TRAIL FORTRESS

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Rough Country 70331 Installation Instructions

3.5-Inch Lift Kit with N3 Shocks for 2022–2025 Toyota Tundra 4WD

Part number: 70331

trailfortress.com/rough-country-3-5-inch-lift-kit-70331

Scan for fitment, price and install help



TOYOTA 2022 Tundra 3.5” Lift Kit

Thank you for choosing Rough Country for all 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 the tool list and make sure you have the necessary tools to install the kit.

PRODUCT USE INFORMATION

⚠WARNING As a general rule, the taller a vehicle is, the easier it will roll. We strongly recommend, because of rollover possibility, that 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. We will be happy to answer any questions concerning the design, function, and correct use of our products.

This suspension system was developed to accommodate a **Maximum tire size of 35 x 12.50 on an 20x9” 0mm Offset. Larger tires or different wheel offsets will need to be verified prior to use.**

⚠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. It is your responsibility to install the warning decal and forward these installation instructions on to the vehicle owner for review. These instructions should be kept in the vehicle for its service life.

⚠NOTICE Note to installer : Before installation begins we recommend that a test drive be performed. While driving check for uncommon sounds and/or vibrations . What you feel and hear during the test drive will only magnify once lift kit is installed. Advise you to discuss possible issues identified from drive with customer before proceeding to install this kit.

Torque Specs:

Size	Grade 5	Grade 8	Size	Class 8.8	Class 10.9
5/16”	15 ft/lbs	20ft/lbs	6MM	5ft/lbs	9ft/lbs
3/8”	30 ft/lbs	35ft/lbs	8MM	18ft/lbs	23ft/lbs
7/16”	45 ft/lbs	60ft/lbs	10MM	32ft/lbs	45ft/lbs
1/2”	65 ft/lbs	90ft/lbs	12MM	55ft/lbs	75ft/lbs
9/16”	95 ft/lbs	130ft/lbs	14MM	85ft/lbs	120ft/lbs
5/8”	135ft/lbs	175ft/lbs	16MM	130ft/lbs	165ft/lbs
3/4”	185ft/lbs	280ft/lbs	18MM	170ft/lbs	240ft/lbs

Kit Contents

70300BOX1

Front

1 - Dr Upper Control Arm
1 - Pass Upper Control Arm
1 - Dr Diff Mount
1 - Pass Diff Mount
1 - Dr Sway Bar Drop
1 - Pass Sway Bar Drop
1 - 70331BAG1 (Front Kit Bag)
- 2 - 1/2” Flat Washers
- 2 - 1/4” Lock Nuts
- 4 - 7/16” x 1.25” Bolts
- 4 - 7/16” Flat Washers
- 4 - 7/16” Lock Nuts
- 2 - 5/16” x 3/4” Bolts
- 2 - 5/16” Flat Washers
- 2 - 5/16” Flange Lock Nuts
- 3 - Brake Line Brackets

1 - 70300BAG2 (Diff Drop Bag)
- 4 - Bushings
- 2 - 9/16” x 3/4” x 2.6” Sleeve
- 2 - 9/16” Flat Washers
- 3 - 16mm Nylock Nuts
- 3 - 16mm Flat Washers
- 2 - 14mm x 65mm Bolts

Rear

2 - Rear Coil Springs
1 - 70300BAG3 (Rear Kit Bag)
- 2 - Flag Nuts
- 2 - 1/2” x 1.25” Bolts
- 2 - 1/2” Flat Washers
- 2 - 3/4” x 3.5” Bolts
- 2 - 3/4” Lock Nuts
- 4 - 3/4” Flat Washers
- 2 - 3/8” x 1” Bolts
- 2 - 3/8” Flat Washers
- 2 - 3/8” Flange Lock Nuts
- 1 - 5/16” x 3/4” Bolt
- 1 - 5/16” Flat Washer
- 1 - 5/16” Flange Lock Nut
- 1 - 10mm x 35mm Bolt
- 1 - 10mm Flat Washer
- 1 - 10mm Serrated Flange Nut
- 1 - 9/16” x 13/16” x 1.6” Sleeve
- 1 - 14mm x 80mm Bolt
- 1 - 14mm Lock Nut
- 2 - 9/16” Flat Washers

1 - Track Bar Bracket
1 - Track Bar Bracket Shim

N3 Shock Pair

Loaded Strut Pair

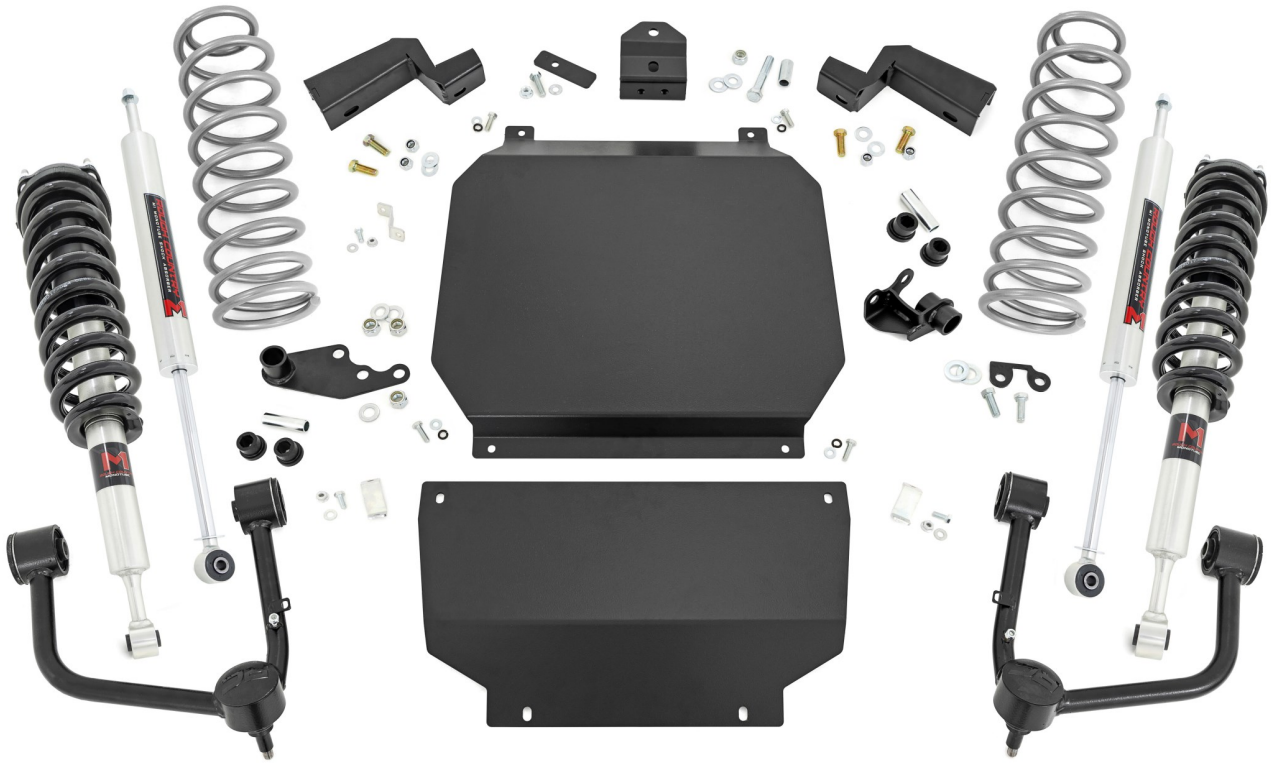
70300BOX2

1 - 70300BAG4 (Skid Plate Bolts)
- 4 - 8mm x 25mm Bolts

1 - Front Skid Plate
1 - Lower Skid Plate

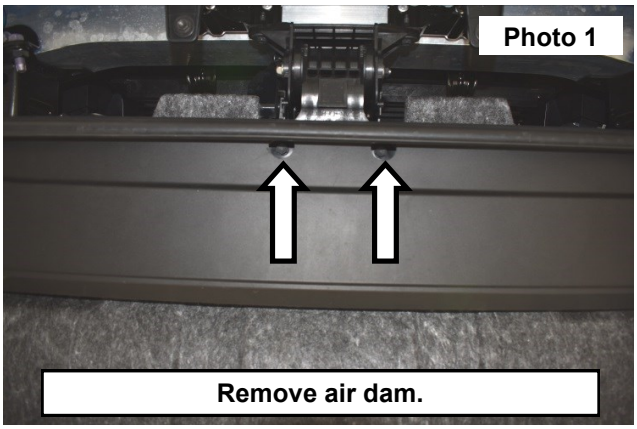
Tools Needed:

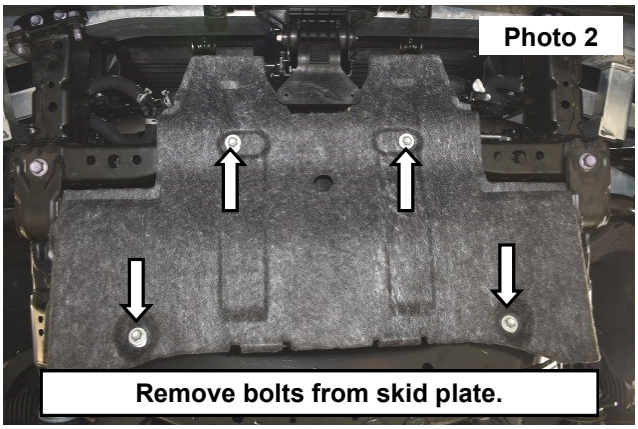
10mm Socket/Wrench
12mm Socket/Wrench
13mm Socket/Wrench
14mm Socket/Wrench
15mm Socket/Wrench
17mm Socket/Wrench
19mm Socket/Wrench
22mm Socket/Wrench
24mm Socket/Wrench
43mm Socket/Wrench
1/2” Socket/Wrench
9/16” Socket/Wrench
5/8” Socket/Wrench
3/4” Socket/Wrench
1-1/8” Socket/Wrench
Trim Remover Tool



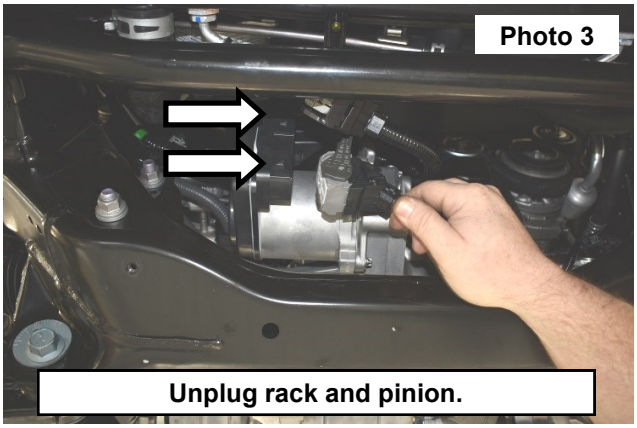
FRONT INSTALLATION INSTRUCTIONS

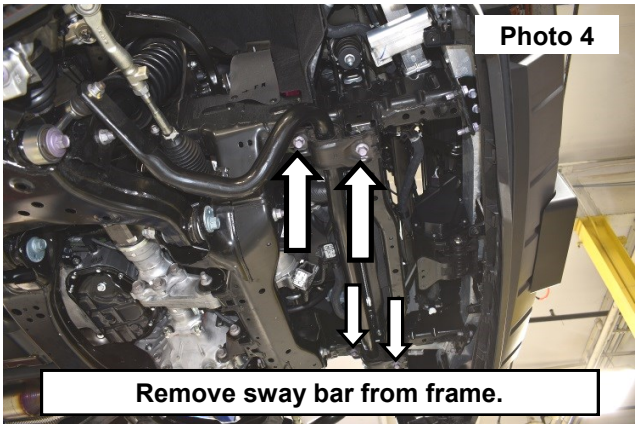
1. Jack up the front of the vehicle and place on jack stands. Remove the front wheels.
2. Remove 2 bolts from the center of the air dam using a 10mm socket/wrench to release the air dam. **See Photo 1**.
3. Remove the 4 bolts from the skit plate using a 12mm socket/wrench. **See Photo 2**.



