Rough Country 33450 Installation Instructions

6-Inch Lift Kit with Vertex 2.5 Shocks for Ram 1500 4WD

Part number: 33450

trailfortress.com/6-inch-lift-kit-ram-1500-4wd-rough-country-33450

Scan for fitment, price and install help

ROUGH COUNTRY
SUSPENSION SYSTEMS®

RAM 2019-22 1500 6” 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 kit contents list. Be sure you have all needed parts and know where they go. Also please review tools needed list and make sure you have the tools needed to install the kit.

⚠WARNING 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. Seat belts and shoulder harnesses should be worn at all times. Avoid situations where a side rollover may occur.

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 use of our products.

This 6” suspension system was developed using a 37 X 12.5 tire with aftermarket wheels. 20” wheels with 5 1/2” backspace. **This kit will not work with wheels smaller than 20”.** As with any tire and wheel combination it is recommended to trial fit the tire / wheel to assure there are no clearance problems.

⚠NOTICE Trucks with 22”XL factory wheels will use the 339 series kit numbers. This is noted on the wheel and tire information sticker in the driver side front door jamb.

⚠NOTICE **Please note, this lift kit is not recommended for AWD (All Wheel Drive) Models. TRX models will achieve approximately 1" of additional lift. This lift is not recommended for use on the TRX models due to possible CV shaft vibration caused by the additional lift.**

⚠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. By purchasing any item sold by Rough Country, LLC, the buyer expressly warrants that he/she is in compliance with all applicable Federal, State, and Local laws and regulations regarding the purchase, ownership, and use of the item. It shall be the buyers responsibility to comply with all Federal, State and Local laws governing the sales of any items listed, illustrated or sold. The buyer expressly agrees to indemnify and hold harmless Rough Country, LLC for all claims resulting directly or indirectly from the purchase, ownership, or use of the items.

INSTALLING DEALER - 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.

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

RC ROUGH COUNTRY

Kit Boxes for Kits Without Factory 22” Wheels

33430A (6” Kit w/ N3 Rr Shocks):

334BOX1
334BOX2
33430BOX1
33430BOX2
33430BOX3
23207

33431 (6” Kit w/ N3 Struts, N3 Rr Shocks, & Dual Rate Rear Coil Springs):

334BOX1
33430BOX1
33430BOX2
33430BOX3
9413
23291
649062 x 2

33450 (6” Kit w/ Fr & RR Vertex Shocks & Dual Rate Rear Coil Springs):

334BOX1
33430BOX1
33430BOX2
33430BOX3
9413
680021L x1
680021R x1
690021 x 2

33470 (6” Kit w/ V2 Rr Shocks):

334BOX1
334BOX2
33430BOX1
33430BOX2
33430BOX3
760815

33471 (6” Kit w/ N3 Struts,V2 Rr Shocks, & Dual Rate Rear Coil Springs):

334BOX1
33430BOX1
33430BOX2
33430BOX3
9413
649062 x 2
760815

33457 (6” Kit w/ Vertex Coil overs, V2 Rr Shocks, & Dual Rate Rear Coil Springs):

334BOX1
33430BOX1
33430BOX2
33430BOX3
9413
680021L x1
680021R x1
760815

Kit Boxes for Kits <u>With</u> Factory 22” Wheels

33930A (6” Kit w/ N3 Rr Shocks):

334BOX1
334BOX2
33430BOX1
33930BOX2
33930BOX3
23207

33931 (6” Kit w/ N3 Struts, N3 Rr Shocks, & Dual Rate Rear Coil Springs):

334BOX1
33430BOX1
33930BOX2
33930BOX3
9413
23291
649062 x 2

33950 (6” Kit w/ Fr & RR Vertex Shocks & Dual Rate Rear Coil Springs):

334BOX1
33430BOX1
33930BOX2
33930BOX3
9413
680021L x1
680021R x1
690021 x 2

33970 (6” Kit w/ V2 Rr Shocks):

334BOX1
334BOX2
33430BOX1
33930BOX2
33930BOX3
760815

33971 (6” Kit w/ N3 Struts, V2 Rr Shocks, & Dual Rate Rear Coil Springs):

334BOX1
33430BOX1
33930BOX2
33930BOX3
9413
649062 x 2
760815

33957 (6” Kit w/ Vertex Coil overs, V2 Rr Shocks, & Dual Rate Rear Coil Springs):

334BOX1
33430BOX1
33930BOX2
33930BOX3
9413
680021L x1
680021R x1
760815

KIT CONTENTS

NOTICE **Only fits models without 22" factory wheels.**

33430Box1 ***Containing*****:**
1-*Fr Cross-member*
1-Rr Cross-member

33430Box2 ***Containing:***
1-Dr Knuckle

33430Box3 ***Containing:***
1-Pass Knuckle

334Box1 ***Containing:***
1-33430BAG2
1-33430BAG13
1-33430BAG6
1-33430BAG12
1-Dr Fr Sway Bar Drop
1-Pass Fr Sway Bar Drop
1-Rr Track Bar Bracket
1-Dr Rr UCA Bracket
1-Pass Rr UCA Bracket
1-Skid Plate
1-Driveshaft Spacer
2-Rr Sway Links
1-Pass Fr Diff Bracket
1-Dr Rr Diff Bracket
1-Dr Fr Diff Bracket
2-Tie Rod Ends
2-Rr Bump Stop Extensions

334Box2 ***Containing:***
1-10MMSTUDBAG-2
2-Strut Spacers
2-Pre Load Spacers
2-Rr Coil Spacers
2-Rr Coil Spacer Washers
1-1329BAG7
1-1329BAG7

1329BOX4-Rear Coil Spring Spacers
2-Rr Coil Spacers
2-Rr Coil Spacer Washers
1-1329BAG7

9413-Rear Coil Springs (Only in Strut and Vertex Kits)
2-Rr Coil Springs

23291-
2-Rear N3 Shocks

69062-
1-N3 Strut

760815-
2-V2 Rear Shocks

Vertex Shocks-
680021L x1
680021R x1
690021 x 2

334INSTBAG1 *Containing*
Instructions:
1-921334000
1-921338000-Air Ride Models

33430BAG2 *Containing*
For Front and Rear Cross-Members:
4-18mm x 150mm Bolt
4-18mm Lock Nut
8-Square Washers

33430BAG12 *Containing:*
For Rear Upper Driver Diff Mount:
3-12mm x 45mm Bolts
3-Flat Washers
3-12mm Flange Lock Nuts
For Front Upper Driver Diff Mount:
2-12mm x 45mm Bolts
2-Flat Washers
2-12mm Flange Lock Nuts
For Passenger Side Diff Mount:
2-12mm x 45mm Bolts
2-12mm Flange Lock Nuts
2-Flat Washers
2-Wire Ties
For Drive Shaft Spacer:
4-12mm x 45mm Bolts
4-Flat Washers
For Front Skid Plate:
4-3/8" x 1" Bolts
4-Flat Washers
2-3/8" Lock Nuts
For Front Brake Line Brackets:
4-5/16" x 1" Bolts
4-5/16" Flange Lock Nuts
4-5/16" Flat Washers
2-3/8" Flat Washers
2-Wire Ties
For Front Sway Bar Links:
4-3/8" x 1.25" Bolts
4-3/8" Lock Nuts
8-Flat Washers

Not used in this kit:
1-Rear Diff Cooling Bracket
2-5/16" x 1.25" Bolts
2-5/16" Flange Lock Nuts
2-5/16" Flat Washers

10MMStudBag-2:
For Front Strut Spacer:
1-1/2" Jam Nut
1-10mm Nut
6-10mm Stud
6-10mm Flange Nuts

33430BAG6 *Containing:*
2-Fr Brake Line Brackets
2-UCA Bracket Sleeves
1-Track Bar Bracket Flag Nut
1-Dr Rr Brake Line Bracket
1-Pass Rr Brake Line Bracket
For Rear Control Arm Brackets:
2-5/8" x 4.5" Bolts
2-5/8" Lock Nuts
4-5/8" Flat Washers
8-3/8" x 1.25" Bolts
16-3/8" Flat Washers
8-3/8" Lock Nuts
For Rear Brake Line Brackets:
2-5/16" x 3/4" Bolts
2-5/16" Flange Lock Nuts
For Rear Sway Links:
2-12mm x 65mm Bolts
2-12mm Flange Lock Nuts
2-Flat Washers

33430BAG13 *Containing:*
For Rear Track Rod Bracket:
1-7/16" x 1.25" Bolt
1-7/16" Flat Washer
1-7/16" Lock Nut
1-14mm x 80mm Bolt
1-14mm Nylock Nut
2-Flat Washer
1-1/2" x 1.5" Bolt
1-1/2" Flat Washer
1-1/2" Lock Washer
For Rear Bump Stops:
2-3/8" x 1.5" Bolts
2-3/8" Flat Washers
2-Flag Nuts
2-5/16" x 1.5" Bolts
2-5/16" Flat Washers
2-5/16" Flange Lock Nuts
2-3/8" Lock Washers

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1-Dr Rr UCA Bracket
1-Pass Rr UCA Bracket
1-Skid Plate
1-Driveshaft Spacer
2-Rr Sway Links
1-Pass Fr Diff Bracket
1-Dr Rr Diff Bracket
1-Dr Fr Diff Bracket
2-Tie Rod Ends
2-Rr Bump Stop Extensions

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2-Pre Load Spacers
2-Rr Coil Spacers
2-Rr Coil Spacer Washers
1-1329BAG7
1-1329BAG7

1329BOX4-Rear Coil Spring Spacers
2-Rr Coil Spacers
2-Rr Coil Spacer Washers
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2-Rr Coil Springs

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2-Rear N3 Shocks

69062-
1-N3 Strut

760815-
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680021L x1
680021R x1
690021 x 2

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2-Flat Washers
2-12mm Flange Lock Nuts
For Passenger Side Diff Mount:
2-12mm x 45mm Bolts
2-12mm Flange Lock Nuts
2-Flat Washers
2-Wire Ties
For Drive Shaft Spacer:
4-12mm x 45mm Bolts
4-Flat Washers
For Front Skid Plate:
4-3/8" x 1" Bolts
4-Flat Washers
2-3/8" Lock Nuts
For Front Brake Line Brackets:
4-5/16" x 1" Bolts
4-5/16" Flange Lock Nuts
4-5/16" Flat Washers
2-3/8" Flat Washers
2-Wire Ties
For Front Sway Bar Links:
4-3/8" x 1.25" Bolts
4-3/8" Lock Nuts
8-Flat Washers

Not used in this kit:
1-Rear Diff Cooling Bracket
2-5/16" x 1.25" Bolts
2-5/16" Flange Lock Nuts
2-5/16" Flat Washers

10MMStudBag-2:
For Front Strut Spacer:
1-1/2" Jam Nut
1-10mm Nut
6-10mm Stud
6-10mm Flange Nuts

33430BAG6 *Containing:*
2-Fr Brake Line Brackets
2-UCA Bracket Sleeves
1-Track Bar Bracket Flag Nut
1-Dr Rr Brake Line Bracket
1-Pass Rr Brake Line Bracket
For Rear Control Arm Brackets:
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2-5/8" Lock Nuts
4-5/8" Flat Washers
8-3/8" x 1.25" Bolts
16-3/8" Flat Washers
8-3/8" Lock Nuts
For Rear Brake Line Brackets:
2-5/16" x 3/4" Bolts
2-5/16" Flange Lock Nuts
For Rear Sway Links:
2-12mm x 65mm Bolts
2-12mm Flange Lock Nuts
2-Flat Washers

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1-14mm Nylock Nut
2-Flat Washer
1-1/2" x 1.5" Bolt
1-1/2" Flat Washer
1-1/2" Lock Washer
For Rear Bump Stops:
2-3/8" x 1" Bolts
2-3/8" Flat Washers
2-Flag Nuts
2-5/16" x 1" Bolts
2-5/16" Flat Washers
2-5/16" Flange Lock Nuts
2-3/8" Lock Washers

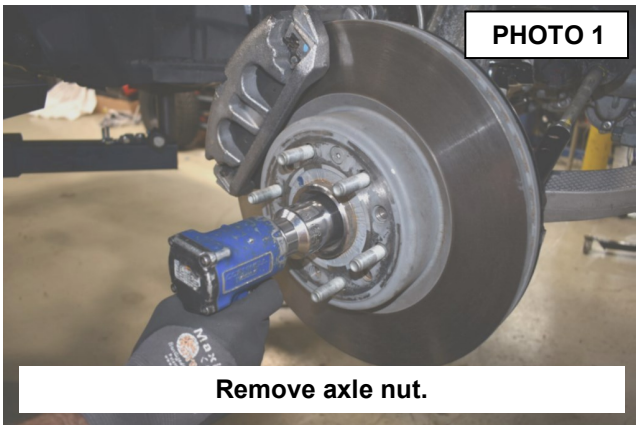


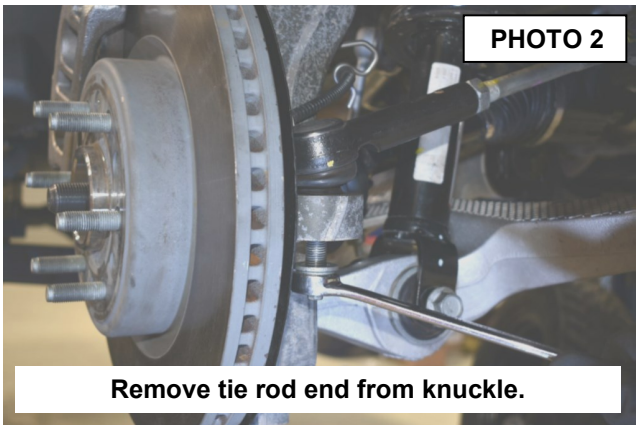
Tools Needed:	
WD-40	16mm Socket / Wrench
Loc-Tite	17mm Socket / Wrench
Reciprocating Saw	18mm Socket / Wrench
Hammer	19mm Socket / Wrench
Dead Blow Hammer	21mm Socket / Wrench
T30 Torx head bit	22mm Socket / Wrench
5mm Allen Wrench	24mm Socket / Wrench
8mm Socket / Wrench	35mm Socket
10mm Socket / Wrench	1 1/16” Socket
13mm Socket / Wrench	Torque Wrench
14mm Socket / Wrench	
15mm Socket / Wrench	

Thank You for choosing Rough Country for your off road needs!!!

