Rough Country 91644 Installation Instructions

3.5-Inch Lift Kit with M1R Shocks for Jeep Wrangler Rubicon 4WD

Part number: 91644

trailfortress.com/rough-country-3-5-inch-lift-kit-91644

Scan for fitment, price and install help

921915300

ROUGH COUNTRY
SUSPENSION SYSTEMS®



JEEP JL 3.5” Adj. Lower Control Arm Kit

Thank you for choosing Rough Country for your suspension needs.

Rough Country recommends a certified technician install this system. In addition to these instructions, professional knowledge of disassemble/reassembly procedures as well as post installation checks must be known. Attempts to install this system without this knowledge and expertise may jeopardize the integrity and/or operating safety of the vehicle.

Please read instructions before beginning installation. Check the kit hardware against the parts list. Be sure you have all needed parts and know where they go. Also please review tools needed list and make sure you have needed tools.

PRODUCT USE INFORMATION

⚠WARNING As a general rule, the taller a vehicle is, the easier it will roll. Seat belts and shoulder harnesses should be worn at all times. Avoid situations where a side rollover may occur.

Generally, braking performance and capability are decreased when larger/heavier tires and wheels are used. Take this into consideration while driving. Do not add, alter, or fabricate any factory or after-market parts to increase vehicle height over the intended height of the Rough Country product purchased. Mixing component brands is not recommended.

Rough Country makes no claims regarding lifting devices and excludes any and all implied claims. We will not be responsible for any product that is altered.

This suspension system was developed using a 35x12.50x20 tire on a 20x10 wheel with -18 offset. Different wheel and tire combinations my be used but different tire manufactures designs may result in a tire width that could result in contact with the lower control arm and/or front sway bar link in a sharp turn. Please consult with your tire and wheel expert before purchasing. Also note that if wider tires are desired, offset wheels will be required. If question exist we will be happy to answer any questions concerning the design, function, and correct use of our products by calling 1-800-222-7023.

⚠NOTICE **NOTICE TO DEALER AND VEHICLE OWNER**

Any vehicle equipped with any Rough Country product should have a “Warning to Driver” decal installed on the inside of the windshield or on the vehicle’s dash. The decal should act as a constant reminder for whoever is operating the vehicle of its unique handling characteristics.

Tools Needed:

6mm Allen
8mm Socket & Wrench
10mm Socket & Wrench
15mm Socket & Wrench
18mm Socket & Wrench
21mm Socket & Wrench
22mm Deep Well Socket
24mm Socket & Wrench
Pliers
7/16” Socket & Wrench
9/16” Socket & Wrench
5/8” Socket & Wrench
3/4” Socket & Wrench
13/16” Socket & Wrench
Jack
15/32” Drill
Drill Motor
Jack Stands
Torque Wrench

Torque Specs:

Size	Grade 5	Grade 8
5/16”	15 ft/lbs	20 ft/lbs
3/8”	30 ft/lbs	35 ft/lbs
7/16”	45 ft/lbs	60 ft/lbs
1/2”	65 ft/lbs	90 ft/lbs
9/16”	95 ft/lbs	130 ft/lbs
5/8”	135 ft/lbs	175 ft/lbs
3/4”	185 ft/lbs	280 ft/lbs

	Class 8.8	Class 10.9
6MM	5 ft/lbs	9 ft/lbs
8MM	18ft/lbs	23 ft/lbs
10MM	32ft/lbs	45ft/lbs
12MM	55ft/lbs	75ft/lbs
14MM	85ft/lbs	120ft/lbs
16MM	130ft/lbs	165ft/lbs
18MM	170ft/lbs	240ft/lbs

trailfortress.com/rough-country-3-5-inch-lift-kit-91644

65531 & 69131 KIT CONTENTS



91530 Kit Contents

67830BOX1
- 2 - Front Coil
- 2 - Rear Coil

91530991
- 2 - Front Sway Bar Links
- 2 - Rear Sway Bar Links
- 2 - Front Lower Adj. Control Arm
- 2 - Flex Joint Housing (16mm)

91530992
- 1609BAG6
- 1609BAG7
- 91530BAG1
- 2 - 660806 N3 Shock
- 2 - 660807 N3 Shock
- 66830BAG2
- 2 - Bump Stop Spacer
- 2 - Rear Sway Bar Spacer
- Track Bar Bracket
- 2 - Body Puck

11061
- Forged Adj. Track Bar

5090.1A
- Front Driveshaft

91830 Kit Contents

66630BOX1
- 2 - Front Coil
- 2 - Rear Coil

91530991
- 2 - Front Sway Bar Links
- 2 - Rear Sway Bar Links
- 2 - Front Lower Adj. Control Arm
- 2 - Flex Joint Housing (16mm)

91530992
- 1609BAG6
- 1609BAG7
- 91530BAG1
- 2 - 660806 N3 Shock
- 2 - 660807 N3 Shock
- 66830BAG2
- 2 - Bump Stop Spacer
- 2 - Rear Sway Bar Spacer
- Track Bar Bracket
- 2 - Body Puck

11061
- Forged Adj. Track Bar

5093.1A
- Front Driveshaft

91550 Kit Contents

67830BOX1
- 2 - Front Coil
- 2 - Rear Coil

91650991
- 1609BAG6
- 1609BAG7
- 91530BAG1
- 66830BAG2
- 2 - Bump Stop Spacer
- 2 - Rear Sway Bar Spacer
- Track Bar Bracket
- 2 - Body Puck

91530991
- 2 - Front Sway Bar Links
- 2 - Rear Sway Bar Links
- 2 - Front Lower Adj. Control Arm
- 2 - Flex Joint Housing (16mm)

11061
- Forged Adj. Track Bar

5090.1A
- Front Driveshaft

Vertex Shocks
- 680007L - Dr Front
- 680007R - Pass Front
- 690007L - Dr Rear
- 690007R - Pass Rear

91530BAG1	
Qty	**Description**
6	7/16” Flat Washer
4	10mm x 55mm Bolt
4	10mm Flat Washer
4	10mm Lock Washer
1	14mm x 80mm Bolt
3	14mm Lock Nut
2	14mm x 75mm Bolt
3	7/16” x 1 1/4” Bolt
4	12mm Flange Lock Nut
4	12mm x 65mm Bolt
3	7/16” Lock Nut
3	9/16” Flat Washer
1	Crush Sleeve
4	1/2” Flat Washer

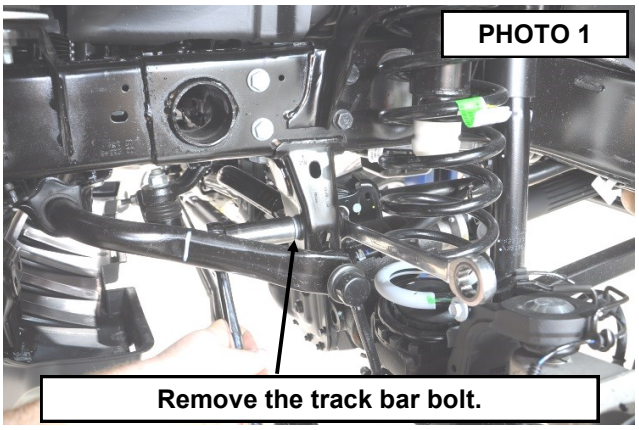
1609BAG6	
Qty	**Description**
4	3/8” Flat Washer
4	3/8” x .75” Bolt
4	3/8” Flange Lock Nut

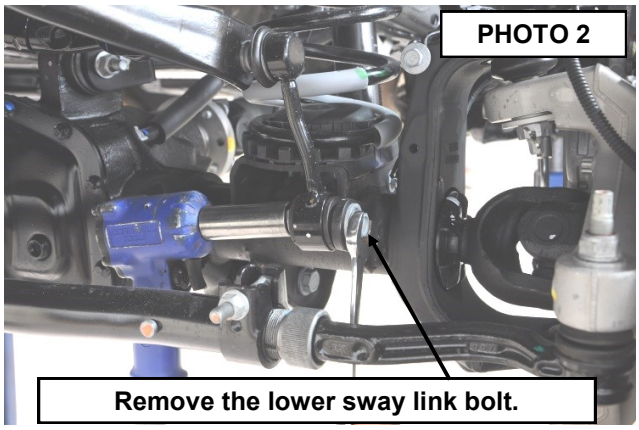
66830BAG2	
Qty	**Description**
1	Dr Brake Line Bracket
1	Pass Brake Line Bracket
2	1/4” x 1” Bolts
2	1/4” Nylock Nuts
4	1/4” Flat Washers

1609BAG7	
Qty	**Description**
2	3/8” Flat Washer
2	3/8” x 3” Bolt
2	3/8” Flange Lock Nut

