

SIMPLY SUPERIOR.

4 DOOR MODELS

J-KRAWL MAX SUSPENSION SYSTEM

2018-2022 JEEP WRANGLER JL 3.5"

JSPEC1313

GETTING STARTED

Read all warnings, instructions, notes and cautions before you begin the installation.



WHO SHOULD INSTALL THIS?

We recommend that this system be installed by a professional mechanic. The installer will need professional knowledge of special tools required for installation as well as assembly and disassembly procedures.

STAYING SAFE AND LEGAL

- If you fail to drive your lifted and modified vehicle safely it may result in serious injury or death.
- Exercise caution: A lifted vehicle is at greater risk for rollovers or loss of control, especially during abrupt maneuvers.
- Always wear your seat belt, reduce your speed and avoid sharp turns.
- Never operate your vehicle under the influence of drugs or alcohol.
- Consult local and state laws for the legality of your ride height.

BEFORE YOU BEGIN INSTALLATION

- Needed items: OE service manual for your vehicle, safety glasses, and any special tools as indicated in these instructions as well as the following tools: assorted metric and standard wrenches, hammer, hydraulic floor jack and a set of jack stands.
- Ride Height: Measure the initial ride height of your vehicle prior to installation. Final ride height may vary depending on the factory height of your vehicle.
- Tires and rims: Larger tire and rim combinations can increase leverage and cause additional stress to suspension, steering, and related components. When installing larger than OE tires and rims, the following components should be inspected for wear every 2500-5000 miles: ball joints, tie rod ends, wheel bearings, track bar bushings, pitman arm.
- Drive line vibrations: Some vehicles may experience drive line vibration after installation of this suspension system. Possible remedies for this include: tuning angles, replacement of slider on shaft, lengthening or truing of shaft, and/or replacing u-joints.
- Installation without a hoist: We recommend completing the rear alterations first if no hoist is available.



TRACTION CONTROL COMPLIANT

In an effort to reduce the risk of rollover crashes the National Highway Traffic Safety Administration (NHTSA) established the Federal Motor Vehicle Safety Standard (FMVSS) No. 126 requiring all new passenger vehicles under 10,000 lbs GVWR include an electronic stability control (ESC) system as standard equipment. Effective August 2012 this law requires aftermarket products to be compliant with these same standards.

VISIT 560PLUS.COM FOR MORE INFORMATION!

THANK YOU FOR CHOOSING JSPEC SUSPENSION

TIRE FITMENT

3.5" LIFT

35x12.50 on 17x8 with 3.5" backspacing*

*Sport & Sahara - rubbing under articulation will occur

37 May not rub under articulation depending on aftermarket bumpers, arms, or fenders

SPECIAL TOOLS REQUIRED

Torque Wrench
Anti-Seize Lubricant
JKS1696 or equivalent jam nut wrench
Metric/Standard Socket Wrench Set
7/16", 1/2" & 9/16" Drill or Step Bit
3" cut-off wheel
4-1/2" angle grinder
Reciprocating Saw
Plasma Cutter (suggested)
Drill (suggested)
90deg Die Grinder
Rivet Gun (1/8" Head)

INSTALLATION TIME

Approximately 13-15 hours

BEFORE YOU BEGIN

- a. Aftermarket High Angle Front Drive shaft is required
- b. Requires cutting of the factory shock mounts. It is not designed to allow the vehicle to go back to a stock configuration.
- c. Disregard individual box kit instruction sheets.

01. PRE-INSTALLATION

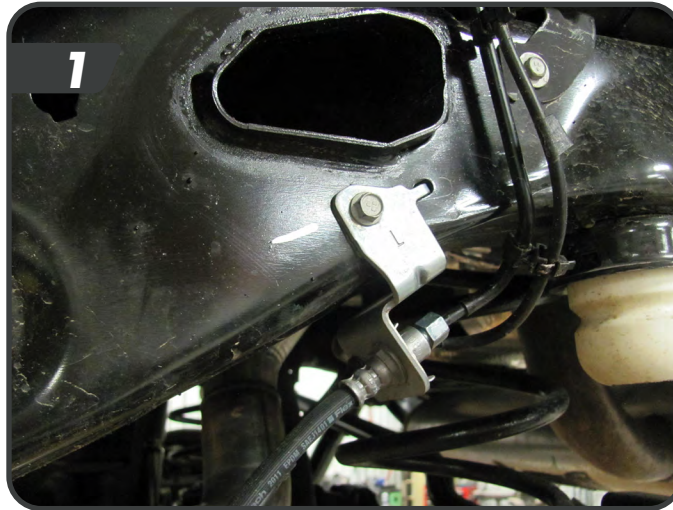
- a. Measure from the center of the wheel up to the bottom edge of the wheel opening.

	Drv	Pass
Front		
Rear		

02. REAR DISASSEMBLY

TPMS ECU and parking brake cable relocation require bolt pack J129.

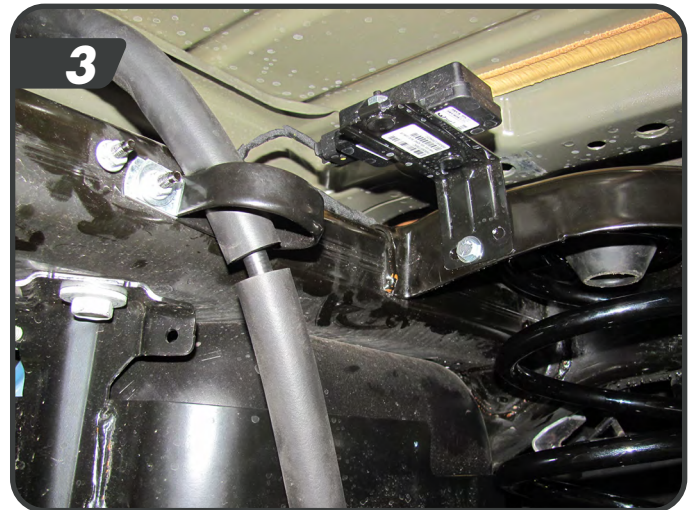
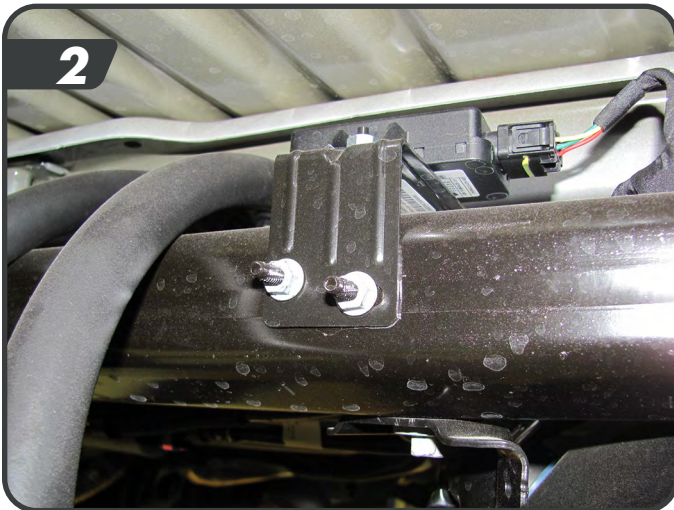
- a. Disconnect the track bar at the axle with the vehicle still on the ground using a 21mm socket. Save bolt and nut tab.
- b. Raise and support the vehicle with jack stands positioned in front of the lower suspension arm brackets. Remove the tires.
- c. Remove the bolts holding the brake lines to the frame (10mm) [1].



- d. Remove the (2) bolts holding the TPMS ECU sensor to the rear crossmember (10mm) [2].

Note: Some models may not be equipped with a TPMS ECU in this location. No action is required in this case.

- e. Relocate the sensor using the provided ¼" hardware in bolt pack J129. Using the provided cable clamp, insert the passenger side parking brake cable and reattach where the sensor was located using the original nut.[3].

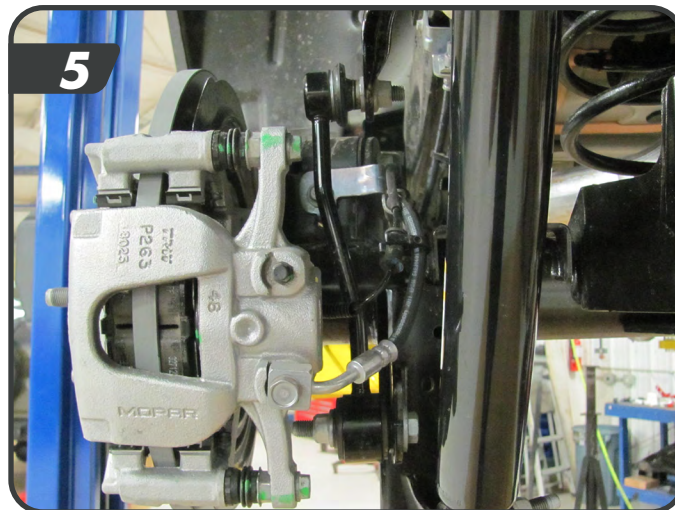


- f. Rubicon models: Disconnect the locker wires from the differential.
- g. Remove "W" bracket securing both emergency cables (15mm). The bracket is located above the driveshaft and is not easily visible. The bracket will not be re-used.[4]

Note: some models may not be equipped with this bracket. No action is required in this case.



- h. Remove the sway bar links from the axle and sway bar (18mm) [5]



- i. Remove the rear inner fender liners by removing the 3 bolts (8mm) to gain access to the upper shock bolt [6]. Also remove the bracket behind it that attaches to the frame with 2 bolts (14mm)



- j. Remove the rest of the inner fender liner by removing six factory plastic rivets and the plastic body clips [7].



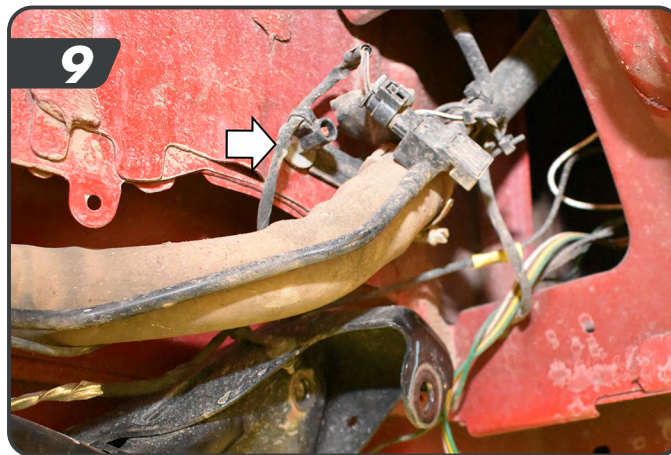
- k. Support the axle with a jack under the center of the differential.
- l. Remove the shocks from the frame and axle (18mm) [8].



- a. Remove the bolt holding the brake line to the axle (10mm) save hardware.
- b. Lower the axle enough to remove the factory springs. Remove the upper and lower spring isolators. Make sure there is adequate slack on all brake lines and ABS wires.

