

ROD & CUSTOM

Motorsports

INCORPORATED

Instruction Package



RC-114K

Rear Coilover Suspension Kit

NOTE...

- PLEASE READ ALL INSTRUCTIONS INCLUDED WITHIN THIS PACKAGE.
- IF AFTER READING YOU STILL NEED ASSISTANCE PLEASE CALL THE TECH LINE AT 843-629-1273.

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- All Claims for missing or damaged parts must be reported to Rod & Custom Motorsports within 7 days of receipt of order. Rod & Custom uses the UPS delivery date according to our UPS computer.
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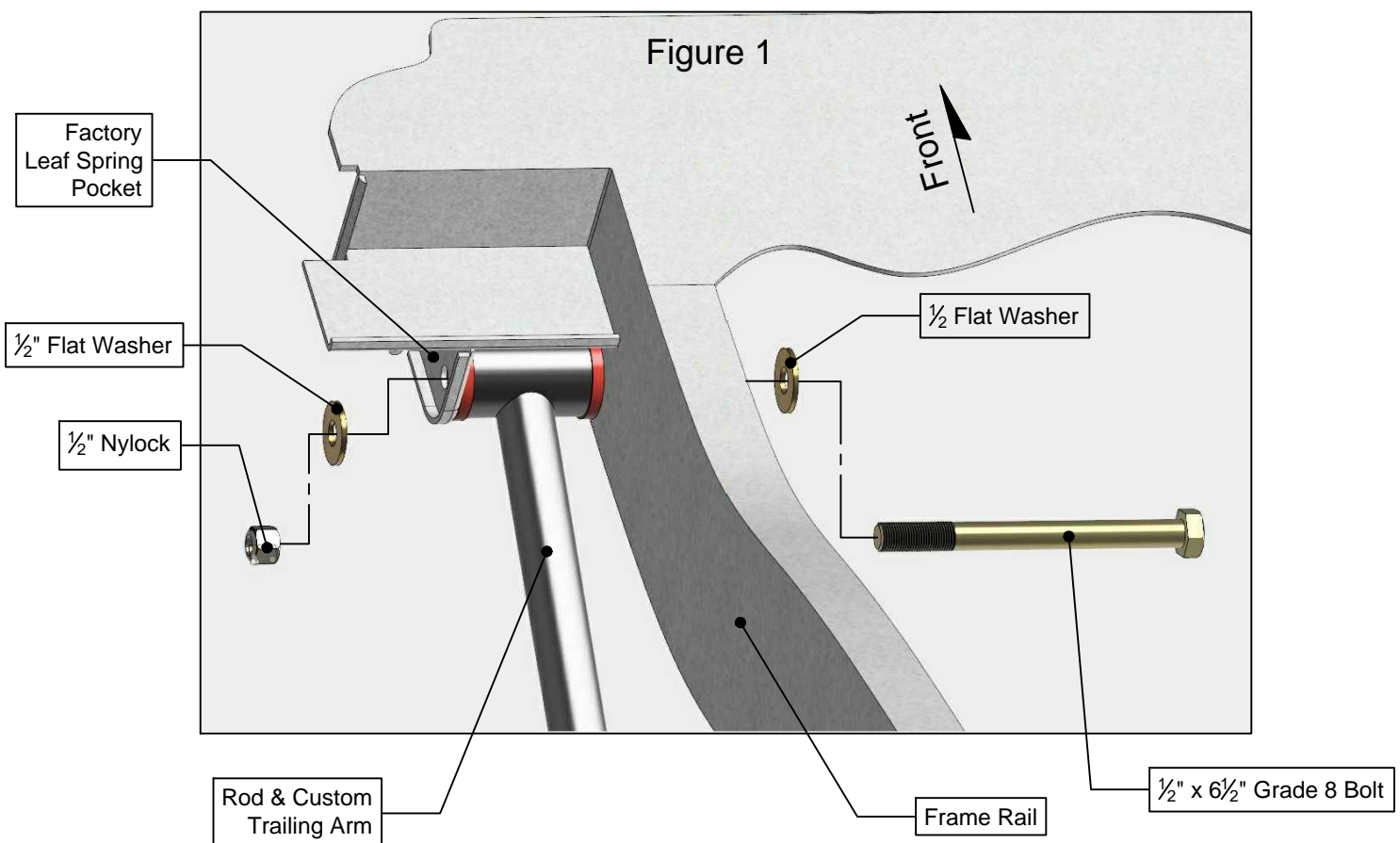
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PLEASE NOTE THE FOLLOWING:

The Instructions contained herein should be considered **generic** in nature and should be used as a **general guide** to installation. These are based on our "Bolt-In" style rear end kit, however, a welded installation is perfectly acceptable and if welded properly, desirable. Bolt-In Only parts are so noted and are not included in kits where the customer has informed Rod and Custom that the installation will be done as a Weld-In. In addition the video which accompanies this kit should also be considered as a generalization. Not all chassis/rear end combinations are identical and therefor some parts and configurations will be different.

RC-114 Rear Coil-Over Installation

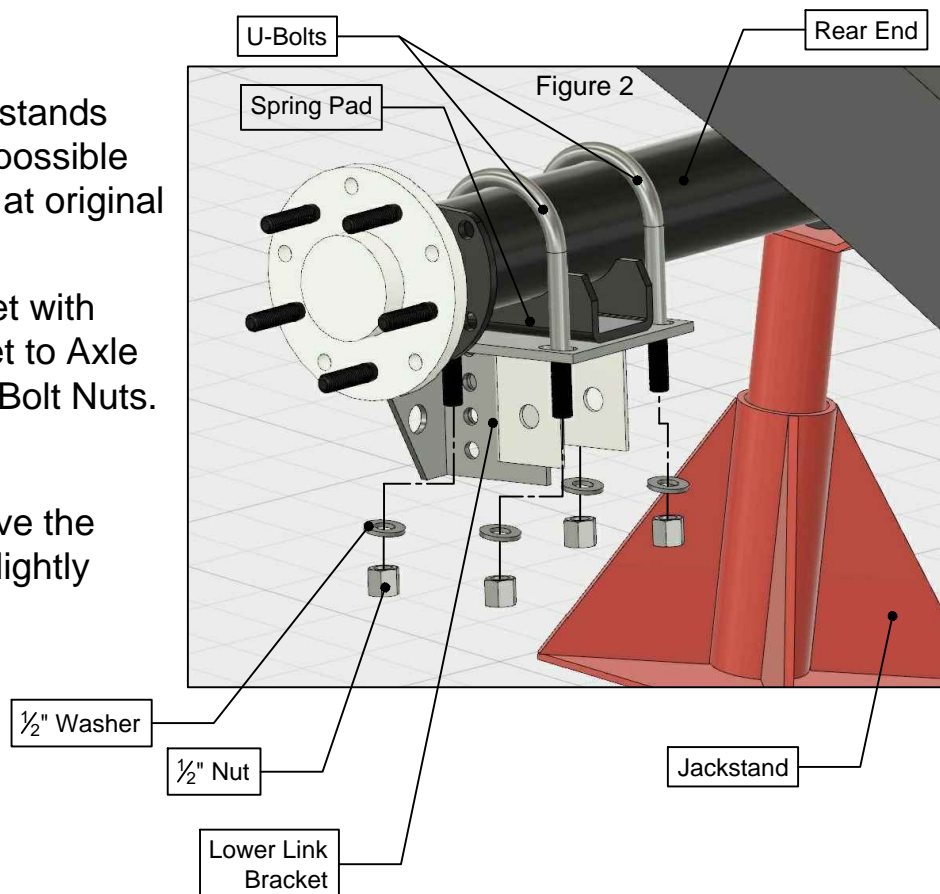
1. Before any work has begun and while vehicle is sitting level at it's normal ride height ... Measure from the centerline of the rear axle to the inside lip of the rear fender directly above. This measurement will later be used to establish the starting point for determining the final ride height after the Rod & Custom coil-over conversion has been installed.
2. Raise car completely off the ground and support on jack stands, preferably with the vehicle resting level.
3. Remove wheels/tires, fuel tank, leaf springs, shock absorbers, driveshaft and rear end housing. Move fuel lines away from left side frame rail to protect from damage during installation.
4. Install the two Lower Trailing Arms using the $\frac{1}{2}$ " x $6\frac{1}{2}$ " grade 8 bolts, washers and Nylocks provided. Note that the "T" shaped end fits into the original/factory forward leaf spring pockets. Be certain to use the Silicon Lube on all urethane contact surfaces. Refer to "Figure 1" below.



