Gleaming Alloy FABRICATION

Stiletto

Single-Piece Rear Lower Control Arm Tubes

For Jeep Cherokee (KL)

(STL-KL-RLCA-TUBE)

Also Applies to Knuckle Interface Replacement

(STL-KL-RLCA-NKLI)

Installation Guide

Revision A

Installation Instructions

Please read completely through the following guide before attempting the installation. It will give you a good feel for what is involved to replace the tubes in your control arms.

This guide presents instructions for the tube replacement only. If your Stilettos are currently installed on your Jeep, you will obviously need to remove them to complete this procedure and re-install them when complete. Refer to the *Stiletto Installation and Owners Guide* for tips on how to do this. If you no longer have that guide, it can be downloaded from our Support page at https://gleaming-alloy.com/support.

Do not attempt to perform this procedure with the Stilettos installed on your vehicle. While it may be possible to do this, your are more than likely to run into obstacles and unforeseen issues that will make that procedure much more difficult than simply removing the Stilettos.

If you are rebuilding your Stilettos with a new set of knuckle interfaces instead of replacing tubes, the procedure is more-or-less identical. Simply keep your old tubes and replace the knuckle interfaces when they are removed. You will need to transfer the spring cradle from your old knuckle interfaces to the new ones.

Required Tools

(This tool list only covers the tube replacement procedure)

- 16mm socket
- 18mm socket
- 1/2” socket
- Torque wrench 25-92 ft-lb range (34-92 Nm)
- 1/2” bolt, 1.5” length with nut (or metric equivalent: M12, 40mm length). Thread pitch is irrelevant.
- Two open-end wrenches for above nut & bolt. Typically 3/4” or 16mm & 18mm.
- One sheet of 150 grit sandpaper

Where To Get Help

Should you have any questions about installation, or problems during the installation process, feel free to reach out to us for assistance. You can send email to info@gleaming-alloy.com or use Facebook Messenger to message “Gleaming Alloy”directly. You can also message us on Instagram at @gleaming_alloy. If you have a particular issue, please accompany it with photographs showing the nature of the problem.

The following resources are also available on the internet.
Just scan the QR code to take you there:

