Rough Country 78600U Installation Instructions

Long Arm Upgrade Kit for Jeep Wrangler JK (2007–2017)

Part number: 78600U

trailfortress.com/long-arm-upgrade-kit-jeep-wrangler-jk-rough-country-78600u

Scan for fitment, price and install help

ROUGH COUNTRY SUSPENSION SYSTEMS®

78630BAG

Jeep 2007-18 JK & JKU 4” Long Arm 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. 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.

This suspension system was developed using a 35X12.50X17 tire with 4.5” to 4.75” of back spacing on aftermarket wheels. Stock wheels can be used with this kit with up to a 35x12.5 tire, but different tire manufactures designs may result in a tire width that could result in contact with the lower control arm and/or front sway bar link in a sharp turn. Please consult with your tire and wheel expert before purchasing. Also note that if wider tires are desired, offset wheels will be required.

⚠NOTICE Upon completing the install of this kit the draglink must be adjusted to center the steering wheel <u>BEFORE</u> the vehicle is driven. Failure to do so will cause a computer error, odd handling, and poor performance.

⚠NOTICE Does <u>NOT</u> fit 2-door models.

If questions exist we will be happy to answer any questions concerning the design, function, and correct use of our products by calling 1-800-222-7023.

⚠NOTICE NOTICE TO DEALER AND VEHICLE OWNER

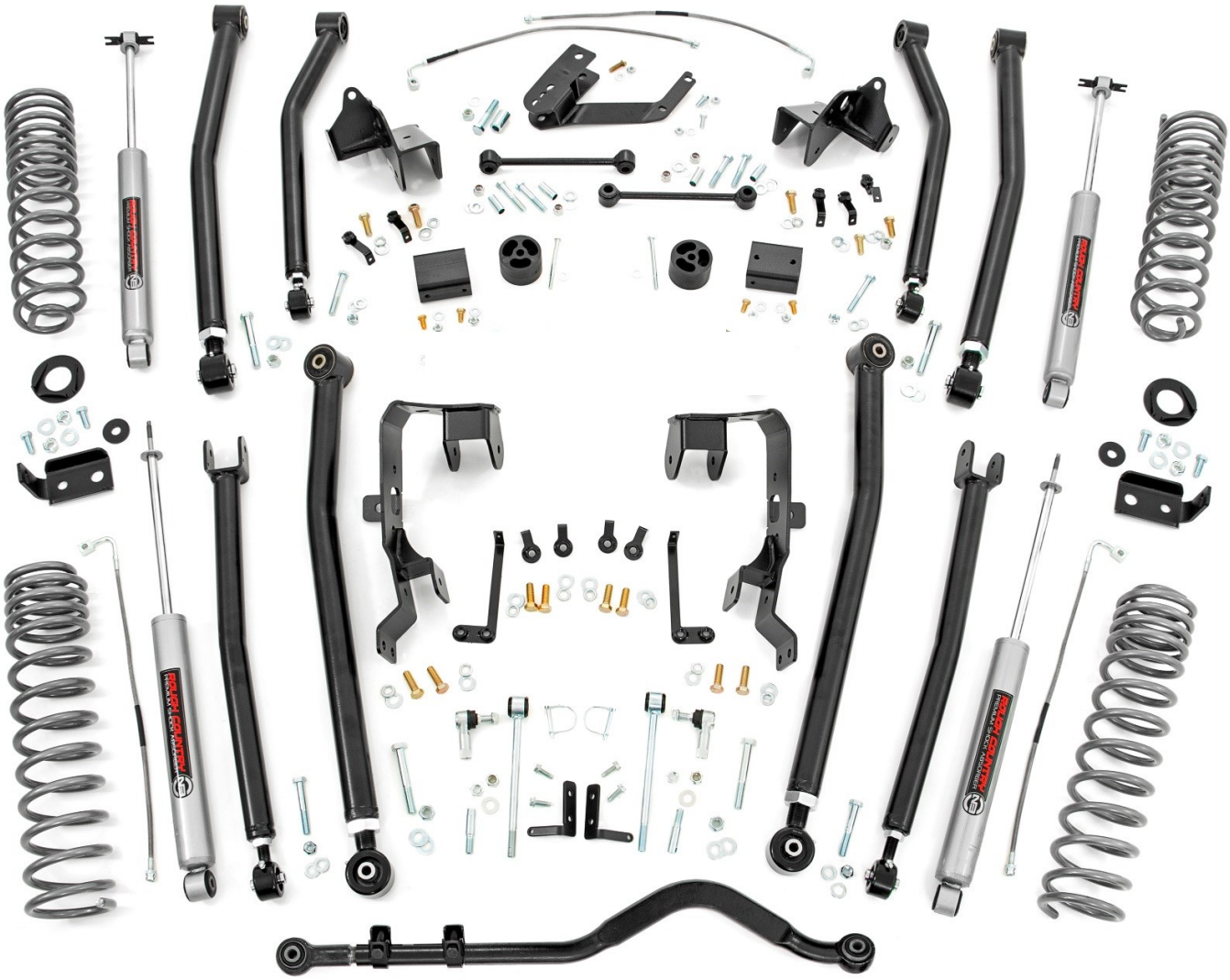
Any vehicle equipped with any Rough Country product should have a “Warning to Driver” decal installed on the inside of the windshield or on the vehicle’s dash. The decal should act as a constant reminder for whoever is operating the vehicle of its unique handling characteristics.

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.

Tools Needed

- 10mm thru 22mm Sockets and Wrenches
- 5/8” thru 1 7/8” Sockets and Wrenches
- Adjustable Wrench
- Gloves
- Safety glasses
- Hand grinder
- Reciprocating saw
- Tape measure
- 1 1/4” hole saw
- 3/8”, 17/32”, 13/32”, 9/16” drill
- Drill Motor
- Torque Wrench
- **2007-11 Models require cutting and welding of the exhaust.**

78530A & 79030A KIT PICTURE



Torque Specs:

Size	Grade 5	Grade 8
5/16”	15 ft/lbs	20 ft/lbs
3/8”	30 ft/lbs	35 ft/lbs
7/16”	45 ft/lbs	60 ft/lbs
1/2”	65 ft/lbs	90 ft/lbs
9/16”	95 ft/lbs	130 ft/lbs
5/8”	135 ft/lbs	175 ft/lbs
3/4”	185 ft/lbs	280 ft/lbs

	Class 8.8	Class 10.9
6MM	5 ft/lbs	9 ft/lbs
8MM	18ft/lbs	23 ft/lbs
10MM	32ft/lbs	45ft/lbs
12MM	55ft/lbs	75ft/lbs
14MM	85ft/lbs	120ft/lbs
16MM	130ft/lbs	165ft/lbs
18MM	170ft/lbs	240ft/lbs

78530A & 79030A Kit Contents

9235 (4 Door Models):
2-Fr Coil Springs

9237 (4 Door Models):
2-Rr Coil Springs

9411 (2 Door Models):
2-Fr Coil Springs

9412 (2 Door Models):
2-Rr Coil Springs

785BOX1:
1-1020BAG
1-1134
1-1681BAG3
1-Instruction Sheet
2-Rear Sway Links
1-1146
1-Instruction Sheet
1-94000964BAG
1-94000964BAG2
2-Sway Ends
1-1609BAG6
1-1609BAG7
1-1786BAG1
1-78630BAG
1-78630BAG2
1-78630BAG3
1-78630BAG6
2-Fr Upper Shock Relocation Brackets
1-Dr Fr Frame Bracket
1-Pass Fr Frame Bracket
1-Dr Rr Frame Bracket
1-Pass Rr Frame Bracket
2-Rr Bumpstops
2-Rr Coil Shims
1-Rr Track Bar Bracket
2-Fr Bumpstops

785BOX2:
2-Fr Upper Flex Joints
2-Fr Lower Flex Joints
1-Dr Fr Upper Control Arm
1-Dr Fr Lower Control Arm
1-Pass Fr Upper Control Arm
1-Pass Fr Lower Control Arm

785BOX3:
2-Rr Upper Flex Joints
2-Rr Lower Flex Joints
2-Rr Upper Control Arms
2-Rr Lower Control Arms

23283:
2-660812 Fr Shocks

23164:
2-660778 Rr Shocks

1179
1-Frt Forged Adjustable Track Bar

78630BAG6: *(Flag Nuts)*
1-Dr Fr Control Arm Flag Nut
1-Pass Fr Control Arm Flag Nut
4-Fr Control Arm Flag Nuts
2-Rr Control Arm Flag Nuts Fr Facing
2-Rr Control Arm Flag Nuts Rr Facing
1-Dr Rr Lower Flag Nut

1146: *(Fr Sway Bar Quick Disconnects)*
1-94000964BAG2 Sway Link Bag
1-94000964BAG Fastener Bag
2-Sway Link Ends

1609BAG7: *(Fr Bump Stop)*
2-3/8" Flat Washers
2-3/8" x 3" Bolts
2-3/8" Flange Lock Nuts

1609BAG6: *(Rr Bump Stop)*
4-3/8" Flat Washers
4-3/8" x 3/4" Bolts
4-3/8" Flange Lock Nuts

1786BAG1: *(Rr Track Bar Bracket)*
1-Track Bar Sleeve
1-14mm Nylock Nut
1-14mm x 75mm Bolts
1-14mm Flat Washer
3-3/8" Flat Washers
2-3/8" x 1" Bolts
3-3/8" Flange Lock Nuts
1-3/8" x 1.25" Bolt

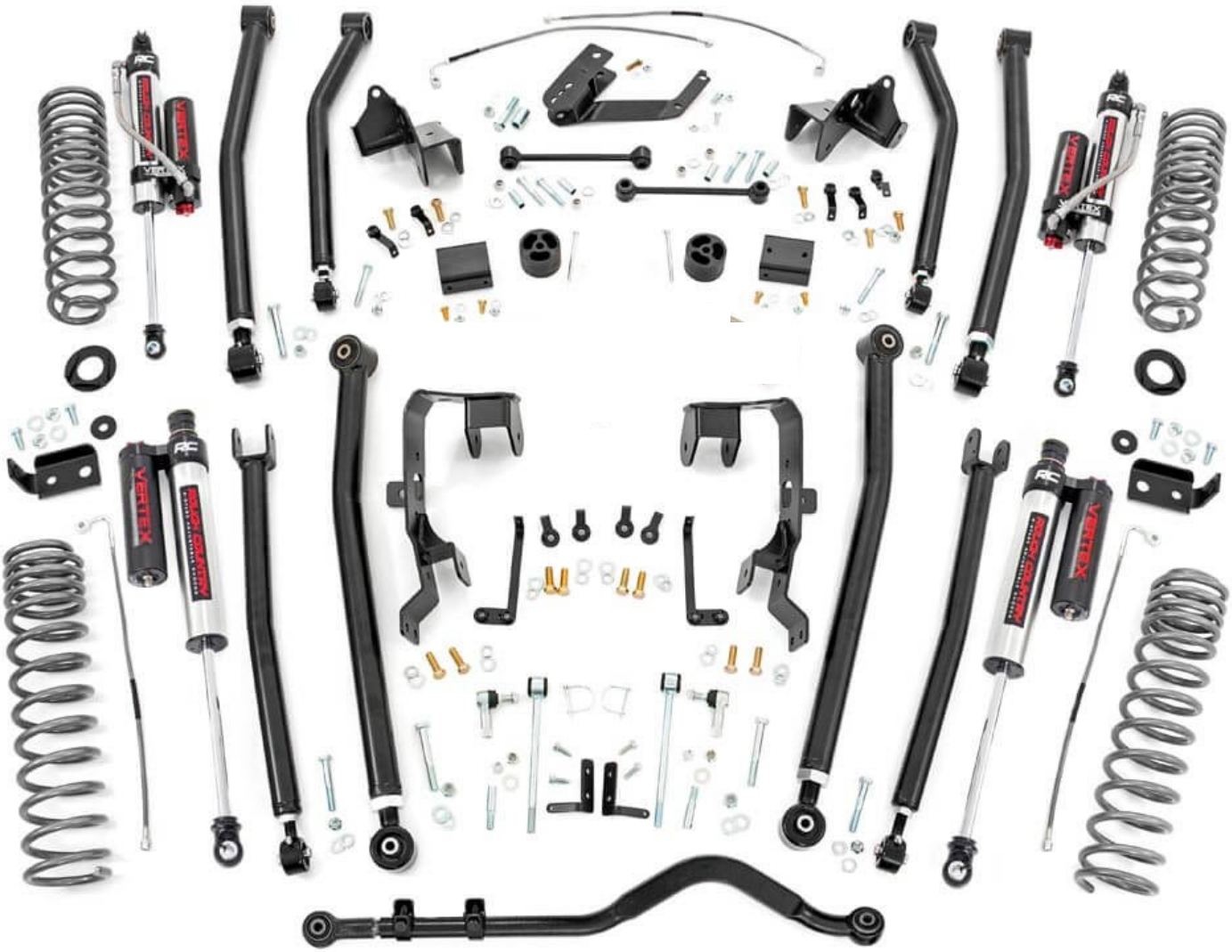
78630BAG2: (*Control Arm Hardware)*
4-14mm x 100mm Bolts
4-12mm x 80mm Bolts
8-14mm Flat Washers
4-14mm Nylock Nuts
4-12mm Lock Nuts
8-12mm Flat Washers

78630BAG3: *(Control Arm Hardware)*
4-12mm x 35mm Bolts
4-12mm Lock Nuts
12-12mm Flat Washers
4-12mm x 140mm Bolts
17-1/2" Flat Washers
13-1/2" x 1.5" Bolts
2-1/2" x 1.25" Bolts
2-1/2" Nylock Nuts
13-1/2" Lock Washers

1020BAG: (*Front Shock Relocation)*
2-5/8" x 1.5" Bolts
2-5/8" Top Lock Nuts
4-5/8" Flat Washers
2-1/2" x 1.25" Bolts
2-1/2" Nylock Nuts
4-1/2" Flat Washers
2-Upper Shock Washers

1681BAG3: (Rear *Sway Link Bag)*
4-Sleeves
4-1/2" Nylock Nuts
4-1/2" x 2.75" Bolts
8-1/2" Flat Washers

78550A & 79050A KIT PICTURE



78550A & 79050A Kit Contents

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2-Fr Coil Springs

9237 (4 Door Models):
2-Rr Coil Springs

9411 (2 Door Models):
2-Fr Coil Springs

9412 (2 Door Models):
2-Rr Coil Springs

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1-78630BAG2
1-78630BAG3
1-78630BAG6
2-Fr Upper Shock Relocation Brackets
1-Dr Fr Frame Bracket
1-Pass Fr Frame Bracket
1-Dr Rr Frame Bracket
1-Pass Rr Frame Bracket
2-Rr Bumpstops
2-Rr Coil Shims
1-Rr Track Bar Bracket
2-Fr Bumpstops

785BOX2:
2-Fr Upper Flex Joints
2-Fr Lower Flex Joints
1-Dr Fr Upper Control Arm
1-Dr Fr Lower Control Arm
1-Pass Fr Upper Control Arm
1-Pass Fr Lower Control Arm