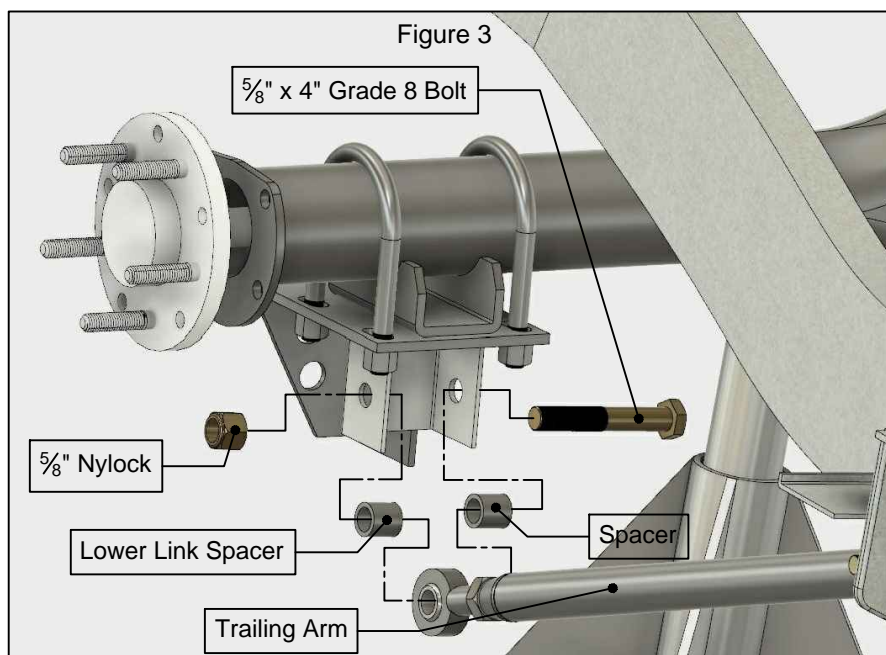
5. Place Rear End on jackstands and position as closely as possible to the original location and at original height.

6. Align Lower Link Bracket with Spring Pad. Attach Bracket to Axle Tube using U-Bolts and U-Bolt Nuts. Refer to "Figure 2".

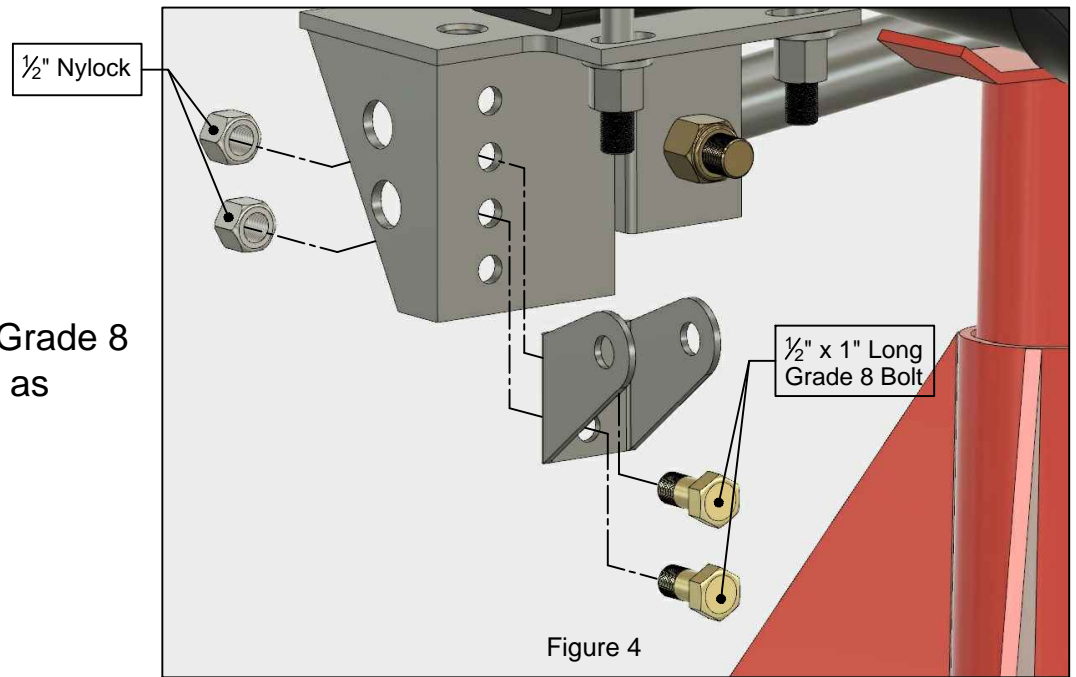
7. Tighten all nuts but, leave the Link Bracket and U-Bolts slightly loose.



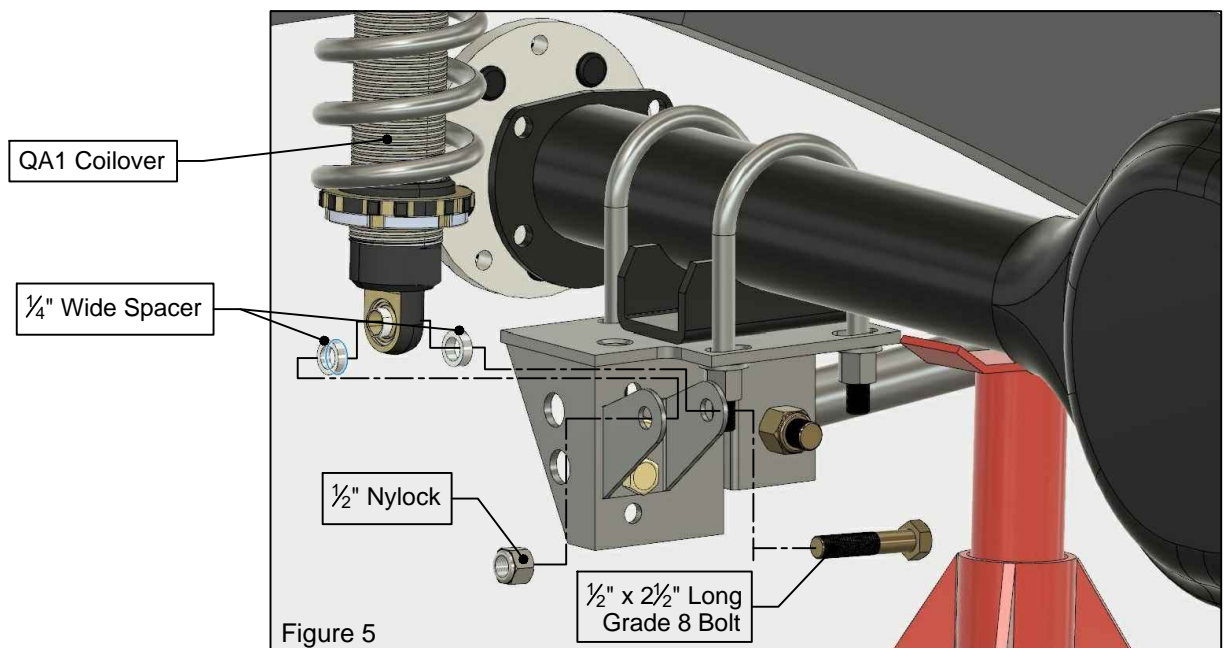
8. Attach Trailing Arm to Trailing Arm Bracket using $\frac{5}{8}$ " x 4" long Grade 8 Bolts, Lower Link Spacers and $\frac{5}{8}$ " Nylocks as shown in "Figure 3" below.



