

**INSPECT THE
CONTENTS OF THE
SHIPMENT BEFORE
YOU BEGIN THE
INSTALLATION**

Part # 10004521

VERSION 1.2



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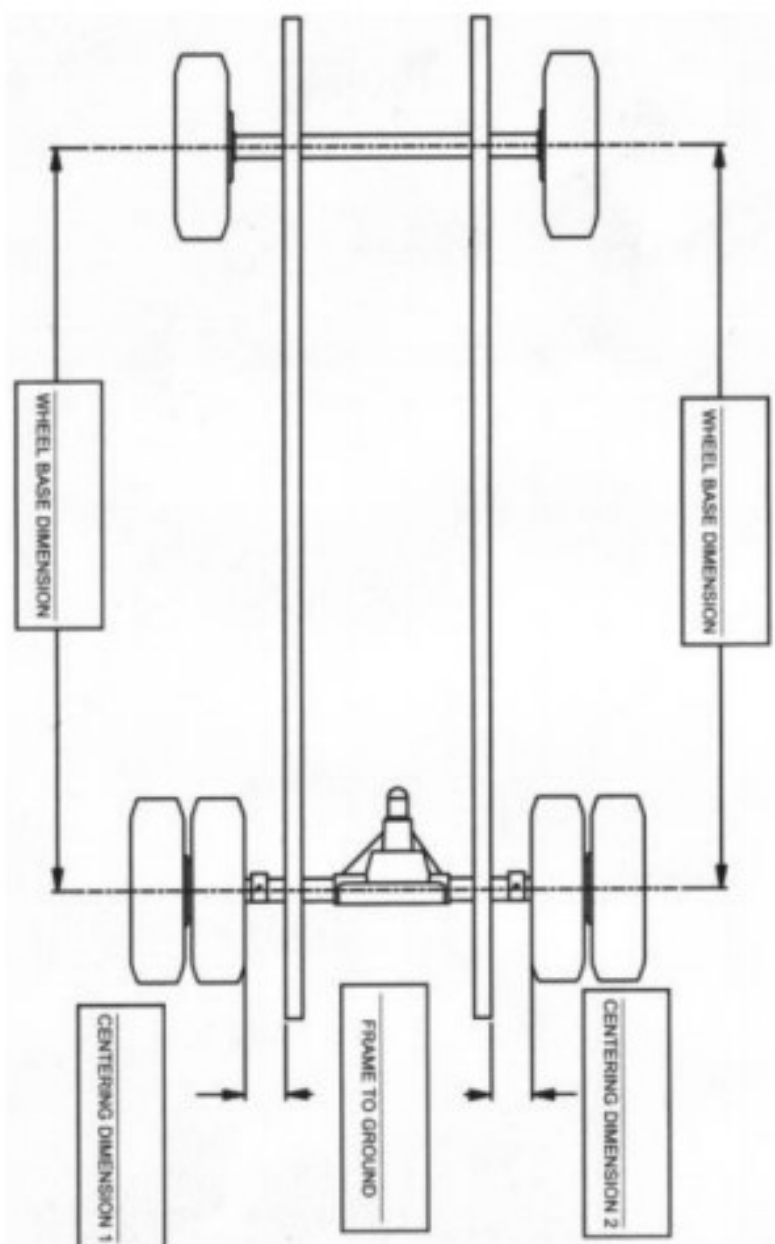
2019+ Ram 2500 4X4 10-12" Rear Coil Replacement Installation Instructions



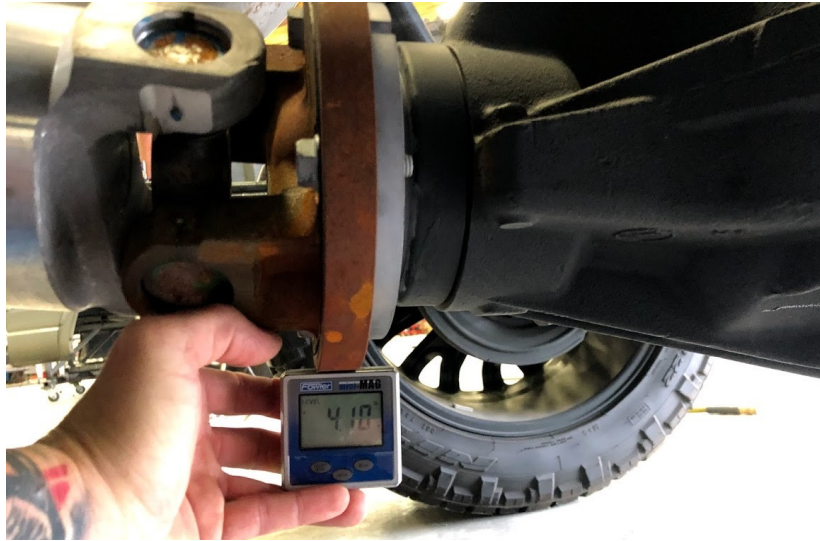
Bolt Fastening Torque Guide

BOLT DIAMETER	ft. lbs.
1/4"	10
5/16"	20
3/8"	37
7/16"	58
1/2"	90
9/16"	129
5/8"	180
3/4"	315
7/8"	501

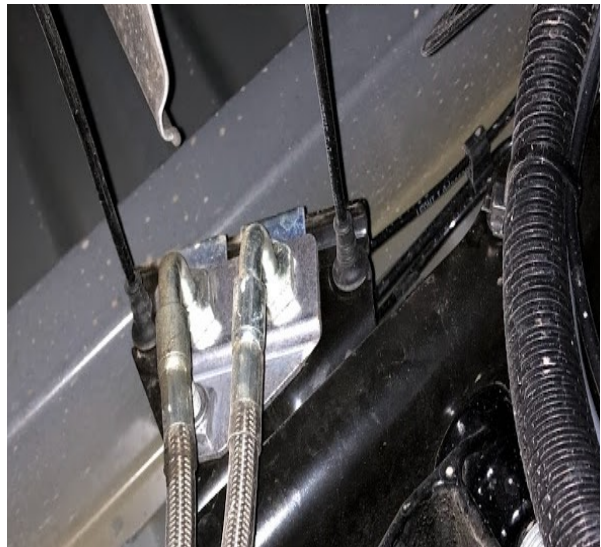
1. Measure all dimensions below before any uninstalling or installing.



1. Before doing anything, place the truck on a level surface and use an angle finder to measure the pinion angle. Write the measurement here _____. Remove the truck bed.



2. Locate the braided brake lines and brake line relocation bracket (Part # 10005109). The relocation bracket fastens to the axle. Once the new brake lines are installed, the brake system will need to be bled and brake fluid added to the reservoir.