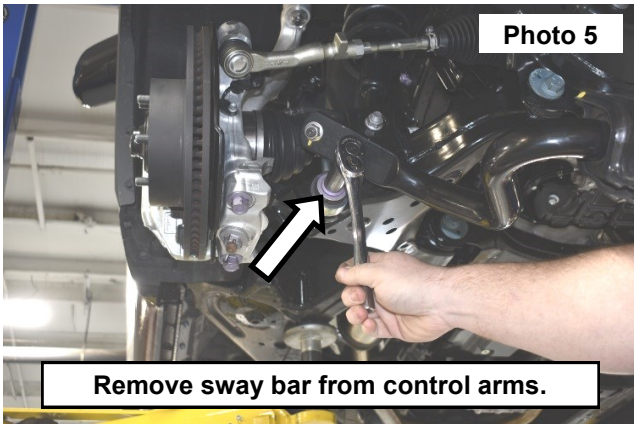


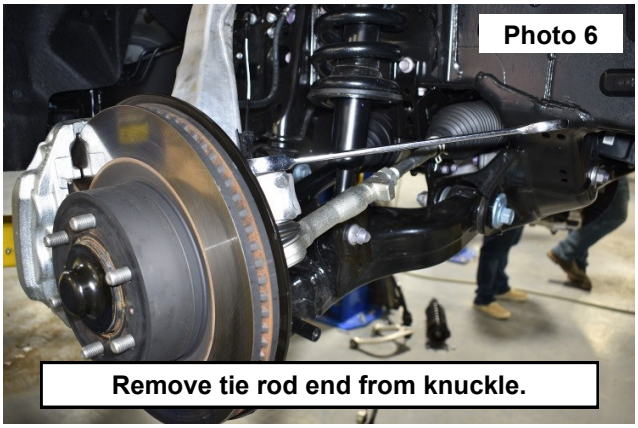
4. Unplug the rack and pinion. **See Photo 3**.
5. Remove the sway bar from the frame using a 17mm socket/wrench. **See Photo 4**.



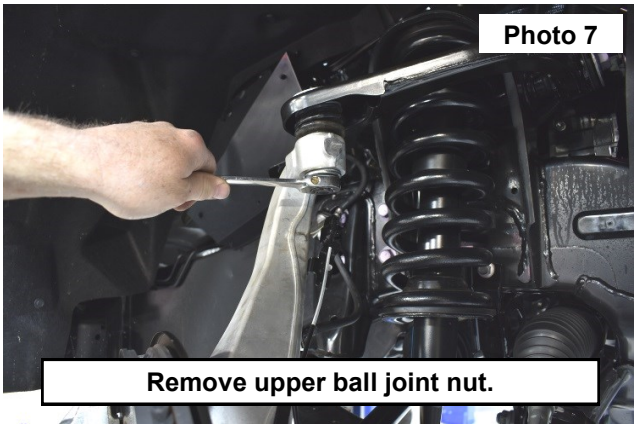


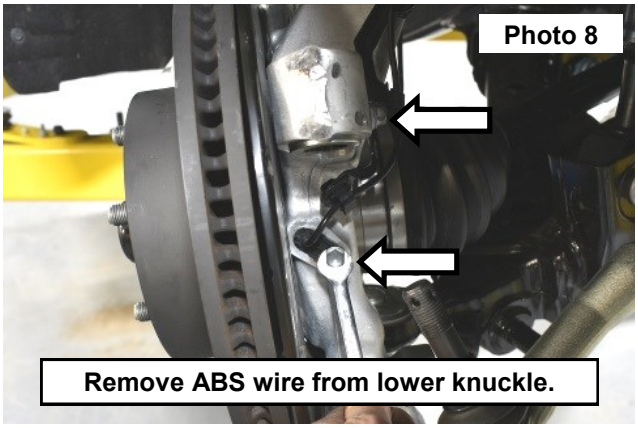
6. Remove the sway bar from the control arms using a 19mm socket/wrench. **See Photo 5**.
7. Remove the tie rod end from the knuckle using a 24mm socket/wrench. **See Photo 6**.



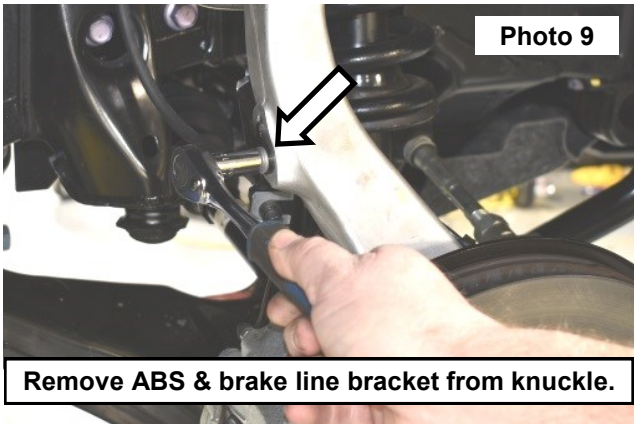


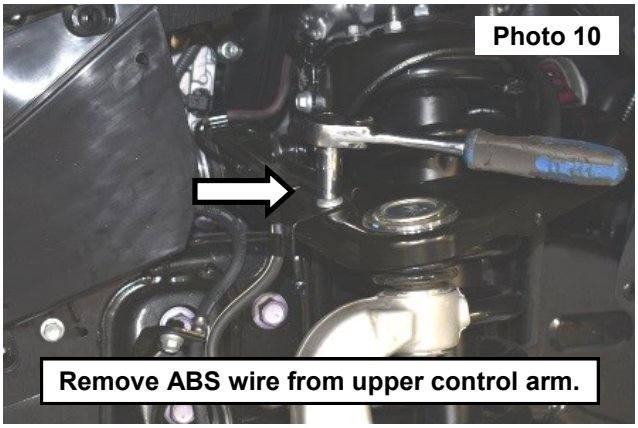
8. Remove the J-clip from the upper ball joint nut and remove the nut using a 19mm socket/wrench. **See Photo 7**.
9. Remove the ABS wire from the lower knuckle using a 10mm socket/wrench. **See Photo 8**.



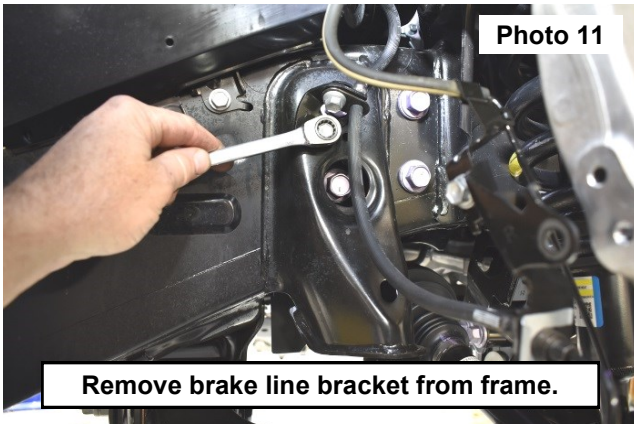


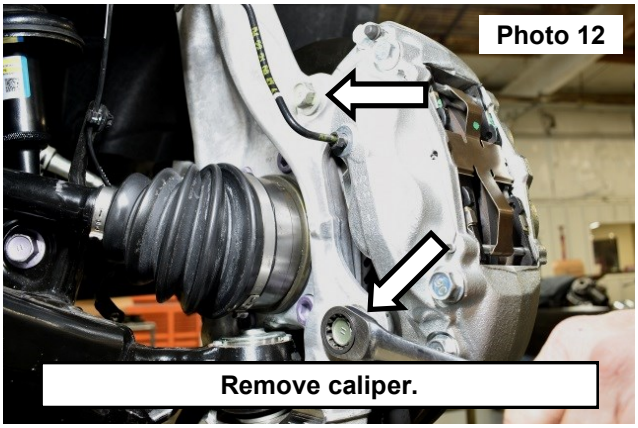
10. Remove the ABS wire and brake line bracket from the knuckle using a 10mm & 12mm socket/wrench. **See Photo 9**.
11. Remove the ABS wire from the upper control arm using a 10mm socket/wrench. **See Photo 10**.



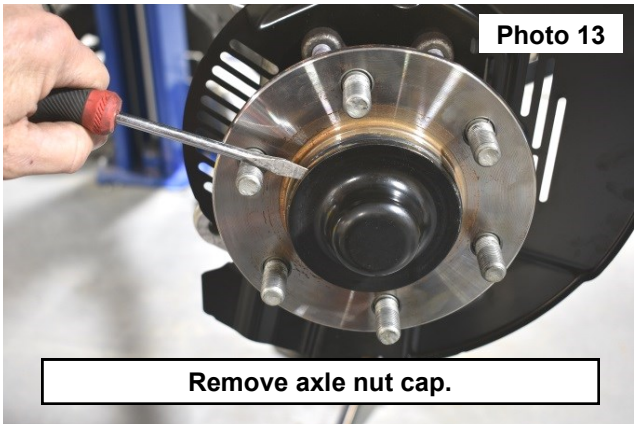


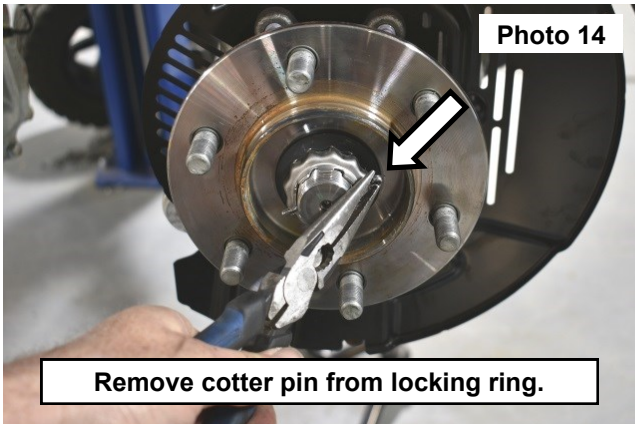
12. Remove the brake line bracket from the frame using a 12mm socket/wrench. **See Photo 11**.
13. Remove the brake caliper from the knuckle using a 19mm socket/wrench. **See Photo 12**.
    NOTE: After removing caliper, hang it using hooks or rest on a stand--do NOT hang it from the brake line.