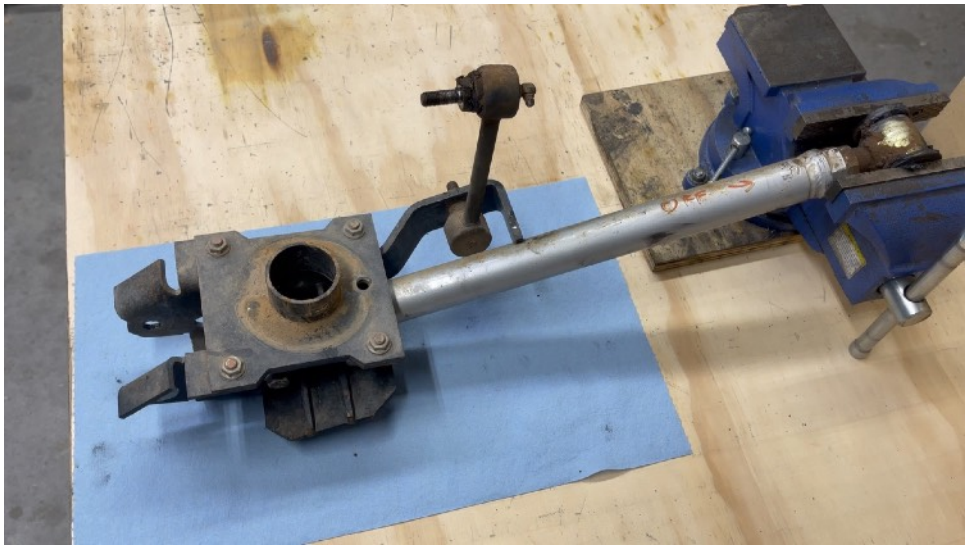
Gleaming Alloy Owners Group

Gleaming Alloy Support Documents

Gleaming Alloy YouTube Channel

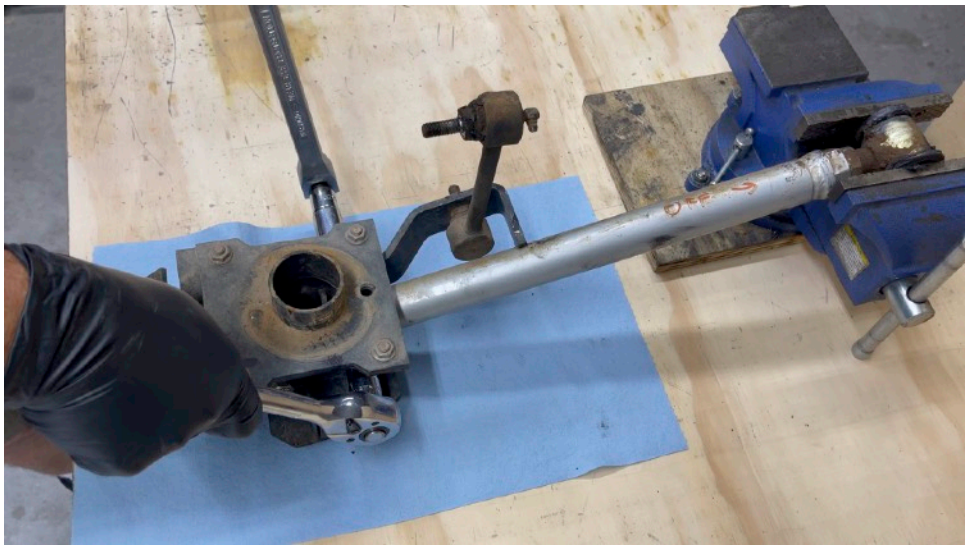
Step 1

Clamp the bushing end of tube in a bench vice or similar device.



Step 2

Remove the two main knuckle interface bolts. This will require a 16mm socket on the bolt head and an 18mm socket on the nut. If these bolts were torqued properly, it will require quite a bit of of effort to break free.

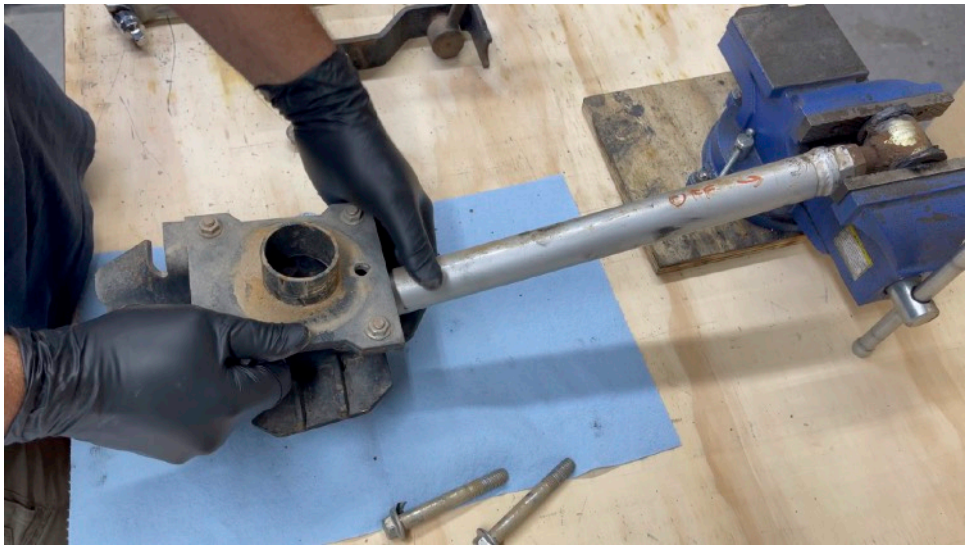


Step 3

If you're lucky, you'll be able to slide the knuckle interface off the tube. It's more likely, however, that the tube will not slide out easily, or the new tube wont slide in. If that is the case, proceed to **Step 3a**.

