

INSPECT CONTENTS  
OF THE KIT PRIOR  
TO INSTALLATION



VERSION 1.1

D4R4-2-X-14-3

*kelderman.*

**AIR SUSPENSION SYSTEMS**

**2686 Highway 92 - Oskaloosa, IA 52577**  
**phone: 641.673.0468 email: info@kelderman.com**  
**www.kelderman.com**

# **2014+ Ram 2500 Factory Rear Coil Spring 3" Rear Lift Kit**



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 \_\_\_\_\_.  
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. It will be easiest for installation if the truck is approximately 10-12" off the floor. If the truck is on a lift, you will want some tall stands to support the rear axle.
2. The rear coil springs need to be removed. To do this, remove the bottom shock bolts and unhook the sway bar end links from the sway bar. **NOTE: WATCH THE-BRAKE LINES. DO NOT STRETCH AND DAMAGE THEM.** You will remove the rubber mounts that the springs sit in also. Remove the top shock nuts. The shocks will not be reused, but the bottom shock bolts will be. You will also be removing the factory rear track bar as well as the four factory trailing arms, factory panhard bar, sway bar and sway bar end links. 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.

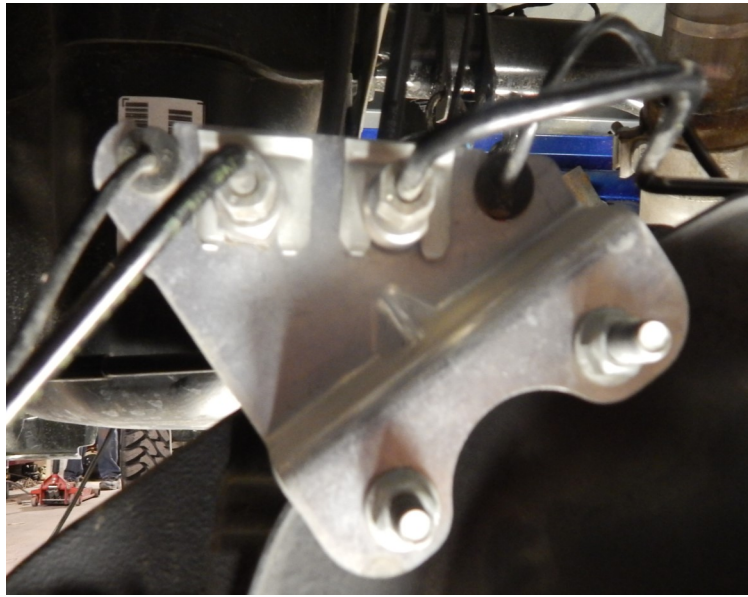
*Coil springs shown removed from truck*



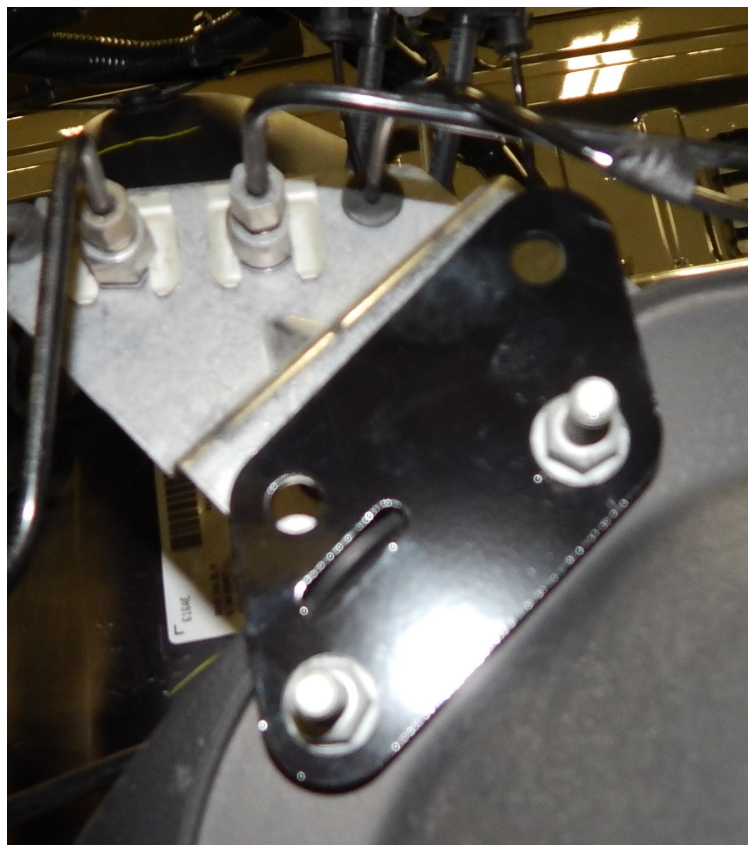
3.) Locate the upper air bag mounts (Part # 19107DS and 1906PS). They fasten into the upper coil mounts with the 1/2" and 3/4" lock nut tools (Part # 19084 and 19083). Install the upper bag mounts in place and torque the 1/2" bolts to 85 ft./lbs. and the 3/4" bolts to 125 ft./lbs. **NOTE:** The cut out for the air line fitting on the drivers side faces towards the center of the truck and the cut out on the passenger side faces towards the front/and passenger side frame rail.



4.) Locate the brake line relocation bracket (Part # 19046). Remove the two nuts off the mounting studs and slide the relocation bracket over the studs. Fasten with the factory nuts. Torque to 20 ft./lbs. Fasten the brake line bracket to the relocation bracket with the 1/4 x 1" bolts. Torque to 25 ft./lbs. Examine the brake lines along the axle. Once the install is complete, make sure the brake lines are not rubbing on anything. *New brake lines are not required for this kit.*



*Stock brake line  
Bracket mount*



*Adapter plate  
attaches to the  
differential cover  
and raises the  
brake line  
bracket up*

5) Locate the knuckles (Part # 19181 and 19182) and trailing arm bars (Part # 52118.5 upper and 52120 lower). The upper arms get the thin wall bushings (Part # 19121) and the lower arms get the thicker walled bushings (Part # 19120).

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
<i>Parts</i>			
1	19121	Bushing - Knuckle Half Sleeve Top Hat - 20mm Bolt - .120" Washer Flange	2
<i>Purchased Parts</i>			
2	10005	TORQUE ARM END (RHT)	1
3	80136	Insert Press-In Bushing	2
<i>Hardware</i>			
4	12420	Bolt - 5/8"-11 X 3 1/4" GR8	1
5	13106	Lock Nut - 5/8"-18	1
6	13026	5/8" Flat Washer	2

REV	ECN	CHANGE DESCRIPTION	CHANGED BY	DATE

2011 DODGE PRODUCTION  
 PART SPEC: **10005**  
 DESCRIPTION: **Trailing Arm Knuckle 10005**  
 PROJECT: **Dodge Trailing Arms**  
 PART NUMBER: **19181**  
 DESIGN BY: **2818** DATE: **11/26/2011**  
 SHEET 1 OF 1

ITEM NO.	PART NUMBER	DESCRIPTION	Default/QTY.
<i>Parts</i>			
1	19120	Bushing - Knuckle Half Sleeve Top Hat - 20mm Bolt - .28" Washer Flange	2
<i>Purchased Parts</i>			
2	10006	TORQUE ARM END (LHT)	1
3	80136	Insert Press-In Bushing	2
<i>Hardware</i>			
4	12420	Bolt - 5/8"-11 X 3 1/4" GR8	1
5	13026	5/8" Flat Washer	2
6	13106	Lock Nut - 5/8"-18	1

