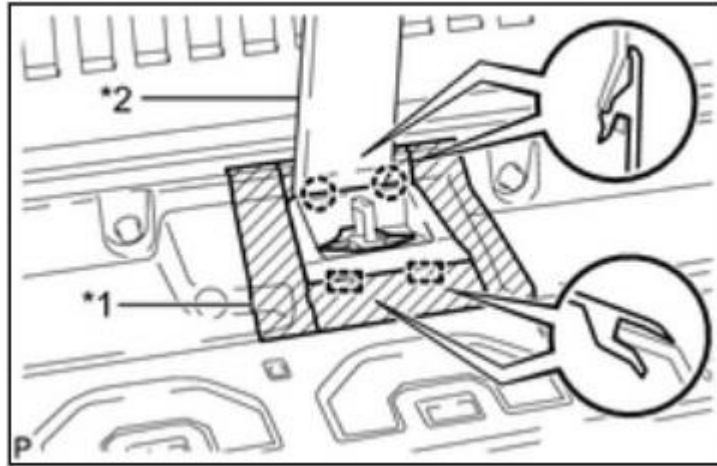
4-5 hours install time bumper only, 2-3 hours rear camera relocate

*****Do not coat any stainless steel surfaces, such as the TrailGate latching mechanisms and locking pin slide ramps. This will cause unnecessary friction and impeded ease of use and proper function of the TrailGator system.*****

Begin installation by carefully unpacking the bumper from the pallet and protective materials. Verify all required hardware and optional accessories are included.

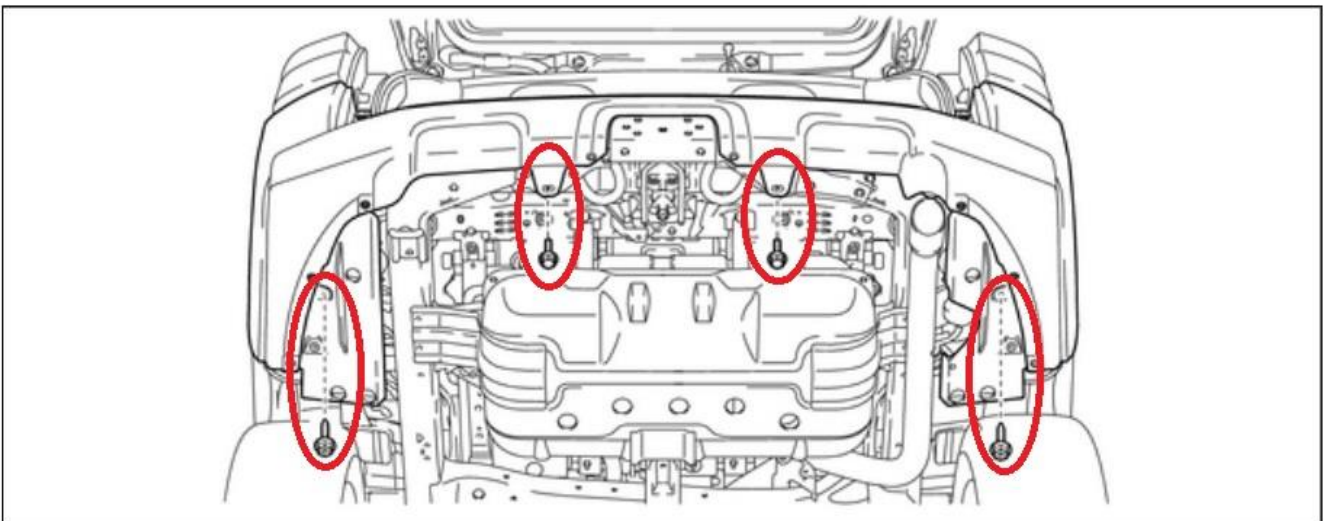
It is best to leave some protective material on the wings to protect your vehicle during installation. This installation procedure can be done with only 2 people, but 3 is optimal.

First, using a small flat head screwdriver or molding tool, unclip the hole cover at the designated areas and remove.

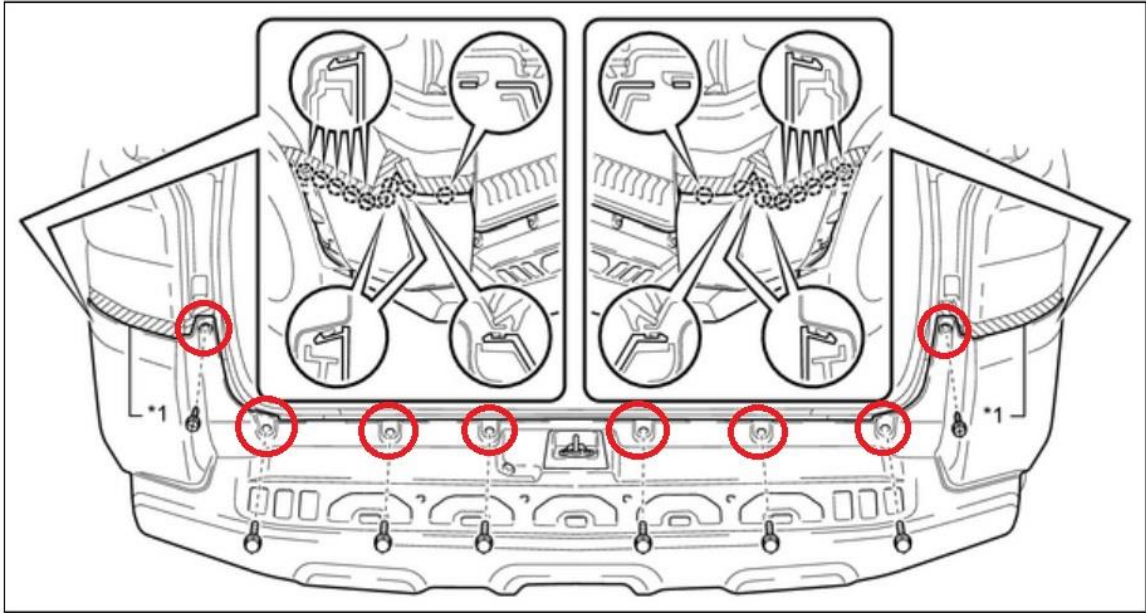


Remove the driver and passenger side mud flap.