02. REAR FRAME SHOCK MOUNT MODIFCIATION

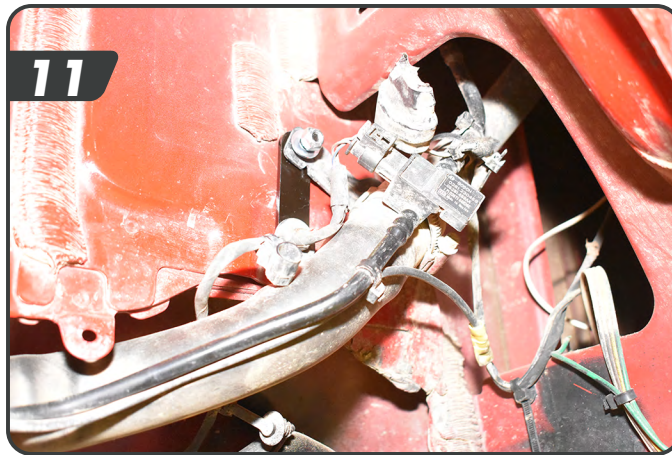
- a. Remove the wiring harness clip from the frame shock mount.
- b. Remove the bolt (10mm) holding the fuel filler neck to the body. [9]



- c. Loosen the forward filler neck mount and and lift filler neck and retighten hardware. [10]

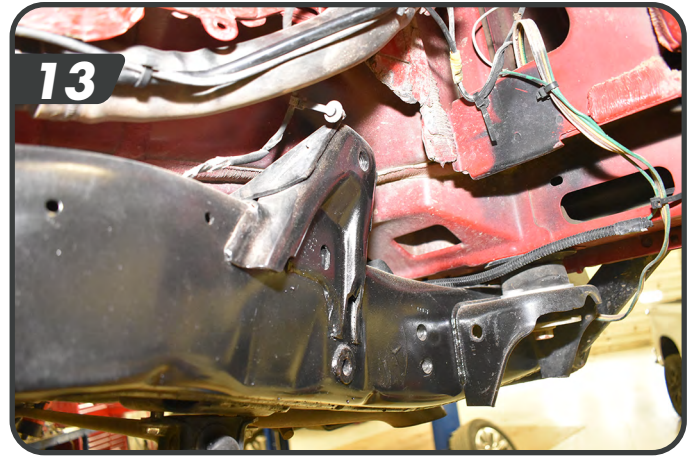


- d. Install the Fuel filler neck relocation bracket to raise the neck up away from the shock mount. [11] Using the 1/4" washer and nut in bolt pack J145. Torque OE bolt (10mm) to 53in-lbs and torque 1/4" nut (7/16) to 86 in-lbs.



- a. Using a cut off wheel and reciprocating saw (plasma cutter can be used too) cut off the outer shock tab flush with the inner shock mounting surface. [12, 13] Grind surface smooth with Shock mounting surface.

Note - Be careful of any wiring harnesses and on the driver side the fuel filler neck.



- b. Grind the formed support rib at a taper. Starting at 3-3/4" down from the top of the shock mount to the bottom of the rib being flushed with the frame. [14]



- c. Repeat this procedure on the opposite side.
d. Paint all bare surfaces.

03. REAR AXLE SHOCK MOUNT & LCA MOUNT MODIFICATION

- e. Support the axle well with some jack stands.
f. Remove the LCA axle bolt (21mm socket and wrench), then remove the LCA from the LCA mount location.
g. Using a cut off wheel or reciprocating saw remove the shock mount from the LCA mount. [15]



- h. Use a cut off wheel or reciprocating saw Remove the Axle sway bar mount from the LCA mount. grind the LCA mount smooth. [16]



- i. Using a cut off wheel or reciprocating saw remove 1-3/4" from the bottom of the LCA mount measured from the rear bottom keeping the cut horizontal. [17, 18]



- j. Drill out both holes in the rear of the lca bracket to 1/2" [19].



- k. Paint any bare surfaces
- l. Repeat this procedure on the opposite side. It is easiest to bolt the LCA back in the first side's mount to prevent the axle from rolling before doing the second side.

04. REAR FRAME COIL-OVER MOUNT INSTALLATION

All Frame coil-over mount hardware is located in bolt pack J143

- m. Secure the frame mount to the frame with the two 10mm x 30mm Bolts (17mm) and washers through the two holes on top of each other. Then place the 10mm x 50mm bolt (17mm) with washer in the lower forward hole. Leave loose. [20]

Note: The threaded frame nuts can become corroded or fill with sand/dirt quickly. It may be necessary to clean out the holes or use a 10mm-1.5 thread chaser on them.

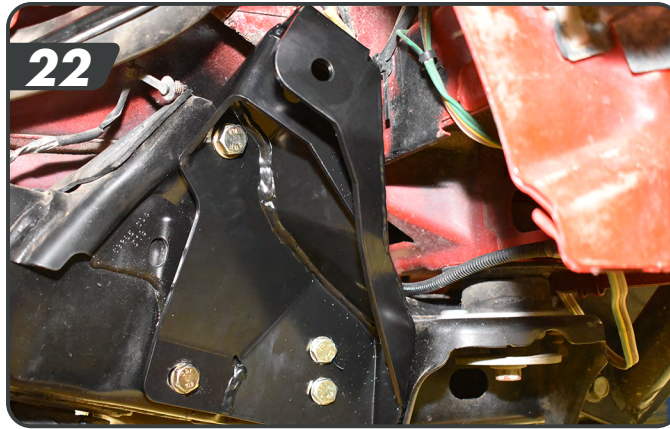
- a. Using the provided 12mm bolt (19mm) and washer. Secure the frame mount to the frame through the old shock mount location. Leave loose. [20]



- b. Mark the rear facing hole on the body mount and remove the bracket. Drill the hole to ½". Paint any Bare surfaces. [21]



- c. Remount the frame mount as before. Use the provided 7/16" bolt, washer, and nut through the body mount hole just drilled. Torque all hardware to the following. [22] 12mm (19) 81ft-lbs, 10mm (17) 45 ft-lbs, 7/16" (5/8") 59 ft-lbs.

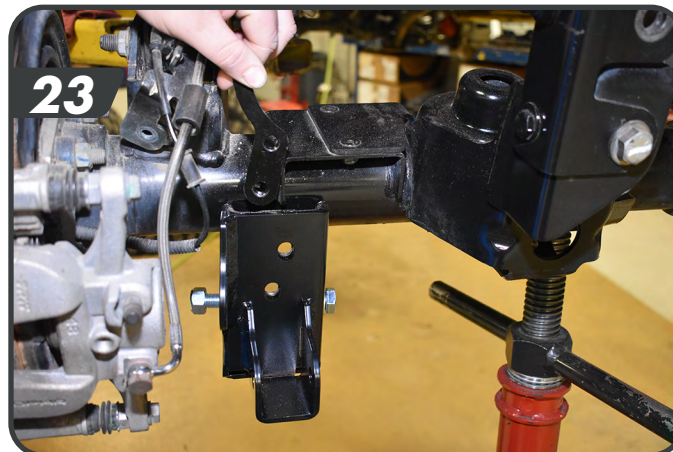


- d. Repeat this procedure on the opposite side.

05. REAR AXLE COIL-OVER MOUNT INSTALLATION

All Axle coil-over mount hardware is located in bolt pack J144

- Remove the LCA bolt again if you reinserted it.
- Place the axle mount over the LCA mount and using the provided 14mm bolt, washers, and nut mount it with the lca in place. Leave loose. [23]



- Insert the nut tab [24] on the front side of the lca pocket and use the provided 7/16" bolts and washers to mount the axle mount through the holes you opened up previously to 1/2". [25] Torque the 7/16" bolt (5/8") to 59 ft-lbs.



- d. Repeat the procedure on the opposite side.

03. REAR CONTROL ARMS INSTALLATION

J-FLEX REAR CONTROL ARMS

Perform replacement control arm installation one at a time.

- a. Raise the axle housing back into position and support with a hydraulic jack. HINT: The axle housing should be evenly supported and the suspension at normal ride height. Do not attempt removal or installation with the suspension extended, or the axle drooped, as this will place tension on suspension arm mounting hardware.
- b. Remove the bolt and flag nut from the chassis rail bracket. Retain the original mounting hardware.
- c. Remove the original lower suspension arm from the vehicle.
- d. Set the length of the lower control arms.
 - Determine the correct length for your application using factors such as:
 - Pinion Angle
 - Tire Clearance
 - Factory length is 19- $\frac{3}{4}$ "
 - Max. length is 21- $\frac{1}{2}$ "
 - Set both control arms to the same length. Lengthening the lower arms will reduce pinion angle.
- e. Apply anti-seize lubricant to bolt threads of original mounting hardware.
- f. Mount the rubber bushing end of the control arm to the axle housing bracket. [26] Install the provided 14mm bolt, washers, and nut (22mm socket and wrench) and finger tighten the nut. DO NOT torque mounting hardware until instructed.



- g. Mount the control arm to the frame bracket with the grease fitting up. Install the original mounting bolt and flag nut. Finger tighten the bolt. [27] DO NOT torque mounting hardware until instructed.



HINT: If mounting bolt is difficult to install due to misalignment of the control arm bushing with mounting bracket, either (1) adjust height of axle housing with hydraulic jack, or (2) move axle housing into position with a heavy-duty ratchet strap.

- h. Repeat installation steps on opposite side of vehicle, then continue on to the upper arms.
- i. Remove the upper suspension arm bolt and nut from the axle housing bracket. Retain the original mounting hardware.
- j. Remove the bolt and flag nut from the chassis rail bracket. Retain the original mounting hardware.
- k. Remove the original upper suspension arm from the vehicle.
- l. Set the length of the upper control arms.
 - Determine the correct length for your application using factors such as:
 - Pinion Angle
 - Tire Clearance
 - Factory length is 17-½"
 - Max. length is 19"
 - Set both control arms to the same length. Lengthening the upper arms will increase pinion angle.
- m. Apply anti-seize lubricant to bolt threads of original mounting hardware.
- n. **Establish control arm orientation.** The arms should be mounted so that the bend goes inward (away from the tire) and the rubber bushing end mounts to the axle.
- o. Mount the rubber bushing end of the control arm to the axle housing bracket. Install the original mounting bolt and finger tighten the nut. DO NOT torque mounting hardware until instructed.
- p. Mount the control arm to the frame bracket with the grease fitting down. [28] Install the original mounting bolt and flag nut. Finger tighten the bolt.



HINT: If mounting bolt is difficult to install due to misalignment of Control Arm bushing with mounting bracket, either (1) adjust height of axle housing with hydraulic jack, or (2) move axle housing into position with a heavy-duty ratchet strap.

- q. Repeat installation of upper arm on opposite side of vehicle. All rear control arm bolts will be torqued when the full weight of the vehicle is on the ground.

