ROUGH COUNTRY SUSPENSION SYSTEMS®

29530BAG4

GM 2019 4WD 1500 3” Lift Kit

Thank you for choosing Rough Country for your suspension needs.

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

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

PRODUCT USE INFORMATION

⚠WARNING As a general rule, the taller a vehicle is, the easier it will roll. Seat belts and shoulder harnesses should be worn at all times. Avoid situations where a side rollover may occur. Generally, braking performance and capability are decreased when larger/heavier tires and wheels are used. Take this into consideration while driving. Do not add, alter, or fabricate any factory or after-market parts to increase vehicle height over the intended height of the Rough Country product purchased. Mixing component brands is not recommended.

Rough Country makes no claims regarding lifting devices and excludes any and all implied claims. We will not be responsible for any product that is altered. If question exist we will be happy to answer any questions concerning the design, function, and correct use of our products.

⚠NOTICE The electric power steering must be unplugged before any of the steering components are removed. Failure to do so may cause damage to the electric power steering.

⚠NOTICE Trucks equipped with a mass damper on the front diff, the damper will have to be removed.

This kit is packaged as a leveling kit—raising the front 3” and the back 1.5”. If you desire a different look or if the vehicle has a tool box or added weight in the rear, please consult with your sales representative about other block and u-bolt options.

This suspension system was developed using a 295/60R20 tire on the factory 20” wheel. If wider tires are used trimming may be required. Due to manufacturing, dimension variances, and inflation, all tire and wheel combinations should be tested prior to installation on all oversized / wider then stock tires and wheels.

⚠NOTICE **Fits crew cab short bed models only. Will not fit models with adaptive ride control and will not fit GMC AT4 or Chevy Trail Boss models.**

⚠NOTICE **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.

Tools Needed:

Floor Jack /Jack Stands	36mm socket
10mm socket /wrench	1/2” socket/wrench
13 mm socket/wrench	9/16” socket /wrench
15mm socket / wrench	3/4” socket/wrench
17mm socket/wrench	T30 Torx bit
18mm socket /wrench	Reciprocating Saw
21mm socket /wrench	Hammer
22mm socket /wrench	Locking Pliers
24mm socket /wrench	
27mm socket /wrench	

Torque Specs:

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

KIT CONTENT

Kit Contents

29530Box1

- Driver Upper Control Arm-1
- Pass Upper Control Arm-1
- Ball Joint Hardware Bag-2

29530Box2

- Driver Diff Drop Bracket-1
- Pass Diff Drop Bracket-1
- Rear Crossmember-1
- 660739 Rear Shocks-2
- Skid Plate-1
- Driver Bump Stop Bracket-1
- Pass Bump Stop Bracket-1
- Strut Spacers-2
- Rear Blocks-2
- 29530BAG1-1
- 29530BAG2-1
- U-bolts-4
- 9/16BAG-1
- 10MMSTUDBAG-1

29530Bag2

- Lower Control Arm Brace Washers-4
- 3/8” Flat Washers-6
- 3/8” x 1” Bolts-6
- 3/8” Lock Washer-2
- 3/8” Flange Lock Nuts-4
- 14mm x 110mm Bolts-2
- 14mm Flat Washers-6
- 14mm Nylock Nuts-3
- 14mm x 100mm Bolt-1
- 10mm x 65mm Bolts-4
- 10mm Flat Washers-8
- 10mm Nylock Nuts-4

29530Bag3

- Instructions-1
- Warning to Driver Decal-1
- Service Reminder Decal-1

10mmstudbag

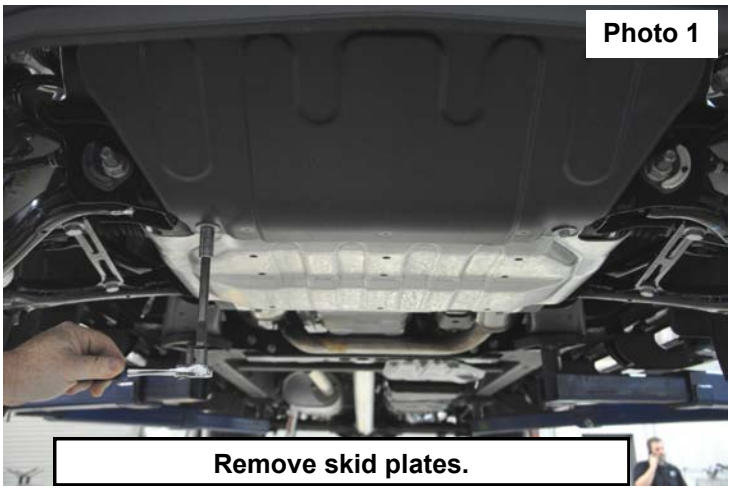
- 10mm Stud-6
- 10mm Lock Washer-6
- 10mm Nut-7
- 1/2” Jam Nut-1

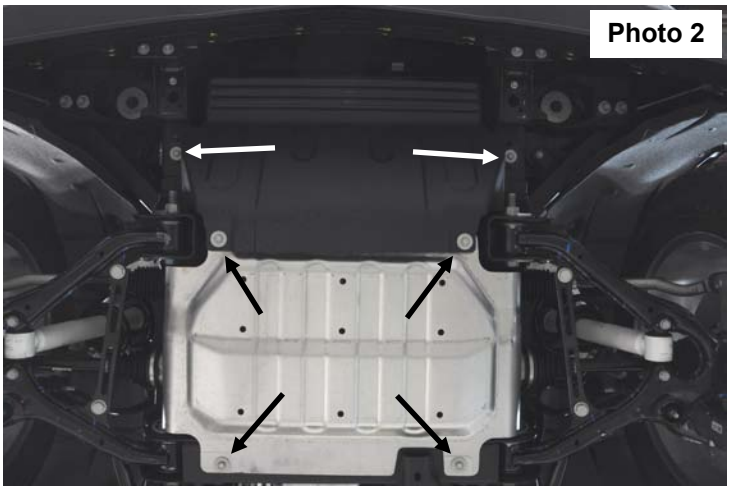
9/16Bag

- 9/16” Washers-8
- 9/16” Nuts-8

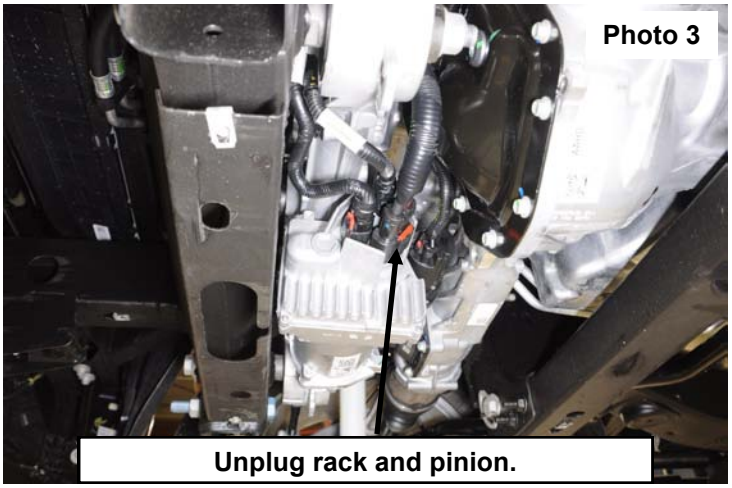
FRONT INSTALLATION

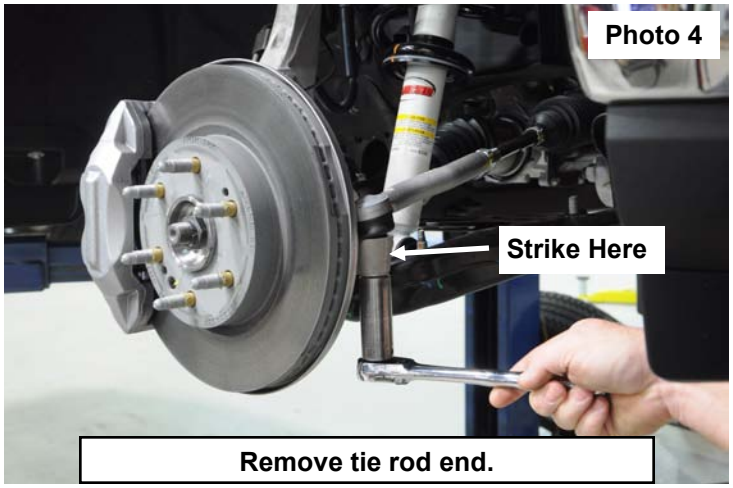
1. Park the vehicle on a level surface and chock the rear wheels. Lock the steering wheel in the straight position.
2. Jack up the front of the vehicle. Place jack stands under the frame rails and lower onto jack stands letting the front suspension hang.
3. Raise the hood and disconnect the battery using a 10mm socket.
4. Remove the tires and wheels.
5. Remove the 6 bolts holding the factory skid plates, using a 13mm socket. **See Photos 1 & 2.**



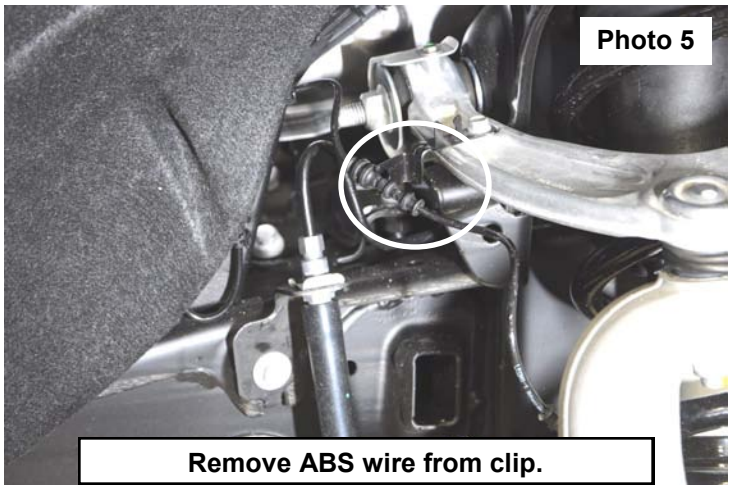


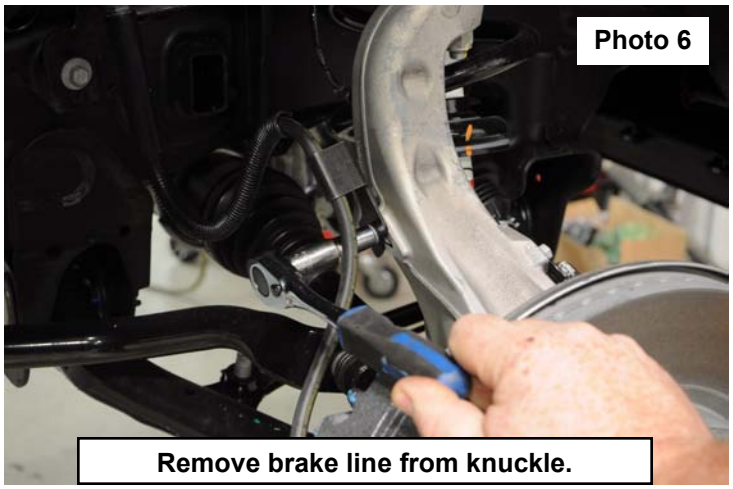
6. Unplug the three connectors going to the rack and pinion. **See Photo 3**.
7. Using a 21mm socket, remove the tie-rod nut as shown in **Photo 4**. Using a hammer, strike the front of the mount to dislodge the tie rod end. Remove from the knuckle.



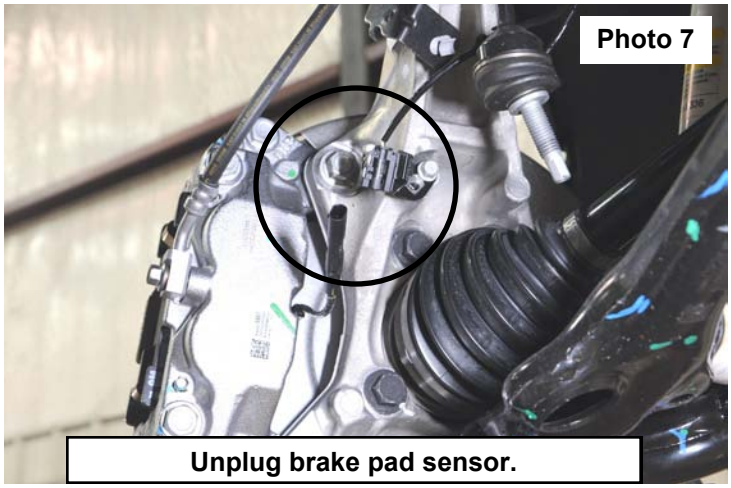


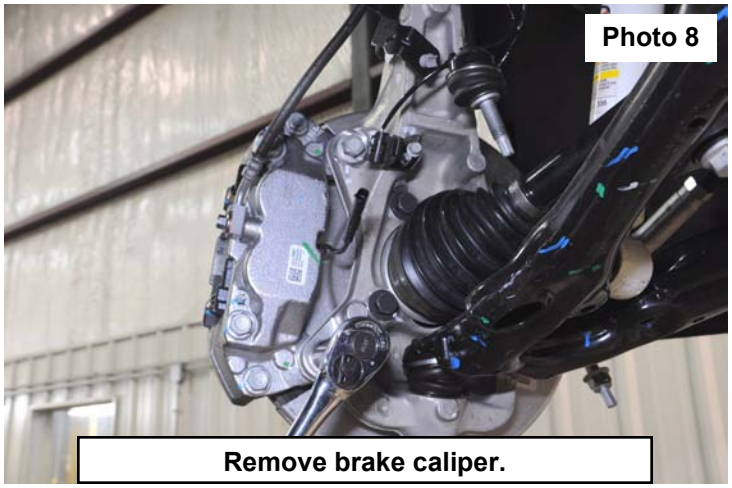
8. Remove the ABS wire from the clip on the upper control arm mount. **See Photo 5.**
9. Using a 10mm socket, remove the brake line and brake pad sensor wires from the knuckle. Retain hardware. **See Photo 6.**