Remove the two bolts and two screws underneath the bumper cover using a 10mm socket.



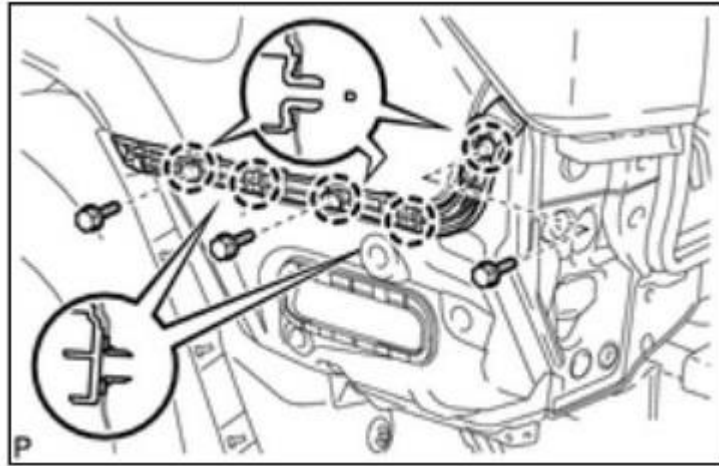
Remove the remaining (8) 10mm bolts and apply protective tape to the paint on the body along the seam line. Gently begin unlatching the plastic clips along the body of the truck to completely remove the bumper cover. Pull the panel at the rear of the wheels down and outward. The panel will pop right out. Do the same on opposite side of the vehicle, then work loose and pull panel outward from the tailgate area. Look to the image below for clarification on latching system.



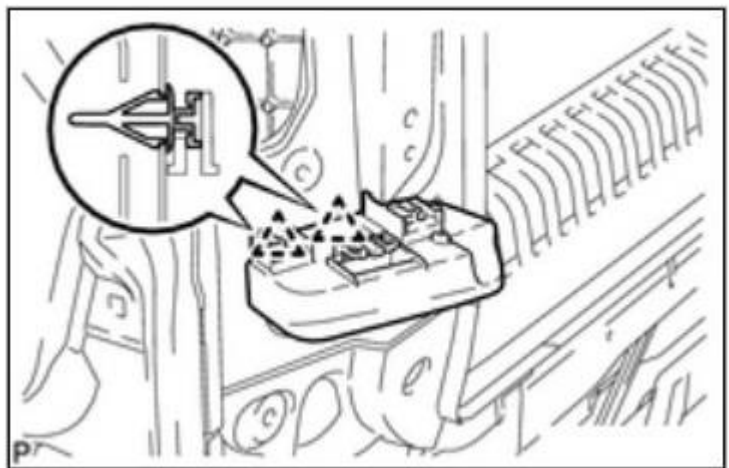
Your vehicle should now look like this:



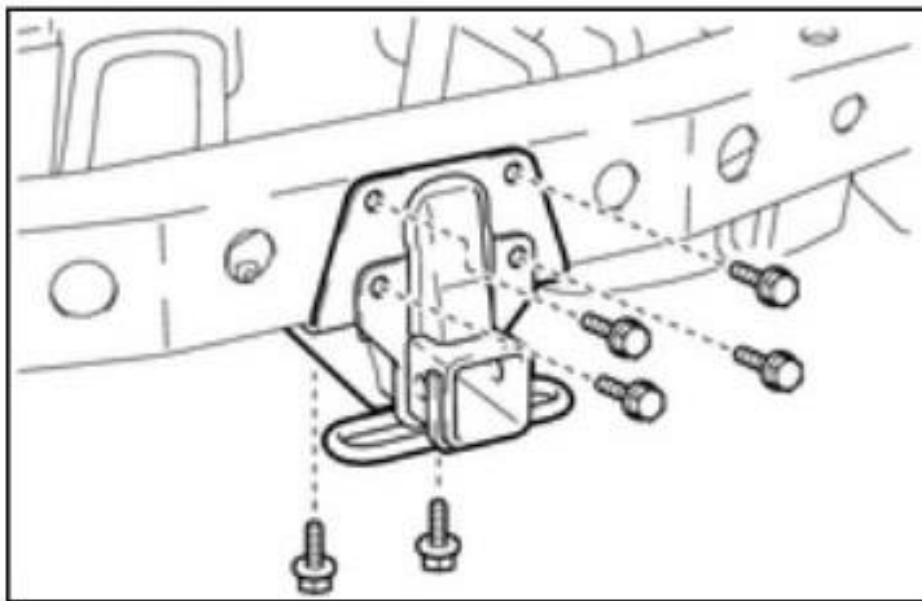
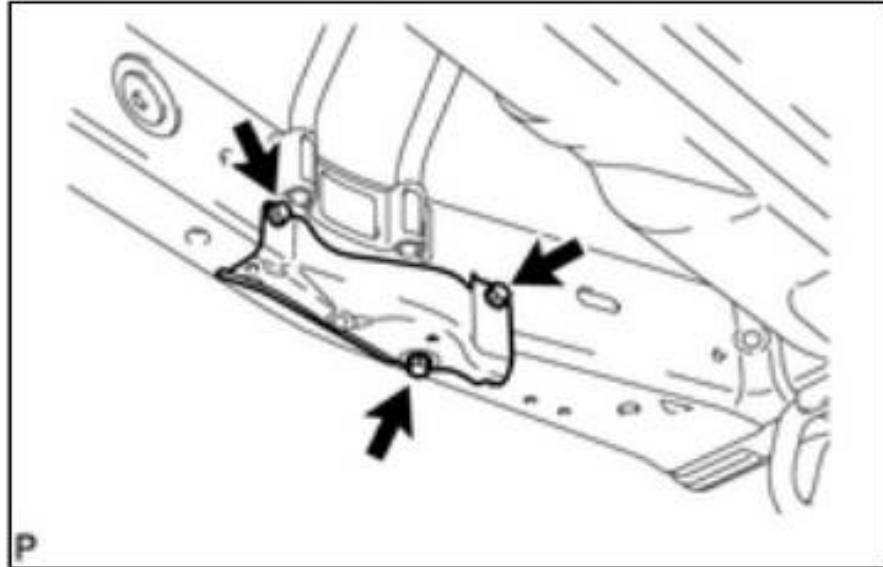
Remove the plastic side supports.



