



TUFF COUNTRY

EZ - Ride Suspension

**PART NUMBER : 14813 (6 LUG) / 14823 (8 LUG)
4" I.F.S. SUSPENSION SYSTEM WITHOUT SPINDLES**

PARTS LIST:

Part #	Description	Qty.
C4I-103	Steering Center Link	1
C4I-104	Steering Assist	1
C4I-105	Driver Side Upper Control Arm Drop Bracket (6 lug only)	1
C4I-106	Passenger Side Upper Control Arm Drop Bracket (6 lug only)	1
C4I-205	Driver Side Upper Control Arm Drop Bracket (8 lug only)	1
C4I-206	Passenger Side Upper Control Arm Drop Bracket (8 lug only)	1
C4I-109	Driver Side Differential Drop Bracket	1
C4I-110	Pass. Side Differential Drop Bracket	1
C4I-111	Torsion Bar Drop Brackets	2
C4I-112	4" One Piece Lower Sub Frame	1
C4I-NB1	Poly Bushing Bag	1
14813NB	Hardware Box	1
C4ISL	Sleeve Bag	1
BL401	4" Rear Lifted Blocks	2
5U-9262S	9/16" x 2 3/4" x 12 5/8" Square U-bolts (6 lug only)	4
916NW	9/16" U-bolt High Nuts and Washers	1
5U-9237S	5/8" x 2 3/4" x 12 5/8" Square U-bolts (8 lug only)	4
58NW	5/8" U-bolt High Nuts and Washers	1
CAM-02	9/16" x 4" Cam Bolts	4
CAM-03	Cam Washers	8
916UN	9/16" Unitorque Nuts	4
C46IBL	Front and Rear Brake Line Extension Brackets	1
22SW	2" x 2" Square Washers	6
916358WW	9/16" x 3 5/8" Crush Sleeve With Welded Washer	2
SERT	Sert Fittings	2
P98	Rear Shock Clevis Mounts	2
14813INST	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 locktite on all new and stock hardware associated with the installation of this suspension system.

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.

**INSTALLATION MANUAL
4" I.F.S. SUSPENSION SYSTEM
1988- 1998
PART # 14813 / C4I1N
K1500 & K2500 (6 LUG)
PART # 14823 / C4I2N
K2500 & K3500 (8 LUG)**

sj020204rev.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.

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 of 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:

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.

Tuff Country EZ-Ride Suspension highly recommends NOT installing part # 14813 or part # 14823 on vehicle's equipped with a two piece rear driveline, 4 door long bed and extended cab long bed. If this suspension system is installed on vehicle's with these characteristics, problems may occur and your Tuff Country WARRANTY WILL BE VOID.

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.

On 1998 GMC / Chevy vehicle, you must order a CV axle extension kit. Part # 9801B for 6 lug vehicles and part # 9802B for 8 lug vehicles.

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

Exhaust modification is required once the suspension system has been installed

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. Remove the stock front differential skid plate. Also at this time, remove the stock front drive line and save the stock front drive line and hardware for later re-installation.

4. 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

5. 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

6. 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.** Working on the driver side, tap the stock torsion bar forward until the stock torsion bar cross member can be removed. Repeat procedure on the passenger side. Set the stock torsion bar keys a side for later re-installation.

7. Working on the driver side, remove the (3) stock bolts that connect the stock torsion bar cross member to the bottom side of the stock frame rail. The stock hardware may be discarded. 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.

8. 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.

9. Working on the driver side, remove the front stock shock and save the stock hardware for later re-installation. Repeat procedure on the passenger side. The stock shocks may be discarded. New front shocks are needed.

10. 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.

11. 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. Save the stock hardware for later re-installation. Repeat procedure on passenger side.

12. 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 # 12. Clean and dress up any exposed metal.**

See Illustration # 3

13. Working on the driver side, remove the stock cotter pin and castle nut that connects the stock outer tie rod to the stock steering knuckle. Save the stock hardware for later reinstallation. Using a tie rod separating tool, carefully remove the stock outer tie rod from the stock steering knuckle. Repeat procedure on the passenger side. **Special Note: Take special care not to rip or tear the stock outer tie rod boots.**

See Illustration # 4

14. Working on the driver side, remove the stock cotter pin and castle nut from the stock pitman arm and save the stock hardware for later re-installation. On the passenger side, remove the stock cotter pin and castle nut from the stock idler arm and save the stock hardware for later re-installation.

15. Remove the stock center link from the stock location and lay on the ground in front of the vehicle. **Special Note: Chevy/GMC have a driver and a passenger side outer tie rod end. Make sure that when you re-install the new steering center link that you do not install the driver side outer tie rod end on the passenger side and the passenger side on the driver side.**

16. With the stock center link on the ground, remove both inner cotter pins and castle nuts and set aside for later re-installation. Remove the driver and passenger side stock tie rod ends from the stock center link and save for later re-installation. **Special Note: Make sure to keep the driver side tie rod end on the driver side and the passenger side on the passenger side.**

17. Locate the new steering center link and secure to the idler arm and pitman arm. Secure using the stock hardware. **Special Note: Do not tighten at this point. Also, the lower spud on the new center link needs to pointing towards the rear of the vehicle.**

18. Working on the driver side, unbolt the (6) stock bolts that hold the inner CV joint to the stock front differential. **Special Note: Before separating the CV from the stock front differential, mark one bolt hole on the CV plate and another directly across to the stock front differential, this will allow you to re-install the CV back into the same location at a later step. Hang the CV from the lower control arm using a wire taking special care not to let the CV's come apart.**

See Illustration # 5

19. Working on the driver side, remove the stock lower control arm from the stock front location and save the stock hardware for later re-installation. Repeat procedure on the passenger side.

See Illustration # 6

20. Working on the driver side, remove the stock lower control arm from the stock rear location and save the stock hardware for later re-installation. Repeat procedure on the passenger side.

See Illustration # 7

21. Place a hydraulic differential floor jack under the front differential and raise up on the floor jack until it makes contact with the front differential.

22. Working on the driver side, remove the stock upper bolt that holds the stock front differential upper nose into the stock upper location and save the stock hardware for later re-installation. 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 wiring.**

23. 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.

24. Carefully lower down on the jack stand that is supporting the front differential approximately 4". **Special Note: During this procedure the front differential is being lowered in relation to the stock frame rail. On some I.F.S. vehicles this can cause clearance problems between the cooling fins on the front differential and the stock bracket on the driver side frame rail. If the cooling fins come into contact with the frame rail, it may cause binding and could cause damage to the front differential housing. The differential also must be centered to allow the proper amount of inner CV joint plunge. If the cooling fins contact the frame, the differential is pushed toward the passenger side. This causes the left axle to over extend causing the inner CV joint to pull out of the housing. If the cooling fin contact occurs, the aluminum fins must be trimmed to allow the differential to center without contacting the frame rail. These fins are important for the cooling of the front differential. If trimming is needed, only trim enough material to allow for proper clearance.**

25. Locate the new driver side differential drop bracket, (1) 9/16" x 4" bolt, (2) 9/16" flat washers and (1) 9/16" unitorque nut. Working on the driver side, install the new driver side differential drop bracket into the stock upper location and secure using the new 9/16" bolt and hardware. **Special Note: Do not tighten at this point. Also, make sure to use thread locker or lock tite.**

See Illustration # 8

26. Locate the new passenger side differential drop bracket, (2) 9/16" x 1 1/2" bolts, (4) 9/16" flat washers and (2) 9/16" unitorque nuts. Install the new passenger side differential drop bracket into the stock location and secure using the new 9/16" x 1 1/2" bolt and hardware. **Special Note: Do not tighten at this point. Also, make sure to use thread locker or lock tite.**

See Illustration # 9

27. Carefully raise up on the hydraulic differential floor jack until the stock front differential seats properly with the new driver and passenger side differential drop brackets.

28. Working on the driver side, secure the upper tab on the front portion of the front differential into the newly installed upper driver side differential drop bracket and secure using the stock hardware that was removed from

step # 22. **Special Note: Do not tighten at this point. Also, make sure to use thread locker or lock tite.**

See Illustration # 10

29. Working on the passenger side, secure the passenger side of the front differential to the newly installed passenger side differential drop bracket and secure using the stock hardware that was removed in step # 23. **Special Note: Do not tighten at this point. Also, make sure to use thread locker or lock tite.**

See Illustration # 11

30. Carefully remove the hydraulic differential floor jack from under the front differential.

31. Locate the new one piece lower sub frame. Working on the driver side, install the front part of the new sub frame into the stock front lower control arm pocket and secure using the stock hardware that was removed from step # 19. **Special Note: Do not tighten at this point. Also, make sure to use thread locker or lock tite.** Repeat procedure on the passenger side.

See Illustration # 12

32. Working on the driver side, install the rear part of the new sub frame into the stock rear lower control arm pocket and secure using the stock hardware that was removed from step # 20. **Special Note: Do not tighten at this point. Also, make sure to use thread locker or lock tite.** Repeat procedure on the passenger side.

See Illustration # 12

33. Working on the driver side, install the lower tab on the front differential into the newly installed sub frame and secure using the stock hardware that was removed from step # 12. **Special Note: Do not tighten at this point. Also, make sure to use thread locker or lock tite.**

See Illustration # 13

34. Using a hydraulic floor jack, carefully raise up on the hydraulic floor jack on the front portion of the new sub frame until it seats flush with the stock front cross member. Using the holes in the new sub frame as a guide, carefully drill (2) 1/2" holes into the stock front cross member. Locate (2) 1/2" x 1 1/2" bolts, (4) 1/2" flat washers and (2) 1/2" unitorque nuts. Secure the front portion of the newly installed sub frame to the stock front cross member using the new 1/2" x 1 1/2' bolts and hardware and torque to **85 ft lbs.** **Special Note: Make sure to use thread locker or lock tite.** Carefully remove the hydraulic floor jack from under the vehicle.

See Illustration # 14

35. Locate (6) poly bump stops, (6) 3/8" lock nuts and (6) 3/8" flat washers from poly bag C41-NB1. Working on the driver side, install (3) new poly bump stops into the rear pocket of the new one piece sub frame and secure using the new 3/8" hardware. Torque to **28 ft lbs.** **Special Note: Make sure to use thread locker or lock tite.** Repeat procedure on the passenger side.

See Illustration # 15

36. Locate (2) 5/8" x 4 1/2" bolts, (2) 5/8" x 5 1/2" bolts, (8) 5/8" flat washers and (4) 5/8" unitorque nuts. Working on the driver side, install the stock lower control arm into the front location on the newly installed one piece lower sub frame using the new 5/8" x 4 1/2" bolt and hardware. **Special Note: Do not tighten at this point. Also, make sure to use thread locker or lock tite.**

See Illustration # 16

37. Working on the driver side, install the stock lower control arm into the rear location on the newly installed one piece lower sub frame using the new 5/8" x 5 1/2" bolt and hardware. **Special Note: Do not tighten at this point. Also, make sure to use thread locker or lock tite.** Repeat step # 36 & # 37 on the passenger side.

See Illustration # 17

38. Move back the stock and new hardware that is associated with the new front differential and the new front differential drop bracket and tighten each bolt to the proper torque specifications. Refer to the torque sheet at the end of the installation manual. **Special Note: Make sure that when you are torquing these bolts that you get the differential centered. This will allow for the proper amount of inner CV joint engagement.**

39. Move back to all the bolts associated with the new one piece lower sub frame. Tighten the stock bolts that connect the new one piece lower sub frame to the stock location and torque them to proper torque specifications. Refer to the torque sheet at the end of the installation manual.

40. Working on the driver side, torque the front and rear newly installed 5/8" hardware that connects the stock lower control arm to the newly installed one piece sub frame to **125 ft lbs.** Repeat procedure on the passenger side.

41. On the driver side, torque the stock bolt that secures the lower tab of the front differential to the newly installed one piece lower sub frame to **95 ft lbs.**

42. Working on the driver side, support the stock lower control arm using a hydraulic floor jack and remove the stock cam bolts that secure the stock upper control arm into the stock upper control arm pocket. Save the stock hardware for later re-installation. Repeat procedure on the passenger side.

43. Working on the driver side, unbolt the stock rubber bump stop from the stock location and discard. With a suitable cutting tool, carefully cut the stock bump stop bracket flush with the frame on the driver and passenger side. This will allow the new upper control drop brackets to sit flush with the stock frame rail. **Special Note: Do not cut or grind into the stock frame rail. Also, take special care when cutting because the undercoating is flammable.** Grind and clean up any slag from the trimming that was performed earlier in the step. Paint any

exposed metal.