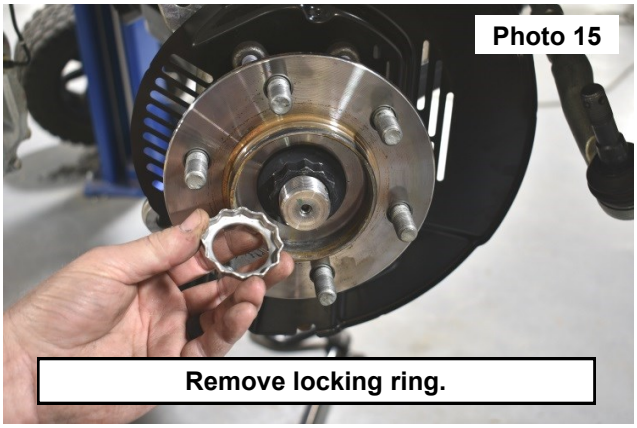


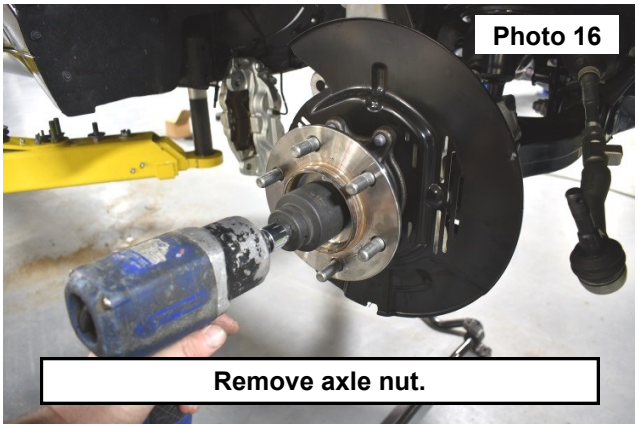
14. Remove the rotor, axle nut cup, and the cotter pin from the locking ring. **See Photo 13** and **Photo 14**.



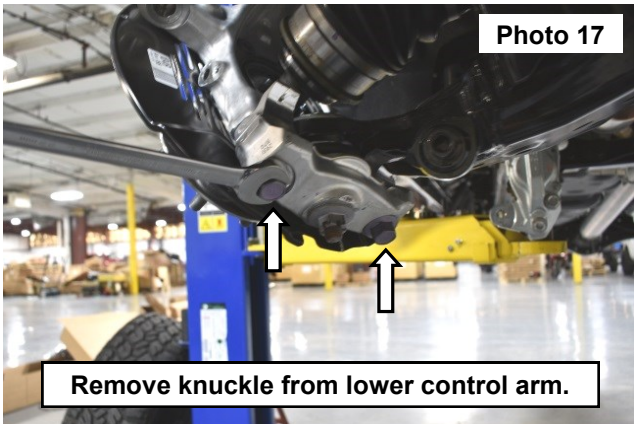


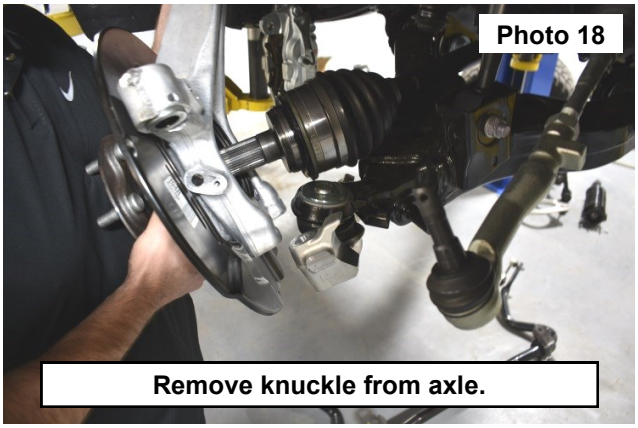
15. Remove the locking ring and remove the cotter pin using a 39mm socket. **See Photo 15** and **Photo 16**.



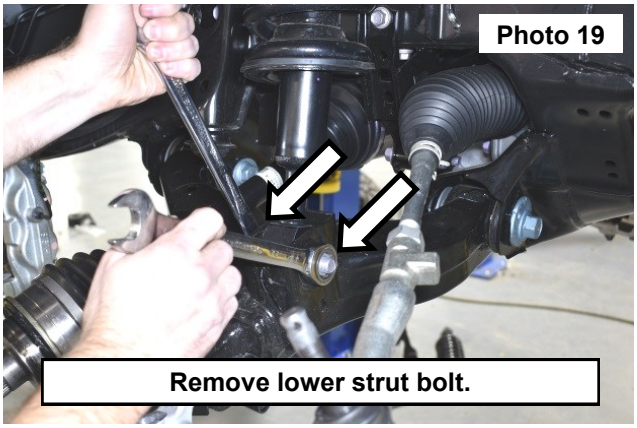


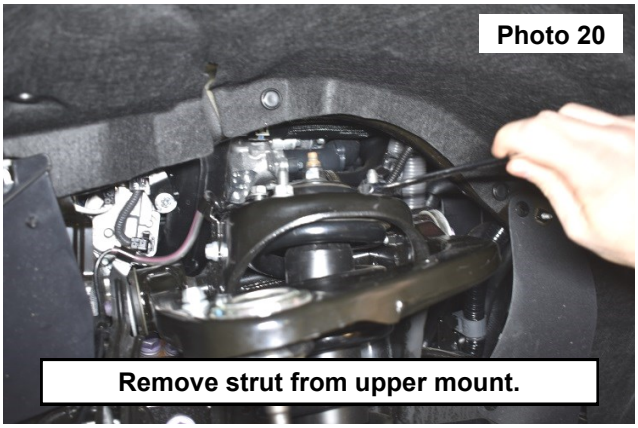
16. Remove the bolts for the knuckle from the lower control arm using a 22mm socket/wrench. **See Photo 17**.
17. Remove the knuckle from the axle. **See Photo 18**.



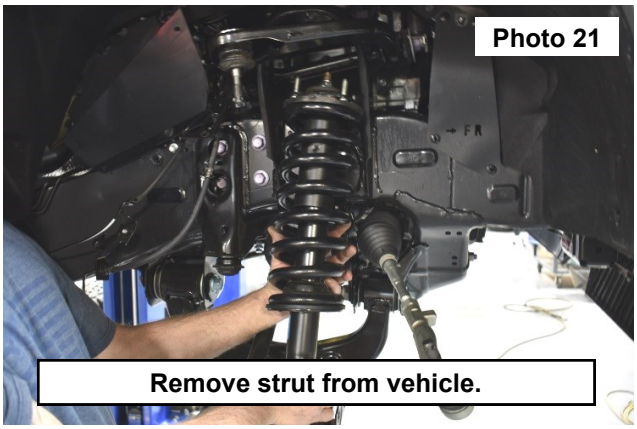


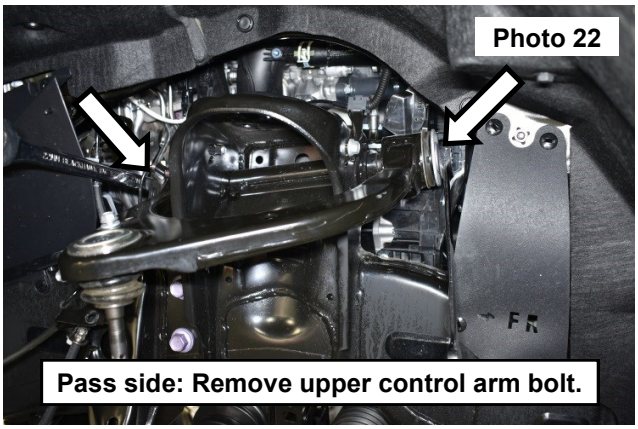
18. Remove lower strut bolt from the control arm using two 22mm wrenches. **See Photo 19**.
19. Remove the nuts from the upper strut mount using a 14mm wrench. **See Photo 20**.



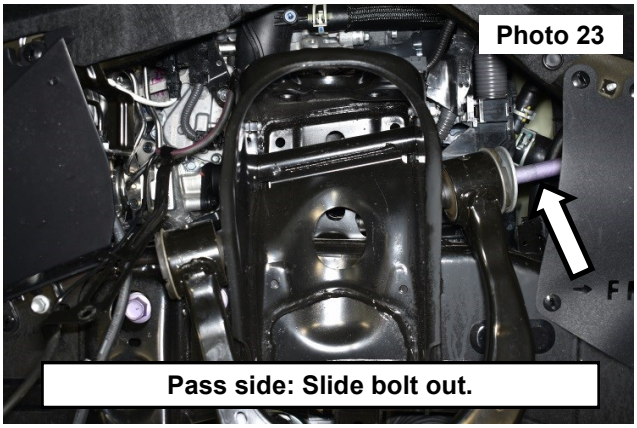


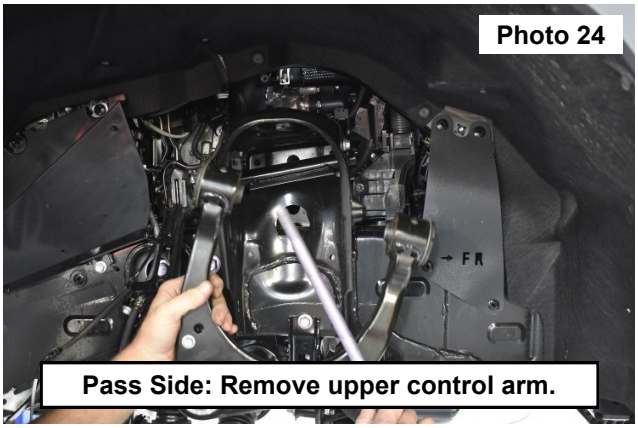
20. Loosen lower control arm cam bolts using two 24mm sockets/wrenches to allow the lower control arm to drop and remove the strut from the vehicle. **See Photo 21**.
21. **Passenger side**: Remove the upper control arm bolt using two 22mm wrenches. **See Photo 22**.



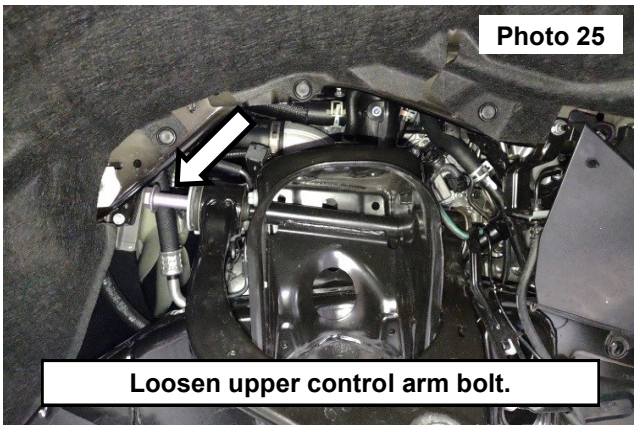


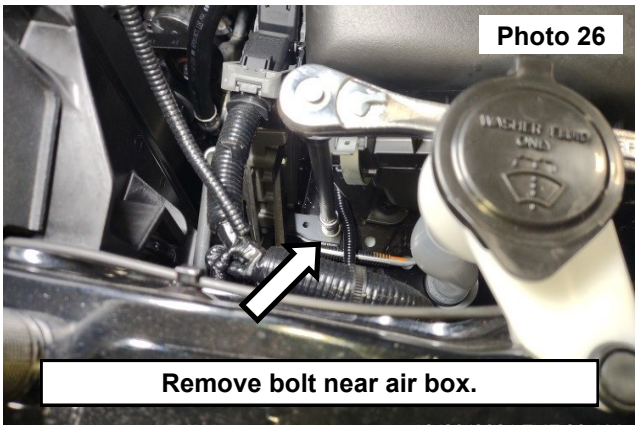
22. Slide the bolt out to remove the upper control arm. **See Photo 23**.
23. Remove the upper control arm. **See Photo 24**.



