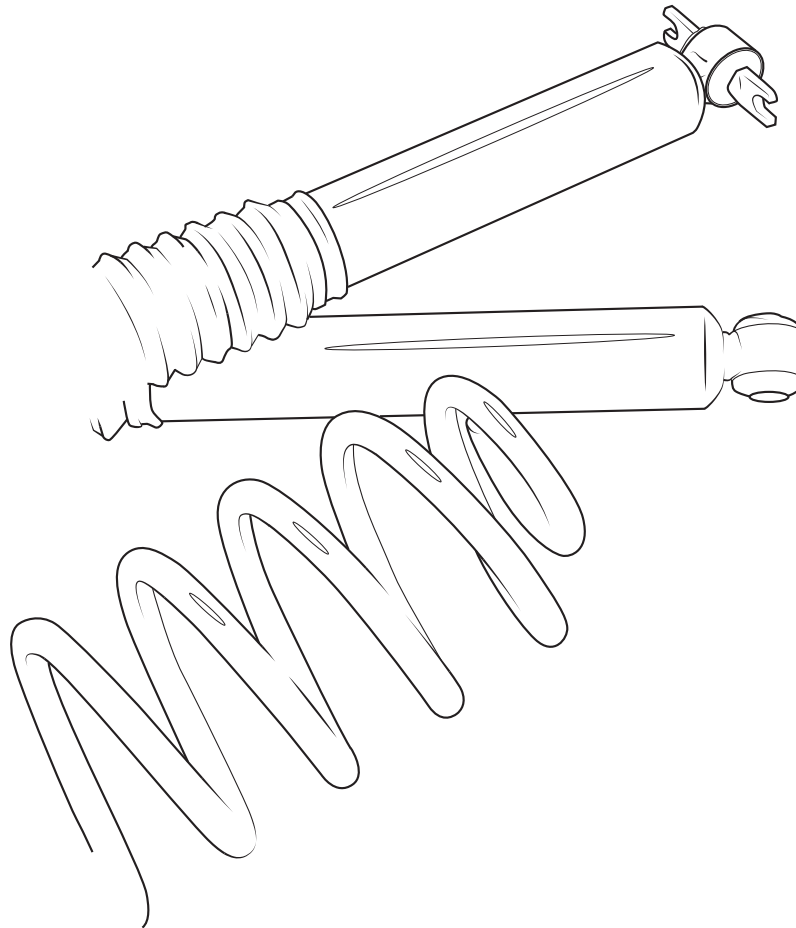




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# 2.5" DUALSPORT XT SUSPENSION





## **PLEASE READ BEFORE YOU START**

TO GUARANTEE A QUALITY INSTALLATION, WE RECOMMEND READING THESE INSTRUCTIONS THOROUGHLY BEFORE BEGINNING ANY WORK. THESE INSTRUCTIONS ASSUME A CERTAIN AMOUNT OF MECHANICAL ABILITY AND ARE NOT WRITTEN NOR INTENDED FOR SOMEONE NOT FAMILIAR WITH AUTO REPAIR.