06. REAR COIL-OVER INSTALLATION

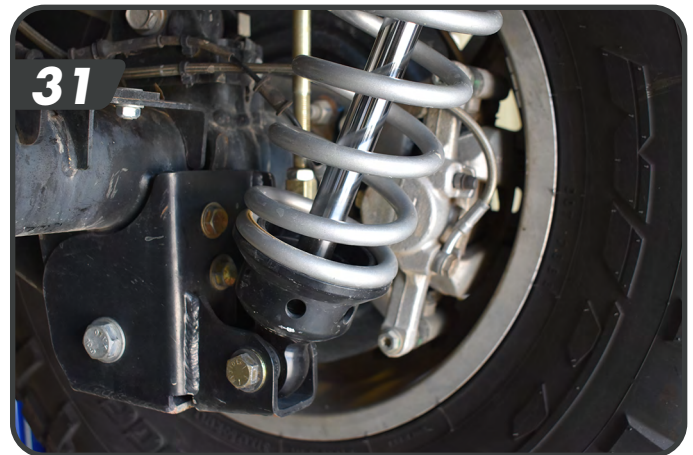
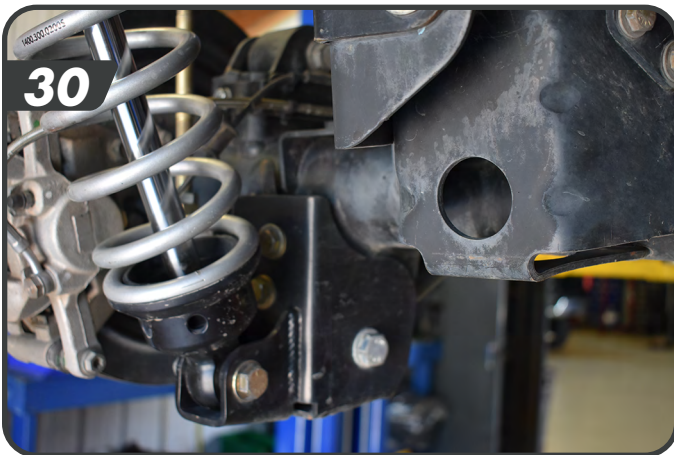
All coil-over mounting hardware is located in bolt pack J145

- a. With the upper and lower brackets installed on both sides, Lower the axle to install the coilovers to the upper mount using the $\frac{1}{2}$ " x $2\frac{3}{4}$ " bolt from the outside in. [29]

Tip: The coilover misalignment spacers may need to be compressed with a pair of channel lock pliers to fit into the bracket.



- b. Raise the axle to mount the coilover into the lower mount. Fasten with the $\frac{1}{2}$ " x $2\frac{3}{4}$ " bolt, washers, and nut. [30, 31]



- c. Repeat the procedure on the opposite side.
- d. Torque both upper and lower coilover mounting $\frac{1}{2}$ " ($\frac{3}{4}$ " socket and wrench) hardware to 90 ft-lbs.

07. INNER FENDER TRIMMING

- a. Trim inner fenders to clear the reservoir and coilover mount on both sides. [32]

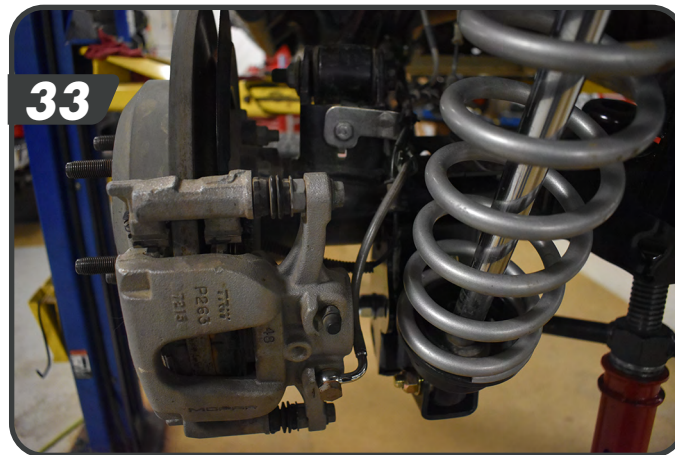


- b. Fasten the inner fenders to the body with the original hardware/clips and new plastic rivets.

06. REAR BRAKE LINES, SWAY BAR, AND TRACK BAR

BRAKE LINES

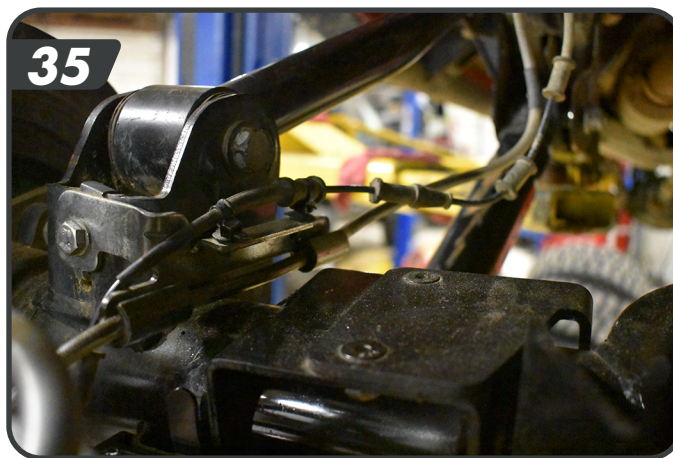
- a. Disconnect the flexible brake line from the hardline at the frame (12mm).
- b. Disconnect the flexible brake line from the caliper (15mm).
- c. Route brake line as shown. [33, 34, 35]



- d. Reattach provided extended brake line to the hardline (12mm) torque to 15 ft-lbs
- e. Reattach provided extended brake line to the caliper (15mm) torque to 21 ft-lbs
- f. Reattach brake line bracket to the frame using OE hardware (10mm) [34].



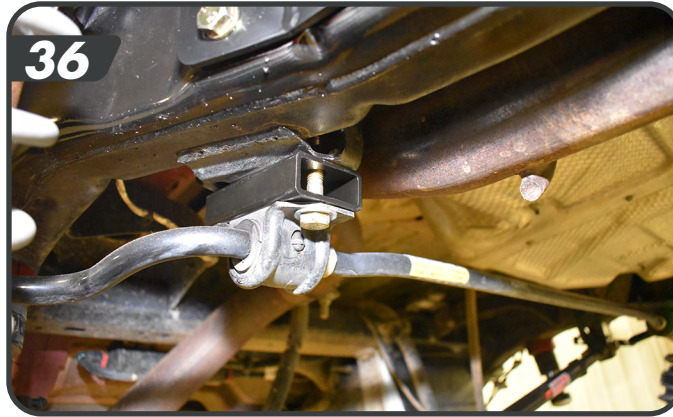
- g. Reattach the brake line to the axle mount with OE hardware (10mm). Also use the provided cable tie and attach the brake line to the abs wire. [35]



- h. Repeat procedure for the other side. Clean off any brake fluid and bleed brakes according to manufacturer manual.

SWAY BAR

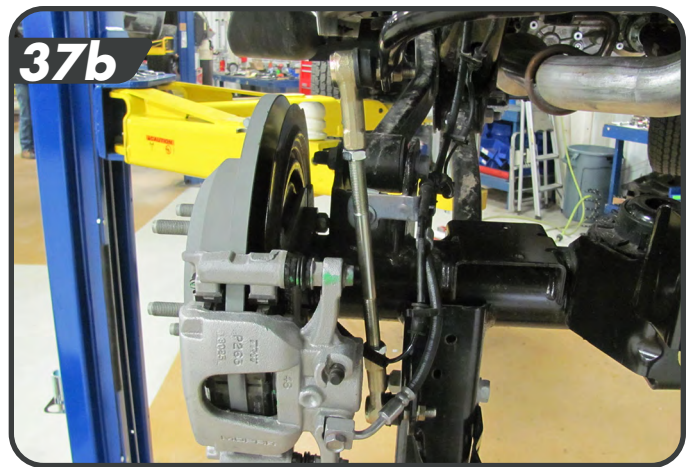
- i. On one side at a time remove the 2 bolts (15mm) mounting the sway bar to the frame. Insert the sway bar drop bracket between the OE mount and Frame. Use the provided 10mm bolt and 3/8" washers and bolt the sway bar back to the frame in bolt pack J145. When both sides are complete Torque bolt to 46 ft/lbs [36]



- j. Set the length of the provided rear sway bar links with the booted joints to 11-1/4" between the ball stud centers and install to the outside of the sway bar and axle mount [37a, 37b]. Torque to 72 ft-lbs.

Note: Sway bar hole will be tight, it may require being enlarged just slightly to get the stud to push through. A round file or rotary bit can be used.

Note: While flexing the stud might rub against the frame, so cutting the stud shorter once installed may be necessary.



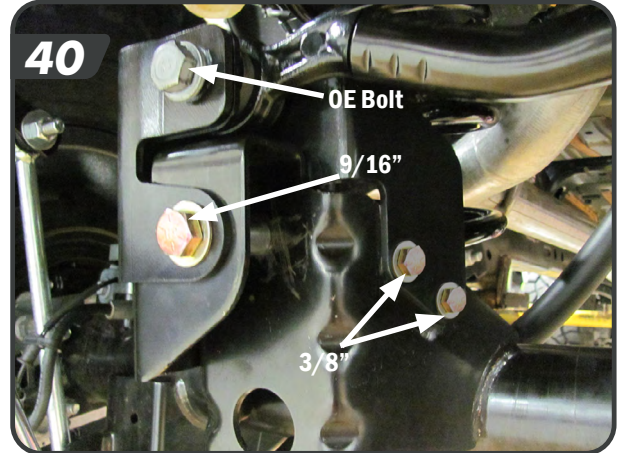
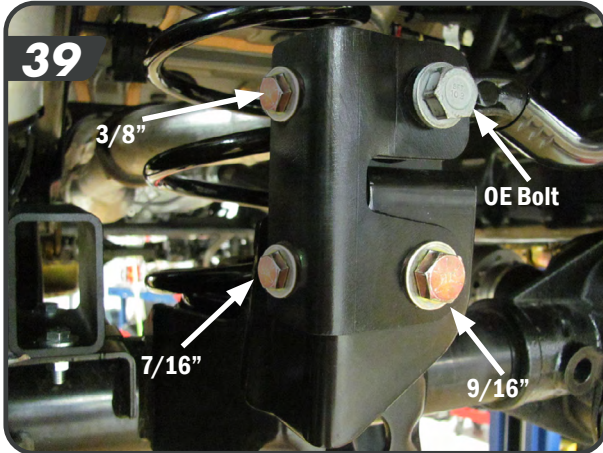
- k. Install the provided adjustable bump stop spacers on the axle using the existing holes in the axle bump stop pad. The bump stop system consists of one 2" bump stop block, and two 1/2" bump stop blocks. This allows for bumpstop height to be tuned specifically for your wheel and tire combination. We require using the 2" block. Fasten the bump stop spacer to the axle with the appropriate length 5/16" bolts (1/2"), nuts (1/2"), and washers (Bolt pack J151). Torque bolts to 15 ft-lbs. [38]



TRACK BAR BRACKET

Rear track bar bracket and brace will require bolt pack J129 and the 1 5/8" long sleeve.