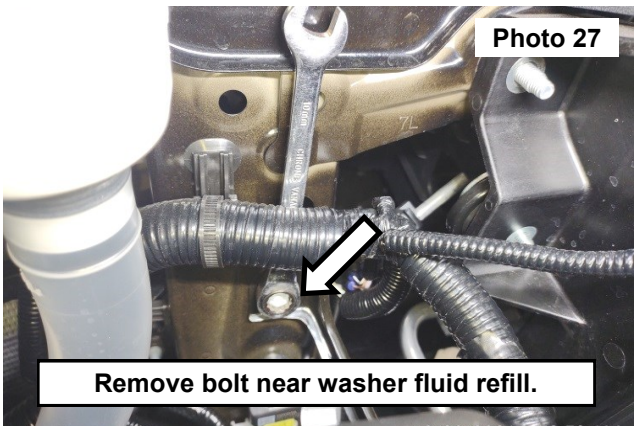


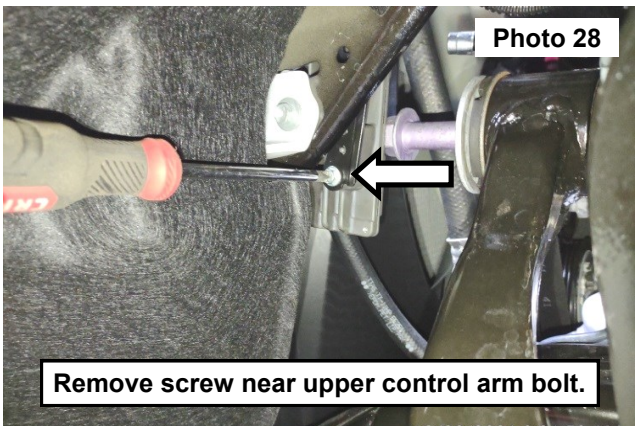
24. **Driver side**: Loosen upper control arm bolt using two 22mm wrenches. **See Photo 25**.
25. Open the hood and remove the bolt near the air box using a 10mm socket. **See Photo 26**.



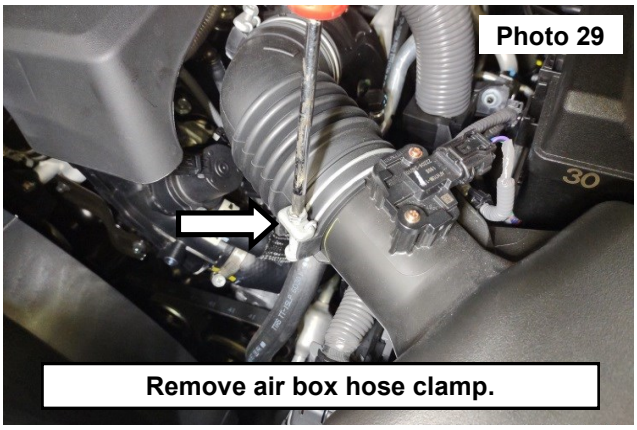


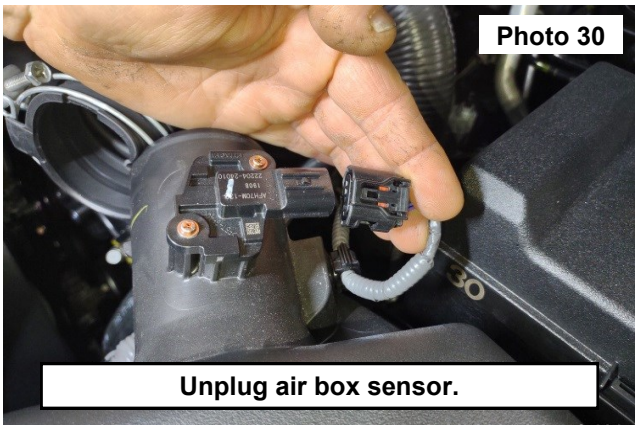
26. Remove the bolt near the washer fluid refill using a 10mm wrench. **See Photo 27**.
27. Remove the screw next to the upper control arm bolt using a screw driver. **See Photo 28**.



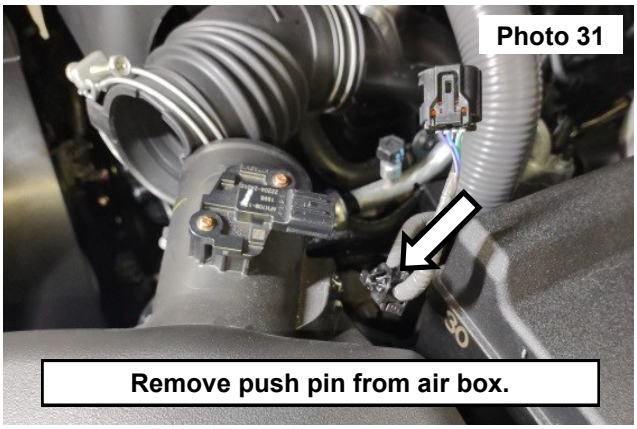


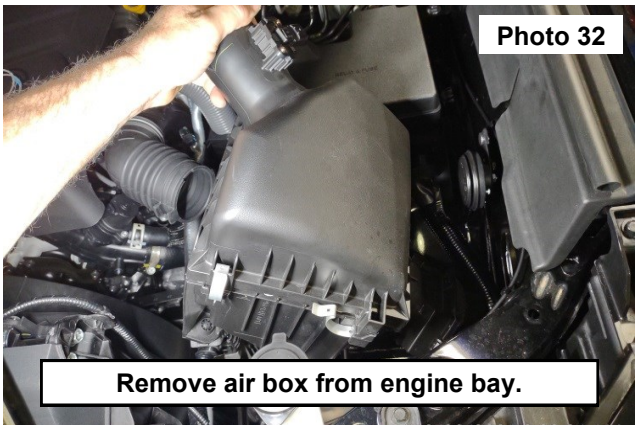
28. Unscrew the air box hose clamp using a screw driver. **See Photo 29**.
29. Unplug the air box sensor. **See Photo 30**.





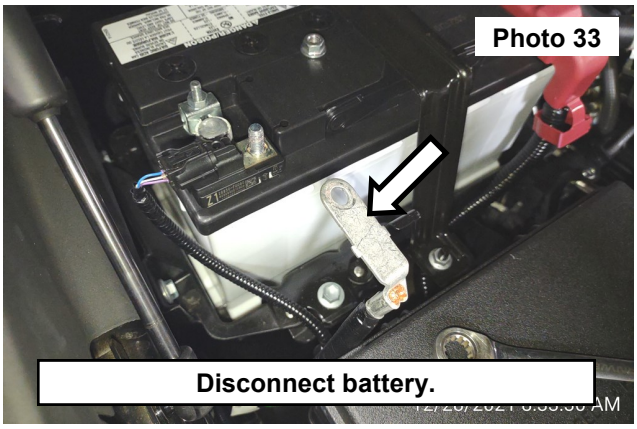
30. Remove the push pin from the air box. **See Photo 31**.
31. Remove the air box from the engine bay. **See Photo 32**.

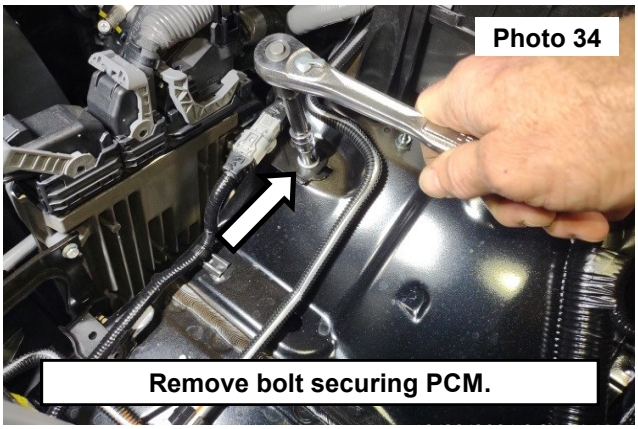




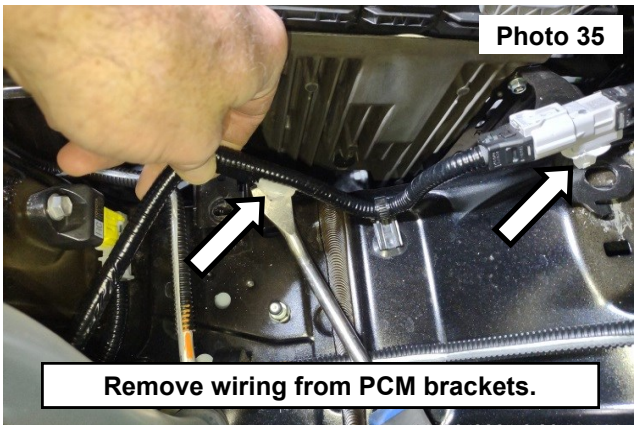
NOTICE

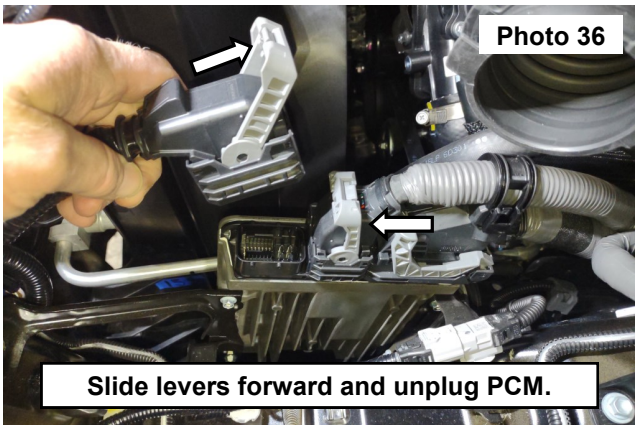
32. Disconnect the battery using a 12mm wrench. **See Photo 33**.
33. Remove the bolt securing the PCM using a 10mm socket/wrench. **See Photo 34**.