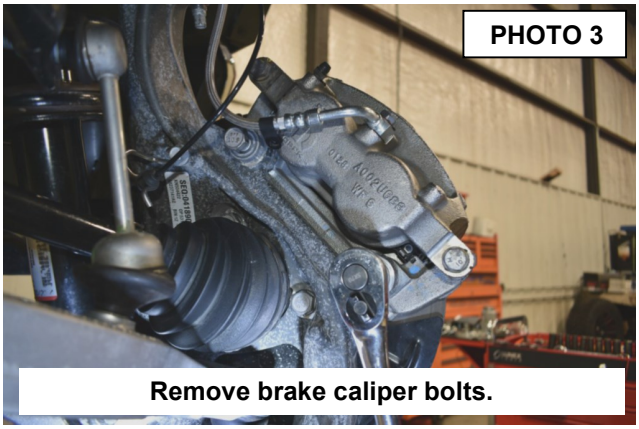
INSTALLATION INSTRUCTIONS

1. Chock rear wheels of the vehicle and raise the front of the vehicle using a floor jack.
2. Support the vehicle with jack stands.
3. Remove wheel using 22mm socket.
4. Using a 36mm socket, remove the axle nut. Retain hardware. **See Photo 1**.
5. Using a 21mm wrench, remove the tie rod end from the knuckle. Retain hardware. **See Photo 2.**



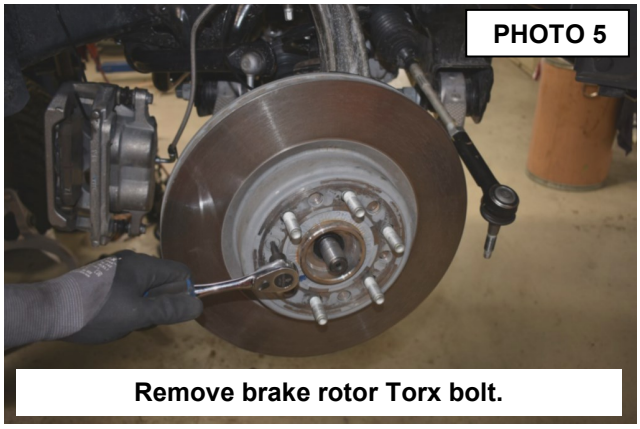


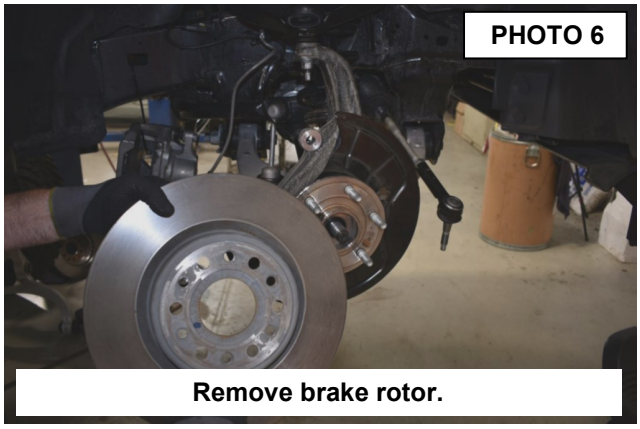
6. Using a 21mm socket, remove the brake caliper hardware. Retain hardware. **See Photo 3.**
7. Remove the brake caliper, do not hang by the brake line. **See Photo 4.**



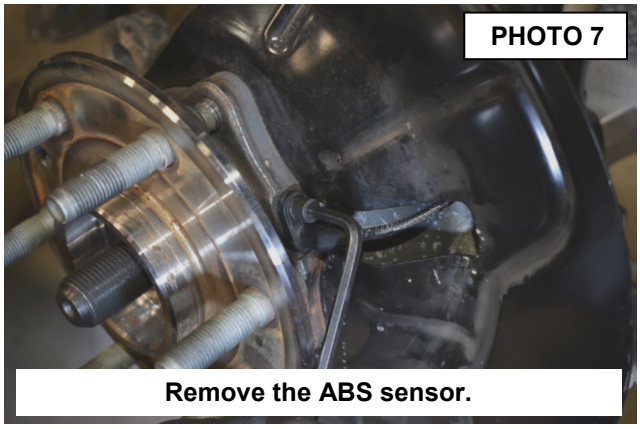


8. Using a T30, remove the brake rotor bolt. Retain hardware. **See Photo 5.**
9. Remove the brake rotor and place out of the way. Retain for reuse. **See Photo 6.**

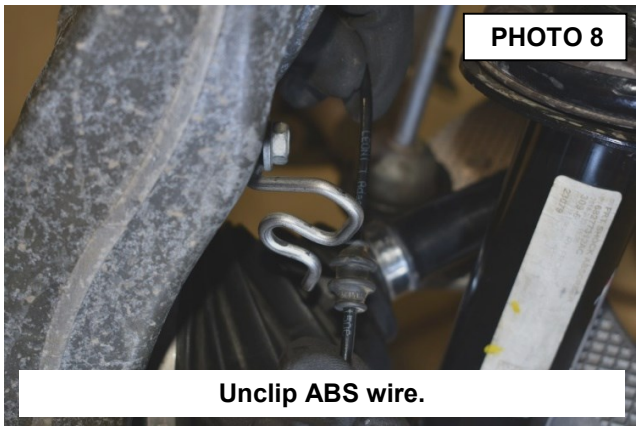




10. Using a 5mm Allen, remove the ABS sensor from the hub. Retain hardware. **See Photo 7.**
11. Unclip the ABS wire from the clip on the knuckle. **See Photo 8.**

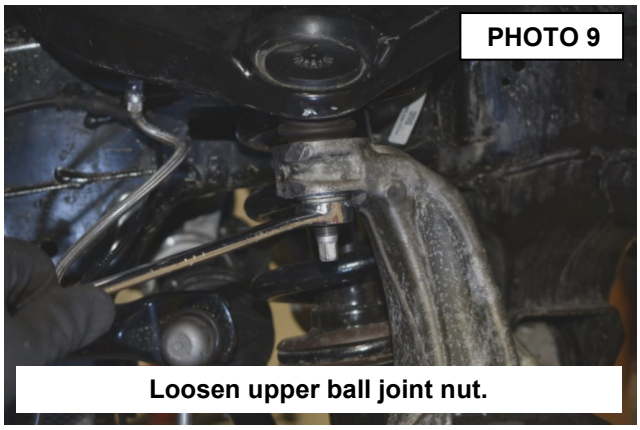


Remove the ABS sensor.



Unclip ABS wire.

12. Using a 21mm wrench, **loosen** the upper ball joint nut. Do not remove. **See Photo 9.**
13. Using a hammer, strike the knuckle at the upper ball joint to release the taper. **See Photo 10.**

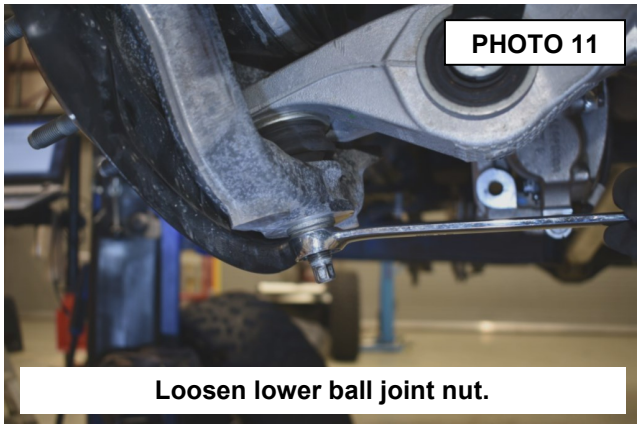


Loosen upper ball joint nut.

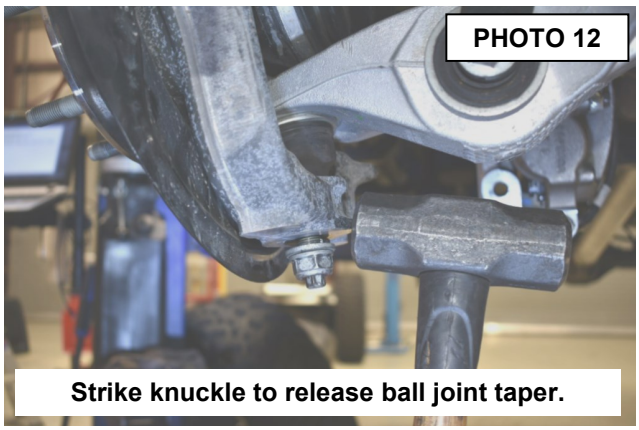


Strike knuckle to release ball joint taper.

14. Using a 24mm wrench, **loosen** the lower ball joint nut. Do not remove. **See Photo 11.**
15. Using a hammer, strike the knuckle at the upper ball joint to release the taper. **See Photo 12.**

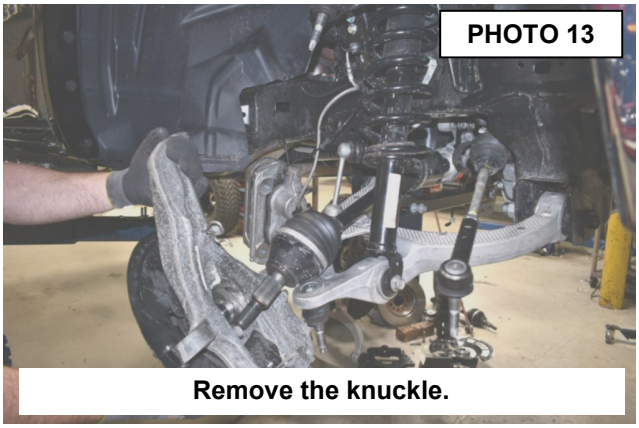


Loosen lower ball joint nut.

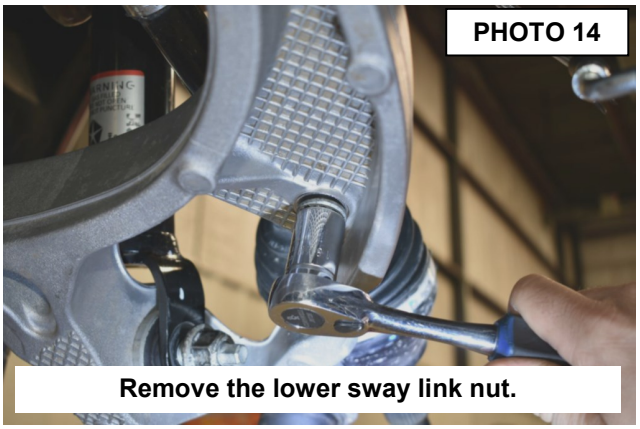


Strike knuckle to release ball joint taper.

16. Remove the knuckle from the vehicle. **See Photo 13.**
17. Using an 18mm socket, remove the sway bar link nut from under the lower control arm. Retain hardware. **See Photo 14.**

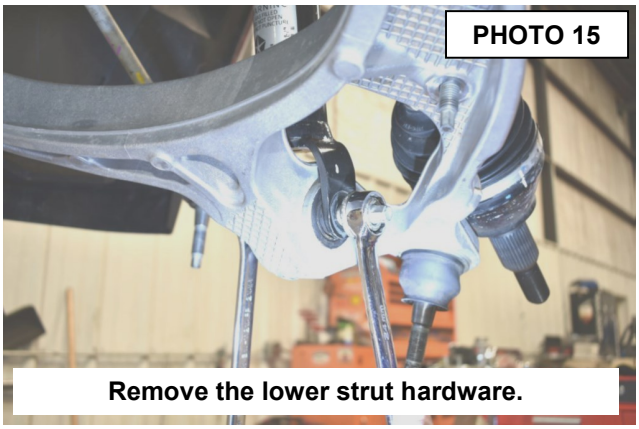


Remove the knuckle.

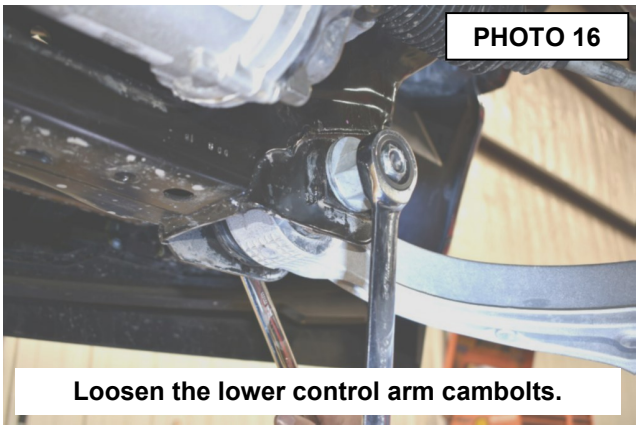


Remove the lower sway link nut.

18. Using a 24mm wrench and 21mm socket, remove the lower strut hardware. Retain hardware. **See Photo 15.**
19. Using 24mm wrenches, loosen the lower control arm cambolts and let the lower control arm swing down. **See Photo 16.**



Remove the lower strut hardware.

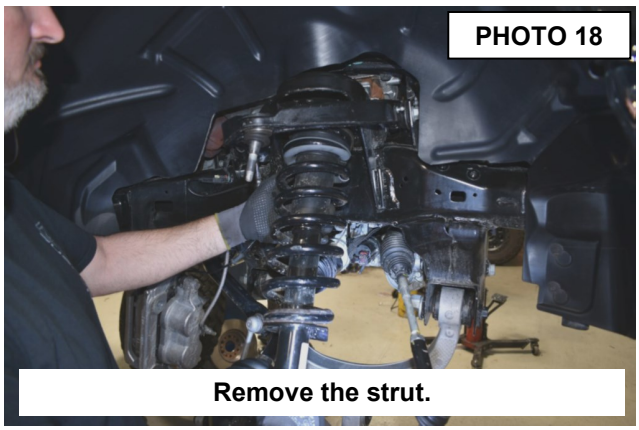


Loosen the lower control arm cambolts.

20. Using a 16mm wrench, remove the (3) upper strut nuts. Retain hardware. **See Photo 17.**
21. Remove the strut from the vehicle. **See Photo 18.**

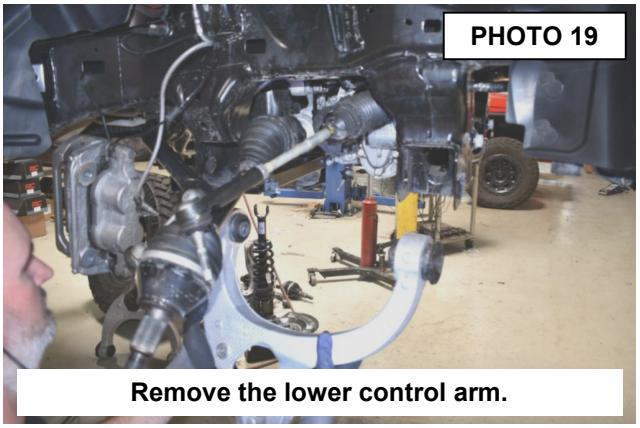


Remove the (3) upper strut nuts.

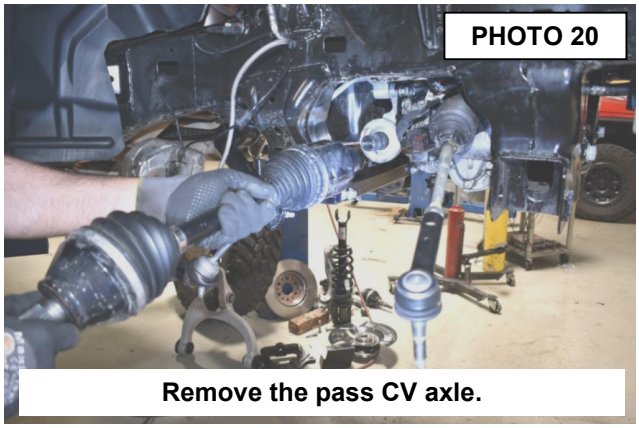


Remove the strut.

22. Remove the lower control arm. Retain hardware. **See Photo 19.**
23. Remove the passenger side CV axle. **See Photo 20.**



Remove the lower control arm.



Remove the pass CV axle.

24. Using a 15mm socket, remove the factory sway bar hardware. Retain hardware. **See Photo 21**.
25. Remove the sway bar and sway links from the vehicle. **See Photo 22**.

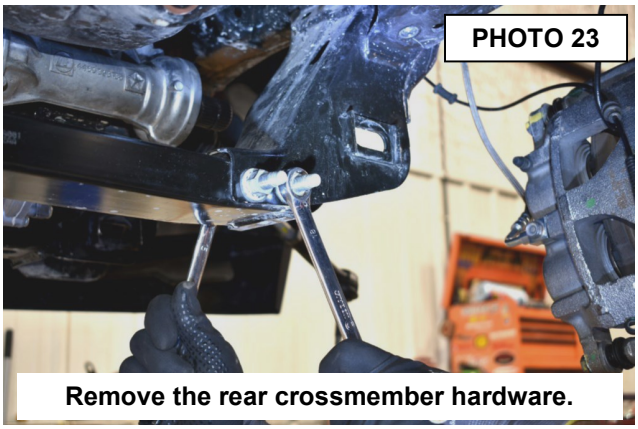


Remove the sway bar hardware.



Remove the sway bar.

26. Using a 15mm wrench and an 18mm socket, remove the (4) bolts holding the rear crossmember. **See Photo 23.**
27. Remove the rear crossmember from the vehicle. **See Photo 24.**

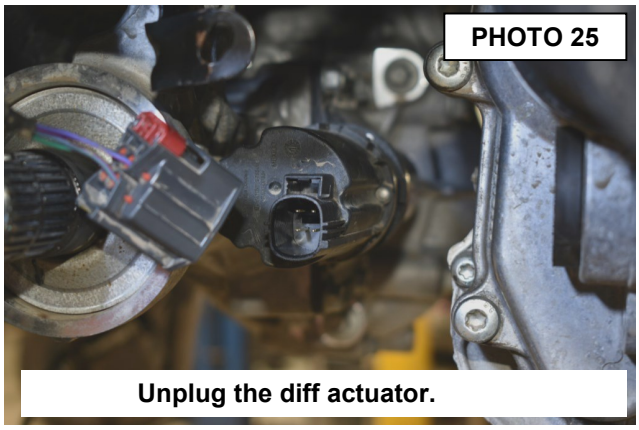


Remove the rear crossmember hardware.

