

#011506, 011508, #011509

Installation Instructions

Rear Axle Flip

Chevrolet/GMC 5" ZR2 Kit



READ AND UNDERSTAND ALL INSTRUCTIONS AND WARNINGS PRIOR TO INSTALLATION OF SYSTEM AND OPERATION OF VEHICLE.

Parts List

011506

Part#	Qty	Description
01146-1	2	Axle Flip—Top Plate
01147-1	1	Axle Flip—Bottom Plate D.S.
01153-1	1	Axle Flip—Bottom Plate P.S.
N96FH	8	9/16" Fine High Nut
W96S	8	9/16" SAE Flat Washer
T86FBB	1	Brake Line Drop Bracket
B381G2	1	3/8 x 1" Bolt
LW38	1	3/8" Lock Washer
N38SS	1	3/8-16 Hex Nut
962340700R	4	9/16 x 2-3/4 x 7" Round U-Bolt
380412FCP	2	3/8 x 4.5" Center pin & Nut
723	1	Bolt Pack
25-1	2	1-1/8" O.D. x 1-1/8" Long Sleeve
36-1	2	3/4" O.D. x 1-3/8" Long Sleeve

011508

Part#	Qty	Description
01146-1	2	Axle Flip—Top Plate
01147-1	1	Axle Flip—Bottom Plate D.S.
01153-1	1	Axle Flip—Bottom Plate P.S.
960305-1	2	S-10 Torsion Bar Drop Link
N96FH	8	9/16" Fine High Nut
W96S	8	9/16" SAE Flat Washer
T86FBB	1	Brake Line Drop Bracket
B381G2	1	3/8 x 1" Bolt
LW38	1	3/8" Lock Washer
N38SS	1	3/8-16 Hex Nut
SB58BK	2	5/8" I.D. Hourglass Bushing
962340700R	4	9/16 x 2-3/4 x 7" Round U-Bolt
380412FCP	2	3/8 x 4.5" Center pin & Nut
723	1	Bolt Pack
25-1	2	1-1/8" O.D. x 1-1/8" Long Sleeve
36-1	2	3/4" O.D. x 1-3/8" Long Sleeve

011509

Part#	Qty	Description
01146-1	2	Axle Flip—Top Plate
01147-1	1	Axle Flip—Bottom Plate D.S.
01154-1	1	Axle Flip—Bottom Plate P.S.
01150-1	1	Track Bar Bracket

514	1	ZR2 Track Bar Bolt Kit
N96FH	8	9/16" Fine High Nut
W96S	8	9/16" SAE Flat Washer
T86FBB	1	Brake Line Drop Bracket
B381G2	1	3/8 x 1" Bolt
LW38	1	3/8" Lock Washer
N38SS	1	3/8-16 Hex Nut
962340700R	4	9/16 x 2-3/4 x 7" Round U-Bolt
380412FCP	2	3/8 x 4.5" Center pin & Nut
723	1	Bolt Pack
25-1	2	1-1/8" O.D. x 1-1/8" Long Sleeve
36-1	2	3/4" O.D. x 1-3/8" Long Sleeve

BOLT PACK 723

Qty	Description
2	5/8"-11 x 4" bolt
2	5/8"-11 prevailing torque nut
4	5/8" SAE flat washer

Installation Instructions

1. Block and secure the front of the vehicle. Use a hydraulic jack or equivalent to raise the rear of the vehicle. Place jack stands under the frame just in front of the spring hangers.
2. Remove the wheels and tires. Remove the OE shocks.
3. Remove the retainer holding the brake line to the frame bracket. Slit the OE bracket to remove the brake line. Be sure not to damage the brake line. Bend the bracket open and remove the line. Bend the bracket back flat.
4. Install the supplied brake line drop bracket to the OE bracket using the supplied 3/8" x 1-1/4" bolt, nut and washers. Attach the line to the key slot in the drop bracket.
5. Support the rear axle with a hydraulic jack. Disconnect the emergency brake cable guide from the frame.

Pick-up Only

6. Disconnect the rear track bar at the frame mount by removing the OE bolt.

Blazer/Jimmy Only

7. Disconnect the rear sway bar at the frame link mount. This is done by removing the nut that attaches the sway bar to the link that comes down from the frame.

All Models

8. Remove the spring U-bolts and remove the springs from the vehicle.
9. Clamp the leaf spring with two large c-clamps on both sides of the center pin. Remove the center pin and insert it through the bottom of the spring. Torque 3/8" nut to 35 ft.lbs.

Pick-up Only

10. The front of the passenger's side OE spring perch must be modified. Remove the front tab of the OE perch to provide clearance for the new BDS perch. (Fig. 1)



11. Install the new spring perch brackets on the axle tube. The long alignment tabs should fit in the rear of the OE axle perch. The shock mount should be facing the rear of the vehicle on the driver's side and the front of the vehicle on the passenger's side. The shock stud should point toward the center of the vehicle. **Note:** Some models have a brake line mounting bracket on the back of the axle tube right where the spring perch bracket mounts. If this is the case, the OE mount will have to be cut off. The surface should be ground flush and painted.

Blazer/Jimmy Only

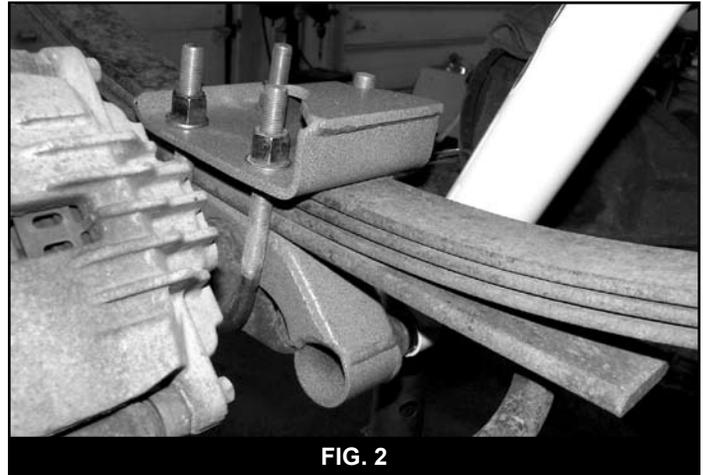
12. Install the new spring perch brackets on the axle tube. The long alignment tab should fit in the rear of the OE axle perch. The shock mount should be facing the rear of the vehicle and the shock stud should point toward the center of the vehicle. **Note:** Some models have a brake line mounting bracket on the back of the axle tube right where the spring perch bracket mounts. If this is the case, the OE mount will have to be cut off. The surface should be ground flush and painted.

All Models

13. Lower the axle while taking care not to over-extend the brake lines or bind the drive shaft. Install the leaf springs on top of the axle in the new perch brackets. Fasten the springs to the shackles and hanger with OE hardware. Do not tighten.
14. Install the new spring plate on top of the springs over the center pin with the bump stop pad toward the front of the vehicle. Install the new U-bolts around the axle and up through the new spring plate. Retain with provided high nuts and washers. Once both sides are installed and aligned torque the U-bolts to 100-120 ft-lbs. (Fig. 2)
15. Locate a safe location for the emergency brake guide. Drill a new hole and install using OE fasteners.

Pick-up Only

16. Install the supplied track bar drop bracket into the OE frame pocket. Fasten the bracket using the 3/8" bolt on the back of the bracket and the 1/2" bolt through the OE mount hole. Torque 3/8" bolts to 35 ft.lbs. and 1/2" bolts to 90 ft.lbs. **Note:** You may need to drill out the OE hole to accept the 1/2" bolt.
17. Attach the track bar to the drop bracket with the OE fasteners. Do not tighten.
18. Install the wheels and tires and lower the vehicle to the ground.



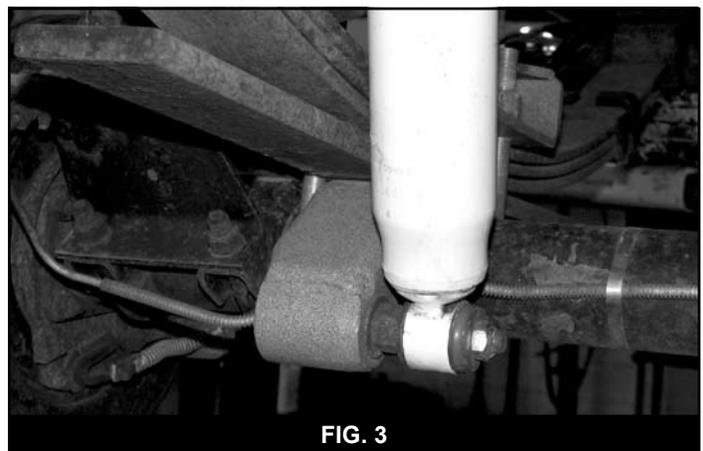
19. With the weight of the vehicle on the tires torque the track bar mounting bolt to 45 ft.lbs.

Blazer/Jimmy Only

20. Replace the existing sway bar link with the supplied link. Install the supplied sleeve in the eye of the supplied link and retain with factory hardware. Torque sway bar bolts.
2 door models:
Upper bolt 25 ft.lbs.
Lower bolt to 50 ft.lbs.
4 door models:
Upper bolt 50 ft.lbs.
Lower bolt 42 ft.lbs.

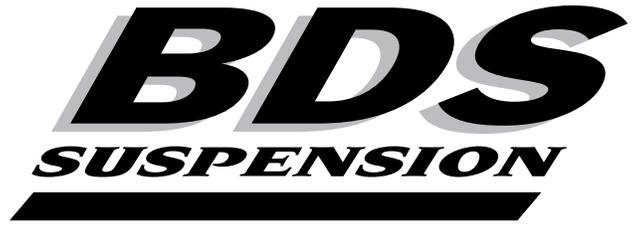
All Models

21. Install new BDS shocks using the bushings provided in the shock box. The 5/8" I.D. bushing is for the frame mount and the 3/4" I.D. bushing attaches to the new lower mount. Install the shock to the frame mount with OE fasteners. Tighten securely. (Fig. 3)



22. Install the supplied sleeve (3/4" O.D. x 1-3/8" long) in the lower bushing of the shock. Slide the 5/8" x 4" bolt through the mounting bracket so the nut end of the bolt is toward the center of the vehicle. Continue sliding on in the following order: 1-1/8" O.D. x 1-1/8" long spacer sleeve, 5/8" washer, shock, washer, and 5/8" nut. Tighten securely. (Fig. 3) **Note:** See bolt pack #723 for all provided hardware.
23. Bounce the rear of the vehicle to settle the rear suspension and Torque the front spring hanger bolt and the shackle bolts to 89 ft.lbs.
24. Check all fasteners for proper torque.

#021502, 021503, 021504
5" Suspension System
84-04 Chevrolet/GMC S10/S15 4WD



READ AND UNDERSTAND ALL INSTRUCTIONS AND WARNINGS PRIOR TO INSTALLATION OF SYSTEM AND OPERATION OF VEHICLE.

SAFETY WARNING

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

PRODUCT SAFETY WARNING

Certain BDS Suspension products are intended to improve off-road performance. Modifying your vehicle for off-road use may result in the vehicle handling differently than a factory equipped vehicle. Extreme care must be used to prevent loss of control or vehicle rollover. Failure to drive your modified vehicle safely may result in serious injury or death. BDS Suspension Co. does not recommend the combined use of suspension lifts, body lifts, or other lifting devices.

You should never operate your modified vehicle under the influence of alcohol or drugs. Always drive your modified vehicle at reduced speeds to ensure your ability to control your vehicle under all driving conditions. Always wear your seat belt.

PRE-INSTALLATION NOTES

1. Special literature required: OE Service Manual for model/year of vehicle. Refer to manual for proper disassembly/reassembly procedures of OE and related components.
2. Adhere to recommendations when replacement fasteners, retainers and keepers are called out in the OE manual.
3. Larger rim and tire combinations may increase leverage on suspension, steering, and related components. When selecting combinations larger than OE, consider the additional stress you could be inducing on the OE and related components.