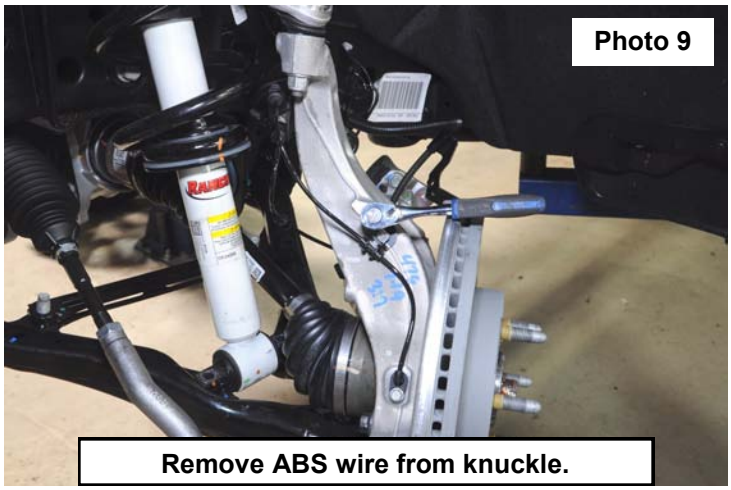


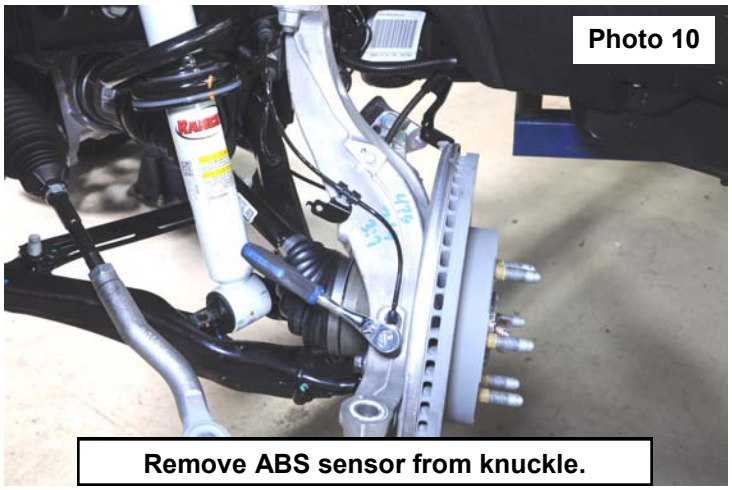
10. Unplug the brake pad sensor wire. **See Photo 7.**
11. Using an 18mm socket, remove the brake caliper. Hang caliper out of the way. **Do not hang the caliper by the brake line**. Retain hardware. **See Photo 8.**



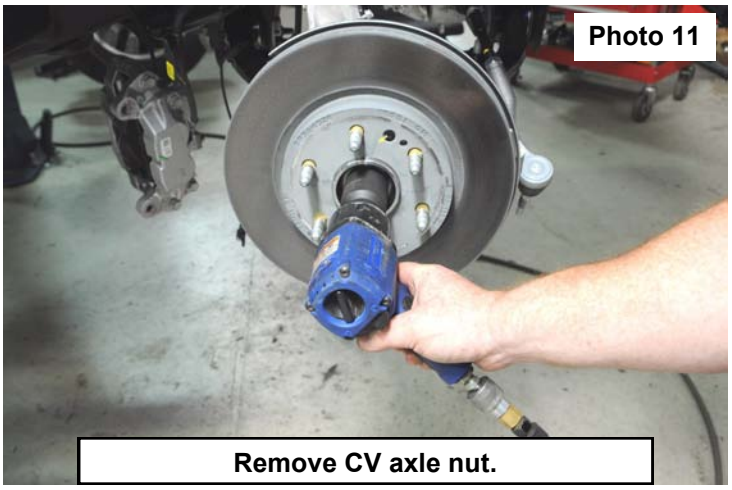


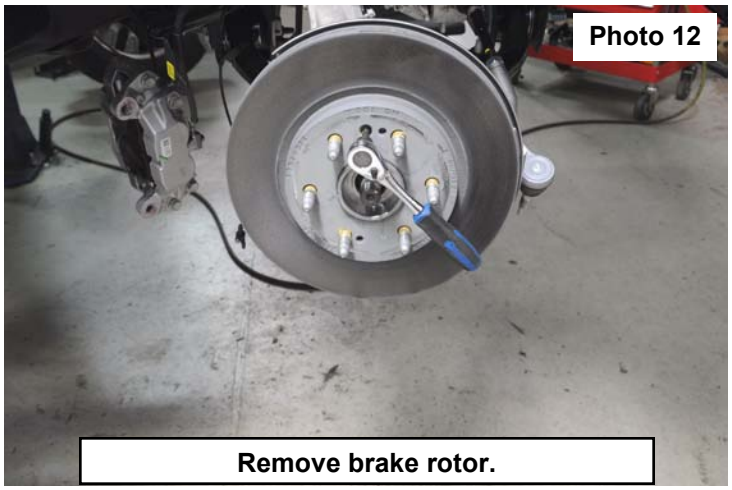
12. Using a 10mm socket, remove the ABS wire bracket from the knuckle. Retain hardware. **See Photo 9.**
13. Using a 10mm socket, remove the ABS sensor from the knuckle. Retain hardware and hang ABS wire out of the way. **See Photo 10.**



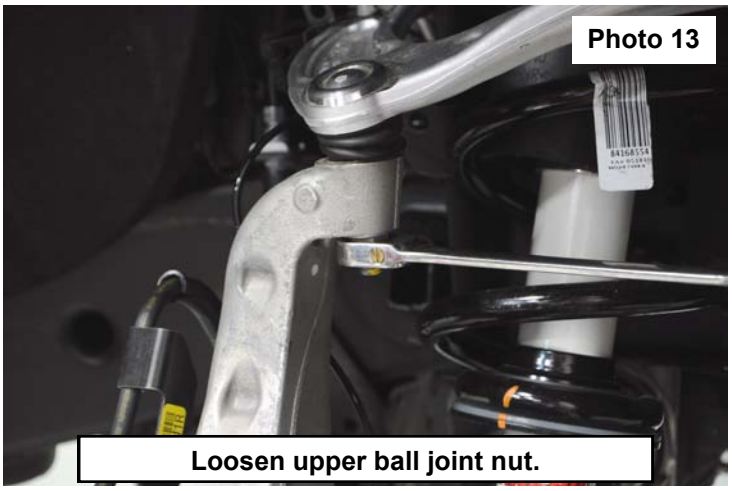


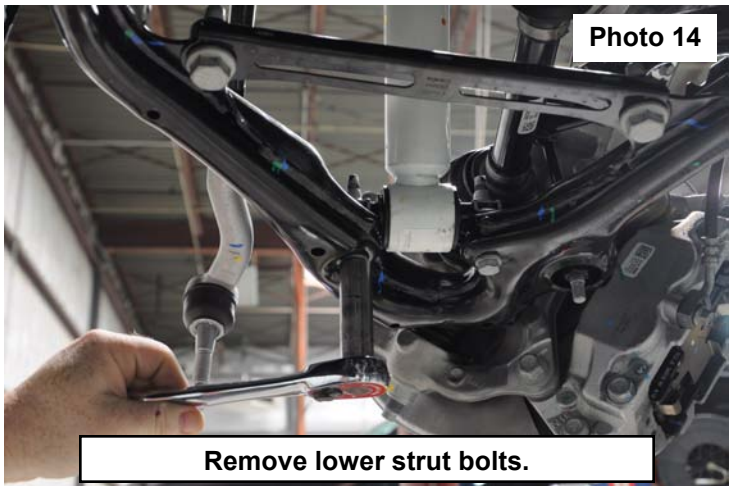
14. Remove the CV axle nut using a 36mm socket. Retain hardware. **See Photo 11.**
15. Using a 30T torx, remove the brake rotor. Retain hardware. **See Photo 12.**



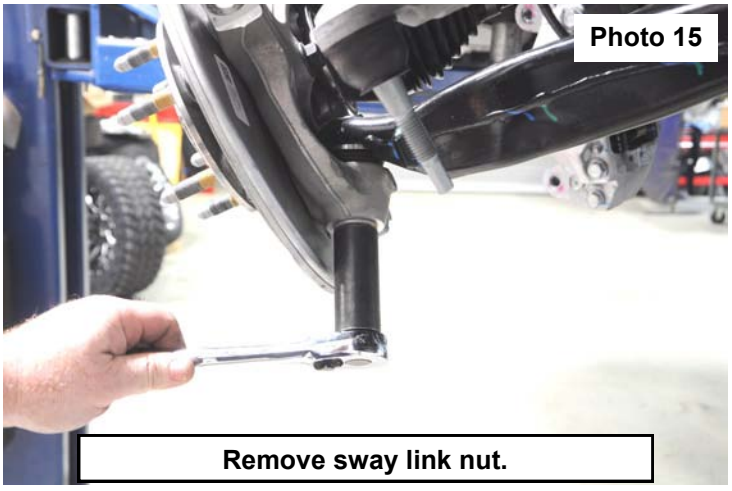


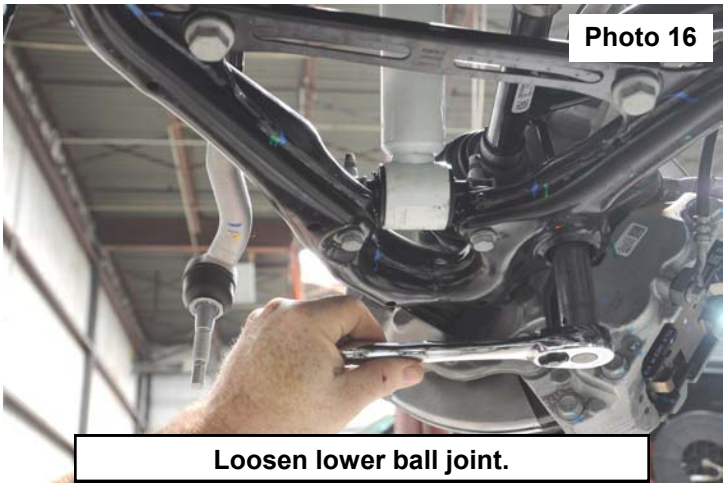
16. Using an 18mm wrench, loosen the upper ball joint nut. Do not completely remove the nut. Strike the knuckle with a hammer to release the ball joint taper. **See Photo 13.**
17. Support the lower control arm.
18. Using a 15mm socket, remove the lower strut mounting bolts. **See Photo 14.**



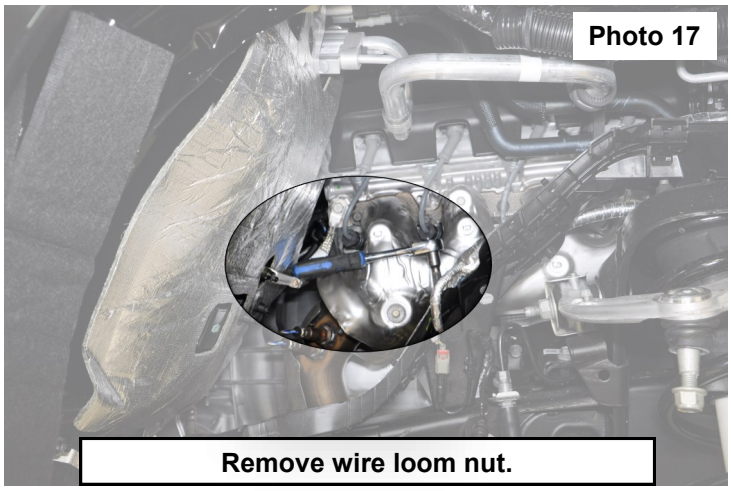


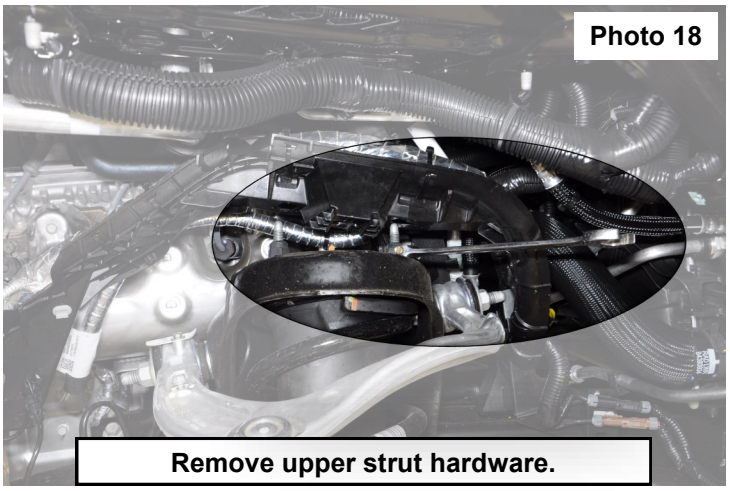
19. Using a 24mm socket, loosen the lower ball joint nut. Do not completely remove the nut. Strike the knuckle with a hammer to release the ball joint taper, remove the upper and lower ball joint nuts and remove the knuckle from the truck. Retain hardware. **See Photo 15.**
20. Remove the lower sway link nut using an 18mm socket. Retain hardware. **See Photo 16.**



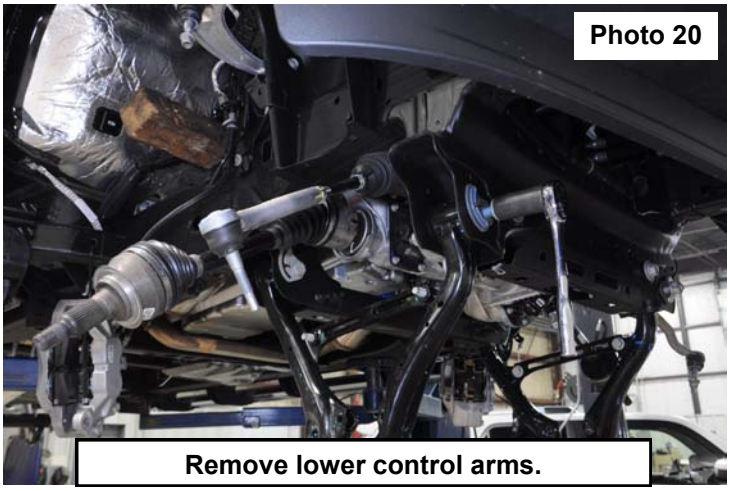


21. On the passenger side, use a 13mm socket to remove the bolt holding the plastic wire loom that is attached to the frame and the upper strut tower. Retain hardware. (Inner fender was removed for pictures) **See Photo 17.**
22. Using an 18mm wrench, remove the upper strut nuts. Retain hardware. Remove the strut from the vehicle. **See Photo 18.**

