



EZ - Ride Suspension

PART NUMBER : 16840
1992— 1998 CHEVY / GMC 1500 6 LUG
4 DOOR TAHOE, YUKON AND SUBURBAN
6" SUSPENSION SYSTEM WITH FRONT SPINDLES

PARTS LIST:

Part #	Description	Qty.
16810-03	Driver Side Differential Drop Bracket	1
16810-04	Passenger Side Differential Drop Bracket	1
16810-06	Rear Lateral Compression Arm Mounts	2
16810-09	One Piece Lower Sub Frame	1
16810-11	Lateral Compression Arms	2
16985-16	Torsion Bar Drop Brackets	2
C6I-118M	Driver Side Spindle	1
C6I-119M	Passenger Side Spindle	1
SB-01	Rear Sway Bar End Links	2
9803	Axle Spacers	2
BL401	4" Lifted Blocks	2
5U-9295S	9/16" x 2 3/4" x 12 5/8" Square U-Bolts	4
TCI-R25	Rear Add-a-Leaf	2
BLR01	Rear Brake Line Extension Bracket	1
BLR02	Front Brake Line Extension Bracket	2
16810SL	Poly and Sleeve Bag	1
16840NB	Hardware Bag	1
16840SL	Poly and Sleeve Bag	1
916NW	Hardware Bag	1
CB38	Hardware Bag	1
16840INST	Instruction Sheet	1

Congratulations on your selection to purchase a Tuff Country EZ-Ride Suspension System. We at Tuff Country EZ-Ride Suspension are proud to offer a high quality product at the industries most competitive pricing. Thank you for your confidence in us and our product.

For a list of all parts, please refer to the Parts Description Page, at the end of the Installation Manual.

Make sure to use thread locker or loctite on all new and stock hardware associated with the installation of this suspension system.

Torque Settings

5/16"	15—18 ft lbs.
3/8"	28—32 ft lbs.
7/16"	30—35 ft lbs.
1/2"	65—85 ft lbs.
9/16"	85—120 ft lbs.
5/8"	95—130 ft lbs.
3/4"	100—140 ft lbs.

INSTALLATION MANUAL

6" I.F.S. SUSPENSION 1992 - 1998

CHEVY / GMC 1500 6 LUG

4 DOOR TAHOE, YUKON & SUBURBAN

PART # 16840

Sj061603rev.01

IMPORTANT CUSTOMER INFORMATION

Tuff Country EZ-Ride Suspension highly recommends that a qualified or a certified mechanic performs this installation.

If you desire to return your vehicle to stock, it is the customers responsibility to save all stock hardware.

It is the responsibility of the customer or the mechanic to wear safety glasses at all times when performing this installation.

It is the customers/installers responsibility to read and understand all steps before installation begins. OEM manual should be used as a reference guide.

This vehicles reaction and handling characteristics may differ from standard cars and/or trucks. Modifications to improve and/or enhance off road performance may raise the intended center of gravity. Extreme caution must be utilized when encountering driving conditions which may cause vehicle imbalance or loss of control. **DRIVE SAFELY!** Avoid abrupt maneuvers: such as sudden sharp turns which could cause a roll over, resulting in serious injury or death.

It is the customers responsibility to make sure that a re-torque is performed on all hardware associated with this suspension system after the first 100 miles of installation. It is also the customers responsibility to do a complete re-torque after every 3000 miles or after every off road use.

After the original installation, Tuff Country EZ-Ride Suspension also recommends having the alignment checked every 6 months to ensure proper tracking, proper wear on tires and front end components. Tuff Country EZ-Ride Suspension takes no responsibility for abuse, improper installation or improper suspension maintenance.

The Tuff Country EZ-Ride Suspension product safety label that is included in your kit box must be installed inside the cab in plain view of all occupants.

It is the responsibility of the installers to make sure that the rear view mirror hanger is hung from the rear view mirror. The rear view mirror hanger has instructions on proper post installation procedure.

LIMITED LIFETIME WARRANTY

Notice to all Tuff Country EZ-Ride Suspension customers: It is your responsibility to keep your original sales receipt! If failure should occur on any Tuff Country EZ-Ride Suspension component, your original sales receipt must accompany the warranted unit to receive warranty. Warranty will be void if the customer can not provide the original sales receipt. Do not install a body lift in conjunction with a suspension system. If a body lift is used in conjunction with any Tuff Country EZ-Ride Suspension product, your Tuff Country EZ-Ride Suspension **WARRANTY WILL BE VOID**. Tuff Country Inc. ("Tuff Country") suspension products are warranted to be free from defects in material and workmanship for life if purchased, installed and maintained on a non-commercial vehicle; otherwise, for a period of twelve (12) months, from the date of purchase and installation on a commercial vehicle, or twelve thousand (12,000) miles (which ever occurs first). Tuff Country does not warrant or make any representations concerning Tuff Country Products when not installed and used strictly in accordance with the manufacturer's instructions for such installation and operation and accordance with good installation and maintenance practices of the automotive industry. This warranty does not apply to the cosmetic finish of Tuff Country products nor to Tuff Country products which have been altered, improperly installed, maintained, used or repaired, or damaged by accident, negligence, misuse or racing. ("Racing is used in its broadest sense, and, for example, without regards to formalities in relation to prizes, competition, etc.) This warranty is void if the product is removed from the original vehicle and re-installed on that or any other vehicle. This warranty is exclusive and is in lieu of any implied warranty of merchantability, fitness for a particular purpose or other warranty of quality, whether express or implied, except the warranty of title. All implied warranties are limited to the duration of this warranty. The remedies set forth in this warranty are exclusive. This warranty excludes all labor charges or other incidental or consequential damages. Any part or product returned for warranty claim must be returned through the dealer of the distributor from whom it was purchased. Tuff Country reserves the right to examine all parts returned to it for warranty claim to determine whether or not any such part has failed because of defect in material or workmanship. The obligation of Tuff Country under this warranty shall be limited to repairing, replacing or crediting, at its option, any part or product found to be so defective. Regardless of whether any part is repaired, replaced or credited under this warranty, shipping and/or transportation charges on the return of such product must be prepaid by the customer under this warranty.

IMPORTANT INFORMATION THAT NEEDS TO BE READ BEFORE INSTALLATION BEGINS:

Tuff Country EZ-Ride Suspension recommends using a 4.5" back spacing on the tire and wheel combination. The stock wheels will not work in combination with the new spindle design.

Before installation begins, Tuff Country EZ-Ride Suspension highly recommends that the installer performs a test drive on the vehicle. During the test drive, check to see if there are any uncommon sounds or vibrations. If uncommon sounds or vibrations occur on the test drive, uncommon sounds or vibrations will be enhanced once the suspension system has been installed. Tuff Country EZ-Ride Suspension highly recommends notifying the customer prior to installation to inform the customer of these issues if they exist.

General Motors has introduced a new transfer case option that uses the name "Auto Trac". Auto Trac is a full time 4WD system. This options pertains to the Tahoe (2 or 4 door), Suburban and some pick up trucks. To identify this, see the transfer case selection panel located on the dash board. Below the 2HI button it will read "Auto 4WD" or "Auto". Vehicles with the "Auto Trac" transfer case may encounter a front drive line vibration when the lift kit is installed. After installation, if the vehicle that you are working on encounters any front driveline vibration, the stock driveline may need to be replaced. If this is the case on the vehicle that you are working on, please feel free to contact Tuff Country or your local Tuff Country dealer and order part # 10820 to replace your stock driveline.

General Motors has also introduced and upgrade on the front ABS system for vehicle manufactured between 1992—1995. If the vehicle that you are working on has the upgrade ABS system on it, the new spindle design WILL NOT work due to the ABS upgraded sensor. If this is the case on the vehicle that you are working on and you still want to install a Tuff Country EZ-Ride Suspension, please contact Tuff Country or your local Tuff Country dealer and order part # 16843. NON SPINDLE DESIGN

After the completion of the installation a front end alignment is required. Also an exhaust modification is needed.

New longer front and rear shocks are needed after this suspension system has been installed and the front and rear shocks need to be ordered as a separate part #. If you have not already ordered your front and rear shocks, please feel free to contact Tuff Country or your local Tuff Country dealer and order your front and rear shocks.

If the vehicle that you are installing Part # 16840 was manufactured in 1998, you must order an additional axle extension kit. The part # that needs to be ordered is part # 10806.

Hardware Bag 16810SL Includes:

<u>Description</u>	<u>Quantity</u>
Poly Bushings (PB2408G)	10
Crush Sleeve (9/16" x 2 1/8")	1
Crush Sleeve (1/2" x 2 1/8")	4
Crush Sleeve (1/2" x 1 1/8")	2
Shock Bushings (PB8004G)	2
Shock Sleeves (1/2" x 2 1/2")	2
Poly Bump Stops	2
6" Long Sway Bar End Links	2
Sway Bar End Link Washers	8
Sway Bar End Link Bushings	8
Poly Lube Pack	2

Hardware Bag 16840NB Includes:

Bag # 1

<u>Description</u>	<u>Quantity</u>
5/16" x 1 1/4" Bolts	3
5/16" Unitorque Nuts	3
5/16" Flat Washers	6
5/16" Lock Washers	3
3/8" x 10" Bolts	2
3/8" Unitorque Nuts	4
3/8" Flat Washers	2
3/8" Lock Washers	2
10 mm x 70 mm Bolts	12
10 mm Lock Washers	12

Bag # 2

<u>Description</u>	<u>Quantity</u>
7/16" x 1 1/2" Bolts	8
7/16" x 3" Bolts	1
7/16" Unitorque Nuts	9
7/16" Flat Washers	18
7/16" Lock Washers	9

Bag # 3

<u>Description</u>	<u>Quantity</u>
1/2" x 1 1/4" Bolts	2
1/2" x 2 1/4" Bolts	2
1/2" x 3 1/2" Bolts	4
1/2" Unitorque Nuts	8
1/2" Flat Washers	16
1/2" Lock Washers	8

Bag # 4

<u>Description</u>	<u>Quantity</u>
9/16" x 1 3/4" Bolts	2
9/16" Unitorque Nuts	2
9/16" Flat Washers	4
9/16" Lock Washers	2

Bag # 5

<u>Description</u>	<u>Quantity</u>
5/8" x 4 1/2" Bolts	2
5/8" x 5 1/2" Bolts	2
5/8" Unitorque Nuts	4
5/8" Flat Washers	8
5/8" Lock Washers	4

Hardware Bag 16840SL Includes:

<u>Description</u>	<u>Quantity</u>
Poly Bushings (PB4902G)	12
Crush Sleeves (.690 x .400 x 1 1/2")	4
Crush Sleeves (.690 x .500 x 1 1/2")	2

Hardware Bag 916NW Includes:

<u>Description</u>	<u>Quantity</u>
9/16" U-Bolt High Nuts	8
9/16" U-bolt Harden Washers	8

Hardware Bag CB38 Includes:

<u>Description</u>	<u>Quantity</u>
3/8" x 6" Centering Bolt	2
3/8" Centering Bolt Fine Nut	2

Special Note: Before installation begins, it is the customers/installers responsibility to make sure that all parts are on hand. If any parts are missing, please feel free to call one of our customer service representatives @ (801) 280-2777.

Special Post Installation Procedure: Once the new Suspension System has been installed. Check the fluid level in the front differential. Top off the fluid with proper differential fluid. On occasion customer may find burping of fluid coming out of the front vent tube.

Please Follow Instructions Carefully:

Before installation begins, measure from the center of the hub, to the bottom of the fender well, and record measurements below.

Pre-Installation Measurements:

Driver Side Front: _____

Passenger Side Front: _____

Driver Side Rear: _____

Passenger Side Rear: _____

At the end of the installation, take the same measurements and compare to the pre-installation measurements.

Post-Installation Measurements:

Driver Side Front: _____

Passenger Side Front: _____

Driver Side Rear: _____

Passenger Side Rear: _____

Please follow instructions carefully:

Front End Installation:

1. To begin installation, block the rear tires of the vehicle so that the vehicle is stable and can't roll backwards. Safely lift the front of the vehicle, and support the frame with a pair of jack stands. Place a jack stand on both the driver and passenger side. Next, remove the tires and wheels from both sides.

2. Working on the driver side, remove the stock inner rubber fender splash guard and save the stock inner rubber fender splash guard and hardware for later re-installation. Repeat procedure on passenger side.

3. Working on the driver side, remove the stock shock from the stock location and save the stock hardware for later re-installation. Longer shocks are needed, so the stock shocks may be discarded. **Special Note: Shocks are not included with this suspension system and need to be ordered as a separate part number, Tuff Country EZ-Ride Suspension recommends using a 23" fully extended nitrogen gas shocks.** Repeat procedure on passenger side.

4. Remove the stock front differential skid plate. The stock front differential skid plate and hardware can be discarded.

5. Remove the stock front driveline from the stock front differential and the stock transfer case. Save the stock driveline and hardware for later re-installation.

6. Measure exposed threads on the torsion bar adjusting bolt and record measurement here for a later reference.

Record Driver Side measurement here: _____

Record Passenger Side measurement here: _____

See Illustration # 1

7. Working on the driver side, attach the torsion bar removing tool, making sure that the unloading bolt in the center of the torsion bar removing tool is in the small divot of the stock torsion bar key. Adjust the torsion bar key up high enough so that the stock small metal adjusting block and bolt can be removed. Save the stock hardware for later re-installation. Repeat procedure on passenger side.

See Illustration # 2

8. Mark both torsion bars before removal so that they can be re-installed back into the same location. **Example: Driver vs. Passenger and front vs. rear.** Tap the stock torsion bars forward until the stock torsion bar cross member can be removed. Once you tap the stock torsion bar out of the stock torsion bar cross member, the stock torsion bar key will fall out. Set the stock torsion bar key a side for later re-installation. Repeat procedure on the passenger side.

9. Working on the driver side, remove the stock bolt that connect the stock torsion bar cross member to the stock mounting point and save the stock hardware for later re-installation. **Special Note: The stock mounting point is on the inside of the stock frame rail.** Repeat procedure on the passenger side. Remove the stock torsion bar cross member from the stock location and set a side for later re-installation.

10. Working on the driver side, slide the stock torsion bar out of the stock rear lower control arm and set a side for later re-installation. Repeat procedure on passenger side.

11. Working on the driver side, remove the stock brake line bracket from the stock upper control arm bracket and save the stock hardware for later re-installation. Repeat procedure on passenger side.

12. Working on the driver side, remove the stock front sway bar end link from the stock sway bar and the stock lower control arm location. The stock end link and hardware may be discarded. Repeat procedure on passenger side. **Special Note: At this time, invert the stock sway bar.**

13. Working on the driver side, remove the (2) stock bolts that connect the stock brake caliper to the stock spindle. Save the stock hardware for later re-installation. Using a bungee cord, carefully tie the stock brake caliper up and out of the way in the fender well. **Special Note: Take special care not to kink or over extend the stock brake line.**

14. Working on the driver side, remove the stock rotor from the stock location and set a side for later re-installation.

15. Working on the driver side, remove the stock nut that connects the stock axle to the stock hub assembly. Save the stock nut for later re-installation.

See Illustration # 3

16. Working on the driver side, disconnect the ABS lines from each other. Also disconnect the ABS line from any other mounting points.

17. Working on the driver side, remove the stock nut that connects the stock outer tie rod ball joint to the stock spindle. Save the stock hardware for later re-installation. Carefully break the stock taper on the stock outer tie rod ball joint. **Special Note: Take special care not to rip or tear the stock outer tie rod ball joint dust boot.**

18. Working on the driver side, remove the stock cotter pin from the stock castle nut that connects the stock upper control arm ball joint to the stock steering knuckle. **Save the stock cotter pin for re-installation.** Loosen the stock nut that connects the stock upper control arm ball joint to the stock steering knuckle. **Do not remove the stock nut completely.** Carefully break the stock taper on the stock upper control arm ball joint. **Special Note: Take special care not to rip or tear the stock ball joint dust boot.**

19. Working on the driver side, remove the stock cotter pin from the stock castle nut that connects the stock lower control arm ball joint to the stock steering knuckle. **Save the stock cotter pin for re-installation.** Loosen the stock nut that connects the stock lower control arm ball joint to the stock steering knuckle. **Do not remove the stock nut completely.** Carefully break the stock taper on the stock lower control arm ball joint. **Special Note: Take special care not to rip or tear the stock ball joint dust boot.**

20. Working on the driver side, move back to the stock nuts holding the upper control arm ball joint and the lower control arm ball joint to the stock spindle and remove completely. Save the stock hardware for later re-installation.

21. Working on the driver side, use a suitable removal tool to remove the stock axle from the stock hub assembly. **Special Note: Take special care not to damage the stock threads on the stock axle.**

22. Working on the driver side, carefully remove the stock hub assembly and the stock spindle from the stock location.

23. Working on the driver side stock hub assembly, remove the (3) stock bolts that connect the stock hub assembly to the stock spindle. Save the stock hardware and stock hub assembly for later re-installation. Carefully remove the stock axle seal from the stock spindle and set a side for later re-installation. A new spindle is used, the stock spindle can be discarded.

24. Locate the new driver side spindle. Carefully install the stock axle seal that was removed from step # 23 to the new driver side spindle. Using the stock hardware that was removed from step # 23, secure the new driver side spindle to the stock hub assembly. Torque to **92 ft lbs.** **Special Note: Make sure to use thread locker or lock tite.**

25. Set the new driver side spindle and hub assembly a side for later re-installation.

26. Working on the driver side, scribe a mark on the CV plate and another directly across to the stock differential, this will allow you to re-install the stock CV back into the stock location at a later step.

See Illustration # 4

27. Working on the driver side, unbolt and remove the (6) stock bolts holding the inner CV axle to the stock differential. Discard the stock hardware. Set the stock CV axle a side for later re-installation.

28. Working on the driver side, remove the stock front and rear hardware that connects the stock lower control arm to the stock front and rear location. Save the stock hardware for later re-installation. Set the stock lower control arm aside for later re-installation.

29. Repeat step's 13 - 28 on the passenger side.

30. Working on the driver side, locate the stock lower bracket that wraps around the rear lower half of the stock front differential. Remove the stock bolt that connects the lower portion of the stock front differential to the stock bracket. Save the stock hardware for later re-installation. Using the stock mounting point on the rear lower control arm as a reference point, measure 3" towards the inside of the vehicle and scribe a line on the stock bracket that wraps around the rear portion of the stock front differential. Using a hacksaw or suitable cutting tool, cut along the line that was scribe earlier in this step. **Special Note: Tuff Country recommends not using a cutting torch when performing step # 30. Clean and dress up any exposed metal.**

See Illustration # 5

31. Place a pair of hydraulic floor jacks under the front differential, and carefully raise up on both hydraulic floor jacks at the same time, until they come into contact with the front differential.

32. Locate the wiring harness that connects the 4WD control panel to the front differential. Disconnect the 4WD wiring harness from the front differential. Tie the 4WD wiring harness up and out of the way. **Special Note: Take special care not to kink the 4WD wiring harness.**

33. Disconnect any other vent hoses and/or wiring that is connected to the front differential.

34. Working on the driver side, remove the stock hardware that connects the upper driver side tab of the stock front differential to the stock location. Save the stock hardware for later re-installation.

35. Working on the passenger side, remove the (2) stock nuts that connect the passenger side of the stock front differential to the stock location and save the stock hardware for later re-installation.

36. Carefully lower down on both hydraulic floor jacks at the same allowing enough room to remove the front differential completely from the vehicle. Remove the front differential completely from underneath the vehicle.

