



INSTALLATION MANUAL

Vehicle: 2019-2024 Chevrolet Silverado 1500 4WD & GMC Sierra 1500 4WD

Kit Part # BJK11401FRS & BJK11402FRS

Level 4 of 5 Install

Install Time: 30-40 hours

****NOTE:** Read through entire installation manual including the pre-install notes before deciding whether to attempt the procedure. Do not attempt if you do not possess the proper know-how and tools necessary to complete the installation.

FOR ANY TECHNICAL QUESTIONS OR SUPPORT, PLEASE CONTACT BAJA KITS

Contact: Tel: 949.566.8615 • Tech-Baja@ridefox.com

REV111224

www.bajakits.com



BEFORE YOU START

Baja Kits recommends this system be installed by a professional technician. In addition to these instructions, professional knowledge of disassembly/reassembly procedures and post installation checks must be known.

FOR YOUR SAFETY

Certain Baja Kits products are intended to improve off-road performance. Modifying your vehicle for off-road use may result in the vehicle handling differently than a factory equipped vehicle. Extreme care must be used to prevent loss of control or vehicle rollover. Failure to drive your modified vehicle safely may result in serious injury or death. Baja Kits does not recommend the combined use of suspension lifts, body lifts, or other lifting devices. You should never operate your modified vehicle under the influence of alcohol or drugs. Always drive your modified vehicle at reduced speeds to ensure your ability to control your vehicle under all driving conditions. Always wear your seat belt.

BEFORE INSTALLATION

- Special literature required: OE Service Manual for model/year of vehicle. Refer to manual for proper disassembly/reassembly procedures of OE and related components.
- Secure and properly block vehicle prior to installation of Baja Kits components. Always wear safety glasses when using power tools.
- Due to payload options and initial ride height variances, the amount of lift is a base figure. Final ride height dimensions may vary in accordance to original vehicle attitude. Always measure the attitude prior to beginning installation.

BEFORE YOU DRIVE

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.

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. Longer replacement hoses, if needed can be purchased from a local parts supplier.

Perform head light check and adjustment.

Re-torque all fasteners after 500 miles. Always inspect fasteners and components during routine servicing.

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Minimum Required Tool List:

- Wrench and Socket Set up to 27mm or 1-1/16"
- 36mm Axle Socket
- Ball Joint Removal Tool
- Right Angle Low Profile Drill (Milwaukee 2615-20 or similar)
- 1/2" Drill (Milwaukee 4606-20 or similar)
- Die Grinder (Milwaukee 2485-20 or similar)
- 1/2" Step Drill Bit (Hougen Step Drill 1/8-1/2" 35200 or similar)
- Drill Bit set up to 9/16" minimum (11/16" drill bit needed for a "regular box" model truck)
- Torque Wrench (Up to 320 ft-lbs)
- Cut Off Tool (Milwaukee 2522-20 or similar)
- Right Angle Grinder (Milwaukee 2880-20 or similar)
- Air Hammer with Large Radius Rounded End (Bed clearance for shock eyelet)
- Pinch Style CV Clamp Pliers
- Flexible Magnet
- Tape Measure
- Paint Pen (For marking holes to be drilled)
- Center Punch
- Alignment Punch
- Anti-Seize Type Lubricant
- Grease gun with standard grease fitting and narrow needle dispenser
- Undercoating Spray Paint (For drilled holes through the frame)
- Specialty Tools required if re-gearing the front differential (including but not limited to EN-47966)
- Welder (**Only for weld on rear axle bracket kit BJK11402FRS, not required with BJK11401FRS**)

Parts List:

- | | |
|----------------------|---|
| - BJK1144001 | Front Component Box Kit (Parts list at end of these instructions) |
| - BJK1141001 | Front Upper Control Arm Box Kit |
| - BJK1142001 | Front Lower Control Arm- Driver Side |
| - BJK1142002 | Front Lower Control Arm- Passenger Side |
| - BJK1145001 | Rear Suspension Mount Box Kit 1 |
| - BJK1145002 | Rear Suspension Mount Box Kit 2 |
| - BJK1145003 | Rear Upper Control Arm and Track Bar Box Kit |
| - BJK1145004 | Rear Trailing Arm Box Kit (Quantity: 2) |
| - BJK1143001 | Driver Side Steering Knuckle |
| - BJK1143002 | Passenger Side Steering Knuckle |
| - BJK1146001 | Rear Axle Components (Dana Axle Only) |
| - BJK1146002 | Rear Axle Components (Weld On Kit Only) |
| | |
| - DANA10515329 | Dana Ultimate 60 Replacement Rear Axle |
| - IK83-1106 | Front Differential Bearing Installation Kit |
| - AAM80TI373GEARKIT | 3.73 Ring and Pinion with Carrier Set |
| - JEREEL100996 | Rear Drive Shaft (4wd crew cab models only) |
| - RCV-CVJIFS-TBOSSX3 | RCV Front CV Shafts |
| | |
| - FOX98406507L | Front 3.0 IBP Coilover- Driver Side |
| - FOX98406507R | Front 3.0 IBP Coilover- Passenger Side |
| - FOX98406508L | Rear 3.0 IBP Coilover- Driver Side |
| - FOX98406508R | Rear 3.0 IBP Coilover- Passenger Side |
| - FOX98402493 | Rear Hydraulic IFP Bump Stop- Threaded |
| - FOX98402412 | Front Hydraulic IFP Bump Stop- Eyelets |
| - FOX98402484 | Front Steering Stabilizer |

PRE - INSTALLATION / FITMENT NOTES

1. Wheel and Tire Requirements:

17" x 8.5" or 9" wide with 4.5" or 5" Back Spacing wheels required (5" Back Space provides the best fender clearance)

37" x 12.50 R17 Load Range C Tires HIGHLY recommended for best performance, Load Range D tires will have a stiffer side wall.

2. For best clearances when aligning the vehicle, it is recommended to keep the camber with the OE specification range and run the caster to a higher amount around 5.5 degrees. Toe adjustment is recommended to be within the OE specification.
3. **This kit has only best test fitted on a Chevrolet 1500 4x4 crew cab, short bed (69.92In long) configuration with either a 5.3 or 6.2 engine truck. Different cab and box configurations have not been test fitted to work for pilot hole locations or frame bracket fitment.**
4. Different engine configurations may result in different front ride height positions affecting bypass hole positions. Eye to eye of the front coil-over measurement should be close to 23-1/8" at ride height for best tuning of the suspension relative to bypass hole positions.
5. The rear ride height for this kit was tuned and set ride height around a crew cab, short bed configuration truck with 2 full size 37" spare tires and ~100lbs of accessories in the bed of the truck. Eye to eye of the rear coil-over measurement should be close to 27-3/8" at ride height for best tuning of the suspension relative to bypass hole positions.
6. **OE exhaust will not work with the rear linked geometry.** An aftermarket custom exhaust is required to work with the rear suspension. Make sure the exhaust is close to the track bar cross over frame mount tube (within 1-2") to prevent contact with the track bar during suspension compression.
7. Replacement rear driveshaft has only been test fitted on a Chevrolet 1500 4x4 crew cab, short bed (69.92In long) configuration with either a 5.3 or 6.2 engine truck. **Replacement rear drive shaft will NOT work on 2wd models due to driveshaft length.** Replacement driveshafts that are custom made will require a 1350 U-joint at the axle end for the Dana Ultimate 60 replacement rear axle.
8. To achieve full suspension travel on the front and rear of the truck, aftermarket / wider fenders are required similar to Fiberwerx or ADV. The minimum requirements are shown below, additional features can be customized to these requirements from the fender manufacturer such as bumper caps, valence, composite material made out of carbon fiber, etc Make sure you purchase the correct fit for your vehicle / year range based on fender manufacturers website. Typical aftermarket fenders will not include and means to relocate the fuel filler neck.

Fiberwerx Minimum Fender Requirements:

Chevy Front: CSF-108; Chevy Rear: CSB-021F

GMC Front: GSF-006; GMC Rear: GSB-005F

ADV Minimum Fender Requirements (Replacement ADV inner fenders will not work due to tire contact)

Chevy / GMC Front 4" Flare / 2" Rise

Chevy / GMC Rear 4.5" Flare / 2" Rise

9. The aftermarket front fenders may need to be modified to ensure full tire clearance through all of wheel travel. The plastic bracket on the front of the front fender that attaches between the body, fender liner,

and headlight will need to be removed to ensure adequate compression travel for a 37" tire. The rear of the front fender will need to be modified on aftermarket fenders as well along with folder over the pinch weld to ensure adequate compression travel for a 37" tire. Note that typically GMC model trucks have a smaller wheel well opening, therefore depending upon the aftermarket fender design, may require additional trimming to fit a 37" tire through wheel travel.



REAR OF FRONT FENDER



FRONT OF FRONT FENDER

10. This kit can be 100% bolt-in / bolt-on when optioned with the rear Dana Ultimate 60 axle. This means drilling through the frame in defined areas of these instructions will be needed.
11. Kit comes pre-installed with ball joints and bushing pressed into the control arms. No assembly of ball joints and bushings into control arms is required.
12. When installing the optional rear Dana Ultimate 60 axle, replacement brake lines will be used to extend the brakes out from their traditional position. Brake bleeding must happen and will require a dealer service tool for the ABS system.
13. When installing the replacement rear axle option for this kit, note that the front differential **MUST** be re-gearing or match. Front and rear gear ratios **MUST** match. The gearing of the Dana Ultimate 60 replacement rear axle is 3.73. If your truck already has a 3.73 gearing front differential re-gearing is not needed. Recommended to follow OE procedure for front gear set installation using the provided bearing installation kit. Specialty tools may be required for re-gearing the front differential, including, but not limited to the EN-47966 for removing the driver side stub shaft.
- 14. When re-gearing to 3.73 ratio and the truck did not come with this gear ratio, it must be re-calibrated for this change. The truck will have a check engine light for mismatched transmission output speed versus wheel speed. Recommended to have this altered via HP Tuner type programmer (See information for HP Tuners further on in the instruction sheet). Pulsar LT will work with 2019-2022 models for a gear change (not 2022i-2024 currently). Pulsar LT will cause the cruise control to no longer function as intended.**
15. Note when re-gearing and changing the tire diameter, the speedometer will not be correct to the vehicle's true speed. Recommended to have this altered via HP Tuner's or Pulsar LT type programmer for accuracy.
16. If installing the Dana Ultimate 60 rear axle, an air compressor is required for running the rear ARB Air Locker. The rear ARB Air Locker is a RD167. Recommended to install at a minimum ARB Single Motor Air Compressor (Kit # CKMA12 from ARB). Follow supplier recommendations for installing air compressor, wiring air compressor to the vehicle, and running air lines to the air locker.
17. The air locker system can be operated on any alternate air source that meets each of the following guidelines:
 - Must supply a minimum of 85PSI [586kPa].
 - The Air source should have a tank capacity that enables it to actuate the Air Locker(s) in one charge so that no hesitation is experienced when locking one or two differentials.
 - HINT : A good way to insure that you have the necessary capacity is to make sure you can engage, disengage, and then reengage your Air Locker(s) without the air source having to regenerate (e.g., without the compressor turning on to refill the tank).
 - Must supply clean air, free of rust, dirt, water, or other foreign matter.
 - Must match the 1/8" BSP porting of the Air Locker solenoid.
 - Mount solenoid within close proximity of the air supply and secure it from the effects of vibration and shock.
 - Connect the air supply to the 1/8" BSP inlet port of the solenoid (stamped "1" on the solenoid body) using thread sealant.
18. If installing the weld on axle bracket kit, a professional / experienced welder is recommended for welding of the brackets onto the rear axle. Note that the rear axle can be and should be removed from

the vehicle to weld on the axle brackets. The material used for the weld on brackets is HSLA Grade 50 Steel, 1/4" thick.

19. A minimum of 3" wheel spacers is required to be used with the OE weld on axle kit. The Dana Ultimate 60 rear axle already has additional track width built into the axle and does not require wheel spacers.
20. OE spare tire cannot be reinstalled underneath the bed due to track bar configuration.
21. If using a lift, be aware of the position of the lift arms in relation to where the trailing arm brackets will be installed on the frame. Ensure that the section of the vehicle frame is clear for bracket installation.
22. Fastening or strapping the truck frame to the lift is recommended prior to removal of the truck bed to ensure the truck does not tip forward when using a lift.



23. Note the front reservoir will mount to the front frame horns brackets. Some aftermarket bumper designs require this to be removed, eliminating the front reservoir mount position on the frame. This will require a custom reservoir mount if this mount is removed.



- 24. Check all fasteners for proper torque.
- 25. Perform head light check and adjustment after suspension installation is completed.
- 26. Always inspect fasteners and components during routine servicing.



E90 GM Truck Global B How-To

This one-time service upgrades to an original E90 ECM (Global B generation only) and is required to enable tuning capabilities in VCM Suite. Users must physically remove their original E90 ECM from their vehicle and ship it to HP Tuners' headquarters for servicing (shipping information below). Once upgraded and licensed, users have full access to calibrate, log, and scan directly via the OBDII port.

Step 1: Once you've confirmed your vehicle's support, purchase this upgrade service here (<https://www.hptuners.com/product/gm-e90-ecm-service-global-b/>). Make sure you have an MPVI3 interface (Can be purchased here: <http://www.hptuners.com/mpvi3>).

Step 2: After placing your order with the necessary information, see the "Shipping" info below for a shipping form and address. Fill out and print this form (<https://files.hptuners.com/pub/2023/07/GM-E90-ECM-Global-B-Service-Shipping-Form.pdf>) to place in your shipping box. You will also receive an email immediately after placing your order with this shipping form and address.

Step 3: Remove the ECM from your vehicle and safely package it. Then, package your ECM safely with the shipping form.

Step 4: Write your order number on the outside of the shipping box.

Step 5: Ship your ECM to HP Tuners using any carrier you prefer. The shipping address can be found at the bottom of this page and in the email discussed in Step 2. Shipping costs are the responsibility of the customer.

Step 6: HP Tuners will upgrade your ECM for tuning and diagnostics. Then, we'll ship it back to you.

Step 7: Once you receive your upgraded ECM, install it back into your vehicle. Then, license the upgraded E90 ECM by purchasing [8] Universal Credits (sold separately). Once licensed, start tuning with your MPVI3 interface and the latest version of VCM Suite BETA.

Step 8: Once you've downloaded VCM Suite Beta, open VCM editor, read the stock file from your vehicle, and save the file. Once saved, make changes to the gear size and save file with a different name. Once new file is saved, write calibration to ECM via VCM Editor.

Shipping information

HP Tuners, LLC

ATT: GM E90 ECM Service (Global B)

Order #: _____

700 Eastwood Ln

Buffalo Grove, IL 60089

*Please allow 1 to 3 business days (plus shipping times) per ECM that you send in for servicing (i.e., 2 ECMs = 2-6 business days).



REAR DISASSEMBLY

1. Disconnect Battery.



FIGURE 1

2. Remove Tires and Wheels.
3. If equipped, remove running boards. (6) bolts per side.



FIGURE 2

4. Remove Spare Tire per manufacturer instructions.
5. Remove aluminum spare tire splash guard. (6) bolts total.

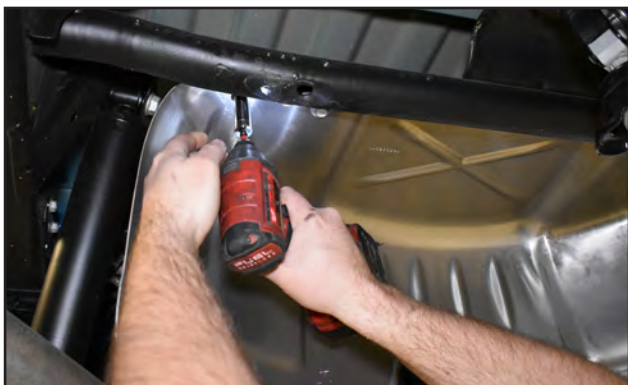


FIGURE 3

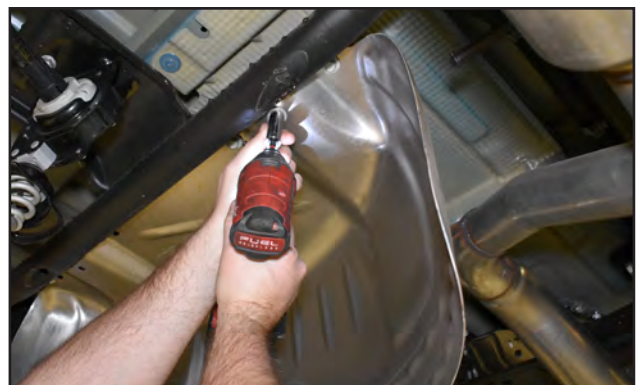


FIGURE 4

6. Remove spare tire lift cable and crank system.



FIGURE 5

7. Remove trailer plug by sliding clip back to release.



FIGURE 6

8. Remove wiring from bumper. Use trim tool to remove clips from frame.



FIGURE 7



FIGURE 8

9. Remove bumper bracket bolt first, then lower bolt (2) bolts

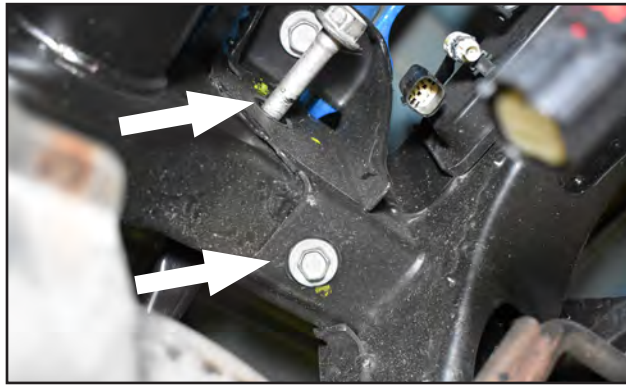


FIGURE 9

10. Remove bumper from the truck.
11. Remove (6) bed bolts as indicated in the figures below.

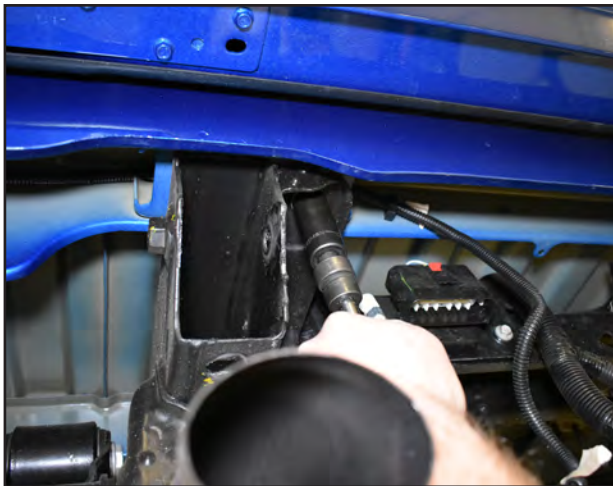


FIGURE 10



FIGURE 11

**FIGURE 12****FIGURE 13****FIGURE 14****FIGURE 15**

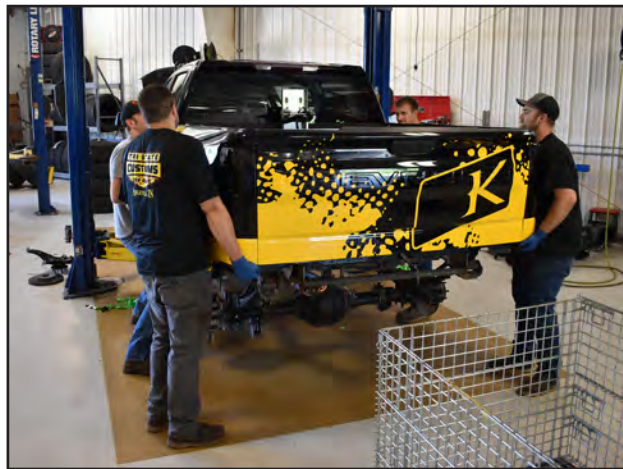
12. Remove gas cap guard by pushing from inside out.

**FIGURE 16**

13. Remove (2)bolts from fuel fill line bracket attaching it to the bed.

**FIGURE 17****FIGURE 18**

14. Disconnect any wire harnesses between the bed and the frame.
15. Verify the bed is free to be completely removed between the hardware and wire harnesses. With assistance, remove truck bed. Place out of your work area.

**FIGURE 19**

FUEL TANK REMOVAL

16. Support fuel tank with screw jack or other method.



FIGURE 20

17. Disconnect all topside wiring found on the fuel tank.



FIGURE 21

18. Disconnect Fuel and Evap. Lines at the front of the tank by removing retaining clips.



FIGURE 22



FIGURE 23

19. Remove fuel tank by removing (2) bolts attaching the fuel tank straps to the frame.

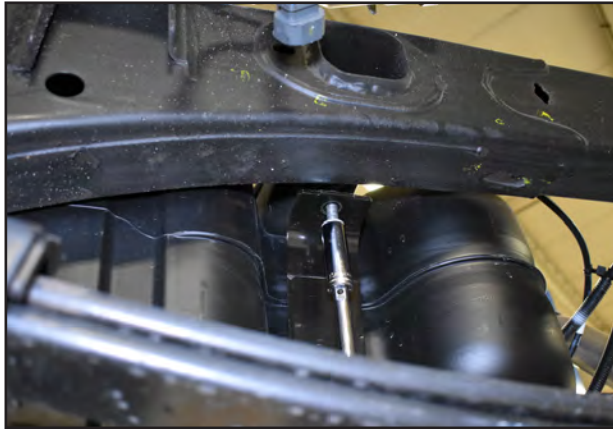


FIGURE 24



FIGURE 25

20. Straps can now be removed from the frame brackets.



FIGURE 26

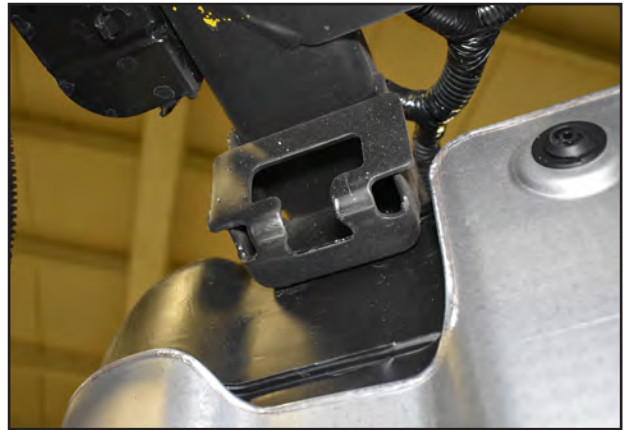


FIGURE 27

21. Carefully lower and remove fuel tank from the frame. Set away from your work area.

DRIVE SHAFT REMOVAL

22. Remove (4) drive shaft bolts attaching drive shaft to rear differential. A light tap from a rubber mallet may be needed to dislodge the drive shaft from the differential. Set driveshaft and hardware aside for later installation, unless using the replacement rear axle and driveshaft.