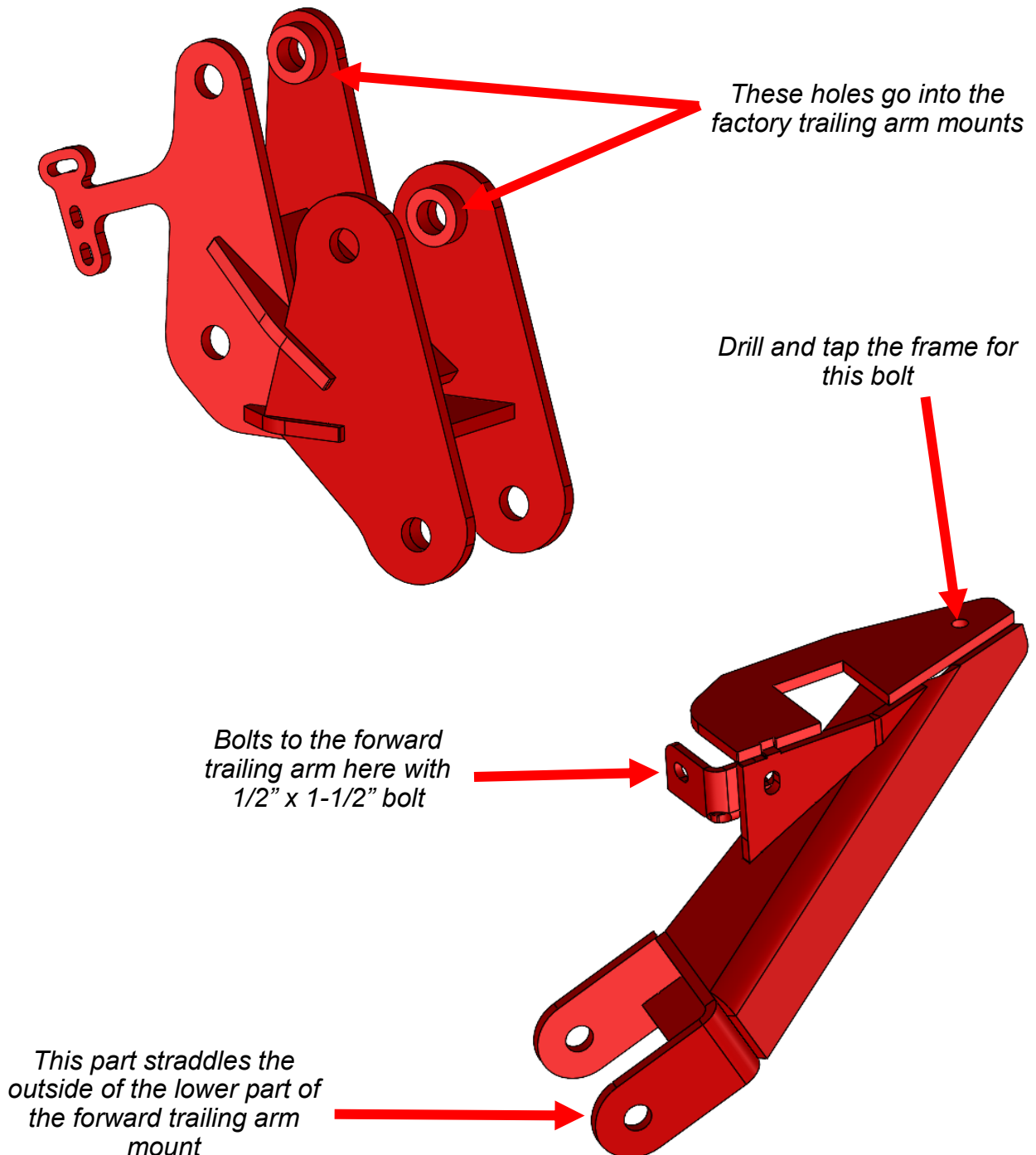


3. If a two post lift is not being used, jack the truck up from the frame. You will also need to put a floor jack under the rear axle. Place jack stands under the frame while you work. Lift the truck up approximately 10-12". Remove the shocks and the sway bar assembly. Lower the axle down using the floor jack. You will remove the rubber mounts that the springs set in also. Remove the top shock nuts. The shocks will not be re-used. You will also be removing the track bar as well as the four trailing arms. It works well to throw a strap over the front of the axle/driveshaft in order to keep the axle from rotating out of position.

4. Locate the upper shock mounts (Part # 19176-DS and 19177-PS). They weld into the recessed portion of the frame where the OEM shock went through. It will need to be set at a slight angle. The outside of the mount will be pushed slightly more into the frame than the inside of the mount. The best way to get the correct angle is to take the stock shock, insert the bolt in the bottom end and then attach the upper shock mount to the upper end. That will provide the correct angle. Tack weld the upper shock mount in place and remove the OEM shock. You can now fully weld the new shock mount in place.

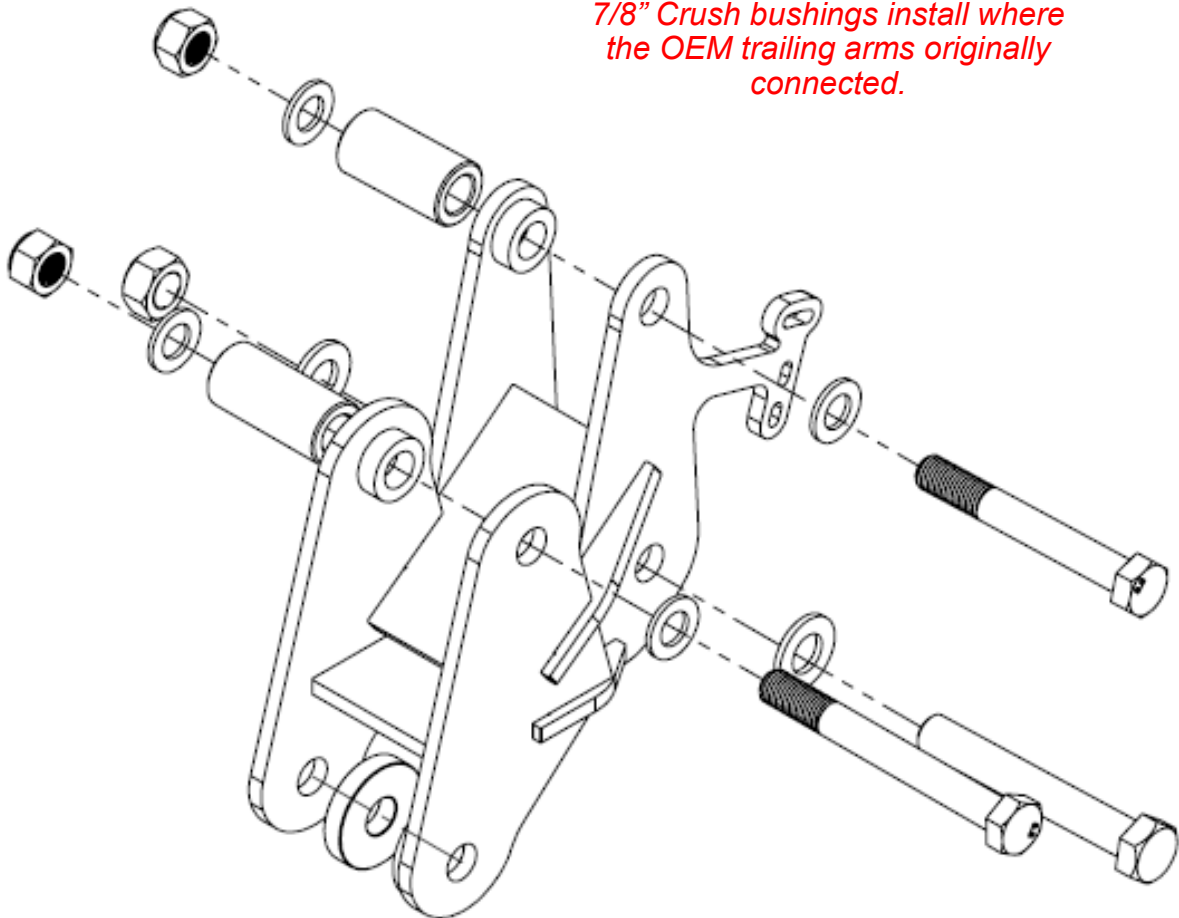


5. Locate the front trailing arm mounts (Part # 10001450-DS and 1003060-PS and trailing arm support brackets (Part # 10001449-DS and 10001452-PS). The trailing arm mounts fasten into the OEM trailing arm mounts with the M20-20 x 150 and M20-2.5 x 180 bolts. Use the 7/8" OD bushings in between the OEM mounts where the trailing arms originally fastened. The trailing arm mounting bracket support brackets need to be bolted to the bottom of the frame (you will drill and tap the frame), and also weld it to the frame. Use the diagram below. You will also need to install the right hand thread knuckles into the trailing arm mounts while installing the support brackets.