37. Working on the driver side of the stock front differential upper tab, measure 2" from the stock mounting point and scribe a mark on the front differential. Using a sawzall, carefully cut the upper tab off of the stock front differential and discard. **Refer to illustration # 6 for proper cut line. Take special care not to cut into the stock front differential housing.**

See Illustration # 6

38. Locate the new driver side differential relocation bracket, (1) 7/16" X 3" bolt, (1) 7/16" unitorque nut, (2) 7/16" flat washers and (1) 7/16" lock washer from hardware bag 16810NB2. Also, locate (2) PB2408G poly bushings and (1) 9/16" x 2 1/8" anti crush sleeve from hardware bag 16810SL. Install the new poly bushings and anti crush sleeve into the new driver side relocation bracket. **Special Note: Make sure to use a lithium or moly base grease prior to inserting the new bushings into the new driver side differential relocation bracket. This will increase the life of the bushing as well as prevent squeaking.** Referring to illustration # 7, remove the (4) stock differential mounting bolts that connect to two half's of the front differential together. Save the stock hardware for later re-installation. Secure the new driver side differential relocation bracket to the stock front differential using the stock hardware that was removed earlier in this step. **Special Note: Get all (4) stock bolts started but do not tighten at this point. Also, make sure to use thread locker or lock tite.** Secure the lower portion of the new driver side differential relocation bracket to the stock front differential, using the new 7/16" x 3" bolt and hardware. Torque to **34 Ft. lbs.** Go back to the (4) stock bolts that hold the new differential relocation bracket to the stock front differential and torque to **34 ft lbs.** **Special Note: Make sure not to over tighten the stock and new hardware associated with the front differential. If bolts are over tighten, the stock front differential may crack.**

See Illustration # 7

39. Locate the new passenger side differential drop bracket and the stock hardware that was removed from step # 35. Install the new passenger side differential drop bracket into the stock upper location and secure using

the stock hardware. **Do not tighten at this point. Special Note: Make sure to use thread locker or lock tite.**

See Illustration # 8

40. Locate (2) 9/16" x 1 3/4" bolts, (4) 9/16" flat washers, (2) 9/16" unitorque nuts and (2) 9/16" lock washers from hardware bag 16810NB4. Carefully raise up on both hydraulic floor jacks at the same time until the passenger side of the stock front differential sits flush with the newly installed passenger side differential drop bracket. Install the passenger side of the stock front differential to the previously installed passenger side differential drop bracket. Secure using the new 9/16" x 1 3/4" bolts and hardware. **Do not tighten at this point. Also, make sure to use thread locker or lock tite. Using a bungee cord, carefully tie the driver side of the stock front differential up and out of the way so that the new one piece lower sub frame can be installed. Also, at this time re-connect the 4WD wiring harness back into the stock location on the stock front differential.**

See Illustration # 9

41. Carefully remove both hydraulic floor jacks from under the stock front differential.

42. Locate the new one-piece lower sub frame and the stock lower control arm hardware that was removed in step # 28. Working on the driver side, install the front and rear part of the new one piece lower sub frame into the stock front and rear lower control arm stock pockets and secure using stock hardware. **Do not tighten at this point. Make sure to use thread locker or lock tite.** Repeat procedure on passenger side.

See Illustration # 10 / Front Location

See Illustration # 11 / Rear Location

43. Carefully remove the bungee cord that is holding the driver side of the front differential up and out of the way. Let the stock front differential rest on the newly installed one piece lower sub frame.

44. Locate the stock rear driver side differential mounting bracket hardware that was removed from step # 30. Install the rear portion of the front differential into the tab on the rear portion of the new one piece lower sub frame. Secure using the stock hardware. **Do not tighten at this point. Make sure to use thread locker or lock tite. Special Note: During this procedure the front differential is being lower in relation to the frame. On some I.F.S vehicles this can cause a clearance problem between the cooling fins on the stock front differential and the stock rear lower control arm pocket. If contact occurs, it may cause binding and damage to the differential housing. The differential also must be centered to allow the proper amount of inner CV joint plunge. When the cooling fins contact the frame, the differential is pushed to the passenger side. This causes the left axle to over extend causing the inner CV joint to pull out of the housing. When**

cooling fin contact occurs the aluminum fins must be trimmed to allow the differential to center without contacting the stock rear lower control arm pocket or the stock frame rail. These fins are important for the cooling of the differential. When trimming the cooling fins you should only remove enough material to allow for proper clearance.

See Illustration # 12

45. Locate the stock upper front differential hardware that was removed from step # 34. Working on the driver side, secure the new driver side relocation bracket to the front part of the newly installed one piece lower sub frame and secure using the stock hardware. **Do not tighten at this point. Make sure to use thread locker or lock tite.**

See Illustration # 13

46. Using a pair of hydraulic floor jacks, carefully raise up on the front portion on the new one piece lower sub frame until the new one piece lower sub frame sits flush with the stock front cross member. Using the holes in the front part of the new one piece lower sub frame as a guide, carefully drill (2) 1/2" holes into the stock front cross member.

47. Locate (2) 1/2" x 1 1/4" bolts, (2) 1/2" unitorque nuts, (4) 1/2" flat washers and (2) 1/2" lock washers from hardware bag 16810NB3. Secure the new one piece lower sub frame to the stock front cross member using the new 1/2" x 1 1/4" bolts and hardware. **Torque to 85 ft lbs. Make sure to use thread locker or lock tite.**

See Illustration # 14

48. Carefully remove both hydraulic floor jacks from under the front portion of the new one piece lower sub frame.

49. Move back to all the stock and new hardware associated with the new driver and passenger side differential drop brackets, the rear portion of the stock front differential that mounts to the new one piece lower sub frame and the stock mounting points were the new one piece lower sub frame mounts. Torque all hardware to proper torque specifications. **Refer to the torque setting sheet on the first page of the installation manual.**

50. Locate (2) poly bump stops from hardware bag 16810SL. Also, locate (2) 3/8" lock nuts, (2) 3/8" flat washers and (2) 3/8" lock washers from hardware bag 16810NB1. Working on the driver side, install the new poly bump stop into the newly installed one piece lower sub frame and secure using the new 3/8" hardware. Torque to **28 ft. lbs. Make sure to use thread locker or lock tite.** Repeat procedure on passenger side.

See Illustration # 15

51. Locate (2) 5/8" x 4 1/2" bolts, (2) 5/8" x 5 1/2", (4) 5/8" unitorque nuts, (8) 5/8" flat washers, (4) 5/8" unitorque nuts, (4) 5/8" lock washers from hardware bag 16810NB5. Also, locate the stock driver and passenger

side lower control arms that were removed from step # 28. Working on the driver side, install the stock lower control into the newly installed one piece lower sub frame front location and secure using the new 5/8" x 4 1/2" bolt and hardware. Next, secure the rear portion of the stock lower control arm into the rear portion of the newly installed one piece lower sub frame and secure using the new 5/8" x 5 1/2" bolt and hardware. **Do not tighten at this point. Make sure to use thread locker or lock tite.** Repeat procedure on passenger side.

See Illustration # 16 / Front Location

See Illustration # 17 / Rear Location

52. Locate (12) 10 mm x 70 mm bolts and (12) 10 mm lock washers from hardware bag 16810NB1. Locate (2) new axle half shaft spacers. Also, locate the stock driver and passenger side CV axles that were removed from step # 27. Working on the driver side, install (1) new axle spacer between the stock front differential and the stock axle. Secure using the new 10 mm x 70 mm bolts and hardware. Torque to **65 ft. lbs. Make sure to use thread locker or lock tite. Special Note: Make sure that the stock axle is re-installed back into the stock location on the stock front differential. Refer to the marks that were scribe in step # 26.** Repeat on the passenger side.

See Illustration # 18

53. Locate the new driver side spindle and the stock hub assembly, the stock hardware for the upper control arm ball joint and the lower control arm ball joint that was removed from step # 20. Using the stock hardware, secure the new driver side spindle and stock hub assembly to the stock upper control arm ball joint and the stock lower control arm ball joint. Torque the stock hardware on the upper and lower ball joints to **85 ft lbs.** Also, when performing this step, slide the stock axle into the stock hub assembly location. Repeat procedure on the passenger side using the passenger side steering knuckle.

See Illustration # 19

54. Locate the stock cotter pins that were removed from step # 18 and 19. Install the stock cotter pins back into the stock location on the stock upper and lower control arm ball joints.

55. Locate the stock hardware that was removed from step # 17. Working on the driver side, install the stock outer tie rod ball joint to the newly installed driver side spindle, secure using the stock hardware. Torque the outer tie rod ball joint hardware to **68 ft. lbs. Make sure to use thread locker or lock tite.** Repeat procedure on passenger side.

56. Locate the stock hardware that connects the stock front axle to the stock hub assembly that was removed in step # 15. Working on the driver side, secure the stock front axle to the hub assembly using the stock hardware. Torque to **112 ft. lbs. Make sure to use thread locker or lock tite.** Repeat procedure on the passenger side.

57. Move back to all associated hardware that connects the stock lower control arms to the new one piece lower sub frame and torque **125 ft. lbs.**

58. Locate the stock rotors that were removed from step # 14. Working on the driver side, install the stock rotors into the stock location. Repeat procedure on the passenger side.

59. Locate the stock hardware that was removed from step # 13. Working on the driver side, re-install the stock brake caliper to the new spindle using the stock hardware. **Make sure to use thread locker or lock tite.** Torque to **90 ft lbs.** Repeat procedure on the passenger side.

60. Working on the driver side, reconnect the stock ABS lines back together. Also reconnect all other stock mounting points on the stock ABS line. Repeat procedure on the passenger side.

61. Locate (2) front brake line relocation brackets, (2) 5/16" x 1 1/4" bolts, (4) 5/16" flat washers, (2) 5/16" unitorque nuts (2) 5/16" lock washers from hardware bag 16810NB1. Also, locate the stock hardware that was removed from step # 11. Working on the driver side, install the new brake line relocation bracket to the stock location using the stock hardware. **Do not tighten at this point. Make sure to use thread locker or lock tite.** Next, secure the stock brake line bracket to the newly installed brake line relocation bracket and secure using the new 5/16" x 1 1/4" bolt and hardware. **Make sure to use thread locker or lock tite.** Torque the stock and new hardware to **15 ft lbs.**

See Illustration # 20

62. Locate (2) new sway bar end links, (8) sway bar end links washers and (8) sway bar end links bushings from hardware bag 16810SL. Also, locate (2) 3/8" x 10" bolts and (2) 3/8" unitorque nuts from hardware bag 16810NB1. Working on the driver side, install the new sway bar end link and hardware to the stock sway bar and the stock lower control arm. Torque to **32 ft lbs.** Repeat procedure on the passenger side. **Special Note: If you did not invert the stock sway bar in step # 12, invert it before you install the new sway bar end links.**

See Illustration # 21

63. Working on the driver side, carefully remove the (2) stock rivet's on the bottom side of the stock frame rail. **Special Note: If using a drill, take special care not to drill into any stock hoses and/or lines running down the inside of the stock frame rail.** The stock torsion bar drop bracket may be discarded. Repeat procedure on the passenger side.

64. Locate (2) new torsion bar drop brackets, (4) PB4902 poly bushings and (2) 1/2" x 1 1/2" anti crush sleeve from hardware bag 16840SL. Install the new poly bushings

and sleeves into the new torsion bar drop brackets. **Special Note: Make sure to use a lithium or moly base grease prior to inserting the new bushings and sleeves into the new torsion bar drop brackets. This will increase the life of the bushing as well as prevent squeaking.**

65. Working on the driver side, hold the new torsion bar drop bracket to the new location on the stock frame rail. **Special Note: Make sure to center the new torsion bar drop bracket where the stock torsion bar drop bracket was located.** With the new torsion bar bracket in place, use a pair of vice grips and secure the new torsion bar drop bracket to the stock frame rail. Using the new torsion bar drop bracket as a guide, carefully drill (4) 7/16" holes into the stock frame. (2) on the side of the frame rail and (2) on the bottom. **Take Special care not to drill into any stock hoses and/or lines running down the inside of the stock frame rail.** Repeat procedure on the passenger side of the vehicle.

66. Locate (8) 7/16" x 1 1/2" bolts, (16) 7/16" flat washers, (8) 7/16" unitorque nuts and (8) 7/16" lock washers from hardware bag 16840NB2. Working on the driver side, secure the new driver side torsion bar drop bracket to the stock frame rail using the new 7/16" x 1 1/2" bolt and hardware. **Make sure to use thread locker or lock tite. Do not tighten at this point.** Repeat procedure on the passenger side. Remove the pair of vice grips holding the new torsion bar drop bracket to the new location.

See Illustration # 22

67. Locate the driver side torsion bar that was removed in step # 10. Install the stock torsion bar into the stock lower control arm. Make sure that you push the stock torsion bar as far forward as you can, this will allow you to install the stock torsion cross member. **Special Note: Make sure that you install the stock torsion bar the same way that it was removed. Example: driver side vs. passenger side and front vs. rear.** Repeat procedure on passenger side.

68. Locate the stock torsion bar cross member and stock torsion bar hardware that was removed from step # 9. Working on the driver side, secure the stock torsion bar to the newly installed torsion bar drop bracket and secure using the stock hardware. **Make sure to use thread locker or lock tite. Do not tighten at this point.** Repeat procedure on the passenger side. Once the driver and passenger side torsion bar stock hardware has been installed torque the stock hardware to **95 ft lbs.** Move back to the new 7/16" x 1 1/2" bolts and hardware that is holding the new torsion bar drop brackets to the stock frame rail and torque to **76 ft lbs.**

See Illustration # 23

69. Locate the stock driver and passenger side torsion bar key's that were removed from step # 8. Working on the driver side, install the stock torsion bar key back into

the stock torsion bar cross member. Holding the stock torsion bar key into the stock location, slide the driver side torsion bar into the stock torsion bar key. Repeat procedure on the passenger side.

70. Locate the small metal adjusting blocks and bolts that were removed from step # 7. Working on the driver side, attach the torsion bar removing tool, making sure that the unloading bolt in the center tool is in the small divot of the torsion bar key. Adjust the torsion bar key up high enough so that the small metal adjusting block and stock bolt can be re-installed, Refer back to step # 6 and adjust the stock bolt to the stock location. Repeat procedure on passenger side. Remove the torsion bar adjusting tool.

71. Move back to all newly installed brackets and make sure that all stock and new hardware is torqued to proper specifications. Now re-connect the front differential vent hose. **Refer to the torque setting sheet on the first page of the installation manual and torque to proper settings.**

72. Locate (2) 5/8" x 2 1/2" poly shock bushings and (2) 1/2" x 2 1/2" shock sleeves from hardware bag 16810SL. Also, locate the stock upper and lower shock hardware that was removed from step # 3 and the new shock boots. Install the new shock boots onto the new shocks. Insert the new poly shock bushings and sleeves into the upper eyelet of the new shocks. **Special Note: Shocks are not included with this suspension system, shocks need to be ordered as a separate part number, Tuff Country EZ Ride suspension recommends using a 23" fully extended nitrogen gas shock. Make sure to use a lithium or moly base grease prior to inserting the new bushings into the new shock. This will increase the life of the bushing as well as prevent squeaking. Install the lower shock bushing and sleeve into the lower eyelet of the new shock. Special Note: Make sure to use a lithium or moly base grease prior to inserting the new bushings into the new shock. This will increase the life of the bushing as well as prevent squeaking. Working on the driver side, install the new shock into the stock location and secure using the stock hardware. Torque the upper and lower stock hardware to 70 ft lbs. Repeat procedure on passenger side.**

73. Locate the stock inner rubber fender splash guards that were removed from step # 2. Working on the driver side, re-install the inner rubber fender splash guard. Repeat procedure on the passenger side.

74. Locate (2) rear lateral compression mounts. (2) 1/2" x 1 1/4" spacer sleeves from hardware bag 16810SL. (2) 1/2" x 2 1/4" bolts, (4) 1/2" flat washers, (2) 1/2" unitorque nuts and (2) 1/2" lock washers from hardware bag 16810NB3. Working on the driver side stock transfer case cross member carefully drill a 1/2" hole into the upper part of the stock transfer case cross member. **Special Note: There is an existing hole in the lower**

part of the stock transfer case cross member, use this hole as a guide to drill the new 1/2" hole in the upper part of the stock transfer case cross member. Install the new rear lateral compression arm mount to the stock transfer case cross member. Secure using (1) 1/2" x 2 1/4" bolt, spacer sleeve and hardware. Torque to **38 ft lbs. Special Note: The new 9/16" x 1 1/4" anti crush sleeve needs to go into the stock transfer case cross member, this will not allow the transfer case cross member to crush when the bolt is torqued.** Repeat procedure on passenger side.

See Illustration # 24

75. Locate (2) front lateral compression arms. (8) PB2408G poly bushings and (4) 9/16" x 2 1/8" crush sleeves. Install the new poly bushing into each end of the new front lateral compression arms. Next, install the new anti crush sleeve into the newly installed poly bushing. **Special Note: Make sure to use a lithium or moly base grease prior to inserting the new bushings and sleeves into the new front lateral compression arms. This will increase the life of the bushing as well as prevent squeaking.**

76. Locate (4) 1/2" x 3 1/2" bolts, (8) 1/2" flat washers, (4) 1/2" unitorque nuts and (4) 1/2" lock washers from hardware bag 16810NB3. Working on the driver side, secure (1) new lateral compression arm to the new front lateral compression arm mount on the newly installed one piece lower sub frame and secure using the new 1/2" x 3 1/2" bolt and hardware. **Do not tighten at this point. Make sure to use thread locker or lock tite.** Next, secure the new lateral compression arm to the previously installed rear lateral compression arm mount. Secure using the new 1/2" x 3 1/2" bolt and hardware. Torque the front and rear mount to **85 ft lbs.** Repeat procedure on the passenger side

See Illustration # 25 / Front Location

See Illustration # 26 / Rear Location

77. Re-install the tires and wheels and carefully lower the vehicle to the ground.

78. Check and double check to make sure that all steps were performed properly. Check and double check to make sure that all new and stock hardware has been torque to proper torque specifications. **Refer to the torque setting sheet on the first page of the installation manual.**

79. An exhaust modification is required once the suspension system has been completed. After the rear end installation is complete take the vehicle directly to a muffler shop and have the exhaust modification performed. Once the exhaust modification has been performed re-install the stock front drive line back into the stock location using the stock hardware that was removed from step # 5. Torque to **35 ft lbs.**

Congratulation, Front End Installation Complete!

Rear End Installation:

80. To begin installation, block the front tires of the vehicle so that the vehicle is stable and can't roll forward. Safely lift the rear of the vehicle and support the frame with a pair of jack stands. Place a jack stand on both the driver and passenger side. Next remove the wheels and tires from both sides.

81. Locate (1) rear brake line extending bracket. (1) 5/16" x 1 1/4" bolt, (2) 5/16" flat washers, (1) 5/16" unitorque nut and (1) 5/16" lock washer from hardware bag 16810NB1. Remove the stock brake line bracket from the rear differential and save stock bolt for later re-installation. Secure the new brake line bracket to the rear differential housing using the stock bolt. **Special Note: Make sure to use thread locker or lock tite.** Next, attach the stock brake line bracket to the newly installed brake line bracket and secure using the new 5/16" x 1 1/4" bolt and hardware. **Torque to 16 ft. lbs. Special Note: If you feel that the stock rear brake line is too tight, wait and perform this step once the rear end installation is complete and the weight of the vehicle is on the ground.**

See Illustration # 27

82. Position a pair of hydraulic floor jacks under the rear axle. Place one jack stand on the driver side and one on the passenger side. Raise up on both hydraulic floor jacks at the same time until they make contact with the rear axle.

83. Working on the driver side, remove the stock sway bar end link from the stock location. The stock sway bar end link may be discarded. Save the stock hardware for later re-installation. Repeat procedure on the passenger side.

