



SYNERGY MFG. 870 INDUSTRIAL WAY, SAN LUIS OBISPO, CA (805) 242-0397

8020-20 / 8040-20 JEEP JK STARTER KIT

GENERAL NOTES:

- These instructions are also available on our website; www.synergymfg.com. Check the website before you begin for any updated instructions and additional photos for your reference.
- The installation of this kit requires minor drilling.

PARTS LIST:

- **8057-20 – 2” FRONT BUMP STOP SPACERS**
 - (2) 8058-20-01 JK 2.0” Rear Bump Stop Spacers
 - (2) 3/8-16 UNC x 2-1/4” long socket head cap screw
 - (2) 3/8-16 UNC flange nut
- **8058-20 – 2” REAR BUMP STOP SPACERS**
 - (2) 8058-20-01 JK 2.0” Rear Bump Stop Spacers
 - (4) 3/8-16 UNC x 3/4” long hex head bolt
 - (4) 3/8-16 UNC flange nut
 - (4) 3/8” flat washer
- **8060 – JK REAR SWAY BAR LINKS**
 - (2) 806001 JK rear sway bar links assembled with tie rod end & jam nut
 - (2) 1/2-20 UNF top lock flange nut
- **8083 – FRONT JEEP JK BRAKE LINE RELOCATION KIT**
 - (2) 808301 Front brake line relocation bracket
 - (2) 1/4”-20 UNC x 3/4” long hex head bolts
 - (2) 1/4”-20 UNC nylock nuts
 - (4) 1/4” GR8 flat washers
- **8084 –REAR JEEP JK BRAKE LINE RELOCATION KIT**
 - (2) 80840 Rear brake line relocation bracket
 - (2) 1/4”-20 UNC x 3/4” long hex head bolts
 - (2) 1/4”-20 UNC nylock nuts
 - (4) 1/4” GR8 flat washers

2 DR MODELS:

- 8063-10 – 2” FRONT COIL SPRINGS
- 8064-10 – 2” REAR COIL SPRINGS

4 DR MODELS:

- 8063-20 – 2” FRONT COIL SPRINGS
- 8064-20 – 2” REAR COIL SPRINGS

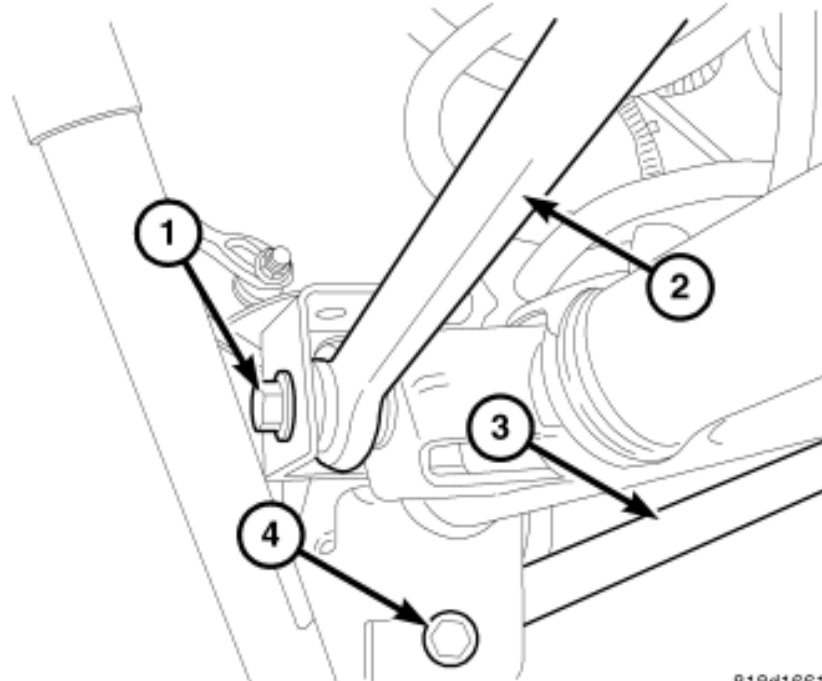
Parts / Tools Needed to complete installation:

- Basic simple hand tools.
- Drill with 3/8” metal cutting drill bit.
- Quality jack & jack stands.

INSTALLATION:

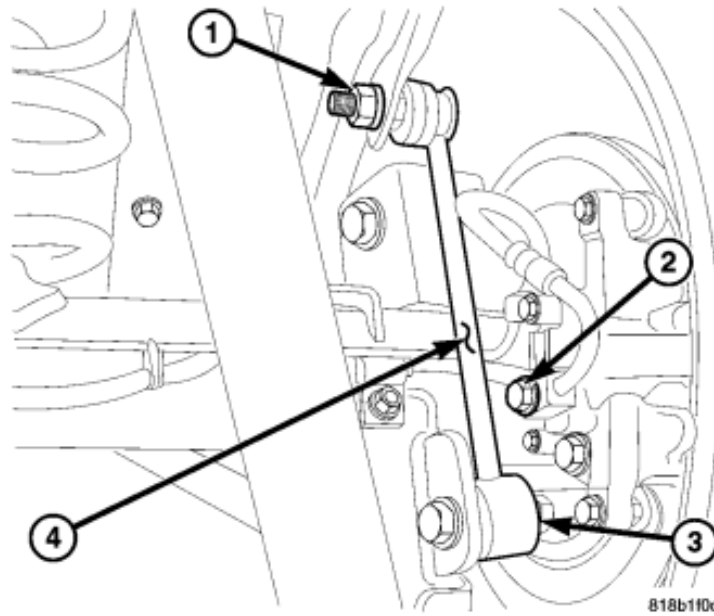
REAR INSTALLATION

- 1) Begin installation at the back of the vehicle. Remove the factory track bar bolt at the axle side. Bolt #1 in the image below. Use a 21 mm socket / wrench. Retain this hardware as it will be re-used.

