

Ultimate Rear Shock Relocation Kit

Tools Required:

- 21mm socket and ratchet
- 21mm wrench
- (2) ¾" wrenches
- 13mm socket and ratchet
- 9/16 socket and ratchet
- 9/16 wrench
- 3/32 Allen Key Wrench
- Grinder with cut-off wheel and sand disc
- Tape measure
- Floor jack and proper jack stands
- T15 Torx bit
- 10mm socket and ratchet
- Trim Tool
- Welder

- Always read instructions thoroughly before beginning
- All welding should be done by a professional who is proficient with welding on modern vehicles
- Use safe practices and proper Personal Protection Equipment
- Inspect all shocks for leaks before installation. Have damaged shocks replaced before you begin!
- You will be welding near the fuel tank. Take proper precautions before welding

Prepping for install

Step 1: Pull vehicle on a large flat concrete surface. Disconnect the negative battery terminal. Jack up the rear of the vehicle enough to place jack stands under the rear axle. You will want to place jack stands inboard of the factory shock mounts, to insure they are not in the way later. Remove the rear tires.

Step 2: Remove the wheel liners using the T15 torx bit and trim tool. On the ZR2 and Bison trucks you will need to remove the fender flare to remove the liner.

Step 3: With the rear shocks still in the factory mounts, measure the distance from center of eyelet to center of eyelet on EACH shock and record this number below. You will use this number later when positioning the lower mount. Your measurements may vary side to side depending on how much fuel is in the tank, how much weight is in the bed, inconsistent jack stand heights, etc. **Therefore, it is important to measure both sides.**

You can remove the shocks from the factory mounts now. Note: if you have a diesel, you will need to remove the DEF tank to get one of the shocks out. This will add a bit of time to the job.

Driver Side:

Passenger Side:

Installing the upper mount.

Step 4: Before installing the upper mount, you will need to remove the factory bump stop striker pad that is welded to the frame. We have found it easiest to cut along the weld on both side of the pad. **Be careful to not cut into the frame. You do not need to cut all the way through, just most of the way.** Next, you can cut the mount down the center, all the way through. This lets you pry each side of the pad and it will break away at the weld. With the pad removed, you can grind down the weld smooth and paint the bare metal. ***Note: Removing the fuel tank is easy and recommended.**



Step 5: With the frame cleaned up and painted, you can now install the upper mount. Located the mount for the side you are working on. Place the mount over the frame rail and align the holes with the holes in the frame. On the driver's side, you will need to unbolt the brake line bracket and move the wiring harness out of the way. The upper mount will attach to the frame by sandwiching it with the backing plate. Bolt the two halves together using (8) 3/8 x 1 flange head bolts and nuts. With the holes in the frame aligned, you can tighten the 3/8 bolts. The brake line bracket can then have the hole enlarged to 3/8 and mounted to one of the upper mount bolts.



Installing the Lower Mounts

Step 6: (A second set of hands is useful here) Prep the axle tube for the lower mount by removing all paint and debris. Both lower mounts are identical and can be used on either side. With the axle tube prepped, hold the lower mount into position. Using the measurements from Step 3, measure from the center of the hole on the top mount and bring the center of the lower mount hole to meet your measurement. (Make sure you are using the measurement from the correct side of the vehicle) With the distance between the mounts set, measure from the face of the axle flange to the outer face of the lower mount. Set this distance to 3.5". Tack mount in place. *(Non-ZR2 Trucks will set this distance to 1.5")



Step 7: With the lower mounts tacked into place, install both shocks with factory hardware and supplied flange nuts. Double check all your measurements. Now is the time to adjust any bracket that may need it. Once you have confirmed all measurements, you can remove the shocks and weld the lower mounts into place. Take your time here and get good welds on all the mounts. Prep and paint the welds.

Be sure to follow proper procedures for welding on modern vehicles with electronics. You will be welding near the fuel tank. Take proper precautions before welding.

Installing the Bump Stops

Step 8: With the mounts installed and welded you can now install the bump stop.

Carbon Bump Stop: On the bump stop body, thread the lower retaining ring all the way down and remove the upper retaining ring. Slide the bump stop into the upper mount, reinstall the upper retaining ring and tighten the rings down. Using a 3/32 allen wrench, tighten the locking set screws on each retaining ring. Carbon Bump Stops are adjustable in height, depending on your lift, spring choice and tire size, you may choose to lower the bump stop, by adjusting the retaining rings. **Carbon Bump stops require a nitrogen charge. Do not operation the bump stop without nitrogen. We recommend a pressure of 150psi. Compressed air can be used temporarily; however it can contain contaminants that will ruin the oil in the bump.**

Timbren Active Off-Road Bumps: Using the provided hardware, take the long 3/8's bolt with a washer and install it through the Timbren bump from the bottom so the bolt sticks out through the top. Next, Timbren provides a large, cupped washer that will you slide over the bolt and face it so it cups the bump stop. We provide mounting spacers that adapt the Timbren bumps to our mount. Locate the bigger spacer and place it on top of the bump, over the bolt, with the step facing up. Take this assembly and pass it through the upper frame mount, sliding the step portion of the spacer into the tube on the upper mount. Now you can place the smaller spacer on top with the step portion down into the tube of the upper mount. Place washer and nut on the bolt and tighten.

Carbon Bump Stop:



Timbren Active Off-Road Bump:



Installing the Striker Pads

Step 9: Now that the bump stops have been installed, you can now replace the factory U-bolts with the new U-bolts and stiker pads. Start with preassembling the striker pad by loosely installing the slider plate using the supplied gold ½" bolts, washers and lock nuts. On ZR2 trucks the slider will go on the outside of the striker plate, on the non-ZR2 trucks, the slider will go on the inside.



ZR2



Non-ZR2

Step 10: With the striker plates pre-assembled, you can now remove the factory u-bolts and plates using the 21mm Deep Socket and ratchet. Place the striker plate on top of the leaf spring and align the hole in the striker plate with the pin on the spring. Install the new supplied u-bolts and tighten them down by jumping around to keep them even. Torque the U-bolts to 90 lb-ft. With the u-bolts tight, you can slide the slider plate down to the axle tube and tighten the bolts using $\frac{3}{4}$ " wrenches. ***Note: if the slider plates don't match up with the axle tube, just remove them and flip them around. Retorque the U-Bolts after 100 miles.**

Step 11: You can now reinstall the shocks using the factory hardware along with the supplied flanged nuts for the upper mount.



Removing the Factory Shock Mounts

Step 12: With everything installed, you can start removing the factory shock mounts off of the axle. We found the easiest way is to cut the brackets down the middle vertically, splitting them into two halves. Then score the weld with a cut off wheel, use caution not to cut into the axle tube. With the weld scored you can start working the bracket, with a hammer, back and forth to get the weld to crack and release the bracket. This leaves a small bit of weld that is easy to clean up.

****On the passenger side bracket**** do not remove the whole bracket. You will want to leave a small tab that holds the threaded hole for the e-brake cable bracket to bolt too! Mount and bend the E-brake cable bracket so the cable doesn't interfere with the shock. With the lower brackets removed and cleaned up, you can now prep and paint any bare metal.



Final Assembly

Step 13: To finish up, reinstall the fender liners. Some minor trimming is required to get them to fit around the upper mounts. They are easy to cut with scissors or tin snips. Be gentle when reinstalling as they can rip easily.

With the fender liners installed, you can reinstall the wheels and tires and torque the lug nuts to 140 lb/ft.