4. Post suspension system vehicles may experience drive line vibrations. Angles may require tuning, slider on shaft may require replacement, shafts may need to be lengthened or trued, and U-joints may need to be replaced.
5. Secure and properly block vehicle prior to installation of BDS Suspension components. Always wear safety glasses when using power tools.
6. If installation is to be performed without a hoist, BDS Suspension Co. recommends rear alterations first.
7. Due to payload options and initial ride height variances, the amount of lift is a base figure. Final ride height dimensions may vary in accordance to original vehicle attitude. Always measure the attitude prior to beginning installation.

POST-INSTALLATION WARNINGS

1. Check all fasteners for proper torque. Check to ensure for adequate clearance between all rotating, mobile, fixed, and heated members. Verify clearance between exhaust and brake lines, fuel lines, fuel tank, floor boards and wiring harness. Check steering gear for clearance. Test and inspect brake system.
2. Perform steering sweep to ensure front brake hoses have adequate slack and do not contact any rotating, mobile or heated members. Inspect rear brake hoses at full extension for adequate slack. Failure to perform hose check/ replacement may result in component failure. Longer replacement hoses, if needed can be purchased from a local parts supplier.
3. Perform head light check and adjustment.
4. Re-torque all fasteners after 500 miles. Always inspect fasteners and components during routine servicing.

102 S. Michigan Avenue • Coldwater, MI 49036
517-279-2135 • www.bds-suspension.com

PARTS LIST

Part #	Qty	Description
01134	1	Rear Crossmember
01132	1	Front Crossmember
01106	1	Differential Skid Plate
01137	2	Front Anti-Sway Bar Drop
510	1	Bolt Pack
511	1	Bolt Pack (95-03 Only)
512	1	Bolt Pack
513	1	Bolt Pack (84-94 Only)
514	1	Bolt Pack
517	1	Bolt Pack
02101	1	Diff. Drop Bracket (pass)
01115	1	Diff. Drop Bracket (drv)
01133	1	Steering Center Link
01499	2	1/4" Thick Load Washers
01142	1	Upper Rear Control Arm Bracket (drv)
01143	1	Upper Rear Control Arm Bracket (pass)
01144	1	Upper Front Control Arm Bracket (drv)
01145	1	Upper Front Control Arm Bracket (pass)
01148	1	Torsion Bar Crossmember Skid Plate (95-03 Only)
01149	2	Backing Plate
01152	8	Spacer Plate
SBTA	2	Front Brake Line Bracket
26560	2	Tie Rod Adjusting Sleeve
01129L	1	Torsion Bar Drop Bracket (84-94 Only)
01129R	1	Torsion Bar Drop Bracket (84-94 Only)
960305	2	Torsion Bar Crossmember Drop (95-03 Only)
SB26RB	4	Stem Bushing (95-03 Only)
117300006	2	Stem Washer (95-03 Only)
27-1	4	0.875x0.156x1.680 Sleeve
SB58RB	2	Bushing
45313	2	Sleeve
BSC075	2	Bushing
46-1	1	Sleeve
099000	4	Zip Ties
342701	2	Loctite

BOLT PACK 510

Qty	Description
4	14mm-2.00 x 100mm bolt class 10.9
4	14mm-2.00 prevailing torque nut
8	9/16" SAE flat washer
7	1/2"-13 x 1-1/4" bolt grade 5
10	7/16" USS flat washer
5	1/2"-13 prevailing torque nut
1	1/2"-13 x 3" bolt grade 5
3	1/2" SAE flat washer

BOLT PACK 511

Qty	Description
2	3/8"-16 x 5-1/2" bolt grade 5
2	3/8"-16 prevailing torque nut
4	12mm-1.75 x 100mm bolt class 8.8
4	12mm-1.75 prevailing torque nut

4	1/2"-13 x 1-1/4" bolt grade 5
4	1/2"-13 prevailing torque nut
4	7/16" USS flat washer
4	7/16"-14 x 1-1/4" bolt grade 5
4	7/16"-14 prevailing torque nut
10	3/8" USS flat washer clear zinc
2	3/8"-16 x 1" self-tapping bolt
2	1/2" SAE flat washer

BOLT PACK 512

Qty	Description
4	3/8"-16 x 1-1/4" bolt grade 5
8	3/8" USS flat washer
4	3/8"-16 prevailing torque nut
2	1/4"-20 x 3/4" carriage bolt
2	1/4"-20 prevailing torque nut
2	1/4" USS flat washer

BOLT PACK 513

Qty	Description
4	12mm-1.75 x 100mm bolt class 8.8
4	12mm-1.75 prevailing torque nut
8	1/2"-13 x 1-1/4" bolt grade 5
8	1/2"-13 prevailing torque nut
12	7/16" USS flat washer
4	7/16"-14 x 1-1/4" bolt grade 5
4	7/16"-14 prevailing torque nut
8	3/8" USS flat washer
2	3/8"-16 x 1" self-tapping bolt
2	1/2" SAE flat washer

BOLT PACK 514

Qty	Description
2	1/2" SAE flat washer
4	3/8" USS flat washer
2	3/8"-16 x 1" bolt grade 5
2	3/8"-16 prevailing torque nut
1	1/2"-13 x 2 1/2" bolt grade 5
1	1/2"-13 prevailing torque nut

BOLT PACK 515

Qty	Description
4	1/4-28 grease zerk
2	3/8"-16 standard hex nut
2	3/8" lock washer
10	1/4"-28 x 1" bolt grade 8
10	1/4"-28 prevailing torque nut
20	1/4" SAE flat washer

BOLT PACK 517

Qty	Description
3	10mm-1.50 x 60mm bolt class 10.9
3	10mm flat washer
1	1/2"-13 x 3" bolt grade 5
1	1/2"-13 prevailing torque nut
2	1/2" SAE flat washer
2	5/16" -18 x 1" self-tapping bolt

PRE-INSTALLATION MEASUREMENTS

Measure from the center of the wheel up to the bottom edge of the wheel opening

LF _____ RF _____ LR _____ RR _____

INSTALLATION INSTRUCTIONS

1. Park and secure the vehicle on a clean, flat surface. Block the rear tires to avoid accidental movement.
2. Disconnect and remove the battery and battery tray. Disconnect the spring clip and remove the cable from the 4WD vacuum actuator. Press the plastic retaining tabs and remove the cable from the bracket. Disconnect the cable clamp at the frame (Fig. 1). **Note:** On some models the actuator is mounted next to the battery.



FIG. 1

3. Raise the front of the vehicle so the tires are just off the ground. Support the vehicle with jack stands under the frame rail away from lower control arm anchors.
4. Remove the tires and wheels. Remove the skid plate and the front sway bar. Retain all hardware.
5. Measure the length of exposed thread on the torsion bar adjustment bolts and note below. CAUTION: The torsion bar is under extreme pressure. Use the correct unloading tool to remove the pressure on the torsion bars before attempting to remove the assembly. A J36202 or equivalent torsion bar unloading tool must be used. Be sure to follow the OE manual and the torsion bar unloading tool literature as to how to unload the torsion bars.

DS _____ PS _____

6. Mark the torsion bars for driver's side (DS) front and passenger side (PS) front to ensure that they are installed as they were removed. Remove the torsion bars.
7. Remove the torsion bars by first removing the adjusting bolts then remove the retaining plates.
8. Drive the torsion bars forward using a maul or an air hammer through the access hole in the back of the torsion bar crossmember. Note: This will allow the torsion bar adjusters to drop free.
9. Remove the hardware holding the torsion bar crossmember to the frame. On 84-94 models there are two bolts mounting the crossmember to the inside of the frame on each side. On 95-04 models, remove the nut and stem bushings from the link (Fig 2). Retain

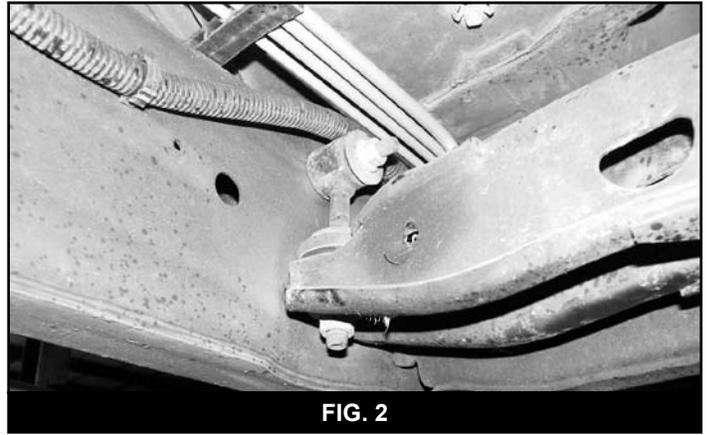


FIG. 2

all hardware. Remove crossmember from vehicle. Note: It may be necessary to remove a portion of the exhaust system on some vehicles in order to complete this operation.

10. Remove the torsion bars by pulling them toward the rear of the vehicle.
11. Mark the tie rod assemblies for inner and outer for future reference. Disconnect the tie rod ends from the OE knuckle and relay rod.
12. Disconnect the inner C.V. joint from the differential flange by removing the fasteners on the older flange style. On newer model vehicles, pry the slip joint apart (Fig 3).



FIG. 3

13. Disconnect the brake line and ABS lead from the upper control arm and retain fasteners (Fig 4).
14. Disconnect the ABS lead connector at the frame. Disconnect the ABS and brake line from frame. (Fig. 5)
15. Remove the brake caliper and support it out of the way. **Do Not Let The Caliper Hang By The Hose!**
16. Disconnect and remove the shocks. Retain mounting hardware
17. Support the lower control arm and knuckle assembly with a floor jack. Remove the upper control arm ball joint cotter pin and nut. Strike the knuckle near the ball joint to dislodge the ball joint or use a pickle fork.

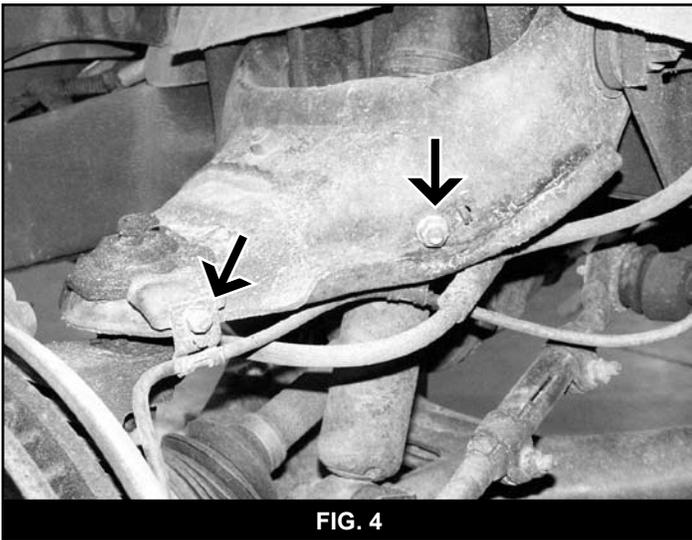


FIG. 4

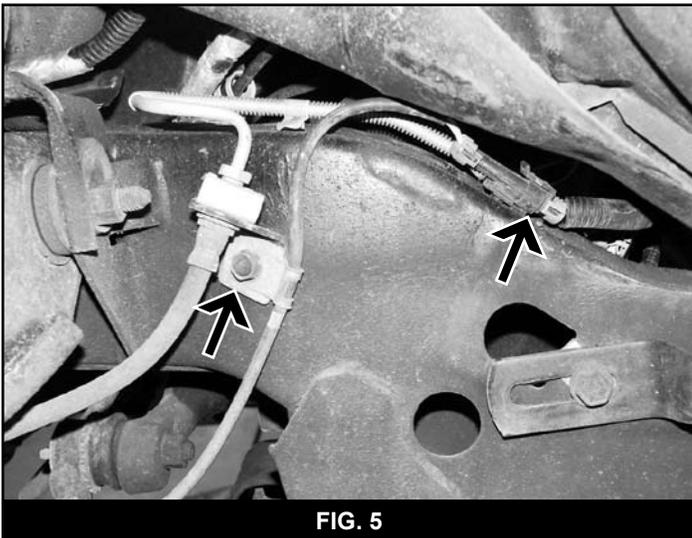


FIG. 5

25. Disconnect the upper control arm pivot bolts and remove the upper control arm from the vehicle. Note the direction the eccentric bolts are installed.
26. Disconnect the lower control arm pivot bolts and remove the knuckle/a-arm assembly from the vehicle.
27. Remove the front bump stops below the rear upper control arm pocket. (Fig. 6) These will be reused.

