

**SIMPLY SUPERIOR.**

**3.5" J-MAX SUSPENSION SYSTEM**

**2007-2018 JEEP JK WRANGLER  
2 & 4 DOOR MODELS**

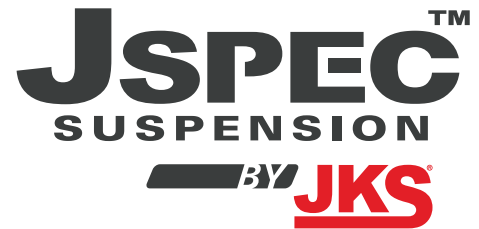
**JSPEC2355**

[www.jksmfg.com](http://www.jksmfg.com) | [jks@ridefox.com](mailto:jks@ridefox.com) | 517-278-1226

RV. 051920

## 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](http://560PLUS.COM) FOR MORE INFORMATION!**

## THANK YOU FOR CHOOSING JSPEC SUSPENSION

### TIRE FITMENT

**3.5" LIFT**

35x12.50 on 16x8 with 4.5" backspacing

### SPECIAL TOOLS REQUIRED

Torque Wrench

5/16", 9/32", 1/2" drill bits

4-1/2" angle grinder with cut off wheel, flap disc

Sawzall

### INSTALLATION TIME

Approximately 13-15 hours





## BEFORE YOU BEGIN

Rear coilover reservoir mounts not intended for use with factory rear bumper.

2012-18 models using the stock front driveshaft will require exhaust extension kit JKS8150.

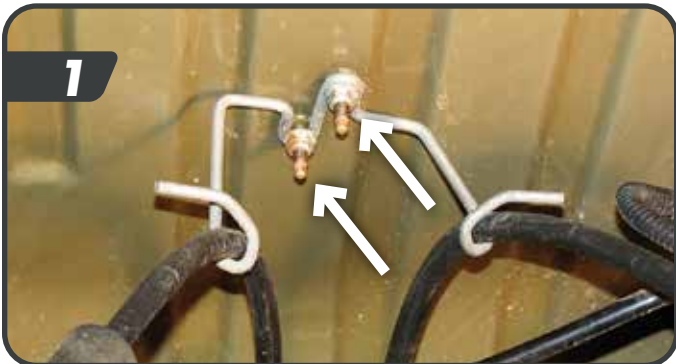
## 01. PRE-INSTALLATION

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

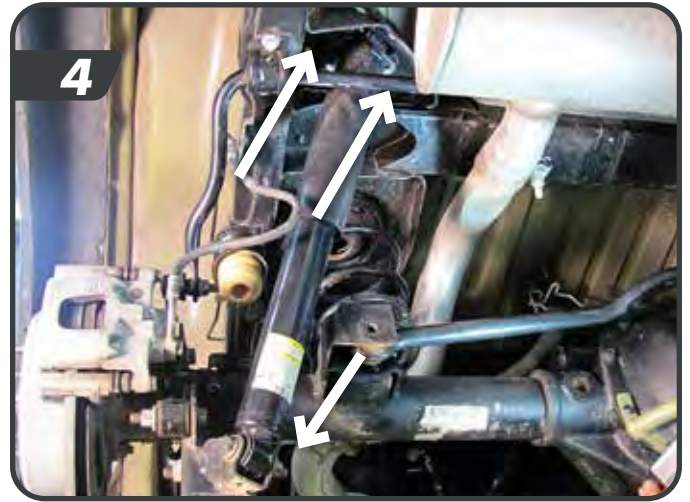
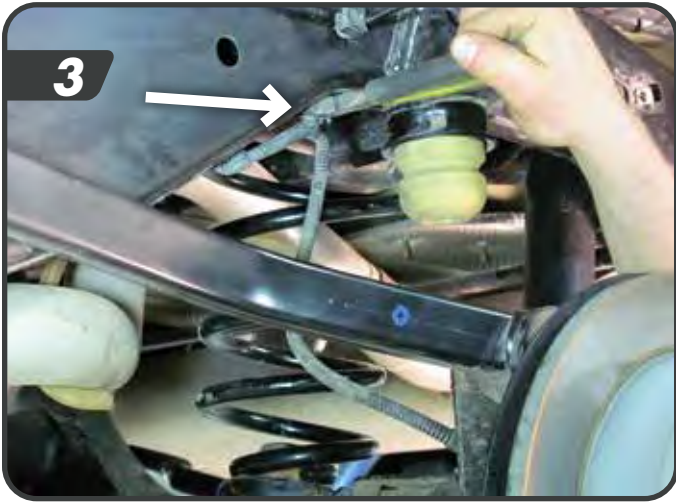
	Drv	Pass
Front		
Rear		

## 02. REAR DISASSEMBLY

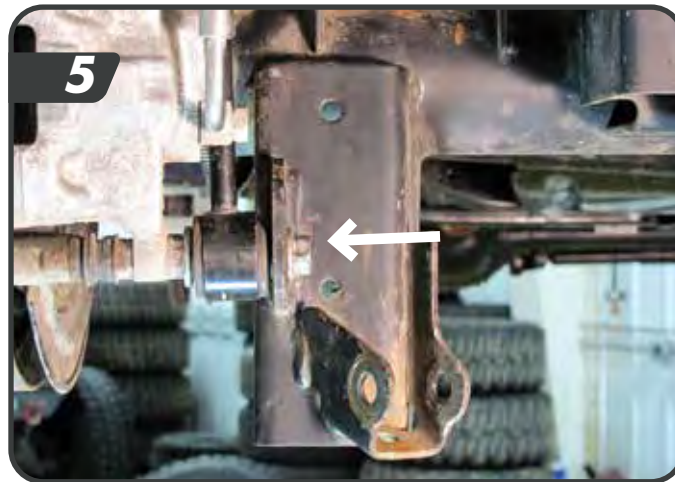
- a. Disconnect the track bar at the axle with the vehicle still on the ground using a 21mm socket. Save bolt and nut tab.
- b. Raise and support the vehicle with jack stands positioned in front of the lower suspension arm brackets. Remove the tires.
- c. Remove the parking brake cable bracket (10mm) [1]. Save nuts.
- d. Remove the bolts holding the brake lines to the frame (10mm) [2].



- e. Using some side cutters pry the wheel speed sensor wiring from the bottom of the frame to gain additional slack [3].
- f. Support the axle with a jack under the center of the differential and remove the shocks from the frame (16mm) and axle (18mm), save hardware [4].



- g. Rubicon models: Disconnect the locker wires from the differential.
- h. Remove the sway bar links from the axle and save hardware (18mm) [5].



- i. Lower the axle enough to remove the factory springs. Make sure there is adequate slack on all wires.

## 03. REAR INSTALLATION

### J-FLEX REAR CONTROL ARMS

**Perform replacement control arm installation one side at a time.**

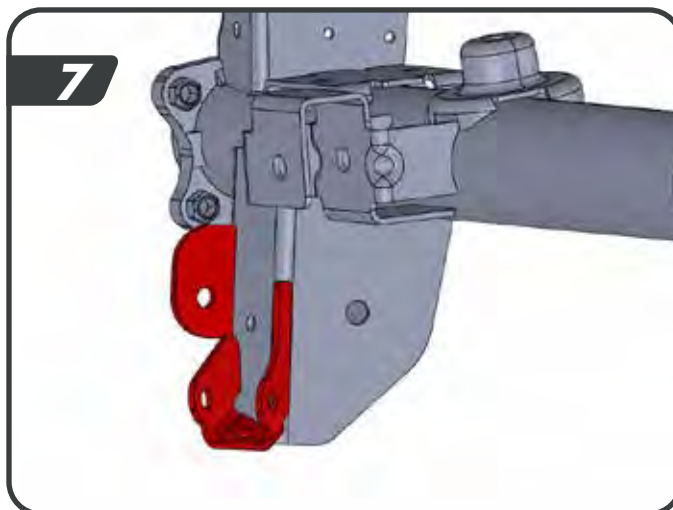
- a. Raise the axle housing back into position and support with a hydraulic jack.  
*HINT: The axle housing should be evenly supported and the suspension at normal ride height. Do not attempt removal or installation with the suspension extended, or the axle drooped, as this will place tension on suspension arm mounting hardware.*
- b. Remove the lower suspension arm bolt and nut from the axle housing bracket. Retain the original mounting hardware.
- c. Remove the bolt and flag nut from the chassis rail bracket. Retain the original mounting hardware.
- d. Remove the original lower suspension arm from the vehicle. [6]