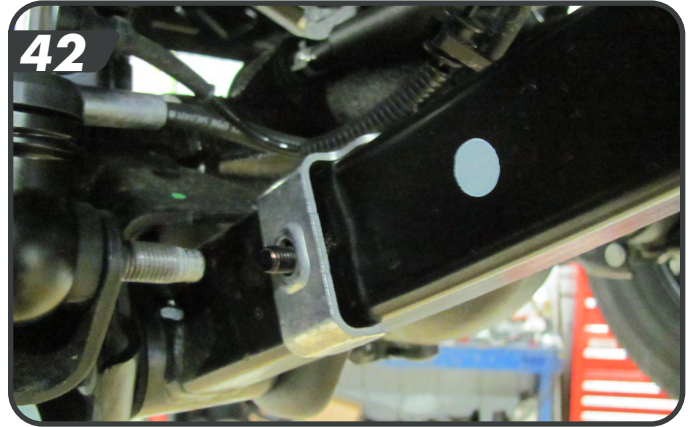
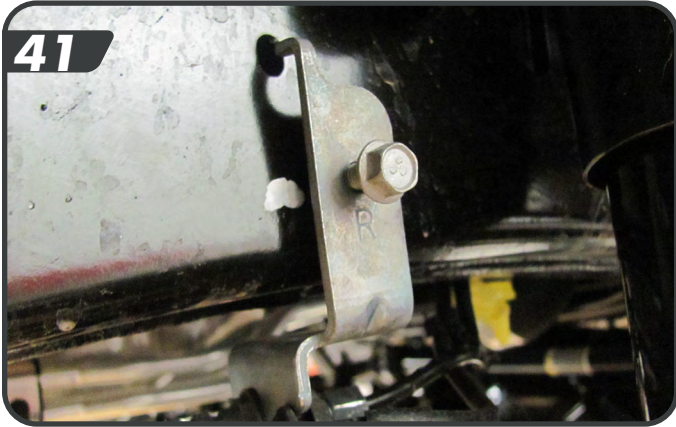
- l. Insert the provided 9/16" hardware first into the track bar bracket, then through the original track bar bolt hole using the provided 1-5/8" long sleeve located in the hardware box. [39]
- m. Secure the track bar brace to the track bar bracket with 3/8" hardware located in bolt pack J129.
- n. With the bracket and brace in position, mark the position of the 3 holes to be drilled. One 1/2" hole will be drilled below the 3/8" bolt holding the bracket and brace together, a 1/2" drill bit is used to provide clearance for the 7/16" hardware. Two 7/16" holes will be drilled adjacent to each other to secure the track bar brace to the axle. A 7/16" drill bit is used to provide clearance for the 3/8" hardware.



- o. Drill the holes and fasten the bracket to the axle with the provided hardware. Insert the provided sleeve in the OE track bar position. [39, 40]
- p. Tighten the 9/16" bolt to 130 ft-lbs; 7/16" to 59 ft-lbs, and the 3/8" hardware to 37 ft-lbs [40]. The track bar will be re-installed with the vehicle on the ground.
- q. Rubicon models: Reattach the locker wire harness to the differential.
- r. Mount the tires and lower the vehicle to the ground.
- s. Install the rear track bar into the relocation bracket with the factory bolt.
Tip: Use an assistant to push on the body of the vehicle to help align the track bar in the bracket.
- t. Torque the axle side track bar bolt to 74 ft-lbs Plus 60deg.

04. FRONT DISASSEMBLY

- a. Disconnect the front track bar (21mm) from the axle. Save bolt and nut tab.
- b. Raise the vehicle and support the frame with jack stands behind the front lower control arm pockets.
- c. Remove the wheels.
- d. Disconnect the front brake line brackets from the frame rails and front LCA (10mm) [41, 42].



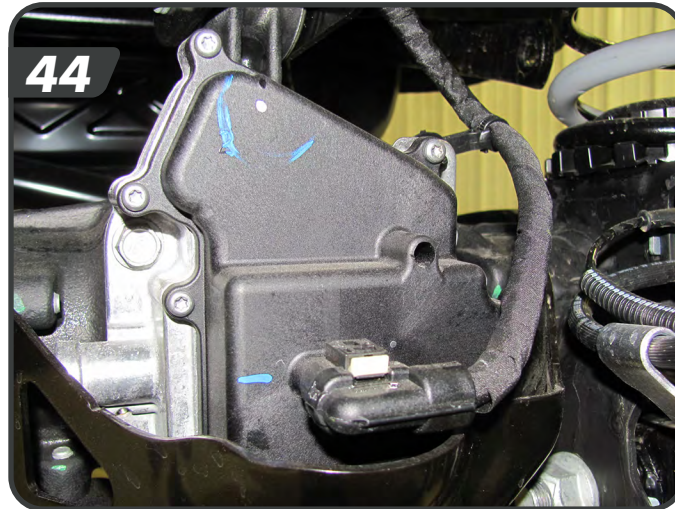
- e. Disconnect the brake line from the axle coil mount location [43] Remove the axle bracket and LCA bracket from the brake line.

Note - It easiest to remove the brake line brackets by cutting a groove in them carefully not to hit the brake line and using two pliers to open up the mount.

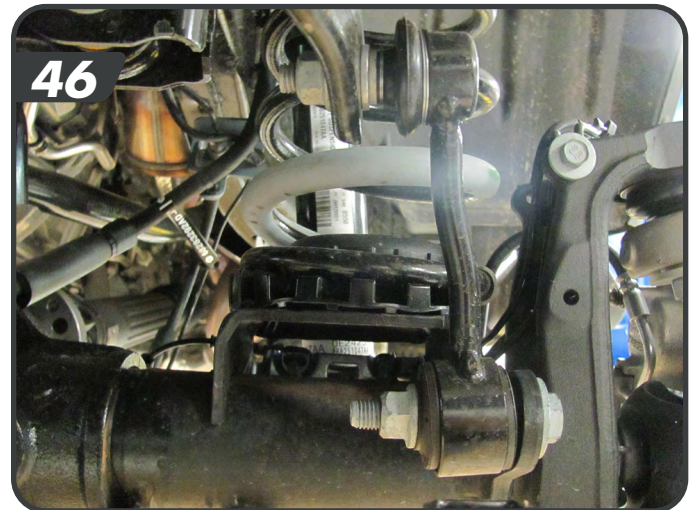
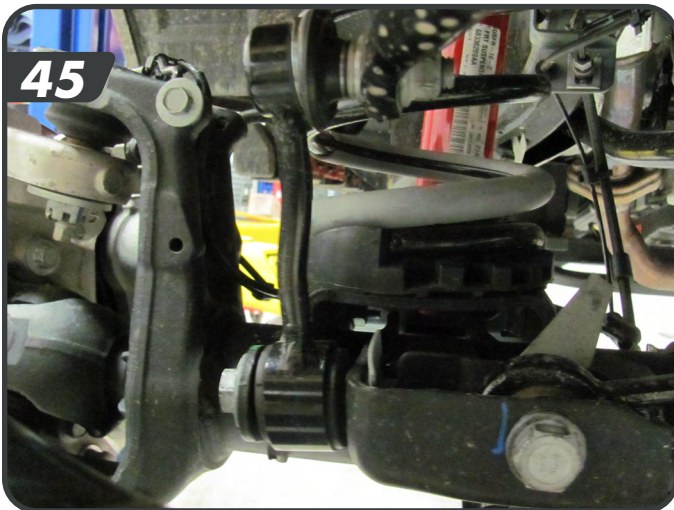


- f. Rubicon models: Disconnect the front locker wires from the differential.

- g. All models: Disconnect the front axle disconnect wiring harness and pull out the (2) push pins that mount the harness to the axle [44].



- h. Disconnect the sway bar links from the axle and sway bar (18mm). Discard links, save lower hardware [45,46].



- i. Remove the 4 bolts mounting the front driveshaft to the pinion flange (15mm) and support it with a strap or bungee cord. This is done to ensure the driveshaft does not bind when removing the coil springs. [47]



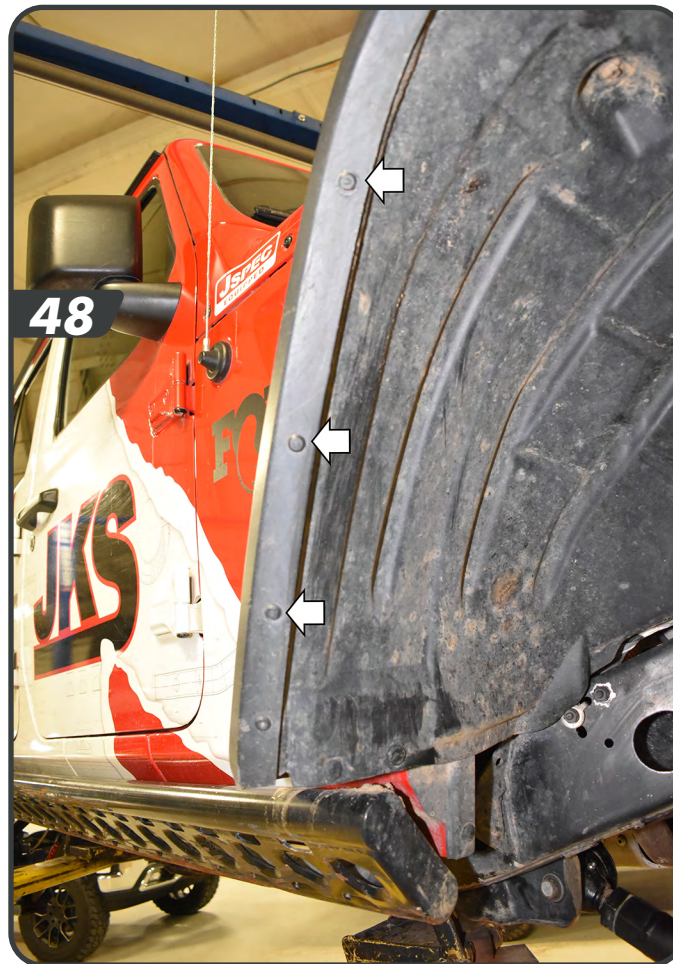
- j. Support the front axle with a hydraulic jack. Remove the front shocks from the vehicle using a 18mm socket for the top and 18mm socket and wrench on the bottom. Save lower hardware.

- k. Lower the front axle and remove the coil springs. As the axle is lowered, verify all brake and electrical wires have enough slack and the driveshaft doesn't bind.

02. FRONT SHOCK MOUNT & COIL MOUNT MODIFICATION

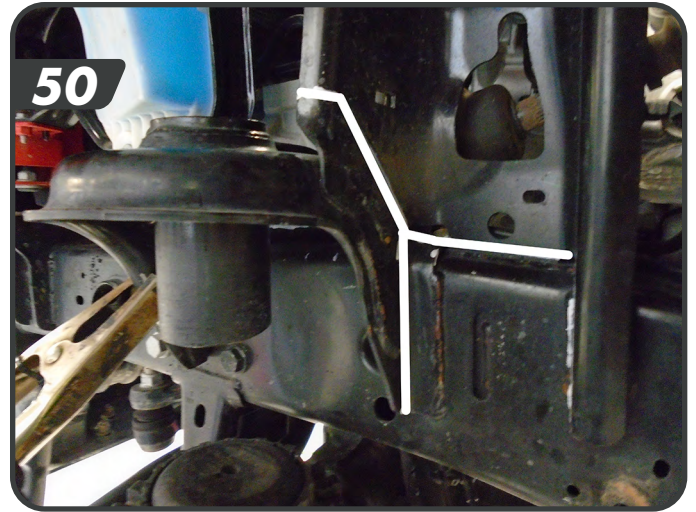
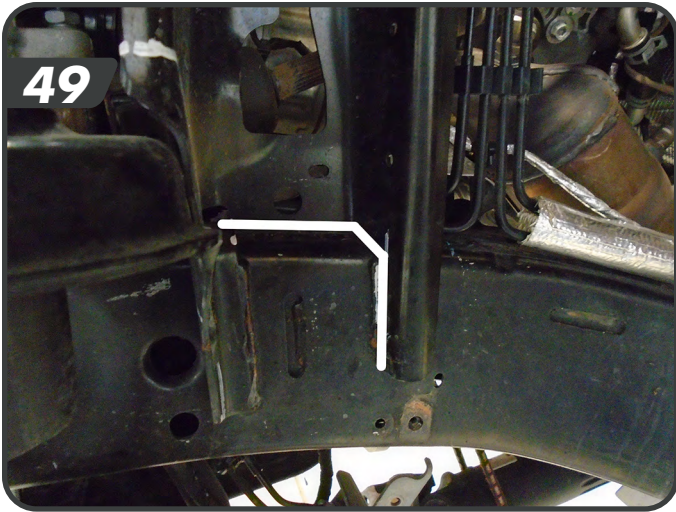
- a. Remove the inner fender liner by removing the screws and clips and remove the three plastic rivets shown in [48]

Note - The easiest way to remove the plastic rivets is to push the mandrel in with a small punch or screwdriver. Then use a body clip tool to pull the body clip out of the fender.