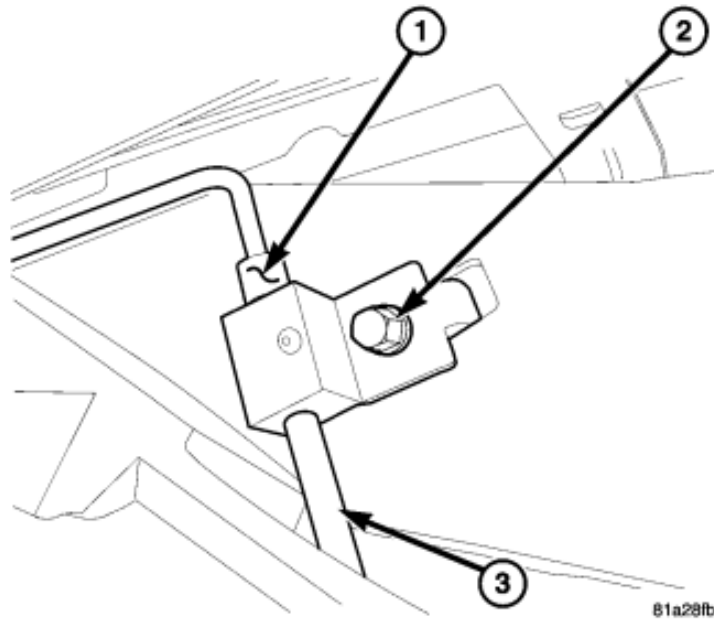


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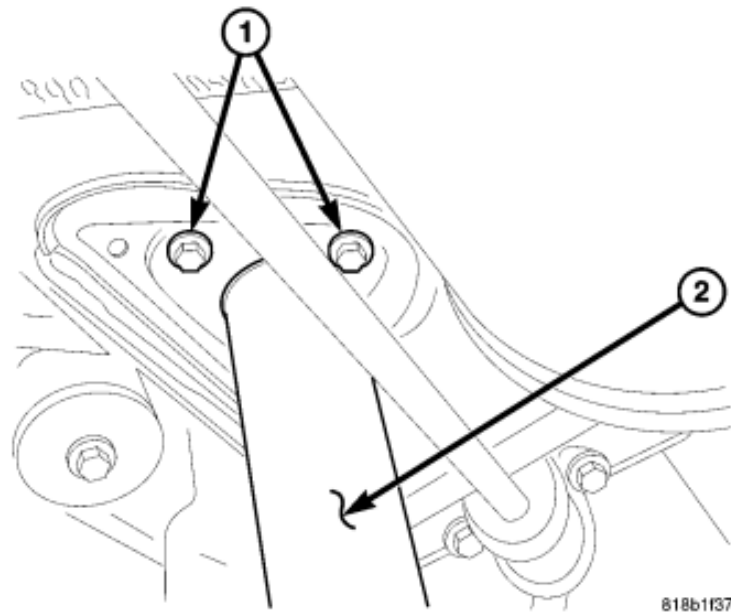
- 2) Next, jack the vehicle up and support it in a manner that will allow the suspension to hang free. Remove the rear tires.
- 3) Remove the rear sway bar links. Use an 18mm socket / wrench to remove hardware labeled #1 and #3 in image 3.1 below. Retain all hardware as these sway bar links will be relocated to the front of the vehicle.



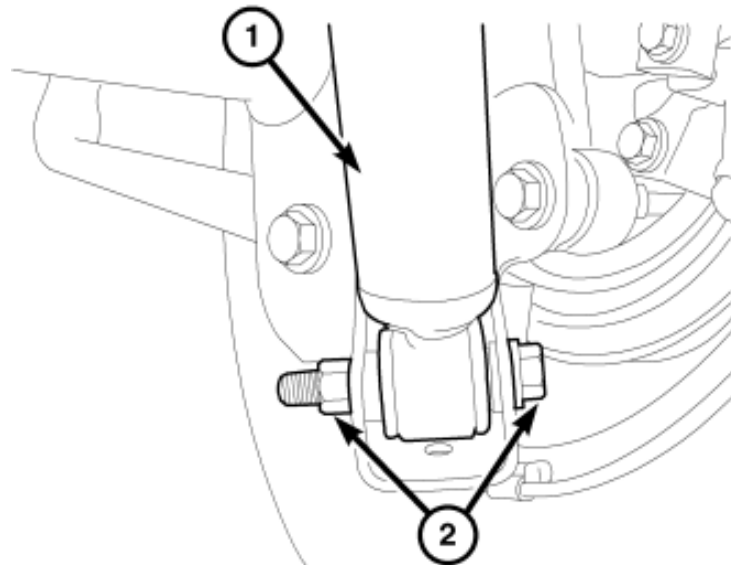
- 4) Remove the frame attachment bolt for the brake line. This is bolt #2 in the image below, use a 10 mm socket / wrench. Retain this bolt as it will be re-used.



