

On the Rox Fabrication and Manufacturing

OTR Shackle Reversal Leveling Kit

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Instructions available online at
ontheroxfab.com



*Beginning note, our bolt hole specifications are tight. Die grinding powder coated bolt holes in our components may be necessary to install the bolts.

*Trimming on the bottom lip of the factory front bumper is required for the Shackle Reversal Crossmember.

*On the Rox Front bumper with receiver hitch will not clear the Shackle Reversal Crossmember.

*Use Anti-Seize on bolts.

*These instructions serve as a guide; the installer and user assume all responsibility for the installation of these suspension components.

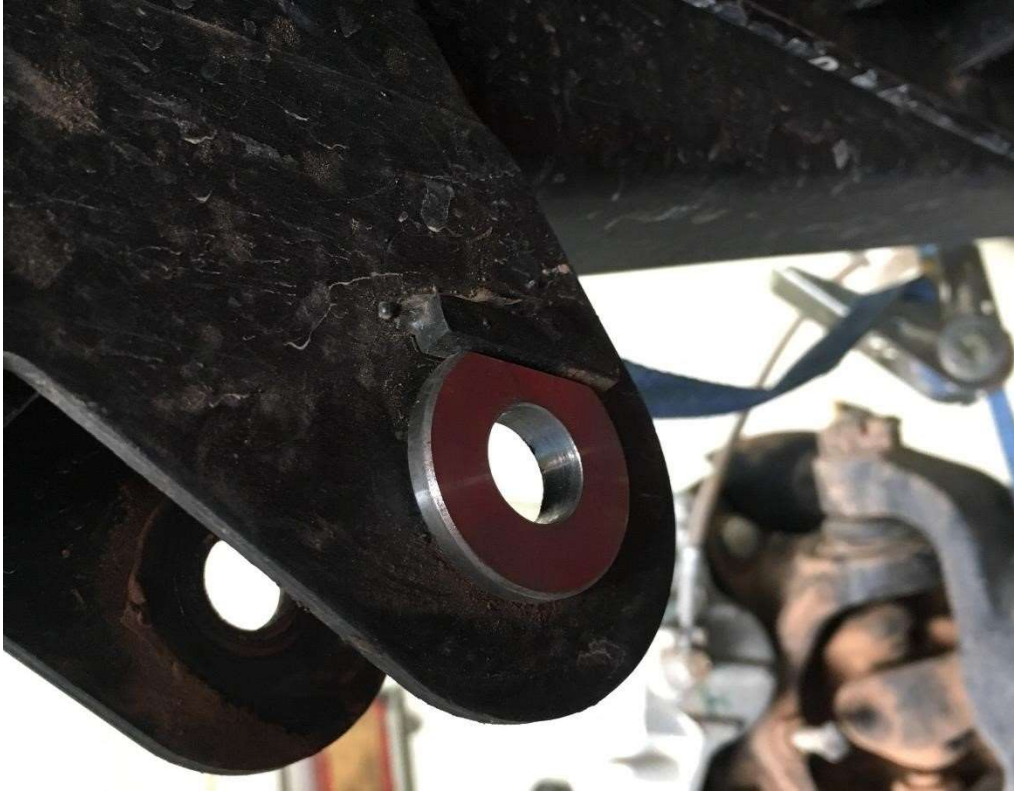
- Lift the vehicle up with a floor jack so that the tires are up off of the ground. Support the front axle and frame with jack stands keeping the front tires from touching the ground.
- Remove the front bumper.
- Remove the front wheels and tires.



- Remove the shocks from both sides.
- Remove the axle U bolts from both sides.
- Remove the spring shackles from both sides.
- Remove the rear spring bolt (from the front spring pack) on both sides. Remove the front springs and flip them end for end. (What used to be the rear of the spring, is now facing forward.)