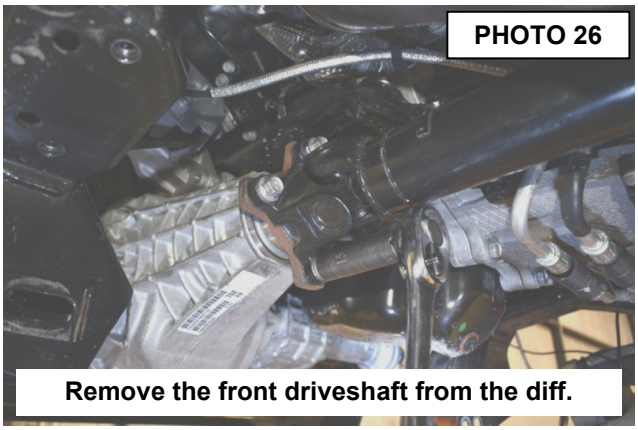


Remove the rear crossmember.

28. Unplug the diff actuator on the pass side of the differential. **See Photo 25.**
29. Using a 15mm socket, remove the front driveshaft from the front diff. **See Photo 26.**

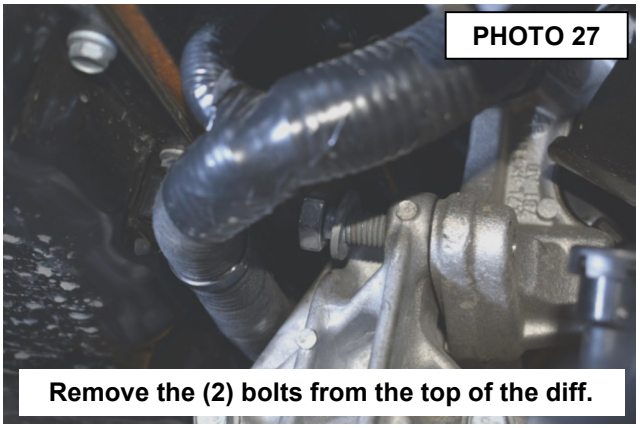


Unplug the diff actuator.

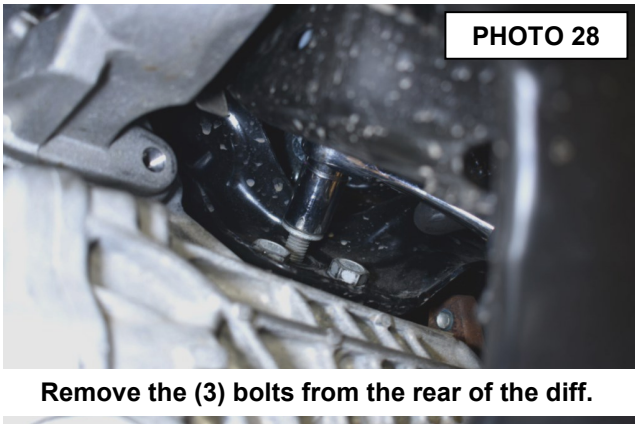


Remove the front driveshaft from the diff.

30. Support the front diff using a jack or jack stand.
31. Using an 18mm wrench, remove the (2) bolts from the top of the diff. Retain hardware. **See Photo 27**.
32. Using an 18mm socket, remove the (3) bolts from the rear of the diff. Retain hardware. **See Photo 28.**

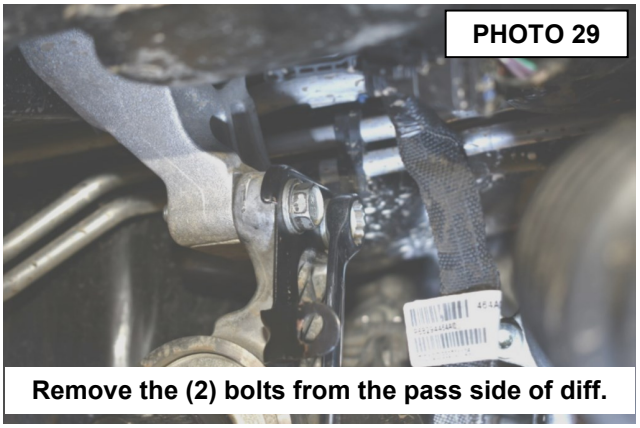


Remove the (2) bolts from the top of the diff.

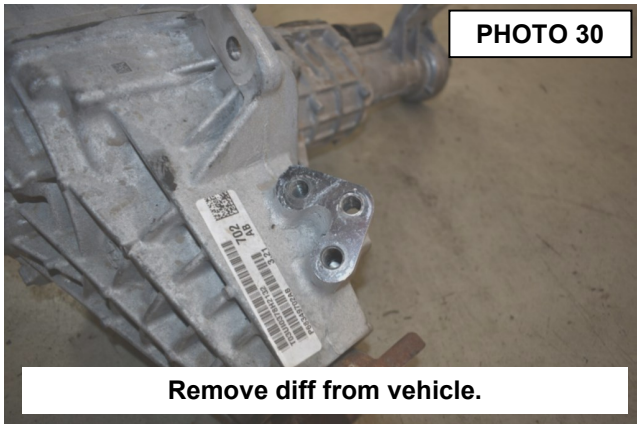


Remove the (3) bolts from the rear of the diff.

33. Using an 18mm wrench, remove the (2) bolts from the pass side of the diff. Retain hardware. **See Photo 29.**
34. Remove the front differential from the vehicle. **See Photo 30.**

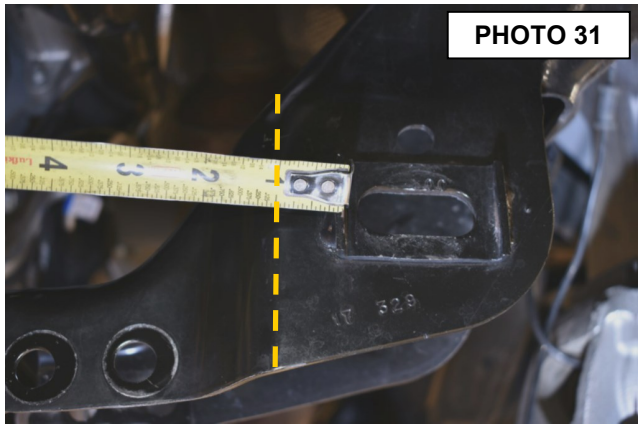


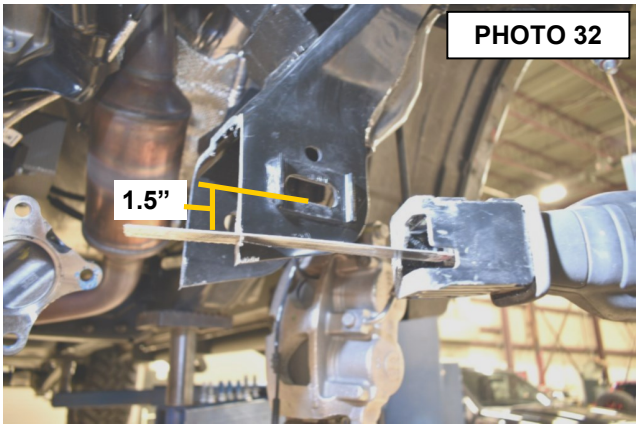
Remove the (2) bolts from the pass side of diff.



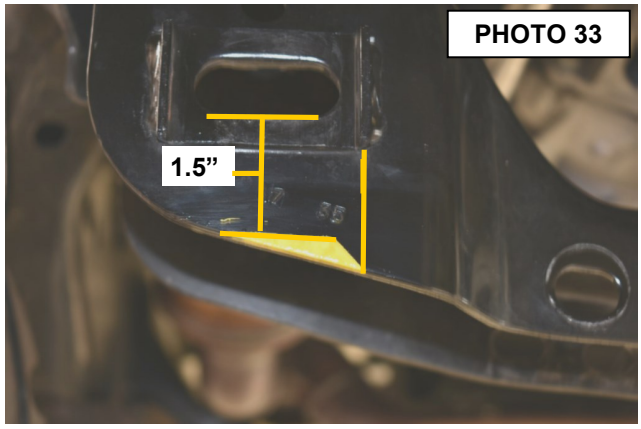
Remove diff from vehicle.

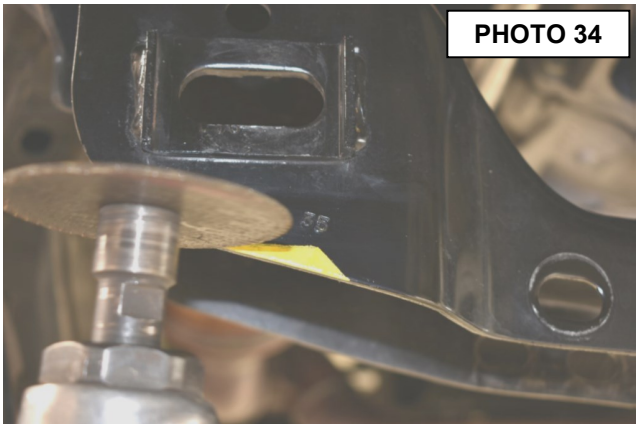
35. On the front side of the driver rear crossmember mount, measure 1” from the cam tab and mark. **See Photo 31.**
36. Using a reciprocating saw, cut the crossmember mount off using the mark made in step 35. Sand and paint cut edges to prevent rust.
37. On the front side of the driver rear crossmember mount, measure down 1.5” from the cam bolt hole and cut the inside corner off. Sand and paint cut edges to prevent rust. **See Photo 32.**



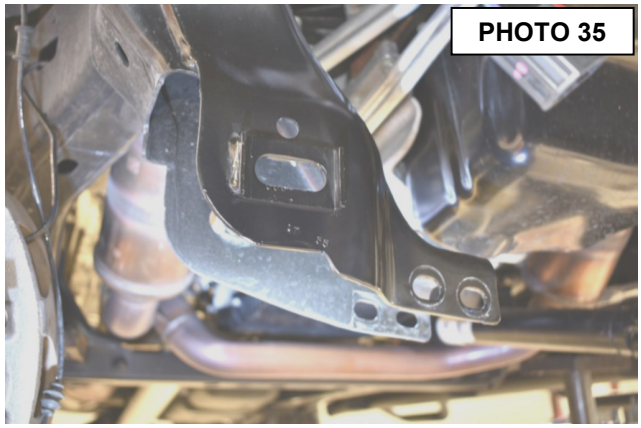


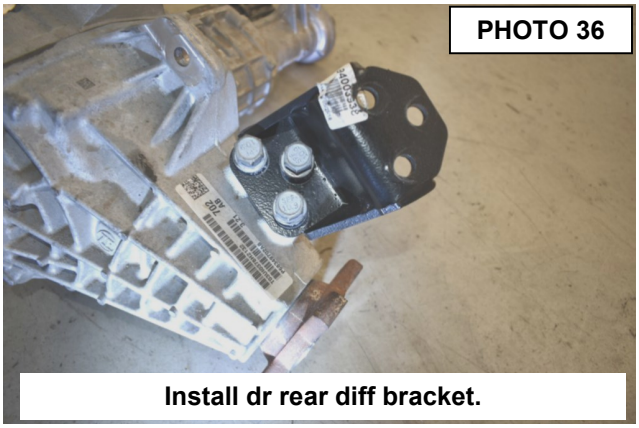
38. On the front side of the pass rear crossmember mount, measure down 1.5” from the cam bolt hole and mark. Also, mark a line straight down from the inner cam tab, creating a triangle. **See Photo 33.**
39. Using a cutoff wheel, cut along the marks made in step 38. This is done for clearance of the supplied rear crossmember. Check the clearance by placing the supplied rear crossmember in the factory control arm pockets. Sand and paint cut edges to prevent rust **See Photos 34 & 35.**



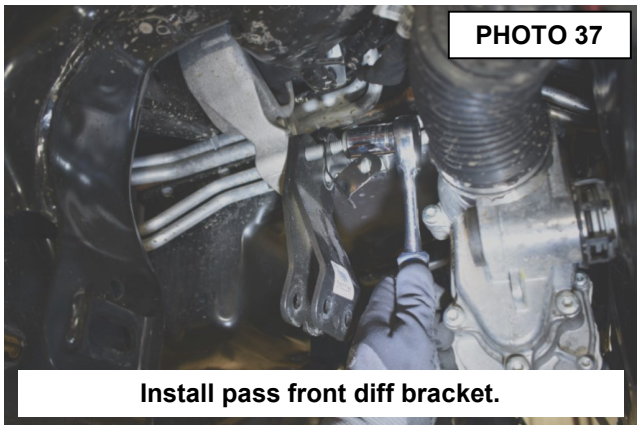


40. Install the supplied driver rear diff bracket using the factory hardware. Torque to 78 ft-lbs. using an 18mm socket. **See Photo 36.**

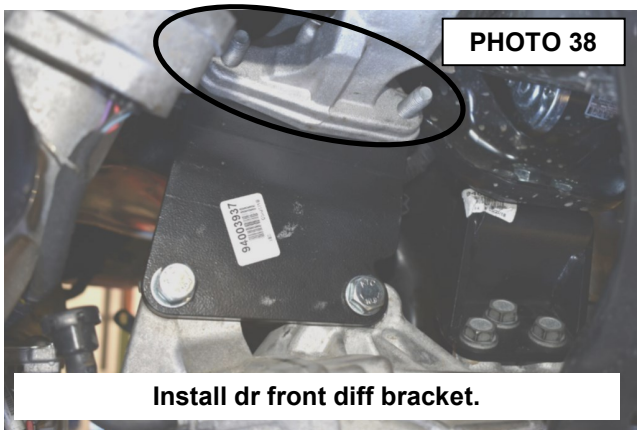




41. Install the supplied pass side front diff bracket, with the factory wire clip, using the factory hardware. Torque to 78 ft-lbs. using an 18mm socket. **See Photo 37.**
42. Install the supplied dr side front diff bracket using the factory hardware. Torque to 78 ft-lbs. using an 18mm socket. **See Photo 38.**

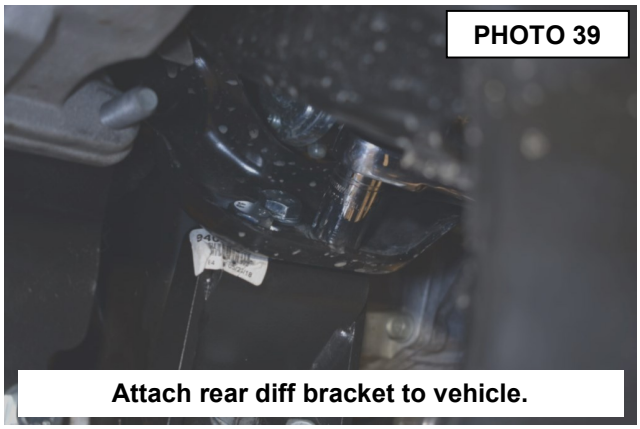


Install pass front diff bracket.

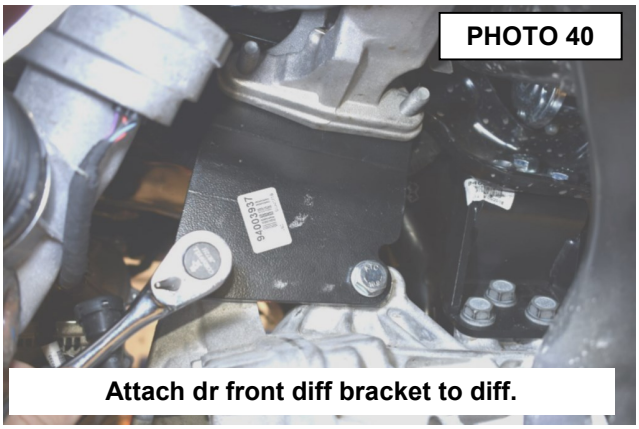


Install dr front diff bracket.