84. Working on the driver side, remove the stock shock and save the stock hardware for later re-installation. Longer shocks are needed, so the stock shocks may be discarded. **Special Note: Shocks are not included with this suspension system and need to be ordered as a separate part number, Tuff Country EZ-Ride Suspension recommends using a 30" fully extended nitrogen gas shocks.** Repeat procedure on passenger side.

85. Working on the driver side, remove the (2) stock rear U-bolts and discard. Set the upper and lower U-bolt plates a side for later re-installation. Repeat procedure on passenger side

86. Lower down on both hydraulic floor jacks at the same time until the stock springs separate from the stock rear axle. Lower down approximately 5". **Special Note: Make sure not to over extended any brake lines or hoses when lowering axle.** This will allow you enough room for the new rear blocks and add-a-leaves to be installed.

87. Locate (2) new rear add-a-leaves. (2) 3/8" centering bolts and nuts from hardware bag CB38. Working on the driver side, place a pair of "C" clamps around the rear springs about 2" from the stock spring clamps. Safely remove the stock centering bolt and discard. Install the new add-a-leaf to the stock spring assembly. Secure the new rear add-a-leaf to the stock spring assembly using the new 3/8" center bolt and nut. **Special Note: The new add-a-leaf should be installed into the stock spring assembly in progression in order. The new add-a-leaf should be installed between the stock overload and the stock spring pack. The stock overload is usually the un-arched spring at the bottom of the stock leaf pack. Also Tuff Country EZ-Ride Suspension recommends not using any air tools when installing the new add-a-leaves into the stock spring assembly. If air tools are used the centering bolt may strip, causing the stock spring assembly to come apart.** Torque the new centering bolt and nut to **28 ft. lbs.** Remove the "C" clamps from the stock spring assembly. With a suitable cutting tool, cut off the thread from the new centering bolt. Repeat procedure on passenger side.

See Illustration # 28

88. Locate (2) new 4" lifted rear blocks. Working on the driver side, install (1) new 4" lifted block between the stock rear axle and the stock spring assembly. **Special Note: The new 4" lifted block has a slight taper to it, the small end of the new block needs to be installed with the small end towards the front of the vehicle.** Repeat procedure on passenger side.

See Illustration # 28

89. Raise up on both hydraulic floor jacks at the same time until the driver and passenger side stock spring assembly seats flush with newly installed 4" block.

90. Locate (4) new 9/16" x 2 3/4" x 14 5/8" Square U-bolts. (8) 9/16" U-bolt high nuts, (8) 9/16" U-bolt washers from hardware bag 916NW. Also locate the stock upper and lower U-bolt plates that were removed from step # 85. Working on the driver side, install (2) new 9/16" x 2 3/4" x 14 5/8" square U-bolts into the stock location and secure using the new 9/16" high nuts and washers. **Torque to 120 ft lbs.** Repeat procedure on passenger side.

See Illustration # 28

91. Working on the driver side, install the new rear shocks absorbers using the stock hardware removed from step # 84. **Special Note: Shocks are not included with this suspension system, shocks need to be ordered as a separate part number, Tuff Country EZ-Ride Suspension recommends using a 30" fully extended nitrogen gas shocks.** Locate the new rear upper clevis mount and install the new clevis mount into the upper eyelet of the rear shock before installation. Repeat procedure on passenger side.

92. Locate (2) new rear sway bar end links and (8) 4902G sway bar poly bushings and (4) crush sleeves from hardware bag 16840SL. Install the new poly bushings and sleeves into each end of the new rear sway bar end link. **Special Note: Make sure to use a lithium or moly base grease prior to inserting the new bushings and sleeves into the new rear sway bar end links. This will increase the life of the bushing as well as prevent squeaking.**

93. Locate the stock rear sway bar end link hardware that was removed from step # 83. Working on the driver side, install the new sway bar end link into the stock location and secure using the stock hardware **Do not tighten at this point. Make sure to use thread locker or lock tite.** Repeat procedure on the passenger side. Once both new sway bar end links are secure to the stock location, torque the stock hardware to **45 ft lbs.** **Special Note: If you are not able to connect the new rear sway bar end link to the stock location, the weight of the vehicle may need to be on the ground. If this is the case, perform this step once the tires have been installed and the vehicle is on the ground.**

See Illustration # 29

94. Check and double check to make sure that all step related with the front and rear end were performed properly. Check and double check to make sure that all stock and new hardware is torque to proper torque specifications. **Refer to the torque setting sheet on the first page of the installation manual.**

95. Carefully remove both hydraulic floor jacks from under the rear axle.

96. Install the tire wheels and safely lower the vehicle to the ground.

97. If you were not able to install the rear brake line extension bracket to the rear differential in step # 81, perform this step now that the weight of the vehicle is on the ground.

98. If you were not able to install the new rear sway bar end links in step # 93, perform this step now that the weight of the vehicle is on the ground.

CONGRATULATIONS INSTALLATION COMPLETE

SPECIAL NOTE: AN EXHAUST MODIFICATION IS NEEDED. ALSO A FRONT END ALIGNMENT IS REQUIRED

ONCE THE EXHAUST MODIFICATION HAS BEEN PERFORMED REPLACE THE STOCK FRONT DRIVE LINE BACK INTO THE STOCK LOCATION AND SECURE USING THE STOCK HARDWARE THAT WAS REMOVED IN STEP # 5

Special Post Installation Procedure: Once the new Suspension System has been installed. Check the fluid level in the front differential. Top off the fluid with proper differential fluid. On occasion customer may find burping of fluid coming out of the front vent tube.

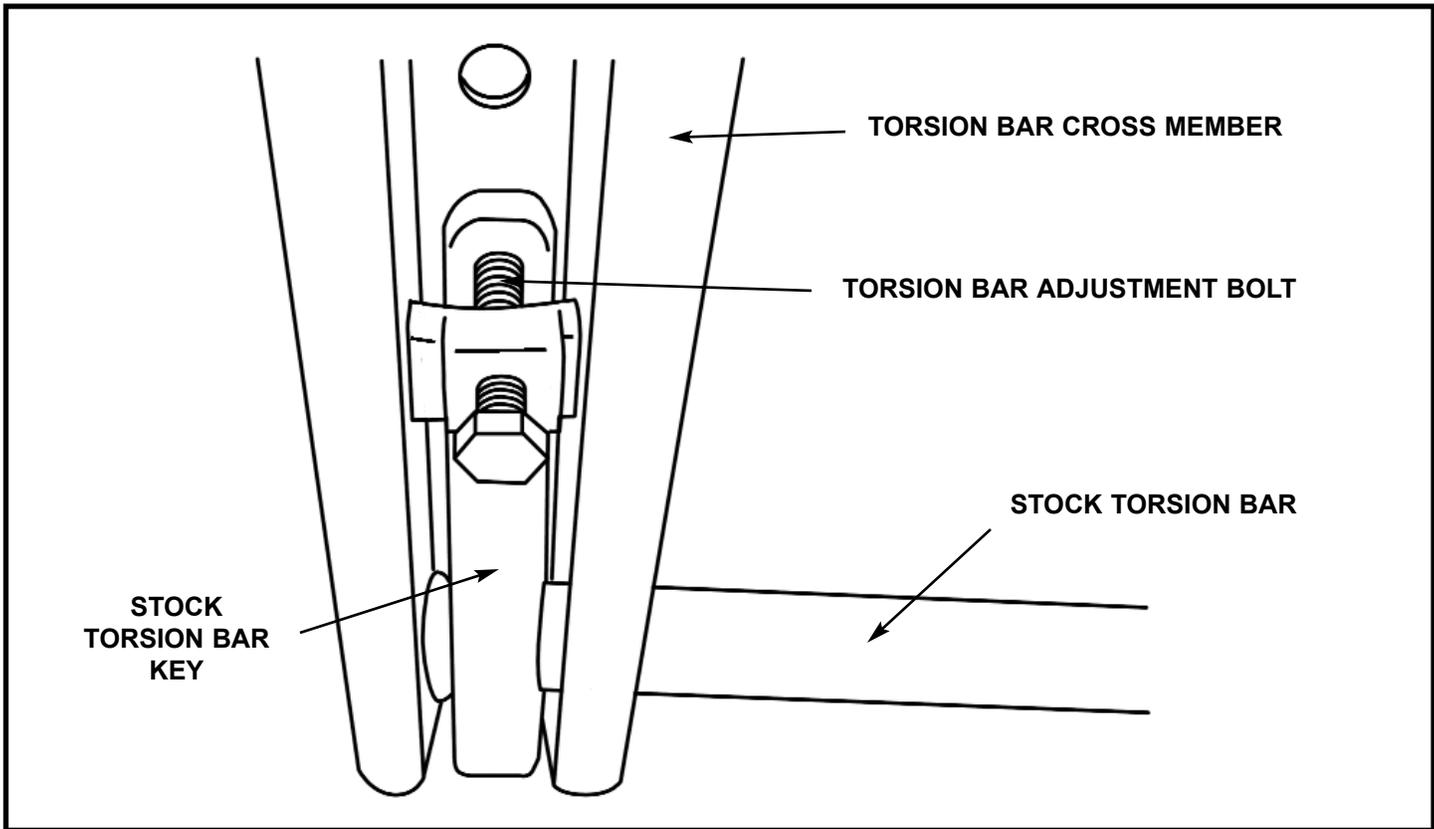


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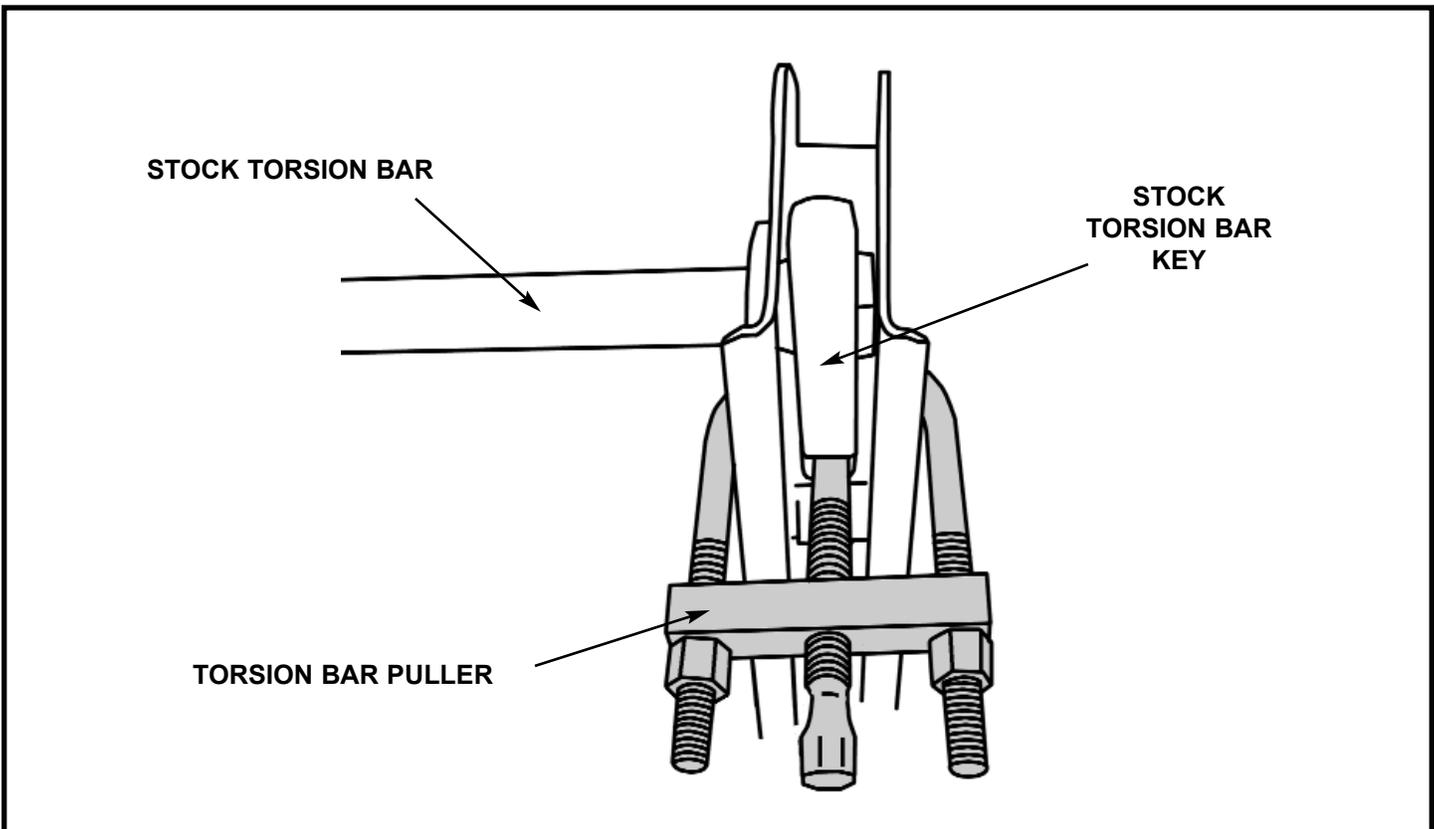


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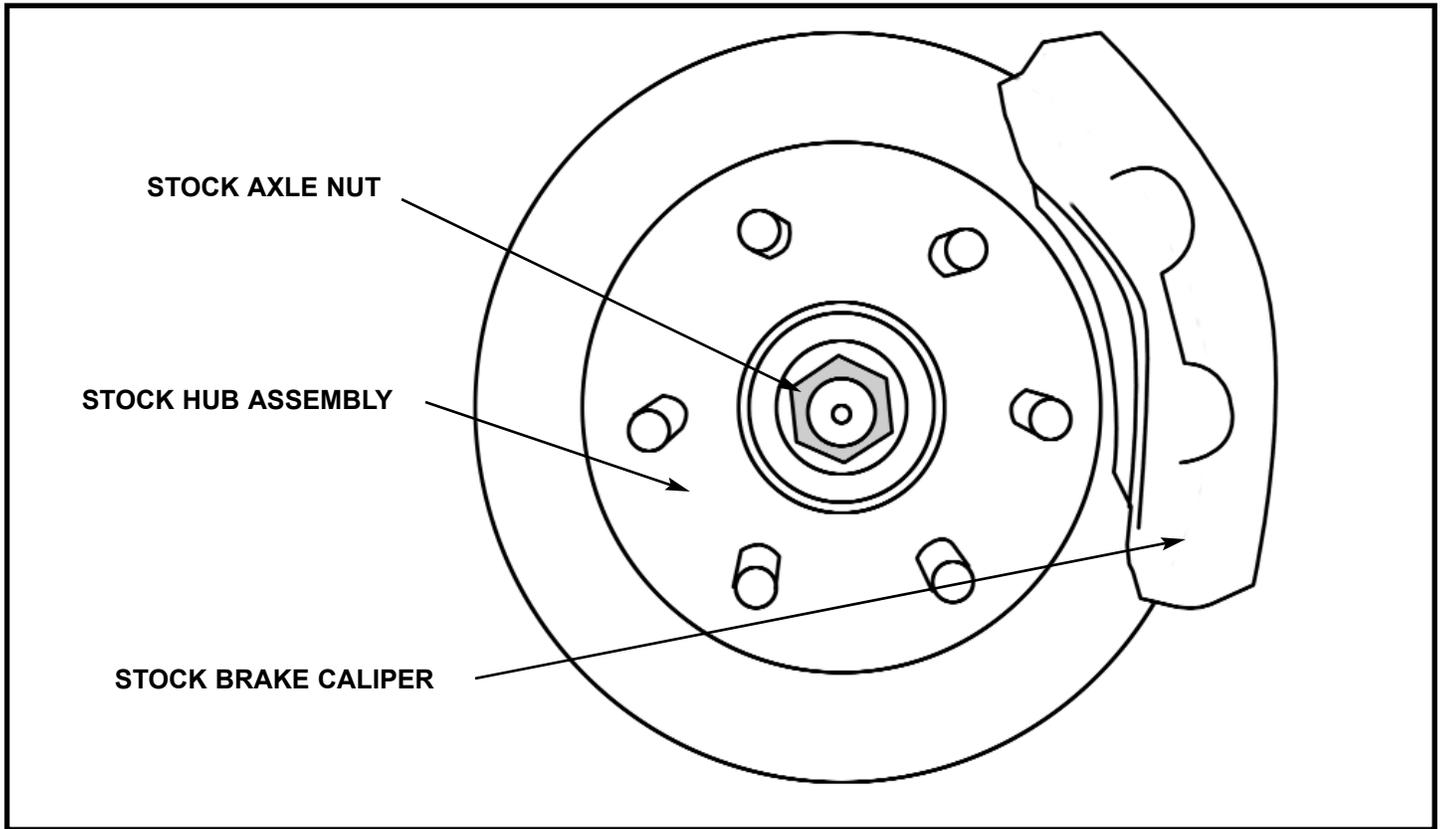


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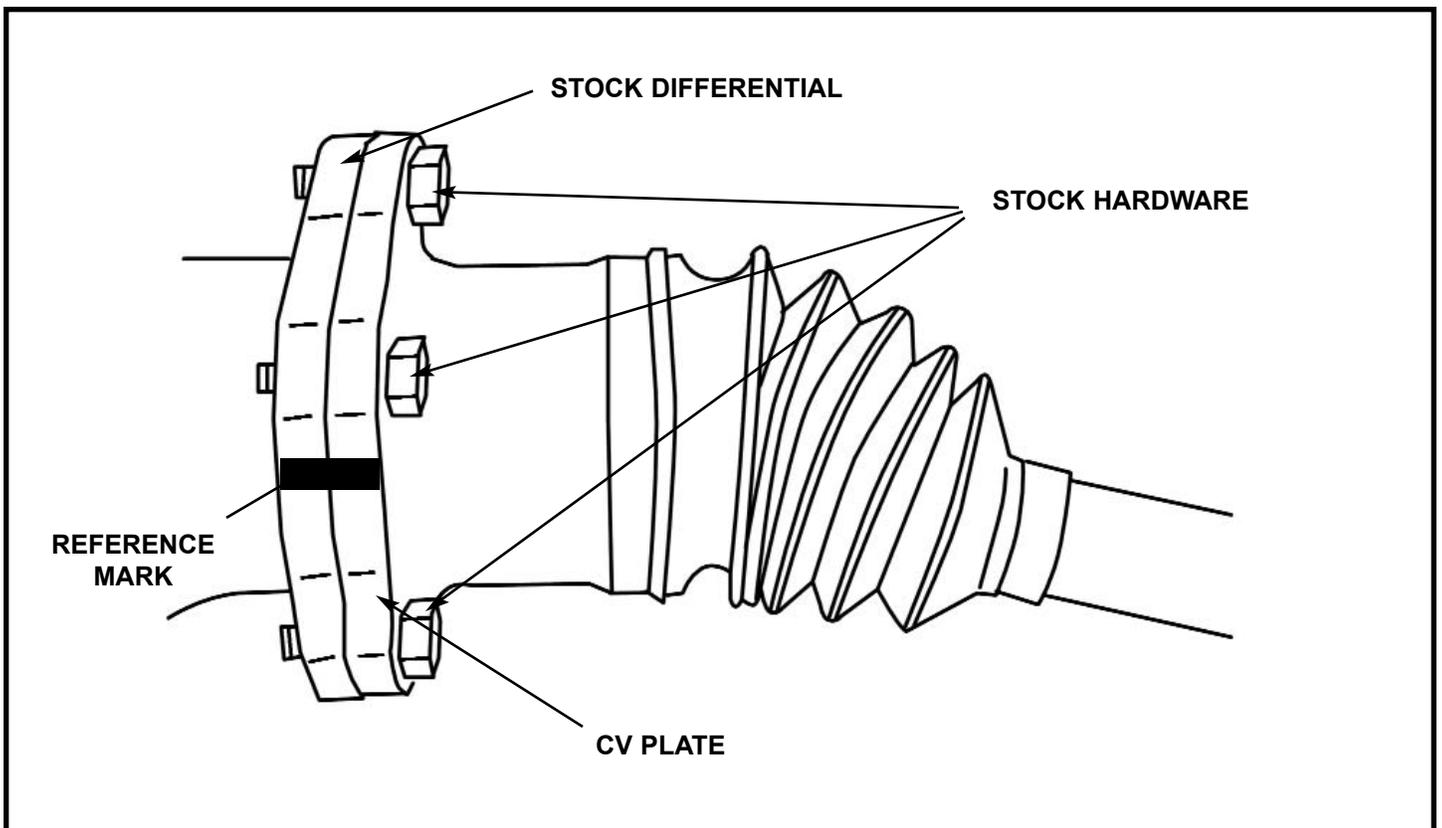