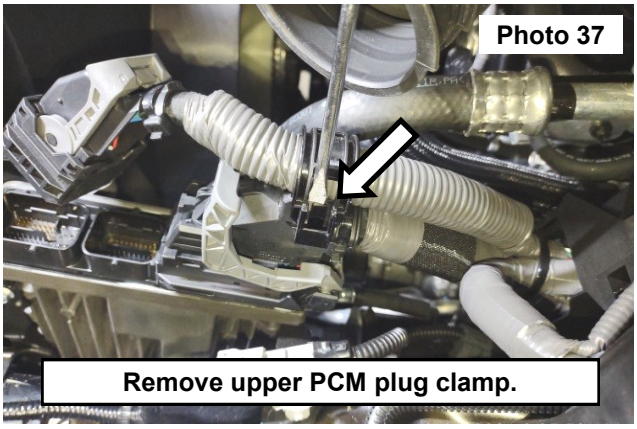


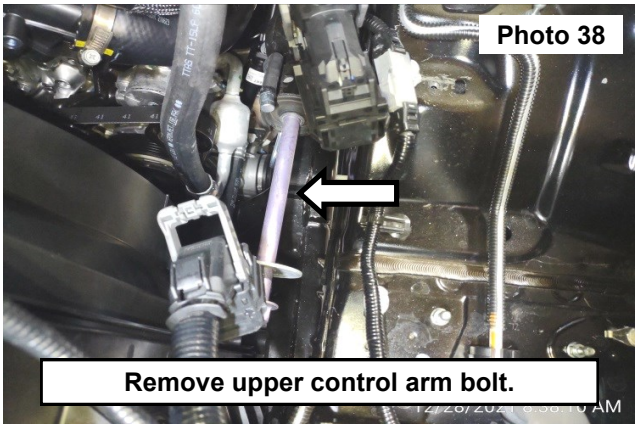
34. Use a trim remover tool to remove the wiring from the PCM brackets. **See Photo 35**.
35. Slide the levers forward to unlock and unplug the PCM. **See Photo 36**.



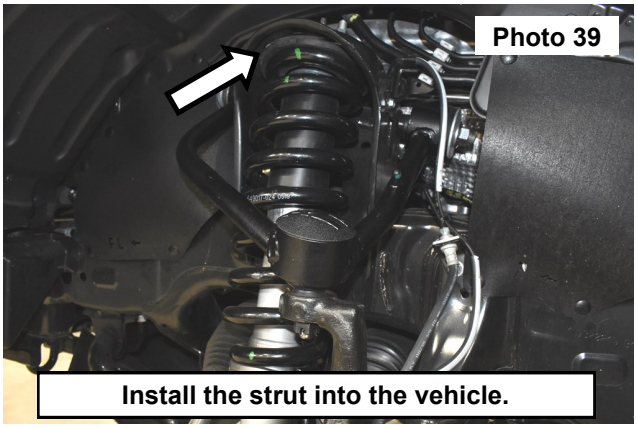


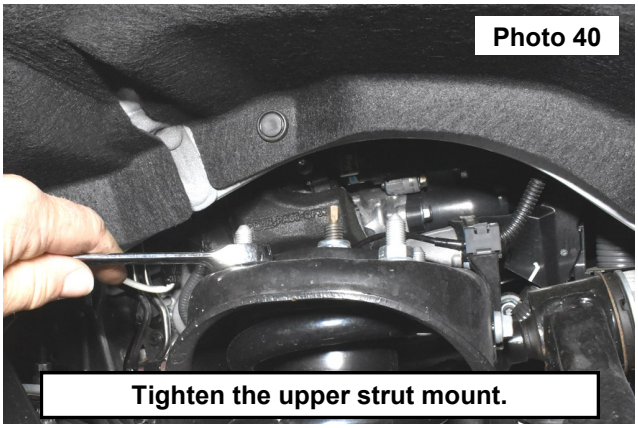
36. Remove the upper PCM plug clamp using a flat head and unplug the last PCM plug and remove the PCM from the engine bay. **See Photo 37**.
37. Remove the Dr side upper control arm bolt and remove the upper control arm. Finally! **See Photo 38**.
NOTE: After installing the upper control arm, reinstall PCM and air box in reverse order of tear down.



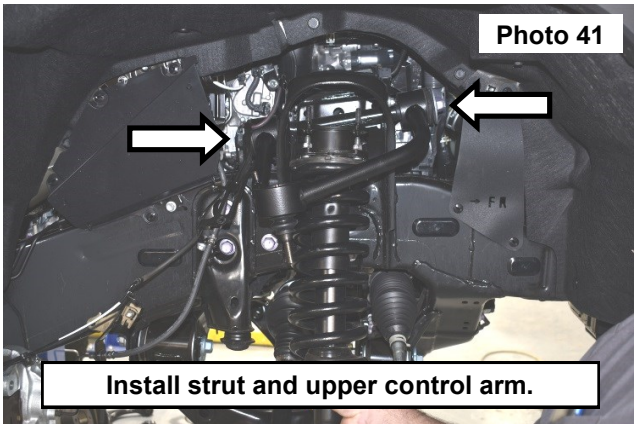


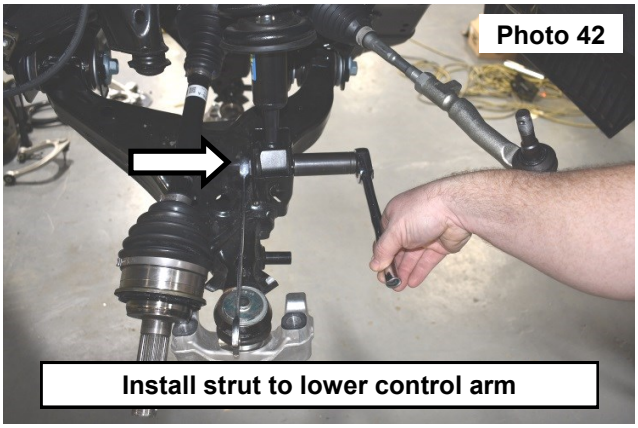
38. Install the strut into the vehicle with the supplied flange nuts. **See Photo 39**.
39. Tighten the upper strut using a 17mm socket. **See Photo 40**.



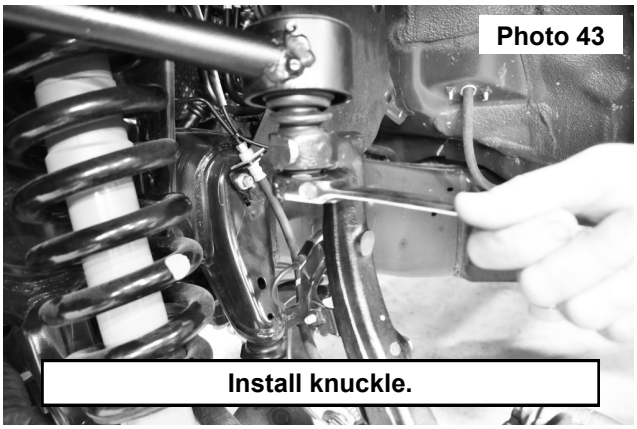


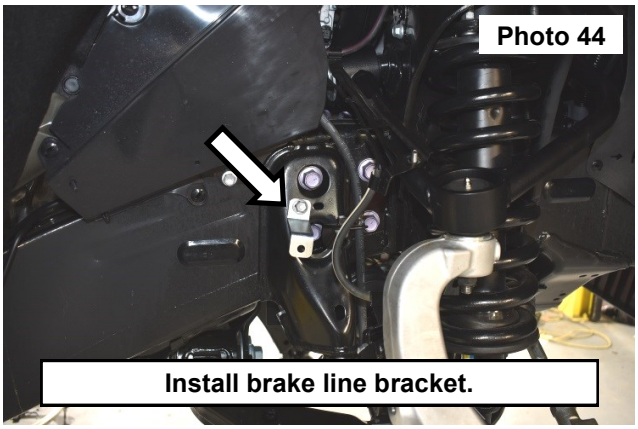
40. using a 15mm wrench and install the new upper control arm using the stock hardware. **See Photo 41**.
41. Pull the lower control arm back up and install the strut to the lower control arm using stock hardware. **See Photo 42**.



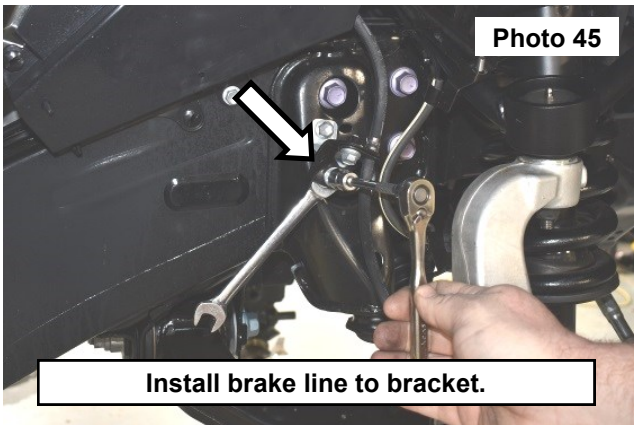


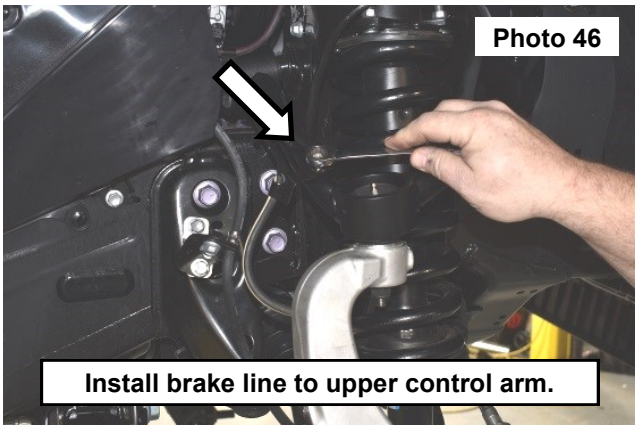
42. Reinstall the knuckle to the lower control arm using stock hardware and attach the knuckle to the upper control arm using hardware supplied with the control arm. **See Photo 43**.
43. Install the brake line bracket using the stock hardware. **See Photo 44**.



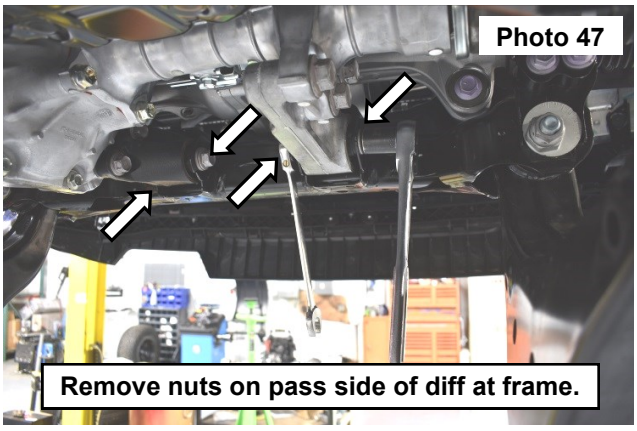


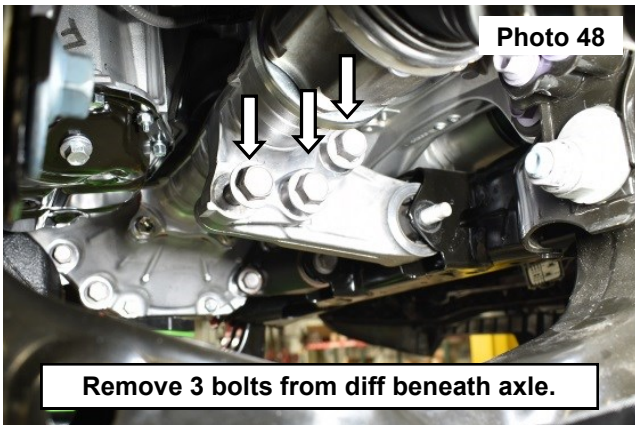
44. Install the brake line to the brake line bracket using the supplied 5/16” x 3/4” bolts, washer, and flange nut. Tighten using two 13mm socket/wrenches. **See Photo 45**.
45. Install the brake line to the upper control arm using the stock hardware. **See Photo 46**.



