



Part # 14040  
2006 Hummer H3  
4" Suspension system

Parts list:

<u>Part #</u>	<u>Description</u>	<u>Qty.</u>
14040-01	DS knuckle	1
14040-02	PS knuckle	1
14040-03	Front cross member	1
14040-04	Rear cross member	1
14040-05	Front lower skid plate	1
14040-06	DS differential relocation bracket	1
14040-07	PS differential relocation bracket	1
PB67061	Front performance bump stop	2
14040-09	Front differential kicker support brackets	2
SB-06	Rear sway bar end links	2
5U-123128R	1/2" x 3 1/2" x 8" round u-bolts	4
12NW	Hardware bag	1
14040NB	Hardware bag	1
14040PL	Hardware bag	1
14040SL	Sleeve bag	1
14040INST	Instruction sheet (installer copy)	1
14040INST	Instruction sheet (customer copy)	1
MIRRORHANGER	Rear view mirror hanger	1
WARNINGDECAL	Warning decal	1
DECAL	Window sticker	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.

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.

Installation manual  
Hummer H3  
4" suspension system  
2006  
Part # 14040  
sj022807rev.03

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.

### 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:

The stock wheels will not work in conjunction with this suspension system. New wheels with a 4.5" back spacing is required. Tuff Country recommends a 35x12.50 tire package. If larger than a 35x12.50 tire is installed on your vehicle in conjunction with part # 14040: Tuff Country assumes no liability and the warranty will be VOID.

This box kit includes the front end only. Tuff Country offers 2 options for the rear end. A new rear leaf pack or a new rear add-a-leaf. The rear end parts are sold separately and must be ordered separately from the front box kit. If you have not already ordered the option for the rear end, please contact Tuff Country or your local Tuff Country dealer and order (2) 19400 for the rear spring option or (1) 81350 for the add-a-leaf option. This instruction sheet will talk about the installation of both options.

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.

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. Tuff Country recommends installing a 20" fully extended nitrogen gas shock in the front and a 26" fully extended nitrogen gas shock in the rear.

### 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.

**Hardware bag 12NW includes:**

<u>Description</u>	<u>Quantity</u>
1/2" u-bolt high nuts	8
1/2" u-bolt harden washers	8

**Hardware bag 14040NB includes:**

<u>Description</u>	<u>Quantity</u>
14 mm x 40 mm bolt	2
14 mm flat washers	2
14 mm lock washers	2
1/4" x 1" bolt	2
1/4" USS flat washers	6
1/4" unitorque nuts	2
5/16" x 1" bolt	1
5/16" unitorque nuts	1
3/8" x 1" bolts	2
5/16" USS flat washers	4
3/8" unitorque nuts	2
1/2" x 1 1/2" bolts	6
1/2" x 2 1/4" bolts	4
1/2" x 3" bolts	4
7/16" USS flat washers	24
1/2" unitorque nuts	14
9/16" x 3 1/2" bolts	2
9/16" x 4" bolt	1
1/2" USS flat washers	4
9/16" unitorque nuts	3
5/8" x 4 1/2" bolts	2
9/16" USS flat washers	4
5/8" unitorque nuts	2
S10077 (over size washer)	1
SUW-916 (harden washers)	2

**Hardware bag 14040PL includes:**

<u>Description</u>	<u>Quantity</u>
PB106300018 (stem mount bushings)	2
PB2456 (poly bushings)	4
PB4902 (poly bushings)	8
S10116 (heim joints)	4
BLR10 (brake line relocation brackets)	3
BLR12 (rear ABS relocation brackets)	2
SERT (sert fittings)	2
PB8297 (upper shock bushings)	4
S10107 (upper shock washers)	4
LUBE (poly lube packs)	2

**Hardware bag 14040SL includes:**

<u>Description</u>	<u>Quantity</u>
S10115 (.875" x .635" x 3.360" sleeve)	2
S10117 (front sway bar end link)	2
S10118 (.750" x .510" x .310" sleeve)	8
S10026 (.680" x .500" x 1.500" sleeve)	4

**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.

**Recommended tools:**

Cut off wheel  
Sawzall  
Torque wrench  
Standard socket set  
Standard wrench set  
Metric socket set  
Metric wrench set  
Tape measure  
Hydraulic floor jacks  
Hammer

**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: \_\_\_\_\_

**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 the passenger side. Next, remove the front wheels and tires from both sides.

2. Working on the front of the vehicle, remove the stock upper front skid plate from the stock location. Save the stock upper skid plate and the hardware for later re-installation.

3. Place the stock upper front skid plate on a work bench with the "H3" logo facing upwards. Working on the driver side lower corner, measure 1 1/2" from the side edge of the skid plate towards the center and scribe a mark. Next, measure 2 1/4" from the bottom edge of the skid plate towards the center and scribe a mark.

4. Working on the passenger side lower corner, measure 1 1/2" from the side edge of the skid plate towards the center and scribe a mark. Next, measure 3 1/4" from the bottom edge of the skid plate towards the center and scribe a mark.

5. Using a die grinder, carefully cut out each corner of the stock skid plate where the marks were scribed in steps 3 and 4.

**Photo # 1**

6. Locate the stock front skid plate hardware that was removed in step # 2. Install the modified stock skid plate back into the stock location using the stock hardware. **Make sure to use thread locker or lock tite and torque**

to 18 ft lbs.

7. Working on the driver side, remove the stock shock from the stock location. The stock shock and stock upper mounting hardware may be discarded. Save the stock lower mounting hardware for later re-installation. **Special note: New longer front shocks are needed after this suspension system has been installed and the front shocks need to be ordered as a separate part #. If you have not already ordered your front shocks, please feel free to contact Tuff Country or your local Tuff Country dealer and order your front shocks. Tuff Country recommends installing a 20" fully extended nitrogen gas shock in the front.** Repeat procedure on the passenger side.

8. Working on the driver side, remove the torsion bar adjusting bolt and torsion bar key and set aside for later re-installation. **Special note: 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.** Remove the stock torsion bar from the stock location and set aside for later re-installation. Repeat procedure on the passenger side.

9. Working on the driver side, remove the stock front sway bar end link from the stock location. The stock sway bar end link may be discarded. Repeat procedure on the passenger side.