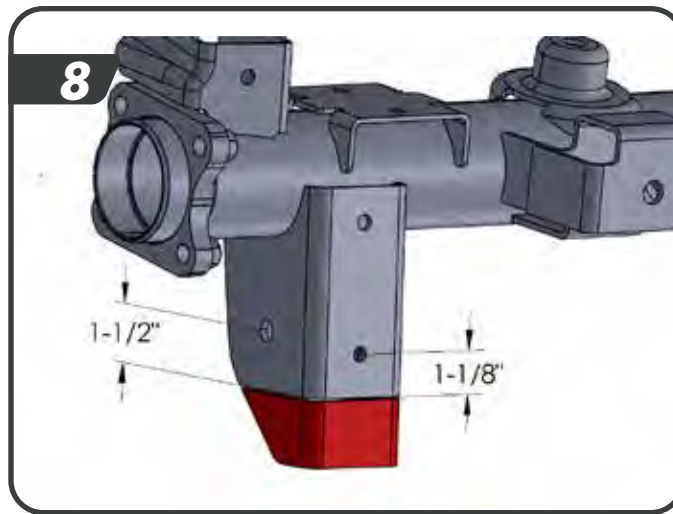
### REAR COILOVER AXLE BRACKET INSTALLATION

**Rear axle coilover mounts 03339, 03340 will require bolt pack J157**

- a. Perform these steps one side at a time while the control arm is removed. Using a cutoff wheel or plasma cutter remove the sway bar link and factory shock mount from the axle brackets [7].



- b. Measure 1.5" down from the center of the lower control arm mounting hole and make a cut perpendicular to the rear face of the mount [8].



c. Drill out the the 2 factory holes on the rear face of the mount using a 1/2" drill bit [9].



d. Place the JKS lower coilover mount over the factory bracket. Line the bracket up by temporarily installing the factory control arm bolt and line up the 2 rear holes. Use the provided 7/16" hardware to attach the bracket to the mount. The flange lock nuts can be placed on the bolts using a magnet from the top. Tighten hardware to to 70 ft lbs [11].



## J-FLEX REAR CONTROL ARMS (CONT.)

- e. 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-<sup>3</sup>/<sub>4</sub>"
    - Max. length is 21-<sup>1</sup>/<sub>2</sub>"
  - Set both control arms to the same length. Lengthening the lower arms will reduce pinion angle.
- f. Apply anti-seize lubricant to bolt threads of original mounting hardware.
- g. Mount the rubber bushing end of the control arm to the axle housing bracket. [12] Install the original mounting bolt and finger tighten the nut. DO NOT torque mounting hardware until instructed.



- h. 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. 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.
- i. Repeat installation steps on opposite side of vehicle, then continue on to the upper arms.
- j. Remove the upper suspension arm bolt and nut from the axle housing bracket. Retain the original mounting hardware.
- k. Remove the bolt and flag nut from the chassis rail bracket. Retain the original mounting hardware.
- l. Remove the original upper suspension arm from the vehicle. [13]



- m. 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 17-1/2"
    - Max. length is 19"
  - Set both control arms to the same length. Lengthening the upper arms will increase pinion angle.
- n. Apply anti-seize lubricant to bolt threads of original mounting hardware.
- o. **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. [14]



- p. 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.
- q. Mount the control arm to the frame bracket with the grease fitting down. Install the original mounting bolt and flag nut. Finger tighten the bolt.
- r. 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.



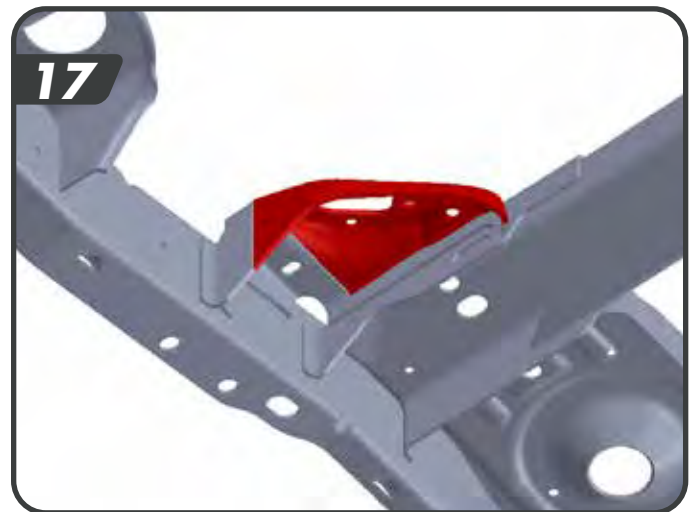
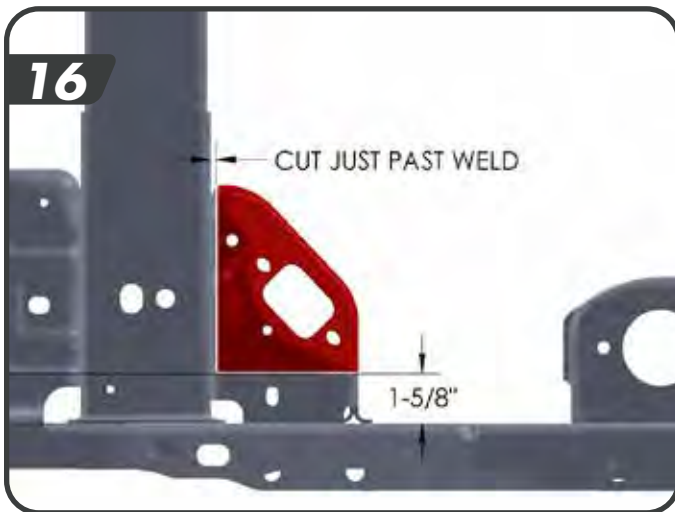
## REAR COILOVER FRAME BRACKET INSTALLATION

**Rear frame coilover mounts 03337, 03338 will require bolt pack J156 and (4) 1/4" Spacer washers (01499)**

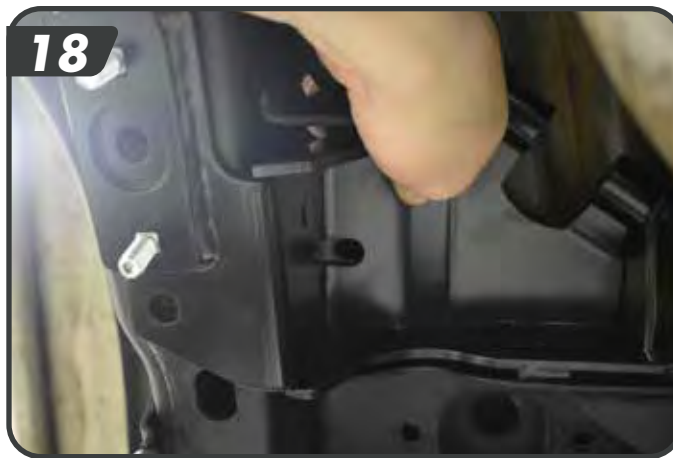
- Remove the muffler from the exhaust pipe and both rear hanger mounts from the frame.
- Remove the sway bar from the frame.
- Using a cut off wheel, cut the passenger side exhaust hanger from the frame rail, grind smooth, and paint the frame.



- Measure in 1-5/8" from the frame rail and make a cut line across the factory shock mount to the crossmember. To avoid a lot of grinding, the crossmember side of the shock mount can be cut just past the weld as shown [16].