785BOX3:
2-Rr Upper Flex Joints
2-Rr Lower Flex Joints
2-Rr Upper Control Arms
2-Rr Lower Control Arms

680015:
2-Vertex Front Shocks

690015L:
1-Vertex Left Rear Shock

690015R:
1-Vertex Right Rear Shock

1179
1-Frt Forged Adjustable Track Bar

78630BAG6: *(Flag Nuts)*
1-Dr Fr Control Arm Flag Nut
1-Pass Fr Control Arm Flag Nut
4-Fr Control Arm Flag Nuts
2-Rr Control Arm Flag Nuts Fr Facing
2-Rr Control Arm Flag Nuts Rr Facing
1-Dr Rr Lower Flag Nut

1146: *(Fr Sway Bar Quick Disconnects)*
1-94000964BAG2 Sway Link Bag
1-94000964BAG Fastener Bag
2-Sway Link Ends

1609BAG7: *(Fr Bump Stop)*
2-3/8" Flat Washers
2-3/8" x 3" Bolts
2-3/8" Flange Lock Nuts

1609BAG6: *(Rr Bump Stop)*
4-3/8" Flat Washers
4-3/8" x 3/4" Bolts
4-3/8" Flange Lock Nuts

1786BAG1: *(Rr Track Bar Bracket)*
1-Track Bar Sleeve
1-14mm Nylock Nut
1-14mm x 75mm Bolts
1-14mm Flat Washer
3-3/8" Flat Washers
2-3/8" x 1" Bolts
3-3/8" Flange Lock Nuts
1-3/8" x 1.25" Bolt

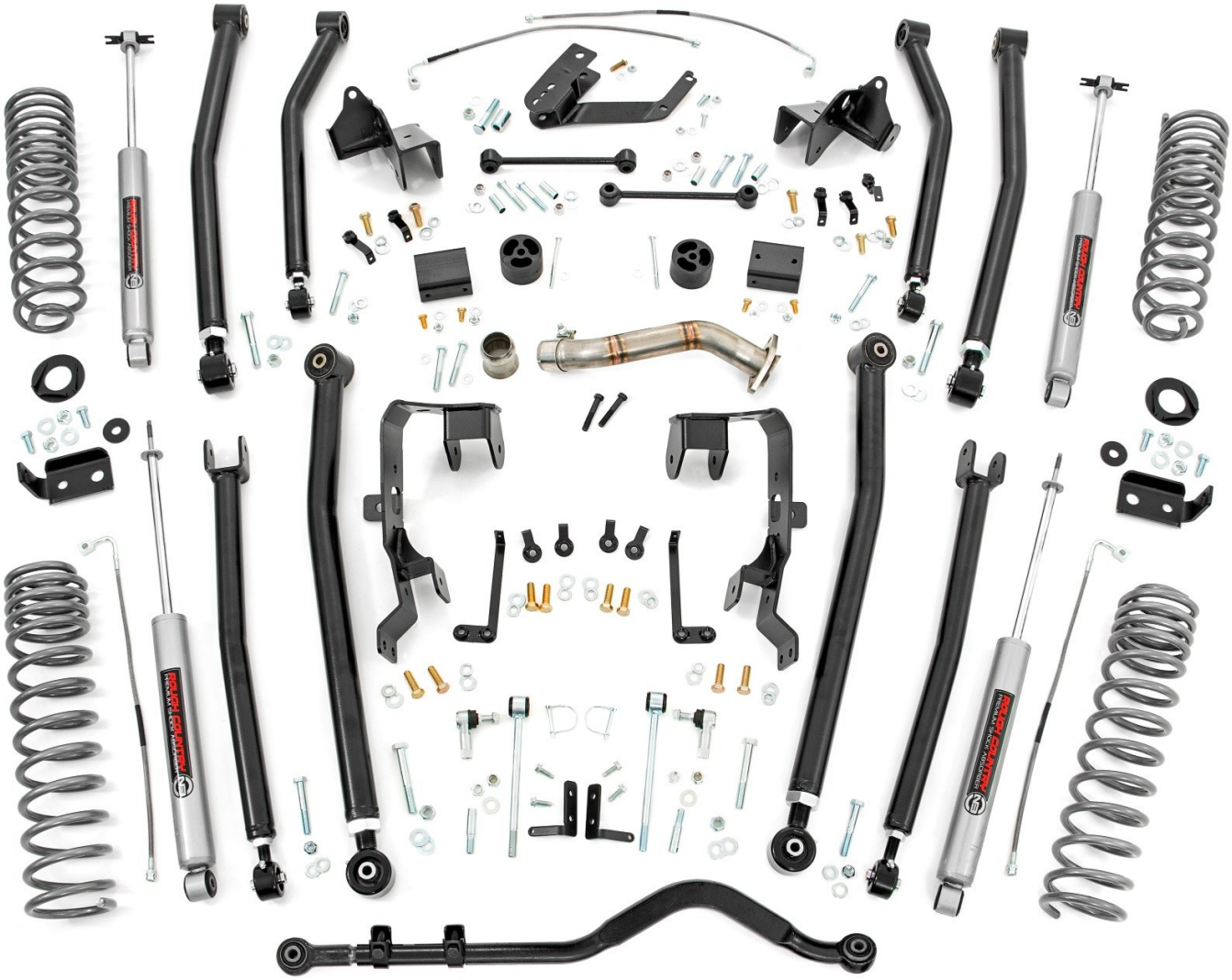
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4-12mm x 80mm Bolts
8-14mm Flat Washers
4-14mm Nylock Nuts
4-12mm Lock Nuts
8-12mm Flat Washers

78630BAG3: *(Control Arm Hardware)*
4-12mm x 35mm Bolts
4-12mm Lock Nuts
12-12mm Flat Washers
4-12mm x 140mm Bolts
17-1/2" Flat Washers
13-1/2" x 1.5" Bolts
2-1/2" x 1.25" Bolts
2-1/2" Nylock Nuts
13-1/2" Lock Washers

1020BAG: (*Front Shock Relocation)*
2-5/8" x 1.5" Bolts
2-5/8" Top Lock Nuts
4-5/8" Flat Washers
2-1/2" x 1.25" Bolts
2-1/2" Nylock Nuts
4-1/2" Flat Washers
2-Upper Shock Washers

1681BAG3: (Rear *Sway Link Bag)*
4-Sleeves
4-1/2" Nylock Nuts
4-1/2" x 2.75" Bolts
8-1/2" Flat Washers

78630A & 79130A KIT PICTURE



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9235 (4 Door Models):
2-Fr Coil Springs

9237 (4 Door Models):
2-Rr Coil Springs

9411 (2 Door Models):
2-Fr Coil Springs

9412 (2 Door Models):
2-Rr Coil Springs

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1-78630BAG2
1-78630BAG3
1-78630BAG6
2-Fr Upper Shock Relocation Brackets
1-Dr Fr Frame Bracket
1-Pass Fr Frame Bracket
1-Dr Rr Frame Bracket
1-Pass Rr Frame Bracket
2-Rr Bumpstops
2-Rr Coil Shims
1-Rr Track Bar Bracket
2-Fr Bumpstops

785BOX2:
2-Fr Upper Flex Joints
2-Fr Lower Flex Joints
1-Dr Fr Upper Control Arm
1-Dr Fr Lower Control Arm
1-Pass Fr Upper Control Arm
1-Pass Fr Lower Control Arm

785BOX3:
2-Rr Upper Flex Joints
2-Rr Lower Flex Joints
2-Rr Upper Control Arms
2-Rr Lower Control Arms

23283:
2-660812 Fr Shocks

23164:
2-660778 Rr Shocks

1179
1-Frt Forged Adjustable Track Bar

785BOX4:
1-1030BAG2
1-Exhaust Loop Delete
1-Pass Exhaust Flange

78630BAG6: *(Flag Nuts)*
1-Dr Fr Control Arm Flag Nut
1-Pass Fr Control Arm Flag Nut
4-Fr Control Arm Flag Nuts
2-Rr Control Arm Flag Nuts Fr Facing
2-Rr Control Arm Flag Nuts Rr Facing
1-Dr Rr Lower Flag Nut

1146: *(Fr Sway Bar Quick Disconnects)*
1-94000964BAG2 Sway Link Bag
1-94000964BAG Fastener Bag
2-Sway Link Ends

1609BAG7: *(Fr Bump Stop)*
2-3/8" Flat Washers
2-3/8" x 3" Bolts
2-3/8" Flange Lock Nuts

1609BAG6: *(Rr Bump Stop)*
4-3/8" Flat Washers
4-3/8" x 3/4" Bolts
4-3/8" Flange Lock Nuts

1786BAG1: *(Rr Track Bar Bracket)*
1-Track Bar Sleeve
1-14mm Nylock Nut
1-14mm x 75mm Bolts
1-14mm Flat Washer
3-3/8" Flat Washers
2-3/8" x 1" Bolts
3-3/8" Flange Lock Nuts
1-3/8" x 1.25" Bolt

78630BAG2: (*Control Arm Hardware)*
4-14mm x 100mm Bolts
4-12mm x 80mm Bolts
8-14mm Flat Washers
4-14mm Nylock Nuts
4-12mm Lock Nuts
8-12mm Flat Washers

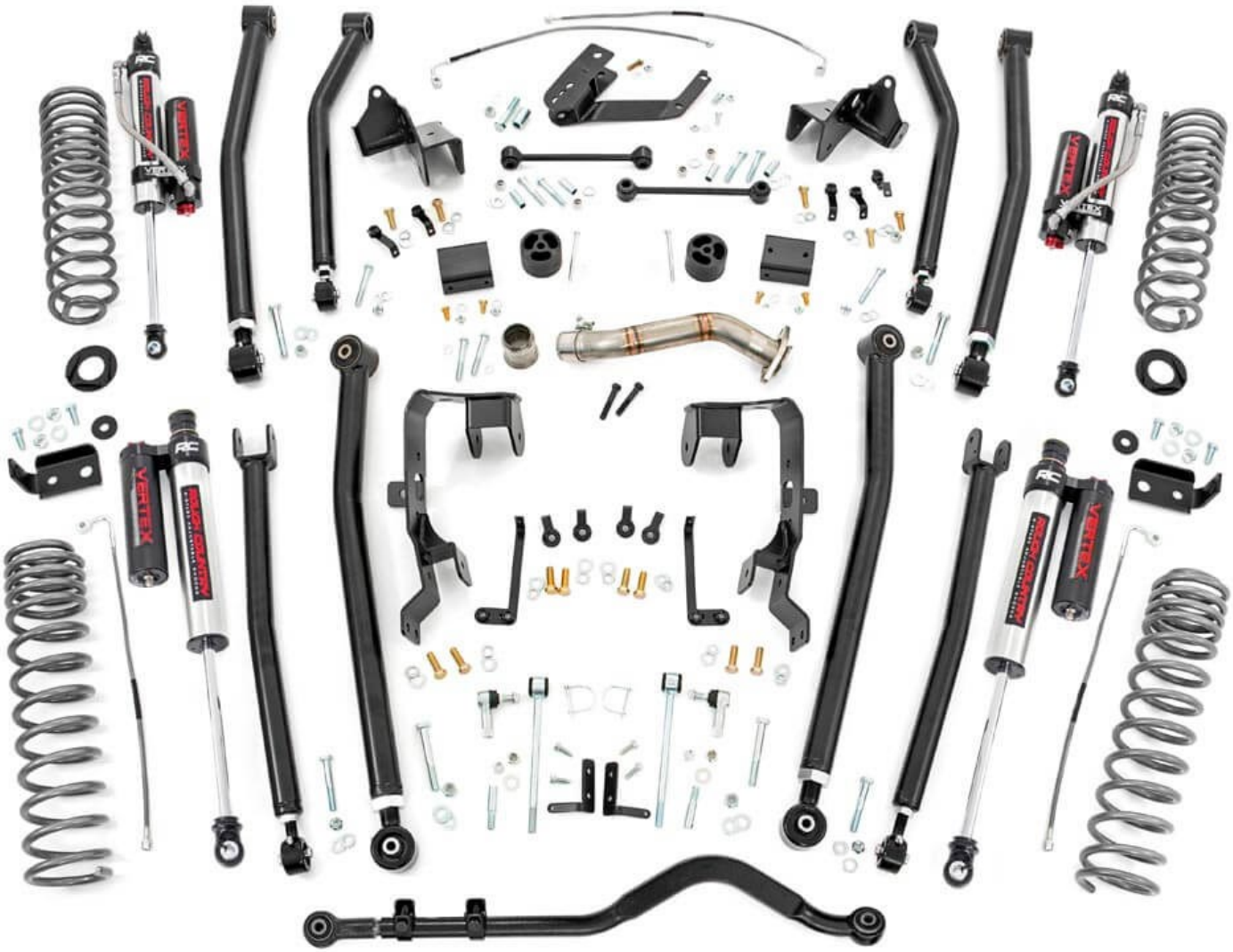
78630BAG3: *(Control Arm Hardware)*
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4-12mm Lock Nuts
12-12mm Flat Washers
4-12mm x 140mm Bolts
17-1/2" Flat Washers
13-1/2" x 1.5" Bolts
2-1/2" x 1.25" Bolts
2-1/2" Nylock Nuts
13-1/2" Lock Washers

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4-5/8" Flat Washers
2-1/2" x 1.25" Bolts
2-1/2" Nylock Nuts
4-1/2" Flat Washers
2-Upper Shock Washers

1681BAG3: (Rear *Sway Link Bag)*
4-Sleeves
4-1/2" Nylock Nuts
4-1/2" x 2.75" Bolts
8-1/2" Flat Washers

1030BAG2: *(Exhaust Bag)*
2-8mm x 80mm Bolts
2-8mm x 100mm Bolts

78650 & 79150 KIT PICTURE



78550A & 79050A Kit Contents

9235 (4 Door Models):
2-Fr Coil Springs

9237 (4 Door Models):
2-Rr Coil Springs

9411 (2 Door Models):
2-Fr Coil Springs

9412 (2 Door Models):
2-Rr Coil Springs

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2-Fr Upper Shock Relocation Brackets
1-Dr Fr Frame Bracket
1-Pass Fr Frame Bracket
1-Dr Rr Frame Bracket
1-Pass Rr Frame Bracket
2-Rr Bumpstops
2-Rr Coil Shims
1-Rr Track Bar Bracket
2-Fr Bumpstops

785BOX2:
2-Fr Upper Flex Joints
2-Fr Lower Flex Joints
1-Dr Fr Upper Control Arm
1-Dr Fr Lower Control Arm
1-Pass Fr Upper Control Arm
1-Pass Fr Lower Control Arm

785BOX3:
2-Rr Upper Flex Joints
2-Rr Lower Flex Joints
2-Rr Upper Control Arms
2-Rr Lower Control Arms