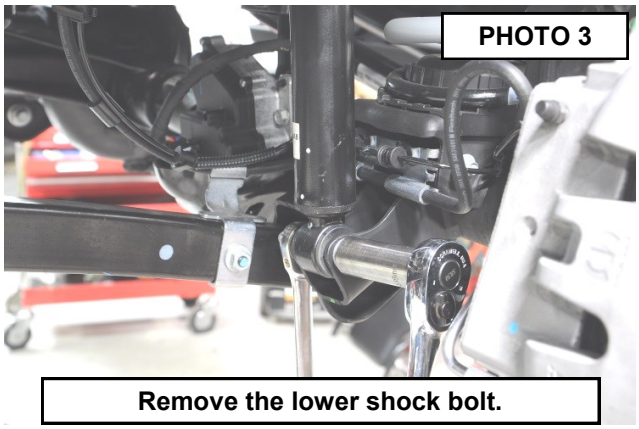
FRONT INSTALLATION INSTRUCTIONS

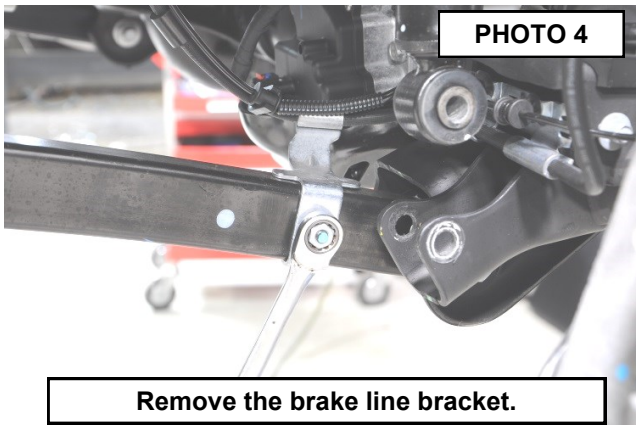
1. Place vehicle in park and chock the rear wheels. Raise the front of the vehicle with a jack and secure a jack stand beneath each frame rail behind the front control arms. Ease the frame down onto the stands. Place the jack under the front axle for support when removing the coil springs.
2. Remove the front tires/wheels, using a 22mm deep well socket.
3. Remove front driveshaft from axle and the transfer case, using a 15mm socket.
4. Using a 21mm socket and wrench, remove the front track bar from the frame and axle. **See Photo 1.** Retain hardware for reuse.
5. Using an 18mm socket and wrench remove the bottom sway bar link bolts. Retain hardware for reuse. **See Photo 2**.



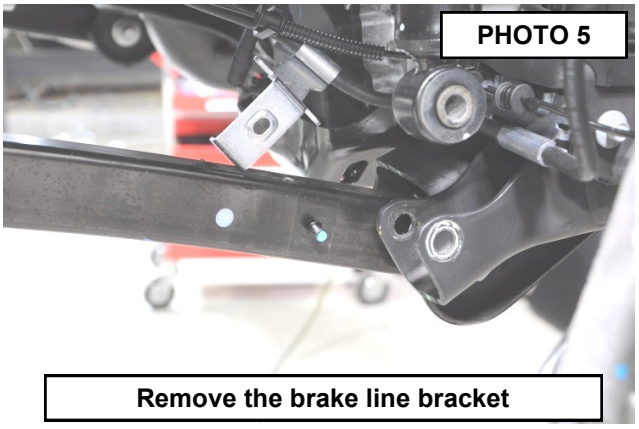


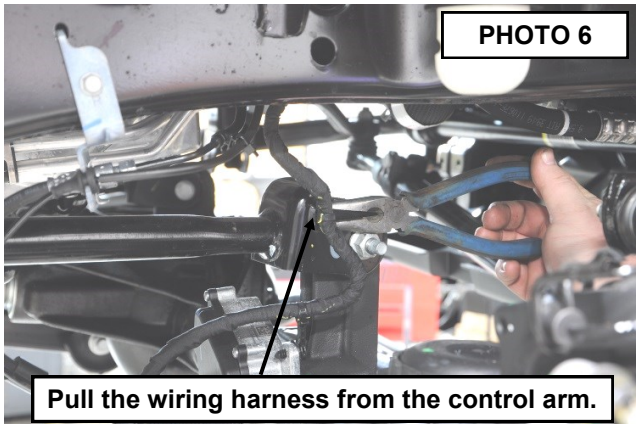
6. Remove the upper and lower shock bolts using a 18mm socket and wrench. You may have to raise the axle with the jack and pull down on the shock to remove the lower bolt. **See Photo 3.** Retain stock hardware.
7. Using a 15mm wrench, remove the brake line bracket from the lower control arm. **See Photos 4 & 5.** Retain hardware for reuse.



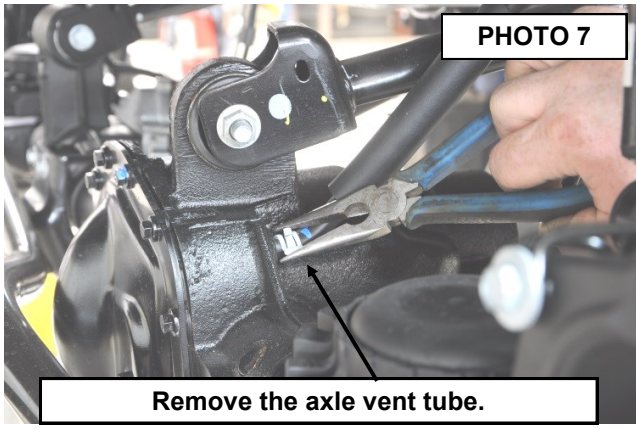


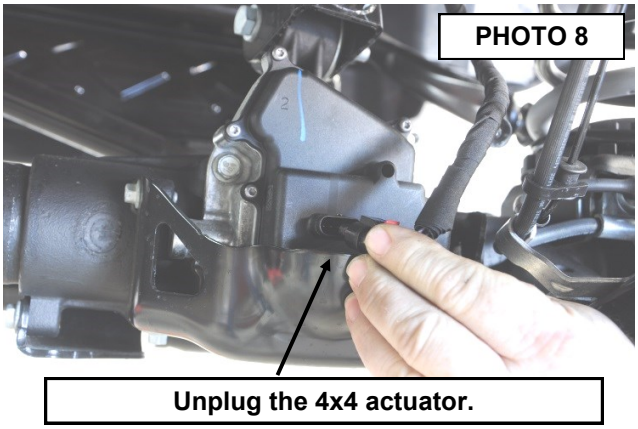
8. Using pliers, remove the wiring harness from the upper control arm. **See Photo 6.**



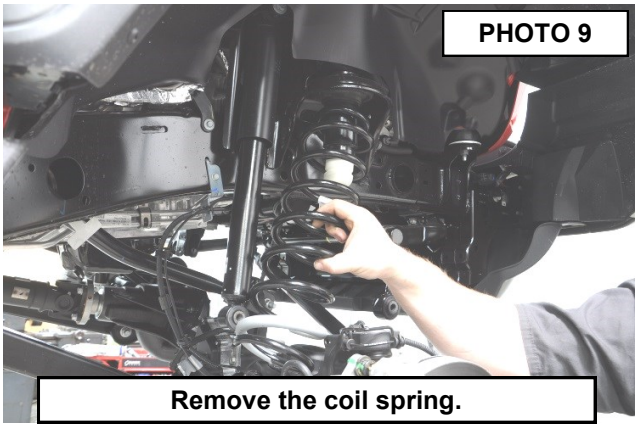


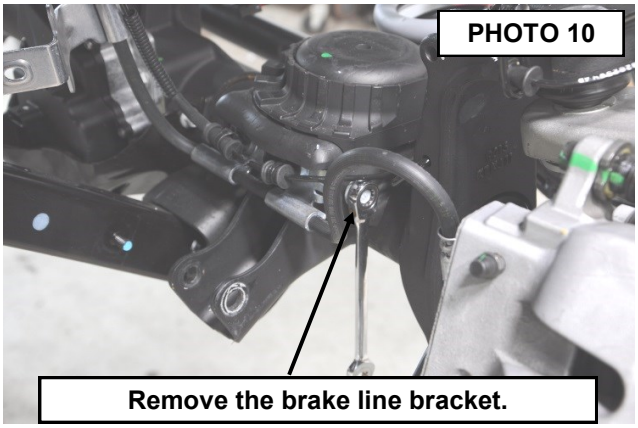
9. Using pliers, remove the axle vent tube from the differential housing. **See Photo 7**.
10. Unplug the 4x4 actuator for slack. **See Photo 8.**



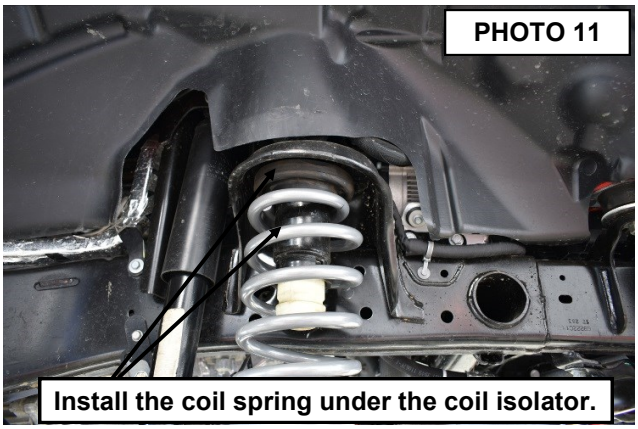


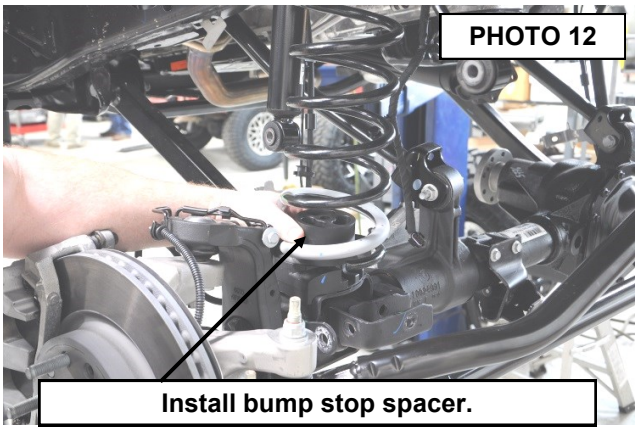
11. Lower the jack slowly and remove the coil spring and spring isolator. **See Photo 9.**
12. Using a 10mm wrench, remove the brake line bracket from the mount. Retain hardware for reuse. **See Photo 10.**