10. Working on the driver side, remove the stock nut that connects the stock outer tie rod ball joint to the stock steering knuckle. Set the stock nut aside for later re-installation. Carefully break the stock taper on the stock outer tie rod ball joint and remove the stock outer tie rod from the stock knuckle. **Special note: Take special care not to rip or tear the stock outer tie rod ball joint dust boot.**

11. Working on the driver side, locate the stock ABS line quick disconnect located above the stock upper control arm. Disconnect the ABS lines from each other. Also, disconnect the stock ABS line from any other mounting points. Also, at this time, remove the stock brake line bracket that attaches to the stock upper control arm. Save the stock hardware for later re-installation.

12. Working on the driver side, remove the (2) stock bolts that connect the stock brake caliper to the stock knuckle. Save the stock hardware for later re-installation. Using some tie wire, carefully tie the stock brake caliper up and out of the way in the stock fender well. Also, at this time, remove the stock rotor and set the stock rotor aside for later re-installation.

**Photo # 2**

13. Working on the driver side, remove the stock CV axle nut that connects the stock CV axle to the stock hub assembly. Set the stock CV axle nut aside for later

re-installation.

**Photo # 3**

14. Working on the driver side, loosen but do not remove the stock bolt and nut that connects the stock upper control arm ball joint to the stock steering knuckle. For now, leave the stock upper control arm attached to the stock knuckle.

15. Working on the driver side, loosen but do not remove the stock nut that connects the stock lower control arm ball joint to the stock steering knuckle. Carefully break the stock taper by striking the stock knuckle with a hammer. **Special note:** Take special care not to damage the stock lower control arm ball joint or rip the stock location control arm ball joint dust boot. For now, leave the stock lower control arm attached to the stock knuckle. We want to just break the stock taper for now.

16. Working on the driver side, move back to the stock bolt and nut holding the stock upper control arm ball joint to the stock knuckle. Save the stock bolt and nut for later re-installation. Also, remove the lower nut holding the lower control arm ball joint to the stock knuckle. Save the stock lower ball joint nut for later re-installation. Carefully remove the stock hub assembly and the stock steering knuckle from the stock location and set aside for later instructions.

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

18. Repeat step's 10 — 17 on the passenger side.

19. Place a pair of hydraulic floor jacks under the front differential. Place one on the driver side and one on the passenger side. Carefully raise up on both hydraulic floor jacks until they make contact with the front differential.

20. With the front differential supported by the hydraulic floor jacks, remove the stock mounting hardware that connects the rear portion of the front differential to the stock rear cross member. Save the stock hardware for later re-installation.

21. Working on the driver side, remove the 2 stock bolts that connect the stock rear cross member into the stock location. Repeat procedure on the passenger side. Save the stock hardware for later re-installation. The stock rear cross member may be discarded.

22. Working on the driver side, remove the stock bolt that connects the stock front differential to the bottom side of the stock frame rail. The stock hardware may be discarded. Repeat procedure on the passenger side.

**Photo # 4**

23. Locate the stock driver side and passenger side

knuckles that were removed in step # 16. Also, locate the new driver side and passenger side knuckle. Working on the stock driver side knuckle, remove the (3) stock bolts that connects the stock hub bearing to the stock knuckle. Save the (3) stock bolts for later re-installation. Remove the stock hub bearing from the stock knuckle and save. **Special note:** A slight blow from a rubber mallet will make removal easier. The stock knuckle may be discarded. Install the stock hub bearing to the new driver side knuckle and secure using the (3) stock bolts that were removed earlier in this step. Make sure to use thread locker or lock tite and torque to 80 ft lbs. Repeat procedure on the passenger side stock and new knuckle.

**Photo # 5 / stock knuckle**

**Photo # 6 / hub bearing removal**

**Photo # 7 / new knuckle**

24. Working on the front portion of the driver side front lower control arm pocket, measure 1 1/2" from the center of the lower control arm mounting location towards the inside of the vehicle and scribe a mark. On the rear portion of the driver side front lower control arm pocket, measure 1 1/2" from the center of the lower control arm mounting location towards the inside of the vehicle and scribe a mark. Carefully cut along the lines that were scribed earlier in this step. Then cut the excess lower control arm pocket out so that the new front cross member will fit properly into the stock lower control arm pocket. **Special note:** Tuff Country EZ-Ride Suspension highly recommends not using a torch when performing this step. A cut off wheel is recommended. Repeat procedure on the passenger side front lower control arm pocket.

**Photo # 8**

**Photo # 9**

**Photo # 10**

25. Locate the new front cross member. Locate (2) 5/8" x 4 1/2" bolts, (4) 9/16" USS flat washers and (2) 5/8" unitorque nuts from hardware bag 14040NB. Install the new front cross member to the driver and passenger side stock lower control arm pockets and secure using the new 5/8" x 4 1/2" bolts and hardware. Do not tighten at this point.

**Photo # 11 / driver side shown**

26. Locate the new rear cross member. Also, locate (2) pound in sert fittings from hardware bag 14040PL. Insert the new pound in sert fitting into each end of the new rear cross member. **Special note:** Take special care not to damage the pound in sert fittings during installation.

**Photo # 12**

27. Locate (4) PB2456 poly bushings from hardware bag 14040PL. Also, locate (2) S10115 sleeves from hardware bag 14040SL. Insert the new poly bushings and sleeves into the new rear cross member. **Special note:** Make sure to use a lithium or moly base grease prior to inserting the new bushings and sleeves into the new rear cross member. This will increase the life of the bushing as well as prevent squeaking. **Installer note:** It is

**recommended to inform the customer that these bushings need to be lubed regularly. A suggestion is to make sure that these bushings are lubed through the sert fitting every time the customer has their oil changed. Failure to lube the bushings properly could cause the bushing to fail prematurely.**

**Photo # 13**

28. Locate the (4) stock rear cross member bolts that were removed in step # 21. Install the new rear cross member into the stock location and secure using the stock hardware. Do not tighten at this point. **Special note: The rear differential mounting tab that is welded onto the rear cross member needs to be installed towards the passenger side of the vehicle.**

**Photo # 14 / driver side shown**

29. Carefully lower down on both hydraulic floor jacks at the same allowing enough room for the new driver and passenger side differential relocation bracket to be installed.