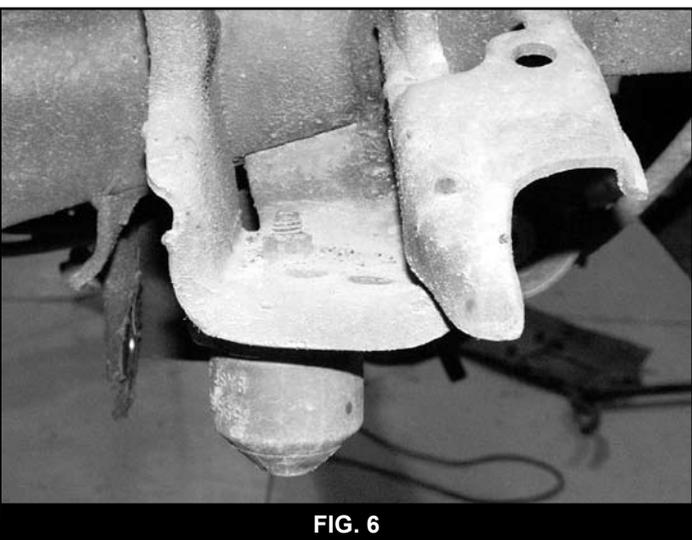


FIG. 6

28. Remove stabilizer, if equipped, from fixed mount.
29. Remove the OE steering relay rod by disconnecting the idler and pitman arm nuts and using a pickle fork to dislodge the relay rod. (Fig. 7)

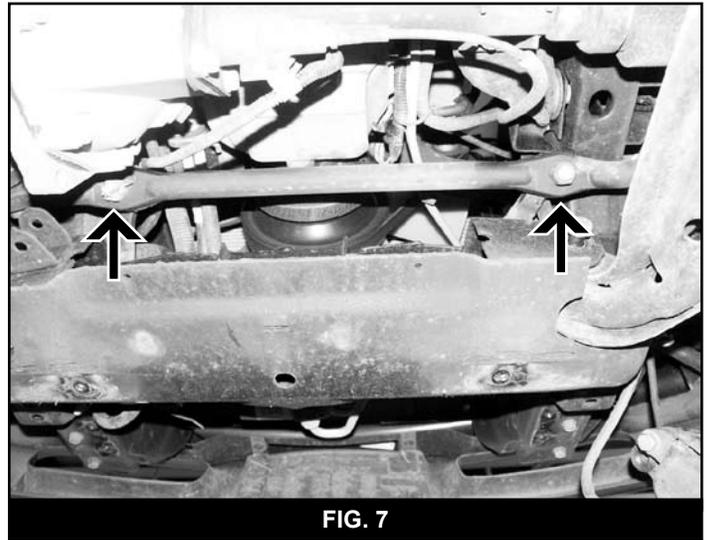


FIG. 7

30. Disconnect the front drive shaft from the differential and support it safely. Wrap tape over the u-joint cups ends to prevent them from falling off. Do not allow the slider yoke to disengage from the shaft.
31. Support the differential with a floor jack. Disconnect the electrical connector and wire clip from the center of the differential (Fig 8). Disconnect the vent hose from the driver's side of the differential. Disconnect the fasteners that attach the differential to the chassis and remove the differential from the vehicle (Fig 8, 9). Note: When lowering the front differential, make sure that the actuator cable (see Fig. 1) does not become entangled.

Note: We do not recommend using a cutting torch for the following step. Use a plasma cutter, sawzall, or cut-off wheel to remove material as instructed. Be sure to always check behind what you are cutting to avoid damage. There are fuel lines inside the frame on the driver's side, so please exercise caution. Be sure to never work alone and always keep a fire extinguisher handy.

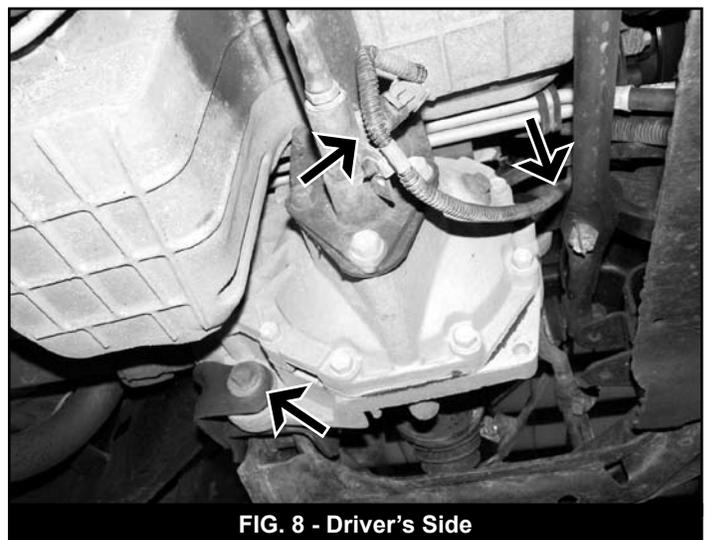


FIG. 8 - Driver's Side

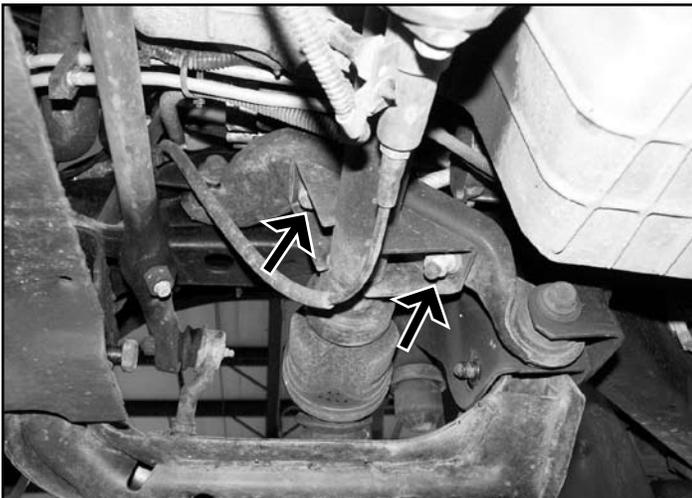


FIG. 9 - Passenger's Side

32. On the rear upper control arm pocket, cut the extended stop support wing off flush with frame. On the front surface of the pocket itself, make an outward 2" horizontal cut about 1/2" below the frame. Cut vertically through the bracket to meet the horizontal cut. (Fig. 10)

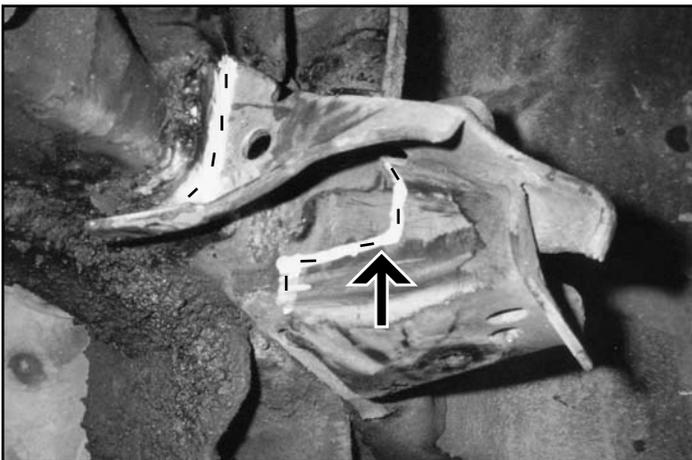


FIG. 10-View from front-Dashes indicate cut path

33. On the back surface, start a cut flush with the bottom of the frame and cut upward about 3/4". From that point cut horizontally outward about 2". Cut again down the bracket to meet the horizontal cut. (Fig. 11)



FIG. 11-View from back-Dashes indicate cut path

34. On the inside of rear upper A-arm pocket, there is a plate welded in place that protrudes into the pocket. This plate must be removed to create a flat internal surface. (Fig. 12)

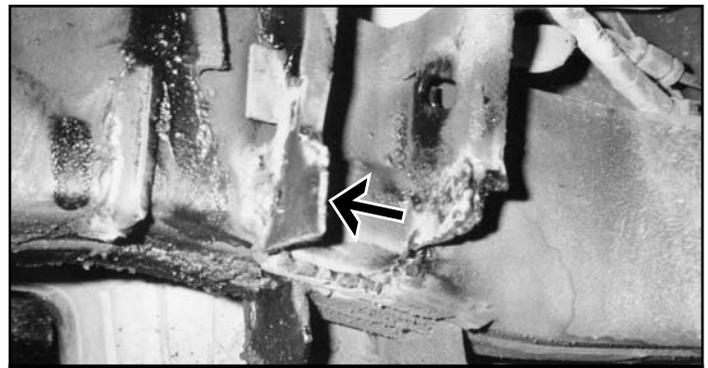


FIG. 12-View from drivers side

35. Dress and paint the affected areas. Repeat steps on the passenger's side.
36. Cut off the inner portion of the driver's side lower rear control arm pocket by making vertical and horizontal cuts 3/4" inward from the control arm mount holes. Dress and paint the affected area. (Fig. 13, 14)

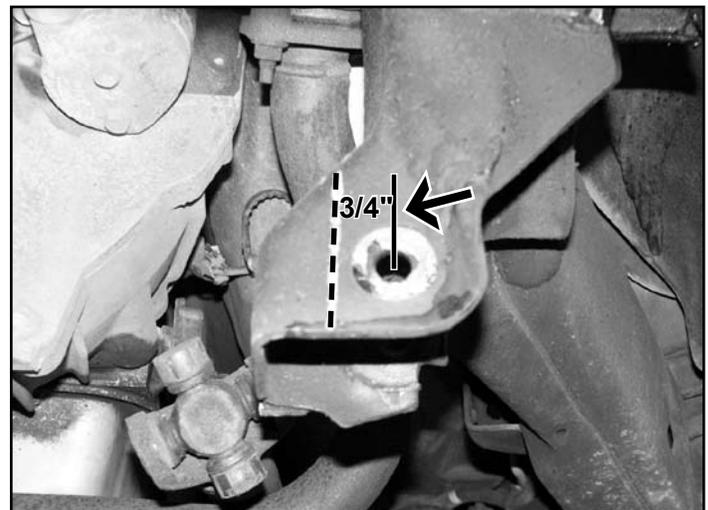


FIG. 13 - Front View

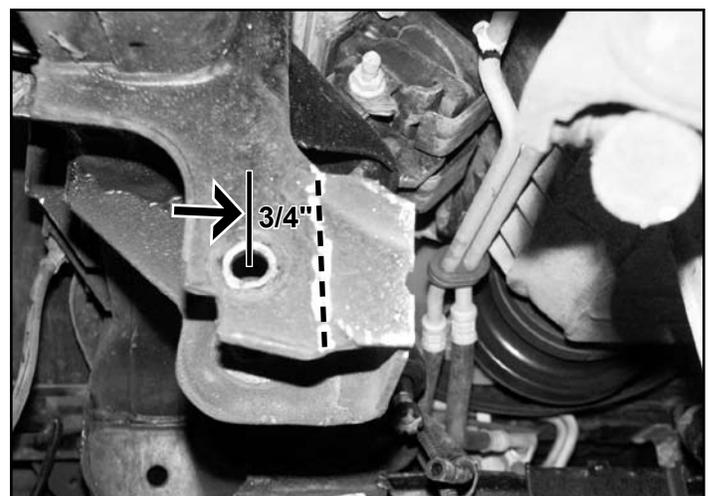
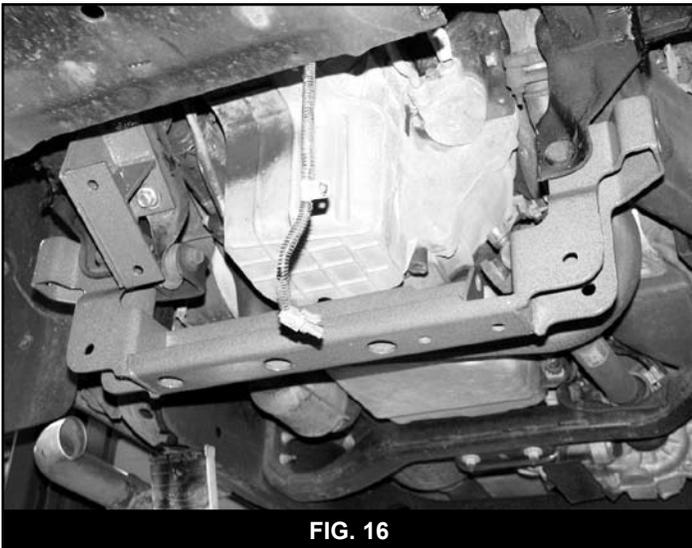