REV	ECN	CHANGE DESCRIPTION	CHANGED BY	DATE

2011 DODGE PRODUCTION  
 PART SPEC: **10006**  
 DESCRIPTION: **Trailing Arm Knuckle 10006**  
 PROJECT: **Trailing Arms**  
 PART NUMBER: **19182**  
 DESIGN BY: **2814** DATE: **11/26/2011**  
 SHEET 1 OF 1

6) Locate the trailing arms and install the top bars first. Use the pictures on Page 8 to set the bolt orientation. The factory bolts and nuts will be reused. While the trailing arms are removed, unhook the emergency brake line on the passenger side. Use the pictures below and on Page 6 to see how to re-route the cable. It will fasten to the lower trailing arm forward pinch bolt with the supplied clamp. Once the trailing arms are installed, torque the bolts to 200 ft./lbs. NOTE: When installing on the truck, the RH knuckles so they will be on the front end of the trailing arm and the LH can go into the truck axle. This makes adjustments easier when all the trailing arms are orientated the same way. The top bars are the shorter ones.



**The lower trailing arms (longer ones) get the thicker walled bushings**



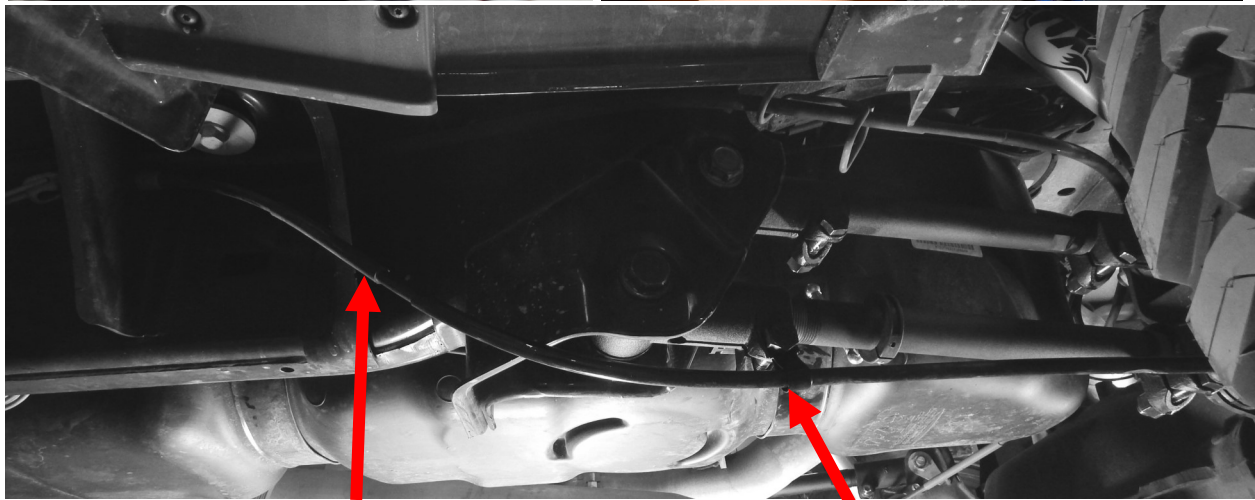
*By setting the trailing arms at these measurements the pinion angle and axle centering should be close. Fine tuning may be required once install is complete.*

*Remove the e-brake cable from this hole.*



7) Remove the drivers side e-brake cable from the metal loop that holds it in place. Unhook it from the connection on the side of the frame and push it back through the mounting brackets. It will now drop down and run up to the forward bracket. It will also tie into the lower forward trailing arm knuckle pinch bolt with the supplied clamp.

*Remove drivers side e-brake cable from this loop*



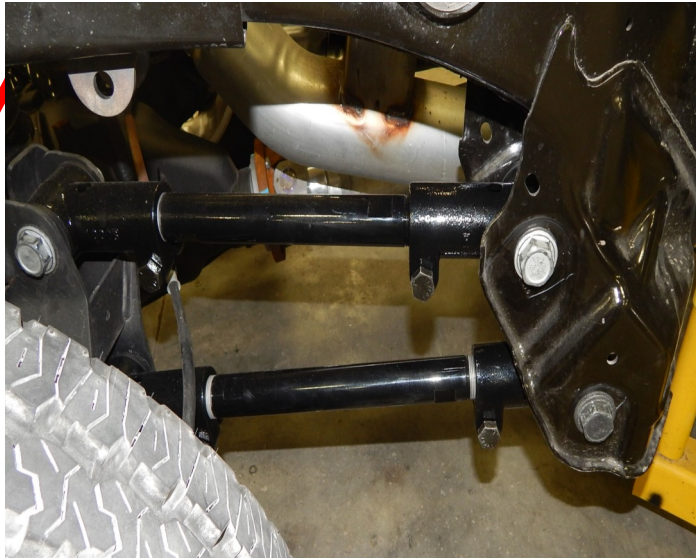
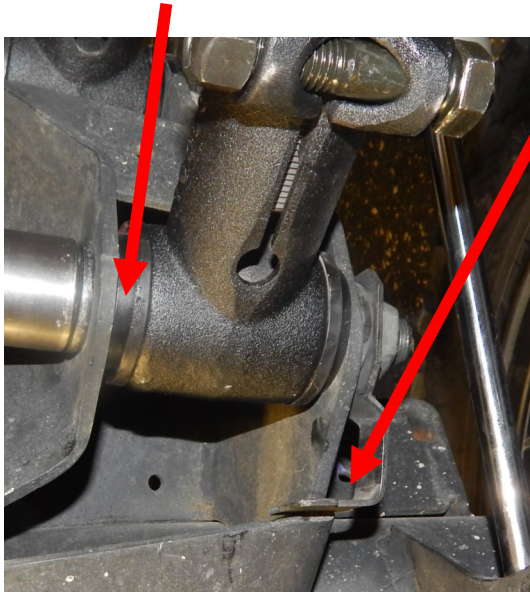
*Brake cable now droops down below the rear mount that it originally was routed through*

*Clamp to the pinch bolt on the lower front knuckle*



*The lower trailing arms use the thicker walled bushings.*

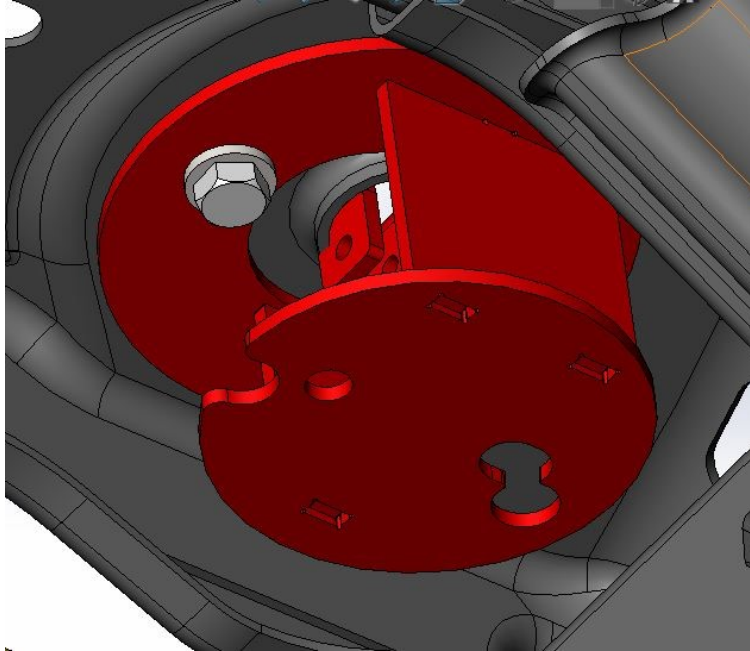
*This tab needs to be bent so it will catch on the trailing arm mounting bracket.*