**FIGURE 28****FIGURE 29**

23. Lower the drive shaft and pull it out of transmission. Set drive shaft aside.

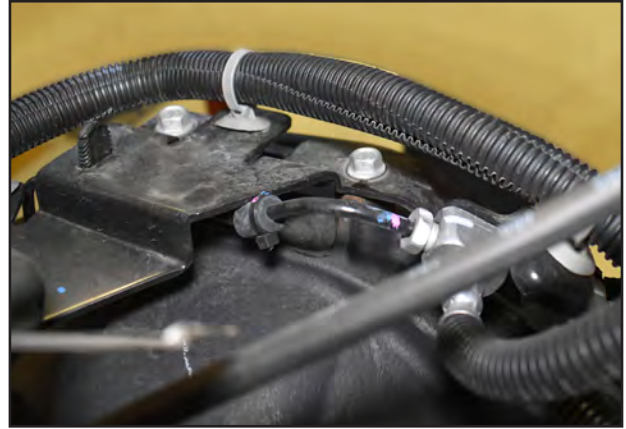
REAR SHOCK REMOVAL

24. Remove upper and lower bolts from the driver and passenger side rear shocks. Discard shocks and hardware.

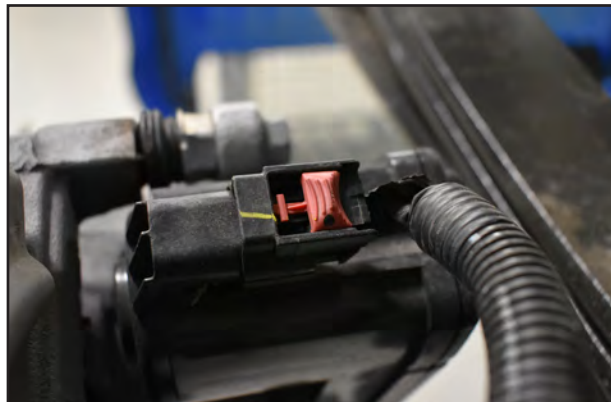
**FIGURE 30****FIGURE 31**

REAR DIFFERENTIAL REMOVAL

25. Remove (3)bolts attaching wiring harness bracket to top of differential.

**FIGURE 32****FIGURE 33**

26. Unplug wiring harness plug from the brake calipers by sliding red clip.

**FIGURE 34**

27. Remove speed/ABS sensor bolt from passenger and driver side drive shaft assembly near the brake rotor. Remove speed sensor taking care not to damage.

**FIGURE 35****FIGURE 36**

28. Unplug brake pad sensor on the driver side.



FIGURE 37

29. Remove (6) wiring harness bracket bolts from the 2 brackets attached along the top of the rear end assembly. There are 3 bolts per bracket.



FIGURE 38



FIGURE 39

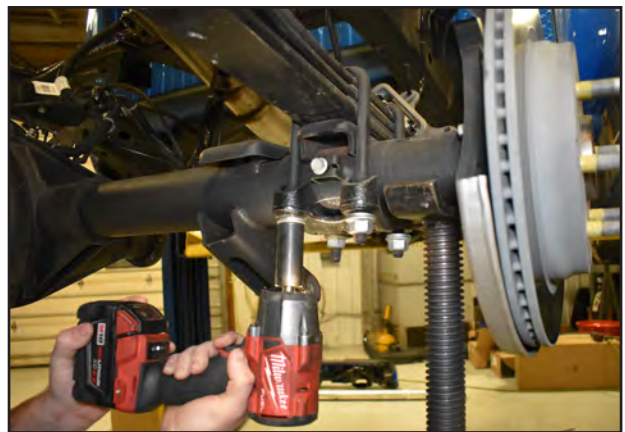


FIGURE 40

30. Once all wiring and brackets are removed from the rear end assembly it is recommended to place wiring up and out of the way with a bungee cord or other strap to help ease differential removal.
31. Remove rear brake calipers by removing (2) brake caliper bolts on both passenger and driver side. Hang calipers to frame to protect brake lines from damage. Calipers and brake lines must be moved out of the way such that the rear differential and leaf springs can be removed from the vehicle. Be careful to not bend the lines.

**FIGURE 41****FIGURE 42**

32. Support rear end assembly with screw jacks or other method. Remove (8) Nuts from U-Bolts attaching axle to leaf springs on both sides. Lower rear end assembly to the ground away from work area. This may be done on the ground with wheels / tires on the axle to easily move the axle. Ensure when removing the rear axle no brake or ABS lines are caught on the differential when moving it. Discard the nuts and U-Bolts.

**FIGURE 43****FIGURE 44**

33. Remove front leaf springs bolts. Save bolt and nut tab for later installation.

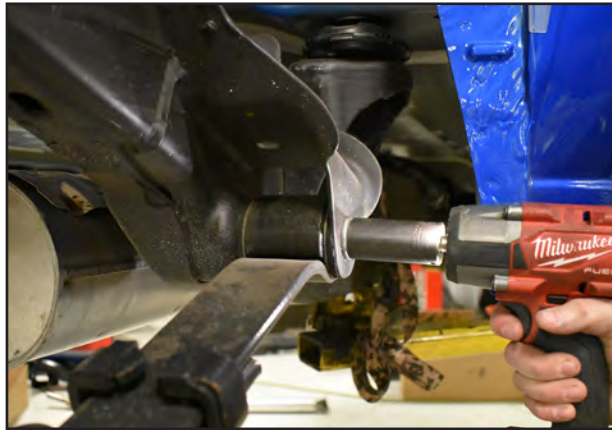


FIGURE 45

34. Remove rear leaf spring bolts. This will require backing out the exhaust hanger bolt to access the lower inside leaf spring shackle bolt. The shackle can remain attached to the leaf spring and remove the leaf spring from the vehicle. The rear leaf spring hardware will not be reused.



FIGURE 46



FIGURE 47

35. Remove exhaust by first unbolting clamp as shown in the figure below.

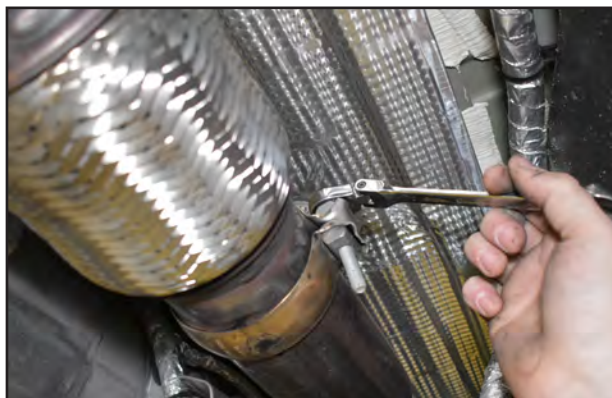


FIGURE 48

36. Remove exhaust from rubber mounts as shown in the figures below.



FIGURE 49



FIGURE 50



FIGURE 51

37. Remove the factory bumper stop by removing bolt found in the center attaching stop to the frame.



FIGURE 52



FIGURE 53

38. The entire rear frame should now be stripped of the rear axle, exhaust, fuel tank, bed, rear bump stop mount, and rear bumper

INSTALL REAR COIL-OVER SUSPENSION SYSTEM

These steps will be performed on both sides of the vehicle.

REAR UPPER CONTROL ARM BRACKET INSTALLATION

1. The factory hole on the top side of the front leaf spring mount may need to be drilled or die grind out to 1/2" to accommodate the new hardware.



FIGURE 54



FIGURE 55

2. Install rear upper control arm bracket into factory front leaf spring mount using the factory front leaf spring bolt. Leave hardware loose.



FIGURE 56



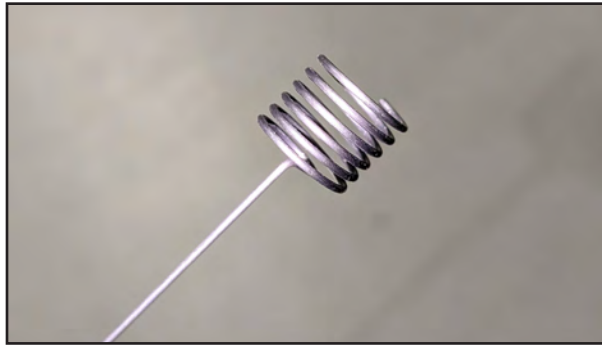
FIGURE 57

3. Attach the rear upper control arm bracket to the top side hole on the front leaf spring mount with a 1/2" flange head bolt and flange nut in Bolt Pack 382. Leave hardware loose.

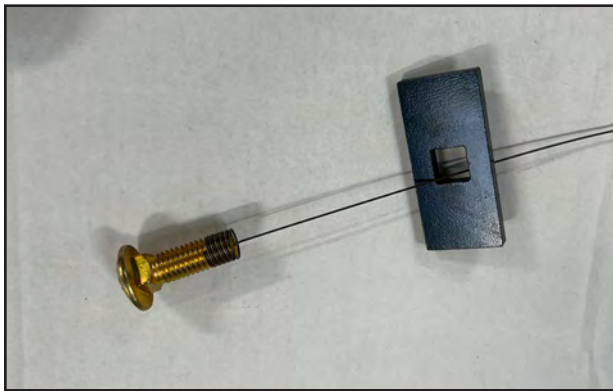
**FIGURE 58****FIGURE 59****FIGURE 60**

4. Using the provided fish wire back feed the coiled end of the fish wire through the bottom hole in the rear upper control arm bracket and out the large OE slotted hole on the inside of the frame.

**FIGURE 61****FIGURE 62**

**FIGURE 63**

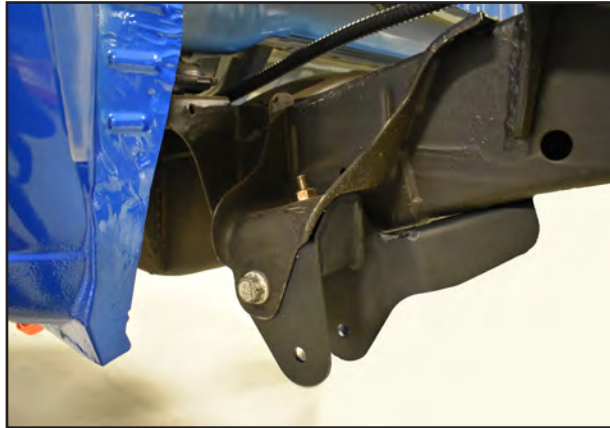
5. Insert the carriage bolt plate onto the fish wire first, followed by a 1/2"-13 carriage bolt from Bolt Pack 382.

**FIGURE 64****FIGURE 65**

6. Using the fish wire assembly, first feed the carriage bolt plate through the frame followed by the carriage bolt. Be careful to always hold on to the bottom side of the fish wire (opposite the carriage bolt) in order to make sure the carriage bolt plate and carriage bolt feed through to the correct location in the frame. After the carriage bolt is fed through and sticking out the bottom side of the frame and rear upper control arm bracket, removed the fish wire from the carriage bolt. Using a 1/2" flange nut from Bolt Pack 382, attach the rear upper control arm bracket to the frame. Torque this carriage bolt to 50 ft-lbs.

**FIGURE 66**

7. Torque the 1/2" bolt on the top side of the rear upper control arm bracket to 80 ft-lbs. Line up the OE nut tab to the OE leaf spring bolt and torque this bolt to 137 ft-lbs.

**FIGURE 67****REAR COIL-OVER / BUMP STOP BRACKET**

Note: When using red thread locker for installation, typical set time is 10-20 minutes. Ensure all hardware is torqued within this time frame for proper installation of thread locking compound.

Note: Use painters tape on the coil-over mount bracket to prevent damage to the bracket from a clamp during fitment.

1. To install coil-over / bump stop bracket to the frame on the driver side, start by first removing the gray brake line clip on the top side of the frame.

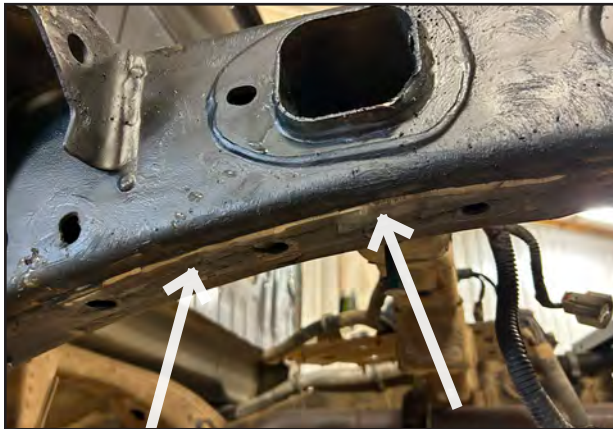
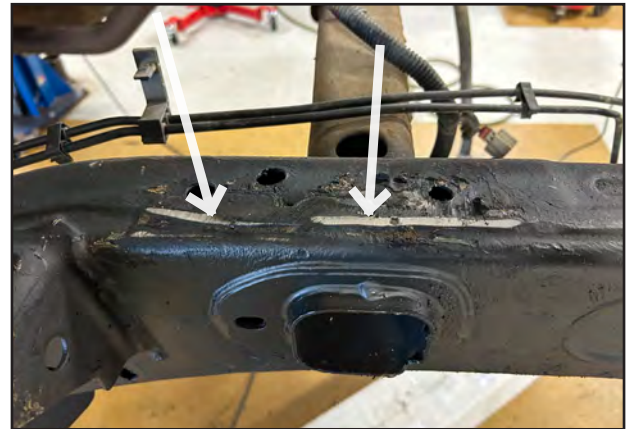
**FIGURE 68**

2. To install coil-over / bump stop bracket to the frame on the passenger side, start by removing the wire harness from the top side of the frame.

**FIGURE 69****FIGURE 70**

3. The weld joint along the frame rail needs to be ground flush for better fitment of the coil-over mount bracket. Any weld joint bubbled up from the OE frame rail will affect fitment of the coil-over bracket.

Note: The coil-over mount bracket is a very tight fitment to the frame.

**FIGURE 71****FIGURE 72**

4. Temporarily mount the coil-over / bump stop bracket to the frame. Note on the passenger side the OE bed mount must be trimmed for bracket clearance. After trimming make sure there is no contact between the coil-over / bump stop bracket and the bed mount.

Tip: A rubber mallet or block of wood and hammer may be needed to tap bracket onto the frame.

**FIGURE 73****FIGURE 74****FIGURE 75**

5. Align the coil-over / bump stop bracket to the frame, centering the bracket as close as possible to the OE slot as shown below. Typically this bracket is a tight fit to the OE frame and is biased towards the rear of the vehicle. The 5/8" bolt installed in the next step can help pull the bracket forward for alignment.

**FIGURE 76**

6. Install the 5/8" flange bolt from Bolt Pack 382 through the coil-over mount bracket and through the OE frame hole on the bed mount. Attach on the inside of the OE bed mount using a 5/8" flange nut from Bolt Pack 382. Snug up hardware, but do not torque to spec. Snugging up this hardware will pull this bracket towards the front of the vehicle, helping line up the slot.

Note: "Standard Box" models (79.44" bed length) may not have this hole for the 5/8" bolt on the passenger side. Reference drill template at end of instructions to drill out an 11/16" for installing this bolt.

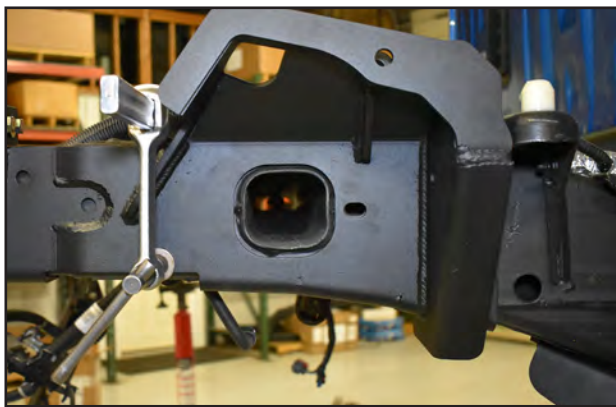
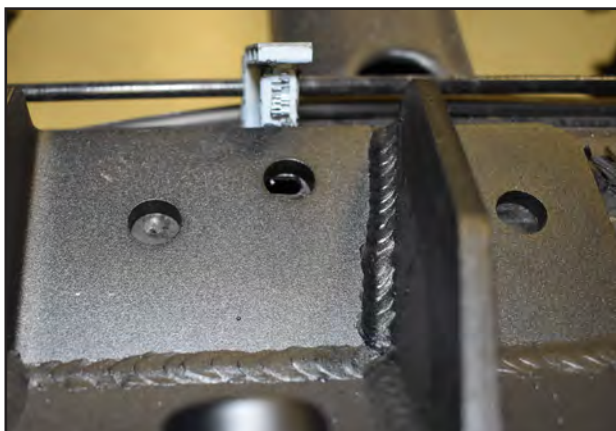
**FIGURE 77****FIGURE 78**

7. Along with centering the coil-over / bump stop bracket on the OE slot, make sure the rear part of the bracket is pushed up so it is on the frame.

**FIGURE 79**

8. Using the holes on the coil-over / bump stop bracket mark all holes on the side, bottom, and top of the frame rail. Hole punch the center of all the holes for best accuracy of installation. It is recommended to use a clamp to the frame to discourage movement of bracket when marking holes.

Note: Use painters tape on the coil-over mount bracket to prevent damage to the bracket from a clamp during fitment.

**FIGURE 80****FIGURE 81****FIGURE 82****FIGURE 83****FIGURE 84**

9. Remove the bracket to drill all the holes to 9/16". If needed, remove the 5/8" bolt installed in the previous step.

Note: The OE slotted hole that was first referenced may need to be die grind out for a 1/2" hardware.

**FIGURE 85****FIGURE 86****FIGURE 87**

10. Once drilled, the bracket can be re-mounted on the frame and aligned to the drilled out frame holes. The required nut tabs and bolt plates are laid out in the images below.

**DRIVER SIDE****PASSENGER SIDE**



FIGURE 88



FIGURE 89



FIGURE 90

11. Follow the order of nut tab and bolt plate installation as described. **ENSURE PROPER FITMENT OF HARDWARE, A DIE GRINDER CAN BE USED TO SLIGHTLY OPEN UP HOLE SIZES.**
12. Re-install the 5/8" flange bolt from Bolt Pack 382 through the coil-over mount bracket and through the OE frame hole on the bed mount. Snug up this hardware again to get the drilled holes to line up.

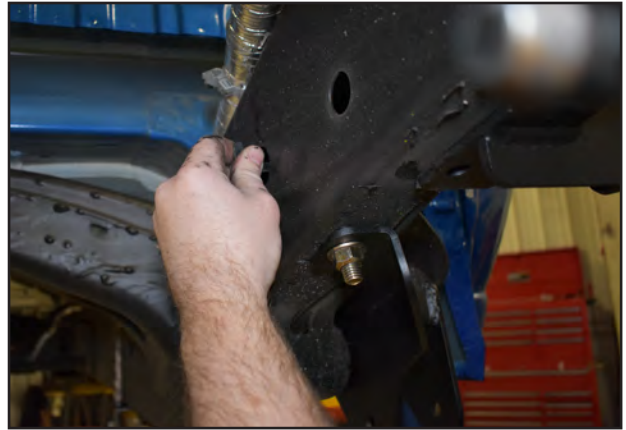
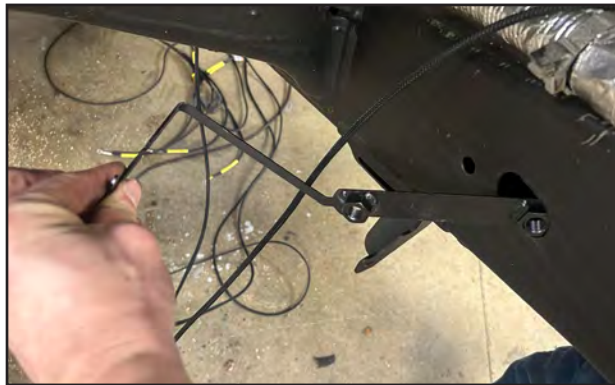


FIGURE 91



FIGURE 92

13. Install the nut tab shown below through the front most factory hole on the inside frame rail near the leaf spring mount. Install the (2) provided 1/2" x 1-1/2" flange bolts from Bolt Pack 382 using red thread locker. Leave hardware loose.

**FIGURE 93****FIGURE 94****FIGURE 95****FIGURE 96**

14. Install nut tab shown in the figure below through the slotted hole on top of the frame rail for installing your (3) top bolts into the coil-over / bump stop bracket. It may be necessary to remove the ground wire shown below to allow room for nut tab installation. Make sure the nut tab is above the frame rail when installed and you can see the nut tab from the top (3) holes in the coil-over / bump stop bracket. The nut tab handle may need to be slightly bent to get it above the frame cross-member. Loosely install (3) 1/2" x 1-1/2" flange bolts using red thread locker to the nut tab. Re-install your ground wire once nut tab and bolts are installed. Leave hardware loose.