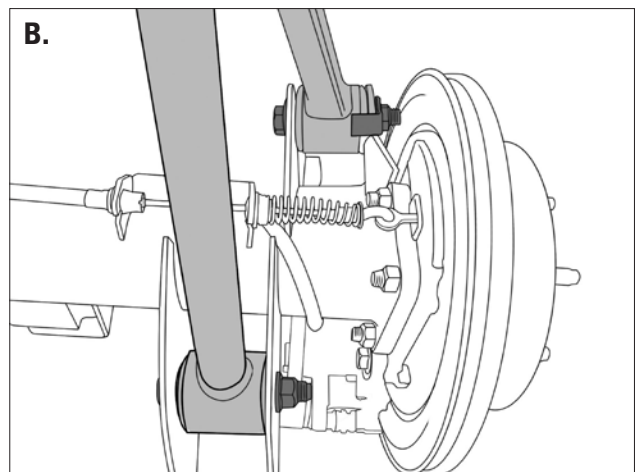
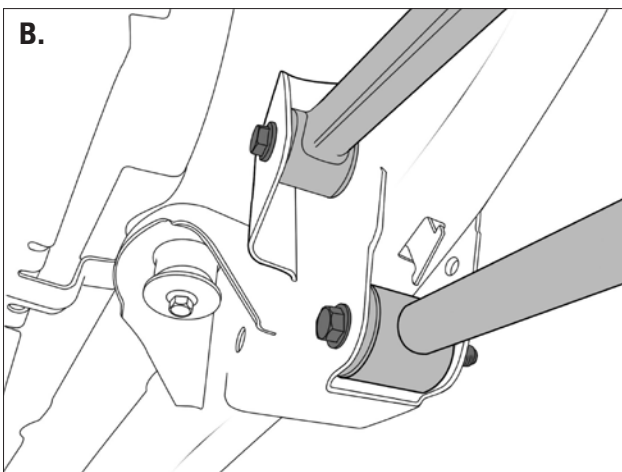
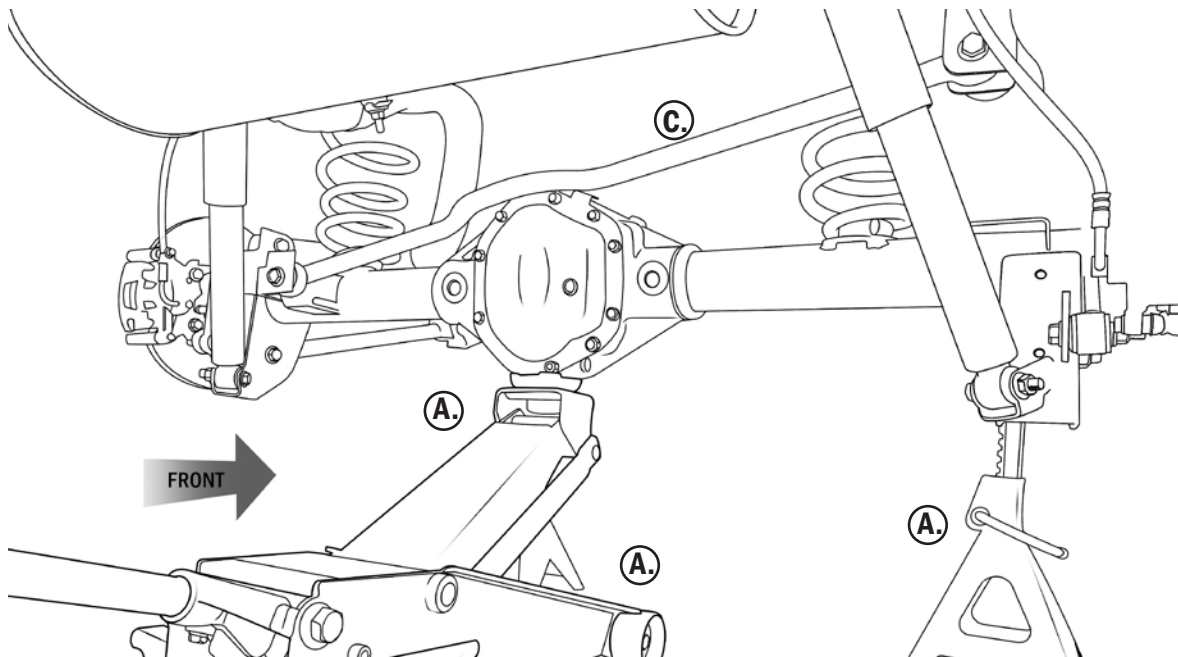
| <b>INCLUDED PARTS</b>                            | <b>QTY</b> | <b>REQUIRED TOOLS</b>                |
|--|------------|--------------------------------------|
| Springs  | 4          | Basic Standard and Metric hand tools |
| Shocks   | 4          | 3/8-in Drill Bit                     |
| Bump Stop Spacer Kit                             | 1          | 1/2-in Drill Bit                     |
| Rear Track Bar (LHD system only)                 | 1          |                                      |
| Rear Track Bar Tower                             | 1          |                                      |
| Brake Line Drop Bracket Set                      | 1          |                                      |
| Front Stabilizer End Link<br>Relocation Brackets | 2          |                                      |



## REAR SUSPENSION

### 1.

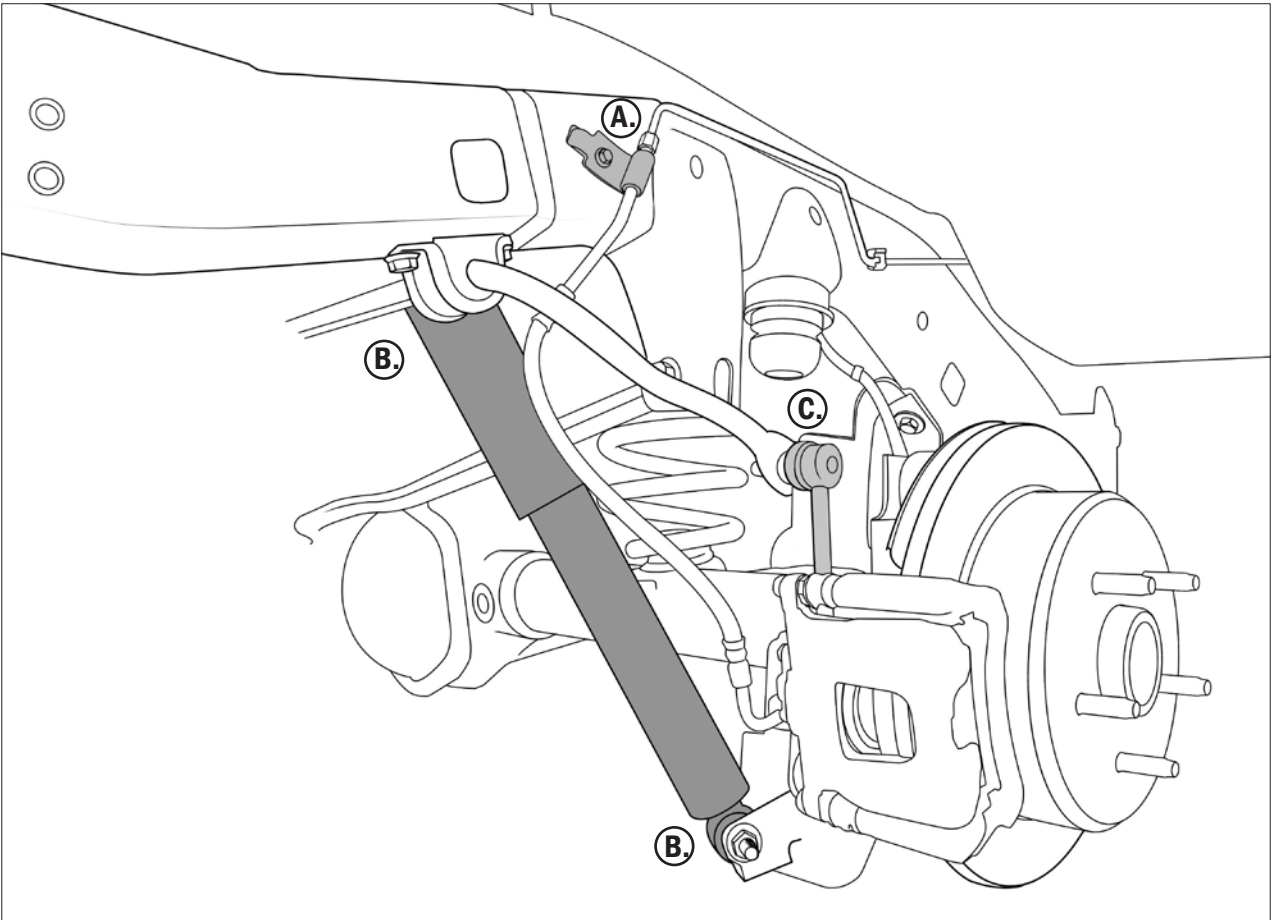
- A. Raise Jeep and support the frame using jack stands or a hoist, such that the rear axle can be lowered enough to remove the springs. Support the axle by placing floor jack under the center of the axle. Remove the wheels.
- B. Loosen but DO NOT remove all 8 control arm bolts.
- C. Remove the track bar. (NOTE: Right hand drive vehicles will reuse the factory track bar)