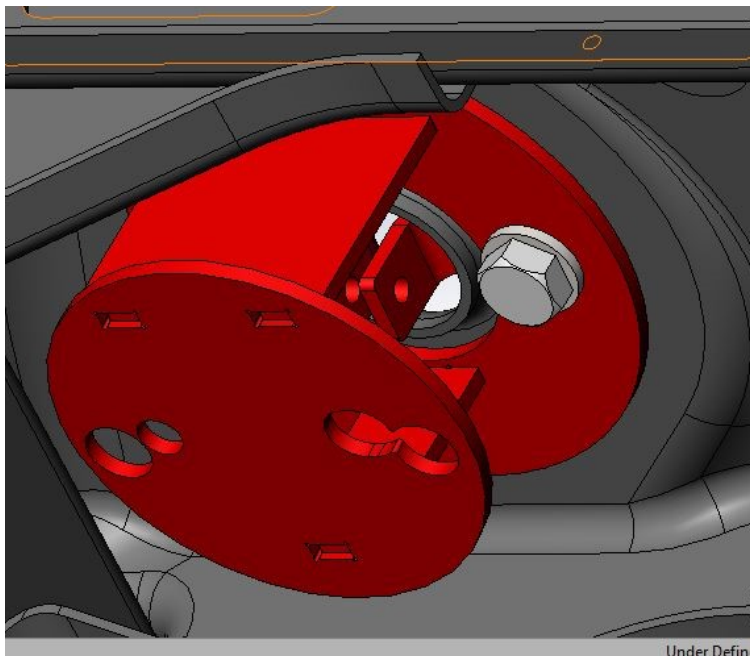


8.) Locate the two holes in the top of the coil spring perch. Use a 13/16" drill bit to open up the holes. Use the 3/4" wrench nut (Part # 19084) and the 5/8" wrench nut (Part # 19083) to attach the upper bag mount to the frame. Use the 1 1/2" x 5/8" and 3/4" bolts.

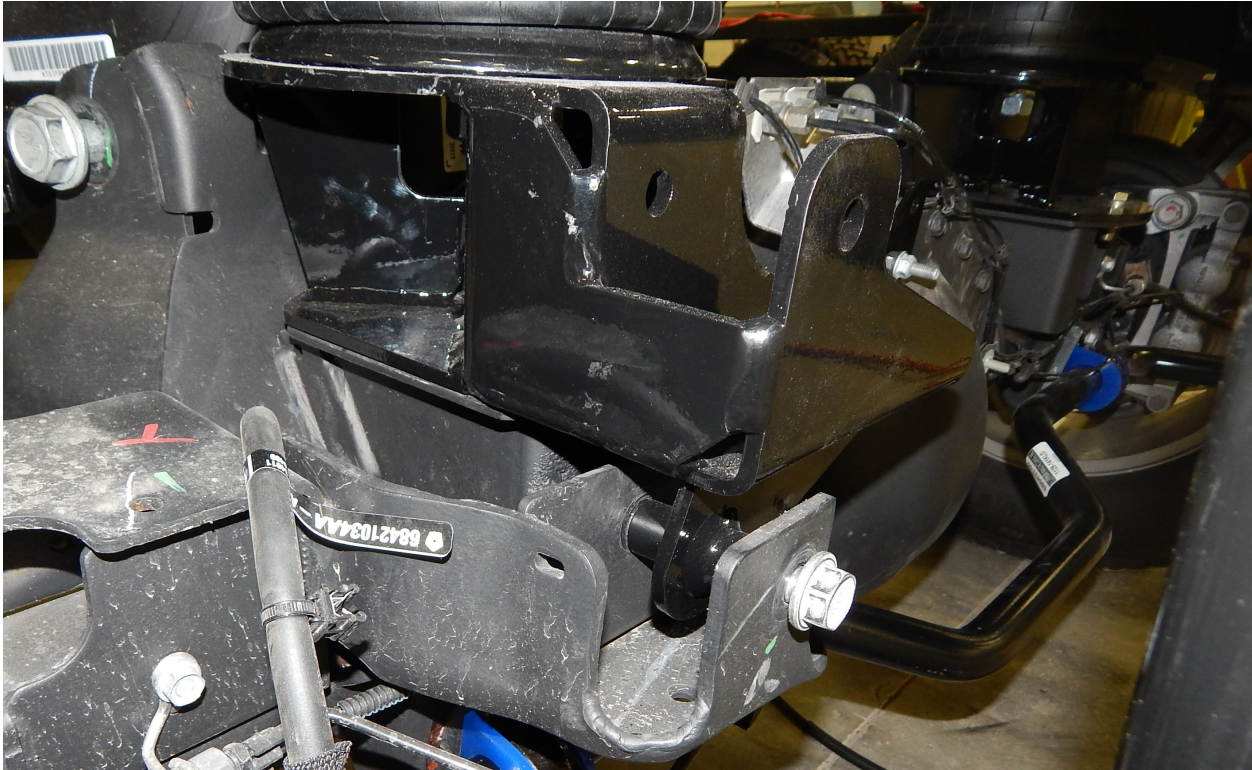
Drivers side



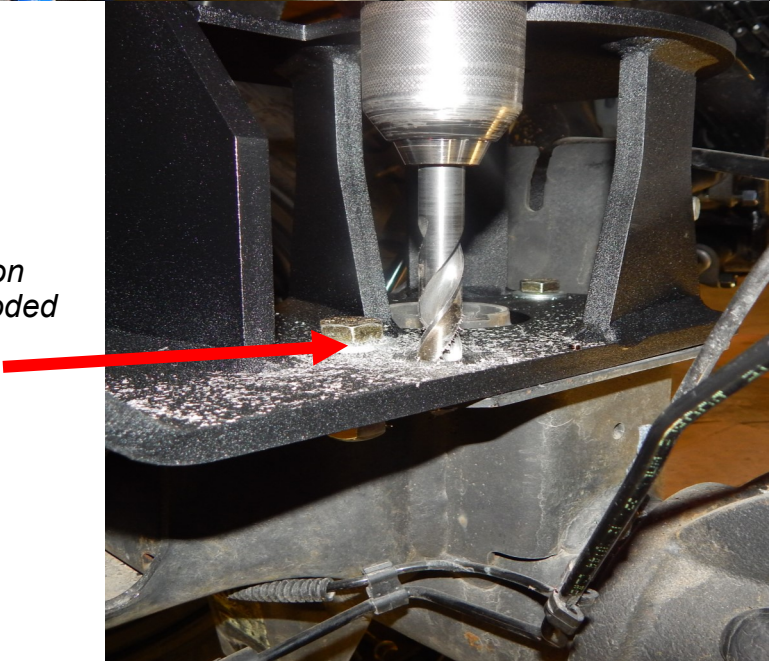
Passenger side



8) Locate the lower bag mounts (Part # 19230 DS and 19237PS). Beginning with the driver side, place the bag mount on the axle. It fastens with the three 1/2 x 1 1/2" bolts (one hole gets drilled) and the factory panhard bar bolt into the factory panhard bar mount. Once all the bolts are installed, torque the 1/2" bolts to 85 ft./lbs. and the factory panhard bar bolt to 120 ft./lbs.