If the tube slides out, skip ahead to **Step 4**.

If you are replacing the knuckle interface instead of the tubes, continue to **Step 3a**.



Step 3a

Use a 1/2” wrench to remove the four carriage bolts in the spring cradle.

Yes, this is a 1/2” nut that needs to be removed, and is the only non-metric component used on the Stilettos. If you only have metric tools, an adjustable wrench, or six point 13mm socket can be used to remove it.

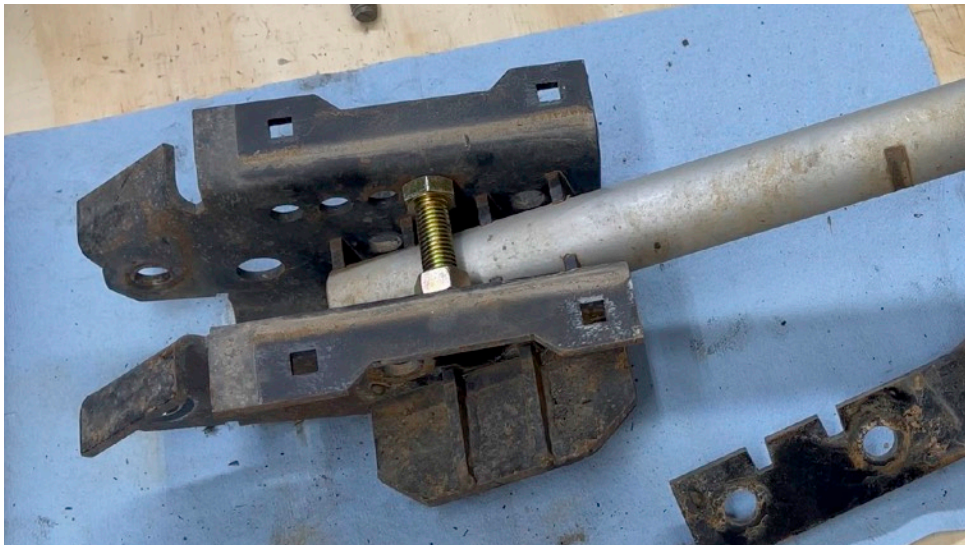
Step 3b

If the knuckle interface does not slide freely from the tube at this point, you will have to spread the knuckle interface to remove it from the tube.

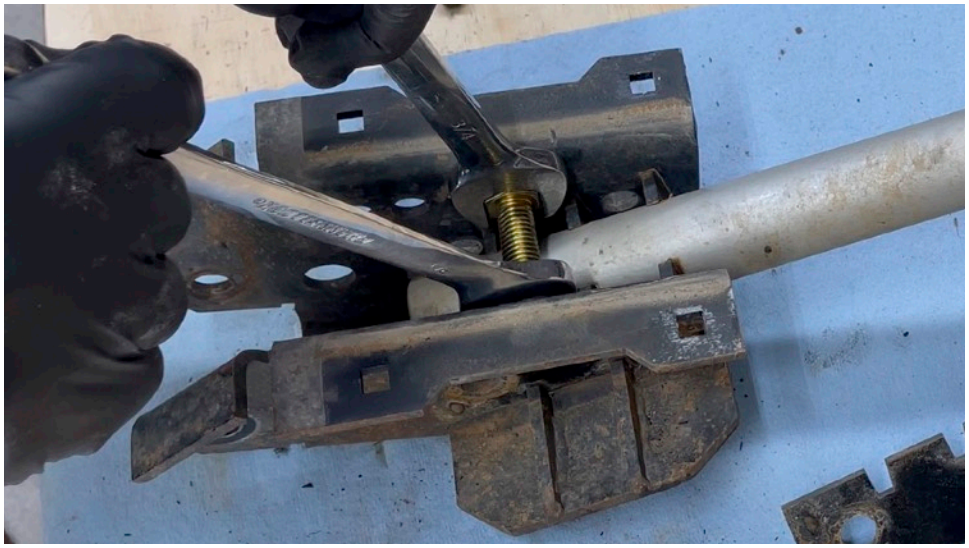
You can use a 1/2” bolt that is 1-1/2” long (M12, 40mm metric equivalent), along with a corresponding nut, as a spreader to allow the removal and insertion of tubes.