## 2.

- A. Remove the bolts that hold the brake lines to the frame.
- B. Remove the shocks.
- C. Remove the sway bar end links.

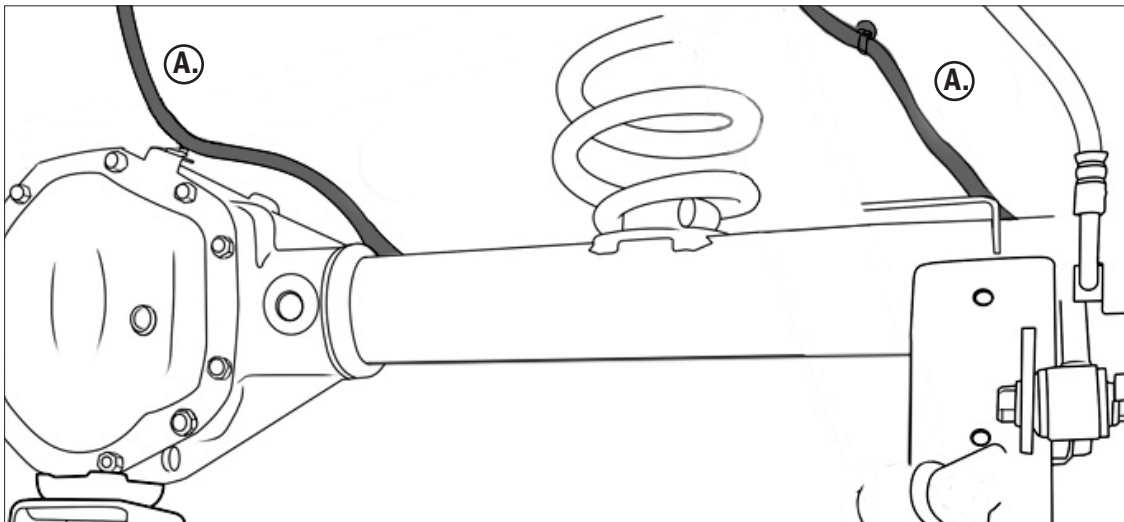




### 3.

Carefully lower the axle using the floor jack enough to remove the springs. **DO NOT** overextend the wheel speed sensor or locker wiring (A).

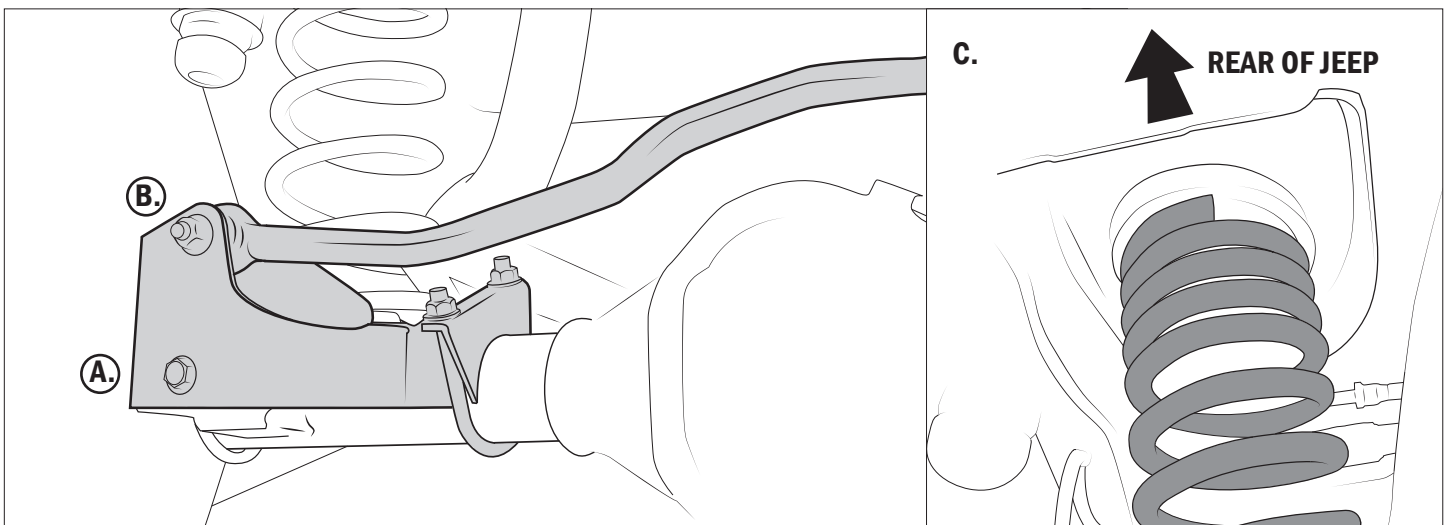
Remove the factory springs.