30. Locate the driver side and passenger side differential relocation brackets. Also, locate (2) 14 mm x 40 mm bolt, (2) 14 mm flat washer and (2) 14 mm lock washer from hardware bag 14040NB. Working on the driver side, install the new driver side differential relocation bracket to the bottom side of the stock frame rail were the stock differential was located. Secure using the new 14 mm x 40 mm bolt and hardware. **Do not tighten at this point.** Repeat procedure on the passenger side.

31. Locate (2) 9/16" x 3 1/2" bolts, (4) 1/2" USS flat washers and (2) 9/16" unitorque nuts from hardware bag 14040NB. Working on the driver side, install the stock front differential mount to the newly installed driver side differential relocation bracket and secure using the new 9/16" x 3 1/2" bolt and hardware. **Do not tighten at this point.** Repeat procedure on the passenger side.

**Photo # 15 / upper and lower mounting hardware shown on the driver side**

32. Working on the driver side, remove the stock upper rear mounting bolt that connects the stock CV axle to the front differential housing. Save the stock hardware for later re-installation. Repeat procedure on the passenger side.

**Photo # 16 / driver side shown**

33. Locate the driver side and passenger side differential kicker support brackets. Also, locate the stock upper rear mounting bolts that were removed in step # 32. Working on the driver side, install the new kicker support bracket to the stock CV flange and the differential housing using the stock bolt. **Special note: Make sure to use thread locker or lock tite and torque to 65 ft lbs.** Repeat procedure on the passenger side.

34. Locate (2) 3/8" x 1" bolts, (4) 5/16" USS flat washers and (2) 3/8" unitorque nuts from hardware bag 14040NB.

Working on the driver side, secure the newly installed driver side kicker support bracket to the newly installed driver side differential relocation bracket using the new 3/8" x 1" bolt and hardware. **Do not tighten at this point.** Repeat procedure on the passenger side.

**Photo # 17 / driver side shown**

35. Locate the stock rear mounting hardware that attached the rear portion of the stock front differential to the stock rear cross member that was removed in step # 20. Locate (2) PB106300018 poly bushings from hardware bag 14040PL. Also, locate (1) S10077 over size washers from hardware bag 14040NB. **Referring to photo # 18,** secure the rear portion of the stock front differential to the newly installed rear cross member using the stock hardware, new poly bushings and over size washer. **Special note: if need be, the hydraulic floor jacks may need to be let down so that the rear portion of the front differential can be installed to the rear cross member.** For now, get the stock bolt started into the rear portion of the front differential.

**Photo # 18**

36. Install some thread locker or lock tite on the rear differential mounting bolt that was installed in step # 35 and tighten the stock bolt until the measurement from the new washer to the stock washer is 1 1/4".

**Photo # 19**

37. Locate the stock lower control arms and the stock lower control arm mounting hardware that was removed in step # 17. Working on the driver side, install the stock lower control arm to the newly installed front cross members using the stock hardware. **Do not tighten the stock front mounting hardware at this point.** Secure the stock lower control arm to the newly installed rear cross member using the stock hardware. Make sure to use thread locker or lock tite and torque to **95 ft lbs.** Repeat procedure on the passenger side.

**Photo # 20 / front location**

**Photo # 21 / rear location**

38. Locate the new driver side and passenger side knuckles. Locate the stock upper control arm ball joint hardware that was removed in step # 16. Locate the stock lower control arm ball joint nuts that we removed in step # 16. Also, locate the stock CV axle nut that was removed in step # 13. Working on the driver side, slide the stock CV axle onto the new knuckle. Attach the lower control arm ball joint to the new knuckle and secure using the stock lower control arm ball joint. **Do not tighten at this point.** Next, attach the upper control arm ball joint to the new knuckle and secure using the stock upper control arm ball joint bolt and nut. **Do not tighten at this point.** Secure the stock CV axle shaft to the new knuckle using the stock hardware. Make sure to use thread locker or lock tite and torque the stock CV axle nut to **130 ft lbs.** Move back to the upper control arm ball joint mounting hardware and add some thread locker or lock tite and torque the stock upper control

arm ball joint hardware to **75 ft lbs**. Now torque the lower control arm ball joint to **110 ft lbs**. Repeat procedure on the passenger side knuckle.

**Photo # 22 / CV axle nut**

**Photo # 23 / upper knuckle**

**Photo # 24 / lower knuckle**

39. Locate the stock rotor that was removed in step # 12. Working on the driver side, install the stock rotor into the stock location. Repeat procedure on the passenger side.

40. Locate the stock brake caliper hardware that was removed in step # 12. Working on the driver side, untie the brake caliper that is tied up in the wheel well and attach to the newly installed knuckle. Secure using the stock hardware. Make sure to use thread locker or lock tite and torque to **100 ft lbs**. Repeat procedure on the passenger side.

**Photo # 25**

41. Locate (4) S10116 heim joints from hardware bag 14040PL. Locate (2) S10117 front sway bar end link sleeves from hardware bag 14040SL. Install the new heim joints into the new front sway bar end links. We want to adjust the length of the end link to 10 1/8" from the center of one heim joint to the center of the other heim joint. Once the measurement is 10 1/8" from center to center, tighten the nuts on the heim joint until it is tight against the new sway bar end link.

**Photo # 26 / heim joint**

**Photo # 27 / heim joint being tightened**

42. Locate (8) S10118 front sway bar end link spacer sleeves from hardware bag 14040SL. Locate (4) 1/2" x 2 1/4" bolts, (4) 7/16" USS flat washers and (4) 1/2" unitorque nuts from hardware bag 14040NB. Working on the driver side, install the new sway bar end link to the stock front sway bar and secure using the new 1/2" x 2 1/4" bolts and hardware. **Special note: Make sure to install the spacer sleeves between the stock sway bar and the new 1/2" unitorque nut.** Do not tighten at this point. Next, install the new sway bar end link to the stock lower control arm and secure using the new 1/2" x 2 1/4" bolt and hardware. **Special note: Make sure to install the spacer sleeves between the stock mount on the stock lower control arm and the new 1/2" unitorque nut.** Add some thread locker or lock tite on the new 1/2" bolts and torque to **65 ft lbs**. Repeat procedure on the passenger side.