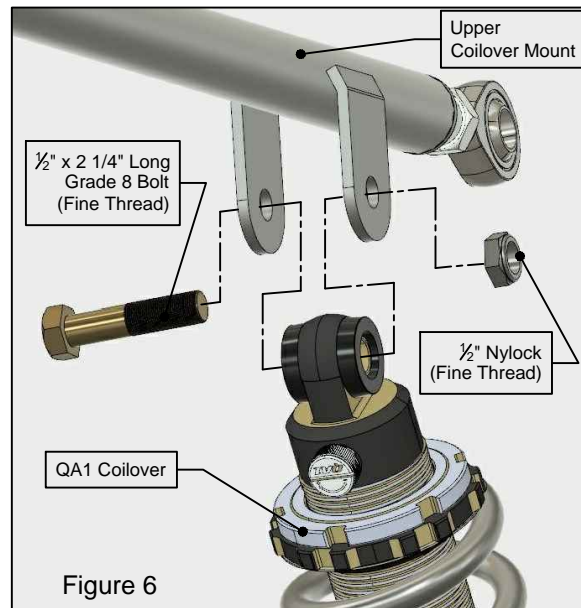
9. Install coilover mount using $\frac{1}{2}$ " x 1" Grade 8 bolts and $\frac{1}{2}$ " Nylocks as shown in "Figure 4".



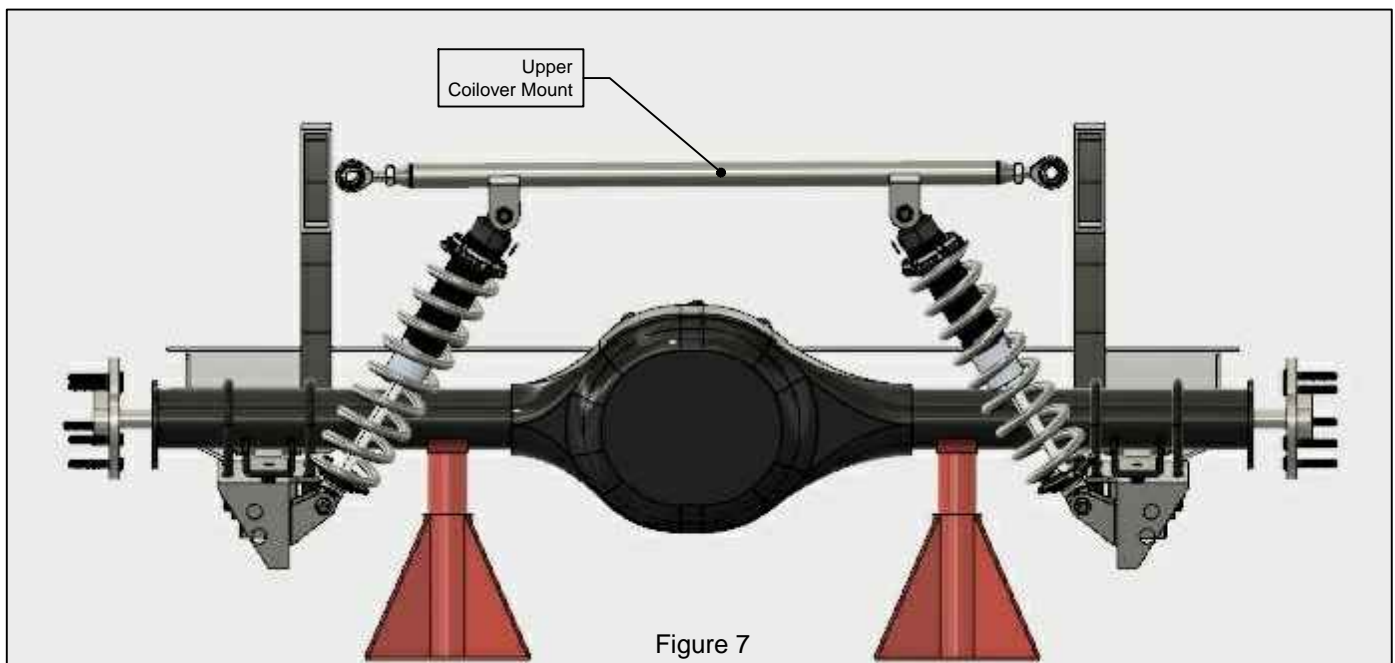
10. Install lower coilovers using $\frac{1}{4}$ " wide spacers, $\frac{1}{2}$ " x $2\frac{1}{2}$ " long bolts and $\frac{1}{2}$ " Nylocks.

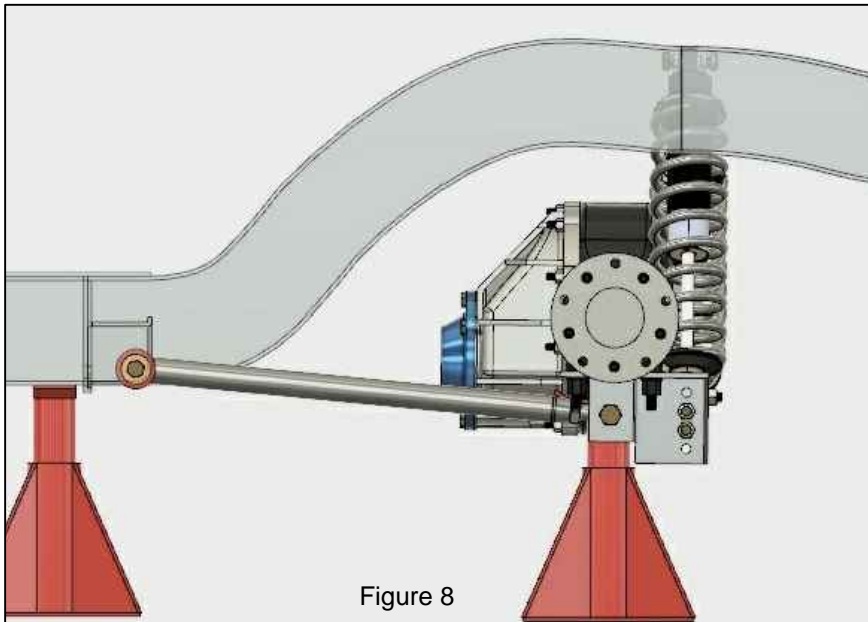


11. Attach Upper Coilover Mount to Coilovers using $\frac{1}{2}$ " x $2\frac{1}{4}$ " long, fine thread Grade 8 bolts and thin $\frac{1}{2}$ " fine thread Nylocks.



Once both Coilovers have been installed and attached to the Upper Coilover Mount, the assembly should appear as illustrated below in "Figure 7". Note that with the Coilovers positioned at 90° to horizontal the Upper Coilover Mount can be used to position the Coilover Mount brackets in Step 11 on the following page. Mounting these brackets to the frame rails will be the next step of the installation.