See Illustration # 19

44. Locate the new driver and passenger side upper control arm drop brackets, (2) 3/4" x 9/16" x 4" anti crush sleeves, (2) 3/4" x 9/16" x 3 1/2" anti crush sleeves and (2) 3/4" x 9/16" x 3 5/8" anti crush sleeve with welded washer. **Special Note: To determine the new driver side upper control arm drop bracket from the new passenger side upper control arm drop bracket, the "S" sweep on the pockets on the new upper control arm drop brackets needs to be pointing towards the rear of the vehicle.** Working on the driver side, TEMPORARILY bolt the new driver side upper control arm drop bracket into the stock location using the stock hardware. Using an angle indicator to ensure that the bracket sits perpendicular (90 degrees) to the stock frame rail. **Special Note: If the bracket is not perpendicular, remove and grind a little more where the bump stop was cut off ensuring that you do not cut or grind into the stock frame rail.** Once positioned, use the new upper control arm drop bracket as a guide and drill (2) 1/2" holes through the stock frame rail. **Special Note: One hole is in the center on the new bracket and one hole is towards the front of the new bracket. There is an existing hole in the frame towards the back on the new bracket.** Now remove the new driver side upper control arm drop bracket and set the new upper control arm drop bracket a side. Carefully enlarge the (2) previously drilled holes to 3/4". **Special Note: Do not drill all the way through the stock frame rail. The inner part of the stock frame rail needs to have the 1/2" hole. The holes on the back of the frame rail are only big enough for the bolts to protrude, not the sleeve.** Insert (1) 3/4" x 9/16" x 4" anti crush sleeve into the middle hole in the stock frame rail. Insert (1) 3/4" x 9/16" x 3 1/2" anti crush sleeve into the front hole. **Special Note: On some 3/4 ton vehicles the front sleeve may need to be trimmed down about 3/16" so that new upper control arm drop bracket can sit flush with the stock frame rail. This only needs to be done on the driver side.** Insert the 3/4" x 9/16" x 3 5/8" anti crush sleeve with welded washer into the rear hole in the stock frame rail. The sleeves are installed to prevent the stock frame rail from crushing when the new bolts are torqued to proper torque specifications during the final assembly. Repeat procedure on the passenger side.

45. Working on the driver side, install the new driver side upper control arm into the stock location and secure using the stock cam bolts. **Special Note: Do not tighten at this point. Also, make sure to use thread locker or lock tite.** Repeat procedure on the passenger side.

See Illustration # 19

46. Locate (6) 1/2" x 5 1/2" bolts, (6) 1/2" flat washers, (6) 1/2" unitorque nuts and (6) 2" x 2" square washers. Working on the driver side, secure the new upper control arm drop brake to the stock frame rail using the new 1/2"

x 5 1/2" bolts and hardware. Torque to 95 ft lbs. **Special Note: The square washers will be installed on the inside of the stock frame rail. Also, on some 8 lug 3/4 and 1 ton vehicles, the driver side front 1/2" x 5 1/2" bolt may come into contact with the stock steering box, if this occurs, trim the new 1/2" x 5 1/2" bolt slush with the new unitorque nut. When torque the new 1/2" x 5 1/2" bolts, torque the middle bolt first, the forward bolt next and then the rear bolt last.** Once the new 1/2" x 5 1/2" bolts are 95 ft lbs, torque the stock cam bolts that attach the new upper control arm drop bracket to the stock location. Torque to 95 ft lbs. Repeat procedure on the passenger side.

See Illustration # 20 / Outside of the stock frame rail

See Illustration # 21 / Inside of the stock frame rail

47. Locate (4) 9/16" x 4" cam bolts, (8) cam washers and (4) 9/16" unitorque nuts. Working on the driver side, install the stock upper control arm to the newly installed upper control arm bracket using the new 9/16" x 4" cam bolt and hardware. **Special Note: Center the alignment cam and tighten to 95 ft lbs. After the completion of the installation, take the vehicle directly to an alignment shop for a proper front end alignment.** Repeat procedure on the passenger side.

See Illustration # 22

48. Locate (2) new torsion bar drop blocks. (10) 7/16" x 1 1/2" bolts, (2) 7/16" x 2 1/2" bolts, (24) 7/16" flat washers, (12) 7/16" unitorque nuts and (12) lock washers. Working on the driver side of the stock torsion bar cross member that was removed from step # 7, install the new torsion bar drop block to the stock torsion bar cross member and secure using (1) 7/16" x 2 1/2" bolt and hardware in the center of the new torsion bar drop block and the stock torsion bar cross member. Use (2) 7/16" x 1 1/2" bolts and hardware on the outer (2) bottom holes. **Make sure to use thread locker or lock tite.** Torque the (3) 7/16" bolts to 35 ft lbs. **Special Note: Install the stock torsion bar cross member to the inside of the new torsion bar drop blocks.** Repeat procedure on the passenger side.

49. Locate the driver side torsion bar that was removed on step # 8. 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.

50. Working on the driver side, install the stock torsion bar cross member and the newly installed torsion bar drop blocks to the stock location on the bottom of the stock frame rail and secure using the new 7/16" x 1 1/2" bolt and hardware. **Make sure to use thread locker or lock tite.** Torque to 35 ft lbs. Repeat procedure on the passenger side.

See Illustration # 23

51. Locate the stock driver and passenger side torsion bar key's that were removed from step # 6. 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.

52. Locate the stock outer tie rod ends that were removed in step # 16. Working on the driver side, install the stock outer tie rod end to the stock steering knuckle and secure using the stock castle nut and cotter pin. Torque to **65 ft lbs.** **Special Note: Make sure to use thread locker or lock tite.** Repeat procedure on the passenger side. **Special Note: make sure that the driver side outer tie rod end is installed on the driver side and the passenger side outer tie rod end is installed on the passenger side.**

See Illustration # 24

53. Working on the driver side, install the inner tie rod end to the newly installed steering center link and secure using the stock castle nut. Torque to **65 ft lbs.** **Special Note: Make sure to use thread locker or lock tite.** Repeat procedure on the passenger side.

See Illustration # 25

54. Locate the new steering assist, (4) MO2050 poly bushings, (2) 9/16" x 2 1/8" crush sleeves with a hole drilled in the center, (2) sert fittings, (2) 9/16" x 3" bolts and (2) 9/16" flat washers. Install the new poly bushings into the new steering assist unit. **Special Note: Make sure to use a lithium or moly base grease prior to inserting the new bushings into the new steering assist. This will increase the life of the bushings as well as prevent squeaking.** Install the new anti crush sleeve into each end of the new steering assist. The new steering assist unit has pre drilled holes in each end of it, install the new sert fittings into each end of the new steering assist. Secure the new steering assist to the newly installed one piece sub frame and the newly installed center link using the new 9/16" x 3" bolts and washers. **Special Note: Make sure to use thread locker or lock tite. When torquing the new hardware associated with the new steering assist. Start with the idler arm and make a few turns on the nut, then make a few turns on the 9/16" hardware, then to the pitman arm. Continue in a circular movement until the new center link and steering assist is torque to proper torque specifications.**

See Illustration # 26

55. 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. Also, locate the stock hardware that was removed from step # 10. 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 # 27

56. Working on the driver side, re-connect the stock front sway bar end link to the stock sway bar and to the front part of the stock lower control arm using the stock hardware that was removed from step # 11. Repeat procedure on the passenger side.

57. Working on the driver side, re-connect the stock CV to the stock front differential using the stock hardware that was removed from step # 18. Torque to **30 ft lbs.** **Special Note: Make sure that the marks that where made in step # 18 line up with each other. Also, make sure to use thread locker or lock tite on the stock bolts.** Repeat procedure on the passenger side.

58. Working on the driver side, attach the torsion bar removing tool, making sure that the unloading bolt is the center of the tool is in the small divot of the stock torsion bar key. Adjust the stock torsion bar key up high enough so that the small metal adjusting block and bolt can be re-installed. Refer back to step # 4 and adjust the stock bolt to the stock setting. Repeat procedure on the passenger side.

59. Move back to all newly installed brackets and make sure that all the stock and new hardware is torque to proper torque specifications. Now re-connect the front differential electronic 4WD coupler and vent hose. **Special Note: Refer to the torque setting sheet at the end of the installation manual for proper torque settings. Check and double check to make sure that all bolts are torqued properly.**

60. Locate (2) 5/8" x 2 1/2" poly shock bushings and (2) 1/2" x 2 1/2" shock sleeves. Also, locate the stock upper and lower shock hardware that was removed from step # 9 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. Re-install the inner rubber fender splash guard on the driver and the passenger side.

61. Check and double check to make sure that all step where performed properly and that all hardware, stock and new, has been torqued to proper torque specifications.

62. Re-install the tires and wheels and carefully lower the front of the vehicle to the ground.. 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 # 3. Torque to **35 ft lbs.**

Congratulation, Front End Installation Complete

Rear End Installation:

63. 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.

64. Locate (1) rear brake line relocation 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 14810NB1. Remove the stock brake line bracket from the rear differential and save the 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 relocation bracket and secure using the new 5/16" x 1 1/4" bolt and hardware. **Torque to 16 ft. lbs.**

See Illustration # 28

65. 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.

66. Working on the driver side, remove the stock shock and save the stock upper and lower 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, shocks 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.

67. Working on the driver side, remove the (2) stock rear U-bolts. The stock rear U-bolts and hardware may be discarded. Set the upper and lower U-bolt plates a side for later re-installation. Repeat procedure on passenger side.

68. 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.**

69. 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 # 29

70. 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.

If the vehicle that you are working on is a 6 lug, please follow step # 71 for the installation of the U-bolts

If the vehicle that you are working on is a 8 lug, please follow step # 72 for the installation of the U-bolts

71. Locate (4) new 9/16" x 2 3/4" x 12 5/8" Square U-bolts. Locate (8) 9/16" U-bolt high nuts, (8) 9/16" U-bolt washers. Also, locate the stock upper and lower U-bolt plates that were removed from step # 67. Working on the driver side, install (2) new 9/16" x 2 3/4" x 12 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 # 30

72. Locate (4) new 5/8" x 2 3/4" x 12 5/8" Square U-bolts. Locate (8) 5/8" U-bolt high nuts, (8) 5/8" U-bolt washers. Also, locate the stock upper and lower U-bolt plates that were removed from step # 67. Working on the driver side, install (2) new 5/8" x 2 3/4" x 12 5/8" square U-bolts into the stock location and secure using the new 5/8" high nuts and washers. Torque to **130 ft lbs.** Repeat procedure on passenger side.

See Illustration # 31

73. Locate the new rear 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 30" fully extended nitrogen gas shock.** Also, locate (2) new rear upper shock clevis mounts and the stock upper and lower shock hardware

that was removed from step # 73. Install the new poly bushings into each end of the new shocks. 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.** Install the new shock boots onto the new shocks, then install the new shock clevis mounts into the upper shock eyelet. Install the proper shock sleeve into the lower eyelet of the new shocks. Working on the driver side, install the new rear shocks absorbers using the stock hardware. Repeat procedure on passenger side.

74. 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 specification sheet at the end of the installation manual.

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

Special Alignment Notice: If the alignment shop that you are having do the alignment on you vehicle is running into an issue with the back side of the stock upper control arm hitting the bottom of the stock frame rail, some grinding may need to be done on the back side of the stock upper control arm.

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 # 3

IF YOU HAVE ANY QUESTION AND OR CONCERS ABOUT THE INSTALLATION PLEASE FEEL FREE TO CONTACT TUFF COUNTRY

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.