43. Raise the differential up to the vehicle.
44. Attach the rear mounting bracket using the supplied 12mm x 45mm bolts, washers, and flange lock nuts. Do not tighten at this time. **See Photo 39.**
45. Attach the front driver side mount to the diff using the supplied 12mm x 45mm bolts, washers, and flange lock nuts. Do not tighten at this time. **See Photo 40.**

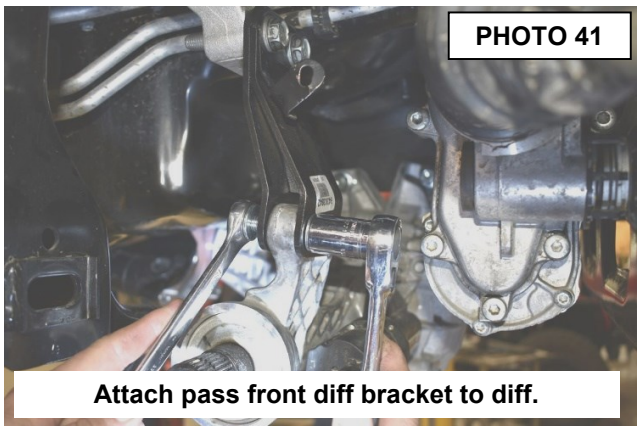


Attach rear diff bracket to vehicle.

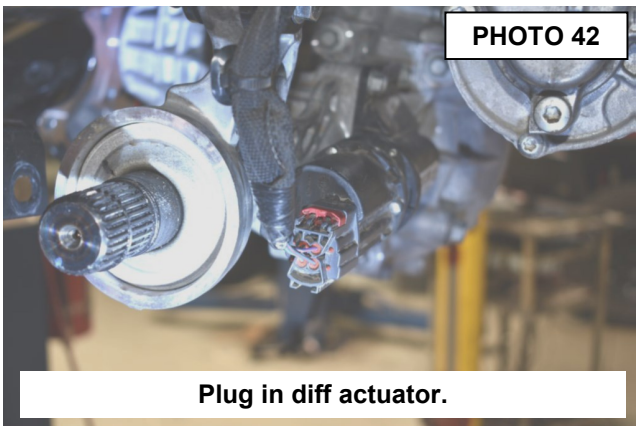


Attach dr front diff bracket to diff.

46. Attach the front pass bracket to the diff using the supplied 12mm x 45mm bolts, washers, and flange lock nuts. **See Photo 41.**
47. Torque all differential hardware to 55ft/lbs using an 18mm socket and 19mm wrench.
48. Plug in the diff actuator. **See Photo 42.**

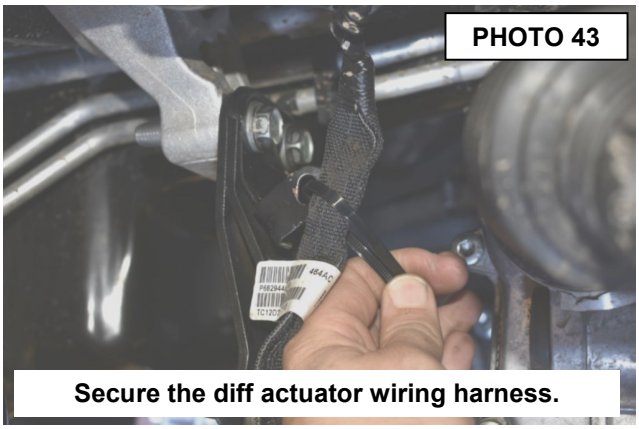


Attach pass front diff bracket to diff.

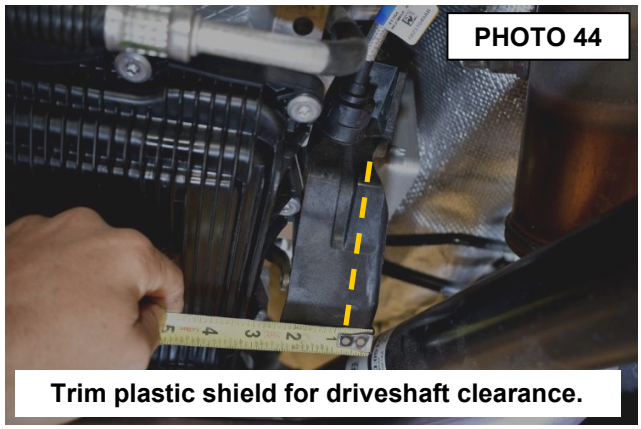


Plug in diff actuator.

49. Wire tie the diff actuator wiring harness to the clip on the pass front diff drop bracket. **See Photo 43.**
50. Measure over 3/4” and trim this plastic shield for driveshaft clearance. **See Photo 44.**

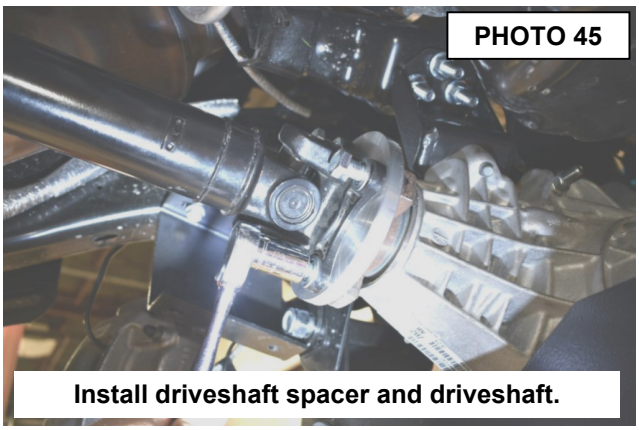


Secure the diff actuator wiring harness.

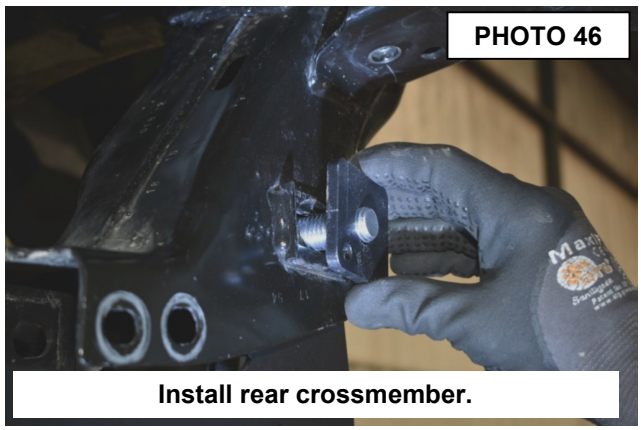


Trim plastic shield for driveshaft clearance.

51. Install the supplied driveshaft spacer and the driveshaft using the supplied 12mm x 45mm grade 10.9 bolts and washers. Torque to 75ft/lbs using an 18mm socket. **See Photo 45.**
52. Install the supplied rear crossmember using the supplied 18mm x 150mm bolts (33430BAG2) with the square washers **(thin goes in front & thick goes in the back of the crossmember**). **See Photo 46.**

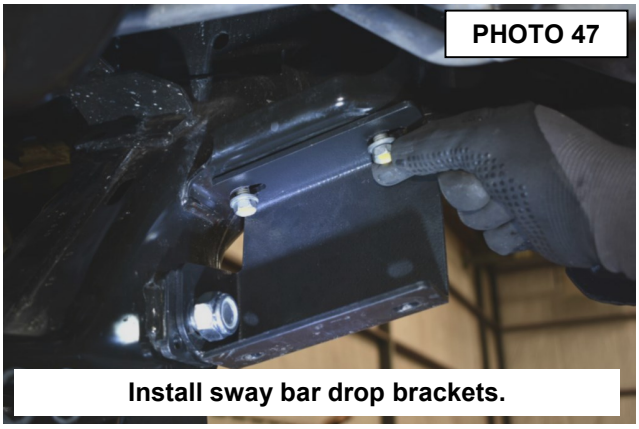


Install driveshaft spacer and driveshaft.



Install rear crossmember.

53. Install the supplied sway bar drop brackets on the crossmember bolts, using the supplied 18mm nylock nuts (33430BAG2), and attach to the frame using the factory hardware. Do not tighten at this time. **See Photo 47.**
54. Install the supplied front crossmember using the supplied 18mm x 150mm bolts, square washers, and nylock nuts (33430BAG2). Do not tighten at this time. **See Photo 48.**

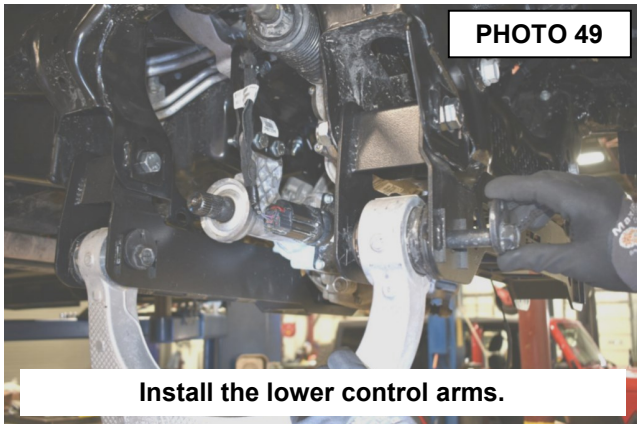


Install sway bar drop brackets.

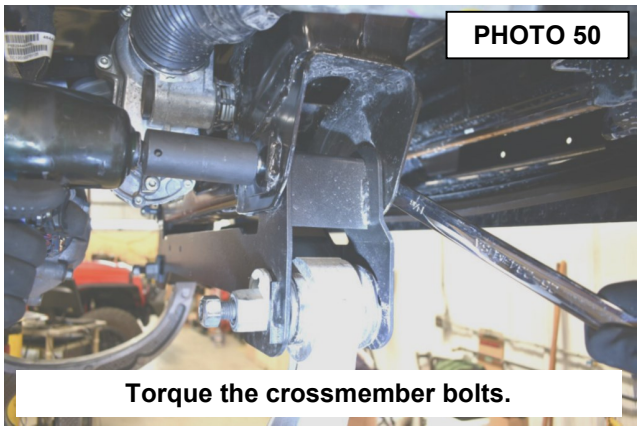


Install front crossmember.

55. Install the lower control arms using the factory cam bolts. **See Photo 49.**
56. Torque the upper crossmember bolts to 170ft/lbs using a 27mm socket and wrench. **See Photo 50.**

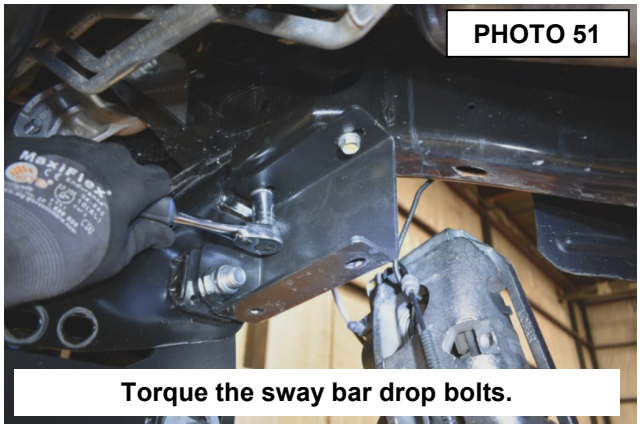


Install the lower control arms.



Torque the crossmember bolts.

57. Torque the sway bar drop bolts to 35 ft-lbs. using a 15mm socket. **See Photo 51**.
58. Install the supplied skid plate on the rear crossmember using the supplied 3/8" x 1" bolts, washers, and flange lock nuts . Torque to 30ft/lbs using a 9/16" socket and wrench. **See Photo 52**.



Torque the sway bar drop bolts.



Install the skid plate.

59. Install the supplied skid plate on the front crossmember using the supplied 3/8" x 1" bolts, washers, and flange lock nuts .Torque to 30ft/lbs using a 9/16" socket and wrench. **See Photo 53.**
60. **Mark the strut top orientation with the strut body before proceeding to the next steps.**
61. Place the strut in a strut compressor and compress the strut. Using an 18mm socket on the strut nut and an 8mm socket on the strut shaft, remove the strut nut. **Do not use an impact. See Photo 54.**

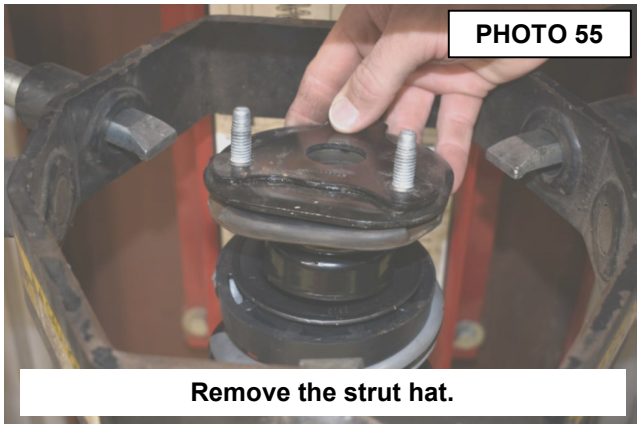


Install the skid plate.



Remove the strut nut.

62. Remove the top hat from the strut. **See Photo 55.**
63. Remove the plastic shock guard from the strut. **See Photo 56.**

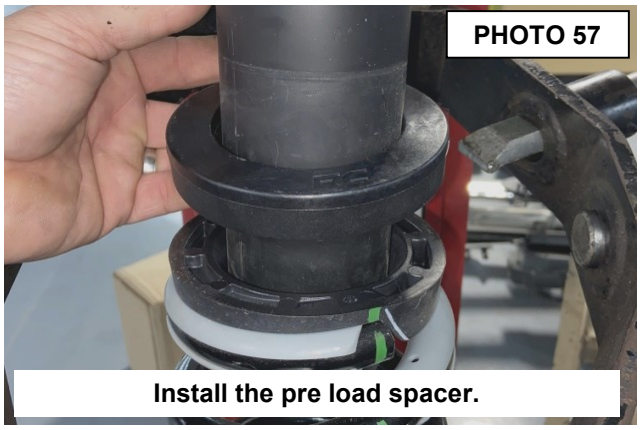


Remove the strut hat.



Remove the plastic shock guard.

64. Install the supplied preload spacer on top of the coil spring isolator. **See Photo 57**.
65. Place the plastic shock guard down through the pre load spacer. **See Photo 58**.



Install the pre load spacer.

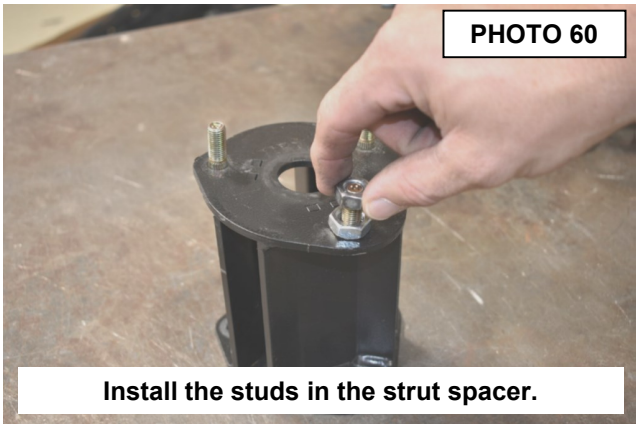


Install the plastic shock guard.

66. Place the hat on the strut making sure to align the marks made in step 60. Compress the strut and install the strut nut. Torque to 35 ft-lbs. **Do not use an impact on the strut. See Photo 59.**
67. Place the supplied 10mm studs in the supplied strut spacer. Place the supplied 1/2" jam nut over a stud and then thread a supplied 10mm nut onto the stud (10MMSTUDBAG-1). **Do not use an impact on the studs. See Photo 60.**



Install the strut hat and nut.

