TRAIL FORTRESS

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Rough Country 28101 Installation Instructions

5-Inch Lift Kit for Chevy Tahoe, Suburban & GMC Yukon (2007-2014)

Part number: 28101

trailfortress.com/rough-country-5-inch-lift-kit-28101

Scan for fitment, price and install help

921209000

ROUGH COUNTRY SUSPENSION SYSTEMS®

07-13 1500 Tahoe/Suburban/Yukon/Yukon XL & Avalanche Kit

Thank you for choosing Rough Country for your suspension needs. We appreciate your business!!

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. Be sure you have all needed parts and know where they go.

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. We will be happy to answer any questions concerning the design, function, and correct use of our products.

⚠NOTICE **This kit will not fit vehicles equipped with factory auto leveling or auto ride systems.**

This kit is packaged as a leveling kit—raising the front 5” and the rear 3”. 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 an add-a-leaf option.

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 18” or larger wheel not to exceed 9” in width. When using a 18” wheel backspacing should be maximum of 5.5” and a minimum 5.0” . With a 20” or larger wheel backspacing should be a maximum of 6.0” and a min of 5.5”. Additionally a quality tire of radial design is recommended, not exceeding 33” tall and 12.5” wide for 5” of lift and 35” tall and 12.5” wide for 7-7.5” of lift. Please note that modification to the front valance may be required.

⚠NOTICE **For alignment purposes, it may be necessary to trim/shorten the tie rod end to allow the front end alignment to be set properly. Please alert your alignment specialist of this possibility.**

Optional kicker Bars Part #1262 are available for this kit. Please contact you local Rough Country Dealer for information.

⚠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.

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.

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 Boxes

5” Tahoe/Yukon/Suburban/Yukon XL

28100 (5” Kit w/ N3 Rr Shocks):
281BOX2
1264BOX3
229BOX2
262BOX2
9427

28101 (5” Kit w/ N3 Struts & N3 Rr Shocks):
281BOX2
1264BOX3
229BOX2
501031x 2
9427

7.5” Tahoe/Yukon

28600 (7.5” Kit w/ N3 Rr Shocks):
286BOX1
1264BOX3
229BOX2
174BOX3
9231

28601 (7.5” Kit w/ N3 Struts & N3 Rr Shocks):
286BOX1
1264BOX3
229BOX2
501032 x 2
9231

28650 (7.5” Kit w/ Fr Vertex Shocks):
286BOX1
1264BOX3
229BOX2
680001B x 2
9231

7.5” Avalanche

20900 (7.5” Kit w/ N3 Rr Shocks):
281BOX1
1264BOX3
229BOX2
174BOX3
9228

20901 (7.5” Kit w/ N3 Struts & N3 Rr Shocks):
281BOX1
1264BOX3
229BOX2
501032 x 2
9228

20950 (7.5” Kit w/ Fr Vertex Shocks):
281BOX1
1264BOX3
229BOX2
680001 x 2
9228

7” Suburban/Yukon XL

28700A (7.5” Kit w/ N3 Rr Shocks):
286BOX1
1264BOX3
229BOX2
178BOX9
9231

28701 (7.5” Kit w/ N3 Struts & N3 Rr Shocks):
286BOX1
1264BOX3
229BOX2
501032 x 2
9231

28750 (7.5” Kit w/ Fr Vertex Shocks):
286BOX1
1264BOX3
229BOX2
680001B x 2
9231

Tools Needed:
Floor Jack /Jack Stands
8mm Allen Socket
10mm socket / wrench
11mm socket / wrench
13 mm socket/ wrench
15mm socket / wrench
17mm socket/ wrench
18mm socket / wrench
21mm socket / wrench
22mm socket / wrench
24mm socket / wrench
19mm socket / wrench
35mm socket
7/16” socket / wrench
9/16 socket / wrench
Reciprocating Saw
Drill
11/16” Drill Bit
Hand Grinder
Loctite

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

28100 & 28101 Kit Box & Bag Contents

Box Kit

281BOX2
- 84130GM Guide/Decal Bag
- 126450 Sub Assembly Box
- 1272BAG3
- Sway Bar Drop Brackets-2
- Front Brake Brackets-2
- 1264BAG1
- CV Spacers-2
- Rear Brake Bracket
- Rear Track Bar Bracket
- Rear Bump Stop Brackets-2
- Pass Diff Bracket
- Dr Diff Bracket
- Skid Plate
- Dr Rear Shock Ext
- Pass Rear Shock Ext
- Rear Sway Links-2

229BOX2
- Front Crossmember-1
- Rear Crossmember-1

262BOX2
- Upper Strut Spacers-2
- 10MMSTUDBAG-2

1264BOX3
- Driver Knuckle-1
- Passenger Knuckle-1

9427-Rear Coil Springs

501031-Front Strut

Kit Bags

84130GM
- Instruction Sheet-1
- Decal Sheet-1
- Service Reminder-1
- Warning to Driver Sticker-1
- GM Accessory Insert

1264BAG2-*Front Kit Bag*

Driver Side Diff. Drop Bracket
- 12mm x 35mm Bolt (2)
- 12mm Flange Nut (2)
- 12mm Washer (2)

Pas Side Differential Brkt
- 12mm x 45mm Bolt (2)
- 12mm Flange Nut (2)
- 12mm Washer (2)

For Skid Plate:
- 3/8” x 1” Bolt (4)
- 3/8” Lock Washer (4)
- 3/8” Flat Washer (4)

For Front Brake Line Brackets:
- 5/16” x 3/4” (4)
- 5/16” Flat Washers (8)
- 5/16” Nylock Nuts (4)

1272BAG3-*CV Spacer Bag*
- 10mm x 65mm Bolts (12)

1280BAG1-*Rear Bag*

For Rear Track Bracket:
- Sleeve .562 x .750 x 1.75
- 9/16” x 3 1/2” Bolt (1)
- 9/16” Lock Nut (1)
- 9/16” Washer (2)
- 7/16” x 1” Bolt (2)
- 7/16” Nylock (2)
- 7/16” Washers (4)

For Rear Shock Brackets:
- 9/16” x 3 1/2” Bolts (2)
- 9/16” Lock Nuts (2)
- 9/16” Washers (2)
- 1/2” x 1.25” Bolts (2)
- 1/2” Top Lock Nuts (2)
- 1/2” Flat Washers (4)

For Rear Brake Line Bracket:
- 5/16” x 1.25” Bolt (1)
- 5/16” Flange Lock Nut (1)
- 5/16” Flat Washer (1)

For Rear Bump Stops:
- 3/8” x 1” Self Tapping Bolts (4)

For Rear Sway Links:
- 1/2” x 2 1/2” Bolts (2)
- 1/2” Top Lock Nuts (2)
- 1/2” Flat Washers (4)

Kit Bags

1264BAG1-*Crossmember Bag*

Front Cross Member
- 5/8” X 4 1/2” Bolt (2)
- 5/8” Nuts (2)
- 5/8” Flat Washers (4)

Rear Cross Member
- 5/8” x 5 1/2”Bolt (2)
- 5/8” Lock Nuts (2)
- 5/8” Flat Washers (4)

Sway Bar Brackets
- 10mm x 35mm Bolts (4)
- 10mm Flat Washers (8)
- 10mm Lock Washers (4)
- 10mm Nylock Nuts (4)

Lower Strut to Control Arm
- 10mm x 55mm Bolts (4)
- 10mm Nylock Nuts (4)
- 10mm Flat Washers (8)

10MMSTUDBAG-2-*Upper Strut Spacer Bag*
- 10mm Stud-6
- 10mm Flange Lock Nut-6
- 10mm Nut-1
- 1/2” Jam Nut-1

20900, 20901, & 20950 Kit Box & Bag Contents

Box Kit

281BOX1
- 209INSTBAG
- 1264BAG2
- 1272BAG3
- Sway Bar Drop Brackets-2
- Front Brake Brackets-2
- 1264BAG1
- 1280BAG1
- CV Spacers-2
- Rear Brake Bracket
- Rear Track Bar Bracket
- Rear Bump Stop Brackets-2
- Pass Diff Bracket
- Dr Diff Bracket
- Skid Plate
- Dr Rear Shock Ext
- Pass Rear Shock Ext
- Rear Sway Links-2

229BOX2
- Front Crossmember-1
- Rear Crossmember-1

174BOX3
- Upper Strut Spacers-2
- 10MMSTUDBAG-2

1264BOX3
- Driver Knuckle-1
- Passenger Knuckle-1

9228-Rear Coil Springs

649032-Front Strut

680001-Front Vertex Coilover

Kit Bags

209INSTBAG
- Instruction Sheet-1
- Warning to Driver Sticker-1

1264BAG2-*Front Kit Bag*

Driver Side Diff. Drop Bracket
- 12mm x 35mm Bolt (2)
- 12mm Flange Nut (2)
- 12mm Washer (2)

Pas Side Differential Brkt
- 12mm x 45mm Bolt (2)
- 12mm Flange Nut (2)
- 12mm Washer (2)

For Skid Plate:
- 3/8” x 1” Bolt (4)
- 3/8” Lock Washer (4)
- 3/8” Flat Washer (4)

For Front Brake Line Brackets:
- 5/16” x 3/4” (4)
- 5/16” Flat Washers (8)
- 5/16” Nylock Nuts (4)

1272BAG3-*CV Spacer Bag*
- 10mm x 65mm Bolts (12)

1280BAG1-*Rear Bag*

For Rear Track Bracket:
- Sleeve .562 x .750 x 1.75
- 9/16” x 3 1/2” Bolt (1)
- 9/16” Lock Nut (1)
- 9/16” Washer (2)
- 7/16” x 1” Bolt (2)
- 7/16” Nylock (2)
- 7/16” Washers (4)

For Rear Shock Brackets:
- 9/16” x 3 1/2” Bolts (2)
- 9/16” Lock Nuts (2)
- 9/16” Washers (2)
- 1/2” x 1.25” Bolts (2)
- 1/2” Top Lock Nuts (2)
- 1/2” Flat Washers (4)

For Rear Brake Line Bracket:
- 5/16” x 1.25” Bolt (1)
- 5/16” Flange Lock Nut (1)
- 5/16” Flat Washer (1)

For Rear Bump Stops:
- 3/8” x 1” Self Tapping Bolts (4)

For Rear Sway Links:
- 1/2” x 2 1/2” Bolts (2)
- 1/2” Top Lock Nuts (2)
- 1/2” Flat Washers (4)

Kit Bags

1264BAG1-*Crossmember Bag*

Front Cross Member
- 5/8” X 4 1/2” Bolt (2)
- 5/8” Nuts (2)
- 5/8” Flat Washers (4)

Rear Cross Member
- 5/8” x 5 1/2”Bolt (2)
- 5/8” Lock Nuts (2)
- 5/8” Flat Washers (4)

Sway Bar Brackets
- 10mm x 35mm Bolts (4)
- 10mm Flat Washers (8)
- 10mm Lock Washers (4)
- 10mm Nylock Nuts (4)

Lower Strut to Control Arm
- 10mm x 55mm Bolts (4)
- 10mm Nylock Nuts (4)
- 10mm Flat Washers (8)

10MMSTUDBAG-2-*Upper Strut Spacer Bag*
- 10mm Stud-6
- 10mm Flange Lock Nut-6
- 10mm Nut-1
- 1/2” Jam Nut-1