- 5) With brake lines loosened, support the axle and remove the shocks. ****Note**** the shocks are keeping the suspension from fully drooping out. Once shocks are removed, the axle can be lowered to the point of coil removal.
- Remove the two upper shock bolts using a 15mm socket / wrench (#1 in IMG 5.1 below)
 - Remove the lower nut and bolt using an 18mm socket / wrench (#2 in IMG 5.2 below)



IMG 5.1

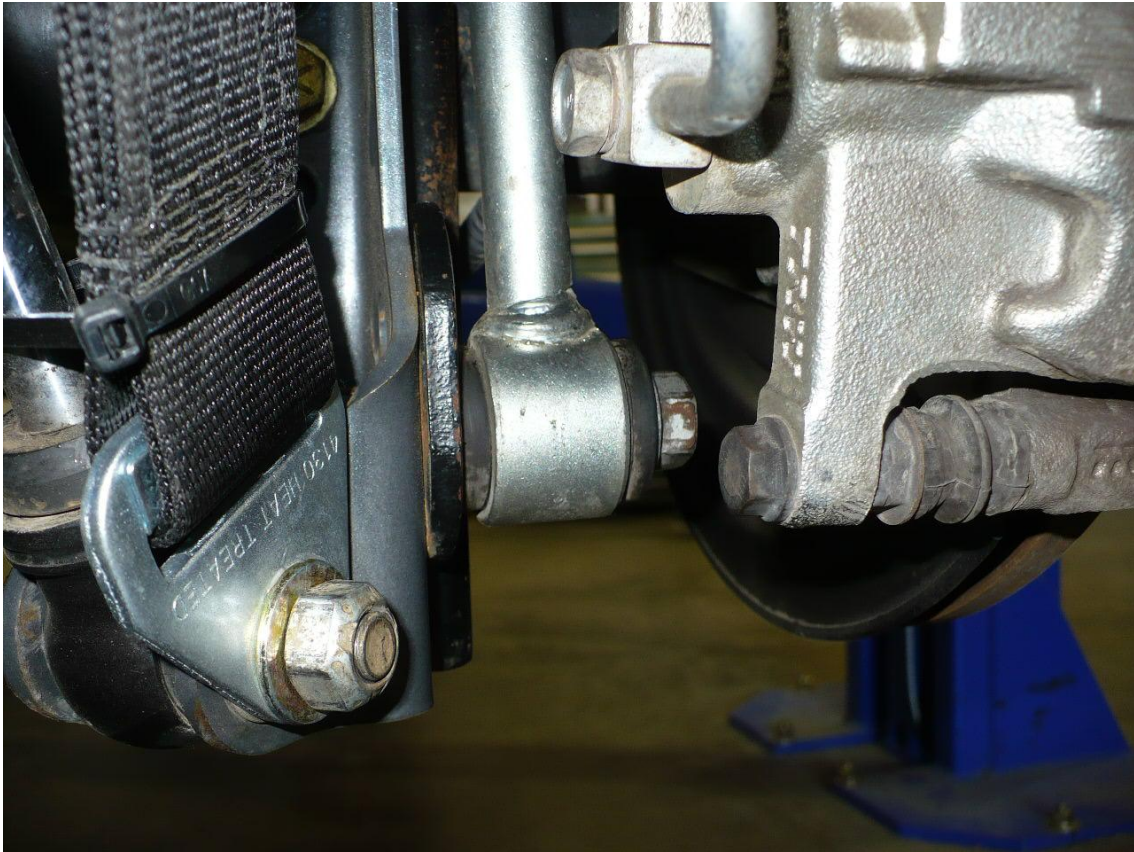


IMG 5.2

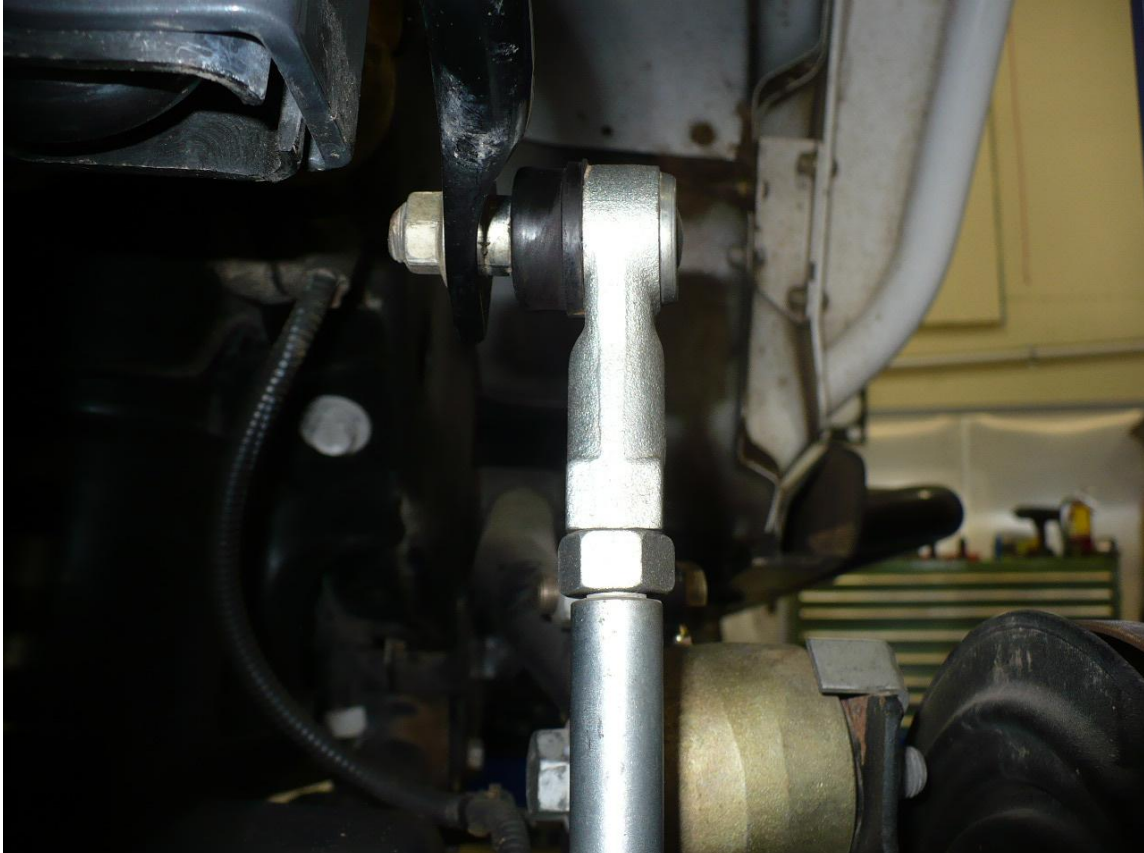
- 6) With shocks removed, carefully lower the axle to allow for coil spring removal.
 - Take careful note of all electrical connections going to the axle. Make sure these will not be strained as axle is lowered. Disconnect / remove fasteners as needed to allow for coil removal.
- 7) Install 8058-20 rear bump stop spacers. Position the spacers on top of the factory bump pad so they lean forward. Install using the hardware provided. Be sure to use a washer under the bolt head only. Torque 3/8" bolts to 40 ft-lbs.



- 8) If installing 8074 rear lower shock mounts, reference those instructions for installation at this time. If utilizing the factory lower shock mounts, proceed to the next step.
- 9) Install new coil springs. Note, coil springs have a top and bottom. Orient them so the small pigtail fits down at the axle, and the larger diameter is up at the chassis. Be sure to re-use the factory rubber coil spring isolator at the top of the coil.