Remove the tail lights and the plastic bumper retainer under the tail lights. Access the tail light bolts from inside the truck behind the tail light access panel. Remove the 10mm nuts with an extended socket.



Remove all other brackets and reinforcements until you have a bare frame. These bolts will be 10mm and 12mm. You'll also need to remove the oem hitch receiver using a 17mm deep head socket with extension.



The factory u-shaped brackets to locate the spare tire will need to be massaged downward with a heavy maul or cut off entirely at or below the frame. Remove the tow hook bolted into the driver's side of the frame as well.



Remove the towing wire harness from its oem location and relocate using the supplied spacer to the rear of the frame as shown with supplied m8 bolt. There will be a captured nut in the frame that can be used for this purpose.

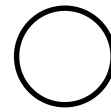
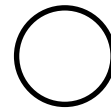
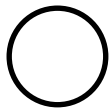
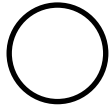


Ensure that the factory welds are smooth across the frame rails. Grind down any welds that prevent the 3/8" brackets from seating flat against the frame.



For integrated hitch bumpers only:

Using the supplied template, line up the bolt holes to the holes in the template and mark the inside rectangular pattern to be cut, FRONT and BACK of frame. You'll basically be notching a U out of the frame which is necessary because of the inner structure of the cross member at this point. There are concentric circles of steel welded front to back, that need to be cut out. **You may choose to have a welder re-plate the backside of the cross member with the provided 1/4" thick steel square sent with the bumper, although this is not necessary.**



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With the help of a couple of friends, carefully install the bumper onto your truck. Have two people hold it in place on each side, while the third person directs alignment and

inserts all **(10)** m12 bolts into their proper locations. **It is helpful to start with a single m12 bolt under each side of the bumper at the 3/8" frame brace.**

Position the bumper so that spacing is even on both sides and begin tightening the m12 bolts slowly starting from underneath center section and verify that the bumper does not move from its intended location during the tightening process. You may also elect to use the supplied shims between the frame braces and bumper's foot. There are (2) 1/16" shims and (2) 1/8" shims to get the body lines and bumper just right. Torque the m12 bolts to 100 ft/lbs. You can also torque the m8 bolts that were left loose to 30 ft/lbs at this point.

(Bolt on hitch only)

Once the bumper is located correctly and ALL (10) bolts are tight, remove the m12 bolts in the center of the bumper to install the bolt on hitch. The remaining (4) bolts near the wings will provide enough force to keep the bumper from moving during this process.



TrailGate Installation:

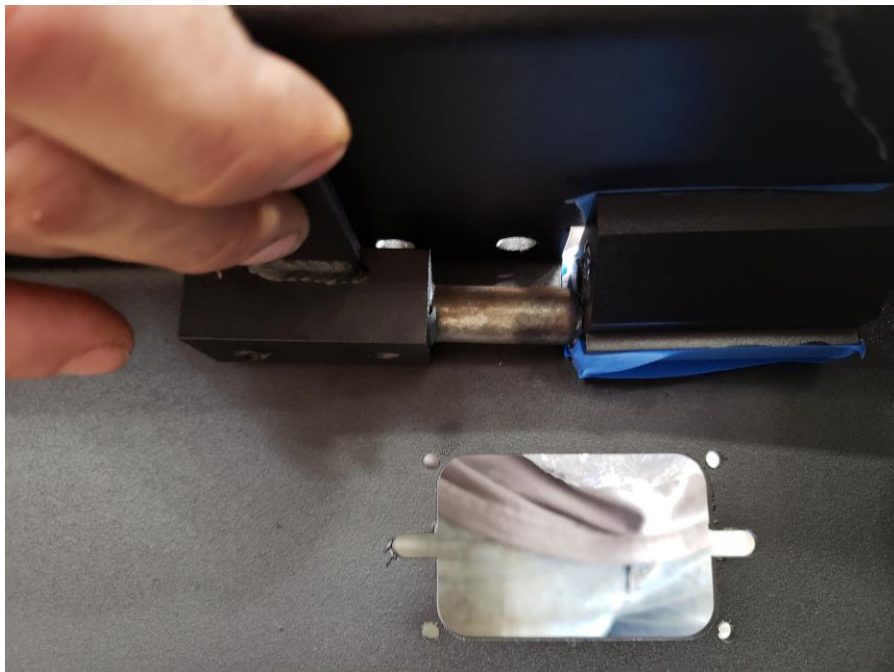
To help prevent scratching, line the hinges and hinge holes with 1 " inch painters tape.