28600, 28601, & 28650 Kit Box & Bag Contents

Box Kit

286BOX1
- 209INSTBAG
- 1264BAG2
- 1272BAG3
- Sway Bar Drop Brackets-2
- Front Brake Brackets-2
- 1264BAG1
- 1280BAG1
- CV Spacers-2
- Rear Brake Bracket
- Rear Track Bar Bracket
- Rear Bump Stop Brackets-2
- Pass Diff Bracket
- Dr Diff Bracket
- Skid Plate
- Dr Rear Shock Ext
- Pass Rear Shock Ext
- Rear Sway Links-2
- 1287BAG1
- Dr Rr Control Arm Drop Brkt
- Pass Rr Control Arm Drop Brkt
- Rr Control Arm Drop Flag Nuts-2

229BOX2
- Front Crossmember-1
- Rear Crossmember-1

174BOX3
- Upper Strut Spacers-2
- 10MMSTUDBAG-2

1264BOX3
- Driver Knuckle-1
- Passenger Knuckle-1

9231-Rear Coil Springs

649032-Front Strut

680001-Front Vertex Coilover

Kit Bags

209INSTBAG
- Instruction Sheet-1
- Warning to Driver Sticker-1

1264BAG2-*Front Kit Bag*

Driver Side Diff. Drop Bracket
- 12mm x 35mm Bolt (2)
- 12mm Flange Nut (2)
- 12mm Washer (2)

Pas Side Differential Brkt
- 12mm x 45mm Bolt (2)
- 12mm Flange Nut (2)
- 12mm Washer (2)

For Skid Plate:
- 3/8” x 1” Bolt (4)
- 3/8” Lock Washer (4)
- 3/8” Flat Washer (4)

For Front Brake Line Brackets:
- 5/16” x 3/4” (4)
- 5/16” Flat Washers (8)
- 5/16” Nylock Nuts (4)

1272BAG3-*CV Spacer Bag*
- 10mm x 65mm Bolts (12)

1280BAG1-*Rear Bag*

For Rear Track Bracket:
- Sleeve .562 x .750 x 1.75
- 9/16” x 3 1/2” Bolt (1)
- 9/16” Lock Nut (1)
- 9/16” Washer (2)
- 7/16” x 1” Bolt (2)
- 7/16” Nylock (2)
- 7/16” Washers (4)

For Rear Shock Brackets:
- 9/16” x 3 1/2” Bolts (2)
- 9/16” Lock Nuts (2)
- 9/16” Washers (2)
- 1/2” x 1.25” Bolts (2)
- 1/2” Top Lock Nuts (2)
- 1/2” Flat Washers (4)

For Rear Brake Line Bracket:
- 5/16” x 1.25” Bolt (1)
- 5/16” Flange Lock Nut (1)
- 5/16” Flat Washer (1)

For Rear Bump Stops:
- 3/8” x 1” Self Tapping Bolts (4)

For Rear Sway Links:
- 1/2” x 2 1/2” Bolts (2)
- 1/2” Top Lock Nuts (2)
- 1/2” Flat Washers (4)

Kit Bags

1264BAG1-*Crossmember Bag*

Front Cross Member
- 5/8” X 4 1/2” Bolt (2)
- 5/8” Nuts (2)
- 5/8” Flat Washers (4)

Rear Cross Member
- 5/8” x 5 1/2”Bolt (2)
- 5/8” Lock Nuts (2)
- 5/8” Flat Washers (4)

Sway Bar Brackets
- 10mm x 35mm Bolts (4)
- 10mm Flat Washers (8)
- 10mm Lock Washers (4)
- 10mm Nylock Nuts (4)

Lower Strut to Control Arm
- 10mm x 55mm Bolts (4)
- 10mm Nylock Nuts (4)
- 10mm Flat Washers (8)

10MMSTUDBAG-2-*Upper Strut Spacer Bag*
- 10mm Stud-6
- 10mm Flange Lock Nut-6
- 10mm Nut-1
- 1/2” Jam Nut-1

1287BAG1-*Rr Control Arm Drop Bag*
- Sleeves (2)
- 9/16” x 4.5” Bolts (2)
- 9/16” x 4” Bolts (2)
- Lock Washers (2)
- 9/16” Nylock Nuts (4)
- Flat Washers (9)

28700A, 28701, & 28750 Kit Box & Bag Contents

Box Kit

286BOX1
- 209INSTBAG
- 1264BAG2
- 1272BAG3
- Sway Bar Drop Brackets-2
- Front Brake Brackets-2
- 1264BAG1
- 1280BAG1
- CV Spacers-2
- Rear Brake Bracket
- Rear Track Bar Bracket
- Rear Bump Stop Brackets-2
- Pass Diff Bracket
- Dr Diff Bracket
- Skid Plate
- Dr Rear Shock Ext
- Pass Rear Shock Ext
- Rear Sway Links-2
- 1287BAG1
- Dr Rr Control Arm Drop Brkt
- Pass Rr Control Arm Drop Brkt
- Rr Control Arm Drop Flag Nuts-2

229BOX2
- Front Crossmember-1
- Rear Crossmember-1

178BOX9
- Upper Strut Spacers-2
- 10MMSTUDBAG-2

1264BOX3
- Driver Knuckle-1
- Passenger Knuckle-1

9231-Rear Coil Springs

649032-Front Strut

680001-Front Vertex Coilover

Kit Bags

209INSTBAG
- Instruction Sheet-1
- Warning to Driver Sticker-1

1264BAG2-*Front Kit Bag*

Driver Side Diff. Drop Bracket
- 12mm x 35mm Bolt (2)
- 12mm Flange Nut (2)
- 12mm Washer (2)

Pas Side Differential Brkt
- 12mm x 45mm Bolt (2)
- 12mm Flange Nut (2)
- 12mm Washer (2)

For Skid Plate:
- 3/8” x 1” Bolt (4)
- 3/8” Lock Washer (4)
- 3/8” Flat Washer (4)

For Front Brake Line Brackets:
- 5/16” x 3/4” (4)
- 5/16” Flat Washers (8)
- 5/16” Nylock Nuts (4)

1272BAG3-*CV Spacer Bag*
- 10mm x 65mm Bolts (12)

1280BAG1-*Rear Bag*

For Rear Track Bracket:
- Sleeve .562 x .750 x 1.75
- 9/16” x 3 1/2” Bolt (1)
- 9/16” Lock Nut (1)
- 9/16” Washer (2)
- 7/16” x 1” Bolt (2)
- 7/16” Nylock (2)
- 7/16” Washers (4)

For Rear Shock Brackets:
- 9/16” x 3 1/2” Bolts (2)
- 9/16” Lock Nuts (2)
- 9/16” Washers (2)
- 1/2” x 1.25” Bolts (2)
- 1/2” Top Lock Nuts (2)
- 1/2” Flat Washers (4)

For Rear Brake Line Bracket:
- 5/16” x 1.25” Bolt (1)
- 5/16” Flange Lock Nut (1)
- 5/16” Flat Washer (1)

For Rear Bump Stops:
- 3/8” x 1” Self Tapping Bolts (4)

For Rear Sway Links:
- 1/2” x 2 1/2” Bolts (2)
- 1/2” Top Lock Nuts (2)
- 1/2” Flat Washers (4)

Kit Bags

1264BAG1-*Crossmember Bag*

Front Cross Member
- 5/8” X 4 1/2” Bolt (2)
- 5/8” Nuts (2)
- 5/8” Flat Washers (4)

Rear Cross Member
- 5/8” x 5 1/2”Bolt (2)
- 5/8” Lock Nuts (2)
- 5/8” Flat Washers (4)

Sway Bar Brackets
- 10mm x 35mm Bolts (4)
- 10mm Flat Washers (8)
- 10mm Lock Washers (4)
- 10mm Nylock Nuts (4)

Lower Strut to Control Arm
- 10mm x 55mm Bolts (4)
- 10mm Nylock Nuts (4)
- 10mm Flat Washers (8)

10MMSTUDBAG-2-*Upper Strut Spacer Bag*
- 10mm Stud-6
- 10mm Flange Lock Nut-6
- 10mm Nut-1
- 1/2” Jam Nut-1

1287BAG1-*Rr Control Arm Drop Bag*
- Sleeves (2)
- 9/16” x 4.5” Bolts (2)
- 9/16” x 4” Bolts (2)
- Lock Washers (2)
- 9/16” Nylock Nuts (4)
- Flat Washers (9)

28100 Kit Pic

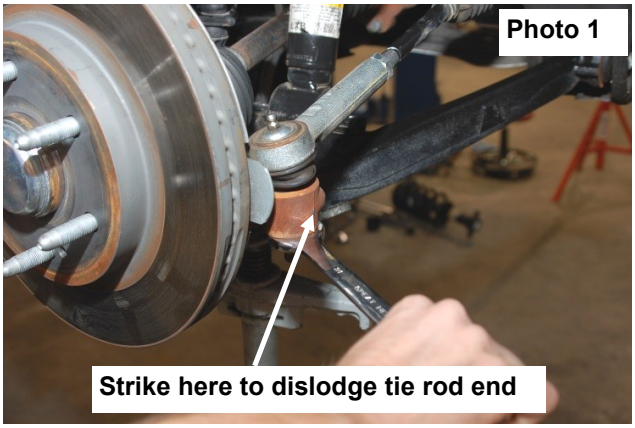


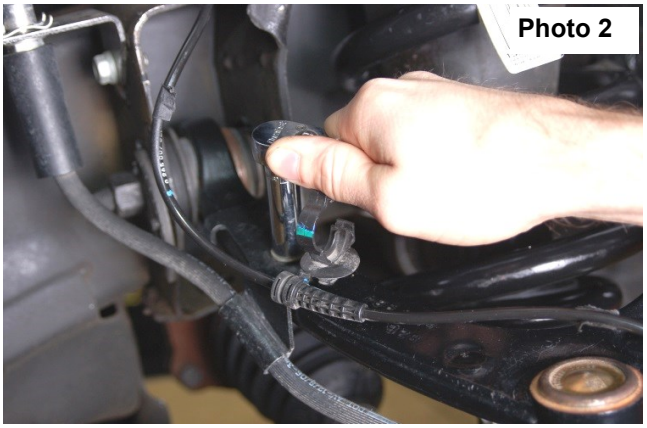
28600 & 28700 Kit Pic



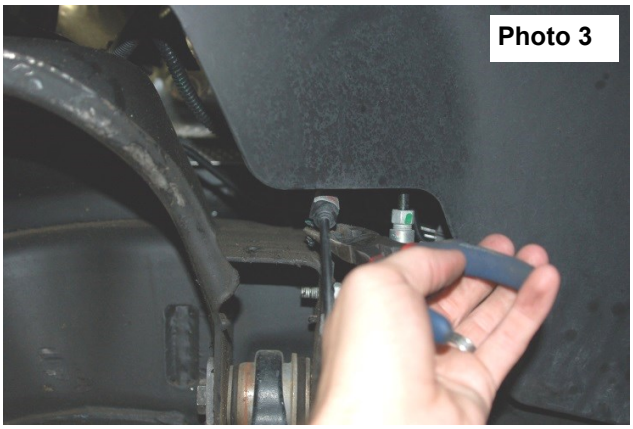
FRONT INSTALLATION

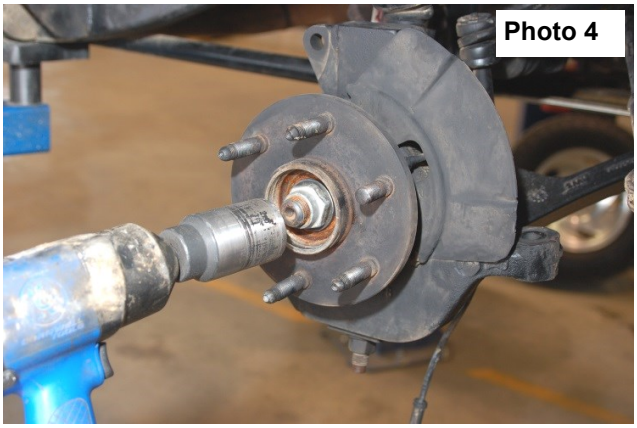
1. Park the vehicle on a level surface and chock the rear wheels.
2. Jack up the front of the vehicle. Place jack stands under the frame rails and lower onto jack stands letting the front suspension hang.
3. Remove the tires and wheels. Remove the upper and lower factory skid plates using a 15mm wrench. Retain factory hardware and front skid plate for reuse.
4. Using a 21mm wrench, remove the tie-rod nut as shown in **Photo 1**. Strike the side of the mount to dislodge the tie rod end. Remove from the knuckle.
5. Remove the sensor wire from the plastic clip. Remove the bracket from the control arm using a 10mm wrench. **See Photo 2.**