- 10) Install shock absorbers in the reverse operation of removal. Torque the upper bolts to 37 ft-lbs. Torque the lower OEM bolt to 56 ft-lbs. Install the lower bolt so the nut is closer to the wheel, this helps prevent thread damage to the bolt from rocks.
- 11) Install the 8060 rear sway bar links. Make sure the new sway bar links are roughly the same length left to right by adjusting the tie rod ends. On lifts 4.5" or less, adjust tie rod ends all the way down.
- 12) Install sway bar link to axle using factory hardware as shown. Insert bolt from wheel side and fasten with nut on inner side. Torque to 75 ft-lbs.



13) Install sway bar link to sway bar as shown. Use a 14mm wrench to hold the flats on the tie rod end stud and a 15mm wrench to tighten the nut. Torque to 50 ft-lbs.



14) Set the tie rod end joint to neutral and tighten tie rod end jam nut. Use two $\frac{3}{4}$ " wrenches and snug jam nut against tie rod end.



15) Install 8084 rear brake line relocation bracket as pictured below. Note the brackets are left and right specific and should jog in as pictured. The notch in the 808401 relocation bracket should be towards the back of the vehicle.

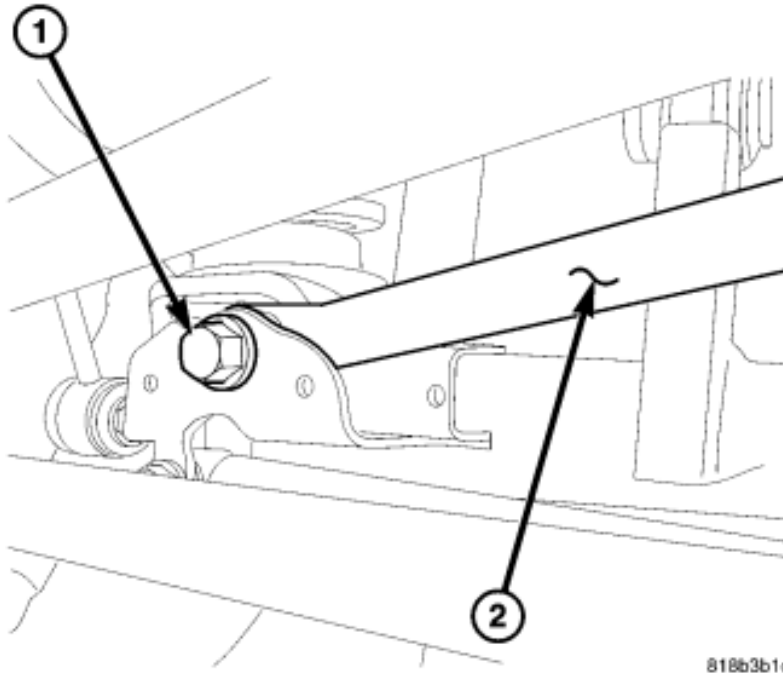
- Attach bracket to frame using the factory bolt. Torque to 10 ft-lbs.
- Bolt the factory brake line to the relocation bracket using the $\frac{1}{4}$ -20 UNC bolts provided with the kit.