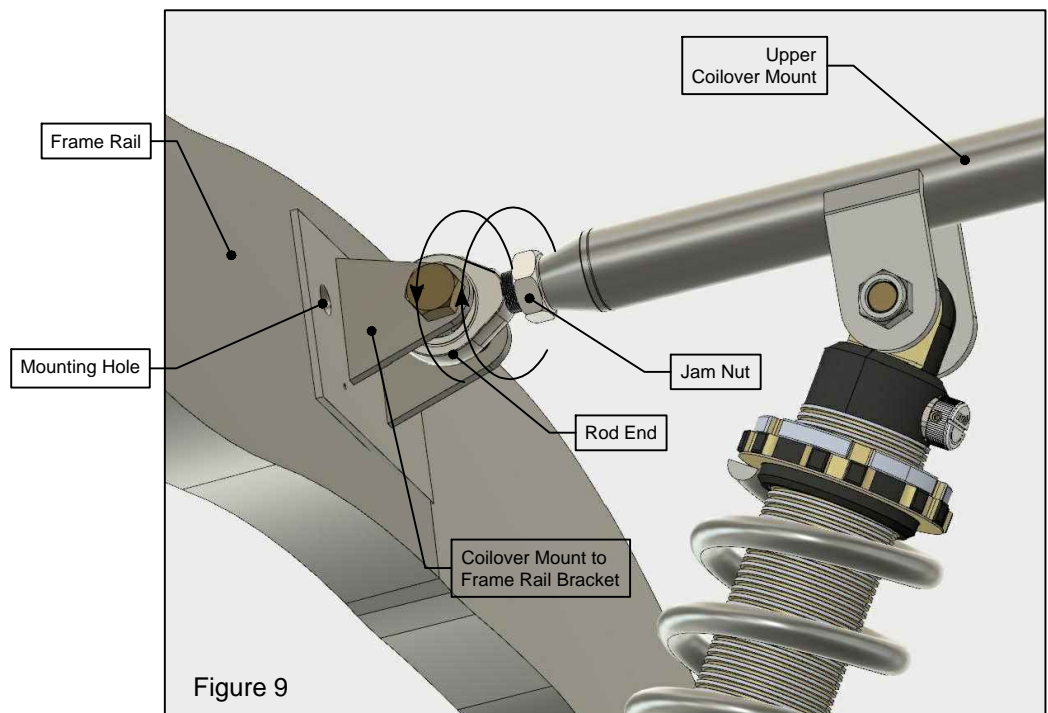




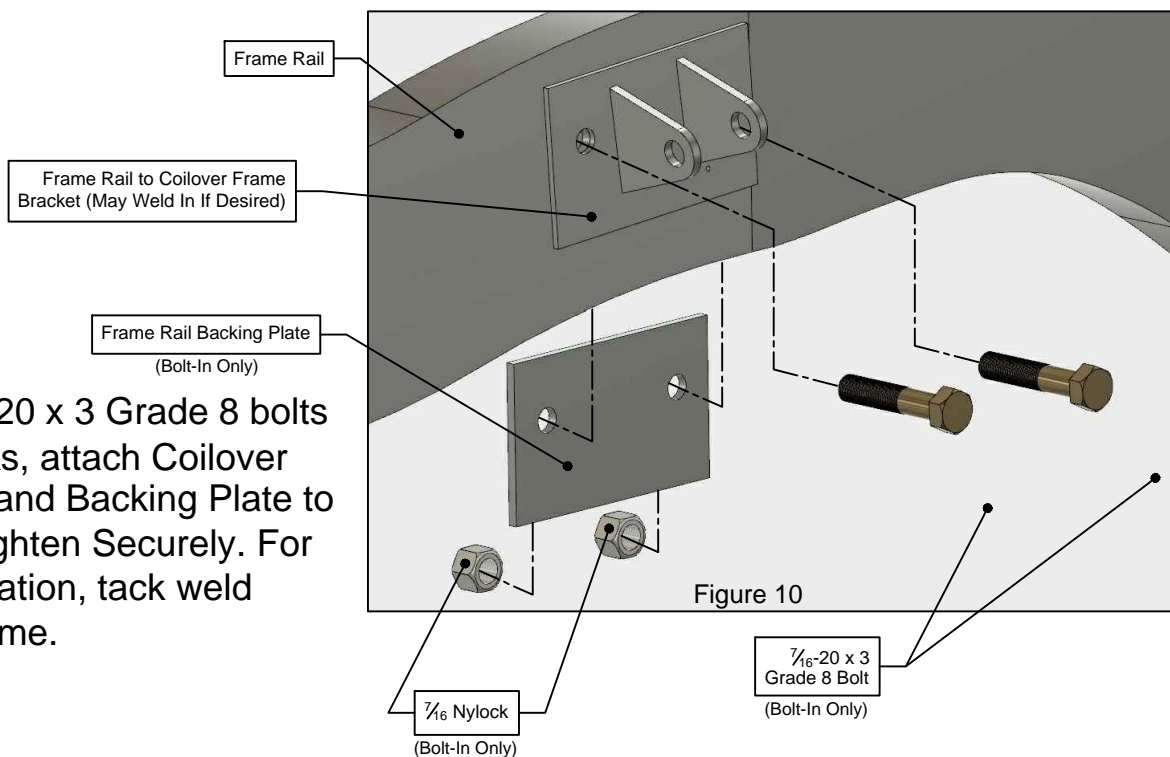
(Figure 8) illustrates the relative position of the rear coilovers in relation to the vehicle. This is how your installation should look at this point in the assembly process.

12. Place the $\frac{1}{2}$ " x $2\frac{1}{2}$ " Grade 8 bolts thru the frame rail Side Plates and the Rod Ends and note the gap or lack of gap between the frame rails and Side Plates. Remove the bolts and loosen the Jam Nuts and turn the Rod Ends in or out on each end until the Side Plates are snug between the frame rails. Refer to "Figure 9".

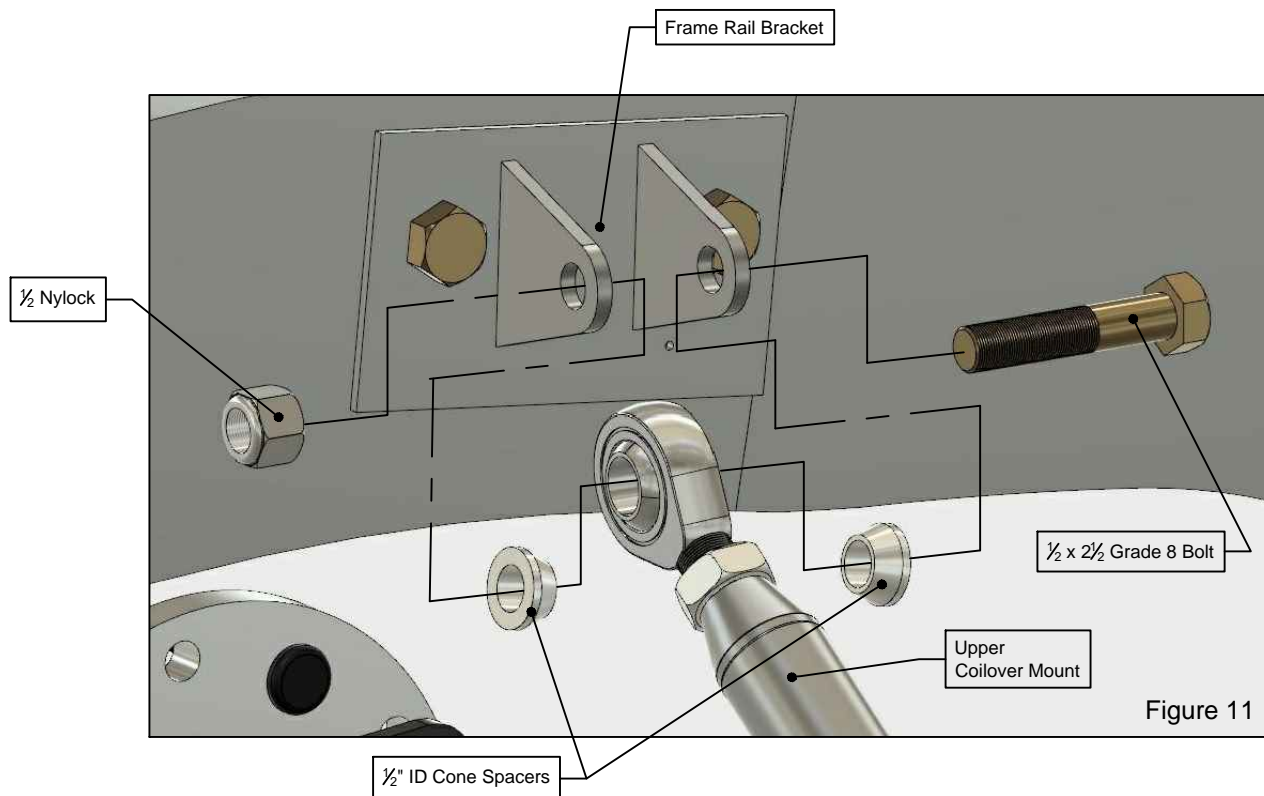
Each Rod End should be adjusted the same amount so that equal amounts of thread are visible on each end and that the Upper Coilover Mount is level. Once the desired fit is achieved clamp the Side Plates in place, remove the Upper Coilover Mount and drill thru the frame rails (Bolt-In Only). If Weld-In Installation, tack weld plates to Frame Rail.