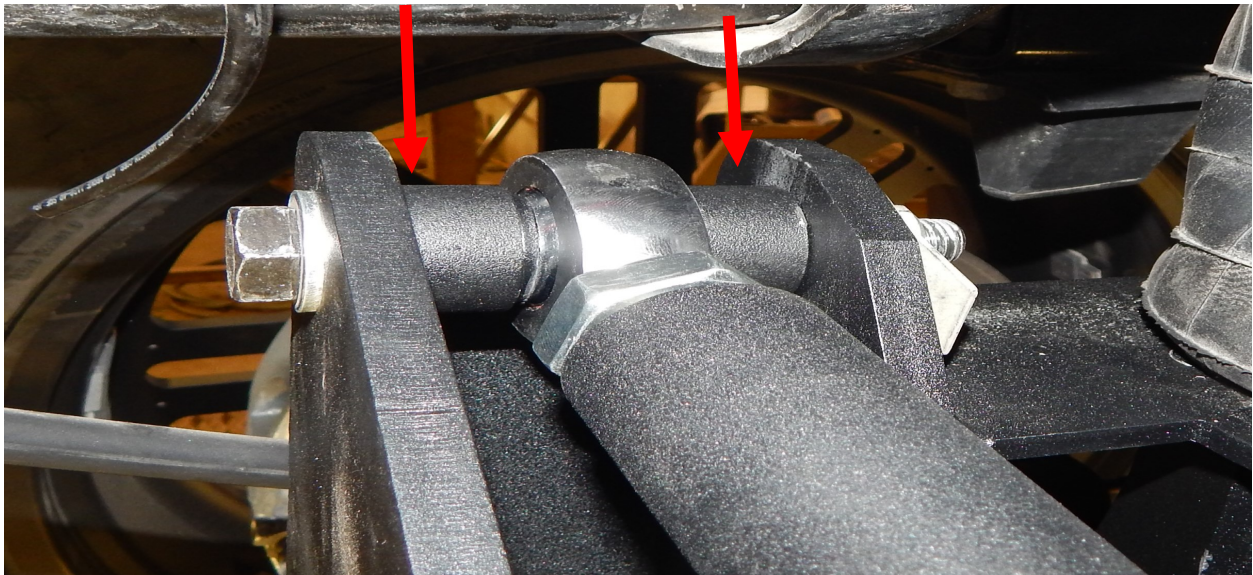
*Drill this hole 17/32"  
(not sure if this is the same on  
2019) will need to look at exploded  
view when its done*



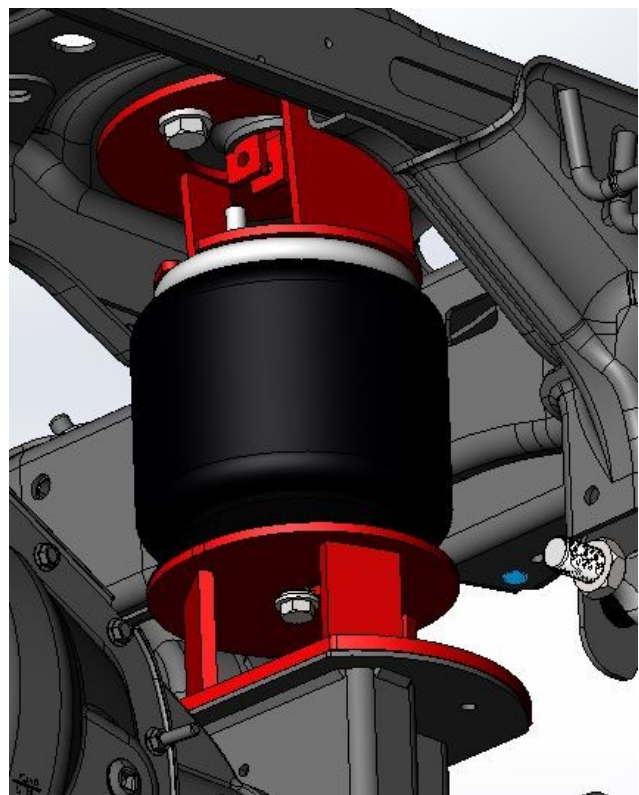
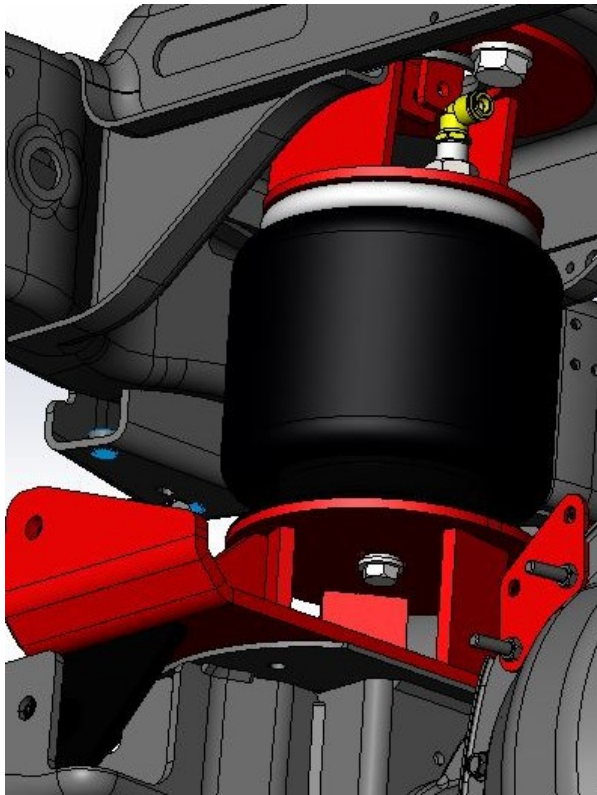
8.) Locate the supplied panhard bar (Part #19166). Locate the four spacers that go into each side of the heim ends. The two of the spacers are wider. These wider spacers go into the lower air bag mount. It fastens into the lower air bag mount in the drivers side with the 9/16 x 4" bolt and in the factory location with the factory bolt on the passenger side. Torque these bolts to 135 ft./lbs.

*One spacer on each side of heim end.*

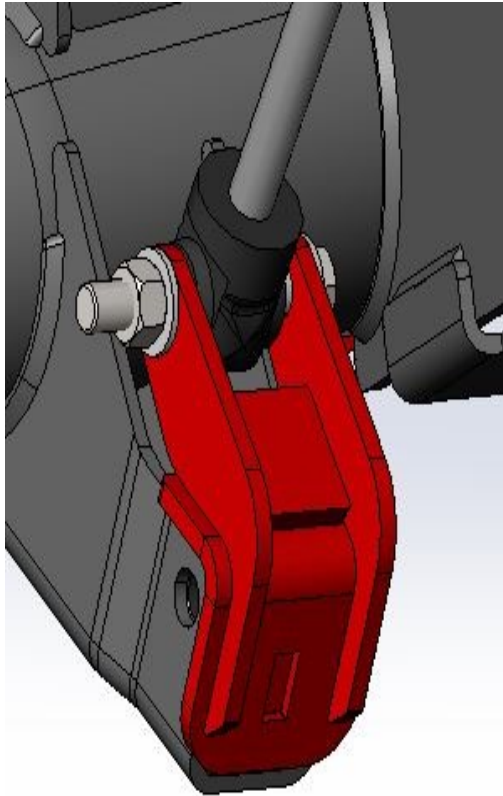
*The wide spacers go on this end.*



10.) Locate the 5323 air bags. Insert the 3/8" 90 degree fitting (if doing the Air Lift 3H air management system) or 1/4" fitting (if doing a mechanical or manual fill). The air bag fastens into the upper air bag mounts with the 3/4 and 1/2" nuts and lock washers. The bottom of the bag fastens to the lower air bag mounts with the 1/2 x 4 1/2" nut and lock washer. Torque the bolts and nuts to 35 ft./lbs.



