



## 2011-UP CHEVY/GM 2500/3500 HD 7.5"NTD DROP LIFT KIT

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

Rough Country recommends a certified technician installs 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 all the instructions before beginning the installation. Check the kit hardware against the Kit Contents list on next page. Be sure you have all the needed parts and understand where they go. Also please review the tools needed list to be certain that you have the tools necessary to complete the installation.

### **PRODUCT USE INFORMATION**

**⚠ WARNING** As a general rule, the taller a vehicle is the easier it will roll. We strongly recommend, because of roll-over possibility, that seat belts and shoulder harnesses should be worn at all times. Avoid situations where a side roll-over may occur. Braking performance and capabilities are decreased when significantly larger/heavier tires and wheels are used. Take this into consideration while driving. Also, speedometer recalibration is necessary when larger tires are installed.

Do not add, alter, or fabricate any factory or after-market parts which increase vehicle height over the intended height of the Rough Country product purchased. Mixing component brands, lifts, with this suspension lifts voids all warranties. 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.

Due to differences in manufacturing, dimension and inflated measurements, tire and wheel combinations should be test fit prior to installation. For this application we recommend a wheel not to exceed 9+in width with 4.5 % of backspacing.. Additionally a quality tire of radial design is recommended, not exceeding 35+ tall and 12.5+ wide. Please note that use of a 35+x 12.5+ tire may require modification to the front valance. If this vehicle was equipped from the factory with 17+ wheels and if purchasing new wheels, the wheel size must not be below 17+ but can be larger than 17+ due to the vehicle being equipped with larger calipers /rotor.

**⚠ NOTICE** Gas models may require modification to the exhaust to clearance the driveshaft. We recommend an exhaust professional perform this modification.

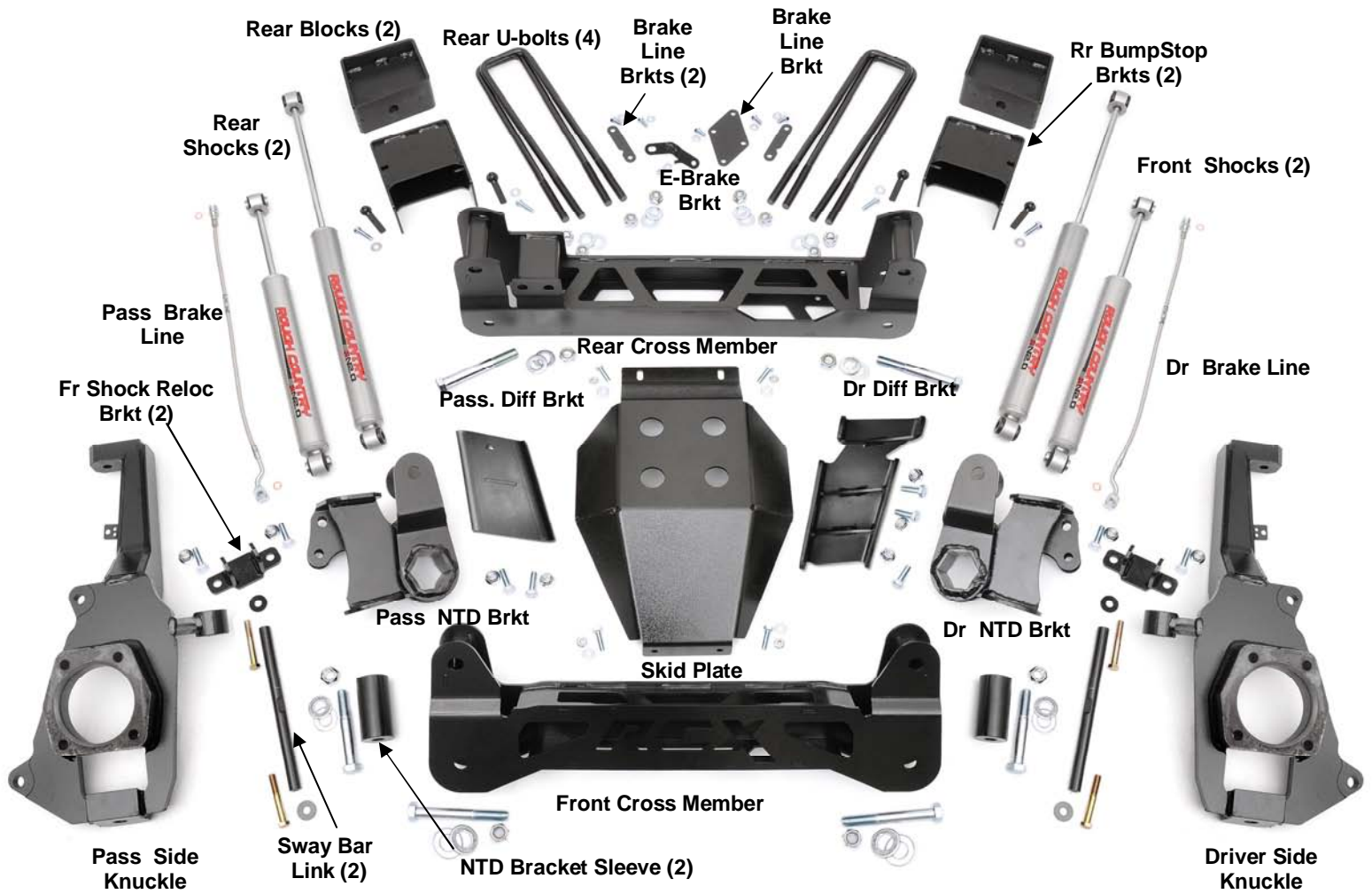
**⚠ NOTICE** Due to varying cab, motor, and bed length configurations on these trucks the final ride height measurement may need to be adjusted. After installation roll the truck forward and backwards, next measure from the center of the front hub to the edge of the fender the truck should be a minimum of 31.0" and a maximum of 32.5". The torsion bar bolt will need to be adjusted until the measurement falls into this range.

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

Any vehicle equipped with any Rough country product must have the ⚠ Warning to Driver+ decal installed on the sun visor or dash. The decal is to act as a constant reminder for whoever is operating the vehicle of its unique handling characteristics. **INSTALLING DEALER-** It is your responsibility to install the warning decal and to forward these installation instructions on too the vehicle owner for review and to be kept in the vehicle for its service life.

***We hope installing your Rough Country lift kit is a positive experience. Please note that variations in construction and assembly in the vehicle manufacturing process will virtually ensure that some parts may seem difficult to install. Additionally, the current trend in manufacturing of vehicles results in a frame that is highly flexible and may shift slightly on disassembly prior to installation. The use of pry bars and tapered punches for alignment is considered normal and usually does not indicate a faulty product. However, if you are uncertain about some aspect of the installation process, please feel free to call our tech support department at 800-222-7023. We do not recommend that you modify the Rough Country parts in any way as this will void any warranty expressed or implied.***

## KIT CONTENTS



KIT CONTENTS ON NEXT PAGE

**Kit Contents:****1253Box1:**

Driver Side Knuckle

**1253Box2**

Pass Side Knuckle

**1253Box3**

Dr Fr Diff Bracket

Dr Rr Diff Bracket

Pass Diff Bracket

Front Shock Brackets (2)

1253BAG1

1253BAG6

RR Lift Blocks (2)

5/8" X 3" X 16" Square U-bolts (4)

5/8" Nut Bag For U-bolts

Front Shock Part #658741 (2)

Rr Shock Part #658694 (2)

**1253Box4**

Torsion Bracket Sleeves (2)

Bump Stop Brackets (2)

Fr Sway Bar Link (2)

Rr Dr Diff Brake Bracket

Rr Pas Diff Brake Bracket (2)

Rr E-Brake Bracket

Dr NTD Bracket

Pass NTD Bracket

1253BAG4

Sway Bar Relocation Bracket (2)

1770BAG4

**1253Box5**

Rear Cross Member

Frt Cross Member

Dr Fr Brake Line

Pass Fr Brake Line

**1253Box6**

Front Skid Plate

**Fastener Breakdown:****For Front Cross Member: 1253Bag2**

18mm x 120mm Bolt (2)

18mm Nylock Nut (2)

Flat Washer (4)

**For Rear Cross Member:**

18mm x 140mm Bolt (2)

18mm Nylock Nut (2)

Flat Washer (4)

**For Pass Side Dif Drop Brkt: 1253Bag3**

12mm Lock Nut (2)

12mm x 35mm Bolt (2)

**For Driver Side Front Dif Drop Brkt.**

12mm x 35mm Bolt (2)

Flat Washers (2)

**For Driver Side Rear Diff Drop Brkt**

12mm Lock Nut

12mm x 35mm Bolt

**For Front Sway Bar Links:**

Sway bar Link (2)

Sway Link Washers (8)

7/16" x 3" Bolt (4)

Link Washers (8) 1253Bag7**For Front Shock Absorber Bracket**

1/2" x 1 1/2" Bolt (4)

Flat Washers (8)

1/2" Lock Nut (4)

9/16" x 3 1/2" Bolt (4)

Flat Washer (8)

9/16" Lock Nut (4)

**For Skid Plate:**

3/8" x 1 1/4" Bolt (4)

Flat Washer (8)

3/8" Lock Nut (4)

**For Sway Bar Bracket:**

3/8" x 1" Bolt (4)

3/8" Flat Washer (4)

3/8" Nut (4)

3/8" Lock Washer (4)

**For Non-Torsion Bar Bracket: 1253Bag8**

Sleeves (2)

3/4" X 5 1/2" Bolt (2)

3/4" Lock Nut (2)

3/4" Flat Washers (4)

**For Rear Bump-stop Brackets: 1253Bag4**

3/8" x 1 1/4" Bolt (4)

3/8" Flat Washer (4)

3/8" Flag Nut (2)

**For Rear Brake Brackets:**

5/16" Lock Nut

Flat Washer (5)

5/16" x 3/4" Bolt (4)

5/16" Lock Nut (4)

**For Rear Bump-stops: 1253Bag7**

Flag Nuts (4)

**For Front Brake Lines: 1253Bag5**

Brake Crush Washers (4)

Black Cable Ties (2)

**For Rear Shocks: 1253Bag6**

Shock Sleeves (4)

**Rear U-bolts:**

5/8" Nuts

**TOOLS NEEDED:**

10mm socket /wrench

11mm socket /wrench

13mm Deep Socket

13mm wrench

15mm socket / wrench

17mm socket / wrench

18mm socket /wrench

19mm socket /wrench

21mm socket /wrench

24mm socket /wrench

9/16 socket /wrench

Torsion bar Tool

Drill

13/32 Drill Bit

Loc-Tite

Reciprocating Saw

Floor Jack

Jack Stands

Size

3/8"

7/16"

1/2"

9/16"

5/8"

