



2265 Crosswind Drive • Prescott, AZ 86301  
(928) 636-3175

## C2101 & C2101SSV

99-03 Chevrolet/GMC IFS 2WD (8Lug)  
2500HD

6" Suspension Lift

## INSTALLATION INSTRUCTIONS



### WARNING

1. Read and understand all instructions, warnings and cautions in these instructions, your owner's manual and related service manuals before the installation or use of this product. DO NOT install or use this product if there is anything you do not understand in these instructions or related materials.
2. Certain Trail Master products are intended to improve off-road performance. Modifying your vehicle for off-road use may result in the vehicle handling differently than a factory equipped vehicle. Use of oversize tires, suspension lifts, body lifts and other suspension modifications may raise your vehicle's center of gravity resulting in an increased tendency for the vehicle to pitch and roll during sudden turns or abrupt maneuvers. Extreme care must be used to prevent loss of control or vehicle roll over. Failure to drive your modified vehicle safely may result in serious injury or death. Drive at reduced speeds to ensure your ability to maintain control of the vehicle under all driving conditions. **Always** wear seat belts.
3. DO NOT combine suspension lifts, body lifts or other lift devices. Combined use of lifts may result in unsafe and/or unexpected handling characteristics (see enclosed product safety WARNING label).
4. Many states now have laws restricting vehicle modifications such as lift, bumper height or other alterations. Consult your state vehicle equipment laws to determine if the installation of this system or other modifications are permitted.
5. The use of larger than OE tire and wheel combinations may reduce the effectiveness of the braking system (including ABS equipped) and increase the amount of pedal pressure necessary to obtain a given braking distance with normal stops and increase the stopping distance in a panic stop. Drive at reduced speeds and allow for extra stopping distance while driving a vehicle equipped with larger than OE tires. Discuss this issue with your tire and wheel dealer before installing larger tires and do not use tire and/or wheel combinations that compromise safe braking performance.



### WARNING

6. Supplied in this system is a safety WARNING label. Install this label inside the cab of the vehicle where it will be highly visible to all operators of the vehicle.



### WARNING

7. We strongly recommend using the Trail Master shocks that were engineered to be used with this system. If you use other shocks, they MUST match the full extended and full collapsed lengths of the Trail Master units EXACTLY. The use of longer or shorter shocks than recommended may cause damage to the vehicle suspension and could result in sudden loss of control of the vehicle and personal injury. Contact Trail Master for the exact lengths of the front and rear shocks that must be used with this suspension system.



### CAUTION

1. Proper installation of Trail Master products requires knowledge of recommended procedures for disassembly/assembly of OE vehicles and components (i.e. steering tie rods, control arms, brake calipers, etc.). Access to OE shop manuals and special tools is required. Attempting to install this system without knowledge of these procedures may affect the safety of your vehicle and/or the performance of these components. Trail Master strongly recommends that this system be installed by a certified mechanic with off-road experience.
2. Use the appropriate tool for the job and be sure that tools are in good condition. Failure to use proper tools and/or tools in good condition may result in personal injury.
3. Always wear safety glasses while installing this system to avoid eye damage from debris, broken tools, etc.
4. Use Loctite® 242/ 243 or equivalent thread locker on all metal fasteners (per the manufacturers directions) unless otherwise noted in these instructions. Failure to use thread locker may result in fasteners becoming loose over time.
5. The components included in this system require periodic inspection for wear or damage. Visually inspect the suspension, braking and steering components after every six months of normal on-road driving and after EVERY off-road excursion. Re-torque all fasteners at these same intervals. Refer to the attached torque chart or specific instruction step for torque values. Worn, damaged or loose parts can fail suddenly resulting in loss of control of the vehicle and personal injury.



## CAUTION

On some variations of this vehicle, it may be necessary to modify the exhaust crossover pipe for clearance with the front driveshaft. Before installing this system be sure to check appropriate government laws relating to modifications to your exhaust system to ensure full compliance with all laws and regulations.

## PRE-INSTALLATION NOTES



## WARNING

1. Properly block and secure vehicle prior to installation.

**Compare parts included in your system with the enclosed parts list. Placing hardware with components before you start may reduce installation time. Contact your Trail Master dealer if any parts are missing or appear to be different than those indicated on the parts list.**

## GLOSSARY OF TERMS

|      |                                |
|------|--------------------------------|
| TM   | Trail Master                   |
| DRV  | Drivers side of the vehicle    |
| PASS | Passengers side of the vehicle |
| OE   | Original equipment             |
| SRS  | Supplemental Restraint System  |

## FASTENERS

Adhere to recommendations when replacement fasteners, retainers and keepers are called out in the OE service manual. When reassembling the vehicle it is recommended by the vehicle manufacturer that certain fasteners are replaced in order to maintain proper retaining characteristics. This system may not include all replacement hardware as recommended by the OE service manual. Additional replacement hardware should be obtained prior to installation of this system to meet the requirements of the OE service manual.

## TORQUE SPECIFICATIONS

See OE manual for torque values and procedures when reusing an OE fastener.

| BOLT SIZE         | GRADE 5 | GRADE 8  |
|-------------------|---------|----------|
| 1/4"-20 FASTENER  | 10'LBS  | 10'LBS   |
| 1/4"-28 FASTENER  | 10'LBS  | 12.5'LBS |
| 5/16"-18 FASTENER | 17'LBS  | 22.5'LBS |
| 5/16"-24 FASTENER | 20'LBS  | 25'LBS   |
| 3/8"-16 FASTENER  | 30'LBS  | 40'LBS   |
| 3/8"-24 FASTENER  | 35'LBS  | 45'LBS   |
| 7/16"-14 FASTENER | 50'LBS  | 65'LBS   |
| 7/16"-20 FASTENER | 55'LBS  | 70'LBS   |
| 1/2"-13 FASTENER  | 75'LBS  | 100'LBS  |
| 1/2"-20 FASTENER  | 80'LBS  | 110'LBS  |
| 9/16"-12 FASTENER | 105'LBS | 135'LBS  |
| 9/16"-18 FASTENER | 115'LBS | 150'LBS  |
| 5/8"-11 FASTENER  | 150'LBS | 195'LBS  |
| 5/8"-18 FASTENER  | 160'LBS | 210'LBS  |
| 3/4"-16 FASTENER  | 175'LBS | 225'LBS  |

## ADDITIONAL NOTES

1. Computer controlled functions such as the speedometer and the ABS system may require recalibration if the tires you choose are larger than stock. For information and service, consult your GM Service Department.

2. Due to the increased diameter of larger than stock tires, engine RPM may be reduced. Operation of the vehicle in this condition, may risk transmission damage due to overheating. Operating the vehicle in "drive" instead of "overdrive" may help this condition by reducing the amount of shifting required to maintain speed.

3. After installation, some vehicles may experience drive line vibrations. To eliminate these conditions, drive line angles may require adjustment. Drive shafts may need to be lengthened and/or turned and Universal Joints may require more frequent replacement.

4. Thoroughly inspect all vehicle components to ensure that the vehicle is in excellent mechanical condition. Make repairs or replacements as necessary prior to installation of this system. Do not install this system if vehicle is not in excellent mechanical condition. If you are not capable of performing this inspection, take the vehicle to a reputable automotive service shop or technician.

5. Inspect the vehicle for aftermarket changes to the steering and suspension components. This suspension system is not to be installed in conjunction with any aftermarket steering or suspension modifications. If you are not capable of performing this inspection, take the vehicle to a reputable automotive service shop or technician.