12.) Locate the lower shock mounts (Part # 19080). They fasten into the OEM shock mounts with the 1/2 x 3 1/2" bolt and 3/8 x 1" bolts.

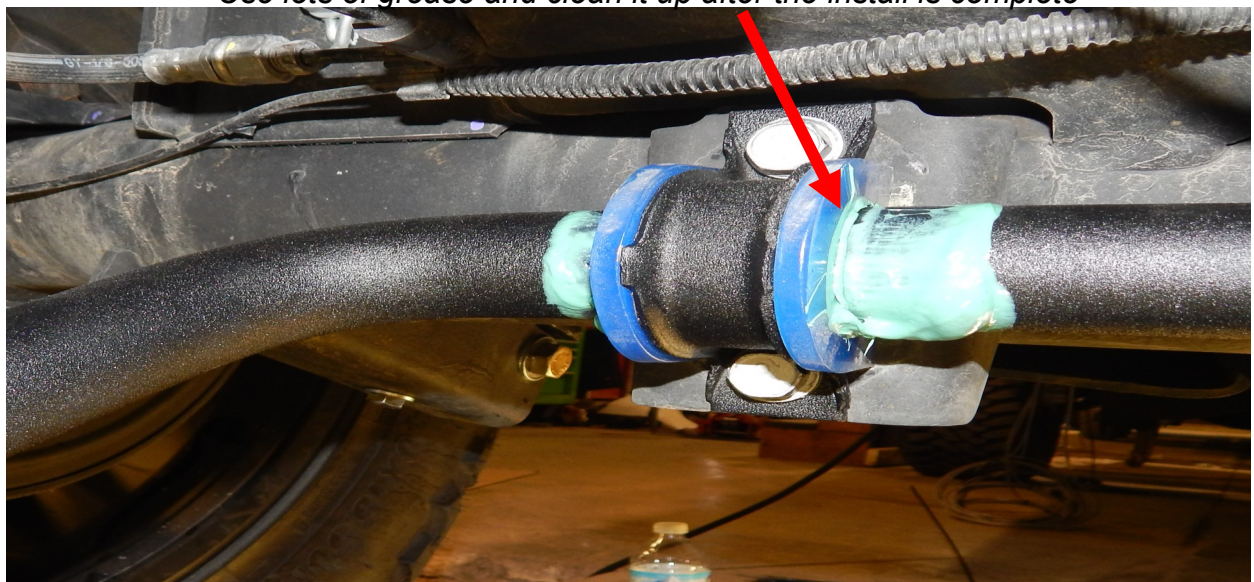


14.) Locate the sway bar (Part #1129-141), sway bar bushing kit (4129-141), and sway bar extension plates (Part #18384). The D-rings will attach to the bottom of the axle. Install the sway bar extension plates between the mounts and the D rings. There are four holes in the bottom shock mount on the axle. Use the closest one to the front of the truck, as well as the third closest to the front. Use the provided grease to lube up the poly bushing before installing. Use plenty of grease and then wipe the excess off once the install is complete. Failure to grease the poly bushing will result in a squeaking noise while driving. Fasten the sway bar to the axle with the factory sway bar bolts. Torque to 55 ft./lbs.

*Rear sway bar assembly shown installed w/ bushings, d-rings, and grease*



*Use lots of grease and clean it up after the install is complete*



15.) Locate the sway bar end links (Part # 25015 ) and the upper end link mount adapters (Part # 19161). The upper end link adapters fasten to the factory end link mounts with the 1/2 x 3" bolts and the 3/8 x 1 1/4" bolts. Fasten the bottom of the end link to the sway bar with the 1/2 x 3" bolt. Make sure to use the large flat washer on the outside of the end link (against the poly bushing). Torque the 1/2" bolt 85 ft./lbs. and the 3/8" to 45 ft./lbs.

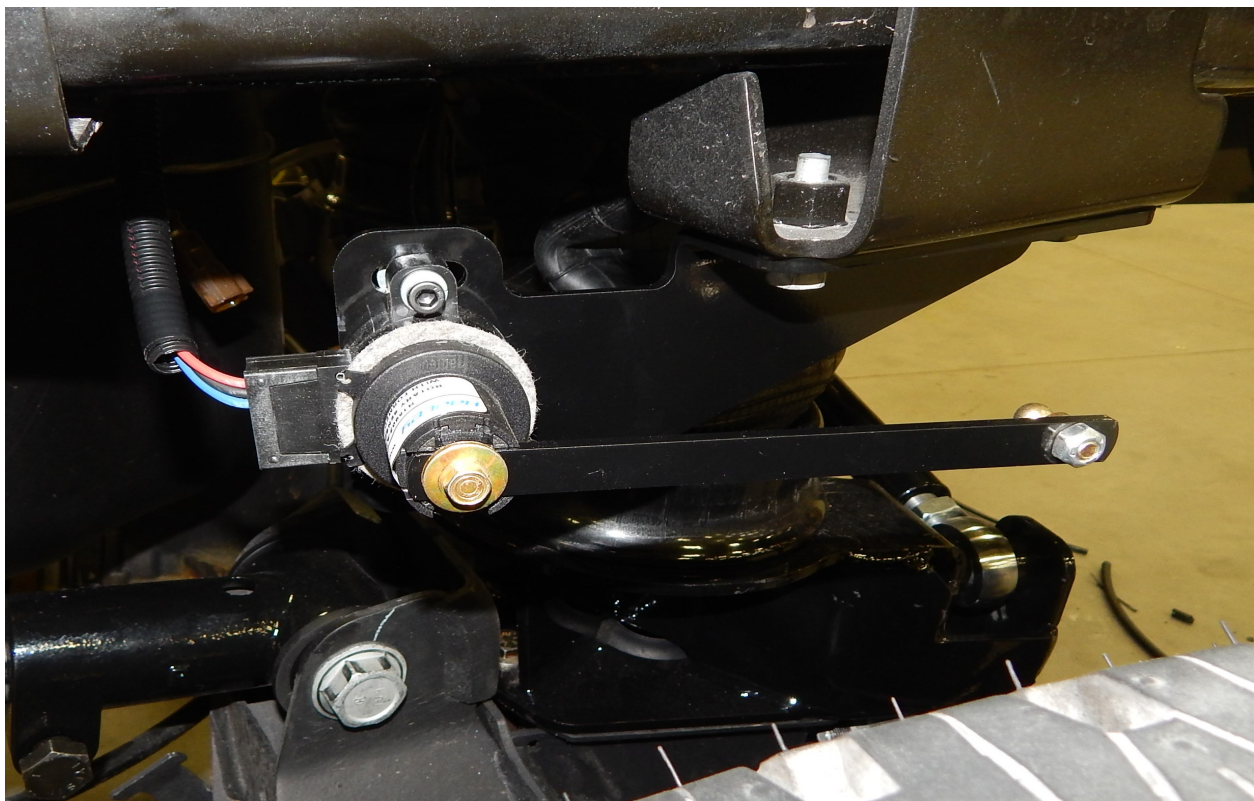
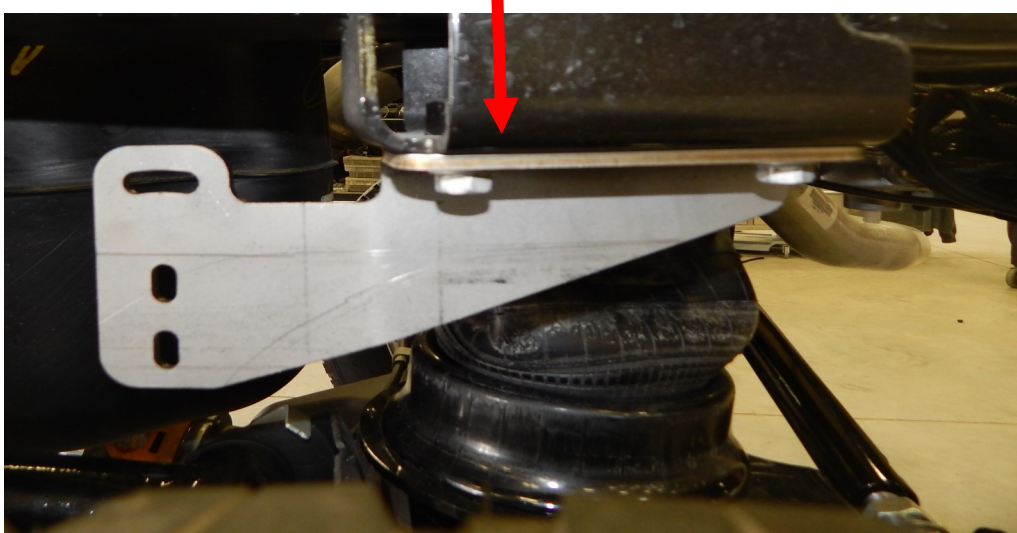