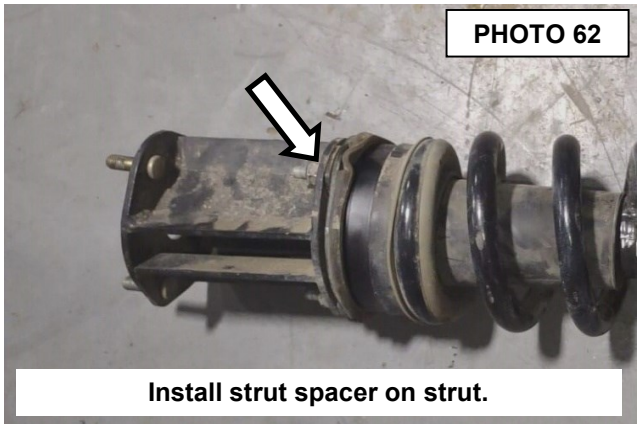


Install the studs in the strut spacer.

68. Using a 17mm wrench, tighten the 10mm nut to pull the stud into the spacer. **Do not use an impact. See Photo 61.**
69. Install the assembled strut spacers on the struts using the factory hardware. Torque to 45 ft-lbs. using a 16mm wrench. **See Photo 62.**

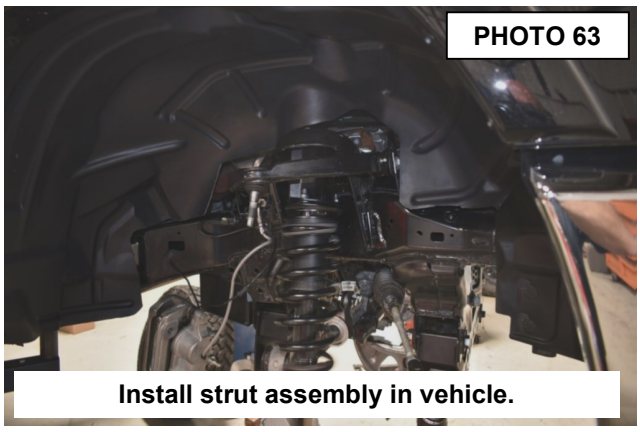


Install studs in strut spacer.

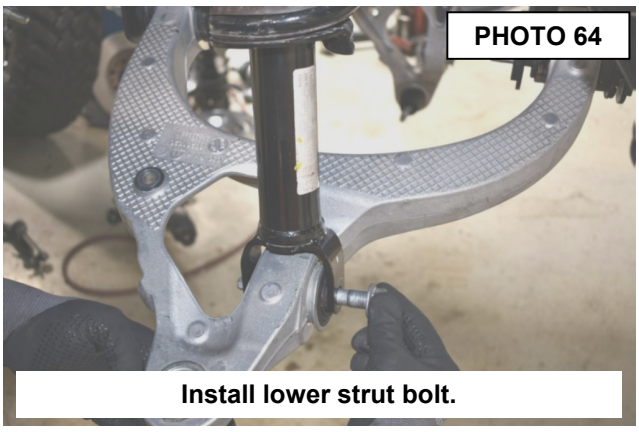


Install strut spacer on strut.

70. Install the strut assembly into the vehicle, using the supplied 10mm hardware (10MMSTUDBAG-1) for the (3) upper studs. Do not tighten at this time. **See Photo 63**.

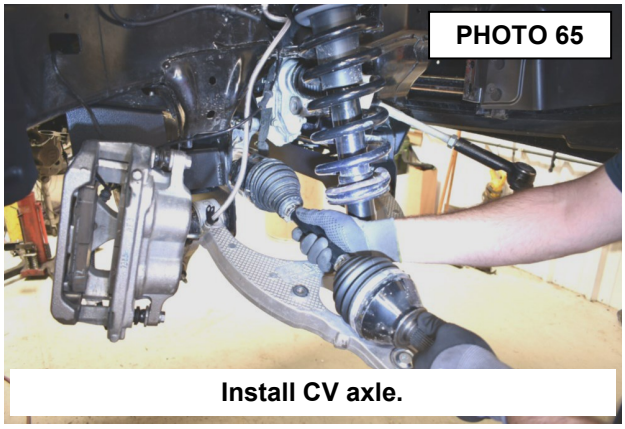


Install strut assembly in vehicle.

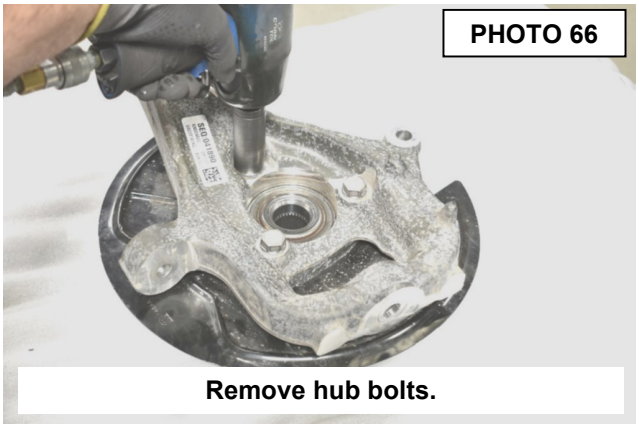


Install lower strut bolt.

71. Install the factory hardware into the lower mount. Do not tighten at this time. **See Photo 64**.
72. Torque the upper strut nuts to 35 ft-lbs. using a 17mm wrench. The lower hardware will be tighten once the front of the vehicle is on the ground.
73. Install the pass side CV axle. **See Photo 65.**
74. Using a 21mm socket, remove the hub bolts. Retain hardware. **See Photo 66.**



Install CV axle.



Remove hub bolts.

75. Using a 13mm socket, remove the ABS wire bracket from the factory knuckle. Retain hardware. **See Photo 67.**
76. Remove the factory knuckle from the hub. **See Photo 68.**

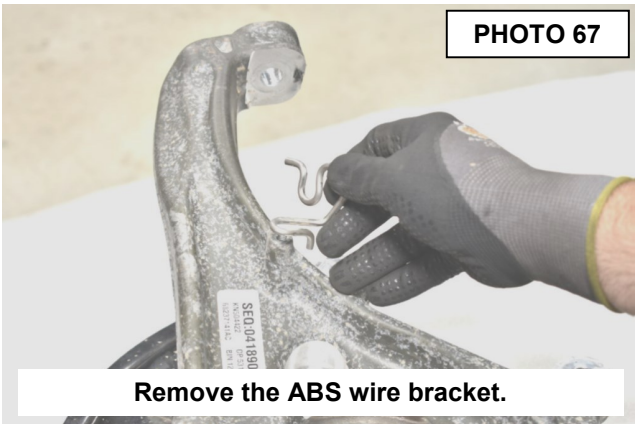


PHOTO 67
Remove the ABS wire bracket.


PHOTO 68
Remove the knuckle from the hub.

77. Place the supplied lift knuckle on the factory hub using the factory hardware. Torque the hub bolts to 100 ft-lbs. using a 21mm socket. **See Photo 69**.
78. Install the ABS wire bracket on the lift knuckle using the factory hardware. Torque to 18 ft-lbs. using a 13mm wrench. **See Photo 70**.


PHOTO 69
Install the supplied knuckle on the hub.

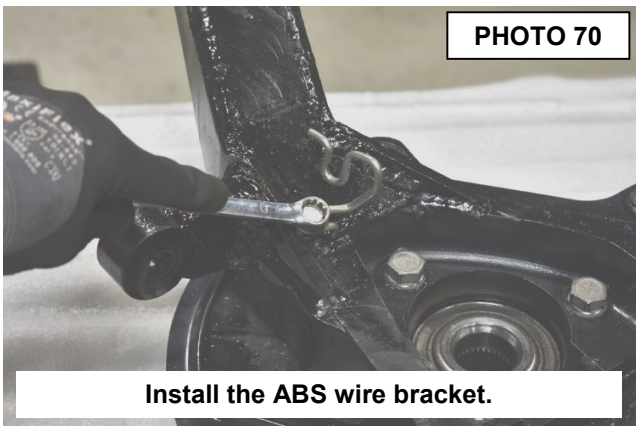


PHOTO 70
Install the ABS wire bracket.

79. Using a 13mm wrench, remove the factory brake line bolt. Retain hardware. **See Photo 71.**
80. Using a cutting wheel, carefully, cut a slot in the frame mounting hole. **See Photo 72.**


PHOTO 71
Remove brake line from frame.

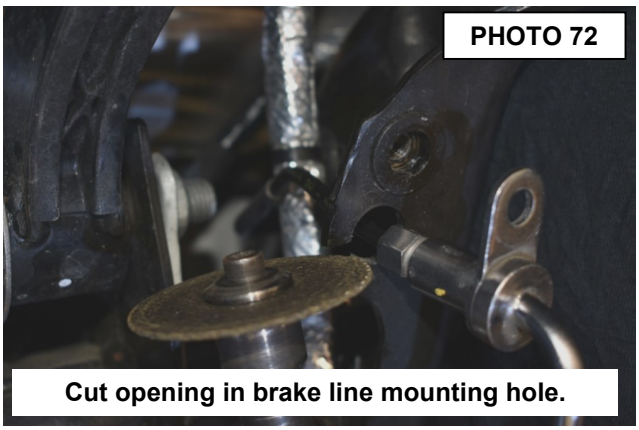
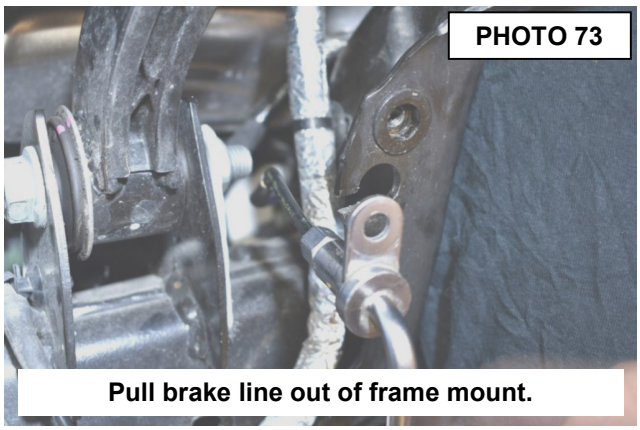
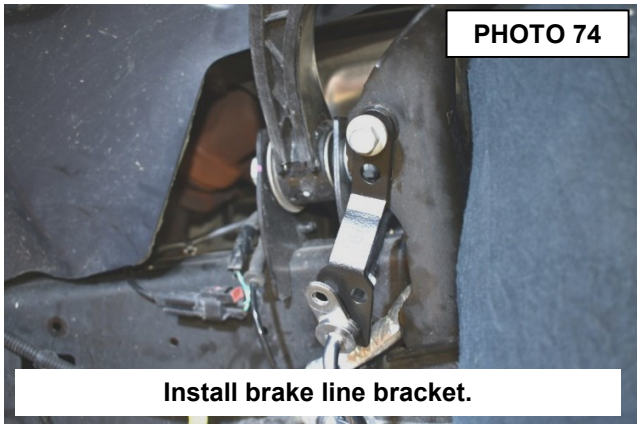


PHOTO 72
Cut opening in brake line mounting hole.

81. Carefully, remove the brake line from the frame mounting hole. **See Photo 73.**
82. Install the supplied brake line bracket (33430BAG6) using the factory hardware. Do not tighten at this time. Install the brake line in the lower hole. **See Photo 74.**

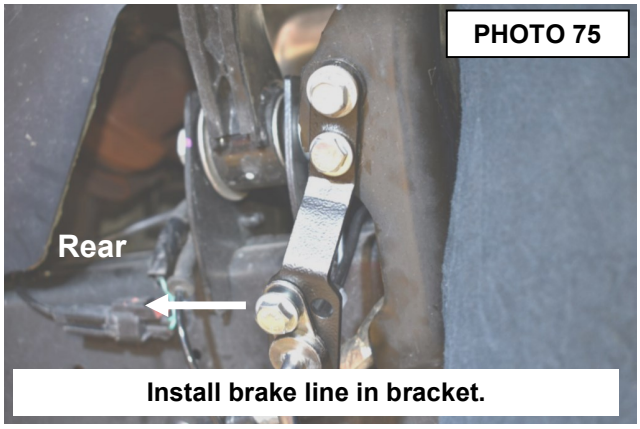


Pull brake line out of frame mount.

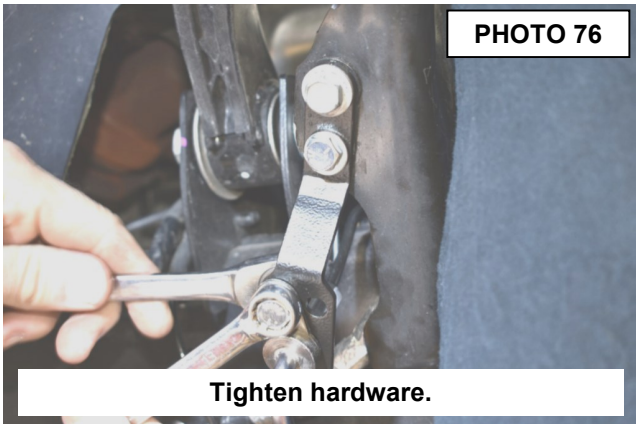


Install brake line bracket.

83. Install the supplied 5/16” x 1” bolts and 5/16” flat washer through the 2nd hole from the top of the brake line bracket using the supplied 3/8” large washer and 5/16” flange nut on the backside. Do not tighten at this time. **See Photo 75**.
84. Install the supplied 5/16” x 1” bolt, 5/16” washers, and 5/16” flange lock nut in the rear mounting hole, securing the brake line to the bracket. **See Photo 75**.
85. Torque the 5/16 hardware to 15 ft-lbs. using 1/2” socket / wrench. Torque the factory hardware to 15 ft-lbs. using a 13mm socket / wrench. **See Photo 76.**



Install brake line in bracket.



Tighten hardware.

86. Install the CV axle into the hub on the knuckle and knuckle on the lower ball joint. **See Photo 77.**
87. Using the stock nut, lower the upper control arm and attach the ball joint to the knuckle. **See Photo 78.**

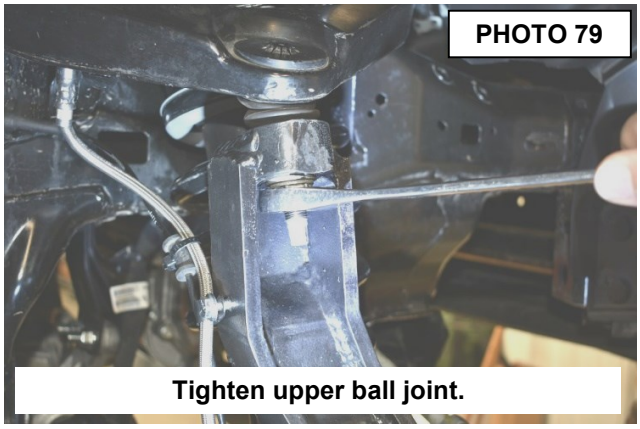


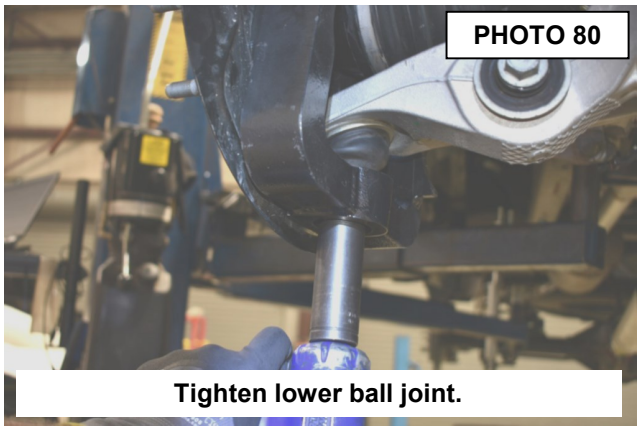
Install the knuckle on the vehicle.



