INSTALL INSTRUCTIONS

2019+ Ram 2500

Factory Rear Coil Spring 5-6” Rear Lift Kit



KIT # 10004864

KELDERMAN MANUFACTURING

2686 HIGHWAY 92 EAST OSKALOOSA, IOWA 52577

INFO@KELDERMAN.COM 1-800-334-6150

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Kit Numbers

- This installation manual covers the following air ride kits.

Kit Number	Description
10004864	Kit - 2019+ Ram 2500 Pickup 4-Link 6" Lift Rear - Coil Replacement



Introduction

Important

- It is important that the entire installation instructions be read thoroughly before proceeding with installation.
- If your kit was ordered raw, open every box and locate all parts. There are several smaller bushing pieces and bolts that are packaged separately inside the main box.

Product Installer Responsibilities

- Installer is responsible for installing this product in accordance with Kelderman Mfg. Inc. specifications and installation instructions.
- Installer is responsible for providing proper installation of vehicle components and attachments as well as required or necessary clearance for suspension components, axles, wheels, tires, and other vehicle components to ensure a safe and sound installation and operation of this product.

Definition of Terms

- **Warning:** Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
- **Caution:** A potential hazardous situation may result in property damage.
- **Note:** Provide information or suggestions that help correctly perform a task.
- **Torque:** When italicized "torque" alerts the installer to tighten fasteners to a specified value.

bolt torque chart

Bolt Size	Grade 5 Torque	Grade 8 Torque
1/4"-20	8 *ft-lb*	12 *ft-lb*
3/8"-16	*19 ft-lb*	26 *ft-lb*
3/8"-24	*21 ft-lb*	30 *ft-lb*
1/2"-13	45 *ft-lb*	64 *ft-lb*
1/2"-20	50*ft-lb*	70 *ft-lb*
9/16"-18	70 *ft-lb*	100 *ft-lb*
5/8"-11	90 *ft-lb*	125 *ft-lb*
5/8"-18	100 *ft-lb*	150 *ft-lb*
3/4"-16	175 *ft-lb*	250 *ft-lb*
7/8"-14	275*ft-lb*	400 *ft-lb*

Safety

Your Safety and the Safety of Others is Very Important.

- Read and understand all safety precautions and instructions before installing this product.

CAUTION: Trucks Equipped with Parking Sensors or Other Like Devices.

- Relocation of these devices will alter the field of view. It is the responsibility of the owner to understand how these changes affect the operation of these systems.

WARNING: Components Under Pressure.

- Bleed all pressure from the air system before performing any maintenance or service. Serious injury could occur if components are removed while system is pressurized.

WARNING: Careless Installation Can Result in Serious Injury or Property Damage

- Wear eye protection.
- Disconnect the battery before doing any work on the vehicle.
- Work on flat level ground.
- Ensure truck is properly supported by jack stands. Never work under a vehicle supported only by hydraulic jacks.
- Take precautions when lifting product. Due to the size and weight of this product two people are recommended for installation.
- Never work directly under the product until it has been securely fastened to the vehicle.
- Avoid sharp, hot, and moving components when routing electrical cables and air lines.
- If drilling, inspect both sides of the surface and remove/relocate any objects located in the way.
- Ensure all bolts are properly tightened before driving.

Product Owner Responsibilities

- Product owner is solely responsible for pre-operation inspection, periodic inspections, maintenance, and use of the product as specified by Kelderman Mfg. Inc. Of particular importance is the re-torque of fasteners.
- This re-torque must be performed within 2500 miles of this product being put into service.
- The Kelderman Air Suspension is fully automatic in controlling the height of the chassis when properly installed.
- No Manual Intervention to control air pressure or ride height is needing during the course of normal operation.
- Product owner is responsible for "*down time*" expenses, cargo damage, and all business costs and losses resulting from a warrantable failure.

Service Intervals

First 2,500 Miles

- Check Ride Height ± 1/4"
- Check for air leaks around fittings.
- Check for any loose or rubbing hoses and wires.
- Re-torque all hardware.

Every 30,000 Miles

- Check Ride Height ± 1/4"
- Check for air leaks around fittings.

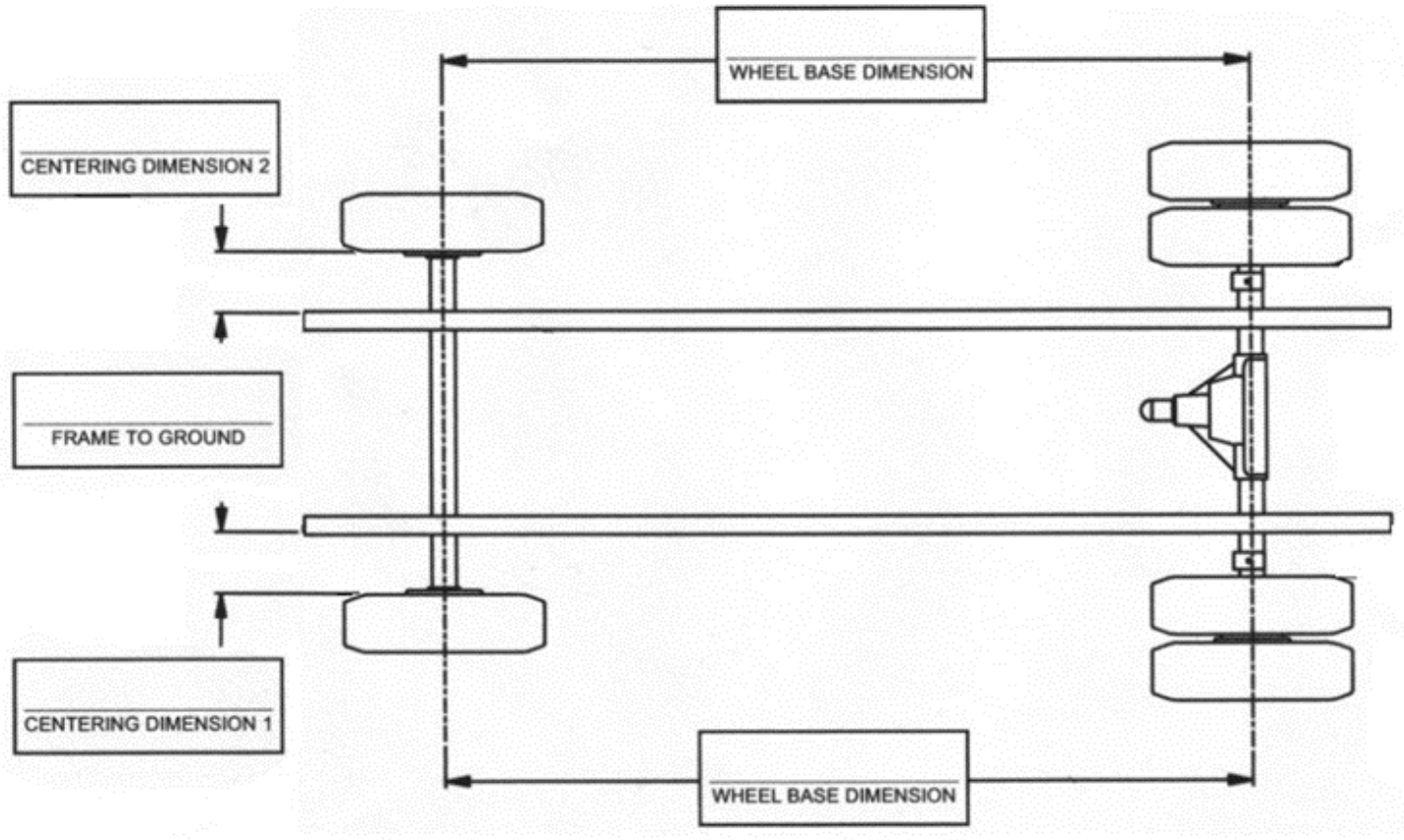
DISASSEMBLY

Before doing anything, measure the pinion angle and record it. This is important because you will need to put the axle back to this measurement after installation. See figure 1.