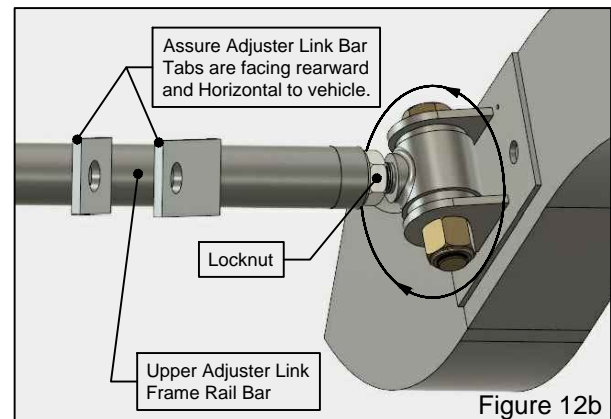
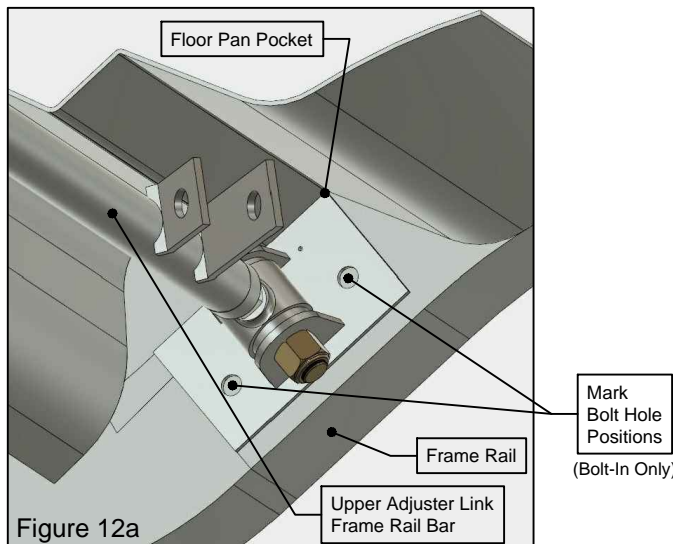


13. Using $\frac{7}{16}$ -20 x 3 Grade 8 bolts and $\frac{7}{16}$ Nylocks, attach Coilover Shock Frame and Backing Plate to frame rails. Tighten Securely. For Weld-In installation, tack weld brackets to frame.



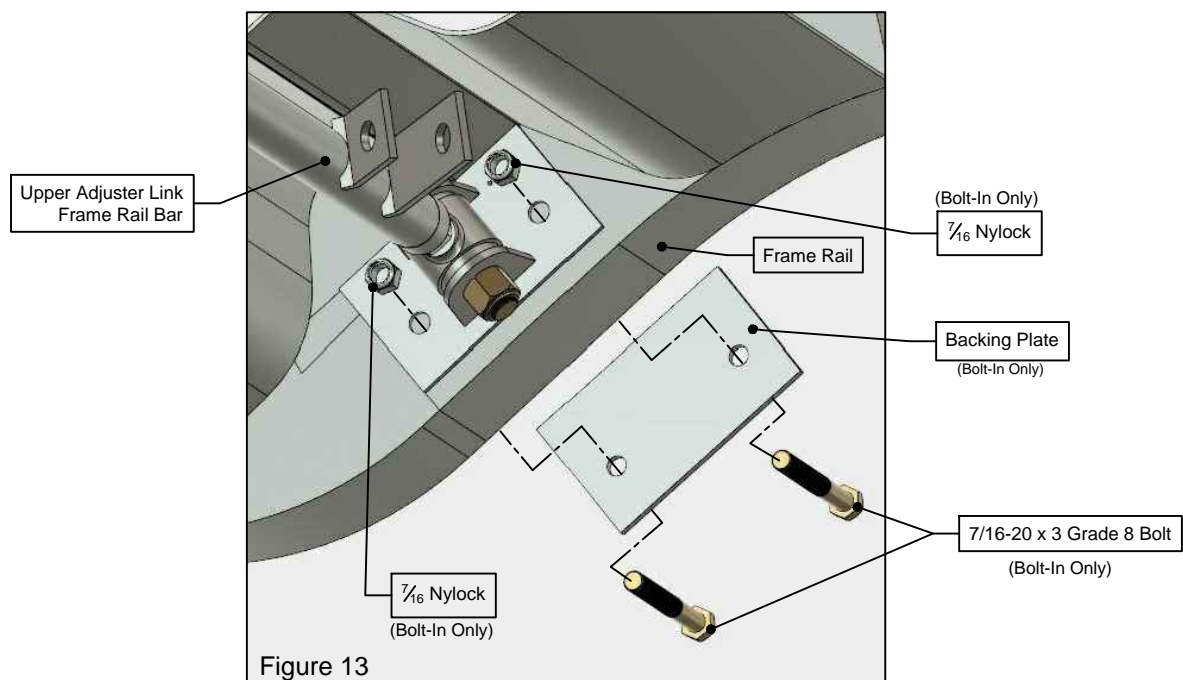
14. Place the $\frac{1}{2}$ " x $2\frac{1}{2}$ " bolts thru the Frame Rail Brackets, Cone Spacers and Upper Coilover Mount rod ends. Tighten Securely.

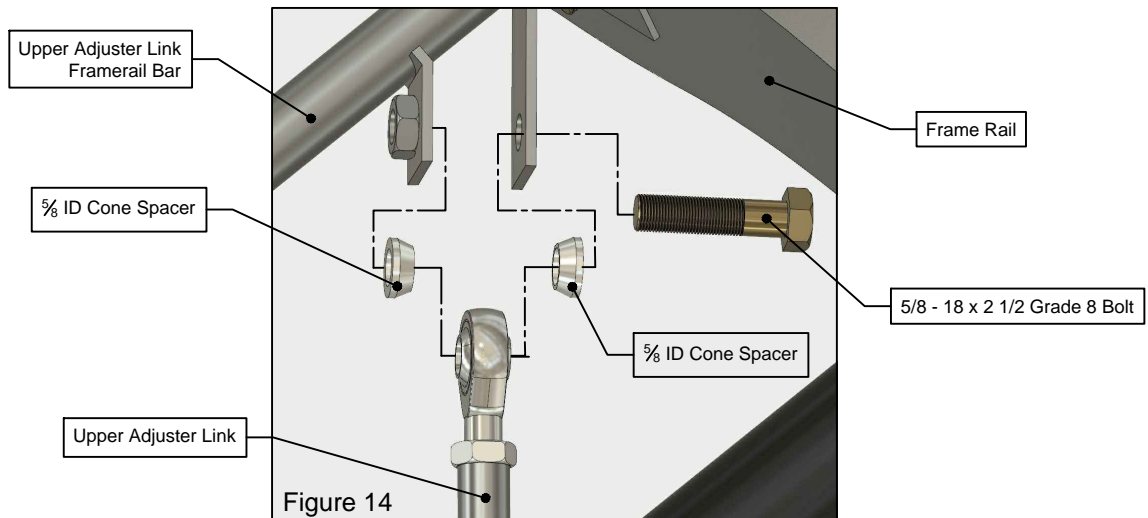




15. Place Upper Adjuster Link Frame Rail Bar into position as shown in "Figure 12a". Note the "pocket" where the floor pan and frame rail meet. Place the indicated corner all the way into this "pocket" while keeping the lower edge of the mounting plate aligned with the frame rail. If adjustment is required due to factory tolerances, the length of the Upper Adjuster Link Bar can be changed by loosening the lock nuts on either end and turning the mounting plate assembly clockwise or counter clockwise. Refer to "Figure 12b". Adjust the length of the bar to attain a "snug" fit between the frame rails. Once a satisfactory fit has been obtained, clamp mounting plates to frame rails. If Installation is Weld-In, tack weld in place. If Bolt-In mark bolt hole location and drill thru with $\frac{7}{16}$ " bit.