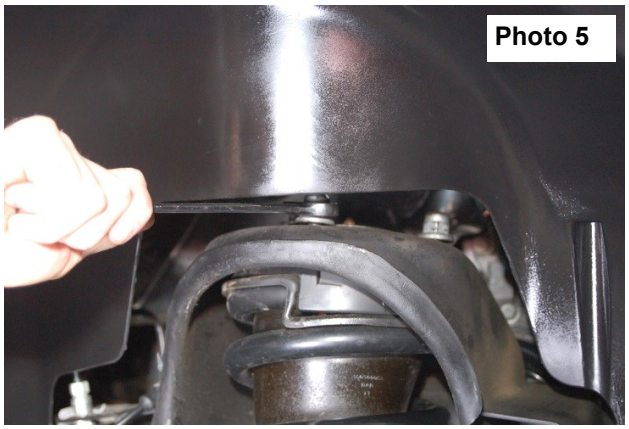


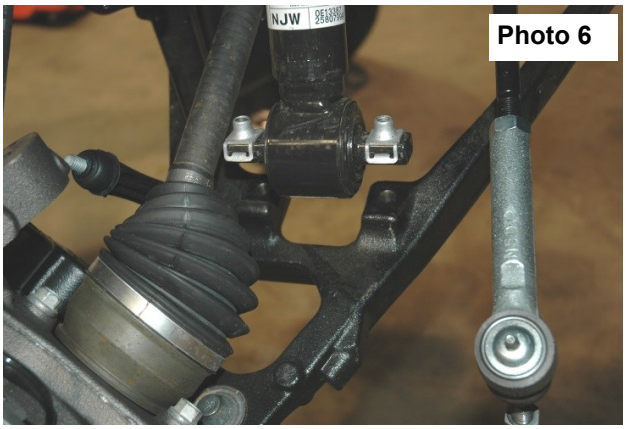
6. Remove and unplug the ABS sensor wire from the frame as shown in **Photo 3** and remove the two bolts holding brake caliper to the factory knuckle using a 18mm wrench. Remove the caliper assembly from the knuckle and hang securely out of the way. Do not hang the caliper by the brake hose.



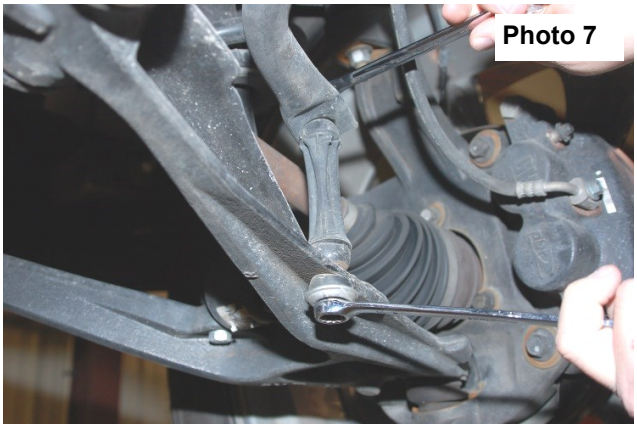


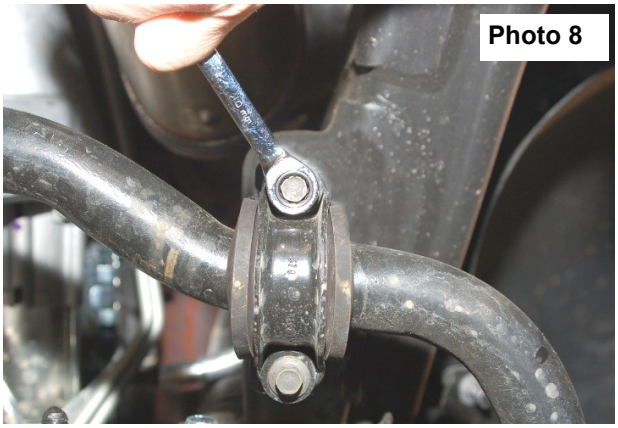
7. Remove the axle nut from the knuckle as shown in **Photo 4** using a 35mm socket. Retain the hardware for reuse.
8. Using a 18mm wrench, remove the upper strut nuts as shown in **Photo 5**. Retain factory hardware for reuse.



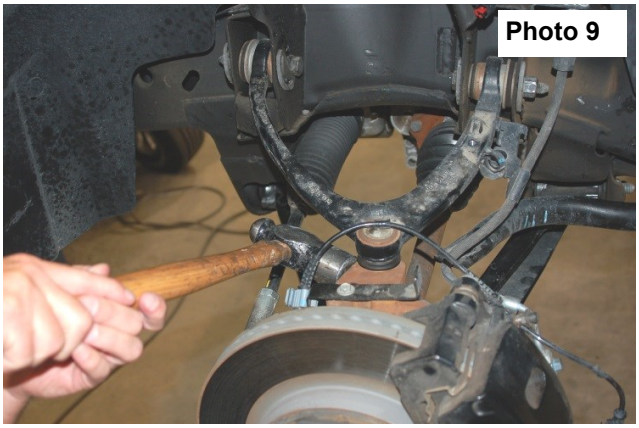


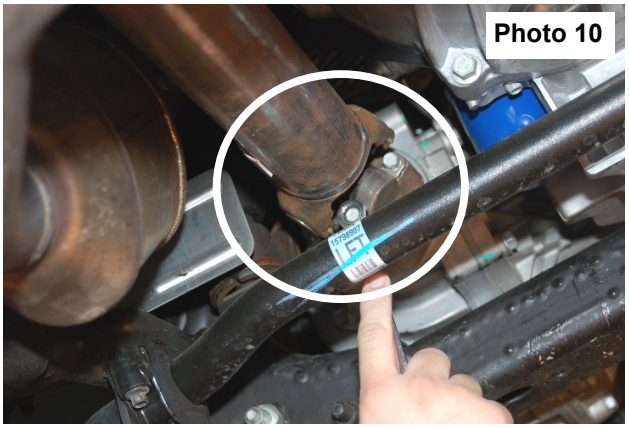
10. Remove the sway bar & end links from the lower control arm as shown in **Photo 7** using a 15mm wrench.
11. Remove the sway bar from the frame as shown in **Photo 8** using a 10mm wrench. Retain all hardware for reuse.



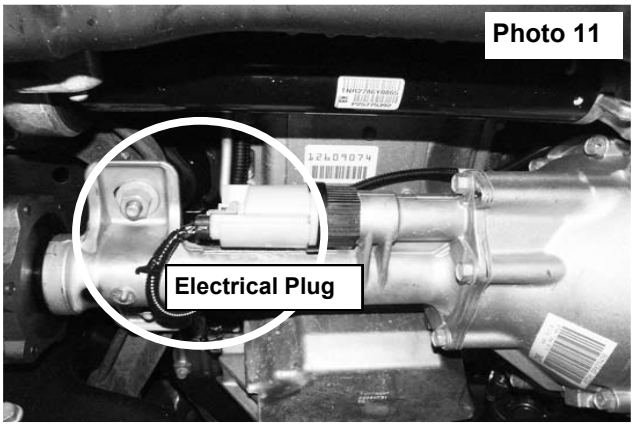


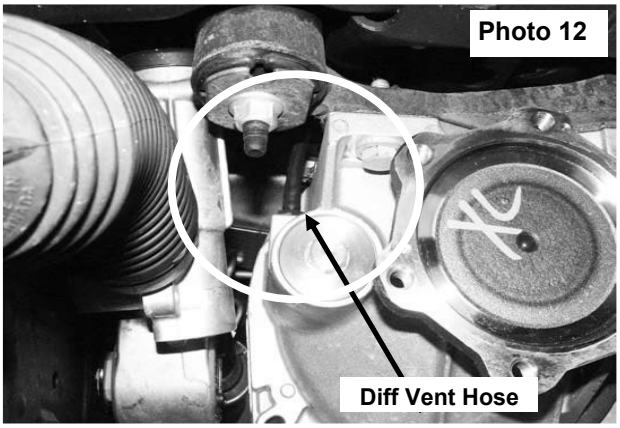
12. Using a 15mm wrench, remove the 6 axle shaft bolts from the differential and remove from the knuckle. Repeat on opposite side.
13. Remove the upper and lower ball joint from knuckle using a 18mm wrench and 24mm on the lower. Upper shown in **Photo 9**. Strike the knuckle as shown to dislodge the ball joint. Separate the upper control and lower control arm from the knuckle and remove the knuckle and the lower control arms from the vehicle.
14. Make an alignment mark to show relationship between driveshaft and differential input flange. Using a 11mm wrench, remove the four drive shaft bolts. **See Photo 10.** Retain hardware for reuse.
15. Place a floor jack under the differential assembly to provide support for following steps.





16. Unplug the electrical connector on differential as shown in **Photo 11.**
17. Unplug the differential vent hose shown in **Photo 12.**





18. Remove the four rear cross member bolts and remove the rear cross member brace as shown in **Photo 13** using a 18mm wrench.
19. Using a 18mm socket remove the 4 differential bolts (2 each side) securing the differential to the frame. **See Photo 14.** Retain the hardware for reuse.


Photo 13

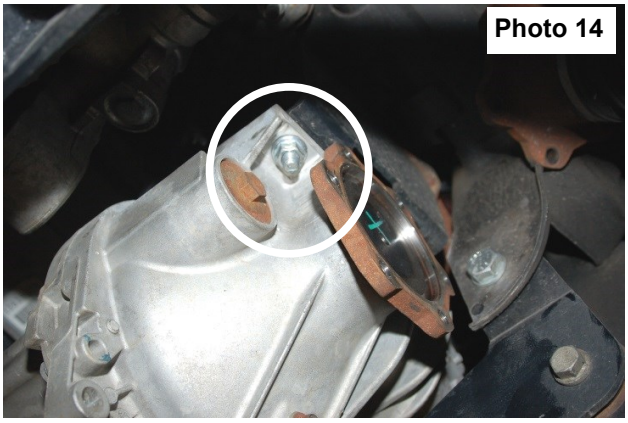


Photo 14

20. Slowly lower differential assembly to the ground.
21. Trim the lower control arm mount on the frame as shown in **Photo 15**. Trim only enough to allow for installation of new front RCX cross member.
22. Install the front cross member as shown in **Photo 16** with the supplied 5/8" x 4 1/2" bolts, nuts /washers. Do not tighten at this time.