10MM

12MM

18MM

Grade 5

30 ft/lbs

45 ft/lbs

65 ft/lbs

95 ft/lbs

135 ft/lbs

Class 8.8

32ft/lbs

55ft/lbs

170ft/lbs

Grade 8

35 ft/lbs

60 ft/lbs

90 ft/lbs

130 ft/lbs

175 ft/lbs

Class 10.9

45ft/lbs

75ft/lbs

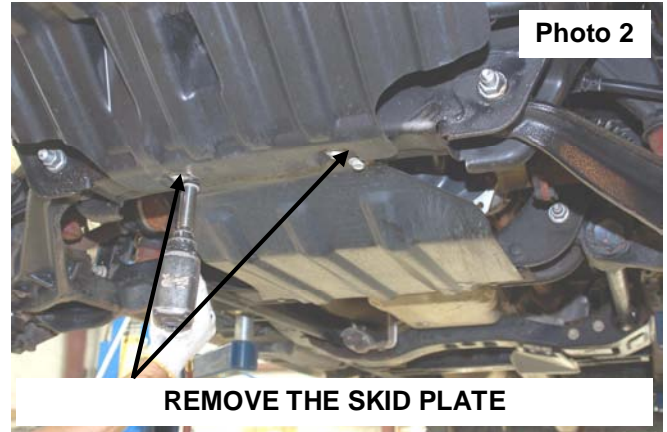
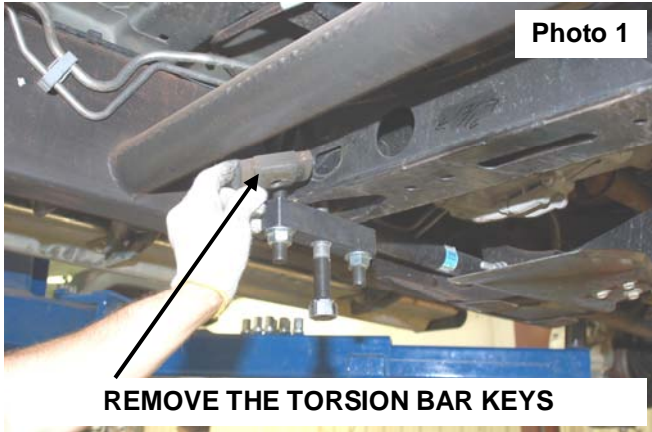
240ft/lbs



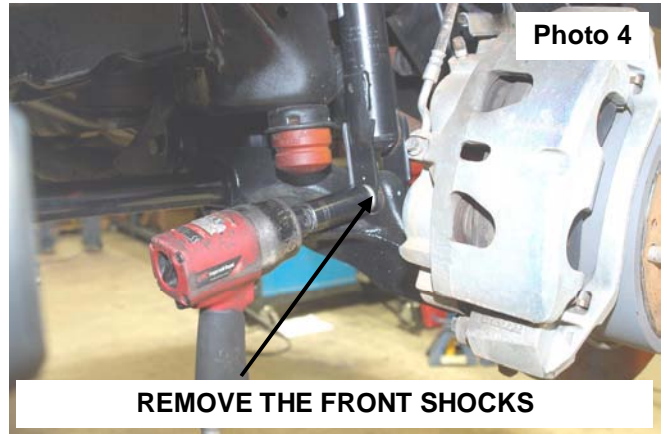


## INSTALLATION INSTRUCTIONS

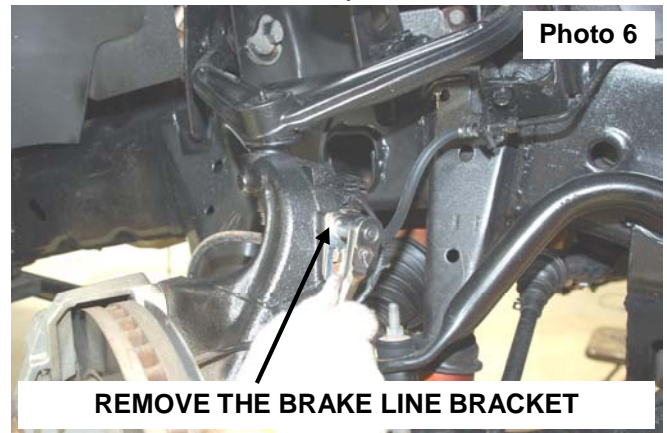
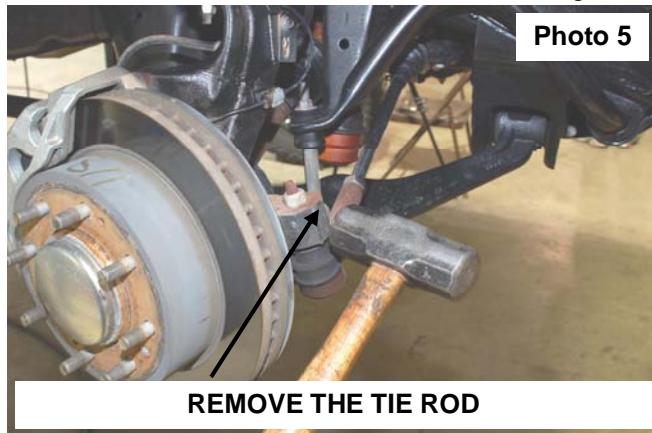
1. Chock the rear wheels.
2. Jack up the front of the vehicle.
3. Place jack stands on the frame behind the lower control arms.
4. Lower the vehicle onto the jack stands and remove the tires and wheels.
5. Place the floor jack under the differential.
6. Using a torsion bar tool, unload the torsion bars using a 21mm socket and remove the threaded block. Retain the stock hardware **See Photo 1**.
7. Slide the bars forward to disengage the torsion bar adjusters. Pay attention to how the adjusters are positioned / clocked in the cross-member.
8. Remove the torsion bars from the vehicle and be sure to mark bars driver and passenger side and front to rear.
9. Remove the skid plate from the frame using a 15mm socket. **See Photo 2**.



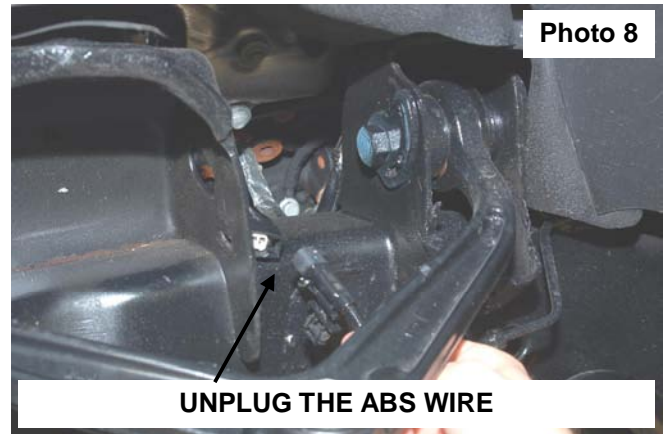
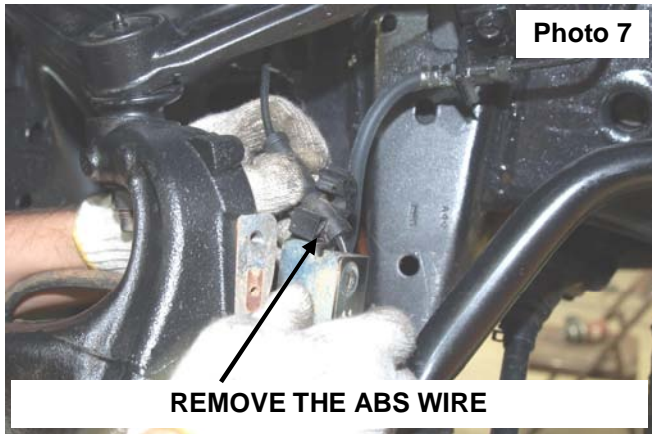
10. Remove the upper shock using a 21mm socket. **See Photo 3**.
11. Remove lower shock 21MM remove shock. **See Photo 4**.



12. Remove tie-rod using a 21mm socket / wrench. Retain the stock hardware. **See Photo 5**.
13. Remove brake line bracket from knuckle using a 10mm socket / wrench. Retain the factory hardware. **See Photo 6**.

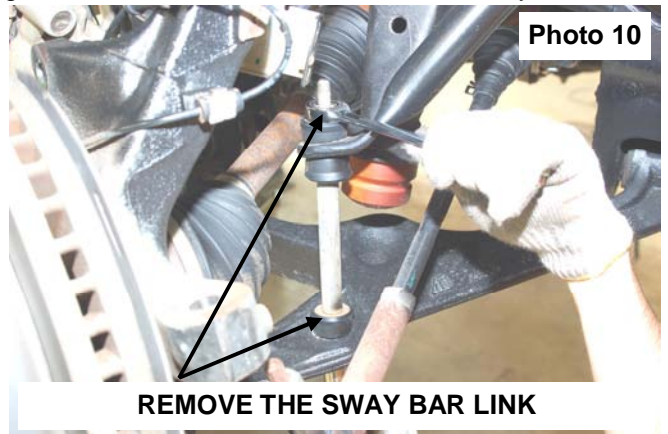
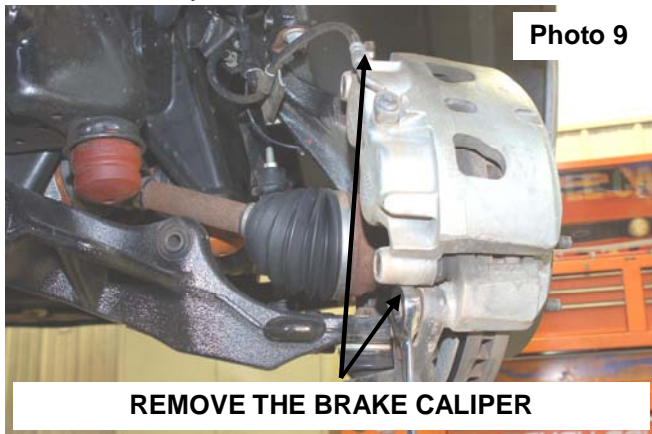


14. Remove the ABS wire from the bracket as shown in **Photo 7** and from disconnect at the frame as in **Photo 8**.



15. Remove brake caliper from the rotor using a 21mm socket / wrench. Retain the factory hardware. **See Photo 9.**

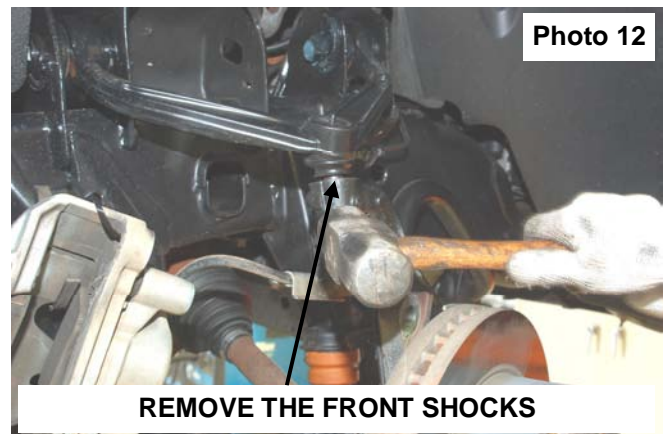
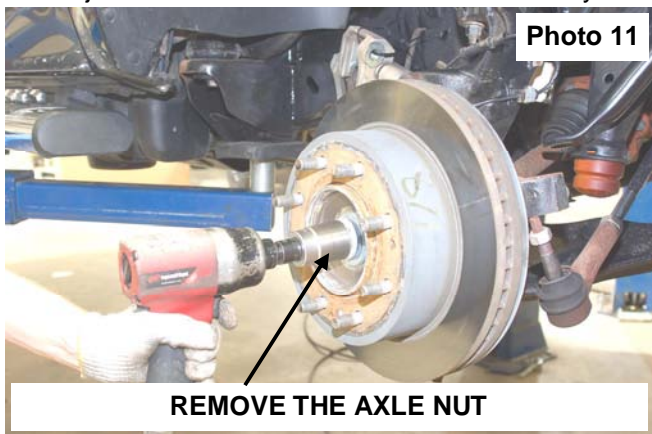
16. Remove sway-bar link hardware as shown in **Photo 10** using a 15mm socket/ wrench. Retain the factory hardware.