REMOVE FRAME SHOCK MOUNT

- b. Using a small (3") cut off wheel and Reciprocating Saw (Plasma Cutter suggested) remove the shock mount from the vehicle. [49, 50] Be carefull not to cut the frame rail, brakelines or any critical components.

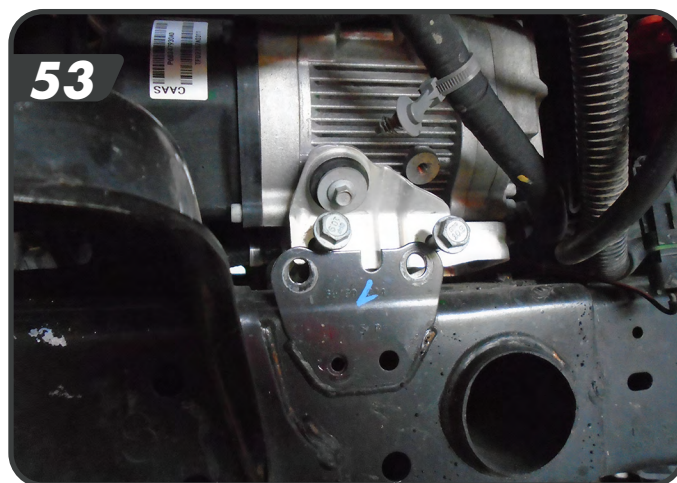
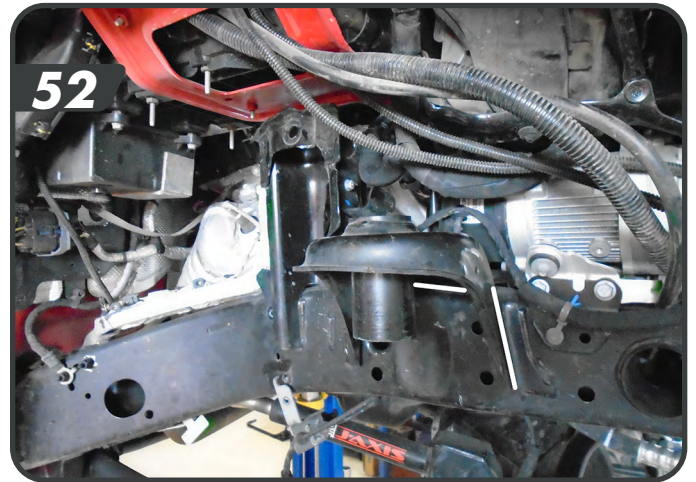
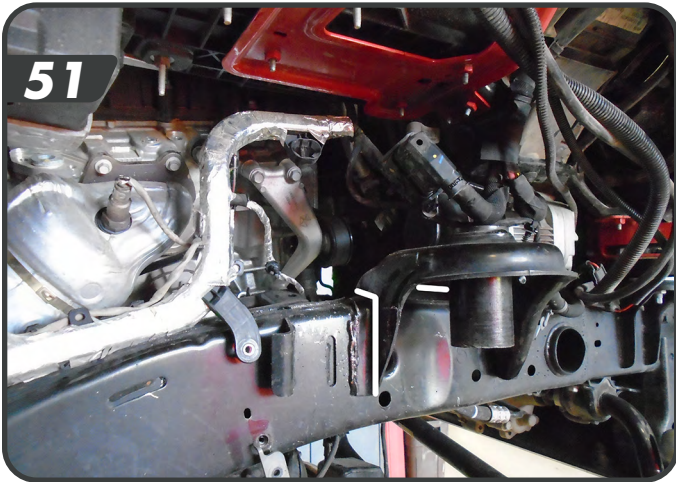


REMOVE FRAME COIL MOUNT

- c. Using a small (3") cut off wheel and Reciprocating Saw (Plasma Cutter suggested) remove the coil mount from the vehicle. [51,52] Be careful not to cut the frame rail, brakelines or any critical components.

Note - On the Passenger side it might be easier to remove the two bolts (15mm) holding on the power steering pump to gain more access for cutting [52]. Resecure the power steering pump with the bolts (10mm) if removed. 21ft-lbs

Note - On the Passenger side you need to remove the body harness connection from the Coil Mount. It will be remounted to the New frame bracket later.



- d. Grind the outside frame until smooth, Paint any bare metal. [54]



- e. Repeat this procedure on the opposite side.

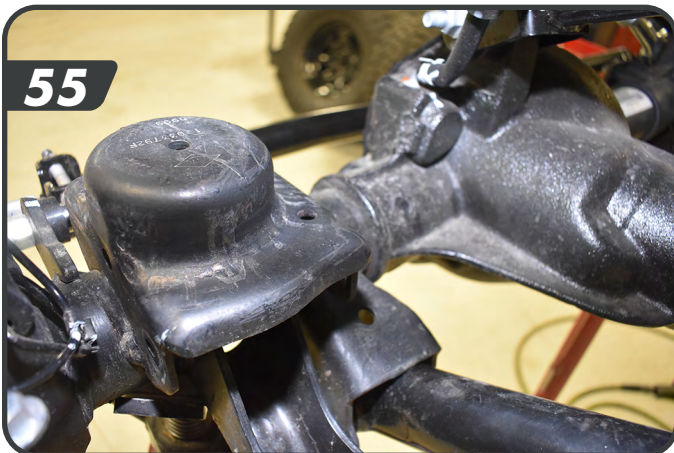
03. FRONT AXLE SHOCK MOUNT, COIL MOUNT, & LCA MOUNT MODIFICATION

- a. Support the axle with some jack stands.
- b. Remove the Rubber isolator from the coil mount if still on the vehicle.

REMOVE FRAME SHOCK MOUNT

- c. Using a cut off wheel (Plasma Cutter suggested) cut the coil mount as shown. [55, 56] Be carefull not to cut the axle, brakelines, abs wire or any critical components.

Note - It will be nessassary to cut the coil mount up to the bottom of the letters where "DANA" is stamped onto the factory bump stop location it.



- d. using a small (3") cut off wheel or Recipricating saw cut the shock mount off of the axle as close to the axle as possilbe without hitting the axle. [57]



- e. Using a cut off wheel cut the LCA mount flange of the axle as shown. [58]

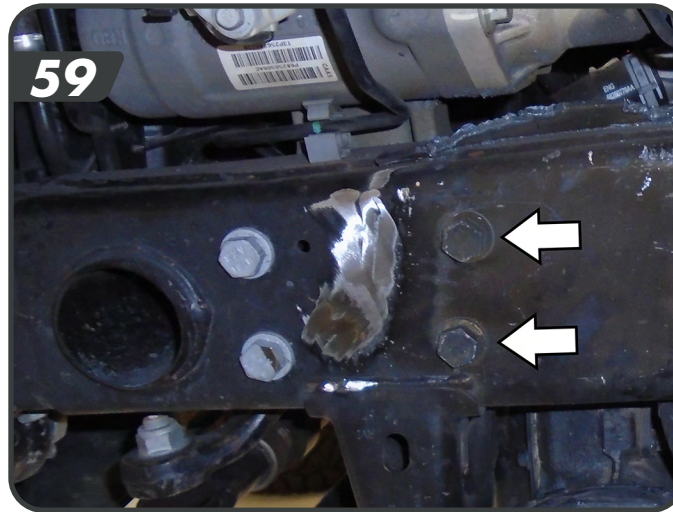


- f. Repeat this procedure on the opposite side.
- g. Grind all your cuts smooth to remove any sharp edges and paint any bare metal.

04. FRONT FRAME COIL-OVER MOUNT INSTALLATION

All upper coil-over mount hardware is located in bolt pack J137

- a. On the Driver Side remove the two rear power steering box bolts(18mm).[59]

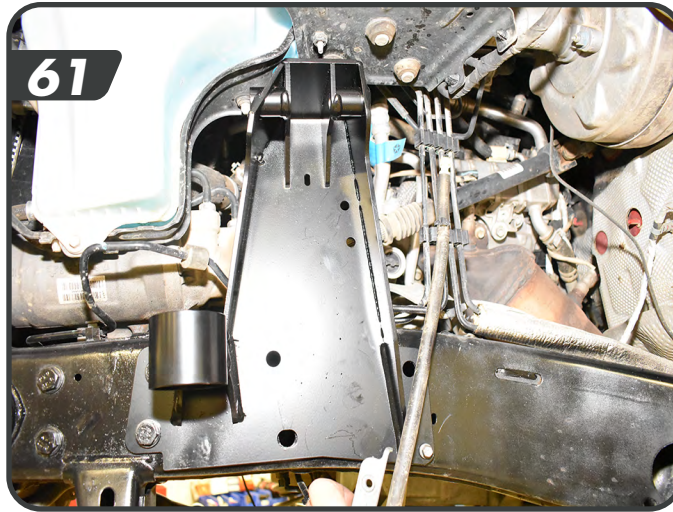


- b. Adjust the hard brake lines out of the way. Place the Frame Mount Bracket onto the frame lining up the two front holes and the brake line bracket hole. Mark the center of the remainder of the holes. Remove the bracket from the frame and drill all the holes to 9/16". [60] Paint all raw metal.

Note - You can use the OE brake line bracket bolt and power steering box bolts to hold the bracket in place while marking the holes.