- 16) Reinstall tires and lower to ground. Torque wheels to manufacturers recommended specifications.
- 17) Reinstall rear track bar bolt removed in step 1 and torque to 125 ft-lbs.
 - It helps to have someone push the back of the vehicle from side to side to align the track bar bushing to the hole in the bracket.
- 18) Rear suspension installation is now complete.

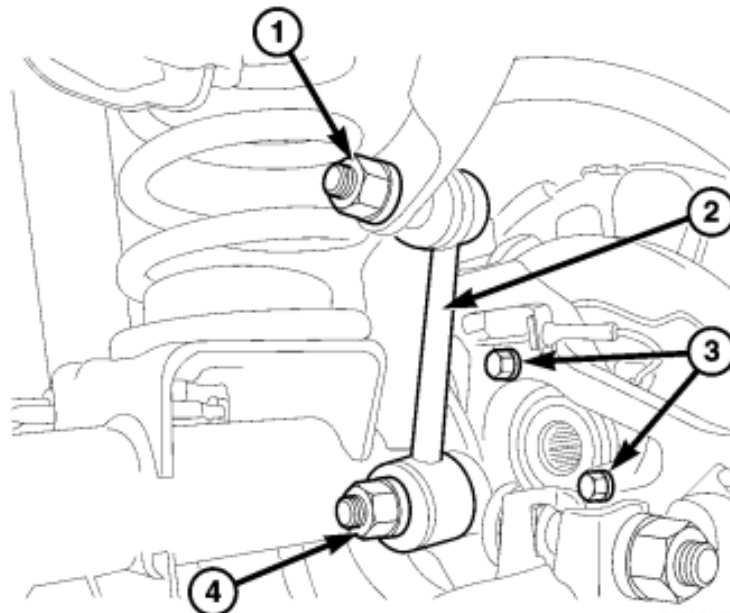
FRONT INSTALLATION

- 19) On the front of the vehicle, begin by removing the factory TB bolt at the axle side. Bolt #1 in the image below. Use a 21mm socket / wrench. Retain this hardware as it will be re-used.



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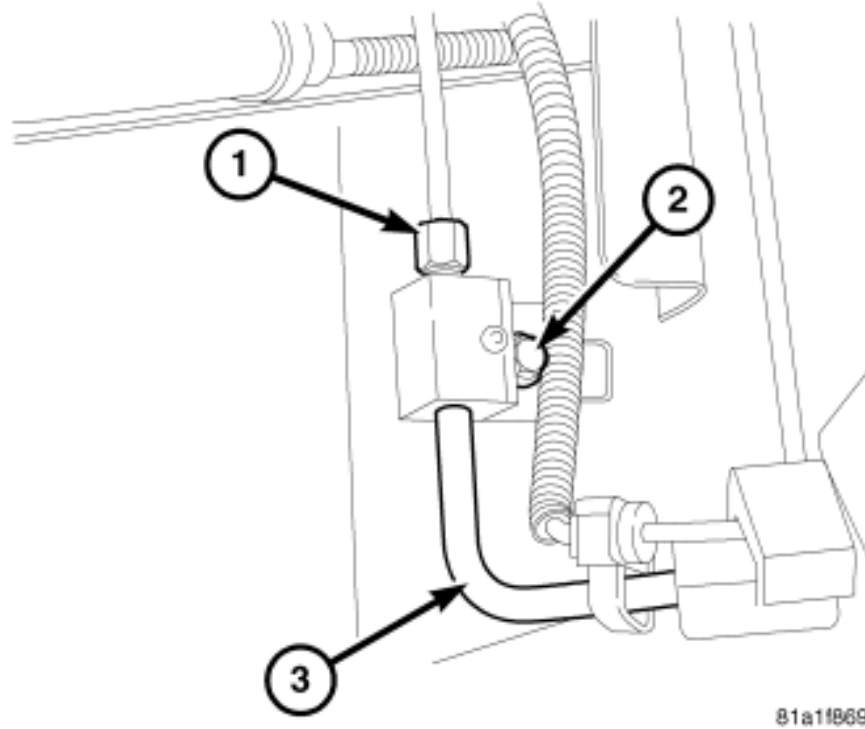
- 20) Next, jack the vehicle up and support it in a manner that will allow the suspension to hang free. Remove the front tires.
- 21) Next, remove the sway bar links. Use an 18mm socket / wrench to remove the nut labeled #1 in IMG 3.1 below. Also, remove the bolt / nut securing the sway bar link to the axle (#4 in IMG 3.1 below) Retain bolt / nut from lower mount as it will be re-used.