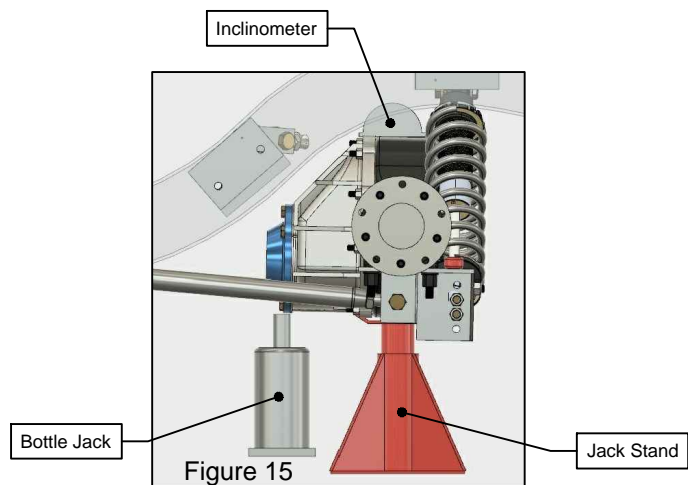
16. Install using the $\frac{7}{16}$ -20 x 3 Grade 8 bolts, $\frac{7}{16}$ " Nylocks and backing plates provided. Securely bolt Adjuster bar into place. Refer to "Figure 13" below.



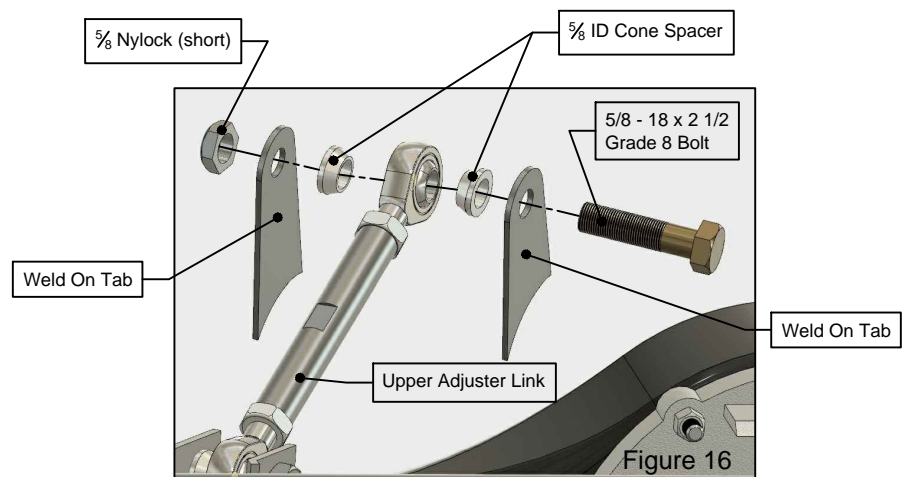


17. Attach Upper Adjuster Links to Upper Adjuster Bar as shown in "Figure 14" using $\frac{5}{8}$ " x $2\frac{1}{2}$ " Grade 8 bolts and $\frac{5}{8}$ " ID Cone Spacers. Left and Right links are identical.

18. Place a Bottle Jack or other sturdy lifting device under the pinion support. Use an Inclinator to determine the Transmission Angle, then raise or lower the Pinion Support/3rd Member to match the Transmission Angle as closely as possible. "Figure 15"



19. Attach Upper Adjuster Links to Rear End Mounting Tabs using $\frac{5}{8}$ " x $2\frac{1}{2}$ " Grade 8 bolts, $\frac{5}{8}$ " ID Cone Spacers, and short height $\frac{5}{8}$ " Nylock.



(Passenger Side Shown, Driver Side mirror image)

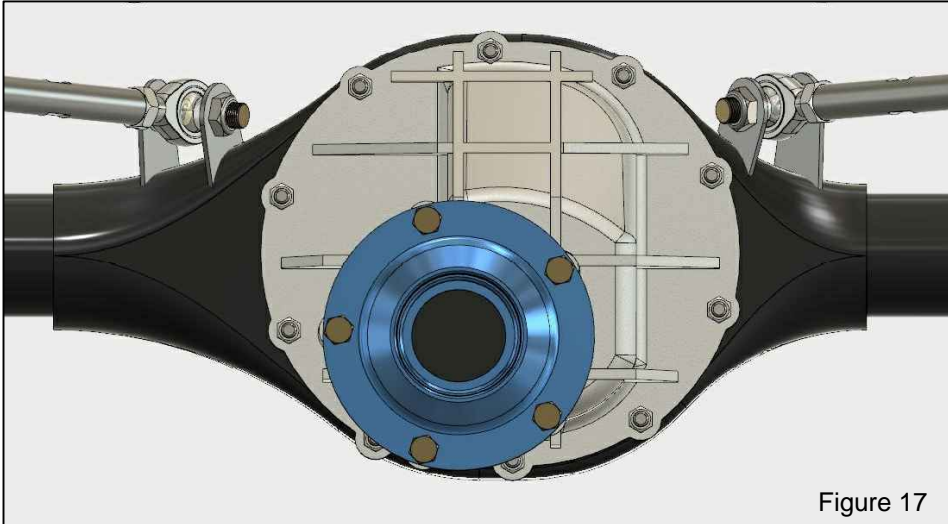


Figure 17

20. Test fit the Weld-on Tabs by laying the Adjuster Rods with Tabs attached onto the rear end housing and determining how much metal needs to be removed from each tab. Due to the differences in factory vendors thru the years and aftermarket manufacturers, the tabs will need to be cut and/or ground to your specific housing. Once fitted to your housing, weld tabs in place "Figure 17".

21. Once the Tabs have been completely welded and the bolts connecting them to the Adjuster Rod's heim joints tightened, the pinion angle can be set by lengthening or shortening the Adjuster Rods. To do this loosen the Jam Nuts, turn Adjuster until desired pinion angle is achieved. Count the number of turns made. Remember, to maintain proper rear end alignment, both driver and passenger Adjuster Rods must be adjusted the same amount. i.e. If the driver side is turned clockwise 2 turns, the passenger side rod must also be turned clockwise 2 turns.