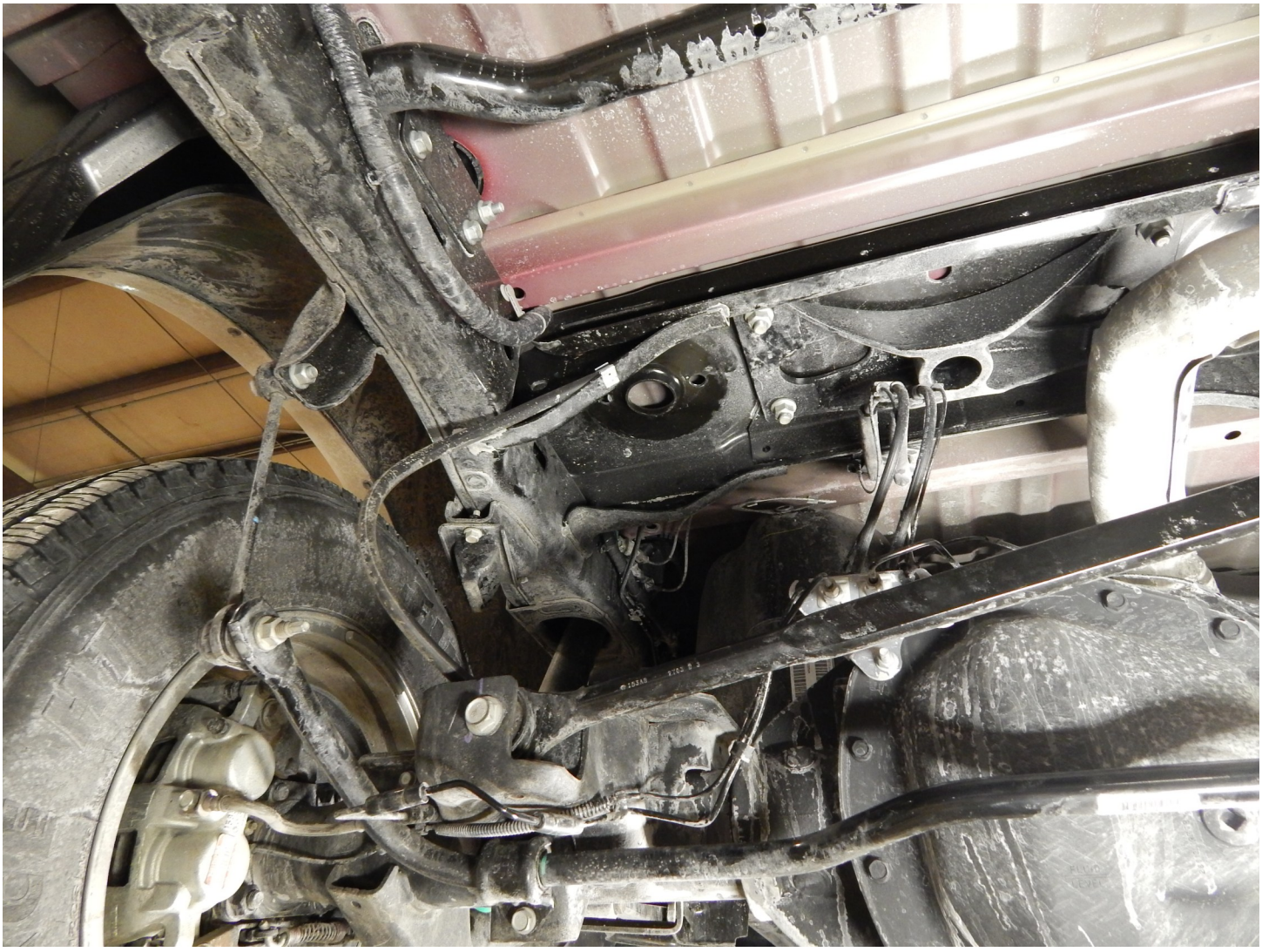
Pinion angle_____



Take the following measurements for future reference. These measurements will be used to adjust the suspension after installation.



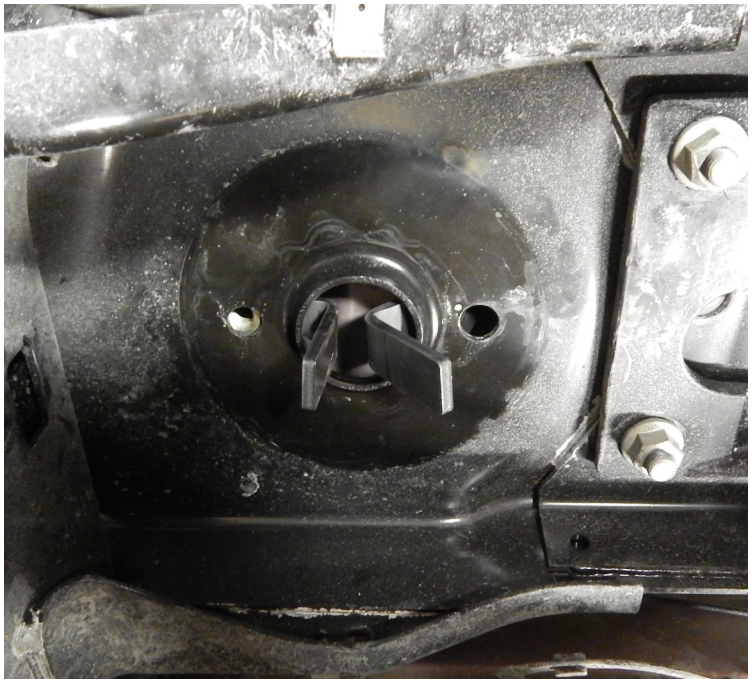
The rear coil springs need to be removed. To do this, remove the bottom shock bolts and unhook the sway bar end links from the sway bar. Drop the axle down with the floor jack. ***NOTE: WATCH THE-BRAKE LINES. DO NOT STRETCH AND DAMAGE THEM***. You will remove the rubber mounts that the springs sit in 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 4 trailing arms, 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

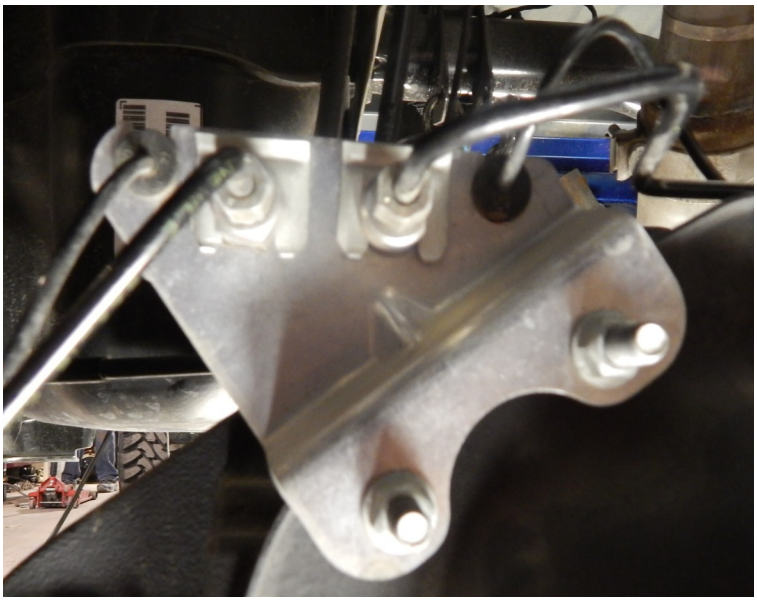
ASSEMBLY

1. Locate the upper air bag mounts (#10005101). They fasten into the upper coil mounts with the 1/2" and 3/4" nut mounts (#19113 and 19114). Fasten 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.

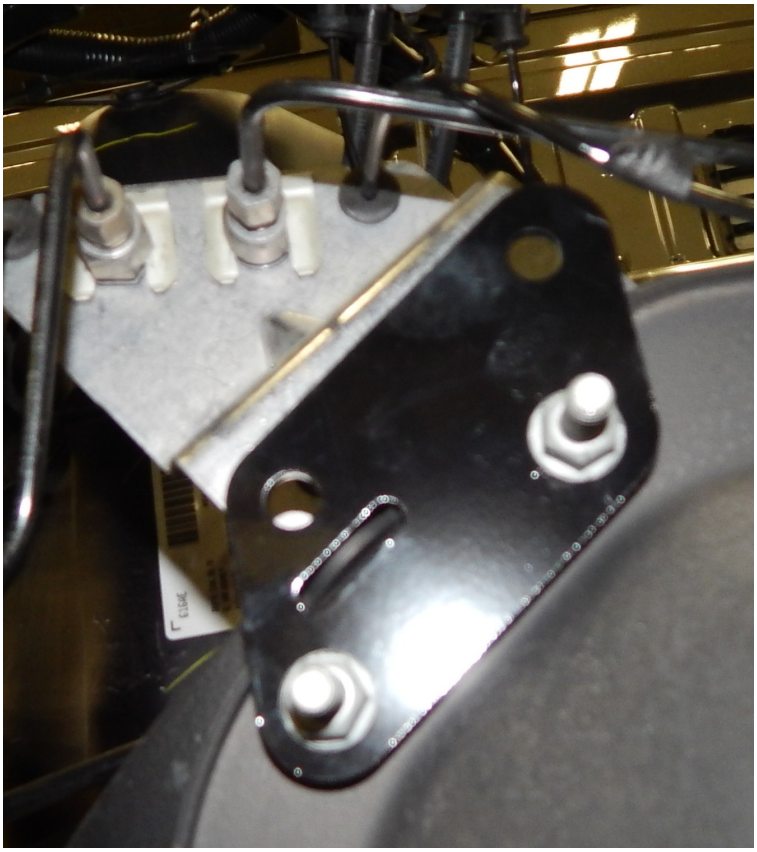




2. Locate the brake line relocation bracket (#19046). Remove the (2) nuts off the mounting studs and slide the relocation bracket over the studs. Fasten with the factory nuts. Torque to 20 ft./lbs. Fasten the brake line bracket to the relocation bracket with the 1/4”-20 x 1” bolts. Torque to 25 ft./lbs. 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



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

3. Locate the four trailing arms (#19051 upper & #19052 lower). Adjust the two longer arms so there is 13" between the knuckles. These will be the bottom arms. Set the shorter arms at 11-1/8" (the top bars) between the knuckles. Insert the top bars first. Use the pictures on Page 13 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 12 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.