FIG. 14 - Rear View

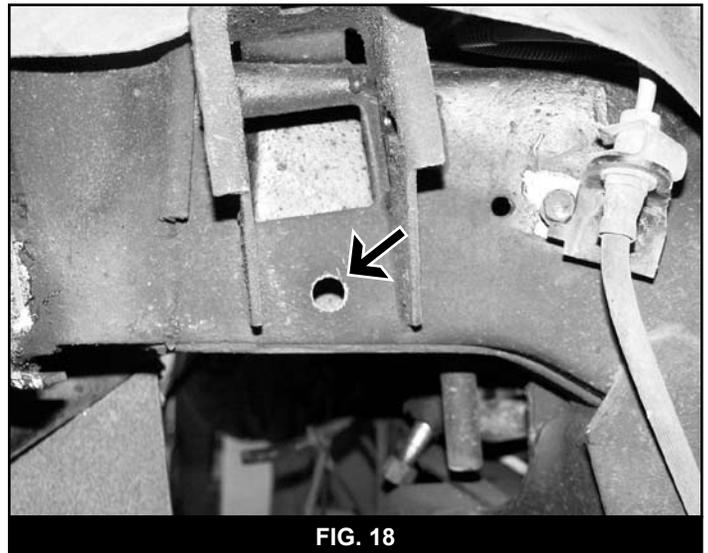
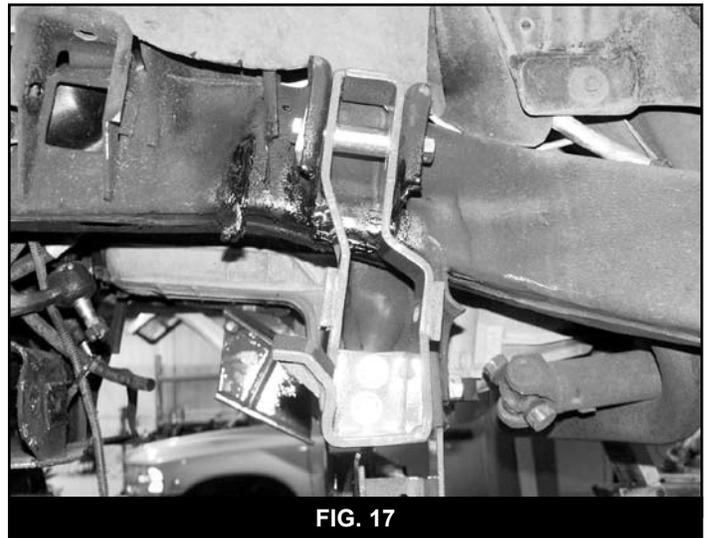
37. Cut the OE steering stabilizer mount off the back of the front crossmember behind the lower a-arm pocket. (Fig. 15)



38. Install main rear crossmember (01134) in the lower rear control arm pockets with the open side facing the front of the vehicle. Attach with the OE lower control arm hardware. Leave hardware loose. (Fig. 16)



39. Install the rear upper a-arm drop brackets (01142 DS & 01143 PS). Install the 1-11/16" sleeves inside the drop brackets and attach to the OE pocket using the 12mm x 100mm bolts, square spacer plates (01152), and nuts. (Bolt pack #511/513) Do not tighten at this time (Fig 17).
40. Align holes in drop bracket with the mating holes in the rear cross member. Attach drop bracket to cross member with the supplied 7/16" x 1-1/4" bolts, 3/8" USS washers and nuts from bolt pack #511/513. Leave hardware loose.
41. Install OE bump stop on the bottom of the supplied a-arm drop brackets as they were removed.
42. Place the passenger's side (01145) front upper control arm bracket in the OE pocket so that it is flush to the top of the bracket. Using the bracket as a template, mark the back hole location on the frame. Remove the bracket and drill a 1/2" hole at the mark (Fig 18).



43. Install a 1/2" x 1-1/4" bolt (Bolt pack #511/513) in a 01149 backing plate. Place bolt and plate in the frame so that the bolt threads are protruding out of the hole just drilled in the OE upper control arm pocket. Install the 01145 passenger's side front upper a-arm bracket in the OE pocket by lining up the hole in the back of the bracket with the bolt in the frame. Secure it with a 1/2" nut and 1/2" SAE washer from bolt pack #511/513. Leave hardware loose.
44. Repeat steps on the driver's side.
45. Install a 1/2" x 1-1/4" bolt, nut and 7/16" USS washers (Bolt pack #511/513) through the top of the OE pocket and new drop bracket. Leave loose. Insert the supplied 1-11/16" sleeve inside the bracket at the mounting point. Secure the bracket with a 12mm x 100mm bolt, nut (Bolt pack #511/513) and two 01152 spacer plates. Leave loose. (Fig. 19)
46. The OE front lower control arm pockets must be trimmed to accept the new front crossmember. Make cut lines to widen the recess that already exists in the crossmember to span the entire width of the pocket (Fig 20). Cut the recess along the lines.

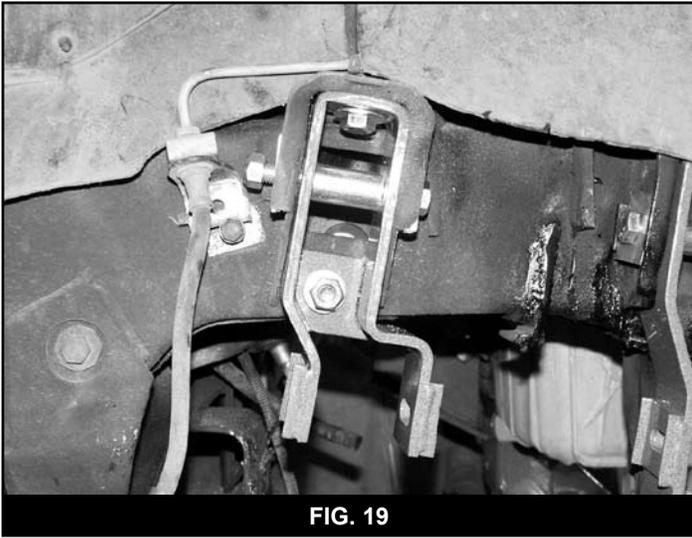


FIG. 19



FIG. 20

47. Install the front crossmember in the OE front lower control arm pockets (# 01136). Attach with the OE lower control arm hardware, running the bolts from the rear to the front. Leave loose (Fig. 21). Note: Before installing the crossmember, be sure that the inside surfaces of the OE lower control arm pockets are free of burrs. Commonly, the OE bolts and washers stretch the mounting holes when installed and leave a rolled edge that could hinder the installation of the new crossmember. These edges can be smoothed with a file or rotary grinding tool.

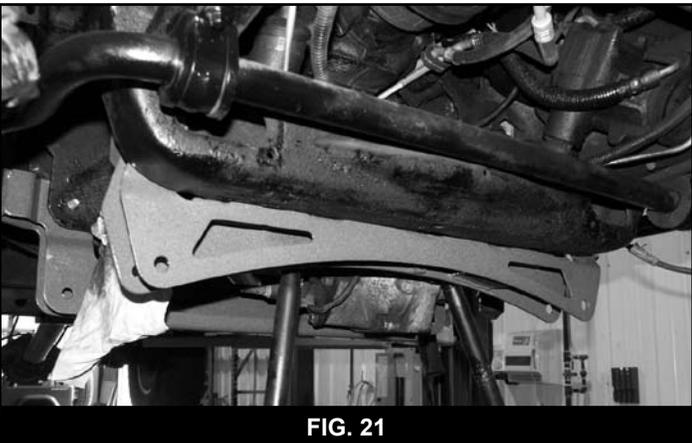


FIG. 21

48. Using the holes in the crossmember as a template, drill out two 1/2" holes in the frame. Install two 1/2" x 1-1/4" bolts with nuts and 7/16" USS washers from bolt pack #510 to retain crossmember to the frame (Fig 22).

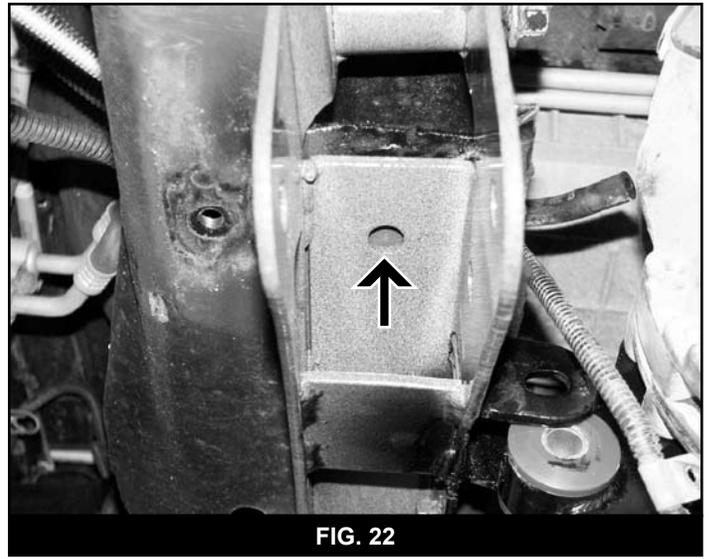


FIG. 22

49. Loosely install passenger side differential drop bracket (02101) to the OE bracket using the original hardware. Leave loose (Fig 23).

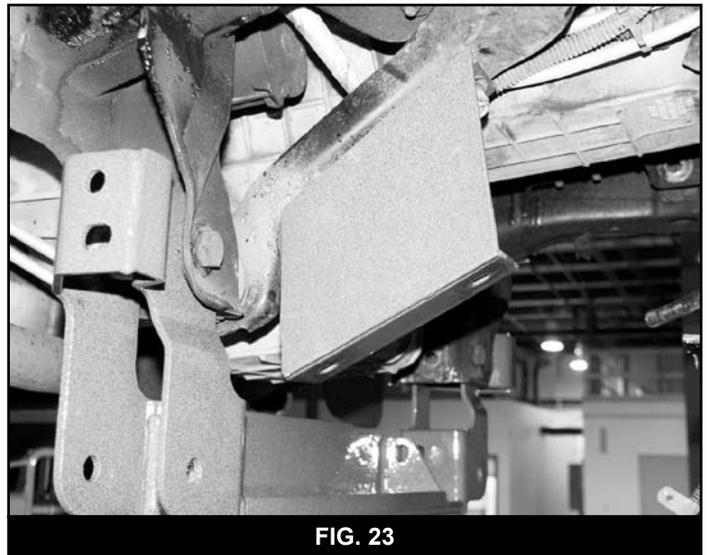


FIG. 23

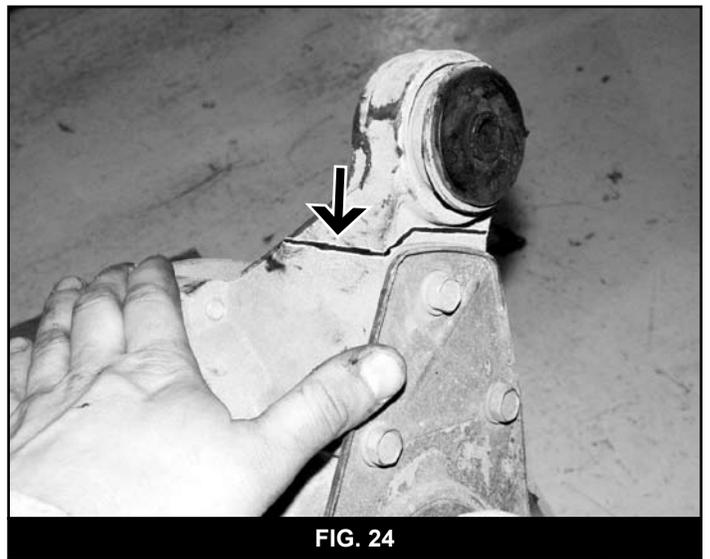


FIG. 24

50. The driver's side front differential eyelet must be removed. Mark the eye with a cut line that follows the contour of the outer steel pan (Fig 24, 25). Cut the eyelet off with a standard or power hacksaw. Note: Take care not to cut into the breather vent on the inside of the eyelet.