17. Remove dust cap using a flat head screwdriver to access the axle nut.

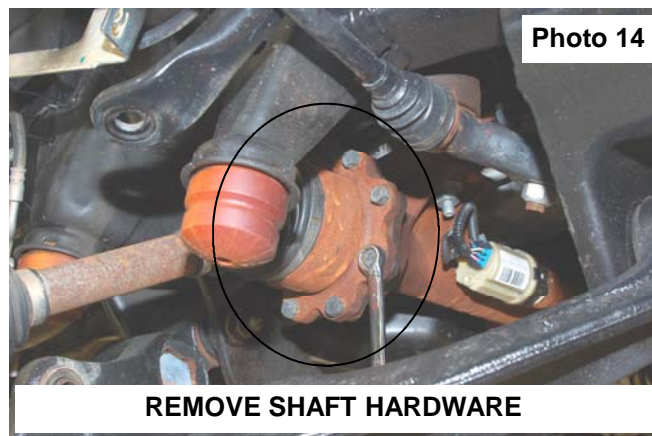
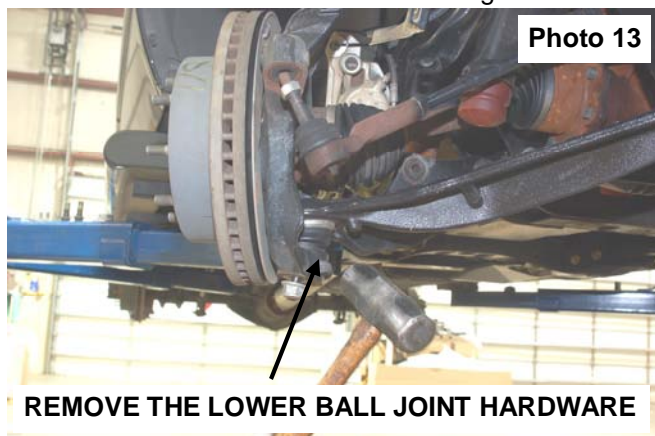
18. Remove axle nut using a 33mm socket. Retain the factory hardware. **See Photo 11.**

19. Loosen but do not remove the upper ball-joint nut using a 18mm socket/ wrench. Strike the knuckle to release the ball joint and remove the nut. Retain the factory hardware. **See Photo 12.**

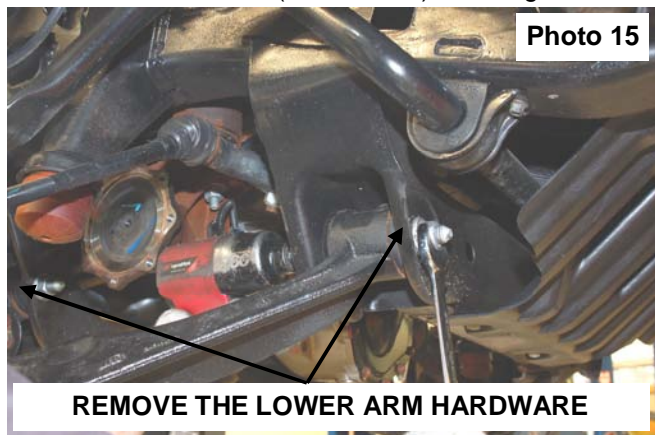




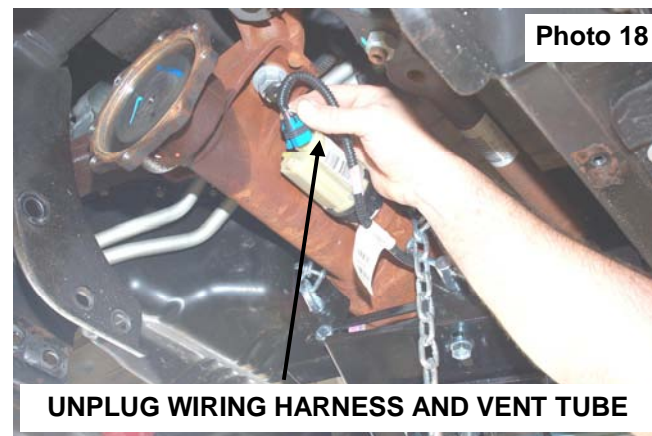
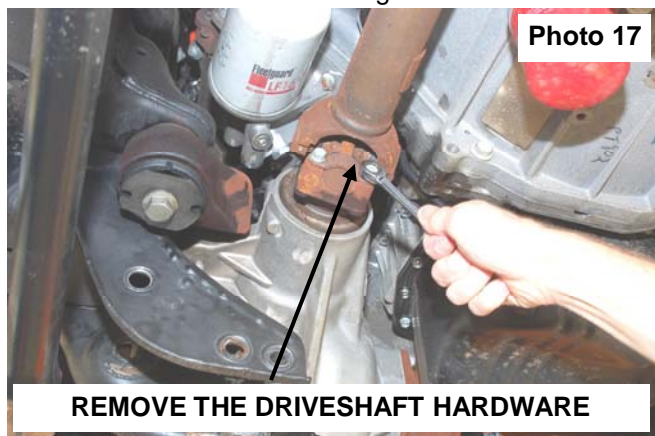
20. Loosen but do not remove the lower ball-joint nut using a 24mm socket/ wrench. Strike the knuckle as shown to dislodge the ball joint and remove the nut. Retain the hardware for reuse. **See Photo 13.**
21. Remove knuckle from the vehicle.
22. Remove the axle shaft as shown using a 15mm socket/ wrench. **See Photo 14.**



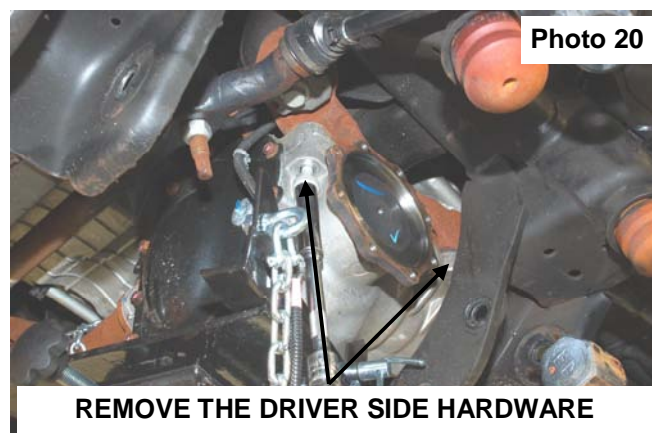
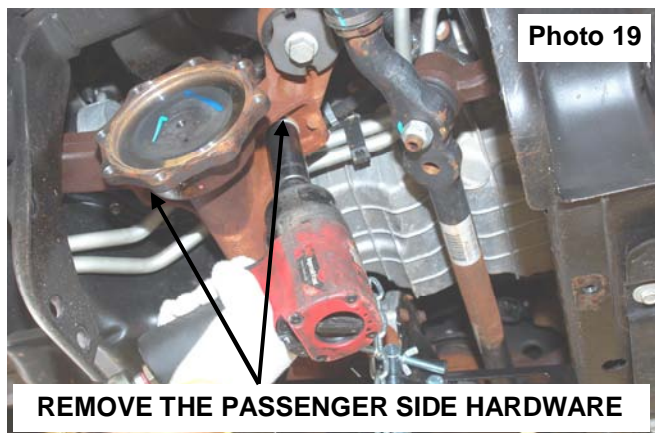
23. Remove lower arm using a 21mm socket and wrench. Retain hardware for reuse. **See Photo 15.**
24. Remove the 4 bolts (2 each side) securing the cross-member using a 18mm socket and wrench. **See Photo 16.**



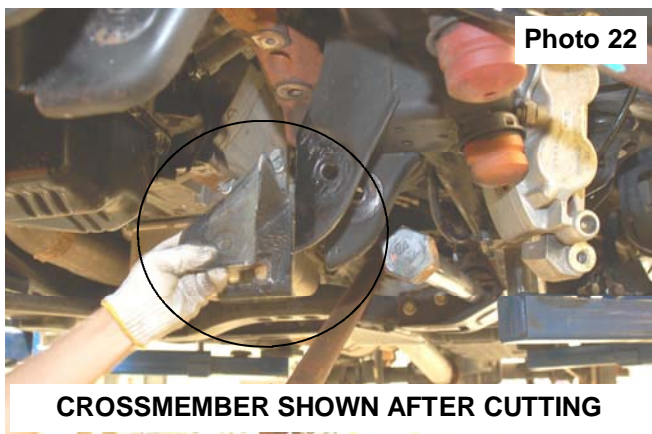
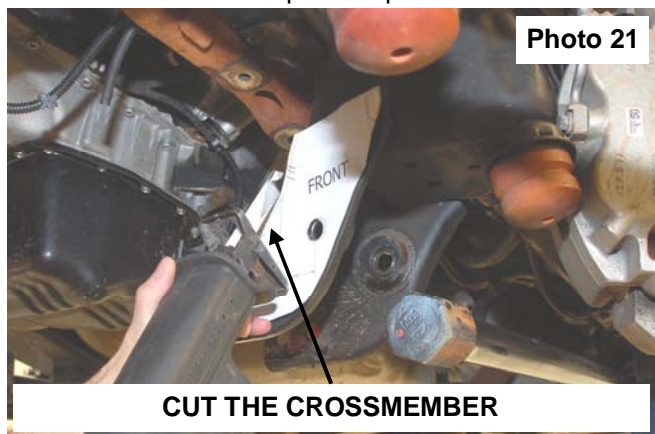
25. Remove the front drive shaft using a 11mm socket. **See Photo 17.**
26. Remove the differential wiring harness from the axle and vent tube. **See Photo 18.**