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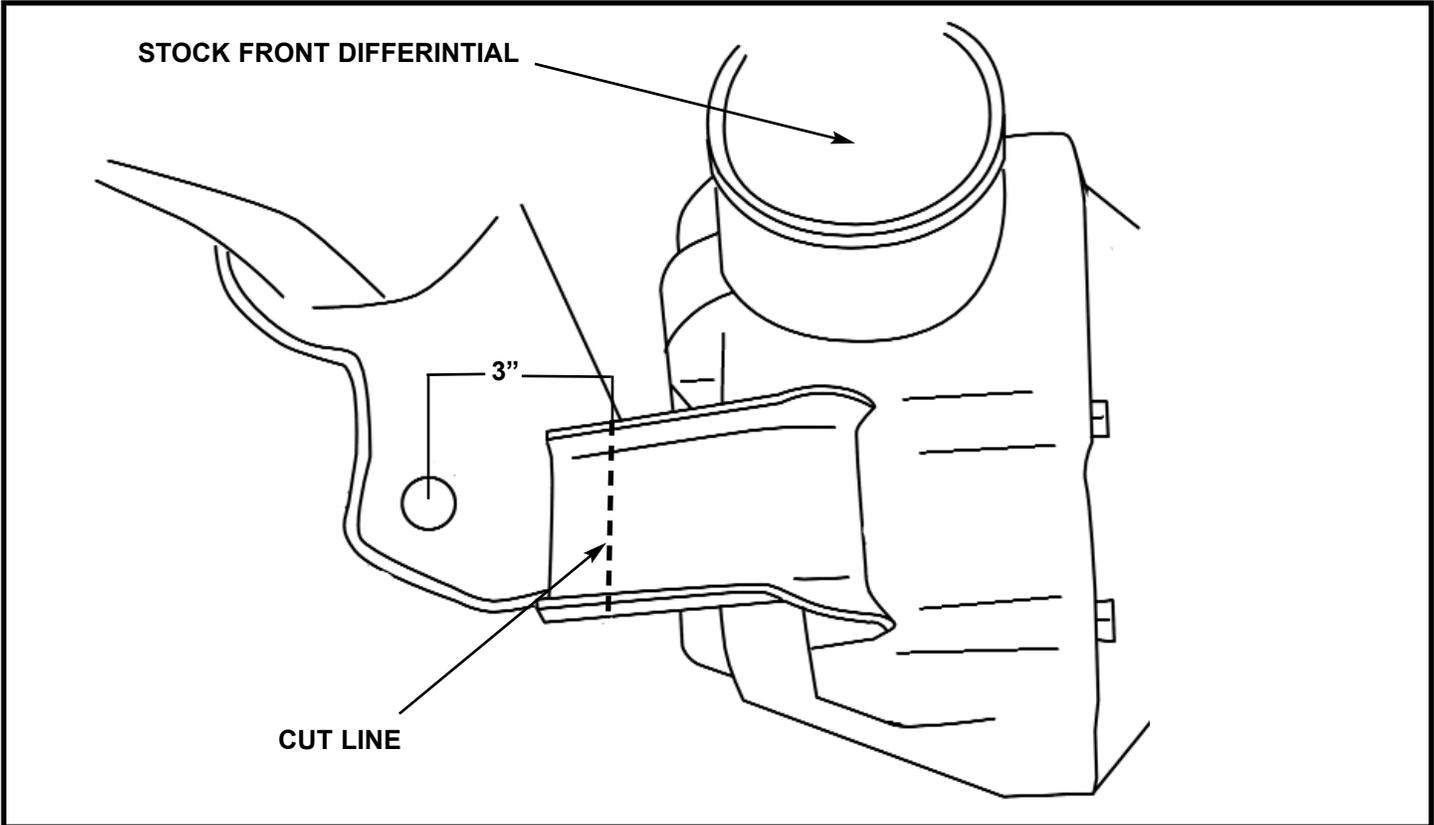


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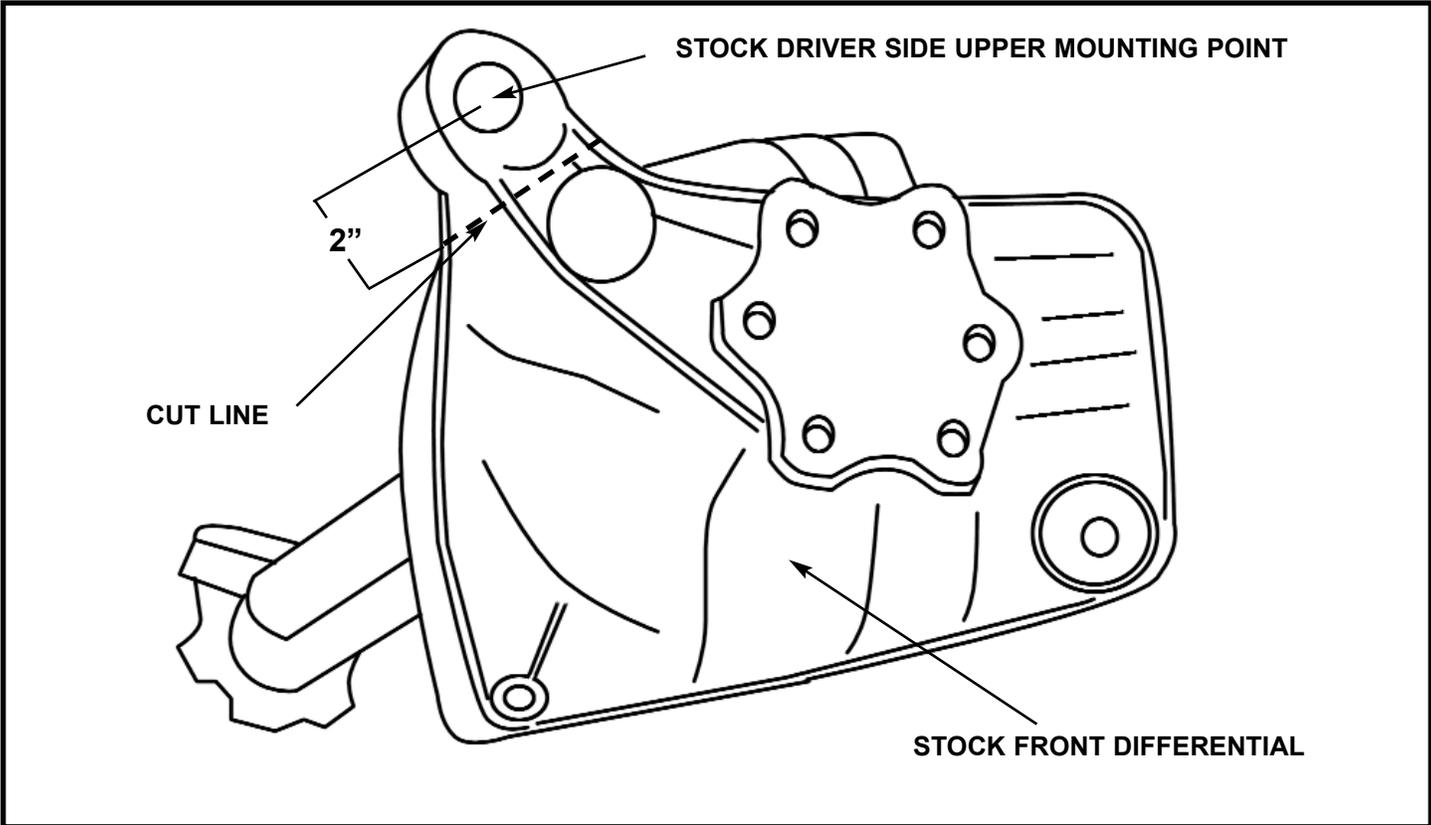


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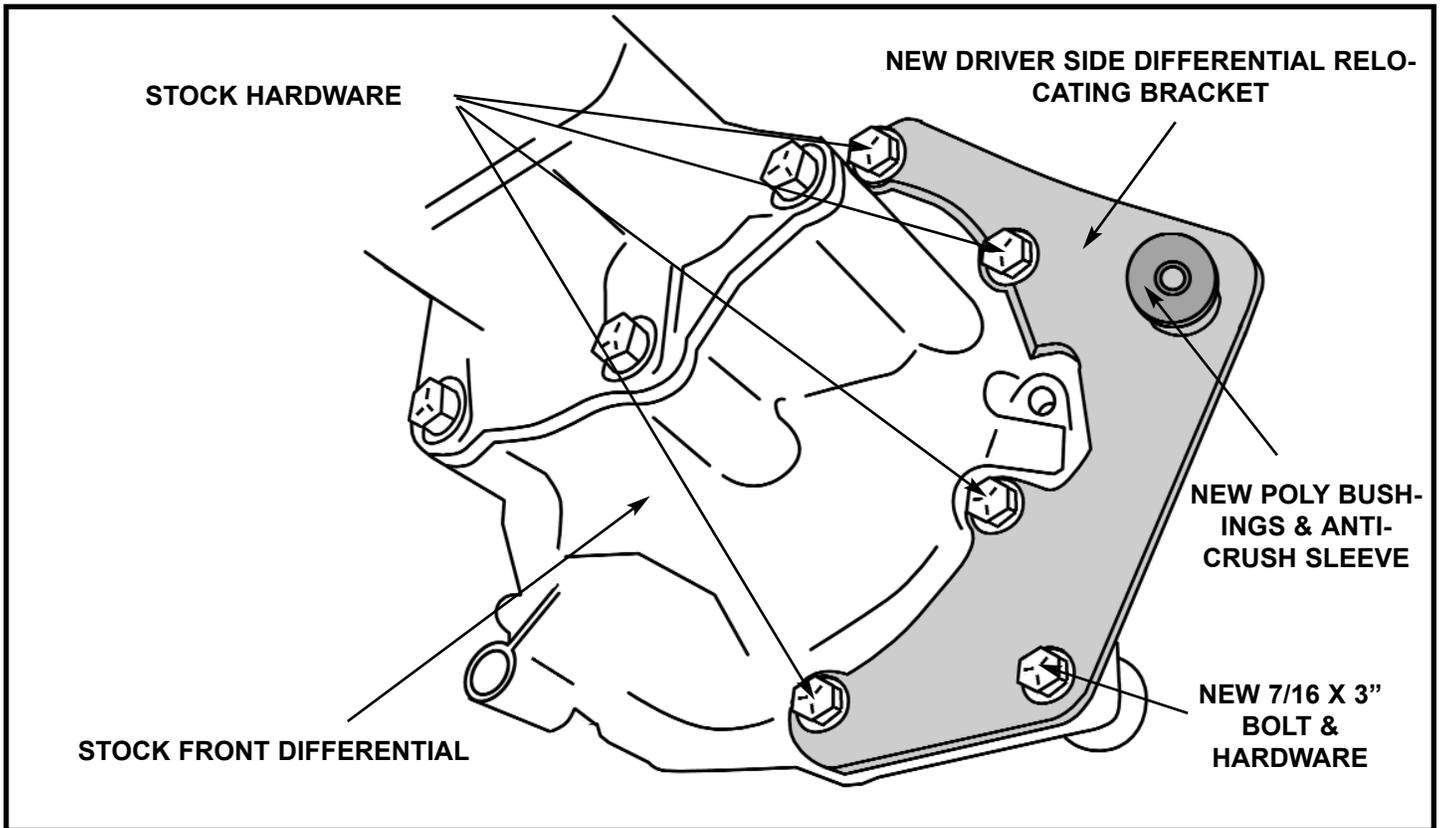


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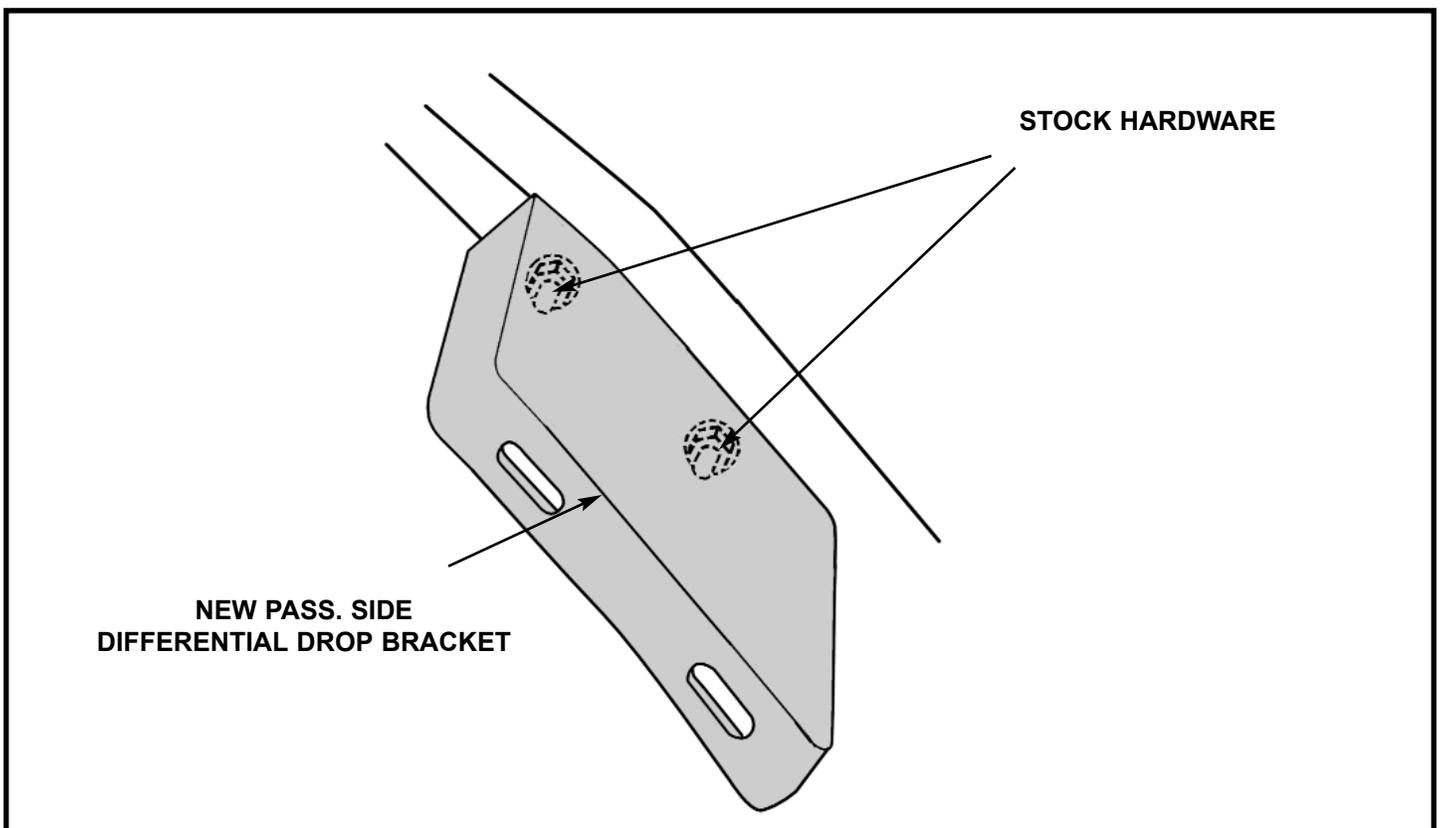


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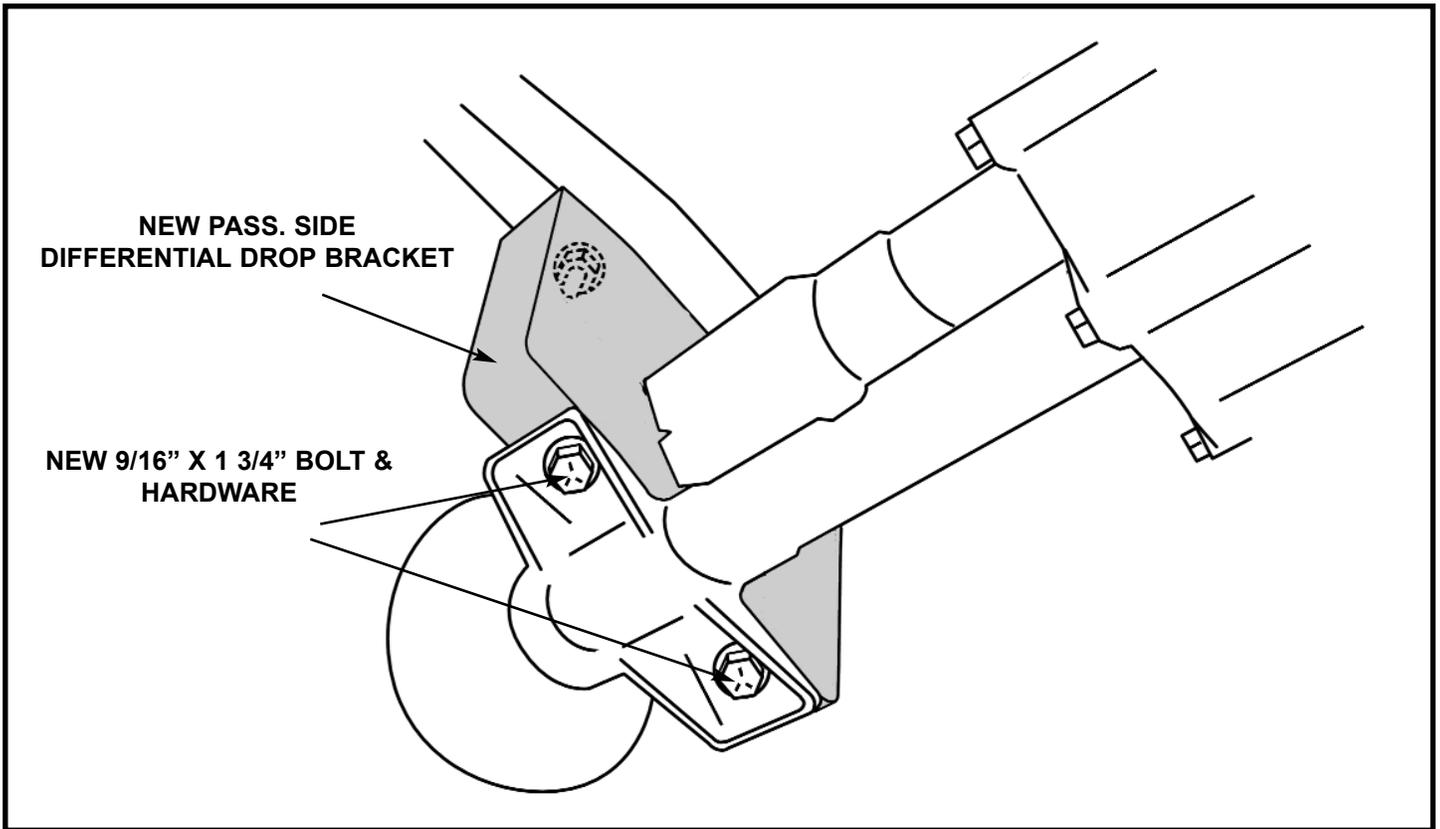