- Following the cut marks, remove both upper shock mounts from the frame. Clean up any sharp edges with a grinder and paint the frame.
- Slide the carriage bolts into the JKS coilover frame mount so they face down to re-mount the sway bar later in the installation [18].
- Place the coilover mount on the frame and loosely install the 7/16" x 1" bolt from the bottom up to attach the bracket to the hole in the remaining part of the factory frame shock mount [19].

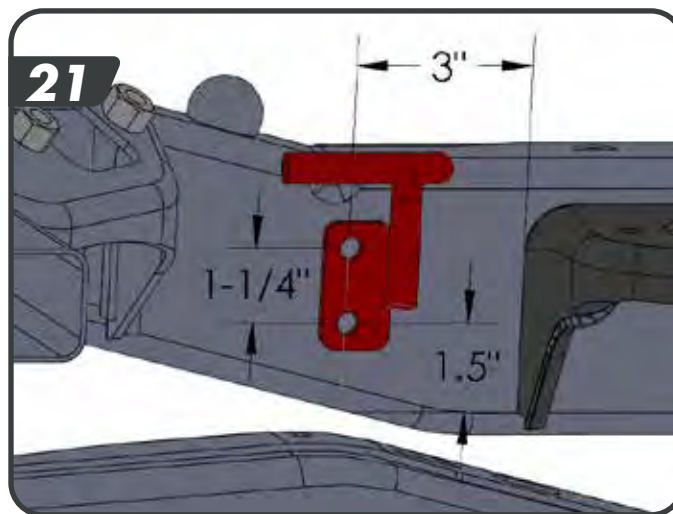


- h. Install the remaining 7/16" x 1-1/4" hardware in the 4 remaining mounting holes. Install the 1/4" spacer washers at two locations per bracket. One is between the framerrail and bracket, the other is located at the innermost crossmember mount and bracket as shown, leave loose [20].
- i. Install the supplied 10mm hardware through the coilover mount at the factory sway bar mount location.
- j. Once all hardware and spacers have been loosely installed, torque all 7/16" hardware to 50 ft-lbs. Torque 10mm hardware to 33 ft lbs.
- k. Attach the sway bar to the carriage bolts with the provided 3/8" nuts and washers. Torque to 25 ft-lbs.



## REAR EXHAUST HANGER MOUNTING

- a. Measure forward on the inside of the frame rail from the factory body mount 3" and make a vertical line. Measure up from the bottom of the frame 1.5" along that line and make a mark. Using the exhaust hanger as a templete, line up the lower hole of the bracket at the first mark and make a second mark for the upper hole. Drill these holes at these locations to 9/32" (.281"). Using the supplied 5/16" self tapping bolts, tap the holes but remove for bracket installation once the coilovers have been installed.

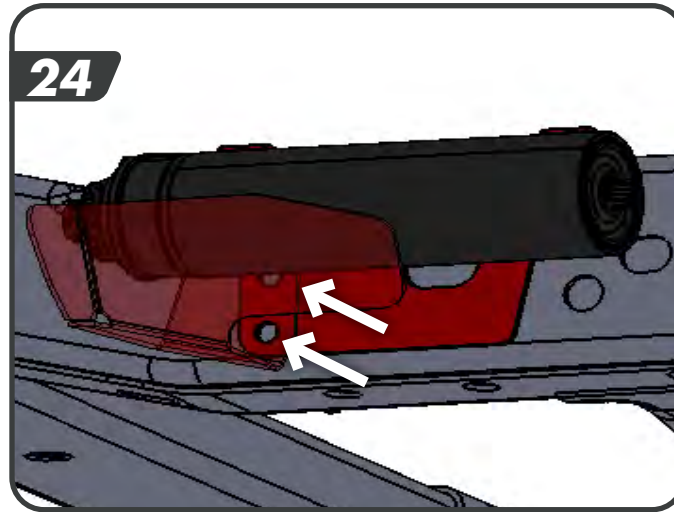


## REAR COILOVER INSTALLATION

- a. Carefully slide the reservoir between the frame and body and attach the coilover to the upper mount with the 1/2" x 5-1/2" bolt. The bolt installs from the center of the vehicle towards the outside, the misalignment spacers may need to be compressed slightly to get them into the mount [22].
- b. Raise the axle until the the lower eye lines up with the mount and attach the coilover using the 1/2"x 3" bolt. Torque upper and lower hardware to 80 ft-lbs [23].



- c. Kit is intended to be installed with aftermarket rear bumper and uses the mounting holes where the factory bumper side mounts used to mount to the frame.
- d. Place the reservoir mount behind the reservoir and the roost shield in front of the reservoir. Loosely attach these to the frame with the supplied 10mm bolts and washers [24]



## SWAY BAR LINKS/REAR BUMP STOPS

**Rear Bump stop spacers 03574, 03575 will require bolt pack J106**

- e. Install the rear bump stop spacers on the axle with the 2" tall orientation with the offset in material forward. Depending on the bump stop needs, these can be flipped to provide 3" of bump stop extension. Fasten the bump stop spacer to the axle with the 5/16" x 7/8" bolts, nuts and washers. Torque bolts to 20 ft-lbs. (1/2") [25]



- f. Attach the sway bar links to the upper hole in the axle bracket using the factory hardware.
- g. Re-install the muffler to the exhaust pipe driver side hanger. Install the supplier passenger side exhaust hanger mount using the provided 5/16" self tapping bolts to the frame used earlier in the installation.

## REAR BRAKE LINES & TRACK BAR BRACKET

**Rear track bar bracket 03179 and riser brace 03217 will require bolt pack J103**

**Brake line brackets 03172 and 03173 will require bolt pack 768**

- h. Position the rear track bar bracket on the axle above the factory bracket so radius edges rest on the axle tube and the rear track bar mount hole aligns with the hole in the bracket.
- i. Install the riser brace into the factory pocket using the factory track bar bolt and nut tab, do not tighten.
- j. Install (2) 3/8" x 1" bolts and washers from the inside of the track bar bracket and through the riser brace. Fasten with provided nuts and washers.
- k. Install the u-bolt, washers, and nylock nuts and fasten the relocation bracket to the axle tube.
- l. Tighten the u-bolt hardware to 65 ft-lbs; the original track bar bolt to 125 ft-lbs; and the 3/8" hardware to 40 ft-lbs [27]. The track bar will be re-installed with the vehicle on the ground.

*Note: The unused hole on the track bar bracket is only used when the JKS Rear Trackbar brace OGS169 has been installed.*

- m. Attach the brake line drop brackets to the brake line so the brake line tab fits in the drop bracket slot using the provided 1/4" hardware.
- n. Attach the brackets to the frame using the factory hardware [28]. Re-install only the lower clip for the ABS wire.
- o. Rubicon models: Reattach the locker wire harness to the differential.
- p. Reattach the parking brake cable bracket to the floor using the factory nuts.
- q. Mount the tires and lower the vehicle to the ground.
- r. Install the rear track bar into the relocation bracket with the provide 9/16" x 3" bolt, nut, and washers.

*Tip: Use an assistant to push on the body of the vehicle to help align the track bar in the bracket.*

- s. Torque the track bar bolts to 110 ft-lbs.



## 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 (10mm). 2011-18 models: Disconnect the brakelines from the axle below the coil spring. Save hardware.
- e. Rubicon models: Disconnect the front locker wires from the differential.
- f. Disconnect the sway bar links from the axle (18mm) and sway bar. Discard links and hardware. [29]
- g. Remove the 4 bolts mounting the front driveshaft to the pinion flange (15mm). This is done to ensure the driveshaft does not bind when installing the new springs. [30]



- h. Disconnect the steering drag link from the pitman arm to ensure it doesn't bind when installing the new coil springs. Remove the tie rod end nut and dislodge the tie rod end from the pitman arm. Save nut. [31]



- i. Support the front axle with a hydraulic jack. Remove the front shocks from the vehicle using a 16mm wrench for the top and 18mm on the bottom. Save lower hardware.
- j. 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 clears the pinion flange.

