

INSTALLATION GUIDE

JK Mule Rear Bumper w/ STC



Included Hardware:

- Rear Bumper
- Swing Arm Carrier
- (1) Hardware Bag
- (1) Door Mount
- (2) Frame L Brackets
- (2) Bump Stops
- (1) Bearing Kit
- (1) Coupling



Skill Level:

3/5 stars (Professional install recommended)



PREINSTALL NOTES:

Keep all stock bolts and hardware when removing stock (OEM) bumper. You will use some of them for the install. Be sure to check that races have been installed into the hub of the tire carrier. Comparison photos to assist in checking the race installment can be found on the last page of these install instructions (ref. Pictures 7A,7B).

Grease: We recommend using a water resistant-high temp grease on all bearings, seals, and cap threads.
IMPROPERLY MOUNTED OR OVER-INFLATED SPARE TIRE CAN VOID YOUR WARRANTY AND DAMAGE YOUR CARRIER.

Remove stock rear bumper and tire carrier:

1. Remove the spare tire on the vehicle.
2. Before removing the carrier make sure to un-plug the 3rd brake-light wire. This is done by opening the rear gate and popping the plastic ventilation access panel on the driver's side of the vehicle. Remove by pulling from the passenger side of the panel to the driver's side. Inside you will see the wiring connection. Unclip the wire connector and then pop the piece from the rear gate.
3. Remove the stock tire carrier - 4 bolts on each side of the unit.

With the stock rear bumper and carrier removed you can now prepare to install your Expedition One rear bumper and Smooth Motion Spare Tire Carrier system.

First, you'll need to remove the tow hooks (if applicable) from the rear frame.

Insert the provided L shaped brackets in the rear frame facing outward, one in each frame rail respectively. The nut in the bracket should line up roughly in the center of the large oval shaped 3/4" hole in the side of the frame.

THIS PART IS EASIER WITH ANOTHER PERSON HELPING YOU.

You may now install the rear bumper. If you have a stock receiver hitch you are going to have to slide the bumper on while lifting the back of the bumper up slightly to clear the hitch - 1 person on each side of the bumper will make this step quick and easy.

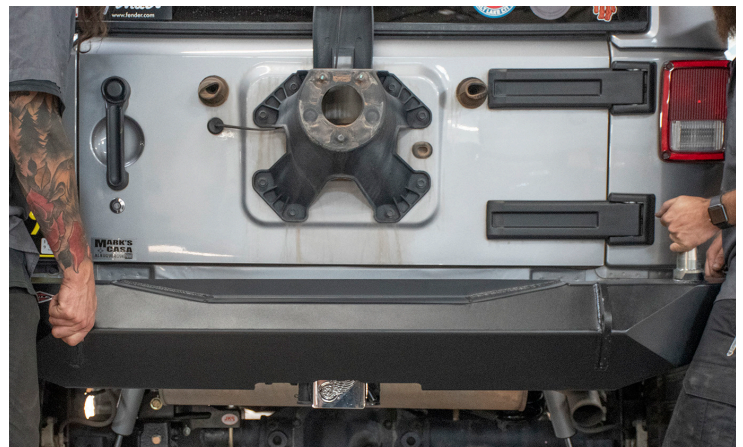
FIG 1A



FIG 1B



FIG 1C



Double check for proper spacing and alignment between the bumper and vehicle body.

Put OEM mounting bolt that came from the outside mounting holes back in place. Do not tighten down fully. Leave some room for adjustment.

Inside the bumper on the outer ends (directly back from the stock mounting position mentioned above) is the mounting position for the L- brackets that are inside the frame. Using the 2 5/8" x 2" bolts and 1 5/8" washers (one for each bolt), install the bolts but again, do not tighten all the way.

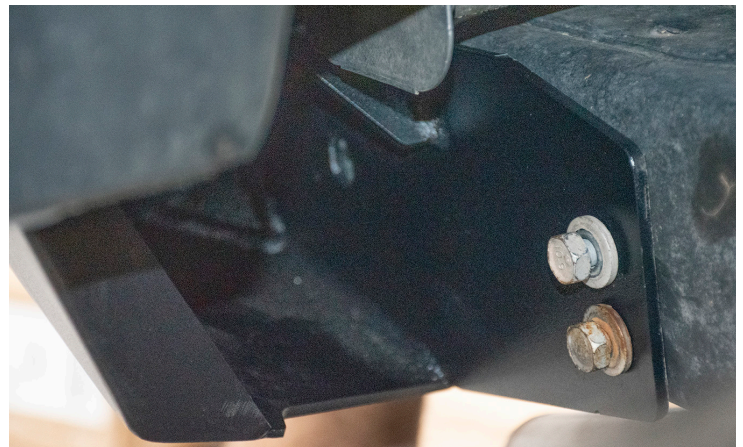
FIG 2A



FIG 2B



FIG 2C



Next, turn the carrier arm upside down.