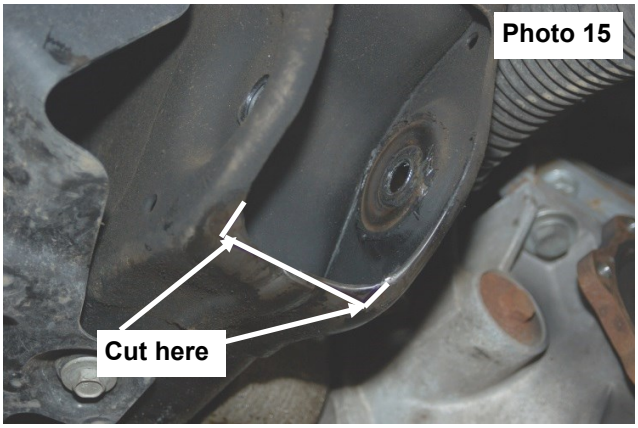


Photo 15

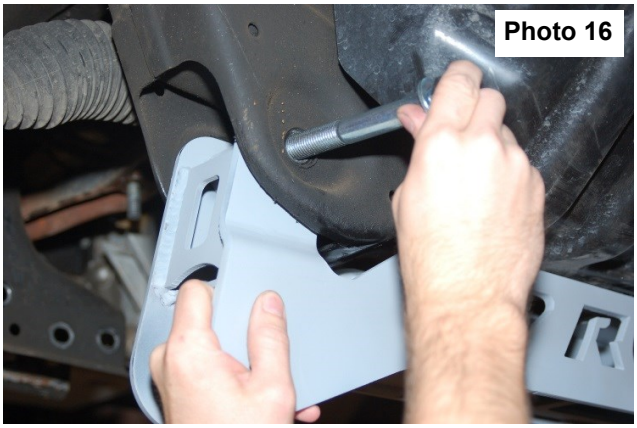


Photo 16

23. On the drivers side rear lower control arm pocket, measure over 3/4" from the edge of the hole on the rear frame where the cross member was removed in step 10 and mark area to be cut as shown in **Photo 17**. Please note the area needs to be cleaned of any oil, grease and/or undercoating. These coatings can be flammable.
24. Cut area with reciprocating saw as shown in **Photo 18.**


Photo 17

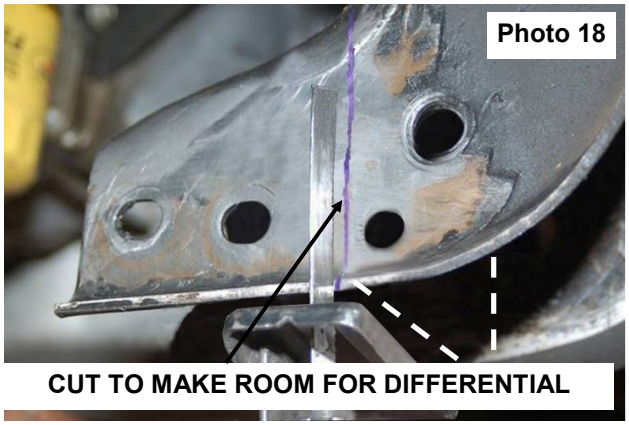
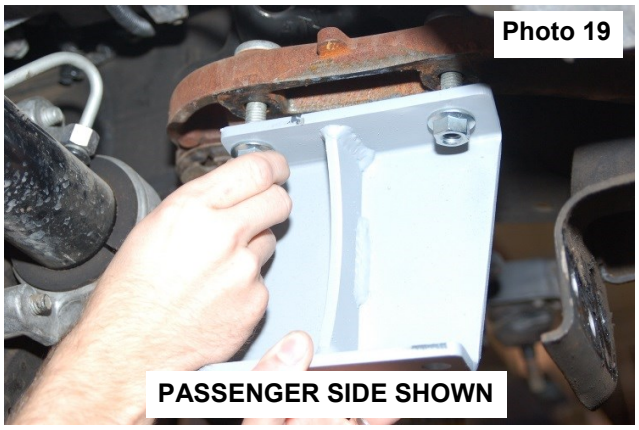
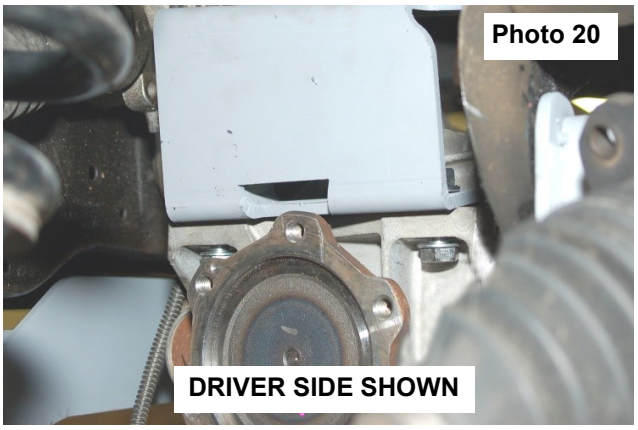


Photo 18

CUT TO MAKE ROOM FOR DIFFERENTIAL

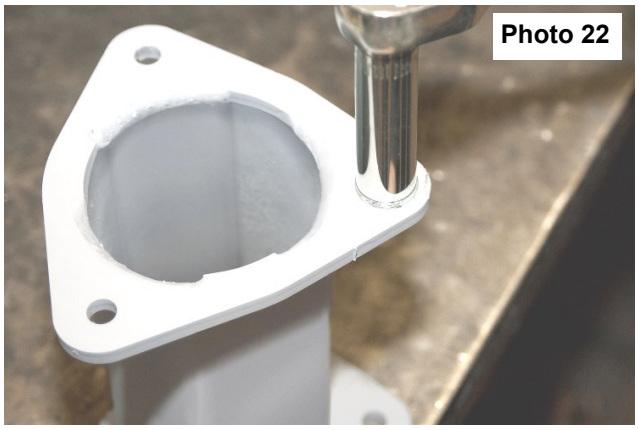
25. After the cross member has been trimmed, grind the edges smooth using a hand grinder, and apply paint to raw metal.
26. Install the Passenger differential drop bracket (open side to center of truck) with the supplied 12mm flange nuts. **See Photo 19.**
27. Install the Driver side differential drop bracket (open side to center of truck) with the notch at the bottom to allow clearance for the differential axle shaft flange using the supplied 12mm x 35mm bolts & washers. Do not tighten.
28. Raise the differential back into place and install on the drivers side drop brackets with the supplied 12mm flange nut and the factory bolts. **See Photo 20.**
29. Install the differential to the passenger side drop brackets with the factory nuts and the supplied 12mm x 45mm bolts & washer on the head of the bolt. **The stock nuts/ large washers must be reused to make sure the differential stays located in the drop bracket.**



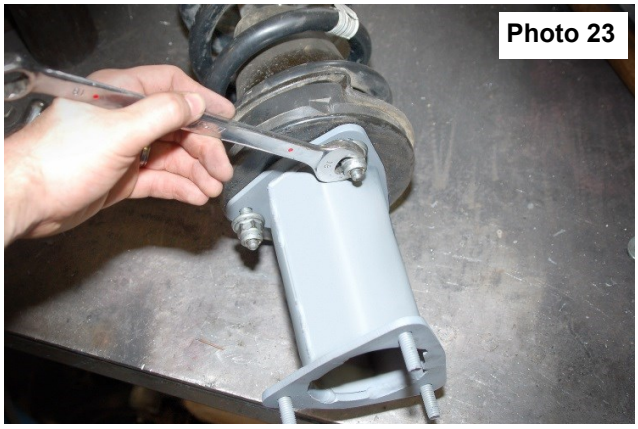


30. Tighten the diff drop brackets (65ft. lbs) to the frame and the differential to the diff drop brackets using a 18mm wrench .
31. Install the rear cross member in the factory location using the supplied 5/8" x 5 1/2" bolts, nuts/ washers as shown in **Photo 21.** Do not tighten at this time.
32. Reinstall the lower control arms in the cross member brackets with the factory hardware. Do not tighten at this time.
33. Install the supplied 10mm studs (10mmstudbag-2) into the strut spacer using the supplied 1/2" jam nut (10mmstudbag-2) between the spacer and the 10mm nut (10mmstudbag-2). Tighten the 10mm nut using a 17mm socket, pulling the stud into the spacer. **Do not using an impact. See Photo 22.**





34. Install the strut spacer on top of the factory strut as shown in **Photo 23** with the stock hardware. Tighten using a 18mm wrench.



35. Trim tie rod ends as per instructions on last page and install on the knuckle. Tighten using a 21mm wrench.
36. Install the strut in the upper strut tower using the supplied 3/8” nuts, washers & lock washers. Tighten using a 9/16” wrench.
37. Install the lower part of the strut in the factory location on the lower control arm with the supplied 10mm x 55mm bolts, nuts /washers. Tighten using a 17mm” wrench.
38. On the factory knuckles, remove the bearing assembly using a 15mm wrench and install in the new knuckle. Tighten hardware. **See Photo 24.**
39. Install the knuckles on the lower ball joint with the factory hardware and tighten using a 18mm wrench
40. Position the axle shafts in the knuckle and tighten the factory nut using a 35mm socket. Torque to 155 ft-lbs.
41. Install the CV spacer as shown in **Photo 25** between the shaft and the differential. Secure with the supplied 10mm x 65mm allen bolts using 8mm allen socket. Use Loctite on the bolt threads and torque to 45ft. Lbs using a crossing pattern.