- c. Remove the forward factory fastener holding the heat shield to the motor mount bracket. Mount the Frame Coilover Reinforcement Bracket to the factory motor mount bracket with the provided 3/8" bolt, nut and washer in bolt pack J137. Leave hardware loose[61]

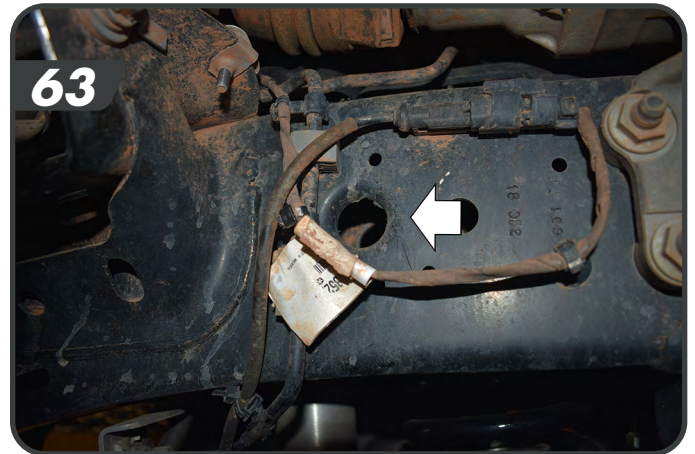
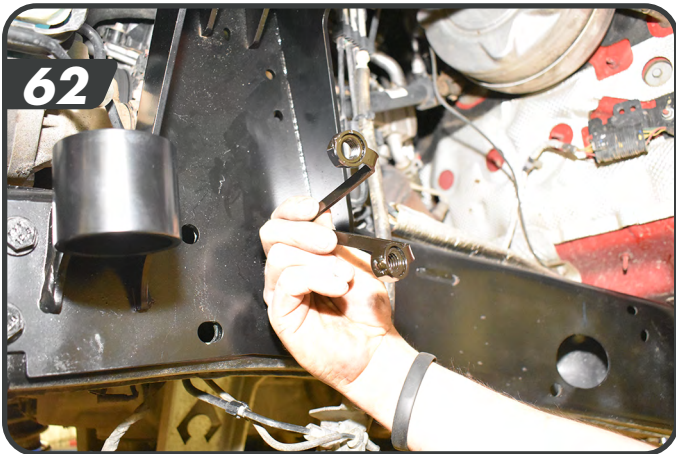


- d. Mount the Frame Mount Bracket to the frame using the original steering box bolt (18mm) and brake line bolt (10mm).
- e. Ensure that all the provided nut tabs are easily threaded onto the provided ½" bolts.

Note - Prethreading them knocks off the protected e-coating on the threads to ensure the loc-tite works.

- f. Insert one of each type of short single nut tab through the formed hole on the inside of the frame at a time using the provided ½" hardware to hold them in place. [62, 63]

Note - Opening up the hole with a die grinder can make it easier but is not required.



- g. Insert the Long single nut tab [64, 65]] into the frame from the outside large frame hole. Use the provided ½" hardware hold it in place. Leave loose.



- h. One at a time remove each $\frac{1}{2}$ " bolt and use the provided loctite. Torque the steering box bolts (18mm) to 99 ft-lbs and the $\frac{1}{2}$ " hardware ($\frac{3}{4}$ " to 90 ft-lbs. Leave the brake line bracket bolt loose.

Note - Using a smaller vice grip on the end of each nut tab to help hold it can make it easier to insert the $\frac{1}{2}$ " bolt and hold it still while torquing the bolts.



- i. Mount the Frame Coilover Reinforcement Bracket to the Frame Mount Bracket with the Remote Resi Bracket using the provided $\frac{5}{16}$ " ($\frac{1}{2}$ " socket and wrench) bolts, nuts, and Washers. [67] Torque hardware to 178 in-lbs

Note - Going from outside to inside the bracket order will be Frame Mount, (2018-2019 3.6L Only) Reinforcement Bracket, then Remote Resi Mount

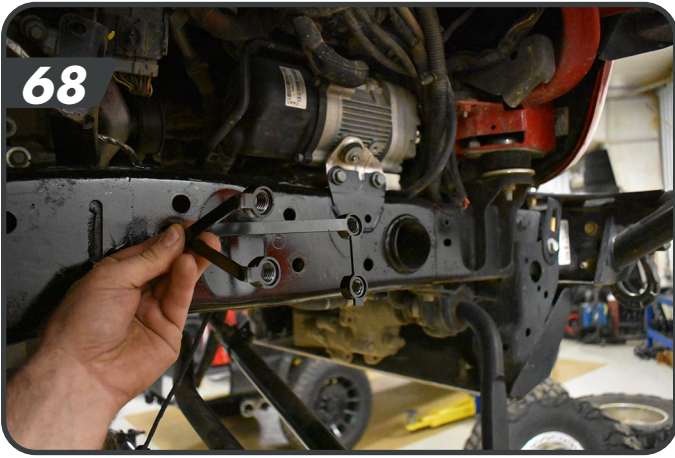


- j. Tighten the $\frac{3}{8}$ " ($\frac{9}{16}$ " socket and wrench) hardware attaching the Reinforcement Bracket to the Frame. Torque to 26 ft-lbs
- k. Repeat this procedure for the passenger side. Instead of using the two power steering box bolts there are two extra $\frac{1}{2}$ " bolts and washers provided along with a short double nut tab. [68, 69]

Note - Temporary removing the brake line and wires from their locations on the inside of the frame is required and they can be put back after installation is complete..

Note - It may be necessary to open up the hole on the backside of the frame with a die grinder to fit all the nut tabs in.

Note- It is easiest to insert the short double nut tab through the hole first than the two short single nut tabs.



- l. On the passenger side the wiring harness factory clip can be inserted into the backside of the frame mount where the vertical slot is present.
- m. Ensure no brake lines or wires rub any of the new brackets or nut tabs and manipulate them out of the way as nessossary.

05. FRONT AXLE COIL-OVER MOUNT INSTALLATION

All lower coil-over mount hardware is located in bolt pack J136

- n. With the axle still well supported, Remove the four bolts holding on the factory skid (10mm).
- o. Remove the driver side LCA axle side bolt. Remove the LCA from the axle mount.
- p. Place the axle mount onto the axle. Place the Cam Washer inbetween the Bracket and LCA mount to ensure proper placement. [70]

Note - You can use the provided 5/8" Bolt and 3/8" bolt to help hold it into place and ensure proper placement. [70]



- q. Mark the location of the most forward holes location on the coil mount. Remove the bracket and drill with a 7/16" Bit. Paint any raw metal.

Note - It easiest to drill the hole if the steering turned all the way towards the side your working on. You can also leave the bracket on to use as a guide.

- r. It necessary to grind out some material on the upper part of the LCA mount to prevent binding between the LCA and LCA mount at droop. You can use the Axle mount as a guide. [71]



- s. Place the LCA into the LCA mount again. Place the cam washer bewtween the Axle mount and LCA Mount in the factory slots. Run the 5/8" supplid bolt, washers, and nut from the inside outward. Leave all hardware loose untill the end of the step. Use one of the provided 3/8" bolt, washers and nut and bolt the axle mount to the top of the LCA pocket. Next use the 7/16" bolt, washers, and nut and bolt the axle mount through the factory side coil mount hole. Using the other 3/8" bolt, washers, and nut bolt the axle mount to the coil mount through the hole you drilled in the previous step. Torque all hardware to the following. 3/8" Hardware (9/16" socket and wrench) 26 ft-lbs, 7/16" bolt (5/8" socket, 11/16" wrench) 42 ft-lbs. [72, 73]



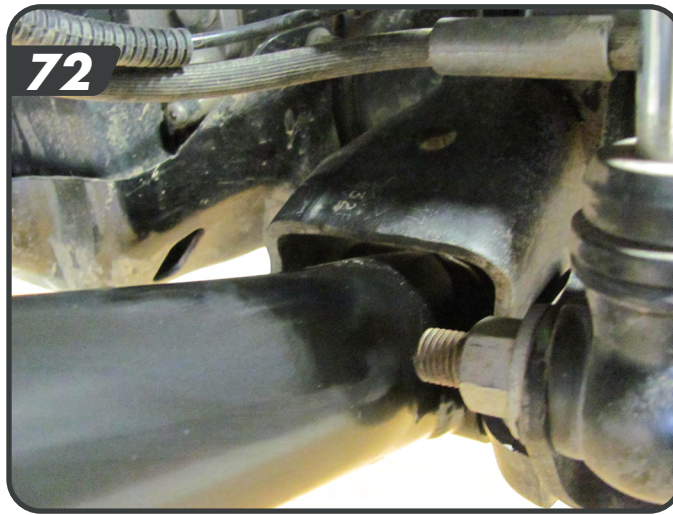
- t. Repeat the procedure on the opposite side.

05. FRONT J-FLEX CONTROL ARM INSTALLTION

Perform replacement control arm installation one at a time.

- Raise the front axle housing back into position and support with a hydraulic jack. HINT: The axle housing should be evenly supported and the suspension at normal ride height. Do not attempt removal or installation with the suspension extended, or the axle drooped, as this will place tension on suspension arm mounting hardware.
- Remove the lower suspension arm bolt and nut from the axle mount.
- Remove the bolt and nut from the chassis rail bracket. Retain the original mounting hardware.
- Remove the original lower suspension arm from the vehicle.

- e. The factory shock bolts will need to be cut shorter to clear the larger JKS control arms. Using a cut off wheel, leave about ¼" of threads past the nut and cut off the bolt [72]



- f. Set the lower control arm length.
- Determine the ideal arm length for your application by considering factors such as:
 - Tire Clearance
 - Steering Clearance
 - Pinion Angle / Caster
 - Factory length is 24"
 - Max. length is 25 ¾"
 - **Set both control arms to the same length.** Lengthening the arms will increase caster.
- g. Apply anti-seize lubricant to bolt threads of original mounting hardware.
- h. **Establish control arm orientation.** The arms should be mounted so that the bend goes inward (away from the tire) and the rubber bushing end mounts to the axle.
- i. Mount the control arm to the axle housing bracket. Install the original mounting bolt and finger tighten the nut. DO NOT torque mounting hardware until instructed.
- j. Mount the control arm to the frame rail bracket so the grease fitting is up on the flex eye. Install the original mounting bolt and nut. Finger tighten the bolt. [73]



HINT: If mounting bolt is difficult to install due to misalignment of the control arm bushing with mounting bracket, either (1) adjust height of axle housing with hydraulic jack, or (2) move axle housing into position with a heavy-duty ratchet strap.

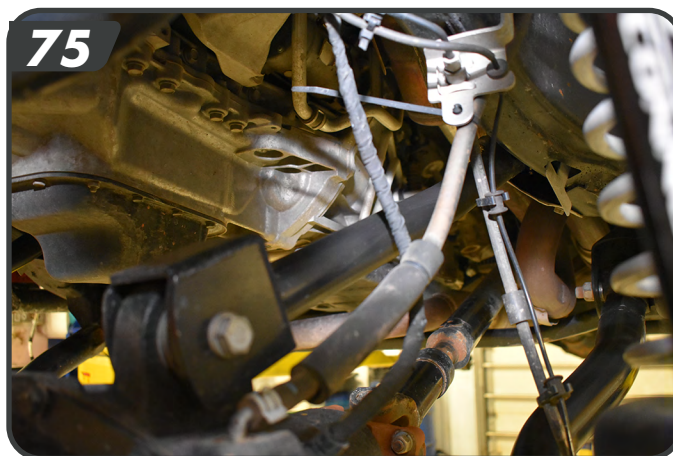
- k. Repeat installation steps on opposite side of vehicle, then continue on to the upper arms.