### 4.

Install the track bar tower. Tightening U-bolt to **NO MORE** than 40 ft lbs. Use supplied bolt and washer in bottom hole (A) and tighten to 80 ft lbs. Install the new AEV track bar reusing the factory hardware to install the track bar, reversing the direction of the hex bolt as shown (B). **DO NOT** tighten at this point. (NOTE: for right hand drive vehicles, reinstall factory track bar)

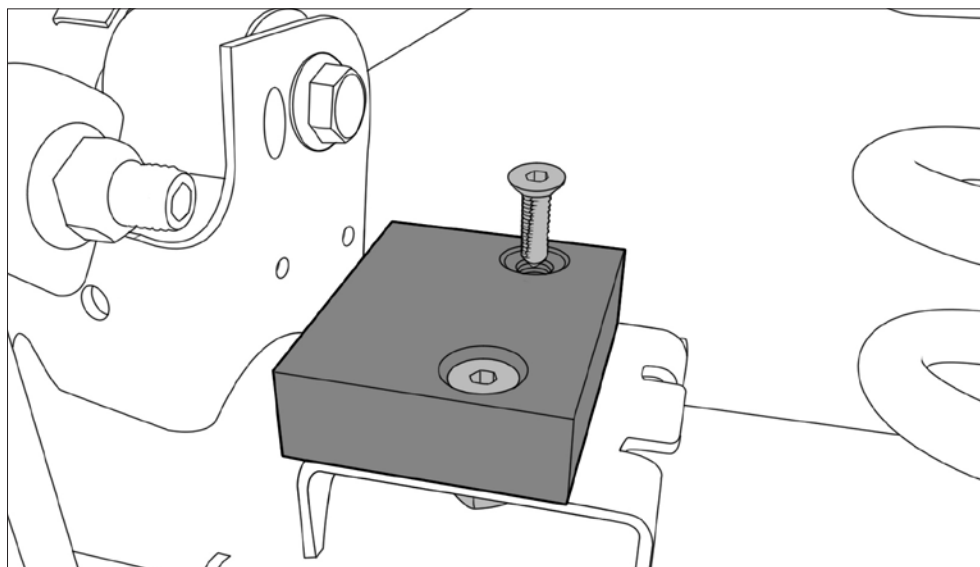
Install AEV springs making sure to properly index them on the axle spring seat (C).





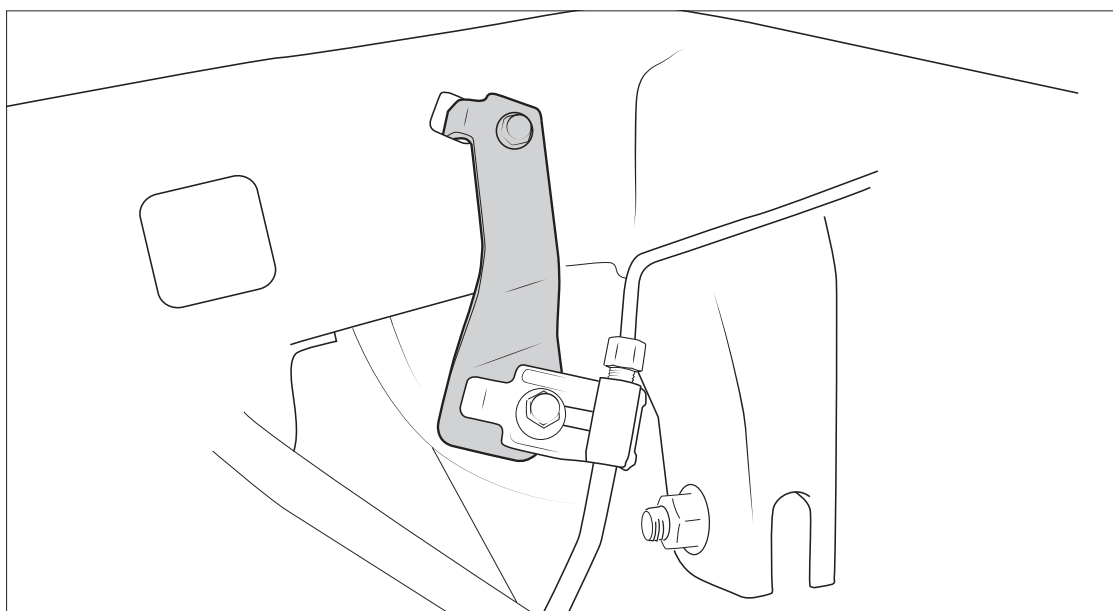
## 5.

Install new Bump Stop Spacers on axle as shown using the supplied hardware. DO NOT reverse the orientation from what is shown.