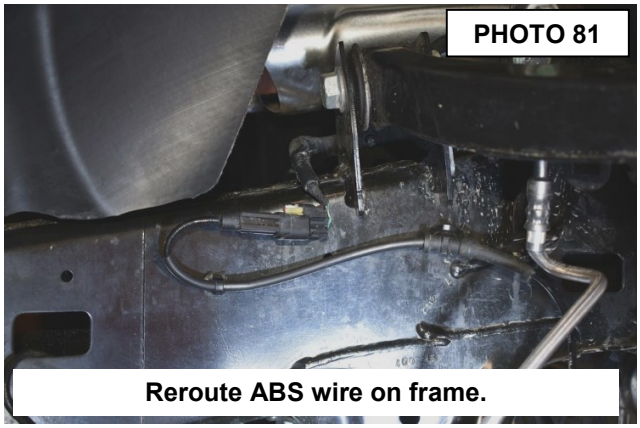
Install the upper ball joint in the knuckle.

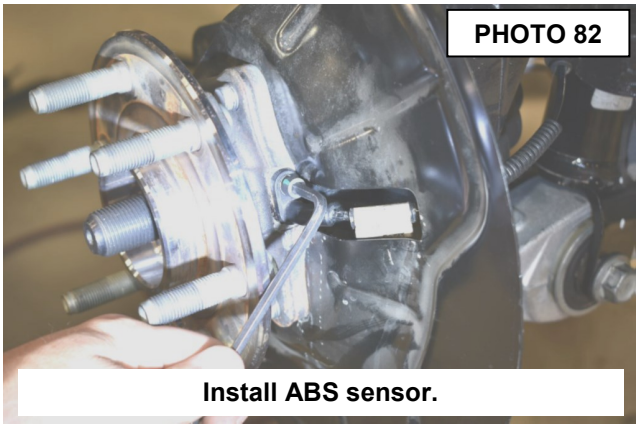
88. Torque the upper ball joint to 40 ft-lbs. using a 21mm wrench. **See Photo 79.**
89. Torque the lower ball joint to 38 ft-lbs. using a 24mm socket. **See Photo 80.**



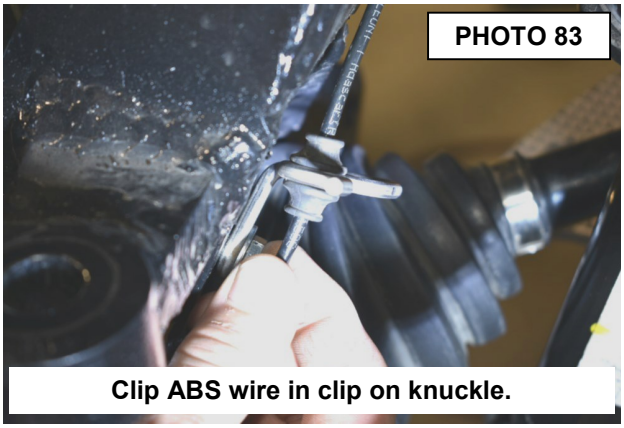


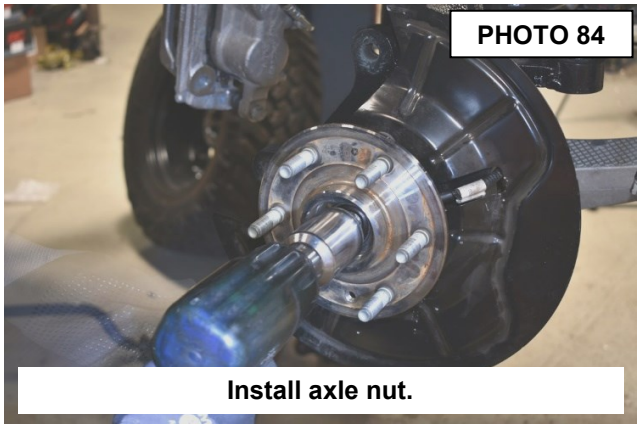
90. Reroute the ABS wire on the frame. **See Photo 81**.
91. Install the ABS sensor into the hub, use the factory hardware. Torque to 8 ft-lbs. using a 5mm Allen. **See Photo 82**.





92. Secure the ABS wire in the clip on the knuckle. **See Photo 83.**
93. Install the factory axle nut and torque to 185 ft-lbs. using a 36mm socket. **See Photo 84.**





94. Install the rotor on the hub using the factory hardware. Torque to 5 ft-lbs. using a T30. **See Photo 85.**
95. Install the brake caliper using the factory hardware. Torque to 130 ft-lbs. using a 21mm socket. **See Photo 86.**

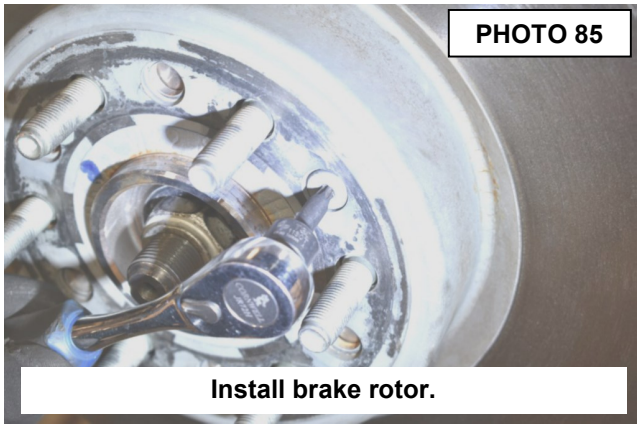


PHOTO 85
Install brake rotor.

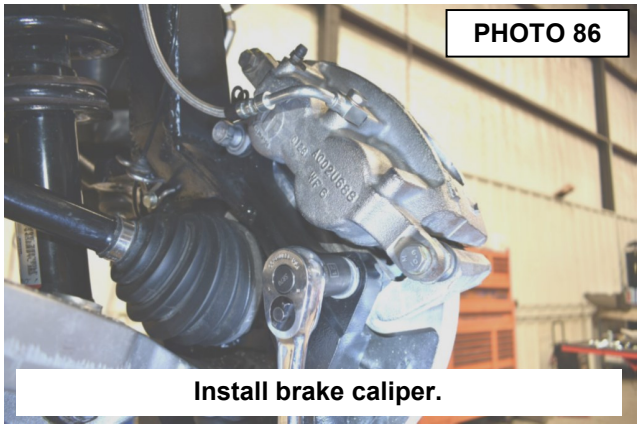


PHOTO 86
Install brake caliper.

96. Remove the factory tie rod ends and install the supplied tie rod ends using a 24mm wrench. Attach the tie rod end to the knuckle using the supplied hardware. Torque to 45 ft-lbs. using a 21mm socket. **See Photo 87**.
97. Install the sway bar assembly on the drop brackets using the supplied 3/8" x 1.25" bolts, washers, and nuts. Torque to 30ft/lbs using a 9/16" wrench and socket. **See Photo 88**.

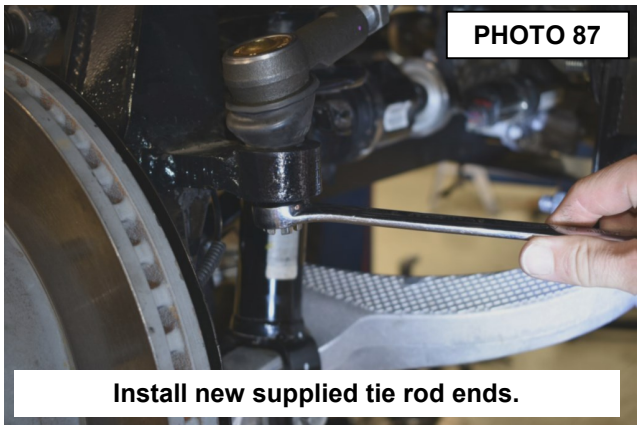


PHOTO 87
Install new supplied tie rod ends.


PHOTO 88
Install sway bar assembly.

98. Install the sway link in the lower control arm using the factory hardware. Torque to 45 ft-lbs. using a 18mm socket. **See Photo 89.**
99. Secure the ABS wire to the brake line using the supplied wire ties. **See Photo 90.**

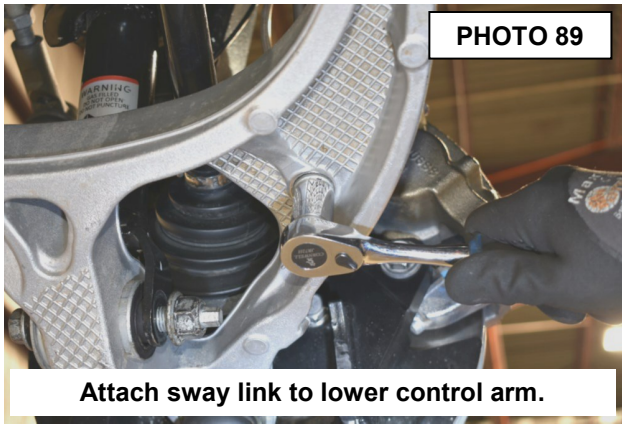


PHOTO 89
Attach sway link to lower control arm.

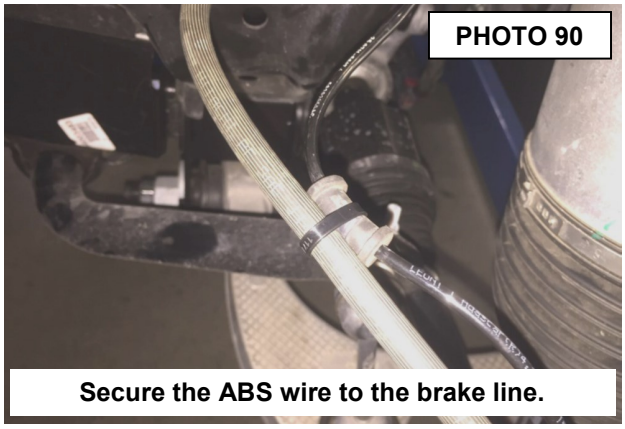
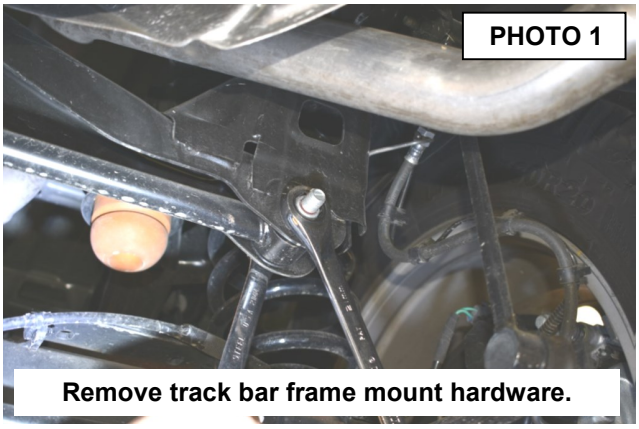


PHOTO 90
Secure the ABS wire to the brake line.

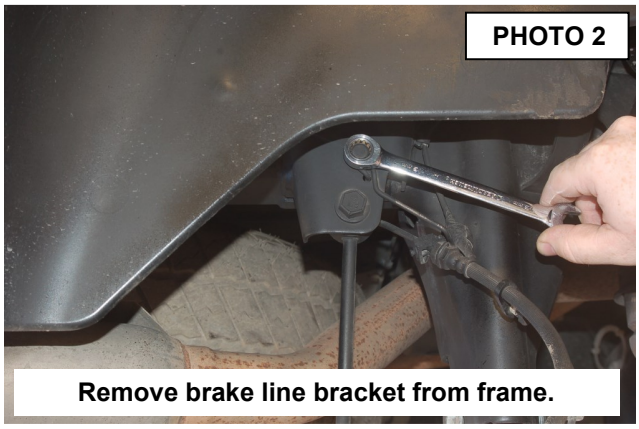
100. Install wheels and tires and lower the vehicle to the ground.
101. Torque the lower strut bolts to 196 ft-lbs. using a 24mm socket and 21mm wrench.
102. Torque the lower control arm cam bolts to 196 ft-lbs. using a 24mm wrench and socket.

REAR INSTALLATION INSTRUCTIONS

1. Chock the front tires. Raise rear of the vehicle with floor jack.
2. Support the rear with jack stands
3. Support the rear axle with a jack.
4. Remove wheels using a 22mm socket.
5. Using a 21mm socket and wrench, remove the track bar frame mounting hardware. Retain hardware. **See Photo 1**.
6. Remove the plastic ABS bracket from the frame.
7. If equipped with an inner fender liner, remove using an 8mm socket. Retain hardware.
8. Using a 13mm wrench, remove the brake line bracket from the frame. Retain hardware. **See Photo 2.**



Remove track bar frame mount hardware.

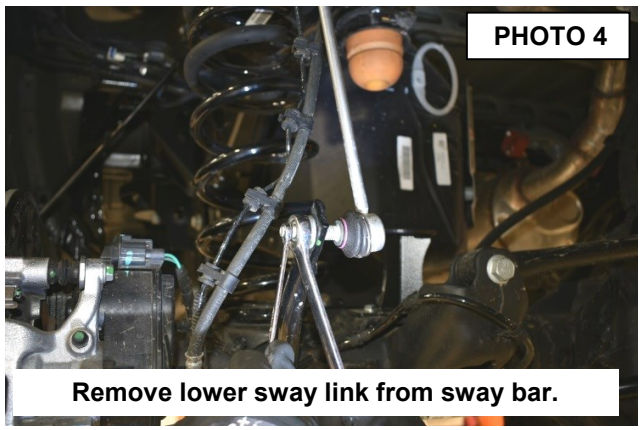


Remove brake line bracket from frame.

9. Remove the upper sway link hardware using an 18mm wrench. Retain hardware. **See Photo 3.**
10. Remove sway-bar link using 8mm and 18mm wrench for lower end and 18mm for top end. **See Photo 4.**

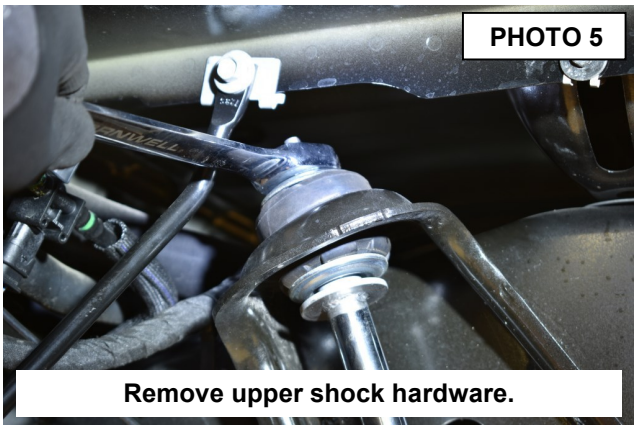


Remove upper sway link hardware.

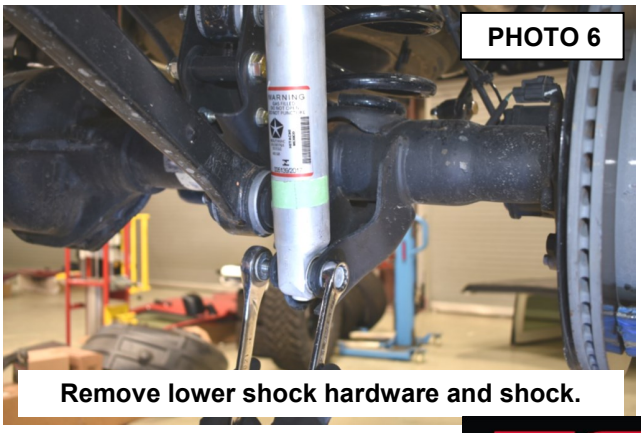


Remove lower sway link from sway bar.

11. Remove the upper shock nut using a 9mm wrench on the stud and a 18mm wrench on the nut. **See Photo 5.**
12. Using 18mm wrenches, remove the lower shock hardware and remove the shock from the vehicle. Retain hardware. **See Photo 6**.

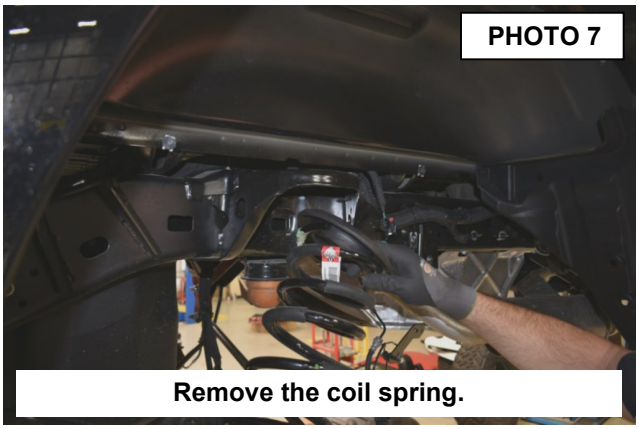


Remove upper shock hardware.