## 05. FRONT INSTALLATION

### J-FLEX FRONT CONTROL ARMS

**Perform replacement control arm installation one side at a time.**

- a. 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.*
- b. Remove the lower suspension arm bolt and nut from the axle housing bracket. Retain the original mounting hardware.
- c. Remove the bolt and nut from the chassis rail bracket. Retain the original mounting hardware.
- d. Remove the original lower suspension arm from the vehicle. [32]



- e. 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 22-5/8"
    - Max. length is 24 3/8"
  - **Set both control arms to the same length.** Lengthening the arms will increase caster and reduce pinion angle.
- f. Apply anti-seize lubricant to bolt threads of original mounting hardware.
- g. **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.
- h. 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. [33]

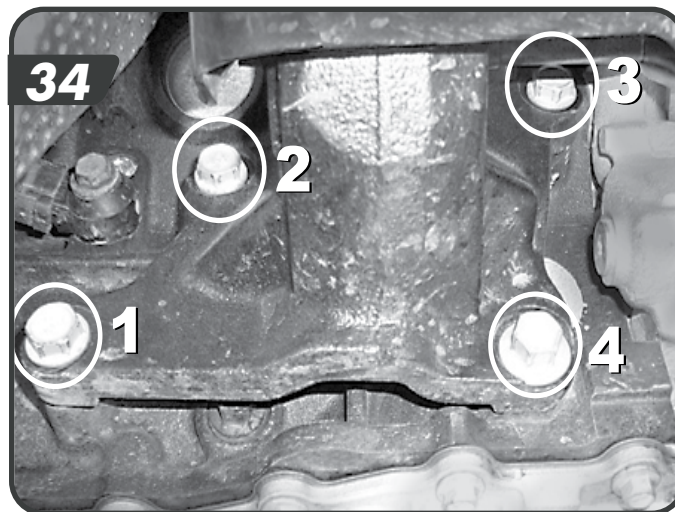




- i. Mount the control arm to the frame rail bracket so the grease fitting is up on the flex eye. Install the original mounting bolt and nut. Finger tighten the bolt.

**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, (2) move axle housing into position with a heavy-duty ratchet strap, or (3) temporarily disconnect track bar until mounting holes align.

- j. Repeat installation steps on opposite side of vehicle, then continue on to upper arms.
- k. Remove the electrical clip from the suspension arm clevis bracket if equipped.
- l. Remove the upper suspension arm nut and bolt from the axle housing bracket. Retain the original mounting hardware.
- m. Remove the upper suspension arm nut and bolt from the chassis rail bracket. Retain original mounting hardware. See specific year notes below.
- n. 2007-2011 models with 3.8L engine: To remove the passenger side bolt from the chassis, it will be necessary to raise the engine according to the followign instructions:
  - Position a second hydraulic jack beneath mounting flange of oil pan. support engine using a suitable block of wood (2x4 or larger) to distribute weight across oil pan bolts. DO NOT attempt to lift engine by engine oil pan.
  - Carefully raise the hydraulic jack just enough to remove the weight of the engine from the engine mounts. Locate the passenger side engine mount bracket and remove the four (4) bolts that secure it to the engine block. [34]



- Slowly raise the hydraulic jack approximately 1-2 inches until the passenger side control arm bolt clears the interfering exhaust pipe.
- Continue following instructions with engine in raised position and begin control arm install.
- o. 2012+ models with 3.6L engines: To access the frame bolts, it will be necessary to remove the heat shields from both the upper control arm frame mounts.

- Remove the 2 bolts per heat shield, one on top and one on the bottom using a 10mm ratchet wrench. [35]



- p. Remove the original upper suspension arm from the vehicle.
- q. Set the lower 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 18-3/4"
    - Max. length is 20-1/4"
  - Set both control arms to the same length. Lengthening the arms will reduce caster and increase pinion angle.
- 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. [36]



- 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 inboard side. Bolt threads should point outboard.
- v. 2007-2011 models with 3.8L engine: Passenger side bolt must be installed with engine in the raised position to provide sufficient clearance around exhaust pipe.
  - With the control arm positioned in the chassis bracket, insert the original bolt into the mounting hole.
  - Carefully lower the hydraulic jack until the passenger side engine mount support bracket is realigned with the engine block.

- Install the four (4) original bolts into the corresponding mounting holes and tighten to 45 ft-lbs using a torque wrench.
- Lower the hydraulic jack and remove block of wood from beneath engine oil pan.
- w. Install the original mounting nut and finger tighten. **DO NOT** torque mounting hardware until instructed.
- x. Install the original mounting bolt from inboard side. **Bolt threads should point outboard.**
- y. Once both upper control arms have been installed, torque the frame mount hardware to 75 ft-lbs. (Upper control arms only at this time)
- z. 2012+ models: re-install the heat shields that were removed from the control arm mounts

## BUMP STOP INSTALLATION

***This conversion requires 1-¼" of additional bump stop. Directions for the recommended JKS1112 bump stop kit are included here for convenience. If installing Fox hydraulic bump stops, refer to those instructions.***

- aa. Make a mark in the center of the lower coil spring mound pad. Drill a 27/64" hole at the mark; if this drill is unavailable use a 7/16". [37]
- ab. Thread the hole using the provided ½" tap.

*Tip: Use a 12 point 5/16" (8mm) socket that fits the head of the tap with a ratchet to cut the threads.*



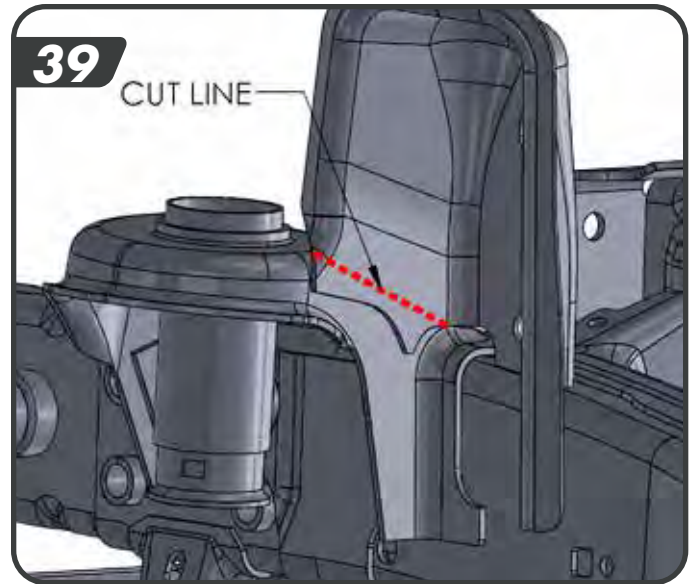
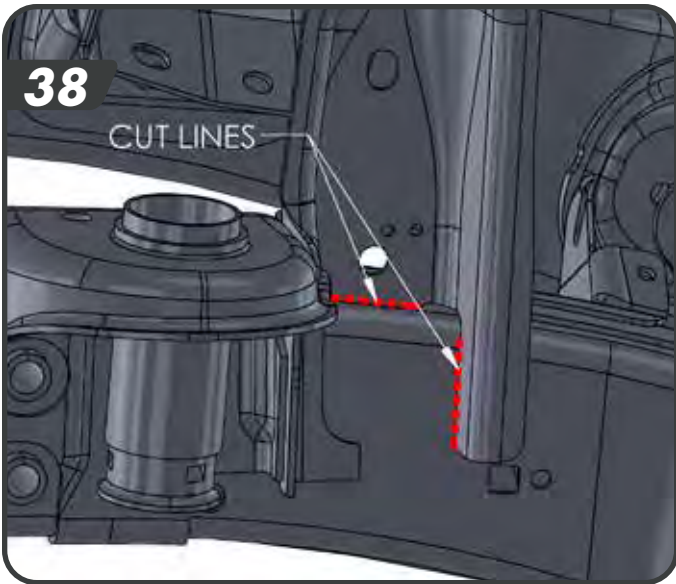
- ac. Attach the bump stop extension to the axle through the hole that was made earlier using the provided ½" x 1-½" bolt and split washer. Torque to 40 ft-lbs.
- ad. Repeat the bump stop installation on the other side of the vehicle.