Gently insert the TrailGator into the hinge holes. It will rest in the fully open position with no assistance.



Install The Zirk fitting pointed up and slide the ball bearings into the tailgate side of the hinge. Insert the hinges from inside the bumper with the installation handle at the top.



Use the provided black 3/8"-16 button heads and torque to **30 ft/lbs**



Loosely install the TrailGate latch stops and rubber bumpers on both sides of the bumper using the provide 3/8" black button head screws.

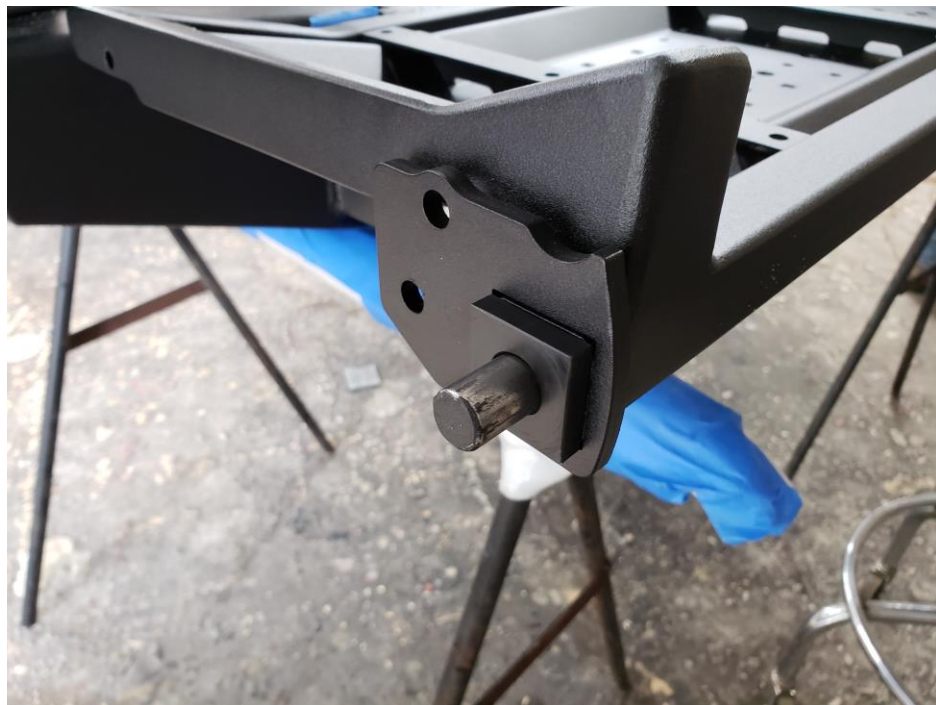




Insert the latching rod into the Trailgator as shown.



Slide the delryn bushings over each end and into the Trailgator. You'll want approximately 1" protruding from both ends.



Slide both the driver and passenger side latches over the protruding rod (do not tighten) and lift the Trailgate into the closed position. Manually engage the latches on each side and tighten the small latch bolts to 8ft/lbs and the 3/8" Trailgate stop bolts to 30 ft/lbs. Latch engagement and disengagement should be smooth and non binding. Adjust the rubber bumpers so that slight pressure is applied but not so much so that the latches do not operate correctly. **The stainless steel latches and stoppers should not have any coating at the engagement points as shown. It will gum up and cause unnecessary friction.**