6. Retain this instruction booklet, complete with vehicle measurements, proof of purchase and all other documents pertaining to this system and it's installation, with your vehicle's permanent records. **PROOF OF PURCHASE IS REQUIRED FOR WARRANTY PARTS ASSISTANCE.**

7. If you are a professional installer, please be certain that all documentation pertaining to this installation is forwarded to the vehicle owner.

8. If technical assistance is required, please have the following information readily available:

- A. Instruction booklet complete with all stock height and lifted vehicle measurements and data.
- B. Proof of purchase.
- C. Wheel Alignment results.

9. Do not begin installation of this system until you have verified that all components as listed on the parts list are included with your system.

## SPECIAL LITERATURE & TOOLS

10. An OE service manual for the model and year of your vehicle is required. Refer to this manual for proper disassembly/reassembly procedures of OE and related components. Additional tools: REQUIRED: Torsion bar unloading tool #J36202 available from GM dealer or from Kent Moore Tool Group phone #(800) 345-2233, order part #J-22517-C.

# WHEEL AND TIRE NOTES

- A. Minimum wheel diameter: 16"
- B. Maximum wheel backspacing: 4-1/4"
- C. Maximum tire diameter: 33"  
(some 35" combinations may fit with minor fender area trimming. Consult your tire and wheel dealer to determine the correct size).



## WARNING

DO NOT USE WHEEL SPACERS.

## PARTS LIST

|   |   |
|---|---|
| knuckle, dvr (201001) .....                         | 1 |
| knuckle, pas (201002) .....                         | 1 |
| crossmember, fwd (202003) .....                     | 1 |
| crossmember, aft (202004) .....                     | 1 |
| torsion bar drop bracket (201010) .....             | 2 |
| crossmember brace (201012) .....                    | 2 |
| bumpstop extension, rear (201015) .....             | 2 |
| block, rear (4KB-H) .....                           | 2 |
| bearing spacer, driveshaft (201016) .....           | 1 |
| u-bolt (1032258Q) .....                             | 4 |
| Bag Kit, Front (C2101BAGF) .....                    | 1 |
| Hdwr Bag, Crossmembers (C4101BAG1) .....            | 1 |
| bolt, hex 5/8-11 UNC x 5 1/2 LG (58512CHHC8) .....  | 2 |
| bolt, hex 5/8-11 UNC x 4 1/2 LG (58412CHHC8) .....  | 2 |
| washer, flat SAE HRDN 5/8 (W58H) .....              | 8 |
| nut, hex, stover 5/8-11 UNC (N58CS8) .....          | 4 |
| Diff Shims (W12F) <b>NOT USED IN THIS KIT</b> ..... | 3 |
| Thread locker (242) .....                           | 2 |
| tie wrap (SHKTIE) .....                             | 8 |
| Hdwr Bag, Front End Links (C4101BAG3) .....         | 1 |
| bushing, 0.5 ID x 1.38 OD (201022) .....            | 8 |
| formed washer 1.28 OD x 0.5 ID (201021) .....       | 8 |
| sleeve, .750 OD x .134 WALL x 9.00 LG (136) .....   | 2 |
| bolt, hex 7/16-14 UNC x 15 LG (761500CHHC8) .....   | 2 |
| nut, hex, stover 7/16-14 UNC (N76CS8) .....         | 2 |
| Hdwr Bag, Skid Plate (C4101BAG8) .....              | 1 |
| stem cup washer parts pack (142819) .....           | 2 |
| bolt, hex 7/16-14 UNC x 1 1/4 LG (76114CHHC) .....  | 4 |
| washer, flat SAE 7/16 (W76S) .....                  | 6 |
| washer, lock 7/16 (W76LK) .....                     | 4 |
| Bag Kit, Supports (CMBRBAG) .....                   | 1 |
| Hdwr Bag, Crossmember Support (CMBRBAG) .....       | 1 |
| bolt, hex 3/8-16 UNC x 2 1/4 LG (38214CHHC) .....   | 4 |
| nut, hex, stover 3/8-16 UNC (N38CS8) .....          | 4 |
| washer, flat SAE 3/8 (W38S) .....                   | 8 |
| Bag Kit, Mid (C4101BAGM) .....                      | 1 |
| Hdwr Bag, Torsion Bar Drop (C4101BAG5) .....        | 1 |
| bolt, hex 7/16-14 UNC x 1 1/4 LG (76114CHHC8) ..... | 4 |
| bolt, hex 14mm-2.00 x 80mm LG (14M080CHHC8) ..      | 2 |
| washer, flat SAE HRDN 7/16 (W76H) .....             | 8 |
| washer, flat SAE 14mm (W14MS) .....                 | 4 |
| nut, hex, stover 7/16-14UNC (N76CS8) .....          | 4 |

|  |   |
|--|---|
| nut, hex, stover 14mm-2.00 (N14MCS10) .....          | 2 |
| sleeve, .750 OD x .562 ID x 1.5 LG (131) .....       | 2 |
| bushing, .75 ID x 1.312 OD x .753 LG (201019) .....  | 4 |
| Hdwr Bag, Drive Shaft Spacer (C4101BAG6) .....       | 1 |
| bolt, hex 3/8-16 UNC x 1 1/4 LG (38114CHHC) .....    | 2 |
| nut, hex, stover 3/8-16 UNC (N38CS8) .....           | 2 |
| washer, flat SAE 3/8 (W38S) .....                    | 4 |
| Bag Kit, Rear (C4101BAGR) .....                      | 1 |
| Hdwr Bag, Rear Bumpstop Spacers (C4101BAG7) .....    | 1 |
| bolt, hex 3/8-16 UNC x 1 1/4 LG (38114CHHC) .....    | 4 |
| washer, flat SAE 3/8 (W38S) .....                    | 8 |
| nut, hex, stover 3/8-16 UNC (N38CS8) .....           | 4 |
| Hdwr Bag, 5/8 U-Bolts (58UBBAG) .....                | 1 |
| nut, hex, High 5/8-18 (N58FH) .....                  | 8 |
| washer, flat SAE HRDN 5/8 (W58N) .....               | 8 |
| warning label (WL002) .....                          | 1 |
| decals (DC007) .....                                 | 2 |
| instructions .....                                   | 1 |
| SSV boxed shock, front (75610) (C2101SSV only) ..... | 2 |
| SSV boxed shock, rear (75620) (C2101SSV only) .....  | 2 |

## PREPARATION

1. Measure ride height with the vehicle supporting its own weight on level ground. The vehicle should be driven forward at least 10 feet immediately prior to taking this measurement to settle the suspension. Ride height is the measurement from the center of the axle straight up (vertical) to the fender lip. Record this measurement for all four wheels on the worksheet (page 11). You will be taking these measurements again after installation, please measure “before” & “after” in the same manner.

## FRONT DISASSEMBLY

1. Raise the vehicle per the OE service manual instructions. If working without a shop hoist, put the vehicle in park, set the emergency brake and chock both rear wheels in front and behind the tires. Loosen the front wheel lug nuts. Place floor jack under the lower control arm's front crossmember and raise the vehicle until both front wheels are off of the ground. Place safety jack stands under the frame rails behind the front wheel wells and lower the vehicle onto the stands. Remove the front wheels.

2. Remove torsion bar assembly. See warning below.



### CAUTION DANGEROUS PROCEDURE

The torsion bars are under extreme torsional load. Use a J36202 torsion bar tool for unloading the bars. Keep hands and fingers clear of the crossmember, adjusting arm, adjusting bolts and unloading tools as much as possible. This will lessen the possibility of injuries in the event that the tool would slip or break. **DO NOT** put your fingers through the retaining plate hole in the crossmember when removing or installing the retaining plate. Follow specifically the instructions as stated in OE manual and the literature included with torsion bar unloading tool for completing this procedure.