FIGURE 97



FIGURE 98

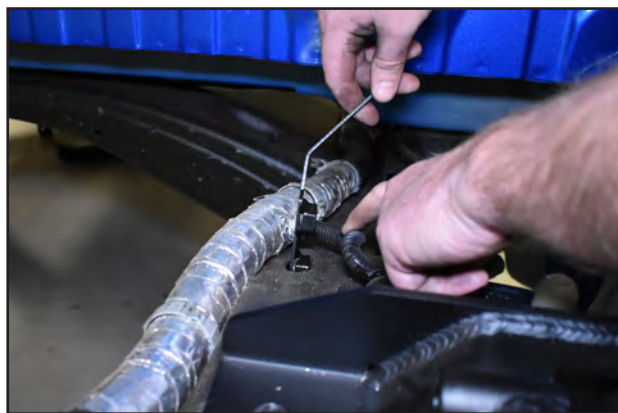


FIGURE 99

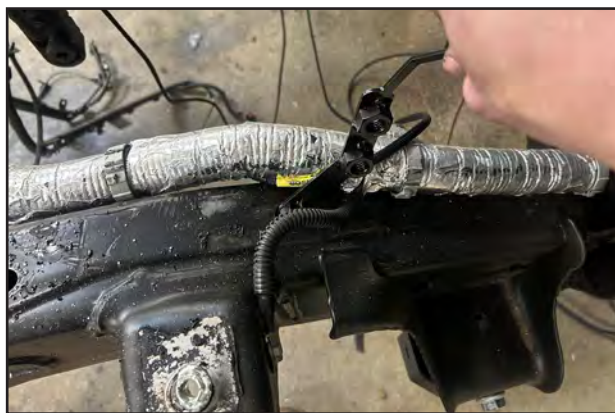


FIGURE 100



FIGURE 101



FIGURE 102

15. Feed coiled end of your fish wire through the drilled holes near the bump stop mount and out the inside slotted factory frame hole. Insert the bolt plate onto the fish wire followed by threading on a 1/2" carriage bolt from Bolt Pack 382. Feed the bolt plate and carriage bolt through factory hole pulling on the fish wire such that it is fed through the bottom hole on the coil-over / bump stop bracket. Note not to pull too hard on the fish wire as it can un-thread from the carriage bolt. Un-thread the fish wire from the carriage bolt. Thread on a 1/2" flange nut from Bolt Pack 382 to the carriage bolt. Leave hardware loose. Do this for both holes near the bump stop mount.



FIGURE 103

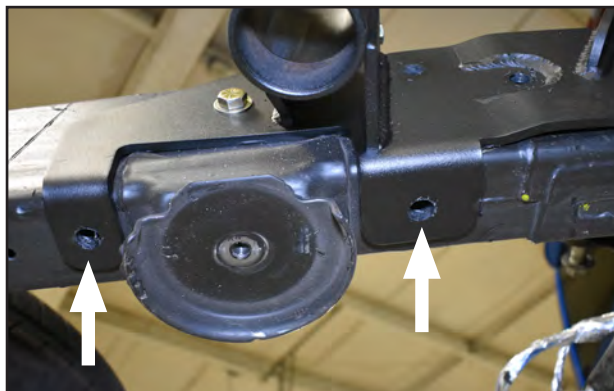
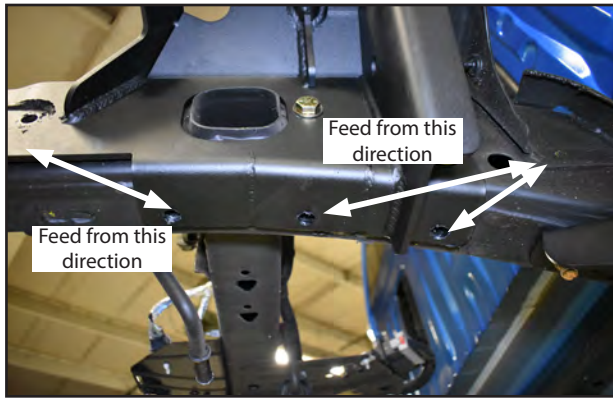


FIGURE 104

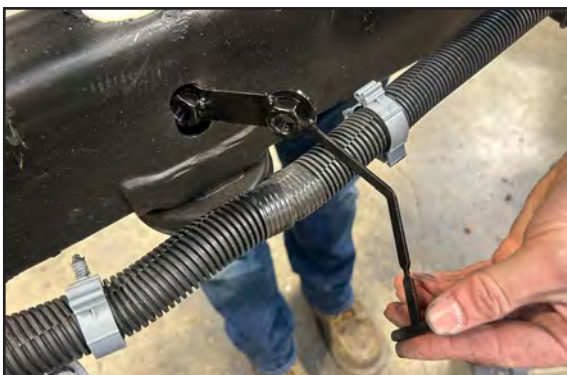


FIGURE 105

16. Feed coiled end of your fish wire through the drilled holes and out the inside factory frame hole on the front (3) bottom holes of the coil-over / bump stop mount bracket. Follow the image below for which direction to feed the fish wire from. Insert the bolt plate onto the fish wire followed by threading on a 1/2" carriage bolt from Bolt Pack 382. Feed the bolt plate and carriage bolt through factory hole pulling on the fish wire such that it is fed through the bottom hole on the coil-over / bump stop bracket. Un-thread the fish wire from the carriage bolt. Thread on a 1/2" flange nut from Bolt Pack 382 to the carriage bolt. Leave hardware loose. Do this for all (3) holes near the coil-over mount.

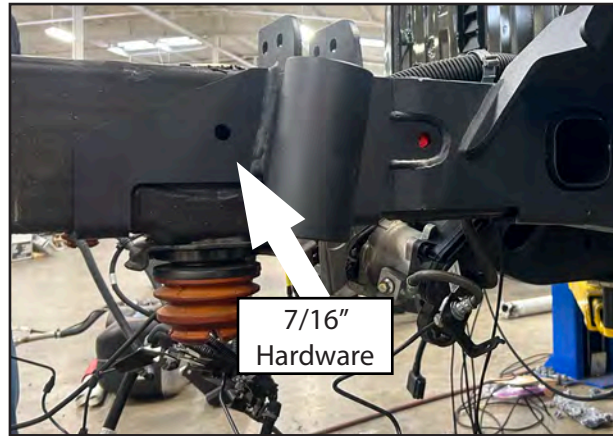
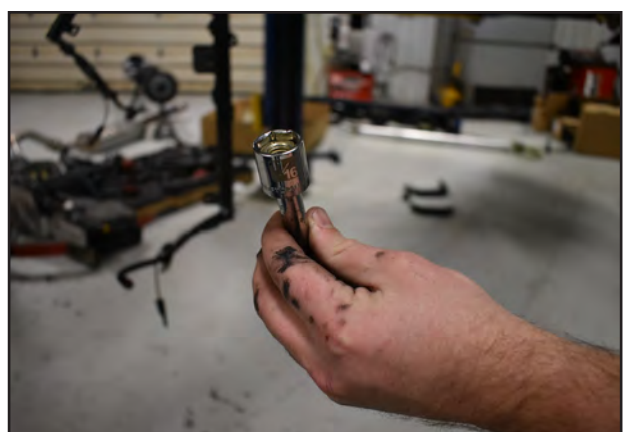
**FIGURE 106****FIGURE 107**

17. Install the nut tab shown below through the rear factory hole on the inside frame rail near the bump stop mount. Install the (2) provided 1/2" x 1-1/2" flange bolts from Bolt Pack 382 and using red thread locker. Leave hardware loose.

**FIGURE 108****FIGURE 109****FIGURE 110****FIGURE 111**

18. Install the 7/16" hardware from Bolt Pack 382 first. Install the 7/16" x 1-1/2" bolt first from the outside in such that the threads are showing on the inside of the frame. A bolt plate (same one as used with the

carriage bolts) will need to be installed through the hole shown in figures below on to the threads of the 7/16" bolt on the inside of the frame. Next install a 7/16" flange nut to the 7/16" bolt on the inside of the frame. It is recommended to use a magnet as shown in the figure blow to install the nut plate into the frame hole and onto the bolt. Then install the flange nut using a chrome 11/16" socket. Leave hardware loose.

**FIGURE 112****FIGURE 113****FIGURE 114****FIGURE 115****FIGURE 116**

19. After all hardware is installed, torque all the coil-over / bump stop mount brackets in this order:

7/16" hardware - 59 ft-lbs

1/2" nut tab hardware - 80 ft-lbs

1/2" carriage bolt hardware - 80 ft-lbs

5/8" hardware - 90 ft-lbs

REAR SUSPENSION TRAILING ARM BRACKETS INSTALLATION

Note: This will be performed on both sides. A step bit and right angle drill are required.

Note: When using red thread locker for installation, typical set time is 10-20 minutes. Ensure all hardware is torqued within this time frame for proper installation of thread locking compound.

Note: Use painters tape on the coil-over mount bracket to prevent damage to the bracket from a clamp during fitment.

1. Locate the rear trailing arm brackets and nut tabs.



PASSENGER SIDE



DRIVER SIDE



2. Find the factory hole on the bottom side of the frame rail where the frame starts to run uphill.

Note: On the driver side on 2021+ Model Trucks the frame has changed and this hole may no longer be present. A drill template is needed to line up with other existing holes on the frame. See the last page of the instructions for this drill template.

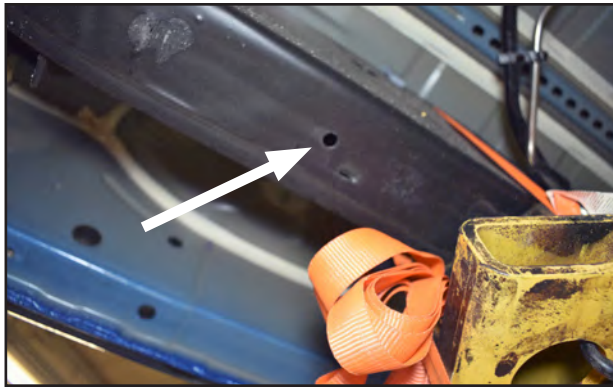


FIGURE 117



FIGURE 118

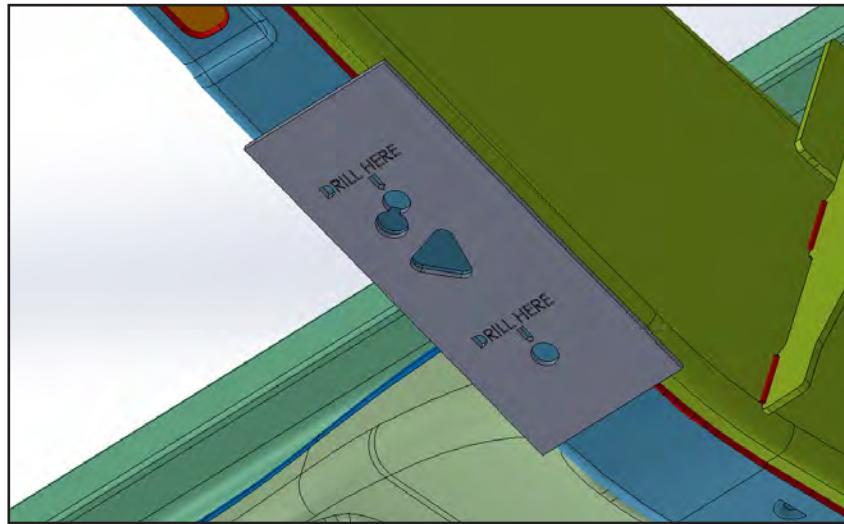


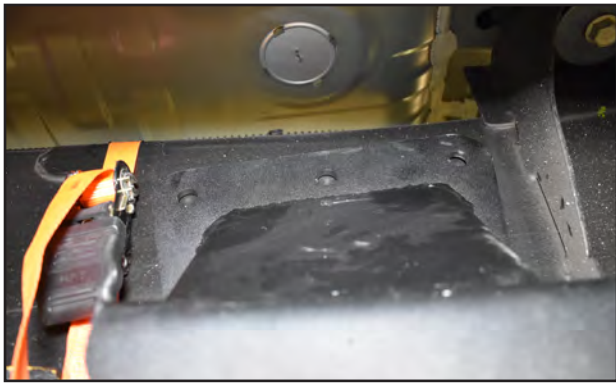
FIGURE 119

3. Drill factory hole (or holes in the template) to 1/2". Temporarily install a 1/2" x 1-1/2" flange bolt from Bolt Pack 382 to locate the trailing arm bracket.



FIGURE 120

4. Mark your other bottom hole along with the (3) side holes. Remove the bracket and drill the (2) bottom holes out to 9/16" along with the (3) side holes on the outside of the frame rail to 9/16". Due to the limited space between the frame and the body it is recommended to use an right angle drill and a step bit that goes up to at least 9/16" or use a die grinder to open the holes up more.

**FIGURE 121****FIGURE 122**

5. Install the trailing arm bracket to the frame using the two nut tabs along with 1/2" x 1-1/2" flange bolts from Bolt Pack 382 and using red thread locker. Leave hardware loose until all of the hardware is installed. NOTE: Both nut tabs are installed through the same hole so it is recommended to break off the nut tab feeder after installing the bolts into the first nut tab. The nut handle can be broke of by spinning it with pliers.

**FIGURE 123****FIGURE 124****FIGURE 125**

6. After all the hardware is loosely installed, torque all of the 1/2" bolts to 80 ft-lbs.

REAR BUMP STOP CROSS MEMBERS

1. Insert the square tube plugs into the square bump stop cross-member tube. Tap in with a rubber mallet.



FIGURE 126

2. Install cross member into coil-over / bump stop bracket as shown the figure below. Do this on both sides of the vehicle. The tube may need to be tapped into the mounts with a rubber mallet. Using the 3/8" flange head bolts and flange nuts in Bolt Pack 382, attach the cross member to the coil-over / bump stop bracket. **Be sure to run the bolts back to front to allow re-installation of the truck bed.** Torque this hardware to 31 ft-lbs.



FIGURE 127



FIGURE 128

3. Install the rear bump stops by threading them into the bump stop cups on the rear mount. Install the bump stops as shown in the figure below such that there are 2-3 threads showing.

Note: Use an anti-sieze type coating to prevent issues in the future.

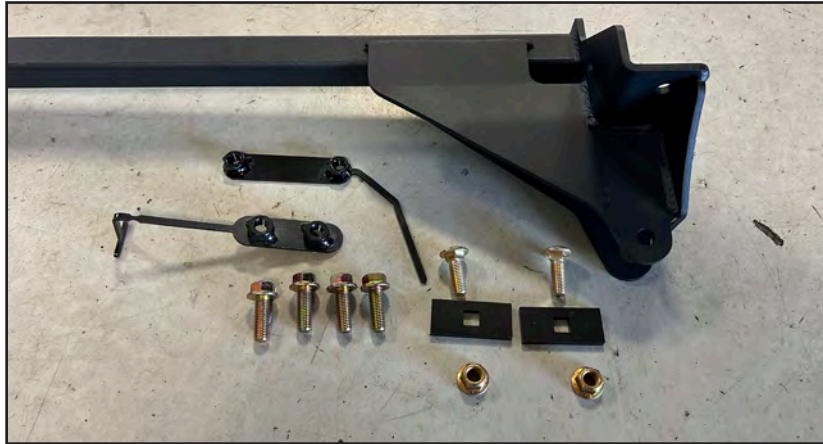


FIGURE 129

TRACK BAR BRACKET

Note: When using red thread locker for installation, typical set time is 10-20 minutes. Ensure all hardware is torqued within this time frame for proper installation of thread locking compound.

1. Locate the track bar brackets and nut tabs.

**FIGURE 130**

2. Remove the two bolts attaching the OE brake line bracket to the frame on the rear driver side. Drill both of the holes out to 9/16".

**FIGURE 131**

3. Find the OE frame hole on the bottom passenger side frame rail behind the coil - over / bump stop bracket. Drill this hole out to 1/2". Temporarily install a 1/2" x 1-1/2" flange bolt from Bolt Pack 382 to locate the track bar bracket. Mark the location of the (3) other mounting holes on the track bar bracket.

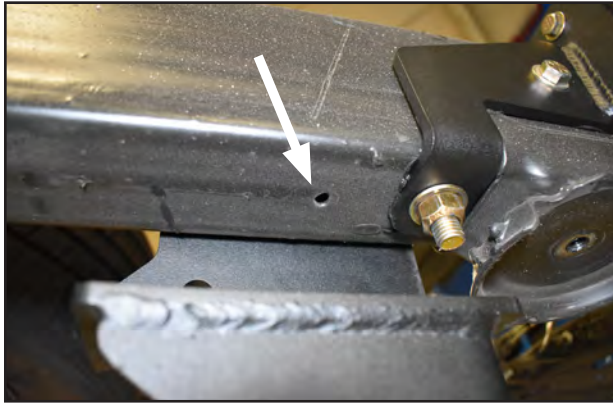


FIGURE 132



FIGURE 133



FIGURE 134

4. Remove the track bar bracket from the frame and drill all (4) holes out to 9/16".
5. Install track bar bracket and brake line relocation bracket using the provided nut tab on the drivers side and 1/2" x 1-1/2" flange head bolts from Bolt Pack 382 and red thread locker. Leave hardware loose. The brake line relocation bracket will be on the outside face of the track bar bracket and offset towards the front of the vehicle.

NOTE: Some frame width variation has be seen, so the brake line bracket can be used as a spacer between the track bar bracket and frame if needed.

NOTE: If needed, break off previously installed nut tab handle "T" by twisting to make room for cross member nut tab installation.



FIGURE 135



FIGURE 136

**FIGURE 137****FIGURE 138**

6. Lift passenger side of the track bar bracket and align with holes drilled in previous step. Insert the nut tab through the factory hole on the back side of the frame rail. Note this factory hole may need to be enlarged with a die grinder to fit the nut tab. Using a pair of pliers to hold the nut tab, line up the holes in the track bar bracket with the frame and attach to the nut tab using (2) 1/2" x 1-1/2" flange bolts from Bolt Pack 382 and red thread locker. Leave hardware loose.

**FIGURE 139****FIGURE 140****FIGURE 141**

7. Feed coiled end of your fish wire through the drilled holes on the bottom of the track bar bracket and out the inside slotted factory frame hole. Insert the bolt plate onto the fish wire followed by threading on a 1/2" carriage bolt from Bolt Pack 382. Feed the bolt plate and carriage bolt through factory hole pulling on the fish wire such that it is fed through the bottom hole on the track bar bracket. Note not to pull too hard on the fish wire as it can un-thread from the carriage bolt. Un-thread the fish wire from the carriage bolt. Thread on a 1/2" flange nut from Bolt Pack 382 to the carriage bolt on the outside of the track bar pocket. For the carriage bolt on the inside of the

track bar pocket, use the provide 1/2" prevailing torque nut with out a washer.. Leave hardware loose. Do this for both holes on the bottom of the track bar bracket.

**FIGURE 142****FIGURE 143**

8. The bolt on the inside of the track bar bracket may be best to use a thin wall (chrome) 3/8" socket since the nut is close to the bracket. This nut should be a 1/2" prevailing torque nut without a washer (non-flange nut)

**FIGURE 144**

9. After all the hardware is loosely installed, torque all of the 1/2" bolts to 80 ft-lbs.

IF THE KIT IS OPTIONED WITH THE WELD ON REAR BRACKETS, FOLLOW INSTRUCTIONS IN THE BJK1146002 BOX KIT NOW.

COIL OVER AND TRAILING ARM INSTALLATION - ALL KITS

10. Install the provided (4) compression limiters onto the rock guards as shown below.



FIGURE 145

11. Using a light amount of thread locker, hand tight all (4) provided ¼-28 screws through the compression limiters into the trailing arm.



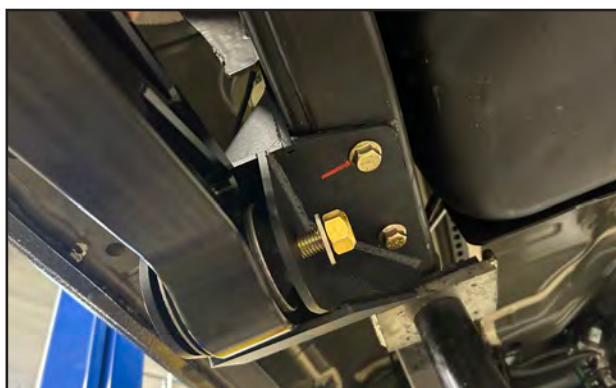
FIGURE 146

12. Torque all (4) ¼-28 screws to 80 inch-lbs.

13. Mount your coil over to the coil over mount using the provided 14mm x 130mm flange head bolt and flange nut in Bolt Pack 383. Note: Coil over reservoir is side specific to allow for mounting to frame. Before installing make sure the dove tail mount is facing in so that it will attach to the frame mount. Torque upper coil-over mount hardware to 126 ft-lbs.

**FIGURE 147****FIGURE 148****FIGURE 149**

14. Install the trailing arms to the trailing arm bracket using a 18mm x 120mm flange head bolt and 18mm flat washer with 18mm nylock nut from Bolt Pack 383. Leave hardware loose.

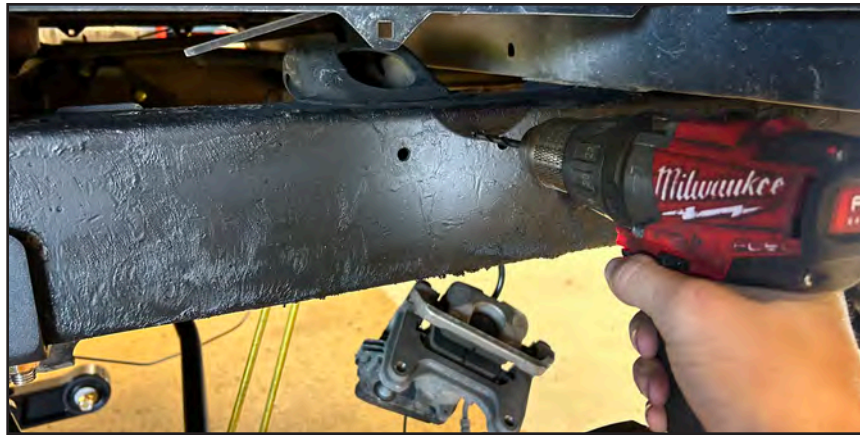
**FIGURE 150****FIGURE 151**

15. Mount the trailing arm to coil over as using a 5/8" x 3-1/2" flange head bolt and flange nut from Bolt Pack 383. Torque lower coil-over mount hardware to 180 ft-lbs. Note: Make sure the bolt head is facing the outside of the vehicle.