680015:
2-Vertex Front Shocks

690015L:
1-Vertex Left Rear Shock

690015R:
1-Vertex Right Rear Shock

1179
1-Frt Forged Adjustable Track Bar

785BOX4:
1-1030BAG2
1-Exhaust Loop Delete
1-Pass Exhaust Flange

78630BAG6: *(Flag Nuts)*
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4-Fr Control Arm Flag Nuts
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2-Rr Control Arm Flag Nuts Rr Facing
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1146: *(Fr Sway Bar Quick Disconnects)*
1-94000964BAG2 Sway Link Bag
1-94000964BAG Fastener Bag
2-Sway Link Ends

1609BAG7: *(Fr Bump Stop)*
2-3/8" Flat Washers
2-3/8" x 3" Bolts
2-3/8" Flange Lock Nuts

1609BAG6: *(Rr Bump Stop)*
4-3/8" Flat Washers
4-3/8" x 3/4" Bolts
4-3/8" Flange Lock Nuts

1786BAG1: *(Rr Track Bar Bracket)*
1-Track Bar Sleeve
1-14mm Nylock Nut
1-14mm x 75mm Bolts
1-14mm Flat Washer
3-3/8" Flat Washers
2-3/8" x 1" Bolts
3-3/8" Flange Lock Nuts
1-3/8" x 1.25" Bolt

78630BAG2: (*Control Arm Hardware)*
4-14mm x 100mm Bolts
4-12mm x 80mm Bolts
8-14mm Flat Washers
4-14mm Nylock Nuts
4-12mm Lock Nuts
8-12mm Flat Washers

78630BAG3: *(Control Arm Hardware)*
4-12mm x 35mm Bolts
4-12mm Lock Nuts
12-12mm Flat Washers
4-12mm x 140mm Bolts
17-1/2" Flat Washers
13-1/2" x 1.5" Bolts
2-1/2" x 1.25" Bolts
2-1/2" Nylock Nuts
13-1/2" Lock Washers

1020BAG: (*Front Shock Relocation)*
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2-5/8" Top Lock Nuts
4-5/8" Flat Washers
2-1/2" x 1.25" Bolts
2-1/2" Nylock Nuts
4-1/2" Flat Washers
2-Upper Shock Washers

1681BAG3: (Rear *Sway Link Bag)*
4-Sleeves
4-1/2" Nylock Nuts
4-1/2" x 2.75" Bolts
8-1/2" Flat Washers

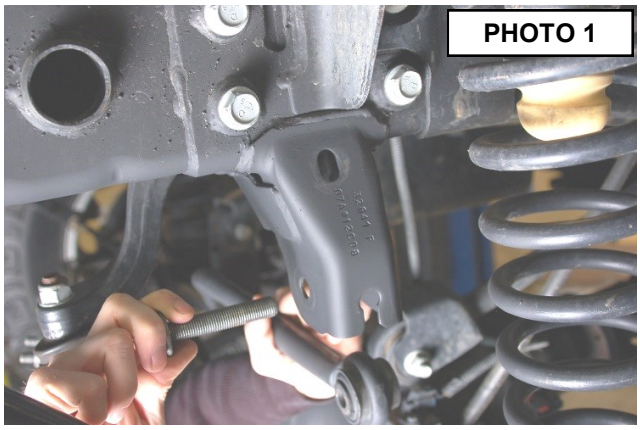
1030BAG2: *(Exhaust Bag)*
2-8mm x 80mm Bolts
2-8mm x 100mm Bolts

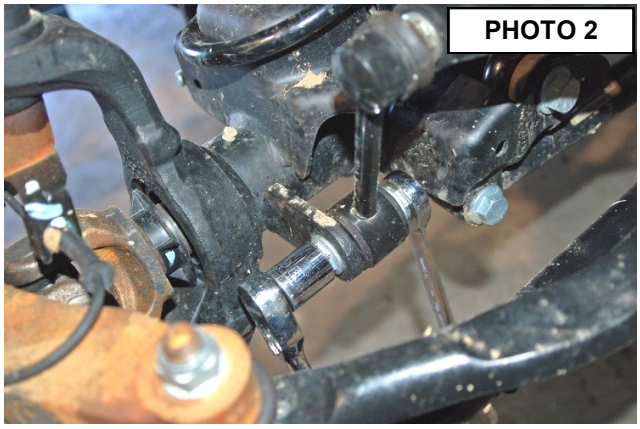
FRONT INSTALLATION INSTRUCTIONS

1. Prior to installing this kit, with the vehicle on the ground, measure the heights of your vehicle. This measurement can be recorded from the center of the wheel straight up to the top of the inner fender lip. Record the measurements.

LF:_____ ,RF:_____, LR:_____, RR:_____

2. Place vehicle in park and chock the rear wheels. Using a 21mm socket, remove bolt securing the front track bar to the frame. Retain stock hardware. **See Photo 1**. Raise the front of the vehicle with a jack and secure a jack stand beneath each frame rail behind the front control arms. Ease the frame down onto the stands. Support the axle with a floor jack.
3. Remove the front tires/wheels, using a 19mm deep well socket.
4. Using a 18mm socket and wrench remove the bottom sway bar bolts. **See Photo 2**.
5. Using an 18mm socket and 19mm wrench, remove the top of the sway bar link.
6. Remove the front factory skid plate with a 18mm socket.
7. Remove the lower shock bolt using a 18mm socket and wrench. Using a 14mm wrench unbolt the top of the shock

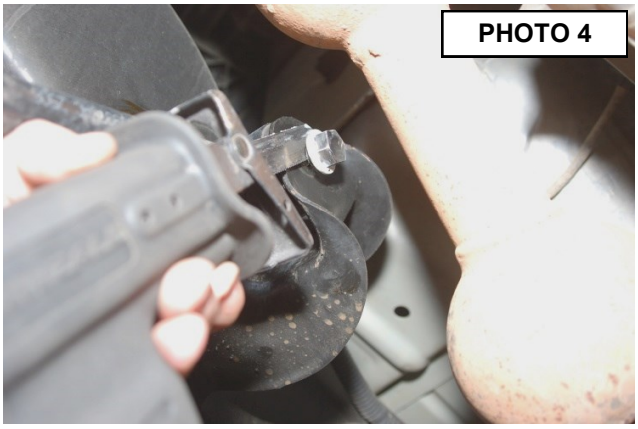




and remove. **See Photo 3.** Retain stock hardware.

8. On some models it will be necessary to remove the brake line bracket from the frame to allow the coils to be removed. Using a 10MM socket, remove the brake line bracket from the stock location.
9. Lower the axle with the floor jack to allow room for the coils to be removed. Remove stock coil springs. Retain upper coil isolators.
10. Remove the bolts securing the upper control arms to the axle and frame using a 18mm wrench/socket. It may be necessary to cut out the passenger side upper bolt as shown in **Photo 4** to remove the control arm. A new bolt is supplied in the hardware bag to replace this factory bolt. Retain factory axle end hardware.
11. Using a 21mm wrench, remove the bolts that secure the lower control arm to the axle and frame then remove the

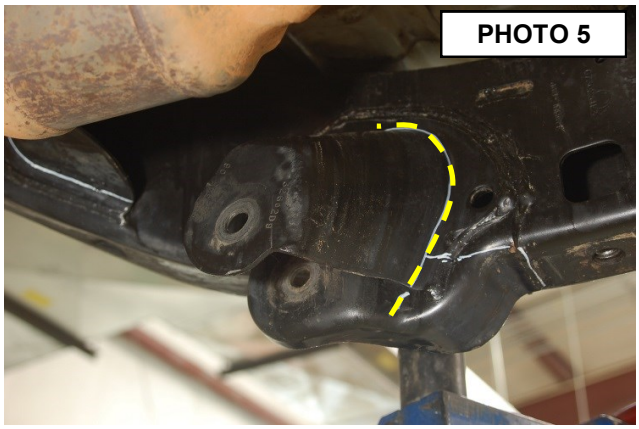


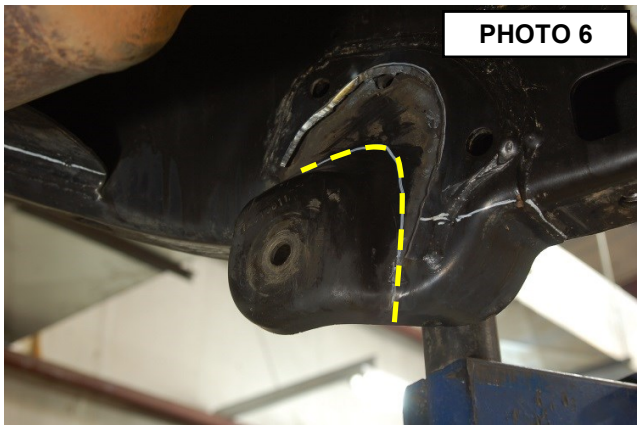


control arm. Retain factory axle end hardware.

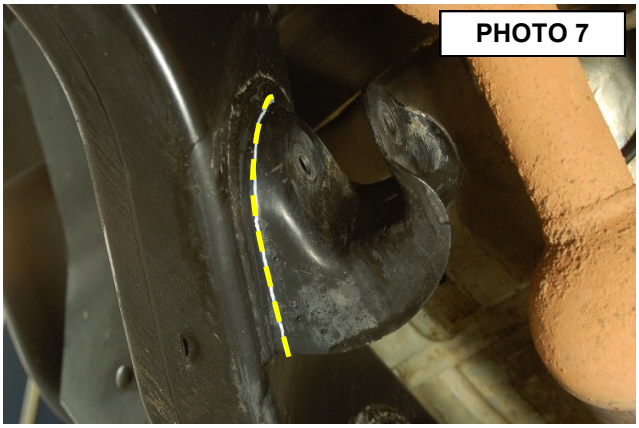
12. Using a 15mm wrench and an 8mm socket, remove the front driveshaft.
13. Using a 13mm and 15mm wrench, remove the exhaust Y pipe. **07-11 models refer to exhaust instructions on pages 19-20 of this instruction booklet.**
14. On the driver side, measure 2.5” from the converter, mark and cut using a reciprocating saw. **See Photo 27 on page 9.**

15. Next the upper and lower factory control arm pocket have to be removed to make clearance for the longer arms. This will be done using a cut off wheel in a die grinder or a reciprocating saw. Always use gloves and safety glasses.
16. First cut half of the lower control arm pocket on the passenger side as shown in **Photo 5**. Follow around the bottom edge where the bracket tapers down to the frame. Be careful not to cut through the frame. In **Photo 6** you can see where the first cut is made.
17. Next cut the other half of the control arm pocket as shown in **Photo 6**. Follow around the bottom edge where the bracket tapers down to the frame, then cut the bottom side of the bracket flush with the bottom of the frame.





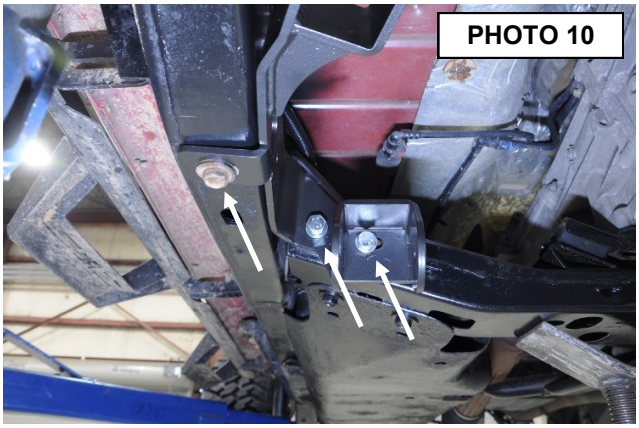
18. Finally cut the upper control arm pocket as shown in **Photo 7**. Follow around the bottom edge where the bracket tapers down to the frame.
19. Using a hand grinder, clean up the remaining control arm bracket mounts and any sharp burrs or jagged edges left from cutting off the control arm pockets. Paint the frame with a durable spray paint to prevent rusting. **See Photo 8**
20. Repeat steps 15-19 on the driver side control arm pockets.



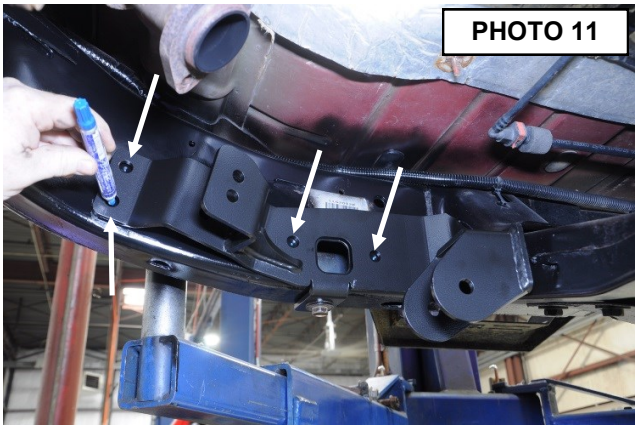


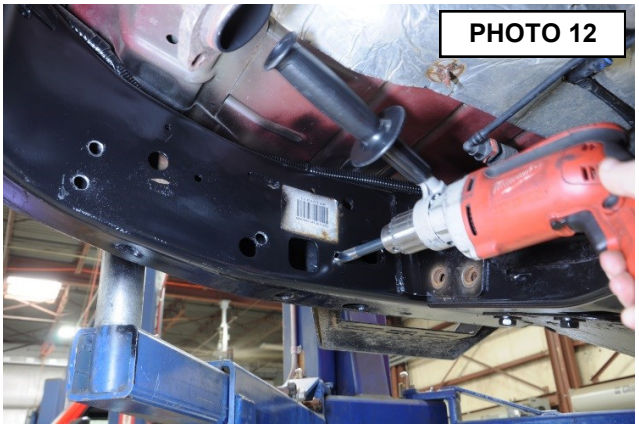
21. Using a jack, support the transmission crossmember.
22. Using an 18mm wrench and socket, remove the two mounting bolts and hardware. **See Photo 9.**
23. Install the supplied control arm bracket using the supplied 12mm x 140mm bolts, washers, and nuts (78630BAG3) in the crossmember mount and the supplied 12mm x 35mm bolt and washer (78630BAG3) in the bottom frame hole. Do not tighten at this time. **See Photo 10.**



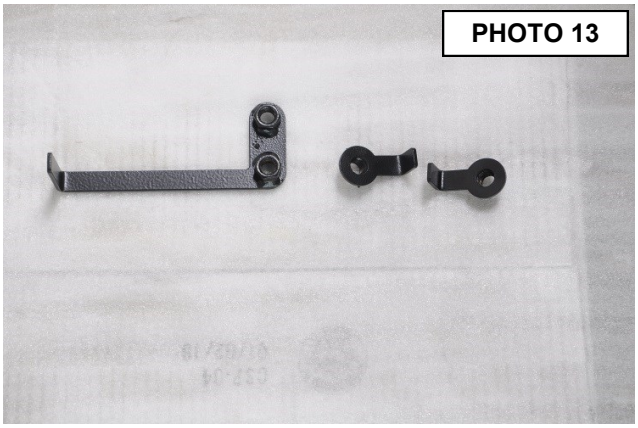


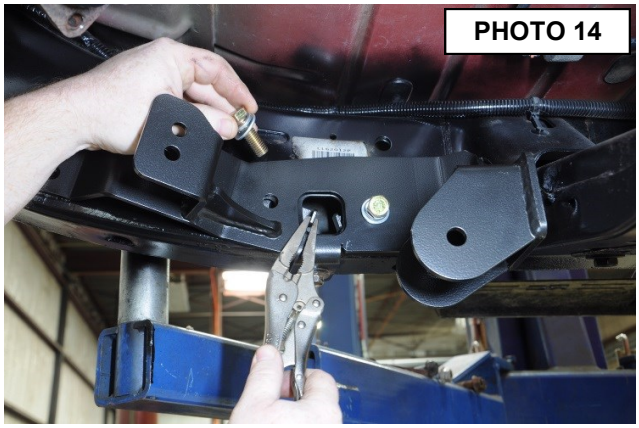
24. Using the bracket as a guide, mark the (4) holes to be drilled. **See Photo 11**.
25. Remove the control arm bracket.
26. Using a 17/32” drill, drill the (4) holes through the inside wall of the frame **ONLY**. **See Photo 12.**