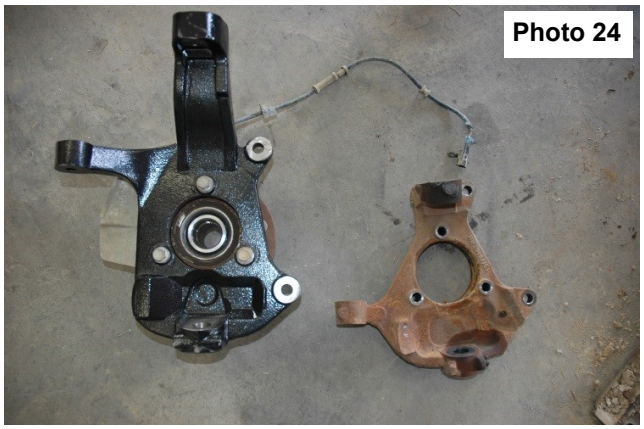


Photo 24

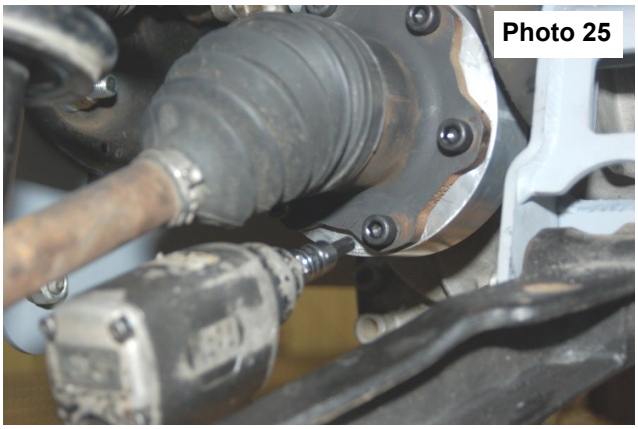


Photo 25

42. Install the sway bar drop brackets with the 10mm x 35mm bolts, lock washers, and flat washers using a 17mm wrench. Tighten hardware. **See Photo 26.**
43. Install the sway bar on the sway bar drop brackets with the stock bolts and supplied 10mm nuts & washers. Tighten using a 17mm wrench. **See Photo 27.**

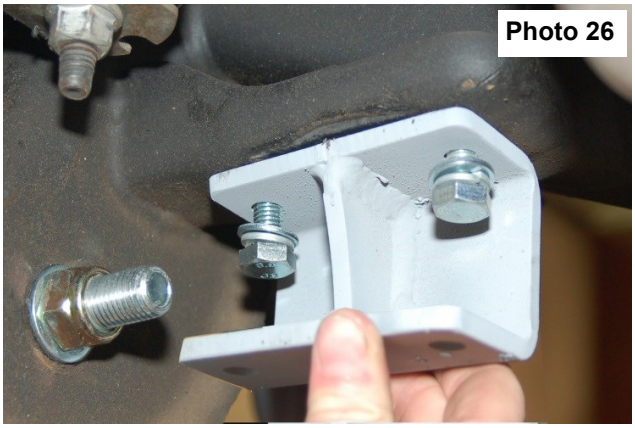


Photo 26


Photo 27

44. Reinstall the drive shaft on the differential with the stock hardware using a 11mm wrench. Note clocking marked during disassembly.
45. Install the skid plate as shown in **Photo 28** with the supplied four 3/8” x 1” bolts, flat washers and lock washers on the front and rear cross member. Tighten using a 9/16 wrench. Tighten cross member hardware using a 24mm wrench.
46. Using the supplied template on last page of instructions as a guide, mark and drill the lower control arm using a 11/16” drill

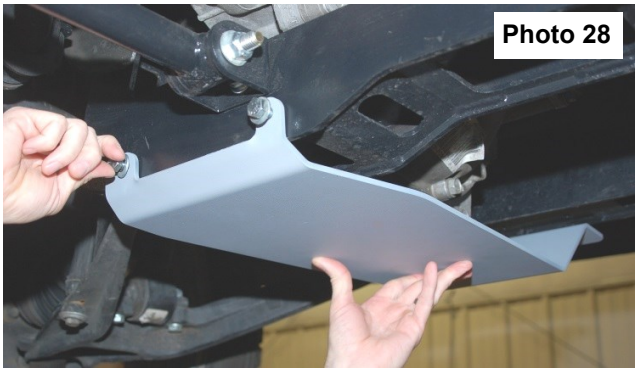


Photo 28

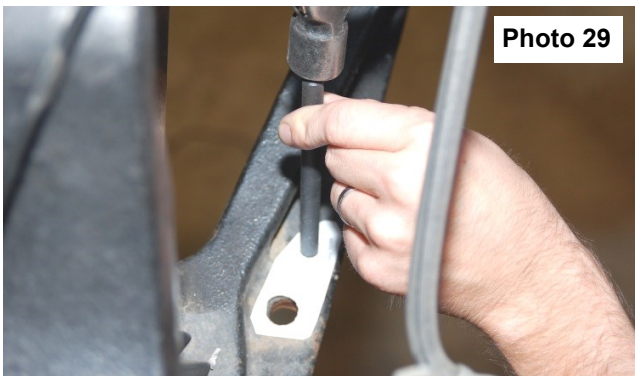


Photo 29

47. The brake shroud must be trimmed to allow the caliper to reinstalled, Mark the dust shroud as shown in **Photo 30** and trim. Reinstall the brake caliper on the knuckle with the factory hardware and tighten.
48. Slightly pull down on the diff vent hose and reinstall on the differential. **See Photo 31.** It may be necessary to loosen the diff vent hose from the wire loom to allow for enough slack to reconnect to the axle.
49. Reconnect the electrical connection on the axle that was removed in Step 16.

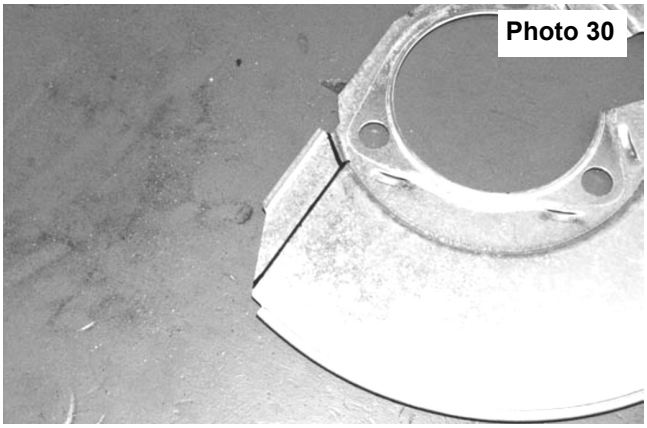


Photo 30

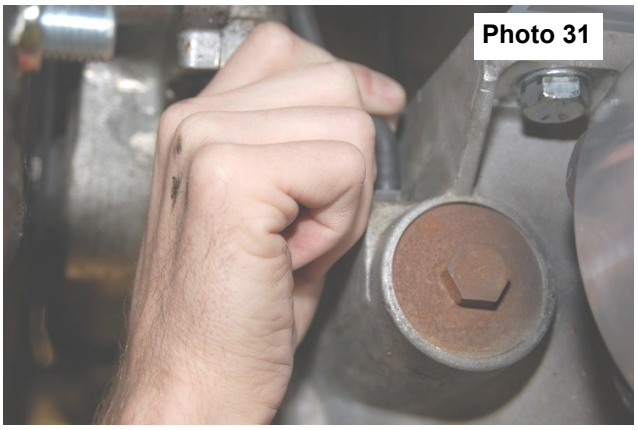


Photo 31

50. Remove the brake line bracket from the upper control arm mount as shown in **Photo 32** using a 13mm wrench.
51. Install the supplied brake line relocation bracket on the upper control arm mount with the stock hardware. Slightly pull down on the brake line assembly and reinstall on the drop bracket with the supplied 5/16" x 3/4" bolts, nuts /washers using a 7/16 wrench. **See Photo 33.** Reconnect the ABS wire that was disconnected in Step 6.

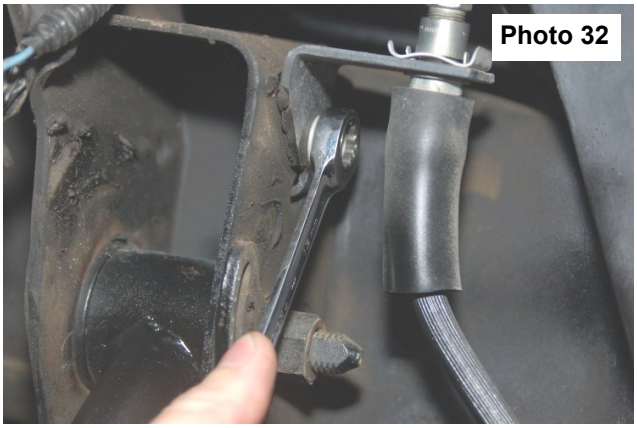


Photo 32

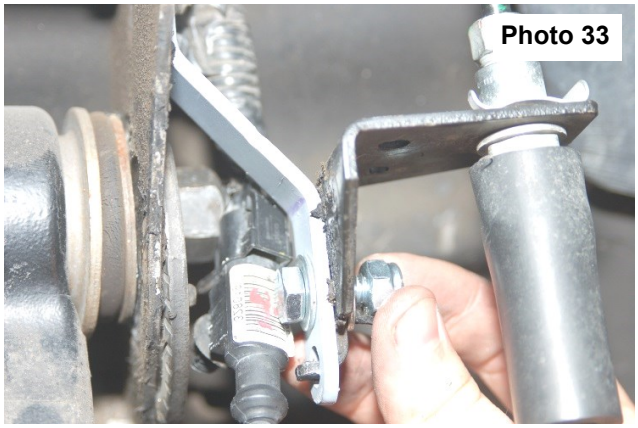


Photo 33

52. Remove the brake line clip from the brake line using a flat head screw driver as shown in **Photo 34** and trim as shown in **Photo 35**. Reinstall the modified bracket on the stock control arm with the stock hardware.

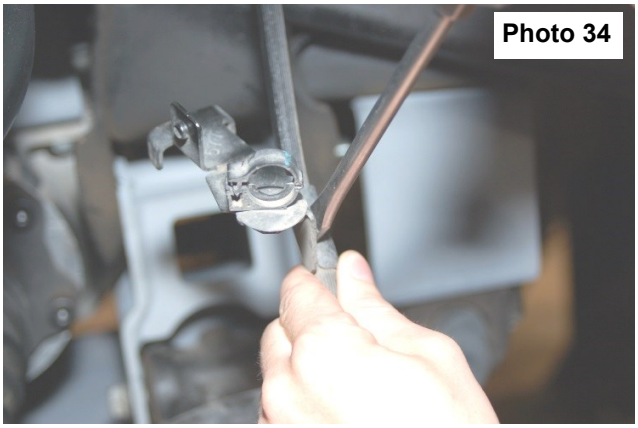


Photo 34

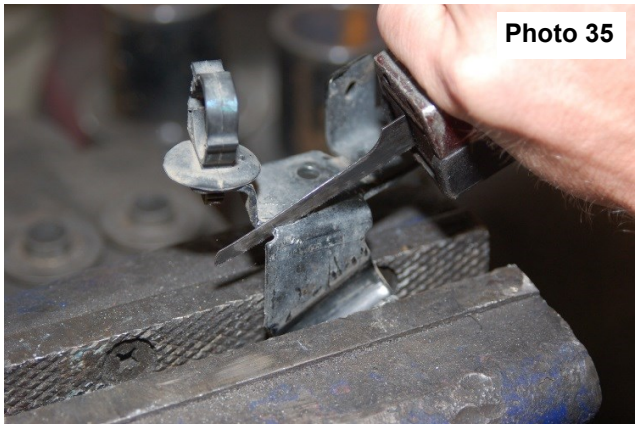
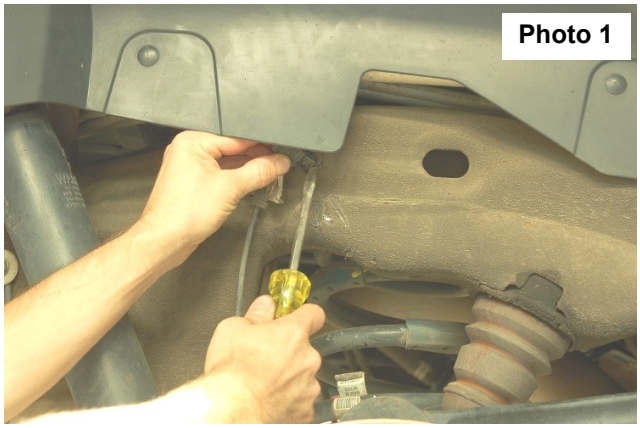


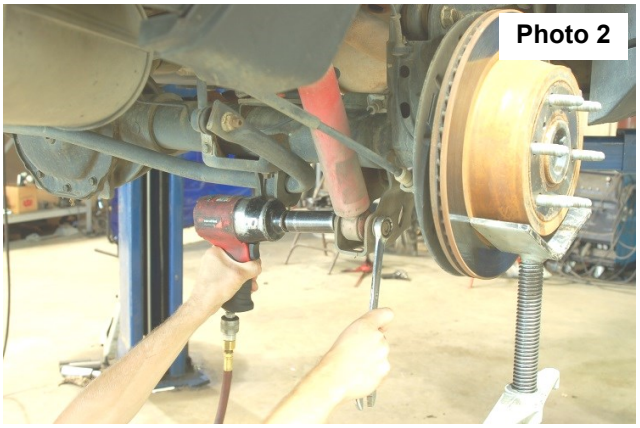
Photo 35

53. If the optional kicker bars were purchased with this kit, install at this time per the instructions included with that kit.
54. Reinstall the factory upper skid plate with the factory hardware.
55. Install the tires and wheels. Jack up the front of the vehicle and remove the jack stands.
56. Lower the vehicle to the ground.