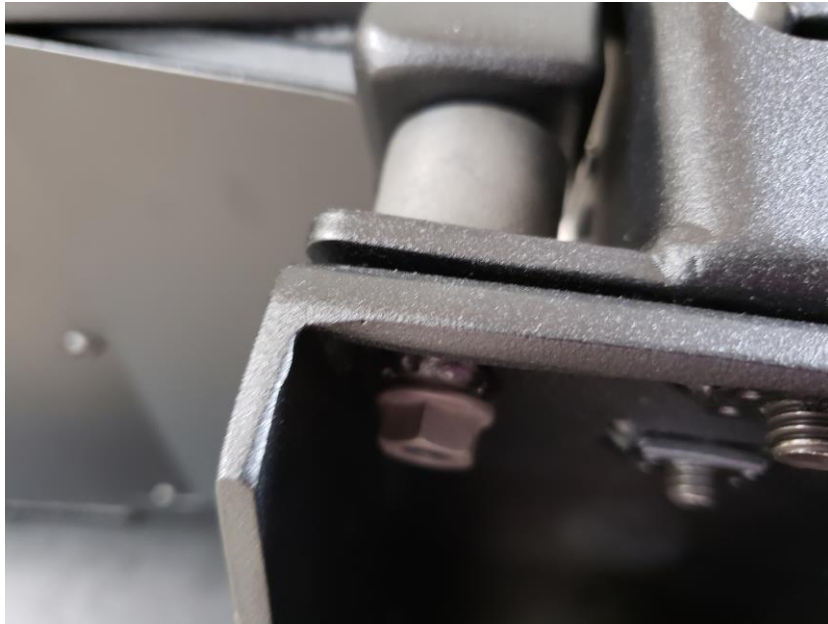
**Rubber
bumper**



adjustment

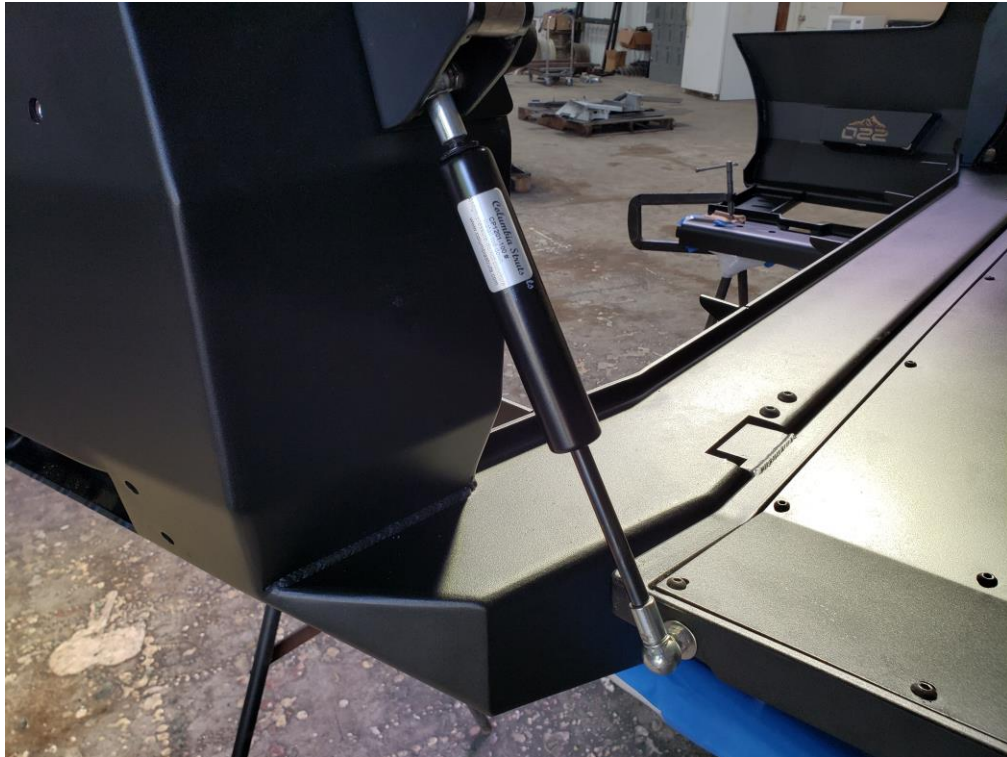


Once proper position is found, lock it in with the provided 3/8" nut.



Install the provided easy lift strut rod down as shown. The strength of the strut assistance can be upgraded depending on desired weight capacity.





Install
the

locking pin and slide the rubber handle onto the latching mechanism. Install the TrailGate backing plate using the supplied (19) 1/4-20 7/16" length black oxide bolts. Torque to 8 ft/lbs.



Gently pull back the rubber molding around the rear door.



Install the edge trim on each of the support legs as shown.



Lay the bumper to truck cover plate into place.



Finish installation using supplied black m8 bolts. Reinstall rubber door trim.



This will complete the TrailGator installation:



Swing Arm Installation:

Bolt the swing arm base onto the passenger side of the bumper using the supplied 7/16" grade 8 bolts. You will need a 5/8" socket, extension and knuckle.





Install the 4 oil-impregnated bronze bushings, top and bottom of each bolt location. Install the locking pin ramp. Torque to 8ft/lbs.



Carefully slide the swing arm into position and use the provided 3" long 7/16" bolts and locking nuts. Don't apply too much torque, as the swing arm will be more difficult to open and close than it needs to be.



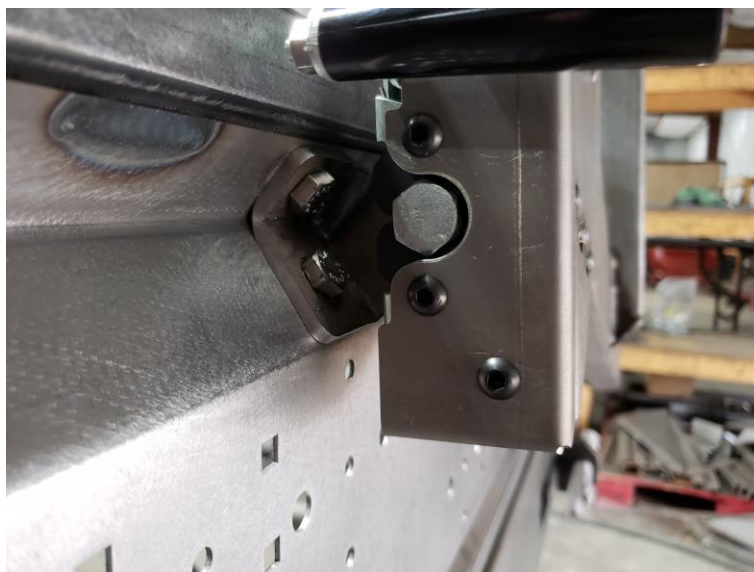
Loosely install the slam latch locking pin as shown.



Install the slam latch, cover, handle, and rubber stop as shown. Use the black 1/4"-20 x 1.25" long bolts. Torque to 12-15 ft/lbs.



Close the swing arm and align the slam latch pin to be directly in the center of the slam latch. Adjust the rubber bumper to provide cushion while not inhibiting the catch mechanism. **The weight of a spare tire may necessitate slam latch pin adjustment.**



Hi lift mount installation

Slide the hi-lift mount over the swing arm near the base. Secure by installing the (4) 3/8"-16 black oxide button head bolts. Torque to 12-15ft/lbs.