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



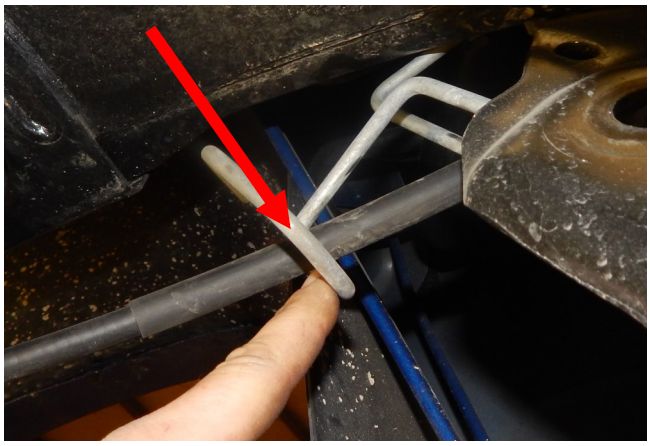
By setting the trailing arms at these measurements the pinion angle and axle centering should be close. Fine tuning may be required once install is complete.

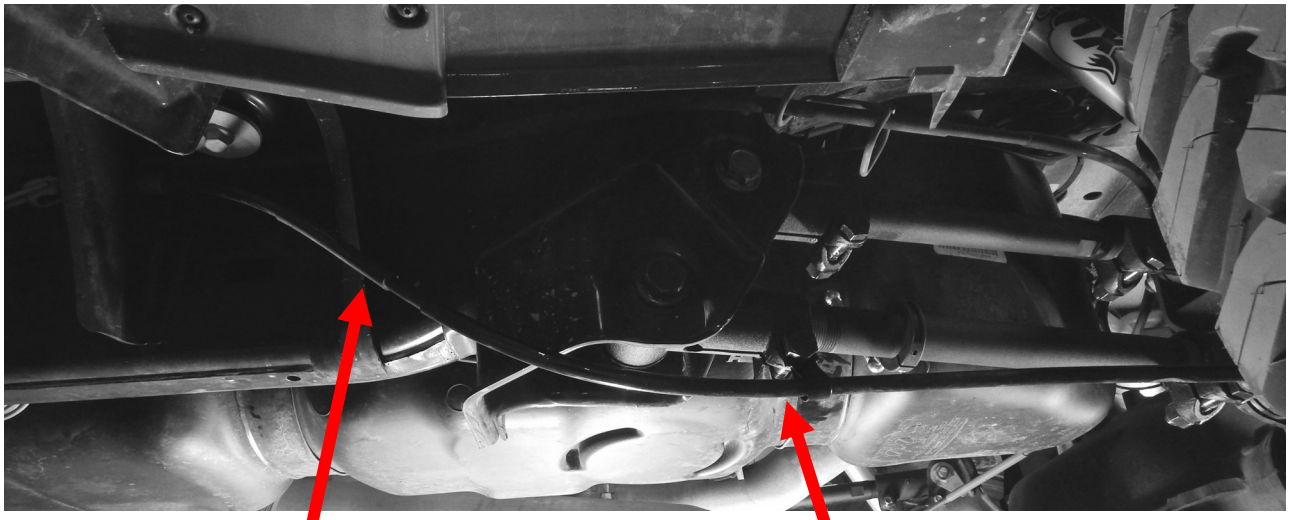
Remove the e-brake cable from this hole.

4. 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





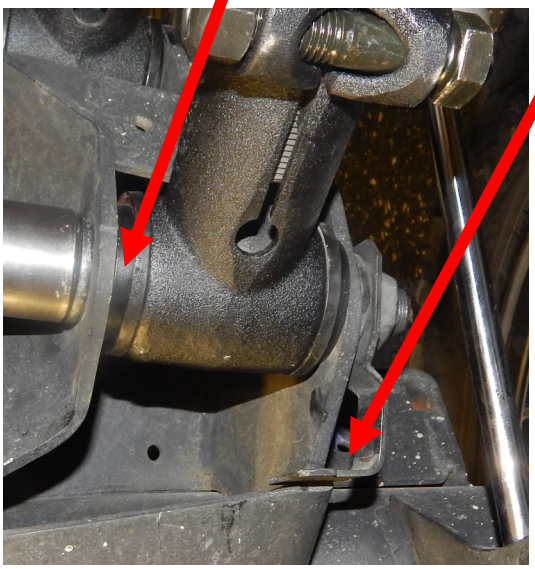
Brake cable now droops down below the rear mount that it originally was routed through

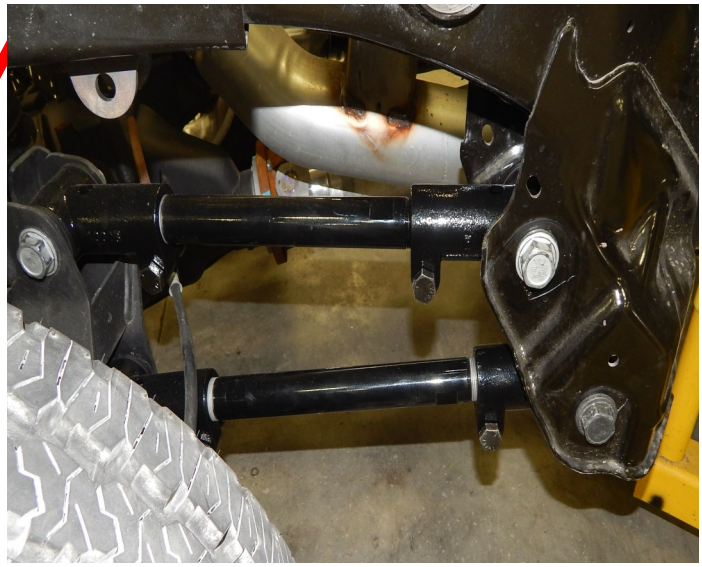
Clamp to the pinch bolt on the lower front knuckle



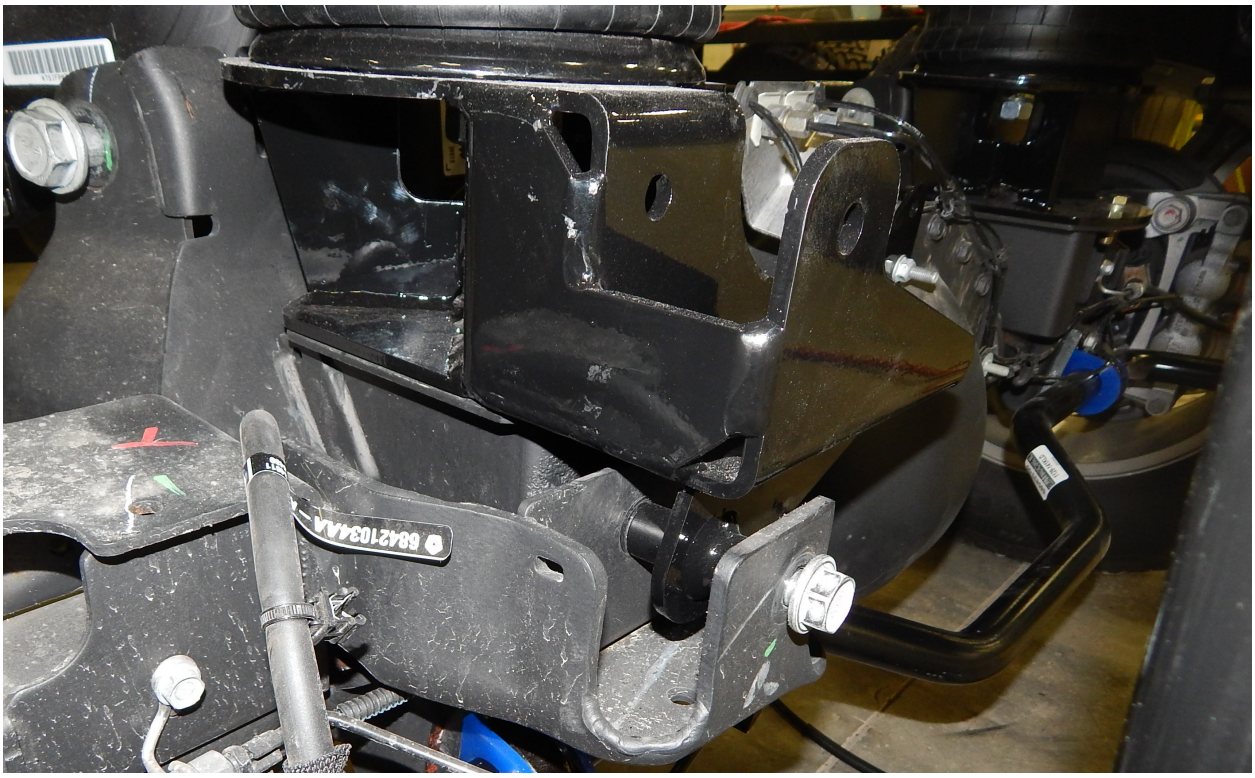
This tab needs to be bent so it will catch on the trailing arm mounting bracket.