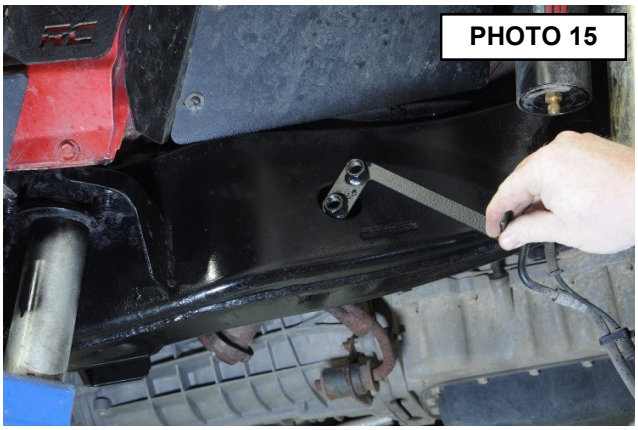


27. Locate the (3) supplied flag nuts for the passenger side control arm bracket (78630Bag6). **See Photo 13.**
28. Install the smaller flag nuts in the frame rail, through the square hole using the supplied 1/2” x 1.5” bolts, flat washers, and lock washers. Do not tighten at this time. **See Photo 14.**



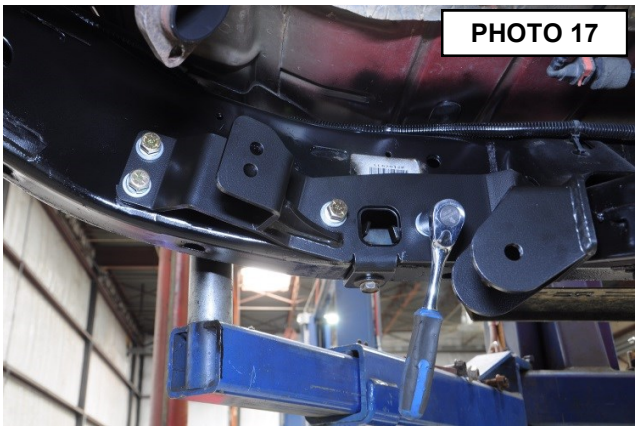


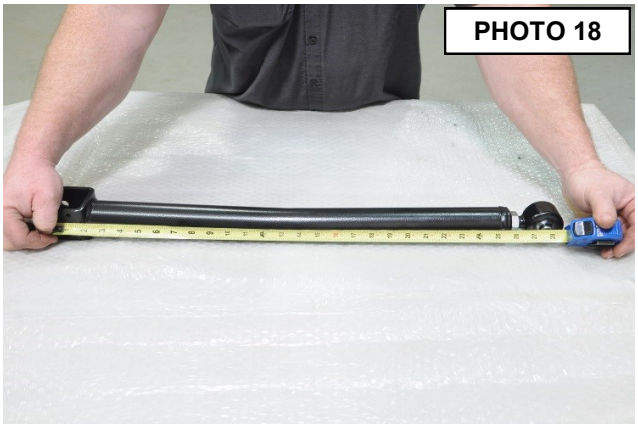
29. Install the double flag nut into the frame rail from the outside of the frame using the supplied 1/2” x 1.5” bolts, flat washers, and lock washers. Do not tighten at this time. **See Photo 15.**
30. Install the supplied 12mm x 140mm bolts, flat washers, and lock nuts through the front of the control arm bracket and the crossmember. Also, install the supplied 12mm x 35mm bolt and washer into the bottom of the frame. Torque to 55ft/lbs using a 17mm socket and wrench. **See Photo 16.**





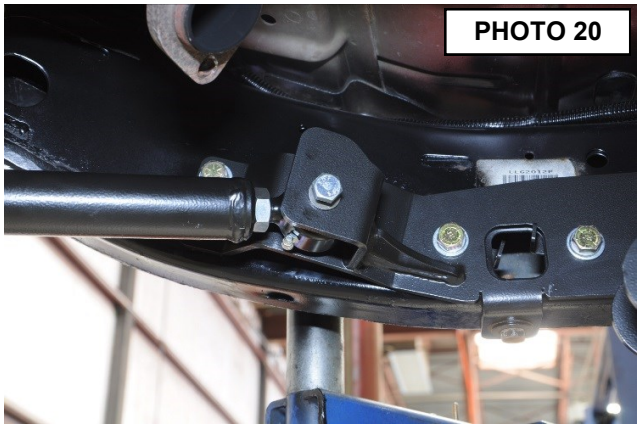
31. Torque the (4) 1/2” bolts to 65ft/lbs using a 3/4” socket. **See Photo 17.**
32. Repeat steps 21-31 for the driver side making sure the brake lines are secured out of harms way..
33. Install the smaller supplied flex joints in the supplied front upper control arms and adjust to a length of 27.75” center to center. **See Photo 18.**



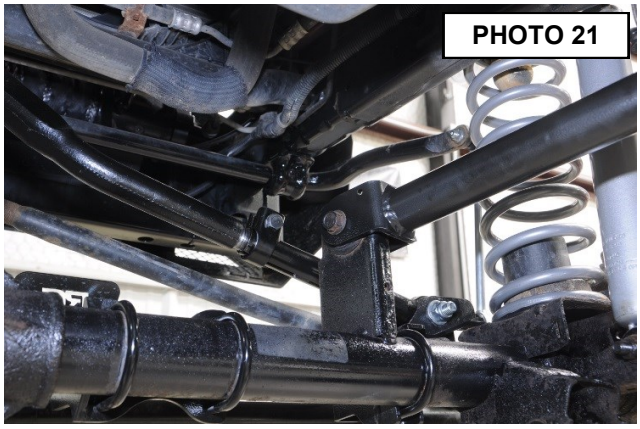


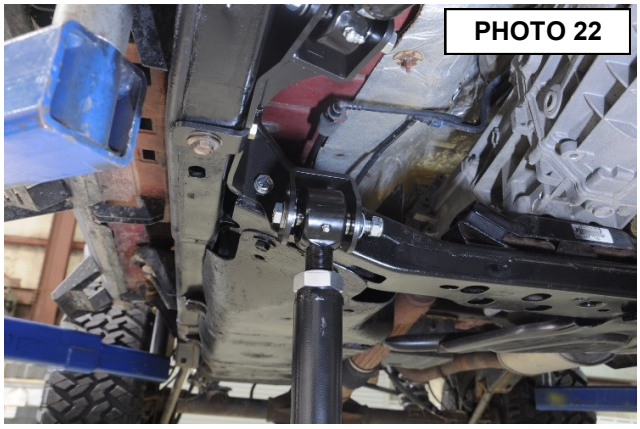
34. Install the larger supplied flex joints in the supplied front lower control arms and adjust to a length of 33.5” center to center. **See Photo 19.**
35. **These control arm measurements are only starting points and may need to be adjusted once the vehicle is back on the ground.**
36. Install the flex joint end of the upper control arms in the upper holes of the control arm brackets using the supplied 12mm x 85mm bolts, washers, and nuts. The grease fittings should be facing inward and down. Do not tighten at this time. **See Photo 20.**



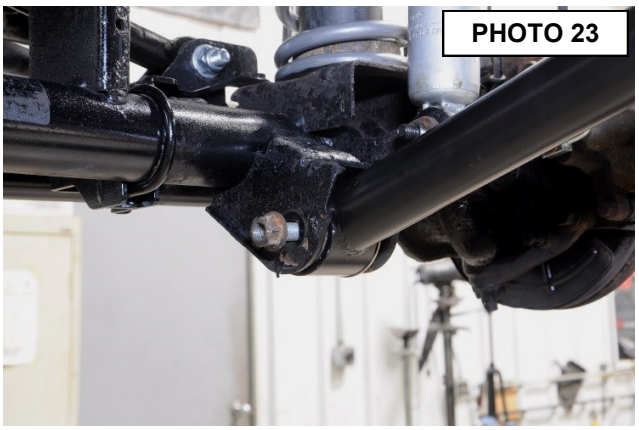


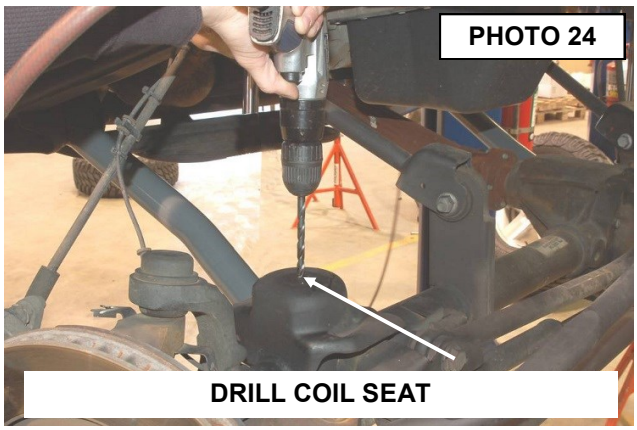
37. **2007-11 Models– At this time, install the modified exhaust using the factory hardware. Install all O2 sensors.**
38. Attach the upper control arms to the axle using the factory hardware. The small holes in the axle end of the control arms will go to the top. Do not tighten at this time. **See Photo 21.**
39. Install the flex joint end of the lower control arms into the control arm brackets using the supplied 14mm x 100mm bolts, washers, and nuts. The grease fittings and the bend of the control arm should be pointing up. Do not tighten at this time. **See Photo 22.**



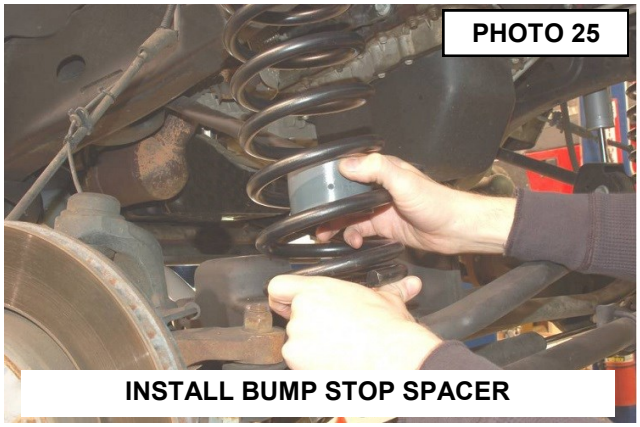


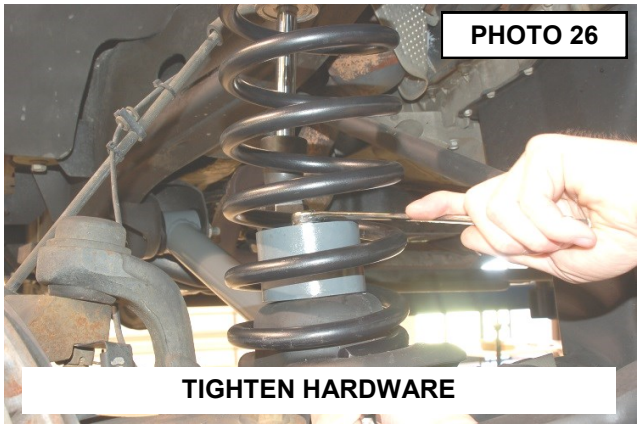
39. Attach the lower control arms to the axle using the factory hardware. Do not tighten at this time. **See Photo 23.**
40. Place the supplied 2” bump stop in place on the lower coil seat. Mark & drill using a 3/8” drill bit. **See Photo 16.**
41. Be sure the factory rubber isolators are in place and install the front coil springs with the 2” bump stop pucks as shown in **Photo 17**. Insert the coil into the upper tower first, followed by the lower seat. Be sure that the coils are rotated so that they seat properly. Raise the axle enough to hold the coil springs in place.



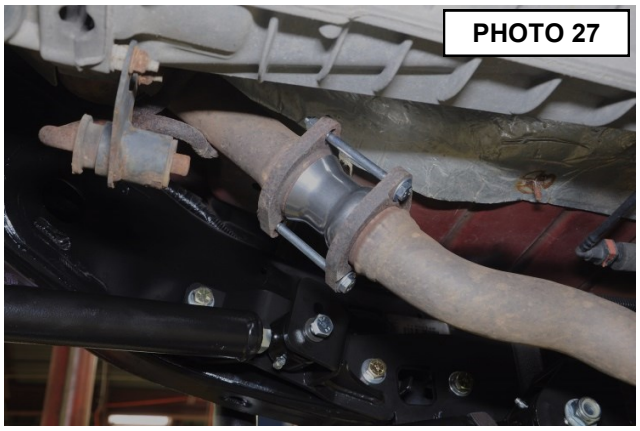


42. Secure the bump stop to the drilled hole in the lower seat using the supplied 3/8” x 3” bolts, washers and nuts. Tighten using a 9/16” wrench. **See Photo 18.**

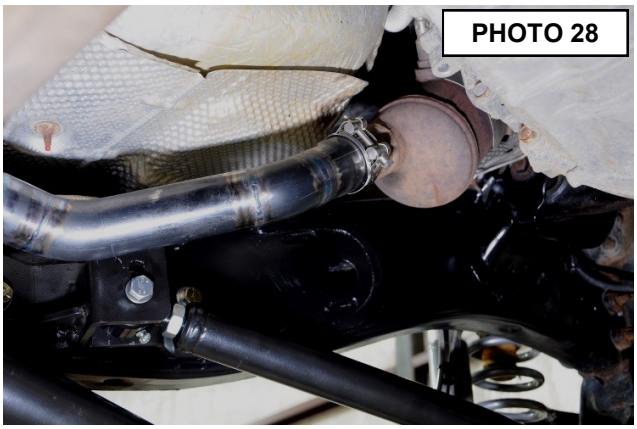


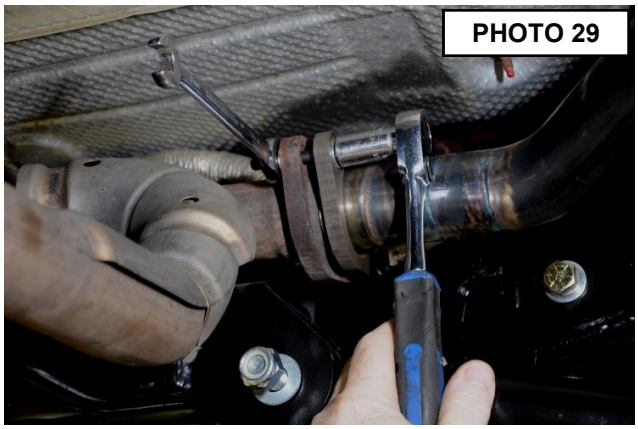


43. Measure 1.5” from the end of the exhaust Y pipe and mark. Using a reciprocating saw, cut the exhaust Y pipe at the mark. Clean the cut edge. Grind off the alignment tab at the end of the Y pipe. **See Photo 30 On Next Page.**
44. Install the supplied, long exhaust extension on the passenger side using the supplied 8mm x 100mm bolts and washers (1030BAG2). Torque to 18ft/lbs using a 13mm socket. **See Photo 27.**