- Install the supplied OTR Shackle using the factory shackle bolt and supplied OTR step washer. SNUG BOLT Wait to torque bolts until the vehicle weight is back on suspension. (Torque to 93 Ft. Lbs. with the weight of the vehicle on the suspension)



Install
spring
into
OTR



shackle utilizing the existing Mahindra spring bolt. SNUG BOLT Wait to torque bolts until the vehicle weight is back on suspension. (Torque to 93 Ft. Lbs. with the weight of the vehicle on the suspension.)



- Remove the Mahindra front shackle bushing, located on the front of the frame rail.



- ✦ Drill out the rubber bushing to remove the crush sleeve.
- ✦ A 1-3/16" hole saw works great to cut out the rubber bushing.
- ✦ Die-Grind, the remaining rubber out to expose the outer sleeve.

- ✦ Hammer and chisel the outer sleeve to remove it from the frame.
- ✦ You can also use a reciprocating saw to cut the steel busing out after the rubber bushing is gone. There are many videos online showing how to remove leaf spring bushings, (same concept)
- ✦ **FAILURE TO REMOVE MAHINDRA RUBBER BUSHING WILL RESULT IN A COMPONENT FAILURE**
- Install the supplied OTR solid bushing into the frame rail.



(Please read ahead from here to the end before continuing your installation.)

- Install the supplied OTR Shackle Reversal Cross Member utilizing the supplied 5/8" bolt and supplied 7/16" bolt and nut assembly. (Torque

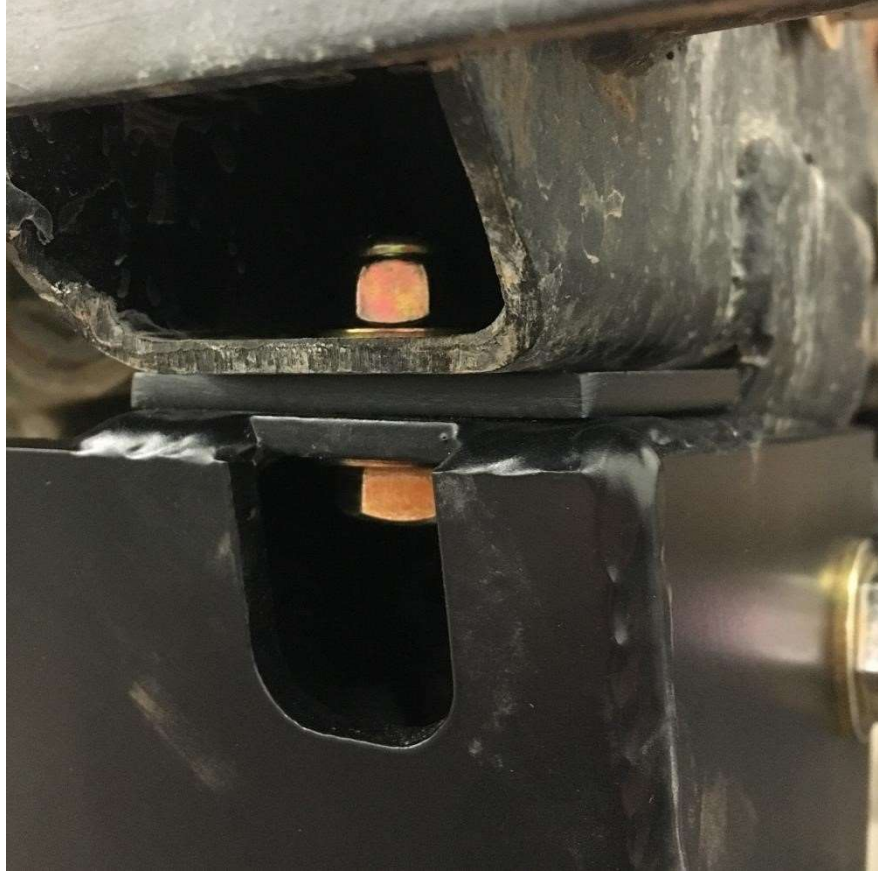
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to 63 Ft. Lbs.) (Due to Mahindra's Manufacturing tolerances, die grinding of the hole in the frame may be required.)