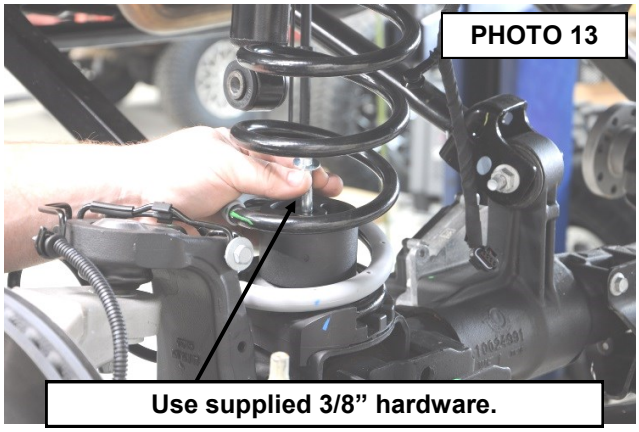


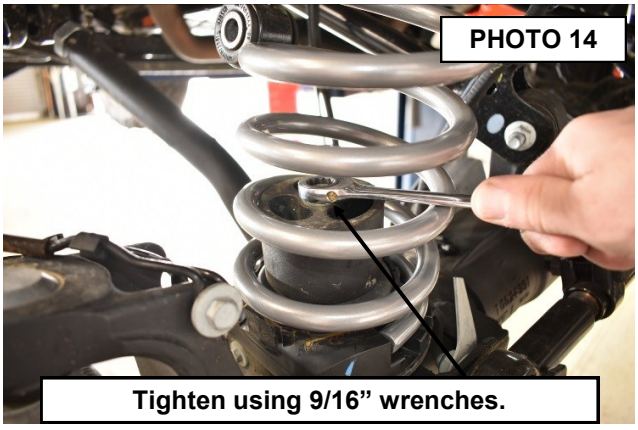
13. Install the supplied coil spring, making sure the coil spring isolator is in the factory location. **See Photo 11.**
14. Install the bump stop spacer into the lower coil mount. **See Photo 12.**



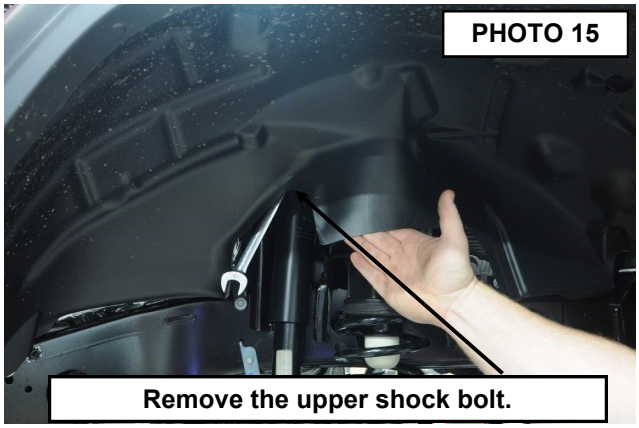


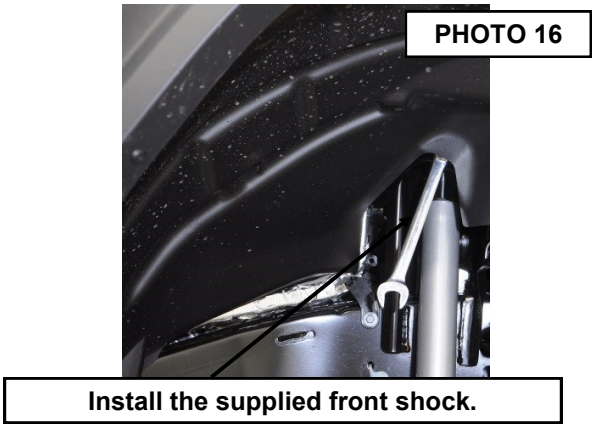
15. Place the supplied 3/8” x 3” bolt, washers, and nut (1609BAG7) through the spacer and coil mount. **See Photo 13.**
16. Tighten using 9/16” wrenches. **See Photo 14.**



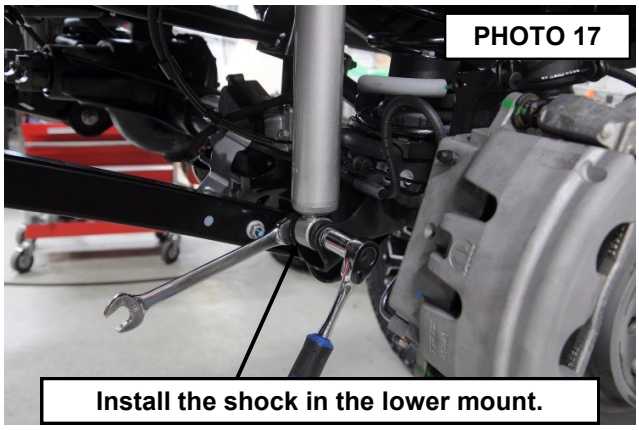


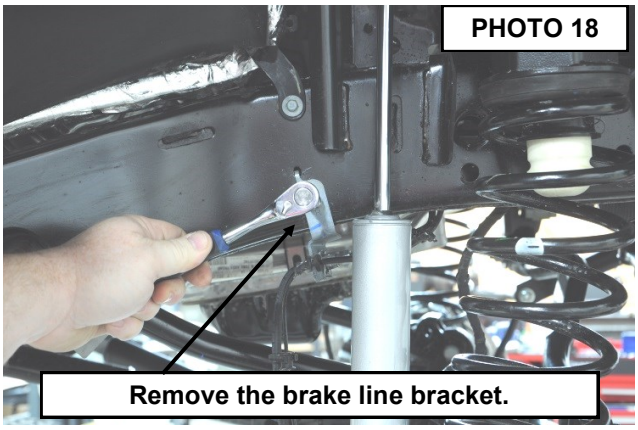
17. Remove the upper shock mounting bolt using a 19mm wrench. Retain hardware for reuse. **See Photo 15.**
18. Install the supplied shock, 660806, in the upper mounts using the factory hardware and the supplied (91530BAG1) 12mm x 65mm bolt, washer (bolt head side), and nut in the lower mount. Tighten using a 19mm wrench. **Make sure the upper eyelet is offset to the outside of the vehicle. See Photo 16.**



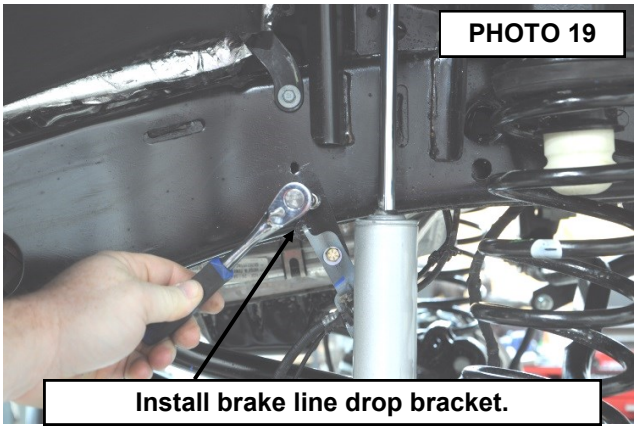


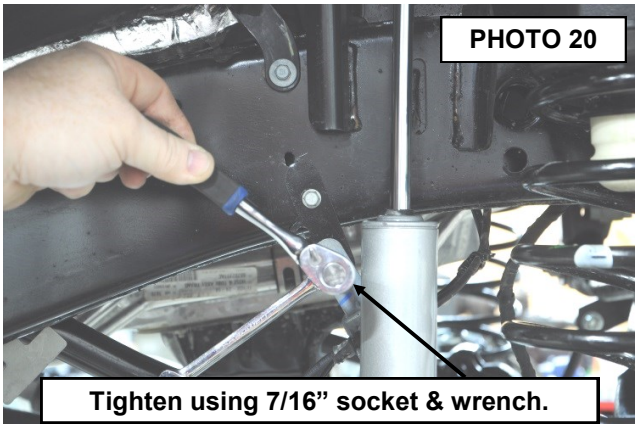
19. Tighten the lower shock mounting bolt using an 18mm wrench and socket. **See Photo 17.**
20. Remove the brake line bracket from the frame using a 10mm wrench. Retain hardware for reuse. **See Photo 18.**