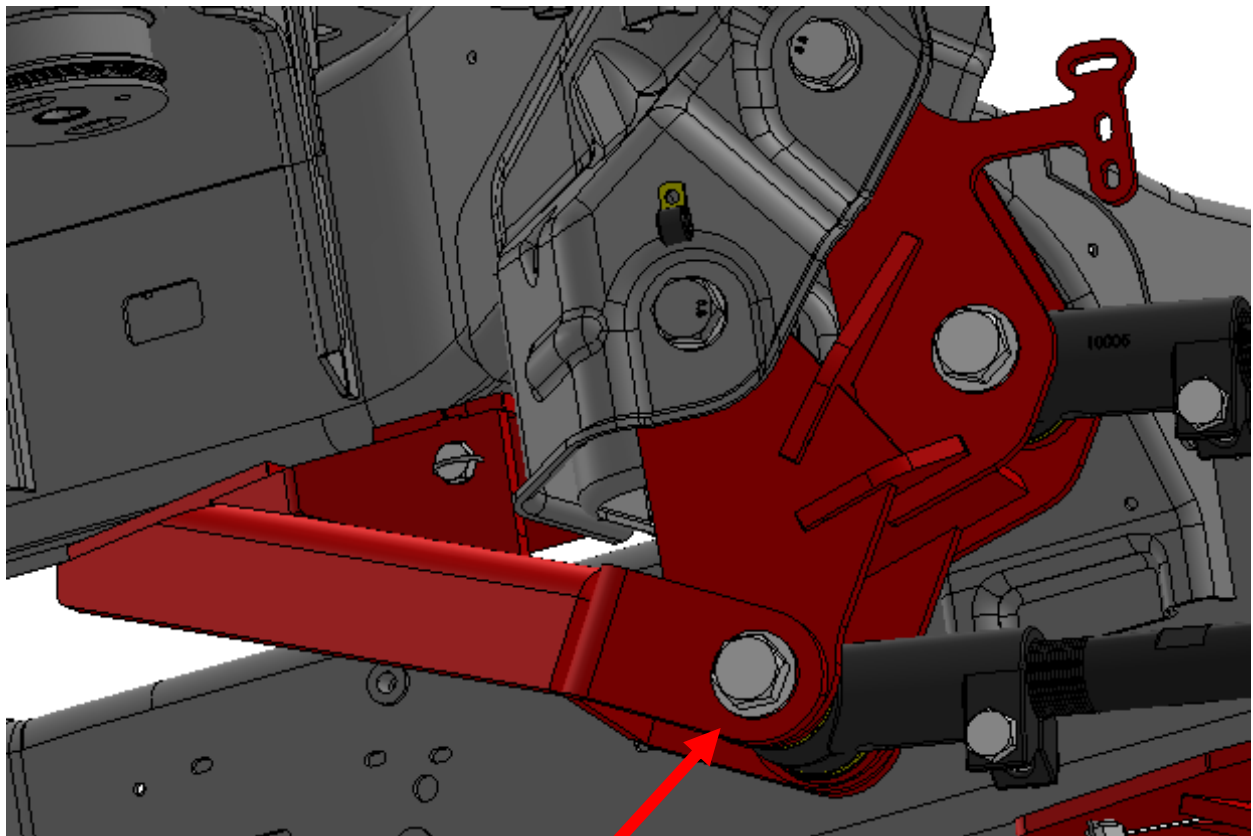




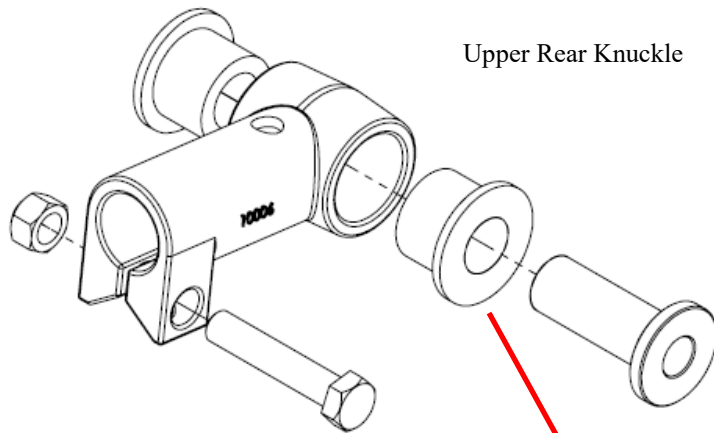
7/8" Crush bushings install where the OEM trailing arms originally connected.



6. Locate the provided Trailing Arms (Part # 21468-Upper & 52118.5-Lower) and Knuckles (Part # 10005-RH and 10006-LH). Adjust the upper (shorter) arm so there is 8.5" between the knuckles. Adjust the lower (longer) trailing arms so there is 12.5" between the knuckles. The 7/8" ID bushings go in the RH knuckles and the you will need to install the lower trailing arms at the same time as the trailing arm support bracket in the next step. Be sure all the RH knuckles (go into the trailing arm mounts) and the LH knuckles go into the axle. Use the OEM bolts in the knuckles that attach to the axle. The step spacers for the axle end go towards the outside of the truck. There are two widths of step spacers. The wider spacer goes on the bottom trailing arms.



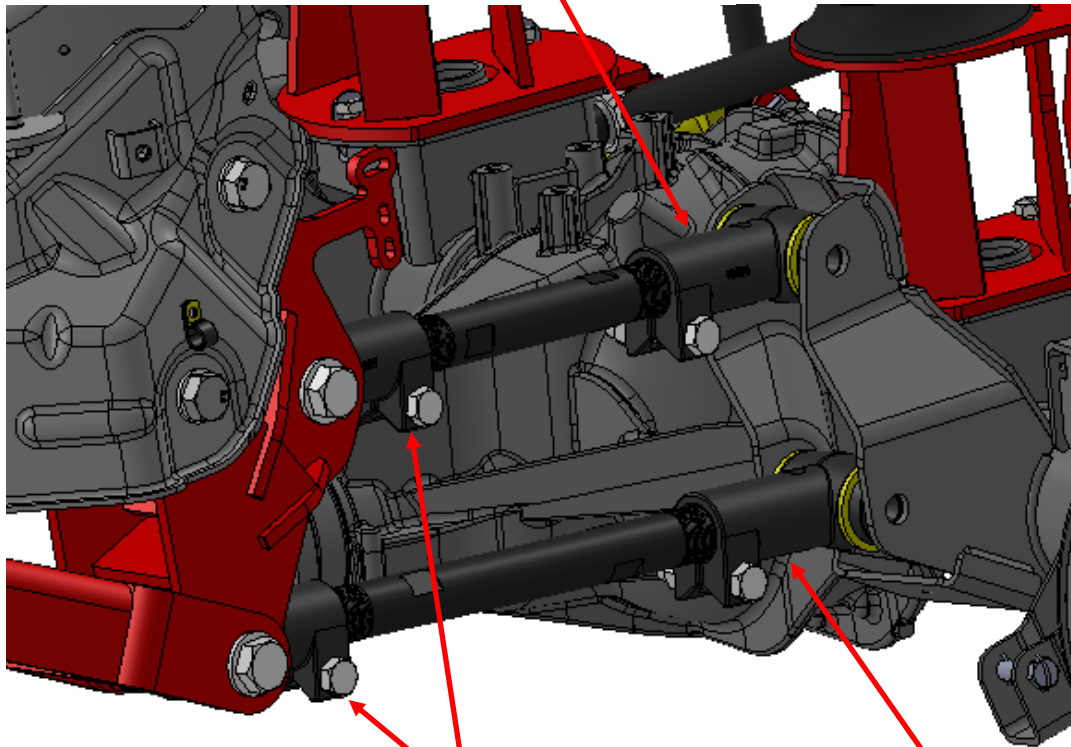
The lower trailing arm knuckle (RH) needs to be installed when installing the 7/8" x 7-1/2" bolt



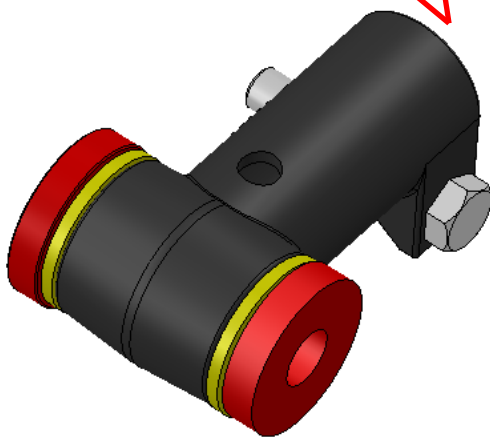
Upper Rear Knuckle

The (4) rear knuckles will need to have step bushings installed. See exploded views that show how the knuckles are installed.