*Large washer on the outside of the bottom end link*



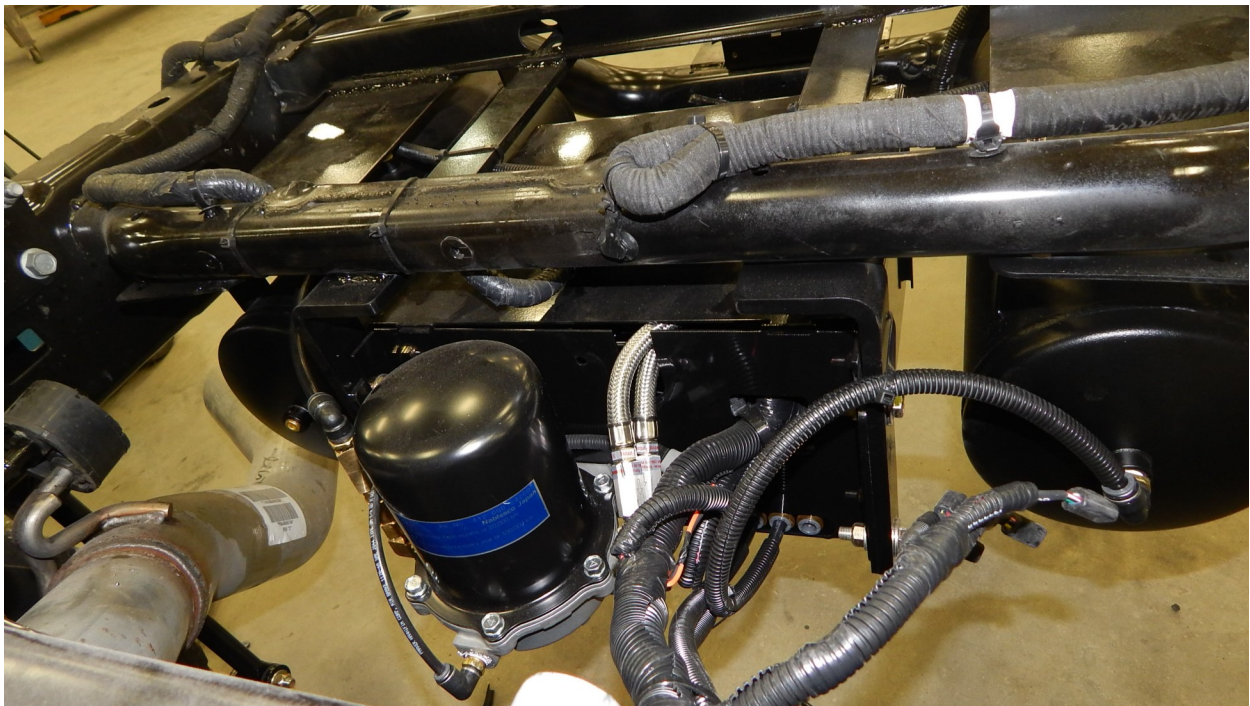
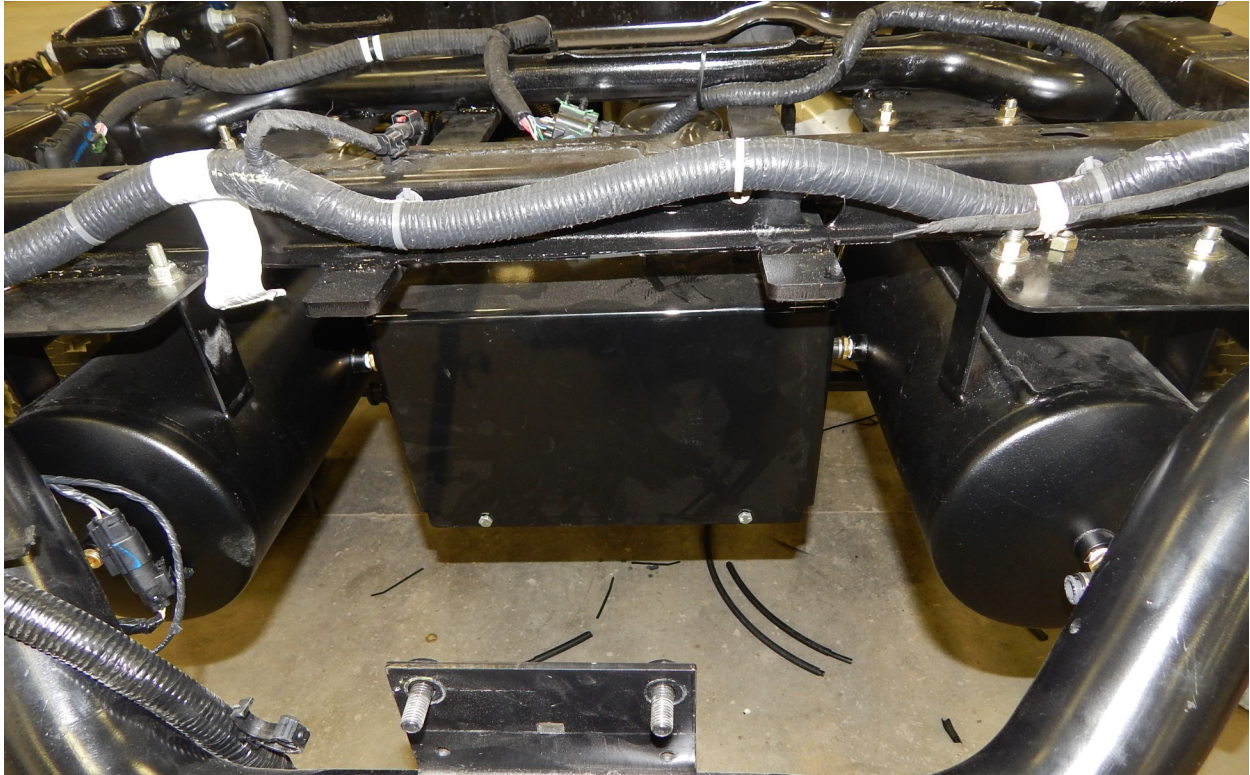
16.) Locate the two ride height sensors and sensor mounting brackets (Part # 5230). The sensor mounting brackets fasten to the bottom of the factory bump stops on the frame. The pointed part of the mount faces the rear. Use the factory bolts to attach the brackets to the bump stop. The sensors fasten to the bracket with the 1/4 x 1" bolts. You can use the top slot to fine tune the sensor when going through the set-up process. *NOTE: There are videos on [YOUTUBE.COM/KELDERMANTRUCKS](https://www.youtube.com/channel/UCkELDERMANTRUCKS) that should be watched before doing the calibration procedure on the 3H.*