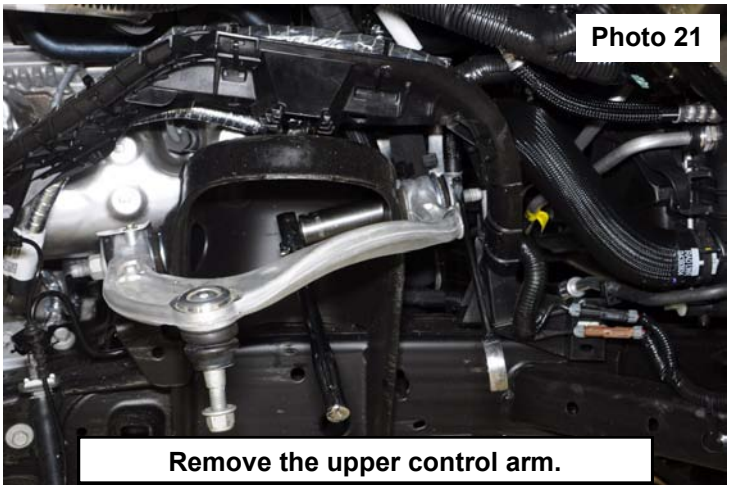


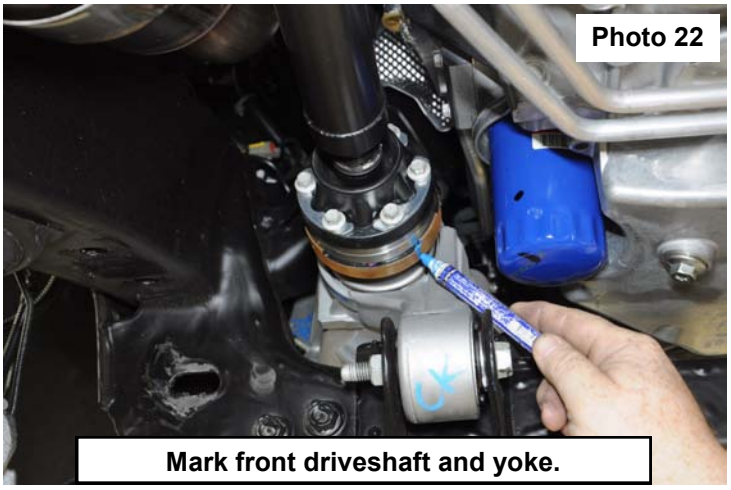


23. Using a 10mm socket, remove the sway bar from the frame. Retain hardware. **See Photo 19.**
24. Using a 27mm socket, remove the lower control arms. Retain hardware. **See Photo 20.**

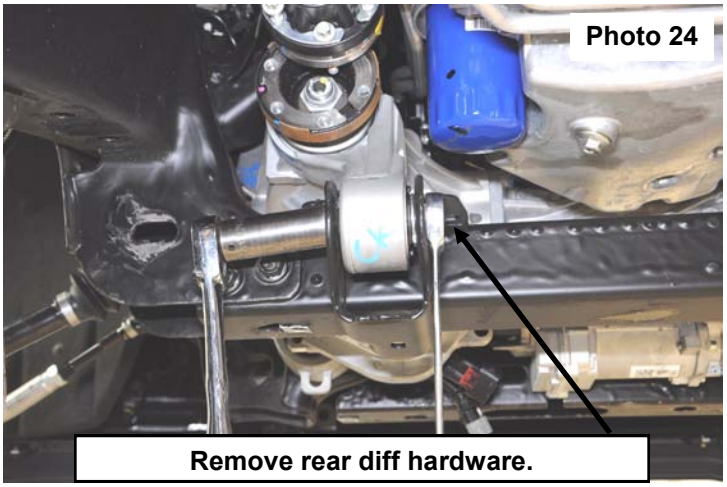


25. Using a 21mm socket and wrench, remove the upper control arm. Retain hardware. **See Photo 21.**
26. Mark the front driveshaft and the front yoke. **See Photo 22.**

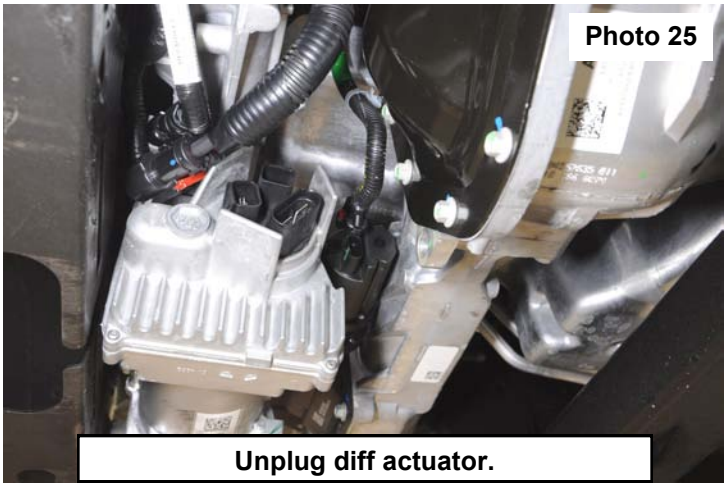


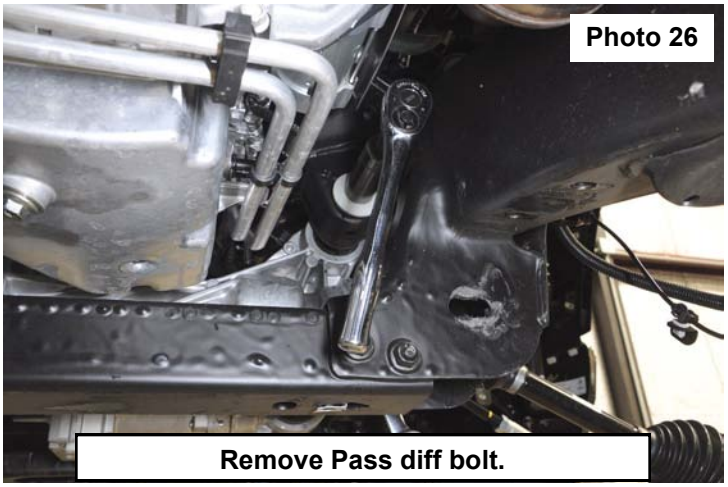


27. Remove the front driveshaft using a 10mm socket. Retain hardware. Do not allow driveshaft to hang from the rear joint, this could damage the boot. Support the driveshaft with a jack stand. **See Photo 23.**
28. Using a 21mm wrench and socket, remove the rear diff bolt from the crossmember. Retain hardware. **See Photo 24.**

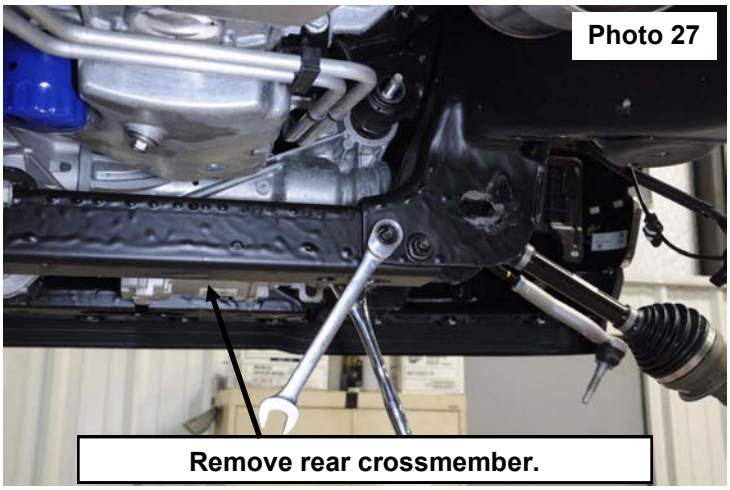


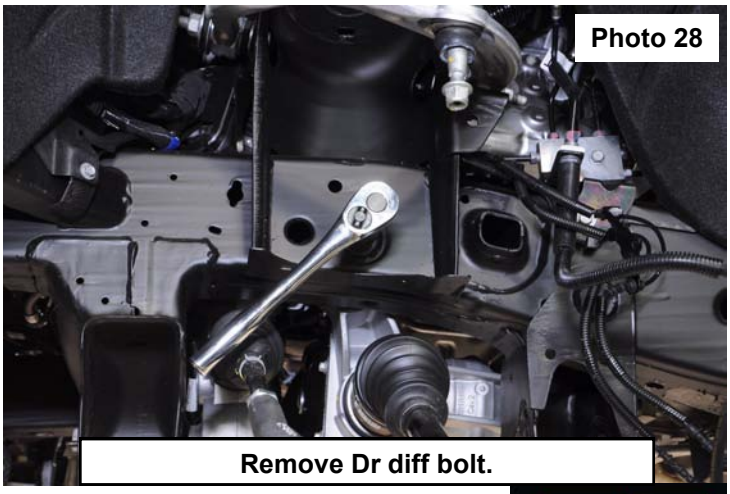
29. Unplug the diff actuator and remove the wire loom clips from the diff and vent hose. **See Photo 25.**
30. Support the differential using a jack.
31. Using a 21mm socket and wrench, remove the nut from the passenger side diff bolt. Retain hardware. **See Photo 26.**



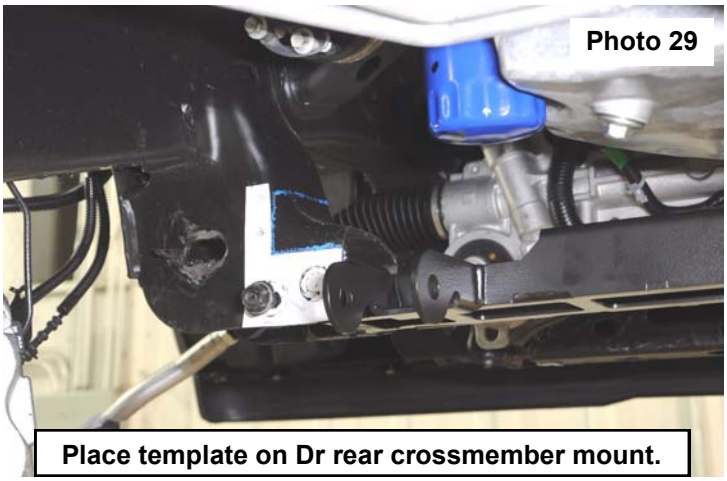


32. Remove the rear crossmember using an 18mm wrench and socket. **See Photo 27.**
33. Using a 21mm socket and 22mm wrench, remove the driver and passenger diff bolts. To remove the pass side bolt, you will need to push the diff to the pass side and roll the back of the diff upward. Lower the differential. Retain hardware. **See Photo 28.**

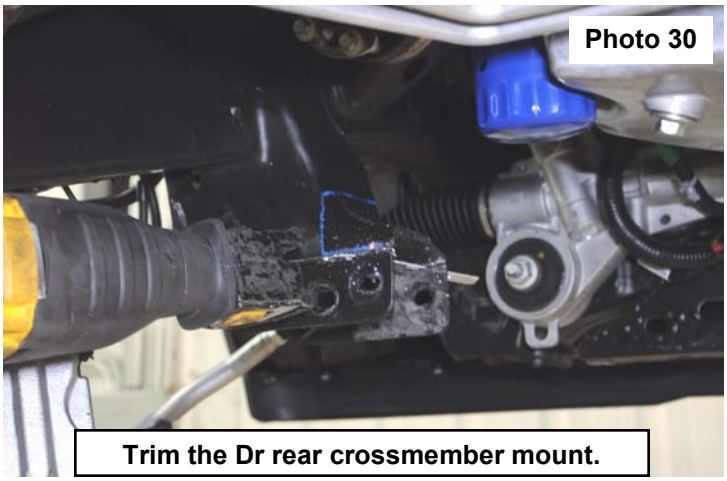




34. Place the supplied template on the back of the rear crossmember mount and mark. **See Photo 29.**
35. Cut along the mark made in step 33 using a reciprocating saw. **See Photo 30.**

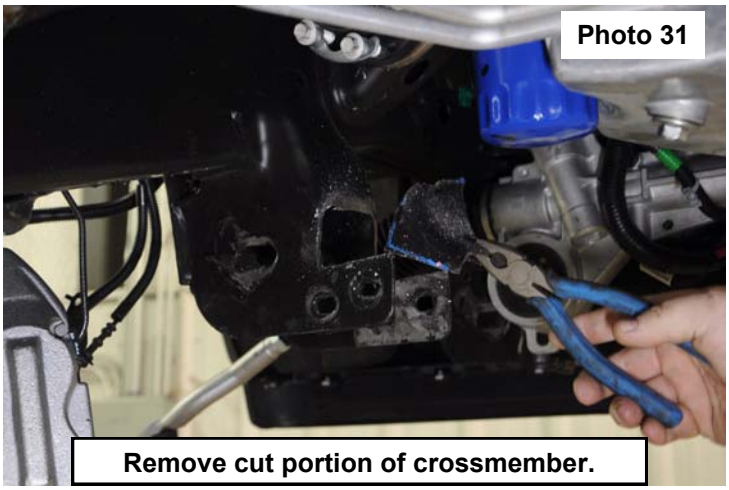


Place template on Dr rear crossmember mount.

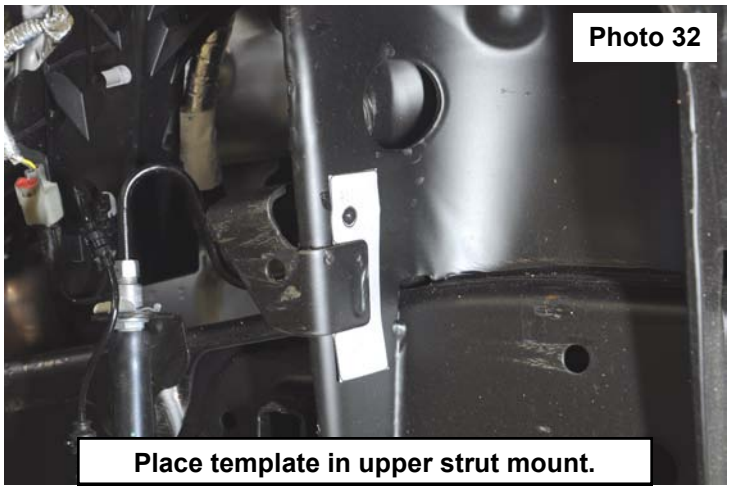


Trim the Dr rear crossmember mount.