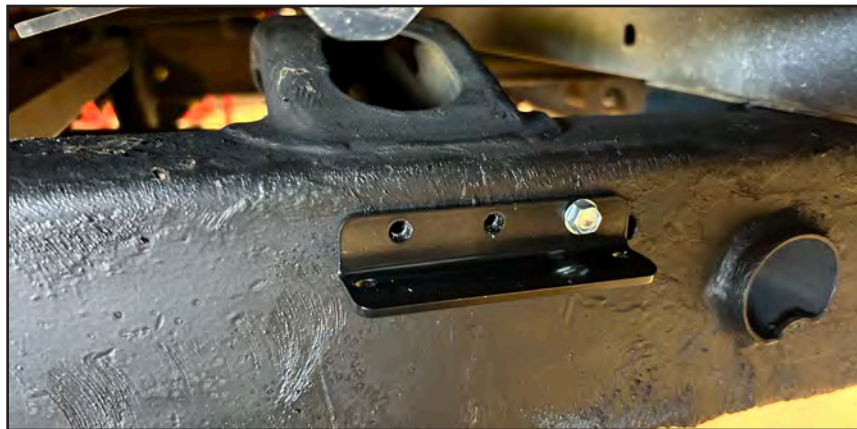
**FIGURE 152**

16. Install rear reservoir bracket by measuring over 7-1/2" from the edge of the coil-over bracket. This will mark the right or left edge of the reservoir bracket. Measure down 5/8" from the top of the frame. This will mark the top edge of the reservoir bracket. Note that the three holes are on the top side as shown in the figures below. Mark the holes in the reservoir bracket to be drilled out.

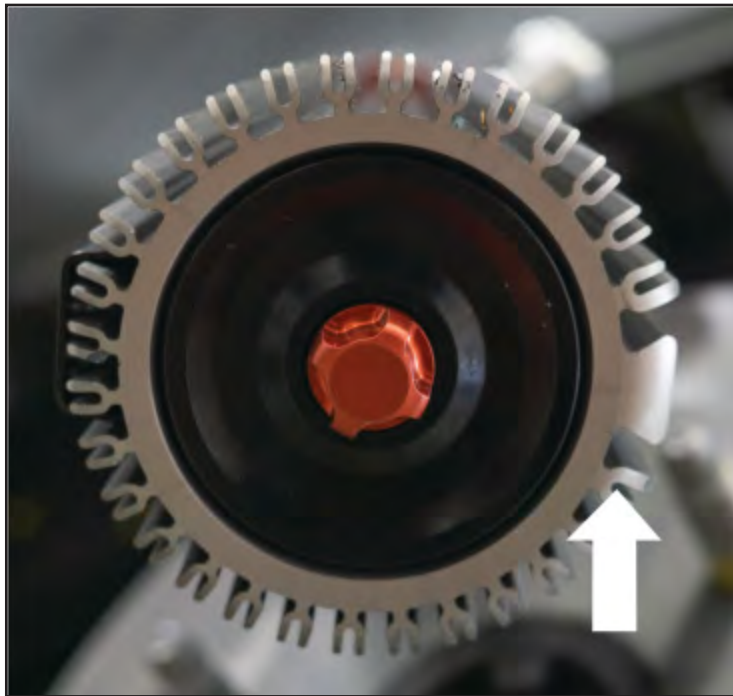
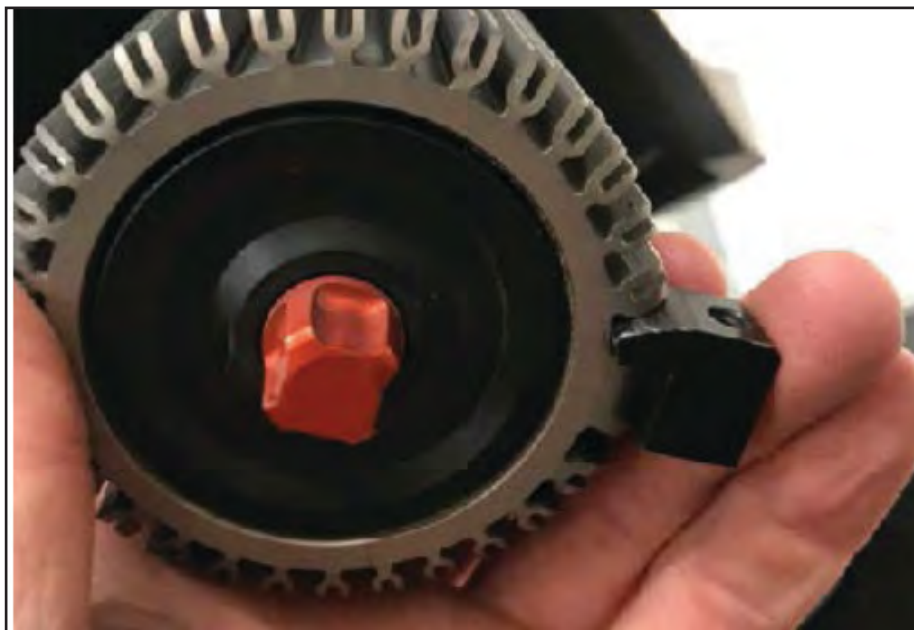
**FIGURE 153****FIGURE 154**

**FIGURE 155**

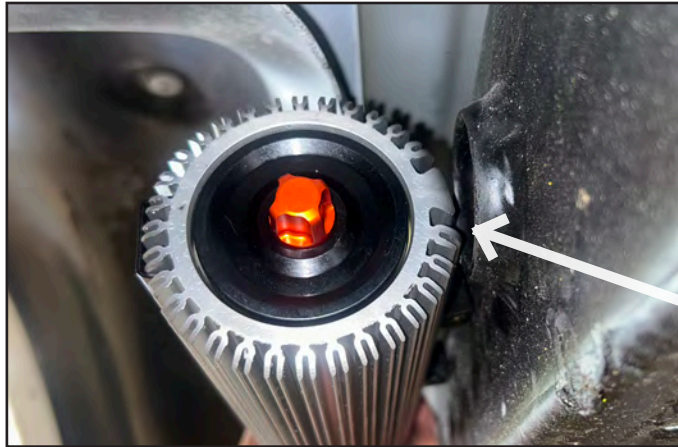
18. Attach the reservoir bracket to the frame using the provided self tappers with the rear coil-overs.

**FIGURE 156**

19. Slide both reservoir clamp nuts into the lower side of the dovetail notch.
20. Use the upper side of the dovetail notch on the reservoir to marry the bracket and reservoir. The reservoir needs at a minimum 1/8" clearance from any surrounding vehicle parts.
21. Once the reservoir is oriented, slide the clamp nut into the dovetail notch from the bottom of the reservoir to the far hole on the reservoir bracket.

**FIGURE 157****FIGURE 158**

22. Align one of the clamp nuts with one of the holes in the reservoir mounting bracket by sliding it along the upper dovetail notch.
23. The cross tube on the OE frame may need to be clearance to the reservoir fins. Check this clearance before fully tightening the clamps for the reservoir.

**FIGURE 159**

24. Loosely install the supplied $\frac{1}{4}$ -20 screws with blue thread-locker. Slide the reservoir assembly on the dovetail clamping system until the reservoir is roughly centered and hoses have $\sim 1/2$ " clearance to the bump stop bracket as shown below. Tighten the $\frac{1}{4}$ -20 screws to 80 inch-lbs.

**FIGURE 160**

REAR AXLE FINAL INSTALLATION

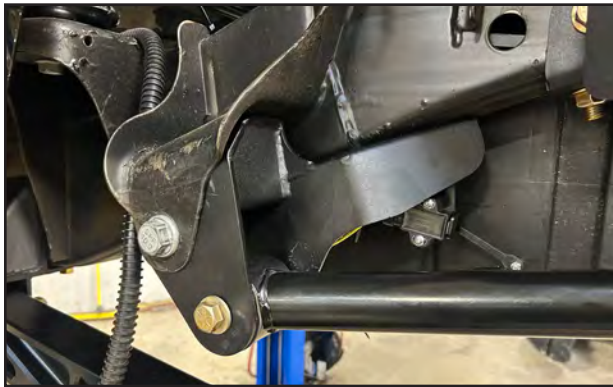
If installing weld on axle brackets, follow those instructions at this time.

1. Install the lower mount on the rear axle to the trailing arms using the 18mm x 120mm flange head bolt and 18mm flat washer with 18mm nylock nut from Bolt Pack 383. Leave hardware loose.

Note: It may be easier to mount wheels / tires to the rear axle to roll it under and position it under the vehicle.

**FIGURE 161**

2. Install the rear upper control arm to the frame mount bracket using the provided 14mm x 100mm flange head bolts and flange nuts from Bolt Pack 383. Leave hardware loose. Make sure the bend on the control arm off sets inwards.

**FIGURE 162****FIGURE 163**

3. Position the rear axle to install the rear upper control arm to the axle mount using the provided 14mm x 100mm flange head bolts and flange nuts from Bolt Pack 383. Leave hardware loose.

**FIGURE 164**

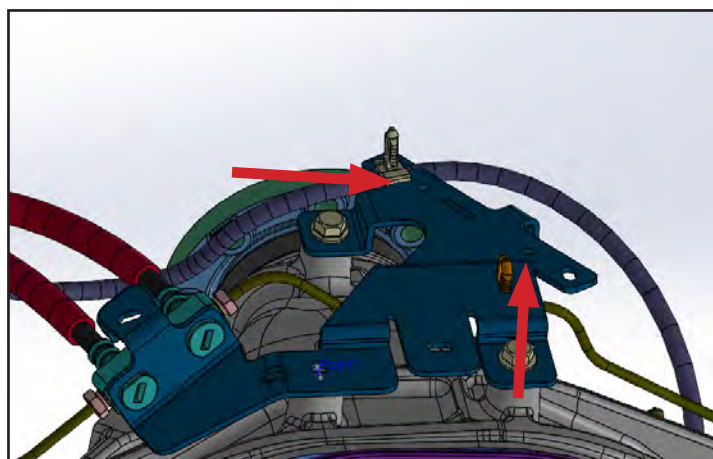
4. Install the rear track bar to the frame mount bracket using the provided 14mm x 75mm flange head bolts and flange nuts from Bolt Pack 383. Leave hardware loose. Make sure the bend on the track bar off sets towards the rear of the vehicle.

**FIGURE 165**

5. Position the rear axle to install the track bar to the axle mount using the provided 14mm x 75mm flange head bolts and flange nuts from Bolt Pack 383. Leave hardware loose.

**FIGURE 166**

6. Remove the OE ABS mount from the rear axle brake line bracket on the top of the differential.

**FIGURE 167**

7. Cut the OE rear brake line bracket where near where it mounts to the brake lines.

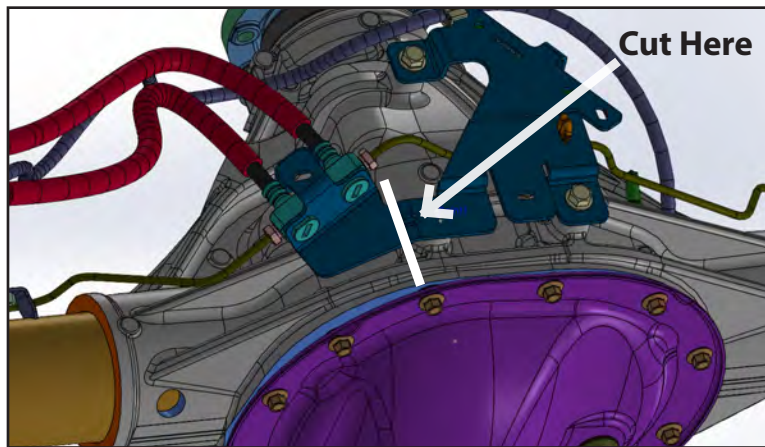


FIGURE 168

8. Install the brake rotor to the rear axle. Reuse the brake rotor retaining bolts if desired.
9. **Dana Ultimate 60 Rear Axle Only:** Trim the OE dust shield to fit on the new axle. Install the dust shield along with the OE wire harness mounts to the axle using thread locker and the OE hardware. Torque to factory specifications.



FIGURE 169

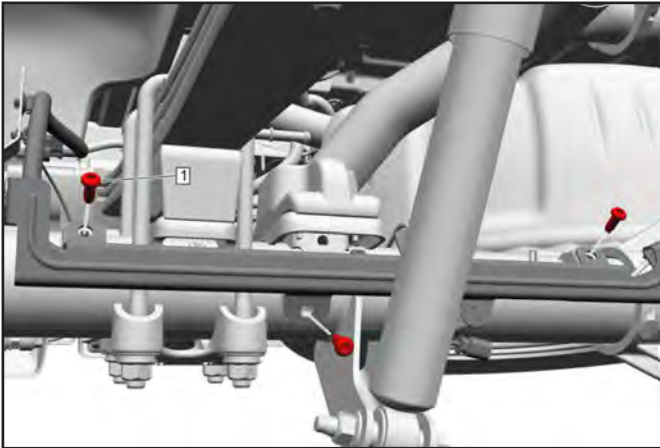


FIGURE 170

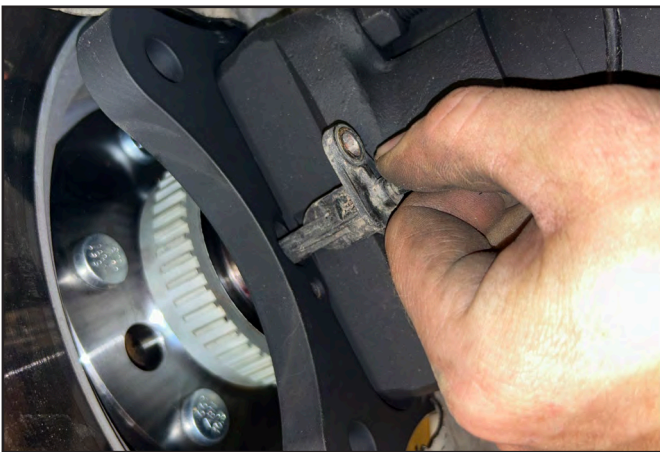


FIGURE 171

10. Route the brake / ABS line brackets and brake caliper to the wheel ends how the factory configuration was mounted. Do NOT attach to the axle at this time.

**FIGURE 172****FIGURE 173**

11. **Dana Ultimate 60 Rear Axle Only:** Route the ABS line to the mount on the rear axle. Insert the ABS sensor 180 degrees opposite of the threaded hole and spin the ABS sensor as you insert it. There is very tight clearance for the ABS sensor to fit with the Dana 60 Rear Axle.

**FIGURE 174****FIGURE 175**

12. Attach the ABS sensor to the axle using the OE hardware. Torque the ABS Sensor bolt to 6.6 ft-lbs.
13. Attach the brake caliper to the axle using thread locker and the OE hardware. Torque to a first pass of 37 ft-lbs followed by a final pass of 30-15 degrees.

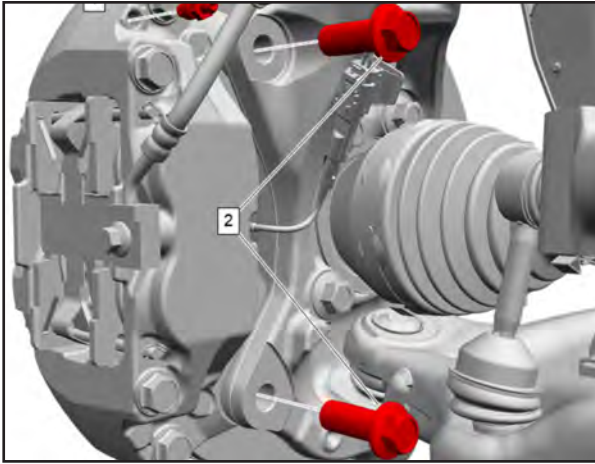


FIGURE 176



FIGURE 177

14. **OE Rear Axle With Weld on Mounts:** Attach the brake line bracket at the wheel end to the OE axle through the trailing arm mount using the 8mm x 20mm flange bolts in Bolt Pack BP1078.
15. **Dana Ultimate 60 Rear Axle Only:** On the driver side only, remove the OE brake line bracket C-clip at the junction of the soft to hard brake line. The brake line bracket should be loose now.



FIGURE 178

16. **Dana Ultimate 60 Rear Axle Only:** Crack open the hard line to soft line junction in order to remove and replace the soft line. Remove the OE soft line from the caliper by removing the banjo bolt. Fully unthread the hard line to soft line junction in order to remove the soft line completely. While the soft brake line is removed, remove the OE brake line bracket on the driver side only.



FIGURE 179



FIGURE 180



FIGURE 181

- 17. Dana Ultimate 60 Rear Axle Only:** Use the provided crush washers and OE banjo bolt to install the new soft line to the caliper. On the driver side only install the new provided brake line bracket in the orientation shown. In the passenger side the OE brake line bracket will be reused. Attach the brake line brackets to the axle with the provided 8mm x 16mm flange head bolts from Bolt Pack BP1051 and thread locker. Torque the 8mm bolts to 16 ft-lbs. Re-use the OE C-clips to lock the brake line to the bracket.

Note that the brake line system will need to be fully bled with this change.



FIGURE 182



FIGURE 183

**FIGURE 184****FIGURE 185****FIGURE 186**

18. OE Rear Axle With Weld on Mounts: On the driver side only, remove the OE brake line bracket C-clip at the junction of the soft to hard brake line. The brake line bracket should be loose now.



FIGURE 187

19. **OE Rear Axle With Weld on Mounts:** Crack open the hard line to soft line junction in order to remove the OE brake line bracket and install the new brake line bracket.

**FIGURE 188****FIGURE 189**

20. **OE Rear Axle With Weld on Mounts:** On the driver side only install the new provided brake line bracket in the orientation shown. On the passenger side the OE brake line bracket will be reused. Attach the brake line brackets to the axle with the provided 8mm x 20mm flange head bolts from Bolt Pack BP1078 and thread locker. Torque the 8mm bolts to 16 ft-lbs. Re-use the OE C-clips to lock the brake line to the bracket.

Note that the brake line system will need to be fully bled with this change.

**FIGURE 190**

21. **Dana Ultimate 60 Rear Axle Only:** Attach the brake / ABS line brackets to the axle using thread locker and the 8mm x 12mm flange head bolts in Bolt Pack BP1051 (Note one bolt in BP1051 is a 5/16" bolt that looks very similar to the 8mm bolts, note the difference in the bolt head markings). Torque these 6 bolts to 16 ft-lbs. On the driver side, remove the OE hard brake line from the bracket to gain additional slack for clearance to the track bar bracket on the axle. The passenger side hard brake line

will remain attached to the brake / ABS line bracket and run towards the wheel end same as the factory configuration.

22. **OE Rear Axle With Weld on Mounts:** Attach the brake / ABS line brackets to the axle using thread locker and the **OE bolts**. Torque these 6 bolts to 16 ft-lbs. On the driver side, remove the OE hard brake line from the bracket to gain additional slack for clearance to the track bar bracket on the axle. The passenger side hard brake line will remain attached to the brake / ABS line bracket and run towards the wheel end same as the factory configuration.

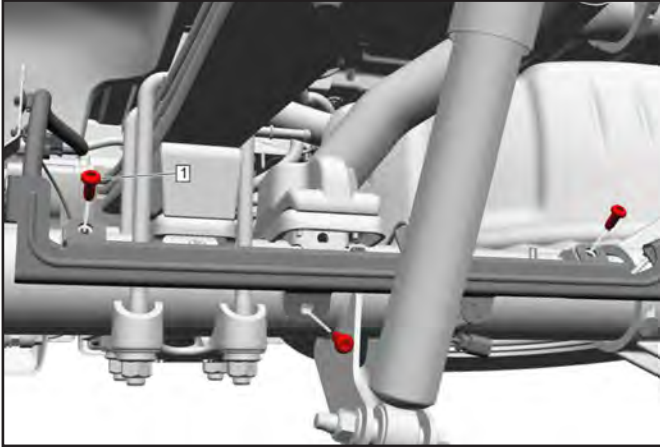


FIGURE 191



FIGURE 192



FIGURE 193

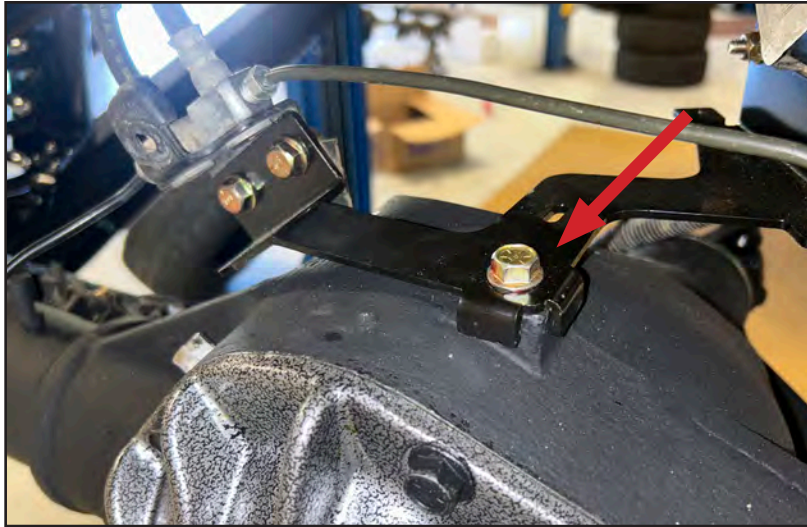


FIGURE 194

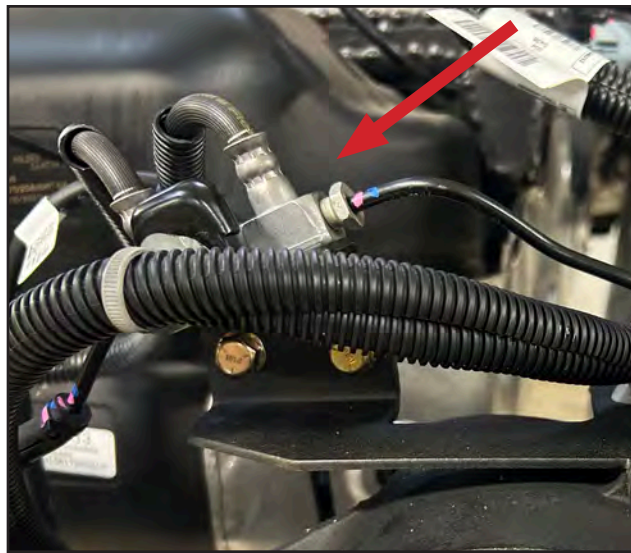
23. Plug in the parking brake wire to the caliper. Attach all wire harness to the bracket attached to the dust shield. The bracket attached to the dust shield may need to be bent to gain additional slack for the wire harnesses.