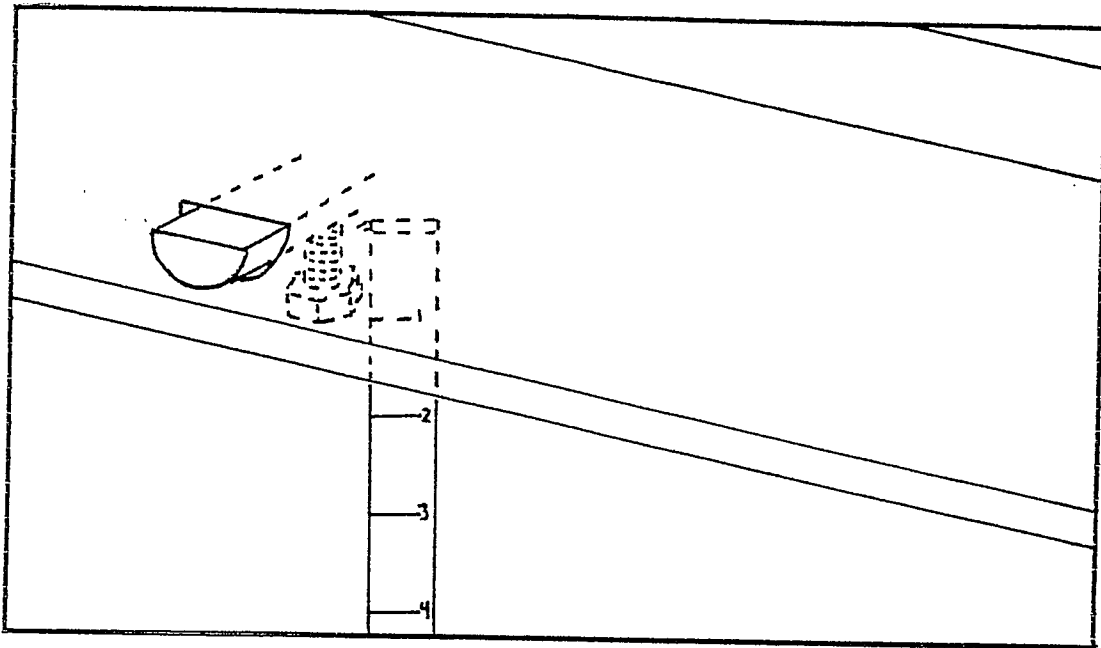


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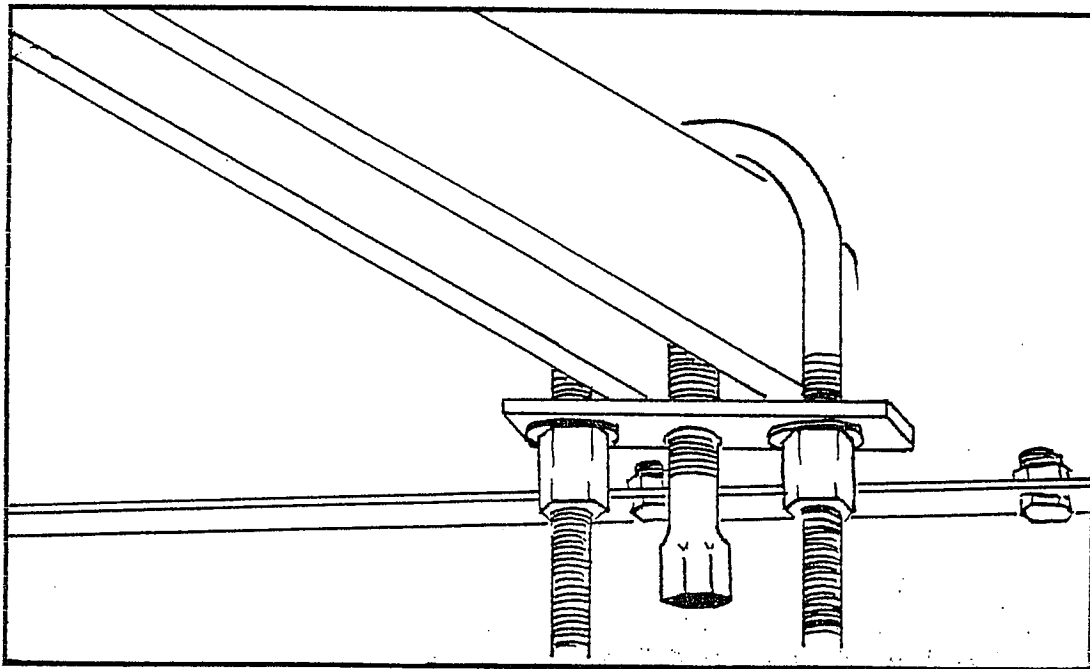


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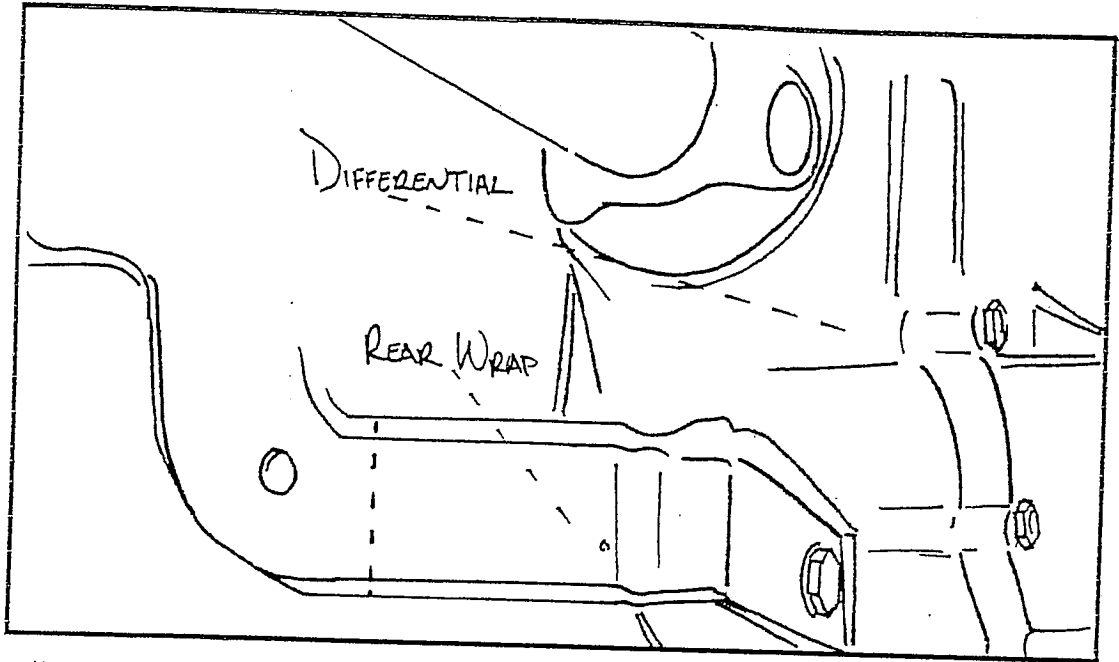


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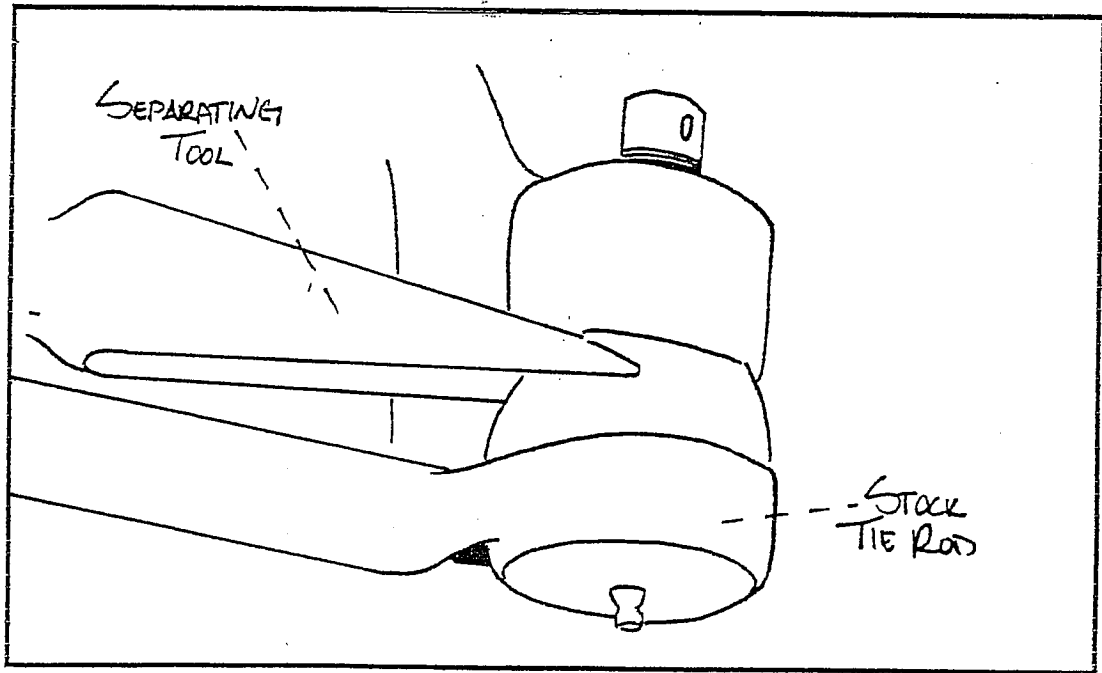


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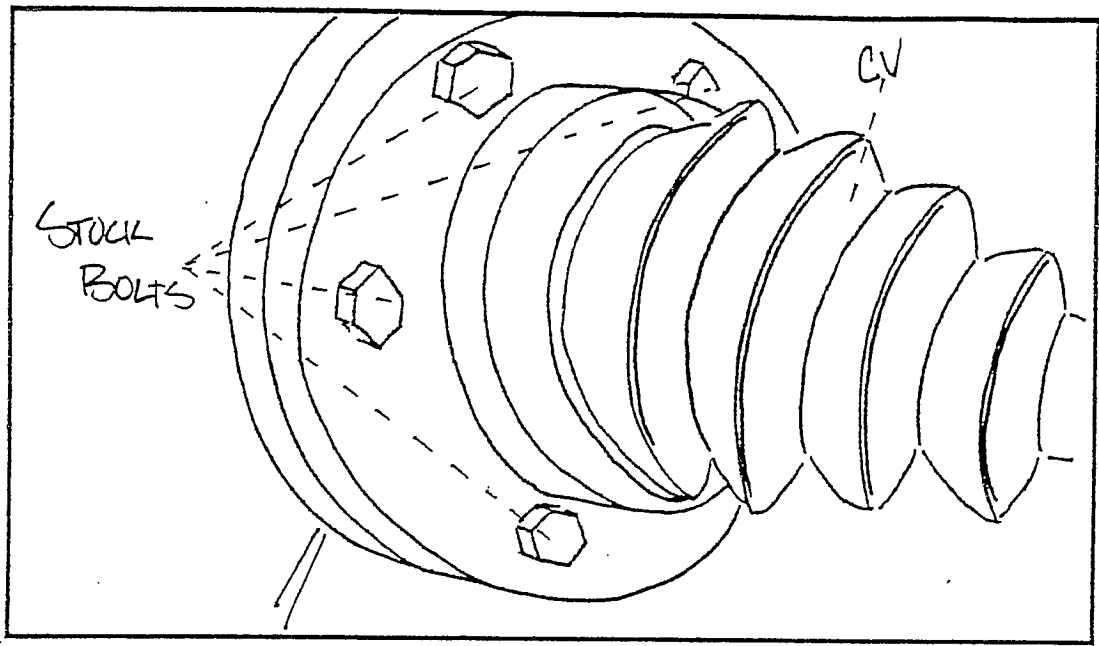


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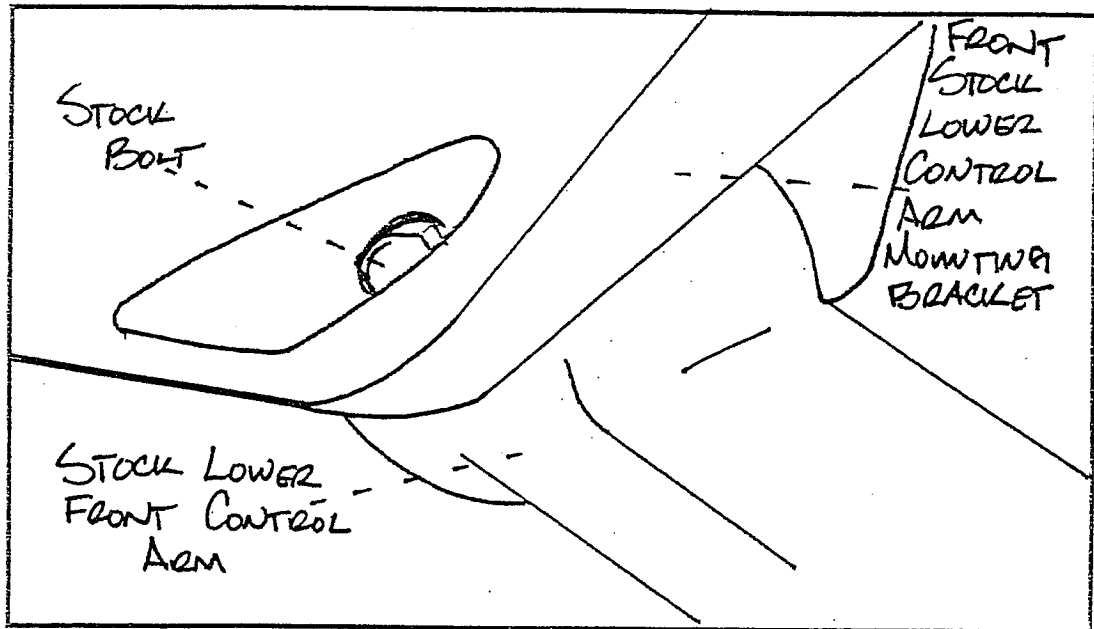