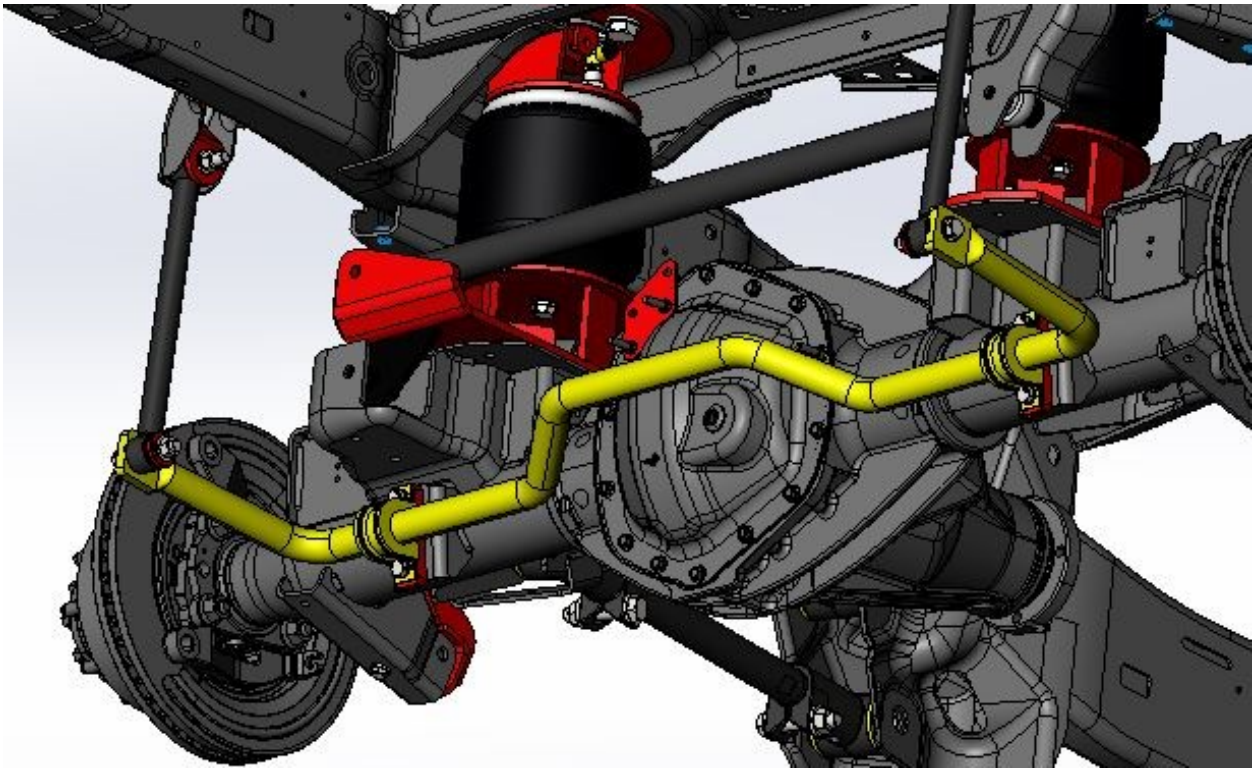
*Sensor bracket attaches to bottom of the bump stop mount*



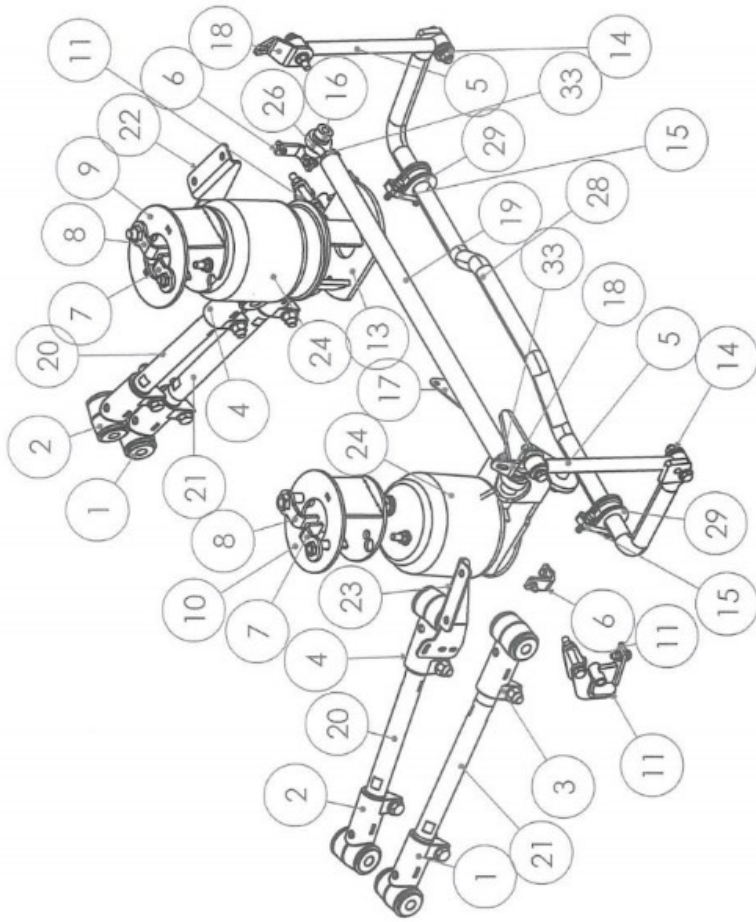


17.) Locate the 3H air management system. The tanks and 3H box mount where the spare tire originally set. **Check out [YOUTUBE.COM/KELDERMANTRUCKS](https://www.youtube.com/channel/UCkELDERMANTRUCKS) for a detailed description on how to install the air management system.**