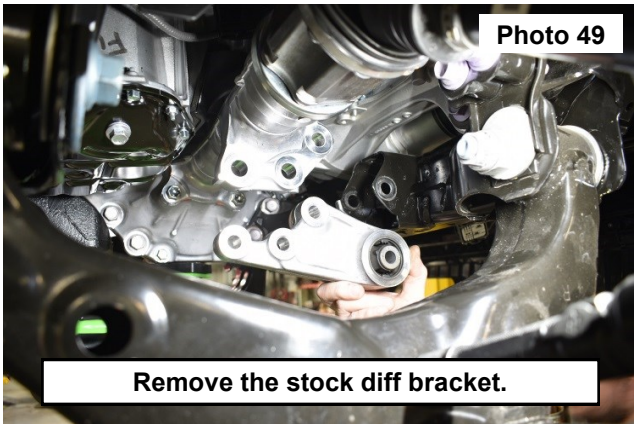


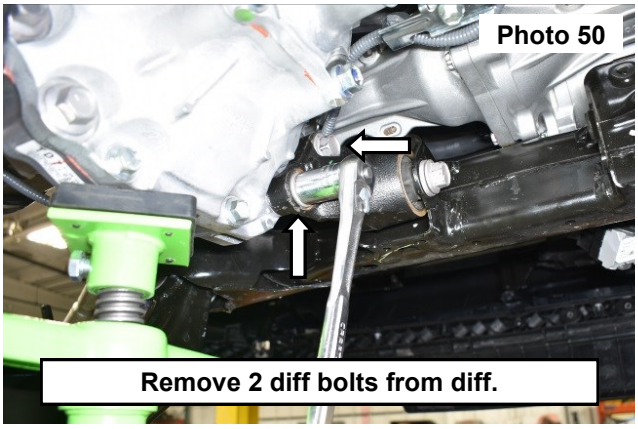
46. Support the differential with a jack stand and remove the nuts on the pass side of the diff that attach the diff bracket to the frame using two 19mm sockets/wrenches. **See Photo 47**.
47. Remove the 3 bolts from the diff bracket beneath the axle using two 22mm socket/wrenches. **See Photo 48**.



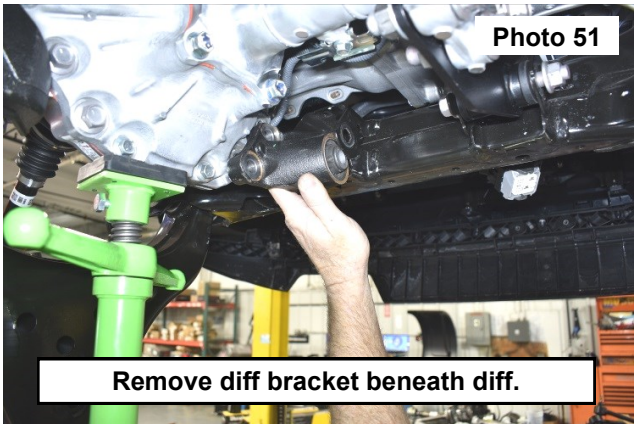


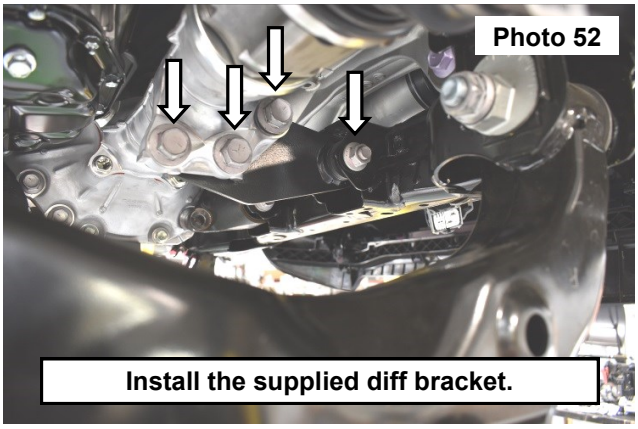
48. Remove the stock diff bracket beneath the axle. **See Photo 49**.
49. Remove the 2 bolts from the diff bracket beneath the diff using a 22mm socket/wrench. **See Photo 50**.



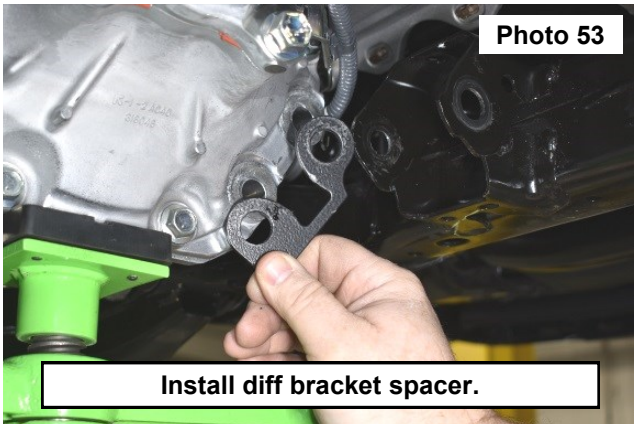


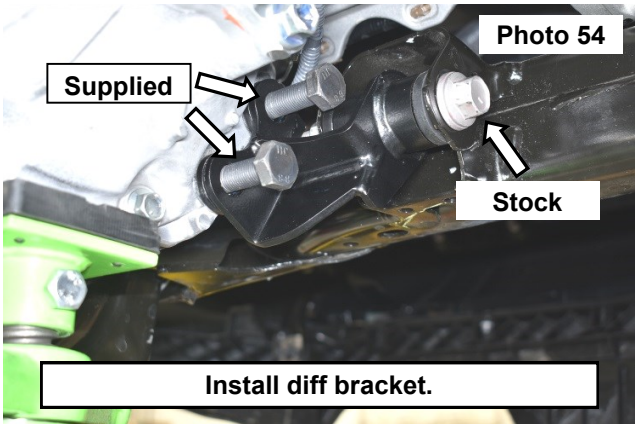
50. Remove the stock diff bracket beneath the diff. **See Photo 51**.
51. Install the supplied diff bracket beneath the axle using the stock bolts and (3) of the supplied 16mm flat washers and (3) lock nuts. **See Photo 52**.



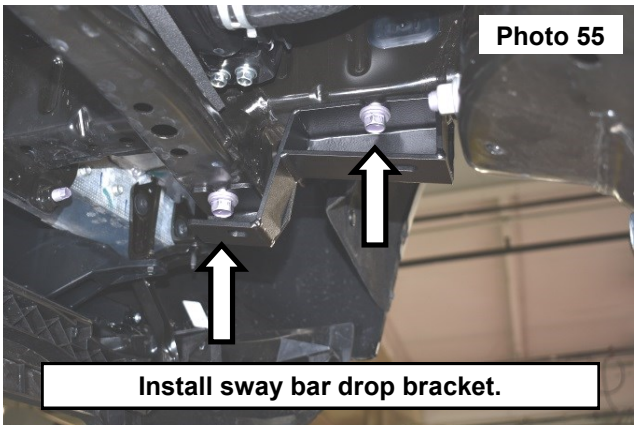


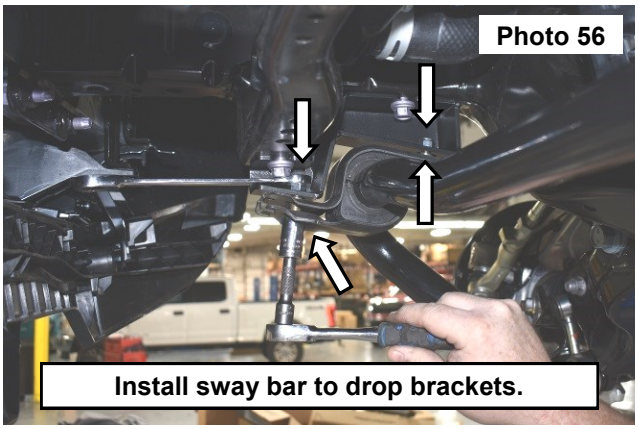
52. Install the diff bracket spacer and diff bracket beneath the diff using stock hardware at the frame and supplied 14mm x 65mm bolts and (2) 14mm flat washers in the diff using a 22mm socket/wrench. **See Photo 53** and **Photo 54**.



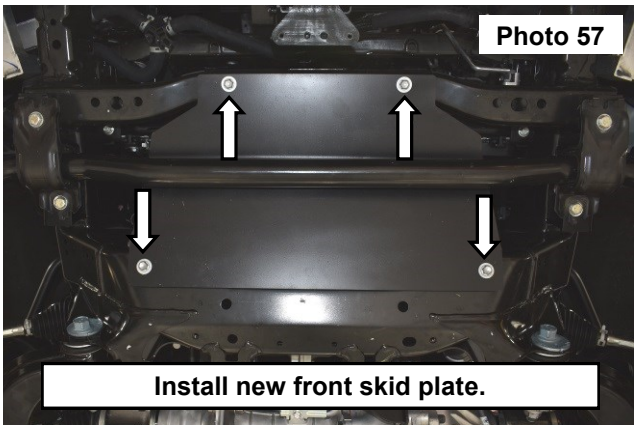


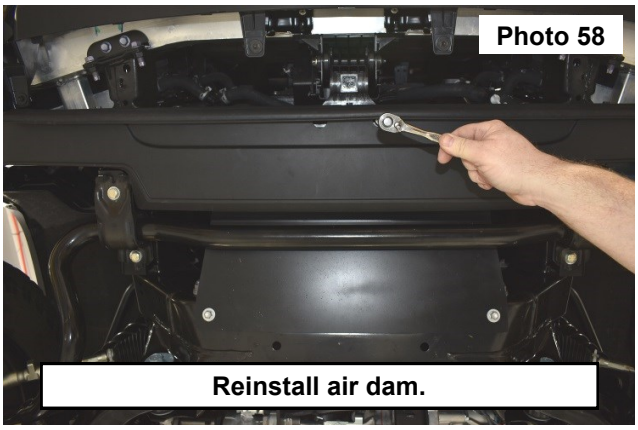
53. Install the Dr and Pass side sway bar drop brackets using the stock sway bar hardware. **See Photo 55**.
54. Install the sway bar to the lower control arms using stock hardware and swing it up and attach to the drop brackets using the supplied 7/16” x 1.25” bolts, nuts, and washers. Tighten using two 5/8” socket/wrenches. **See Photo 56**.