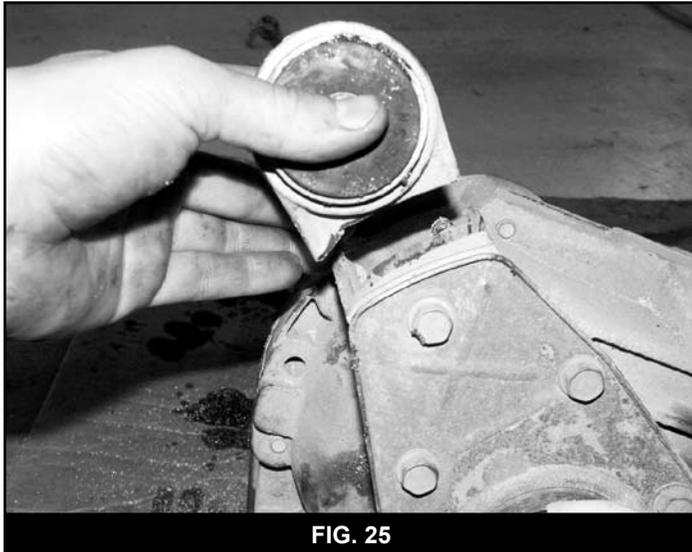


FIG. 25

51. Install the provided bushings (BSC075) and sleeve (46-1) in the new driver's side differential bracket (46-1) in the new driver's side differential bracket (#01115). Line the bracket up to the differential case bolts and remove the three corresponding to the holes in the bracket. Install the bracket with the provided 10mm x 60mm bolt and 10mm flat washers from bolt pack #517. Use Loctite on the bolts and torque to 35 ft-lbs (Fig 26).



FIG. 26

52. Support the differential with a floor jack and install it in the vehicle. Attach the differential to the #02101 passenger's side bracket using $\frac{1}{2}$ " x 1- $\frac{1}{4}$ " bolts, nuts and $\frac{7}{16}$ " USS washers from bolt pack #510. Attach the differential to the rear crossmember using the OE bolt and nut. Attach the new front driver's side bracket to the tabs on the front crossmember with a $\frac{1}{2}$ " x 3" bolt, nut and $\frac{7}{16}$ " USS washers from bolt pack #510 (Fig 26). Torque all fasteners retaining the drop brack-

ets to the chassis. Torque all fasteners retaining the drop brackets to the differential. $\frac{1}{2}$ " bolts torque to 65 ft.lbs., $\frac{7}{16}$ " bolts torque to 45 ft.lbs. Reconnect the electrical and vent lines to the differential.

CONTROL ARM INSTALLATION

53. If reusing the ball joints, they must be removed from the OE control arms. The ball joints will either be riveted or bolted on. If riveted, remove the rivets with a grinder, drill, or air chisel.
54. Locate the new driver's side control arm (Fig. 27).

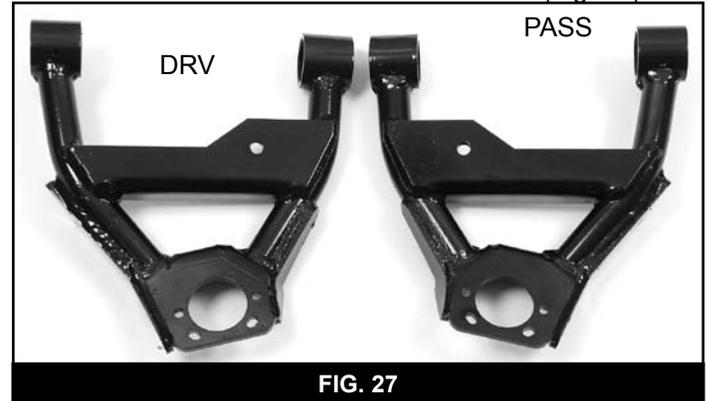


FIG. 27

55. Install the ball joint (new or reused) in the new control arm using the $\frac{1}{4}$ " x 1" bolts, nuts, and SAE washers from bolt pack #515. Torque fasteners to 12 ft-lbs. Note: Ball joint installs from the top down.
56. Install the new bump stop to the underside of the control arm cross brace and fasten with a $\frac{3}{8}$ " nut and $\frac{3}{8}$ " lock washer from bolt pack #515 (Fig. 28).

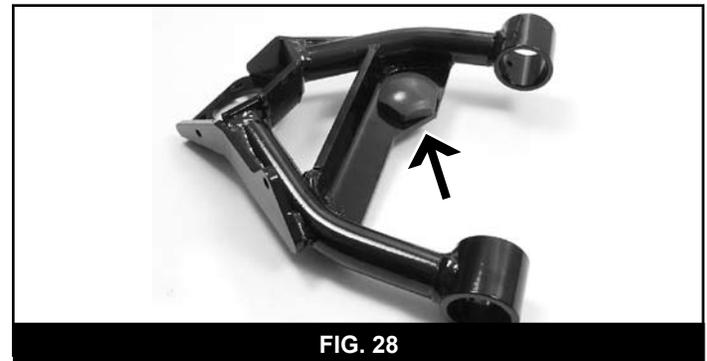


FIG. 28

57. Install the provided $\frac{1}{4}$ " grease zerks from bolt pack #515 in the two thread holes located on the top side of the control arm pivots (Fig. 29).

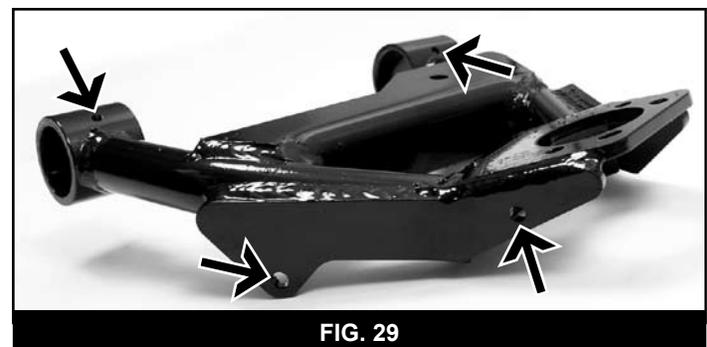


FIG. 29

58. Lubricate and install the provided fluted bushing in the control arms. Install the provided serrated steel sleeves in the bushings.
59. Mount the new control arm assembly into the frame bracket pockets and retain with the OE cam bolts (installed as they were removed). Do not tighten at this time.
60. With both upper control arms installed, go back and tighten all 1/2", 7/16" and 12mm bolts that retain the upper control arm brackets to the frame and rear crossmember. Torque 1/2" hardware to 65 ft-lbs. Torque 7/16" and 12mm hardware to 50 ft-lbs.

Repeat the installation on passenger's side of the vehicle

61. Install the knuckle/a-arm assembly in the new brackets with 14mm x 100mm bolts, nuts and 9/16" SAE washer (bolt pack #510) while aligning the CV shaft to the differential. Attach the upper control arm ball joint to the knuckle and torque the nut to 61 ft.lbs. Leave a-arm pivot bolts loose. (Fig 30)

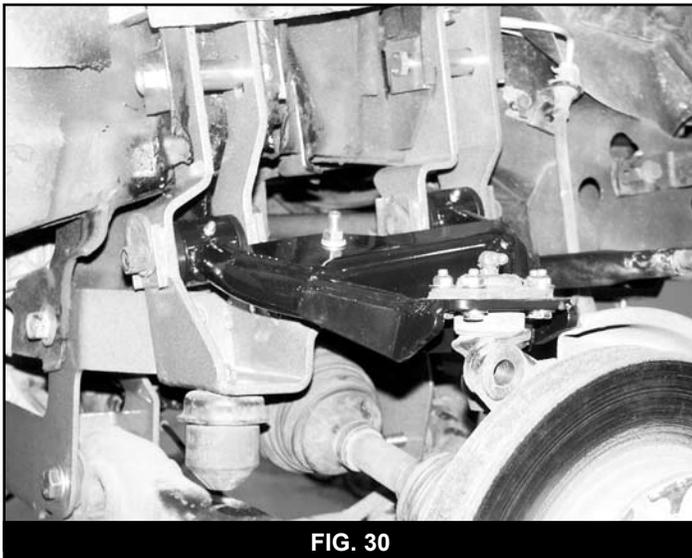


FIG. 30

62. After the lower a-arms are installed, go back and tighten all of the fasteners retaining the front and rear crossmembers. Torque all 14mm and 1/2" fasteners to 65 ft-lbs. Torque all 7/16" fasteners to 45 ft-lbs. Do not install shock at this time. They must be installed after alignment.
63. Install the differential skid plate to the front and rear crossmember with 1/2" x 1-1/4" bolts and 1/2" SAE washer from bolt pack #510. Each of the three mounting points have nuts already attached (Fig. 31).
64. Install the brake calipers to OE specification.
65. Connect the inner C.V. to the differential mating flange and torque flange bolts to 60 ft.lbs. If installing a new slide in style, be sure the unit is fully engaged.
66. Relocate brake line mount on the frame by installing the supplied brake line relocation bracket #SBTA. Attach the supplied bracket to the OE mount using the OE fasteners. Carefully acquire slack in the brake lines. Manipulate the brake line outward and down to remount to the extension bracket using the 1/4" carriage bolt and nut from bolt pack #512 (Fig 32).



FIG. 31

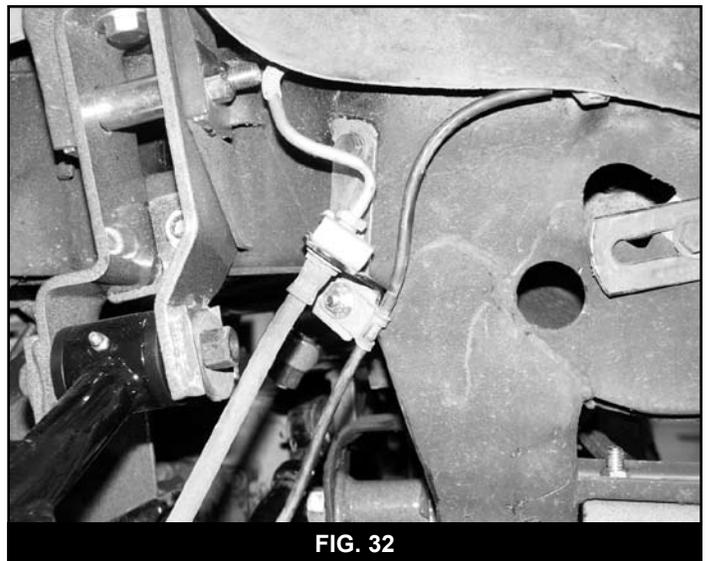


FIG. 32

67. Attach the ABS wire bracket to the new control arm in the hole nearest to the ball joint using a 1/4" x 1" bolt, nut and SAE washers from bolt pack #515 (Fig. 33).
68. Attach the brake line bracket to the hole provided in the control arm using the OE bolt and nut (Fig 33).