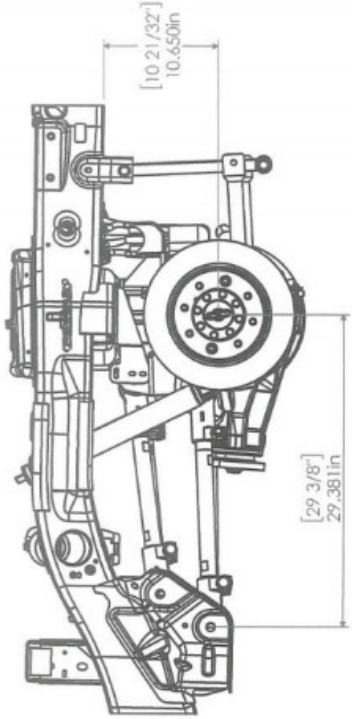


ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
<b>Assemblies</b>			
1	19180	Assembly - Trailing Arm Knuckle	2
2	19181	Trailing Arm Knuckle 10005	2
3	19182	Trailing Arm Knuckle 10006	2
4	19183	Trailing Arm Knuckle 10006	2
5	25015	Assembly - 13.00" End Link	2
6	10050666	Assembly - Sensor Linkage Ear	2
<b>Weldments</b>			
7	19083	Weldment - 5/8"-18 Lock Nut Tool	2
8	19084	Weldment - 3/4"-16 Lock Nut Tool	2
9	19106	Weldment - (PS) Upper Bag Mount	1
10	19107	Weldment - (DS) Upper Bag Mount	1
11	19080	Weldment - Shock Relocation Bracket	2
12	19230	Weldment - (DS) Lower Bag Mount	1
13	19237	(PS) Lower Bag Mount	1
<b>Parts</b>			
14	11551	Plate - 1/4" - 1.5"OD x .53" ID x 1/4"	2
15	18384	Plate - 1/2" - Sway Bar Extension Plate	2
16	18789	OUTDATED SEE POM - Heim Bushing Spacer - Stock & Fab Location	4
17	19046	Plate - 1"ga - Brake Line Relocation Bracket	1
18	19161	Plate - 1/4" - End Link Mounting Ear - w/Bends	2
19	19166	Tube - Panhard Bar (P+H) - 1.5" OD x .8125" ID x 31.75" L - Tapped (Both Ends LHT/RTHT) 7/8"-14	1
20	52118.5	18.50" Trailing Arm Bar	2
21	52120	Tube - 1.5" OD x 1" ID x 20.00"	2
22	10006225	Plate - 7ga - Bump Stop Sensor Bracket (PS) - w/Bends	1
23	10005230	Plate - 7ga - Bump Stop Sensor Bracket (PS) - w/Bends	1
<b>Purchased Parts</b>			
24	80012-5323	Firestone 5323	2
25	80111	7/8"-14" Right-Hand Male Shank, 3/4" Ball ID, 1 7/8" Long Thread	1
26	80112	7/8"-14" Left-Hand Male Shank, 3/4" Ball ID, 1-7/8" Long Thread	1
27	80166	KV2L11-355 - 90° Elbow, 3/8" x 1/4-18 NPT	2
28	1129-141KLD		1
29	4129-141KLD	Sway Bar Bushing Kit	2
<b>Hardware</b>			
30	12021	Bolt - 1/2"-20 X 3" Gr.8	4
31	13004	1/2" Flat Washer	8
32	13164	1/2"-20 Hex Nut Gr.8	4
33	13210	7/8"-14 Hex Jam Nut	2
34	13574	M10 x 1.50" Thread, .40mm Long	4
35	13693	M10 Lock Washer	4

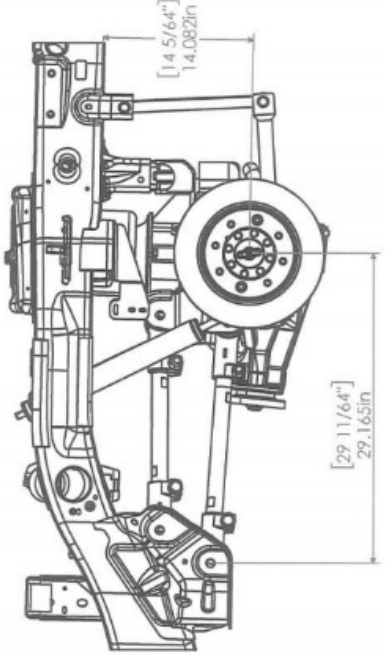


3RD ANGLE PROJECTION	A	ISO 1:20 SCALE DRAWING	1:20	Approximate Weight = 321.08 lbs
MATERIAL SPECIFICATIONS				
UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES				
STD. TOLERANCES				
X.XXX ± 0.00				
X.XX ± 0.01				
X.X ± 0.03				
X ± 0.05				
FRACTIONAL DIMENSIONS ± 1/32"				
DECIMAL DIMENSIONS ± 0.005"				
DESIGN BY: 2818				
DATE: 4/20/2020				
PROJECT: 2014-2018 & 2019+ Ram 2500 - Pickup				
PART NUMBER: DAR4-2-X-14-3				
WCSA INC. 2020 P.O. BOX 1000, GAITHERSBURG, MD 20878				
SHEET 1 OF 4				

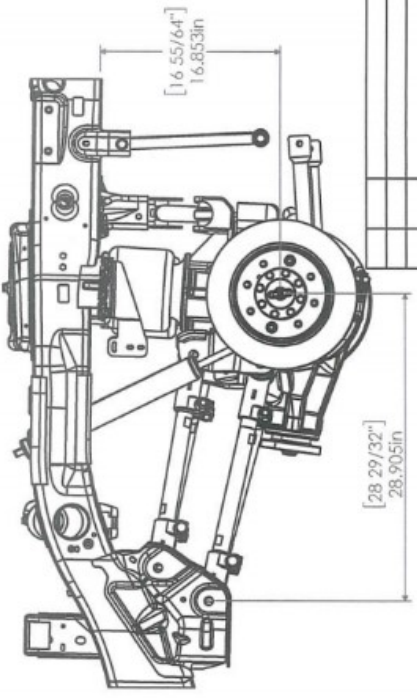
**Air Dumped: Bag Height 5.4"**



**Kelderman Ride Height: Bag Height 8.0"**




**Full Droop: Bag Height 11.75"**



REV	ECH	CHANGE DESCRIPTION	CHGSR	BY	DATE

<b>3RD ANGLE PROJECTION</b>	<b>A</b>	<b>ISO MET SCALE DRAWING</b>	<b>1:50</b>	<b>Approximate Weight = 321.08 lbs</b>
<b>UNLESS OTHERWISE SPECIFIED:</b>	<b>MAIL SPECS:</b>	<b>DESCRIPTION:</b>	<b>RII - 4-Link Rear - 3 Inch Lift - Coil Replacement</b>	
<b>DRAWN IN INCHES</b>	<b>PROJECT:</b>	<b>2014-2018 &amp; 2019+ Ram 2500 - Pickup</b>	<b>PART NUMBER:</b>	<b>D484-2-X-14-3</b>
<b>XX ±.000</b>	<b>DESIGN BY:</b>	<b>DB18</b>	<b>DATE:</b>	<b>4/20/2020</b>
<b>XXX ±0.010</b>	<b>DATE:</b>	<b>4/20/2020</b>	<b>DATE:</b>	<b>4/20/2020</b>
<b>FRACTION 1/32</b>	<b>DATE:</b>	<b>4/20/2020</b>	<b>DATE:</b>	<b>4/20/2020</b>
<b>DEG. 1 3'</b>	<b>DATE:</b>	<b>4/20/2020</b>	<b>DATE:</b>	<b>4/20/2020</b>