You will need to use marine-based grease to grease the lower bearing before placing it inside the arm hub (Fig 3A)



FIG 3A

Take the grease seal and firmly place it on top of the greased bearing (Fig 3B)



FIG 3B

You can now carefully place the swing arm onto the spindle.

It's recommended to keep some fingers underneath the arm hub so that the grease seal and bearing don't fall out while placing the arm!

You may need to wiggle and swing the carrier arm for the bearing to sit correctly onto the spindle.



FIG 3C

Place the greased upper bearing onto the spindle followed by the large washer (Fig 4A). Shown below is an example hub assembly of all the spindle parts.



Place the large spindle nut and tighten down. Don't overly tighten this nut!

To finish off, rub provided anti-seize to the hub cap threads and place the spindle hub cap onto the spindle assembly.

*Don't over tighten the cap

FIG 4A



FIG 4B



FIG 4C



Rear gate mounting plate: You will need to adjust the mounting plate so before installing you may want to put some masking tape on the gate to protect it from being scratched during adjustment. Using the stock mounting points and stock mounting bolts of the OEM tire carrier, on the driver side of the tail gate, install the mounting plate but do not tighten all the way.

NOTE: IF YOU HAVE A HEAVY TIRE AND WHEEL COMBINATION (OVER 150LBS) YOU MAY WANT TO WAIT UNTIL AFTER YOU INSTALL THE SPARE BEFORE ADJUSTING THE DOOR PLATE. THE EXTRA WEIGHT CAN SLIGHTLY ALTER THE HEIGHT WHERE THE PLATE SITS ON THE DOOR.

This part of the install is crucial to the function of the rear tailgate and carrier. Pay attention!!

With the rear gate and carrier in the closed position, you can now start the adjustment of the coupling. Overall, you want the carrier to be snug against the rear door. The coupling is the key to this, but it requires a balance. Adjust the coupling so the door is open and is 1 to 2 inches from closing when the carrier initially contacts the bump stops on the tail gate (this may need to be adjusted later when the spare tire is mounted to the carrier). Install the 4" bolt on the tail gate side. You want the carrier to shut and be snug but not overly tight. **DO NOT TIGHTEN THE BOLT WITH NUT!** YOU'LL PROBABLY HAVE TO TAKE IT APART AGAIN.

With the carrier in the closed position and everything looking even, tighten the forward most bolt on the bumper **DON'T OVER TIGHTEN**, you may need to undo them again to adjust the alignment. There are 2 methods for getting proper pitch. Most of the time, the first method achieves the correct pitch first thing. With the tire carrier installed and with the door in the closed or almost closed position, the carrier needs to be contacting both bump-stops evenly. If the contact is even and the door swings with little or no binding the carrier pitch is good and the installation can now be completed. If it's tilting away from the vehicle, push in the top part of the carrier so that both bump stops hit evenly (you will most likely need help from another person in order to tighten the bumper bolt to keep the carrier in its correct position.) Once it is tight, check the swing. If there is little or no binding you may move to the post install section and finish the install.

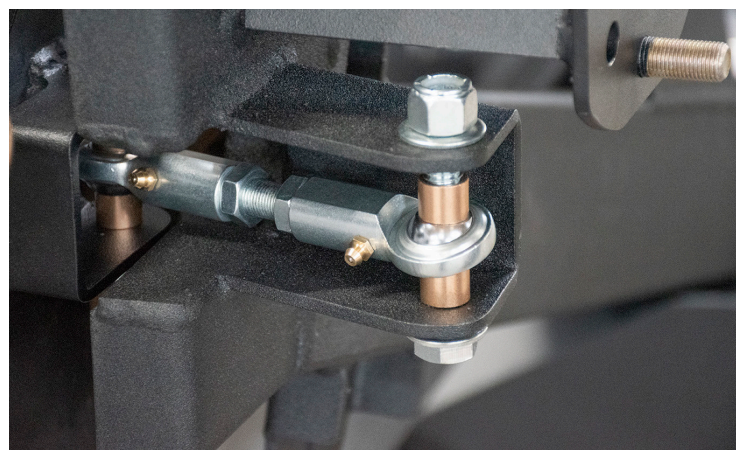
FIG 1A



FIG 1B



FIG 1C



Bumpstops:

Install the rubber bump-stops on the rear tail gate of the vehicle using the stock tire carrier bolt pattern and 8mm socket cap screws.

The top most mounting point on the passenger side and the 3rd mounting point down on the passenger side are the 2 locations for the rubber bump-stops. You may also use the bottom most hole for the lower bump-stop if so desired.

NOTE::: You may want to come back and check all the bolts in a few weeks or after a nice off road trip. The bolts can loosen a bit.

If you have any additional questions for feedback, email us at info@expeditionone.biz or by phone 877.366.3099

Thanks for choosing Expedition One!

FIG 2A



FIG 2B



FIG 2C