45. Install the supplied new exhaust pipe on the driver side with the clamp and the factory hardware at the flange. Tighten all exhaust bolts using 10mm and 13mm wrenches. **See Photos 28 & 29.**



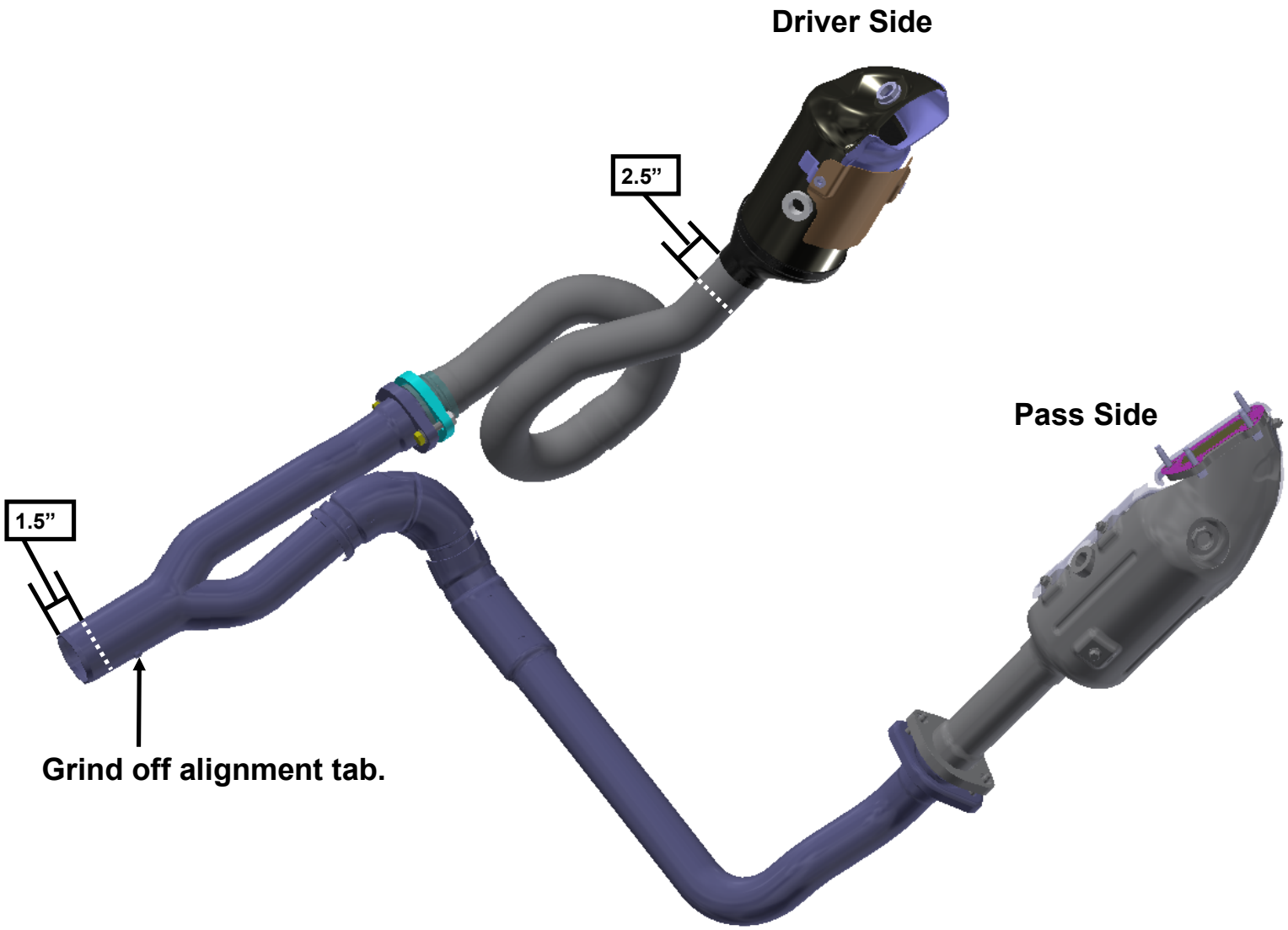


46. Install the front driveshaft.
47. Install the supplied upper shock relocation brackets using the supplied instructions (1020BAG).
48. Vertex shock kits refer to page 21, of this instruction booklet, for Vertex shocks install instructions. Install the supplied front shocks (660812) using the factory hardware on the lower mount and the supplied hardware for the upper mount (1020BAG).
49. Install wheels and tires and lower Jeep to the ground.
50. The front track bar (1179) will be installed after the rear installation is complete.
51. Install the supplied 1146 (785BOX1) sway bar quick disconnects according to the included instructions.
52. Torque the control arms to factory specs at the axle brackets. At the frame brackets, torque the upper control arm hardware to 75ft/lbs using an 18mm socket and wrench and the lower control arm to 120ft/lbs using a 21mm socket and wrench.
53. Tighten the control arm jam nuts using a 1-1/8” wrench for the upper control arms and a 1-7/8” wrench for the lower control arms.
54. Grease control arm flex joints.

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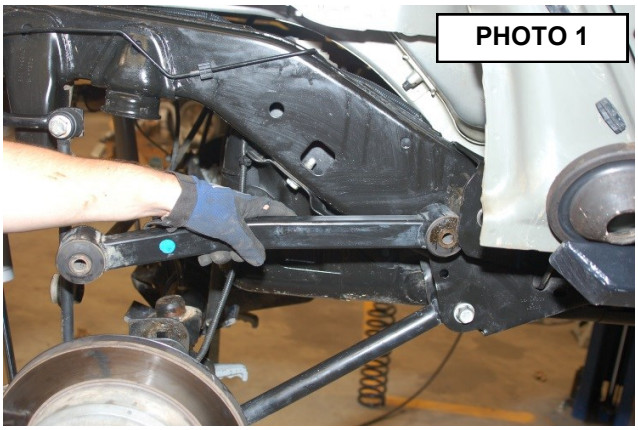
Exhaust Cutting 12-18 Models

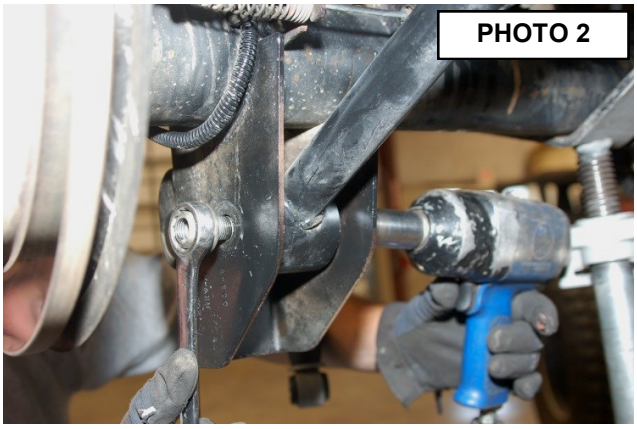
PHOTO 30



REAR INSTALLATION INSTRUCTIONS

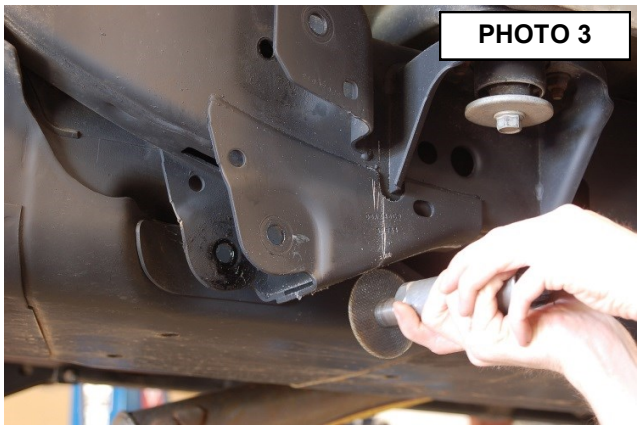
1. Chock front wheels. Jack up the rear of the vehicle and support the vehicle with jack stands, so that the rear wheels are off the ground. Position a jack so it supports, but does not raise the rear axle.
2. Remove the rear tires/wheels, using a 19mm deep well socket.
3. Using a 21mm socket and wrench remove the track bar from the frame on the passenger side. Using a 21mm socket remove the track bar bolt at the axle and remove the track bar from the vehicle. Retain the frame side stock hardware for reuse.
4. Using a 21mm socket loosen, but do not remove the bolts securing the lower control arms at both the axle and frame.
5. On the rear of the vehicle remove the factory sway bar link using a 18mm socket and wrench on the lower. Remove the upper hardware using a 18mm wrench and a 19mm wrench on the ball joint end.
6. Using a 10mm wrench, unbolt the brake hose bracket at the frame. Retain hardware for later use.
7. Remove and discard the rear shocks using a 18mm wrench. Retain stock hardware.
8. Lower the axle enough to remove the stock coil springs. Retain factory upper coil spring isolator.
9. Remove the upper control arms from the frame and axle using a 18mm wrench. Retain the axle end factory hardware for reuse. **See Photo 1.**
10. Using a 21mm socket remove the bolts securing the lower control arms at both the axle and frame. Passenger side lower shown in **Photo 2.** Remove the control arms and retain the axle end hardware for reuse.
11. Next the lower factory control arm pockets will have to be removed to make clearance for the longer arms. This will

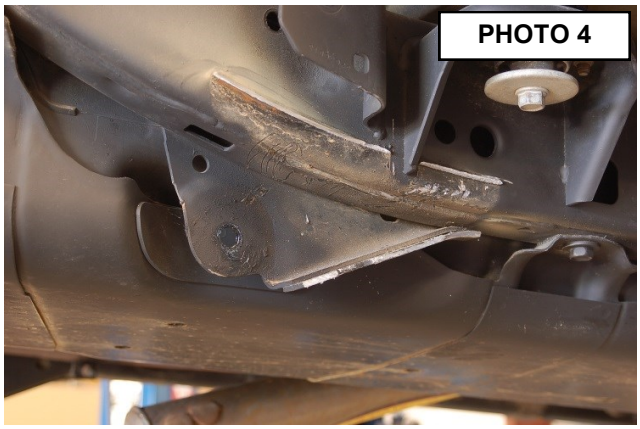




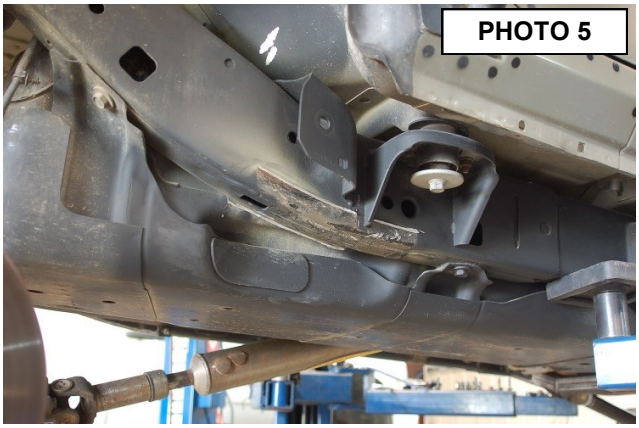
be done using a cut off wheel in a die grinder. Always use gloves and safety glasses.

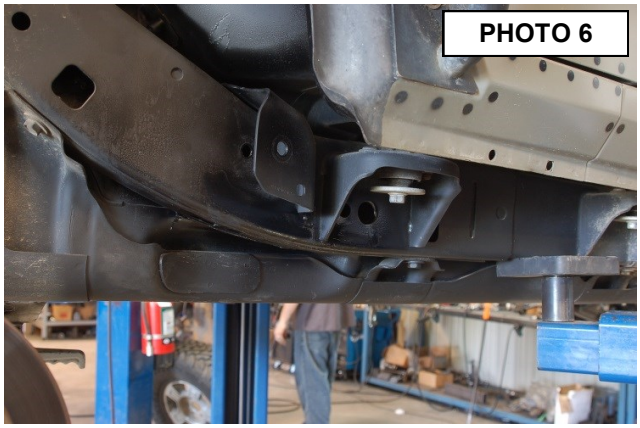
12. Starting on the passenger side control arm bracket use a cut off wheel to split the bracket into two halves. Cut along the center bottom surface. **See Photo 3.** Then cut the weld that connects the bracket to the outside of the frame rail. **See Photo 4**. Be careful not to cut into the frame rail.



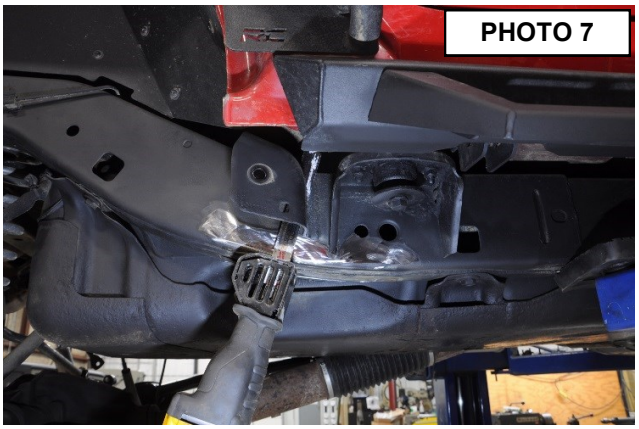


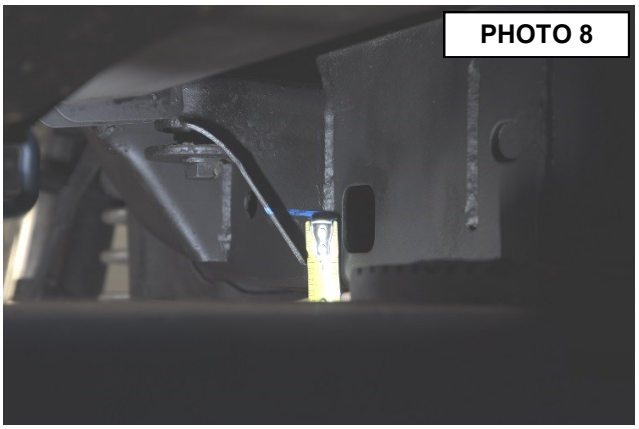
13. Place a piece of cardboard or thin sheet metal between the fuel tank and inside of the frame, this will help keep sparks off the fuel tank while cutting the inside of the lower control arm pocket.
14. Follow along the bottom side of the frame cutting through the control arm pocket. **See Photo 5**.
15. Using a hand grinder clean up any sharp burrs or jagged edges left from cutting off the control arm pocket. Paint the frame with a durable spray paint to prevent rusting. **See Photo 6**.