A. Measure and record the length of exposed thread on the torsion bar adjusting bolts. **Fig. 1**

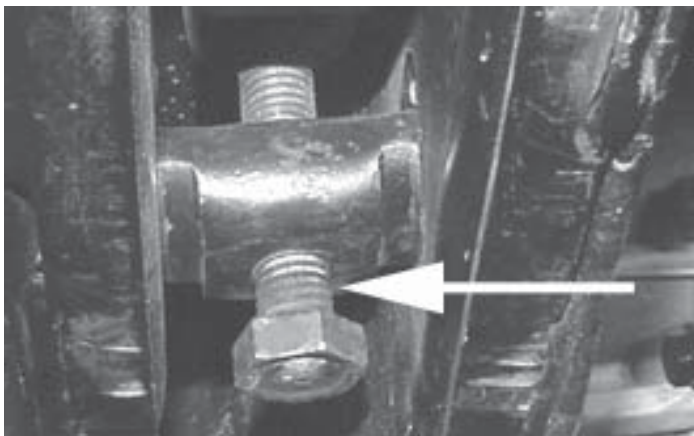


Fig. 1

B. Using J36202 shown in **Fig. 2** or an equivalent torsion bar unloading tool, unload the torsion bars. **DO NOT REMOVE THE TORSION BARS OR ADJUSTERS AT THIS TIME.**

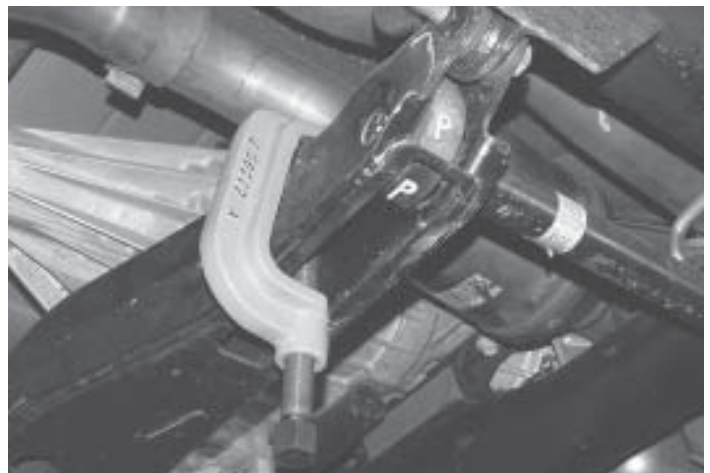


Fig. 2

- C. When load has been relieved from the torsion bars, mark the torsion bars using a paint pen to indicate the driver and passenger side bars. **Fig. 3**
- D. Mark the torsion bars to indicate the front or control arm end of the bars.
- E. Mark the control arms and the front end of the torsion bars to indicate the indexing of the bars relative to the control arms. **Fig. 3**
- F. Mark the adjusting arms and the rear end of the bars to indicate the indexing of the bars relative to adjusting arms. **Fig. 4**
- G. Remove the adjusting bolts. **Refer to Fig. 1**



Fig. 3

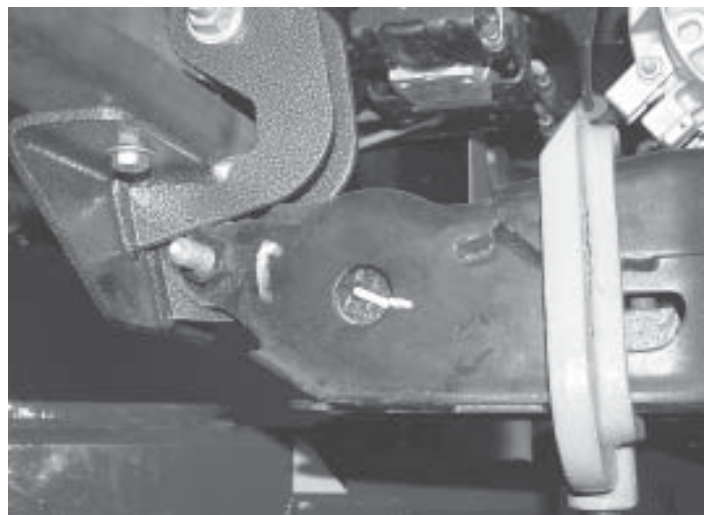
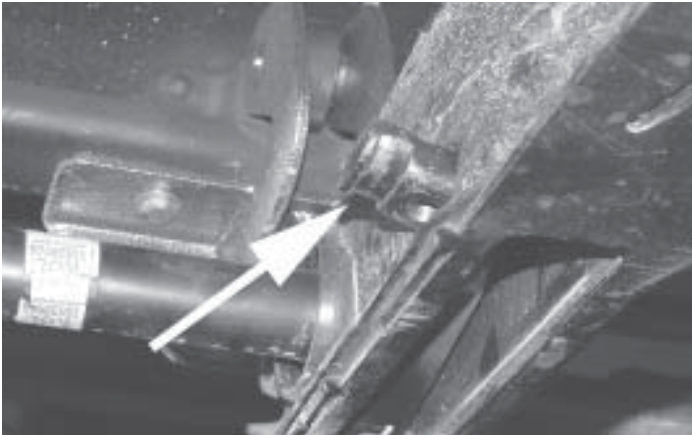
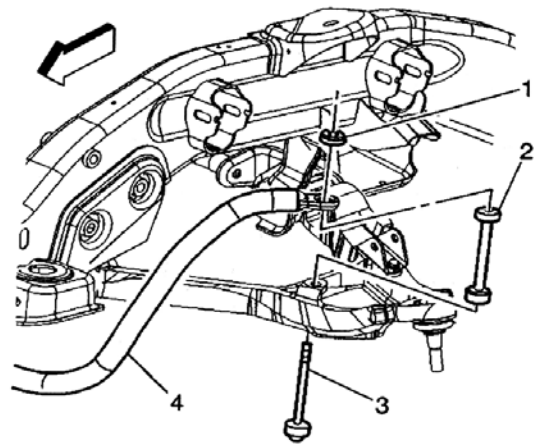


Fig. 4

- H. Remove the retaining plates. **Fig. 5**
- I. Remove the adjusting arms by pushing or driving the bars forward, through the lower control arms until the adjusters and the rear of the bars are forward of the crossmember.



**Fig. 5**



**Fig. 7**

- 7. Remove brake calipers and rotors.
  - A. Locate then disconnect brake hose bracket.
  - B. Locate the two caliper mounting bracket bolts attaching brake caliper to backside of front spindle. Remove the bolts.
  - C. Remove caliper and bracket as an assembly. Use a length of wire to secure caliper assembly out of the way and to prevent damage to brake lines.
  - D. Remove brake rotor.
  - E. Repeat on other side.



**CAUTION DANGEROUS PROCEDURE**

Pushing the torsion bars forward will disengage the torsion bar adjusters from the ends of the torsion bars. This will allow the adjusters to fall free of the vehicle if not supported. Use caution to prevent the adjusters from falling or it may be damaged or cause personal injury. **Fig. 6**



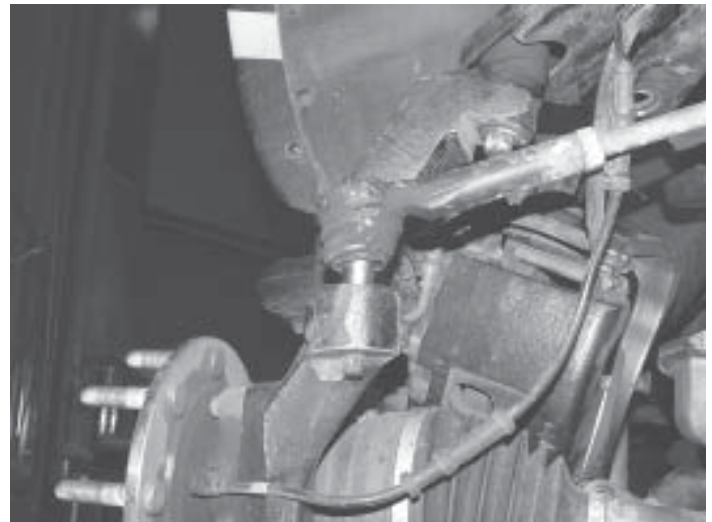
**Fig. 6**



**CAUTION**

Do not allow brake caliper to hang by the brake hose.