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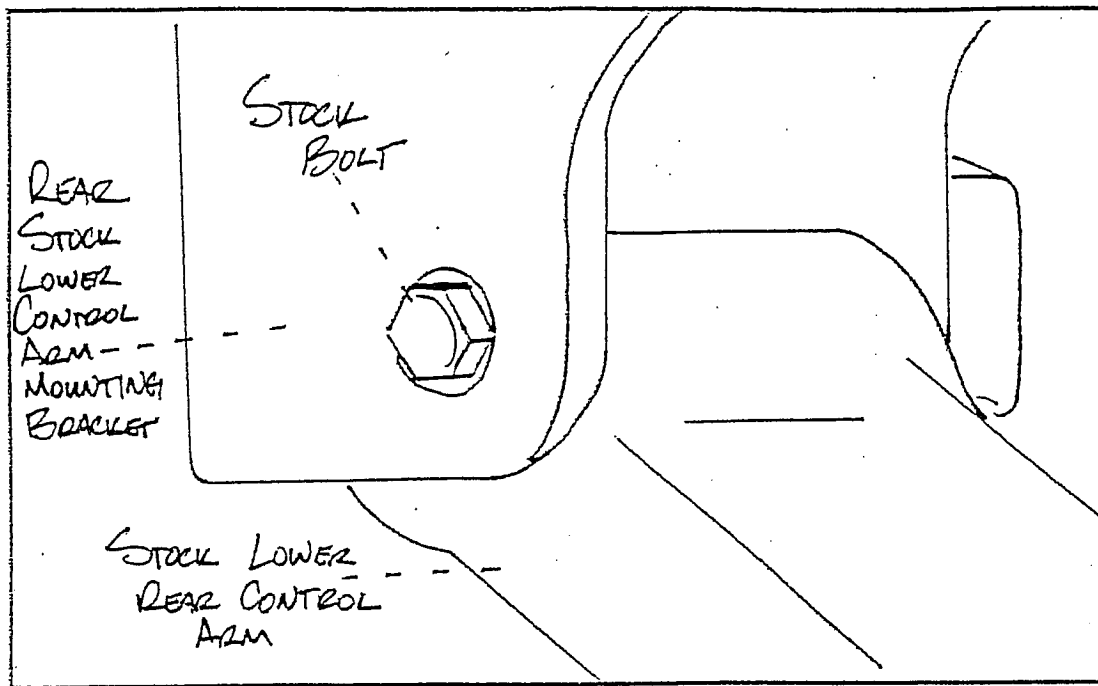


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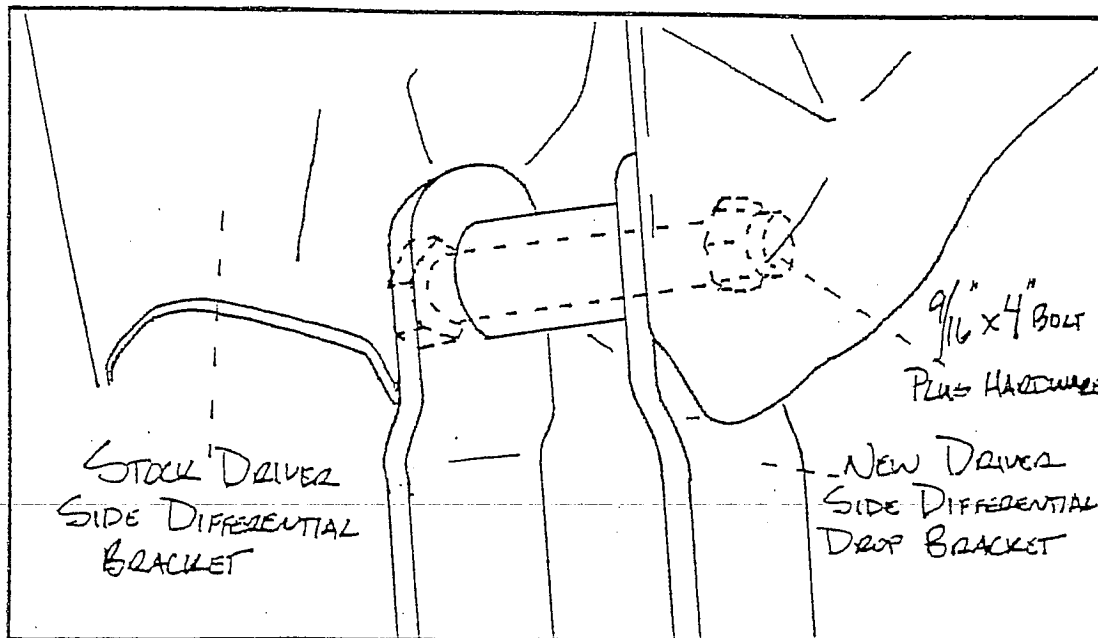


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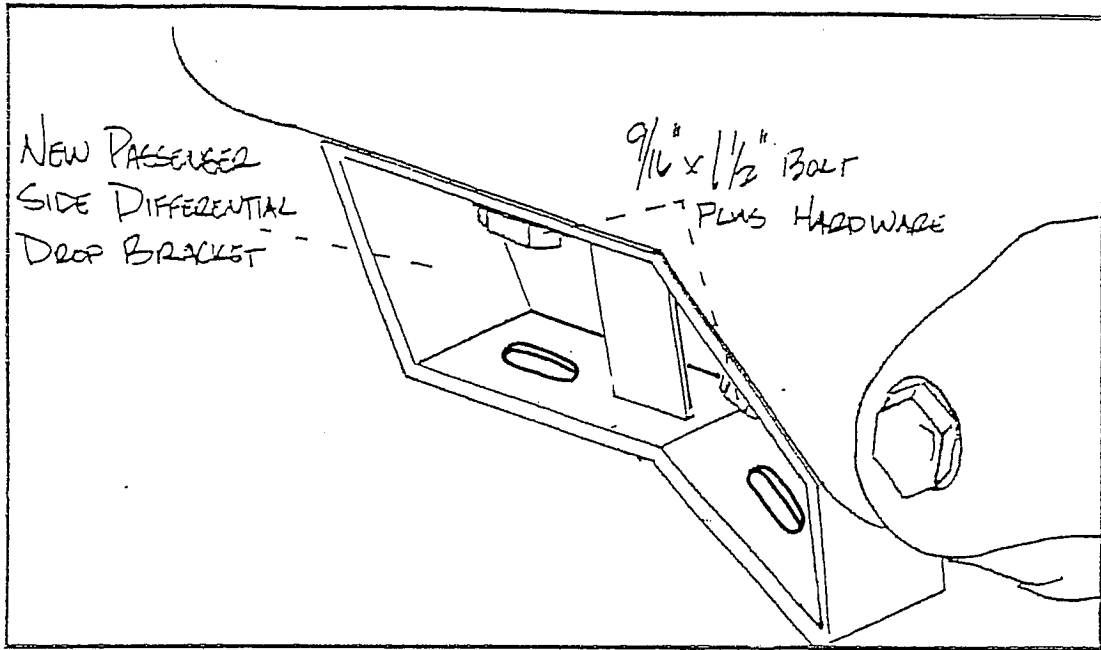


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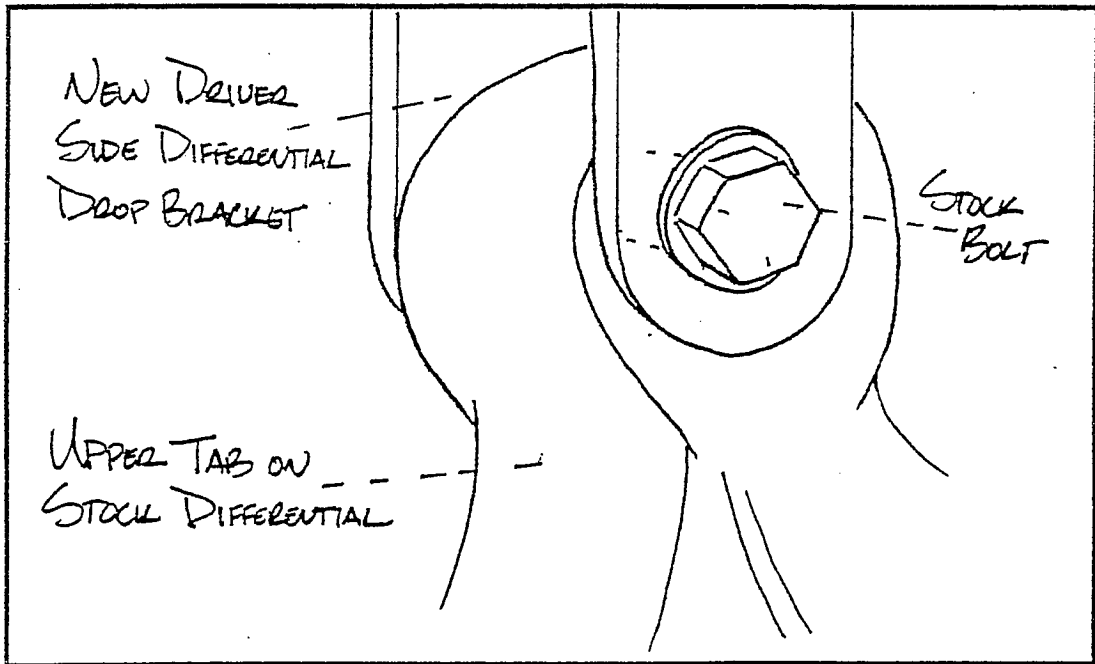