Rear Installation Instructions for 28100, 28101, 20900, 20901, & 20950

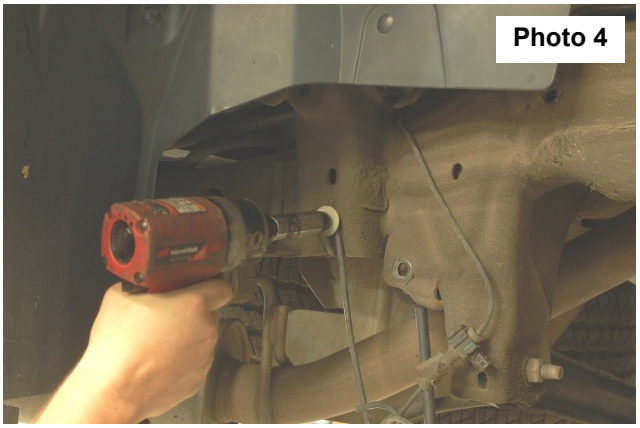
1. Chock the front wheels.
2. Place a floor jack under the differential and jack up the rear of the vehicle.
3. Place jack stands under the frame rails and lower onto the jack stands.
4. Remove the tires/wheels.
5. Locate and remove the ABS wire from the frame. **See Photo 1.**
6. Remove the upper and lower shock from the axle using a 21mm socket/ wrench. **See Photo 2.**





7. Remove the upper sway bar link using a 18mm socket/ wrench. **See Photo 3.**
8. Remove the e-brake mount using a13mm socket / wrench. **See Photo 4.**



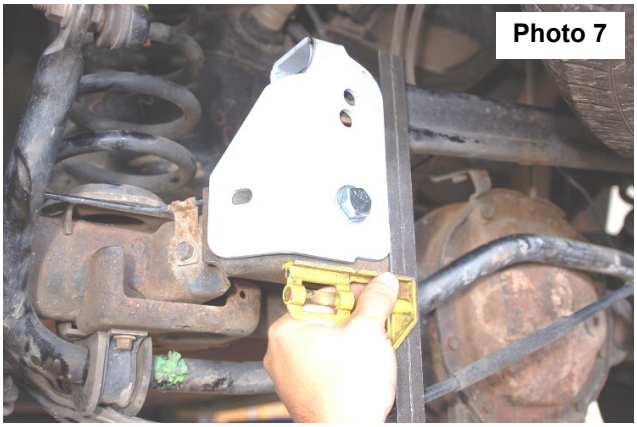


9. Remove the brake line with a 13mm wrench. **See Photo 5.**
10. Remove the factory coil spring.
11. Install the supplied 9228 coil springs in the factory location.

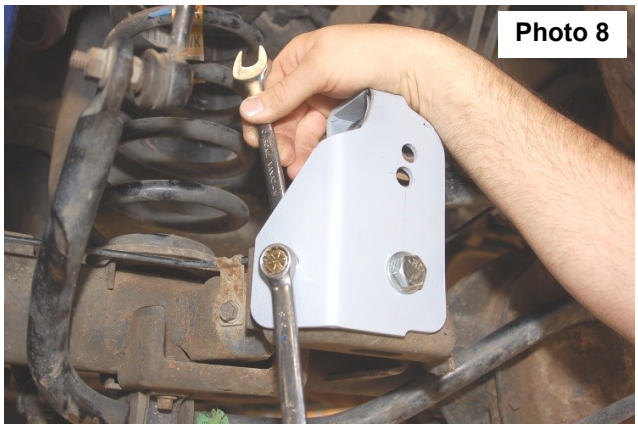


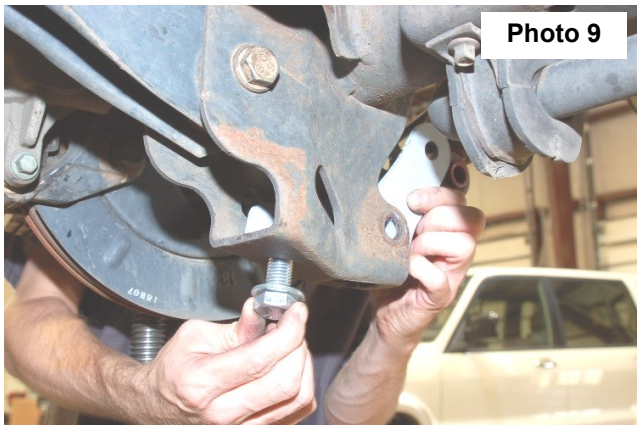
12. Install the brake line spacer as shown in **Photo 6** with the supplied 8mm x 65mm bolt and locking nut. Tighten with a 13mm socket/ wrench.
13. Install the supplied sleeves in the sway bar link and install on the frame using the stock hardware.
14. Place the supplied washer on the head of the supplied 12mm x 65mm bolt and install on the sway bar with the nut on the sway bar. Tighten using a 18mm & 19mm wrench.
15. Remove the track rod from the axle using a 21mm socket/wrench. Install the new bracket as shown in **Photo 7** with the supplied crush sleeve and stock hardware with flanged nut towards middle of vehicle. Do not tighten at this time. Make sure the bracket is square as shown in **Photo 7**. Mark and drill the two holes using a 15/32" drill bit.



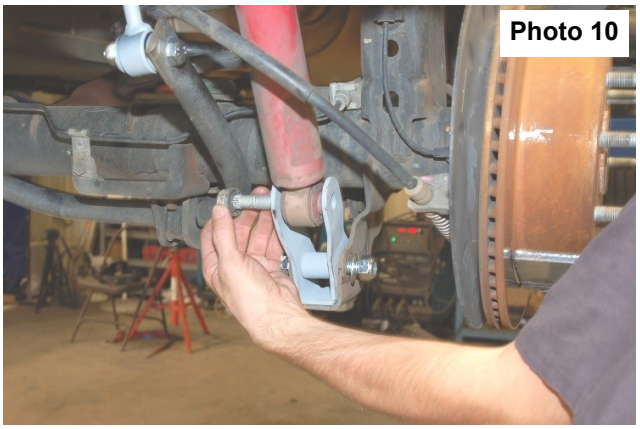


16. Secure with the supplied 7/16" x 1" bolts, washers /nuts as shown in **Photo 8.** Raise the axle to align the track rod with the new bracket and install using supplied 9/16" x 3 1/2" bolt, washers, and nut into the top hole of the track bar bracket. Tighten using a 21mm socket & 22mm wrench. Tighten 7/16" bolts to 52 ft. lbs and the 9/16" bolt to 82 ft. lbs.
17. Install the shock relocation bracket as shown in the factory shock location with the supplied 5/8" x 1 1/2" bolt, washers and lock nut on the bottom of the shock mount. **See Photo 9.**



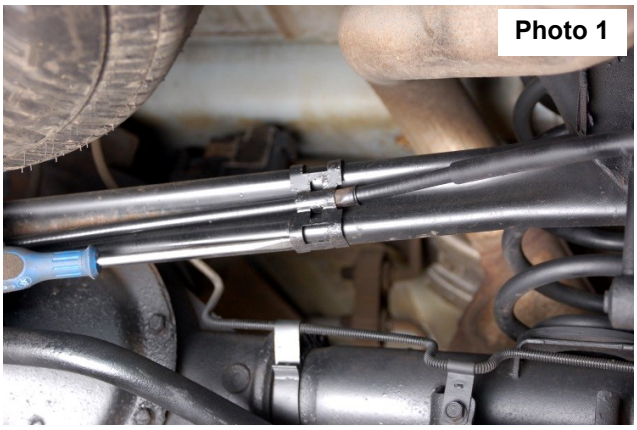


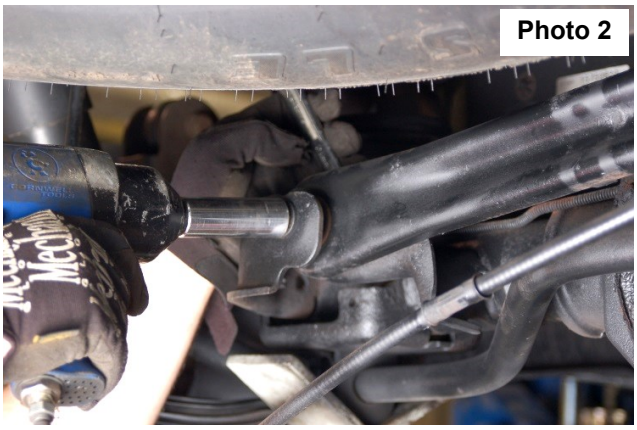
18. Install the supplied 14mm x 75mm bolt, washers and lock nuts in the stock shock mount. **See Photo 10.**
19. Install the tires/wheels.
20. Jack up the vehicle to remove the jack stands. Remove the jack stands and lower the vehicle to the ground.



Rear Installation Instructions for 28600, 28601, 28650, 28700A, 28701, & 28750

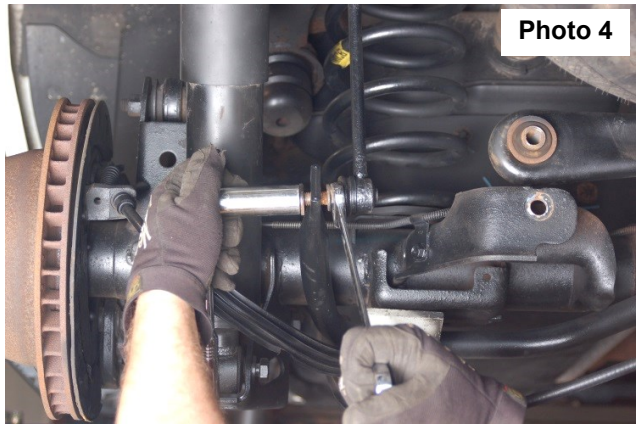
1. Chock the front wheels and jack up the rear of the vehicle. Support the vehicle with jack stands.
2. Remove the tires/wheels using 7/8” deep well socket.
3. Lightly support the axle with a floor jack.
4. Using a flat head screwdriver, remove the e-brake line from the track rod by removing the clip as shown in **Photo 1**.
5. Remove the track rod from the axle as shown in **Photo 2** using a 21mm socket/wrench.