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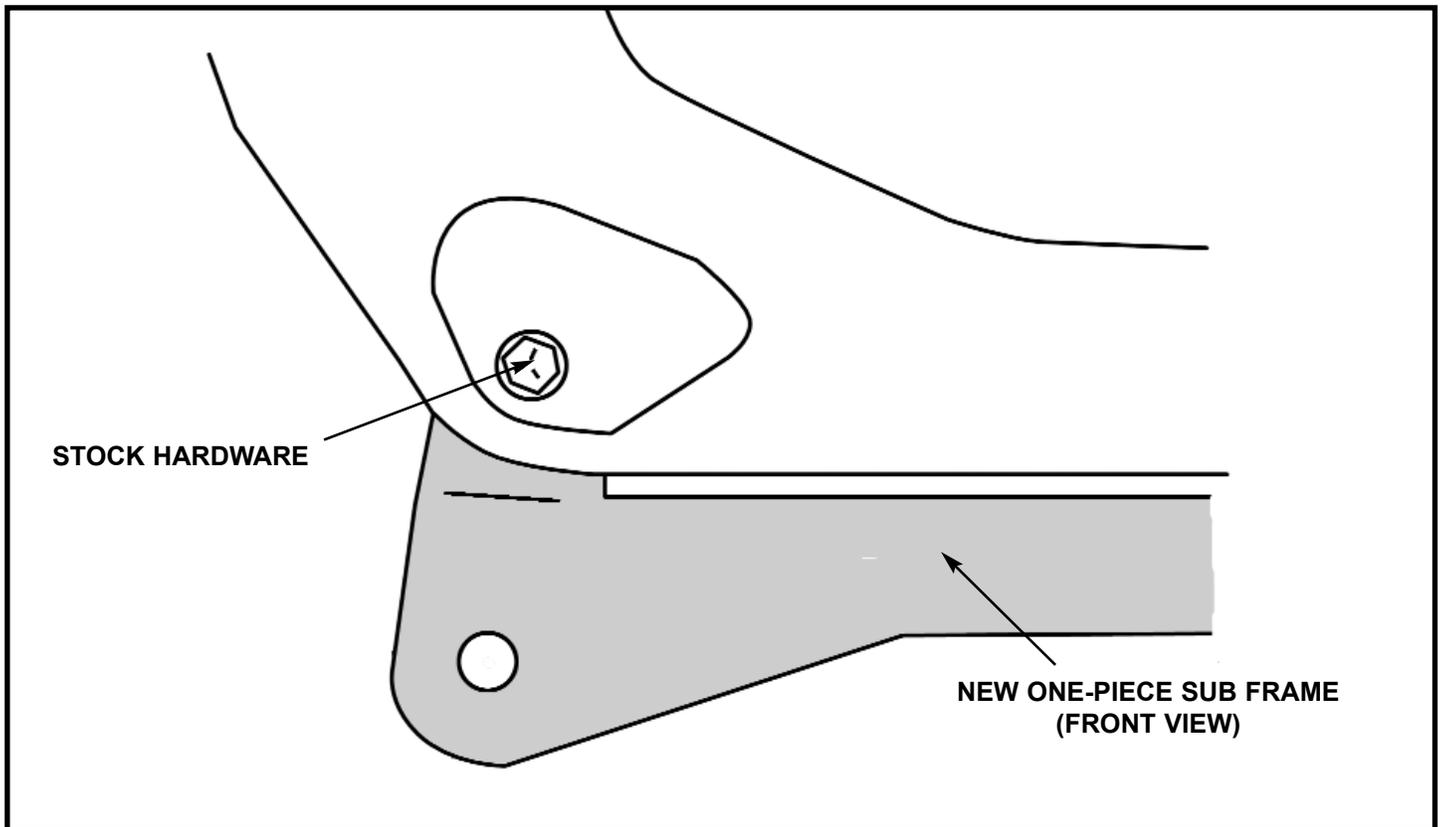


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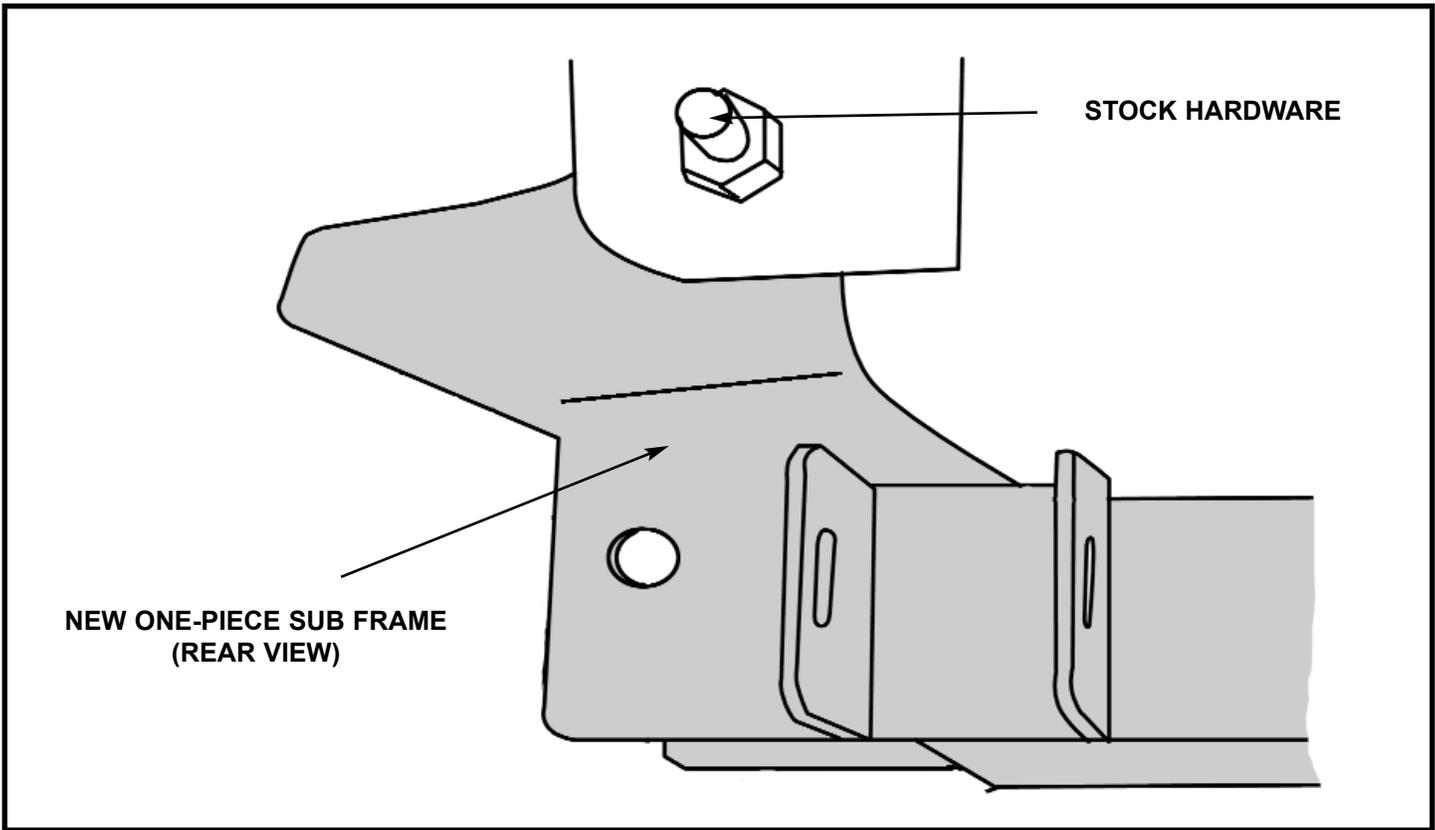


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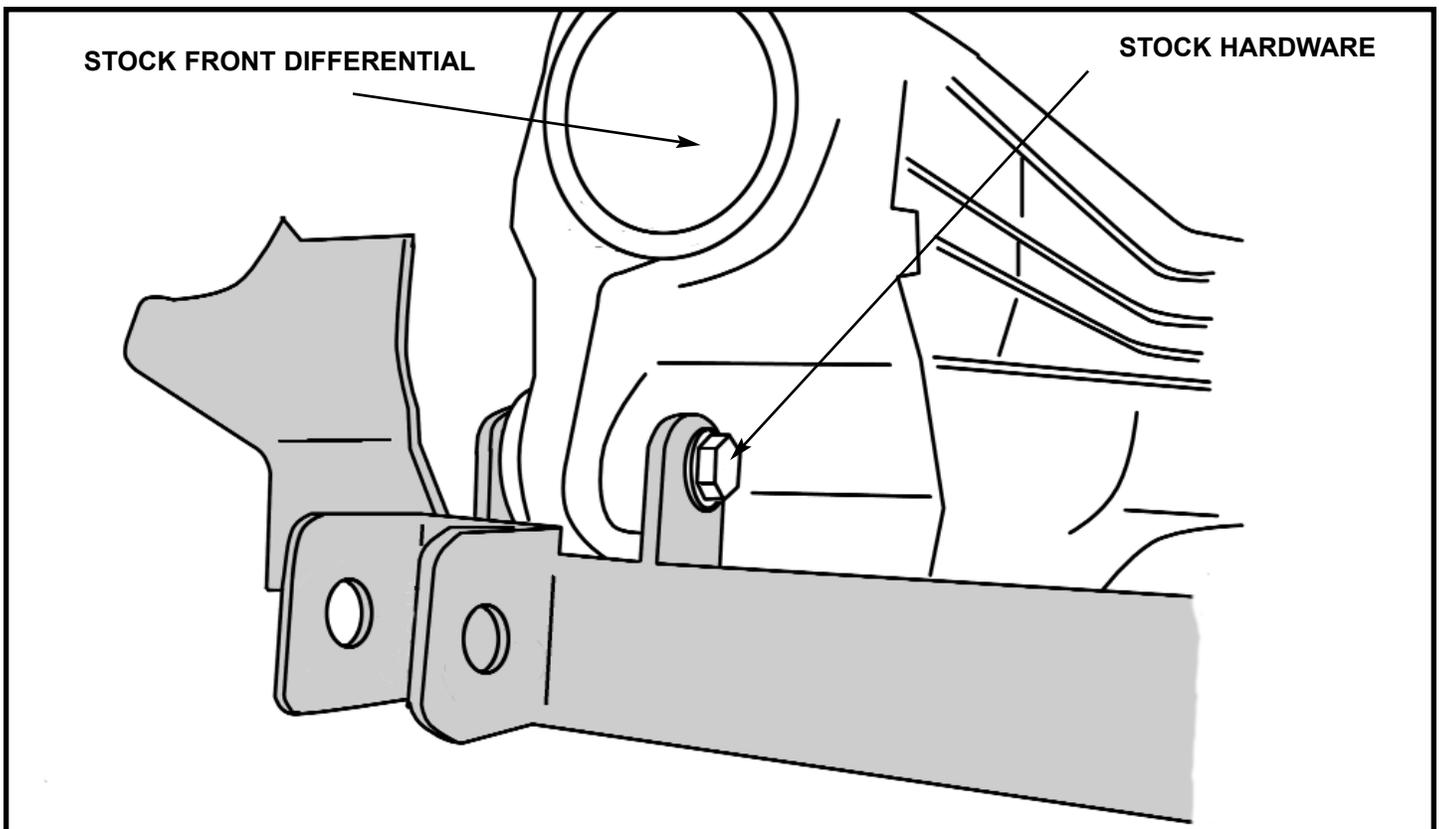


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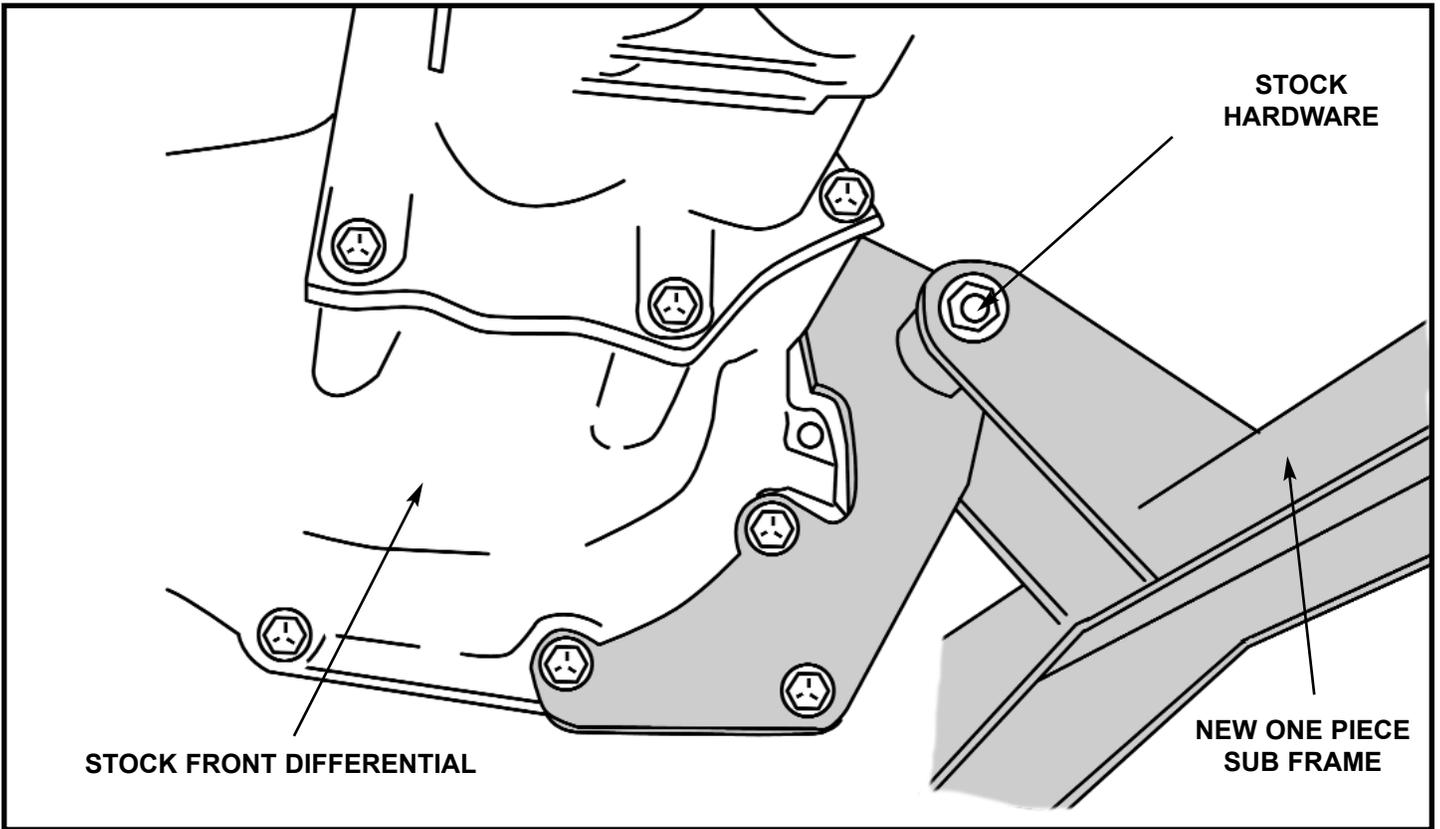


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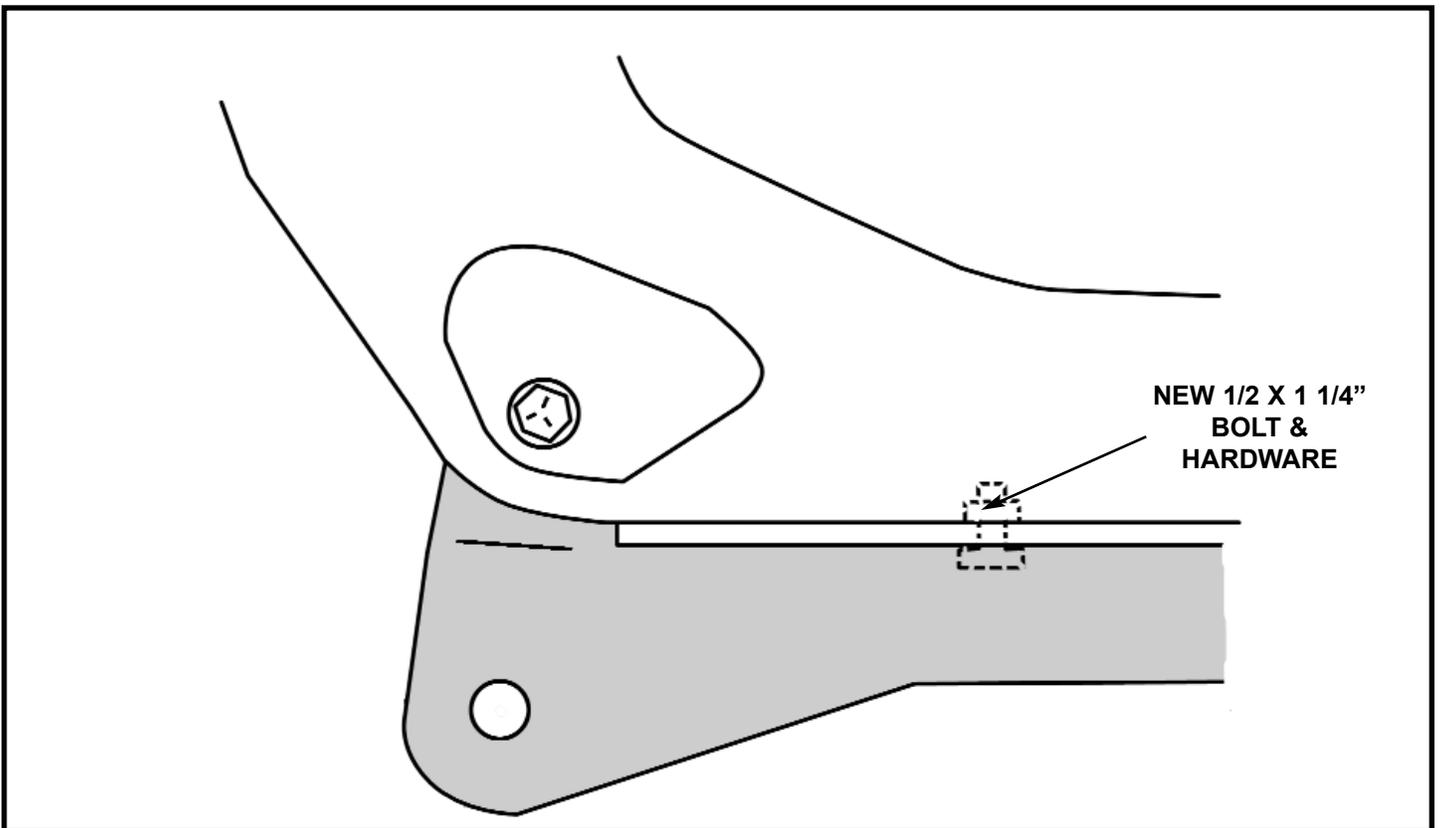