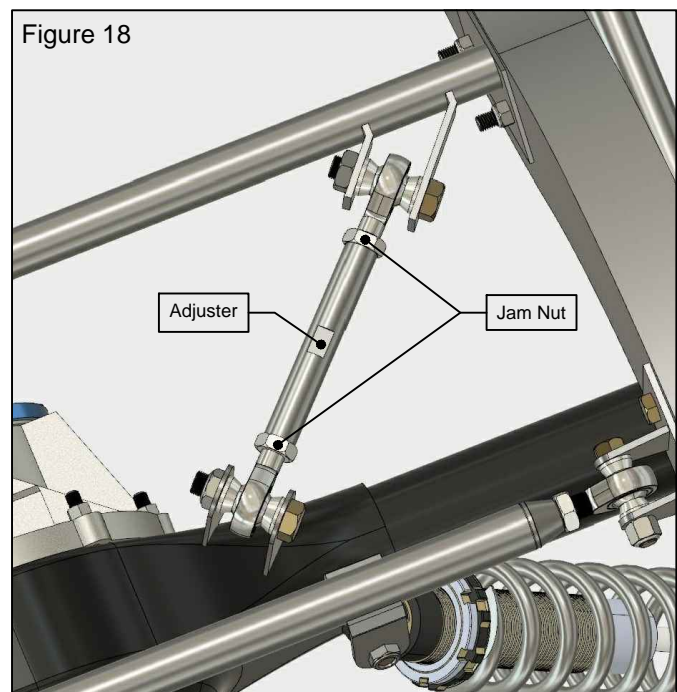
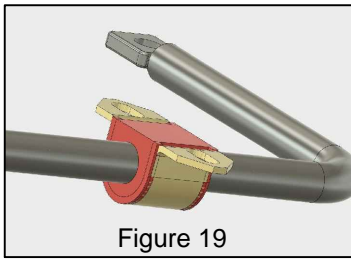
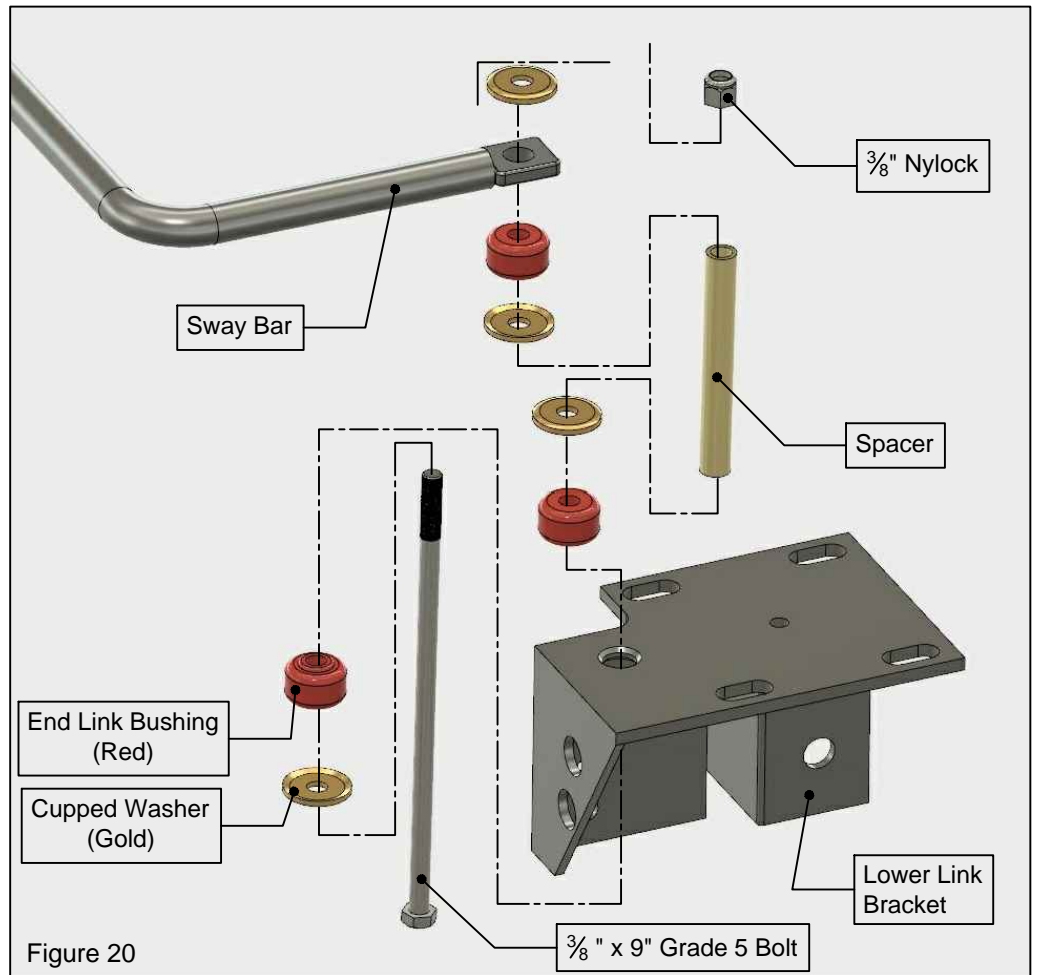


Figure 18

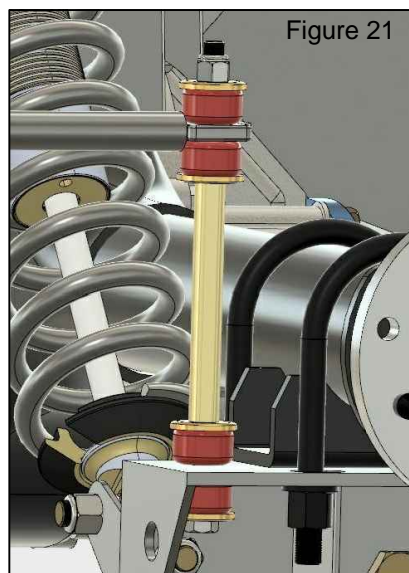


22. Slide Sway Bar Brackets (Shown in "Figure 19" above).

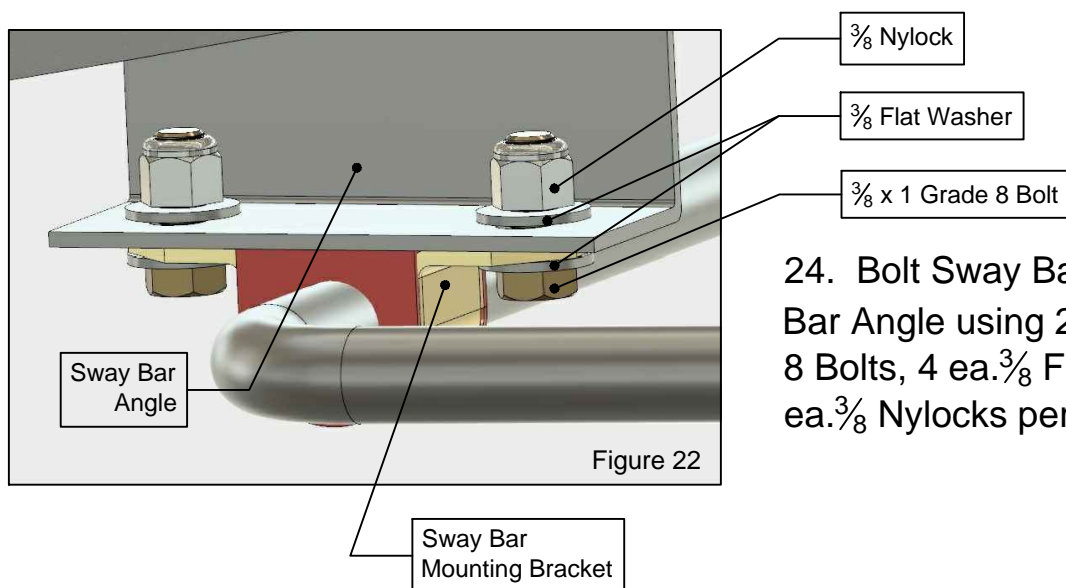
23. Install Sway Bar Link assembly as (Shown in "Figure 20" at right).