36. Remove the cut portion of the rear crossmember mount. Sand and paint the cut edge to prevent rust. **See Photo 31.**
37. Place the supplied drilling template in the upper strut mount. **See Photo 32.**

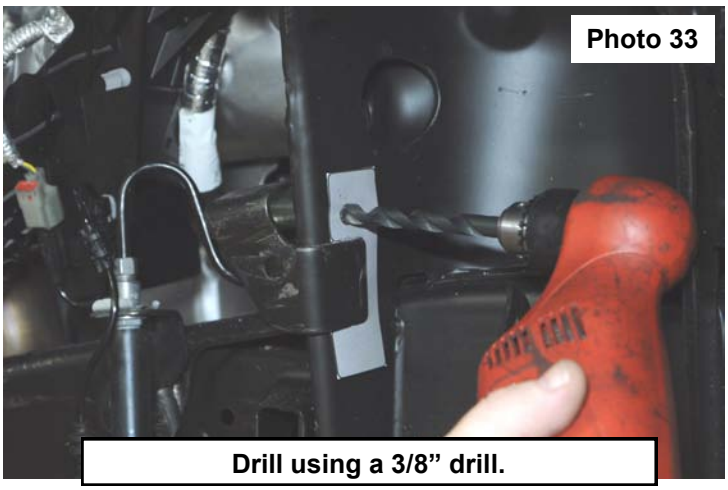


Remove cut portion of crossmember.

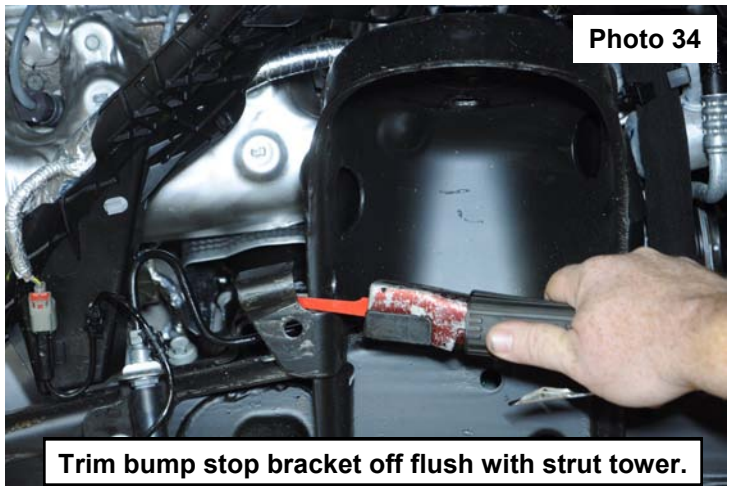


Place template in upper strut mount.

38. Drill using a 3/8” drill. **See Photo 33.**
39. Using a reciprocating saw, trim the bump stop bracket flush with the strut tower. Sand and paint cut edges. **See Photo 34.**

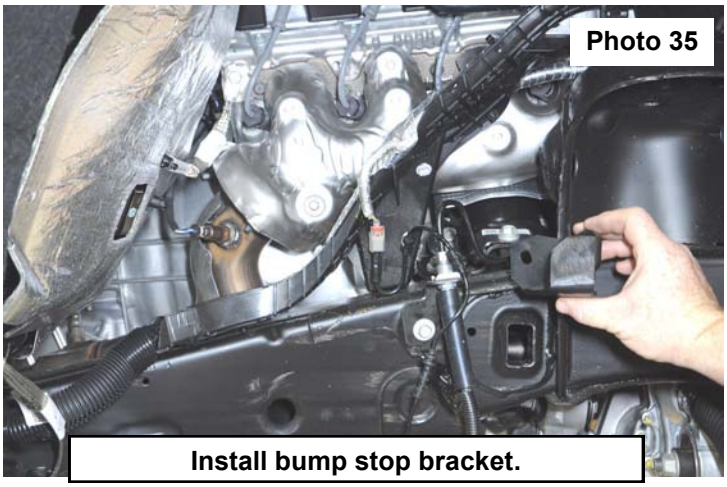


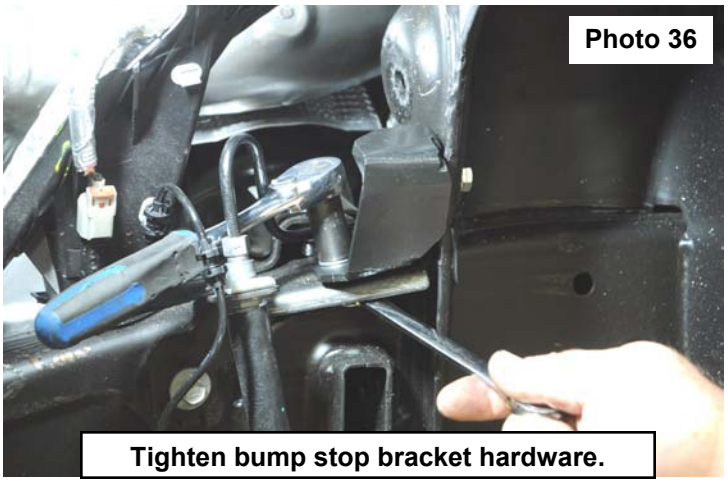
Drill using a 3/8” drill.



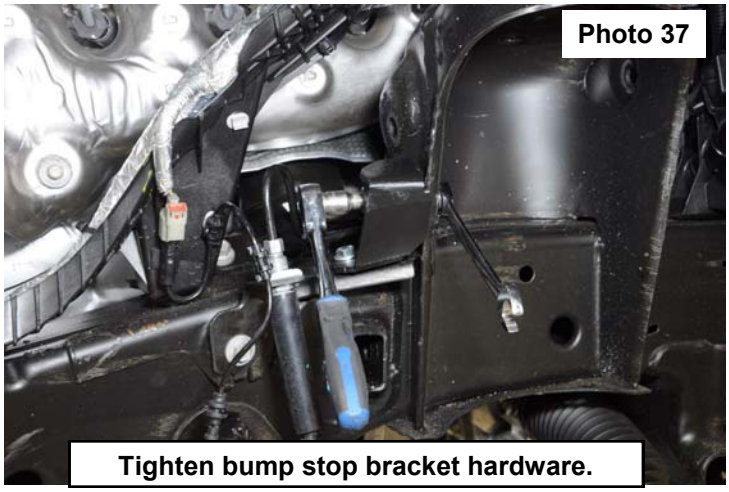
Trim bump stop bracket off flush with strut tower.

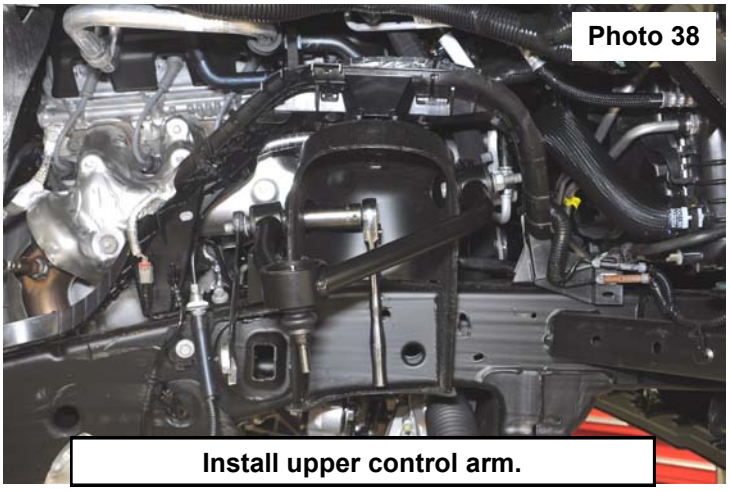
40. Install the supplied bump stop bracket using the supplied 3/8” x 1” bolts, washers, and nuts (29530BAG2). **See Photo 35.**
41. Tighten the 3/8” bump stop hardware using a 9/16” socket and wrench. **See Photos 36 & 37.**



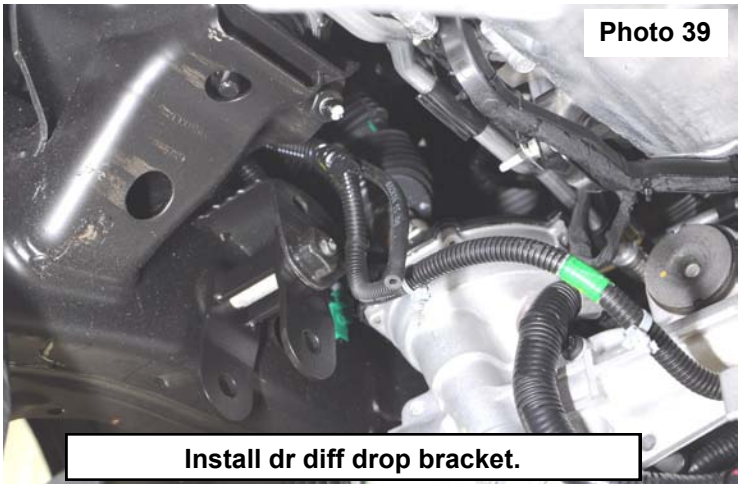


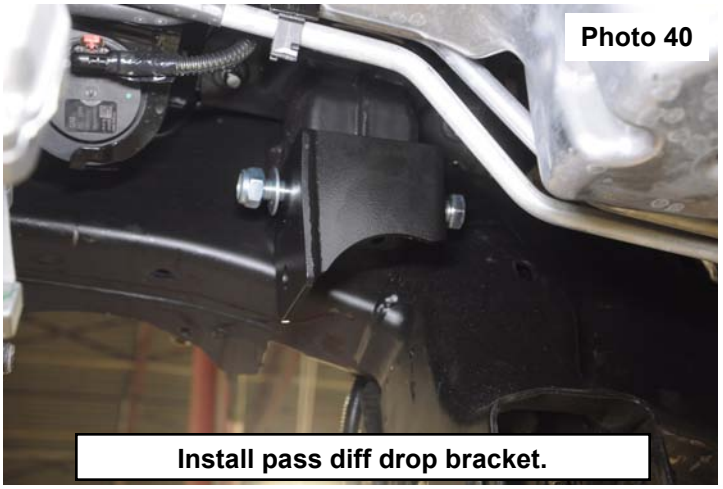
42. Install the supplied upper control arm using the factory hardware. Torque to factory specs using a 21mm socket and wrench. **See Photo 38.**





43. Install supplied driver differential drop using the factory hardware. Do not tighten at this time. **See Photo 39.**
44. Install the supplied pass differential drop using the supplied 14mm x 110mm bolt, washer and nut (29530BAG2). Do not tighten at this time. **See Photo 40.**





45. Install the diff on the pass bracket using the supplied 14mm x 110mm bolt, washer, and nut (29530BAG2). Do not tighten at this time. **See Photo 41.**
46. Install the diff on the dr bracket using the supplied 14mm x 100mm bolt, washer, and nut (29530BAG2). Do not tighten at this time. **See Photo 42.**

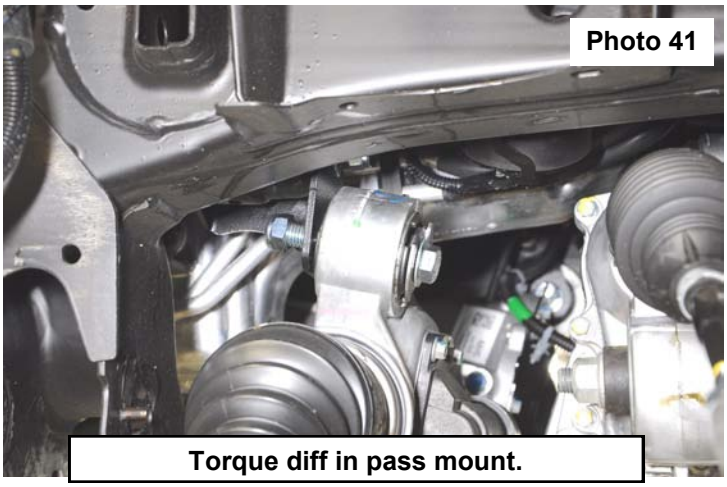


Photo 41

Torque diff in pass mount.

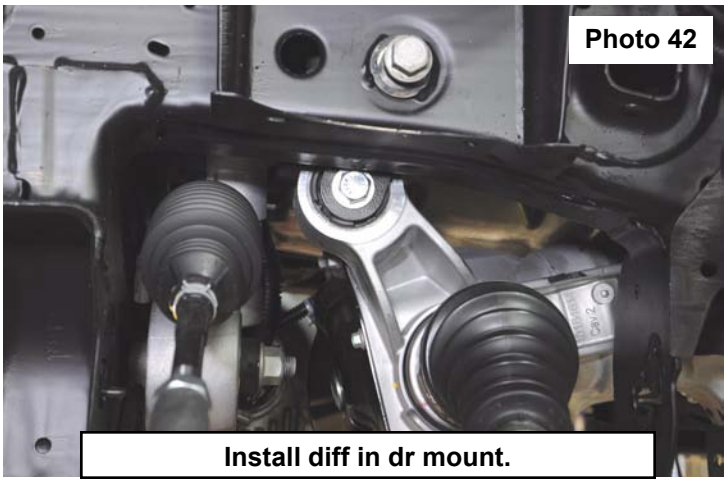
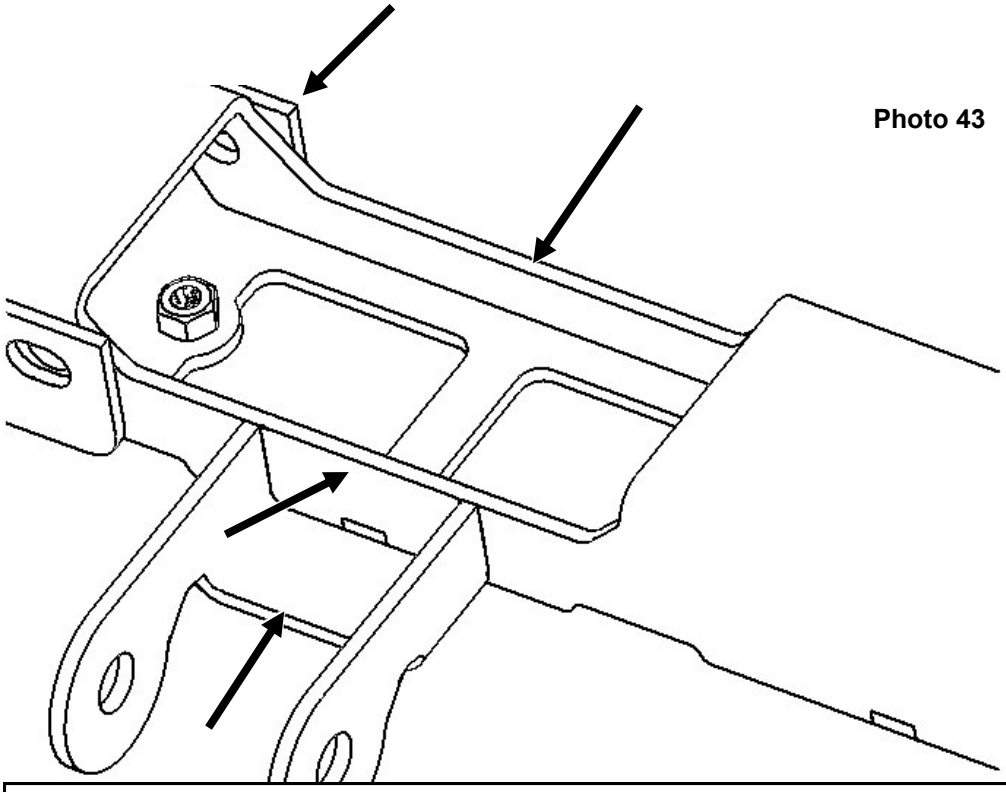


Photo 42

Install diff in dr mount.