- l. Remove the upper suspension arm nut and bolt from the axle housing bracket. Retain the original mounting hardware.
- m. To access the frame bolts, it will be necessary to remove the heat shields from both upper control arm frame mounts.
- n. Remove the 2 bolts per heat shield, one on top and one on the bottom using a 10mm ratchet wrench. [74]



- o. Remove the nut and bolt from the chassis rail bracket. Retain the original mounting hardware.
- p. Remove the original upper suspension arm from the vehicle.
- q. Set the upper control arm length.
 - Determine the ideal arm length for your application by considering factors such as:
 - Pinion Angle / Caster
 - Tire / Steering Clearance
 - Factory length is 20-3/16"
 - Max. length is 21-3/4"
 - Set both control arms to the same length. Lengthening the arms will reduce caster.
- r. Apply anti-seize lubricant to bolt threads of original mounting hardware.
- s. Mount the fixed end of adjustable control arm to the axle housing bracket.
- t. Mount the flex end of the adjustable control arm to the chassis bracket with the greaseable fitting facing down.
- u. Install the original mounting bolt from outboard side. Bolt threads should point inboard.
- v. Install the original mounting nut and finger tighten. DO NOT torque mounting hardware until instructed.
- w. Install the original mounting bolt in the Axle from inboard side. **Bolt threads should point outboard.**
- x. Install the original mounting nut and finger tighten. DO NOT torque mounting hardware until instructed. [75]

HINT: If mounting bolt is difficult to install due to misalignment of the control arm bushing with mounting bracket, either (¹) adjust height of axle housing with hydraulic jack, or (²) move axle housing into position with a heavy-duty ratchet strap.



- y. Once all 4 front control arms have been installed, torque the upper arm frame side bolt to 72 ft-lbs.
- z. Re-install the heat shields that were removed from the control arm mounts. (10mm)
- aa. The upper control arm at the axle and both sides of the lower control arm will be torqued with the weight of the vehicle on the ground.

06. COIL-OVER INSTALLATION

All lower coil-over mount hardware is located in bolt pack J138

- a. Lower the axle with the hydraulic jack to provide enough room to mount the coilovers
- a. With the upper and lower brackets installed on both sides, install the coilovers to the upper mount using the ½" x 5-½" bolt, washers, and nut from the rear to front.

Note: The coilover misalignment spacers may need to be compressed with a pair of channel lock pliers to fit into the bracket.

- b. Mount the reservoir to the coilover mount using the provided clamps. They are designed to slide over the mount seat in the slot cut in the bracket (not through the slot). [76]



- c. Raise the axle to mount the coilover into the lower mount. Fasten with the ½" x 2-¾" bolt washer and nut. [77]



- d. Repeat this procedure for the opposite side.
- Note: Additional preload may be required to attain desired lift height on diesel models..**
- e. Install the provided bump stop by following the instructions provided in that box kit.
- f. Reattach the axle disconnect wire to the axle.
- g. Rubicon models: Reattach the locker wire harness to the differential.

- h. Install your aftermarket drive shaft per manufacturers recommendations. Ensure drive shaft clears and doesn't bind at droop.

07. INNER FENDER TRIMMING

- a. Trim inner fenders to clear the reservoir and coilover mount on both sides.[78]



- b. Fasten the inner fenders to the body with the original hardware. Use the provided Plastic rivets and a standard Rivet gun mount the inner fender to the fender.

05. SWAY BAR DISCONNECTS, BRAKE LINES, AND ADJ TRACK BAR

QUICKER DISCONNECT INSTALLATION

Quicker Disconnects will require bolt pack J127

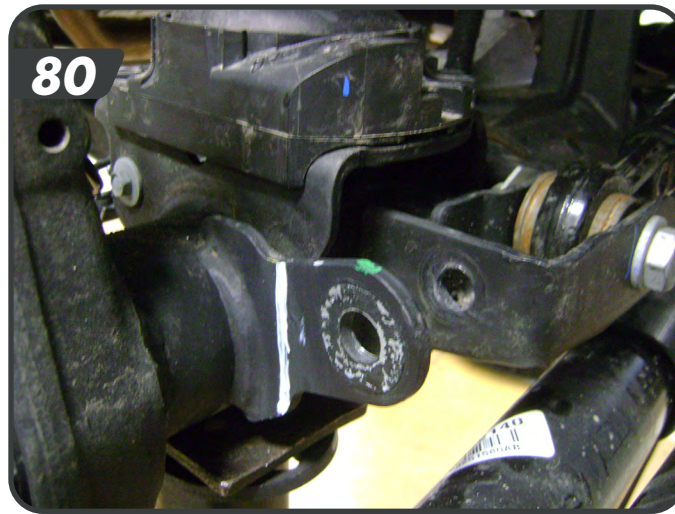
- c. Adjust the length of the quicker disconnects to 9" center to center. This is a good starting point and can be fine tuned once the vehicle is on the ground if needed.
- d. Insert the longer sleeves into the upper bushing and slide the polyurethane spacer onto the upper sleeve so it will mount towards the swaybar.
- e. Install the side post on the sway bar with it pointing outboard [79]. Fasten with the ½" nylock nut and tighten to 64 ft-lbs. (¾") Repeat this procedure on both sides.

Note - A small screwdriver or punch inserted into the pin hole will keep the post from turning as you tighten it.



NON-RUBICON MODELS

- f. The passenger side mount will need to be cut to provide access for the disconnect post. Cut the mount off vertically just past the weld on the bracket [80]. This should be about 1-1/4" from the center of the hole.

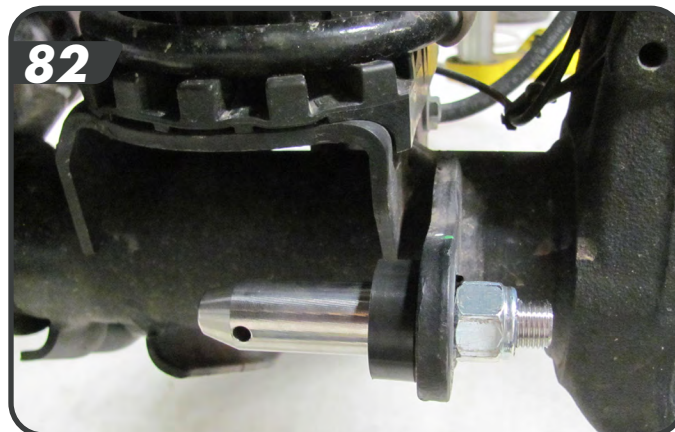


- g. Install the shorter passenger side post on the side of the track bar mount at the sway bar link mount location with it pointing outboard [81]. Fasten with the 1/2" nylock nut and tighten to 64 ft-lbs.

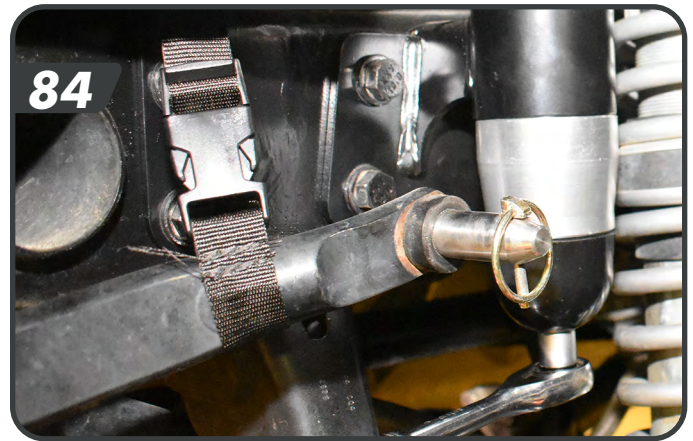
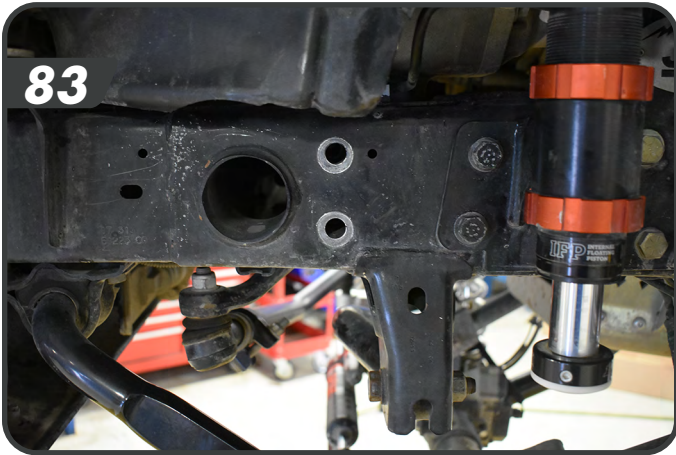


- h. Install the longer disconnect post on the driver side axle sway bar link mount with it pointing inboard [82]. Fasten with the 1/2" nylock nut and tighten to 64 ft-lbs. Tighten the post with the pin hole parallel to the ground. Slide the polyurethane spacer on the pin up against the axle tab.

Note: A small screwdriver or punch inserted into the pin hole will keep the post from turning as you tighten it.

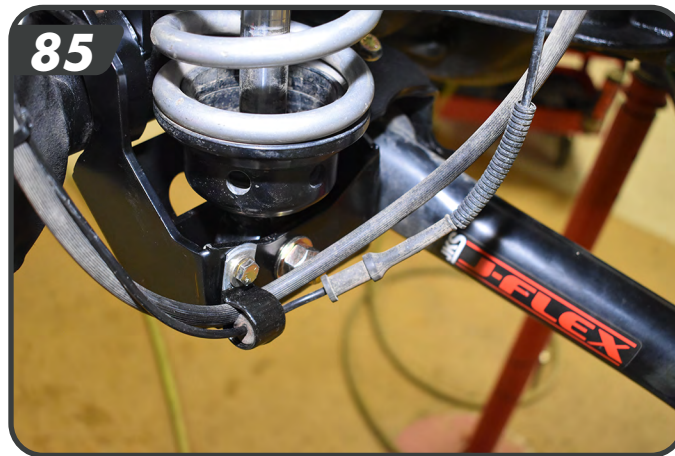


- i. Install the sway bar links.
- j. Mount the lanyard to the lanyard bracket using the provided ¼" hardware in bolt pack J138. Torque to 86 in-lbs (7/16" wrench and socket).
- k. Remove the two forward most bolts (18mm) on the Power steering box. Install the lanyard bracket going upward [83, 84]. Torque hardware to 99 ft-lbs.



BRAKE LINE MOUNTING

- l. Using the provided ¼" Hardware (7/16") in bolt pack J136 and the Hose Clip. Fasten the brake line and ABS line to the axle mount to prevent it from rubbing. Torque to 86 in-lbs (7/16" wrench and socket). Cable ties are also provided to attach the brake line to the abs line. [85]



- m. Reattach the factory brake line to the frame through the frame mount with OE hardware (10mm). Torque Bolt to 115 in-lbs.
- n.

FRONT ADJUSTABLE TRACK BAR

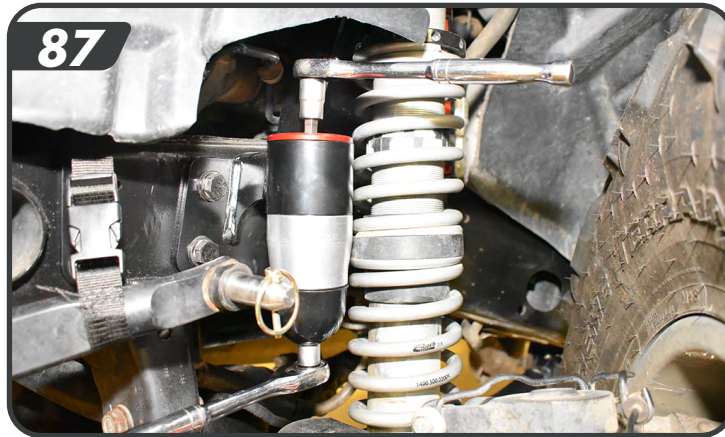
- o. Adjust the length of the track bar to 34". This is a starting point, final adjustment can be made once the vehicle is on the ground.
- p. Disconnect the factory track bar from the frame side mount, save hardware.
- q. Insert the non adjustable end of the new track bar into the frame mount with the clearance bend forward. Use factory hardware. Do not tighten at this time.