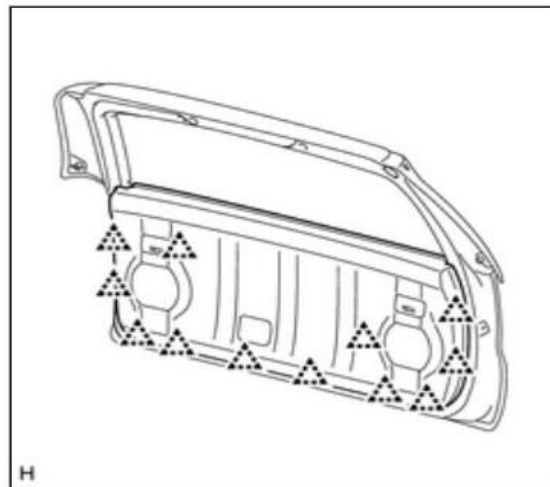
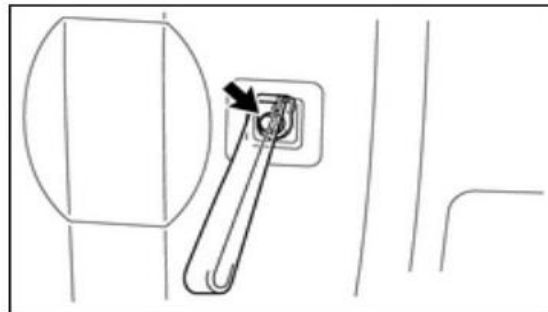
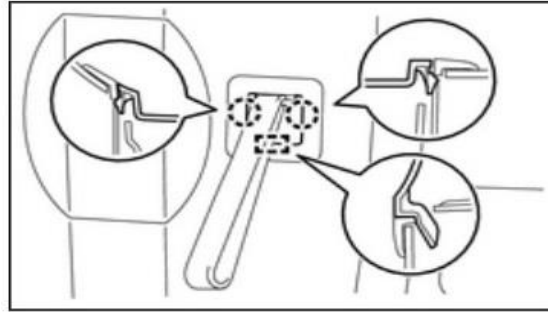




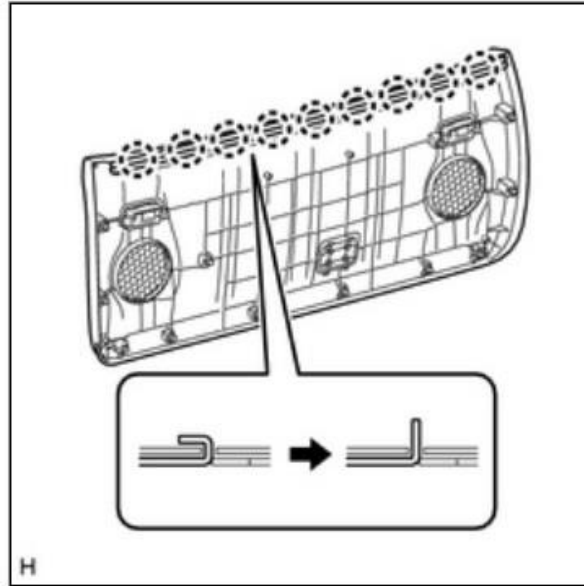


Optional Back up camera relocate:

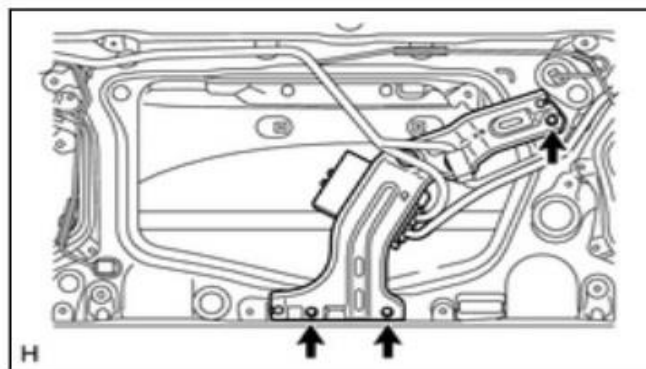
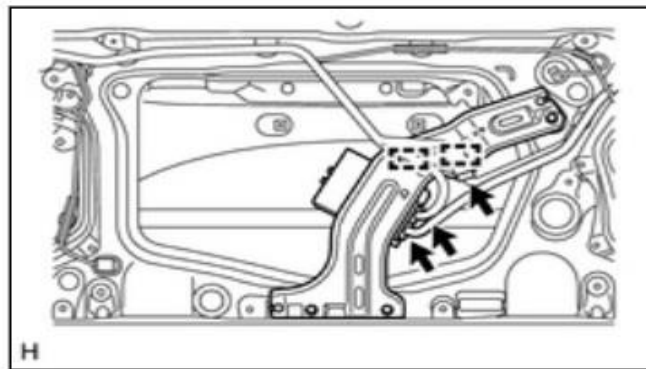
After finishing installation of the passenger side tire carrier swing arm, it is time to tackle the OEM camera relocation. Begin by removing the rear door panel.



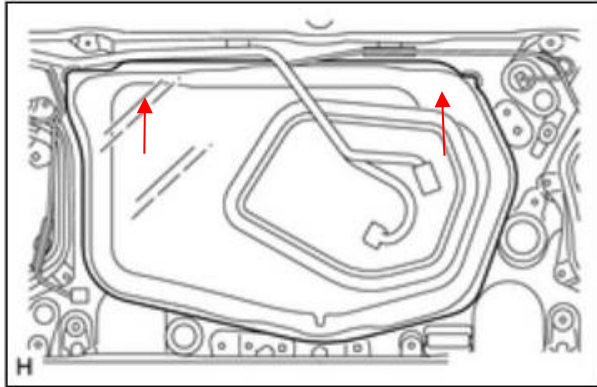
Remove the strap cover and also the 10mm bolt that secures the strap to the door. Gently pop the panel off the door at the indicated locations. Lift the panel off the rear door by detaching the (9) claws around the glass weather-stripping as shown below.