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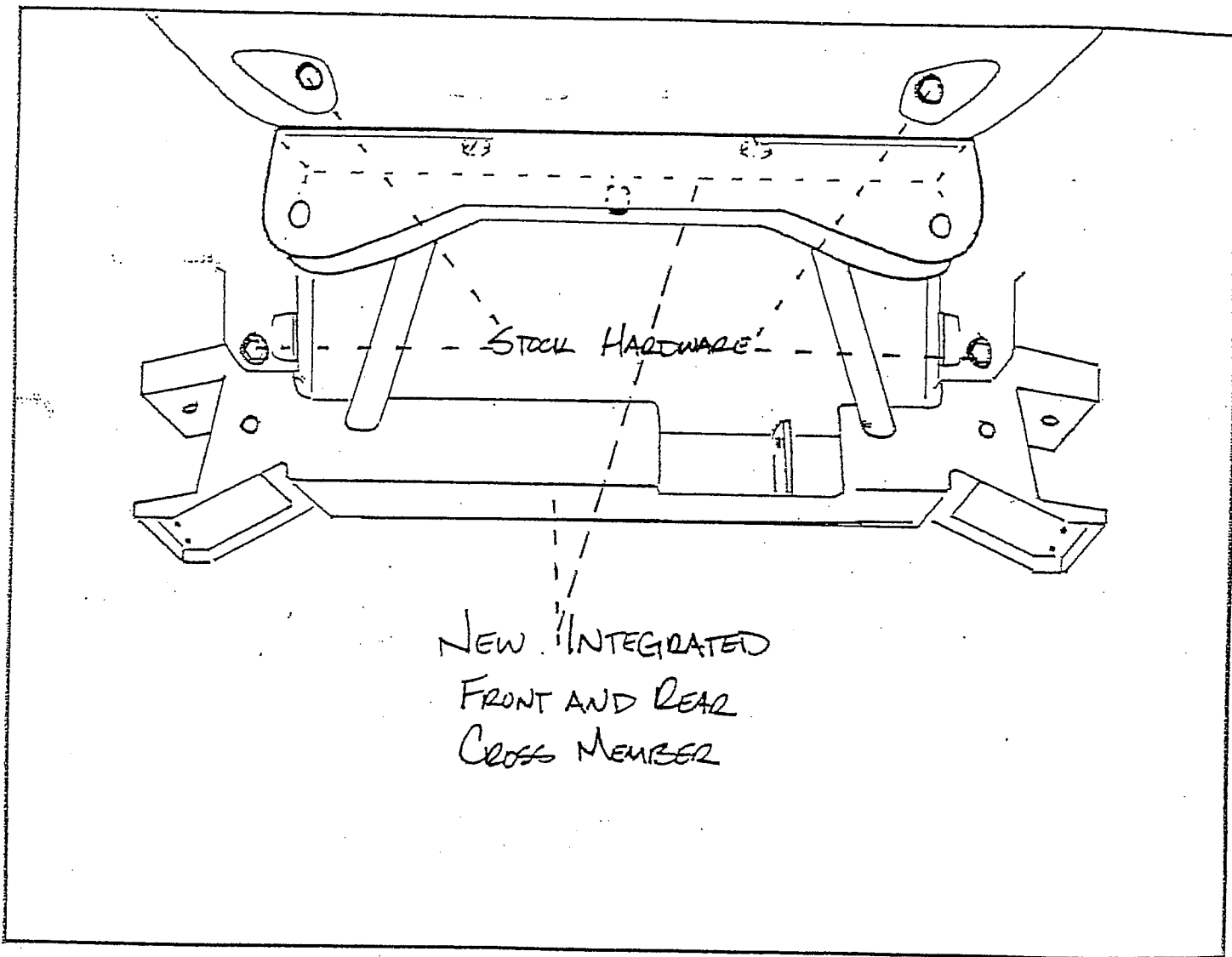


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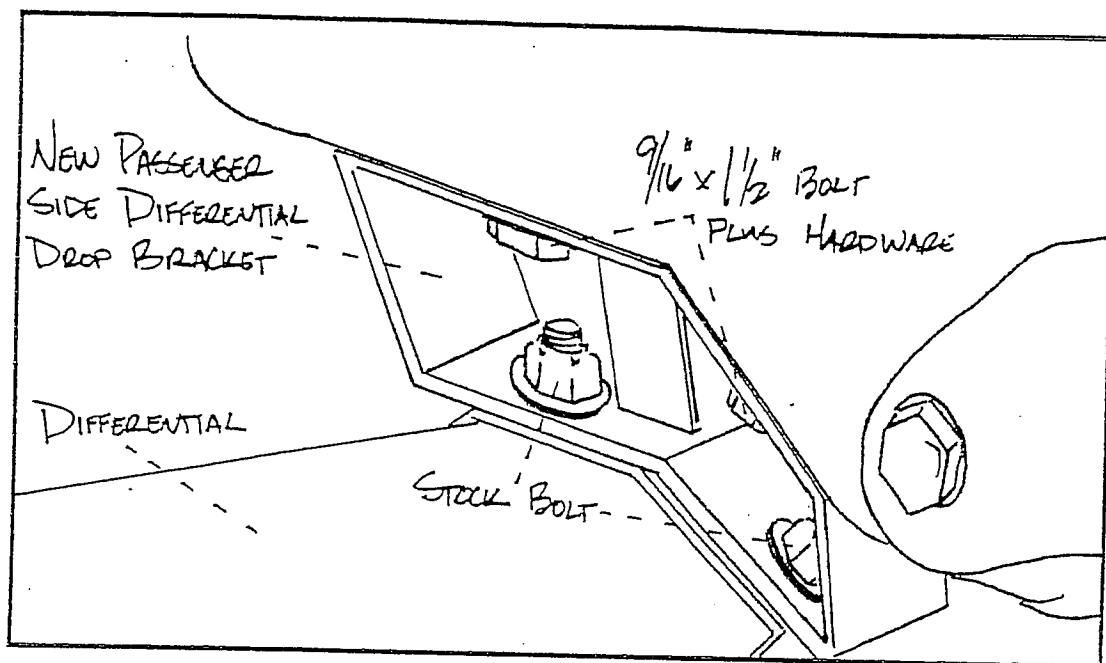


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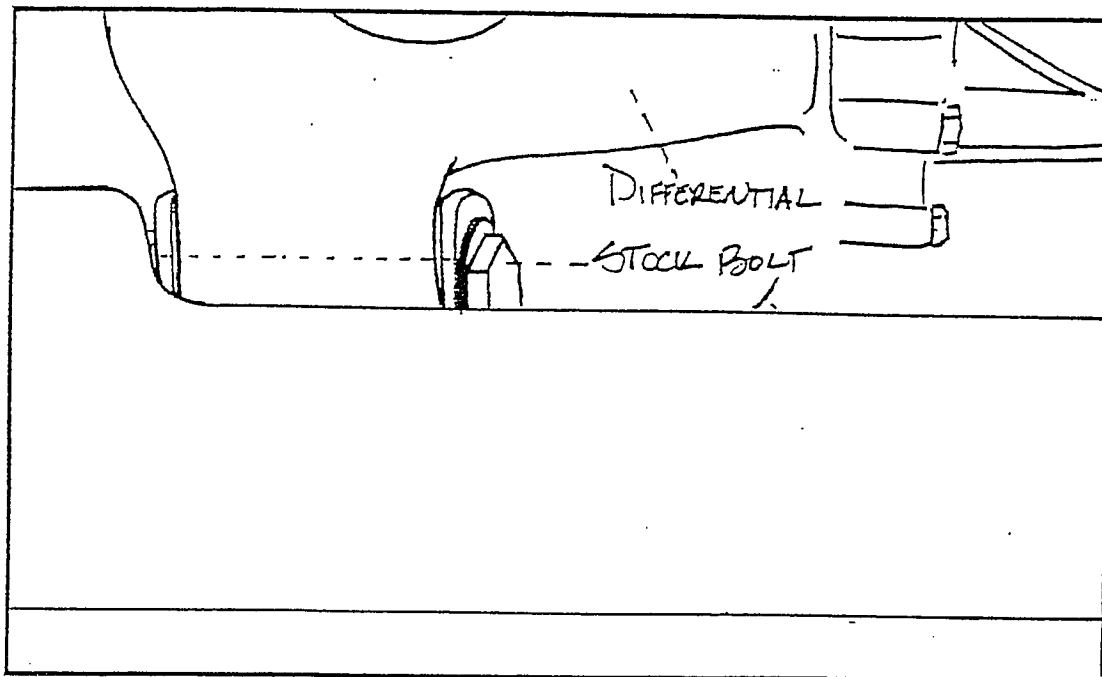


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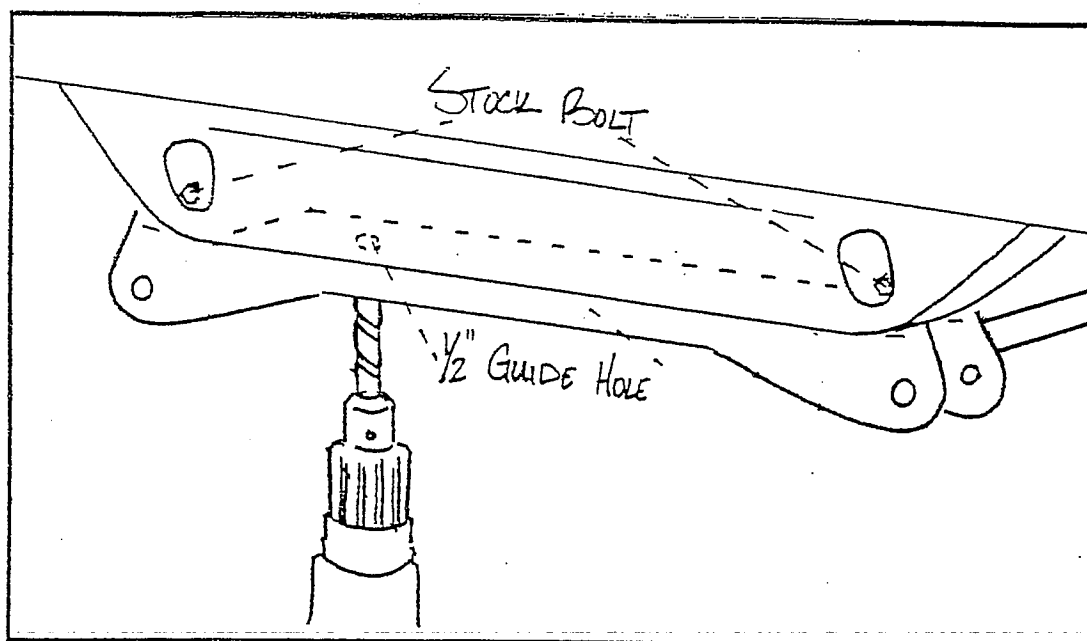


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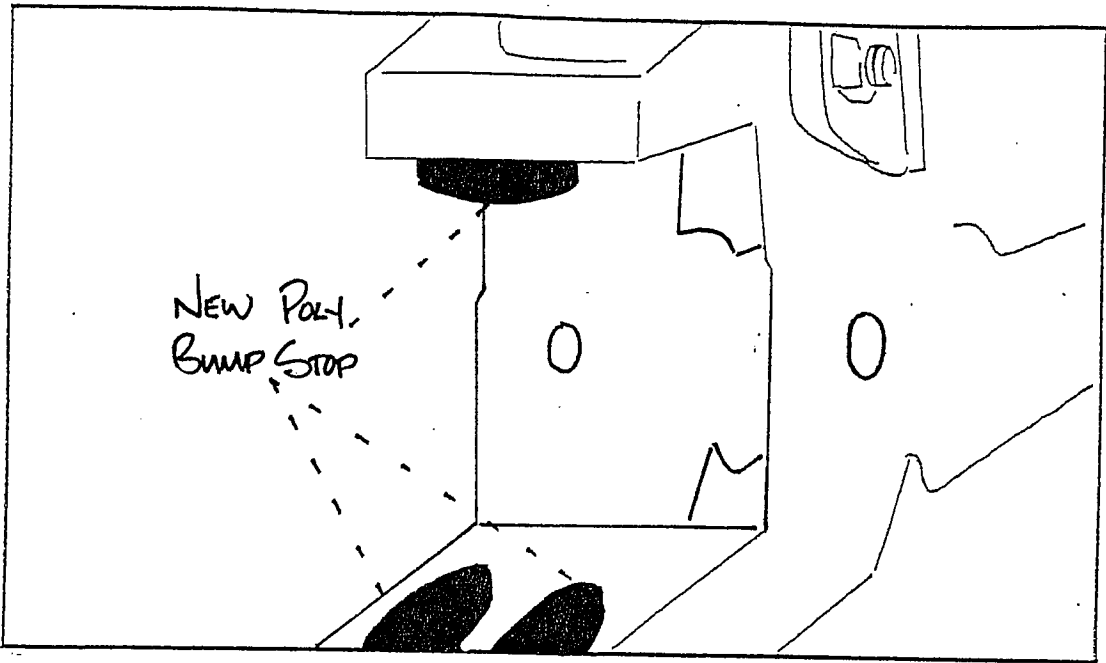