- Also, depending on where the original shackle mount was welded onto the frame, you may end up with a gap between the new crossmember and frame as shown below.



- If this is the case, you will need to install our included spacer with the 7/16" bolt between the cross member and frame. As shown in the following picture.



- If the shackle mount is welded in the most common area, and not lower than standard, you will not need this spacer. Shown.

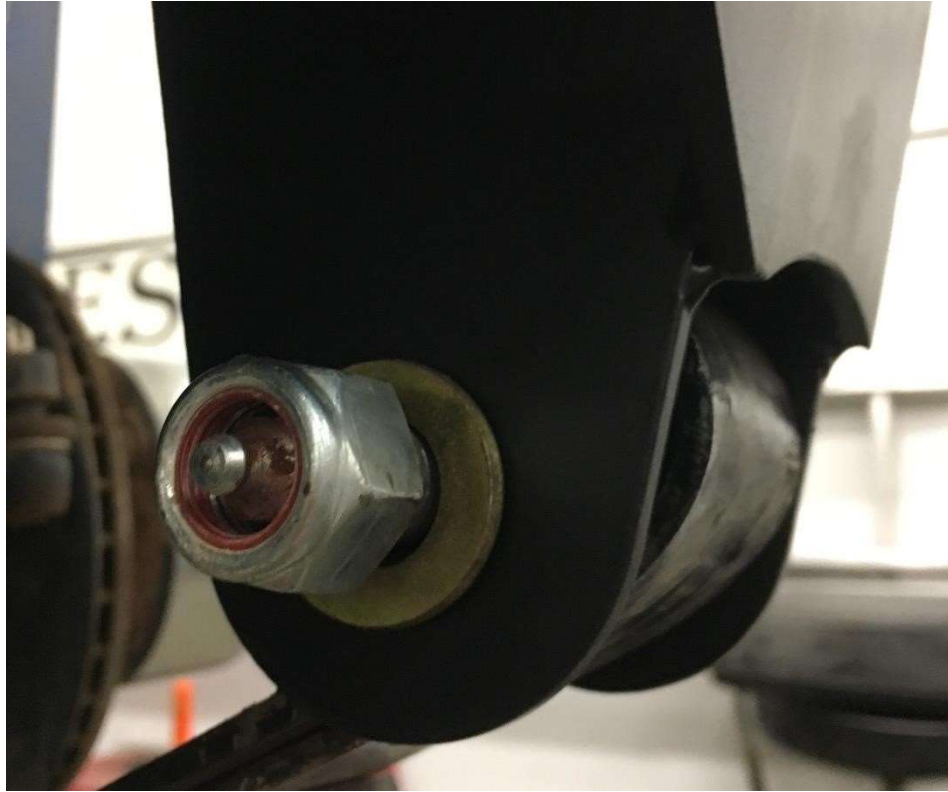


- Due to Mahindra's manufacturing tolerances, you may also need to die grind the original shackle mount.



- Also reuse the original Mahindra rear spring bolt (with grease zerk) onto the front of the spring to the OTR Cross Member. (Torque to 94 Ft. Lbs.)





- Reinstall the original Axle U bolts. (Torque to 58 Ft. Lbs.)
- Install the new supplied shock.
- Remove the factory brake lines and replace them with the supplied fittings and braided brake lines, as pictured in this order.





✦ Install Banjo Fittings with copper washers on both sides.



- ✦ Install the supplied brake line onto the Banjo Fitting.
 - ✦ Install the brass fitting between the frame and the tab.
 - ✦ Install IF-AN Fitting
 - ✦ Install new OTR braided brake line
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- Refill and bleed the air from the brake system.
 - Reinstall tires and torque them to manufacturer specifications.

Your shackle reversal kit is now installed!

*Please retorque or check bolts and nuts at 100 miles, 500 miles, and then 1500 miles.