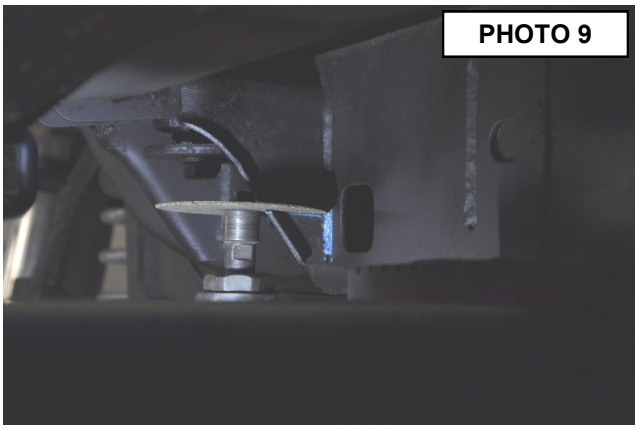


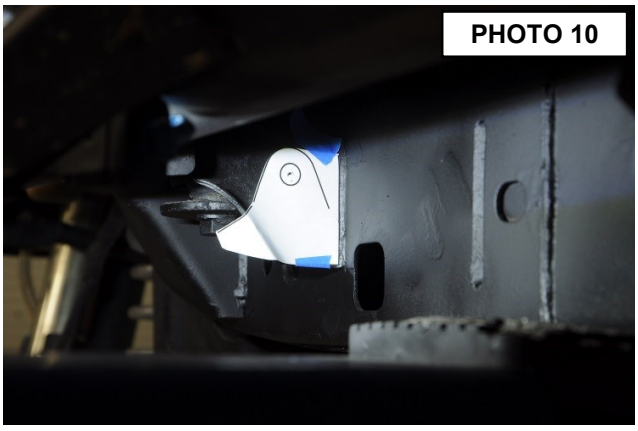
16. Using a reciprocating saw, cut the upper control arm mount off of the frame. Using a hand grinder clean up any sharp burrs or jagged edges left from cutting off the control arm pocket. Paint the frame with a durable spray paint to prevent rusting. **See Photo 7.**
17. On the front of the body mount, measure 1" from the bottom and mark. **See Photo 8.**



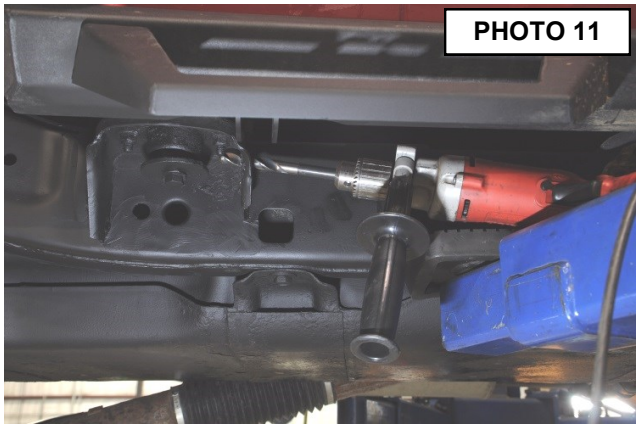


18. Cut the mount along the marks made in step 17. Sand and paint cut edges. **See Photo 9**.
19. Using the supplied template, mark the front side of the body mount. **See Photo 10.**





20. Drill using a 9/16” drill. **See Photo 11.**
21. Using an 18mm socket, remove the bolt in the gas tank skid. **See Photo 12.**



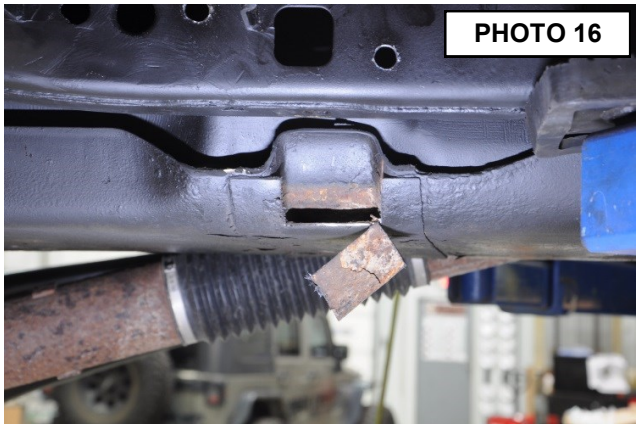


22. Using a reciprocating saw, cut the skid plate mount off as flush with the skid as possible. Sand and paint cut edges. **See Photo 13.**
23. Measure down 1.5” and mark the gas tank skid. The width should be 2.5”. Cut the marked areas, sand and paint the cut edges. **See Photos 14-16.**









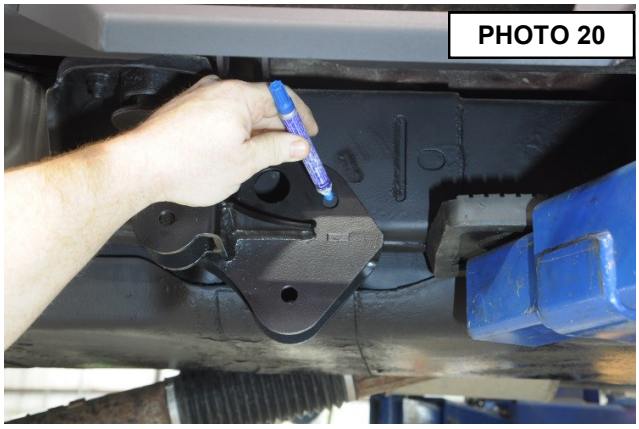
24. On the rear of the body mount, measure up from the bottom 1” and mark. **See Photo 17.**
25. Cut the body mount along the mark made in step 24. Sand and paint cut edges. **See Photo 18.**



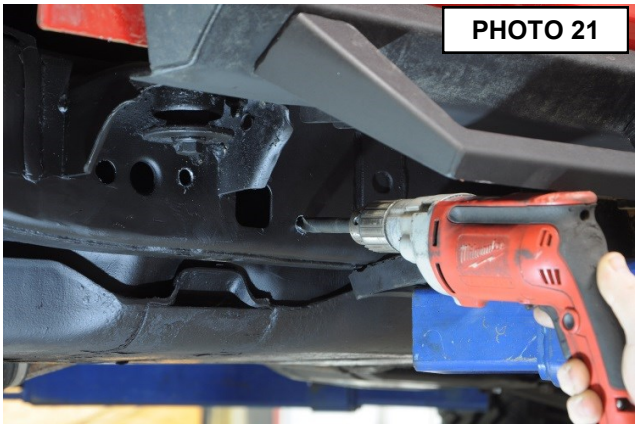


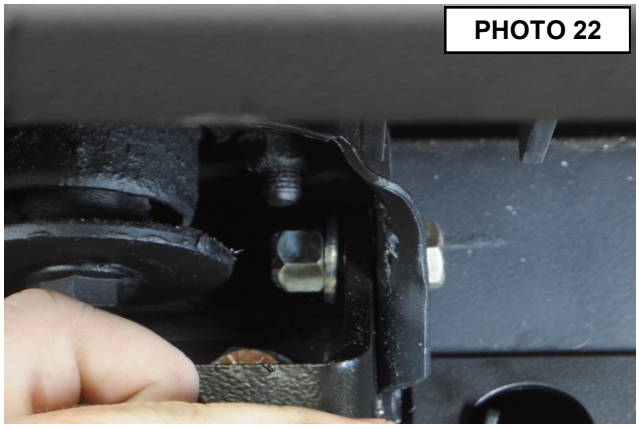
26. Install the supplied control arm bracket on the frame, use the bracket as a guide to mark the 2 holes on the side of the frame for drilling. **See Photos 19 & 20.**



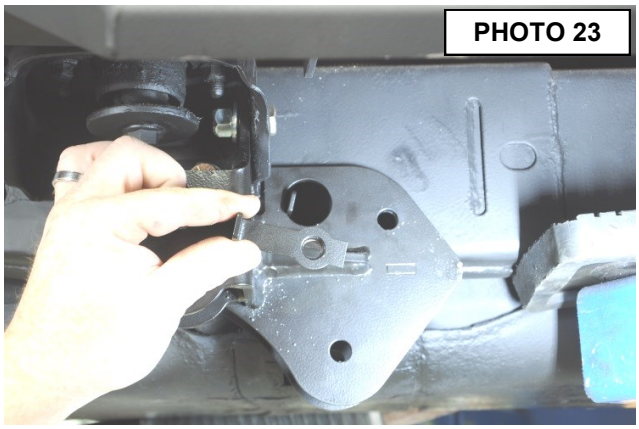


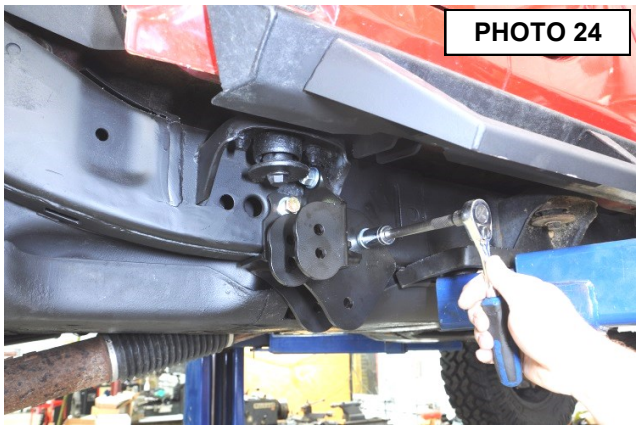
27. Drill the marked holes using a 17/32” drill, **only through the outside wall of the frame rail**. (Passenger side will have 2 17/32”holes in the frame and 1 17/32” hole in the body mount. Driver side will have 3 17/32” holes in the frame rail, 1 1-1/4” hole in the frame rail and 1 17/32” hole in the body mount.) **See Photo 21.**
28. Attach the control arm bracket to the body mount using the supplied 1/2” x 1.25” bolt, washers, and nylock nut (78630BAG3). Do not tighten at this time. **See Photo 22.**





29. Install the supplied flag nuts, longer flag goes to the rear, into the frame and attach using the supplied 1/2” x 1.5” bolts and lock washers (78630BAG3). Do not tighten at this time. On the driver side bracket, you will use the flag nut that has the S shape for the bottom hole, it has to be installed first. Use the supplied 12mm x 35mm bolt and washer (78630BAG3) for the bottom hole on the passenger side bracket. **See Photo 23.**
30. Torque the 1/2” hardware to 65ft/lbs using a 3/4” socket. Torque the 12mm hardware to 55ft/lbs using an 18mm socket. **See Photo 24.**



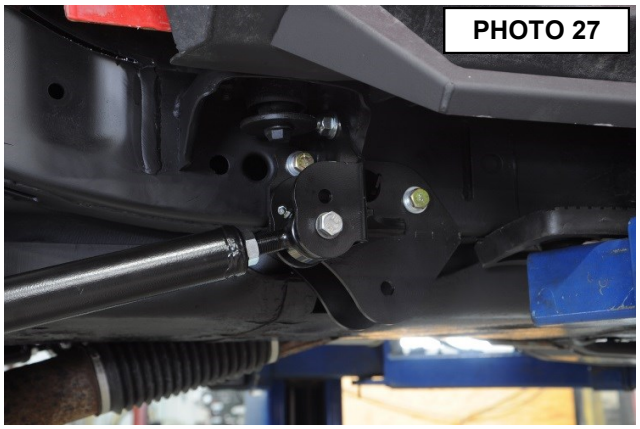


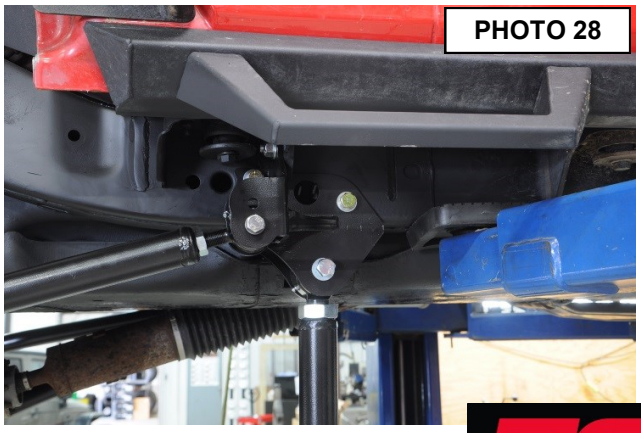
31. Repeat steps 9-30 on the opposite side of the vehicle.
32. Adjust the upper control arms to 25 1/4” long center of hole to center of hole. This is a starting point measurement and may need to be adjusted once the vehicle is on the ground. **See Photo 25.**
33. Adjust the lower control arms to 32 1/8” long center of hole to center of hole. This is a starting point measurement and may need to be adjusted once the vehicle is on the ground. **See Photo 26.**



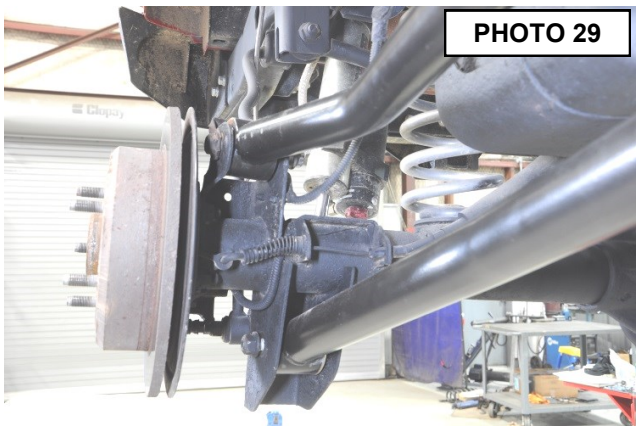


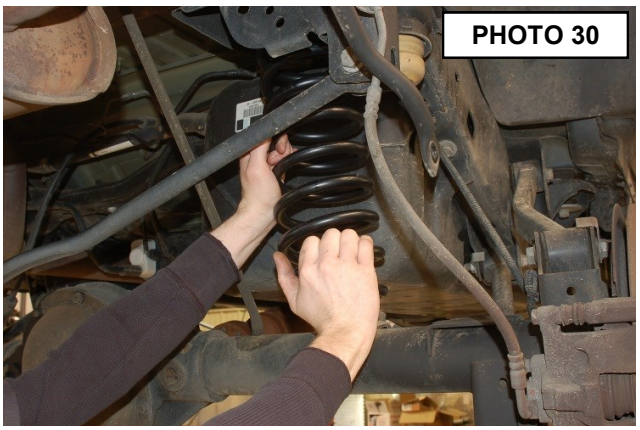
34. Install the upper control arm using the supplied 12mm x 180mm bolt, washers, and lock nut (78630BAG2). Do not tighten at this time. **See Photo 27.**
35. Install the lower control arm into the bottom mounting hole using the supplied 14mm x 100mm bolts, washers, and nylock nut (78630BAG2). Do not tighten at this time. **See Photo 28.**