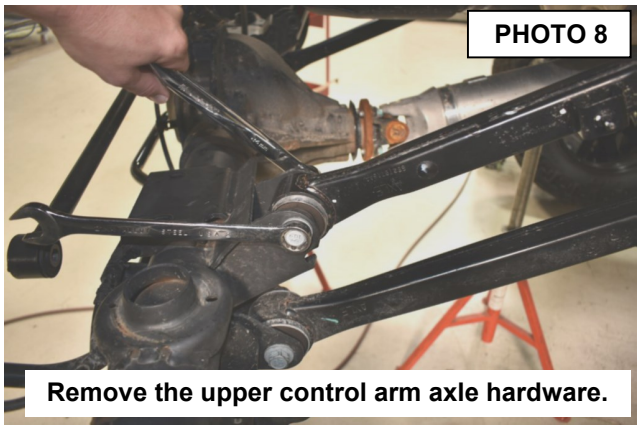


Remove lower shock hardware and shock.

13. Lower the axle and remove the coil springs. **See Photo 7.**
14. Using a 21mm wrench and a 24mm wrench, remove the hardware from the axle end of the upper control arm. Retain hardware. **See Photo 8.**

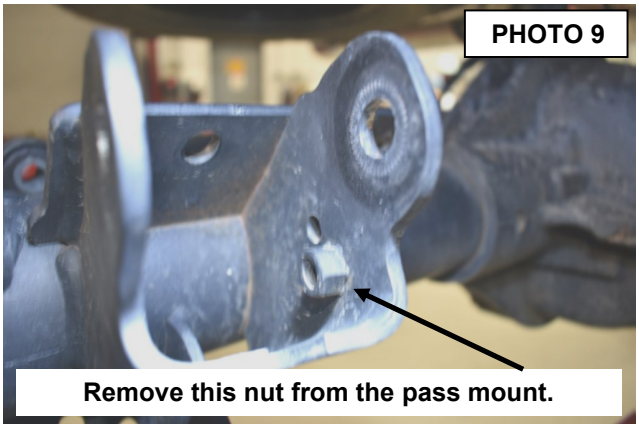


Remove the coil spring.



Remove the upper control arm axle hardware.

15. Using a punch and hammer, remove the welded nut from the inside of the pass upper control arm mount. **See Photos 9 & 10.**

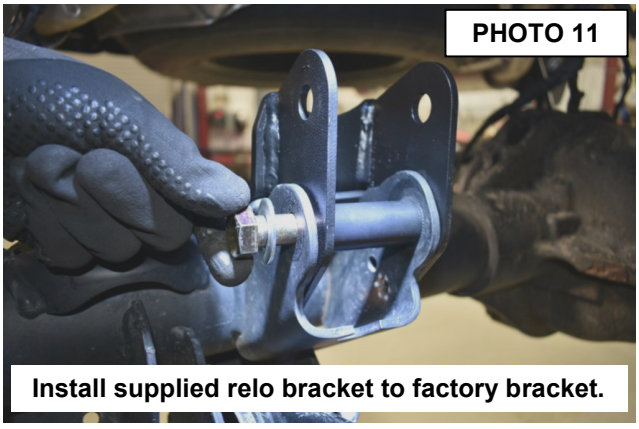


Remove this nut from the pass mount.

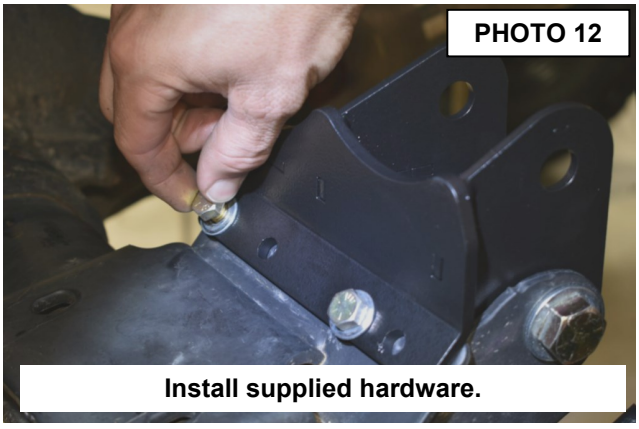


Use a hammer and punch to remove nut.

16. Install the supplied upper control arm relocation bracket in the factory bracket using the supplied sleeve and 5/8" x 4.5" bolt, washers, and nylock nut (33430BAG6). Do not tighten. **See Photo 11.**
17. Install the supplied 3/8" x 1.25" bolts, washer, and nylock nuts into the rear of the mount. Torque to 30ft/lbs using a 9/16" socket and wrench. Do not tighten. **See Photo 12.**

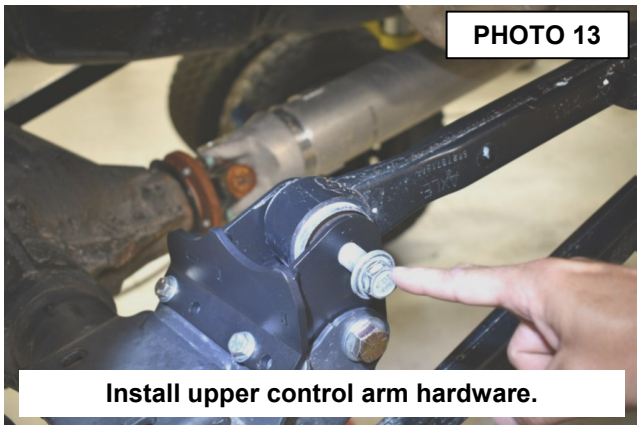


Install supplied relo bracket to factory bracket.



Install supplied hardware.

18. Install the upper control arm in the relocation bracket using the factory hardware. Do not tighten. **See Photo 13.**
19. Torque the 3/8” hardware to 30ft/lbs using a 9/16” socket and wrench. **See Photo 14.**

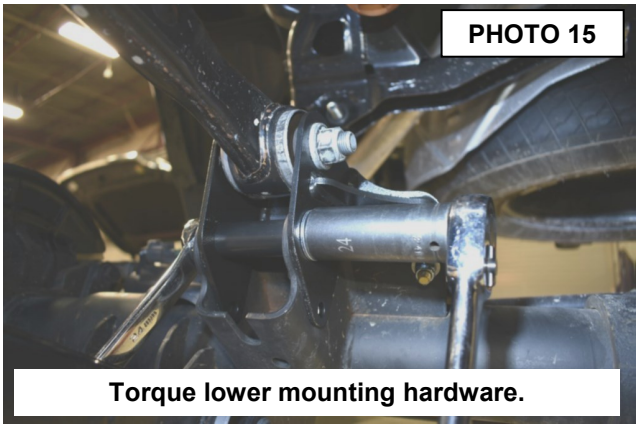


Install upper control arm hardware.

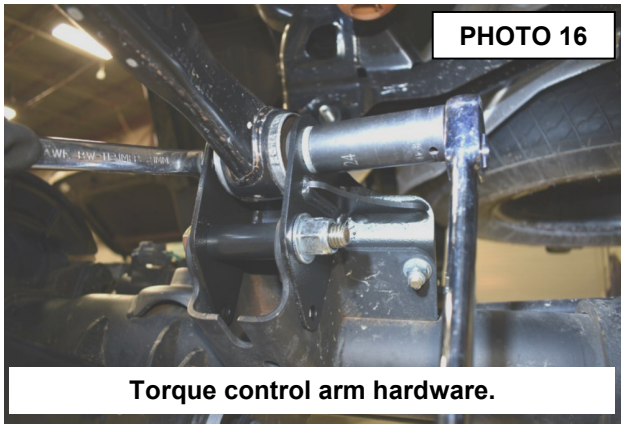


Torque rear 3/8” hardware.

20. Torque the 5/8” hardware to 135ft/lbs using a 15/16” wrench and socket. **See Photo 15.**
21. Torque the factory hardware to 145 ft-lbs. using a 24mm socket and 21mm wrench. **See Photo 16.**

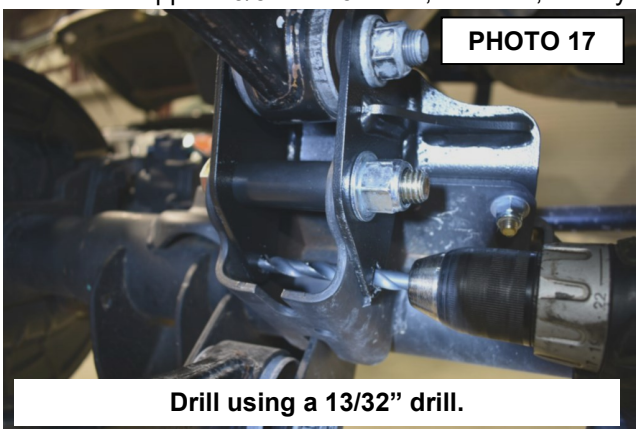


Torque lower mounting hardware.

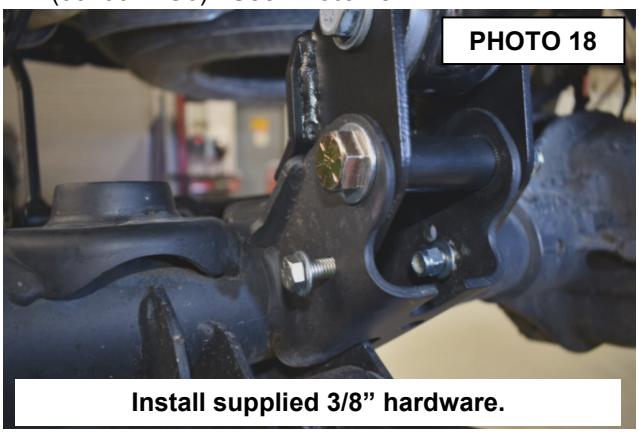


Torque control arm hardware.

22. Using a 13/32” drill, drill the side mounting holes using the bracket as a guide. **See Photo 17.**
23. Install the supplied 3/8” x 1.25” bolts, washers, and nylock nuts (33430BAG6). **See Photo 18.**

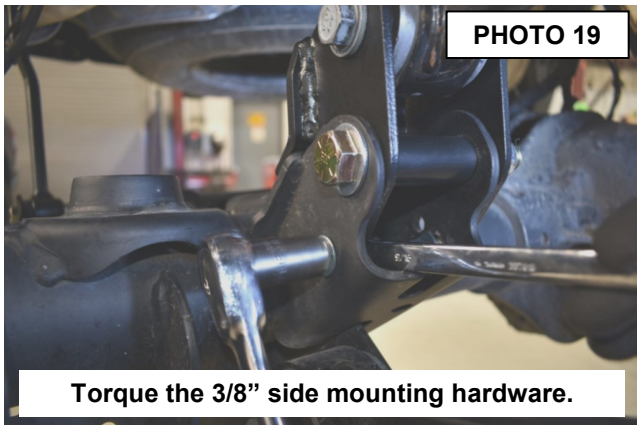


Drill using a 13/32” drill.

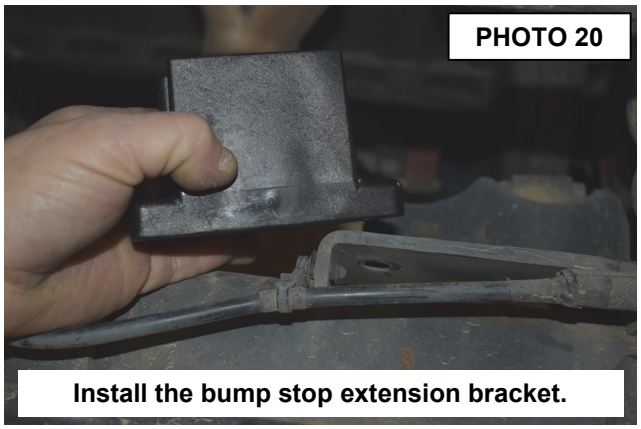


Install supplied 3/8” hardware.

24. Torque the 3/8” side mounting hardware to 30ft/lbs using a 9/16” socket and wrench. **See Photo 19.**
25. Install the supplied bump stop extension bracket using the supplied flag nut, 3/8” x 1.5” bolt, and flat washer (33430BAG13) on the inside. **See Photo 20.**

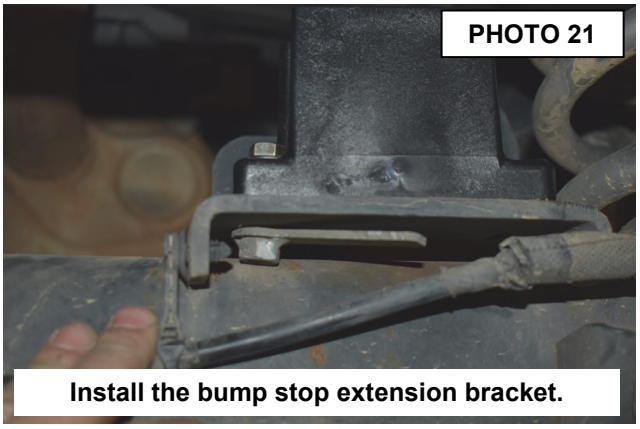


Torque the 3/8” side mounting hardware.

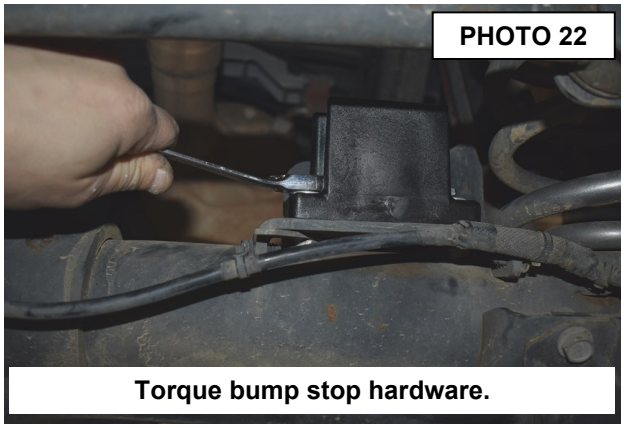


Install the bump stop extension bracket.

26. Install the supplied 5/16” x 1.5” bolt, washer, and flange nut (33430BAG13) on the outside of the bump stop. **See Photo 21.**
27. Torque the 3/8” bump stop hardware to 30ft/lbs using a 9/16 socket and wrench and the 5/16” hardware to 15ft/lbs using a 1/2” socket and wrench. **See Photo 22.**

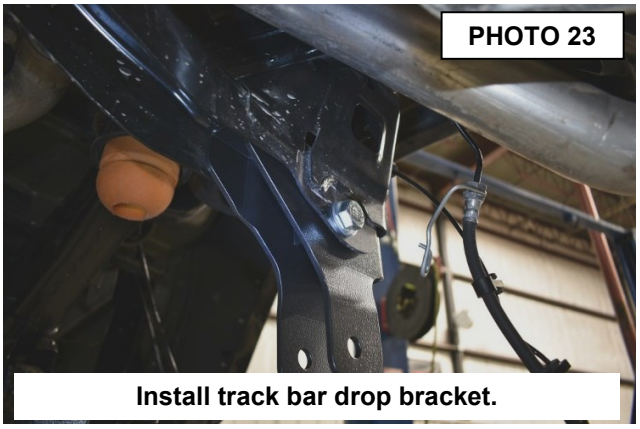


Install the bump stop extension bracket.