If the tube slides out freely, proceed to **Step 4**.

Thread the nut onto the bolt until the nut is flush with the end of the bolt, then insert the bolt into the knuckle interface as shown.

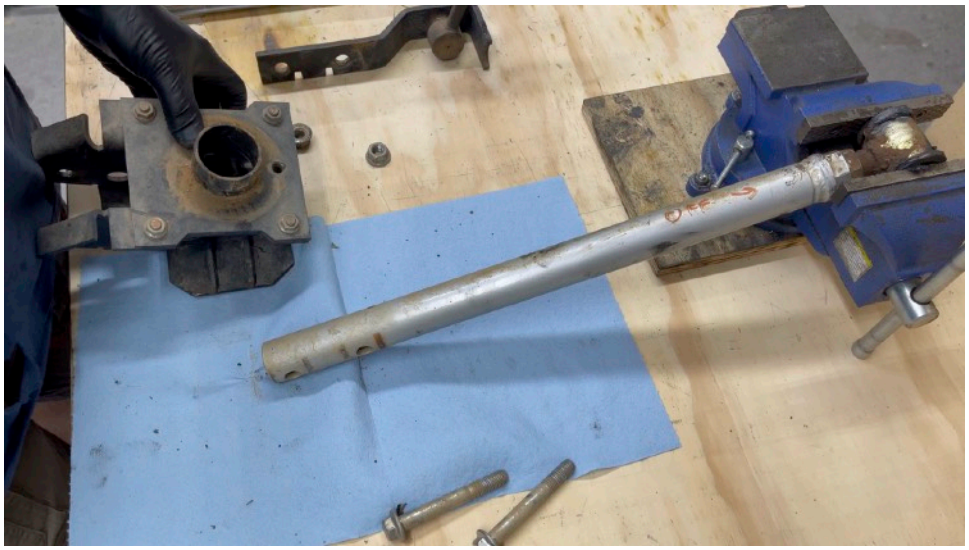


Use a wrench to hold the head of the bolt and another wrench to unthread the nut. After the nut makes contact with the knuckle interface, continue unthreading by about 1/2 turn. This will force the knuckle interface to spread and the ribs will be wide enough to slide the tube in or out, as necessary.



Step 4

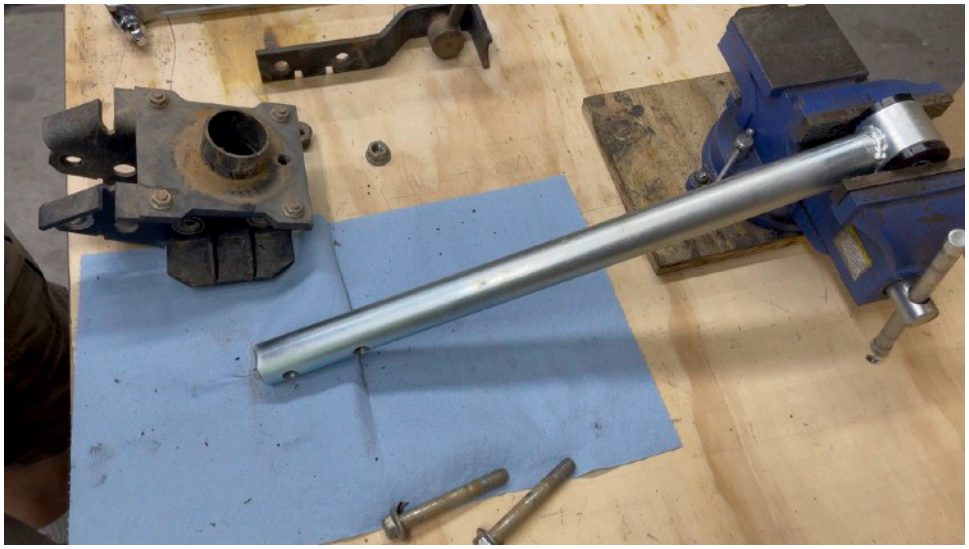
Completely remove the knuckle interface.