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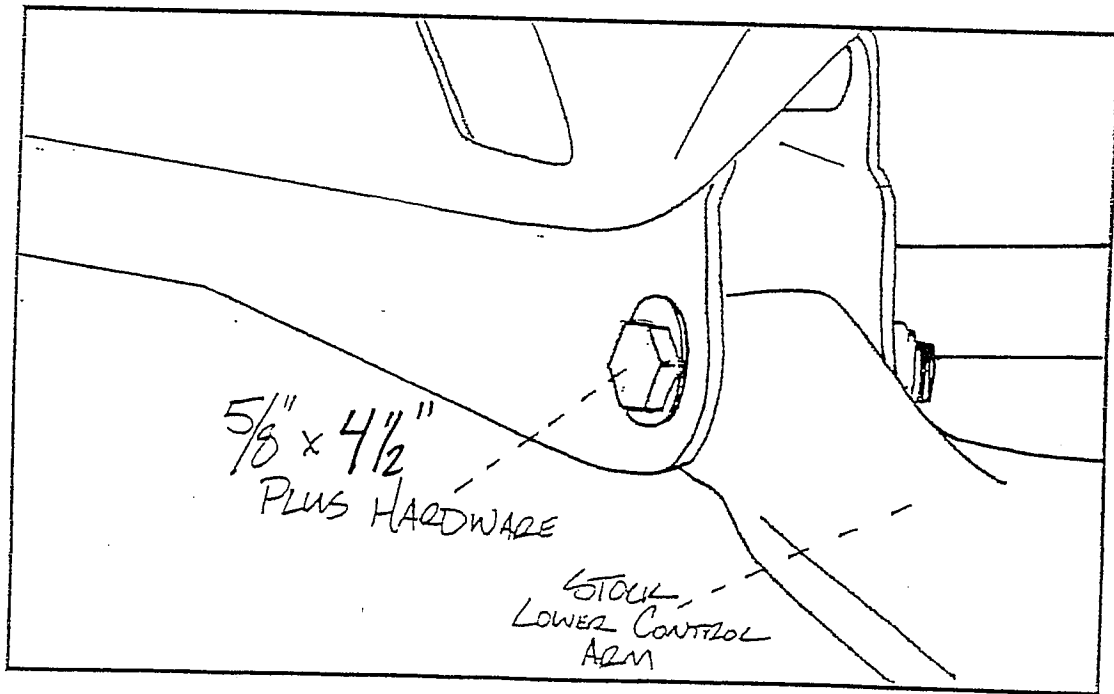


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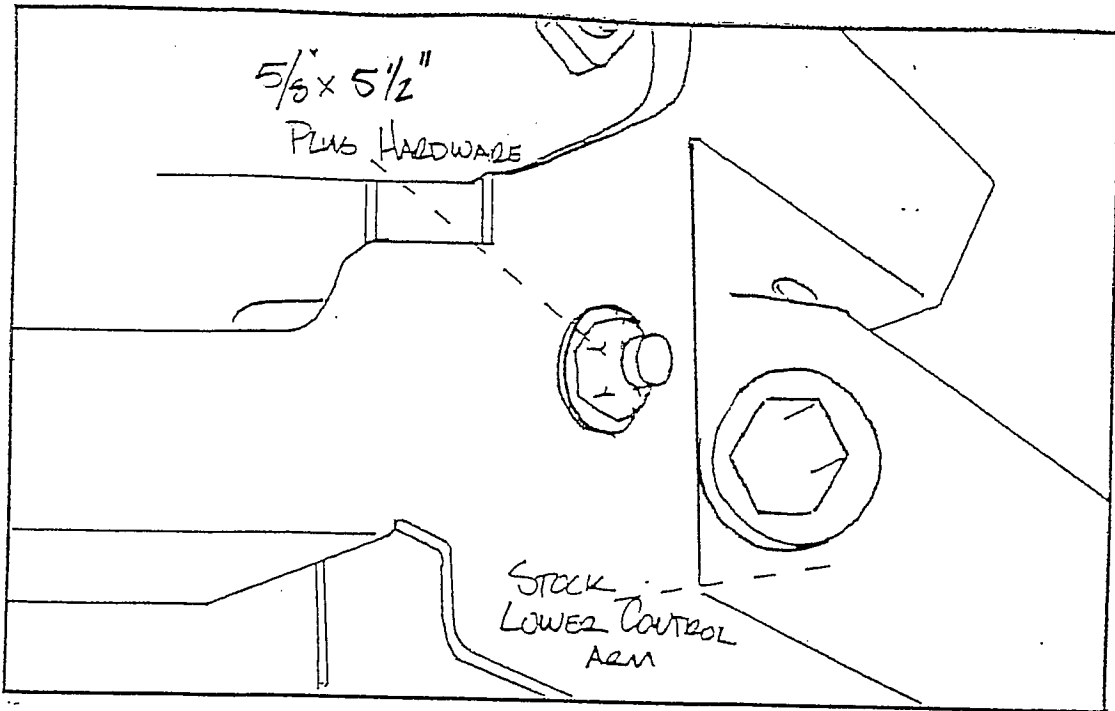


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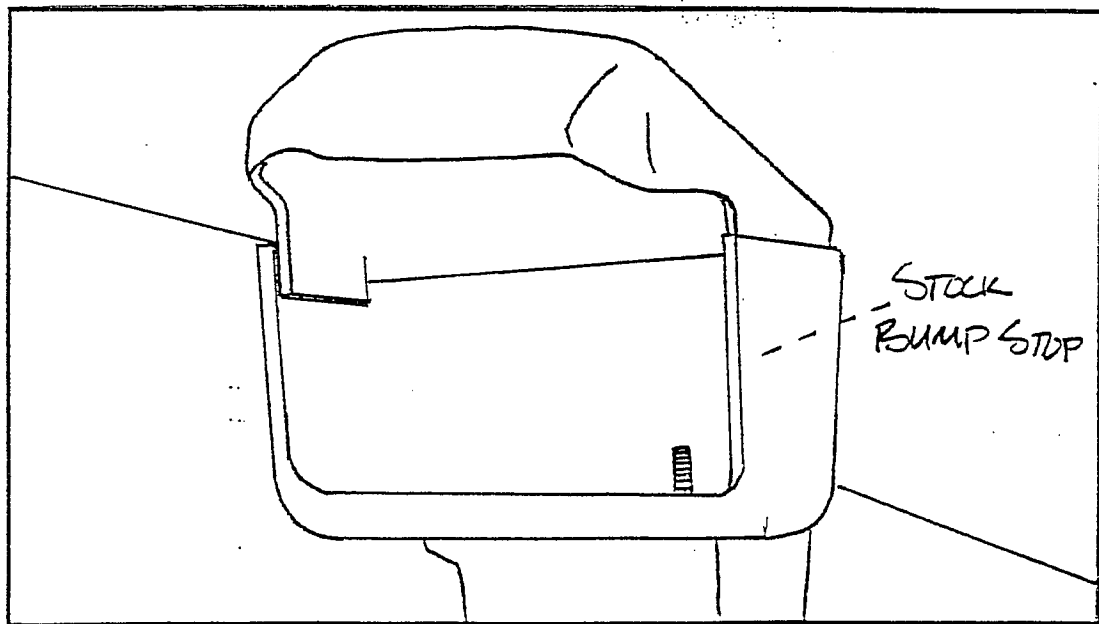


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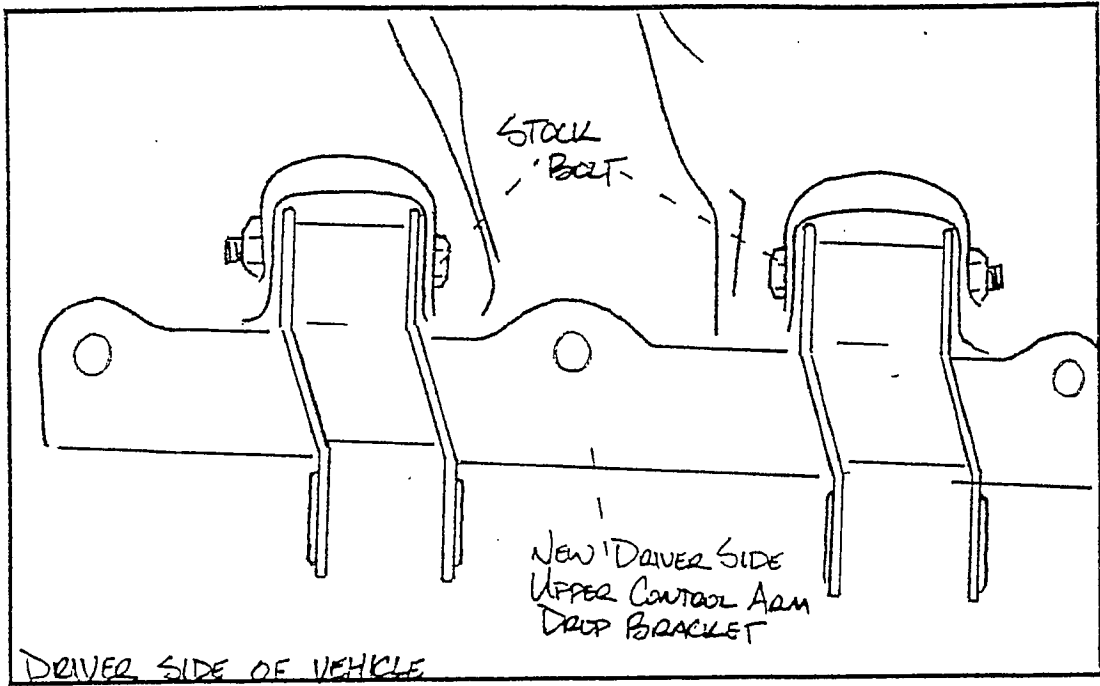


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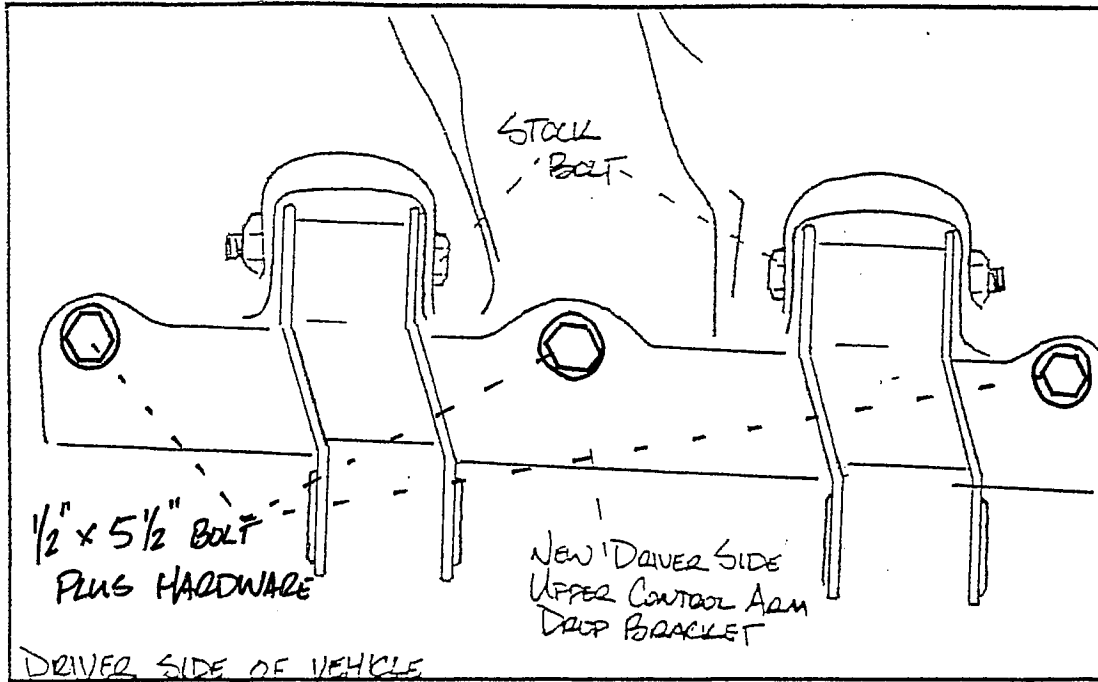


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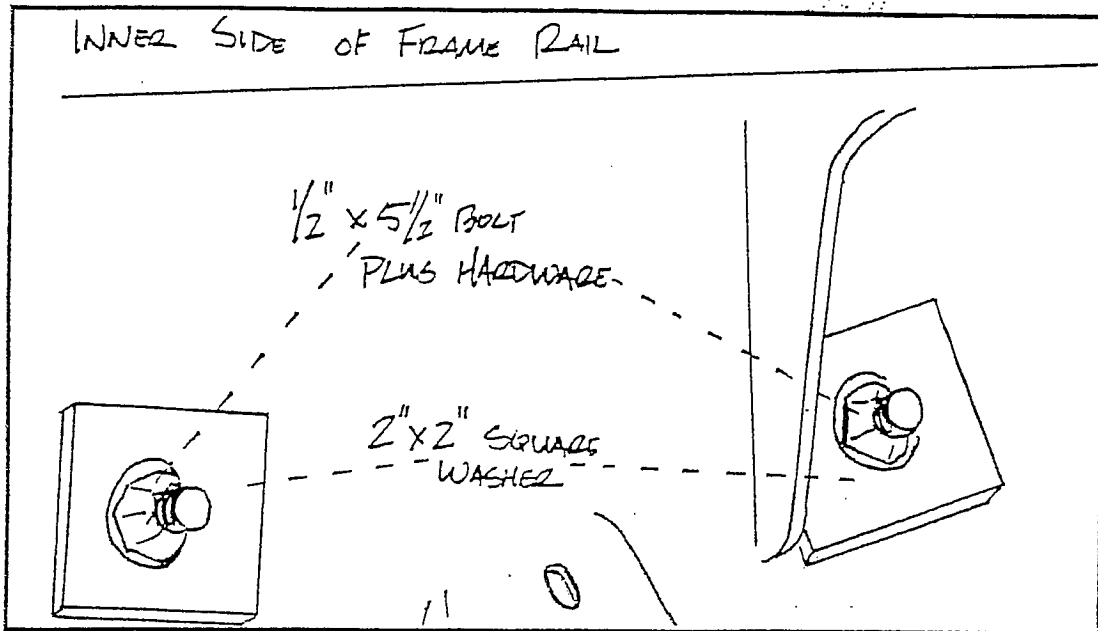