The lower trailing arms use the thicker walled bushings.



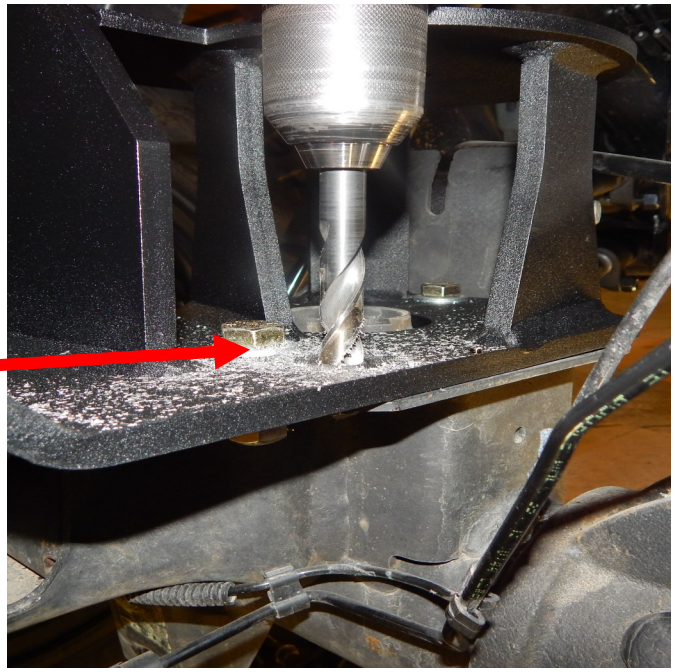


5. Locate the Drivers Side lower bag mount (#1005113). Beginning with the driver side, place the bag mount on the axle. It fastens with the (3) 1/2”-20 x 1-1/2” bolts (one hole gets drilled) and the factory panhard bar bolt into the factory panhard bar mount. Once all the bolts are installed, torque the 1/2” bolts to 85 ft./lbs. and the factory panhard bar bolt to 120 ft./lbs.



Drill this hole 17/32”

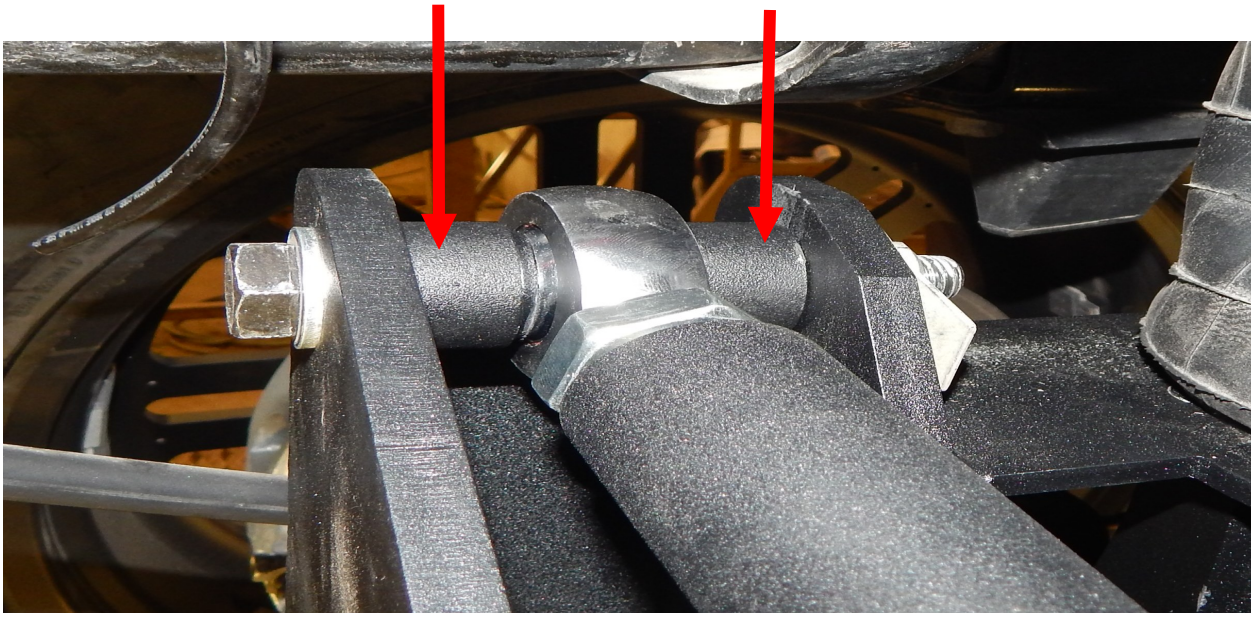
(not sure if this is the same on 2019) will need to look at exploded view when its done



6. Locate the panhard bar Assembly. Adjust the bar/Heim ends so they are 35-13/16" center to center. 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"-20 x 4" bolt and in the factory location with the factory bolt on the passenger side. Torque these bolts to 135 ft./lbs.

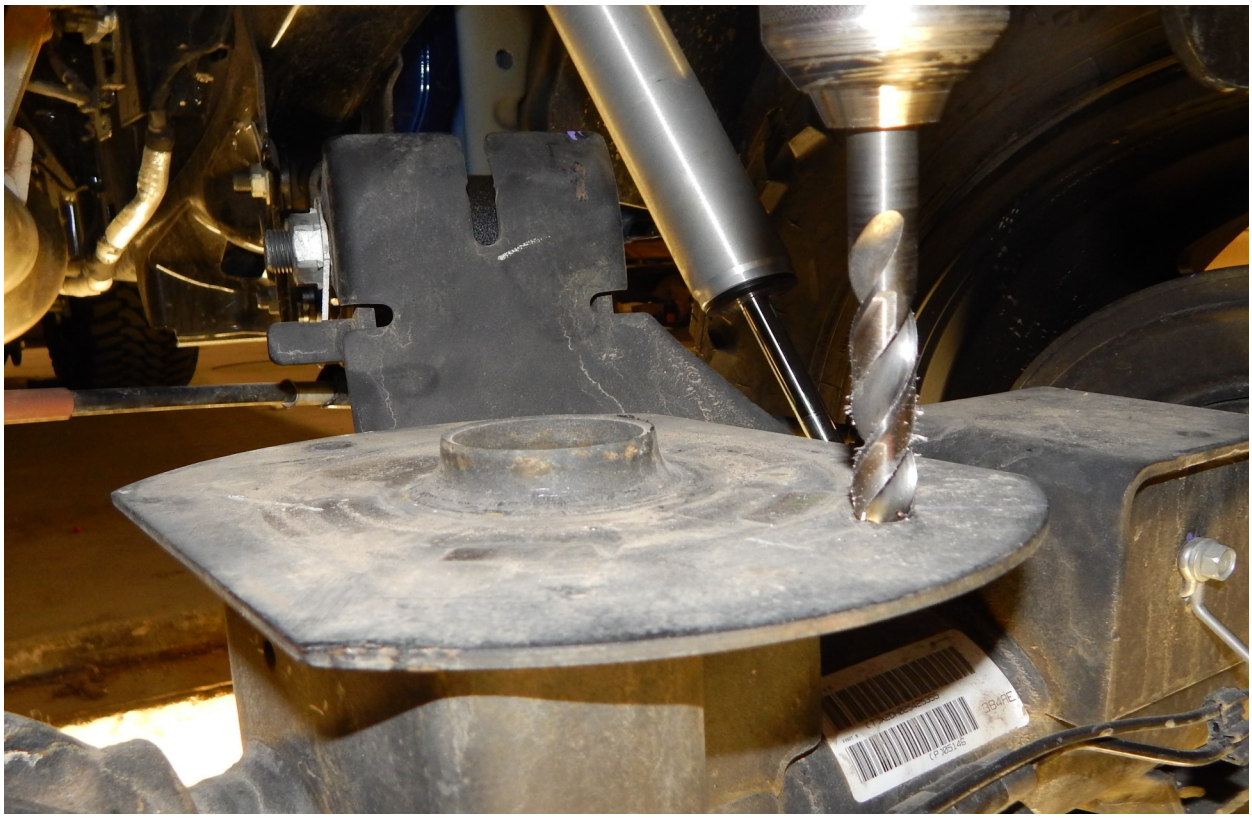
One spacer on each side of Heim end.

The wide spacers go on this end.