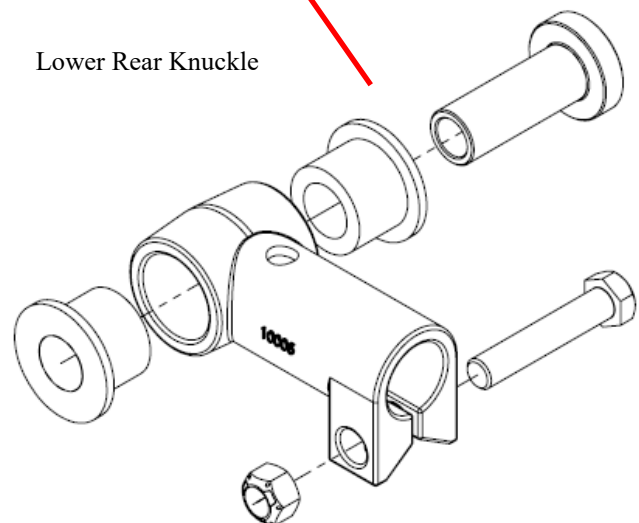
The (4) front knuckles will be installed the same minus the step bushings. The front knuckles will have a thick washer on each side of each knuckle.



Lower Rear Knuckle

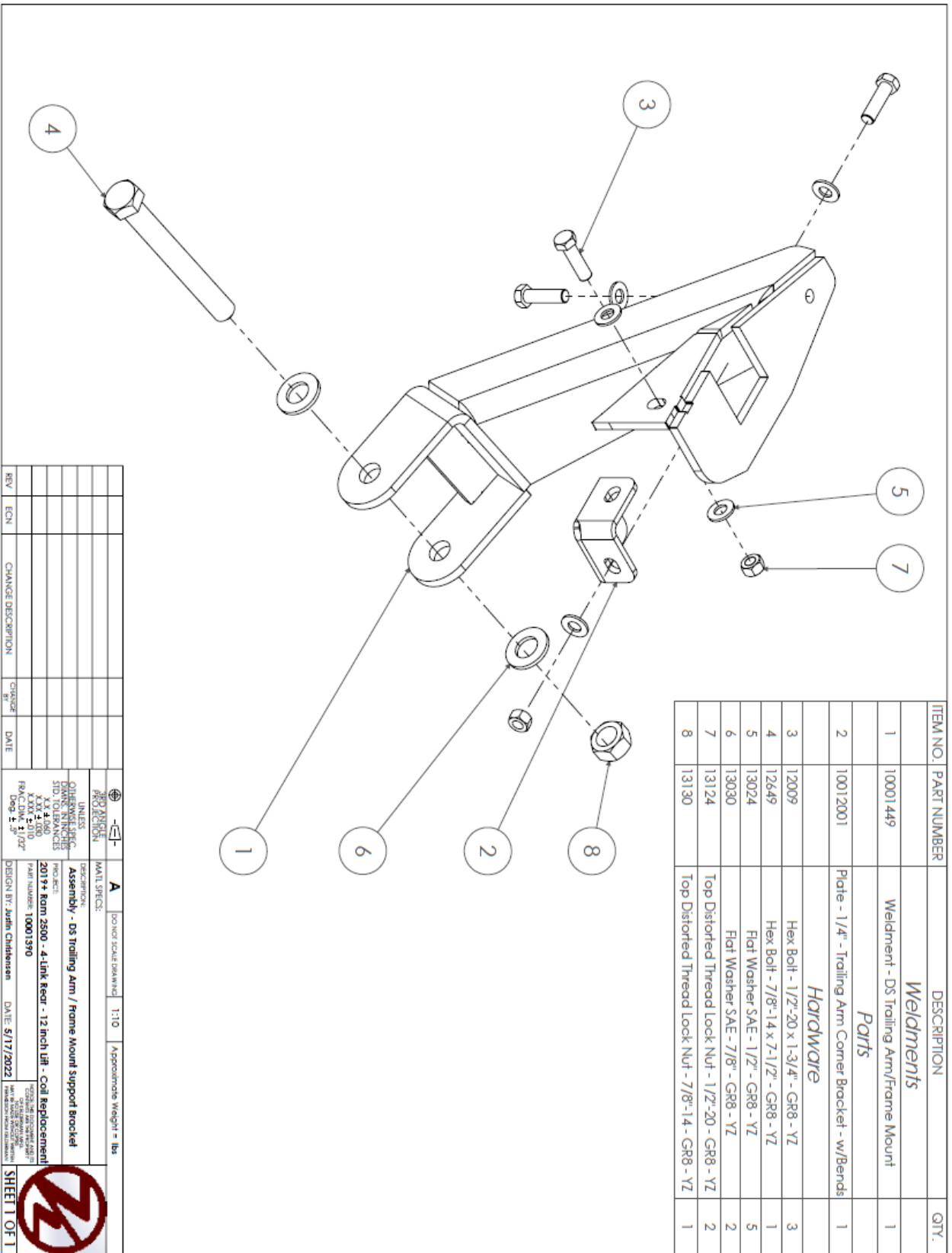


Front Knuckle Installation

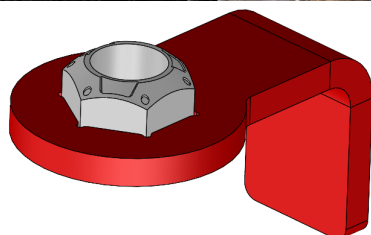
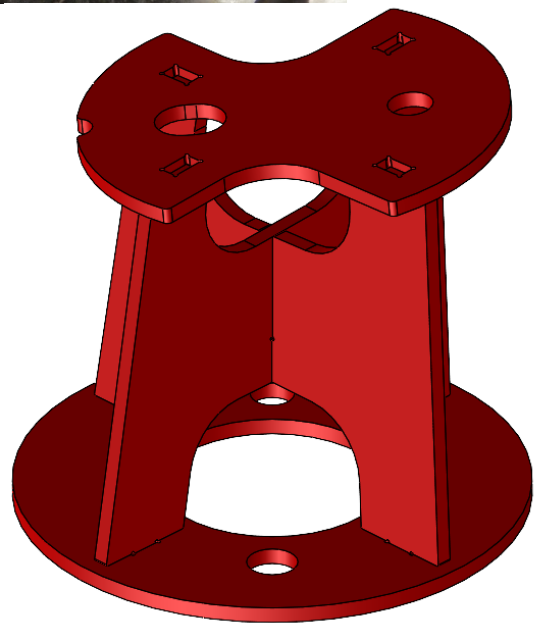
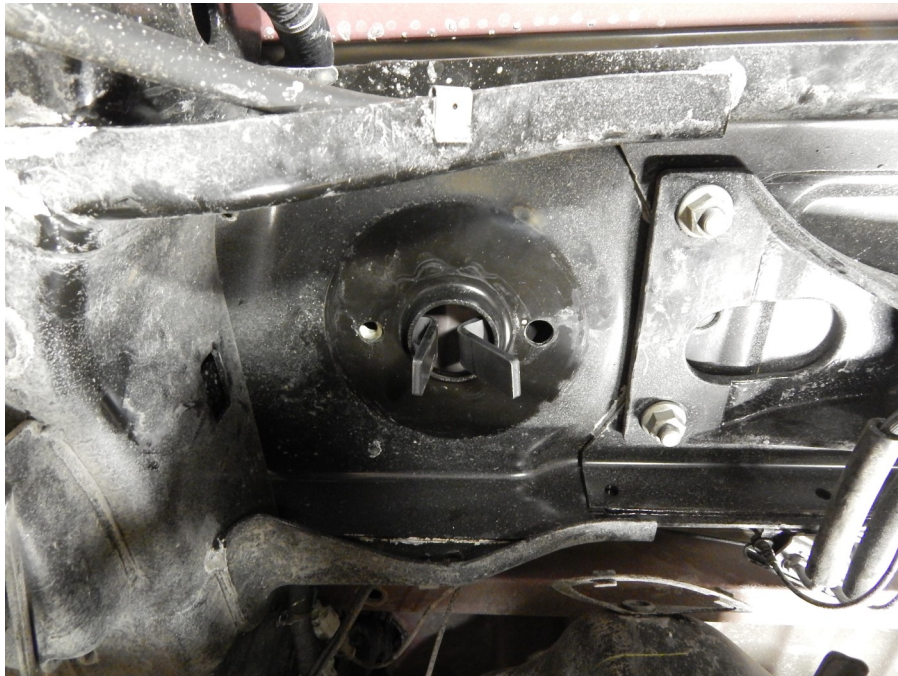