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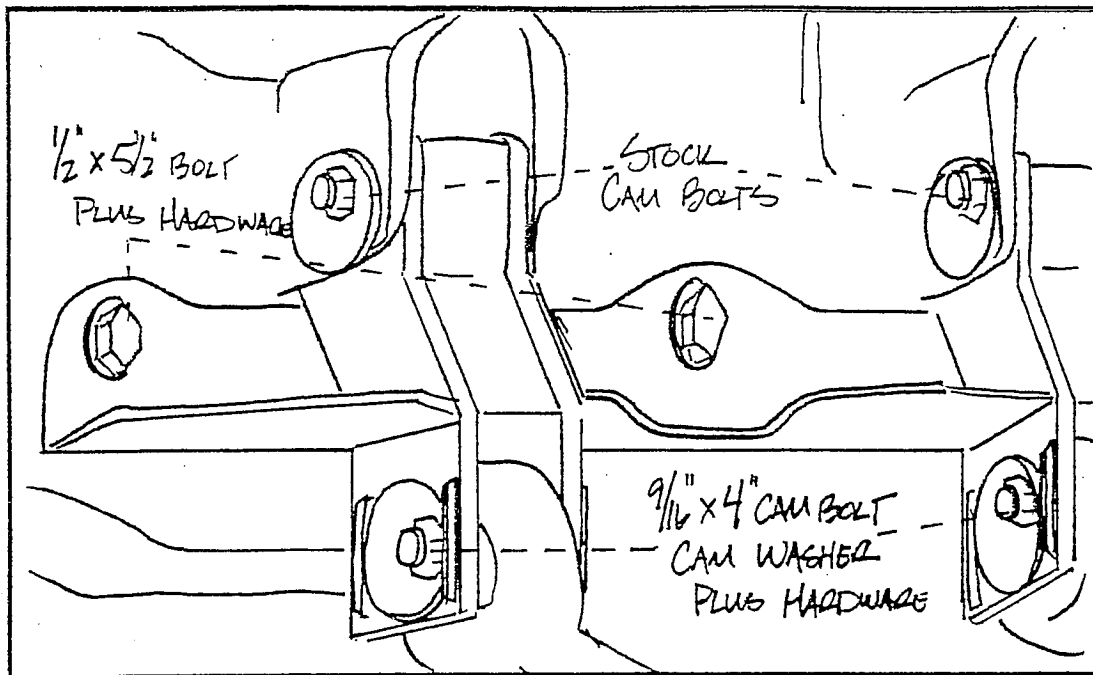


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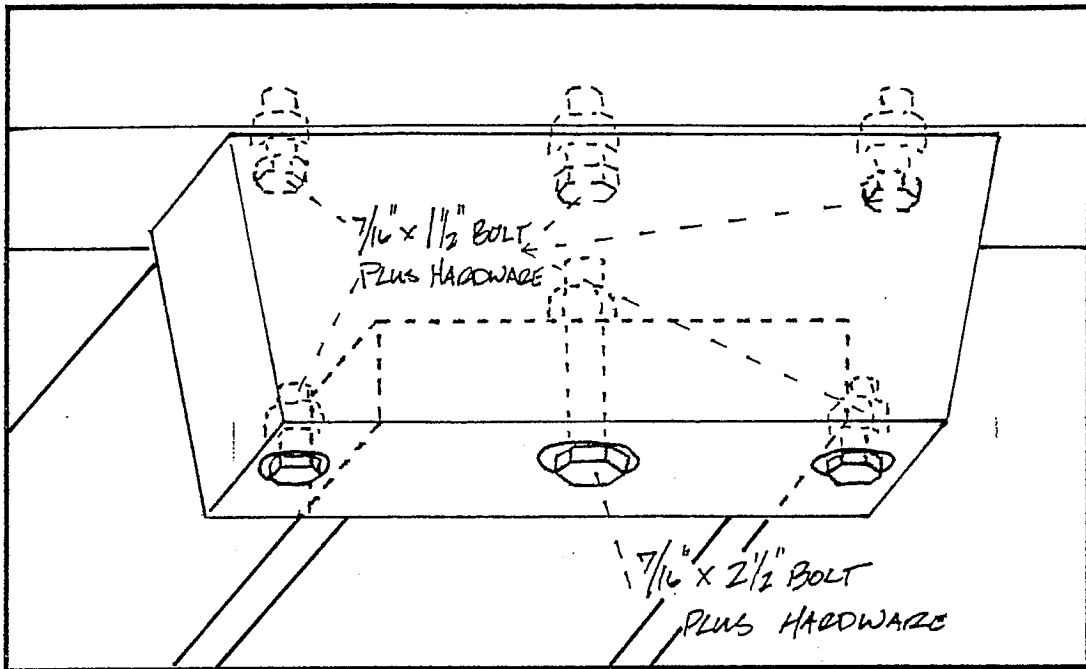


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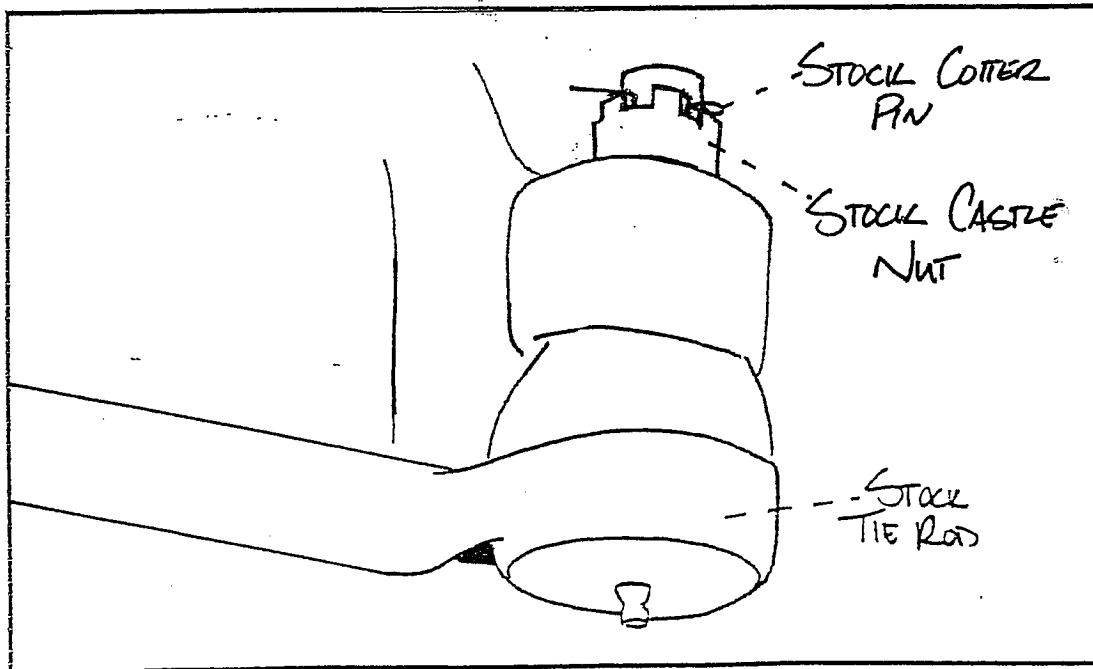


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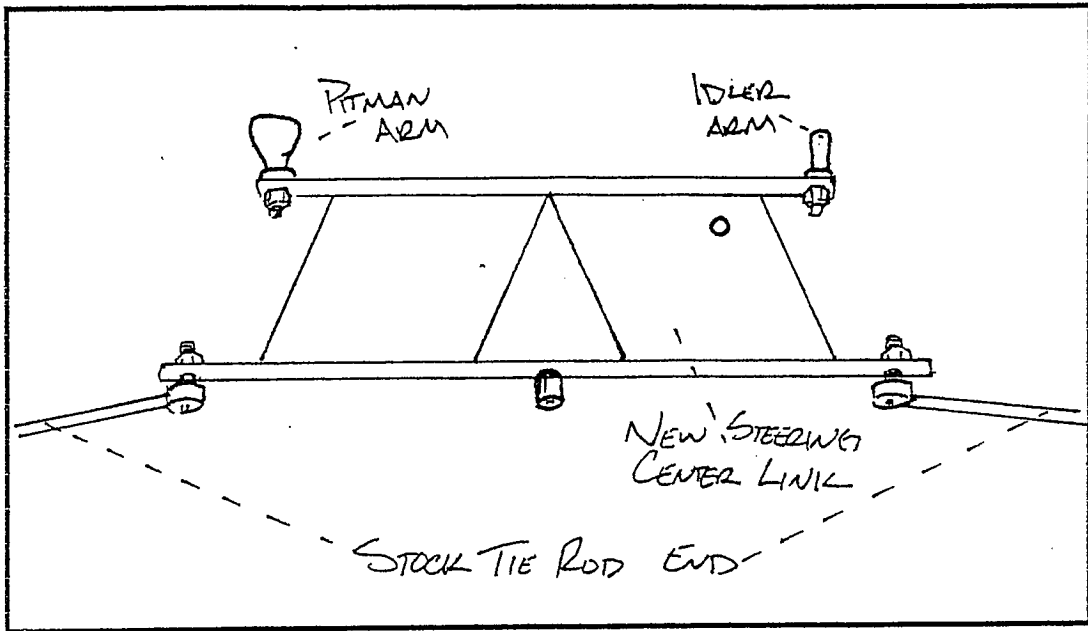


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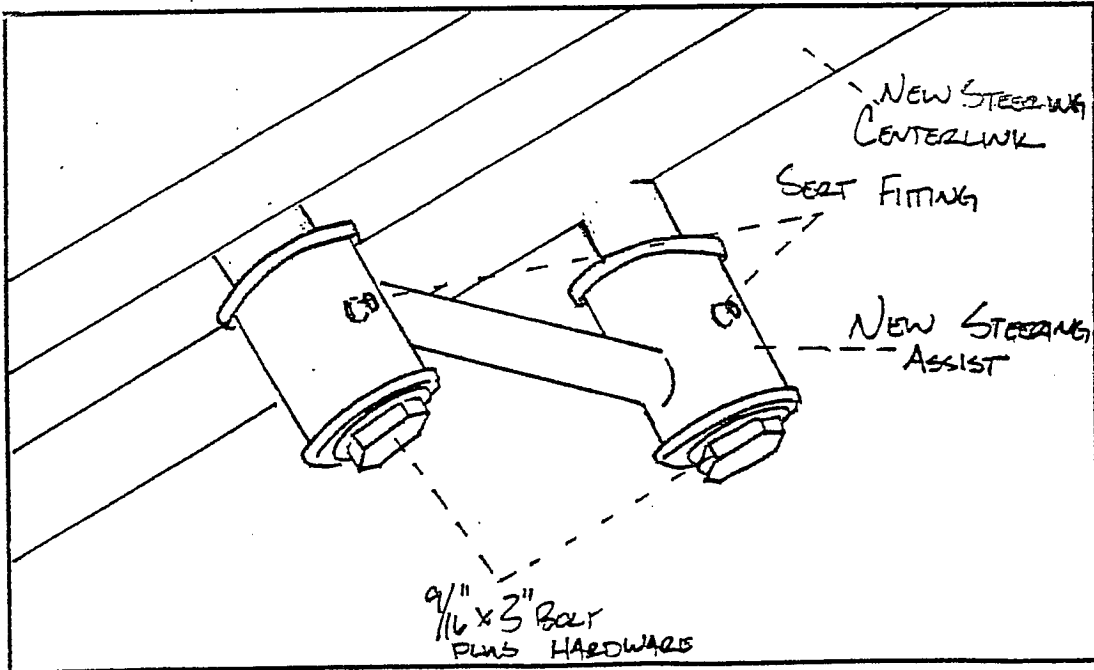