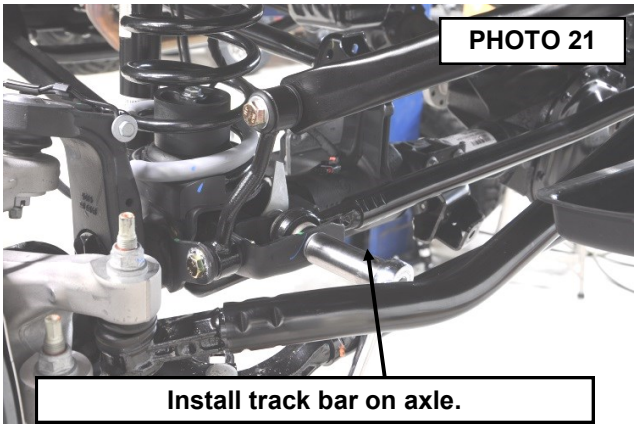


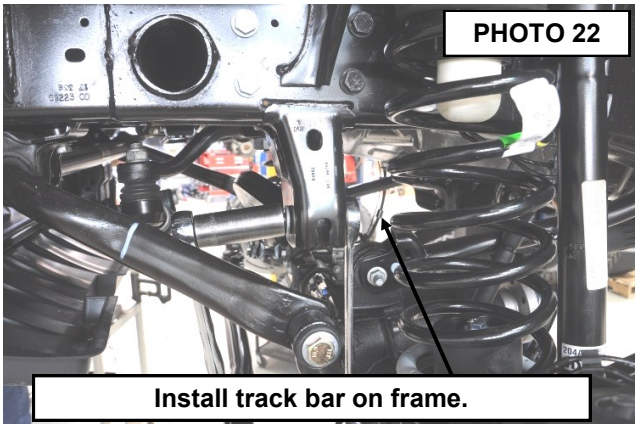
21. Install the supplied brake line bracket using the factory bolt for the frame and the supplied 1/4” x 1” bolt, washer, and nylock nut (66830BAG2). Tighten using a 10mm wrench for the frame bolt. **See Photo 19.**
22. Torque the brake line bracket bolt to 12ft/lbs using a 7/16” wrench and socket. **See Photo 20.**



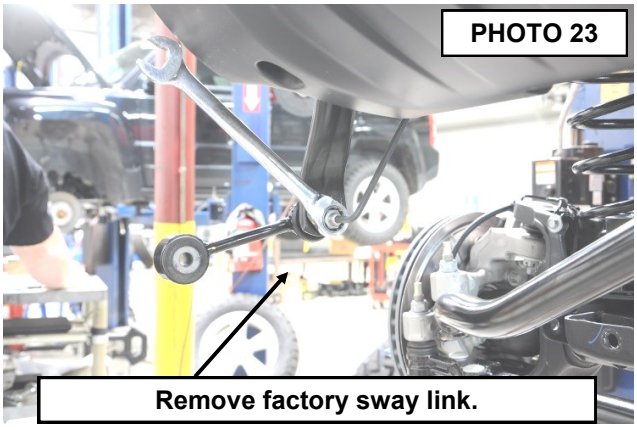


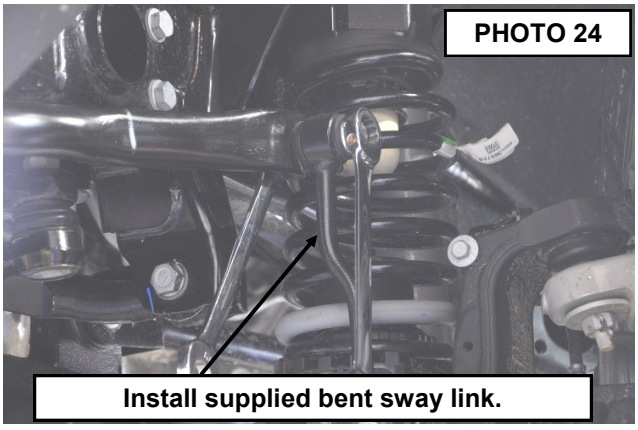
23. Install the brake line bracket on the coil mount using the factory hardware and a 10mm wrench.
24. Adjust the supplied track bar to a length of 33.75 from center of eyelets and install using the factory hardware. The track bar will be adjusted during alignment. **Do not tighten at this time**. **See Photos 21 & 22.**



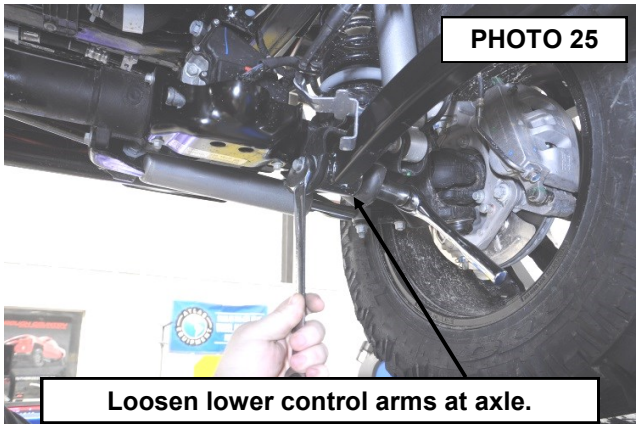


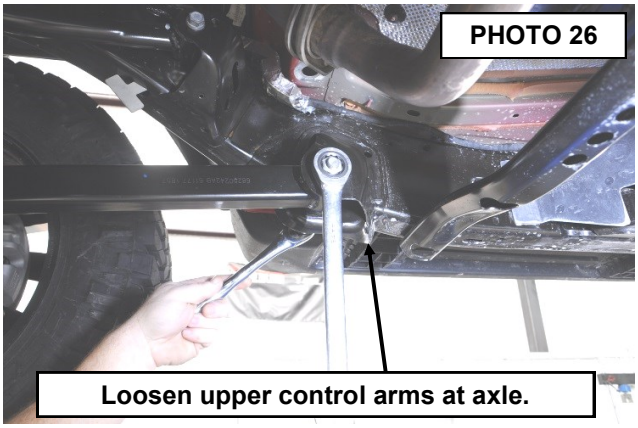
25. Remove the sway link from the sway bar using a 6mm Allen and an 18mm wrench. **See Photo 23.**
26. Install the new supplied offset sway link on the sway bar using the supplied 12mm x 65mm bolt, washers, and lock nut (91530BAG1). Torque to 55ft/lbs. **See Photo 24.**



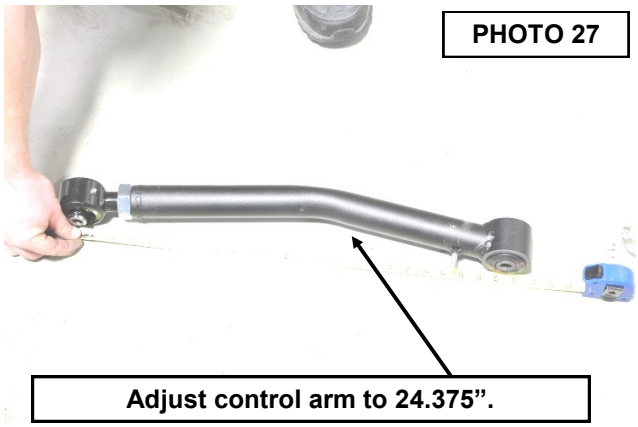


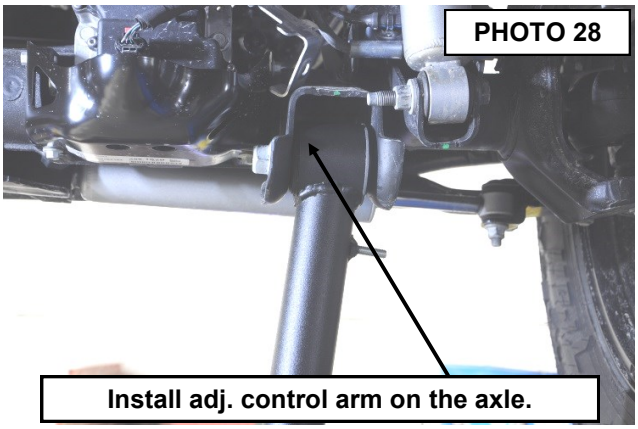
27. Remove the lower control arms using 21mm and 24mm wrenches. Retain hardware for reuse. **See Photos 25 & 26.**



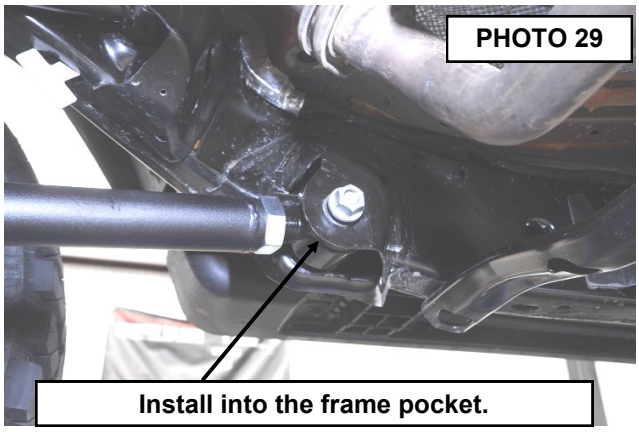


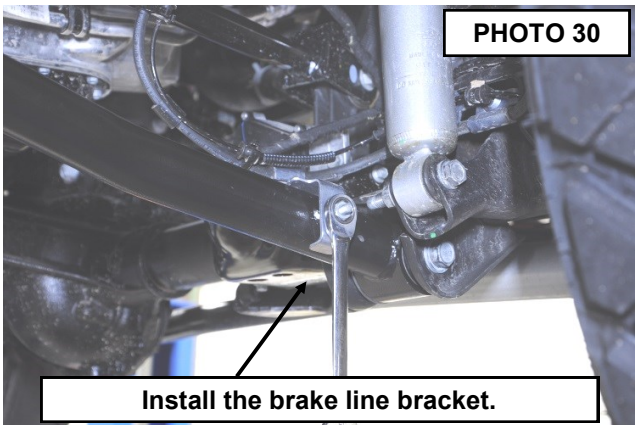
28. Adjust the supplied adjustable lower control arms to a length of 24.375” center of eye to center of eye. **See Photo 27.**
29. Install the adjustable lower control arm on the axle using the factory hardware. **Do not tighten at this time. See Photo 28.**