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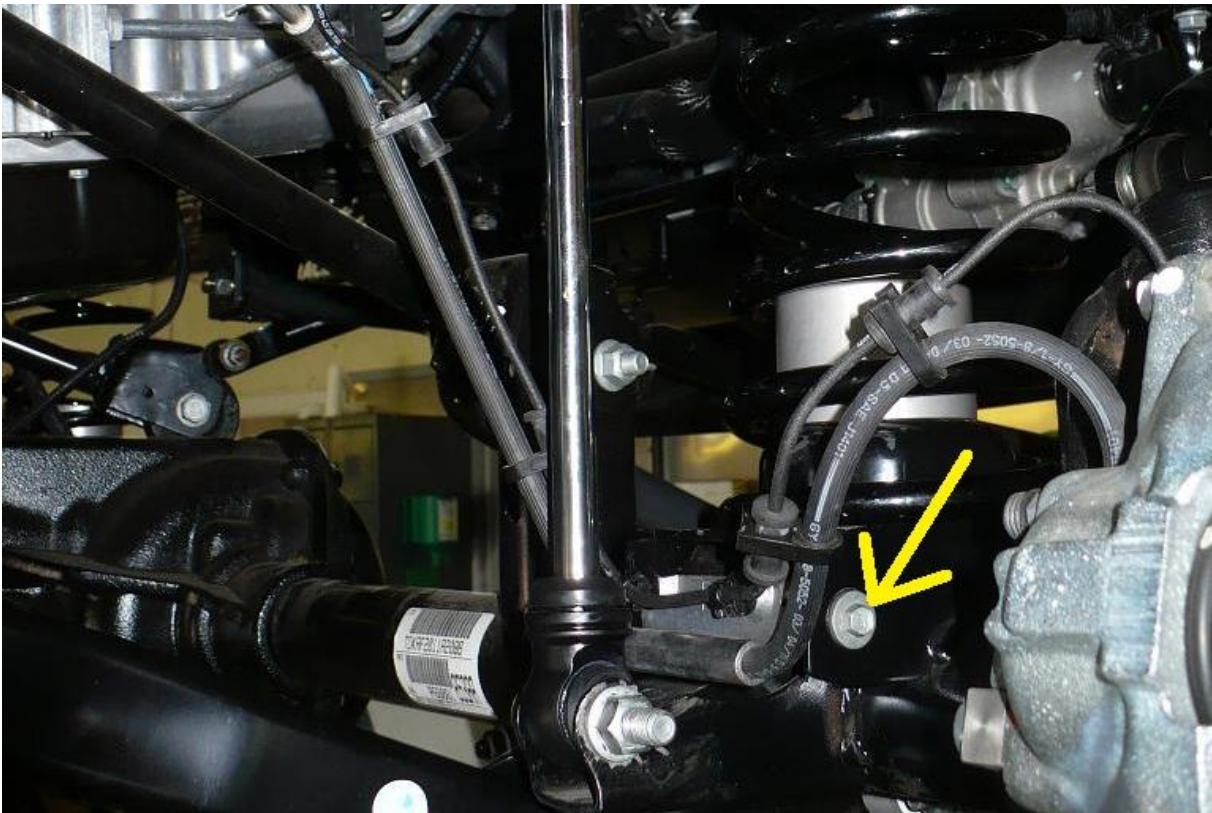
IMG 3.1

22) With front suspension hanging free, remove the brake line attachment bolt at the frame. Bolt 2 in IMG 4.1 below. Retain this bolt as it will be reused.



IMG 4.1 brake line removal

23) On 2012+ models, remove the brake line attachment bolt at the coil spring as indicated in IMG 5.1 below.



IMG 5.1

24) With brake lines loosened, support the axle and remove the shocks. ****Note**** the shocks are keeping the suspension from fully drooping out. Once shocks are removed, lower the axle to the point of coil

removal. Take careful note of electrical connections at the diff as these will need to be disconnected for coil removal.

25) Remove front coil springs.

26) Install front bumpstop spacers.

- First locate and center punch the center of the bump stop strike pad on the coil spring perch.
- Drill a 3/8" hole on center as pictured below.



27) Next, install the coil spring and bump stop spacer simultaneously by holding spacer inside the coil spring.

- Note, the coil springs have a top and bottom, the tighter wrap should be at the top. Another reference is that the tighter "progressive" coils should be at the top. Lastly, the part number should be oriented right side up when installed into the vehicle.

28) With the spring in place, align the bump stop spacer bolt with the hole that was drilled. Install the bolt through the hole and use the 3/8" serrated flange nut provided to secure the bump stop spacer. Using a 5/16" allen wrench, torque to 45 ft-lbs.

29) Ensure the coil springs are properly seated by rotating the spring so that the end of the spring is clocked against the stop in the coil spring perch. See image below.