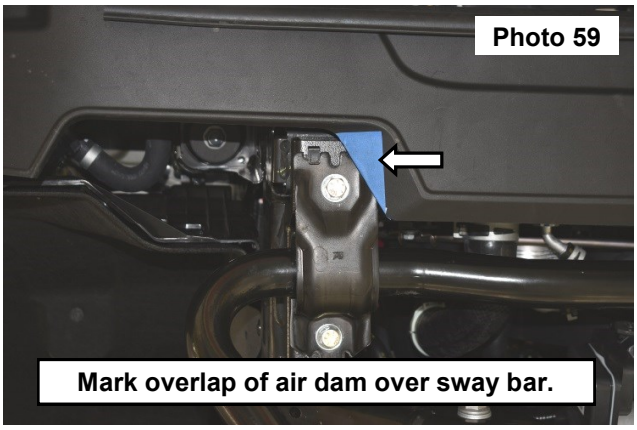


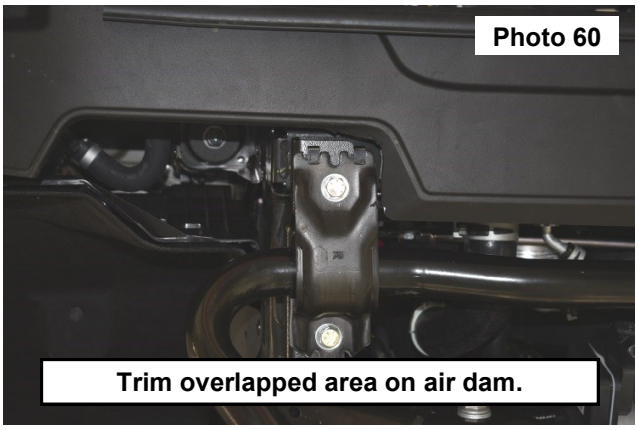
55. **Reconnect the rack and pinion plugs**.
56. Install the new front skid plate using stock hardware. **See Photo 57**.
57. Reinstall the air dam. **See Photo 58**.



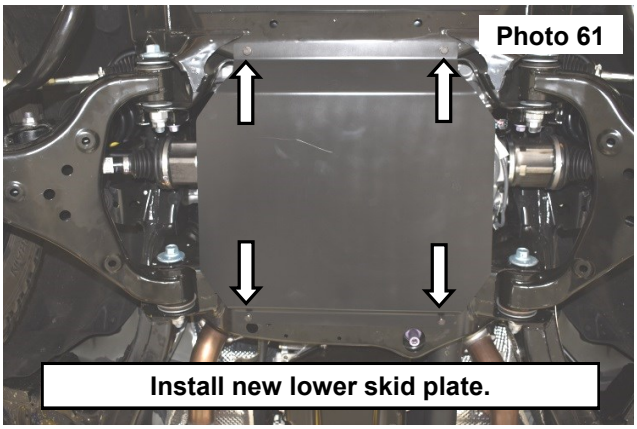


58. Mark the overlap of the air dam over the sway bar bracket. **See Photo 59**.
59. Trim the overlapped area on the air dam. **See Photo 60**.





60. Install the new lower skid plate with the supplied 8mm x 25mm bolts, flat washers, and lock washers using a 13mm socket/wrench. **See Photo 61**.

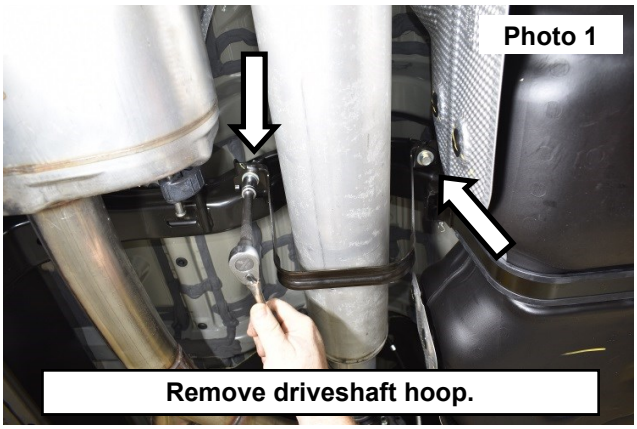


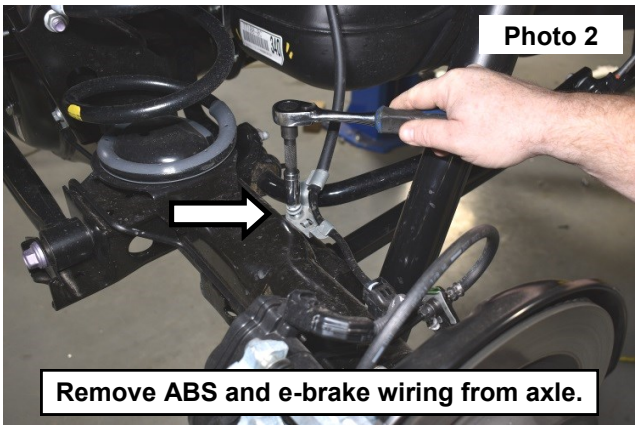
61. Reinstall the remaining components in reverse order of assembly.
62. Put on wheels and lower.



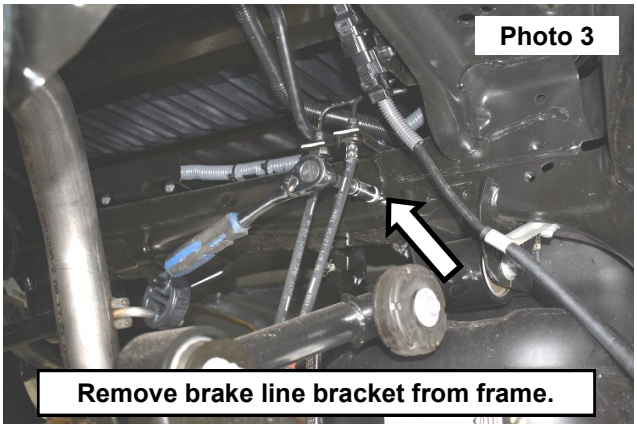
REAR INSTALLATION INSTRUCTIONS

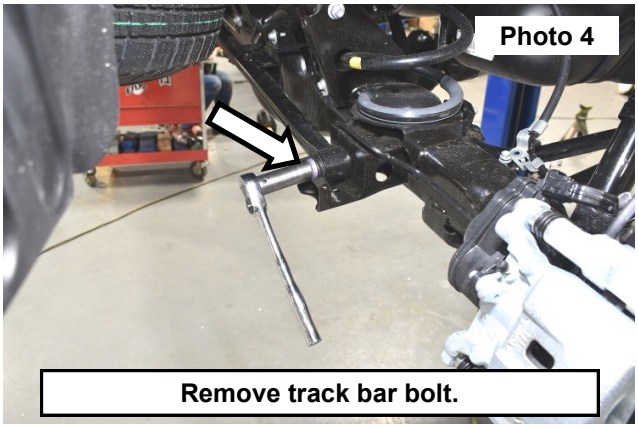
1. Jack up the rear of the vehicle and place on jack stands. Remove the rear wheels.
   NOTE: Support the axle before beginning tear down.
2. Remove the driveshaft hoop using a 14mm socket/wrench. **See Photo 1**.
3. Remove the ABS and e-brake wiring harness from the axle on the Dr and Pass sides using a 12mm socket/wrench. **See Photo 2**.



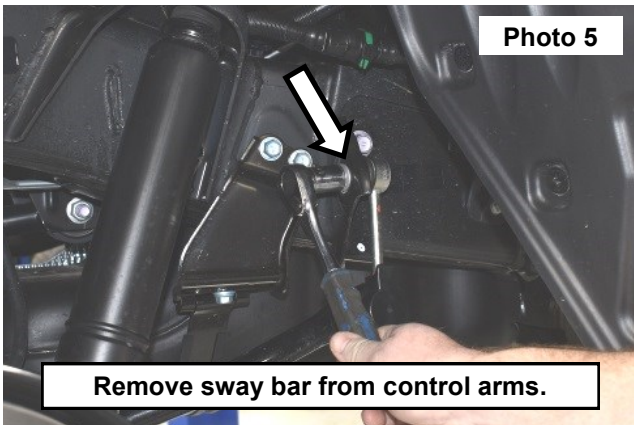


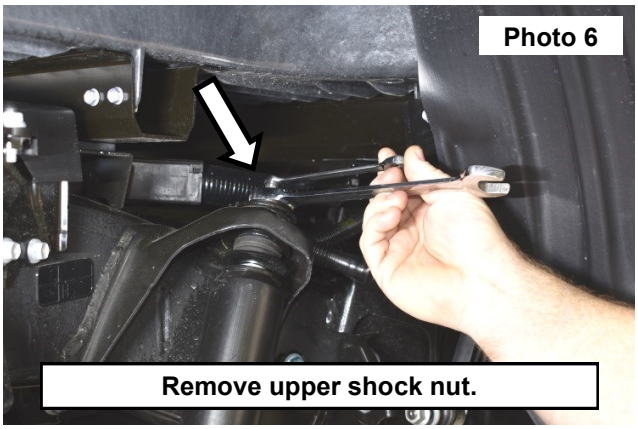
4. Remove the brake line bracket from the frame using a 12mm socket/wrench. **See Photo 3**.
5. Remove the track bar bolt using a 19mm socket/wrench. **See Photo 4**.



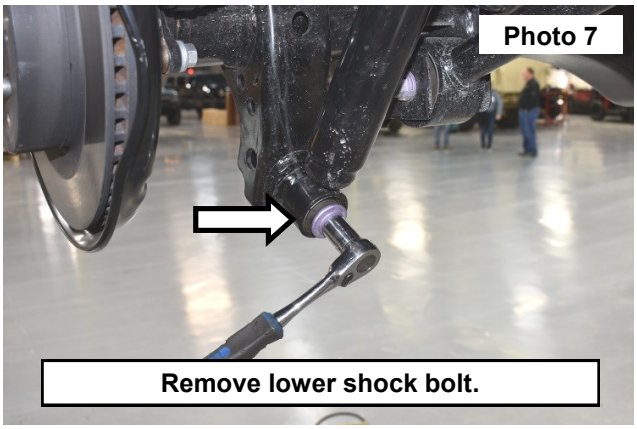


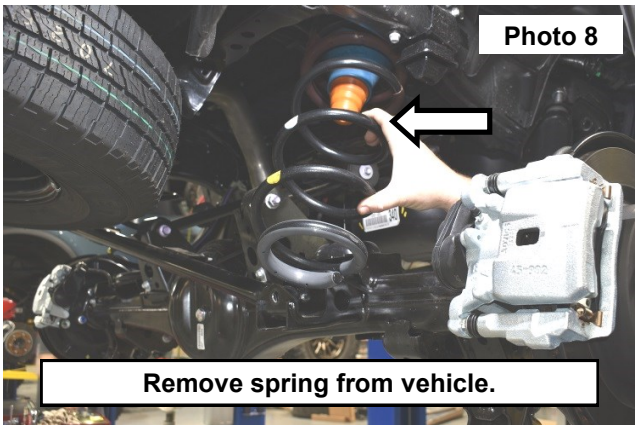
6. Remove the sway bar link nut on Dr and Pass sides using a 17mm socket/wrench. **See Photo 5**.
7. Remove the upper shock nut using a 19mm wrench and 8mm wrench to hold the stem. **See Photo 6**.