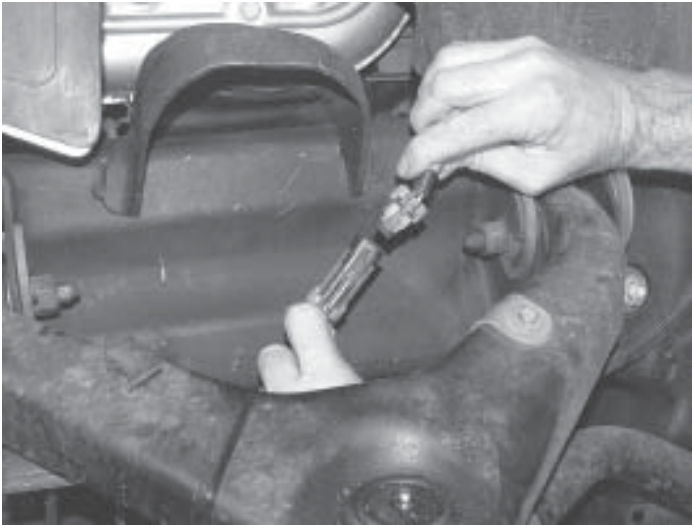
- 8. Locate outer tie rod end and remove the nut. Attach Universal Steering Link Puller (J24319) and separate tie rod end from front knuckles. Repeat on opposite side. **Fig. 8**



**Fig. 8**

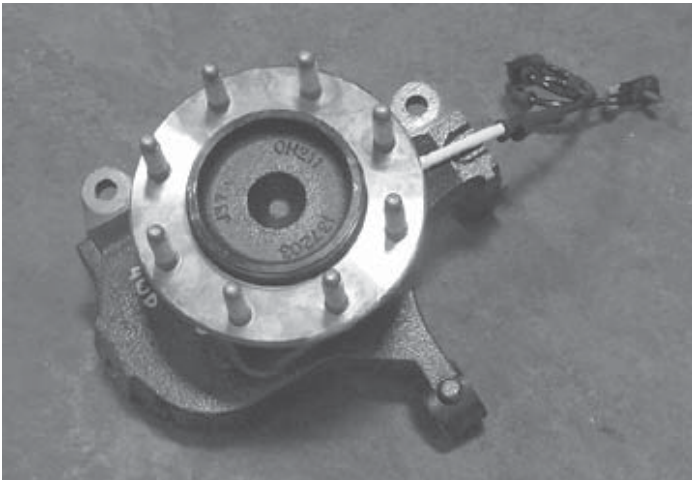
- 3. Remove torsion bar crossmember by removing the two bolts that connect the crossmember to the frame. These fasteners will be re-used during re-assembly. With crossmember out of the way, the torsion bars can be dislodged from the lower control arms and removed.
- 4. Remove both of the front shock absorbers.
- 5. Detach existing front bumpstops from upper mounting cups. Set the bumpstops and fasteners aside. They will be re-installed later.
- 6. Remove both anti-sway bar links, which connect the bar to lower control arms. **Fig. 7**

9. If applicable, separate ABS sensor plug at the frame near upper control arm. (Both sides) **Fig. 9**



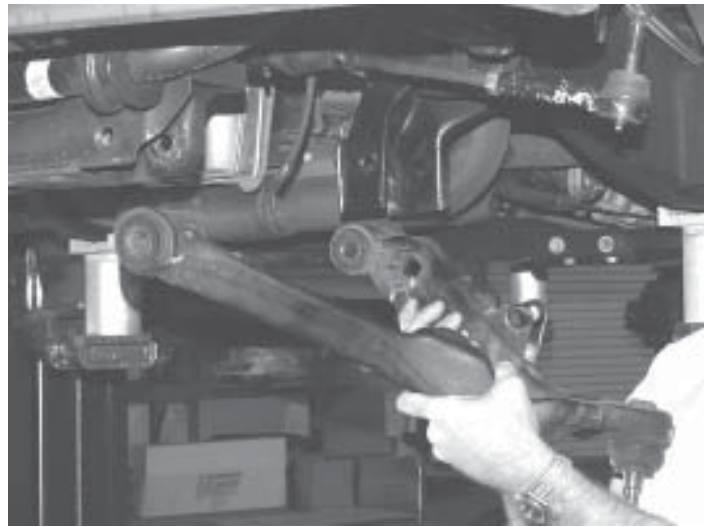
**Fig. 9**

10. Remove knuckle and hub assemblies.
  - A. Locate front lower ball joint and remove nut from ball joint. Using Ball Joint Separator Tool (J43631) apply pressure on tool until ball joint breaks loose from lower part of the front knuckle.
  - B. Locate front upper ball joint. Remove nut from ball joint. Using Ball Joint Separator Tool (J43631) apply pressure on tool until ball joint breaks loose from upper part of front knuckle.
  - C. Remove front knuckle with the hub and bearing assembly attached, set aside. **Fig. 10**
  - D. Repeat on other side.



**Fig. 10**

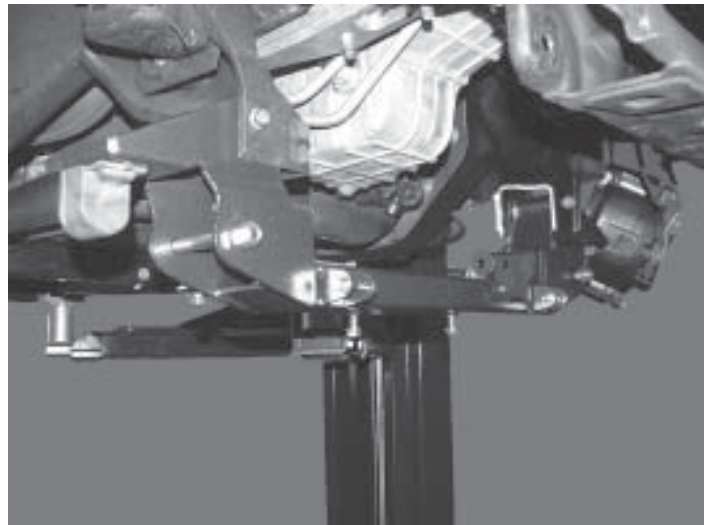
11. Remove lower control arm pivot bolts and remove lower control arm. (**Fig. 11**) (Save these fasteners for use during re-assembly). Repeat on other side.
12. Remove the differential skid plate, if vehicle is so equipped. (Save for re-installation later).