**FIGURE 195****FIGURE 196**

24. **OE Rear Axle With Weld on Mounts:** Use the OE brake line bracket, attached to the top of the OE differential.
25. **Dana Ultimate 60 Rear Axle Only:** Attach the provided rear brake line axle bracket to the top boss of the axle using the provided 5/16" x 1/2" flange head bolt and using thread locker in Bolt Pack BP1051. Torque the 5/16" bolt to 178 in-lbs.

**FIGURE 197**

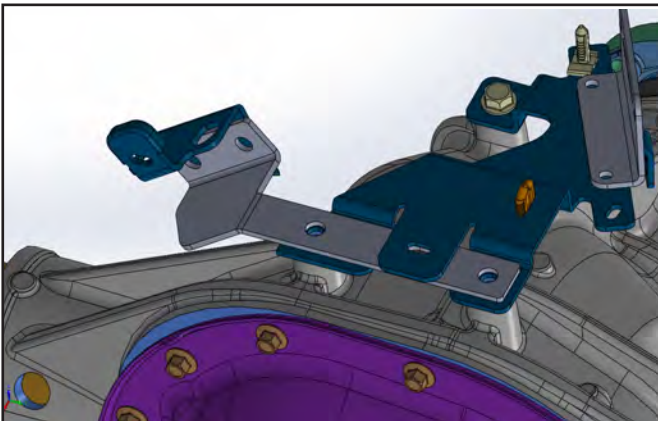
26. Form the OE brake line junction block and remaining OE brake line axle bracket up so that it can be bolted to the new rear brake line axle bracket. The brake lines should run vertical to the vehicle.

**FIGURE 198**

27. **Dana Ultimate 60 Rear Axle Only:** Mark and drill the (2) holes out to 3/8" to attach the OE brake line bracket and OE brake junction blocks to the new brake line axle bracket already attached to the axle. Attach the two together using the provided 5/16" flange head bolts and flange nuts from Bolt Pack 382.

**FIGURE 199****FIGURE 200**

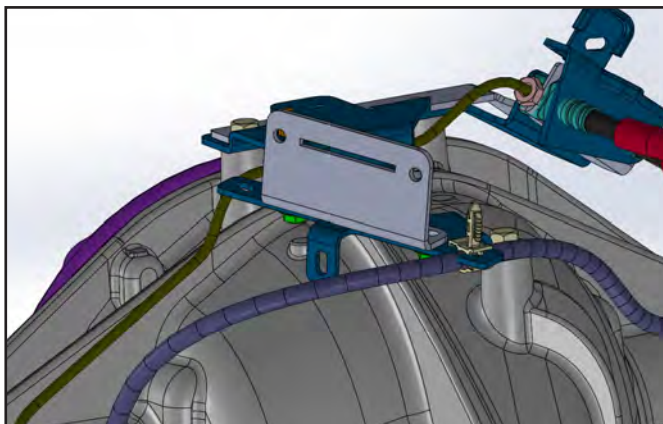
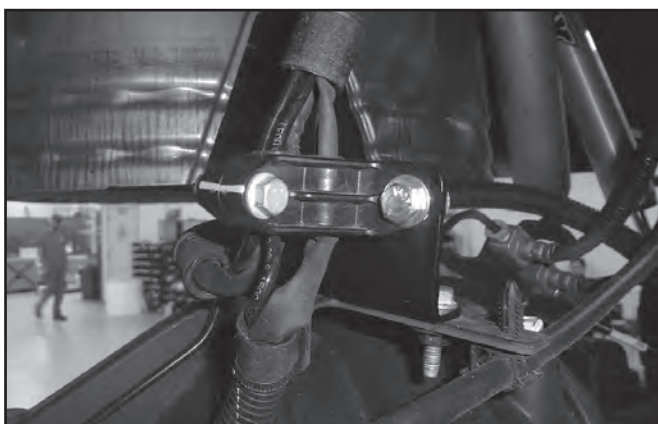
- 28. OE Rear Axle With Weld on Mounts:** Attach the provided brake line relocation bracket to the top of the differential as shown below removing the OE hardware and replacing it with (2) 8mm x 20mm flange head bolts in BO1078. Mark and drill the (2) holes out to 3/8" to attach the OE brake line bracket and OE brake junction blocks to the new brake line axle bracket. Attach the two together using the provided 5/16" flange head bolts and flange nuts from Bolt Pack 382.

**FIGURE 201****FIGURE 202**

- 29. Dana Ultimate 60 Rear Axle Only:** Attach the ABS block to the new rear brake line axle bracket using the provided 1/4" flange head bolts and flange nuts in Bolt Pack 382. Torque the 1/4" hardware to 86 in-lbs.

**FIGURE 203****FIGURE 204**

30. **OE Rear Axle With Weld on Mounts:** Attach the ABS relocation bracket to the OE brake line bracket on top of the differential using the provided 6mm x 16 mm Flange Head Bolts in Bolt Pack BP1078. Attach the ABS black to the ABS relocation bracket using the provided 1/4" flange head bolts and flange nuts in Bolt Pack 382. Torque the 1/4" hardware to 86 in-lbs.

**FIGURE 205****FIGURE 206**

31. Using the provided wire clamp and a 1/4" flange head bolt and flange nut in Bolt Pack BP1051 or BP1078 to attach the hard brake line to the ABS / brake line bracket attached to the rear axle. Mark and drill a 5/16" hole as shown in the figure below. Attach the brake line to the bracket and torque the 1/4" hardware to 86 in-lbs.

**FIGURE 207**

32. Attach the brake line frame mount to the relocation bracket installed in the previous step using the provided 5/16" flange head bolts and flange nuts in Bolt Pack 382.

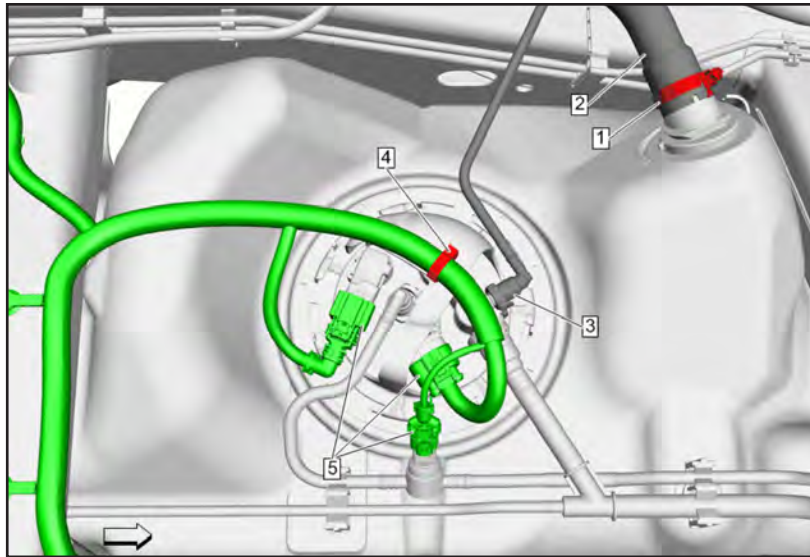
**FIGURE 208**

33. Reinstall the OE breather tube to the top of the axle.

**FIGURE 209**

RE-INSTALLING FUEL TANK

1. Place a suitable adjustable jack under the fuel tank. Raise the fuel tank into position in the truck, but not all the way up.
2. Raise the fuel tank, allowing clearance to access connections at the top of the tank. Connect all lines and wire harnesses to the fuel tank.

**FIGURE 210**

3. Gas tank straps are specific to position. Shorter strap is for the front of the tank. Longer is for the back. Re-attach fuel line & Evap. Lines. Re-attach the fuel filler neck and torque the filler neck clamps to 31 inch-lbs.

**FIGURE 211****FIGURE 212****FIGURE 213**

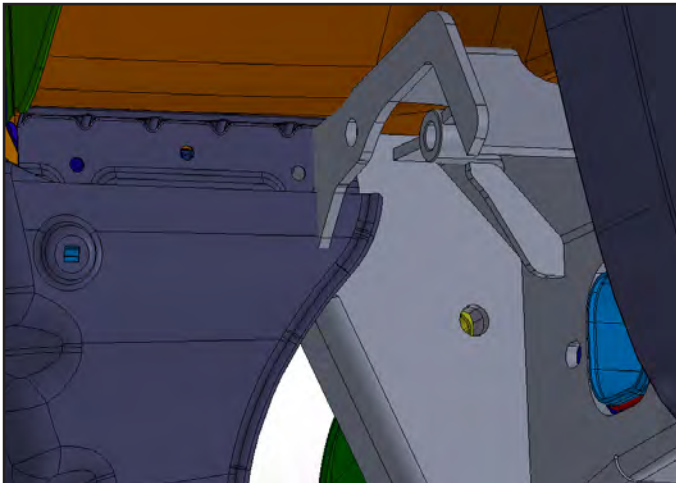
4. Attach the OE fuel tank straps to the frame using the OE hardware torqued to 16 ft-lbs.

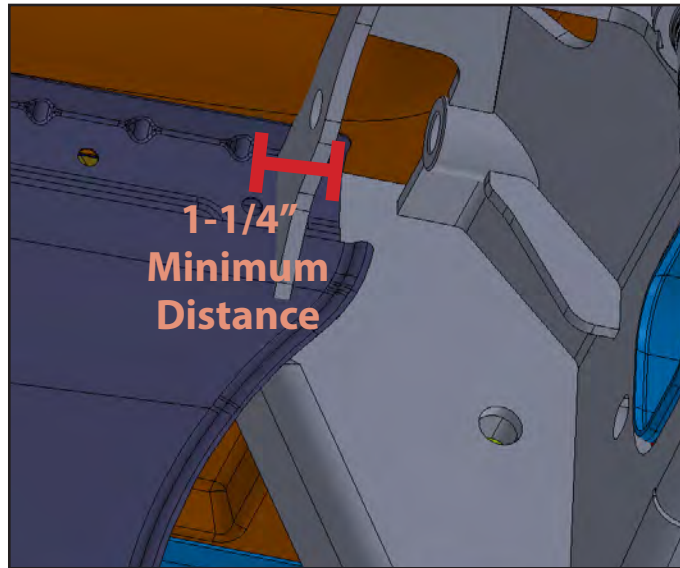
5. **OE Rear Axle With Weld on Mounts:** Remove any loose cured adhesive from the external threads from the (4) rear drive shaft bolts. Realign the rear driveshaft to the mark on the differential made earlier. Apply thread locker and torque the (4) rear drive shaft flange bolts to 74 ft-lbs.
6. **Dana Ultimate 60 Rear Axle Only:** With the fuel tank installed, install the new rear driveshaft into the transfer case and then onto the rear axle using the provided U-joint straps (3-70-28X). Torque the U-joint straps to 30-35 ft-lbs.

**FIGURE 214**

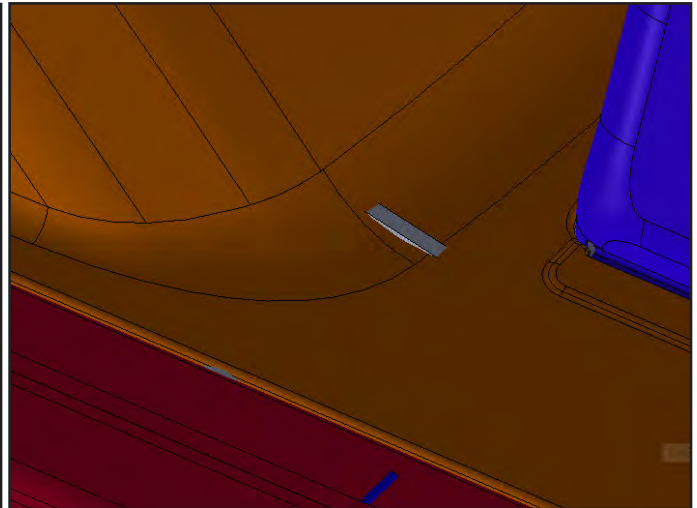
BED TRIMMING & INSTALLATION

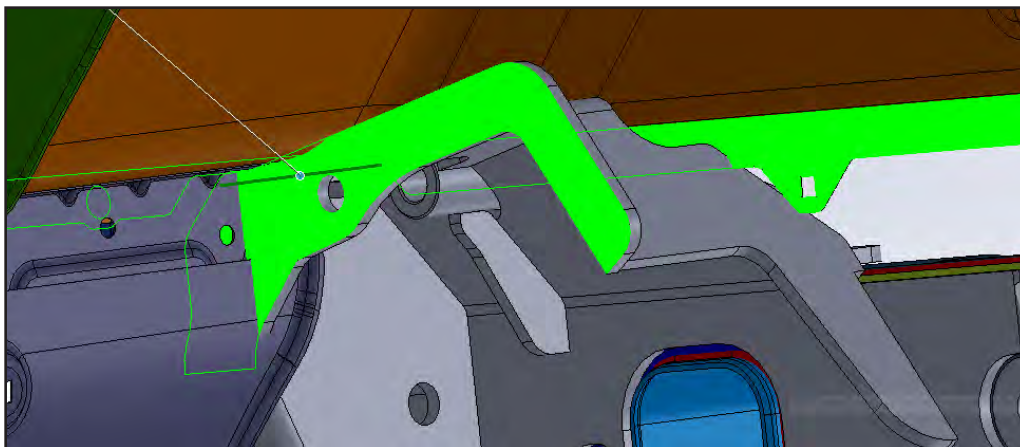
1. The bed will need to be trimmed for clearance to the coil-over mount. The first area to be trimmed is the front part of the inner fender. From the edge over approximately 1-1/4" needs a vertical trim completed as shown in the figures below.

**FIGURE 215****FIGURE 216**

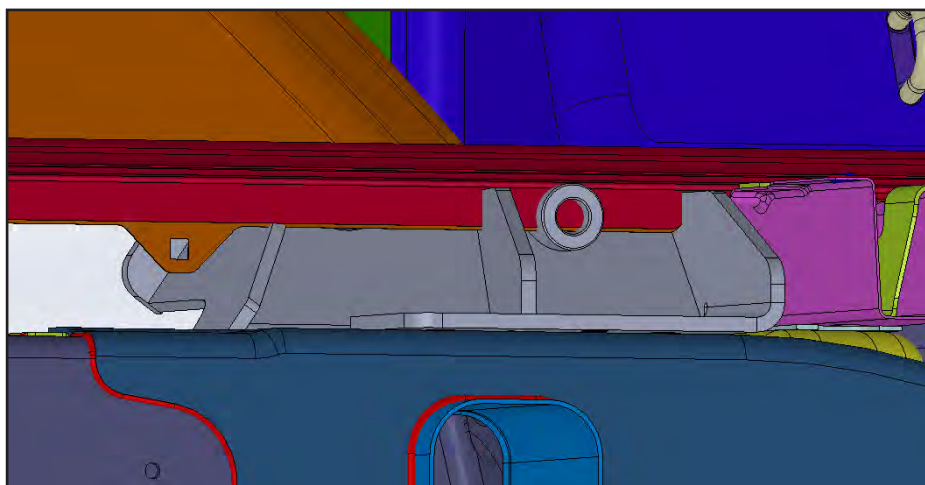
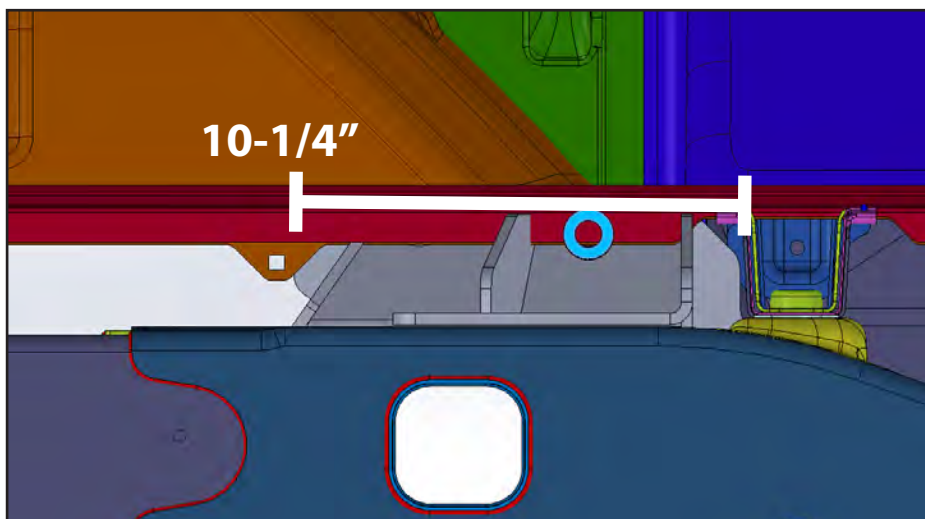
**FIGURE 217**

2. The last area of the bed needs to be “dented” to slightly create clearance to the coilover mount. The bed will need to be “dented” up about $\frac{3}{8}$ ” on the corner of the fender well at a distance of $3\text{--}5\frac{5}{8}$ ” from the bed seam as shown in figures below. This can be achieved with a ball peen hammer or an air hammer with a rounded end on the air hammer. The bed is very thin and can easily be dented for clearance. F

**FIGURE 218 - VIEW FROM BOTTOM OF BED****FIGURE 219 - VIEW FROM INSIDE THE BED**

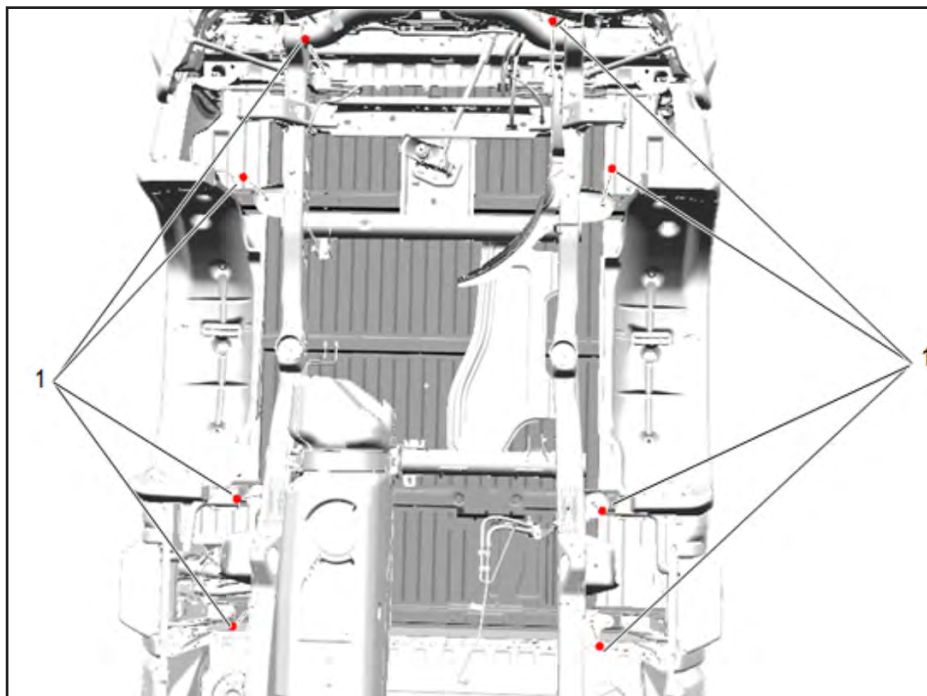
**FIGURE 220**

3. The second part of the bed to be trimmed is the seam on the bottom side. The seam will need to be trimmed between the bed rail and the square hole. This length is approximately 10-1/4" as shown in the figures below. This can be cut completely off or folded over.

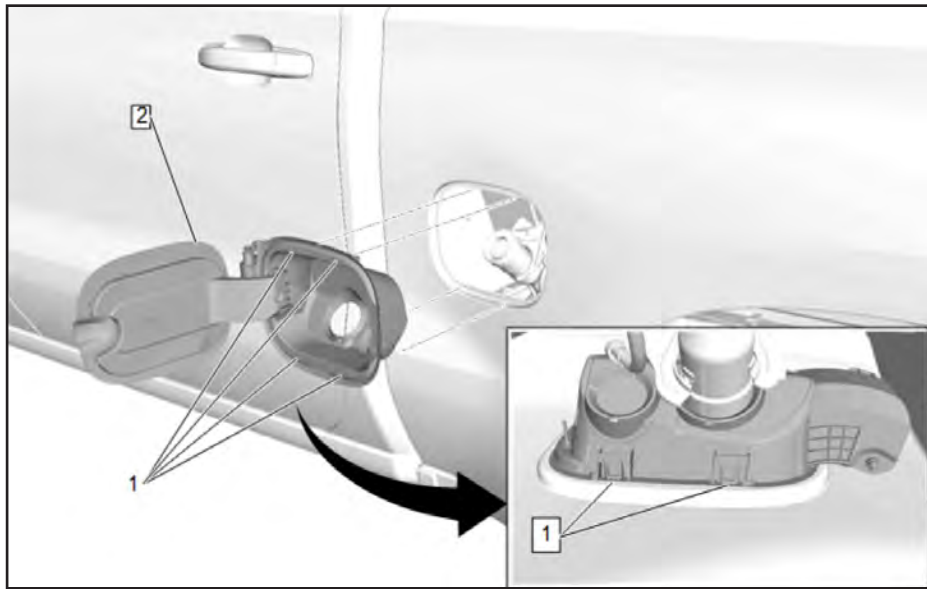
**FIGURE 221****FIGURE 222**

**FIGURE 223**

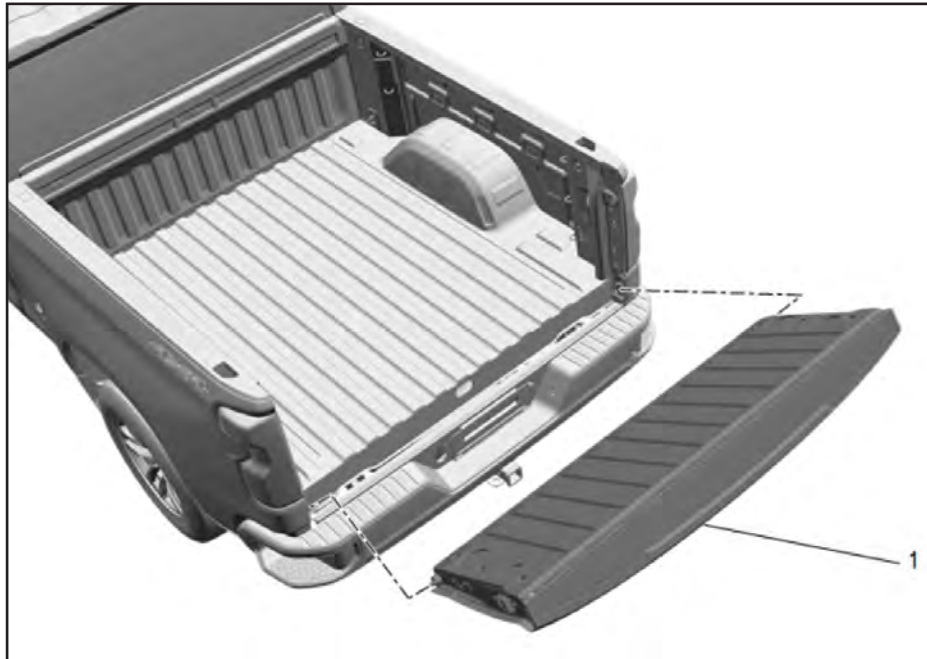
- 4.
5. After the bed trimming is completed on the passenger and driver side, the bed can be reinstalled onto the frame. With the help of assistant, install the bed lining up the locating pins on the frame with the bed. Use the OE bed mount hardware and torque to 63 ft-lbs.