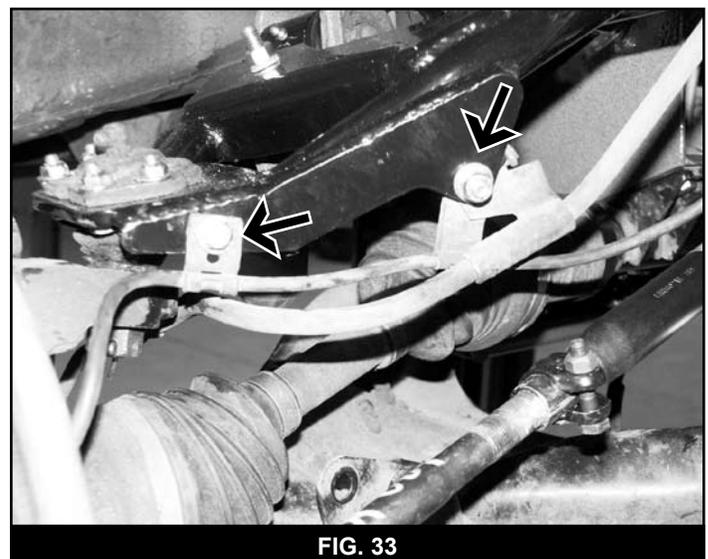


FIG. 33

69. Disconnect the tie rod ends from the OE relay rod and from the tie rod adjuster sleeves and install them on the supplied longer tie rod adjuster sleeves. Note: the tie rod ends are left and right threaded. Be sure to keep them separated. Attach the new adjusting sleeve assemblies to the supplied relay rod part #01133 and install the supplied #01499 (1/4" thick washer) load distribution washer between the tie rod end castle nut and the #01133 if necessary. Tighten to specification. The adjuster sleeves with the tie rod ends attached should measure about 25.5" from center of tie rod end to center of tie rod end.
70. Before installing the relay rod, be sure to check the idler and pitman arms, and replace if necessary. A worn idler arm can cause front end vibration. Install relay rod assembly in the vehicle. It is possible to install the relay rod backwards. Be sure the 3/4" thick plate welded to the round rod is facing down slightly forward (Fig 34). Torque the pitman and idler arm nuts to specification and install supplied cotter pins. Attach the tie rod ends to the knuckles and torque to OE specification. Note: Be sure that the clamps on the adjuster sleeves are located to maximize clearance with the differential. Complete steering sweep to insure clearance.



FIG. 34 - From Passenger's Side

71. Install the front sway bar drop brackets to the frame using the supplied 3/8" x 1-1/4" bolts, 3/8" USS washers, and nuts from bolt pack #512. Install brackets so they are open toward the center of the vehicle (Fig 35). Attach the sway bar to the drop brackets using the OE hardware.
72. Attach the OE sway bar end links to the OE lower control arm mounts. Attach the OE sway bar end links to the bottom of the lower control arm mounts. Torque to 11 ft.lbs.
73. Install the torsion bars in the lower control arms and slide them forward about 12".

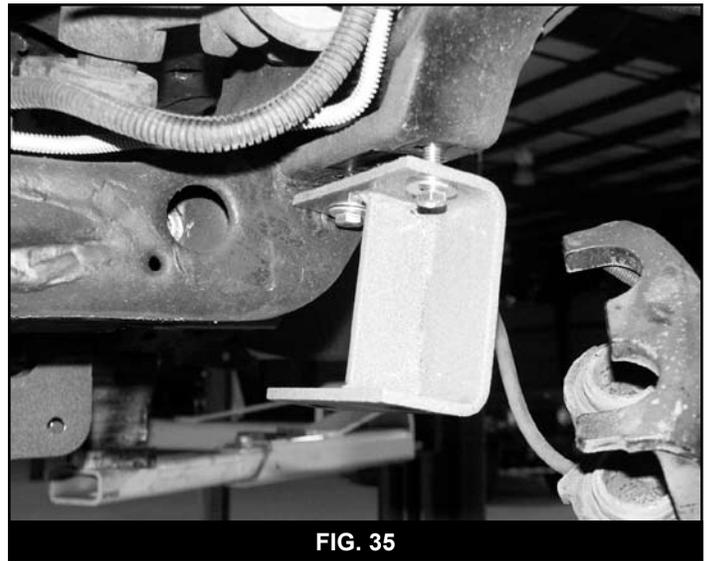


FIG. 35

95-04 MODELS ONLY

74. Remove the OE torsion bar crossmember links from the frame. Retain hardware.
75. Lower the torsion bar crossmember by installing the supplied 960305 links. First install the supplied sleeve in to the new link bushing and attach using the original hardware. Torque the links to 50 ft-lbs.
76. Install the crossmember on the new links with the OE bushings, washers, and nuts. Tighten the nuts until the bushings begin to swell (Fig 36).

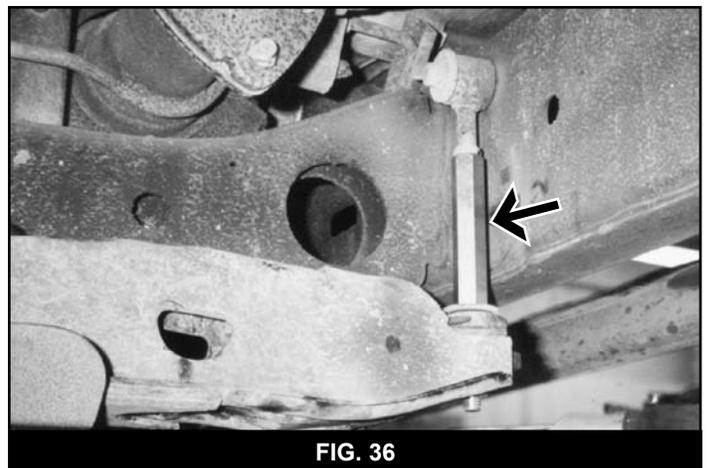


FIG. 36

77. Install torsion bar guard #01148. Install guard using the 3/8" x 1" self-tapping bolts from bolt pack #511 in the crossmember holes. Place a 3/8" USS washer on the 3/8" x 5-1/2" bolt and start through the guard. Install a supplied blue bushing between the guard and the crossmember. Run the bolt through the bushing and frame. Install a bushing and a stem washer on top of the 3/8" bolt sticking out the top and secure with the 3/8" nuts. Torque all 3/8" bolts. (Fig. 37) Hardware found in bolt pack #511.

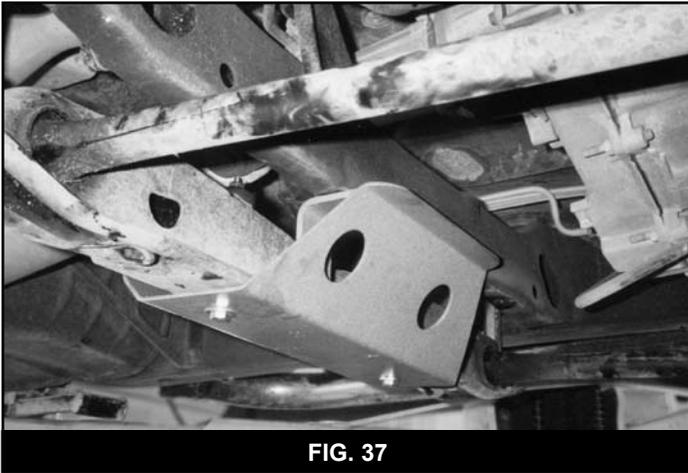


FIG. 37

84-94 MODELS ONLY

78. The original torsion bar crossmember holes must be drilled out to accept $\frac{1}{2}$ " hardware. Drill out the four holes (two per frame rail).
79. Install the new torsion bar crossmember drop brackets (01129L/R) using $\frac{1}{2}$ " x 1-1/4" bolts, nuts and 7/16" USS washers from bolt pack #513.
80. Install the torsion bar crossmember in the new drop brackets and fasten with the OE hardware. Torque the OE hardware to 45 ft-lbs and the $\frac{1}{2}$ " hardware to 60 ft-lbs (Fig 38).



FIG. 38

81. Install torsion bars in their original positions. Install the indexers and torsion bars in the crossmember.
82. Reload the torsion bars using a #J36202 torsion bar tool or equivalent. Set the adjuster bolts to the original setting (See step 5). The setting may need adjustment to level the vehicle.
83. Relocate the vacuum actuator beneath the battery tray. Measure 1" toward the engine from each hole and mark. Drill a $\frac{5}{16}$ " hole at each mark and reattach the actuator with the OE bolts. **Note:** On some models it may be necessary to relocate the actuator to the passenger's side frame rail in order for the cable to reach. If this is the case, refer to the following steps:
 - a. Remove the actuator from the passenger's fender.
 - b. Remove the diaphragm from the mounting bracket

by removing the three screws. Retain hardware.

- c. Mark for new holes to be drilled in the angled section of the bracket as shown (Fig. 39). Drill two

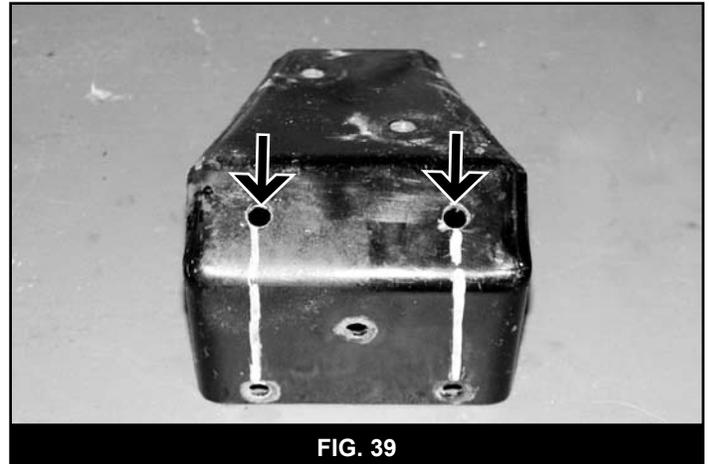


FIG. 39

$\frac{3}{8}$ " holes.

- d. Hold the bracket up to the passenger's frame rail to the front of the idler arm and mark for holes to

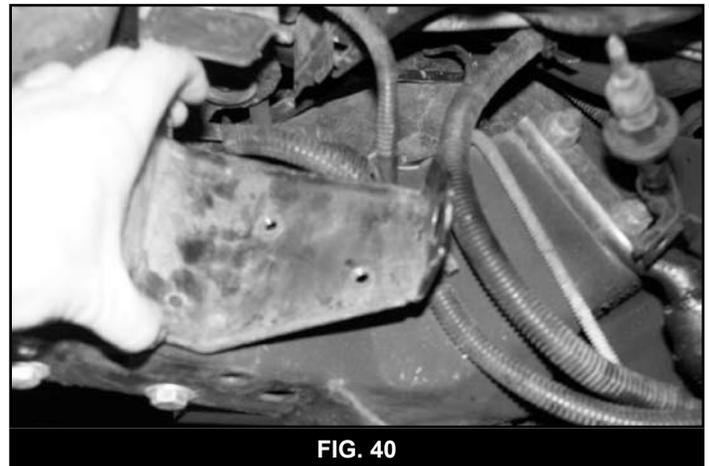


FIG. 40

be drilled using the new holes in the bracket as a template (Fig 40). Drill $\frac{9}{32}$ " holes at the marks.

- e. Reinstall the vacuum diaphragm to the bracket.
- f. Mount the actuator to the frame in the new holes with $\frac{5}{16}$ " x 1" self-tapping bolts from bolt pack #517.
- g. Reroute the vacuum and actuator lines and attach to the actuator. Use zip ties to route the lines away from heated and moving parts.

Note: If your actuator is faulty, contact 4x4 Posi-Lok for a replacement system - www.4x4Posi-Lok.com or 517-279-7177.