**Fig. 11**

## FRONT INSTALLATION

1. Install rear crossmember (202004) into existing rear lower control arm mounting pockets, use existing OE hardware previously removed. Make sure bolt heads are facing to the front of vehicle (**Fig. 12**). **Do not tighten at this time.**

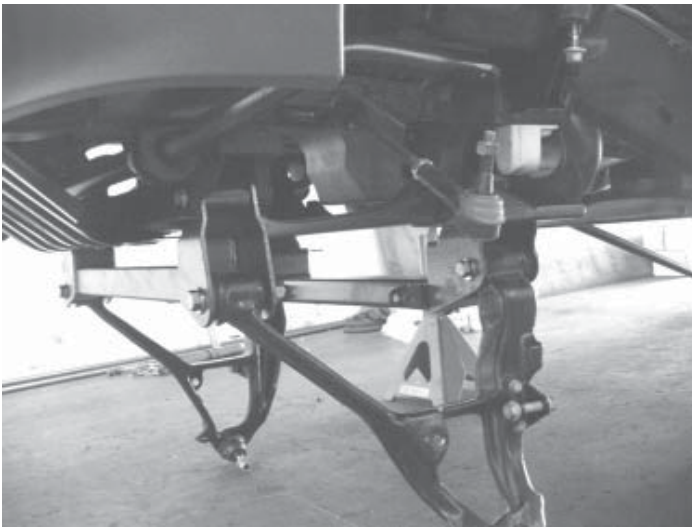


**Fig. 12**

2. Attach OE bumpstops to rear crossmember bumpstop pad using OE hardware previously removed. Torque to OE specifications.
3. Install front crossmember (202003) into existing front lower control arm mounting pockets using existing OE hardware previously removed. Make sure bolt heads are facing to the front of vehicle. **Do not tighten at this time.**
4. Install OE lower control arms into front and rear crossmembers using the new 5/8" hardware supplied. (**Fig. 13**). **Do not tighten at this time.**

### FROM BAG1 USE:

- (2) 5/8-11 X 5 1/2 HEX BOLT
- (2) 5/8-11 X 4 1/2 HEX BOLT
- (8) 5/8 FLAT WASHER
- (4) 5/8-11 LOCKNUT

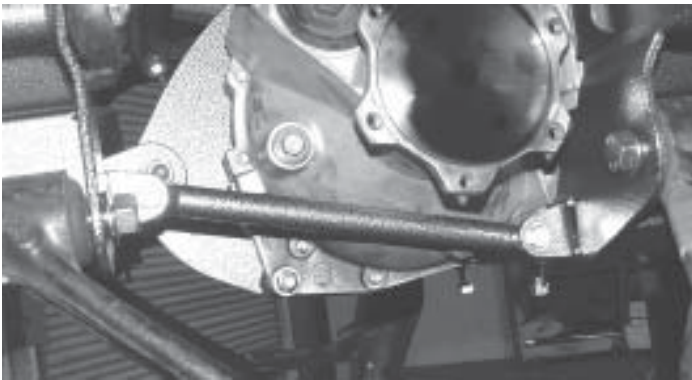


**Fig. 13**

5. Install crossmember supports (201012) between the new crossmembers (202003) and (202004) using the new hardware supplied. **Fig. 14**

**FROM CMBRBAG USE:**

- (4) 3/8-16 X 2 1/4 HEX BOLT
- (8) 3/8 FLAT WAHSER
- (4) 3/8-16 LOCKNUT



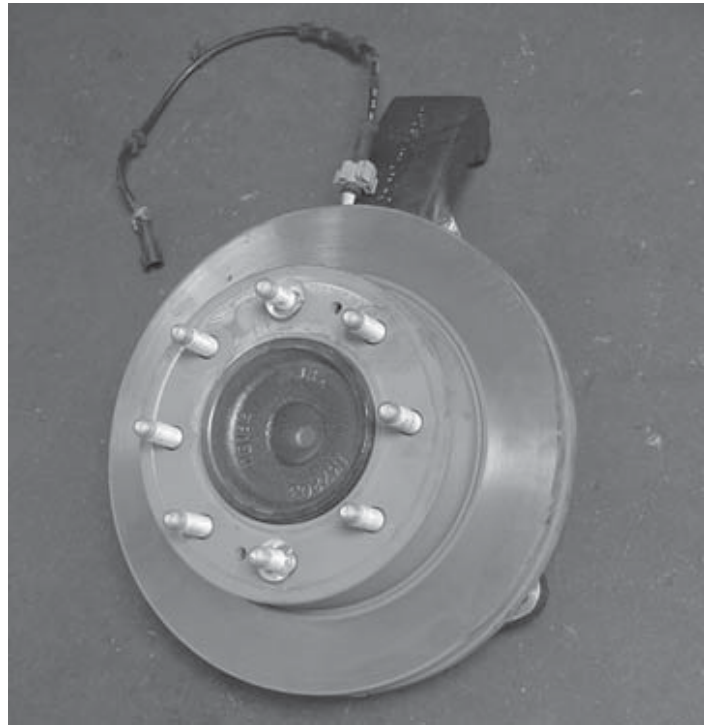
**Fig. 14**

6. Torque all fasteners previously installed EXCEPT the lower control arm pivot bolt fasteners.

- A. Torque front and rear crossmember upper fasteners to 121 ft. lbs.
- B. Torque crossmember support fasteners to 45 ft. lbs.

7. Remove the existing O-ring, splash shield, ABS wires, hub and bearing assembly from front spindle. Reinstall the O-ring, splash shield and hub and bearing assembly to new front spindle (201001Dvr) and (201002Pas). **Fig. 15**

**NOTE:** Make sure hub and bearing assemblies are reinstalled on the same side they were removed from. Apply threadlocker compound to existing fasteners. Torque hub bolts to 133 ft. lbs.



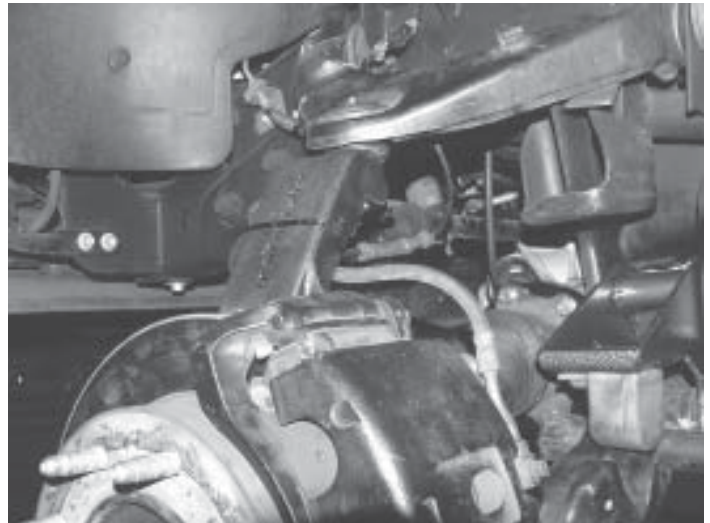
**Fig. 15**

8. Connect driver side front spindle assembly to the upper and lower control arm ball joints. Torque upper ball joint nut to 74ft. lbs. Torque lower ball joint nut to 94 ft. lbs.

9. Loosen each (Driver & Passenger sides) tie rod end jam nut and thread tie rod inward two complete turns. Retighten jam nut and attach tie rod to front spindle. Torque nut to 46 ft.lbs.

10. Install brakes.

- A. Install brake rotor.
- B. Attach front caliper assembly with previously removed existing hardware. Torque 14mm caliper-to-knuckle mounting bolts to 129 ft. lbs.
- C. Position the brake lines and sensor wires so that they do not rub or get pinched during suspension and steering travel and secure using the tie wraps supplied. **Fig. 16**



**Fig. 16**

11. Install front shock absorbers (75610 or see WARNING).  
 Front extended length: 21.50"  
 Front collapsed length: 13.25"



## WARNING

We strongly recommend using the Trail Master shocks that were engineered to be used with this kit. If you use other shocks, they **MUST** match the full extended and full collapsed lengths of the Trail Master units **EXACTLY**. The use of longer or shorter shocks than recommended may cause damage to the vehicle suspension and could result in sudden loss of control of the vehicle and personal injury. Contact Trail Master for the exact lengths of the front and rear shocks that must be used with this suspension kit.