Weld here



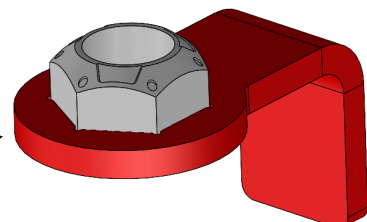


7. Locate the upper air bag mounts (Part # 10004310, both sides are the same) and the four lock nut tools (Part # 19083-5/8" and 19084-3/4"). Slide the lock nut tools as shown in the picture below in the holes located in the upper spring perch. Slide the upper bag mounts up and fasten in plate with the 5/8" x 1-1/2" and 3/4" x 1-3/4" bolts.

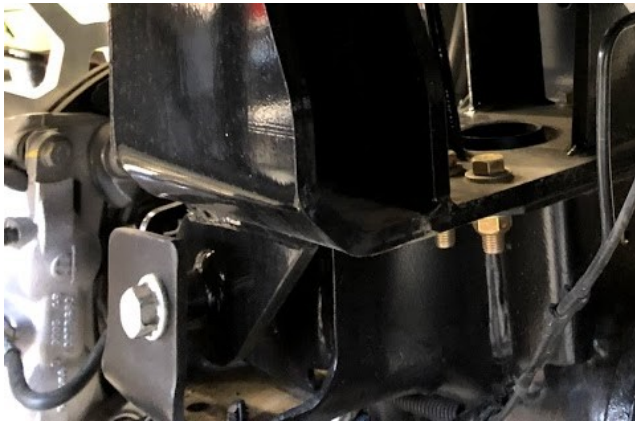


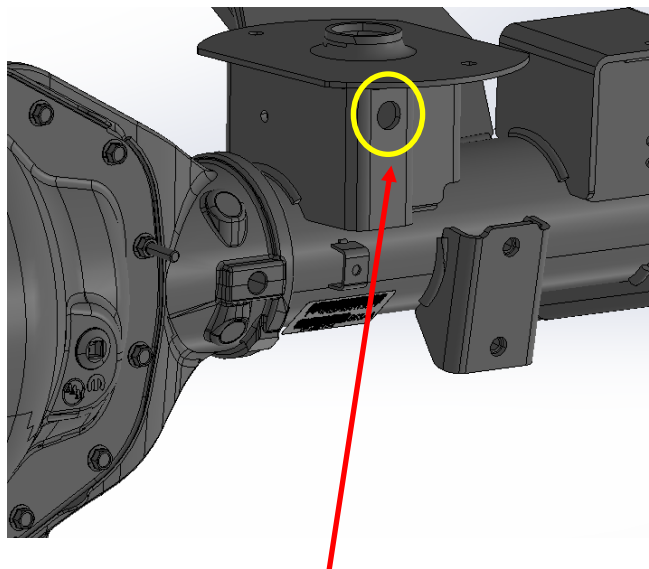
5/8 Lock Tool

3/4 Lock Tool



8. Locate the lower air bag mounts (Part # 10003623-DS and 10003637-PS). Place the drivers side on top of the axle. It attaches to the spring perch with three $\frac{1}{2}$ " x $1\frac{1}{2}$ " bolts and also to the pan hard bar mount on the axle. *Do not tighten yet.* The (2) holes in the lower spring perch need to be drilled out to $\frac{17}{32}$ ". Use a marker to indicate where to drill the third hole. Remove the lower bag mount and drill these holes out to $\frac{17}{32}$ ". Re-install the lower bag mount. Torque the OEM pan hard bar to 150 ft./lbs. and the $\frac{1}{2}$ " bolts to 90 ft./lbs. The passenger side uses a lower track bar mount (Part # 10001466). It will bolt to the bottom of the axle plate with the $\frac{1}{2}$ " x 2" bolt. Once you have that piece in place, you will have mark where to drill a $\frac{25}{32}$ " or $\frac{49}{64}$ " hole into the factory support bracket. See the photos on the next page.



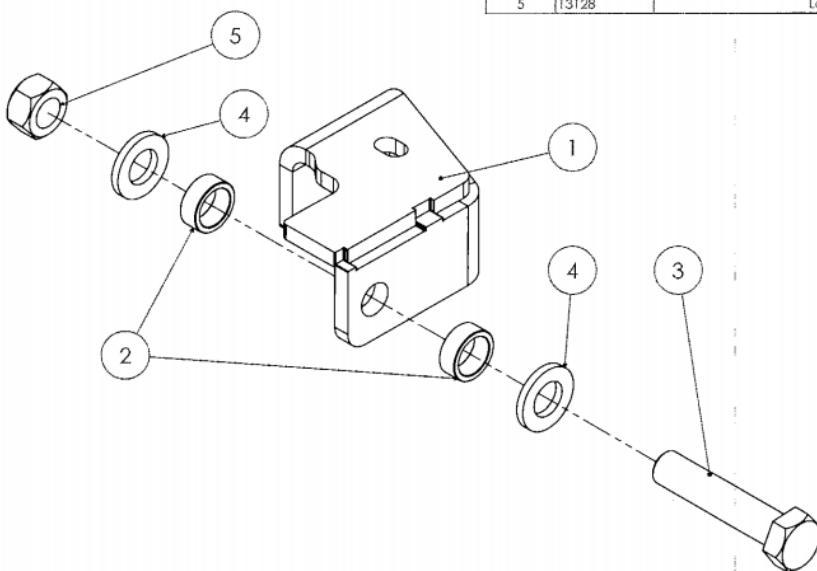


Drill hole to 25/32" or 49/64"

The base of the OEM spring will be drilled for the bolt to go through

9. Once the lower bag mounts are installed, locate the 28" lower adjustable pan hard bar (Part # 10005988). It fastens to the drivers side lower air bag mount and to the passenger side lower bag mount. This bar is just a brace. Use the supplied spacers to center up the heim ends in the mounts.