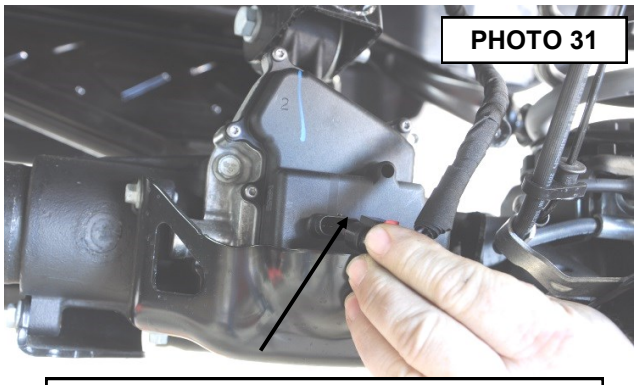


30. Install the flex joint end in the control arm pocket on the frame, using the factory hardware. **Do not tighten at this time. See Photo 29.**
31. Install the brake line bracket on the lower control arm using the factory hardware. Tighten using a 15mm wrench. **See Photo 30.**

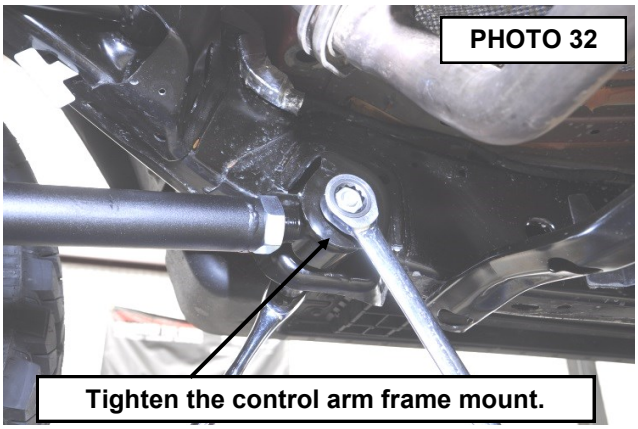




32. Clip the wiring harness into the upper control arm.
33. Attach the axle vent tube to the differential using a pair of pliers.
34. Plug-in the 4x4 actuator. **See Photo 31.**
35. Attach the sway bar links, to the axle, using the factory hardware and an 18mm socket and wrench. Torque to 55ft/lbs.
36. Install the front tires/wheels, using a 22mm deep well socket.
37. Lower the vehicle to the floor.
38. Tighten the control arm frame mount using a 24mm socket and 21mm wrench.. Torque to factory specs. **See Photo 32.**

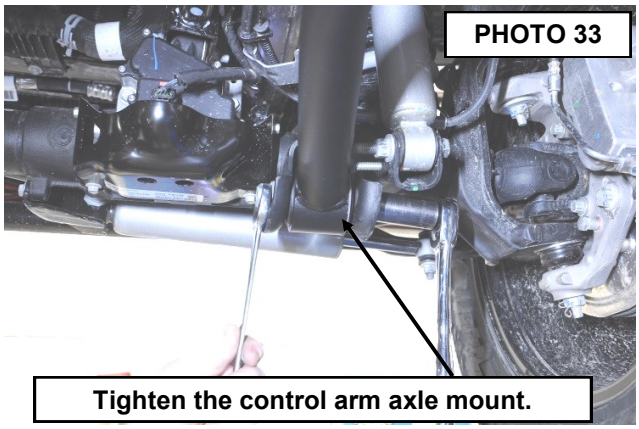


Plug in the 4x4 actuator.

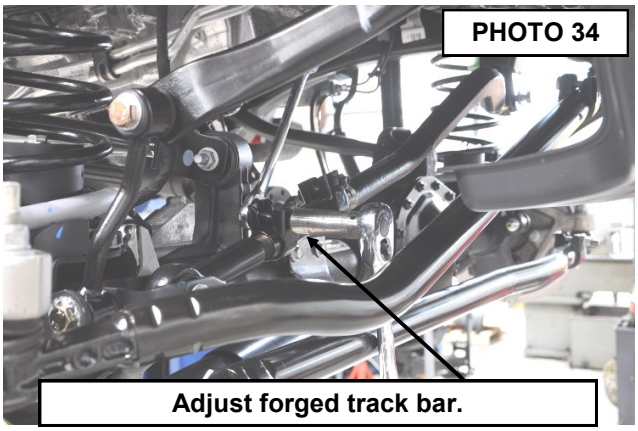


Tighten the control arm frame mount.

39. Tighten the control arm axle mount using a 24mm socket and 21mm wrench. Torque to factory specs. **See Photo 33.**
40. Adjust the front track bar to center the front axle. **Make sure the clamps are positioned to maintain clearance from all obstructions.**
41. Torque the track bar mounting bolts to factory specs using a 21mm socket.
42. Tighten the collar pinch bolts using a 17mm wrench and socket. **See Photo 34.**
43. Install the supplied 5090.1 driveshaft using the instructions included with the driveshaft.



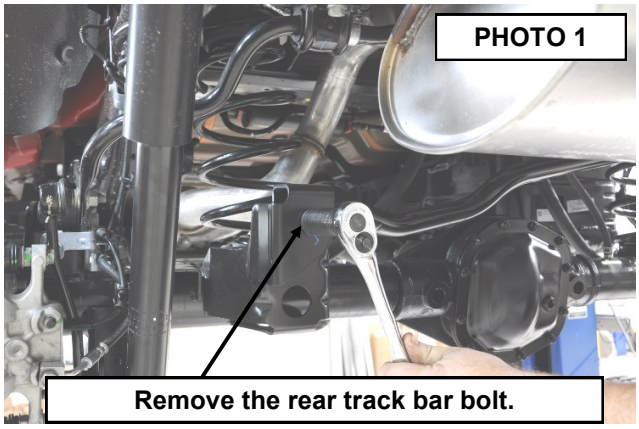
Tighten the control arm axle mount.

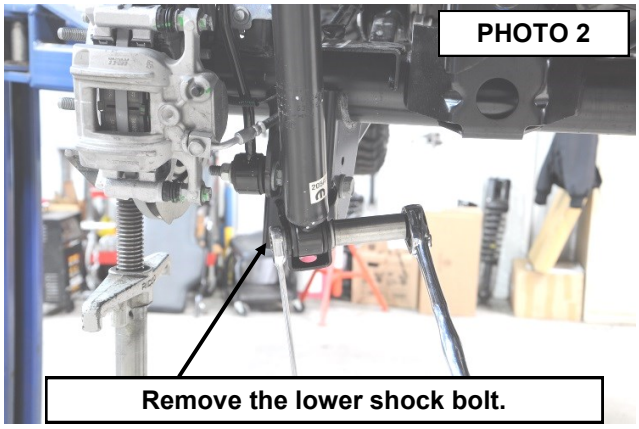


Adjust forged track bar.

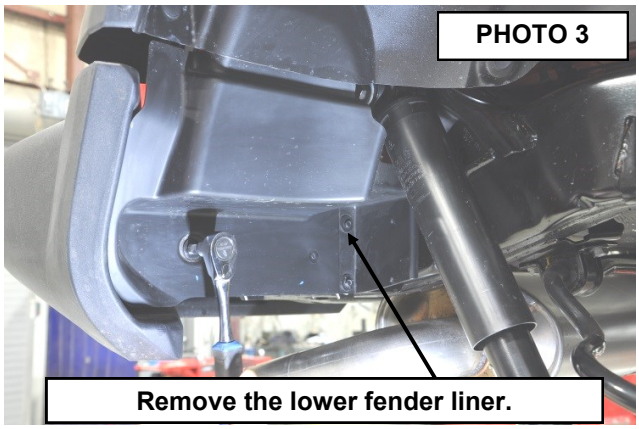
REAR INSTALLATION INSTRUCTIONS

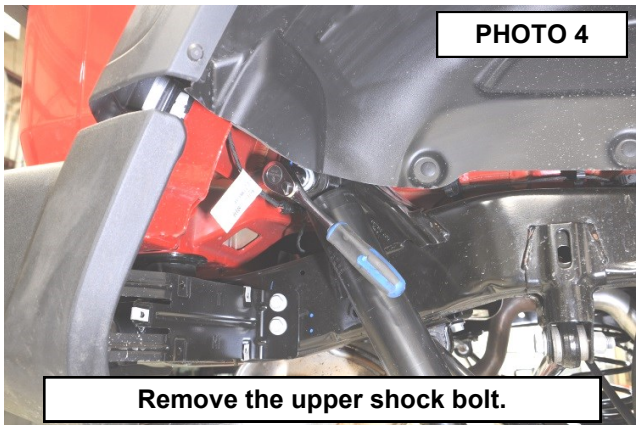
1. Jack up the rear of the vehicle and support the vehicle with jack stands, so that the rear wheels are off the ground. Chock front wheels. Position a jack so it supports, but does not raise the rear axle.
2. Remove the rear tires/wheels, using a 22mm deep well socket.
3. Using a 21mm socket remove the track bar bolt at the axle. Retain the stock hardware for reuse. **See Photo 1.**
4. Using an 18mm socket and wrench, remove the lower shock mounting hardware. Save for reuse. **See Photo 2.**