## SHOCK MOUNT & INNER WHEEL WELL MODIFICATION

- ae. Remove the inner fender liner by removing the screws around the perimeter of the fender.

### REMOVE FRAME SHOCK MOUNT

- af. Using a small (3") cut off wheel (recommended) remove the shock mount from the vehicle. Clean up the cut areas with a flap disc grinder. Paint exposed metal. [38,39]



ag. Repeat the this procedure on the opposite side.

## DRIVER SIDE WHEEL WELL TRIMMING

**The inner fender plastic tray must be cut to provide coilover mount clearance. This is done to fit the longest shock possible. A 3" cutoff wheel or high speed saw is recommended.**

ah. On the drivers side, trim the area shown above the coil bucket on the drivers side for bolt clearance. [40]



ai. The bottom of the plastic tray must be trimmed to provide clearance for the coilover bracket. Test the bracket fitment by temporarily holding up the main coil-over mount to the frame and lining up the OE brake line mounting hole to the lower hole in the bracket. Clearance as necessary. [41,42]



## PASSENGER SIDE WHEEL WELL TRIMMING

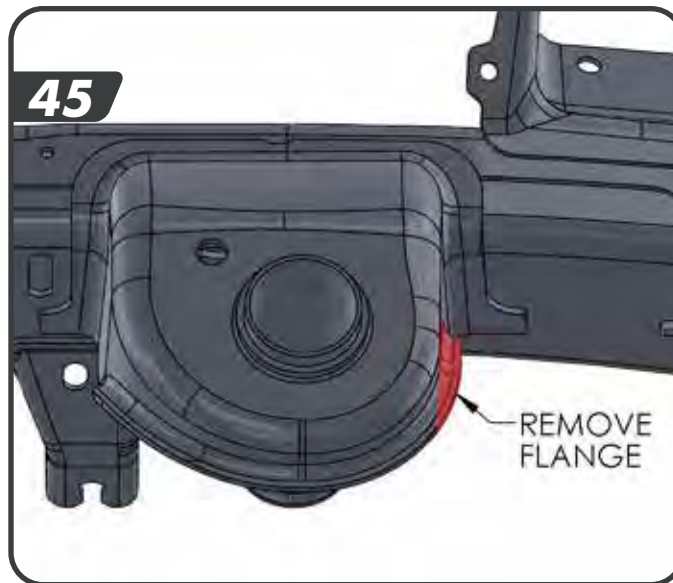
aj. On the passengers side, trim the area shown below the battery tray. Once again test fit the bracket for clearance and trim as necessary.



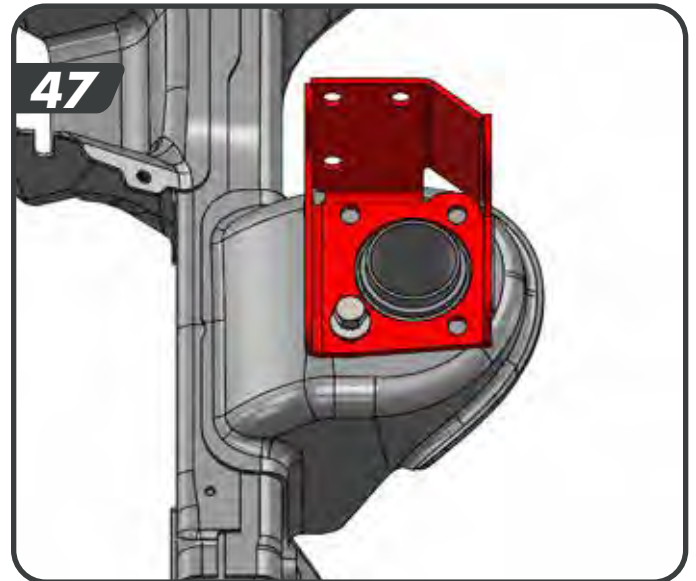
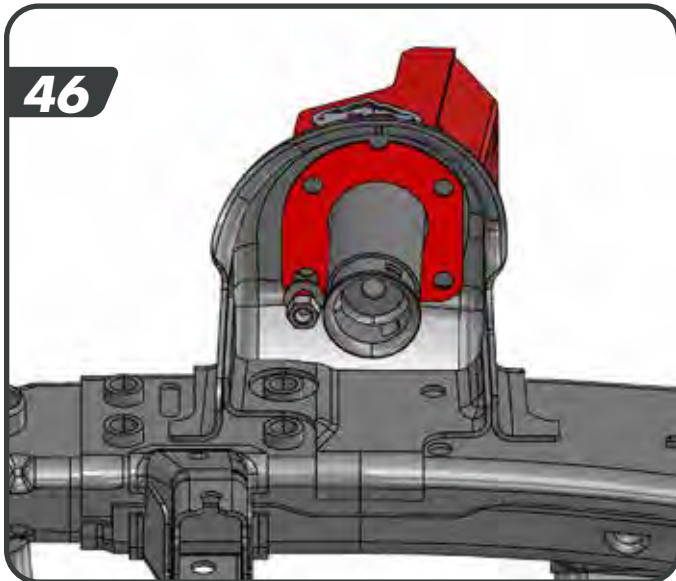
## UPPER COIL-OVER MOUNT INSTALLATION

**All upper coil-over mount hardware is located in bolt pack J116**

ak. Remove the material shown from the upper coil seat for coil-over clearance with a cutoff wheel or grinder.



- al. Place the upper mount brace on top of the coil spring mount. Place the drill template under the coil spring mount with the notch facing out and the large hole of the template lined up with the hole in the frame. Loosely fasten with the provided  $\frac{1}{2}$ " x  $1\frac{1}{4}$ " bolt, nut, and washers.



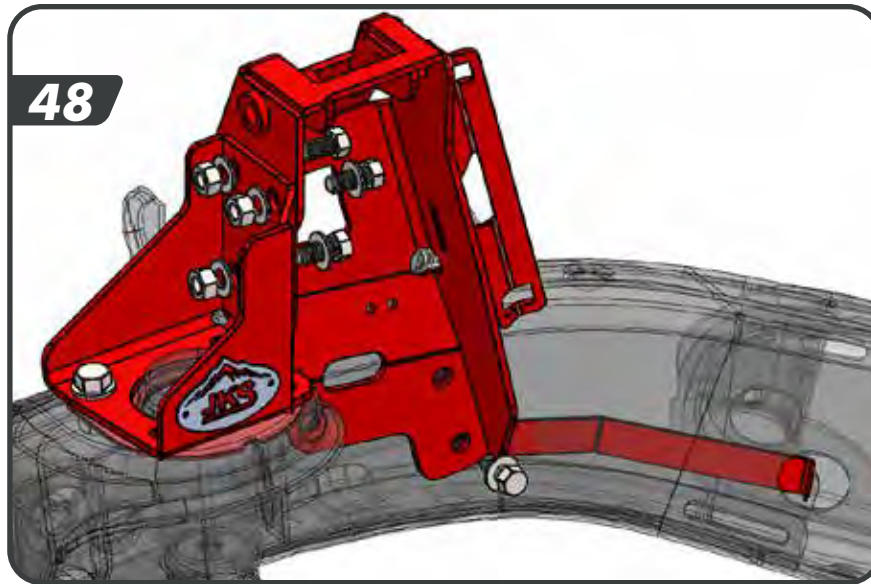
am. Remove the factory brake line U-Nuts from the frame.

an. Drill out the factory brake line hole mounting hole using a  $\frac{1}{2}$ " drill

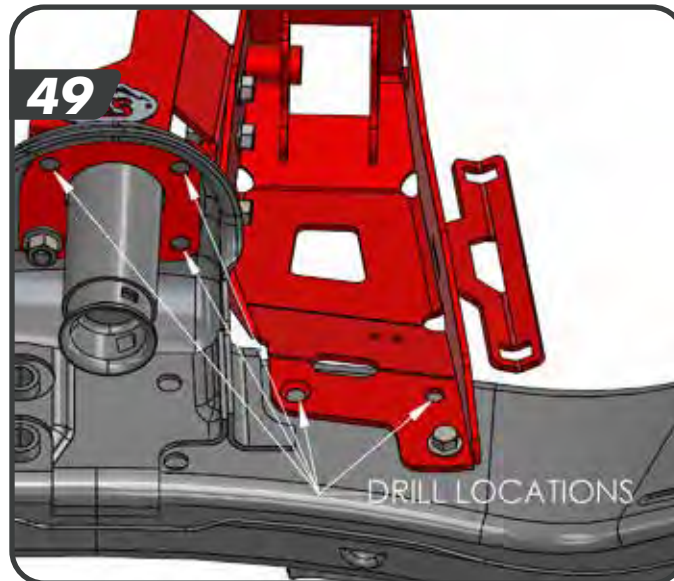
ao. Place the main coilover mount against the frame and brace. Loosely fasten the brace to the upper mount with the provided  $\frac{7}{16}$ " x 1" hardware.