**Photo # 28**

**Photo # 29**

43. Locate the new front extended bump stops. Working on the driver side, remove the stock bump stop from the stock bump stop cup and discard. Install the new extended bump stop into the stock bump stop cup. **Special note: Using some lithium grease may help installation of the new extended bump stop easier.** Repeat procedure on the passenger side.

**Photo # 30**

44. Locate the stock outer tie rod nuts that were removed in step # 10. Working on the driver side, attach the stock outer tie rod to the newly installed knuckle and torque to **95 ft lbs**. Repeat on passenger side.

45. Working on the driver side, attach the stock ABS line to the hole provided in the new steering knuckle. Repeat procedure on the passenger side.

**Photo # 31**

46. Working on the driver side, install the stock ABS line back to the stock location on the stock upper control arm. Repeat procedure on the passenger side.

**Photo # 32**

47. Working on the driver side, attach the stock ABS line back into the stock location on the stock upper control arm pocket. Then reconnect the ABS line back together and the quick connection. Repeat procedure on the passenger side.

**Photo # 33**

48. Locate (2) new front brake line relocation brackets from hardware bag 14040PL. Also, locate the stock brake line bracket hardware that was removed in step # 11. Working on the driver side, install the new front bracket line relocation bracket to the stock upper control arm and secure using the stock hardware. **Do not tighten at this point.** Repeat procedure on the passenger side.

**Photo # 34**

49. Locate (2) 1/4" x 1" bolts, (4) 1/4" USS flat washers and (2) 1/4" unitorque nuts from hardware bag 14040NB. Working on the driver side, attach the stock brake line bracket to the newly installed front brake line relocation bracket and secure using the new 1/4" x 1" bolt and hardware and torque to 12 ft lbs. Move back to the stock hardware that attached the new front brake line relocation bracket to the stock upper control arm and torque to **12 ft lbs**. Repeat procedure on the passenger side.

**Photo # 35**

50. Locate the driver side, passenger side torsion bars, the stock adjusting arms and the stock adjusting bolts that were removed in step # 8. Working on the driver side, install the stock torsion bar into the stock lower control arm location and make sure to index the torsion bar the same way it was removed. Then install the stock torsion bar to the adjusting arm making sure to index the torsion bar the same way it was removed. Install the stock adjusting bolt. Special note: for now, only get the stock adjusting bolt started, we do not want to set the torsions bars at this point. Repeat procedure on the passenger side.

51. Working on the driver side, add some thread locker or lock tite to the stock bolt holding the new driver side differential kicker support bracket to the stock CV axle and differential flange and then torque to **55 ft lbs**. Repeat procedure on the passenger side.

52. Working on the driver side, add some thread locker or lock tite to the new 3/8" x 1" bolt holding the new driver side differential kicker support to the new driver side differential relocation bracket and then torque to 18 ft lbs. Repeat procedure on the passenger side.

53. Working on the driver side, add some thread locker or lock tite to the new 14 mm x 40 mm bolt that connects the new driver side differential relocation bracket to the bottom side of the stock frame rail and torque to **75 ft lbs**. **Special note: when torqueing this bolt, we want to make sure that the new driver side differential relocation bracket does not twist.** Repeat procedure on the passenger side.

54. Working on the driver side, add some thread locker or lock tite to the new 9/16" x 3 1/2" bolt that connects the new driver side differential relocation bracket to the stock front differential and torque to **85 ft lbs**. **Special note: when torqueing this bolt, we want to make sure that the new driver side differential relocation bracket does not twist.** Repeat procedure on the passenger side

55. Working on the driver side, add some thread locker or lock tite to the new 5/8" x 4 1/2" bolt that connects the new front cross member to the stock lower control arm pocket and torque to **110 ft lbs**. Repeat procedure on the passenger side.

56. Working on the driver side, add some thread locker or lock tite to the stock hardware holding the stock lower control arm to the new front cross member and torque to **95 ft lbs**. Repeat procedure on the passenger side.

57. Working on the driver side, add some thread locker or lock tite to the (2) stock bolts holding the new rear cross member to the stock location and torque to **65 ft lbs**. Repeat procedure on the passenger side.

58. Locate the new front skid plate. Also, locate (6) 1/2" x 1 1/2" bolts, (12) 7/16" USS flat washers and (6) 1/2" unitorque nuts from hardware bag 14040NB. Install the new skid plate to the front and rear cross member using the new 1/2" x 1 1/2" bolts and hardware. **Do not tighten at this point.**

**Photo # 36 / front location**

**Photo # 37 / rear location**

59. Add some thread locker or lock tite to the (3) 1/2" x 1 1/2" bolts holding the new skid plate to the newly installed front cross member and torque to **65 ft lbs**. Add some thread locker or lock tite to the (3) 1/2" x 1 1/2" bolts holding the new skid plate to the newly installed rear cross member and torque to **65 ft lbs**.

60. Locate the new front shocks. **Special note: New longer front shocks are needed, if you have not already ordered shocks, please contact Tuff Country or your local Tuff Country dealer and order the proper shocks. Tuff Country recommends using a 20" fully extended**

**hydraulic shock.** Locate (4) PB8297 upper shock bushings and (4) S10107 upper shock washers from hardware bag 14045PL. Install the new shock boot onto the new shocks. **Special note: Tuff Country EZ-Ride Suspension highly recommends that the shocks are installed with shock boots. If shock boots are not installed, damaged may occur to the piston of the new shock.** Working on the driver side, install the new shock into the stock lower using the stock hardware that was removed in step # 7. Make sure to use thread locker or lock tite and torque to **65 ft lbs**. Install the new shock into the stock upper location using the new upper shock bushings, over size washers and the new nut that was packaged with the new shocks. Torque to **18 ft lbs**. Repeat procedure on the passenger side.

61. Working on the driver side, tighten the torsion bar adjusting bolt until there is 2 3/16" of thread sticking out of the torsion bar adjusting block. Repeat procedure on the passenger side.