**FIGURE 224**

6. Connect the electrical connectors and install the wiring harness retainers as necessary.
7. Connect the fuel tank filler pipe and ground bolts to the frame. If aftermarket fenders are used, this attachment method may need to be modified.
8. Position the fuel tank filler pipe housing to the pickup box outer side panel and the fuel filler pipe. If aftermarket fenders are used, this attachment method may need to be modified.

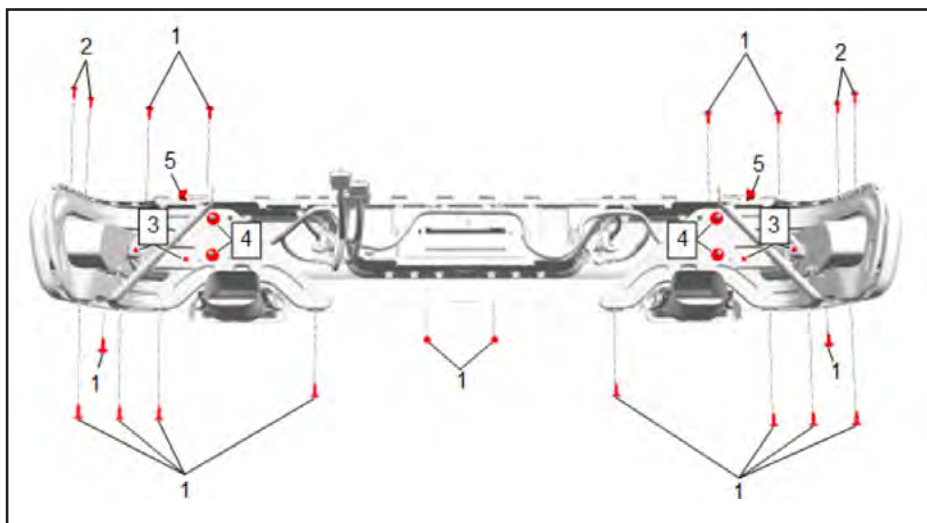
**FIGURE 225**

9. Reinstall the wheel well liner if equipped. If aftermarket fenders are used, this attachment method may need to be modified.
10. With the aid of an assistant, install the tailgate and attach the cables to the box. Torque the cable bolts to 22 ft-lbs. Install the tailgate hinge bolt and torque to 16 ft-lbs.

**FIGURE 226**

11. Connect the electrical connector and install the tailgate wiring harness retainers
12. With the aid of assistant, install the rear bumper to the vehicle. Torque the bumper nuts to 52 ft-lbs (#4 in figure below).

13. Torque the side bumper nuts to 74 ft-lbs (#5 in figure below).
14. Torque the bottom bumper bolts to 16 ft-lbs (#1 in figure below).

**FIGURE 227**

FRONT DISASSEMBLY

1. Remove front tie rod retaining nut. The tie rod and nut will not be reused.



FIGURE 228

1. Use hammer to strike bottom of tie rod to separate tie rod from steering knuckle.



FIGURE 229

2. Remove the brake line retaining bracket and bolt from the knuckle.



FIGURE 230

3. Remove the ABS line retaining bracket and bolt from the front side of the knuckle.

**FIGURE 231**

4. Remove the line bracket from the upper control arm.

**FIGURE 232**

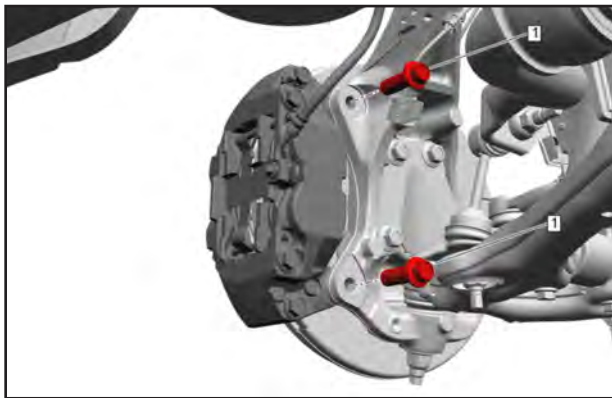
5. Remove the line bracket and bolt from the upper part of the knuckle.

**FIGURE 233**

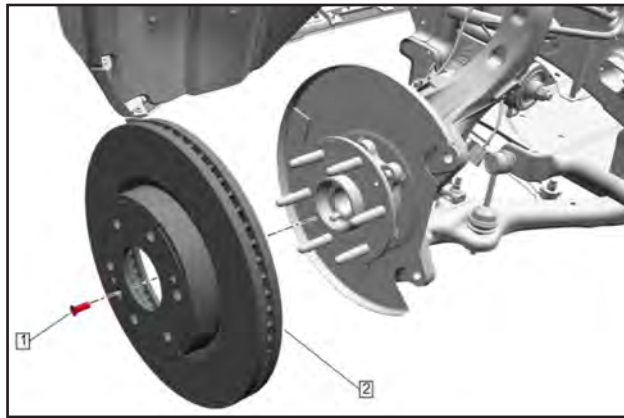
6. Remove the ABS sensor from the knuckle. Taking care not the damage the sensor.

**FIGURE 234****FIGURE 235**

7. Remove the brake caliper by removing the 2 caliper bolts on the driver side the brake pad sensor wire will need to be removed from the knuckle. Hang your caliper in a secure place in order to protect your brake line.

**FIGURE 236****FIGURE 237****FIGURE 238****FIGURE 239**

8. Remove the brake rotor retaining bolt and remove the rotor from the vehicle. Save the bolt and rotor for later installation.

**FIGURE 240**

9. Remove the CV shaft retaining nut. Note the CV shaft and nut will not be reused.

**FIGURE 241**

10. Loosen the upper ball joint nut, do not remove.

**FIGURE 242**

11. Strike knuckle to separate the ball joints tapered rod from knuckle. Do not remove nut at this point.

**FIGURE 243**

12. Tap axle end to dislodge splines from the bearing cup.

**FIGURE 244**

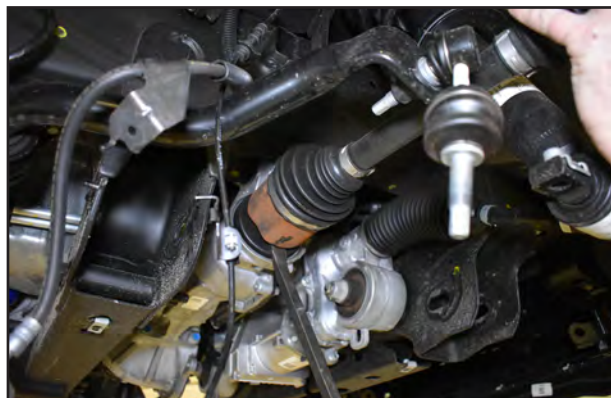
13. Loosen the lower ball joint nut but do not remove.

**FIGURE 245**

14. With the bottom ball joint nut loosened to the end of the threads, strike with hammer to separate the ball joint and knuckle. Remove the upper and lower ball joint nuts. Remove the steering knuckle from the vehicle and set aside. The upper and lower ball joint nuts will not be reused. The hub bearing assembly will be transferred to the new steering knuckle later in the installation.

**FIGURE 246****FIGURE 247**

15. Remove axle shafts using a pry bar to loosen the inner CV joint housing from the front differential. The CV shafts will not be reused.

**FIGURE 248**

16. Remove nut to disconnect sway bar from lower control arm. The nut and sway bar link will not be reused.

**FIGURE 249**

17. Mark orientation of the sway bar relative to the vehicle. Remove the 4 bolts attaching the sway bar to the vehicle. Remove and set the sway bar aside for re-installation later. Save hardware.
18. Remove the OE sway bar links from the sway bar. The OE links and OE link hardware can be discarded.

19. Remove both lower strut bolts. The strut bolts and strut will not be reused.



FIGURE 250

20. Loosen both lower control arm cam bolt / nuts. Once loosened, remove cam bolts and remove lower control arm from the vehicle. The lower cam bolts, nuts, and lower control arm will not be reused.



FIGURE 251



FIGURE 252



FIGURE 253



FIGURE 254

21. Remove strut from strut tower by removing the (3) nuts on top of the strut tower. The rear strut nut can be accessed from the engine bay with an extension. The struts will not be reused.

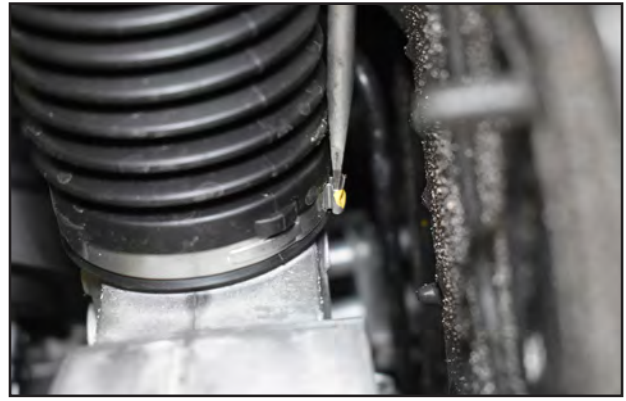
Note: On the drivers side strut tower the wiring harness retainer will need to be pried off of the rear strut bolt to gain access to the rear strut nut. On the passengers side the wiring harness box will need to be pried off of the strut bolt to gain access to the strut nut.

**FIGURE 255****FIGURE 256**

22. Remove the upper control arm by removing the control arm bolts and nuts. The upper control arms and upper control arm bolts / nuts will not be reused.

**FIGURE 257****FIGURE 258****FIGURE 259**

23. Remove the outer rack and pinion boot clamp. Remove the inner rack and pinion boot clamp by inserting a flat head screwdriver into shown slot on clamp and twist to break loose.

**FIGURE 260****FIGURE 261**

24. Slide the rack and pinion boot down to gain access to the large tie rod nut. Break loose with a pipe wrench, thread off by hand. The inner / outer tie rod assembly and boot with clamps will not be reused.

**FIGURE 262****FIGURE 263**

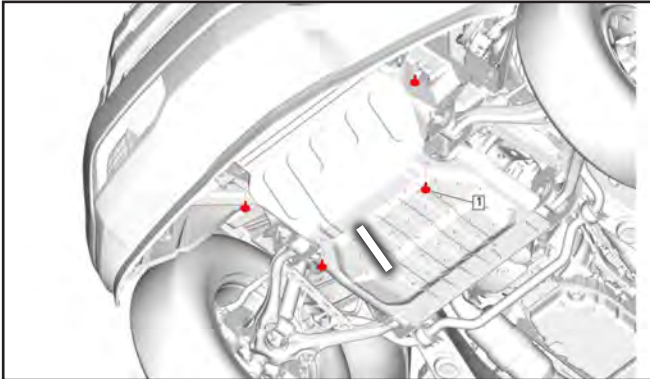
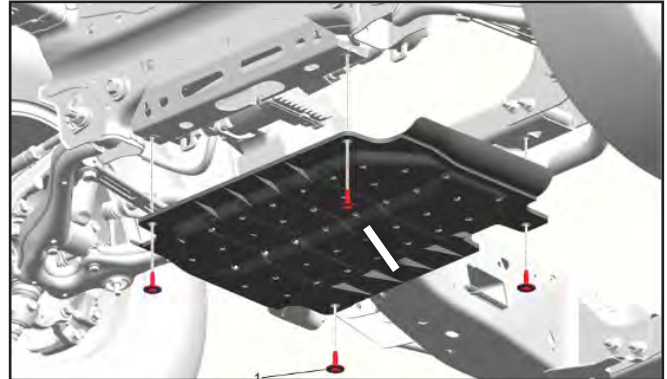
FRAME CLEARANCE CUT

1. Notch out the front frame pocket on the front and back side as shown for clearance of the bump stop bolt on the lower control arm.

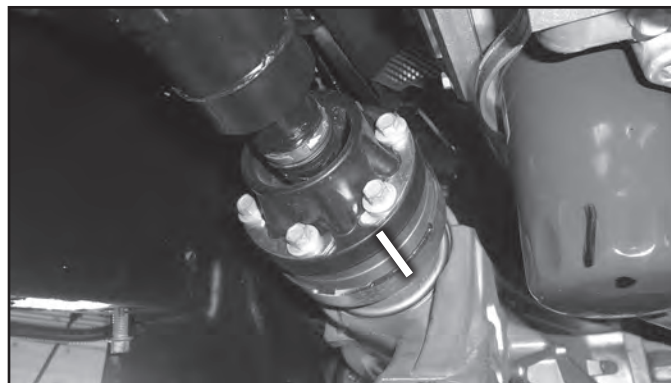
**FIGURE 264**

DIFFERENTIAL REMOVAL

1. Remove the front splash shield and differential skid plate. Save hardware for re-installation.

**FIGURE 265****FIGURE 266**

2. Make an alignment mark to show the relationship between the front driveshaft and the differential yoke. Remove the six driveshaft bolts and disconnect the driveshaft from the differential. Save hardware for re-installation.

**FIGURE 267**

3. Remove the bolt attaching the differential to the rear cross member. Save hardware for re-installation.

**FIGURE 268**

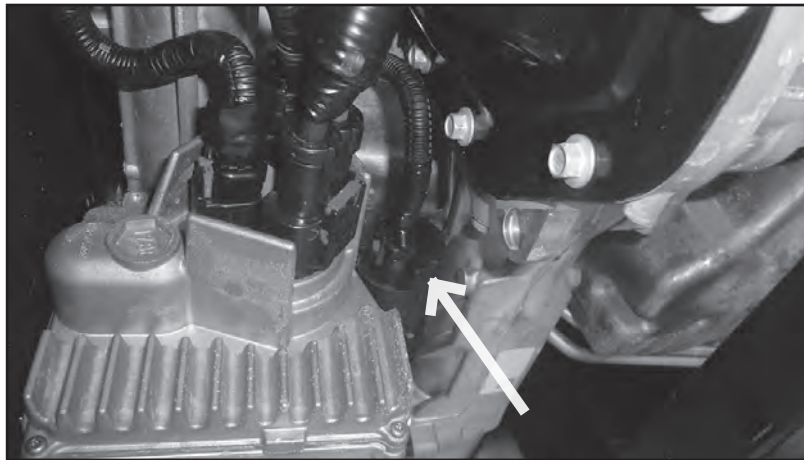
4. Remove the factory rear cross member from the vehicle by removing the 4 bolts. Save hardware and cross-member for re-installation.

**FIGURE 269**

5. Disconnect the differential actuator wire connector from the actuator.



Tip *If you are having difficulty accessing the plug, wait until the differential is being lowered to disconnect it.*

**FIGURE 270**

6. Disconnect the differential breather hose.



Tip *The differential may need to be lowered a little bit to disconnect the breather hose. This can be done as the differential is being removed. Note: Shown with differential removed for clarity*

**FIGURE 271**

7. **Diesel Models Only:** Remove the transmission cooler line near the from drive shaft attached to the transmission.
8. Support the front differential with an appropriate jack. Remove the driver's side differential mounting bolts. Save hardware for re-installation.



Tip We highly recommend having an assistant to help with removal of the front differential.

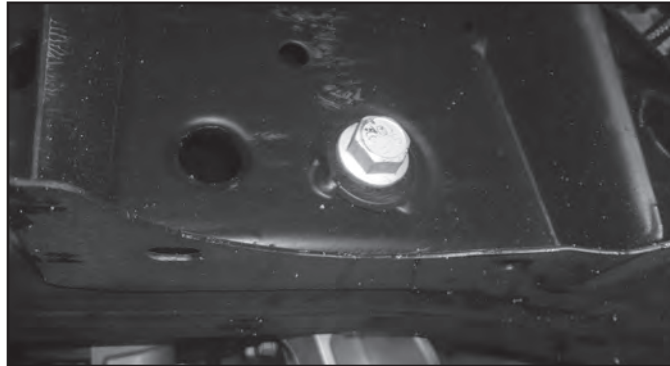


FIGURE 272

9. Remove the nut from the passenger's side differential mounting bolt. Carefully lower the differential to the ground while removing the long bolt for the passenger's side differential mount.



Tip The bolt holding the actuator may need to be removed in order to aid in removal of the long bolt for the differential. Reinstall the bolt for the actuator after it has been removed. It also helps to push the rear of the differential upwards to point the bolt head downwards to aid in removal.

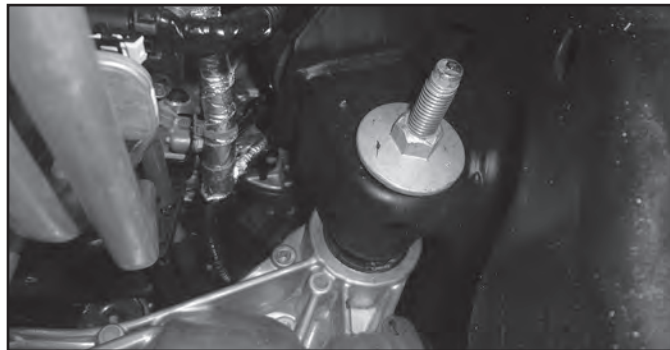


FIGURE 273

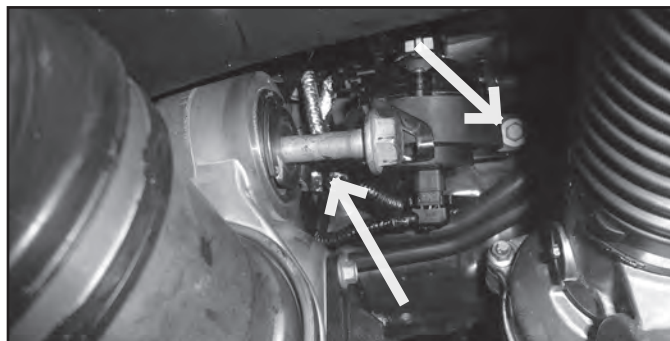
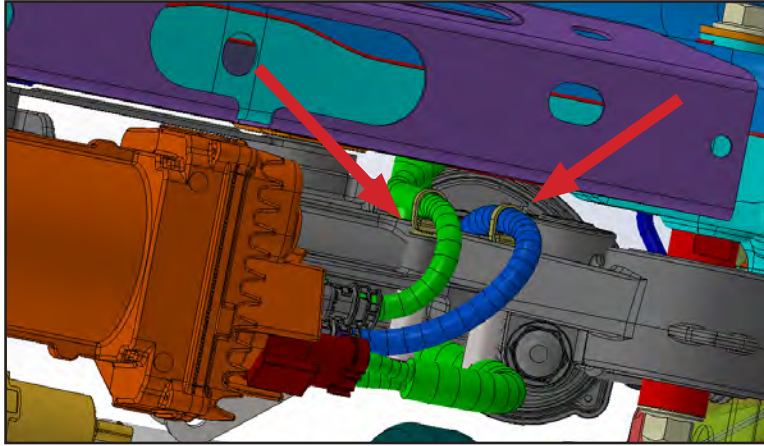


FIGURE 274

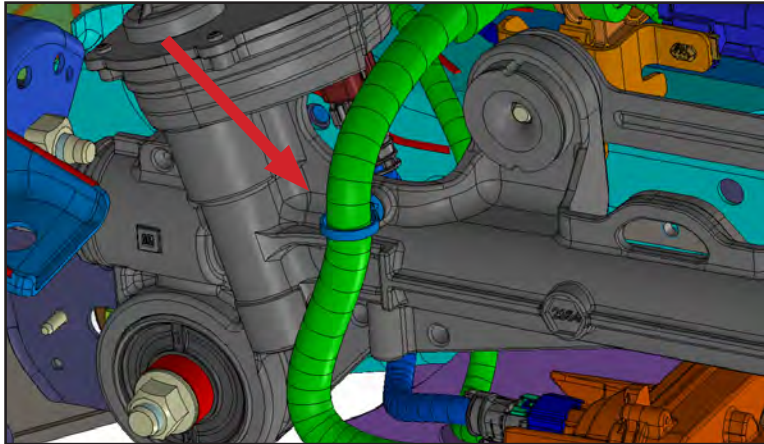
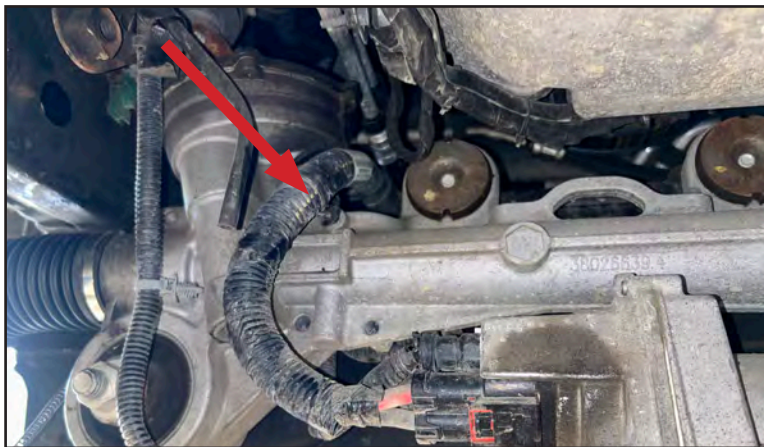
10. If re-gearing the front differential to match the rear axle when the ratio has changed, it is recommended to do this at this time. Follow the OE procedure for re-gearing the front differential.