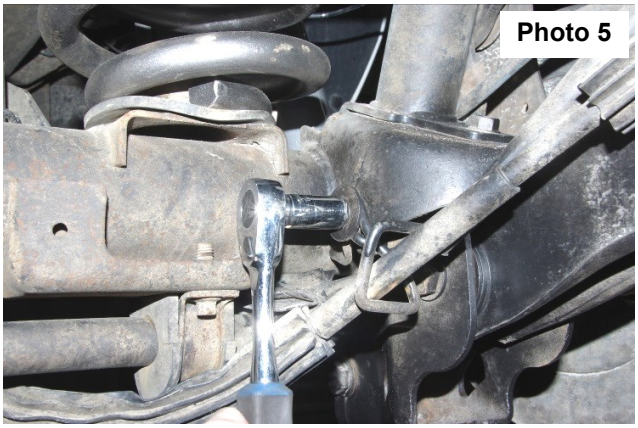


6. Remove the bolt securing the brake line bracket using a 13mm socket as shown in **Photo 3**. Retain hardware for reuse.
7. Remove the sway bar links from the axle and the frame using a 18mm wrench as shown in **Photo 4**. Retain the upper frame mount hardware for reuse.

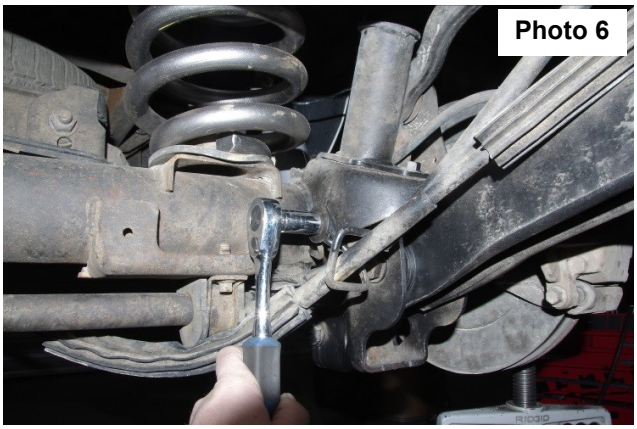




8. Remove the lower shock from the axle using a 21mm wrench/socket leaving the upper part of the shock attached to the frame. Retain the hardware for reuse.
9. Using a 13mm socket, remove the e-brake line bracket from the lower control arm axle mount. Retain for reuse. **See Photo 5.**
10. Remove the upper and lower control arms using 21mm wrenches/sockets. Retain hardware for reuse.
11. Lower the axle with the floor jack and remove the coil springs.

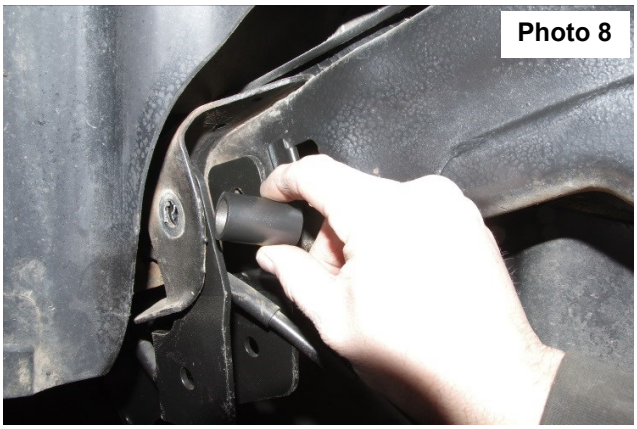


12. Using a 13mm socket, remove the E-brake bracket from the rear axle. **See Photo 6.**
13. Install the supplied control arm drop bracket into the factory control arm pockets on the frame. Use the factory hardware in the lower mount to hold the bracket. **Do Not Tighten. See Photo 7.**



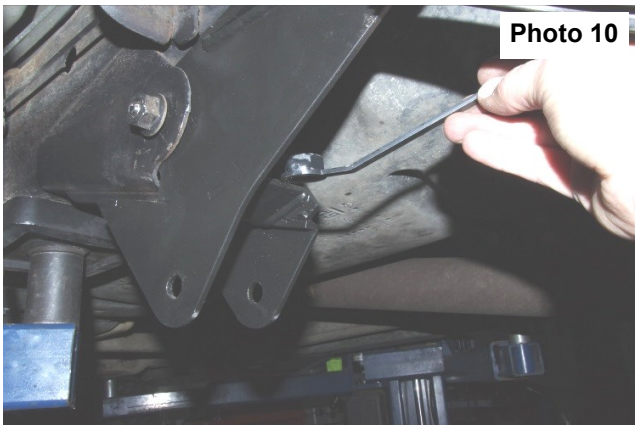


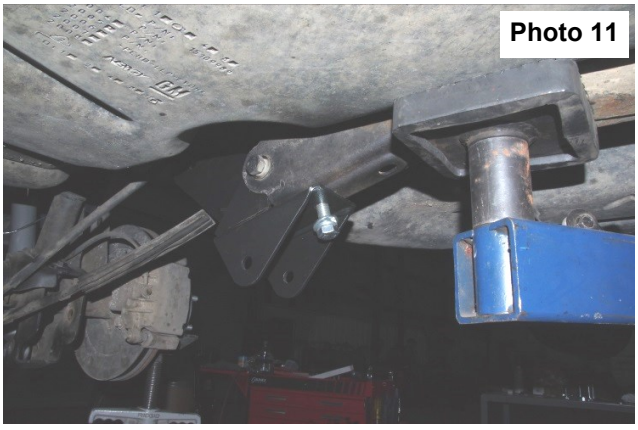
14. Install the supplied sleeve from 1287BOX1, into the upper control arm mount. **See Photo 8.**
15. Use the factory hardware in the upper control arm mount. **Do Not Tighten. See Photo 9.**





16. Install the supplied flag nut from the rear of the lower control arm pocket. **See Photo 10.**
17. Install the supplied 14mm x 40mm bolt, flat washer, and lock washer (1287BAG1) into the flag nut, through the bottom of the control arm drop bracket and the factory lower control arm mount. **Do Not Tighten. See Photo 11.**





18. Install the upper control arm in the control arm drop bracket using the supplied 9/16” x 4” bolt, washers, and nut (1287BAG1) and on the axle using the factory hardware. **Do Not Tighten. See Photo 12.**
19. Install the lower control arm in the control arm drop bracket using the supplied 9/16” x 4.5” bolt, washers, and nut (1287BAG1) and on the axle using the factory hardware and. **Do Not Tighten. See Photo 13.**


Photo 12


Photo 13

20. Tighten the lower control arm drop bracket bolt using a 21mm socket. Torque to 85 ft-lbs. **See Photo 14.**
21. Tighten the factory control arm hardware using a 21mm. Torque to factory specs. **See Photo 15.**

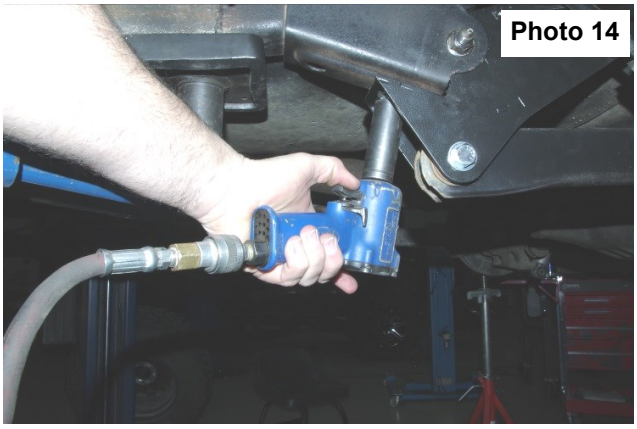


Photo 14


Photo 15

22. Tighten the new 9/16” hardware using a 13/16” socket. Torque to 95 ft-lbs. **See Photo 16.**

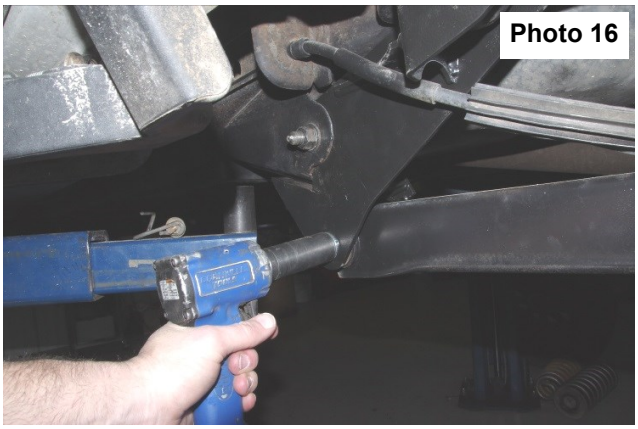


Photo 16

23. Install the new coil springs (9231) in the stock location.
24. Install the new track bar bracket as shown in **Photo 17** in the stock location with the supplied crush sleeve and stock hardware with flanged nut towards middle of vehicle. Do not tighten at this time.
25. Make sure the bracket is square as shown in **Photo 18**. Mark and drill the two holes using a 15/32” drill bit.


Photo 17

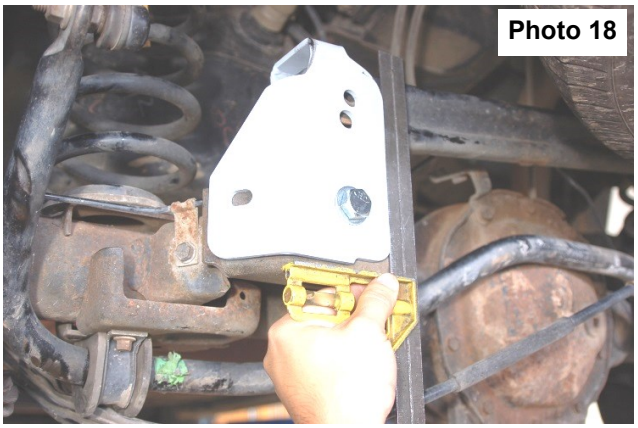


Photo 18

26. Secure with the supplied 7/16” x 1” bolts, washers /nuts as shown in **Photo 19.** Raise the axle to align the track rod with the new bracket and install using supplied 9/16” x 3 1/2” bolt, washers, and nut into the top hole of the track bar bracket. Tighten using a 21mm socket & 22mm wrench. Tighten 7/16” bolts to 52 ft. lbs and the 9/16” bolt to 82 ft. lbs.
27. Install the lower shock relocation bracket **(Please note there is a passenger and driver side bracket)** in the stock location as shown in **Photo 20** using the 1/2” X 1 1/4” bolts, washers & nuts in the lower rear hole and the supplied 9/16” x 3 1/2” bolts, washers, and nuts in the stock location. Tighten 1/2” bolt to 57 ft-lbs. and the 9/16” bolt to 82 ft-lbs. The stock shocks will be installed after the vehicle is lowered to the ground using stock hardware.

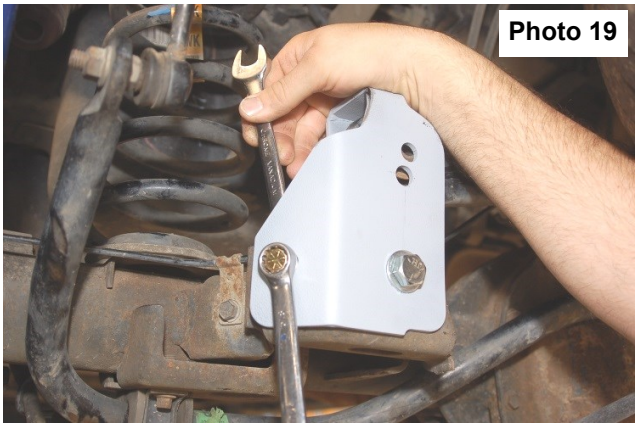


Photo 19


Photo 20

28. Install the bump stops as shown aligning the new bump stop bracket with the factory bump stop. Mark and drill the holes using a 11/32” drill bit as shown in **Photo 21**.
29. Install the bump stops with the supplied 3/8” x 1” self tapping bolts using a 9/16” socket. Do not over-tighten. **See Photo 22**.