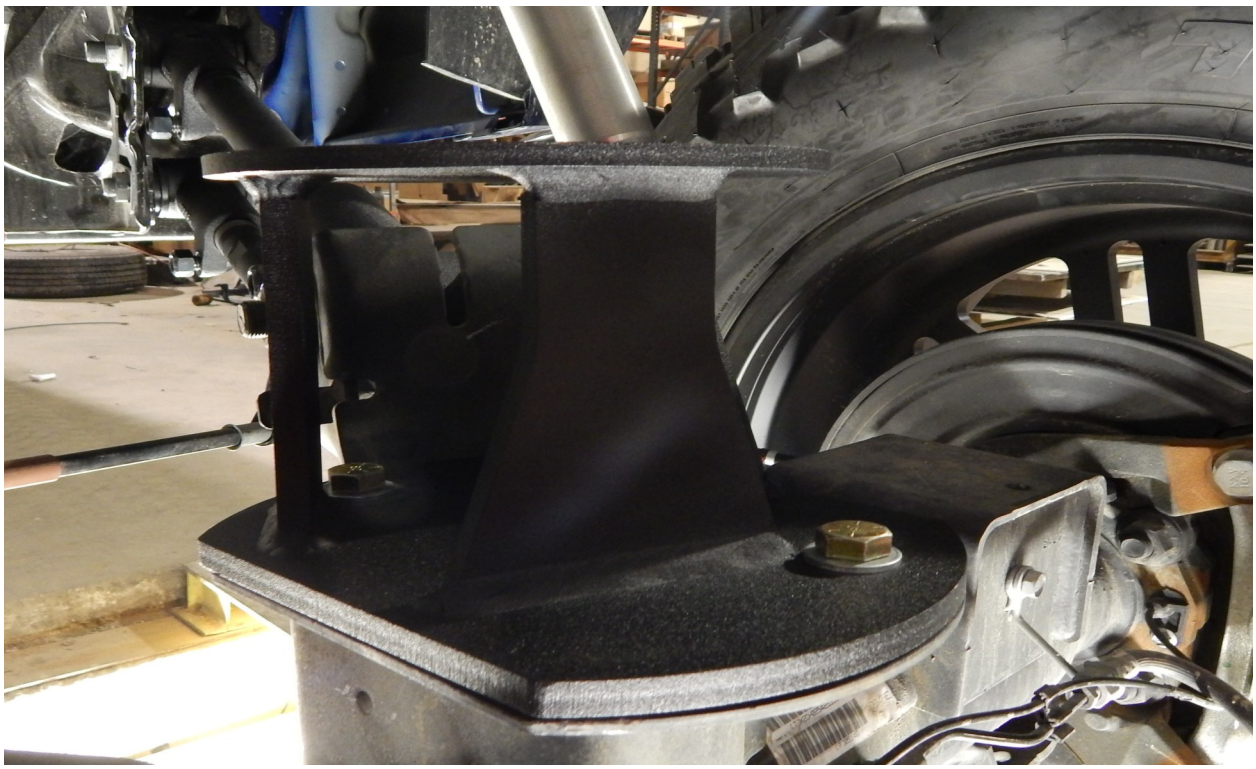




7. Locate the two holes in the top of the coil spring perch. Use a 17/32" drill bit to open up the holes.

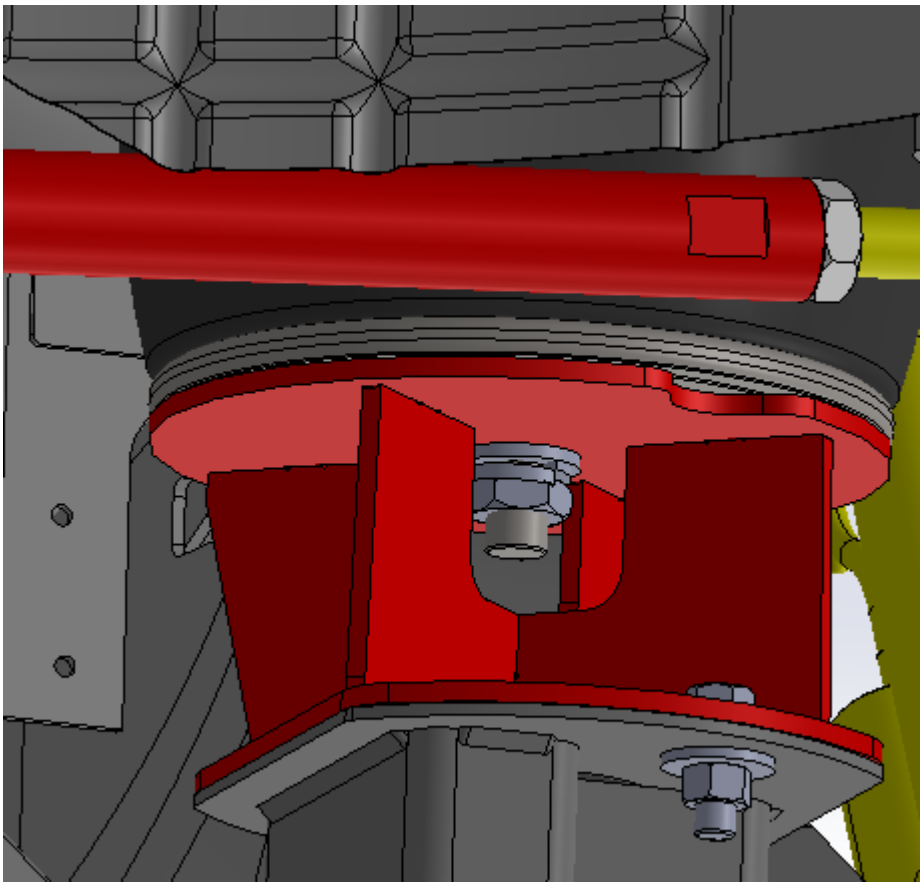


8. Locate the passenger side lower bag mount (#10005111) and fasten to the axle with the (2) 1/2 x 1 1/2" bolts. Torque to 85 ft./lbs.



9. Locate the 5748 air bags. They fasten into the upper air bag mounts with the 3/8”-16 x 1” bolt and lock washers. The bottom of the bag fastens to the lower air bag mounts with the 3/4” nut and lock washer. Torque the bolts and nuts to 35 ft./lbs. Locate the 90 degree 3/4” air fitting. Insert the fitting into the air bag and turn until it is finger tight. Use a wrench to turn it one complete turn.



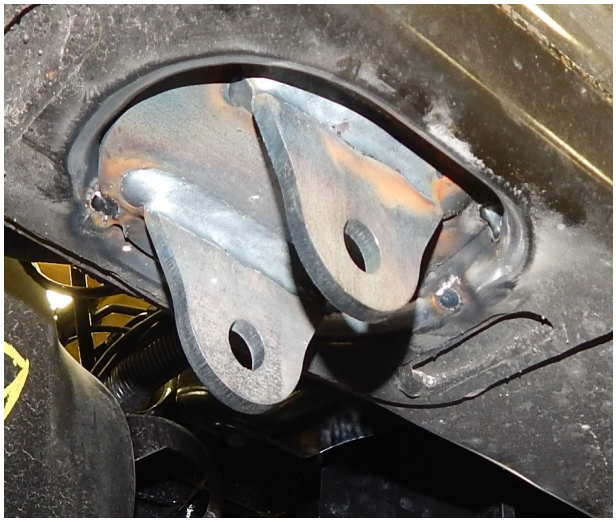


9. Locate the accumulator air tanks Weldment (#10005092). Install the straight 3/4" fitting in the one end and the 3/8" fitting in the other end. The mounting bracket welds to the crossmember that has the diesel fuel filter. The bracket fits between the fuel filter and exhaust hanger. Use the picture below for reference. The assembly will run downhill, otherwise it will hit on the truck bed when the bed is re-installed. Once the air tank bracket is installed, fasten the accumulator tanks to the bracket with the 3/8"-16 x 3/4" bolts. Torque to 19 ft./lbs. Locate the 3/4" air line fittings and install into the tank. Measure out how much 3/4" air line is required and connect the air tank to the air bag.



10. Locate the upper shock relocation brackets (#19177-DS & #19176-PS). They weld into the hole in the frame that the OEM shock went through. Before the upper shock mount is in place, grind away the paint on the frame and the powder coat around the edge of the upper shock mount. The best way to orientate the weld in piece is to use the OEM shock. Install a bolt in the bottom of the shock on the axle and slide a bolt in the new upper shock mount. Tack weld the upper shock in place. Remove the shock and weld the upper shock mount in place. Mask off the shock mount and frame with some tape and use some paint to cover up the weld.