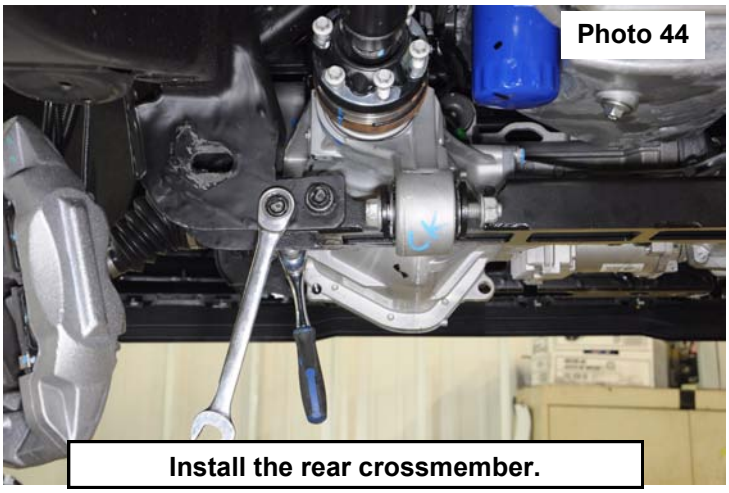
47. Due to manufacturing tolerances, differences in individual vehicles, and multiple differentials being used by the OEM, the rear crossmember/mount may have to be trimmed for proper fitment. **See Photo 43** for areas that may need to be trimmed for differential clearance. Using a grinder remove as little material as possible to allow for fitment of your differential. You may have to test fit your differential and rear crossmember several times until your differential is not making contact with the rear crossmember and/or mount.

Photo 43

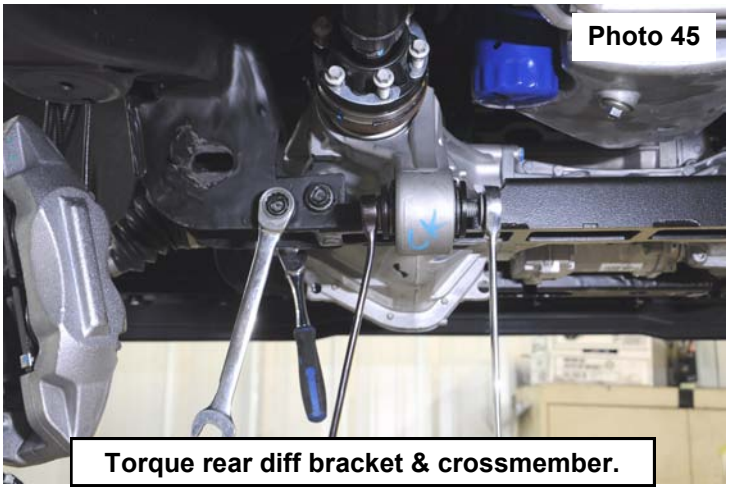


Trimming of these areas may be needed for clearance of the front differential.

48. Install the supplied rear crossmember using the factory bolts into crossmember mounts and rear diff mount. **See Photo 44.**
49. Torque the crossmember bolts to factory specs using an 18mm socket and wrench. Torque the rear bolt to factory specs using a 21mm socket and wrench. **See Photo 45.**

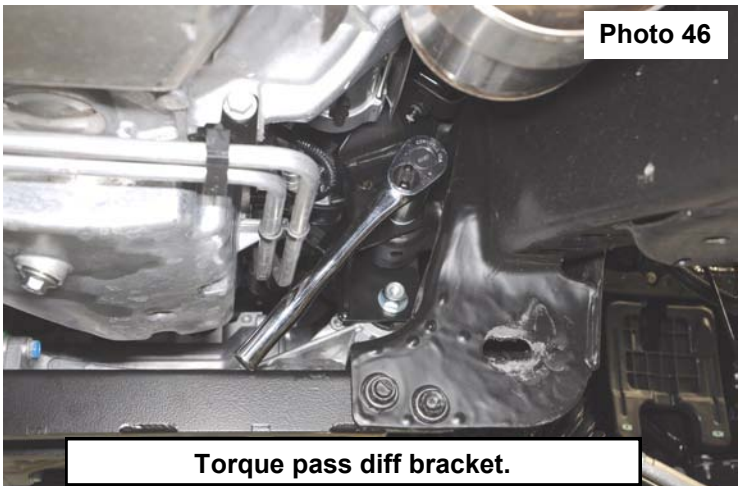


Install the rear crossmember.

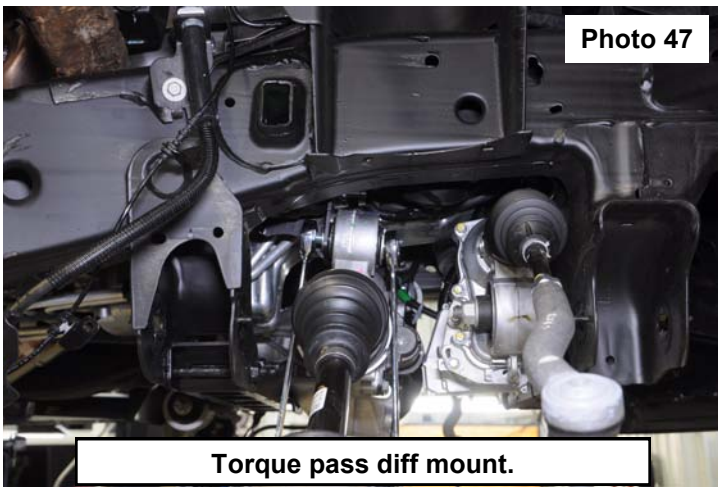


Torque rear diff bracket & crossmember.

50. Using a 21mm wrench and 22mm socket, torque the pass diff drop bolt to 85ft/lbs. **See Photo 46.**
51. Using a 21mm wrench and 22mm socket, torque the pass diff bolt to factory specs . **See Photo 47.**

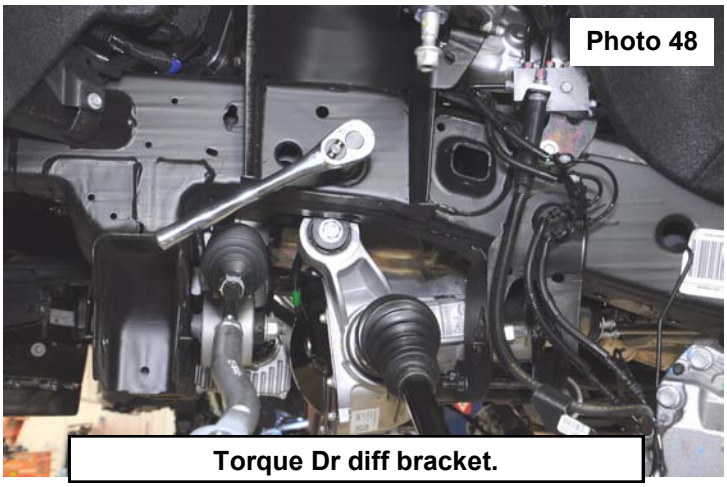


Torque pass diff bracket.

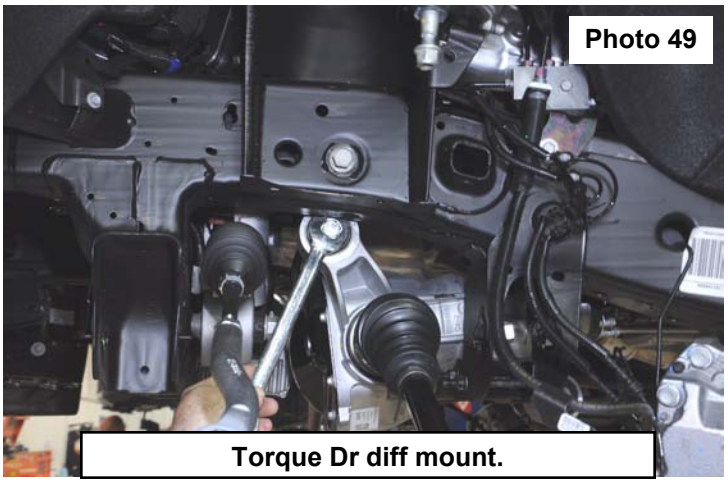


Torque pass diff mount.

52. Using a 21mm socket and 22mm wrench, torque the upper driver diff mount bolt to factory specs. **See Photo 48.**
53. Using a 21mm wrench and 22mm socket, torque the dr diff bolt to 85ft/lbs. **See Photo 49.**

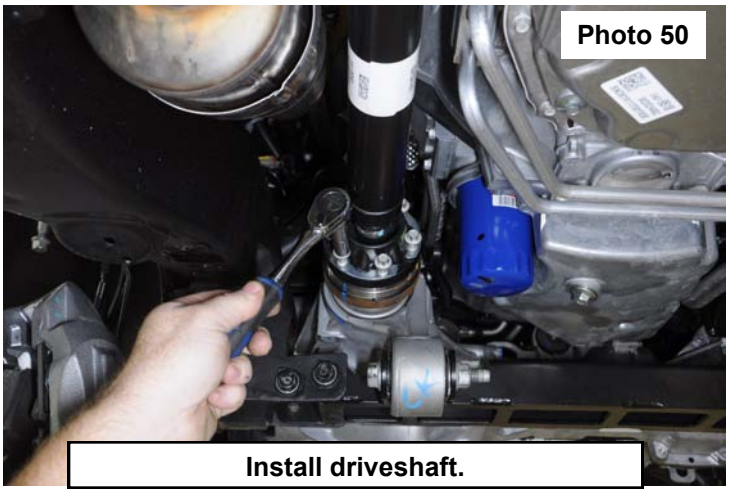


Torque Dr diff bracket.

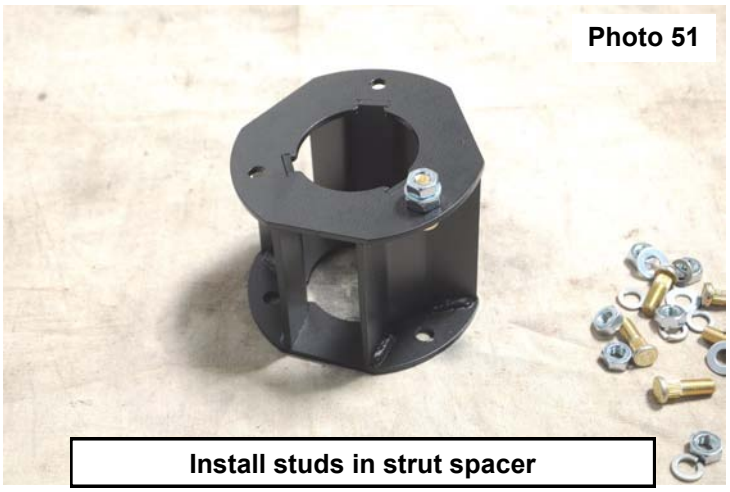


Torque Dr diff mount.

54. Install the front drive shaft on the differential using the factory hardware. Torque to factory specs using a 10mm socket. **See Photo 50.**
55. Install the supplied 10mm studs (10mmstudbag-1) into the strut spacer using the supplied 1/2" jam nut (10mmstudbag-1) between the spacer and the 10mm nut (10mmstudbag-1). Tighten the 10mm nut using a 17mm socket, pulling the stud into the spacer. **Do not using an impact. See Photos 51 & 52.**

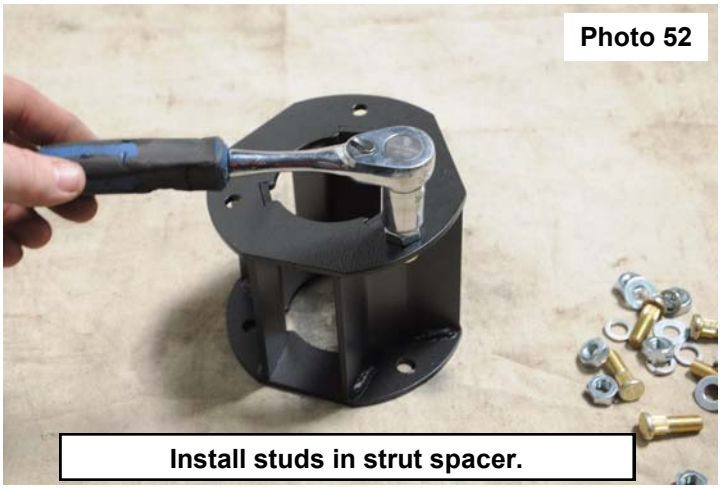


Install driveshaft.