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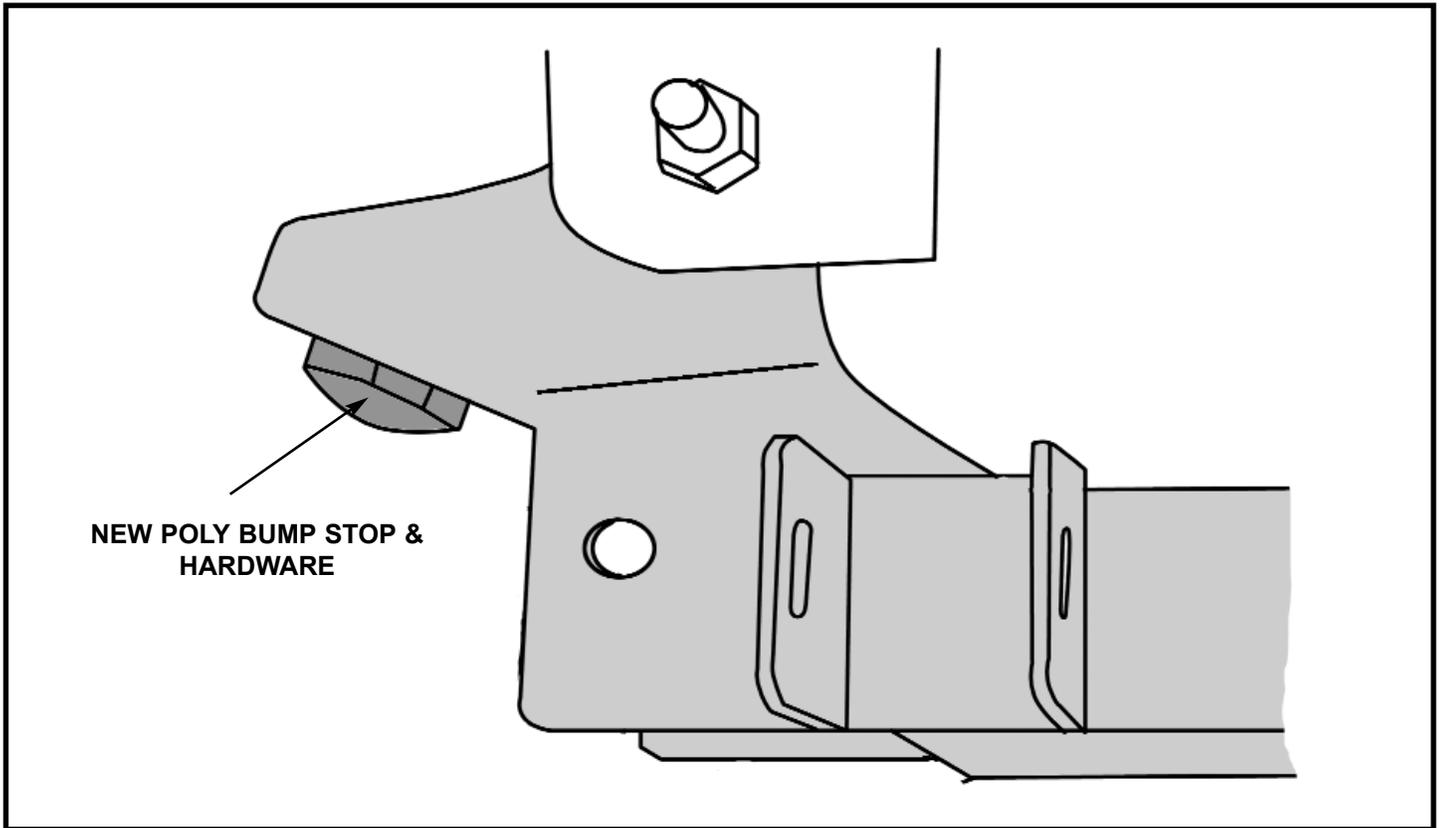


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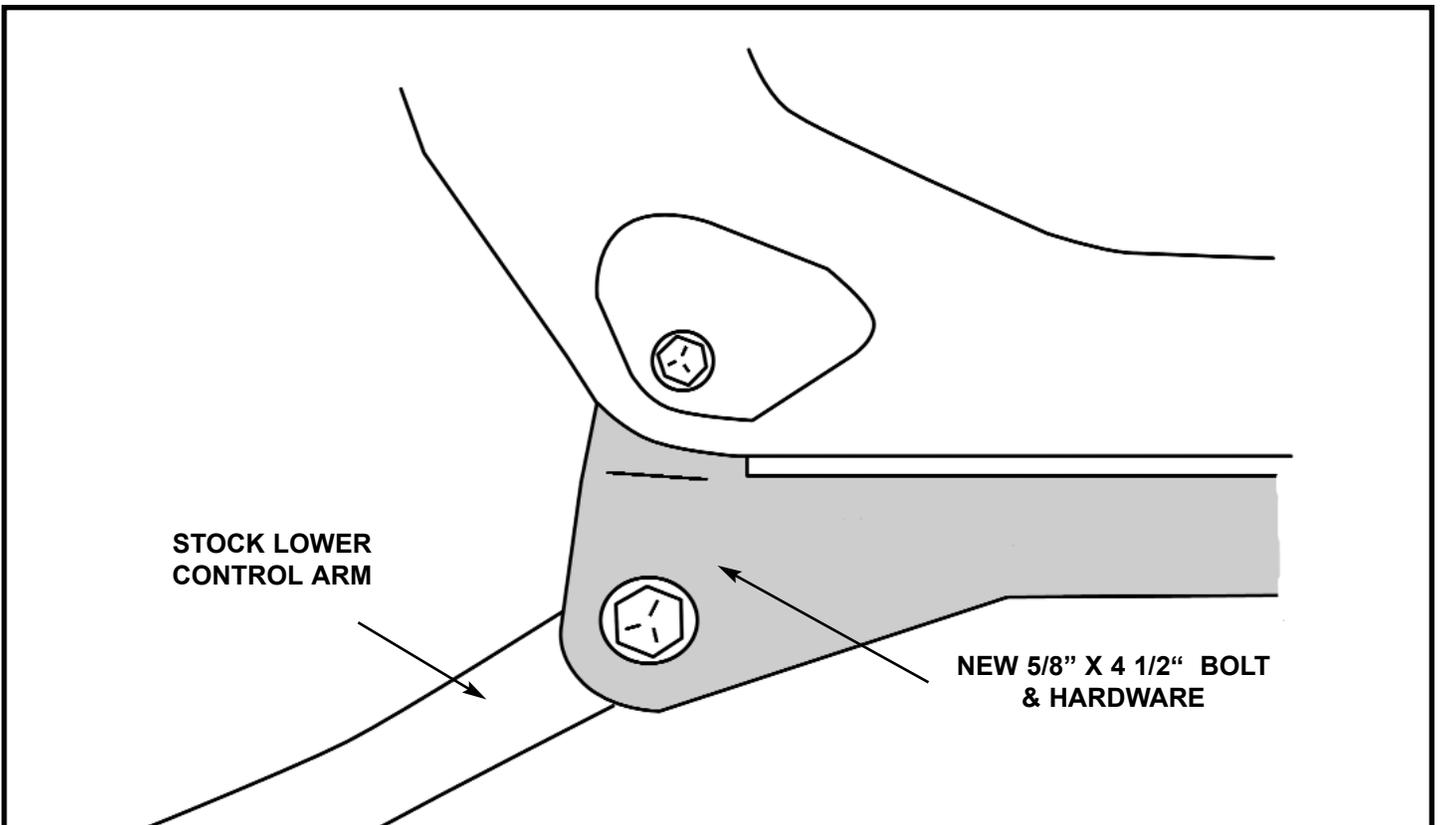


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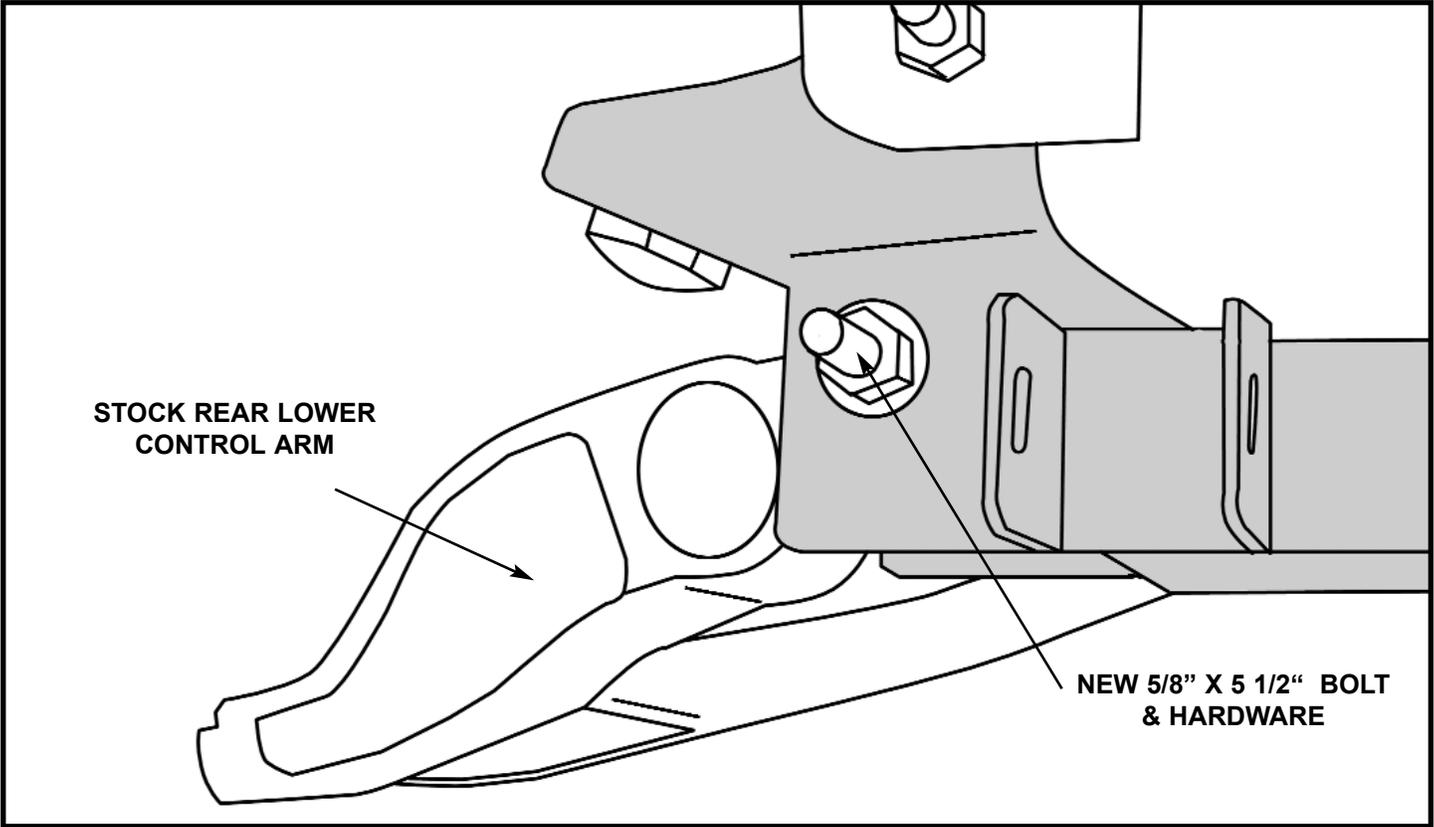


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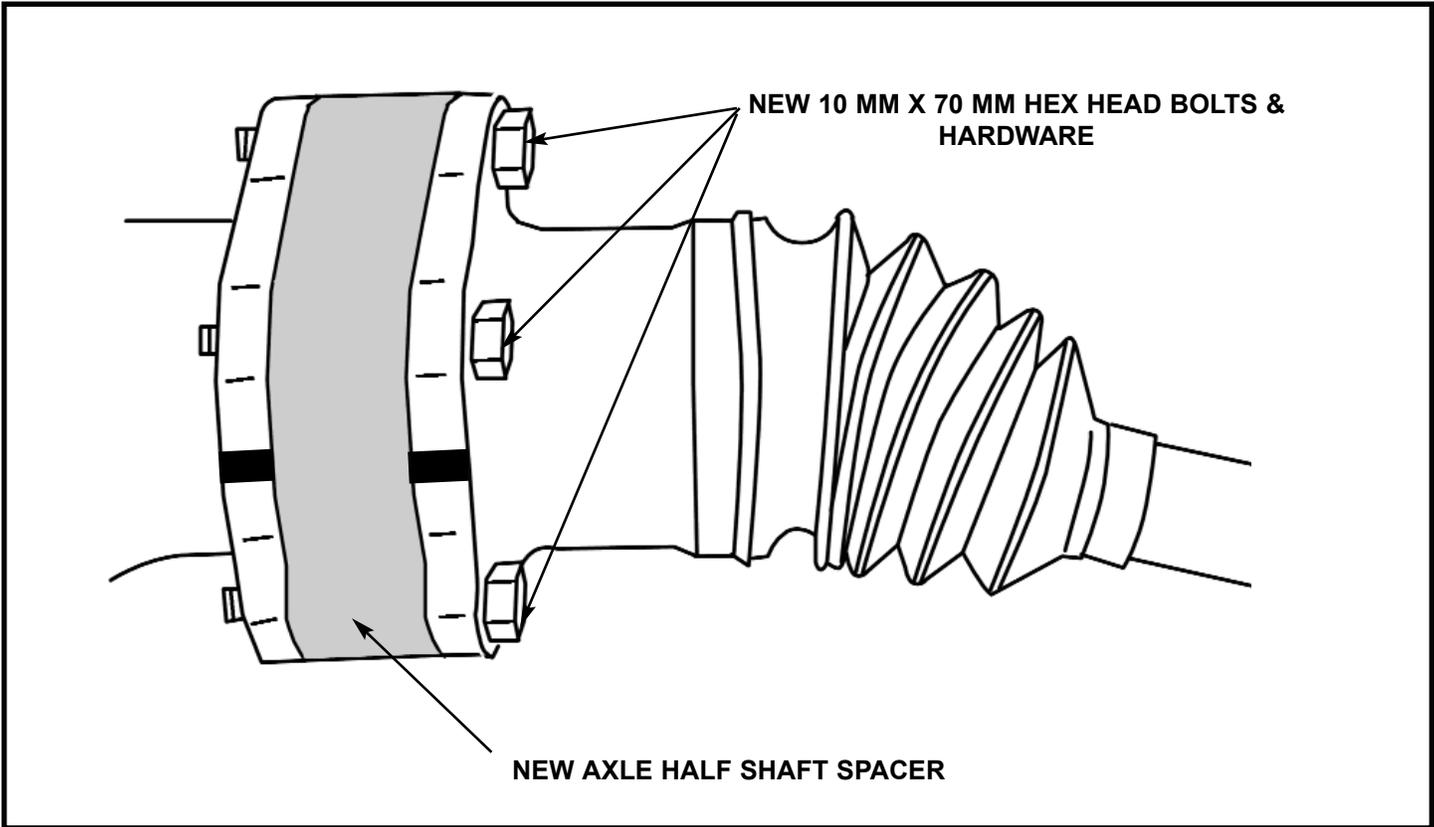


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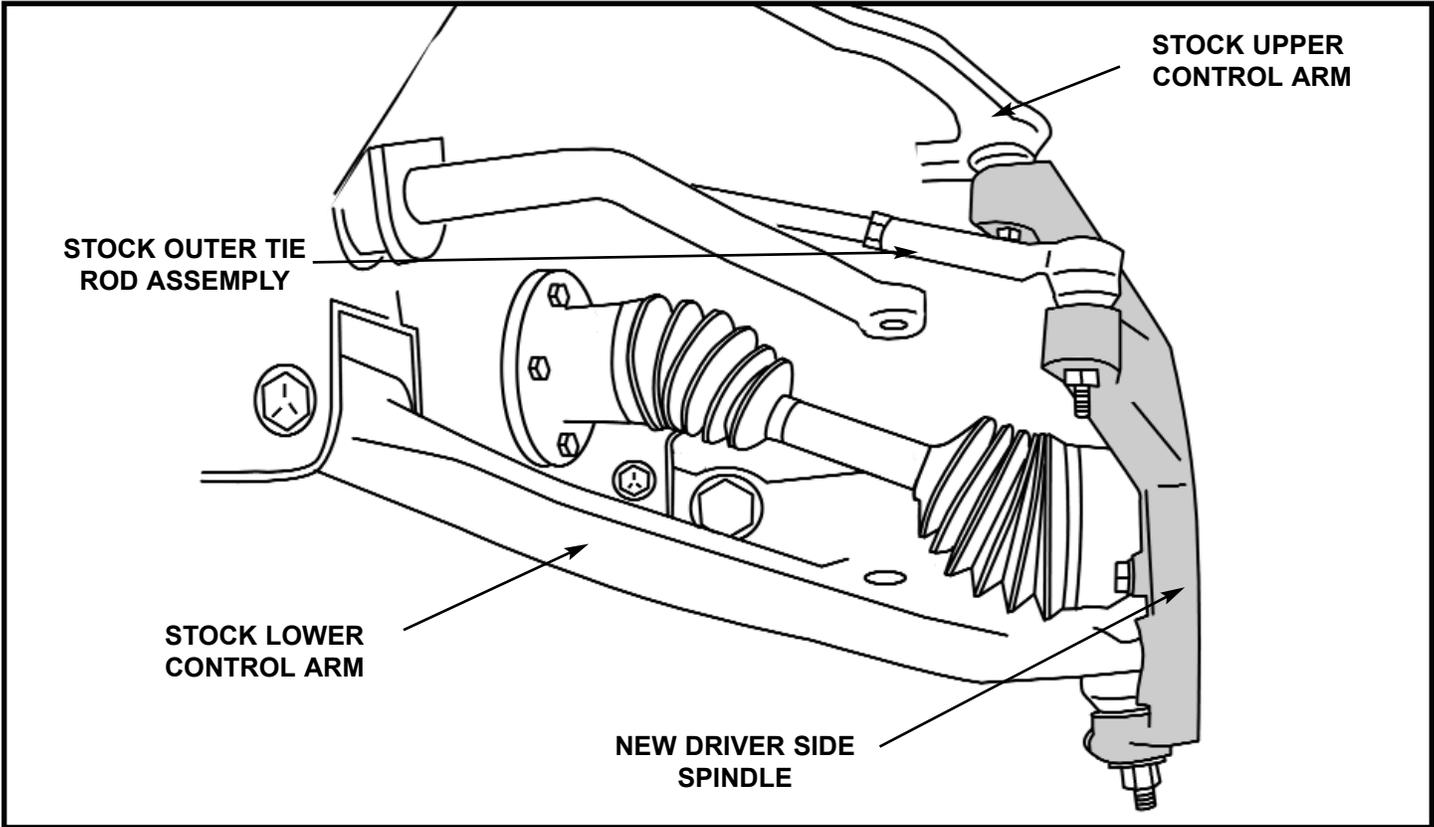