STEERING STABILIZER / MOUNT INSTALLATION

1. Remove the two wire harness mounts from the front side of the steering rack.

**FIGURE 275****FIGURE 276**

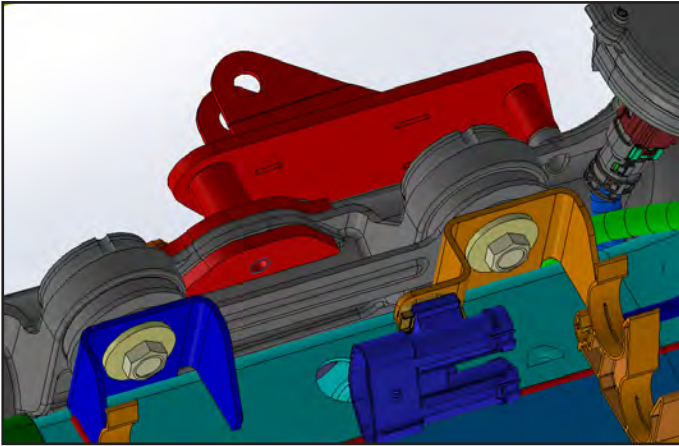
2. Remove the wire harness mount from the back side of the steering rack.

**FIGURE 277****FIGURE 278**

3. Install the steering stabilizer mount to the steering rack. The stabilizer mount should nest onto the steering rack with the pin going into the wire harness mount on the back side of the steering rack.

**FIGURE 279**

4. Install a 3/8" flange head bolt from BP1072 with thread locker through the hole on the passenger side and thread it into the nut plate installed on the front side of the steering rack. Leave hardware loose.

**FIGURE 280****FIGURE 281****FIGURE 282**

5. Install a 6mm washer and a 1/4" x 3-1/4" bolt from Bolt Pack BP1072 through the (2) mounts on the bottom driver side of the steering stabilizer mount. Attach on the back side with a 6mm washer and 1/4" nut from Bolt Pack BP1072. Leave hardware loose.

**FIGURE 283**

6. Torque the 1/4" hardware to 10 ft-lbs followed by the 3/8" hardware to 25 ft-lbs.
7. Install the steering stabilizer body side to the mount using the provided 12mm x 60mm flange head bolts and flange nuts in Bolt Pack BP1072. Make sure the hose for the reservoir is pointed straight down. Torque the 12mm hardware to 30 ft-lbs. The shaft side of the steering stabilizer should be pointing towards the passenger side of the vehicle and will be attached to the tie rod later in the installation. Secure the steering stabilizer out of the way for differential install.

FRONT DIFFERENTIAL INSTALLATION

1. Reinstall the front differential at this time in reverse order as previously removed using the OE hardware.
2. Reinstall the rear cross-member using OE hardware. Torque the four cross-member bolts to a first pass of 75 ft-lbs and a final pass of 90-105 degrees.
3. Torque the driver side through frame bolt to 74 ft-lbs.
4. Torque the passenger side frame mount bolt and nut to 96 ft-lbs.
5. Torque the driver side rear cross-member mount bolt and nut to a first pass of 85 ft-lbs followed by 68 degree final pass.
6. Remove any loose cured adhesive from the external threads from the six front drive shaft bolts. Realign the front driveshaft to the mark on the differential made earlier. Apply thread locker and torque the six front drive shaft bolts to 48 ft-lbs.
7. Reinstall the front wire harness to the front differential.

STEERING STABILIZER RESERVOIR MOUNT

1. Using a paint pen, mark a spot 5/8" down from the top of the OE rear cross-member and 1-1/2" over from the edge of the cross-member mount on the passenger side. This will be the left hole center for the reservoir mount. With the reservoir bracket as a template, level the reservoir bracket with the rear cross-member and mark the right hole center. The holes can be pre-drilled for ease of using the self tappers if desired.



FIGURE 284

**FIGURE 285****FIGURE 286**

2. Use the supplier 1/4" self-drilling / self-tapping to mount the reservoir bracket as shown on the passenger side. Torque both screws to 4.5 ft-lbs

**FIGURE 287**

3. Place hose clamps loosely on the reservoir bracket within the centering grooves as shown below. Slide the reservoir assembly into the hose clamps with it centered on the bracket as shown below. Position the gear housing portions of the hose clamps away from the bottom of the vehicle but easily accessible as shown the below picture.



FIGURE 288

4. Allow the connecting hose to influence where the reservoir wants to rotate.
5. Tighten the hose clamps to 15 inch-lbs.
6. Check for hose clearance. ~1/2" clearance to components as it routes to the steering stabilizer body is best. Loosening and rotating the reservoir slightly can improve clearance if needed. Remembering to re-tighten the hose clamps.
7. Reinstall the front splash shield and differential skid plate. Torque the differential skid plate hardware to 43 ft-lbs. Torque the splash shield hardware to 16 ft-lbs.

FRONT BUMP STOP BRACKET INSTALLATION

Note: When using red thread locker for installation, typical set time is 10-20 minutes. Ensure all hardware is torqued within this time frame for proper installation of thread locking compound.

1. Locate the front bump stop frame brackets and nut tabs.

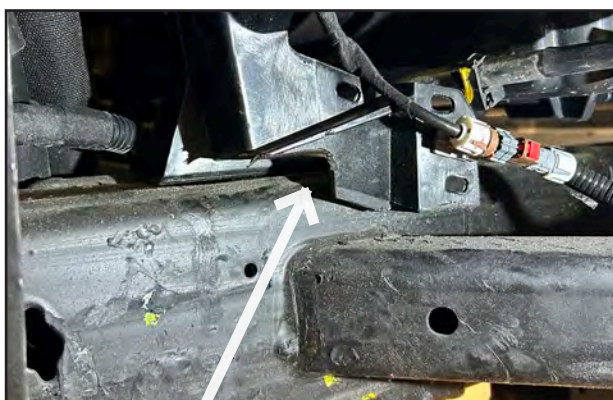
**FIGURE 289****FIGURE 290**

2. If needed, mark and trim inner fender to allow space for bump stop bracket install.

**FIGURE 291****FIGURE 292****FIGURE 293****FIGURE 294**

3. Align bracket with lower right factory hole / slot, mark and center punch for drilling. Drill the (3) marks out to 1/2" holes as shown. The bracket should nest close to the weld on the bottom side and close to the weld on the front side.

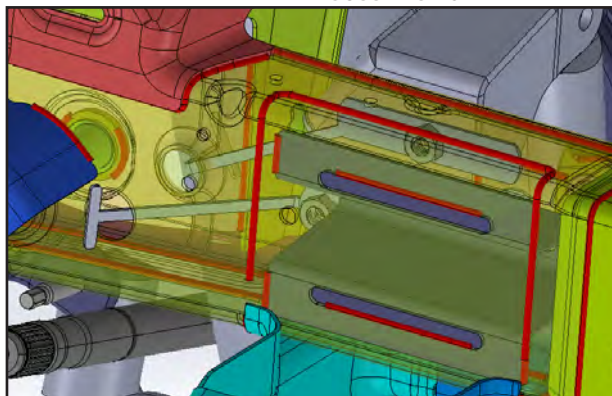
Note that the ECU mount on the driver side and the wire harness tray on the passenger side will need to be trimmed for clearance to the bump stop mount.

**FIGURE 295 DRIVER SIDE****FIGURE 296 DRIVER SIDE****FIGURE 297 DRIVER SIDE****FIGURE 298 DRIVER SIDE**

4. Install nut tab for the (2) lower bolts through the factory frame hole found on the inside of the frame. Apply red thread locker and install the 7/16" x 1-1/2" bolts from Bolt Pack BP1047. Leave hardware loose.

Note: Edges of nut tab may need to be ground down due to internal frame gusset variation.

**FIGURE 299****FIGURE 300**

**FIGURE 301****FIGURE 302****INTERNAL FRAME GUSSET SHOWN****FIGURE 303**

5. Install nut tab for upper bolt through the factory hole found on the outside of the frame as shown. Apply red thread locker and install the 7/16" x 1-1/2" bolts from Bolt Pack BP1047. Leave hardware loose.

**FIGURE 304****FIGURE 305**

**FIGURE 306**

6. Torque all (3) 7/16" bolts to 59 ft-lbs. Break off nut tab feeder T handle from the outside factory hole to avoid any contact with the coil spring.
7. Remove factory droop limiter. Coat with paint after removal to prevent rust.

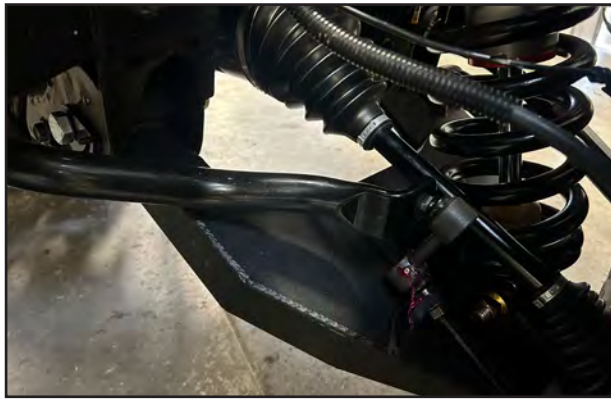
**FIGURE 307**

UPPER CONTROL ARM INSTALLATION

8. Install the upper control arm with the provided 14mm x 90mm flange bolts and flange nuts in Bolt Pack BP1046 from the inside of the strut bucket outwards. Leave hardware loose.

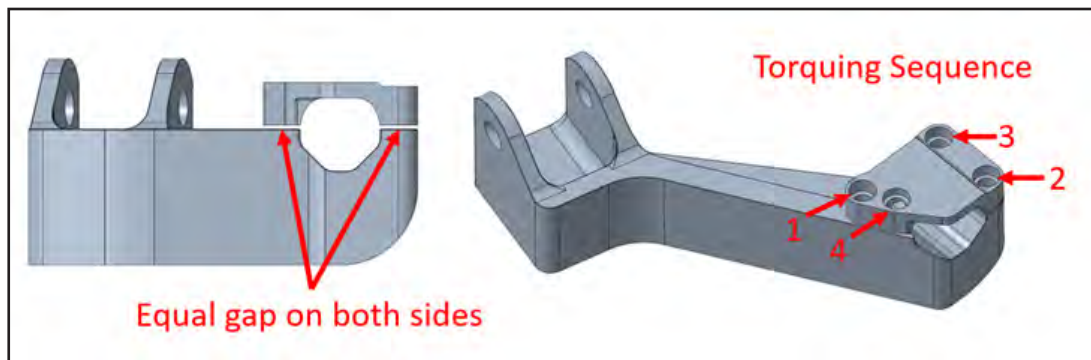
**FIGURE 308****FIGURE 309**

1. Thread the inner tie rod joint into the steering rack. Torque the inner tie rod to the steering rack to 89 ft-lbs.
2. Install the tie rod boot over the steering rack. Secure the tie rod boot to the steering rack using the provided boot clamp in bag kit B1590. Pinch the boot clamp onto the steering rack using CV boot clamp pliers. Cut off any excess length of clamp not used. **Do not** use the metal "zip tie" style tie rod boot clamp that came with the tie rod box.
3. Install the tie rod boot to the tie rod in the groove using the smaller provided boot clamp that came with the tie rod.

**FIGURE 310**

4. On the passenger side, mount the steering stabilizer mount to the flat on the tie rod. Use the provided 1/4" x 1-1/4" socket head cap screws in Bolt Pack BP1072 and thread locker. Torque the 1/4" hardware evenly in the sequence shown below using the following steps.
 1. Snug up all 4 bolts and sure the gap on both sides is approximately the same.
 2. Torque all 4 bolts to 10 ft-lbs in the order shown below.
 3. Final torque pass of all 4 bolts to 16 ft-lbs in the order shown below.

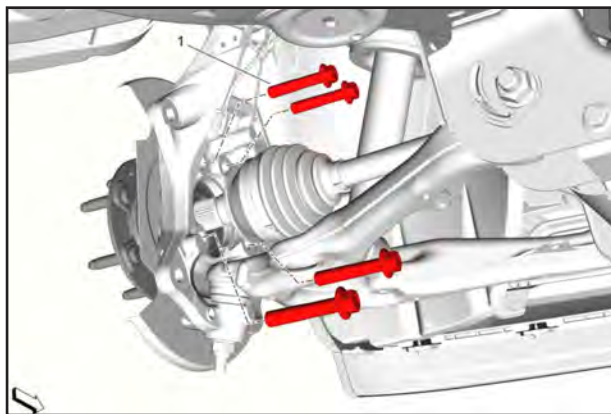
**FIGURE 311**

**FIGURE 312**

5. Attach the shaft side of the steering stabilizer to the mount attached to the tie rod using the provided 12mm flange head bolt and flange nut in Bolt Pack BP1072. Torque the 12mm hardware to 30 ft-lbs.

LOWER CONTROL ARM INSTALLATION

1. Remove the front wheel bearing from the OE steering knuckle. Save hardware.

**FIGURE 313**

2. Remove the (2) O-rings from the knuckle hub bore.

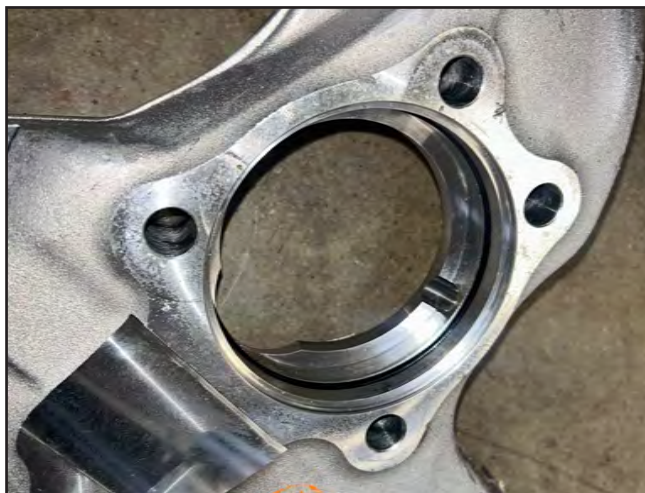


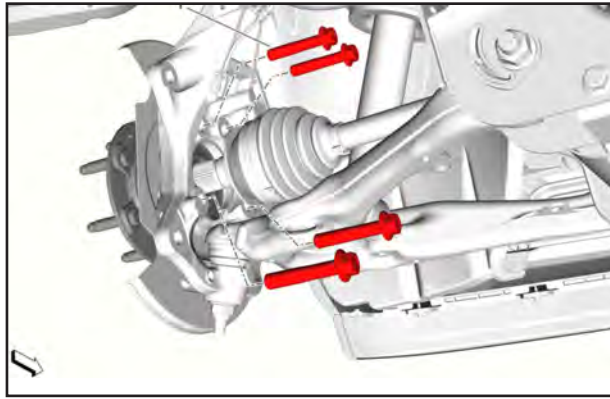
FIGURE 314

3. Install the (2) O-rings from the OE steering knuckle into the replacement steering knuckle.

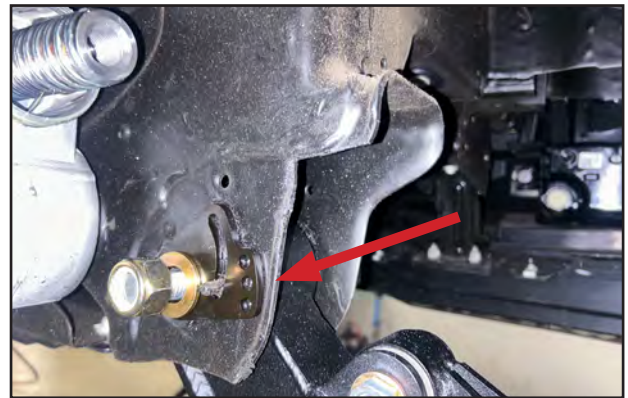
**FIGURE 315**

4. Install the front wheel bearing and OE dust shield into the replacement steering knuckle using the OE wheel bearing bolts and thread locker. Torque the wheel bearing bolts with a first pass to 111 ft-lbs followed by 30-45 degree final pass.

**FIGURE 316**

**FIGURE 317**

5. Install the cam bolt into the cam washer. The cam bolt and washer will install so that the (3) individual holes are towards the bottom of the frame. Install the front cam bolts so that the nuts are towards the rear of the vehicle. Install the rear cam bolt so that the nuts are towards the front of the vehicle.

**FIGURE 318****FIGURE 319****FIGURE 320****FIGURE 321**

6. Grease the lower ball joint using a narrow needle dispenser before installing into the vehicle. It is easiest to do this before installing to the vehicle. Install the lower control arm with the cam bolt/ washer. Install the cam washer on the opposite side such that the orientation is the same with the (3) individual holes towards the bottom of the frame.

**FIGURE 322**

7. Install the bump stop linkage to the lower control arm using the provided 12mm x 65mm flange head bolt and flange nut in Bolt Pack BP1047 . Install the hardware such that the head of the bolt is towards the front of the vehicle.

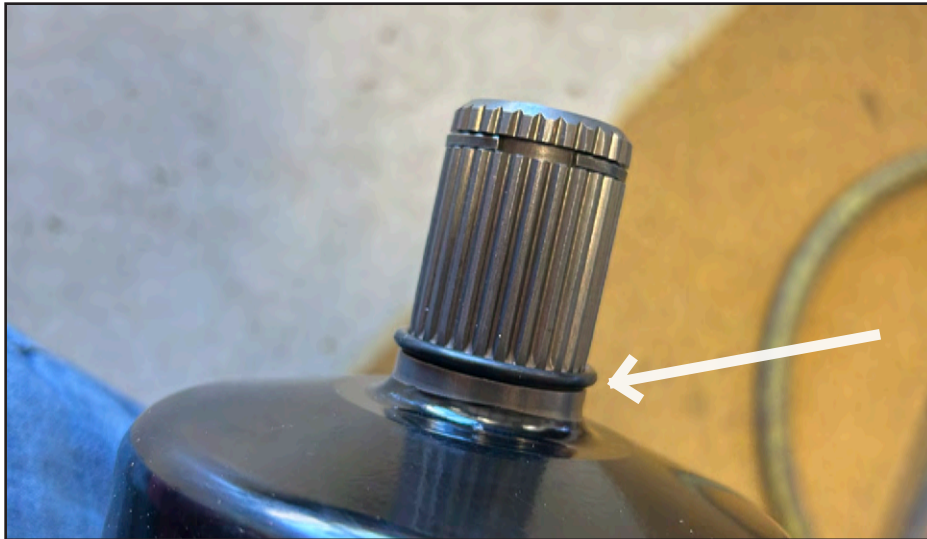
**FIGURE 323**

8. Place a screw jack under the lower control arm to hold up in order to set upper control arm torque for the correct ride height. Protect the lower control arm from scratches from the jack.

**FIGURE 324**

9. Install the provided O-ring with the CV shaft onto the splines of the inner joint.

Note: Check the CV boot clamps at this time to make sure they are tight. CV boot clamps may need to be pinched slightly tighter.

**FIGURE 325**

10. After the O-ring is installed, install the CV shaft to the front differential. The CV shaft should lock in place and not be able to be pulled out of the differential by hand. The front CV shaft can be allowed to rest on the lower control arm until the steering knuckle is installed, be sure to protect the CV shaft from scratches and pinching the boots.

**FIGURE 326****FIGURE 327**

STEERING KNUCKLE INSTALLATION

1. Install the front steering knuckle assembly to the lower ball joint feeding the CV shaft into the front wheel bearing. Use the provided hardware to attach the lower ball joint to the steering knuckle. Torque the lower ball joint hardware to a first pass of 37ft-lbs followed by 125-135 degrees. Install the cotter pin in the lower ball joint, if the hole does not line up continue to tighten the ball joint nut until the hole lines up (do NOT loosen the ball joint nut to line up the holes).

**FIGURE 328****FIGURE 329**

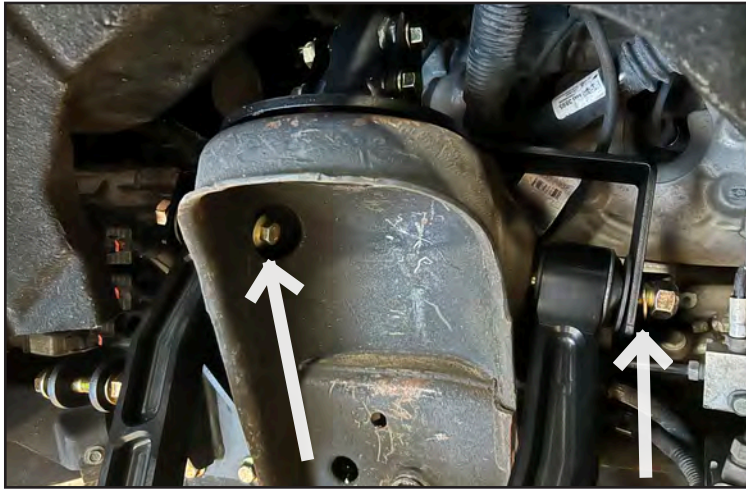
2. Attach the upper control arm to the steering knuckle temporarily using the OE upper ball joint nut. Snug up the upper ball joint nut at this time.

**FIGURE 330**

3. Using the screw jack, set the height from the strut mount face on strut tower to the center of the coil-over mount hole on the lower control arm to approximately 24 inches.

**FIGURE 331****FIGURE 332**

4. Torque the upper control arm frame mount bushing hardware to 126 ft-lbs.

**FIGURE 333**

5. Remove the OE upper ball joint nut and dislodge the steering knuckle from the upper control arm. Discard the OE upper ball joint nut.

FRONT COIL-OVER INSTALLATION

1. Droop out the front suspension such that the CV shaft does not pull out and the front coil-overs can be installed.
2. Install the front coil-over to the frame mount using the provided hardware. Ensure that the reservoir hoses run towards the front of the vehicle. Torque the front coil-over to frame mount hardware to 37ft-lbs.
3. Attach the front coil-overs to the lower control arm using the provided 3/4" flange head bolt and flange nut in Bolt Pack 381. Torque the lower control arm to coil-over hardware to 320 ft-lbs.