Install studs in strut spacer

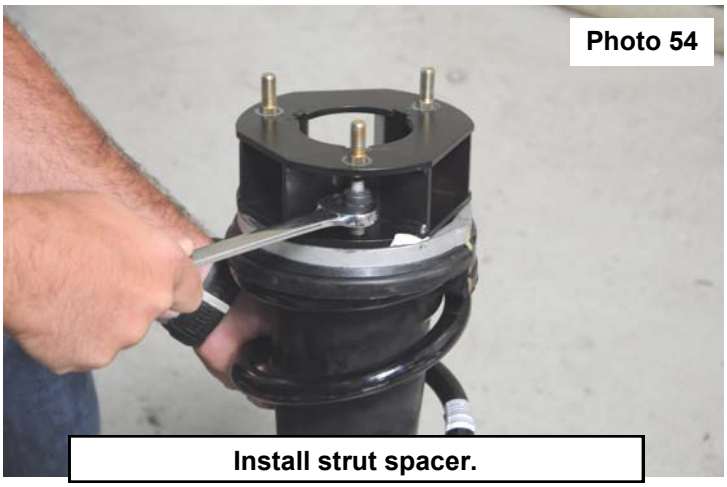
56. Grind the top of the studs on the strut for clearance of the spacer. **Do not grind into the threads. See Photo 53.**

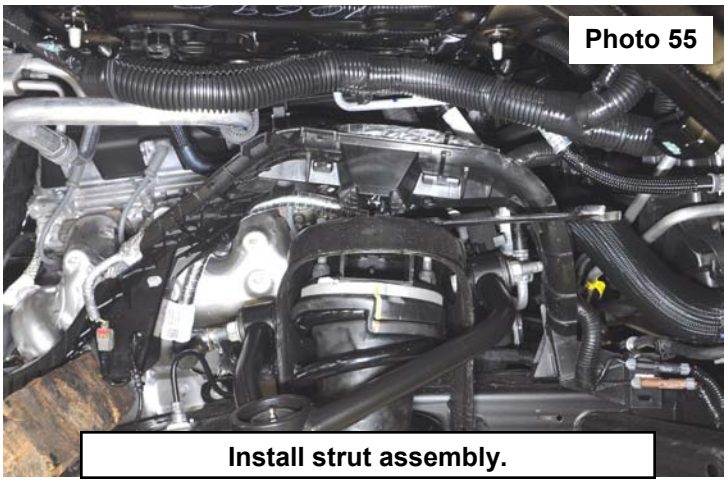


Install studs in strut spacer.

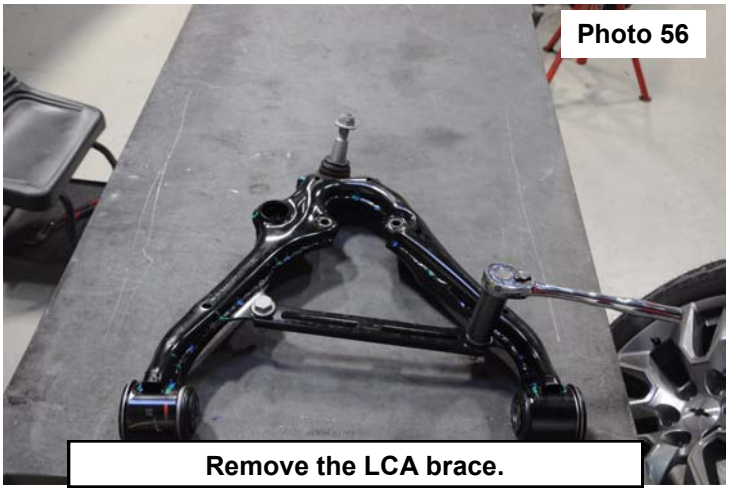
Grind the top of the studs.

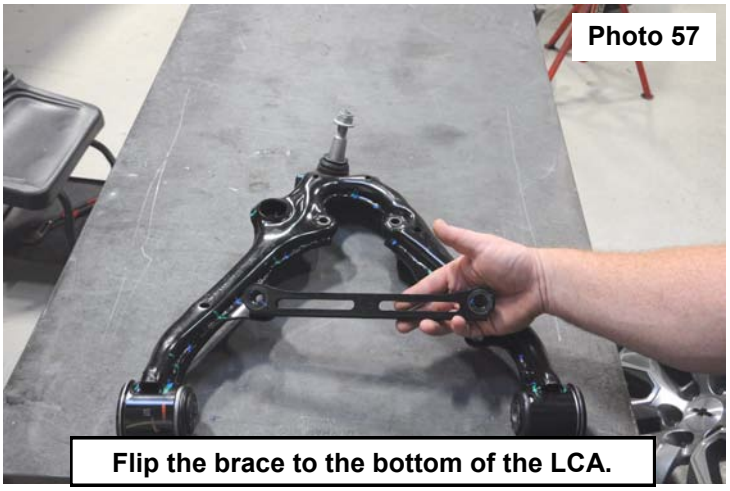
57. Install the supplied strut spacer on the factory strut using the factory hardware. Tighten using an 18mm wrench. **See Photo 54.**
58. Install the strut into the upper mount using the supplied 10mm hardware (10mmstudbag-1). Tighten using a 17mm wrench. **See Photo 55.**





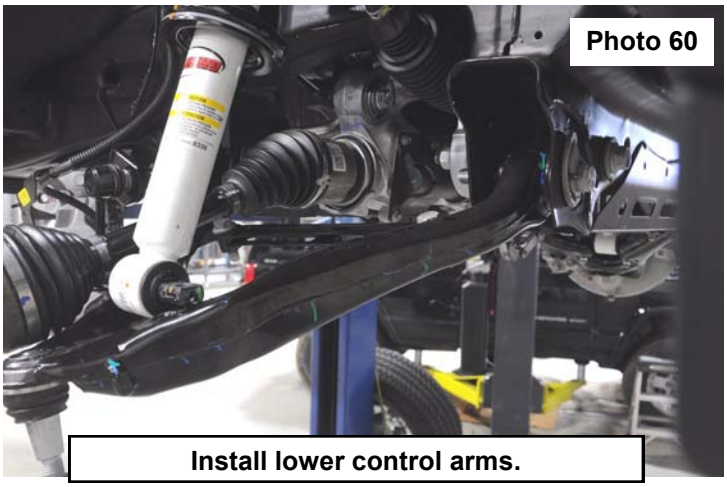
59. Install the plastic wiring loom using the factory hardware, tighten using a 13mm socket.
60. Using a 21mm socket, remove the lower control arm brace. Retain hardware. **See Photo 56.**
61. Flip the lower control arm brace to the bottom of the control arm. **See Photo 57.**



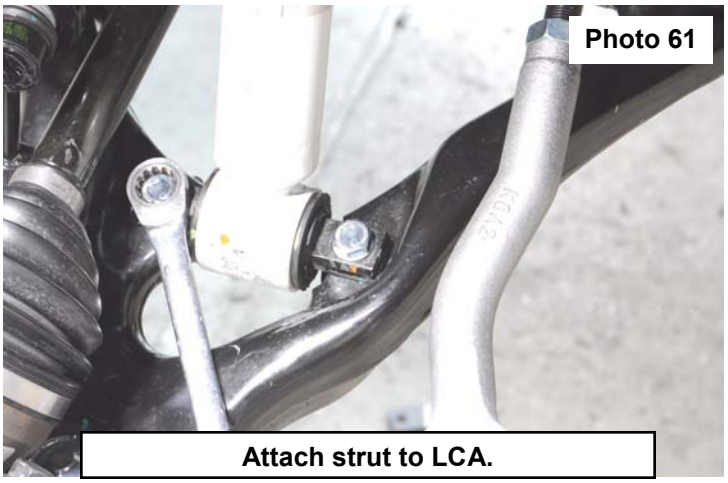


62. Place the supplied washers (29530BAG2) between the lower control arm brace and the control arm. **See Photo 58.**
63. Torque the factory hardware to factory specs using a 21mm socket. **See Photo 59.**

64. Install the lower control arms using the factory cam bolts. Do not tighten at this time. **See Photo 60.**
65. Use a flat screwdriver to remove the factory clip nuts from the lower strut bar pin.
66. Attach the lower strut mount to the lower control arm using the supplied 10mm x 65mm, washers, and nylock nuts. **Bolts will go in from the top. See Photo 61.**

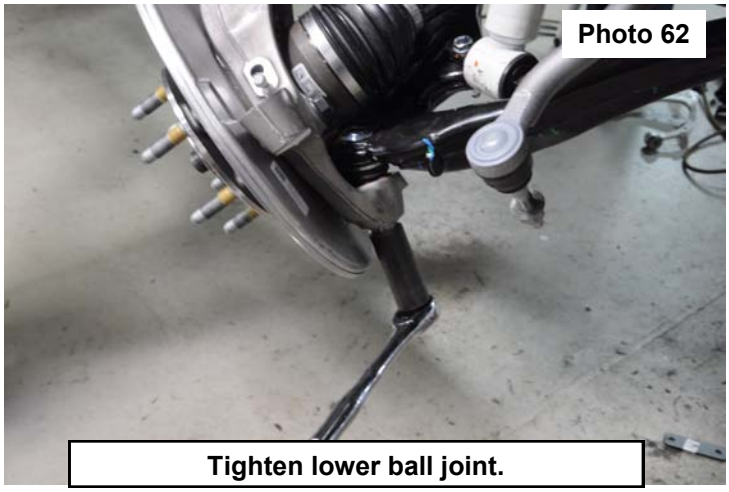


Install lower control arms.

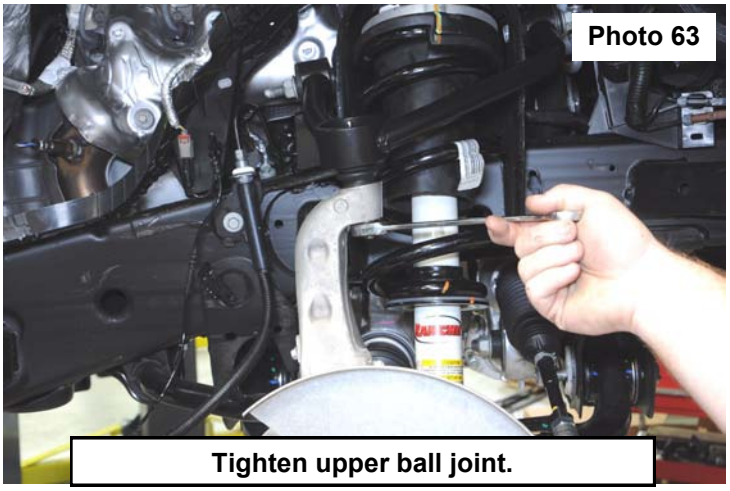


Attach strut to LCA.

67. Install the knuckle assembly on the lower ball joint, using factory hardware, while installing the CV axle through the hub bearing. Tighten using a 24mm socket. **See Photo 62.**
68. Attach the upper ball joint using the factory hardware. Tighten using an 18mm wrench. **See Photo 63.**

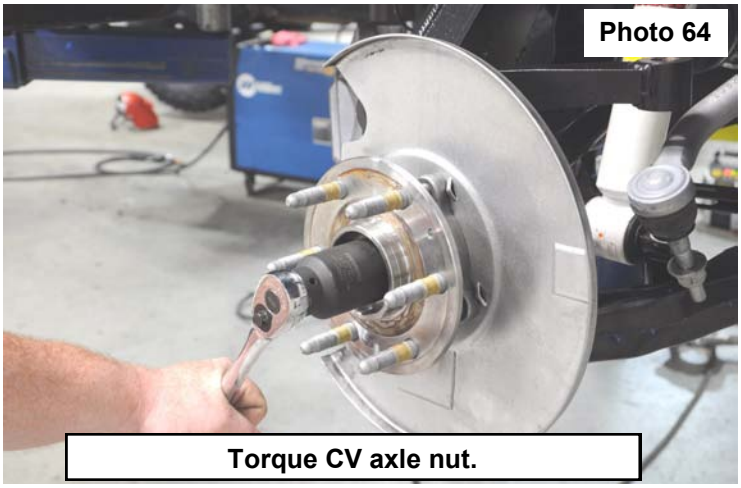


Tighten lower ball joint.

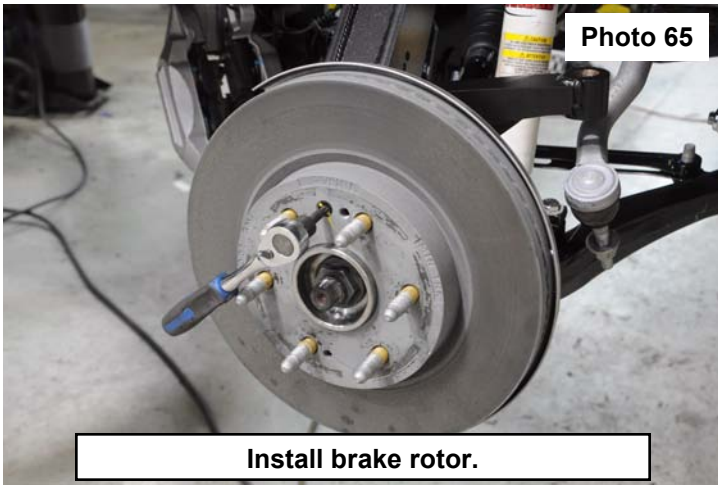


Tighten upper ball joint.