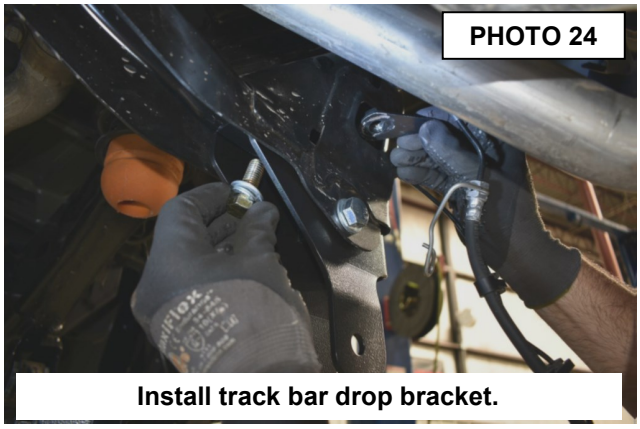


Torque bump stop hardware.

28. Install the supplied track bar drop bracket on the frame mount using the supplied 14mm x 80mm bolt, washers, and nut (33430BAG13). Do not tighten. **See Photo 23.**
29. Install the supplied flag nut through the square hole in the rear of the frame bracket and secure using the supplied 1/2” x 1.5” bolt and washer (33430BAG13). Torque to 65ft/lbs using a 34” socket. **See Photo 24.**
30. Torque the 14mm hardware using a 21mm socket and wrench to 120ft/lbs.

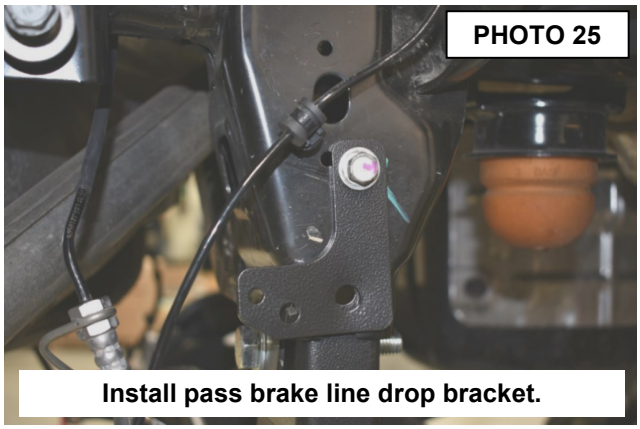


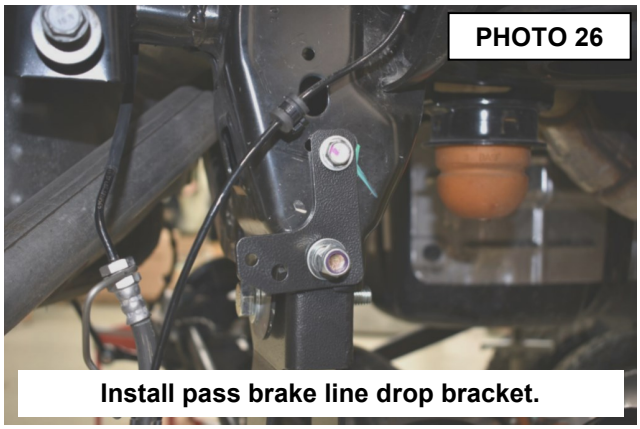
Install track bar drop bracket.



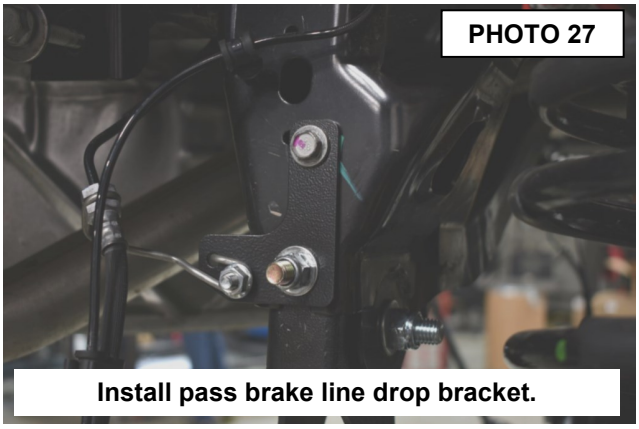
Install track bar drop bracket.

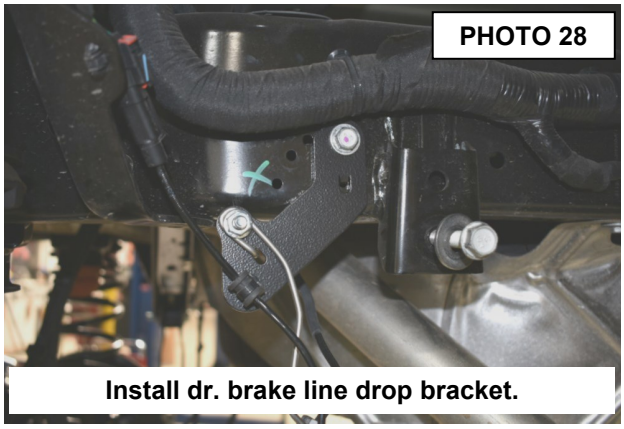
31. Install the pass side brake line drop bracket on the track bar bracket using the factory hardware in the upper hole. **See Photo 25.**
32. Install the supplied 7/16” x 1.25” bolt, washer, and nylock nut (33430BAG13) in the lower hole, inserting the bolt from the inside of the track bar bracket. **See Photo 26.**



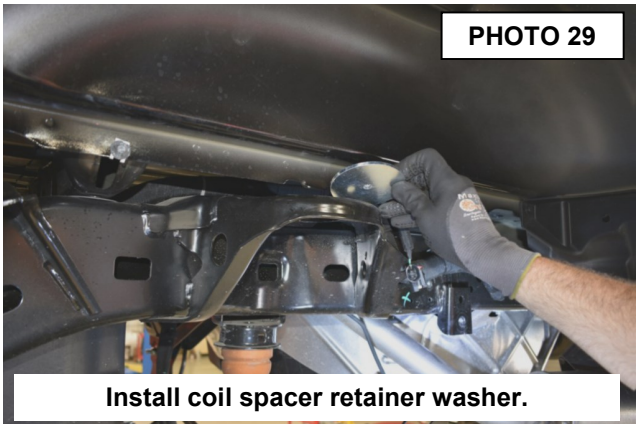


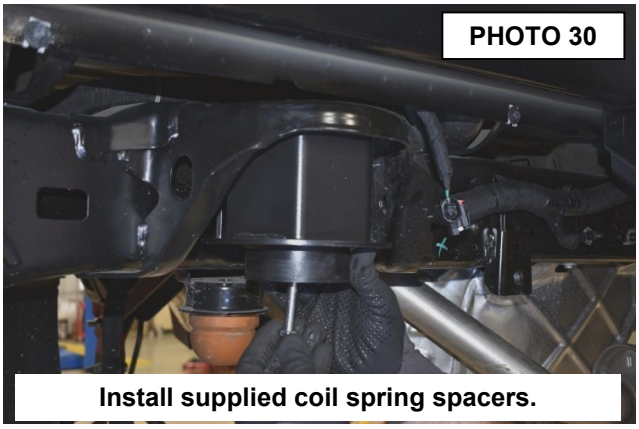
33. Attach the factory brake line holder to the drop bracket using the supplied 5/16” x 3/4” bolt and flange nut (33430BAG6). Torque to 15 ft-lbs. using 1/2” socket / wrench. **See Photo 27.**
34. Install the driver brake line drop bracket using the factory hardware to secure the bracket to the frame and the supplied 5/16” x 3/4” bolt and flange nut. Torque to 15 ft-lbs. using 1/2” socket / wrench. **See Photo 28.**



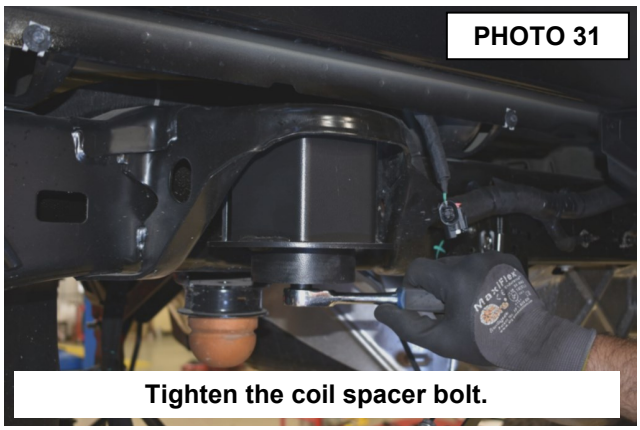


35. **If installing 9413 rear coil springs, skip to step 40.** Install the supplied round retainer washer on the top side of the upper coil pocket. **See Photo 29.**
36. Install the coil spacer into the upper coil pocket using the supplied 3/8” x 5/8” bolt (1329BAG7). **See Photo 30.**

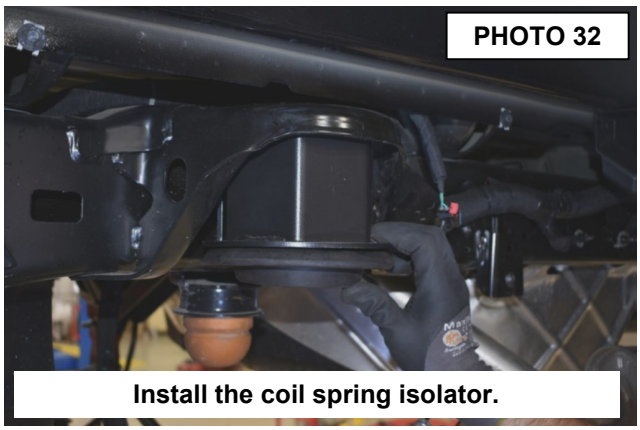




37. Torque to 30ft/lbs using a 9/16” socket. **See Photo 31.**
38. Install the factory coil spring isolator on the coil spacer. **See Photo 32.**

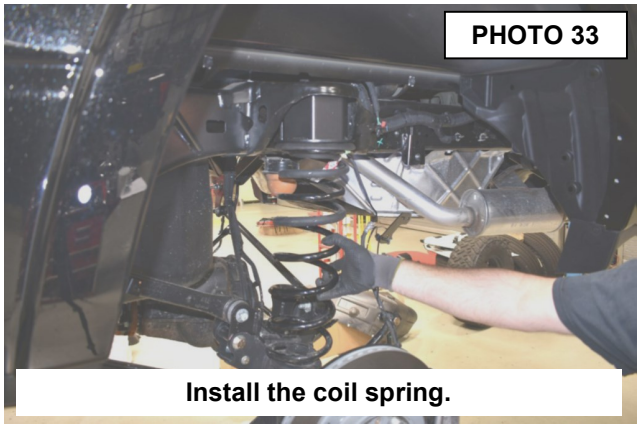


Tighten the coil spacer bolt.



Install the coil spring isolator.

39. Install the factory coil spring and **skip to step 42**. **See Photo 33.**
40. Install the factory coil spring isolator on the upper coil spring mount. **See Photo 34.**

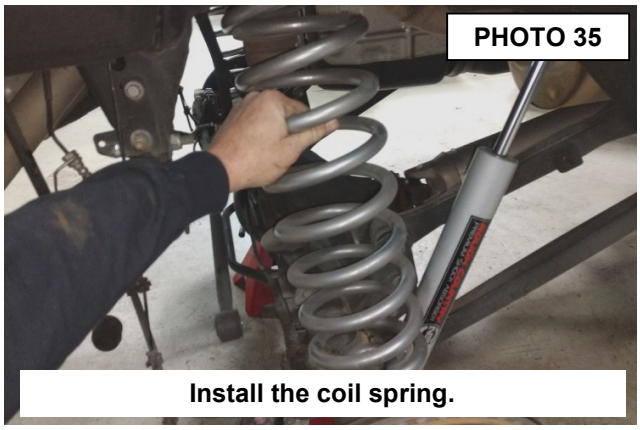


Install the coil spring.

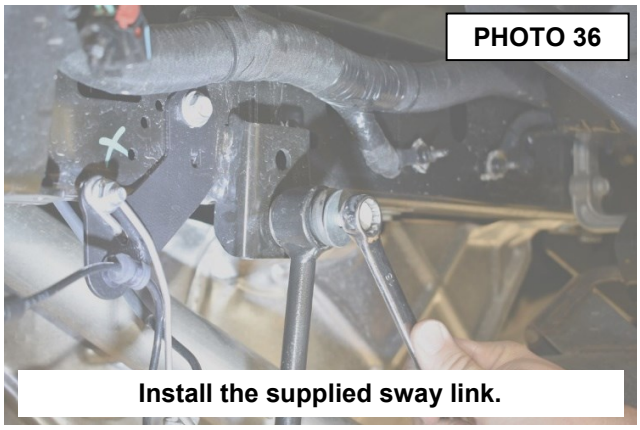


Install the coil spring isolator.

41. Install the supplied coil sping in the upper mount first, making sure to align the end of the spring with coil spring isolator. Then install the coil spring on the axle mount. **See Photo 35.**
42. Install the sway link on the sway bar using the factory hardware on the upper mount and the supplied 12mm x 65mm bolt, large washer, and flange lock nut (33430BAG6) on the lower mount. Upper mount- Torque to 45 ft-lbs. using a 13mm socket. Lower mount- Torque to 55ft/lbs using an 18mm socket and wrench. **See Photo 36.**

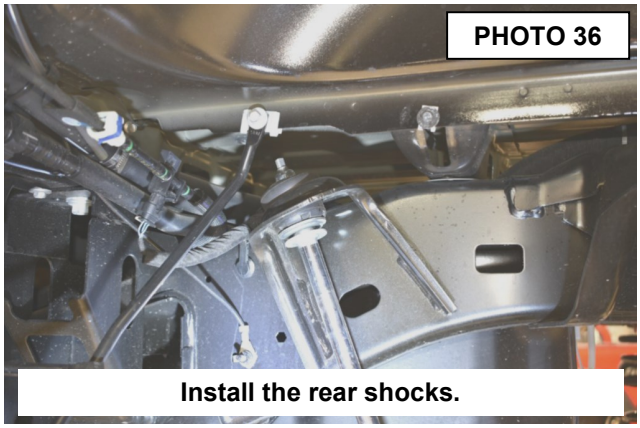


Install the coil spring.

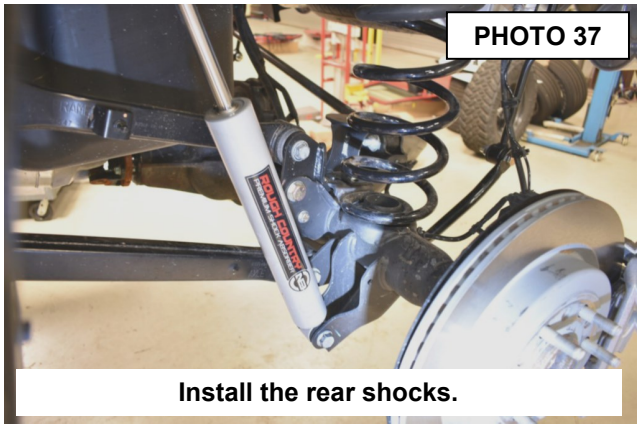


Install the supplied sway link.

42. Install the supplied rear shock 660815 using the factory hardware in the lower mount and the supplied hardware in the upper mount. Torque the upper shock nut to 30 ft-lbs. or just until the bushings start to bulge under the washers. **See Photos 36 & 37.** Torque the lower shock to 88 ft-lbs.



Install the rear shocks.



Install the rear shocks.

43. Install the wheels and tires and lower the vehicle to the ground.
44. Attach the track bar using the factory hardware. Torque to 126 ft-lbs. using a 21mm socket and wrench.

POST INSTALLATION

1. 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.
2. 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.
3. Re torque all fasteners after 500 miles. Visually inspect components and re torque fasteners during routine vehicle service.
4. Readjust headlights to proper settings and take truck in for a front-end alignment to a qualified alignment professional.

Thank You for choosing Rough Country for your off road needs!!!

By purchasing any item sold by Rough Country, LLC, the buyer expressly warrants that he/she is in compliance with all applicable , State, and Local laws and regulations regarding the purchase, ownership, and use of the item. It shall be the buyers responsibility to comply with all Federal, State and Local laws governing the sales of any items listed, illustrated or sold. The buyer expressly agrees to indemnify and hold harmless Rough Country, LLC for all claims resulting directly or indirectly from the purchase, ownership, or use of the items.

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