#### **Photo # 38**

62. Check and double check to make sure that all steps for the front end were performed properly and then check again.

63. Install the tires and wheels and carefully lower the vehicle to the ground.

**This box kit includes the front end only. Tuff Country offers 2 options for the rear end. A new rear leaf pack or a new rear add-a-leaf. The rear end parts are sold separately and must be ordered separately from the front box kit. If you have not already ordered the option for the rear end, please contact Tuff Country or your local Tuff Country dealer and order (2) 19400 for the rear spring option or (1) 81350 for the add-a-leaf option. This instruction sheet will talk about the installation of both options.**

**If you are installing the new rear leaf spring option on the vehicle that you are working on, please follow steps # 64 — 86.**

**If you are installing the new rear add-a-leaf option on the vehicle that you are working on, please follow steps # 87 — 107.**

64. 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.

65. Working on the driver side, remove the stock shock from the stock upper and lower mounting points and save the stock hardware for later re-installation. The stock shocks may be discarded. **Special note: New longer rear**

**shocks are needed, if you have not already ordered shocks, please contact Tuff Country or your local Tuff Country dealer and order the proper shocks. Tuff Country recommends using a 26" fully extended hydraulic shock.** Repeat procedure on the passenger side.

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

67. Remove the stock brake line bracket from the upper portion of the stock brake line bracket and save the stock hardware for later re-installation. **Special note: make sure to remove the hardware that attaches the stock brake line bracket to the upper portion and not the bolt that connects the stock brake line bracket to the rear differential cover.**

68. Working on the driver side, remove the stock ABS line from the stock ABS line bracket located on the stock rear axle. Repeat procedure on the passenger side.

**Photo # 39**

69. Working on the driver side, remove the stock sway bar end link from the stock sway end link upper and lower location. The stock sway bar end link and the stock hardware may be discarded. Repeat procedure on the passenger side.

70. Working on the driver side, remove the stock u-bolts from the stock location and discard the stock u-bolts and hardware. Set the stock lower u-bolt plate aside for later re-installation. Repeat procedure on passenger side.

71. Carefully raise up on both hydraulic floor jacks until the stock spring assemblies separate from the stock rear axle.

72. Working on the driver side, remove the stock nut holding the stock rear spring to the stock spring hanger. The stock nut may be discarded. Carefully tap the stock bolt until it makes contact with the stock gas tank. Using a sawzall, cut the stock bolt. Remove the cut bolt from the stock spring hanger. **Special note: Tuff Country highly recommends not using a torch when performing this step due to the open flames next to the gas tank. Also, once the stock modified bolt is removed the stock spring will fall out of the stock spring hanger. Take special care not to get hit by the stock springs.**

73. Working on the driver side, remove the stock spring from the stock spring shackle. Save the stock hardware for later re-installation. The stock spring may be discarded. Also, at this point, loosen but do not remove the upper shackle bolt that holds the stock shackle into the upper location.

74. Working on the passenger side, remove the stock

spring from the stock front spring hanger and save the stock hardware for later re-installation. **Special note: once the stock hardware is removed the stock spring will fall out of the stock spring hanger. Take special care not to get hit by the stock springs.** Remove the stock spring from the stock spring shackle. Save the stock hardware for later re-installation. The stock spring may be discarded. Also, at this point, loosen but do not remove the upper shackle bolt that holds the stock shackle into the upper location.

75. Locate (1) new rear springs. **Special note: the new rear springs are sold as a separate part #. If you have not already order your new rear springs, please contact Tuff Country or your local Tuff Country dealer and order (2) 19400.** Locate (1) 9/16" x 4" bolt, (2) 9/16" harden washers and (1) 9/16" unitorque nut from hardware bag 14040NB. Also, locate the stock rear spring shackle hardware that was removed in step # 72. Working on the driver side, install the new spring into the stock front spring hanger and secure using the new 9/16" x 4" bolt and hardware. **Do not tighten at this point.** **Special note: Tuff Country recommends installing this bolt from the outside to the inside of the vehicle.** Secure the new spring to the stock spring shackle using the stock hardware. **Do not tighten at this point.** Add some thread locker or lock tite to the newly installed front spring hanger bolt and torque to 110 ft lbs. **Special note: The stock hardware that attaches the newly installed spring to the stock shackle will not be torqued until the weight of the vehicle is on the ground. The new front spring has an off-set centering bolt, the longer end of the spring needs to be installed towards the rear of the vehicle. Also, the taller end of the degree shim installed in the new rear springs should be installed towards the front of the vehicle.**

76. Locate (1) new rear springs. **Special note: the new rear springs are sold as a separate part #. If you have not already order your new rear springs, please contact Tuff Country or your local Tuff Country dealer and order (2) 19400.** Locate the stock spring hardware that was removed in step # 74. Working on the passenger side, install the new spring into the stock front spring hanger and secure using the stock hardware. **Do not tighten at this point.** Secure the new spring to the stock spring shackle using the stock hardware. **Do not tighten at this point.** Add some thread locker or lock tite to the stock front spring hanger bolt and torque to 110 ft lbs. **Special note: The stock hardware that attaches the newly installed spring to the stock shackle will not be torqued until the weight of the vehicle is on the ground. The new front spring has an off-set centering bolt, the longer end of the spring needs to be installed towards the rear of the vehicle. Also, the taller end of the degree shim installed in the new rear springs should be installed towards the front of the vehicle.**

77. Carefully lower down on both hydraulic floor jacks at the

same time until the stock rear axle seats properly with the newly installed rear springs.

78. Locate (4) new 1/2" x 3 1/2" x 8" round u-bolts. Locate (8) 1/2" u-bolt high nuts and (8) 1/2" u-bolt harden washers from hardware bag 12NW. Also, locate the lower u-bolt plates that were removed in step # 70. Working on the driver side, install the new u-bolts into the stock location and secure using the new 1/2" hardware. Repeat procedure on the passenger side. Torque the new u-bolts to **70 ft lbs**.

79. Locate the new rear shocks. **Special note: New longer rear shocks are needed, if you have not already ordered shocks, please contact Tuff Country or your local Tuff Country dealer and order the proper shocks. Tuff Country recommends using a 26" fully extended hydraulic shock.** Working on the new shocks, install the new shock bushing into the upper and lower eyelets of the new shocks. Next, install the new proper shock sleeves into the previously installed shock bushings. **Special note: Make sure to use a lithium or moly base grease prior to inserting the new shock bushings and sleeves into the new shock eyelets. 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 upper and lower location and secure using the stock hardware that was removed in step # 65. **Special note: Make sure to use thread locker or lock tite and torque the upper and lower stock mounting hardware to 75 ft lbs.** Repeat procedure on the passenger side. **Special note: Tuff Country EZ-Ride Suspension highly recommends that the shocks are installed with shock boots. If shock boots are not installed, damage may occur to the piston of the new shock.**

80. Locate the new rear brake line relocation bracket from hardware bag 14040PL. Also, locate the stock brake line bracket hardware that was removed in step # 67. Install the new rear brake line bracket to the upper portion of the stock brake line bracket and secure using the stock hardware. Do not tighten at this point.