**Note - Verify clearance to plastic inner fender trimmed earlier and remove any interference as necessary.**

ap. Line up the factory brake line mounting hole to the lower hole in the bracket. Attach using the  $\frac{7}{16}$ " bolt and nut tab. The nut tab is accessed through the large hole in the frame towards the rear of the wheel well.



- aq. Once all hardware has been installed, tighten the hardware to locate the rest of the mounting holes.
- ar. Mark the 2 holes to be drilled through the side of the frame and the 3 holes to be drilled at the coil spring mount.

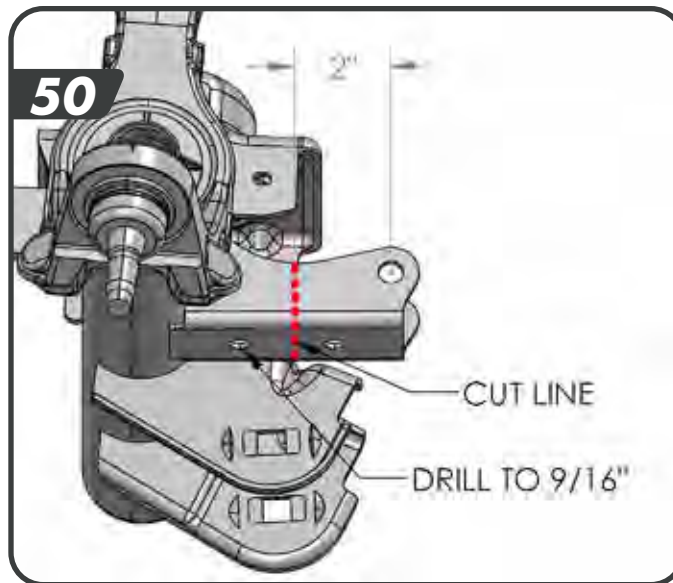


- as. Remove the mounts and drill the holes to 1/2".
- at. Re-install the mount and brace, leaving out the drill template. The 7/16" flat head bolt will be installed in the countersunk hole on the main bracket.
- au. Clip the ABS wire to the back of the 2 holes in the coil-over mount.
- av. Re-from the brake hard lines so the brake line can be fastened to the frame just below the coil-over mount. Drill a 7/32" hole at this location and fasten with the provided 1/4" self tapping bolt.
- aw. Torque 7/16" hardware to 50 ft-lbs (9 bolts).
- ax. Torque 1/2" hardware to 80 ft-lbs (1 bolt).
- ay. Repeat the procedure on the opposite side.

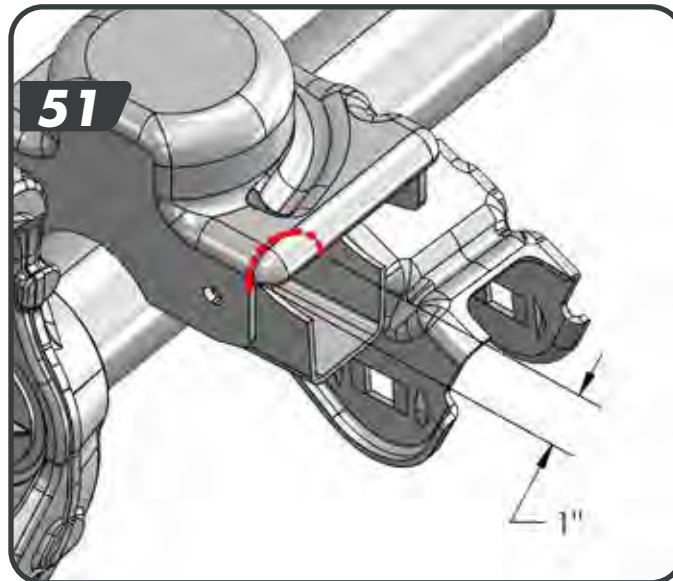
## LOWER COIL-OVER MOUNT INSTALLATION

**All upper coil-over mount hardware is located in bolt pack J117**

- az. Measure in 2" from the center of the shock mount and make a vertical cut line. Cut off the shock mount at this location. A sawzall is recommended.



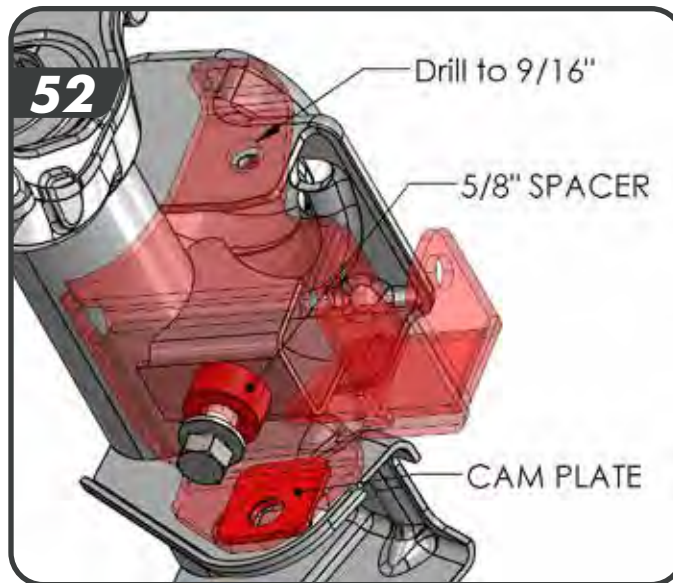
- ba. Drill out the remaining hole in the shock mount to 9/16"
- bb. Remove the material shown from the lower coil seat for coil-over clearance.



- bc. Remove the control arm nut. Place the control arm mount cam plate in between the cam stops on the axle mount.  
**Note: The axle bracket kit is not compactible with an off center control arm bolt from an alignment bolt or cam washer. Longer or adjustable replacement control arms will be required to adjust the caster on the vehicle.**

- bd. Place the axle mount in place and fasten with the 1/2" x 1-3/4" bolt up through the bracket, 5/8" spacer, and shock mount. Also ensure the control arm bolt lines up with the hole in the bracket.





- be. Mark the position of the hole in the side of the coil mount. Remove the bracket and drill the hole to 9/16".
- bf. Reinstall the bracket to the axle. Use the 1/2" x 1-1/4" bolt through the side. Tighten the two 1/2" bolts to 80 ft lbs. Tighten the factory control arm bolt to 117 ft-lbs.
- bg. Install the brake line clip on the brake line and fasten to the bracket with the 1/4" hardware so the line wraps close to the spring bucket and will clear the coil-over once installed.
- bh. Repeat the procedure on the opposite side.