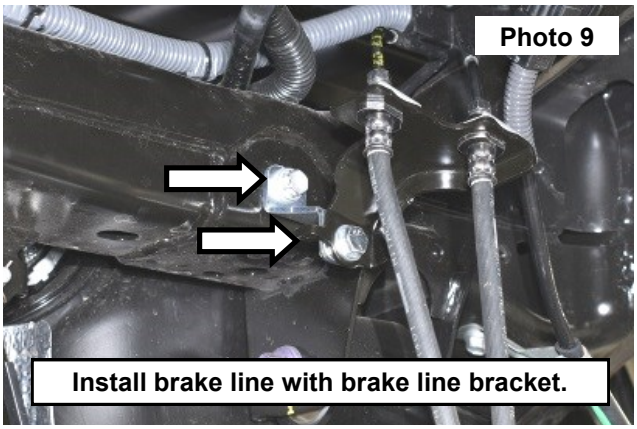


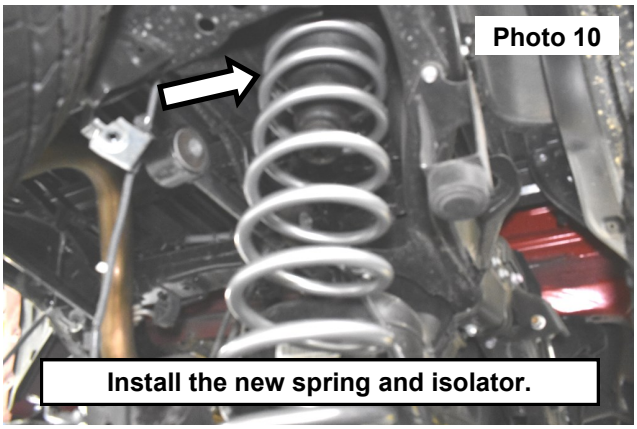
8. Remove the lower shock bolt using a 17mm socket/wrench. **See Photo 7**.
9. Either lower the axle or raise the vehicle to remove the spring from the vehicle. **See Photo 8**.



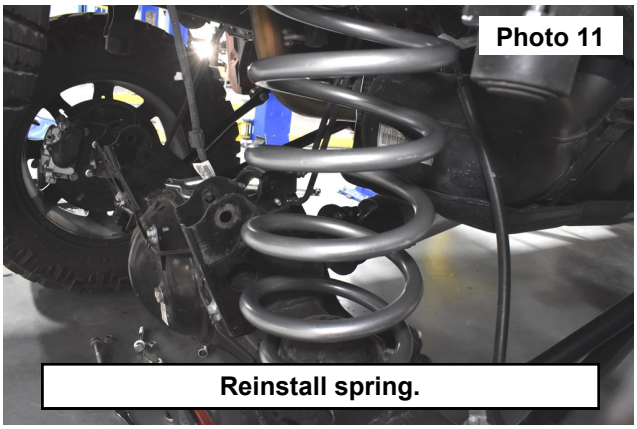


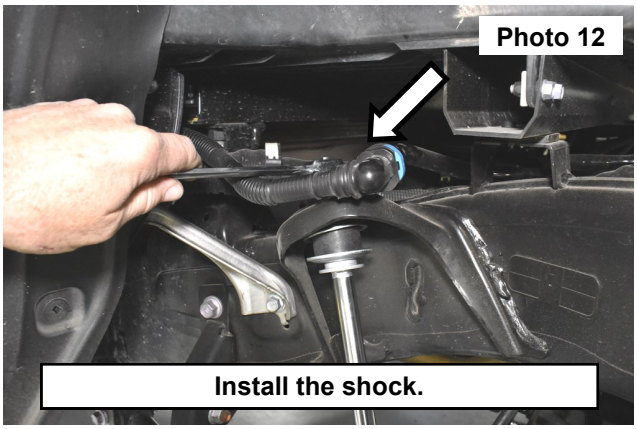
10. Install the brake line with brake line bracket to the frame using the stock bolt at the frame and the supplied 5/16” x 3/4” bolts, washer, and nut using 1/2” socket/wrench. **See Photo 9**.
    NOTE: Make sure brake lines do not rub against the top of the frame by bending away from frame slightly.
11. Install the new coil spring and the OE spring isolator to the upper spring mount. **See Photo 10**.



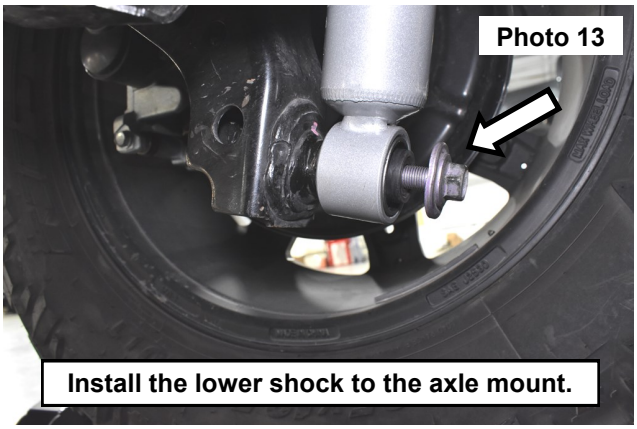


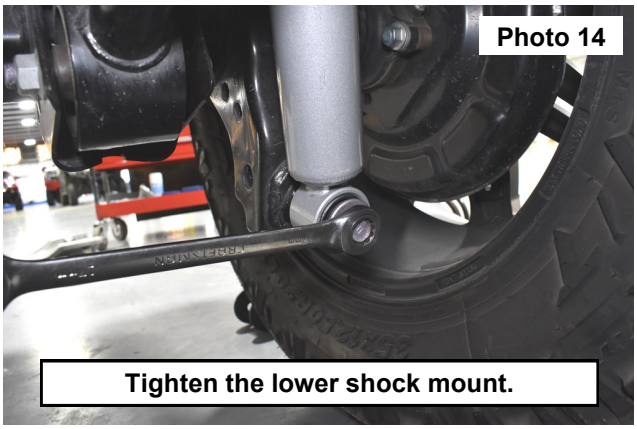
12. Install the spring to the lower axle mount. **See Photo 11**.
13. Install the shock into the upper frame mount using the supplied hardware. Tighten using a 18mm wrench. **See Photo 12**.



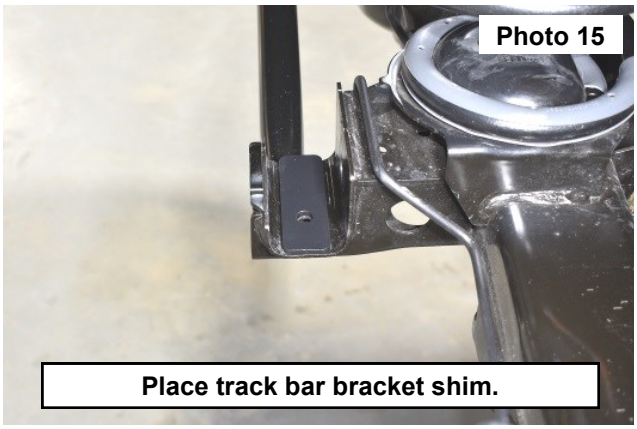


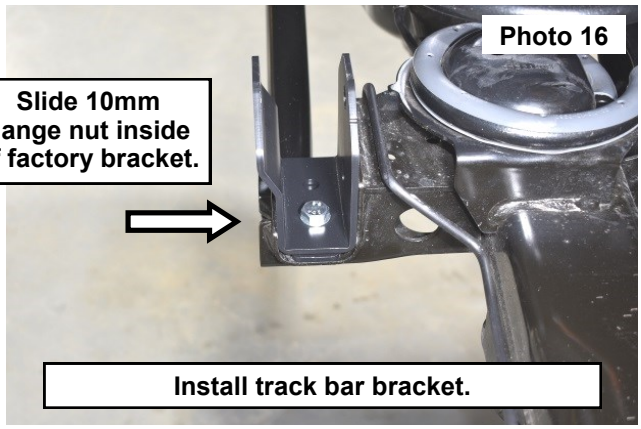
14. Install the lower shock end on to the axle mount, then secure using the OE bolt. **See Photo 13**.
15. Tighten the lower shock mount using a 17mm wrench. **See Photo 14.**



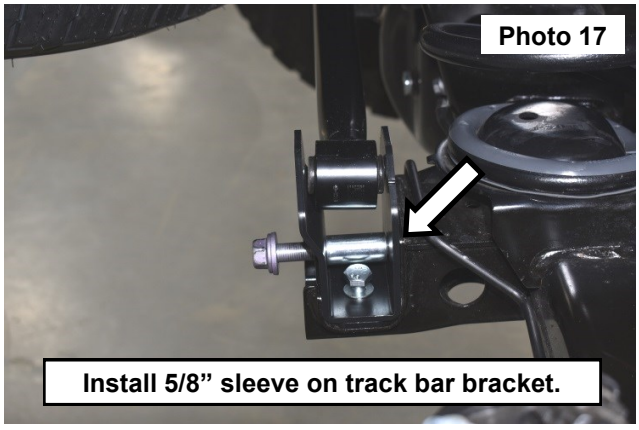


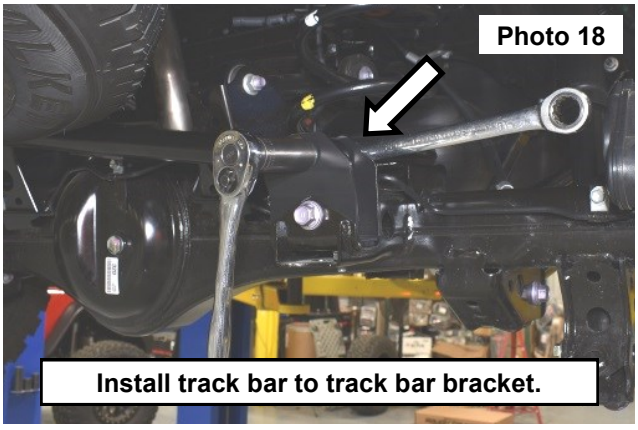
16. Place track bar bracket shim on the stock track bar bracket location with hole toward Pass side. **See Photo 15**.
17. Install the track bar bracket with the supplied 10mm x 35mm bolt, washer, and flange nut using a 15mm and 17mm socket/wrench. Slide the supplied 10mm flange nut inside of the factory track bar bracket. **See Photo 16**.





18. Install the 5/8” sleeve in the track bar bracket using the stock hardware. **See Photo 17**.
19. Install the track bar to the track bar bracket using the supplied 14mm x 80mm bolt and nut using two 22mm sockets/ wrenches. **See Photo 18**.
20. Reinstall the remainder of the components in reverse order of tear down.
21. Put on wheels and lower.







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