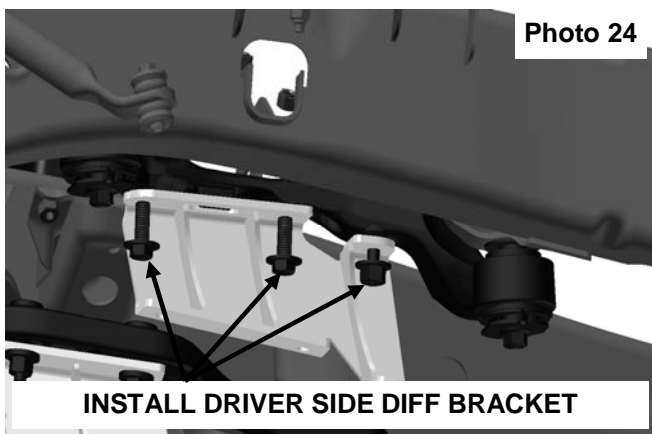
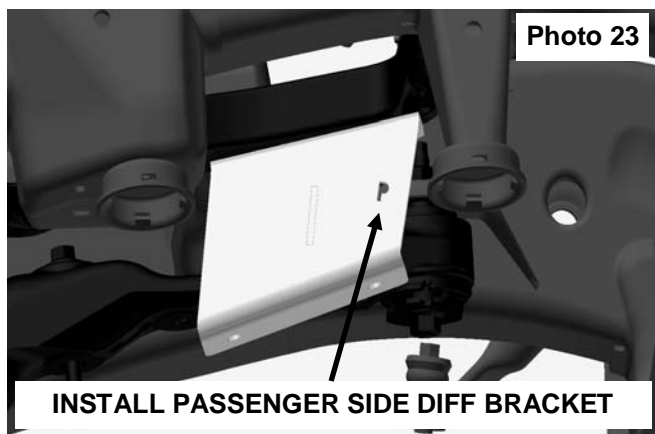
27. Remove the passenger side diff 2 bolts using a 21mm socket. Retain the stock hardware. **See Photo 19.**
28. Remove the two forward driver diff front bolts using a 15mm socket and the rear bolt using a 18mm socket. **See Photo 20.**



29. Position supplied front and rear trim templates on driver side rear lower arm mount, aligning the holes. Tape templates in place and cut with a reciprocating saw. **See Photo 21.** Cut through both front and back side of mount to allow space for the differential.
30. **Photo 22** shows the piece separated from the mount.

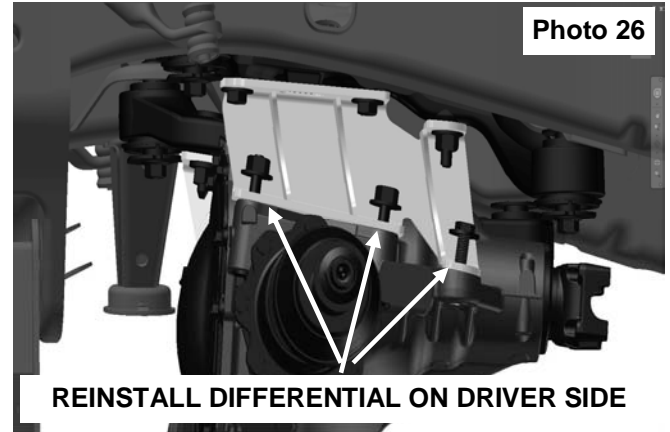
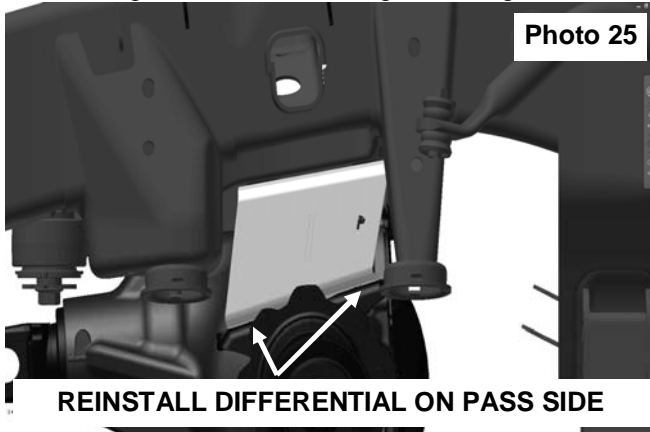


31. Install pass diff drop, taller portion toward the rear, with the supplied 12mm flange lock nuts. Tighten using a 18MM wrench. **See Photo 23.** **"P" will face forward and upright when looking from outside of truck.**
32. Apply thread locker to the 12mm x 35mm bolts and install driver differential bracket, taller portion toward the rear using the bolts and 12mm flat washers. Tighten using a 19mm socket. **See Photo 24.** **Gussets to the outside of the vehicle.**

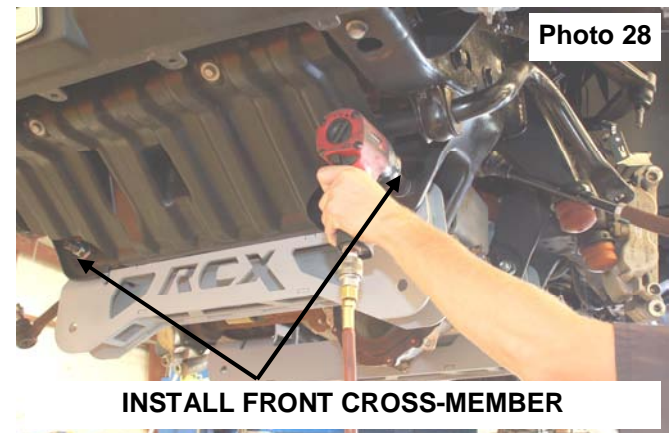
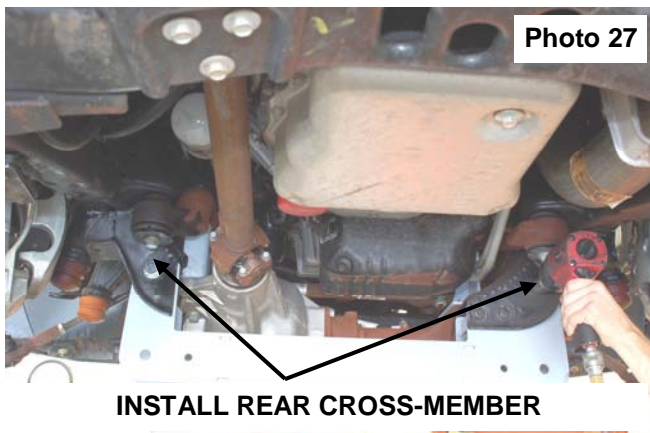




33. Apply thread lock to the two 12mm x 35mm bolts and install the passenger differential on the brackets with the supplied 12mm flat washers using stock nuts in 1253Bag3. Tighten using a 19mm and 21mm wrench. **See Photo 25.**
34. Install the differential on the drivers side to the bracket with the stock bolts and supplied 12mm flange lock nuts from 1253Bag3. **See Photo 26.** Tighten using a 15mm & 18mm wrench.



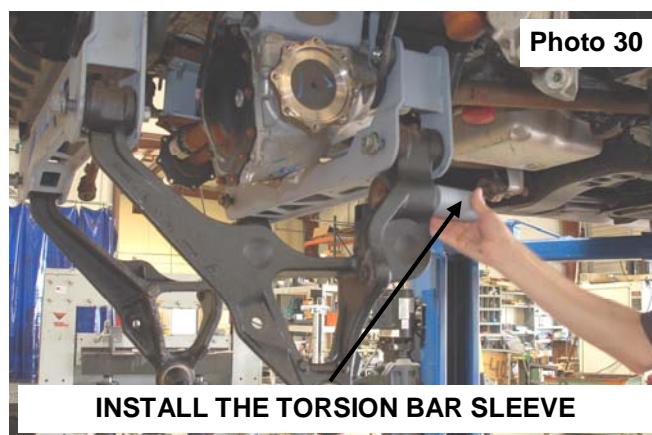
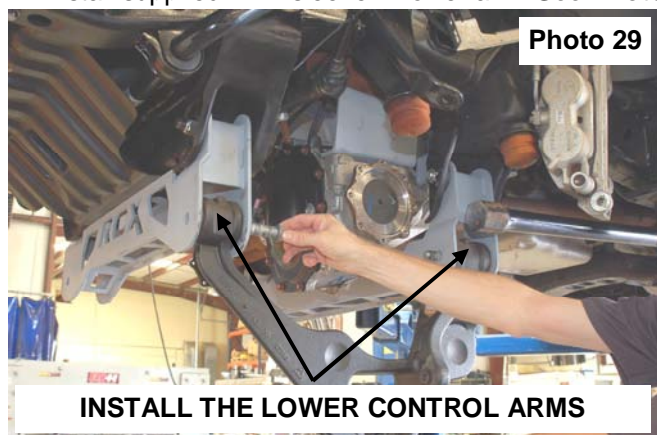
35. Reattach the differential wires and vent tube to the axle. It may be necessary to pull some slack from top. Do Not pull on the wiring connector as damage to the wires can occur.
36. Reinstall front drive shaft using the factory hardware. Tighten using a 11mm socket.
37. Install rear cross-member using the supplied 18mm x 140mm bolts, flat washers and lock nuts in 1253Bag2. Tighten using a 27mm socket/ wrench. **See Photo 27.**
38. Install the two stock bolts in the stock location and tighten using a 18mm socket / wrench.
39. Install front cross-member using the supplied 18mm x 120mm bolts, flat washers and lock nuts in 1253Bag2. **See Photo 28.**





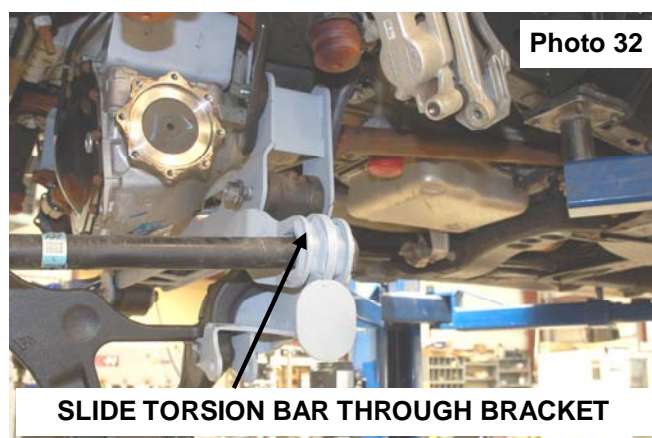
40. Reinstall the lower control arm with stock hardware. **See Photo 29.**