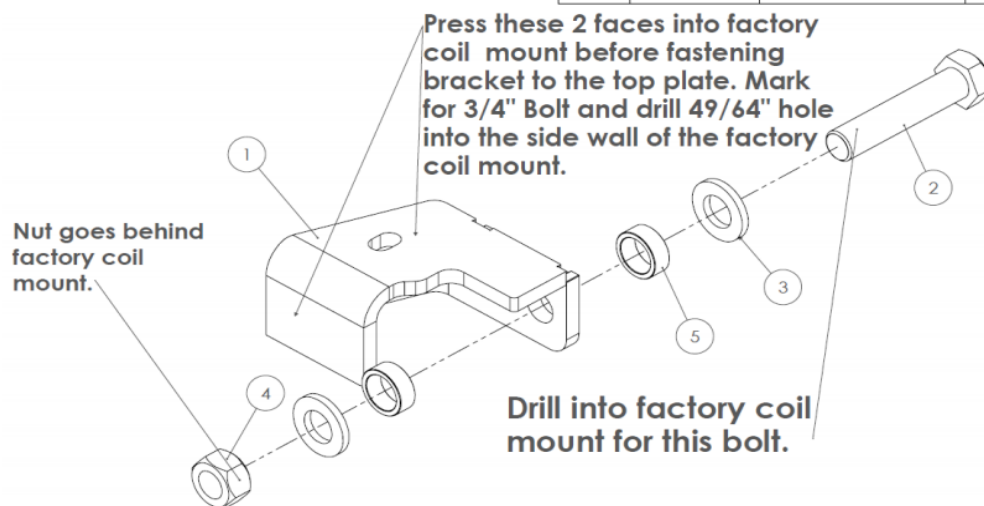
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
Weldments			
1	10001466	Weldment - PS Support Bracket	1
Parts			
2	18532	Bushing - 1.15" OD x .880" ID x .440" Long - Heim Spacer (7/8" Bolt)	2
Hardware			
3	12525	Bolt - 3/4"-16 X 3 1/2" Gr. 8 YZ	1
4	13028	Washer - 3/4" - Flat SAE Washer	2
5	13128	Lock Nut - 3/4"-16 Gr. 8 YZ	1



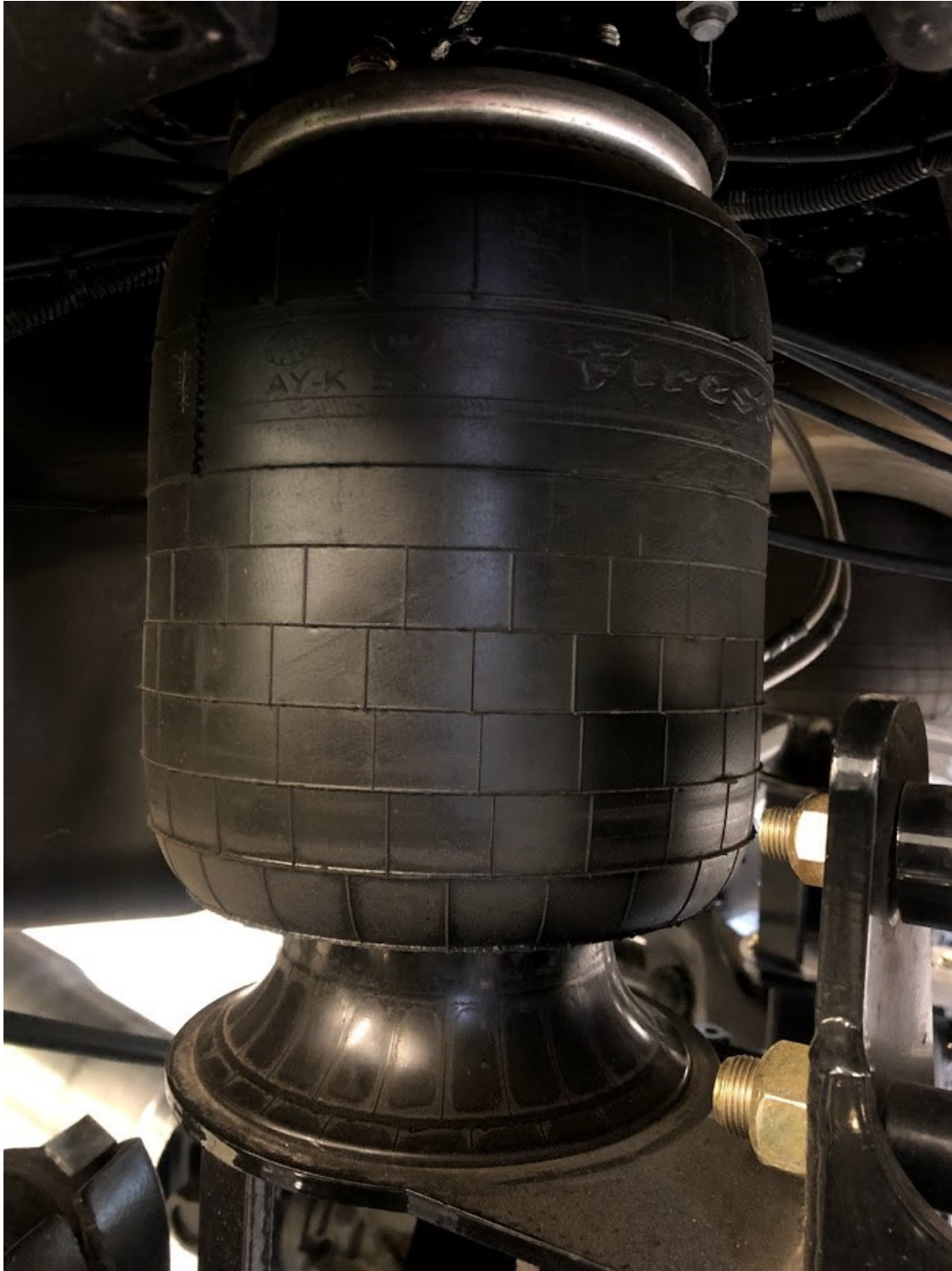


PS Support Bracket Weldment and Hardware

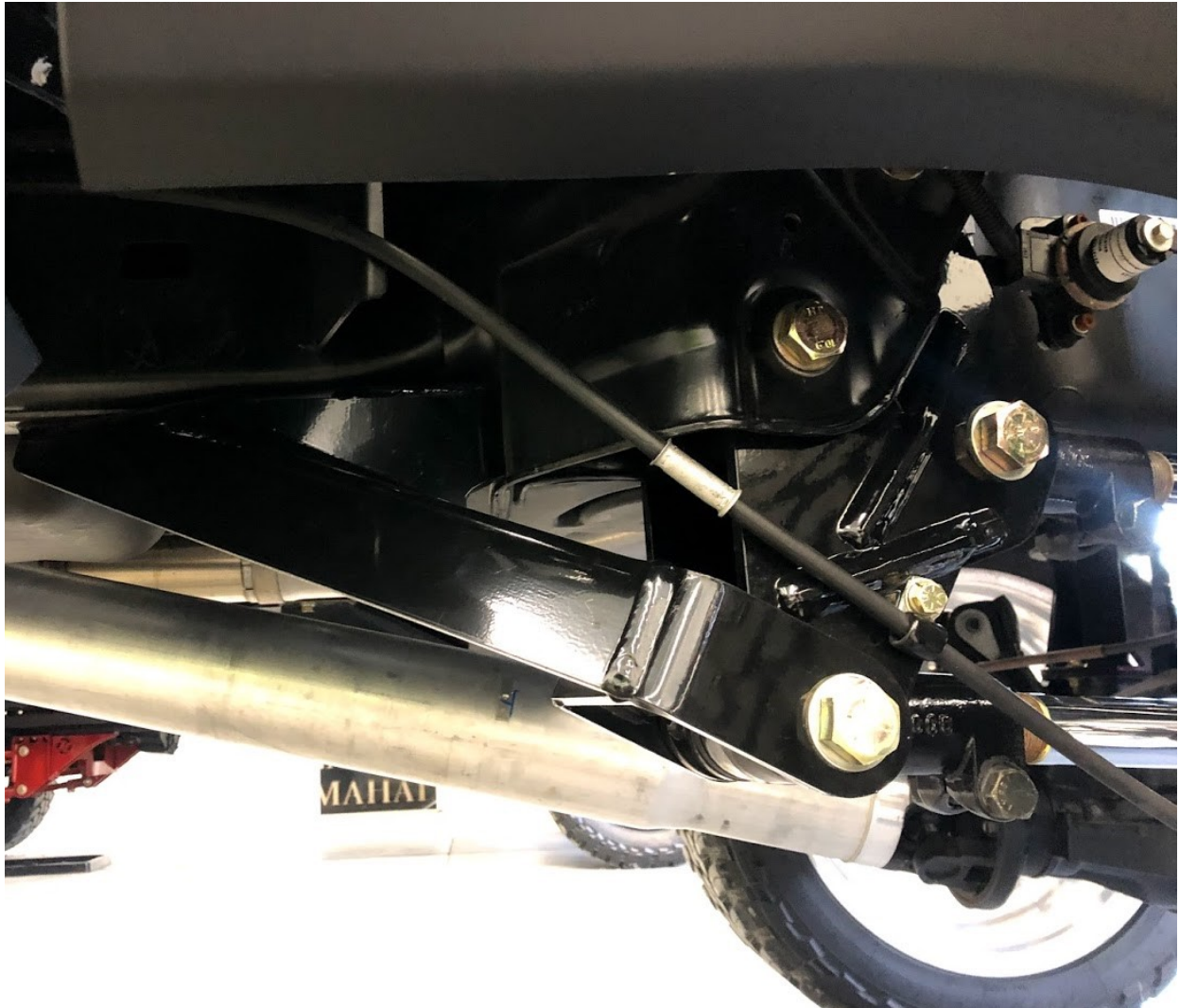
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
<i>Weldment</i>			
1	10001466	Weldment - PS Support Bracket	1
<i>Hardware</i>			
2	12525	Bolt - 3/4"-16 X 3 1/2" Gr. 8 YZ	1
3	13028	Washer - 3/4" - Flat SAE Washer	2
4	13128	Lock Nut - 3/4"-16 Gr. 8 YZ	1
5	18532	Bushing - ID - .880" OD - 1.15" - Length - .440"	2