**FIGURE 334**

4. Reattach the upper ball joint to the steering knuckle using the original provided nut with the upper ball joint. Torque the upper ball joint nut on the first pass to 26 ft-lbs and a final pass of 85-95 degrees. Grease the upper ball joint at this time using 2 pumps of grease.

**FIGURE 335**

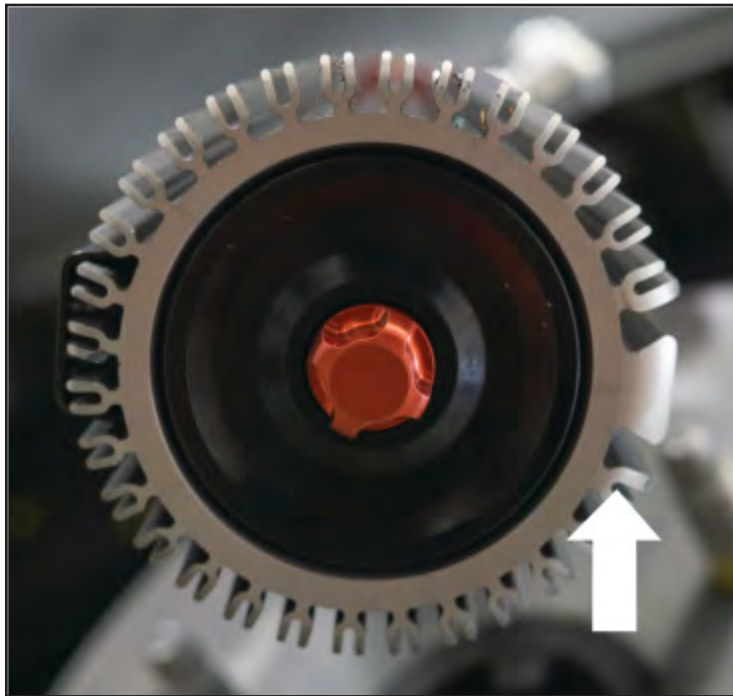
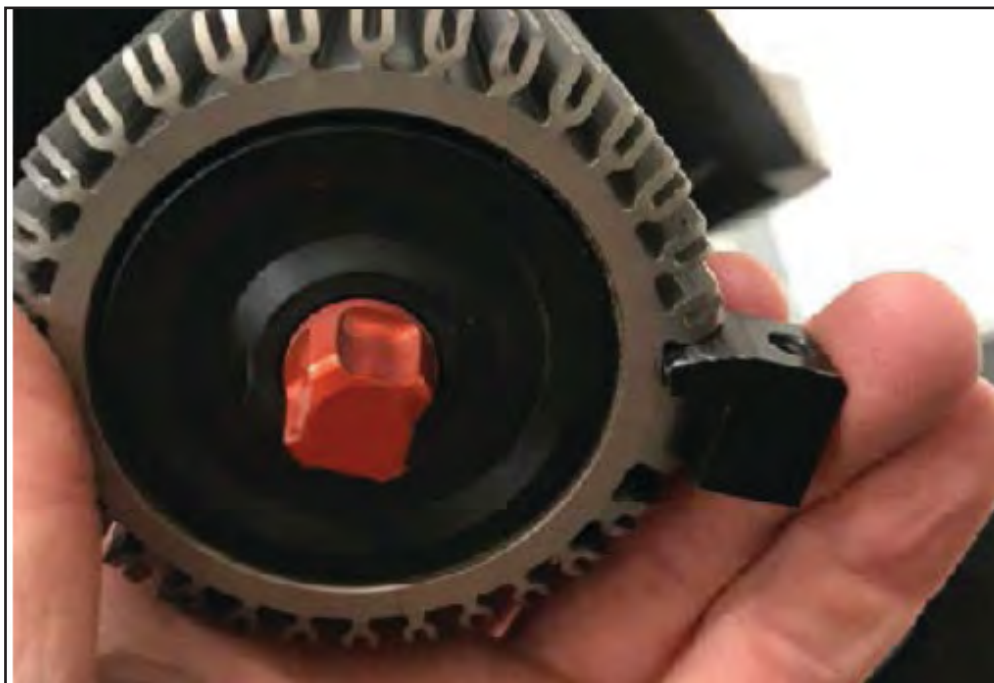
5. Install the upper control arm ball joint cap to the upper control arm. Using a small amount of grease, lubricate the O-ring on the cap and the upper control arm. Use a rubber mallet to tap the cap onto the upper control arm in the correct orientation for the BK logo.

**FIGURE 336**

6. For Non-TB/Non-AT4 models, mount the reservoir bracket to the vehicle's frame with the supplied hardware. Torque both bolts to 30 ft-lbs. Utilize the holes in the vehicle's frame to locate the hardware. For TB/AT4 models, reuse the OEM bolts installed in the vehicle's frame instead of the supplied hardware and torque to OEM specification.

**FIGURE 337****FIGURE 338**

7. Slide both reservoir clamp nuts into the upper side of the dovetail notch.
8. Use the lower side of the dovetail notch on the reservoir to marry the bracket and reservoir. The reservoir needs at a minimum 1/8" clearance from any surrounding vehicle parts.
9. Once the reservoir is oriented, slide the clamp nut into the dovetail notch from the bottom of the reservoir to the far hole on the reservoir bracket.

**FIGURE 339****FIGURE 340**

10. Align one of the the clamp nuts with one of the holes in the mounting bracket by sliding it along the upper dovetail notch.
11. The clamp nut and top of the reservoir bracket must be flush. Loosely install one of the supplied screws. Next, slide the second clamp nut to the second hole of the reservoir bracket. Loosely install the second supplied screw. Torque the clamp nut screws to 76 in-lbs.

**FIGURE 341**

12. Install the supplied hose separator clamp approximately mid-way on the hose between the reservoir and hose fitting right above the tie rod. Use the clamp to improve the hose's clearance from the vehicle. It is best to have the clamp horizontal to pull the hose up from the tie rod. Torque the clamp's screw to 76 in-lbs.

**FIGURE 342**

FRONT SUSPENSION INSTALLATION - CONTINUED

1. Install the front bump stop between the frame mount and the bump stop linkage on the lower control arm. Use the provided 1/2" flange head bolts and flange nuts in Bolt Pack BP1047 installing the hardware such that the bolt head is towards the rear of the vehicle and the nut is towards the front of the vehicle. Tighten the 1/2" hardware to 80 ft-lbs.

**FIGURE 343**

2. Reinstall the front sway bar using thread locker and the OE hardware based on proper orientation marked earlier. Torque the OE sway bar mount hardware to 37 ft-lbs.
3. Install the sway bar lateral locks to the inside of the sway bar on the passenger and driver side. Apply thread locker and torque this hardware to 25 inch-lbs.

**FIGURE 344****FIGURE 345**

4. Attach the new sway bar links to the sway bar and the lower control arm. Tighten the sway bar link hardware to the sway bar and lower control arm to 74 ft-lbs. Grease the sway bar links at this time, using 2 pumps per each link.

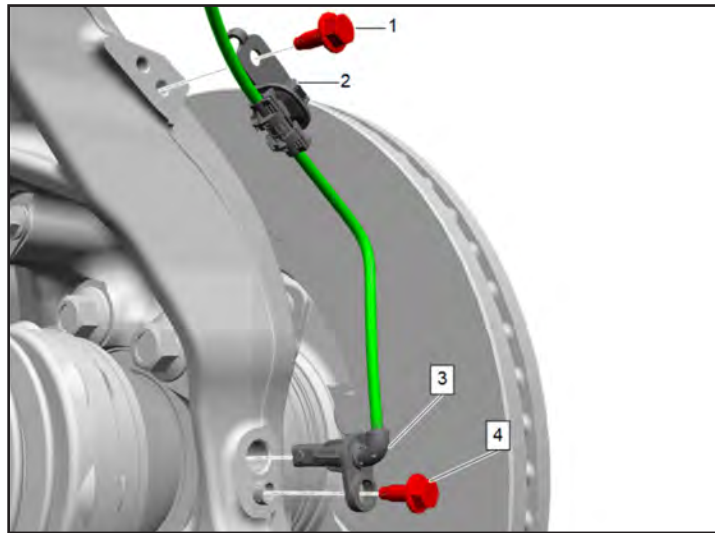


FIGURE 346**FIGURE 347**

5. Attach the outer tie rod joint to the steering knuckle. Torque with a first pass to 26 ft-lbs and a final pass of 85-100 degrees.

**FIGURE 348****FIGURE 349**

6. Attach the OE ABS line brackets to the new steering knuckle using the OE hardware with thread locker. Torque to 80 inch-lbs.

**FIGURE 350**

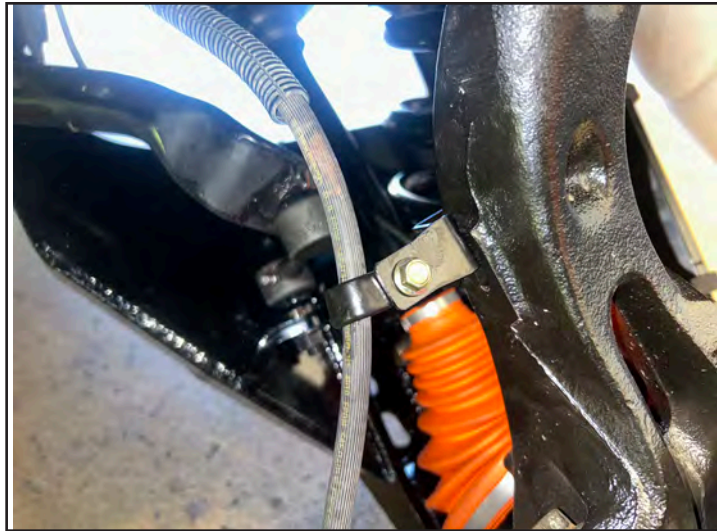
7. The OE brake line bracket that attaches to the steering knuckle will need to be removed from the brake line. Cut on the OE brake line bracket enough to pry open the bracket to free the brake line from the OE bracket. The cut does not need to be all the way thru the bracket, but enough that it can be pried open. Be VERY careful not to cut the brake line.

**FIGURE 351**

8. Attach the provided brake line bracket to the new steering knuckle with the OE hardware with thread locker. Torque to 80 inch-lbs.

**FIGURE 352**

9. Attach the brake line to the new brake line bracket using the provided wire clamp and 1/4" x 3/4" flange head bolt and flange nut in Bolt Pack 381.

**FIGURE 353**

10. Attach the ABS mount bracket on the back side (towards the rear of the vehicle) on the front upper control arm using the provided #10 x 3/8" button heads screws in Bolt Pack BP1046. Torque the #10 hardware to 30 inch-lbs.

**FIGURE 354**

11. Using the wire clamps and #10 x 5/8" flange head hex bolt in BP1046 attach the brake sensor and ABS wire on the driver side to the attached brake line bracket on the upper control arm from the previous step. On the passenger side only the ABS wire will be attached to the upper control arm. Torque the #10 hardware to 26 inch-lbs.

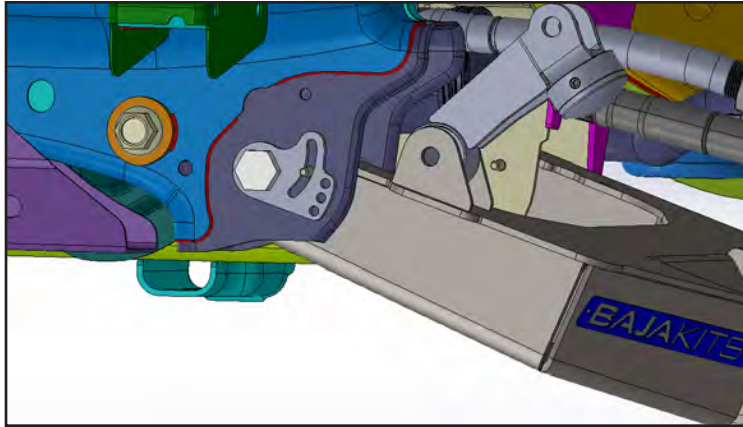
**FIGURE 355**

FINAL INSTALLATION

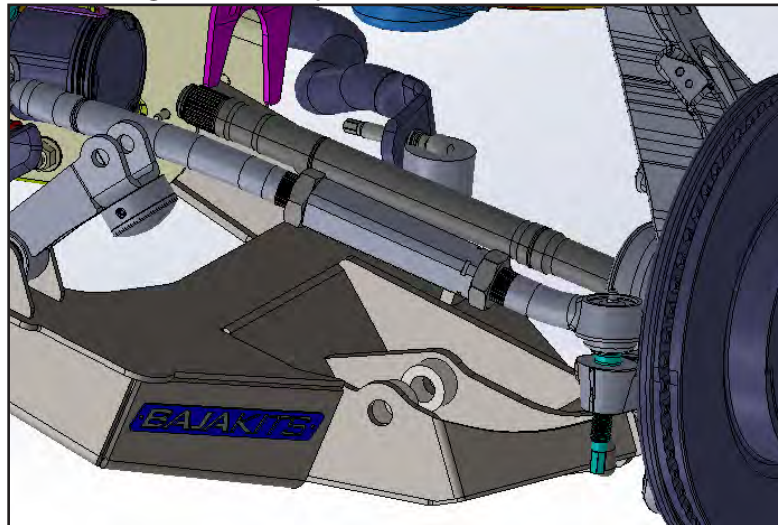
1. Apply anti-seize thread lubricant to the CV axle threads and install the CV axle thick washer and nut. Torque the CV axle nut to a first pass of 133 ft-lbs. A second pass of reverse 45 degrees. Followed by a final pass of 199 ft-lbs per the OE specifications.
2. Reinstall wheels and tires onto the vehicle.
3. Torque lug nuts to OE specifications.
4. Lower vehicle to the ground.
5. Reinstall battery cables to vehicle terminals.
6. Adjust tie rods to closely set toe. Vehicle will require a full alignment, but setting the toe close to zero will allow it to be driven to alignment.
7. Roll vehicle forward and rearward to settle the suspension.
8. Torque the 18mm rear trailing arm frame and axle mount hardware to 270 ft-lbs.
9. Torque the 14mm rear upper control arm and track bar frame and axle mount hardware to 126 ft-lbs.
10. Torque the 18 mm front lower control arm cam nut with a first pass of 133 ft-lbs and a final pass of 90-105 degrees.
11. Torque the 12mm bump stop linkage hardware to 69 ft-lbs. This is the bushing attaching the linkage to the control arm.
12. Bleed the brake system of all air after installing rear brake lines or cracking brake lines open to replace the bracket.

ALIGNMENT AND CAM LOCK OUT INSTALLATION

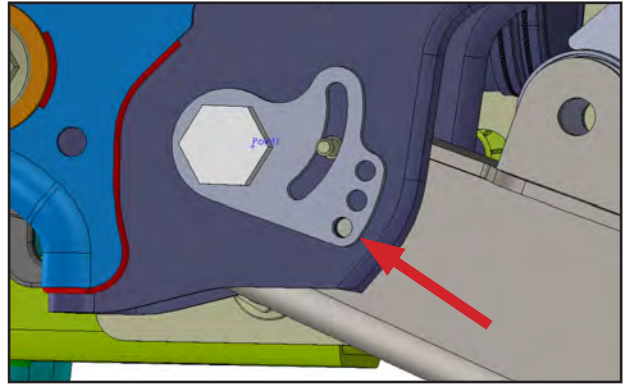
1. Use standard alignment procedure to align the vehicle using the cams on the lower control arm to adjust the lower control arm position for camber and caster. Be sure to use the bolt head side to adjust the cam. Tighten the cam hardware **ONLY FROM THE NUT SIDE** holding the bolt head from moving. The vehicle should be aligned to OE specifications. Tighten the cam hardware with a first pass of 133 ft-lbs and a final pass of 90-105 degrees.

**FIGURE 356**

2. Use the tie rod adjuster sleeve and loosen each jam nut. Spin the center adjuster to lengthen or shorten the tie rod for toe adjustment. After setting the toe, tighten each jam nut against the center adjuster to 250 ft-lbs. The vehicle should be aligned to OE specifications.

**FIGURE 357**

3. In the next steps holes will be drilled in the frame for the cam "lock out". These holes will be used for a bolt through the cam "lock out" and into the frame to prevent the alignment from slipping during extreme use. It is recommended to make sure the alignment is good by driving the vehicle at this time before drilling these holes.
4. After the vehicle is aligned, drill a 1/4" hole at the lowest hole position on the alignment cam on the "front face" of the vehicle. Be careful to not contact the lower control arm when drilling the hole.

**FIGURE 358****FIGURE 359**

5. Drill both "rear faces" for the cams on the vehicle as well. Note that the sway bar may need to be removed on the rear cam for clearance to drill the holes.

**FIGURE 360****FIGURE 361**

6. Install a 1/4" x 5/8" Torx screw from Bolt Pack 381 into the hole drilled in the previous step. Run the bolt from the outside in, attaching on the inside using the provided 1/4" center lock nut in Bolt Pack 381. Tighten to 37in-lbs. The other 2 holes in the cam plate can be used if the alignment is adjusted in the future and new holes need to be drilled.

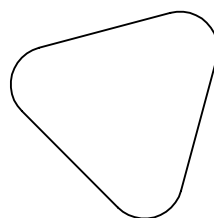
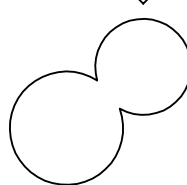
**FIGURE 362****FIGURE 363**

7. Repeat this procedure for all the outer cam holes that were drilled in the previous step. Additional hardware is provided for future use if the cams need to be adjusted.

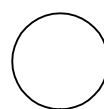
OE Hole Feature On 2021+
GM 1500 OE Frame

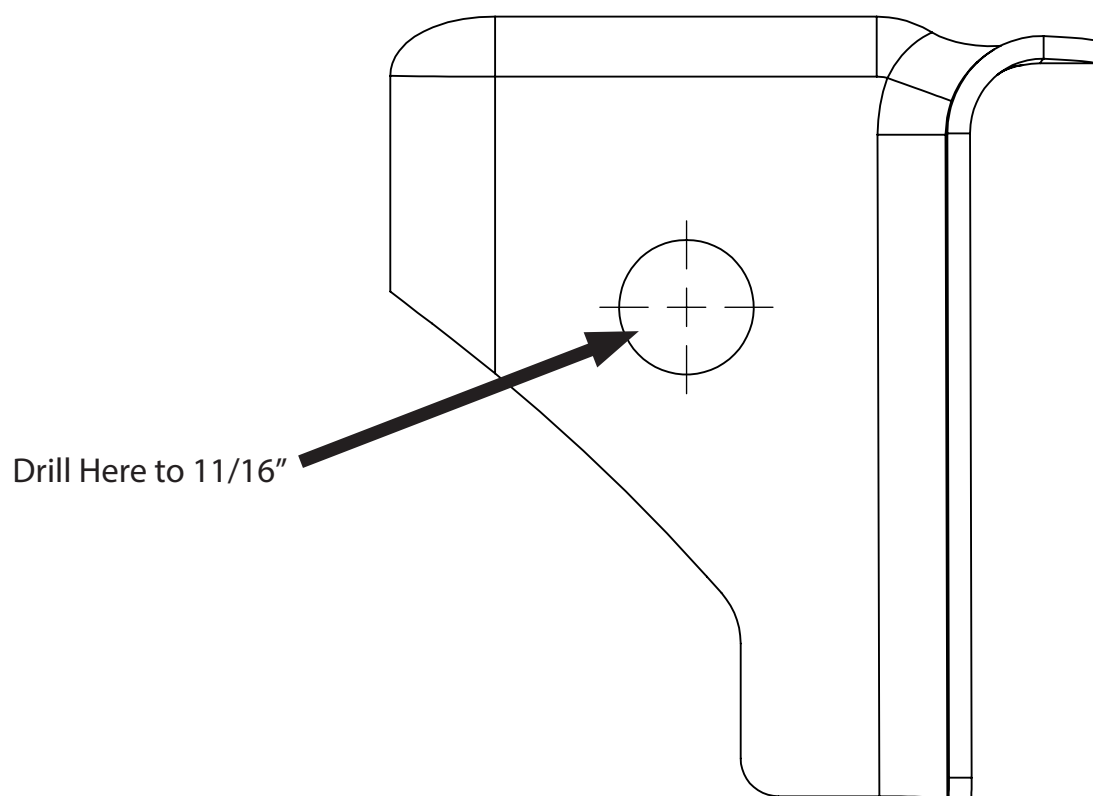
Triangle Feature On 2021+
GM 1500 OE Frame

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BJK1144001 Box Kit Components		
Part #	Quantity	Description
B1590	1	Bag Kit - Front Components
381	1	Bolt Pack - Front Components
BP1047	1	Bolt Pack - Bump Stop
342702	2	Thread Locker
05263	8	2019+ GM 1500 Cam Lock Washers
05316	1	2019+ GM 1500 Driver Side Brake Line Bracket
05317	1	2019+ GM 1500 Passenger Side Brake Line Bracket
DLL133	1	Sway Bar Clamp - 33mm
03623	4	2019+ GM 1500 Cam Bolt
86-5832	2	Tie Rod Boot Clamp
099000	4	Cable Tie - Standard
15700143	4	Cable Tie - Oval Fir Tree
099002	4	Cable Tie - Fir Tree
B1625	1	Bag Kit - Stabilizer Mounting
BP1072	1	Bolt Pack- Stabilizer Mount
05563	1	2019+ GM 1500 LT Steering Rack Bracket Nut Plate
05565	1	2019+ GM 1500 LT Steering Link Attachment Clamp Bracket
A429	2	Bump Stop Link Assembly
K750146	2	Sway Bar Link
05265	1	2019+ GM 1500 Front Bump Stop Frame Mounts - Driver
05266	1	2019+ GM 1500 Front Bump Stop Frame Mounts - Passenger
05267	2	2019+ GM 1500 Bump Stop Nut Tab 1
05268	1	2019+ GM 1500 Bump Stop Nut Tab 2 - Driver
05269	1	2019+ GM 1500 Bump Stop Nut Tab 2 - Passenger
401-2048	1	2019+ GM 1500 Tie Rod End Assembly - Driver
401-2050	1	2019+ GM 1500 Tie Rod End Assembly - Passenger
05562	1	2019+ GM 1500 Steering Rack Bracket
05564	1	2019+ GM 1500 Steering Link Attachment