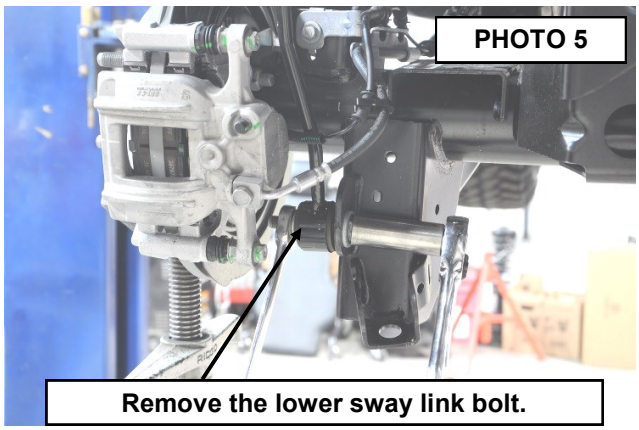


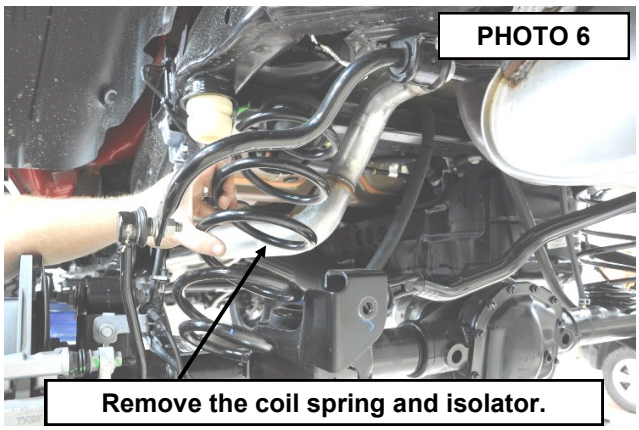
5. Using an 8mm socket, remove the 3 bolts holding the lower fender liner, remove the liner. Retain hardware for re-use. **See Photo 3.**
6. Using an 18mm socket, remove the upper shock bolt and remove the shock. **See Photo 4.**



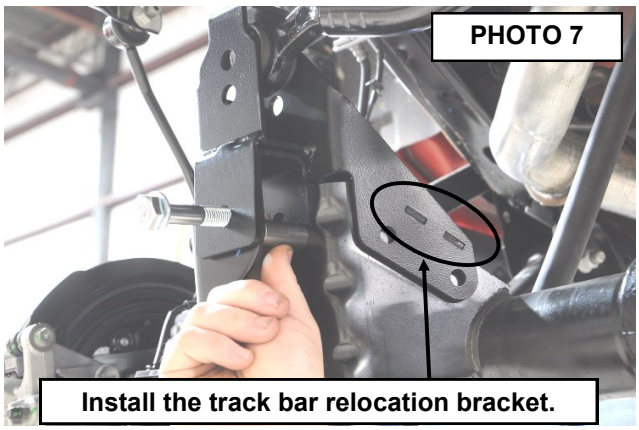


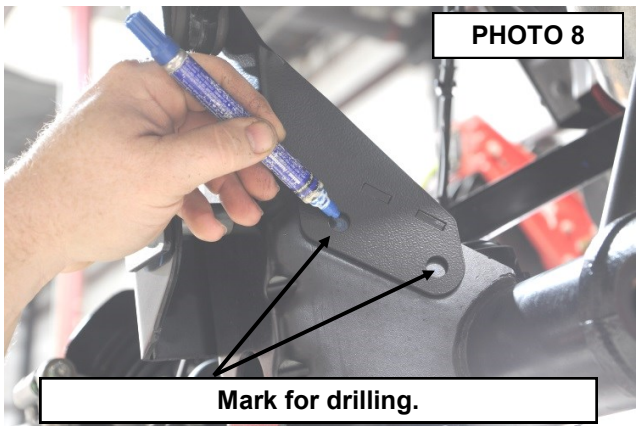
7. Using an 18mm socket and wrench, remove the lower sway bar link hardware. **See Photo 5.**
8. Lower the axle and remove the coil spring and coil spring isolator. **See Photo 6**.



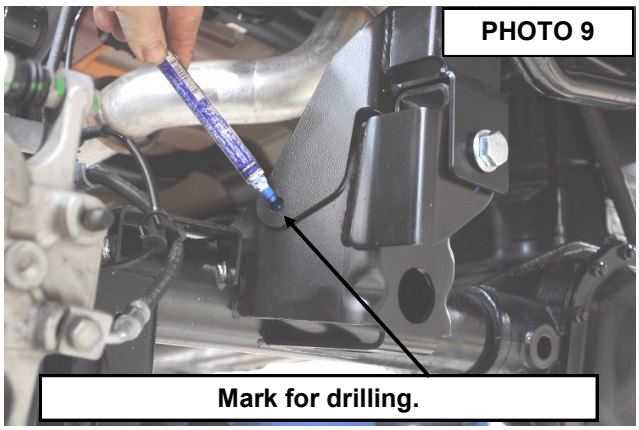


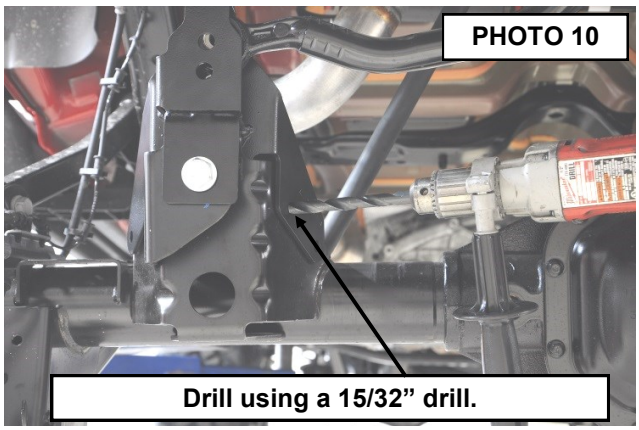
9. Place the supplied track bar relocation bracket over the factory track bar bracket, using the supplied 14mm x 80mm bolt washers, nut and supplied sleeve (91530BAG1). Tighten using a 21mm socket. Make sure the track bar relocation bracket tab is against the edge of the factory bracket. **See Photo 7.**



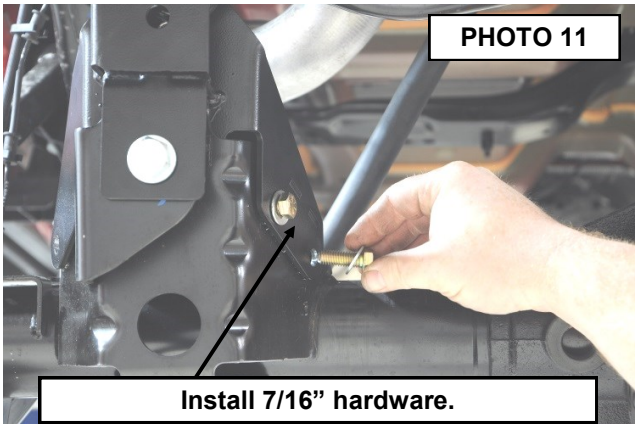


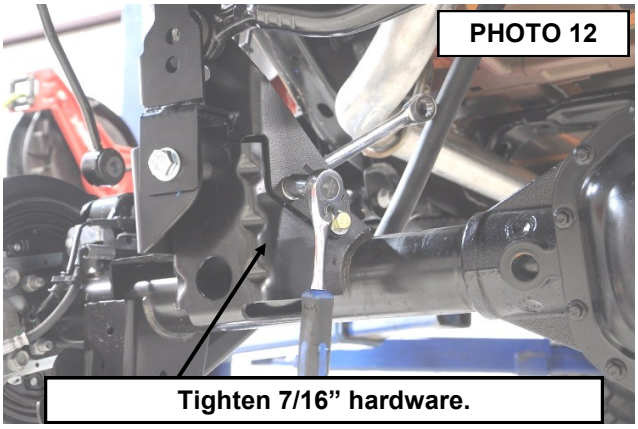
10. Use the supplied bracket as a drill guide. **See Photos 8 & 9.**
11. Drill the 3 holes from **photos 8 & 9** using a 15/32" drill. **See Photo 10.**



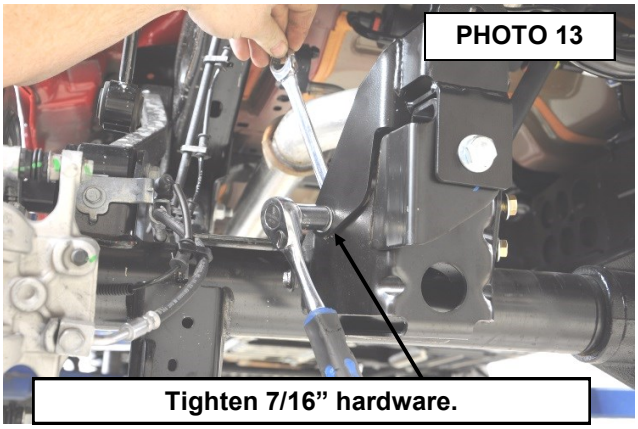


12. Secure the supplied bracket to the factory bracket using the supplied 7/16" x 1.25" bolts, washers, and nylock nuts (91530BAG1). **See Photo 11.**
13. Torque to 60ft/lbs using a 5/8" socket and wrench. **See Photo 12**.