Step 5

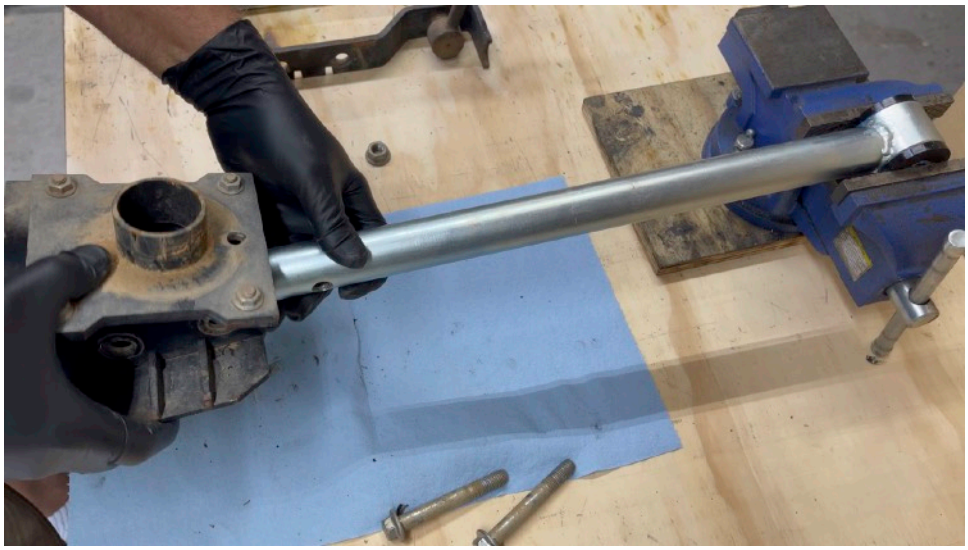
Discard the old tube and place the new tube in the bench vice. Be sure to have the grease fitting facing down.

If you are replacing the knuckle interface, keep your old tube in the vice and prepare to slide your new knuckle interface onto the tube.



Step 6

Slide the knuckle interface onto the new tube.