81. Locate (1) new 5/16" x 1" bolt, (2) 1/4" USS flat washers and (1) 5/16" unitorque nut from hardware bag 14040NB. Install the stock brake line bracket to the newly installed rear brake line relocation bracket and secure using the new 5/16" x 1" bolt and hardware. Make sure to use thread locker or lock tite and torque to 12 ft lbs. Move back to the stock hardware that was installed in step # 80 and add some thread locker or lock tite and torque to **12 ft lbs.**

**Photo # 40**

82. Locate the (2) new rear ABS relocation brackets from hardware bag 14040PL. Working on the driver side, remove the stock bolt that connects the stock brake line bracket to the stock bump stop plate. Secure the new ABS relocation bracket to the stock brake line bracket using the

stock hardware that was removed earlier in this step. **Special note: make sure to thread locker or lock tite and torque the stock bolt to 12 ft lbs.** Next, install the stock ABS line to the previously installed bracket. Repeat procedure on the passenger side.

**Photo # 41**

83. Locate the new rear sway bar end links. Locate (8) PB4902 poly bushings from hardware bag 14040PL. Also, locate (4) S10026 sleeves from hardware bag 14040SL. 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.**

84. Locate (4) new 1/2" x 3" bolts, (8) 7/16" USS flat washers and (4) 1/2" unitorque nuts from hardware bag 14040NB. Working on the driver side, install the new rear sway bar end link into the stock upper and lower location and secure using the new 1/2" x 3" bolts and hardware. **Do not tighten at this point.** Repeat procedure on the passenger side. Add some thread locker or lock tite to all (4) new 1/2" x 3" bolts and torque to **65 ft lbs.**

85. Remove both hydraulic floor jacks from under the vehicle.

86. Install the tires and wheels and carefully lower the vehicle to the ground. With the weight of the vehicle on the ground, working on the driver side, torque the rear stock shackle bolts **40 ft lbs.** **Special note: make sure to torque the upper and lower shackle bolts.** Repeat procedure on the passenger side.

**If you are installing the new rear leaf spring option on the vehicle that you are working on, please skip to step # 108**

87. 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. Repeat procedure on the passenger side.

88. Working on the driver side, remove the stock shock from the stock upper and lower mounting points and save the stock hardware for later re-installation. The stock shocks may be discarded. **Special note: New longer rear shocks are needed, if you have not already ordered shocks, please contact Tuff Country or your local Tuff Country dealer and order the proper shocks. Tuff Country recommends using a 26" fully extended hydraulic shock.** Repeat procedure on the passenger side.

89. Place a pair of hydraulic floor jacks under the rear

differential and carefully raise up on both hydraulic floor jacks at the same time until they come into contact with the rear differential.

90. Remove the stock brake line bracket from the upper portion of the stock brake line bracket and save the stock hardware for later re-installation. **Special note: make sure to remove the hardware that attaches the stock brake line bracket to the upper portion and not the bolt that connects the stock brake line bracket to the rear differential cover.**

91. Working on the driver side, remove the stock ABS line from the stock ABS line bracket located on the stock rear axle. Repeat procedure on the passenger side.

**Photo # 39**

92. Working on the driver side, remove the stock sway bar end link from the stock sway end link upper and lower location. The stock sway bar end link and the stock hardware may be discarded. Repeat procedure on the passenger side.

93. Working on the driver side, remove the stock u-bolts from the stock location and discard the stock u-bolts and hardware. Set the stock lower u-bolt plate aside for later re-installation. Repeat procedure on passenger side.

94. Carefully raise up on both hydraulic floor jacks until the stock spring assemblies separate from the stock rear axle.

95. Working on the driver side, open the stock spring clamps that wrap around the stock springs. **Special note: a big pair of channel locks makes for opening up the stock clamps easier.** Repeat procedure on the passenger side.

96. Locate (2) new rear add-a-leaf, (2) 3/8" x 6" centering bolt and (2) 3/8" fine nut from box kit 81350. Install the new rear add-a-leaf into 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. Torque to **28 ft. lbs.** **Special note: If the new add-a-leaf that you are installing into the stock spring assembly has an offset center hole location, place the longest side of the add-a-leaf towards the rear of the vehicle. Also the new add-a-leaf should be installed into the stock spring assembly in progression in order, from longest to shortest. The new add-a-leaf should be installed between the 2nd and 3rd leaf in the stock spring 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. With a suitable cutting tool, cut off the extra thread from the new centering bolt. Repeat procedure on passenger side.

**Photo # 42**

97. Working on the driver side, bend the stock spring clamps around the stock spring and the newly installed rear add-a-leaf. **Special note: the use of a hammer may make bending the stock clamps easier.**

**Photo # 43**

98. Carefully lower down on both hydraulic floor jacks at the same time until the stock rear axle seats properly with the newly installed rear springs.

99. Locate (4) new 1/2" x 3 1/2" x 8" round u-bolts. Locate (8) 1/2" u-bolt high nuts and (8) 1/2" u-bolt harden washers from hardware bag 12NW. Also, locate the lower u-bolt plates that were removed in step # 93. Working on the driver side, install the new u-bolts into the stock location and secure using the new 1/2" hardware. Repeat procedure on the passenger side. Torque the new u-bolts to **70 ft lbs.**

100. Locate the new rear shocks. **Special note: New longer rear shocks are needed, if you have not already ordered shocks, please contact Tuff Country or your local Tuff Country dealer and order the proper shocks. Tuff Country recommends using a 26" fully extended hydraulic shock.** Working on the new shocks, install the new shock bushing into the upper and lower eyelets of the new shocks. Next, install the new proper shock sleeves into the previously installed shock bushings. **Special note: Make sure to use a lithium or moly base grease prior to inserting the new shock bushings and sleeves into the new shock eyelets. 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 upper and lower location and secure using the stock hardware that was removed in step # 88. **Special note: Make sure to use thread locker or lock tite and torque the upper and lower stock mounting hardware to 75 ft lbs.** Repeat procedure on the passenger side. **Special note: Tuff Country EZ-Ride Suspension highly recommends that the shocks are installed with shock boots. If shock boots are not installed, damaged my occur to the piston of the new shock.**

101. Locate the new rear brake line relocation bracket from hardware bag 14040PL. Also, locate the stock brake line bracket hardware that was removed in step # 90. Install the new rear brake line bracket to the upper portion of the stock brake line bracket and secure using the stock hardware. Do not tighten at this point.