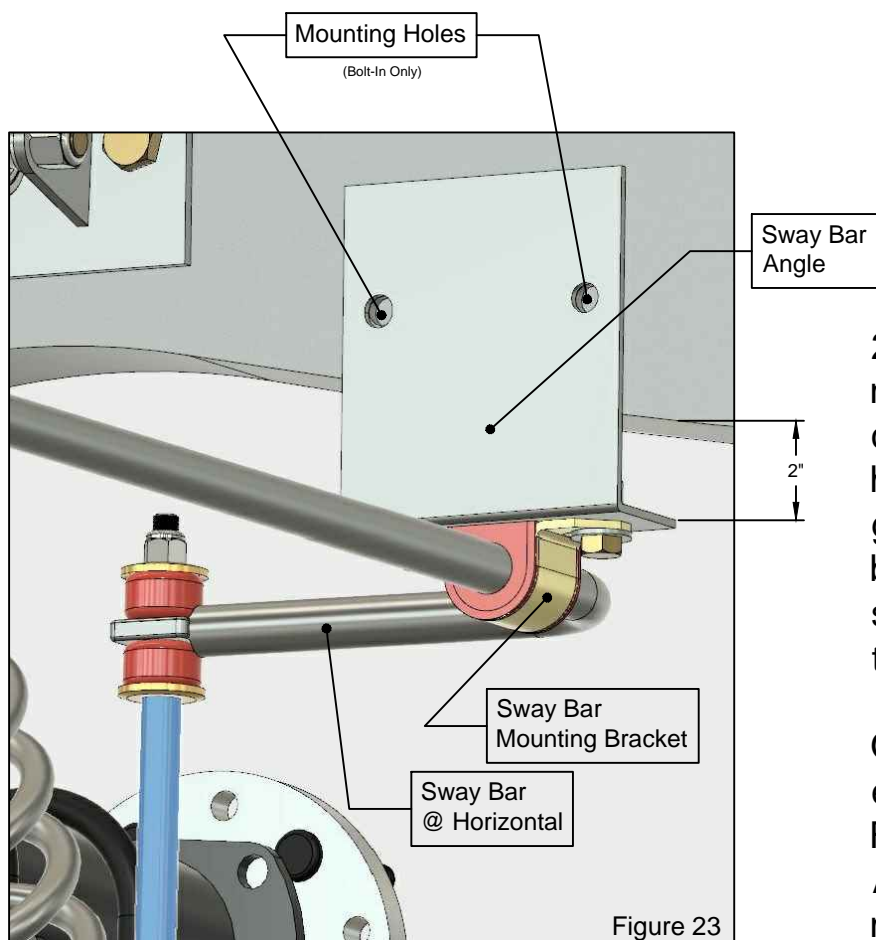
Sway Bar Component Assembly (Illustrate simplified for clarity)



"Figure 21" at left illustrates sway bar linkage assembled and connected to sway bar. Note that when installing sway bar brackets, linkage should be completely vertical as shown with vehicle sitting at normal ride height.

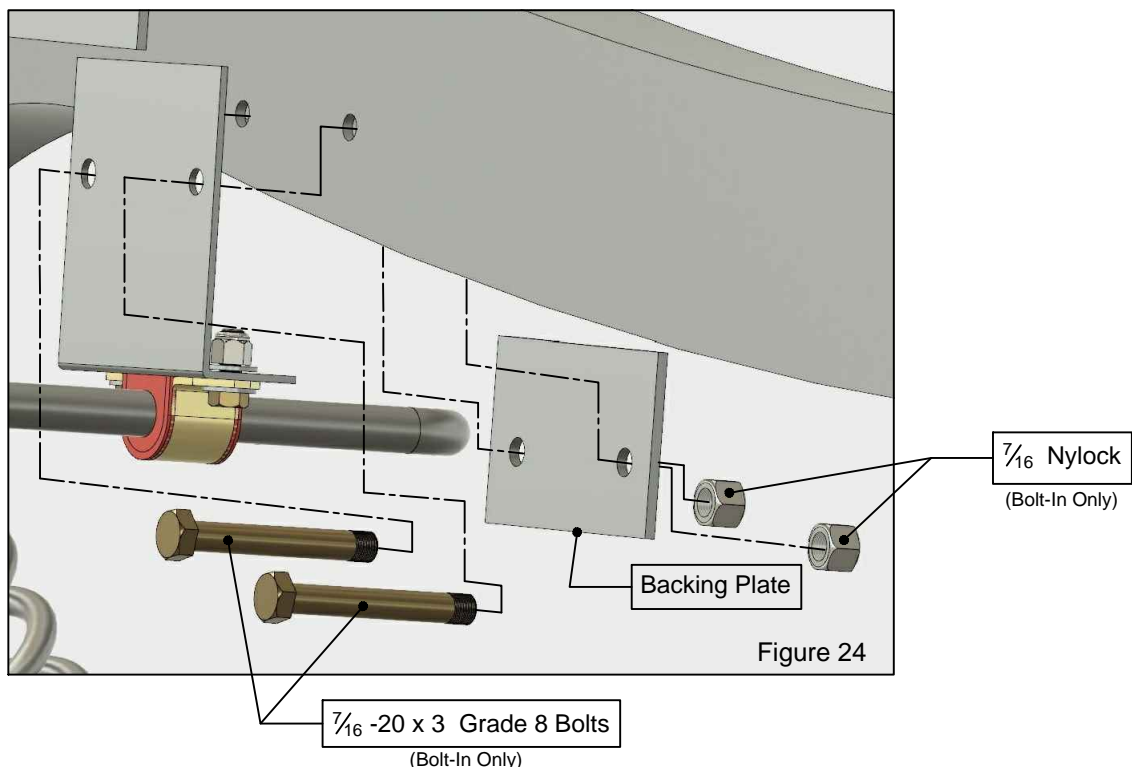


24. Bolt Sway Bar Bracket to Sway Bar Angle using 2 ea. $\frac{3}{8}$ x 1 Grade 8 Bolts, 4 ea. $\frac{3}{8}$ Flat Washers and 2 ea. $\frac{3}{8}$ Nylocks per side.

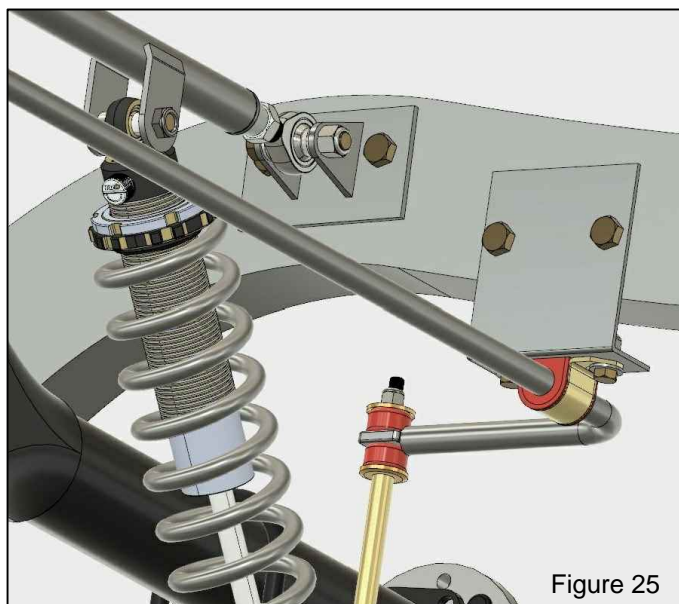


25. Position Sway Bar Angle next to Frame Rail making certain that the Sway Bar is horizontal as noted and that a gap of 2" is maintained between the lower most section of the Frame Rail and the Angle.

Once this position has been established, clamp Angles to Frame Rails and tack weld Angle to Frame (or) if bolting, match drill thru Frame with a $\frac{7}{16}$ " dia. bit.



26. (Bolt-In Only) Attach Sway Bar Mounting Brackets to Frame Rails using 2 ea. $\frac{7}{16}$ -20 x 3 Grade 8 Bolts and 2 ea. $\frac{7}{16}$ " Nylocks. Backing Plate is "sandwiched" between outside of Frame and Nylocks. (Refer to "Figure 24").



"Figure 25" above Illustrates completed (Bolt-In) Sway Bar installation. (Weld-In) will look the same minus bolts thru frame and no Backing Plates required.

27. Tighten Rear End U-Bolts. Double check all connections and be certain all bolts and nuts have been securely tightened. Finish welding all parts initially tack welded.

28. Test drive vehicle and listen for any sound that may indicate a loose condition with a bolted connection.