84. Install the OE front skid plate with the original hardware.
85. Perform exhaust modification to clear the front driveshaft.
86. Install the front drive shaft.
87. Install wheels and tires. Torque nuts to 100 ft.lbs.
88. Lower the vehicle to the ground and torque lower control arm pivot bolts to 81 ft-lbs. Torque upper control arm D-bolts to 85 ft-lbs.

89. Re-torque all fasteners. Check for full steering sweep. Check all brake lines for damage and clearance. Check to ensure proper clearance between all moving parts.

Note: After front end alignment, make sure the adjuster sleeve clamps are rotated properly to maximize differential clearance.

Do not install front shocks until after the front end alignment is complete.

Rear Installation

1. Block and secure the front of the vehicle. Use a hydraulic jack or equivalent to raise the rear of the vehicle. Place jack stands under the frame just in front of the spring hangers.
2. Remove the wheels and tires. Remove the OE shocks.
3. Remove the retainer holding the brake line to the frame bracket. Slit the OE bracket to remove the brake line. Be sure not to damage the brake line. Bend the bracket open and remove the line. Bend the bracket back flat.
4. Install the supplied brake line drop bracket to the OE bracket using the supplied 3/8" x 1" bolt, nut and 3/8" USS washers from bolt pack #514. Attach the line to the key slot in the drop bracket.
5. Support the rear axle with a hydraulic jack. Disconnect the emergency brake cable guide from the frame.
8. Disconnect the front spring hanger bolt, shackle-to-spring pivot bolt and the spring U-bolts and remove the spring from the vehicle.
7. Clamp the leaf spring with two large c-clamps on both sides of the center pin. Remove the center pin and insert the provided 3/8" center pin through the bottom of the spring. Torque to 30 ft-lbs securely with provided 3/8" nut. Trim off excess center pin.
8. Install the provided shock studs on the new spring perch brackets and retain with the provide nut and lock washer.
9. Install the new spring perch brackets on the axle tube. The long alignment tab should fit in the rear of the OE axle perch. The shock mount should be facing the rear of the vehicle and the shock stud should point toward the center of the vehicle. Note: Some models have a brake line mounting bracket on the back of the axle tube right where the spring perch bracket mounts. If this is the case, the OE mount will have to be cut off. The surface should be ground flush and painted.
10. Lower the axle while taking care not to over-extend the brake lines or bind the drive shaft. Install the leaf springs on top of the axle in the new perch brackets. Fasten the springs to the shackles and hanger with OE hardware. Do not tighten.

11. Install the new spring plate on top of the springs over the center pin with the bump stop pad toward the front of the vehicle. Install the new U-bolts around the axle and up through the new spring plate. Retain with provided high nuts and washers. Once both sides are installed and aligned torque the U-bolts to 100-120 ft-lbs. (Fig. 41)

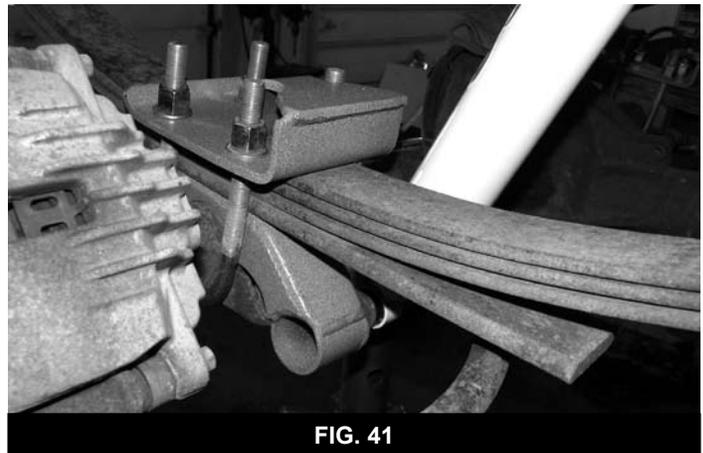


FIG. 41

12. Locate a safe location for the emergency brake guide. Drill a new hole and install using OE fasteners.
13. Install the supplied sleeve (3/4" O.D. x 1-3/8" long) in the lower bushing of the shock. Slide the 5/8" x 4" bolt through the mounting bracket so the nut end of the bolt is toward the center of the vehicle. Continue sliding on in the following order: 1-1/8" O.D. x 1-1/8" long spacer sleeve, 5/8" washer, shock washer, and 5/8" nut. Tighten securely. (Fig. 42) Note: See bolt pack #723 for all provided hardware.

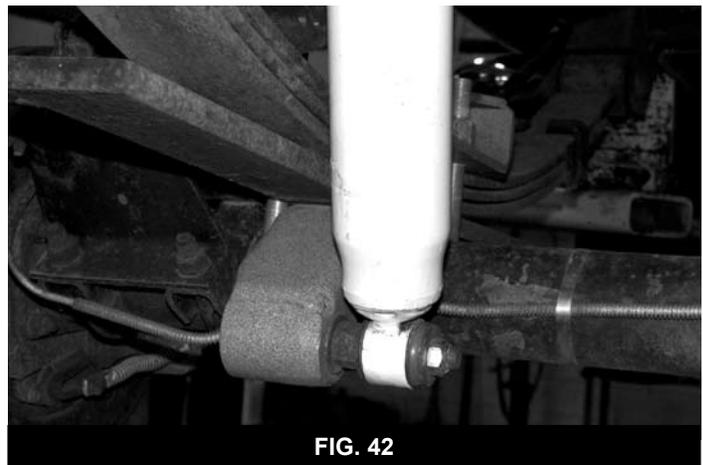
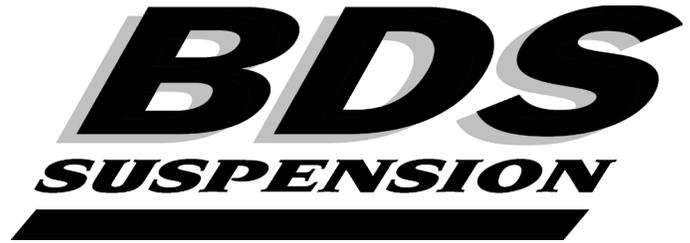


FIG. 42

14. Bounce the rear of the vehicle to settle the suspension. Torque the spring hanger and shackle bolts to OE specs.
15. Check all fasteners for proper torque.
16. Check all fasteners after 500 miles.

#121010

Installation Instructions Chevrolet/GMC Upper Control Arm Kit



READ AND UNDERSTAND ALL INSTRUCTIONS AND WARNINGS PRIOR TO INSTALLATION OF SYSTEM AND OPERATION OF VEHICLE.

SAFETY WARNING

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

PRODUCT SAFETY WARNING

Certain BDS Suspension products are intended to improve off-road performance. Modifying your vehicle for off-road use may result in the vehicle handling differently than a factory equipped vehicle. Extreme care must be used to prevent loss of control or vehicle rollover. Failure to drive your modified vehicle safely may result in serious injury or death. BDS Suspension Co. does not recommend the combined use of suspension lifts, body lifts, or other lifting devices.

You should never operate your modified vehicle under the influence of alcohol or drugs. Always drive your modified vehicle at reduced speeds to ensure your ability to control your vehicle under all driving conditions. Always wear your seat belt.

PRE-INSTALLATION NOTES

1. Special literature required: OE Service Manual for model/year of vehicle. Refer to manual for proper disassembly/reassembly procedures of OE and related components.
2. Adhere to recommendations when replacement fasteners, retainers and keepers are called out in the OE manual.
3. Larger rim and tire combinations may increase leverage on suspension, steering, and related components. When selecting combinations larger than OE, consider the additional stress you could be inducing on the OE and related components.

4. Post suspension system vehicles may experience drive line vibrations. Angles may require tuning, slider on shaft may require replacement, shafts may need to be lengthened or trued, and U-joints may need to be replaced.
5. Secure and properly block vehicle prior to installation of BDS Suspension components. Always wear safety glasses when using power tools.
6. If installation is to be performed without a hoist, BDS Suspension Co. recommends rear alterations first.
7. Due to payload options and initial ride height variances, the amount of lift is a base figure. Final ride height dimensions may vary in accordance to original vehicle attitude. Always measure the attitude prior to beginning installation.

POST-INSTALLATION WARNINGS

1. Check all fasteners for proper torque. Check to ensure for adequate clearance between all rotating, mobile, fixed, and heated members. Verify clearance between exhaust and brake lines, fuel lines, fuel tank, floor boards and wiring harness. Check steering gear for clearance. Test and inspect brake system.
2. Perform steering sweep to ensure front brake hoses have adequate slack and do not contact any rotating, mobile or heated members. Inspect rear brake hoses at full extension for adequate slack. Failure to perform hose check/ replacement may result in component failure. Longer replacement hoses, if needed can be purchased from a local parts supplier.
3. Perform head light check and adjustment.
4. Re-torque all fasteners after 500 miles. Always inspect fasteners and components during routine servicing.

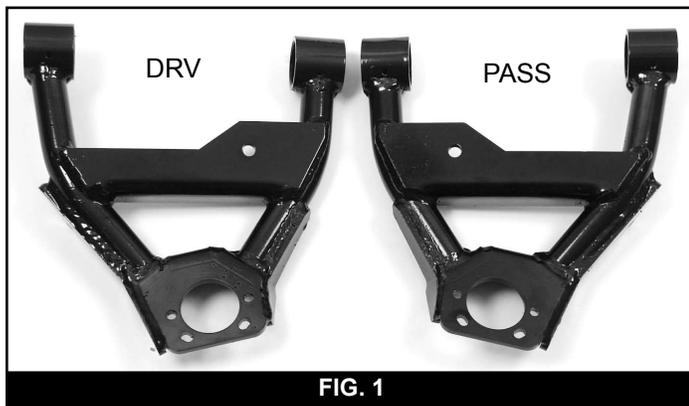
**102 S. Michigan Avenue • Coldwater, MI 49036
517-279-2135 • www.bds-suspension.com**

INSTALLATION INSTRUCTIONS

1. Park the vehicle on a clean, flat surface and block the rear wheels for safety.
2. Raise the front of the vehicle and support with jack stands under the frame rails for safety.
3. Remove the front wheels.
4. Measure the length of exposed threads on the torsion bar adjustment bolts and note below. Unload the torsion bars using a #J36202 torsion bar unloading tool or equivalent.
DS _____ PS _____
5. For ease of installation the front shocks can be removed at this time, though it is not necessary to complete the installation.

Complete installation one side at a time, starting with the driver's side.

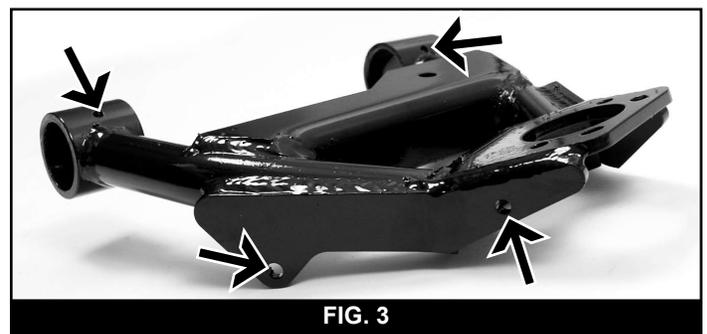
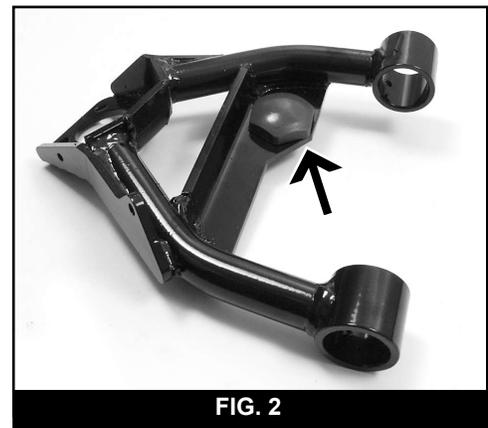
6. Disconnect the brake line bracket from the control arm. Retain mounting bolt and nut.
7. Disconnect the ABS wire bracket from the control arm.
8. Remove the upper control arm ball joint retaining nut. Strike the steering knuckle near the ball joint to dislodge it from the knuckle or use a pickle fork. Remove the ball joint from the knuckle. **Note: Take care not to allow the knuckle to fall outward and over-extend the CV shaft.**
9. Remove the two cam bolts attaching the control arm to the frame and remove the control arm from the vehicle. Note the direction in which the cam bolts are installed so they can be return to the same position when the new control arms are installed.
10. If reusing the ball joints, they must be removed from the OE control arms. The ball joints will either be riveted or bolted on. If riveted, remove the rivets with a grinder, drill, or air chisel.
11. Locate the new driver's side control arm (Fig. 1).
12. Install the ball joint (new or reused) in the new control arm using the 1/4" x 1" bolts, nuts, and SAE washers provided. Torque fasteners to 12 ft-lbs.
13. Install the new bump stop to the underside of the control arm cross brace and fasten with a 3/8" nut and lock washer (Fig. 2).