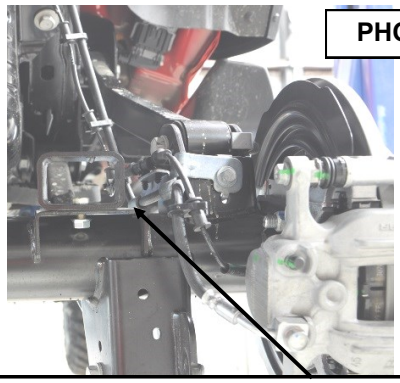




14. Torque to 60ft/lbs using a 5/8” socket and wrench. **See Photo 13.**
15. Install the supplied bump stop spacer on the axle using the supplied (1609BAG6) 3/8” x .75” bolts, washers, and flange lock nuts. (You will use 2 bolts, 2 washers, and 2 nuts per side). Using a 9/16” wrench and socket, torque the hardware to 30ft/lbs. **See Photos 14& 15.**

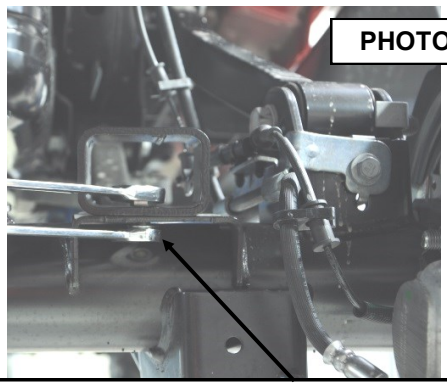


Tighten 7/16” hardware.

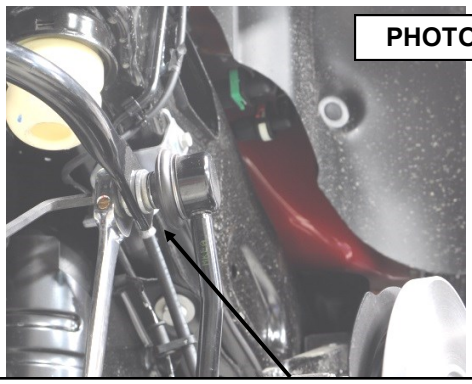


Install the bump stop spacer.

16. Using a 6mm Allen and an 18mm wrench remove the sway link from the sway bar. **See Photo 16.**

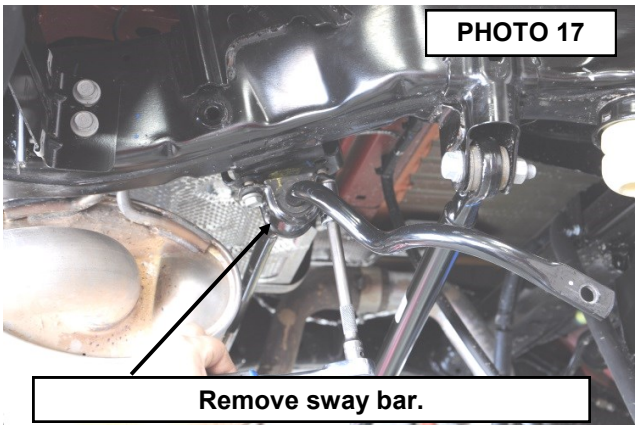


Tighten bump stop spacer hardware.

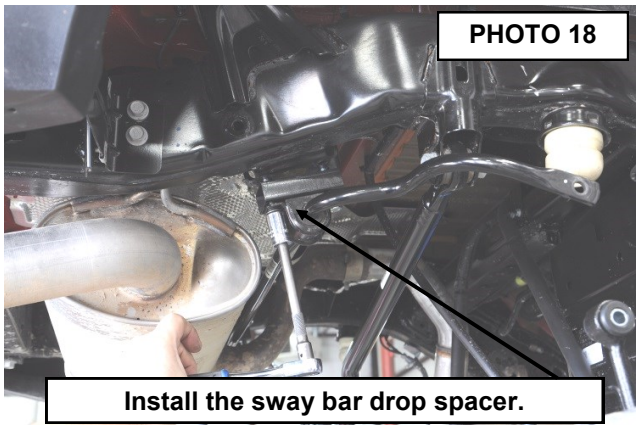


Remove the sway link.

17. Using a 15mm socket, remove the factory sway bar from the frame. **See Photo 17.**
18. **NOTICE** Flip the sway bar from passenger side to driver side.
19. Install the sway bar drop brackets between the sway bar and the frame, using the supplied 10mm x 55mm bolts, lock washers, and flat washers (91530BAG1). Torque to 32ft/lbs using a 16mm socket. **See Photo 18.**

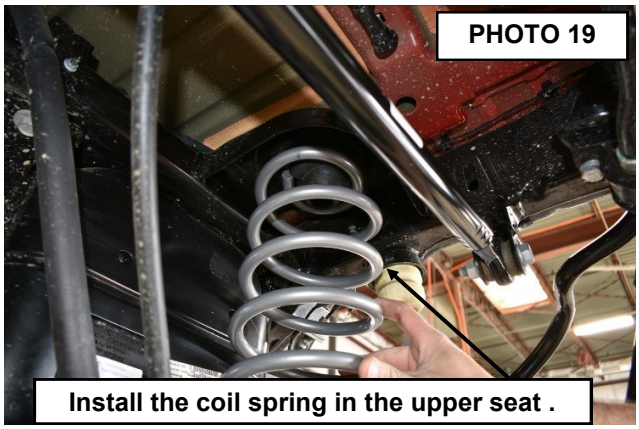


Remove sway bar.

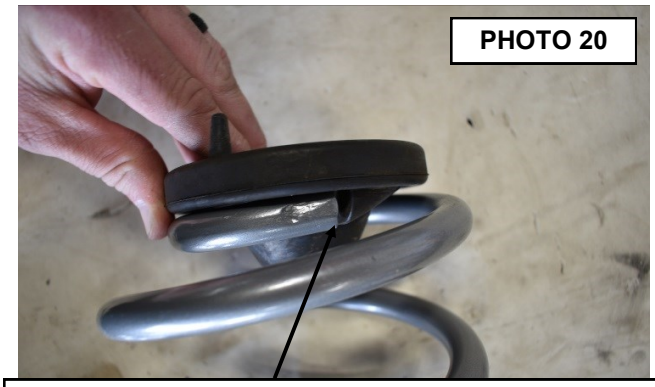


Install the sway bar drop spacer.

20. Install the supplied coil spring into the upper coil spring pocket, making sure the coil spring is properly seated in the coil spring isolator. **See Photos 19 & 20.**

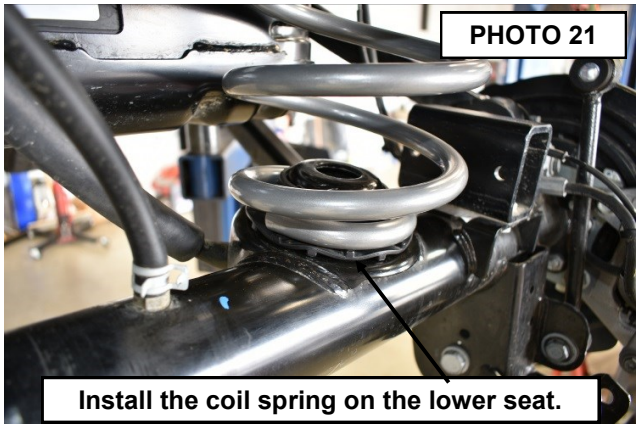


Install the coil spring in the upper seat .

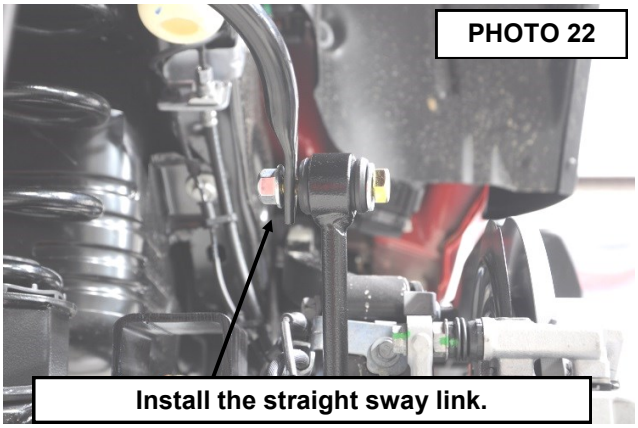


Make sure the coil is properly seated in the isolator.