69. Install the CV axle nut and torque to factory specs using a 36mm socket. **See Photo 64.**
70. Install the rotor using the factory hardware, tighten using a T30 torx. **See Photo 65.**

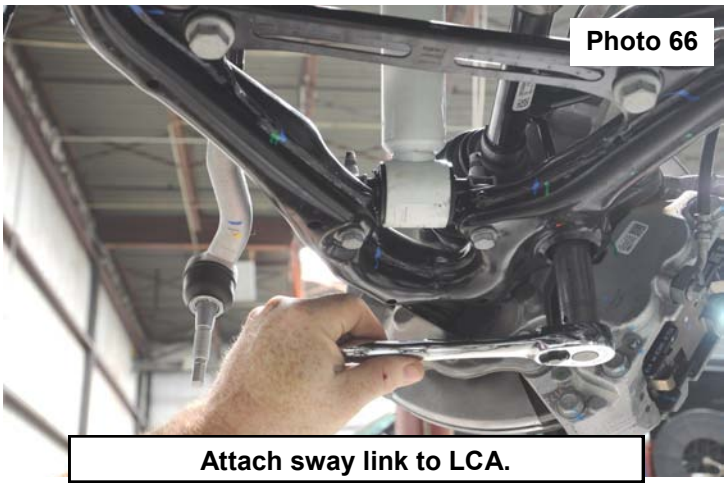


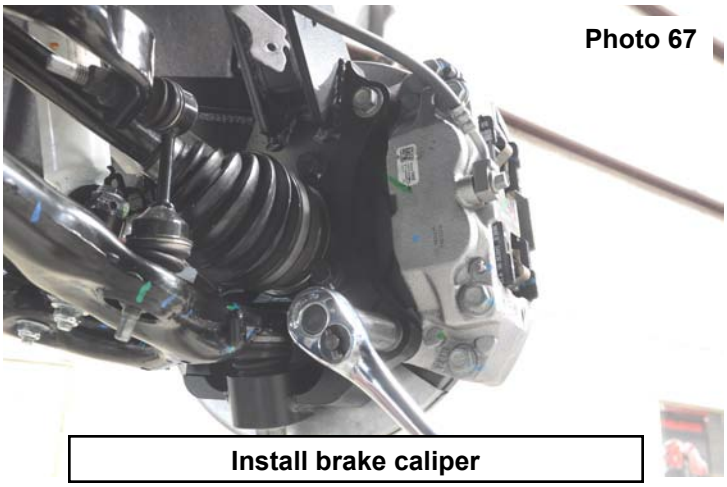
Torque CV axle nut.



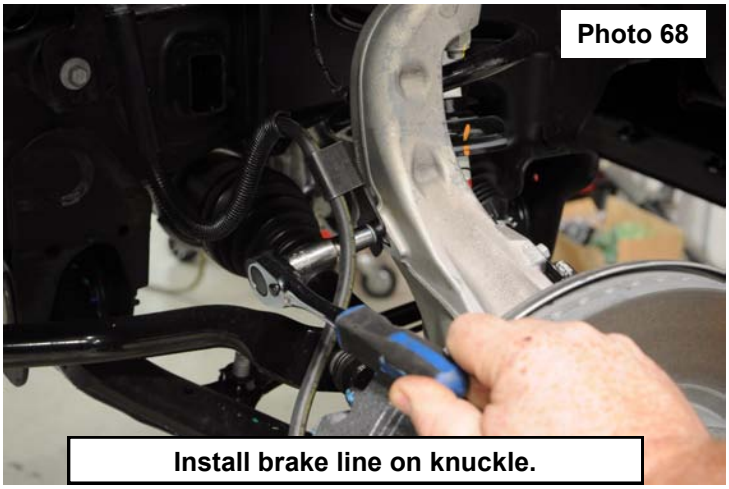
Install brake rotor.

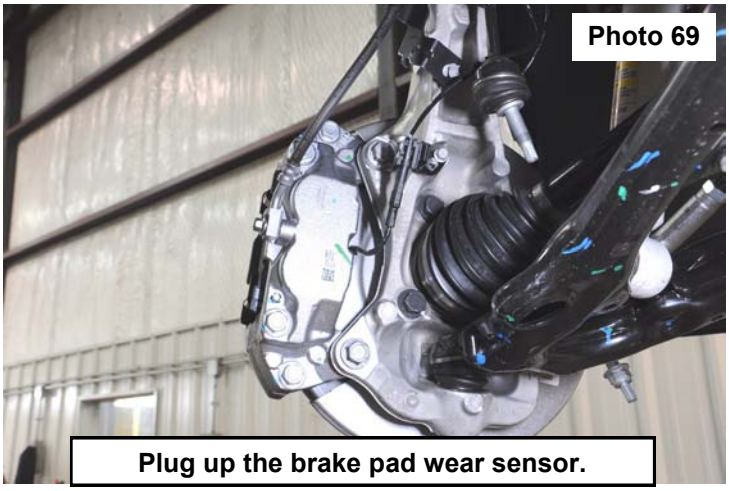
71. Attach the sway link to the lower control arm using the factory hardware. Tighten using an 18mm socket. **See Photo 66.**
72. Install the brake caliper using the factory hardware. Plug in brake pad wear sensor. Torque to factory specs using an 18mm socket. **See Photo 67.**



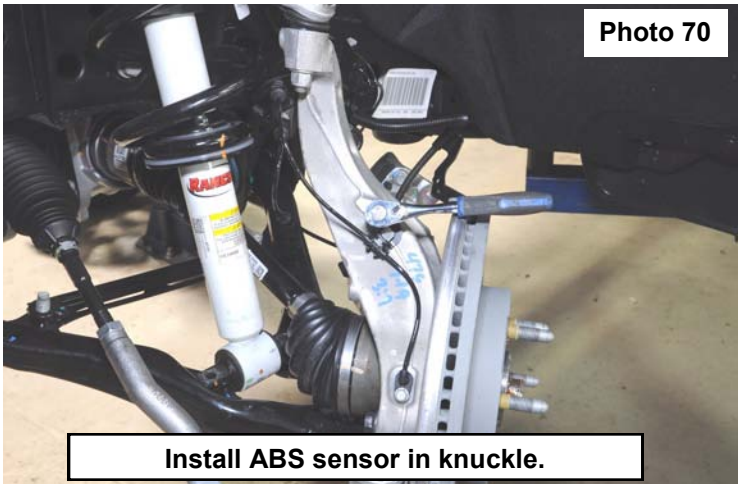


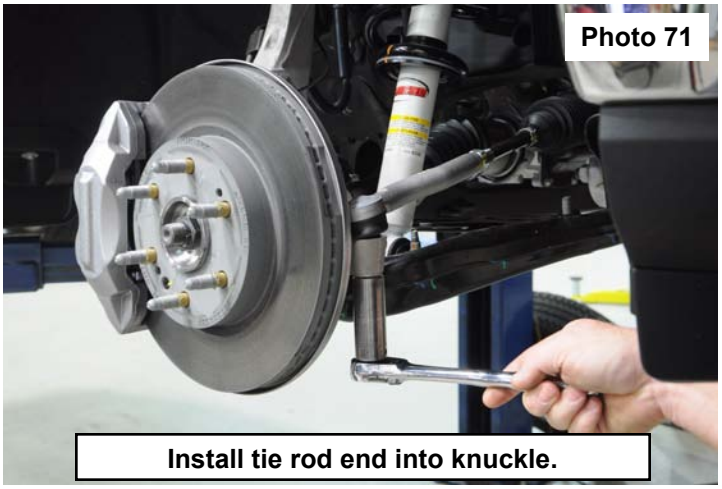
73. Attach brake line to the knuckle using the factory hardware. Tighten using a 10mm socket. **See Photo 68.**
74. Plug up the brake pad wear sensor. **See Photo 69.**





75. Attach the ABS sensor to the knuckle using the factory hardware. Tighten using a 10mm socket. **See Photo 70.**
76. Attach the tie rod end to the knuckle using factory hardware. Tighten using a 21mm wrench. **See Photo 71.**





77. Repeat steps 55-68 on the opposite side of the vehicle.
78. Reconnect the plugs to the rack and pinion and the differential actuator. **See Photo 72.**
79. Install the supplied skid plate using the supplied 3/8" x 1" bolts, washers, and flange locknuts. **See Photo 73.**
80. Install the wheels and tires.

⚠WARNING Take caution when installing the wheels, making sure they completely clear the brake caliper. Any pressure on the brake caliper from the wheel will cause an error in the brake system. The braking system will not function properly. The vehicle will have to be reset by a GM dealership.

81. Jack up the truck and remove the jack stands. Lower the truck to the ground.
82. Using a 27mm wrench and socket, tighten the cam bolts on the lower control arms. Torque to 240ft/lbs.
83. Connect the battery cables to the battery.

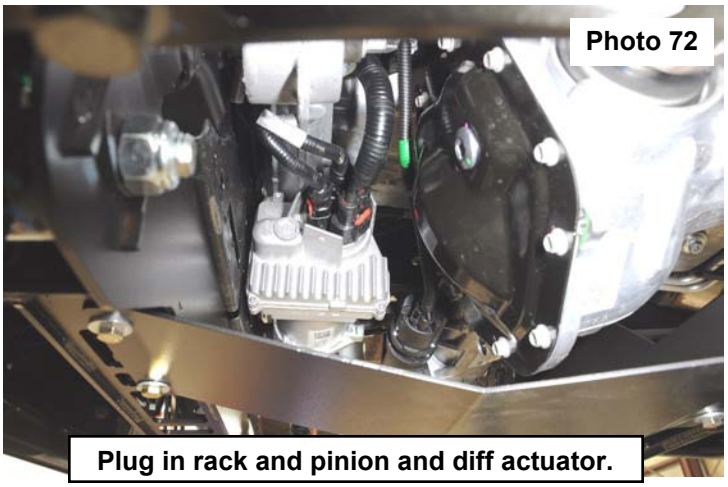
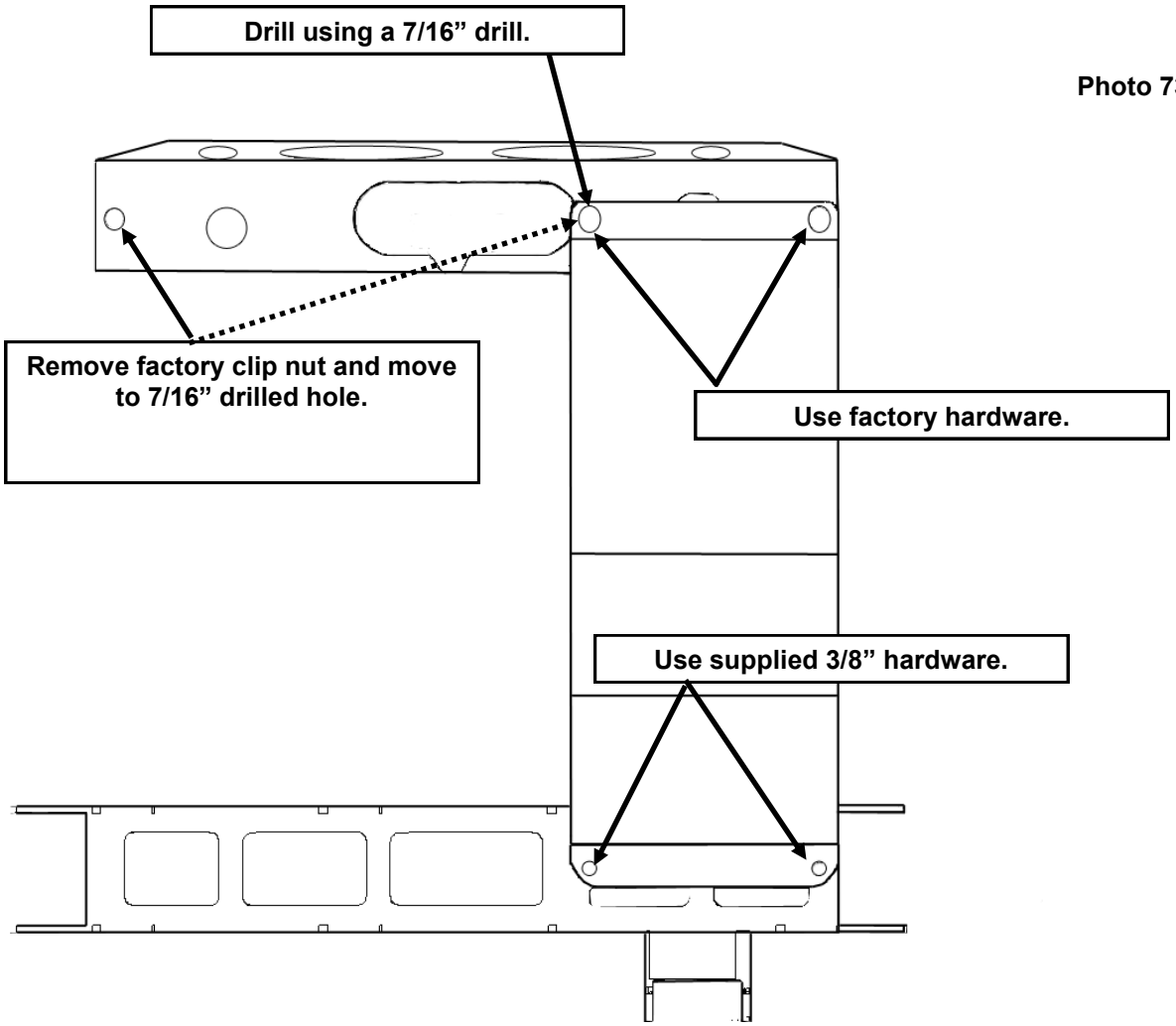
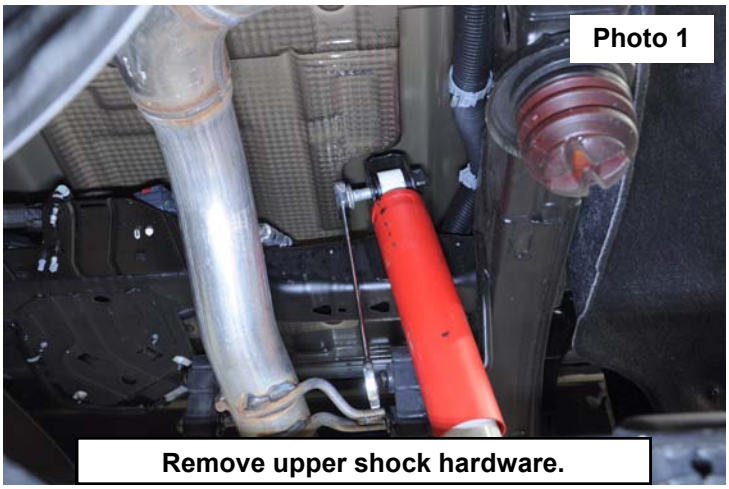