102. Locate (1) new 5/16" x 1" bolt, (2) 1/4" USS flat washers and (1) 5/16" unitorque nut from hardware bag 14040NB. Install the stock brake line bracket to the newly installed rear brake line relocation bracket and secure using the new 5/16" x 1" bolt and hardware. Make sure to use thread locker or lock tite and torque to **12 ft lbs.** Move back to the stock hardware that was installed in step # 101 and add some thread locker or lock tite and torque to **12 ft lbs.**

**Photo # 40**

103. Locate the (2) new rear ABS relocation brackets from hardware bag 14040PL. Working on the driver side, remove the stock bolt that connects the stock brake line bracket to the stock bump stop plate. Secure the new ABS relocation bracket to the stock brake line bracket using the stock hardware that was removed earlier in this step.

**Special note: make sure to thread locker or lock tite and torque the stock bolt to 12 ft lbs.** Next, install the stock ABS line to the previously installed bracket. Repeat procedure on the passenger side.

**Photo # 41**

104. Locate the new rear sway bar end links. Locate (8) PB4902 poly bushings from hardware bag 14040PL. Also, locate (4) S10026 sleeves from hardware bag 14040SL. 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.**

105. Locate (4) new 1/2" x 3" bolts, (8) 7/16" USS flat washers and (4) 1/2" unitorque nuts from hardware bag 14040NB. Working on the driver side, install the new rear sway bar end link into the stock upper and lower location and secure using the new 1/2" x 3" bolts and hardware. **Do not tighten at this point.** Repeat procedure on the passenger side. Add some thread locker or lock tite to all (4) new 1/2" x 3" bolts and torque to **65 ft lbs.**

106. Remove both hydraulic floor jacks from under the vehicle.

107. Install the tires and wheels and carefully lower the vehicle to the ground.

108. Check and double check to make sure that all steps were performed properly for the rear end and check again.

**Congratulations, installation complete**

**Special note:** After the completion of the installation, Tuff Country EZ-Ride Suspension recommends taking the vehicle to an alignment shop and having a proper front end alignment performed.

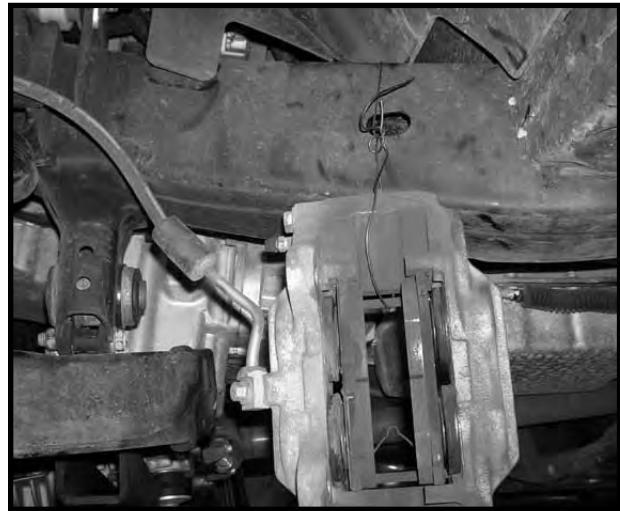
Tuff Country EZ-Ride Suspension recommends that a complete re-torque is done on all bolts associated with this suspension system. It is the customers responsibility to make sure that a re-torque is performed on all hardware associated with this suspension system after the first 100 miles of installation. It is also the customers responsibility to do a complete re-torque after every 3000 miles or after every off road use. Neglect of following these steps could cause brackets to come loose and cause serious damage to the suspension system and to the vehicle.

Tuff Country EZ-Ride Suspension packages (2) sets of instruction sheets with this box kit. (1) is for the installer and (1) is for the customer. The (1) for the customer has some post installation procedure literature and it is the installers responsibility to make sure that the customer receives a copy of the installation manual along with the literature.

If you have any questions or concerns, please feel free to contact Tuff Country or your local Tuff Country dealer.