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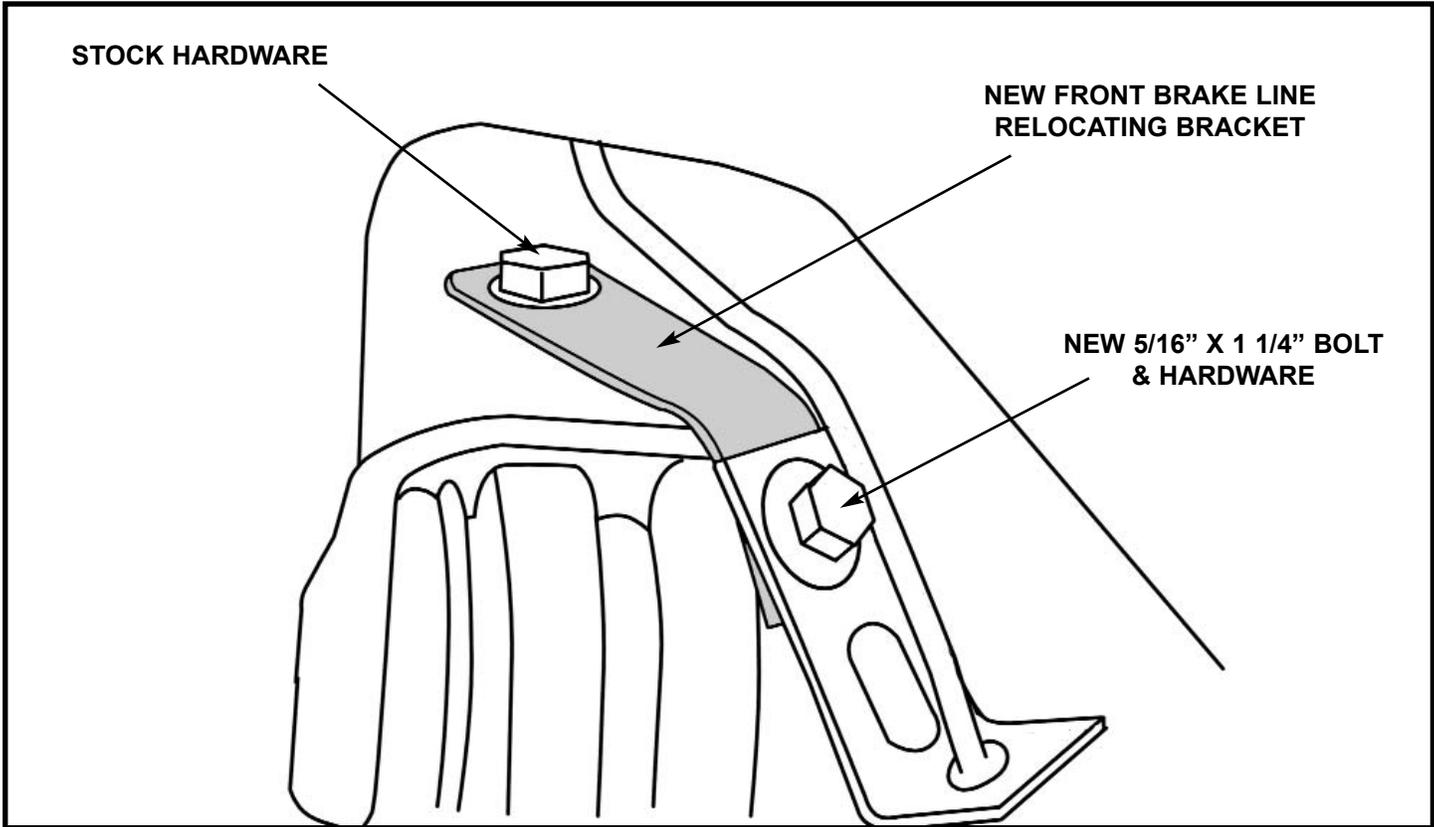


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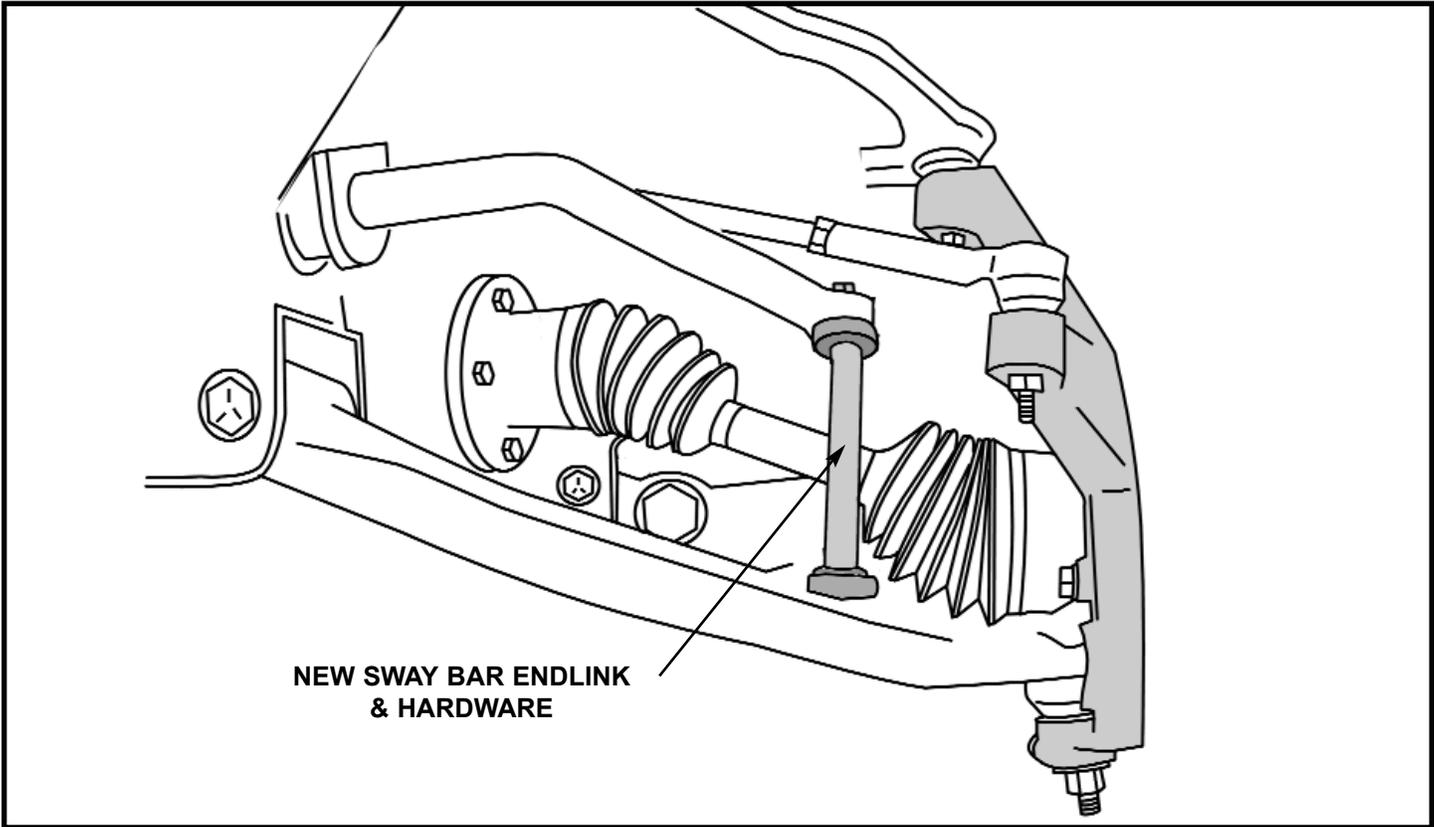


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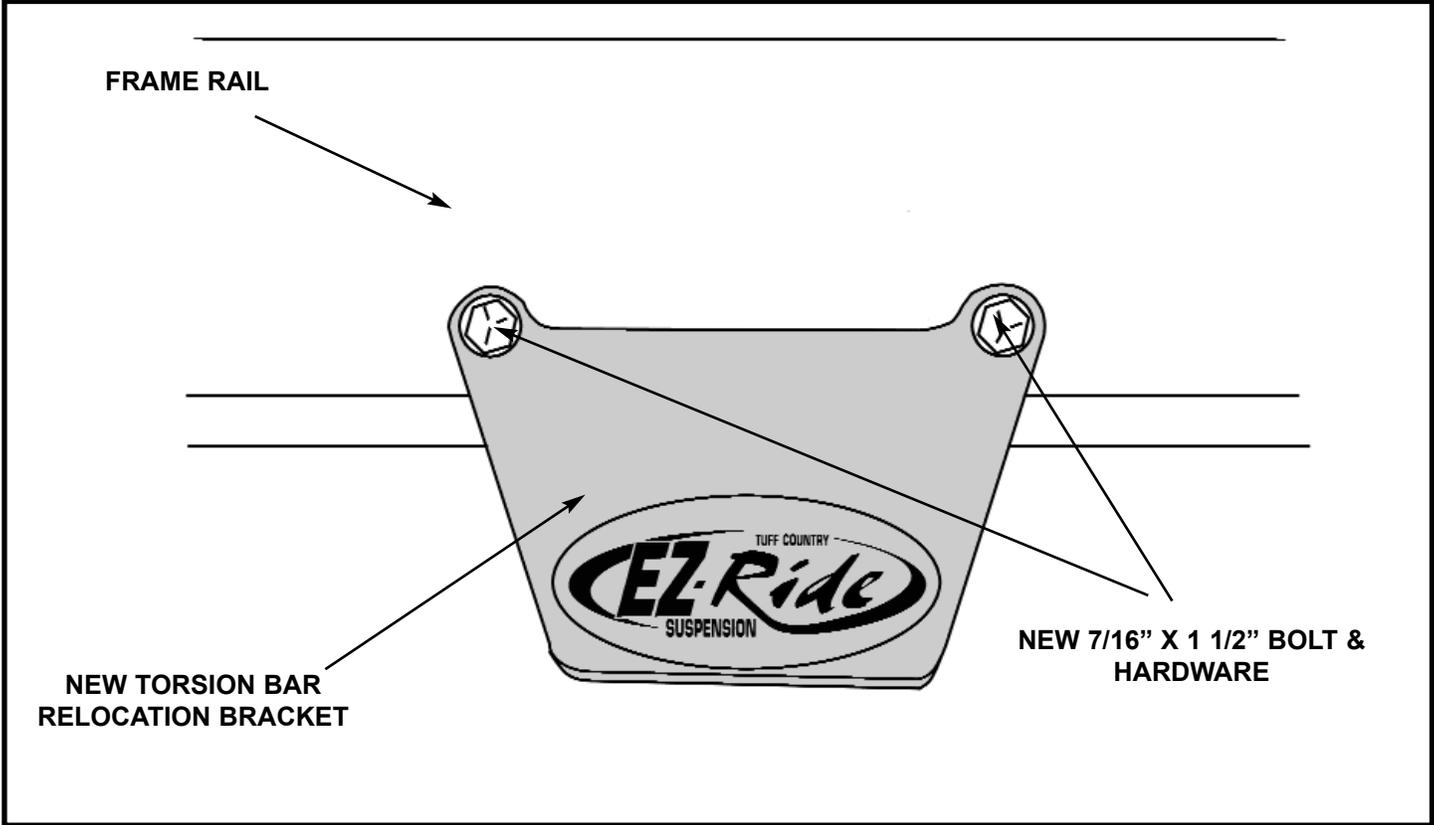


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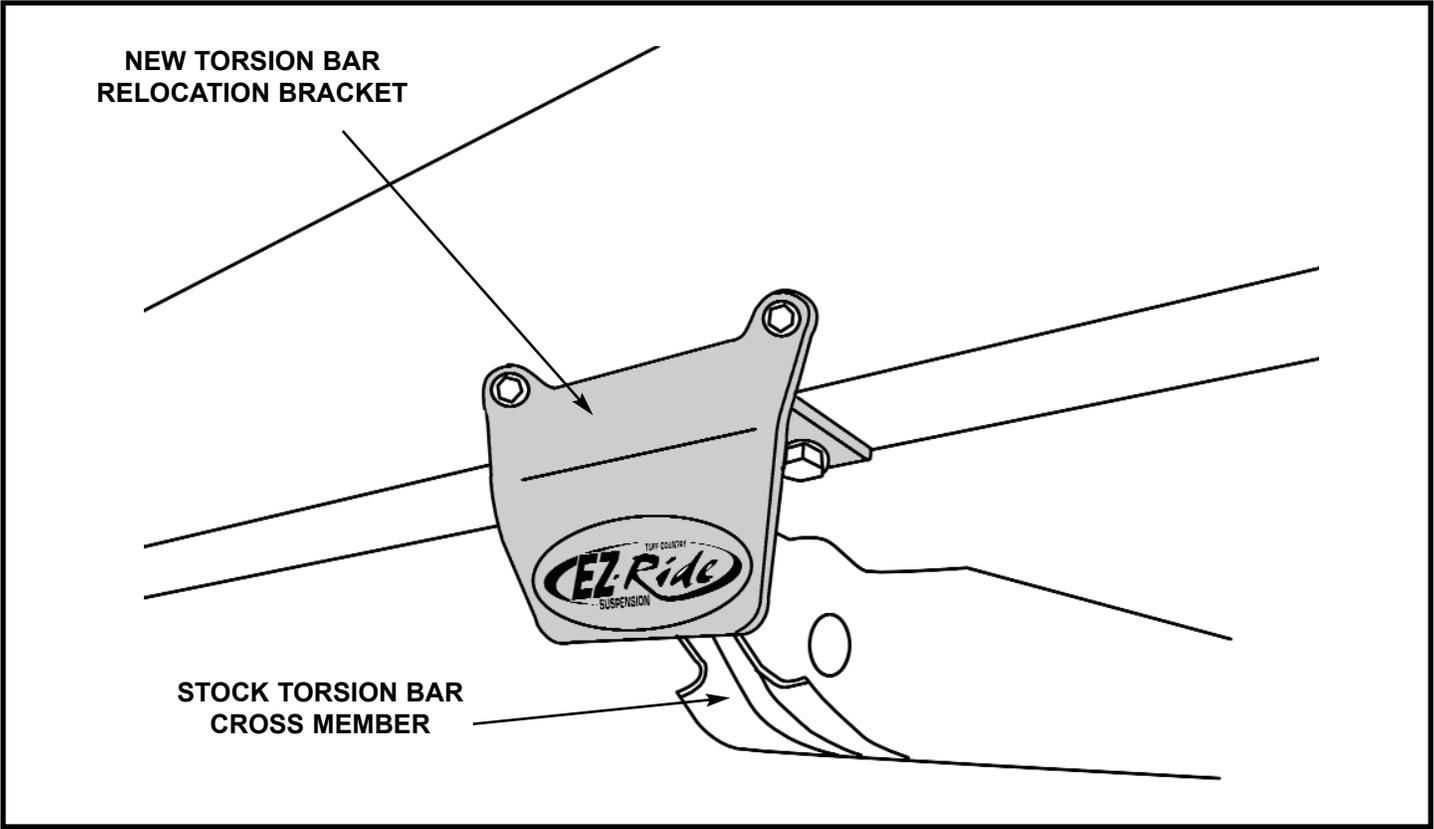


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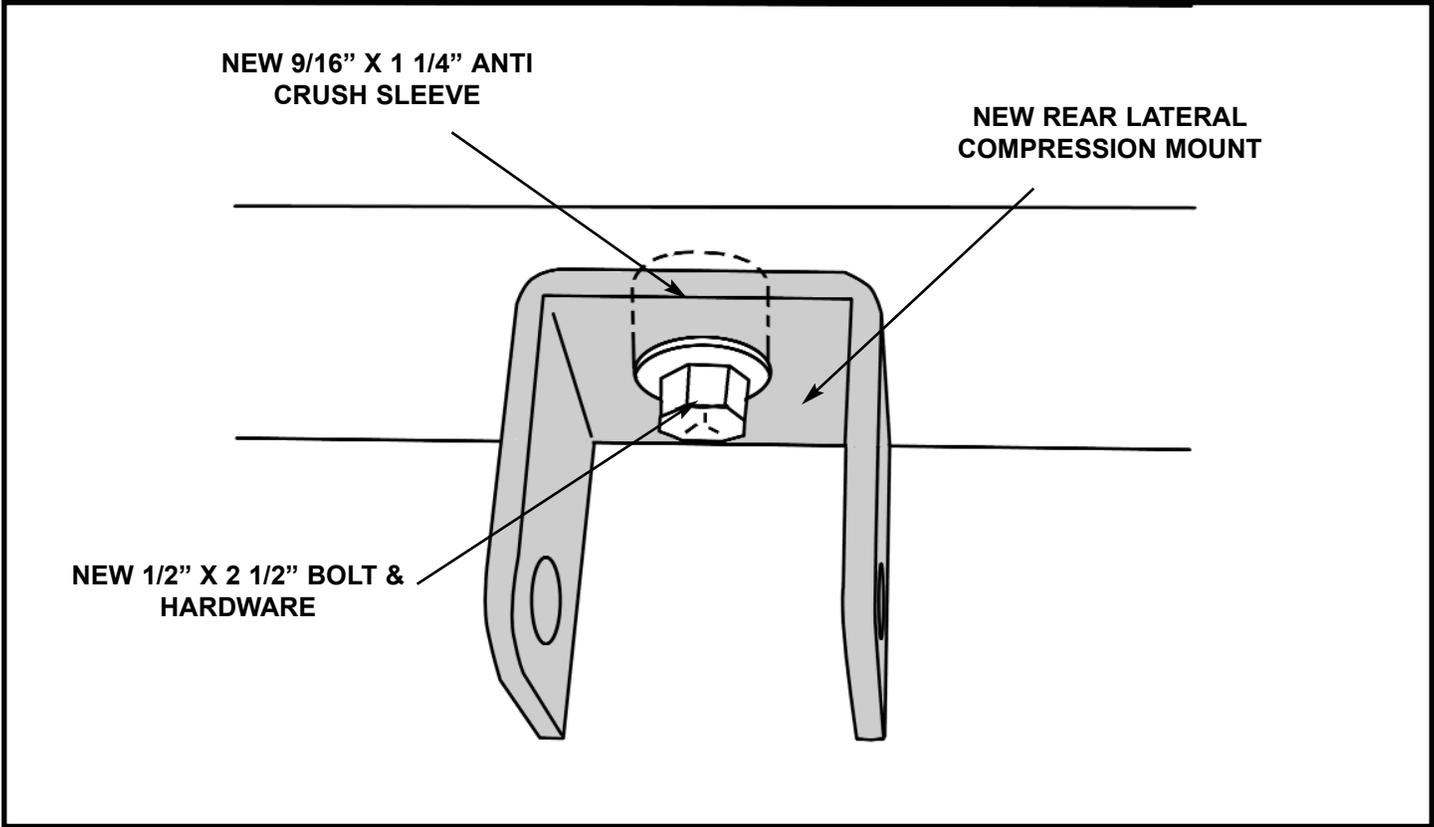


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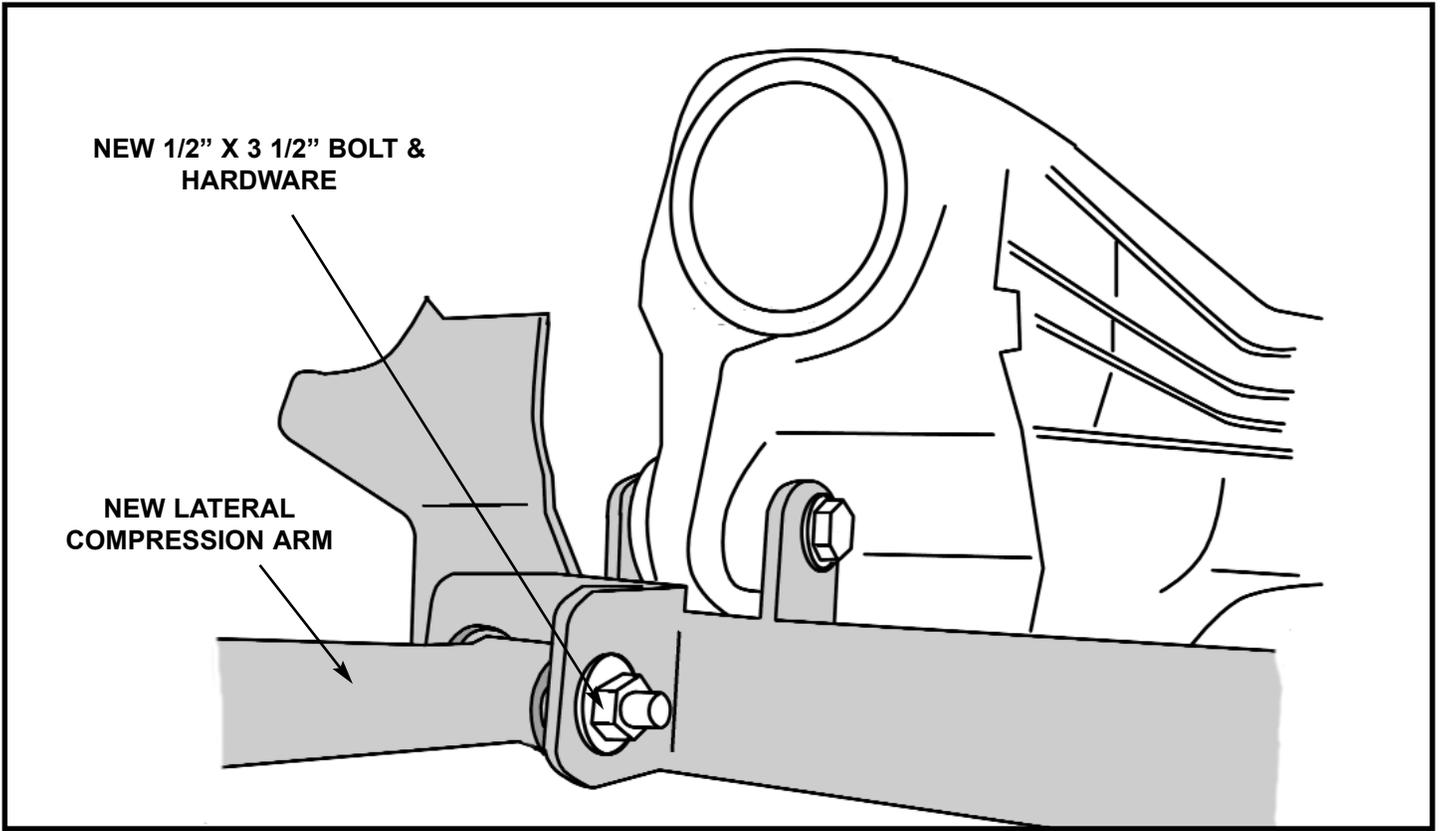