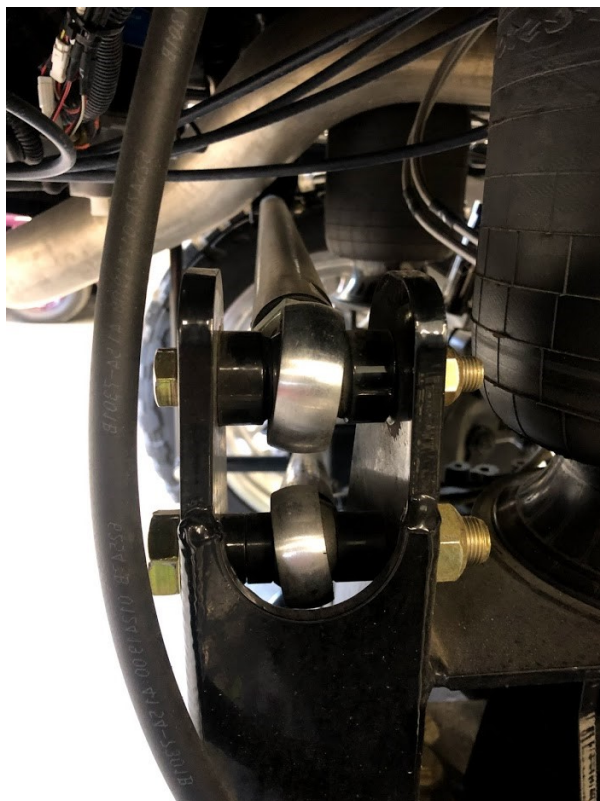
10. Locate the air bags (Part # F8979). They fasten to the upper air bag mounts with the 1/2 and 3/4" nuts and washers. The bottom fastens to the lower air bag mount with the 1/2 x 4" bolts. Torque these bolts and nuts to 35 ft./lbs.



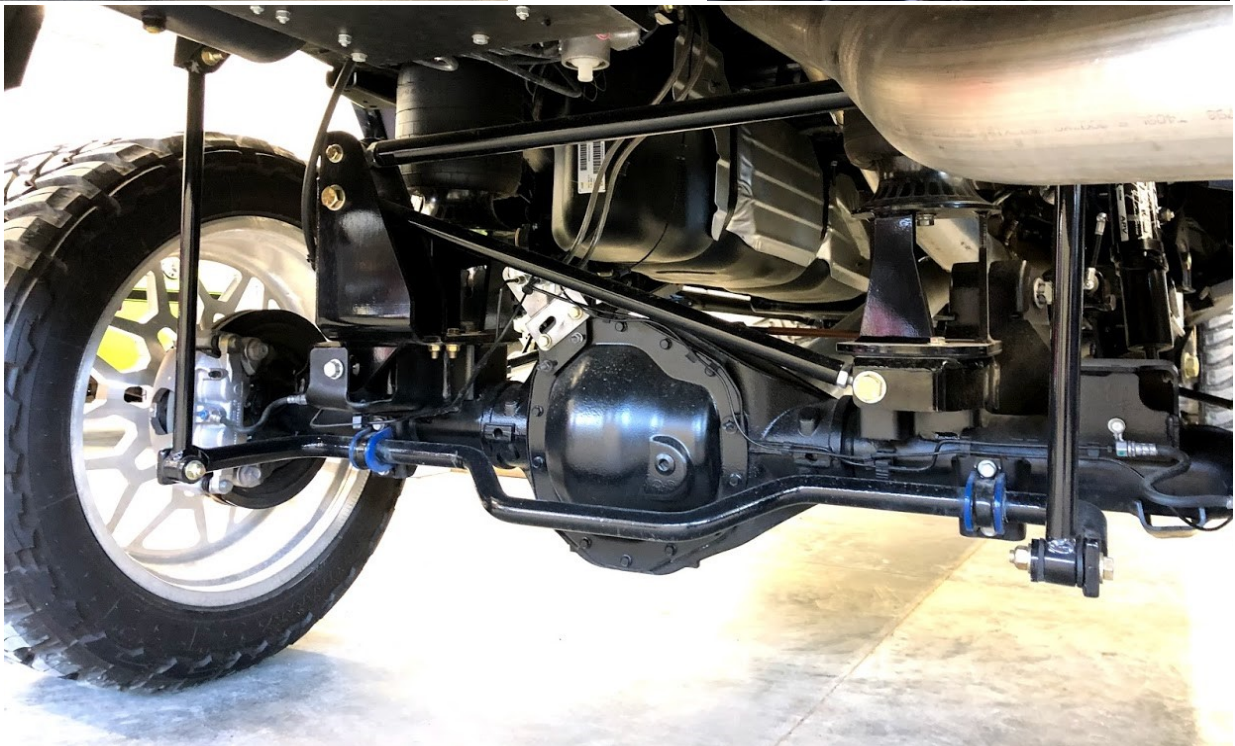
11. Re-route the emergency brake cable as shown in the picture below. It will clamp to the side of the forward trailing arm with the supplied clamp.



12. Locate the 31-3/4" pan hard bar (Part # 10005989). Adjust it so the center to center of the heim ends measure at 35-3/8". This will be close to centering the axle in the chassis. The panhard bar fastens to the drivers side lower air bag mount and into the OEM upper pan hard bar mount on the truck frame. Make sure to use a spacer (Part # 18789) on each side of the heim ends to center the bar up. Use the 14 x 110 bolt to fasten the panhard bar to the DS bracket and the M14 x 110 bolt to fasten the bar to the PS.



13. Locate the sway bar (Part # 80246) and the sway bar end links (Part # 20272). The sway bar attaches to the axle with the OEM bolts. The end links attach to the sway bar with the 1/2" x 3" bolt. Make sure to use the large washer on the bushing side of the end link when attaching to the sway bar. The top of the end link attaches to the OEM mount on the frame. Locate the upper mounting plate (Part # 19161) and fasten the top hole of the bracket to the frame with the 3/8" x 1-1/4" bolt.