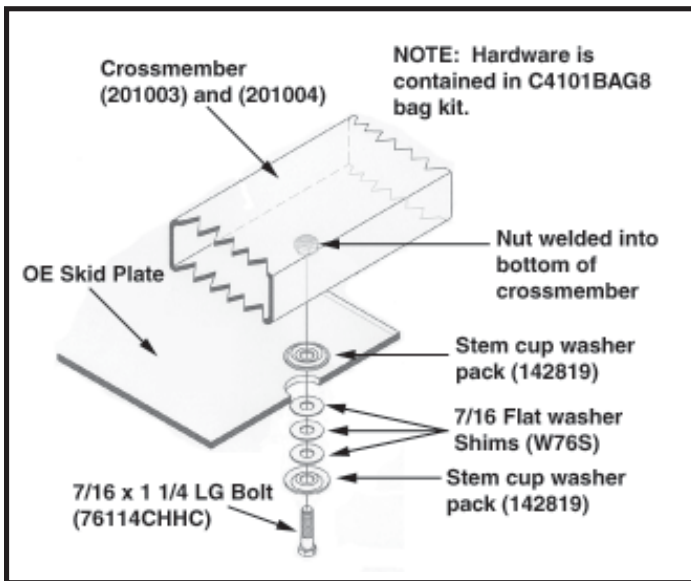
12. Re-install OE front skid plate using new hardware supplied. **Fig. 17**

**FROM BAG8 USE:**

- (4) 7/16-14 X 1 1/4 HEX BOLT
- (4) 7/16 LOCK WASHER
- (6) 7/16 SHIM WASHER

**FROM BAG142819 USE:**

- (2) CUP WASHERS



**Fig. 17**

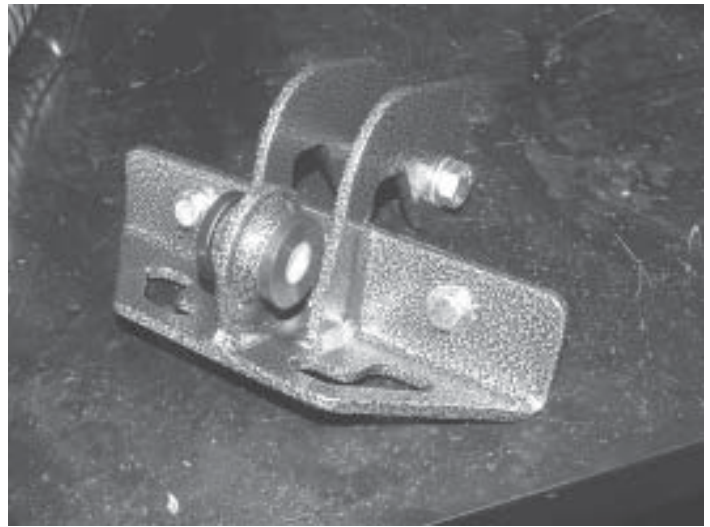
13. Cycle front suspension through full travel and all steering positions and check for adequate clearance between shocks, bumpstops and brake line hoses. Do this with and without front wheels/tires mounted.

14. Remove the trans skid plate, if vehicle is so equipped.

15. Mount the torsion bar drop brackets.

- A. Install bushings (201019) and sleeves (131) into the torsion bar drop brackets (201010). **Fig. 18**

- B. Position the torsion bar drop brackets over the OE mounts and flush to the frame. Using the bracket as a guide, mark and center punch the hole locations (**do not rush this step**).



**Fig. 18**



## CAUTION

Check the frame behind where you will be drilling and move any items (fuel lines, brake lines, etc.) out of the way that could be damaged during drilling.

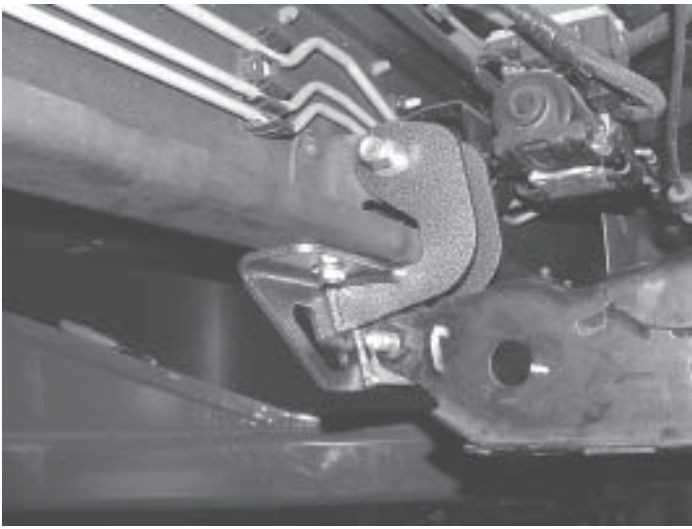
- C. Drill 7/16" holes at each marked location. **Fig. 19**  
 D. Attach the drop brackets to the frame using the new fasteners provided. (**Fig. 20**). Torque the 7/16 fasteners to 69 ft. lbs. Torque the 14mm fasteners to 100 ft. lbs.

**FROM BAG5 USE:**

- (4) 7/16-14 X 1 1/4 HEX BOLT
- (8) 7/16 FLAT WASHER
- (4) 7/16-14 LOCKNUT
- (2) 14MM-2.00 X 80MM HEX BOLT
- (4) 14MM FLAT WASHER
- (2) 14MM-2.00 LOCKNUT



**Fig. 19**



**Fig. 20**

16. Place the torsion bars into the lower control arms in the same orientation they were removed. Slide them fully forward.

17. Install the OE torsion bar crossmember into the drop brackets using the original OE fasteners. Torque to OE specifications.

18. Slide torsion bar rearward through the torsion bar crossmember while holding adjustment arm in the proper position. Verify that reference marks on adjustment arm and torsion bar match.

19. Install the torsion bar unloading tool (J36202). **Be very careful while increasing tension on the torsion bar.**

20. Reinstall retainer plate and adjusting bolt. Thread adjusting bolt until exposed length matches the measured length before removal. This way, they can be installed in the stock position.

21. Install rear driveshaft CENTER BEARING SPACER per Fig. 21.

**FROM BAG6 USE:**

- (2) 3/8-16 X 1 1/4 HEX BOLT
- (4) 3/8 BLAT WASHER
- (2) 3/8-16 LOCKNUT

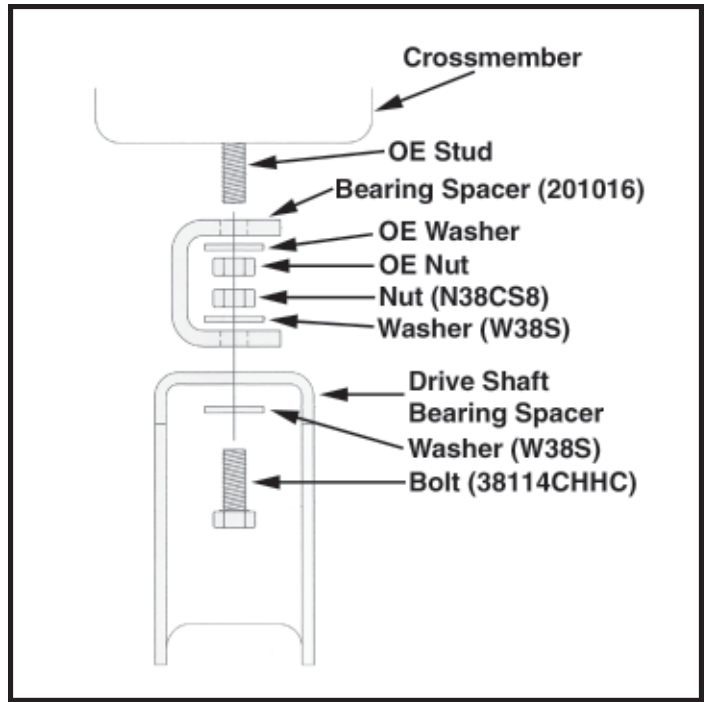
22. Install front wheels and lower vehicle to the ground.