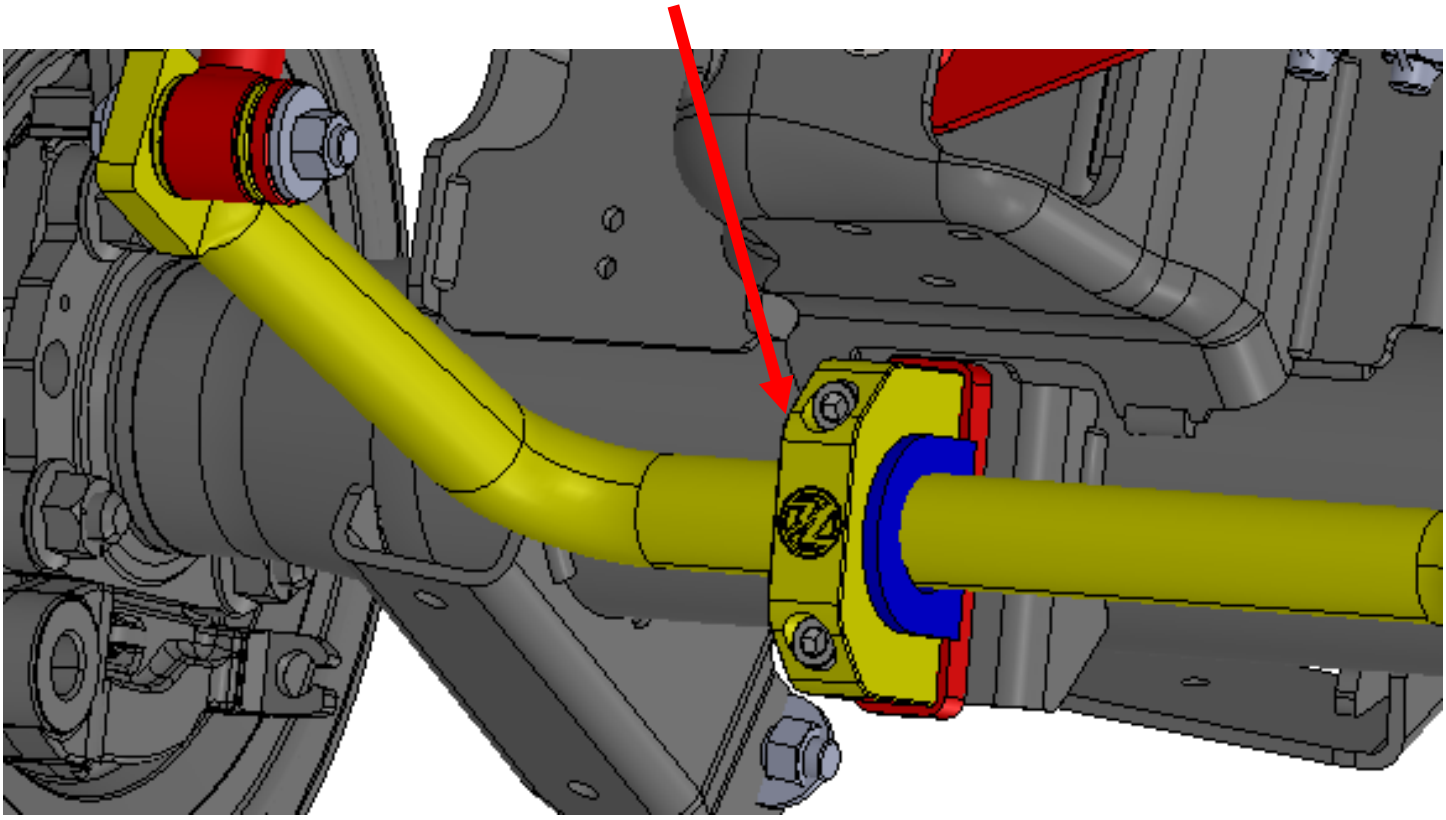


Rear shock mount shown welded in place.

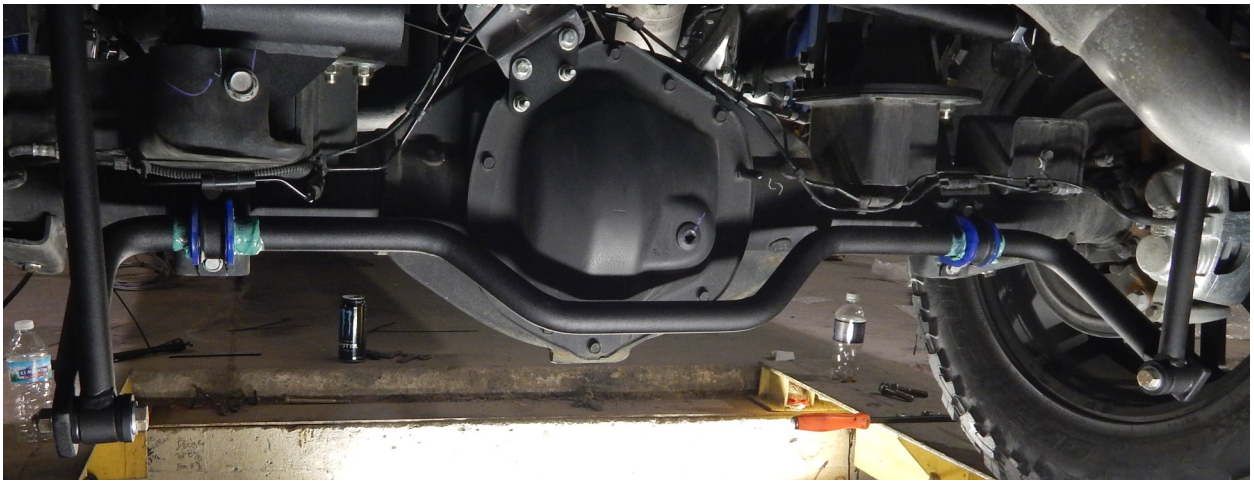
11. With the shock mounts are installed, locate the shocks (#RAP-10095) and install. Use the 1/2”-20 x 3-1/2” bolts on top and OEM 14mm bolts on the bottom to fasten into place. Torque the bolts to 95 ft./lbs.

12. Locate the sway bar (#1129-141KLD), the "D" rings (#10008892), end links (#19139) and upper end link adaptor mounts (#18384). The D-rings will attach to the bottom of the axle. 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

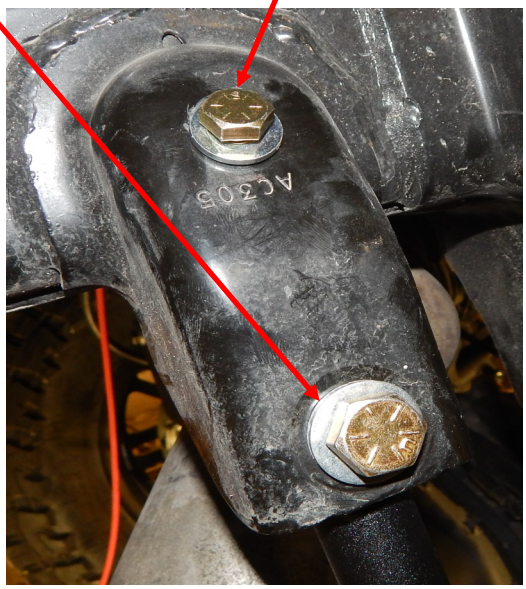


13. Locate the sway bar end links (#19139) and the upper end link mount adapters (#19161). The upper end link adapters fasten to the factory end link mounts with the 1/2”-20 x 3” bolts and the 3/8”-24 x 1-1/4” bolts. Fasten the bottom of the end link to the sway bar with the 1/2”-20 x 3” bolt. Make sure 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.

3/8”-24 x 1-1/4” bolts

1/2”-20 x 3” bolts





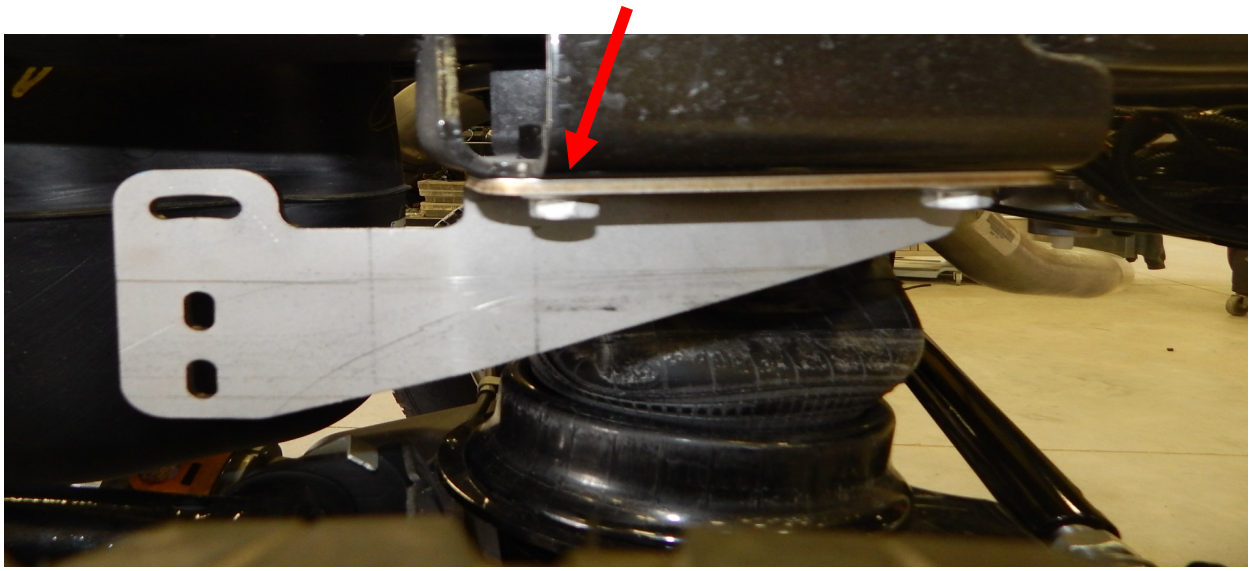
Large washer on the outside of the bottom end link