41. Install supplied NTD sleeve in lower arm. **See Photo 30.**



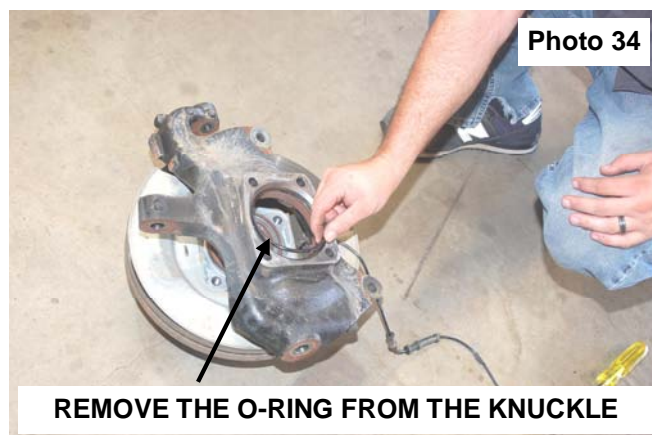
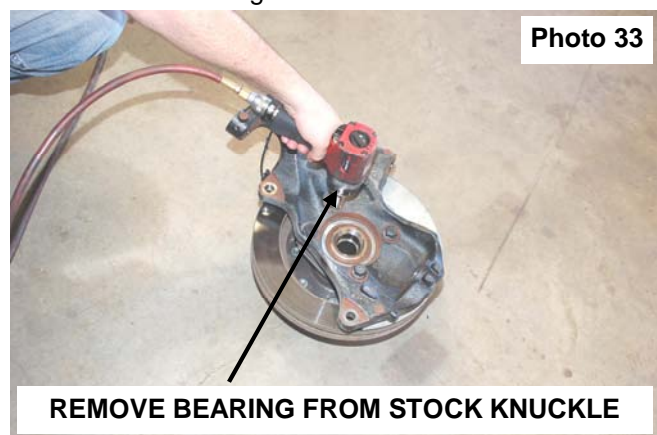
42. Install NTD bracket with the supplied 3/4"x 5 1/2" bolts, flat washers and 3/4" lock nut in 1253Bag8. **See Photo 31.** Tighten using 1- 1/8" wrench. The stock shock bolt will be used in the other hole. Tighten using a 21mm wrench. Slight grinding on the lower control arm may be needed for the bracket to seat properly.

43. Reinstall Torsion bar from front. Be sure to reinstall the passenger and driver side in the position as they were removed. **See Photo 32.**



44. Remove hub bearing from knuckle as shown in **Photo 33** using a 21mm socket.

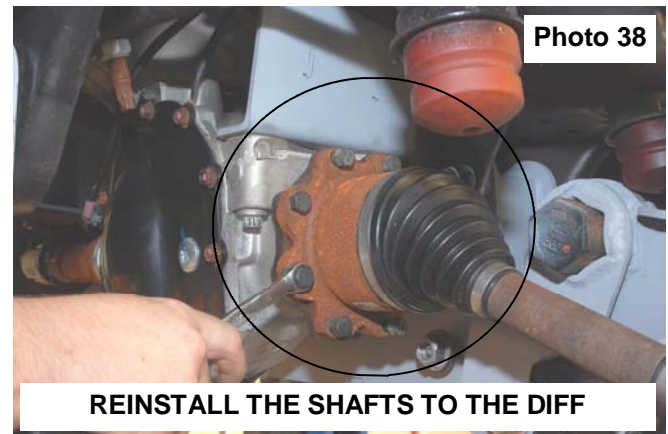
45. Remove the o-ring in the stock knuckle and retain. **See Photo 34.**



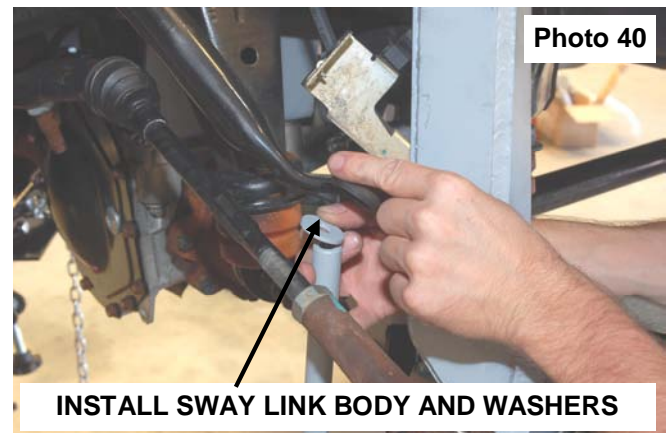
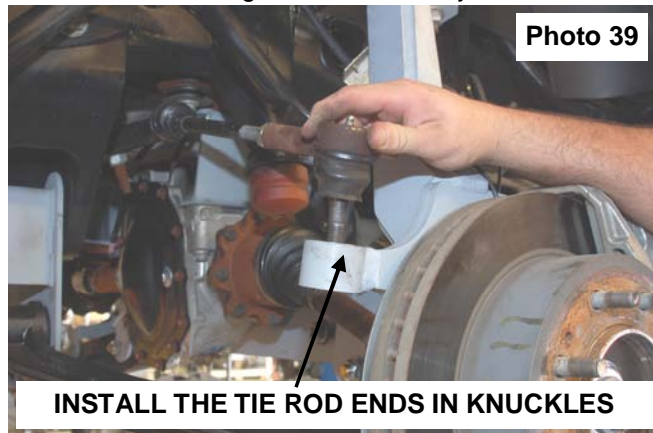
46. Remove the ABS wire and clamp from the stock knuckle.
47. Install the o-ring as shown in **Photo 35**.
48. Install bearing assembly in lifted knuckle with the factory hardware. Tighten using a 21mm socket. **See Photo 36**.



49. Install knuckle on the lower and upper control arms. **See Photo 37**.
50. Reinstall axle shaft in the knuckle bearing and on the differential with the stock hardware. Tighten axle shaft bolts as shown in **Photo 38** with a 15mm socket / wrench and the axle nut using a 33mm socket.

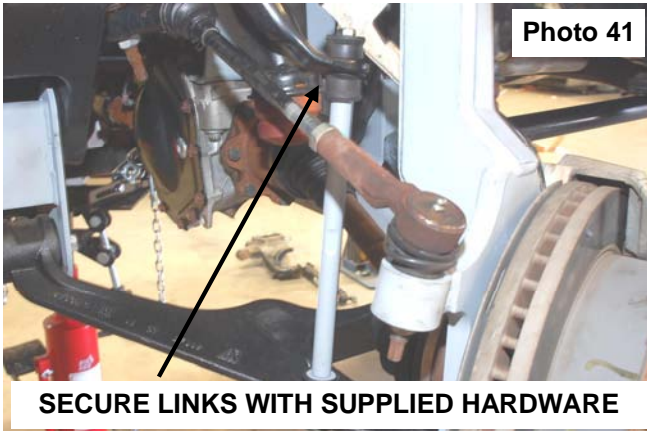


51. Inspect the supplied brake lines and determine driver and passenger side.
52. Remove the rubber brake line from the hard line on the frame using a 3/8" wrench. Replace with the appropriate brake line and tighten.
53. Remove the stock line on the caliper and install the brake line on the brake caliper using the factory hardware and new 3/8" Brake Crush washers from 1253Bag5.
54. Install the caliper on the knuckle using factory hardware. Tighten using a 21mm socket / wrench. Using the supplied zip ties from 1253Bag5, secure the brake lines to the tab on the knuckle.
55. Install tie-rod on the knuckle with the factory hardware. Tighten using a 21mm socket / wrench. **See Photo 39**.
56. **Photo 40** shows the location of the supplied sway bar washers. The washers from 1253Bag7 will install on the upper and lower bushings of both the sway bar and the lower control arm.

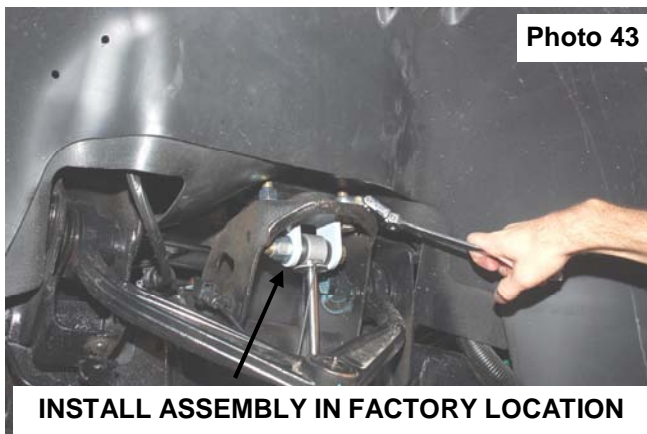




57. Install the stock sway bar bushings and secure with the supplied 7/16+x 3+bolts in 1253Bag3. Tighten assembly using a 5/8+wrench. **See Photo 41.**
58. Install shock bracket on the front shock as shown with the supplied 9/16+x 3 1/2+bolts, flat washers and lock nuts from 1253Bag3. **See Photo 42.** Flat washers are supplied for use as shims in the upper mount and should be used as needed.



59. Install the shock bracket in the factory mount on the frame with the supplied 1/2+x 1 1/2+bolts, flat washers and lock nuts from 1253Bag3. **See Photo 43.** Tighten using a 3/4+socket / wrench.
60. Install the shock in the lower mount with the supplied 9/16+x 3 1/2+bolts, flat washers and lock nuts from 1253Bag3. Flat washers are supplied for use as shims in the upper mount and should be used as needed. **See Photo 44.**

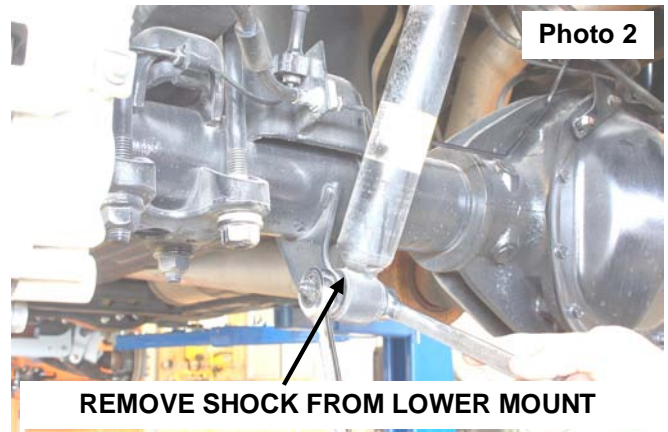
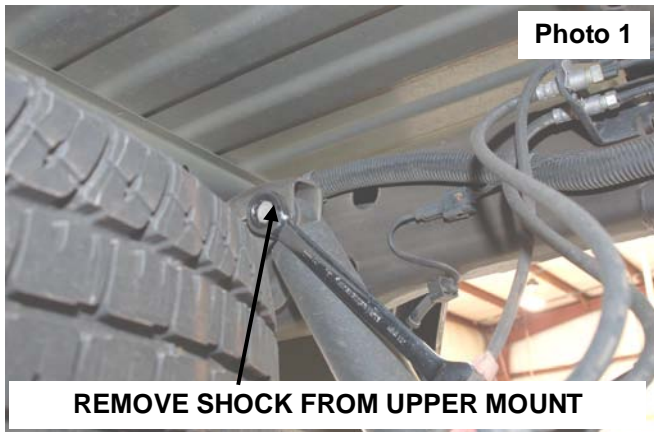


61. Install the skid plate as shown in **Photo 45** with the supplied 3/8+x 1 1/4+ flat washers and lock nuts from 1253Bag3. Tighten using a 9/16+socket / wrench.
62. Using the torsion bar tool, reinstall the torsion bar keys as they were removed and adjust the bolt as it was stock.
63. Install the tires / wheels.
64. Jack up the vehicle.
65. Remove the jack stands and lower the vehicle to the ground.
66. Tighten the lower control arms using a 21mm socket & wrench and reattach the ABS harness.