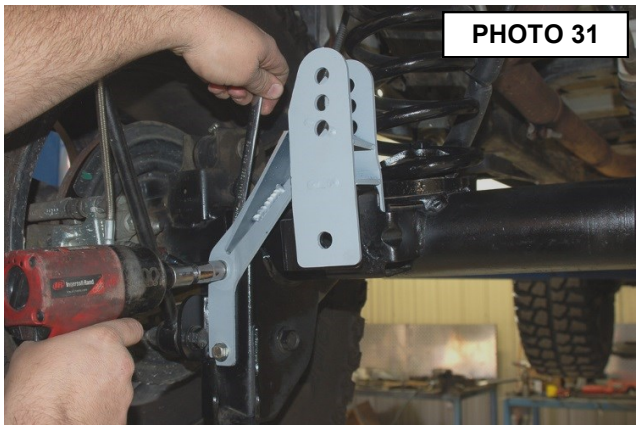


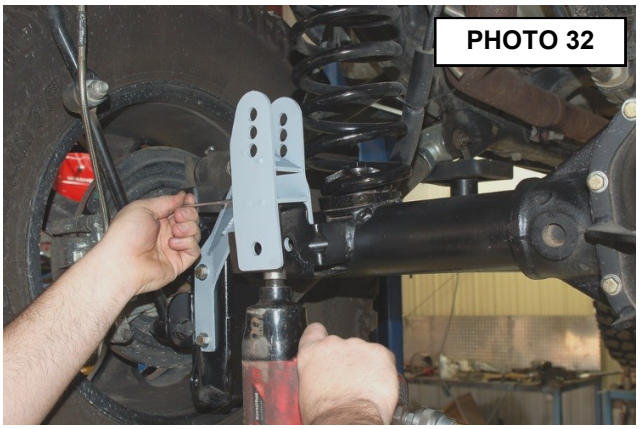
36. Attach the control arms to the axle mounts using the factory hardware. Do not tighten at this time. **See Photo 29.**
37. Install the top of the coil back onto the coil seat making sure the factory coil spring isolator is installed. When installing the bottom of the coil, make sure you install the coil spring angle correction bracket on the lower seat with the thicker part of the spacer to the rear of the vehicle. This bracket helps take out any bow in the coil spring when adjusting the pinion angle. Lower vehicle slightly, watching coils to assure they properly seat on top. **See Photo 30.**





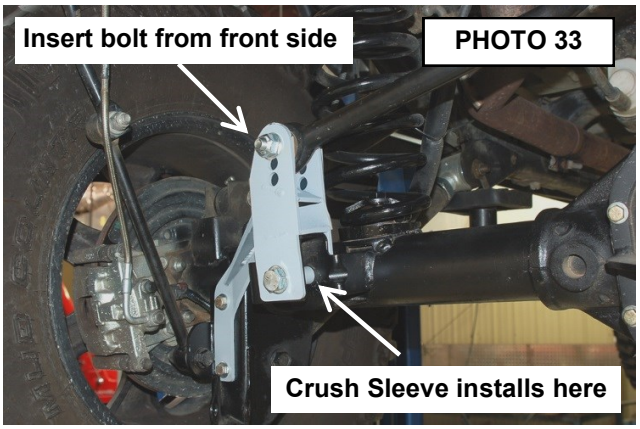
38. Position the rear track bar bracket over the rear factory track bar mount. Verify that the original track bar mounting hole and the hole in the new track bar bracket are aligned vertically. Using the track bar bracket as a template mark and drill a 13/32” hole in the top of the original track bar mount from the top.
39. Install the .375-16 x 1” bolts, washers, and nuts through track bar brace and secure with flange nut using a 9/16” wrench and socket. **See Photo 31.**



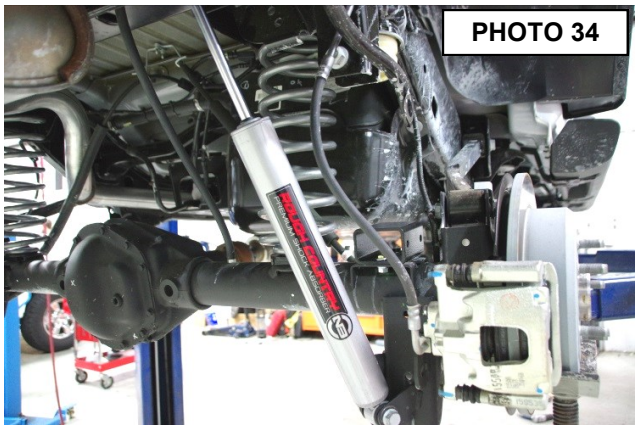


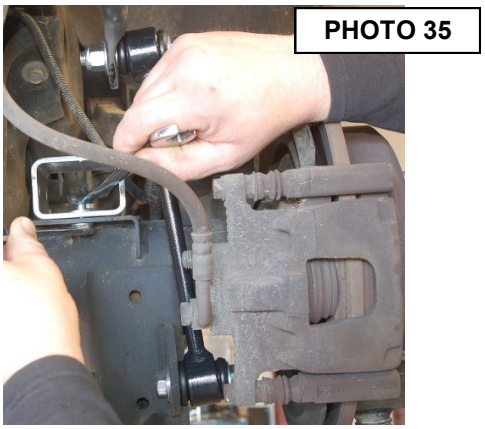
40. Install the 3/8” x 1 1/4” long bolts and flange lock nuts as shown in **Photo 32** through the drilled hole. Tighten with a 9/16” socket and wrench.
41. Insert the supplied crush sleeve, inside the factory track bar mount. Insert the supplied 14mm” x 80mm” bolt through the bracket, factory mount, and sleeve secure using the washer and nut. Tighten.
42. Install the track bar in the track bar bracket with the supplied 14mm x 80mm bolt washers & nut with the head of the bolt on the front by the coil spring. It may be necessary to move the axle up or down with the floor jack to align the hole with the track rod. See **Photo 33.**

⚠ NOTICE The top hole in the track bar bracket is for 6” of lift, middle **(use this hole)** for 4” of lift and the bottom hole is for 2.5”-3.5” of lift.

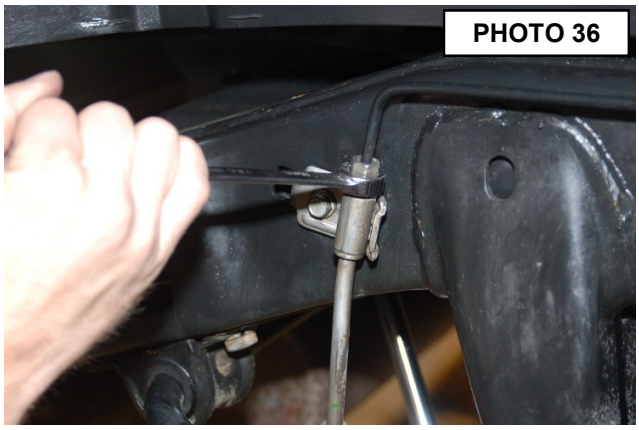


43. Locate the 4 sway bar link sleeves. Insert the sleeves into the sway bar link bushings. Using the supplied .500 x 2.75” bolts, washers and nuts from 1681bag3, install the sway bar links to the sway bar, and axle mount and tighten using a 13/16” socket and 7/8” wrench. **Make sure the bolts are installed with the HEAD of the bolt toward the tire.**
44. Vertex shock kits refer to page 21, of this instruction booklet, for Vertex shocks install instructions. Install the rear Rough Country shocks using the factory hardware, using a 16mm socket for the top, and a 18mm socket for the bottom. **See Photo 34**.
45. Install the rear bump stop spacers on the axle and secure with the supplied 3/8” x 3/4” bolts, washers, and nuts from 1609bag6. **See Photo 35**.





46. Remove the rubber brake line from the steel line using a 12mm wrench as shown in **Photo 36** and remove the brake line from the caliper using a 15mm wrench.
47. Install the new bracket using a 10mm wrench and stock hardware in factory location. Install the new brake line on the hard line and tighten. Install spring clip as shown in **Photo 37** and secure the caliper end of the brake line with supplied crush washers, using a 15mm wrench to tighten.





48. Reinstall the rear tires/wheels, using a 19mm deep well socket.
49. Lower the vehicle to the floor.
50. Torque the control arms to factory specs on the axle bracket. At the frame bracket, torque the upper control arm hardware to 75ft/lbs using an 18mm socket and wrench and the lower control arm to 120ft/lbs using a 21mm socket and wrench.
51. Tighten the jam nuts using a 1 1/” wrench and a 1 7/8” wrench.
52. Install the front track bar into the axle bracket, you may have to turn the steering wheel to move the axle left and right for the bolt hole to align.
53. Next measure from each tire to the frame making sure the front axle is centered. If needed the track bar can be removed and adjusted to the correct length to center the axle. After the adjustment all complete tighten the jam nut with a adjustable wrench.

54. Remove the e-brake cable bracket from the body using a 10mm wrench as shown in **Photo 38**. Remove the bracket from the e-brake cable as shown in **Photo 39** to allow slack in the e-brake cables.



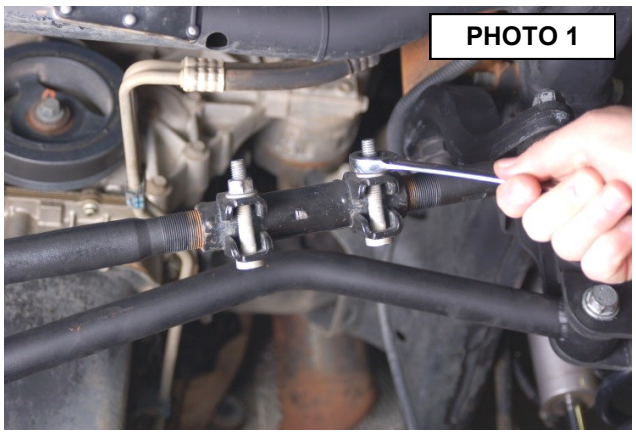


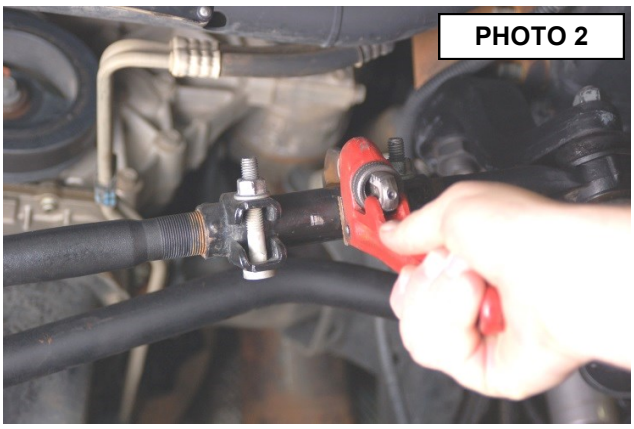
POST INSTALLATION

⚠ NOTICE The draglink must be adjusted to the center steering wheel <u>BEFORE</u> the vehicle is driven. Failure to do so will cause a computer error, odd handling, and poor performance

1. Adjust front draglink to center the steering wheel before driving by loosening the two bolts and turning the adjustment collar. **See Photo 1 & 2**
2. Check all fasteners for proper torque. Check to ensure there is adequate clearance between all rotating, mobile, fixed and heated members. Check steering for interference and proper working order. Test brake system.
3. Perform steering sweep. The distance between the tire sidewall and the brake hose must be checked closely. Cycle the steering from full turn to full turn to check for clearance. Failure to perform inspections may result in component failure.
4. Re-torque all fasteners after 500 miles and recheck after 1000 miles. Alignment must be checked by a qualified mechanic. Visually inspect components and re-torque fasteners during routine vehicle service.
5. Readjust headlights to proper settings.
6. Have a qualified alignment center realign the front end, to the factory specifications immediately.

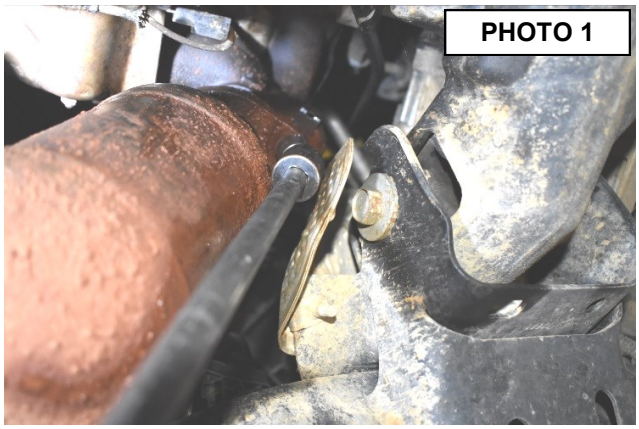
Caster	preferred	4.6 degree	range +,- 1 degree
Camber	preferred	–0.25 degree	range +,- 0.63 degree
Toe-in	preferred	0.15degree	range +,- 0.15 degree

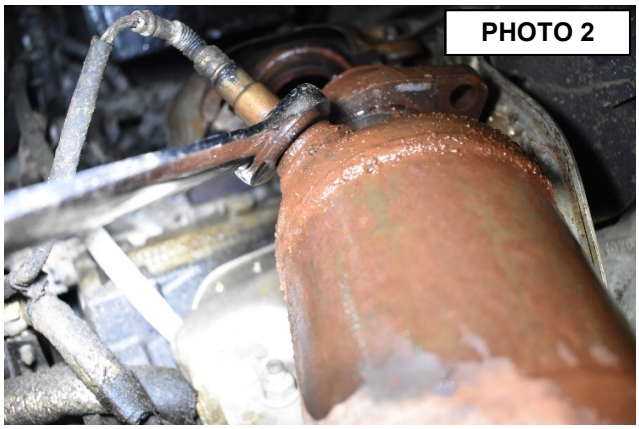




2007-11 Exhaust Modification Instructions

1. Support the transmission with a jack stand.
2. Using a 15mm socket, remove the three factory bolts, from the bottom of the crossmember, that hold the transmission. Retain hardware.
3. Next remove the two factory bolts that connect the skid plate to the crossmember, using a 15mm socket. Retain hardware.
4. Remove four factory bolts holding the crossmember with a 18mm socket and wrench, then remove the crossmember. Retain factory hardware.
5. Using a 15mm socket, remove the 4 exhaust bolts from the manifolds. **See Photo 1.**
6. Using a 22mm wrench, remove all of the O2 sensors from the exhaust system. **See Photo 2.**