## 6.

Install new shocks at upper mount. Raise axle slowly and guide springs into position. Re-install sway bar end links and tighten to 60 ft lbs (refer to step 2C.) Re-install lower shock nut and bolt, tighten to 56 ft lbs (refer to step 2B.) Install brake line drop brackets as shown below, tighten to 8 ft lbs. Reinstall wheels and tighten lug nuts, working in a star pattern, to 105 ft lbs.

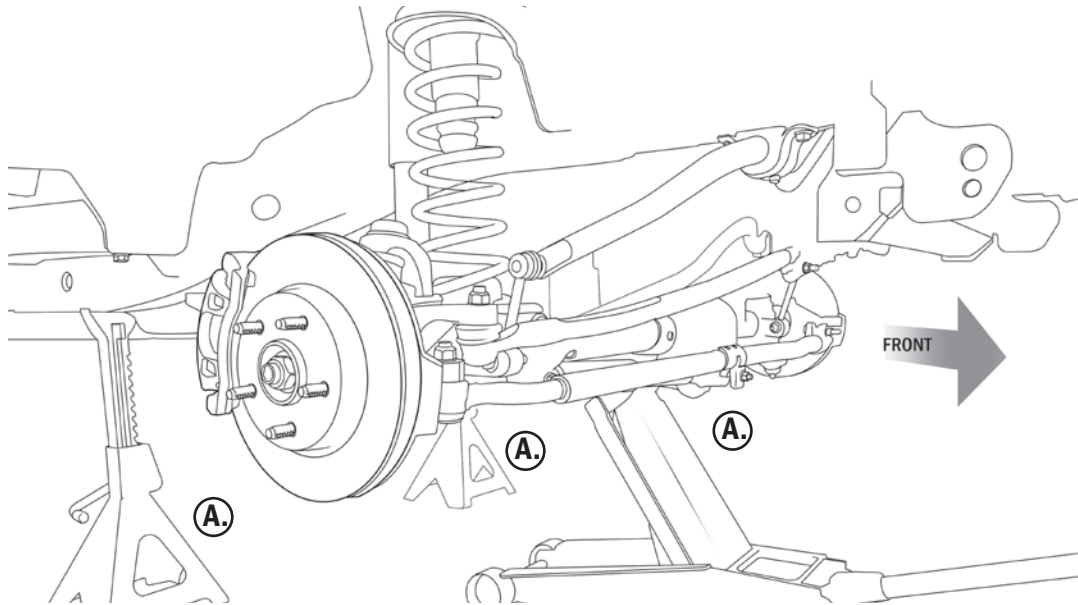




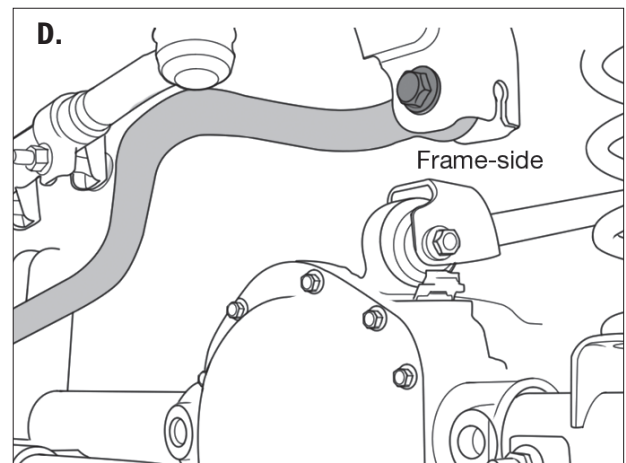
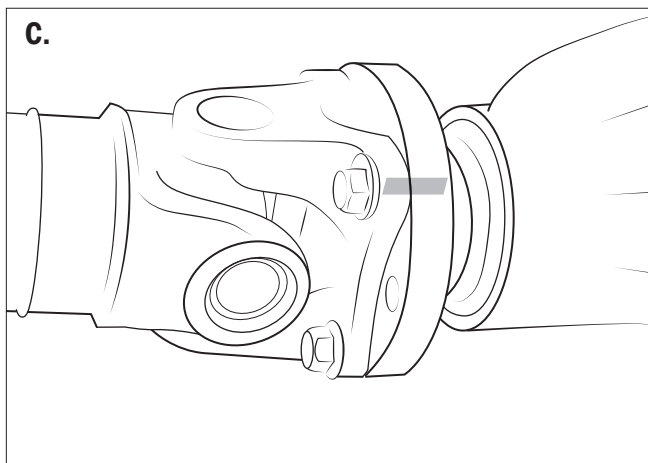
## FRONT SUSPENSION

### 7.

- A. Raise Jeep and support the frame using jack stands or a hoist, such that the front axle can be lowered enough to remove the springs. Support the axle by placing floor jack under the center of the axle. Remove the wheels.



- B. Loosen but DO NOT remove all 8 control arm bolts.
- C. Disconnect the drive shaft. Make sure to mark both sides of the connection so you can properly align it when you reconnect it. Tie loose end of the drive shaft up so it will not hang down, failure to do so may result in damage to your drive shaft.
- D. Loosen but DO NOT remove the frame-side track bar bolt. Remove and save the axle-side track bar bolt and flag nut.