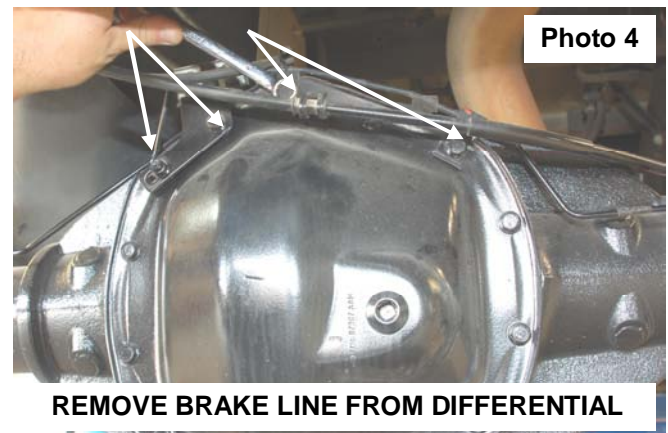
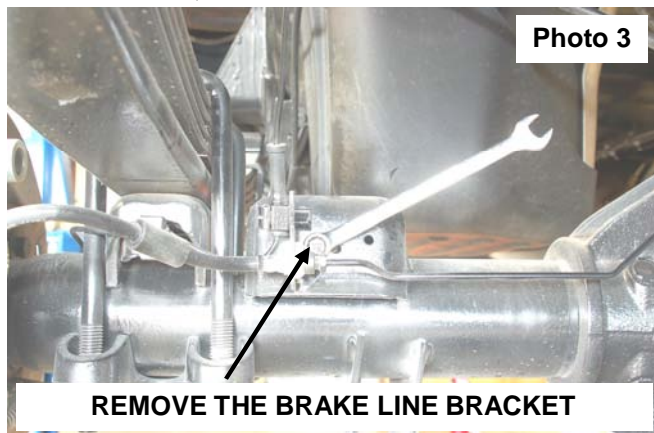


## **REAR INSTALLATION INSTRUCTIONS**

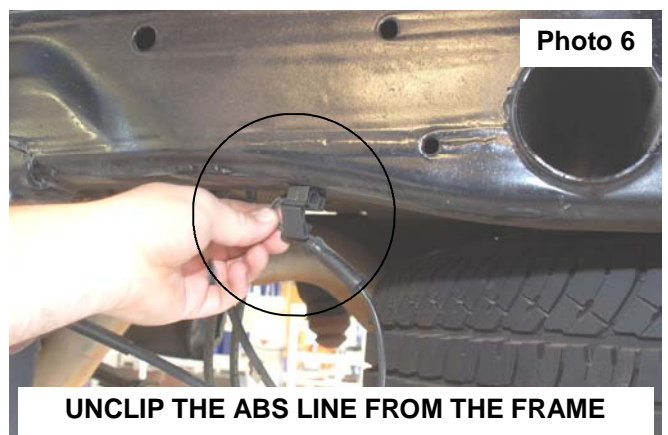
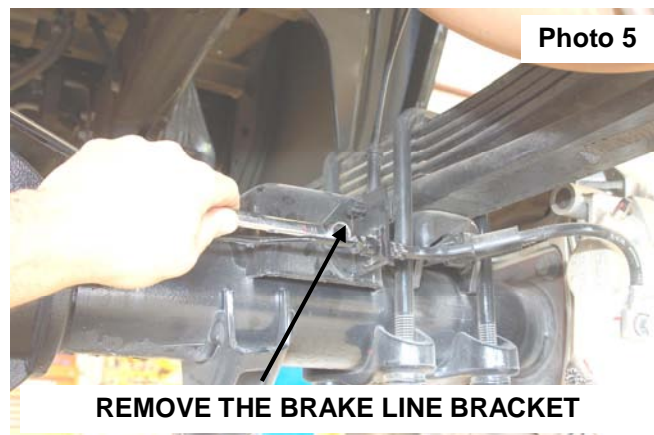
1. Chock the front tires.
2. Position a floor jack under the rear differential and jack up the vehicle.
3. Place jack stands under the frame rails just forward of the front leaf spring hangers and lower the frame on the jack stands.
4. Reposition the floor jack under the center of the differential and apply slight pressure for support, but do not raise the frame off the jack stands.
5. Remove the rear shock with a 21mm wrench on the upper and lower mount **See Photo 1 & 2.**



6. Remove the rear brake line and ABS mounts from the axle as shown using a 13mm socket/ wrench.
7. from the mount using a 13mm socket / wrench. brackets and e brake brackets off the rear end use 13mm wrench.
8. Remove the e-brake brackets from the drivers side, passengers side and center differential using a 13mm wrench. **See Photo 3, 4 & 5.** Retain the stock hardware for reuse.

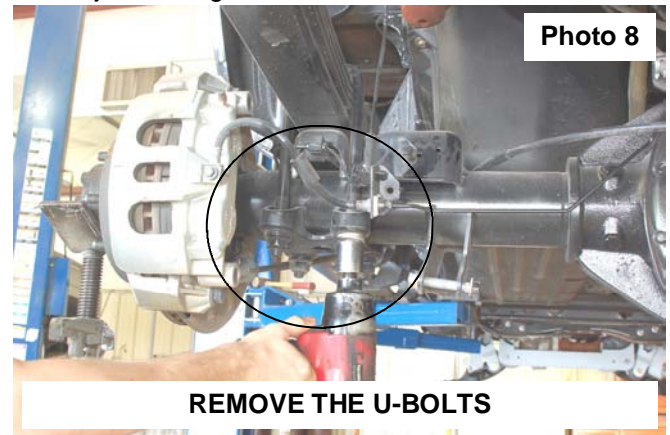
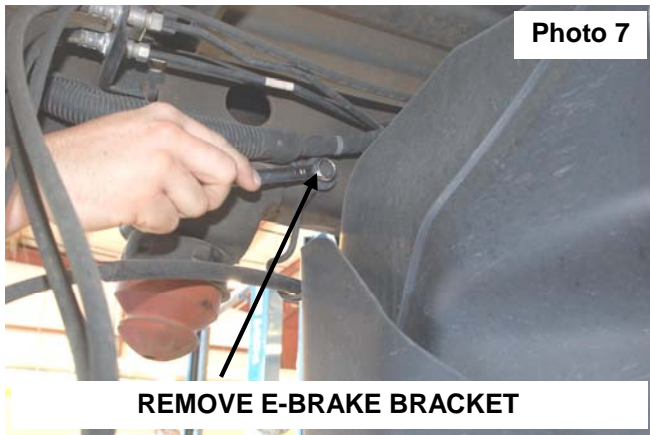


9. Release the line from the frame mount. **See Photo 6.**

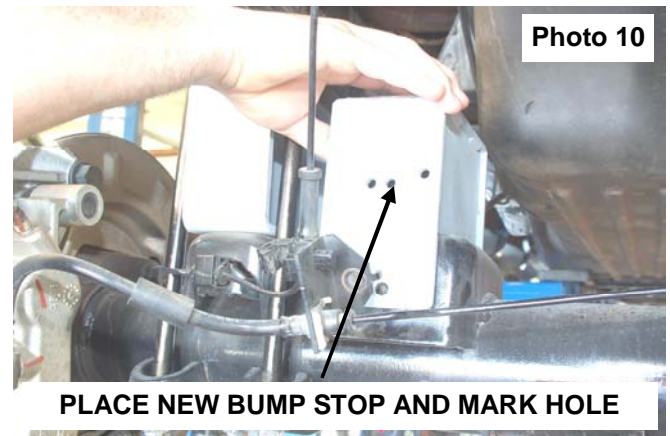
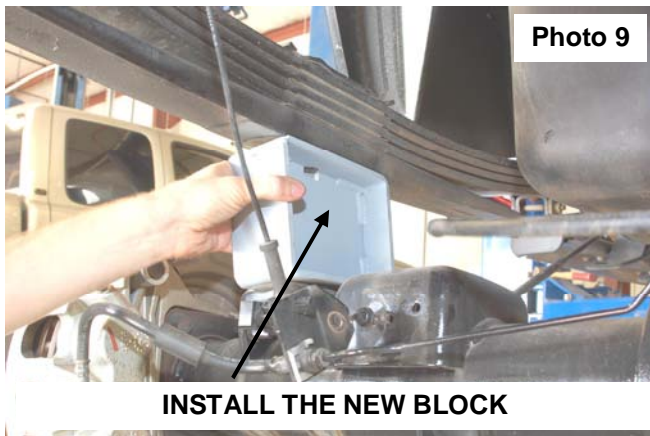