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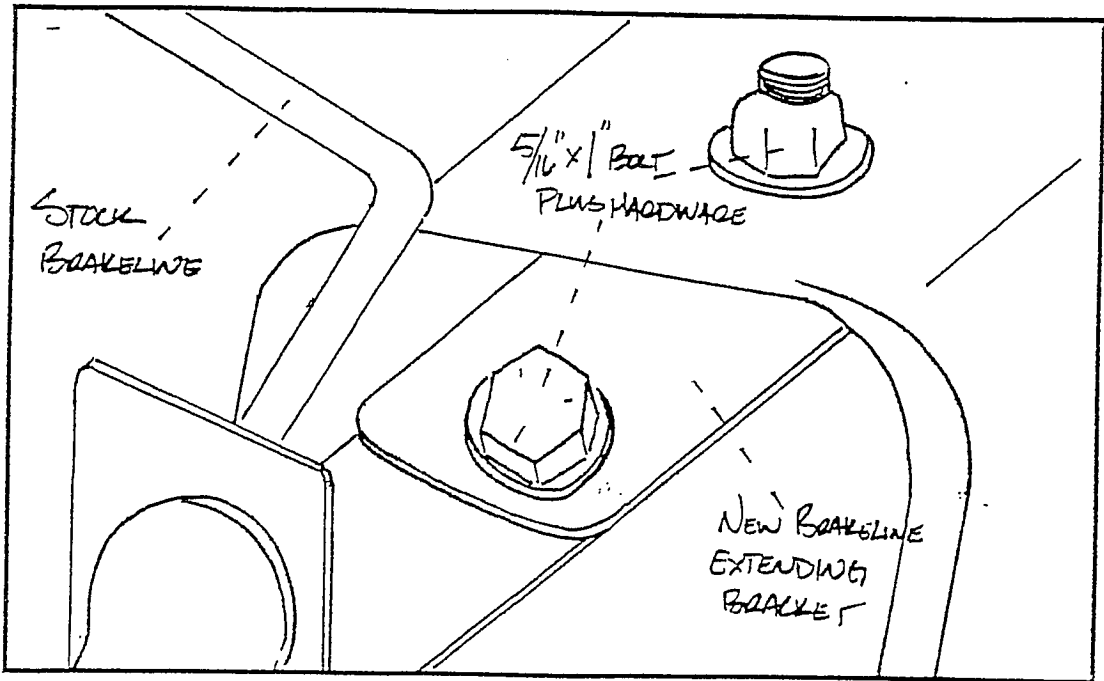


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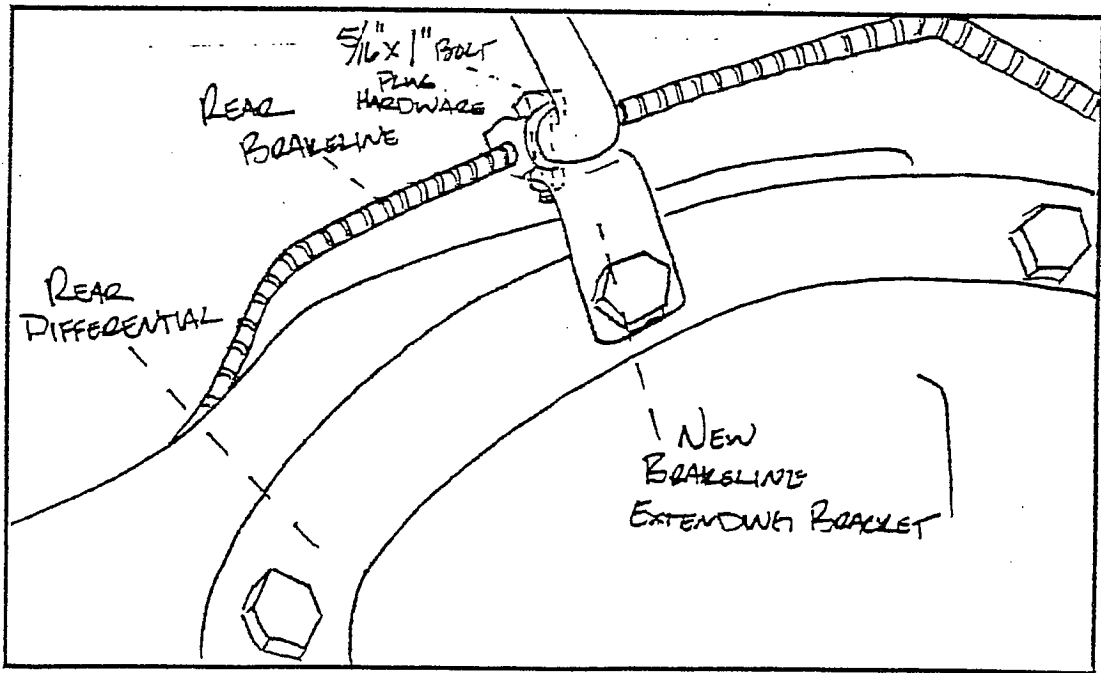


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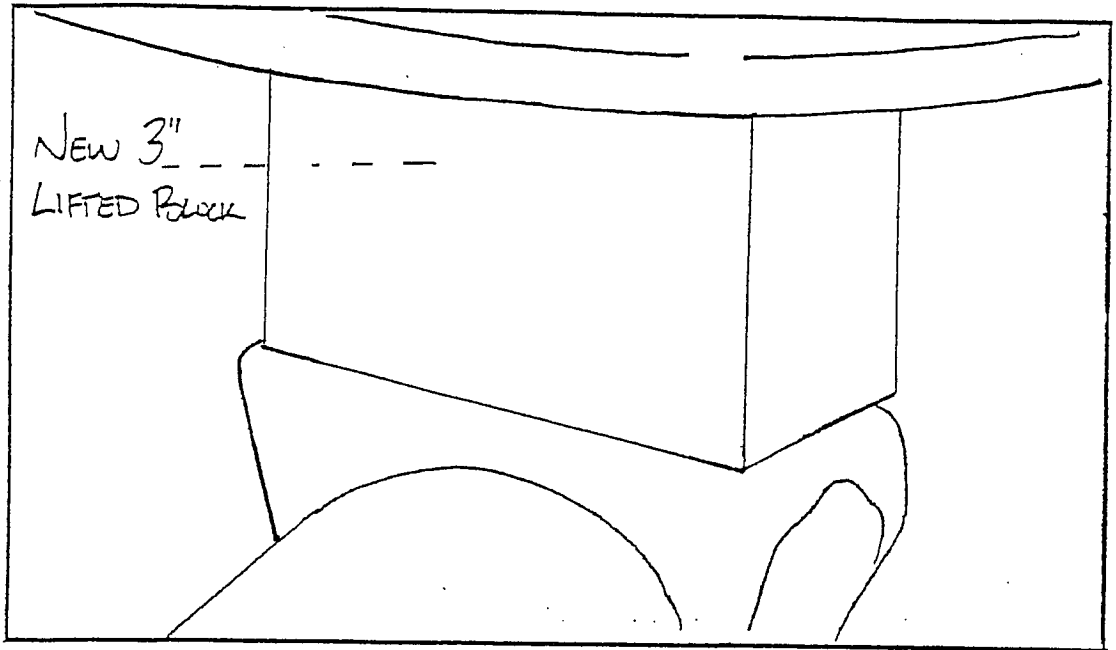


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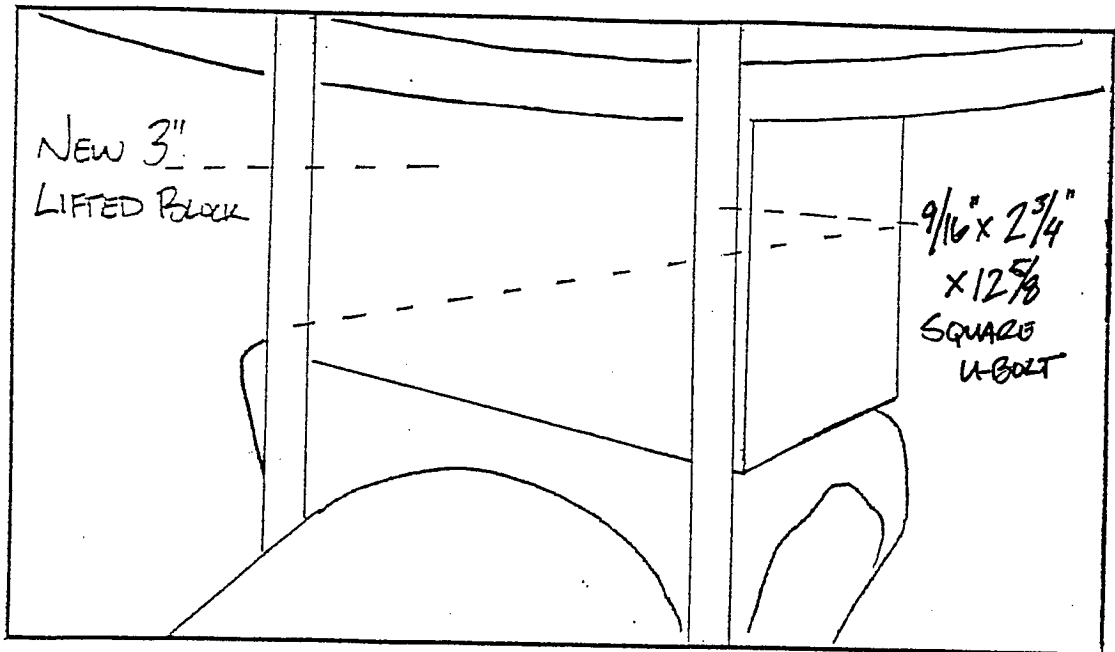


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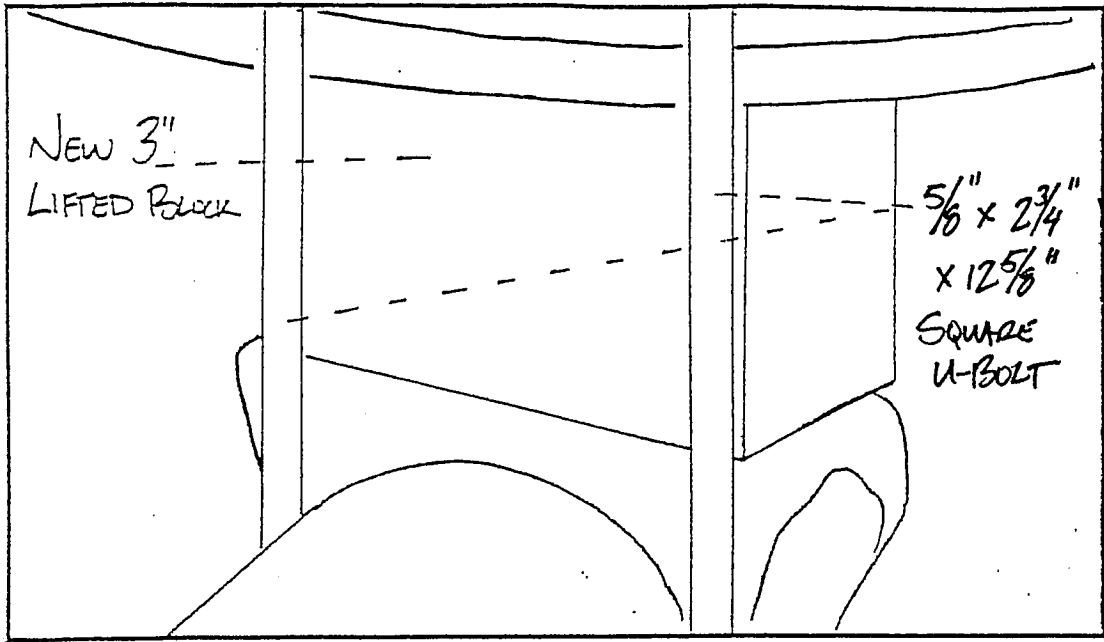


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