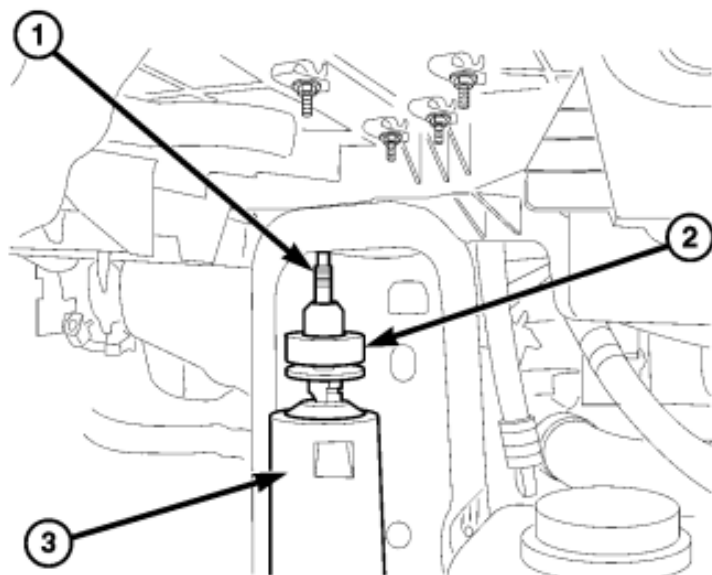


30) Once coil springs are installed, install shock absorbers.

- If reusing factory shocks, we suggest using PPM-8015 front shock mounts. Reference the 8015 instructions at this time if factory shocks are being retained
- If factory shocks are being replaced with upgraded units spec'd for up to 2" of lift, install into factory locations using the steps below for reference.

31) Install shock absorbers. Use images below for reference. Install into upper mount first. Tighten upper nut until bushings begin to bulge out. Do not exceed 20 ft-lbs of torque.

- Note, on 2012+ models, some trimming of inner fender plastics will make for an easier time when installing the front shocks. See IMG 14.2 below

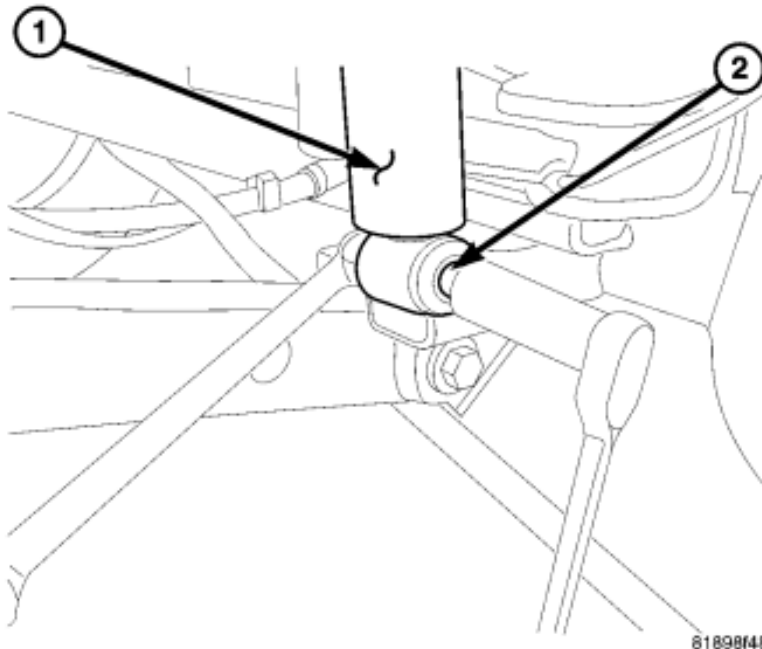


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IMG 14.2 Red arrows indicate section to clearance for easier installation of upper shock nut.

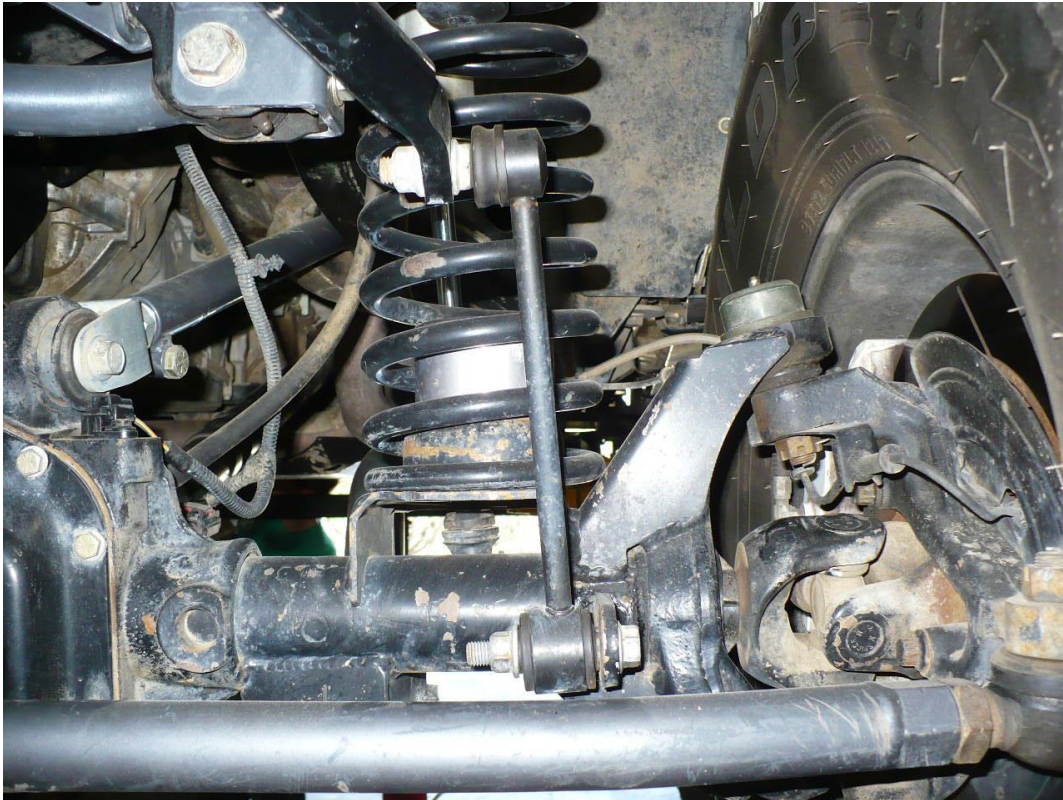
32) Install the lower part of the shock into the mount. Re-use the factory bolt / nut and torque to 56 ft-lbs.