23. When vehicle is at ride height torque lower control arm to front and rear crossmember's pivot nuts to 121 ft. lbs.

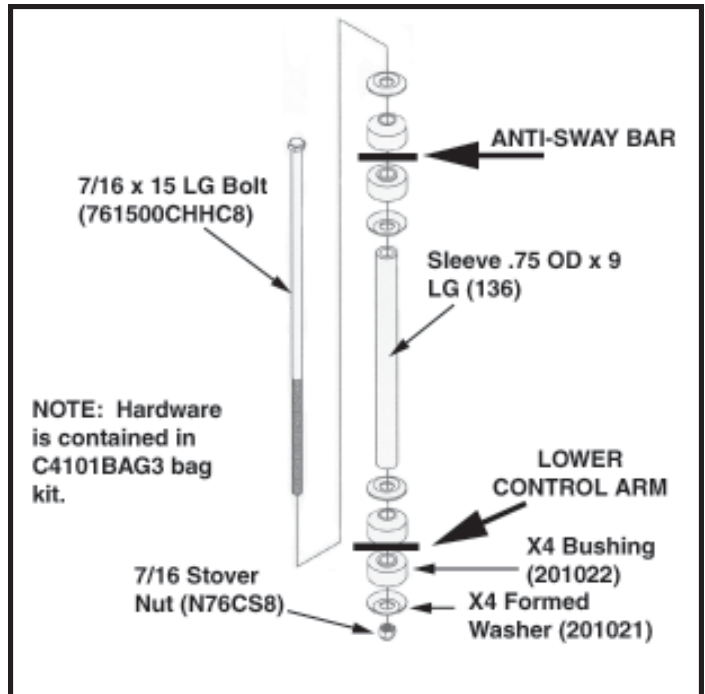
24. Reinstall existing sway bar to lower control arm using sway bar sleeve (136) and hardware provided. **Fig. 22**

**FROM BAG3 USE:**

- (2) 7/16-14 X 15.00 HEX BOLT
- (8) 201021 FORMED WASHER
- (2) 7/16-14 LOCKNUT



**Fig. 21**



**Fig. 22**

## REAR INSTALLATION

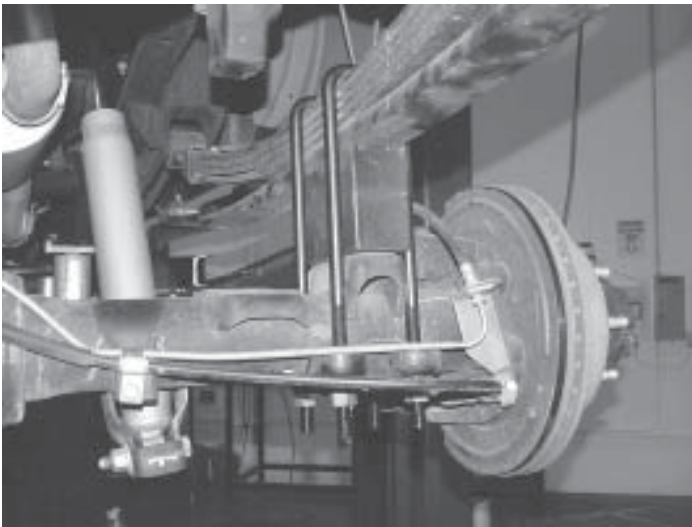
1. Block and secure vehicle.
2. Remove rear wheels and tires.
3. Support axle with floor jack.
4. Remove shock absorbers.
5. Remove rear U-bolts.
6. Lower axle away from springs.



# CAUTION

DO NOT allow axle to hang by hoses or cables.

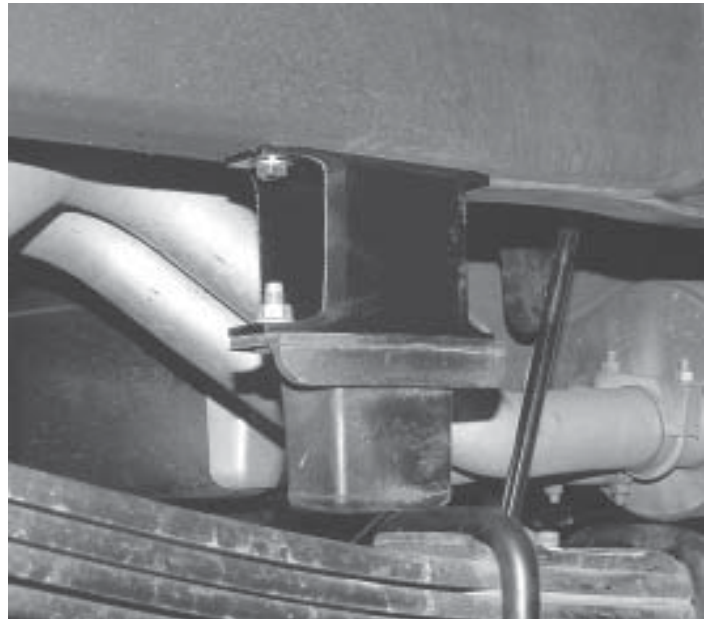
7. Remove OE spacer blocks if applicable. OE spacers will not be reused.
8. Install new spacer blocks (4KB-H).
  - A. Position blocks on top of axle with narrow end facing towards front of vehicle. **Fig. 23**
  - B. Carefully lift axle back into position with floor jack.
  - C. Install new U-bolts (1032258Q) with OE clamp plates and new nuts and washers supplied.  
**FROM 58UBBAG USE:**  
(8) 5/8-18 HIGH NUT  
(8) 5/8 FLAT WASHER (HARDENED)
  - D. Torque U-bolts to 85-100 ft. lbs.



**Fig. 23**

9. Install new bumpstop spacer brackets. **Fig. 24**
  - A. Remove OE bumpstops.
  - B. Install new spacer brackets (201015) to frame using new hardware supplied. Torque to 65 ft. lbs.  
**FROM BAG7 USE:**  
(4) 3/8-16 X 1 1/4 HEX BOLT  
(8) 3/8 FLAT WASHER  
(4) 3/8-16 LOCKNUT
  - C. Install OE bumpstops onto new spacer brackets using OE hardware. Torque to OE specifications.

**NOTE:** Some OE bumpstops have a raised bump on their mounting surface. This must be removed so that it will seat properly on the spacer.



**Fig. 24**

10. Install new longer shock absorbers (76520 - or see WARNING). Use OE hardware and torque to 54 ft. lbs.  
Rear extended length: 29.75"  
Rear collapsed length: 17.50"



# WARNING

We strongly recommend using the Trail Master shocks that were engineered to be used with this kit. If you use other shocks, they **MUST** match the full extended and full collapsed lengths of the Trail Master units **EXACTLY**. The use of longer or shorter shocks than recommended may cause damage to the vehicle suspension and could result in sudden loss of control of the vehicle and personal injury. Contact Trail Master for the exact lengths of the front and rear shocks that must be used with this suspension kit.

11. Install rear wheels and lower the vehicle.
12. Re-check all fasteners on both front and rear of vehicle. Turn steering fully in both directions and check for any clearance issues. Test brakes for proper feel before driving any distance.
13. After driving the vehicle a short distance and while on level ground, adjust the torsion bar adjuster bolts to achieve a ride height equal to the original OE height plus 6 inches. Have the vehicle front end aligned by a professional alignment technician. Complete the information on the worksheet , pg. 11.