14. Install the provided 1/4" grease zerks in the two thread holes located on the top side of the control arm pivots (Fig 3).
15. Lubricate and install the provided fluted bushing in the control arms. Install the provided serrated steel sleeves in the bushings.
16. Mount the new control arm assembly into the frame bracket pockets and retain with the OE cam bolts (installed as they were removed). Do not tighten at this time.
17. Install the ball joint in the steering knuckle and fasten with the appropriate nut. Torque nut to manufacturer's specs.
18. Attach the ABS wire bracket to the new control arm in the hole nearest to the ball joint using a 1/4" x 1" bolt, nut and SAE washers provided (Fig. 3).
19. Attach the bracket line bracket to the hole provided in the control arm using the OE bolt and nut (Fig 3).

Repeat the installation on passenger's side of the vehicle

20. With both sides complete, load the torsion bars using the measurements recorded earlier.
21. Tighten the four (two on each side) upper control arm cam bolts securely.
22. Grease the upper control arm pivot points.
23. Install the front shocks if the were removed.
24. Install the wheels and lower the vehicle to the ground.
25. The vehicle will need a complete front end alignment.
26. Check all fasteners after 500 miles.



Shock Absorber Installation Instructions



READ AND UNDERSTAND ALL INSTRUCTIONS AND WARNINGS PRIOR TO INSTALLATION OF SYSTEM AND OPERATION OF VEHICLE.

LIMITED LIFETIME WARRANTY

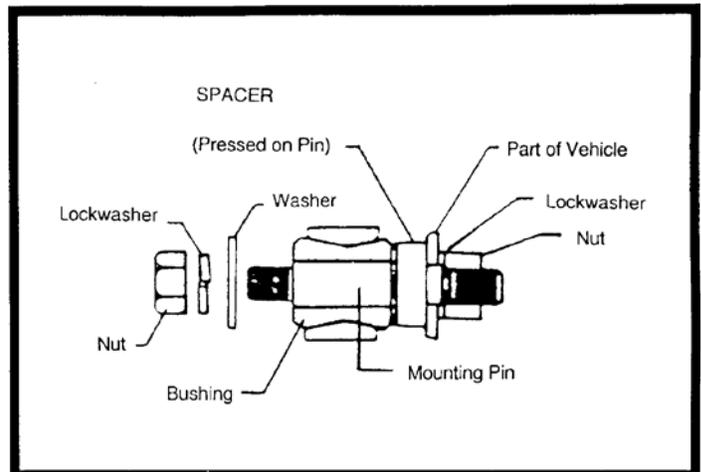
BDS Suspension Co. warrants to the original retail purchaser that its shock and stabilizer cylinders are free from defects in material and workmanship for so long as they own the vehicle. Excluded from this warranty are the finish of the product and mounting bushings. Defects in material and workmanship do not include such things as dented cylinders or bent rods caused by obvious side impact, rust, worn or deformed bushings. A shock absorber is a wear item and over time will experience diminished damping resistance due to normal component wear. This is not a defect in material or workmanship and is therefore not warrantable.

BDS Suspension's obligation under all warranties is limited to the repair or replacement, at BDS's option, of the defective material. Any cost of removal, installation or reinstallation, freight charges, incidental or consequential damages are expressly excluded from these warranties.

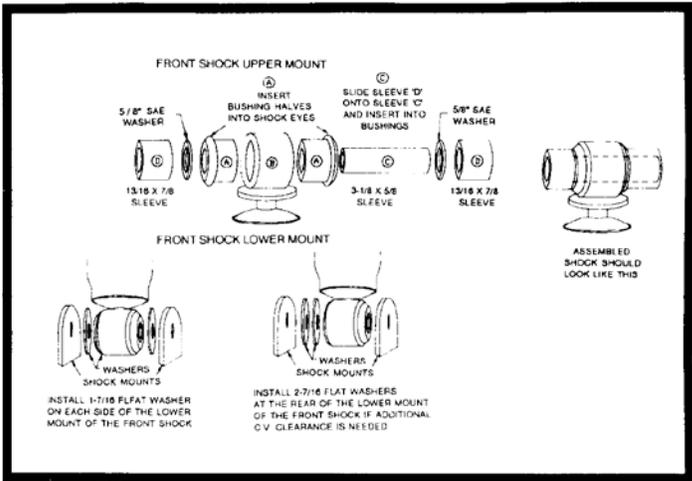
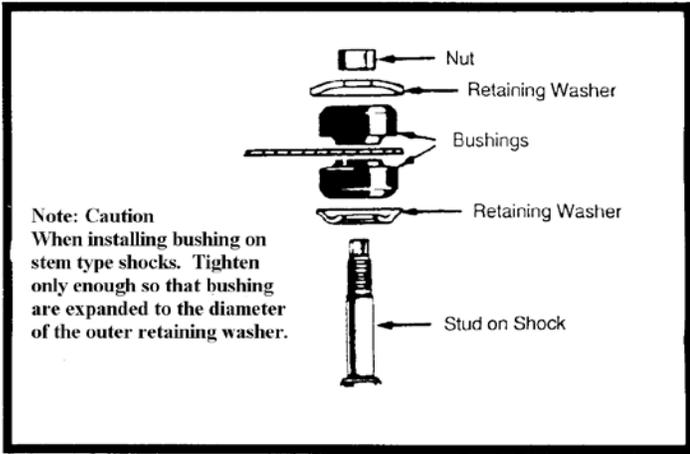
INSTALLATION INSTRUCTIONS

1. **Note: Please read instructions thoroughly before installing shock absorber.**
2. Remove old shock absorber from vehicle. Note any spacers, washers, sleeves or other hardware and note their location. Compare the existing hardware with the supplied hardware. Always use new hardware wherever possible. Due to the variety of applications, you may not use any or all of the hardware supplied. You may need to use some of the original hardware. If any of the original hardware is damaged, corroded, bent or broken it must be replaced.

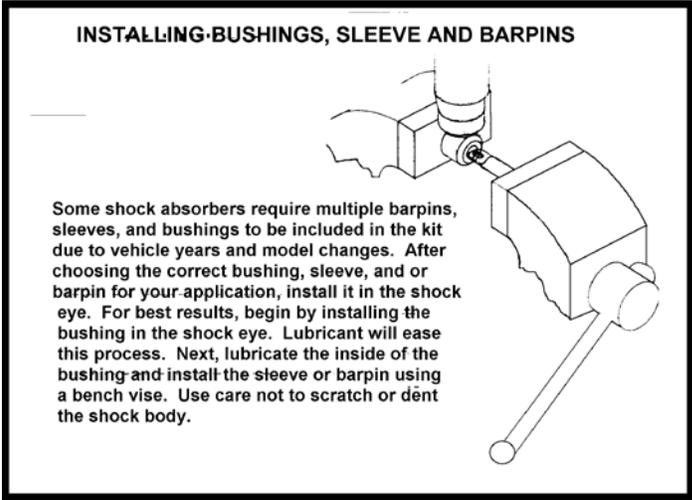
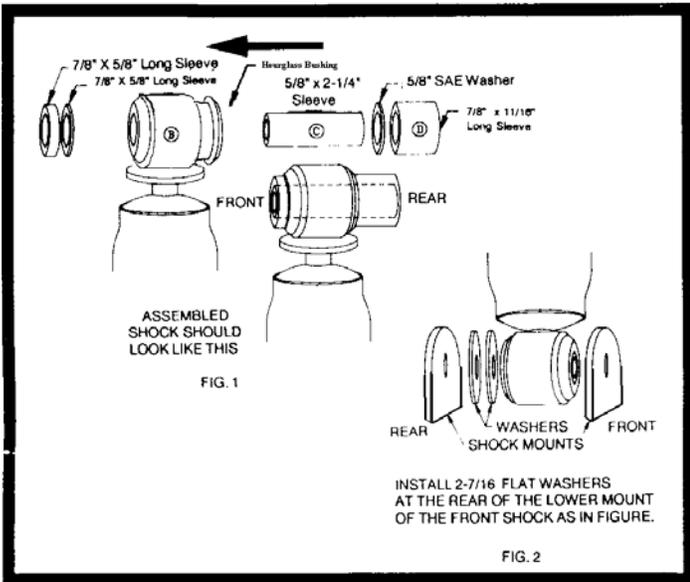
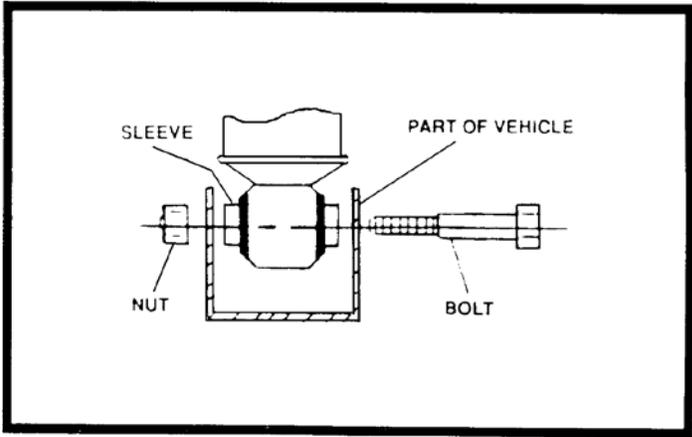
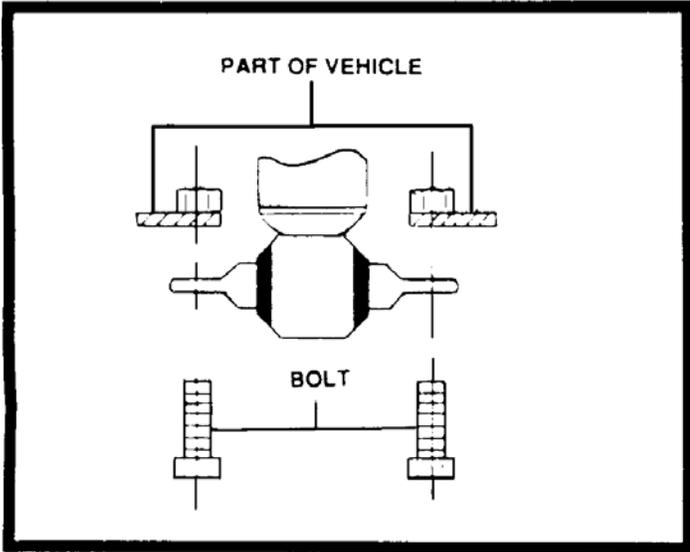
3. If installing dust boot, do so at this time. **Note: The use of a lubricant like dish soap on the inside of the boot will ease installation.** Make sure the washer at the top of the shock is fully seated in the boot all the way around. Secure the bottom of the boot to the cylinder with a plastic tie strap.
4. Install any required bushings and sleeves in to the shock eyes at this time. Install the shock absorber on the vehicle. Use the appropriate illustration as a frame of reference. Due to the different shock mounts within a vehicle model range, the shock eyes must be built to match the shocks that you removed by using the universal hardware kit included. Choose the sleeve with an I.D. closest to the O.D. of the mounting stud or bolt without binding. Some applications will require some extra effort to install.
5. Check all fasteners for tightness before driving and inspect periodically.



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