## COIL-OVER INSTALLATION

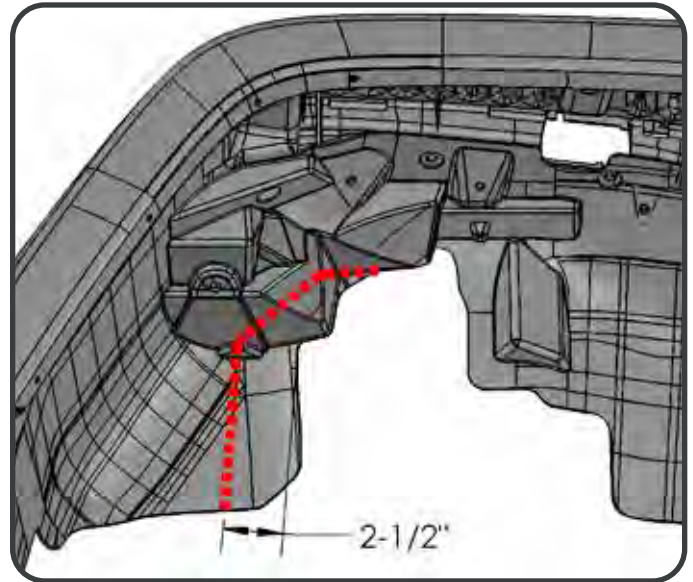
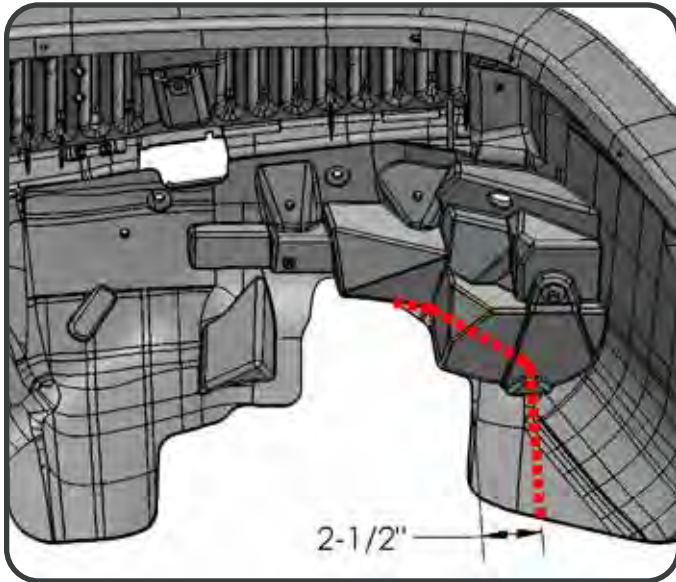
- bi. With the upper and lower brackets installed on both sides, install the coilovers to the upper mount using the 1/2" x 4-1/2" bolt from the rear to front.
- Tip: The coilover misalignment spacers may need to be compressed with a pair of channel lock pliers to fit into the bracket.**
- bj. Mount the 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).



- bk. Raise the axle to mount the coilover into the lower mount. Fasten with the 1/2" x 2-3/4" bolt.
- bl. 2012-17 models, install the exhaust extensions using the instructions provided in the JKS8150 kit, sold separately.
- bm. Rubicon models: Reattach the locker wire harness to the differential.
- bn. Reattach the front driveshaft to the axle flange. Use Loctite on the bolts. Torque to 81 ft-lbs

## INNER FENDER TRIMMING

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



- b. Fasten the inner fenders to the body with the original hardware.

## FRONT BUMP STOP AND COIL SPRING INSTALLATION

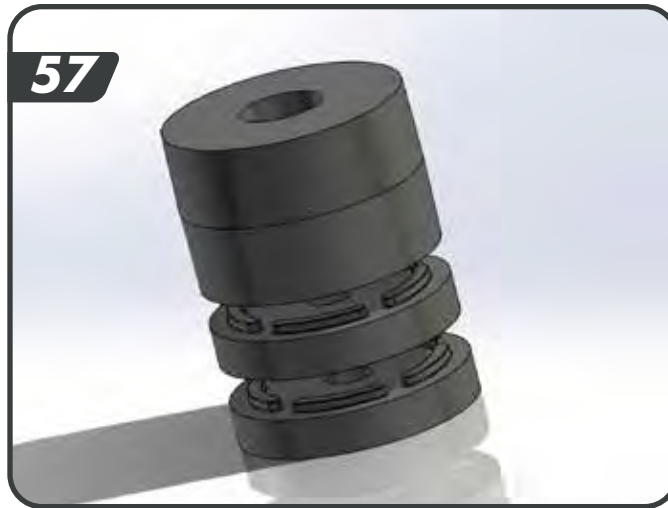
**Front bump stops 03178 will require bolt pack J107**

- c. Make a mark in the center of the lower coil spring mound pad. Drill a  $5/16$ " hole at the mark. Using the provided  $3/8$ " x 1" self tapping bolt ( $9/16$ " ), tap a hole and remove the bolt. This hole will be used to attached the bump stop extension when the coils are installed. [24]



- d. Place the provided bump stop extension inside one of the JSPEC front coil springs. Note: Taller springs are for the front. Install the front coil springs with the bump stop extension. Make sure the spring is seated properly in the axle mount.

*Note: This kit includes an adjustable front bump stop system that allows for bump stop height to be tuned specifically for your wheel and tire combination. The system consists of one bump stop block and two  $1/2$ " bump stop blocks. [25] The 2" configuration is a good starting point for the recommended tire sizes*



- e. Attach the bump stop extension to the axle through the hole that was made earlier using the correct length 3/8" bolt and washer from bolt pack 150. Torque to approximately 25 ft-lbs.
- f. Repeat the spring and bump stop installation on the other side of the vehicle.
- g. Install the new shocks with the factory lower hardware and the new upper bushings and hardware. Torque the lower bolt to 60 ft-lbs and the upper nut until the bushings begin to swell.

## QUICKER DISCONNECT INSTALLATION

### NON-RUBICON MODELS

- h. Remove the nut and mount the longer tapered mounting posts on the outboard side of the sway bar ensuring the click pin holes are parallel with the ground. Slide the polyurethane spacer on the pin and up against the sway bar. Apply Loctite to the tip of the mounting post and fasten with the 1/2" nylock nut, tighten to 65 ft-lbs. [58]



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

- i. Remove the nut and install the lower mounting posts into the factory sway bar link holes so they are pointing inboard and the pin holes are parallel to the ground. The passenger side post is squared off to provide clearance between the post and the OE track bar bracket. [59]



*Note: In some cases a rotary grinder may be necessary to slightly open up the sway bar hole to clear the 1/2" bolt. This ensures a tight fit.*

- j. Apply Loctite to the tip of the mounting post and fasten with the 1/2" nylock nut and tighten to 65 ft-lbs.
- k. Adjust the length of the quicker disconnects to 9" center to center. This is a starting point and can be fine tuned once the vehicle is on the ground.
- l. Slide the upper and lower ends of the disconnects over the mounting posts. Insert click pins to secure. [60]

## RUBICON MODELS

**Rubicon models have a factory electronic disconnect system. Follow these steps to solid mount your sway bar links.**

**Fixed sway bar link mounting will require bolt pack J105**

- m. Adjust the length of the quicker disconnects to 9" center to center. This is a starting point and can be fine tuned once the vehicle is on the ground.
- n. Locate the 3/4" x 1-1/4" sleeve and insert them into the lower bushing of the sway bar link. Insert the longer sleeves into the upper bushing. Slide the polyurethane spacer onto the upper sleeve so it will mount to the swaybar.
- o. Using the 1/2" x 2-1/4" bolts, nuts, and washers fasten the links to the axle.
- p. Using the 1/2" x 3" hardware, fasten the sway bar links to the sway bar.

*Note: It may be necessary to slightly enlarge the sway bar hole using a rotary grinder or file to clear the 1/2" bolt.*

- q. Torque 1/2" hardware to 65 ft-lbs.



## FRONT BRAKE LINE BRACKETS

*Brake line brackets 03174 and 03175 require bolt pack 768*

- r. The front brake line brackets have a tab that inserts into the OE frame slot with the bracket towards the rear of the slot. Attach the drop brackets to the brake line so the brake line tab fits into the drop bracket slot using the provided 1/4" hardware. [61]



- s. Attach the brackets to the frame as shown using the factory hardware. You will need to slightly reform the hard lines.
- t. Verify the newly formed hard lines are not rubbing on the frame or shock mount.
- u. Slightly reform the 90 degree bend in the OE brake line down 10-15 degrees by hand to provide additional slack if necessary.
- v. 2011-18 models: Reattach the brakelines below the coil spring mount with the factory bolt.