# INSTALLATION WORKSHEET

## 1. Trail Master product information

- A. Trail Master product part number \_\_\_\_\_
- B. Purchased from \_\_\_\_\_
- C. Attach copy of original receipt to this page.

## 2. Vehicle identification information

- A. Vehicle make \_\_\_\_\_
- B. Model \_\_\_\_\_
- C. Year \_\_\_\_\_
- D. VIN number \_\_\_\_\_
- E. Mileage \_\_\_\_\_
- F. Engine \_\_\_\_\_

## 3. Owners information

- A. Name \_\_\_\_\_
- B. Address \_\_\_\_\_
- C. City \_\_\_\_\_
- D. State \_\_\_\_\_ Zip \_\_\_\_\_

## 4. Vehicle measurements

### A. Center of wheel to fender: (on level ground)

Stock                      Lifted

- Right front \_\_\_\_\_
- Right rear \_\_\_\_\_
- Left front \_\_\_\_\_
- Left rear \_\_\_\_\_

### B. Bump stop to contact point (with kit at ride height):

- Right front \_\_\_\_\_
- Right rear \_\_\_\_\_
- Left front \_\_\_\_\_
- Left rear \_\_\_\_\_

## 5. Tire information (with lift):

- A. Tire size \_\_\_\_\_
- B. Tire brand \_\_\_\_\_
- C. Actual diameter (measure) \_\_\_\_\_

## 6. Wheel information (with lift):

- A. Wheel size \_\_\_\_\_
- B. Wheel brand \_\_\_\_\_
- C. Style \_\_\_\_\_
- D. Backspacing \_\_\_\_\_

## 7. List other equipment or accessories

\_\_\_\_\_

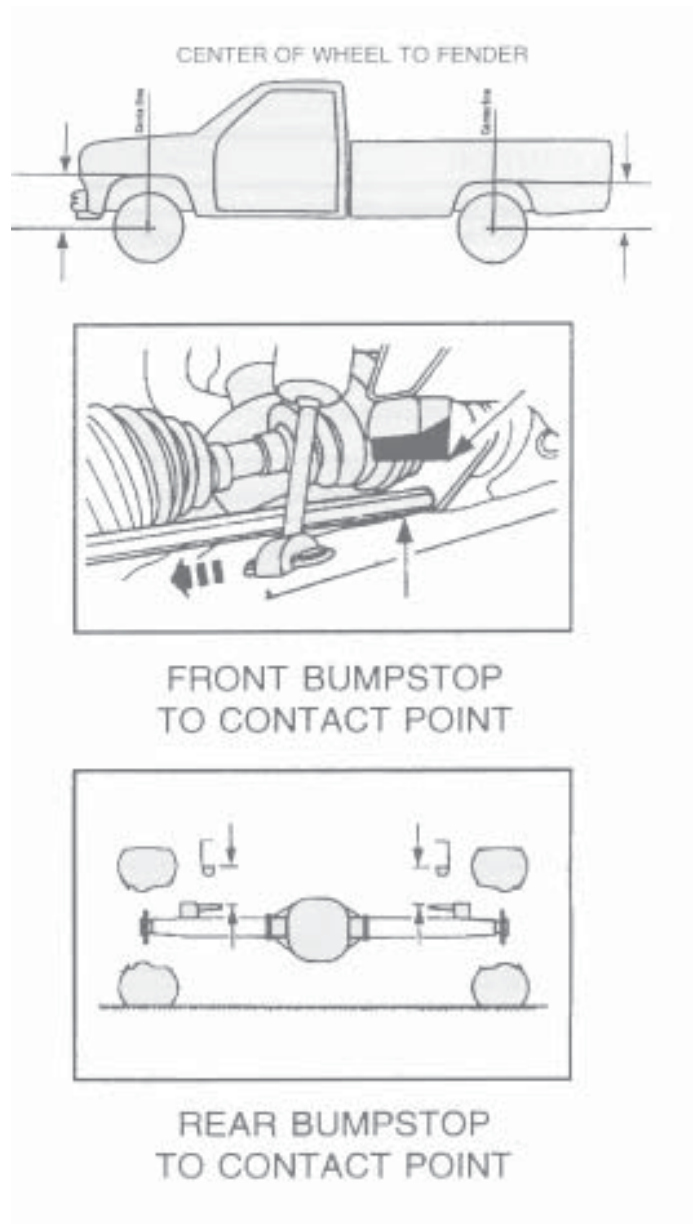
\_\_\_\_\_

## 8. Installer information

- A. Name of installer \_\_\_\_\_
- B. Name of shop \_\_\_\_\_
- C. Address \_\_\_\_\_
- D. City \_\_\_\_\_
- E. State \_\_\_\_\_ Zip \_\_\_\_\_
- F. Phone \_\_\_\_\_

## 9. Wheel alignment information

Attach a copy of the wheel alignment results.



## POST-INSTALLATION NOTES



### WARNING

1. Check all fasteners for proper torque before driving the vehicle for the first time with this kit, after the first 500 miles, after each off-road use and during routine vehicle servicing. Worn, damaged or loose parts can fail suddenly resulting in loss of control of the vehicle and personal injury.
2. In ALL steering and suspension positions, check to ensure that there is adequate clearance between ALL rotating, moving, fixed and heated members. Ensure adequate clearance around steering components, exhaust components, brake lines, fuel lines, fuel tank and electrical wiring.
3. Visually inspect components for wear or damage after each off-road use and during routine vehicle servicing. Worn, damaged or loose parts can fail suddenly resulting in loss of control of the vehicle and personal injury.
4. Trail Master does not recommend a particular tire and wheel combination for use with its products and assumes no responsibility for customer choice of tires and wheels. Consult your owner's manual for recommended tire sizes and warnings related to use of oversize tires and wheels. In general, larger tire and wheel combinations may increase stress and wear on steering components leading to increased maintenance and greater risk of component failure, including loss of steering control. Property damage or personal injury may result. Large tire and wheel combinations may also alter speedometer calibration, reduce braking effectiveness and alter vehicle center of gravity height (See product safety warnings). Check with an experienced off-road shop for the tire and wheel combinations that work best on your truck. Remember, **BIGGER** isn't necessarily better.
5. Trail Master's goal is to provide you with the best system possible for a reasonable cost. It must be noted that the components in your Trail Master system do not eliminate OE component weaknesses.
6. Perform headlight adjustment.
7. Set vehicle alignment within OE specifications. The size of rim and tire combinations should be considered when making front end adjustments.
8. Retain this and all information regarding your altered vehicle for future reference. Thank you for choosing Trail Master. For questions, contact our Technical Assistance Department at (928) 636-3175.

## PRODUCT SAFETY LABEL

Supplied in kit is a safety warning label. Install label inside cab. Locate label in a highly visible location to all operators of this vehicle. If label becomes lost or damaged, contact Trail Master at (928) 636-3175 for a replacement.



### WARNING

The suspension of this vehicle has been modified to improve off-road performance. As a result, this vehicle may handle differently than factory equipped vehicles. Extreme care must be used to prevent loss of control or roll over during sharp turns or abrupt maneuvers. Failure to drive this vehicle safely may result in serious injury or death. Do not drive this vehicle unless you are familiar with its unique handling characteristics and are confident of your ability to maintain control under all driving conditions. Consult the instructions accompanying this product and the vehicle owner's manual for additional product safety warnings. Always wear seat belts, reduce your speed and drive safely.

*trail master*<sup>®</sup>



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