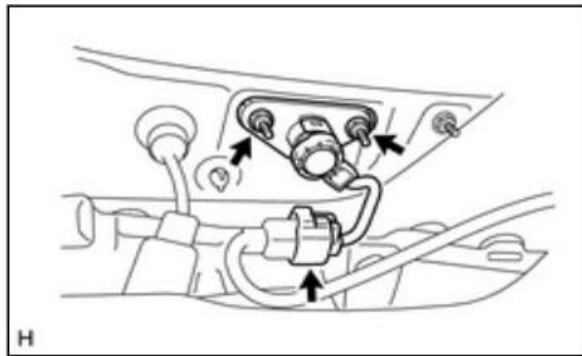
Disconnect the (3) connectors and disengage the (2) clamps. Remove the (3) screws to disengage and remove the ecu bracket.



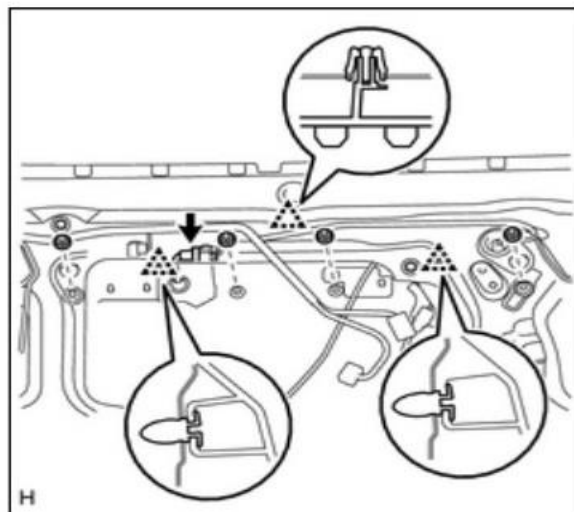
Quickly pull down the weather barrier so that the sealant snaps instead of stretching to access inside the door.



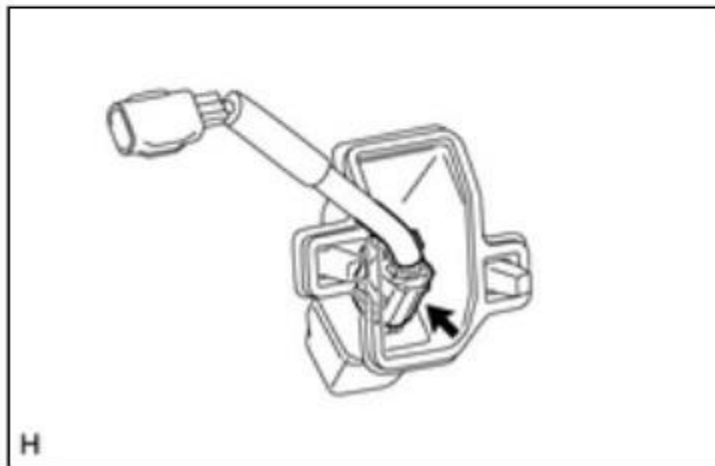
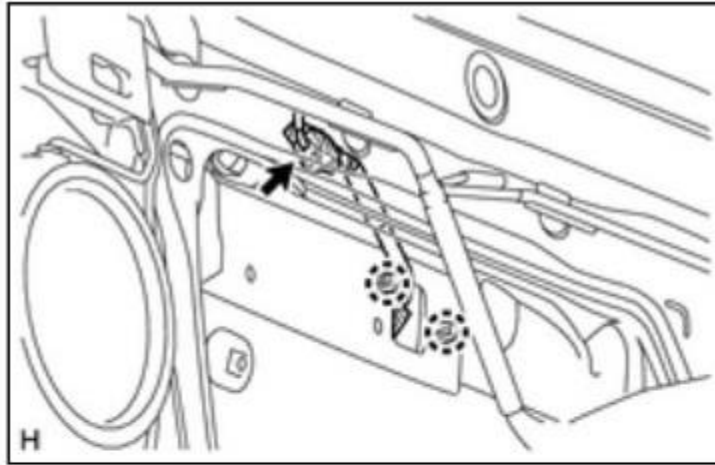
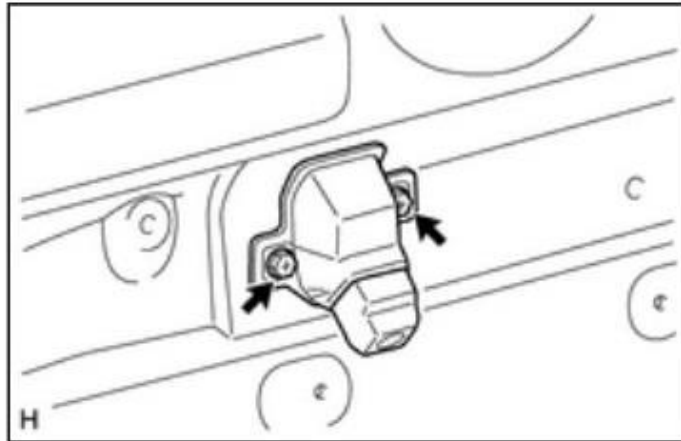
(NON PREMIUM VEHICLES) Remove the back door lock cylinder using a 10mm socket to remove the 2 nuts.