## FRONT ADJUSTABLE TRACK BAR

- w. Adjust the length of the track bar to 32-<sup>3</sup>/<sub>4</sub>". This is a starting point, final adjustment can be made once the vehicle is on the ground.
- x. Insert the non adjustable end of the track bar into the frame mount with the clearance bend forward. Use factory hardware.

## 06. FINAL FRONT INSTALLATION STEPS

- a. 2012-18 models, install the exhaust extensions using the instructions provided in the JKS8150 kit, sold separately.
- b. Rubicon models: Reattach the locker wire harness to the differential.
- c. Reattach the front driveshaft to the axle flange. Use Loctite on the bolts. Torque to 81 ft-lbs.
- d. Install the wheels and torque to the lug nuts to 125 ft-lbs.
- e. Lower the vehicle to the ground and bounce the vehicle to settle the suspension. Torque the front lower control arm bolts at the axle and at the frame to 125 ft-lbs. Torque the front upper control arm bolts at the axle to 75 ft-lbs. Torque the rear lower control arm and upper control arm hardware to 125 ft-lbs.
- f. Tighten the control arm jam nuts using JKS1696 or equivalent.
- g. Grease the flex end bushings.
- h. 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 and axle track bar bolts to 125 ft-lbs.

## 07. MAINTENANCE

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

## 08. 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.



# KIT CONTENTS

## JSPEC2355 MAIN BOX KIT

### Rear Track Bar Bracket

Part No.	Qty	Description
03179	1	Rear track bar bracket
03217	1	Riser Brace Tab
123250500R	1	1/2" x 3-1/4" x 5" U-bolt
J103	1	Bolt pack - Rear track bar bracket
	2	1/2" nylock nut
	2	1/2" SAE washer
	2	3/8" x 1" bolt
	4	3/8" SAE washer
	2	3/8" prevailing torque nut
	1	9/16" x 3" bolt
	1	9/16"-12 lock nut
	2	9/16" SAE washer

### Brake Line Brackets

Part No.	Qty	Description
03174	1	Front brake line bracket - Drv
03175	1	Front brake line bracket - Pass
03172	1	Rear brake line bracket - Drv
03173	1	Rear brakeline bracket - Pass
768	2	Bolt Pack - Front brake line brackets
	2	1/4"-20 x 3/4" bolt
	2	1/4"-20 nylock nut
	4	1/4" USS washer

### Front Adjustable Track Bar

Part No.	Qty	Description
03044	1	Trackbar
03045	1	Adjusting Shaft Assembly
36274	1	1-1/4" Jam Nut
MB01B701740	2	Bushing

## Quicker Sway Bar Disconnects

Part No.	Qty	Description
03005	2	Quick Pin
M03212-BK-01	2	Offset Polyurethane Spacer
A1046	2	Stainless Steel Post w/ Nut - Upper
A1044	1	Stainless Steel Post w/ Nut - Pass Lower
A1045	1	Stainless Steel Post w/ Nut - Drv Lower
03010	2	Sway Bar Link - Female
03011	2	Sway Bar Link - Male
M00475-BK-01	4	Spherical Bushing
7050R	4	Grease Zerk Cap
7607	4	Grease Zerk
36264	2	5/8" Jam Nut

## Bump Stop Extensions

Part No.	Qty	Description
3296-STN	2	2" Front bump stop spacer
3596	4	0.5" Front bump stop spacer
J150	1	Bolt Pack - Front bump stops
	2	3/8"-16 x 2-1/2" bolt
	2	3/8"-16 x 3" bolt
	2	3/8"-16 x 3-1/2" bolt
	2	3/8" USS washer
	2	3/8" flange lock nut
32425	1	3/8" x 1" self-tapping bolt
03574	1	Drv Rear bump stop spacer
03575	1	Pass Rear bump stop spacer
J106	1	Bolt Pack - Rear bump stops
	4	5/16" x 3/4" bolt
	4	5/16" prevailing torque nut
	8	5/16" SAE washer

## Rubicon Fixed Mount Hardware

Part No.	Qty	Description
66	2	3/4" X 1.65" Sleeve
144	2	3/4" x 1.25" Sleeve
J105	1	Bolt Pack - Fixed Links
	2	1/2"-13 x 3" Bolt
	2	1/2"-13 x 2-1/4" Bolt
	4	1/2" Washer
	4	12mm Flat Washer
	2	1/2" Lock Nut



**J-FLEX CONTROL ARMS**

Part No.	Qty	Description
A1018	2	J-Flex Front Lower Control Arm
A1016	2	J-Flex Front Upper Control Arm
A1019	2	J-Flex Rear Upper Control Arm
A1017	2	J-Flex Rear Lower Control Arm

**JKS2510 FRONT COILOVER MOUNT BOX KIT**

Part No.	Qty	Description
03271	1	Axle Bracket - Drv
03272	1	Axle Bracket - Pass
A289	1	Coilover Mount Brace -Drv
A290	1	Coilover Mount Brace - Pass
69	1	3/4" x 1-3/8" Sleeve
03275	1	Coilover Frame Mount - Drv
03276	1	Coilover Frame Mount - Pass
03277	1	Upper Mount Nut Tab - Drv
03278	1	Upper Mount Nut Tab - Pass
01457	2	Axle Mount Spacer
01394	2	LCA Cam Plate
03279	1	Drill Template
J116	1	<b>Bolt Pack Upper Mount Hardware</b>
	16	7/16"-14 x 1" bolt
	2	7/16"-14 x 1-1/4" flat socket head bolt
	28	7/16" SAE flat washer
	12	7/16"-14 prevailing torque nut
	2	1/2"-13 x 1-1/4" bolt
	2	1/2"-13 x 4-1/2" bolt
	4	1/2"-13 prevailing torque nut
	8	1/2"SAE flat washer
	2	1/4"-20 x 3/4" self tapping bolt
J117	1	<b>Bolt Pack Lower Mount Hardware</b>
	2	1/4"-20 x 3/4" bolt
	4	1/4" SAE flat washer
	2	1/4" prevailing torque nut
	2	1/2"-13 x 1-1/4" bolt
	2	1/2"-13 x 1-3/4" bolt
	2	1/2"-13 x 2-3/4" bolt
	12	1/2" SAE flat washer
	6	1/2"-13 prevailing torque nut
	2	Wire Clip

**JKS2519 REAR COILOVER MOUNT BOX KIT**

Part No.	Qty	Description
03337	1	Coilover Frame Mount - Drv
03338	1	Coilover Frame Mount - Pass
03339	1	Coilover Axle Mount - Drv
03340	1	Coilover Axle Mount - Pass
03381	1	Coilover Reservoir Mount - Drv
03382	1	Coilover Reservoir Mount - Pass
03383	1	Coilover Roost Shield - Drv
03384	1	Coilover Roost Shield - Pass
03385	1	Exhaust Hanger
01499	4	
J156	1	<b>Bolt Pack Upper Mount Hardware</b>
	2	1/2"-13 x 5-1/2" bolt
	2	1/2"-13 prevailing torque nut
	4	1/2" SAE washer
	4	3/8"-16 x 1" carriage bolt
	4	3/8"-16 prevailing torque nut
	4	3/8" SAE washer
	2	7/16"-14 x 1" bolt
	8	7/16"-14 x 1-1/4" bolt
	10	7/16"-14 prevailing torque nut
	24	7/16" SAE washer
	8	10mm-150 x 30mm bolt
	8	10mm flat washer
	2	5/16"-18 x 3/4" self tapping bolt
	1	5/16" x 3/4" bolt
	3	5/16" SAE washer
	2	7/16"-14 x 1-1/4" flat socket head bolt
	28	7/16" SAE flat washer
J157	1	<b>Bolt Pack Lower Mount Hardware</b>
	2	1/2"-13 x 3" bolt
	2	1/2"-13 prevailing torque nut
	4	1/2" SAE washer
	4	7/16"-14 x 1" bolt
	4	7/16"-14 serrated flange nut
	4	7/16" SAE washer