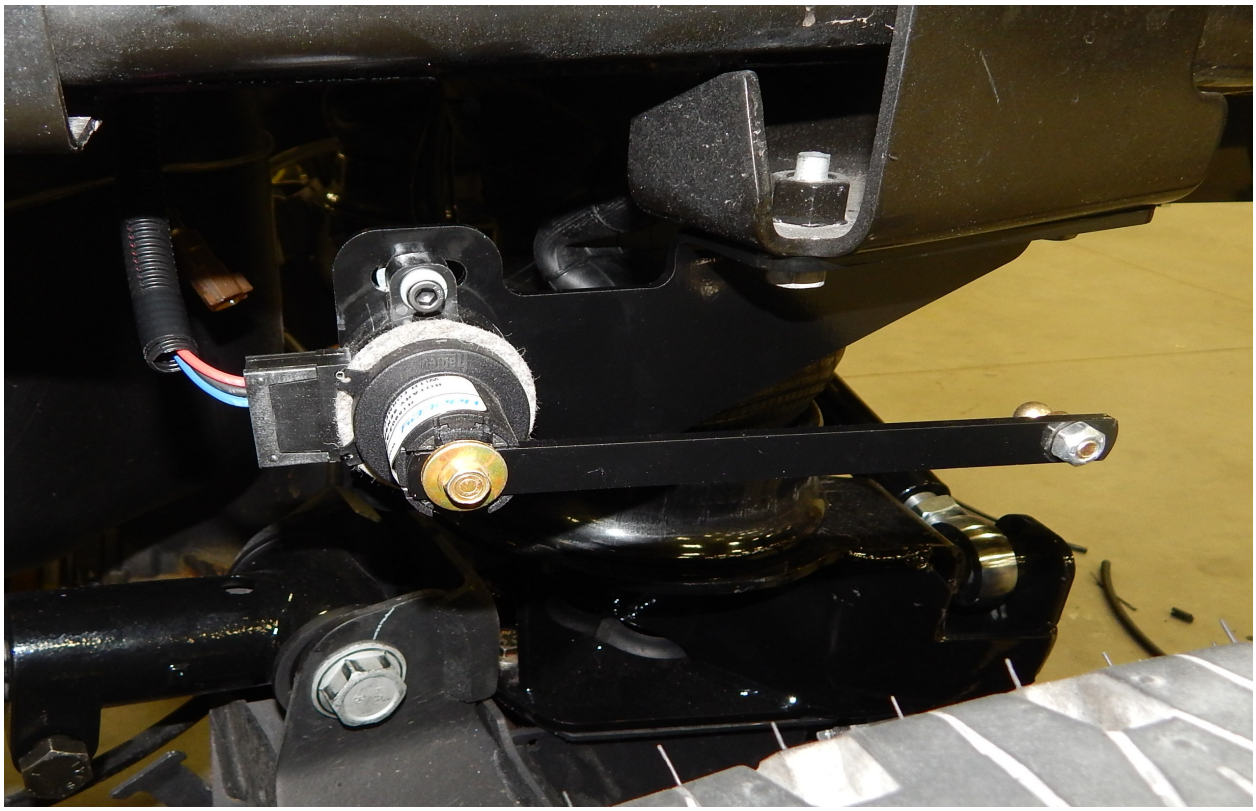




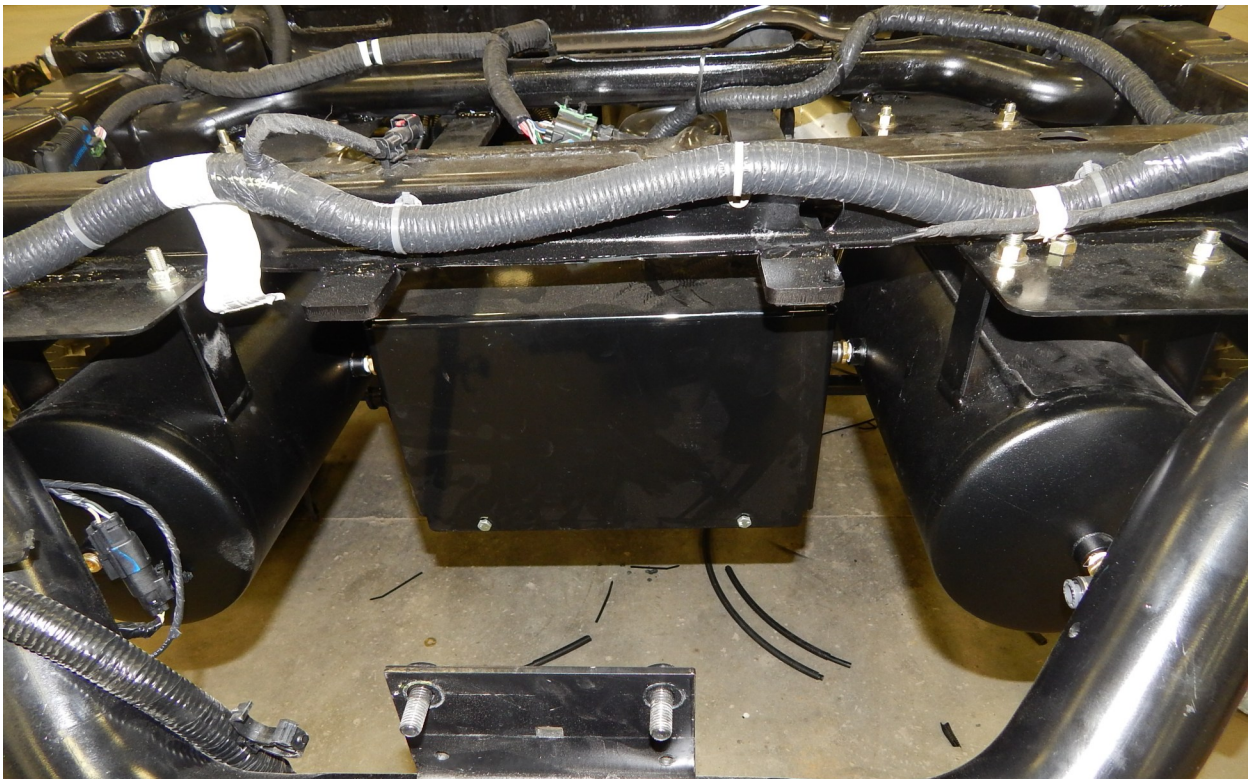
14. Locate the two ride height sensors and sensor mounting brackets (#10005225-PS & 10005230-DS). The sensor mounting brackets fasten to the bottom of the factory bump stops on the frame. The pointed part of the mount faces the rear. Use the factory bolts to attach the brackets to the bump stop. The sensors fasten to the bracket with the 1/4"-20 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 that should be watched before doing the calibration procedure on the 3H.***