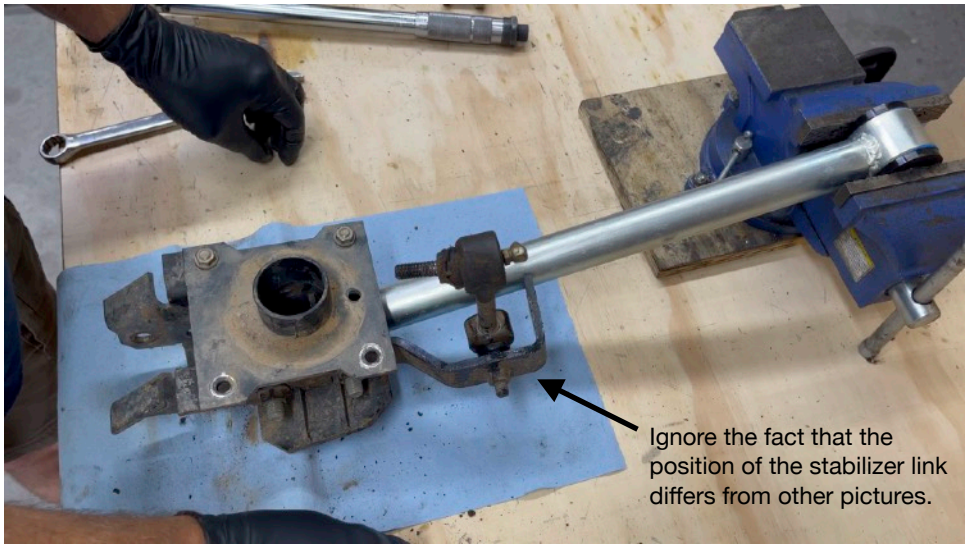
If the tube is being stubborn and does not want to slide onto the knuckle interface, use some 150 grit sandpaper to remove a bit of powder coating from the end of the tube. You only need to sand the area around the two main bolt holes. You need not worry about removing the powder coat layer because the underlaying zinc plating provides most of the corrosion resistance, and this part of the tube will not be visible when the knuckle interface is installed.

If things are being particularly stubborn, you may need to resort to the bolt-spreader technique used in **Step 3a**.

Step 6a

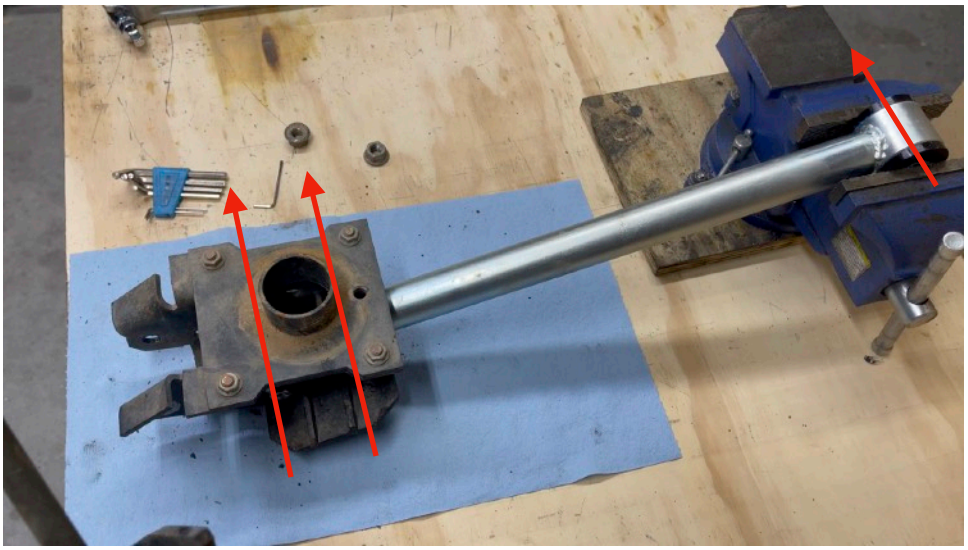
If you removed the spring cradle in **Step 3a**, place it on the knuckle interface with the spring isolator clocking hole facing towards the tube. Thread the four carriage bolts into place and tighten to 25 ft.lbs (34 Nm). It is extremely important to properly torque these bolts!

Note: if you only have metric tools, a six-point, 13mm socket can be used.