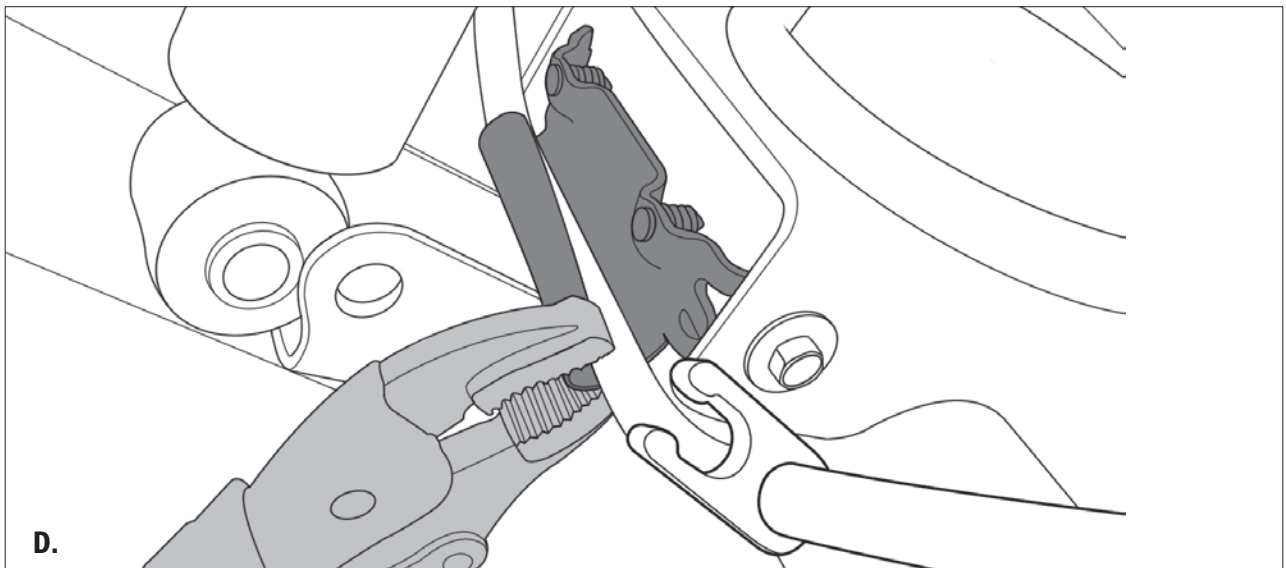
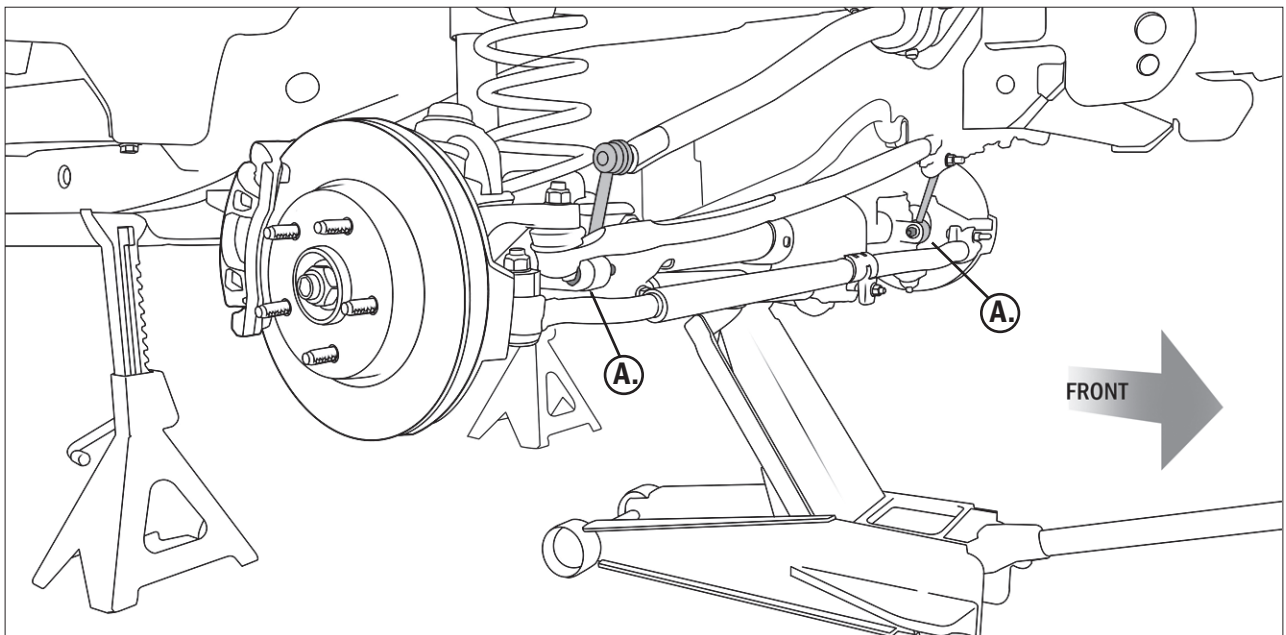




## 8.

Note: On Rubicon models, remove the push pins holding the speed sensor wiring to the frame and upper control arm.

- A. Remove and save all anti-sway bar link hardware.
- B. Remove shocks and save all shock mounting hardware.
- C. Lower axle and remove springs. DO NOT remove factory isolator.
- D. For 2011 or newer models, remove and discard factory bracket from the brake line.