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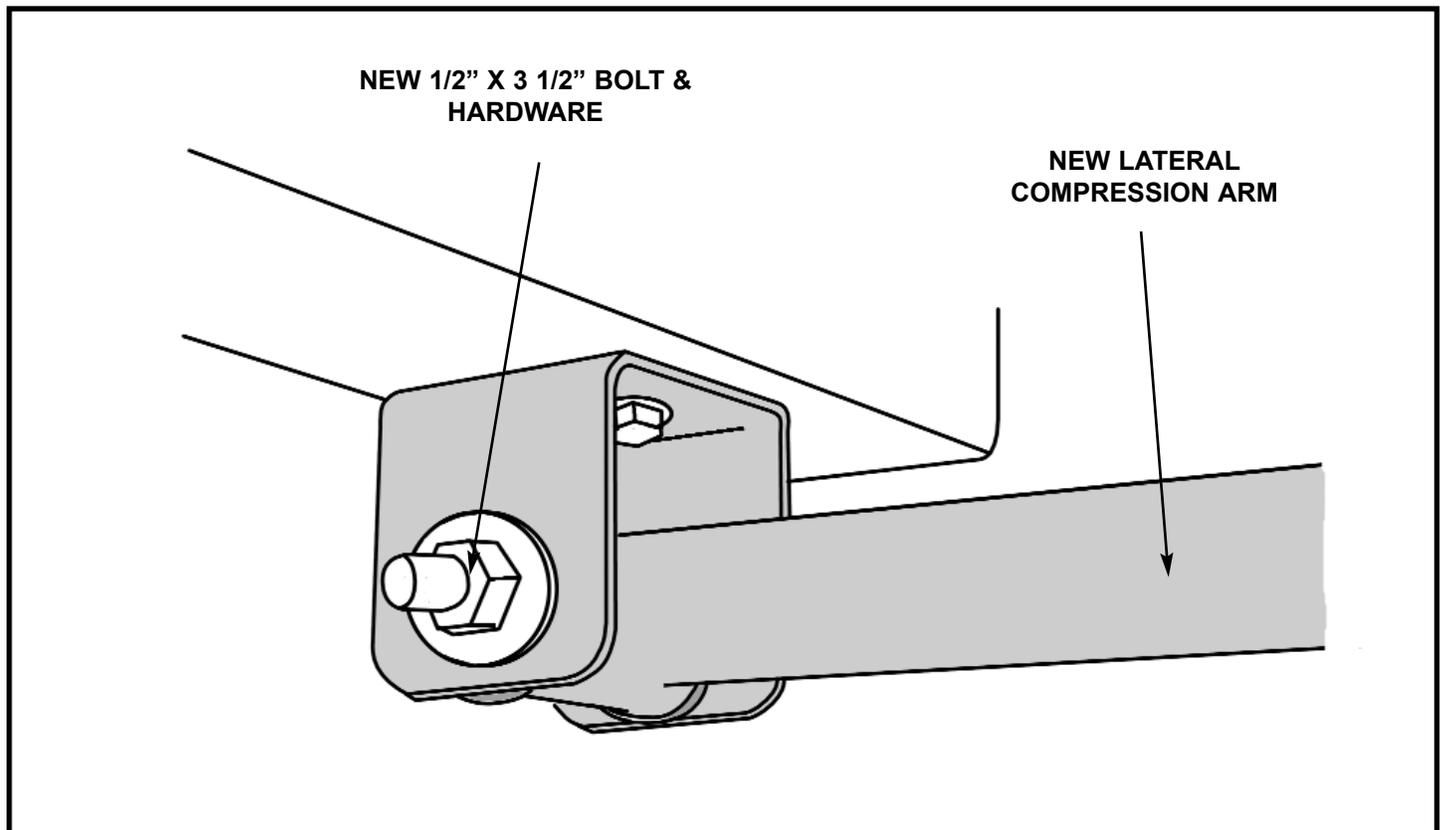


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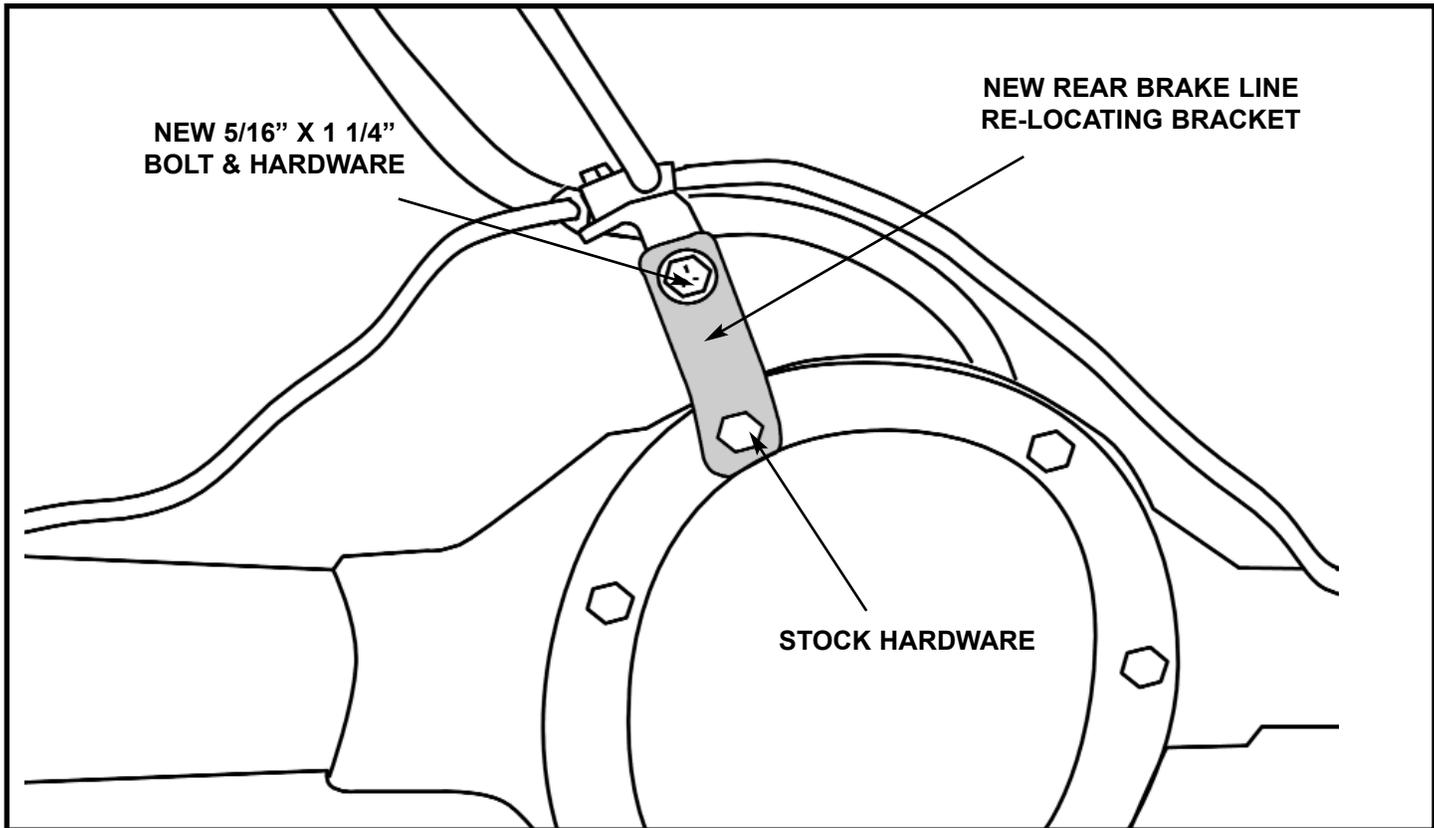


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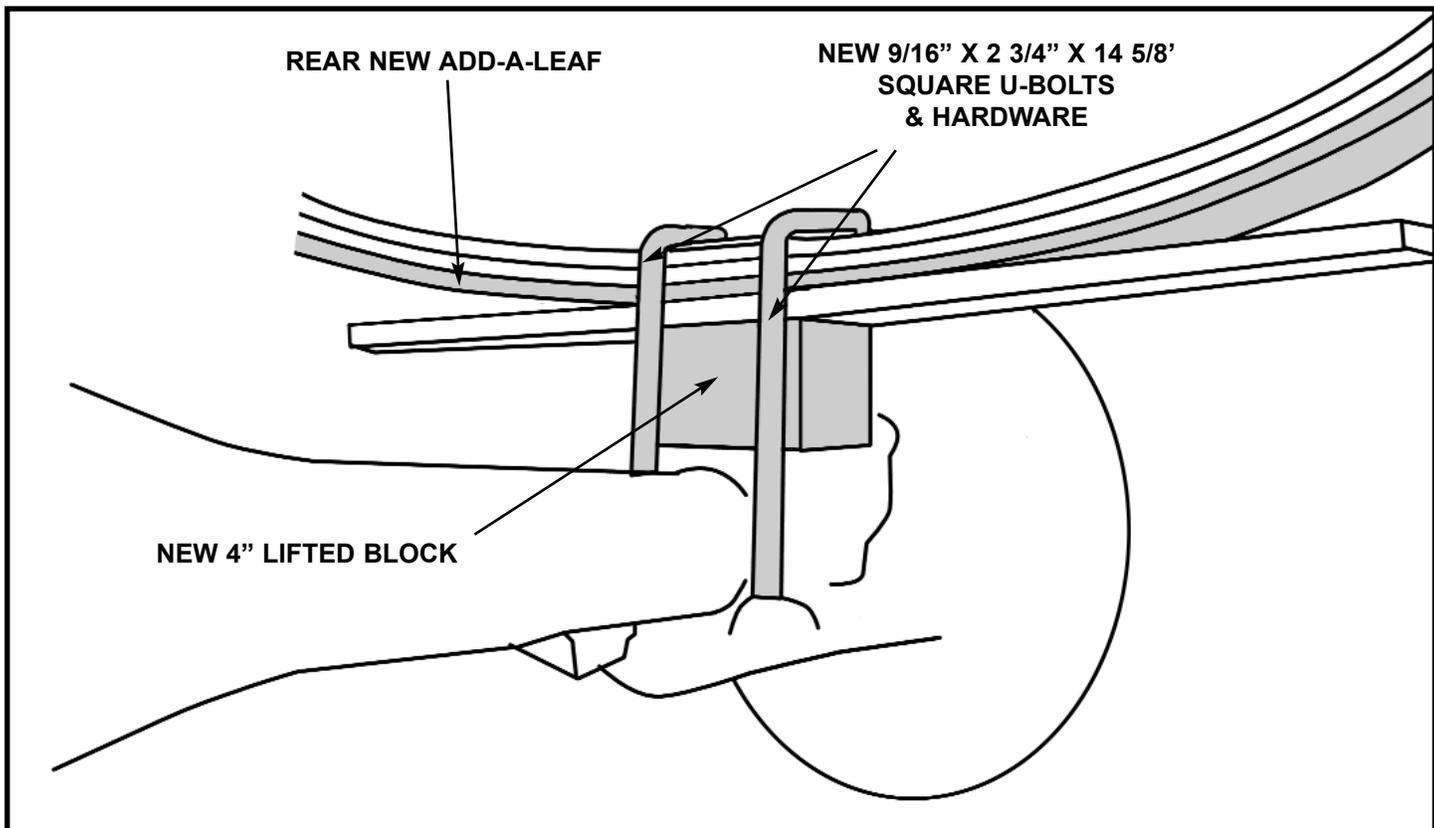


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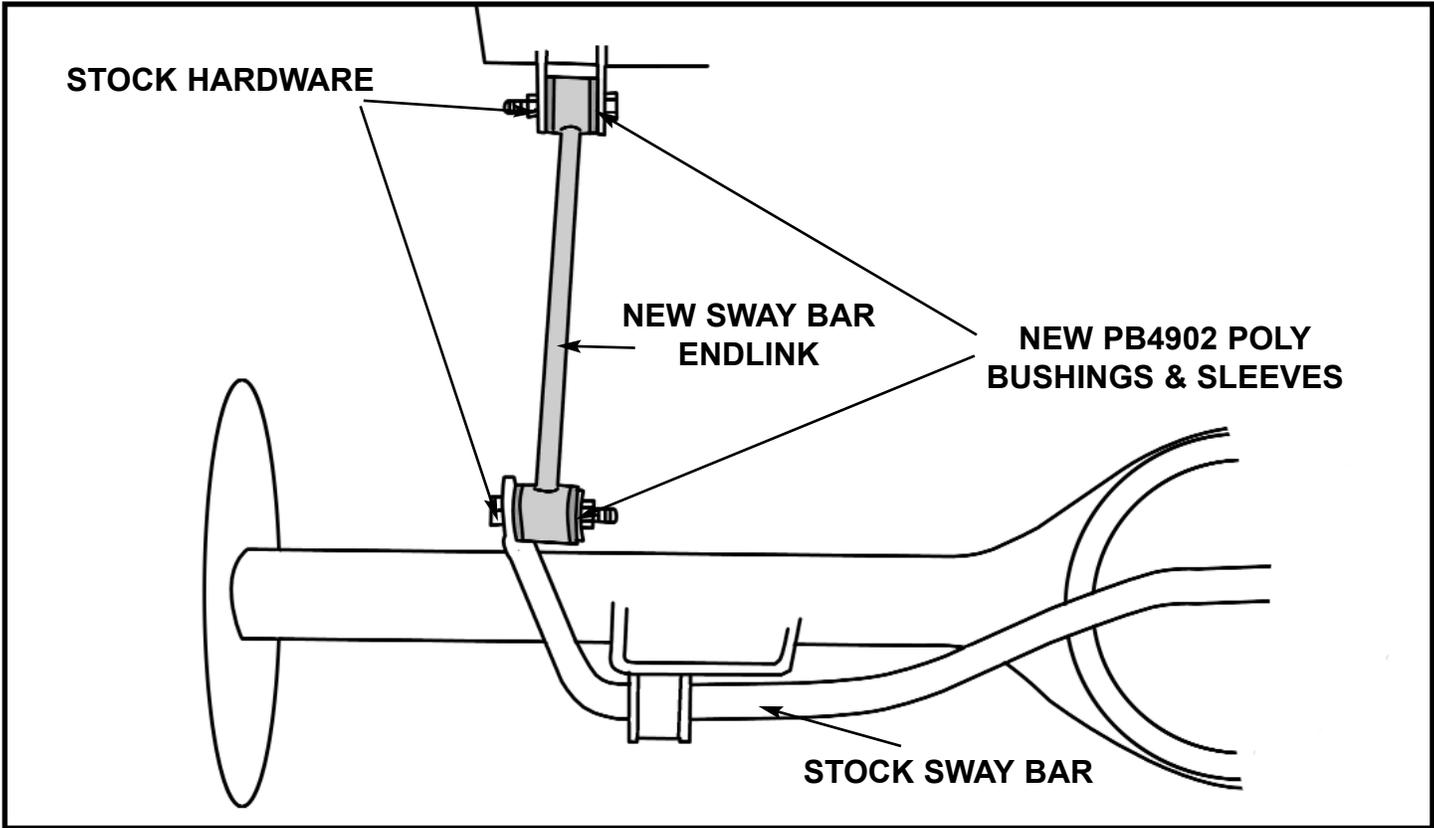
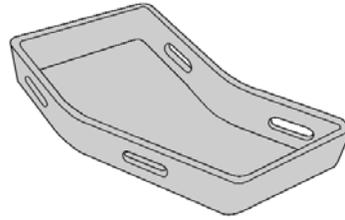


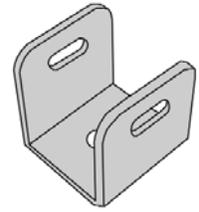
ILLUSTRATION # 29



DRIVER SIDE DIFFERENTIAL
RELOCATION BRACKET
16810-03 / QTY 1



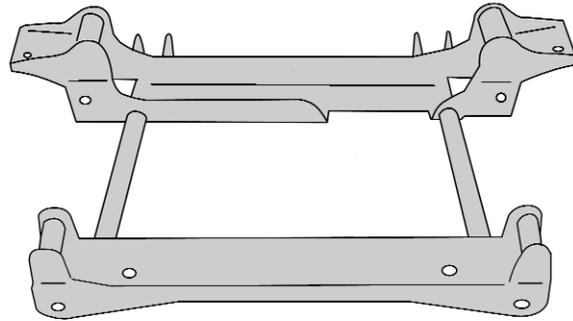
PASSENGER SIDE
DIFFERENTIAL DROP BRACKET
16810-04 / QTY 1



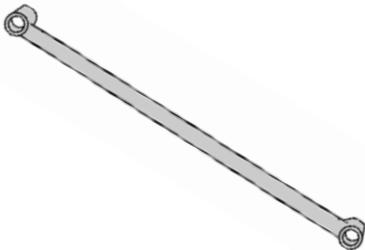
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ARM MOUNT BRACKET
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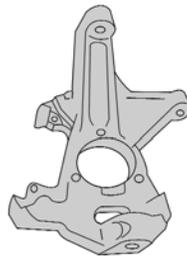
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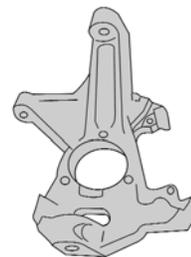
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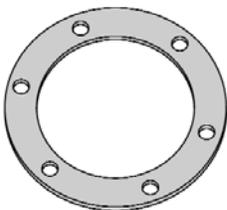
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16810-11 / QTY 2



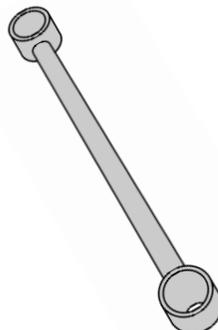
DRIVER SIDE SPINDLE
C6I-118M / QTY 1



PASS. SIDE SPINDLE
C6I-119M / QTY 1



AXLE SPACERS
9803 / QTY 2



REAR SWAYBAR
ENDLINKS
SB-01 / QTY 2