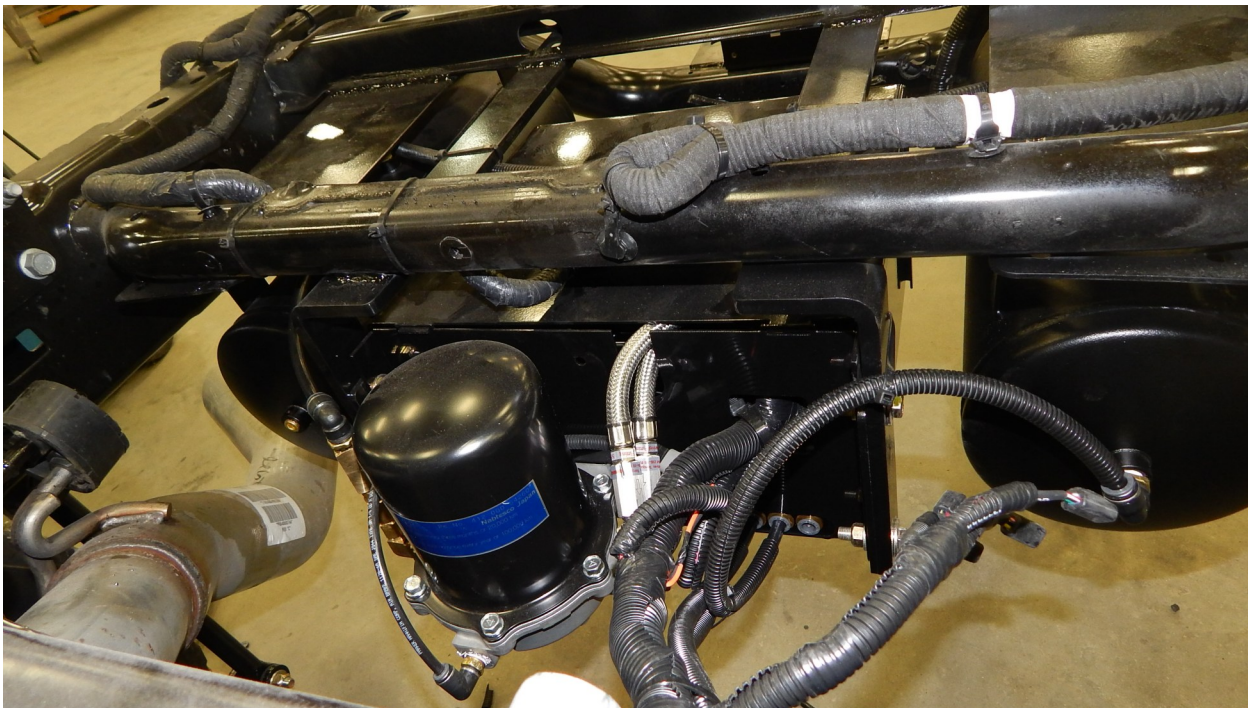
Sensor bracket attaches to bottom of the bump stop mount





15. Locate the 3H air management system The tanks and 3H box mount where the spare tire originally set.

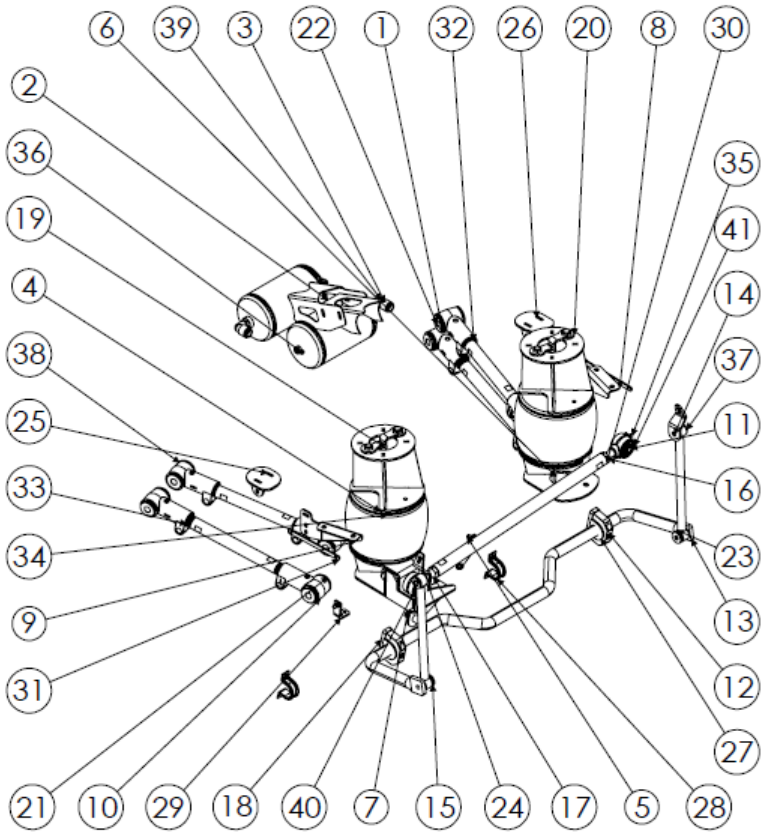




Check out https://www.youtube.com/@KeldermanManufacturing for a detailed description on how to install the air management system.

KIT DRAWINGS

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	10005	Purchased Parts - Cast Trailing Arm Knuckle (RHT) (1-1/2"-12 UNF)	4
2	10005092	Weldment - Crossmember Mounted Dual Accumulator Tank - 1 gallon	1
3	10005098	Plate - 11ga - Dual Accumulator Tank Bracket - w/Bends	1
4	10005101	Weldment - Upper Bag Mount - 5748 Bag	2
5	10005110	Assemlby - Brake Line Relocation Bracket - 1-1/2" Extension	1
6	10005111	Weldment - (PS) Lower Bag Mount - 5748 Bag	1
7	10005113	Weldment - (DS) Lower Bag Mount & PHB Bracket - 5748 Bag -	1
8	10005225	Plate - 7ga - Bump Stop Sensor Bracket (PS) - w/Bends	1
9	10005230	Plate - 7ga - Bump Stop Sensor Bracket (PS) - w/Bends	1
10	10006	Purchased Parts - Cast Trailing Arm Knuckle (LHT) (1-1/2"-12 UNF)	4
11	10008307	DOM - Reducer Sleeve - 3/4" OD x 14mm ID x 2.36" L - Heim	2
12	10008892	Sway Bar D-Ring - 4139-139BKLD	2
13	1129-141KLD	1129-141KLD Roadmaster	1
14	11550	CRR - Sleeve Bushing - .750"OD x .511"ID - 1.375"L	4
15	11551	Plate - 1/4" - 1.5"OD x .53" ID x 1/4"	2
16	13210	Jam Nut RHT - 7/8"-14 - GR5 - Z	1
17	13211	Jam Nut LHT - 7/8"-14 - GR5 - Z	1
18	18384	Plate - 1/2" - Sway Bar Extension Plate	2
19	19083	Weldment - 5/8"-18 Lock Nut Tool	2
20	19084	Weldment - 3/4"-16 Lock Nut Tool	2
21	19120	Bushing - Knuckle Half Sleeve Top Hat - 20mm Bolt - .28" Washer Flange	8
22	19121	Bushing - Knuckle Half Sleeve Top Hat - 20mm Bolt - .120" Washer Flange	8
23	19139	Weldment - 15.00" End-Link	2
24	19161	Plate - 1/4" - End Link Mounting Ear w/ Bends	2
25	19176	Weldment - (DS) Shock Relocation Bracket	1
26	19177	(PS) Shock Relocation Bracket	1
27	205214-10	Purchased Parts - Sway Bar Bushing - ID - 1 3/8"	2
28	4129-141KLD	Sway Bar Bushing Kit	1
29	50177	Plate -1/4" - Axle Sensor Mounting Tab	2
30	50820	Round Bar - 1.5" OD x 29" L - Panhard Bar - 7/8"-14 Internal Thread	1
31	51707	Plate -7ga - Sensor arm - 7.50" - Straight	2
32	52118.5	Tube - Trailing Arm - 18.5" Long - Thread: External 1.5"-12	2
33	52120	Tube - Trailing Arm - 20" Long - Thread: External 1.5"-12	2
34	80012-5748	Air Bag - Firestone 5748	2
35	80073	Ball Stud - .39" Dia - 5/16"-18 Thread	2
36	80094	Fitting - Elbow - 90° - 1/4"18 MNPT x 1/4" PTC - DOT	2
37	80134	Purchased Parts - Insert Press-In Bushing (End Link) - 1.160"OD x .745"ID	8
38	80136	Purchased - Poly Hat Bushing - 1.79"OD x 1-1/8"ID x 1-7/16"L	16
39	80143	90° Male Connector, Union, SAE Flare, 3/4" x 3/4" -14 NPT (Sealant)	4
40	80281	Heim End - 2.5" Johnny Joint Narrow - 7/8"-14 RHT	1
41	80282	2.5" Johnny Joint Narrow, 7/8"-14 LHT, Ball Center 3/4" Hole Heim End	1



3RD ANGLE PROJECTION	A	DO NOT SCALE DRAWING 1:20	Approximate Weight = lbs
UNLESS OTHERWISE SPEC. DIMNS. IN INCHES	MATL SPECS:		
	DESCRIPTION: **Kit - 4-Link Rear - 6 inch Lift - Coil Replacement**		
STD. TOLERANCES X.X ±.060 X.XX ±.010 X.XXX ±.005 FRAC.DIM. ±1/32" Deg. ± .5°	PROJECT: **2019+ Ram 2500 - 4-Link Rear - 6 Inch Lift - Coil Replacement**		
	PART NUMBER: **10004864**	NOTICE: THIS DOCUMENT AND ITS CONTENTS ARE THE PROPERTY OF KELDERMAN MFG. NO USE OR COPIES MAY BE MADE WITHOUT WRITTEN PERMISSION FROM KELDERMAN	SHEET 1 OF 1
	DESIGN BY: DATE:		

NOTES

Contact Information

Kelderman Manufacturing appreciates your business. We strive to meet the needs of our customers by providing the highest quality products. If you have any questions concerning our products please call or email us at the following:

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