**Photo # 1**



**Photo # 2**



**Photo # 3**



**Photo # 4**



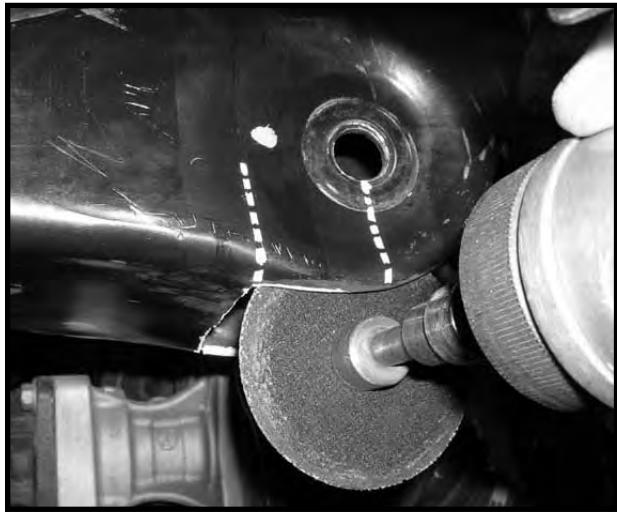
**Photo # 5**



**Photo # 6**



**Photo # 7**



**Photo # 8**



**Photo # 9**



**Photo # 10**



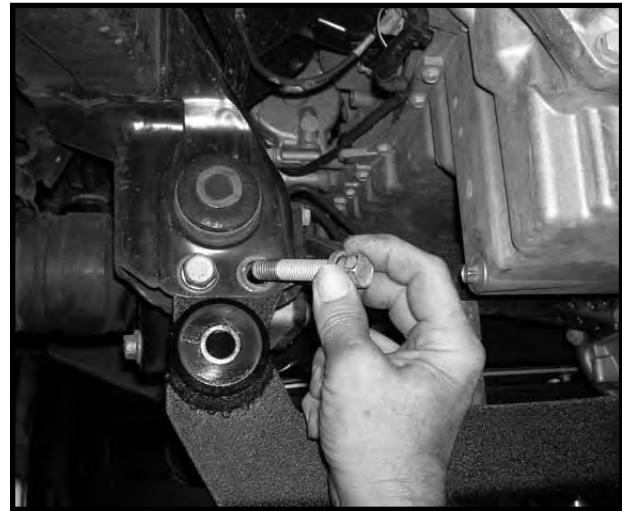
**Photo #11**



**Photo # 12**



**Photo # 13**



**Photo # 14**



**Photo # 15**



**Photo # 16**



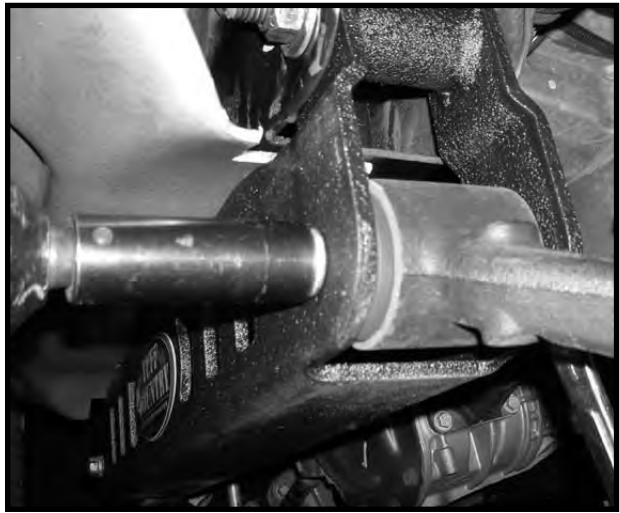
**Photo # 17**



**Photo # 18**



**Photo # 19**



**Photo # 20**



**Photo # 21**



**Photo # 22**



**Photo # 23**



**Photo # 24**



**Photo # 25**



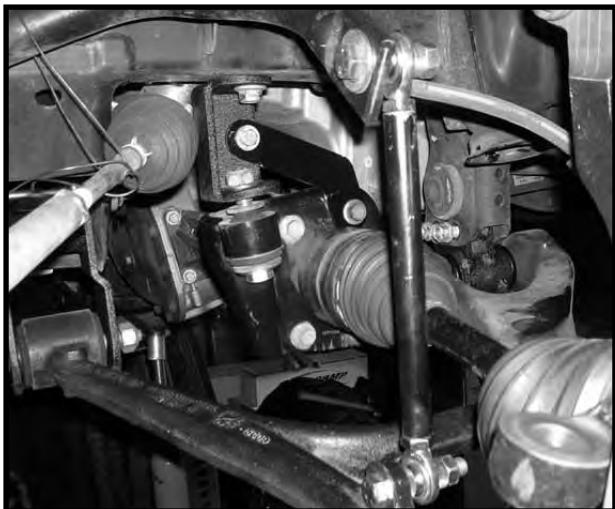
**Photo # 26**



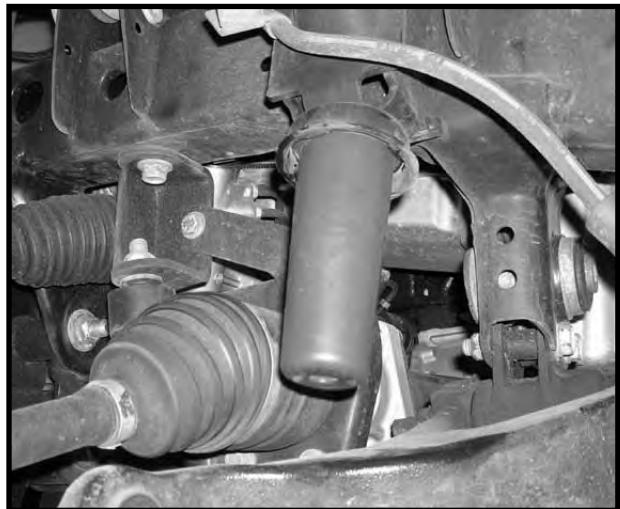
**Photo # 27**



**Photo # 28**



**Photo # 29**



**Photo # 30**



**Photo # 31**



**Photo # 32**



**Photo # 33**



**Photo # 34**



**Photo # 35**



**Photo # 36**



**Photo # 37**



**Photo # 38**



**Photo # 39**



**Photo # 40**



**Photo # 41**



**Photo # 42**



**Photo # 43**



14040-01 (1)  
Driver side knuckle



14040-02 (1)  
Passenger side knuckle



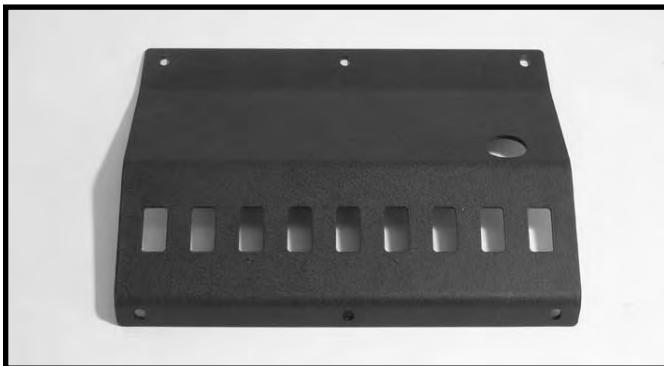
PB67061 (2)  
Front DS & PS bump stops



14040-03 (1) /Front cross member



14040-04 (1) / Rear cross member



14040-05 (1) / Front lower skid plate



14040-06 (1) / driver side differential  
relocation bracket / left bracket  
14040-07 (1) passenger side differential  
relocation bracket / right bracket



14040-09 (2) DS & PS differential  
kicker support bracket



SB-06 (2) / Rear sway bar  
end links