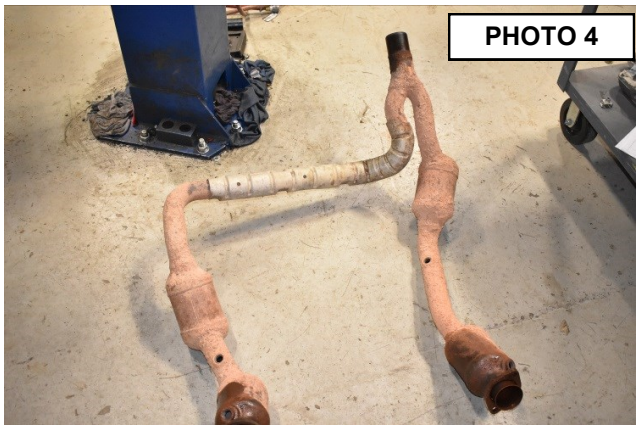

PHOTO 1


PHOTO 2

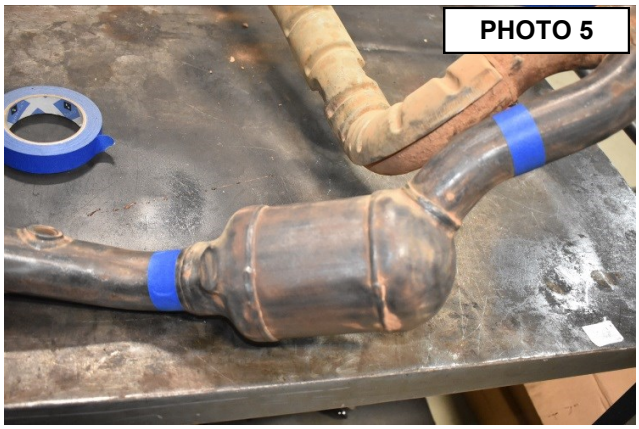
7. Using a 16mm wrench to loosen the exhaust clamp at the rear of the Y-pipe. **See Photo 3.**
8. Carefully remove the exhaust Y-pipe from the Jeep. **See Photo 4**

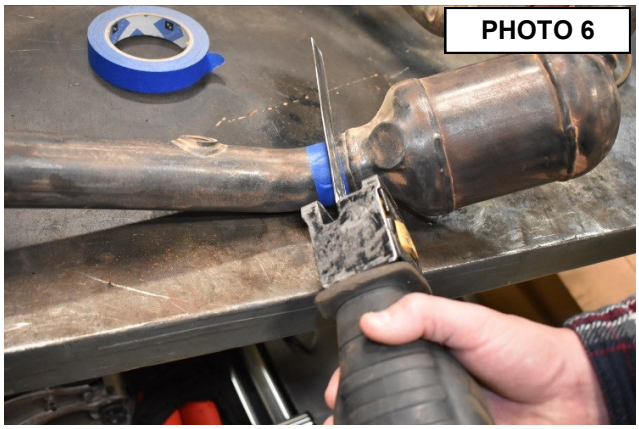


PHOTO 3

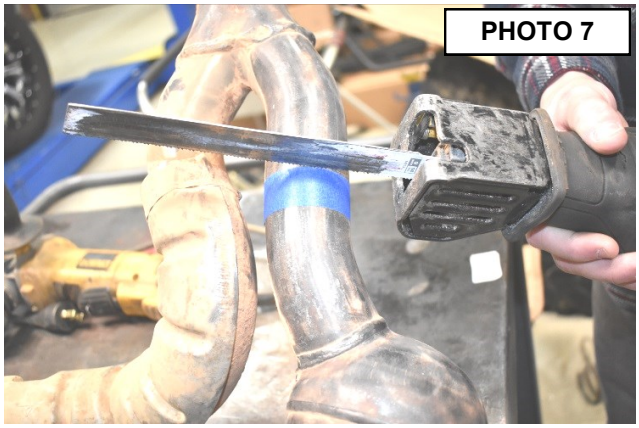

PHOTO 4

9. Clean the exhaust Y-pipe using a wire brush.
10. On the driver side section of the Y-pipe, use tape to mark the 2 cuts required. It is recommended to mark the exhaust on the **straightest** part of the section possible. This way when you rotate the exhaust it will line back up. **See Photo 5.**
11. Cut the exhaust in the 2 marked spots. **A straight cut is crucial to final alignment & fitment See Photos 6 & 7.**


PHOTO 5

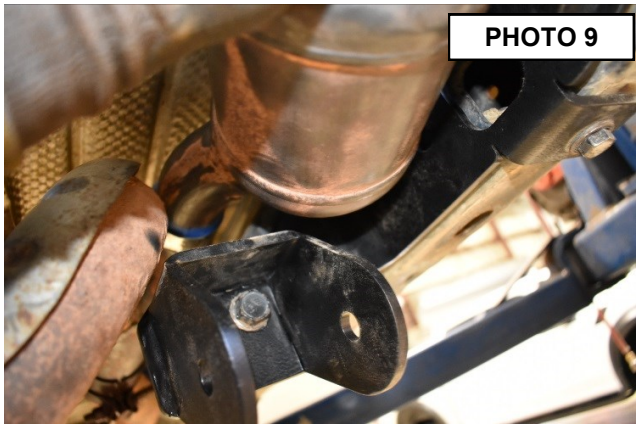

PHOTO 6

12. Refer back to the main instructions to install the supplied control arm brackets, steps 15-32.
13. Install the 2 sections of the Y-pipe back onto the Jeep, using the factory hardware. **See Photo 8.**



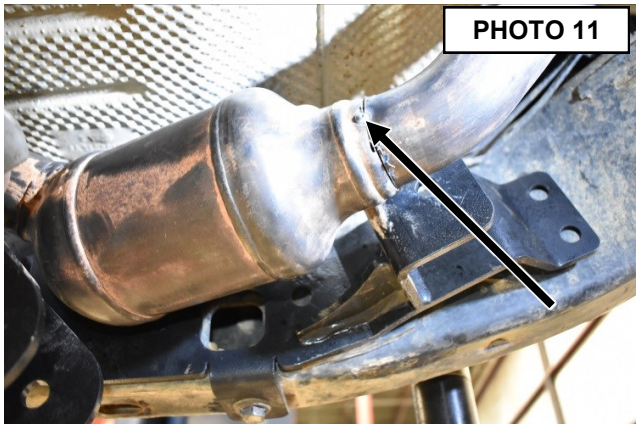


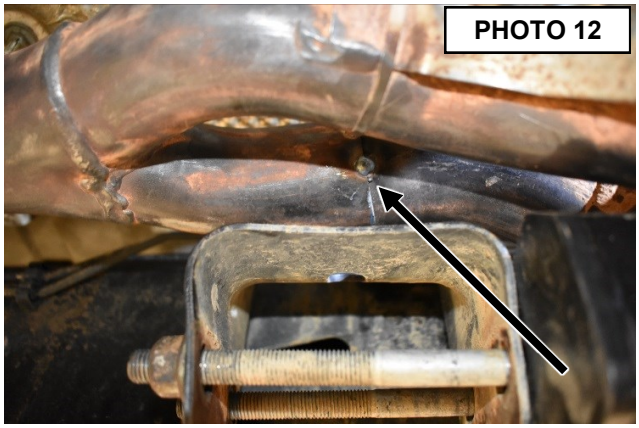
14. Place the cutout portion of the exhaust back into place. You will need to slightly rotate this section so that it is not coming into contact with the new control arm bracket. **2010-2011 Models–** Make sure the O2 sensor is not making contact with any part of the Jeep. **See Photos 9 & 10.**





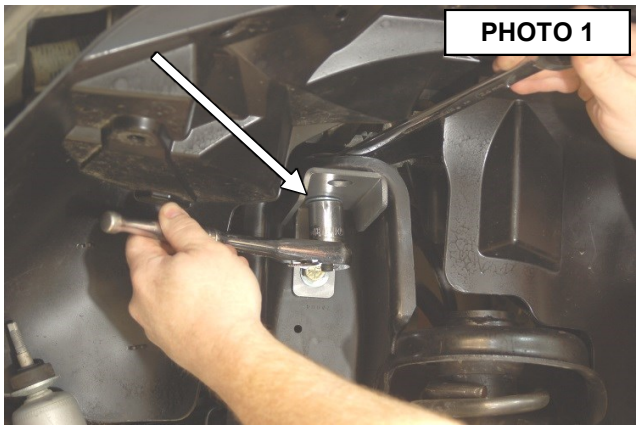
15. Once you have the correct position, tack weld the exhaust at both ends. It is recommended to double check that there is no clearance issues and then place a small bead of weld on both ends of the exhaust to ensure there is no movement during removal. **See Photos 11 & 12.**
16. Remove the exhaust and complete the welding process.
17. Continue on with step 33.

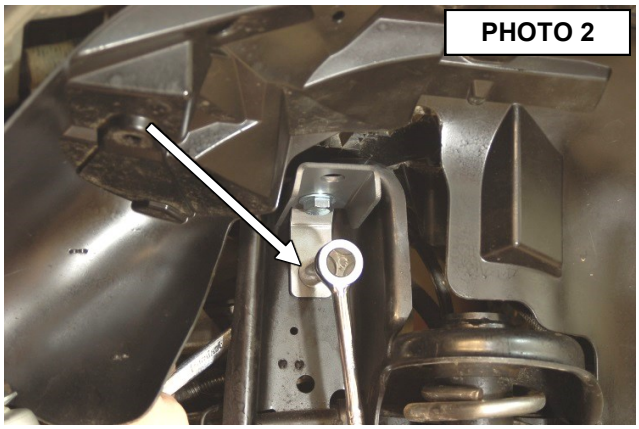




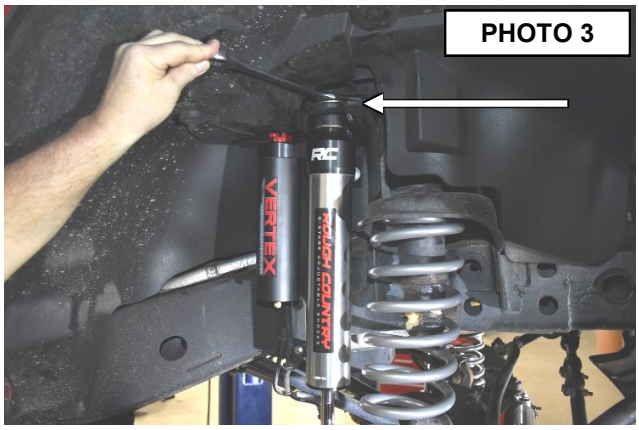
Vertex Shock Installation Instructions

1. Locate the shock relocation bracket and position on the inside of the factory upper shock tower. Apply thread-lock and insert the 5/8” x 1.5” bolt and washer into the rear hole of the relocation bracket though the factory shock mount hole. Place the 5/8”, thick washer and nut on top of the shock tower and tighten with a 15/16” socket and wrench. **See Photo 1.**
2. Apply thread lock to the 1/2” hardware and place the 1/2” x 1.25” bolt and washer though the slotted hole in the relocation bracket and the factory hole in the side of the shock tower. Insert 1/2” washer and nut on the back side of the shock tower and tighten with a 3/4” socket and wrench. **See Photo 2.**





3. Install the Rough Country Vertex shocks part # ***680015*** as shown in **Photo 3** with the supplied stud bushings, cup washers and nuts. Make sure that the reservoir on the shock has been rotated as shown as close to the frame. **See Photo 4.**
4. Install the Rough Country Vertex shock in the lower mount with the factory hardware. Tighten factory hardware using a 18mm wrench.





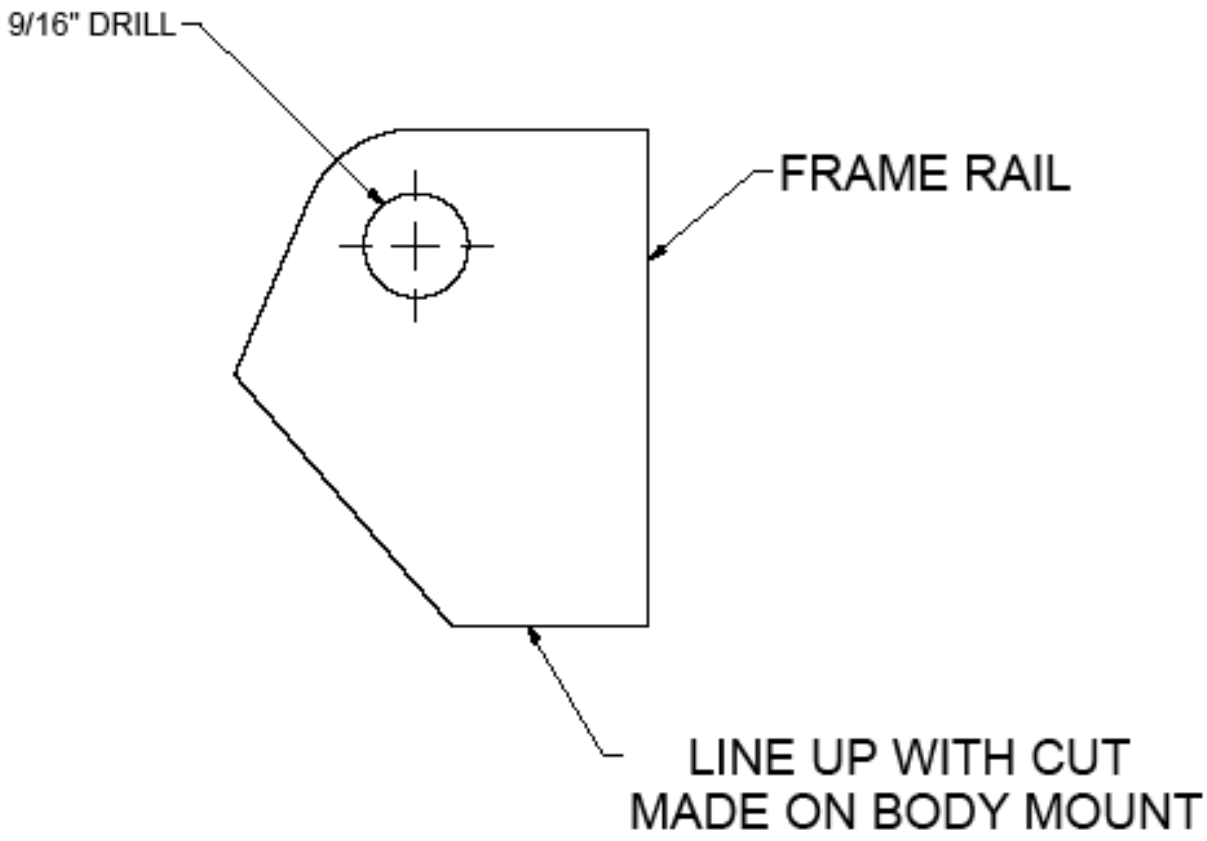
5. Install the Rough Country Vertex shock part # ***690015L*** on the driver side as shown in **Photo 5** using the factory hardware. Tighten using a 15mm socket for the top, and a 18mm socket for the bottom. Be sure to install the shocks on the correct shock installation for part # ***690015R*** on the passenger side. **See Photo 6.**






ROUGH COUNTRY
RC

Body Mount Drilling Template



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