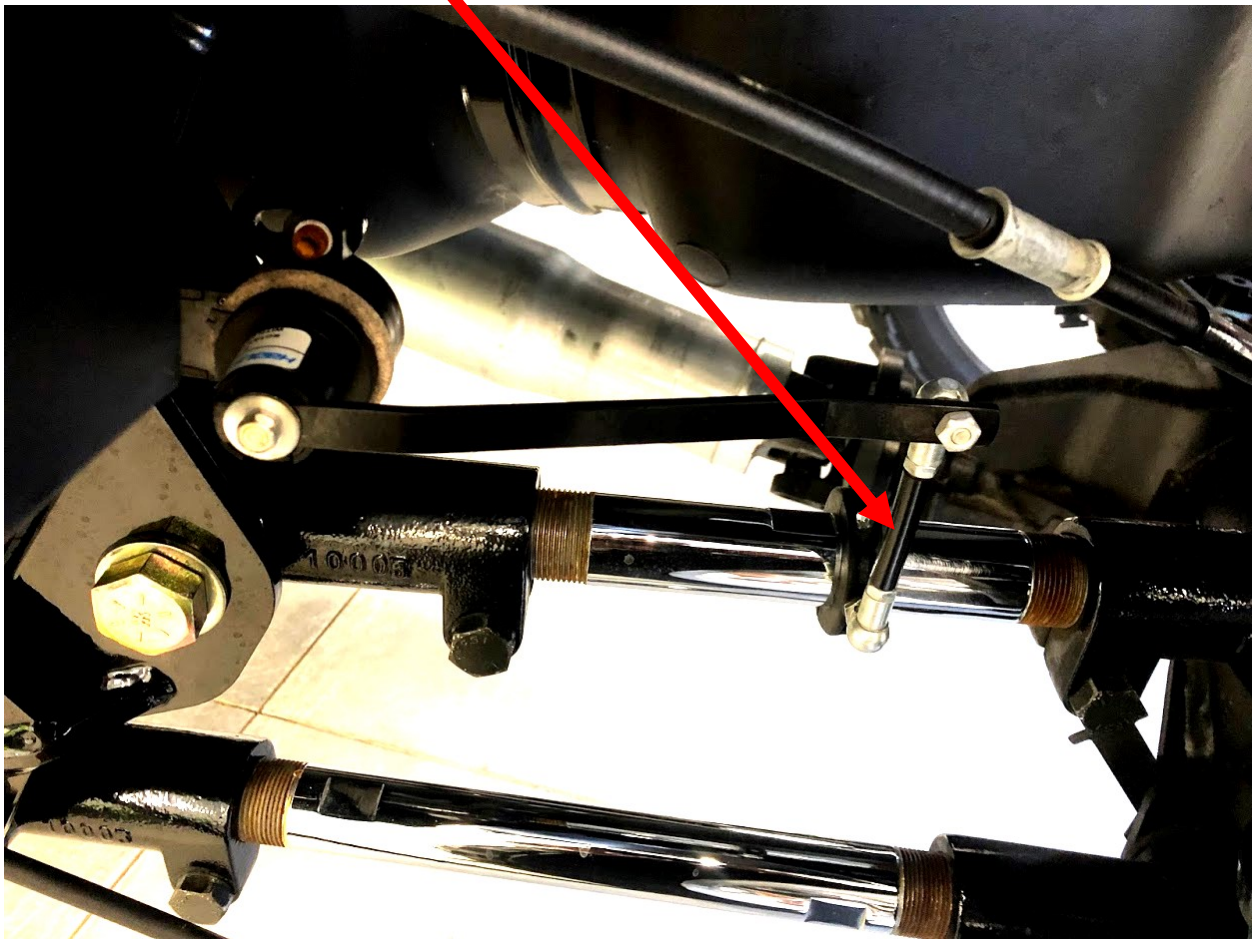


14. Locate the rear shocks (Part # 985-24-054 FOX or 10096 LH & RH Raptor). They attach to the upper air shock mounts with the 1/2 x 3" bolt. The bottom of the shock attaches to the lower shock mounts on the axle with the factory 14M shock bolt. Use the billet piggy back style clamp to attach the remote reservoir to the shock body. (The shocks come with 1/2" bushings. Look for the 9/16" bushing and install in the bottom eyelet).

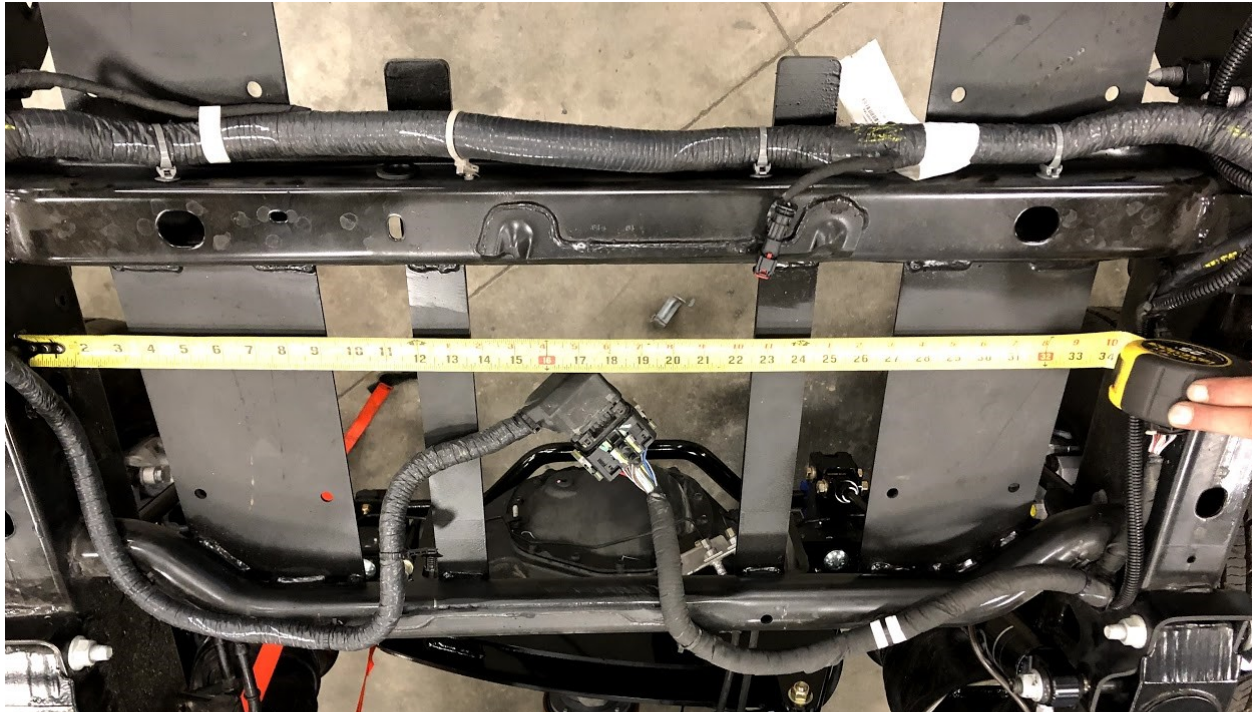


15. Locate the optional ride height sensors. They fasten to the mounting tabs welded to the forward trailing arm mounts with the 1/4" x 1" bolts. With the air bags inflated to 12", the sensor needs to be rotated in the top slot towards the rear of the vehicle. Cut the linkage down to 4". The collar goes 3-1/4" away from the rear cast knuckle.

*4" linkage
Set collar 3 1/4" away
from the rear knuckle*



16. Locate the optional air management system. There is a video on YOUTUBE that walk through the air box and air tank mounting process. Visit [YouTube.com/User/KeldermanTrucks/Videos](https://www.youtube.com/user/KeldermanTrucks/Videos). Cut the spare tire assembly out that sits between the frame crossmembers. The compressor box mounting brackets get welded to the crossmembers and the air tank mounting brackets get welded on each side of the air box mounting brackets. Use the instructions supplied with your air control system to wire up the system and plumb it.





17. Go back to step #1 and check the recorded pinion angle measurements. Use the trailing arms to set the pinion angle back to the recorded measurement, well as the fore and aft of the axle. Use the pan hard bar to set the axle position from right to left. Once the suspension is dialed in, go back and make sure all your bolts are torqued.

Please call 641-673-5396 for and install questions or technical assistance.

Kelderman Air Suspension Systems is open M-F, 7:30-4:30 CST.