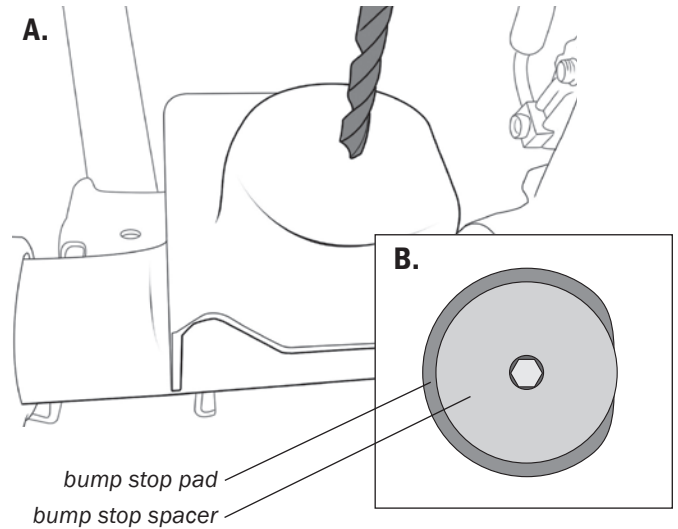






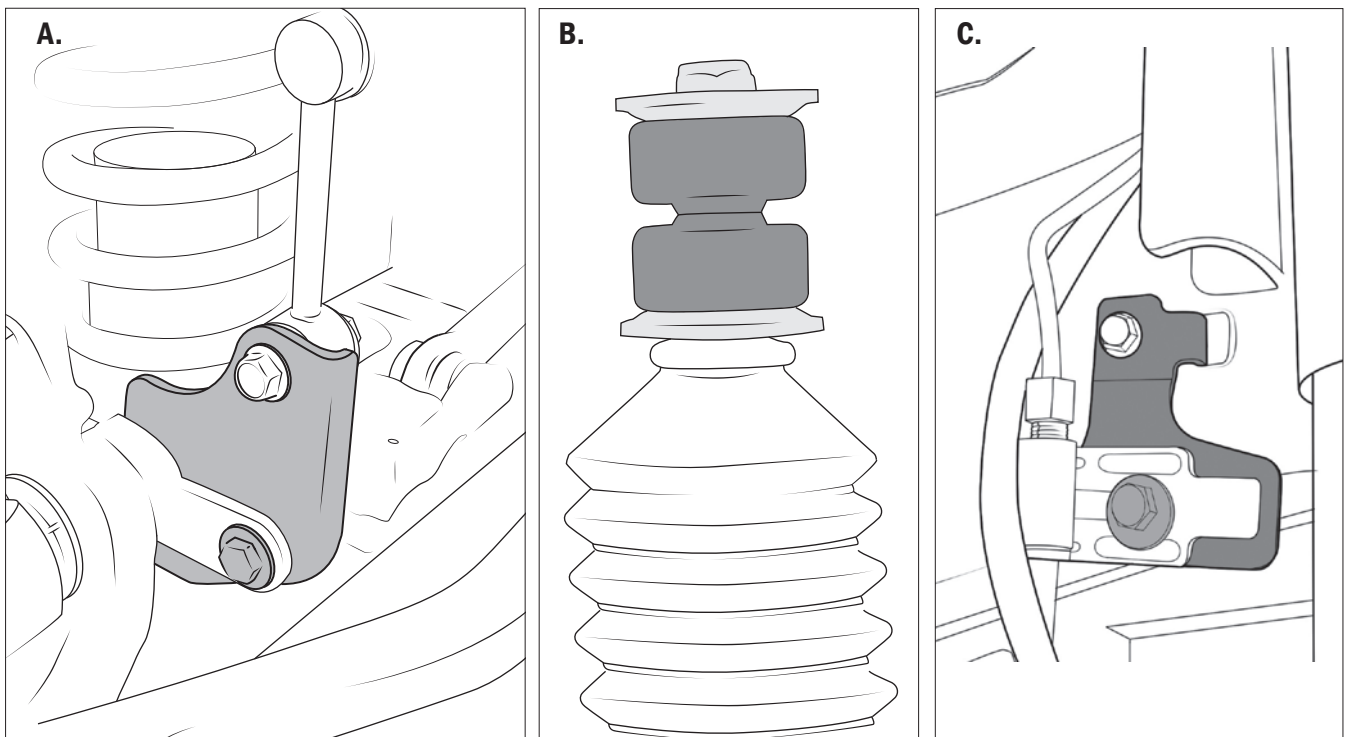
## 9.

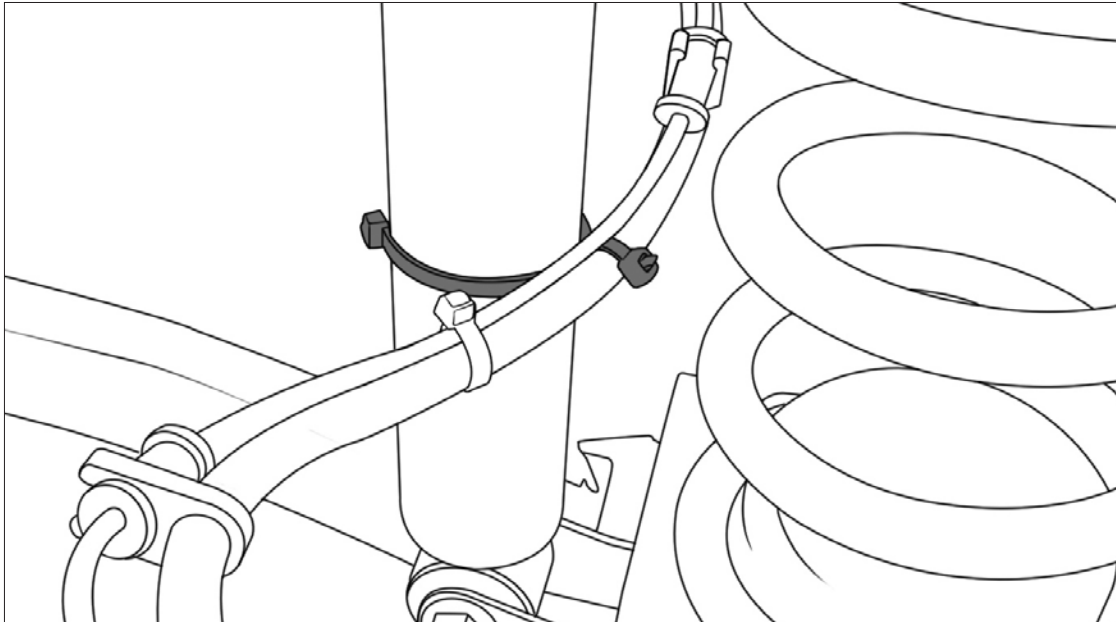
- A. Drill a 3/8 inch hole in the center of the axle bump stop pad.
- B. Place bump stop spacer inside springs.
- C. Install AEV springs, keeping factory isolator in place. Make sure to properly index the springs on the lower spring seat.
- D. Install and tighten supplied bump stop spacer hardware.