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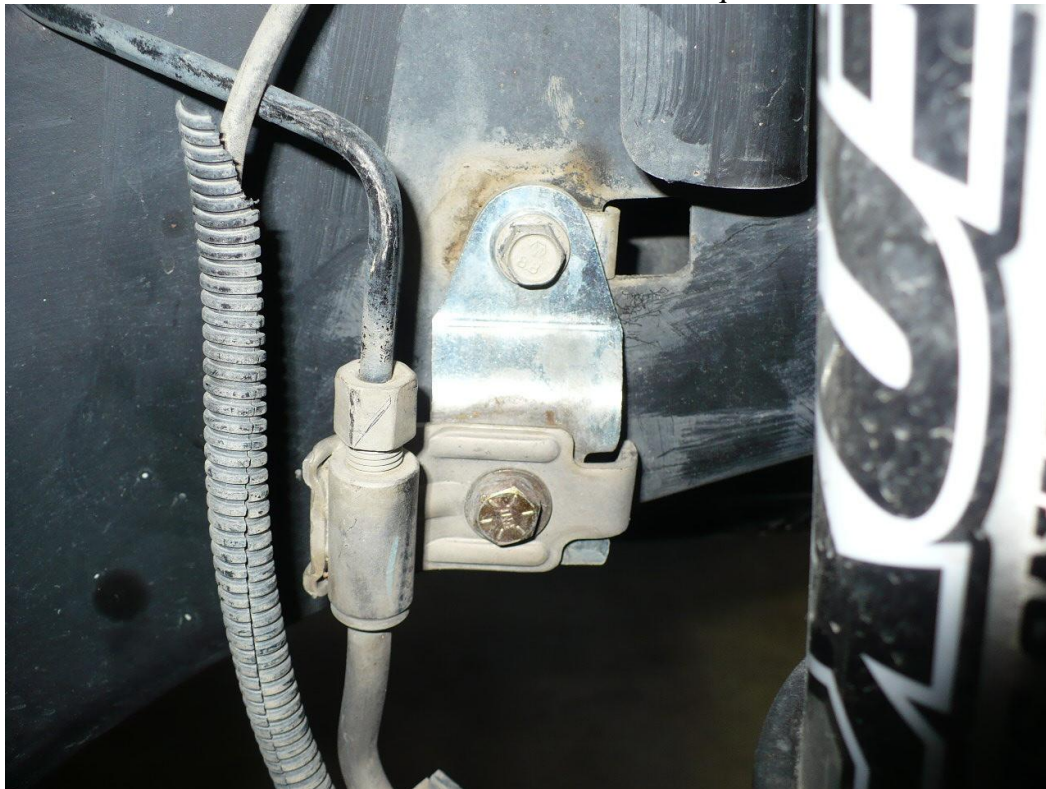
33) Install the factory rear sway bar links to the front of the vehicle. Install in the same orientation as the factory front sway bar links were installed. Use the sway bar link bolt / nut removed in step 23 for attachment at the axle. Torque to 75 ft-lbs. Install the upper nut to 66 ft-lbs.

- Completed sway bar link installation should appear as pictured below.



34) Install front brake line relocation bracket as pictured below. Note the brackets are left and right specific and should jog out as pictured. The notch in the 808301 relocation bracket should be towards the front of the vehicle.

- Attach relocation bracket to frame using the factory bolt. Torque to 10 ft-lbs.
- Bolt the brake line to the bracket using the 1/4-20 UNC bolts provided. Use a washer under both the head of the bolt and the nut. Torque to 10 ft-lbs.



- 35) On 2012+ models, be sure to reinstall the brake line attachment bolt at the coil spring which was removed in step 25. Torque to 10 ft-lbs.
- 36) Reinstall tires and lower to ground. Torque wheels to manufacturers recommended specifications.
- 37) Reinstall front track bar bolt removed in step 21 and torque to 125 ft-lbs.
 - It helps to have someone turn the steering wheels to help align the bushing to the bracket hole when inserting the bolt.
- 38) Installation is complete. Recheck all bolt torques after 100 miles of driving or any significant off-road use.