06. FRONT BUMP STOP INSTALLATION

- r. Place the cap onto the top of the bump stop tube on the front coilover frame bracket
- s. Take the 3/8" socket cap bolt from bolt pack J147 and put it through the bump stop than the bum stop bung. [86]



- t. Place loctite on the bolts threads and insert the assembly into the bottom of the bump stop tube on the front coilover frame bracket.
- u. Tighten the bolt with a 5/16" Allen wrench. While using a 3/8" Allen to hold the cap. It will screw into the cap. Torque to 20 ft-lbs. [87]



06. FINAL INSTALLATION STEPS

- v. Install the wheels and torque to the lug nuts to 125 ft-lbs.
- w. Lower the vehicle to the ground and bounce the vehicle to settle the suspension.
- x. Torque the following control arm bolts.
 - Front lower control arm at the frame to 103 ft-lbs plus 145 degrees. (21mm, 24mm)
- y. Front lower control arm bolts at the axle to 180 ft-lbs. (15/16")
- z. Front upper control arm bolts at the axle to 41 ft-lbs plus 185 degrees. (18mm)
- aa. Front upper control arm bolts at the frame torqued to 37 ft-lbs plus 135 degrees (previously done). (18mm)
- ab. Rear lower control arm bolts at the frame to 74 ft-lbs plus 50 degrees. (21mm, 24mm)
- ac. Rear lower control arm bolts at the axle to 126 ft-lbs. (22mm)
- ad. Rear upper control arm bolts at the frame to 74 ft-lbs plus 80 degrees. (18mm)
- ae. Rear upper control arm bolts at the frame to 74 ft-lbs plus 65 degrees. (18mm)
- af. Attach the front track bar to the axle with the OE hardware. Have an assistance turn the steering wheel to aid in aligning the track bar bolt. Take measurements to check if the axle is centered. Make an adjustment to the track bar

equal to half of the distance the axle is shifted to one side. Torque the frame side track bar bolt to 52 ft-lbs plus 115 degrees and the axle side track bar bolts to 52 ft-lbs plus 155 degrees. (21mm)

ag. Verify tire clearance, trim the front bumper side trim pieces as shown if necessary on your model. [88]



ah. Tighten all control arm jam nuts with JKS1696 or equivalent.

ai. Double check all hardware for proper torque.

aj. Lubricate all grease zerk fittings using common wheel bearing grease or equivalent.

Caution: Rubber bushings must never be lubricated as doing so will impair performance and longevity.

ak. Have a front end alignment performed to center steering wheel.

al. Check all fasteners after 500 miles and at regularly scheduled maintenance intervals.

07. STICKER INSTALLATION

Sticker installation should be performed when the temperature is above 60° F.



a. Clean the areas thoroughly with rubbing alcohol to remove any buildup.

b. Carefully place the sticker in the desired location.

c. Rub gently to secure, then press firmly for 30 seconds.

08. MAINTENANCE

a. Control arm flex ends should be greased regularly as part of vehicle maintenance schedule or after every 4-wheeling trip. Rubber bushings require no grease.

KIT CONTENTS

FOX 2.5" 12" FRONT COILOVERS

Part No.	Qty	Description
88406252	1	Front Coilovers 2.5" (Pair)

FOX 2.5" 12" FRONT COILOVERS

Part No.	Qty	Description
88406253	1	Rear Coilovers 2.5"

JSPEC1313 MAIN BOX KIT

Rear Track Bar Bracket

Part No.	Qty	Description
03321	1	Rear Track Bar Bracket
03322	1	Rear Track Bar Bracket Brace
163	1	Track Bar Bracket Sleeve
J129	1	Bolt pack - Rear Track Bar Bracket
	1	9/16"-12 x 3-1/2" bolt
	1	9/16"-12 prevailing torque nut
	2	9/16" SAE flat washer
	1	7/16"-14 x 1" hex bolt
	1	7/16" prevailing torque nut
	2	7/16" SAE flat washer
	3	3/8"-16 x 1" hex bolt
	3	3/8"-16 prevailing torque nut
	6	3/8" SAE flat washer
	1	1/4"-20 x 3/4" hex bolt
	1	1/4"-20 prevailing torque nut
	2	1/4" SAE flat washer
	1	Cable clamp

Front Adjustable Track Bar

Part No.	Qty	Description
03300	1	Track Bar
03309	1	Track Bar End
36274	1	1-1/4" Jam Nut
MB01B701740	2	Bushing

Sway Bar Quicker Disconnects

Part No.	Qty	Description
03315	1	Disconnect Retention Bracket - Drv
03316	1	Disconnect Retention Bracket - Pass
03010	1	Female
03011	1	Male
M00475-BK-01	2	Spherical Bushing
7050R	2	Grease Zerk Cap
7607	2	Grease Zerk

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36264	1	5/8 Jam nut
J127	1	Bolt Pack - Quicker Disconnects
	2	12mm-1.75 x 75mm bolt
	2	12mm-1.75 x 75mm prevailing torque nut
	4	12mm flat washer
	2	5/16"-18 x 3/4" bolt
	2	5/16"-18 prevailing torque nut
	4	5/16" SAE flat washer
03005	2	Quick Pin (2001CP)
M03212-BK-01	3	Offset Polyurethane Spacer
A1046	1	03013 Stud w/ nut
A1045	1	03017 Stud w/ nut
65	2	3/4" X 1.65" Sleeve

Bump Stop Extensions

Part No.	Qty	Description
03891	2	2" Rear Bump Spacer
03892	4	0.5" Rear Bump Spacer
J151	1	Bolt Pack - Rear Bump Ext.
	4	5/16"-18 x 1-1/4" bolt
	4	5/16"-18 x 1-3/4" bolt
	4	5/16"-18 x 2-1/4" bolt
	4	5/16" SAE washer
	4	5/16" flange lock nut

Rear Sway Bar Links

Part No.	Qty	Description
TRE502	4	Rod End with nut
03065	2	Connecting Rod
N12FJ	4	1/2" Jam Nut

JKS1616 J-FLEX FRONT UPPER CONTROL ARMS

Part No.	Qty	Description
A1061	1	J-Link Front Upper Control Arm - Driver
A1062	1	J-Link Front Upper Control Arm - Passenger

JKS1625 J-FLEX FRONT LOWER CONTROL ARMS

Part No.	Qty	Description
A1060	2	J-Flex Front Lower Control Arm

KIT CONTENTS

JKS1666 J-FLEX REAR UPPER CONTROL ARMS

Part No.	Qty	Description
A1063	2	J-Flex Rear Upper Control Arm

JKS1661 J-FLEX REAR LOWER CONTROL ARMS

Part No.	Qty	Description
A1017	2	J-Flex Rear Lower Control Arm

JKS2511 JEEP JL WRANGLER FRONT COILOVER CONVERSION

FRAME MOUNT

Part No.	Qty	Description
03346	1	Frame Mount - Drv
03347	1	Frame Mount - Pass
03350	2	Remote Reservoir Bracket
03368	1	Reinforcement Bracket - Drv
03369	1	Reinforcement Bracket - Pass
03352	2	Short Single Nut Tab - Drv
03353	2	Short Single Nut Tab - Pass
03354	1	Short Double Nut Tab
03355	2	Long Single Nut Tab
342701	1	Loctite
J136	1	Bolt Pack Frame Mount Hardware
	2	7/16"-14 x 1-1/4" Bolt
	4	7/16" Washer
	2	7/16"-14 Lock Nut
	4	3/8"-16 x 1-1/4" Bolt
	12	3/8" Washer
	4	3/8"-16 Lock Nut
	2	5/8"-11 x 4-1/2" Bolt
	4	5/8" Washer
	2	5/8"-11 Lock Nut
	2	1/4"-20 x 1" Bolt
	4	1/4" Washer
	2	1/4"-20 Lock Nut
	2	3/4" Hose Clips

AXLE MOUNT

Part No.	Qty	Description
03348	1	Axle Mount - Drv
03349	1	Axle Mount - Pass
03326	2	Alignment Cam
J137	1	Bolt Pack Axle Mount Hardware

8	1/2"-13 x 1-1/2" Bolt
8	1/2" Washer
2	3/8"-16 x 1-1/2" Bolt
4	3/8"- Washer
2	3/8"-16" Lock Nut
4	5/16"-18 x 1-1/4" Bolt
8	5/16" Washer
4	5/16"-18 Lock Nut

SWAY BAR & COILOVER MOUNTING

Part No.	Qty	Description
03378	1	Sway Bar Retaining Bracket
01399	1	Lanyard
A1046	2	Sway Bar Stud
M03212-BK-01	2	Offset Swaybar Link Spacer
03005	2	Quick Pin
J138	1	Bolt Pack Coilover Mounting Hardware
	2	1/2"-13 x 5-1/2" Bolt
	2	1/2"-13 x 2 3/4" Bolt
	8	1/2" Washer
	4	1/2"-13 Lock Nut
	1	1/4"-20 x 1" Bolt
	2	1/4" Washer
	1	1/4"-20 Lock Nut
J154	1	Bolt Pack JL Fender rivets
	6	1/4" Plastic Rivet

JKS2518 JEEP JL WRANGLER REAR COILOVER CONVERSION

FRAME MOUNT

Part No.	Qty	Description
03357	1	Frame Mount - Drv
03358	1	Frame Mount - Pass
03365	1	Filler Neck Tab
J143	1	Bolt Pack Frame Mount Hardware
	2	12mm-15 x 35mm Bolt
	2	12mm Washer
	4	10mm-1.5 x 30mm Bolt
	2	10mm-1.5 x 50mm Bolt
	6	10mm Washer
	2	7/16-14 x 1" Bolt
	4	7/16" Washer
	2	7/16"-14 Lock Nut

KIT CONTENTS

AXLE MOUNT

Part No.	Qty	Description
03359	1	Axle Mount - Drv
03360	1	Axle Mount - Pass
03366	1	Axle Mount Nut Tab - Drv
03367	1	Axle Mount Nut Tab - Pass
J144	1	Bolt Pack Axle Mount Hardware
	2	14mm-1.25 x 120mm Bolt
	4	14mm Washer
	2	14mm-1.25 Lock Nut
	4	7/16"-14 x 1" Bolt
	4	7/16" Washer
J155	1	Bolt Pack JL Fender rivets
	12	1/4" Plastic Rivet

SWAY BAR, BRAKE LINES & COILOVER MOUNTING

Part No.	Qty	Description
01975B	2	Sway Bar Drop
22544	1	Ext Brake Lines
J145	1	Bolt Pack Coilover Mounting Hardware
	4	1/2"-13 x 2.75" Bolt
	8	1/2" Washer
	4	1/2-13 Lock Nut
	4	10mm-1.50 x 50mm Bolt
	4	3/8" Washer
	1	1/4" Washer
	1	1/4"-20 Lock Nut

JKS2512 FRONT BUMP STOPS

Part No.	Qty	Description
01975B	2	Sway Bar Drop
22544	1	Ext Brake Lines
J147	1	Bolt Pack JL Front Bumpstop
	2	3/8"-16 x 4" Socket Head Bolt