## 10.

- A. Install new sway bar end link brackets to the inside of the axle tab—curved end of BOTH brackets will point left. Tighten to 80 ft lbs. Re-install end link to bracket and tighten to 75 ft lbs.  
NOTE: Right Hand Drive systems include replacement end links NOT brackets. Install the supplied end links.
- B. Assemble shocks with bushings and washers in the arrangement shown below then install shocks. Use an allen wrench to keep the shock from rotating while tightening the hex nut.
- C. For 2007–2010 model year JKs install the front brake line drop brackets tightening to 8 ft lbs. (2011 or newer refer to step 11)





## **11.**

For 2011 and newer models, use supplied zip ties to secure the brake line to the shock as shown.

Reinstall wheels and tighten lug nuts, working in a “star pattern.” Place Jeep on level ground.

Reconnect the drive shaft making sure to properly align your marks.

Reconnect the track bar at the axle side using the hardware saved from disassembly.

Tighten all fasteners listed below to factory specifications.\*

TIP: It is good practice to mark each major bolted suspension connection such as these with a paint pen. Draw a line that runs from bolt head or nut to the adjacent bracket material. This will allow a visual inspection to easily catch bolts that work loose. After approximately 100 miles, you should perform a complete visual inspection and re-torque any suspect bolts as well as your wheel lug nuts.

\*Refer to Appendix for proper torque specs

# APPENDIX

## JK FACTORY TORQUE SPECIFICATIONS

\*nominal torque shown in ft. lbs.

| Front Suspension & Steering    |                   |              |
|--------------------------------|-------------------|--------------|
| UCA bushings                   | M12               | 75           |
| LCA bushings                   | M14               | 125          |
| Track bar bushing frame        | M14               | 125          |
| Track bar bushing axle         | M14               | 125          |
| Stabilizer end link top        | M12               | 65           |
| Stabilizer end link bottom     | M12               | 75           |
| Shock Absorber                 | upper M12 bayonet | 20           |
|                                | lower M12         | 56           |
| Steering gear                  |                   | 87           |
| P/S pump to engine             |                   | 21           |
| High pressure hose pump        |                   | 22           |
| Hoses to steering gear         |                   | 21           |
| Intermediate shaft, all points | M10               | 42           |
| Intermediate shaft toe plate   |                   | 100 in. lbs. |
| Steering damper                | axle M12          | 50           |
|                                | cross-link M12    | 50           |
| Pitman arm to gear             | 7/8               | 195          |
| Pitman to drag link nut        | M14               | 78           |
| Drag link to knuckle nut       | M14               | 63           |
| Tie rod to knuckle nut         | M14               | 63           |
| Tie rod clamp                  | M10               | 45           |
| Drag link clamp                | M10               | 26           |

| Rear Suspension             |           |     |
|-----------------------------|-----------|-----|
| UCA bushings                | M14       | 125 |
| LCA bushings                | M14       | 125 |
| Track bar bushing frame     | M14       | 96  |
| Track bar bushing axle      | M14       | 111 |
| Stabilizer bar sill bushing | M10       | 45  |
| Stabilizer bar to link      | M12       | 66  |
| Stabilizer bar link to axle | M12       | 75  |
| Shock Absorber              | upper M8  | 37  |
|                             | lower M12 | 56  |

| Cab Mounts |                 |    |
|------------|-----------------|----|
|            | M10 short bolts | 45 |
|            | M12 stud FESM   | 80 |

| Powertrain Mounts |                         |    |
|-------------------|-------------------------|----|
|                   | M10 bracket to block    | 45 |
|                   | M12 bracket to block    | 90 |
|                   | M12 Isolator to frame   | 85 |
| diesel            | bracket to engine       | 85 |
| diesel            | M12 Hydro mt to bracket | 65 |
| diesel            | M12 Hydro mt to frame   | 65 |

| Transmission Mount |                    |    |
|--------------------|--------------------|----|
|                    | M10 trans to mount | 40 |
|                    | M10 mount to frame | 40 |

| Wheels                        |               |     |
|-------------------------------|---------------|-----|
| (5" bolt circle/1.75" offset) | 5 x 1/2" stud | 105 |

| Driveline                   |               |     |
|-----------------------------|---------------|-----|
| T-case companion flange nut |               | 210 |
| Front driveshaft            | to front axle | 80  |
|                             | to t-case     | 22  |
| Rear driveshaft             | to rear axle  | 22  |
|                             | to t-case     | 22  |