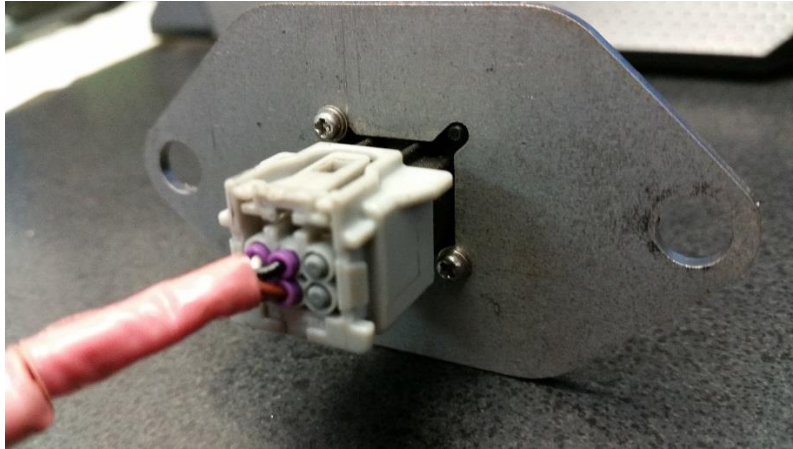
Remove the outside trim piece to finally access the rear view camera.



Remove the (2) screws and disconnect the harness from the oem wire loom.

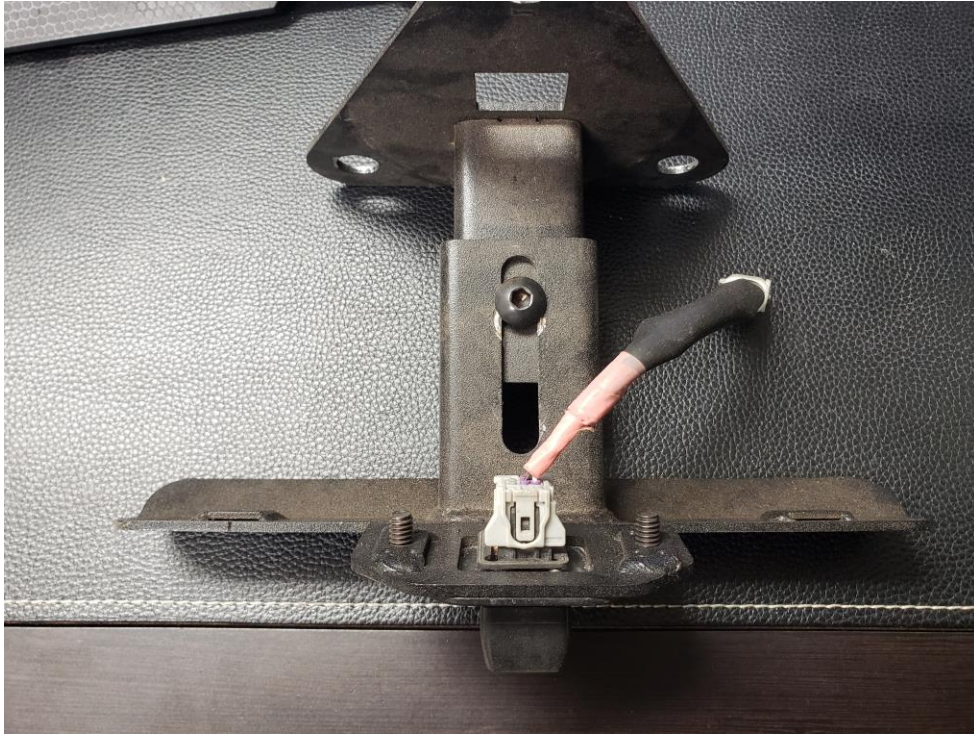


Remove the oem camera from the plastic housing. Using the small oem screws that are found in the back of the camera, mount the camera to the relocation kit bracket .



Mount the camera bracket to the license plate bracket provided in the relocation kit.





Cut the OEM wiring harness nearest the plug still attached to the rear door to splice in the lengthened SSO harness. **It is important that you make this cut so that there are (4) wires and not (3).** One of those wires is a shielded cable that splits off into (2) near the electrical connector. Once again, make sure you make the cut where there will be (4) wires on both sides of this cut. You may need to trim away some of the black protective loom.



You will basically be extending these (4) wires so that they reach the new camera location in the swing arm. The plug that is cut from the OEM harness (circled in red) will be used again at the new camera location. This allows for replacement of the camera itself by just unplugging the connector.

Using the 15 ft of supplied 5 wire extension section, begin by running a fish tape/welding wire up the rear doors passenger side. Have it enter the wire loom grommet nearest the passenger side at the headliner. **It helps to use a grease or petroleum on the wires to aid in sliding it through the very long passage.** You'll want to terminate the extension in the passenger taillight area with the female end of the 6 way plug.



Use the heat shrink around the supplied wire harness. Leave approximately 8-10 inches of wire and plug hanging out of the passenger taillight area. Also use this opportunity to choose a wire from the harness to act as your license plate light. You can use a quick tap connection. Simply tap the positive wire from both the reverse light harness and backup light harness to extend those wires as well. You can access these wires directly at the light bulb housing.

The wiring harness provided allows for (5) connections:

- (1) license plate light
- (4) wires to lengthen/relocate camera

Be certain to remember the specific color of wire connected to each OEM wire from the (4) wire camera setup. If these wires are not reconnected exactly as they were disconnected the camera will not function correctly. It will be beneficial to have a voltmeter handy should you come across any electrical issues. Write down the color connections you choose. You'll need it later to hook up the camera connector to the extended harness.

CONGRATULATIONS! You've just successfully installed your Southern Style OffRoad Toyota 4Runner 5th Gen Modular Rear Plate Steel Bumper. There should be some gap between the bumper and the body of the truck to allow for flex during trail riding. This is normal.

Have a beer and enjoy your work!

Questions? Call (225) 726-7979 Monday through Friday 8:30am-4:30pm CST