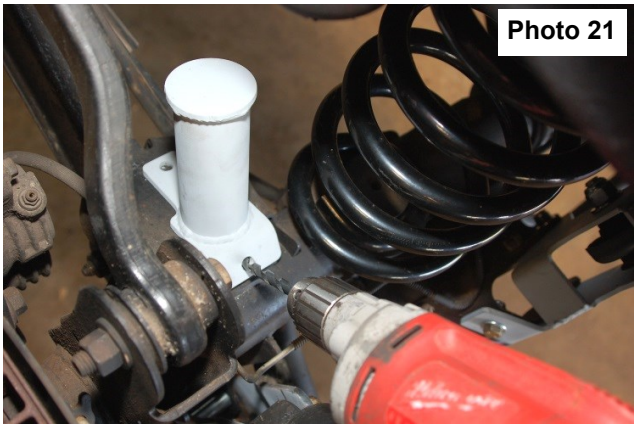


Photo 21

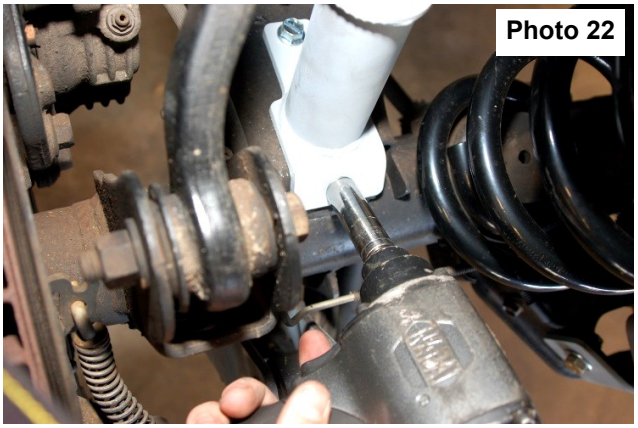
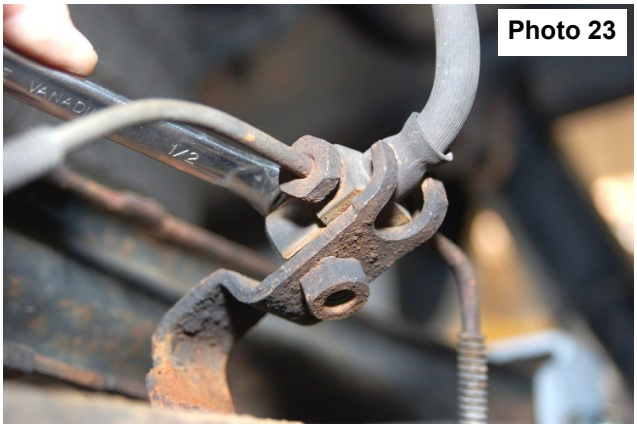
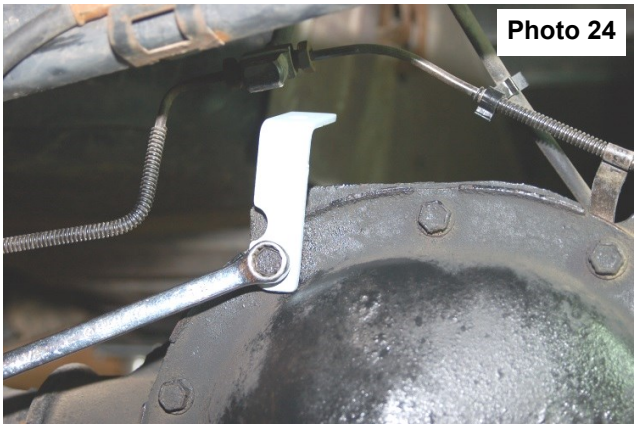


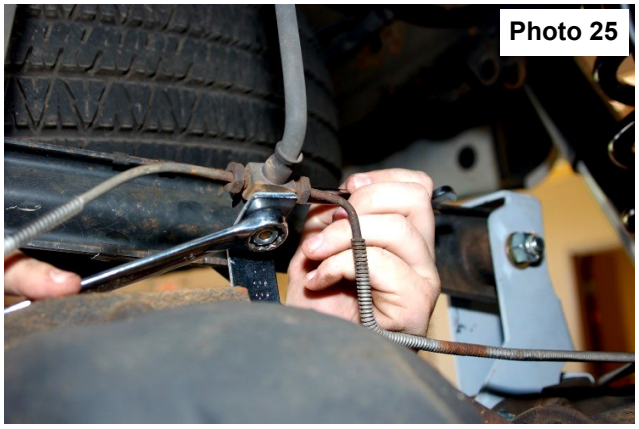
Photo 22

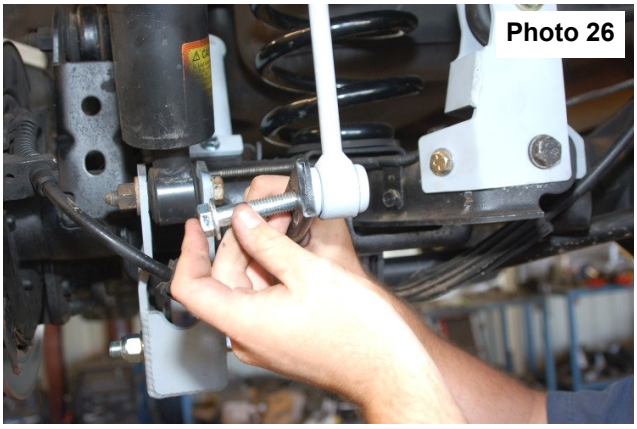
30. Remove the brake line from the brake line bracket using a 1/2” wrench. **See Photo 23**.
31. Install the new brake line bracket as shown in the stock location on the differential with stock hardware using a 13mm wrench. **See Photo 24.**





32. Install the brake line on the new brake line extension bracket as shown in **Photo 25** with supplied 5/16” x 1 1/4” bolt, washer & nut.
33. Swing the sway bar up and install the supplied rear links as shown in **Photo 26** with supplied 1/2” x 2 1/2” bolts/washers & nuts in lower mount and stock hardware in upper mounts. Tighten to 57 ft. lbs.

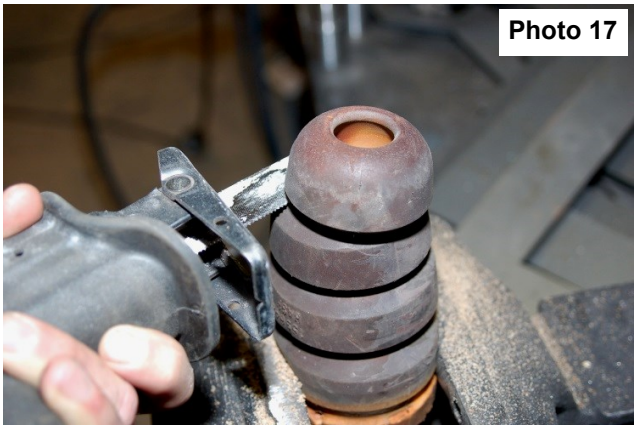




34. Install the wheels and tires.
35. Jack up the vehicle and remove the jack stands. Lower the vehicle to the ground.
36. Install the stock shocks in the new mounts with the stock hardware using a 21mm wrench. Tighten to factory specifications.

BUMPSTOP MODIFICATION

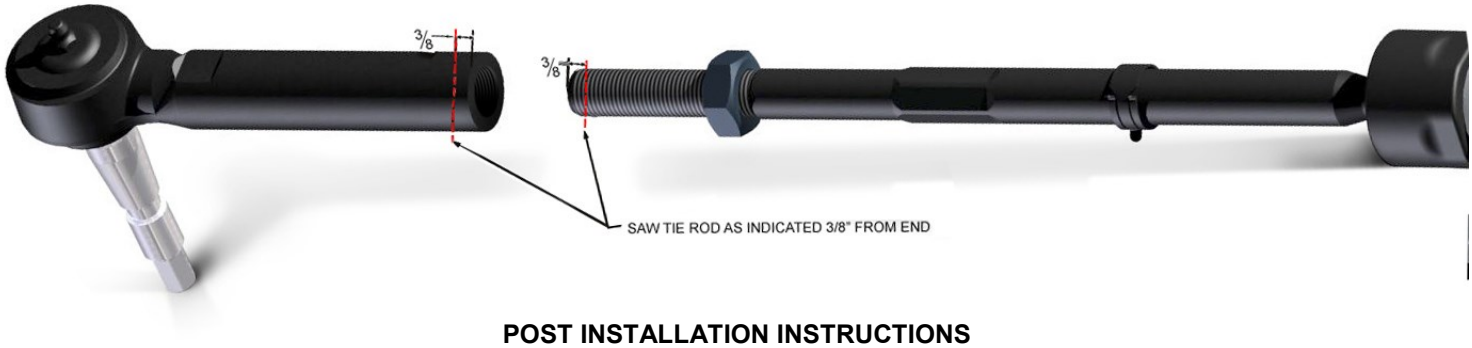
1. Remove the bump stop from the stock location on the frame . Trim the bump stop as shown in **Photo 17** using a reciprocating saw. This bump stop modification is only on certain models with 4 ring bump stops.
2. Only the top portion will be trimmed as shown in **Photo 18**. After the bump stop has been trimmed, reinstall on the vehicle in the stock location.





INSTRUCTIONS FOR TRIMMING TIE ROD ENDS.

1. Disassemble the tie rod from the tie rod ends
2. Measure over 3/8” and mark.
3. Cut the tie rods / tie rod sleeves as shown below to allow the vehicle to be realigned.
4. Smooth any rough edges.
5. Reassemble the cut assembly



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	4.5 +-1.0
Camber in degrees	0.0—.3
Toe In in degrees	0.1 +-.2

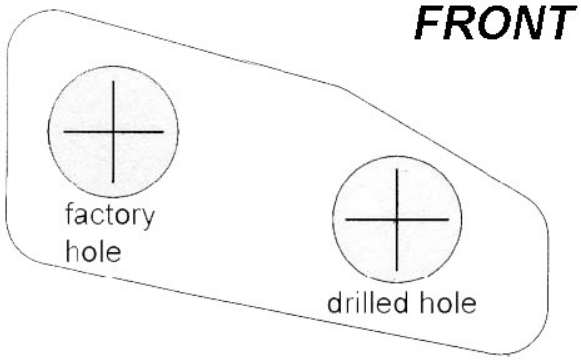
Important note: For alignment purposes, please refer to the instructions above. The inner & outer tie rod ends may need to be trimmed to allow the front end alignment to be set properly. Please alert your alignment specialist of this possibility.

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.

TEMPLATE FOR SWAY BAR RELOCATION

Cut out template and position template on lower control arm as shown in Step 45.. Drill with a 11/16 drill bit and relocate the sway bar end links into the new location.





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