Step 7

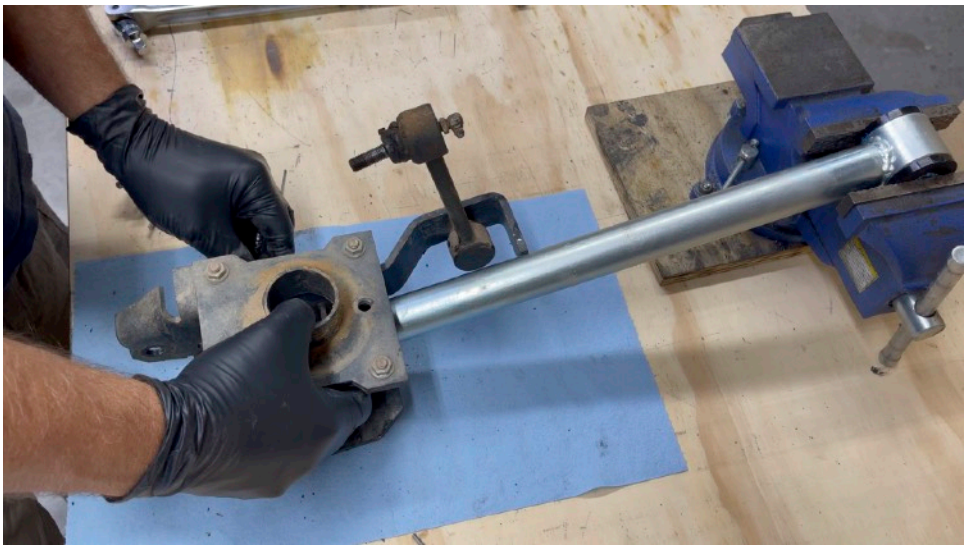
Make sure the knuckle interface is sitting flat. The axis of the bushing's center sleeve must be parallel to the axis of the bolt holes in the knuckle interface. Making sure everything is flat will accomplish this.



Step 8

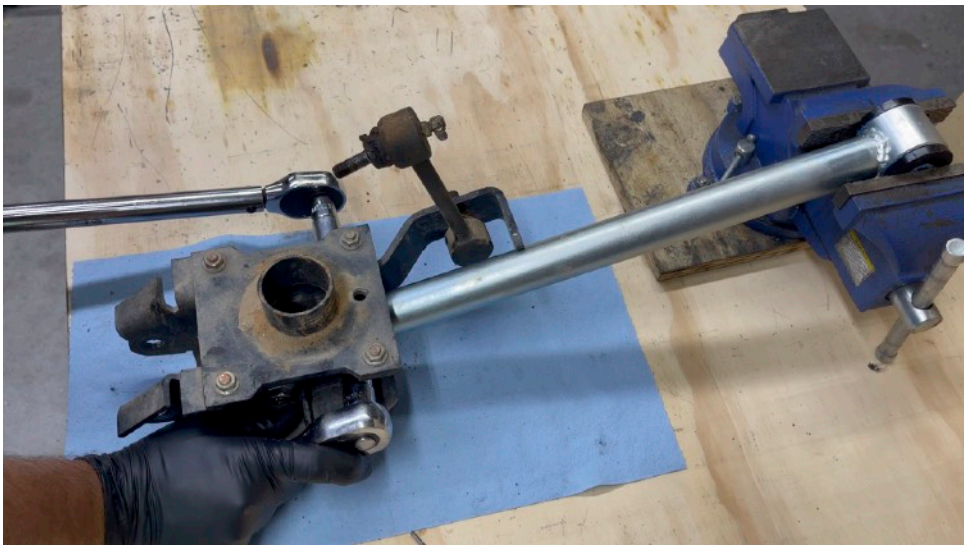
Insert the main bolts through the knuckle interface and tube. Place the stabilizer link bracket on the exposed bolts and then hand tighten the nuts to hold the stabilizer link bracket into place.

Note: the nuts should thread onto the same side as the stabilizer link bracket.



Fully torque the two main bolts to 92 ft.lbs (135 Nm). This is critical for proper operation of the control arm! You should also re-torque these bolts after a 300 mile break in period. This re-torque is also critical!

Note: Don't forget to lubricate the bushing after installing the control arm on the vehicle. Do not lubricate before installing on the vehicle because that may cause the bushing halves to separate.



You have successfully completed the tube replacement on your Stiletto rear lower control arms! Go have a beer!