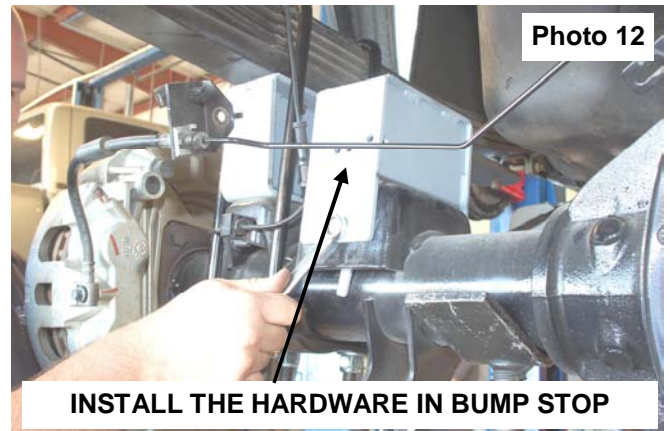
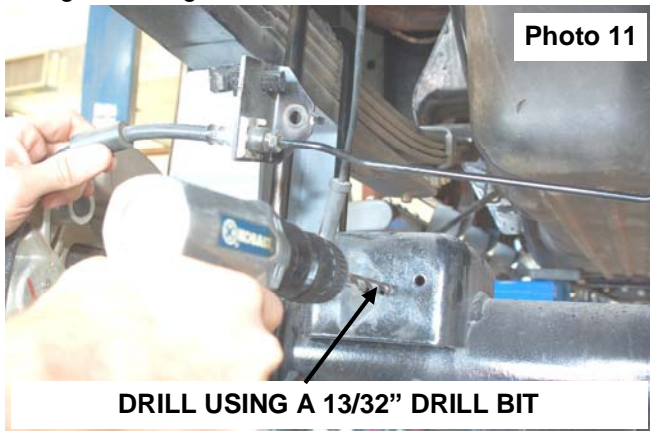
10. Remove the e-brake from the frame. **See Photo 7.** Retain the stock hardware for reuse.
11. Remove U-bolts use 27mm socket and lower the axle with the floor jack enough to install the lift block. **See Photo 8.**



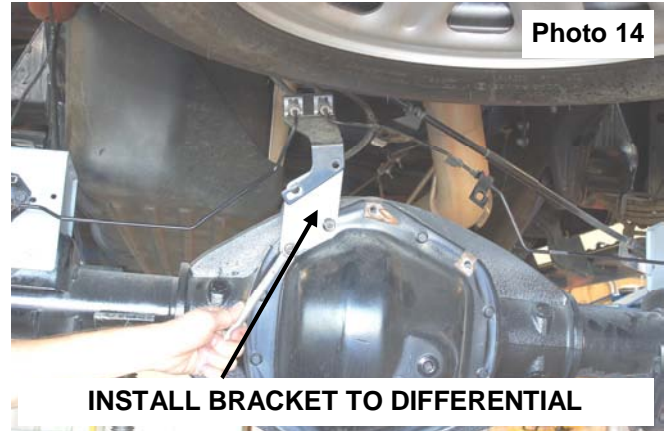
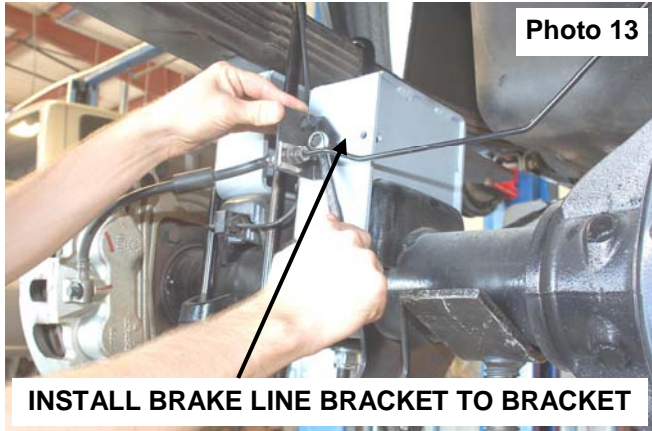
12. Position the lift block on the leaf spring and axle. **See Photo 9**
13. Install the supplied u-bolts and tighten using a 15/16+socket.
14. Install new bump stop on the axle. Center the bump stop on the mount and mark hole to be drilled. **See Photo 10.**



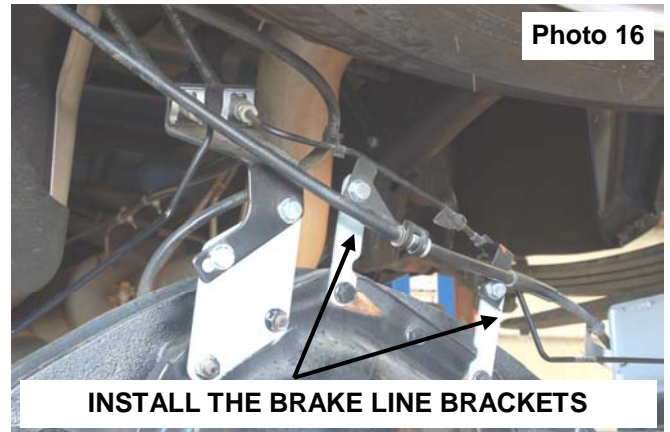
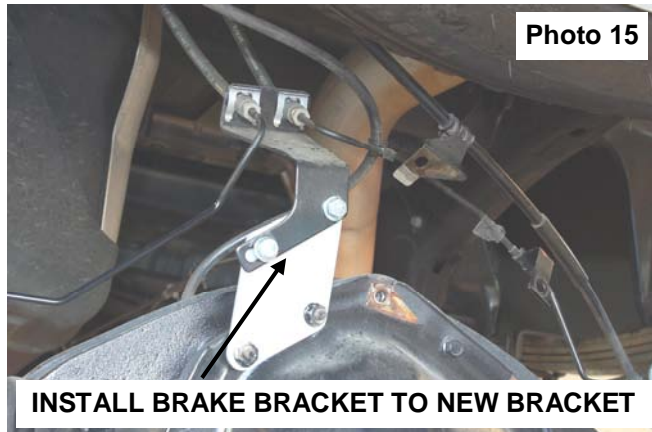
15. Drill using a 13/32+bit. **See Photo 11.**
16. Install the supplied 3/8"x 1 1/4" bolts, flat washers from 1253Bag4 and flag lock nuts from 1253Bag7. **See Photo 12.** Tighten using a 9/16+socket.



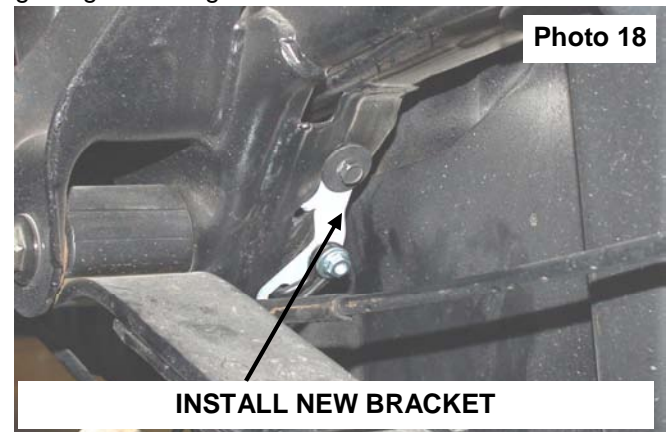
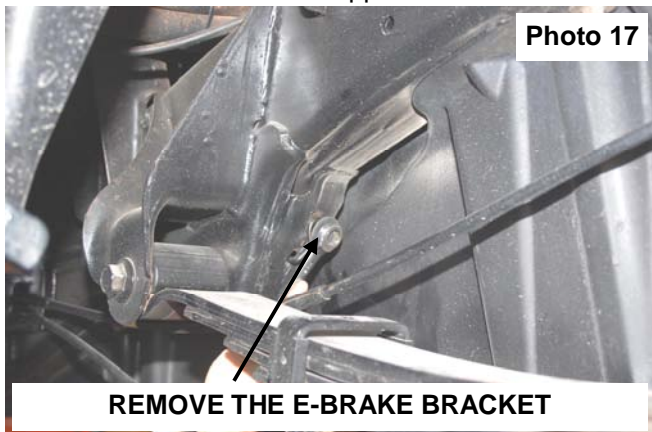
17. Reinstall the brake line on the bump stop bracket with the stock hardware. **See Photo 13.** Tighten using a 13mm socket / wrench.
18. Install the new drop bracket on the differential as shown in **Photo 14** with stock nuts.



19. Reinstall the brake line bracket on the new bracket with the supplied 5/16+x 3/4+bolt, flat washers and lock nuts from 1253Bag4. **See Photo 15.** Tighten using a 1/2+socket / wrench.
20. Install the supplied brackets on the differential with the stock hardware. **See Photo 16.** Tighten using a 13mm socket / wrench. Reinstall the stock brake line brackets on the new brackets using the supplied 5/16+x 3/4+bolts, flat washers and lock nuts from 1253Bag4. Tighten using a 1/2+socket / wrench.



21. Remove the stock e-brake bracket as shown in **Photo 17** using a 13mm socket.
22. Install the e-brake bracket as shown in **Photo 18** with the stock hardware and reinstall the stock e-brake bracket on the new bracket with the supplied 5/16+lock nut from 1253Bag4. Tighten using a 13mm socket.

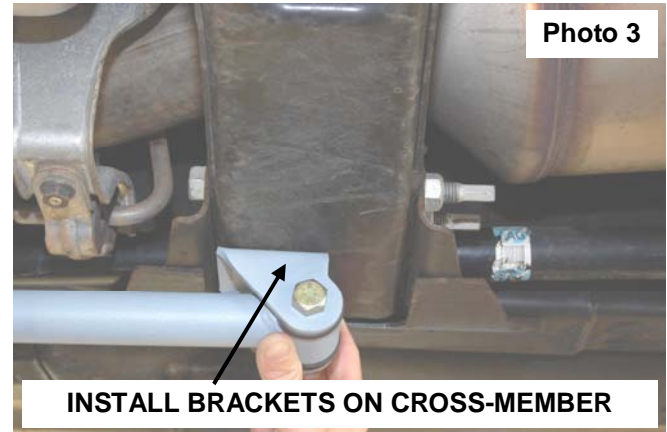
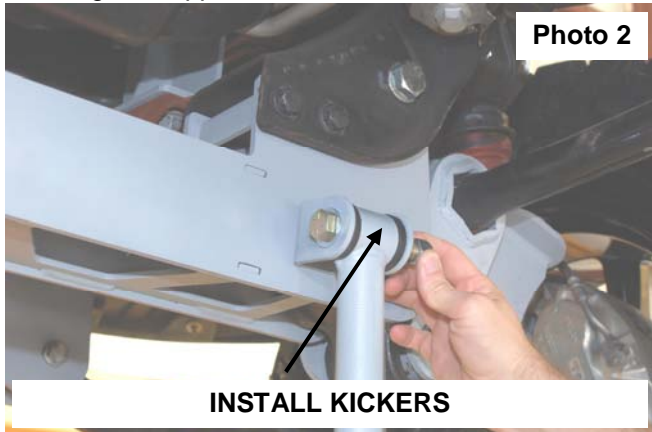
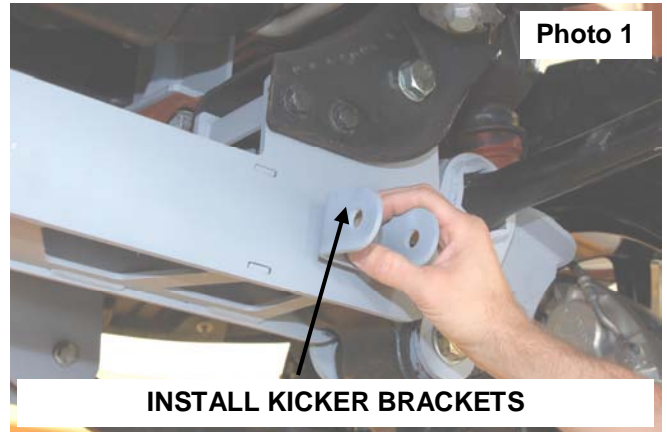


23. Reinstall the ABS wire back onto the frame mount.
24. Install the new shock absorbers in the factory mounts using the factory hardware. Tighten using a 21mm socket / wrench on the upper and lower mount.