21. Install the supplied rear coil spring on the lower spring seat. **See Photo 21**.
22. Attach the supplied straight sway link to the sway bar using the supplied 12mm x 65mm bolt, 12mm washers (bolt head side only), and 12mm flange nut (91530BAG1). **See Photo 22.**

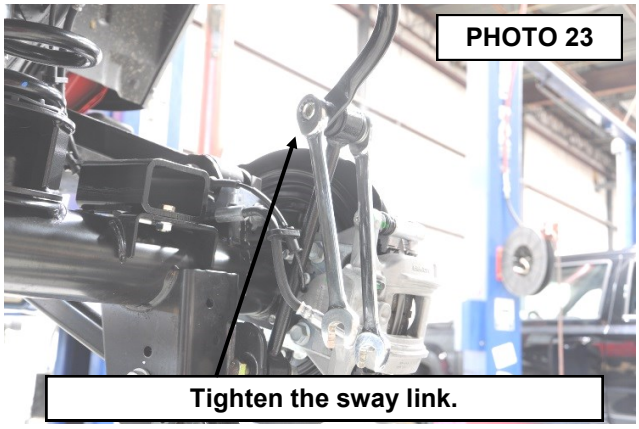


Install the coil spring on the lower seat.

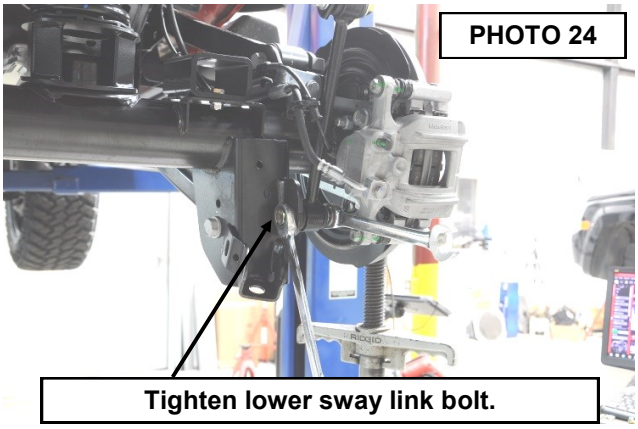


Install the straight sway link.

23. Using 18mm wrenches, tighten the upper sway link bolt. Torque to 55ft/lbs. **See Photo 23.**
24. Install the sway bar links, in the lower mount using the factory bolts and an 18mm socket and wrench. Torque to 55ft/lbs. **See Photo 24.**

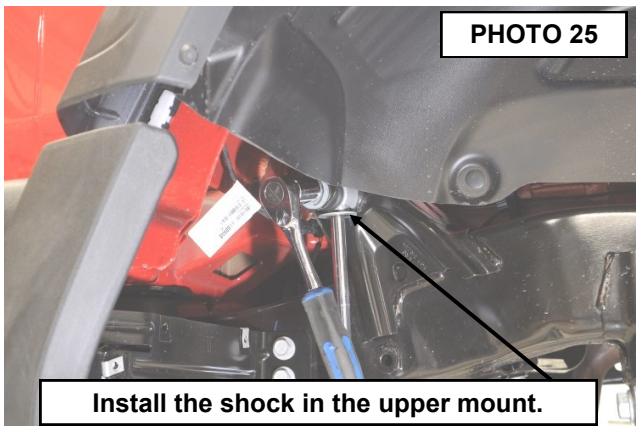


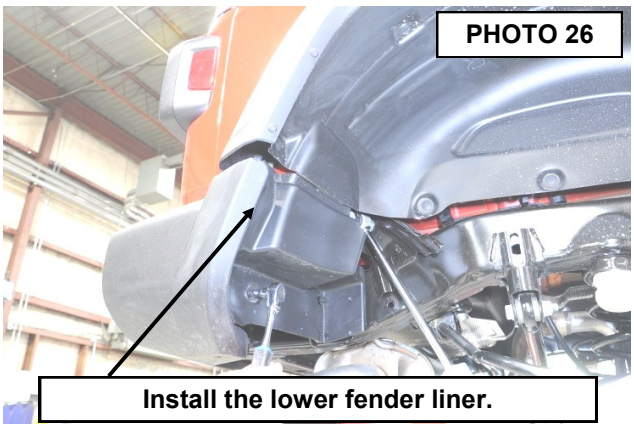
Tighten the sway link.



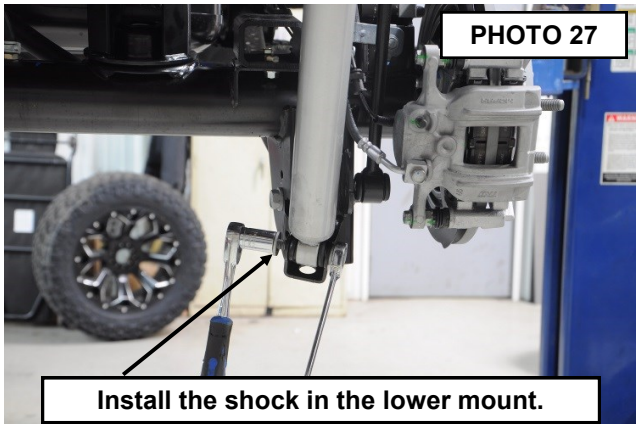
Tighten lower sway link bolt.

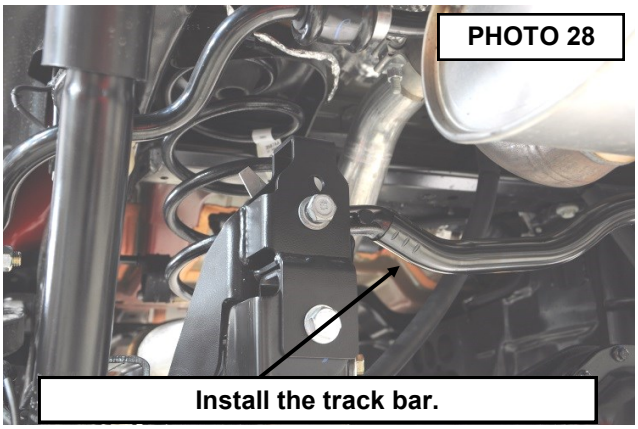
25. Install the supplied rear shock, 660807, in the upper mount using the factory bolt. Torque to factory specs using an 18mm socket. **Make sure the upper eyelet is offset to the outside of the vehicle. See Photo 25**.
26. Install the lower fender liner using the stock hardware, tighten using an 8mm socket. **See Photo 26**.



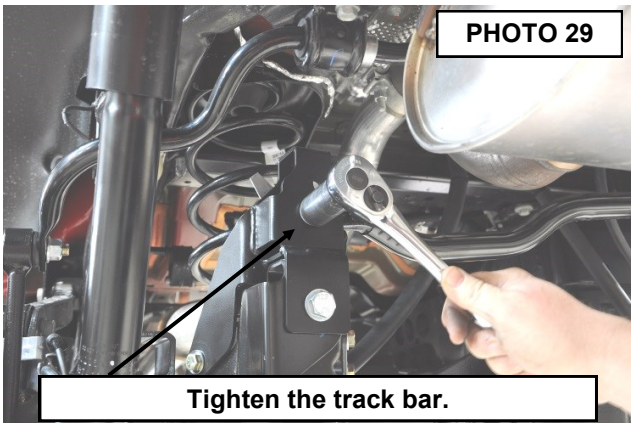


27. Install the shock in the lower mount using the factory shock bolt. Torque to factory specs using an 18mm socket and wrench. **See Photo 27.**
28. Install the track bar into the lower hole, on the track bar relocation bracket using the factory hardware. **See Photo 28**.





29. Torque the track bar bolt to 130ft/lbs. using a 13/16” socket and wrench. **See Photo 29.**
30. Reinstall the rear tires/wheels, using a 22mm deep well socket
31. Lower the vehicle to the ground.



POST INSTALLATION

1. Confirm that the draglink was adjusted to the center steering wheel **BEFORE** the vehicle is driven. Failure to do so will cause a computer error, odd handling, and poor performance.
2. Check all fasteners for proper torque. Check to ensure there is adequate clearance between all rotating, mobile, fixed and heated members. Check steering for interference and proper working order. Test brake system.
3. Perform steering sweep. The distance between the tire sidewall and the brake hose must be checked closely. Cycle the steering from full turn to full turn to check for clearance. Failure to perform inspections may result in component failure.
4. Re-torque all fasteners after 500 miles and recheck after 1000 miles. Alignment must be checked by a qualified mechanic. Visually inspect components and re-torque fasteners during routine vehicle service.
5. Readjust headlights to proper settings.
6. Have a qualified alignment center realign the front end, to the factory specifications immediately.

MAINTENANCE INFORMATION

It is the ultimate buyers responsibility to have all bolts/nuts checked for tightness after the first 500 miles and then every 1000 miles. Wheel alignment, steering system, suspension and driveline systems must be inspected by a qualified professional mechanic at least every 3000 miles.

Thank you for purchasing a Rough Country Suspension System.

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