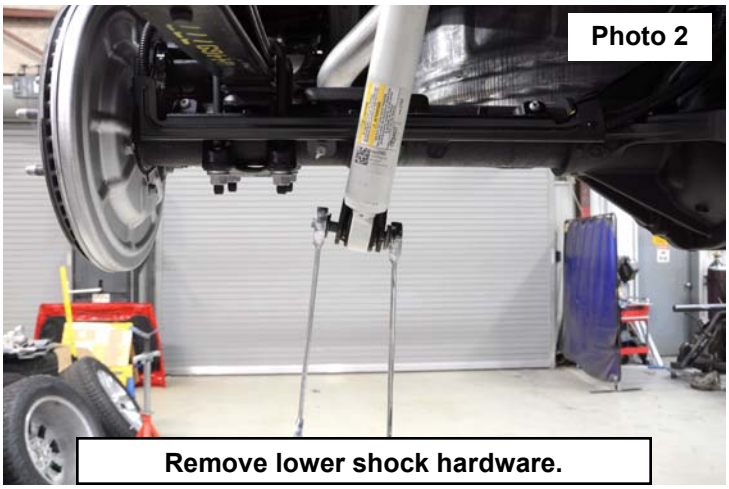
Photo 73



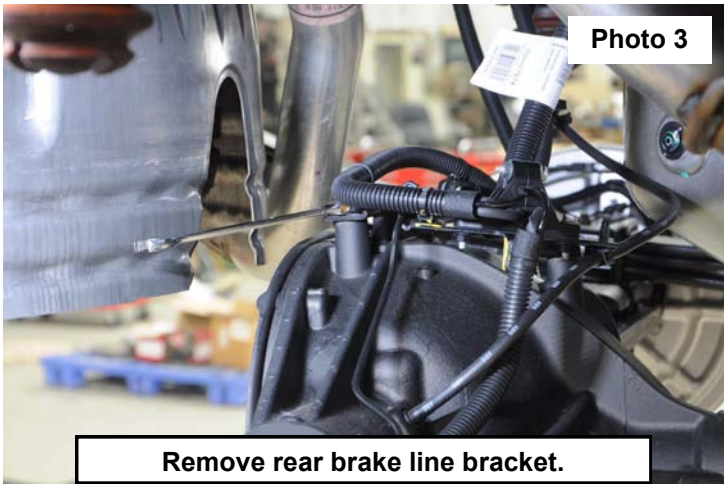
REAR INSTALLATION

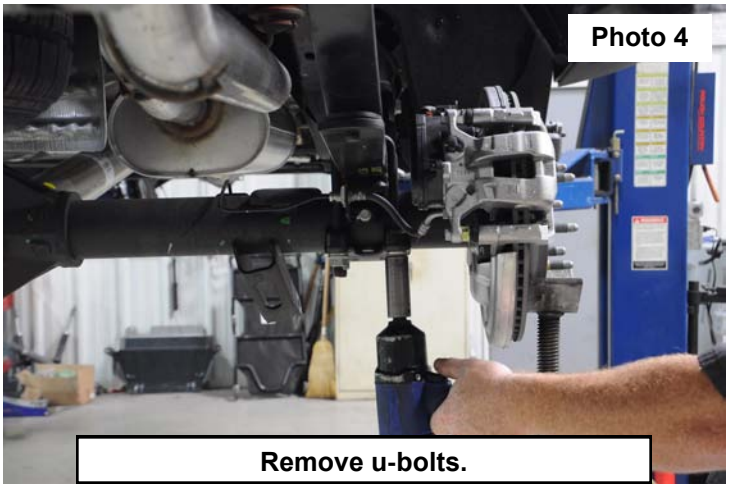
1. Chock the front tires.
2. Jack up the rear of the truck and place jack stands under the frame rails, lower the truck onto the jack stands allowing the rear suspension to hang. Place a jack under the rear differential.
3. Using a 21mm wrench, remove the upper rear shock hardware. Retain hardware. **See Photo 1.**
4. Using a 21mm wrench and socket, remove the rear shock from the axle. Retain hardware. **See Photo 2.**



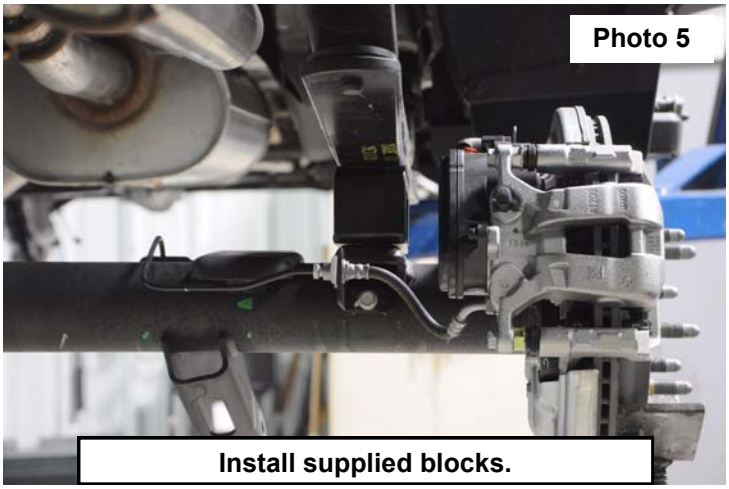


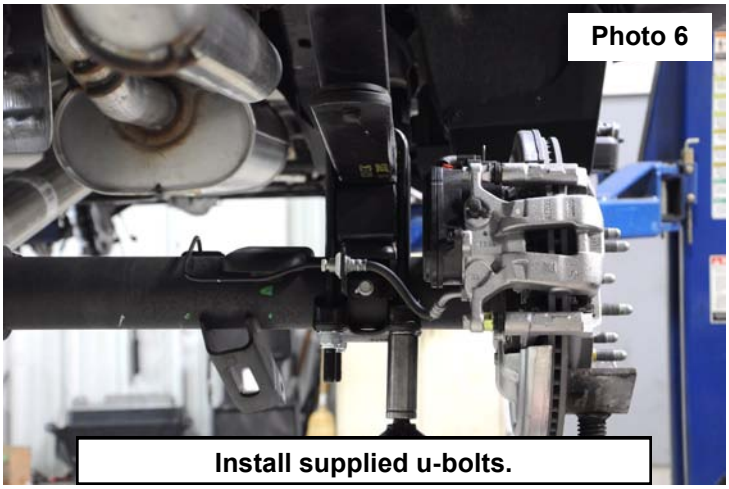
5. Using a 13mm wrench, remove the 3 bolts from the AbS/brake line bracket on the rear differential. **See Photo 3.**
6. Using a 21mm deep well socket, remove the rear u-bolts. **See Photo 4.**





7. Lower the rear axle and remove the factory blocks.
8. Install the supplied rear blocks (larger end of the block to the rear) and u-bolts. Tighten the u-bolts using a 22mm socket. Torque to 90ft/lbs **See Photos 5 & 6.**





8. Install the supplied shocks (660739) using the factory hardware. Torque to factory specs using a 21mm wrench and socket. **See Photo 7.**
9. Re-install tires and wheels.

⚠WARNING Take caution when installing the wheels, making sure they completely clear the brake caliper. Any pressure on the brake caliper from the wheel will cause an error in the brake system. The braking system will not function properly. The vehicle will have to be reset by a GM dealership.

11. Remove jack stands and lower vehicle to ground.
12. Place shock decals on shock absorbers and window decal on vehicle.

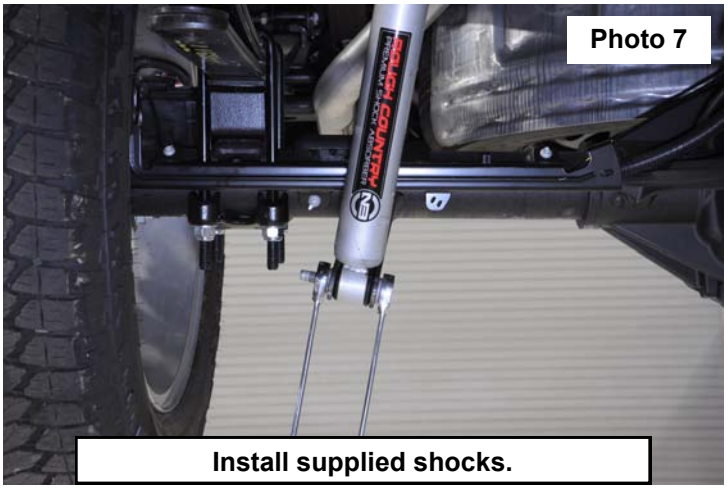
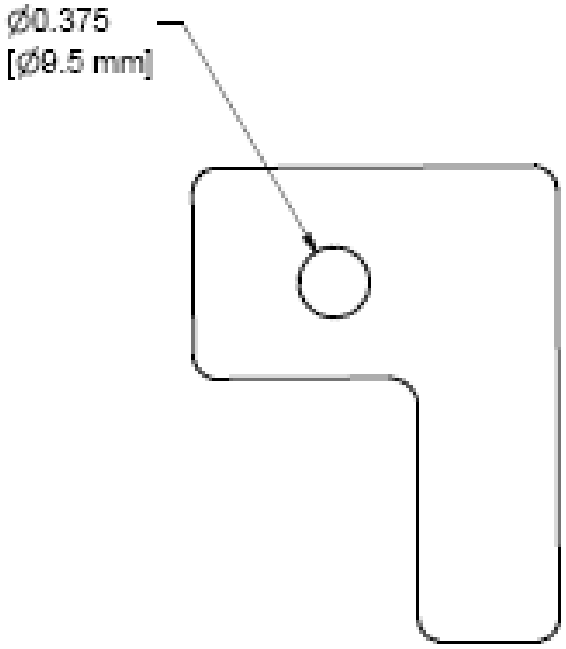


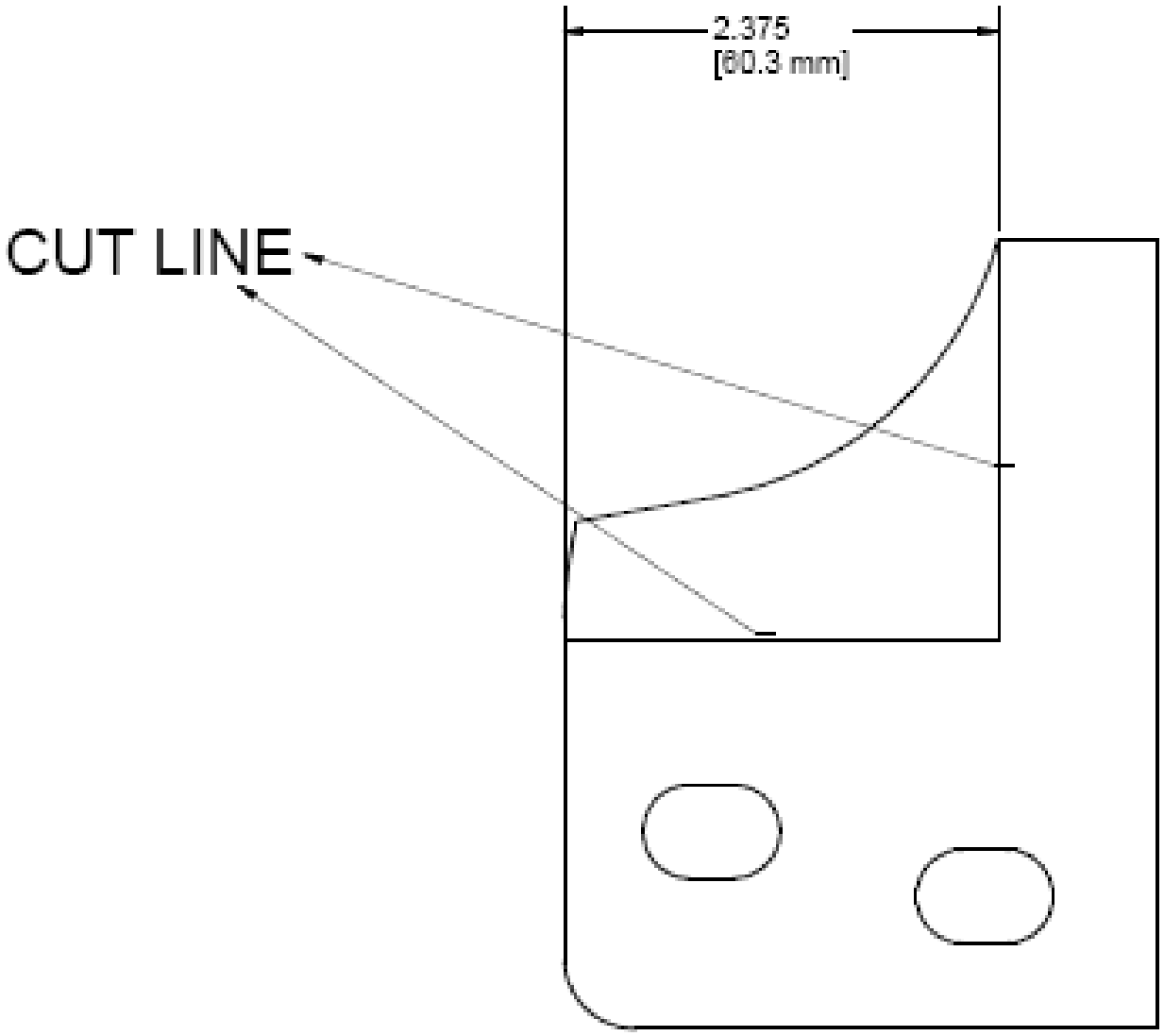
Photo 7

Install supplied shocks.

Bump Stop Template



Driver Crossmember Mount Cut Template



POST INSTALLATION INSTRUCTIONS

1. Check all fasteners for proper torque. Check to ensure for adequate clearance between all rotating, mobile, fixed, and heated members. Verify clearance between exhaust and brake lines, fuel lines, fuel tank, floor boards and wiring harness. Check steering gear for clearance. Test and inspect brake system.
2. Perform steering sweep to ensure front brake hoses have adequate slack and do not contact any rotating, mobile or heated members. Inspect rear brake hoses at full extension for adequate slack. Failure to perform hose check/ replacement may result in component failure.
3. On some vehicles the front lower skirting will need to be trimmed if using certain wheel /tire combinations and with heavy offset wheels. Trim only as needed.
4. Activate four wheel drive system and check front hubs for engagement.
5. Have a qualified alignment center align the vehicle immediately. Realign to factory specifications. The following are the recommended specifications:
   - Caster in degrees 4.0 +-1.0
   - Camber in degrees -.4 +-.8
   - Toe In in degrees 0.1 +-.2
6. Perform head light check and adjustment to proper settings.
7. Check and retighten wheels at 50 miles and again at 500 miles.
8. All kit components must be retightened at 500 miles and then every three thousand miles after installation. Periodically check all hardware for tightness.
9. Install “Warning to Driver” decal on sun visor

Note: Installation of larger tires will require speedometer recalibration.

Thank you for choosing Rough Country for all of your suspension needs.

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