## **OPTIONAL KICKER BAR INSTALLATION INSTRUCTIONS**

1. Install kicker bracket bushing and sleeves in the kicker bars.
2. Install the supplied kicker bar brackets on the rear cross-member as shown in **Photo 1** with the supplied 1/2"x 1 1/4" bolts, flat washers and lock nuts. Tighten using a 3/4" socket & wrench.
3. Install the kicker bar in the mount on the cross-member with the supplied 1/2"x 3 1/2" bolts, flat washers and lock nuts. **See Photo 2.** Do not tighten at this time.
4. Swing up the kicker bars and mark the hole to be drilled.
5. Drill the hole in the cross-member using a 1/2" drill bit.
6. Secure the bracket to the cross-member 1/2"x 1" bolts, flat washers and lock nuts.
7. Swing up the kicker bar and secure to the cross-member using the supplied 1/2"x 3 1/2" bolts, flat washers and lock nuts. **See Photo 3.**



## **Sway Bar Relocation**

1. Remove the four factory bolts holding the front skid plate using a 15mm socket. Retain factory hardware.
2. Remove the sway bar from frame with a 10mm socket, insert the 3/8"x 1.25" bolts into the back of the sway bar bracket. Install the bracket to the frame using the factory bolts and tighten with a 10mm socket. Use the supplied 3/8" washers, lock washers, and nuts to hold the sway bar to the bracket. **See Photo 1.** Tighten with a 9/16 socket.
3. Hold the skid plate up in position and mark the area that will need to be trimmed. Use a body saw or die grinder to cut the skid plate. **See Photo 2.**



4. After this area is cut bolt the skid plate back in factory location use the four factory bolts. Tighten with a 15mm socket.

## **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. 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.
3. Activate four wheel drive system and check front hubs for engagement.
4. Have a qualified alignment center align the vehicle immediately. Realign to factory specifications. Have headlights adjusted to proper settings.
6. Perform head light check and adjustment to proper settings.
7. Check and retighten wheels at 50 miles and again at 500 miles.
8. Recheck lifted height and adjust torsion bar as necessary.
9. All kit components must be retightened at 500 miles and then every three thousand miles after installation. Periodically check all hardware for tightness.
10. Install ~~W~~arning to Driver+decal on sun visor.
11. Bleed the brake system and test braking before driving on road.

Note: Installation of larger tires will require speedometer recalibration.

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

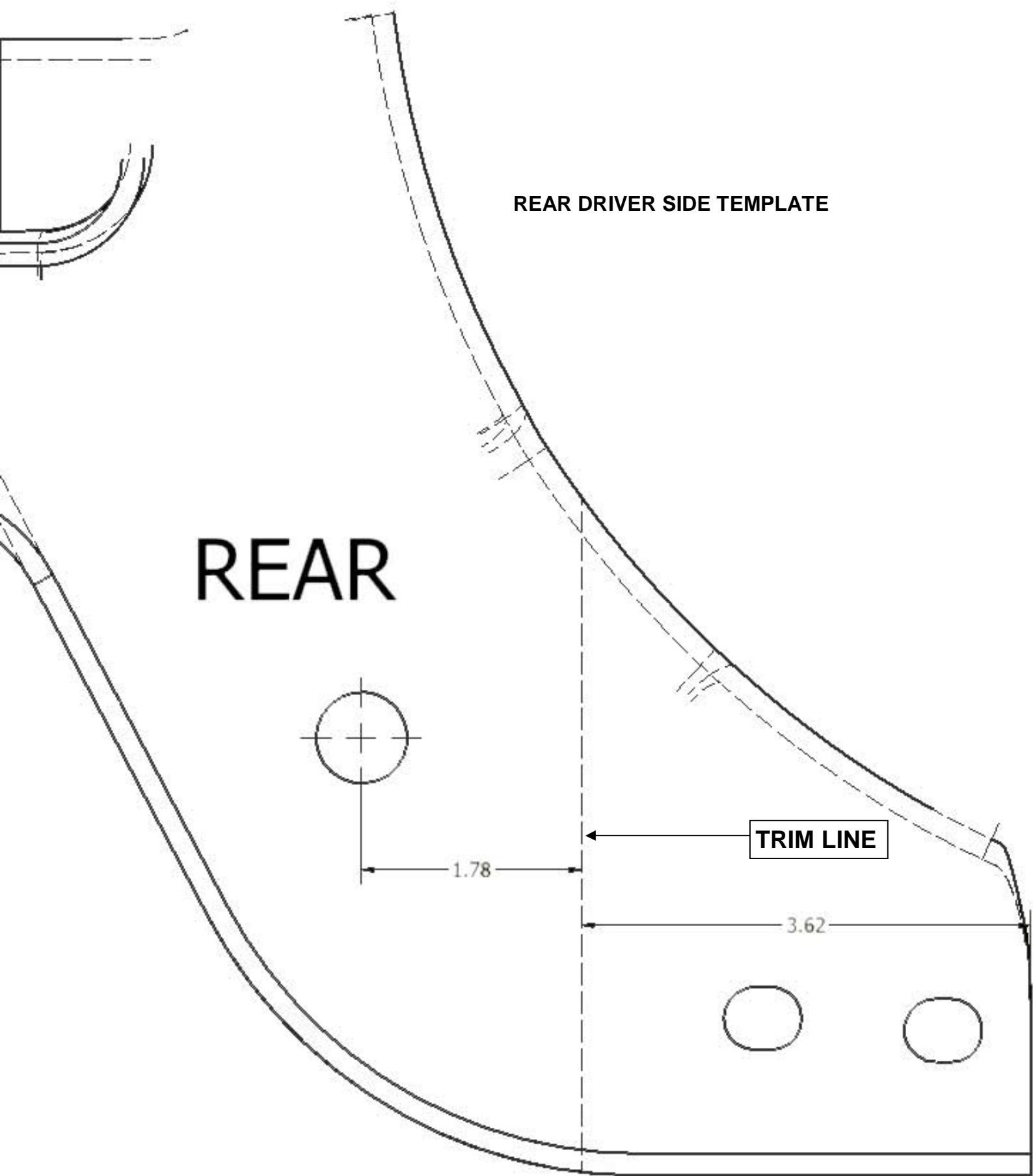
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REAR DRIVER SIDE TEMPLATE

REAR

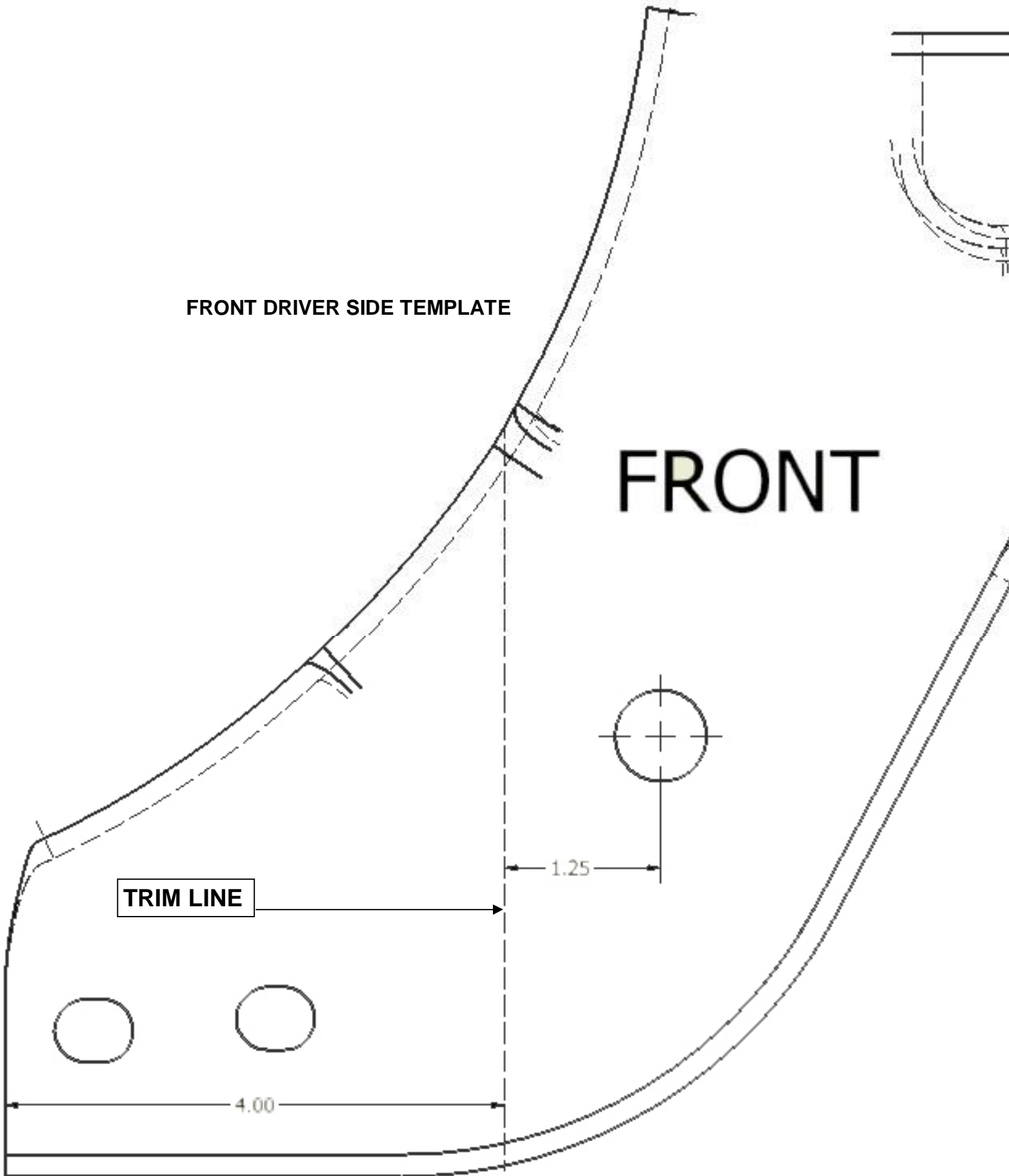






FRONT DRIVER SIDE TEMPLATE

FRONT



TRIM LINE

1.25

4.00

