

#9385

3" Body Lift Kit

Ford F-150, F-250

LD 2WD & 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. Secure and properly block vehicle prior to installation of BDS Suspension components. Always wear safety glasses when using power tools.
5. BDS Suspension Co. body lifts are designed to be used on vehicles in good operating condition. It is not recommended that body lifts be used on vehicles in poor physical shape. This includes rusted body mounts, damaged or worn frame-to-body mounting brackets, and poor mechanical condition. Perform a visual inspection of the vehicle before 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 100 miles. Always inspect fasteners and components during routine servicing.

PARTS LIST

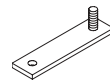
Part#	Qty.	Description
3396	16	3" x 3" Body Blocks
211	1	Bolt Pack
229	1	Bolt Pack
224	1	Bolt Pack
01602	2	Radiator Drop Bracket
01626	4	3" x 2" x 2" Metal Body Spacer
01638	2	Front Bumper Bracket
01728	1	Rear Bumper Bracket (drv)
01729	1	Rear Bumper Bracket (pass)
01640	1	Transmission Cable Bracket
01641	1	Lower Fan Shroud Bracket
01642	1	"L" Ground Extension
01611	1	1-1/2" x 5" Filler Extension
01660	2	5/8" O.D. 3/8" I.D. x 2 5/8" sleeve
49096	1	Steering Extension
243	2	#28 Hose Clamp
240	2	#10 Hose Clamp
	1	1/2" x 13" Fuel Vent Hose
099000	2	Zip ties
342701	1	Loctite

Torque Specifications

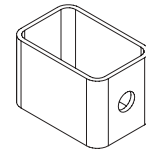
Fastener	Max. Torque (ft-lbs)
1/4"	10
5/16"	17
3/8"	30
7/16"-14	50
7/16"-20	55
1/2"-13	75
1/2" U-Bolt	65-80
9/16"	110
9/16" Grade 8	170
9/16" U-Bolt	75-90
5/8"	150
5/8" U-Bolt	85-110
3/4"	270
10mm	30
12mm	55

Bolt Pack 224

Qty	Description
2	12mm x 200mm bolts
10	12mm x 180mm bolts
4	12mm x 140mm bolts



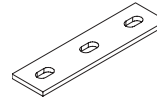
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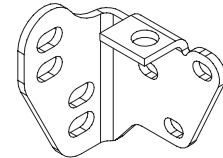
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Bolt Pack 211

Qty	Description
8	1-3/8" O.D. x 1/2" I.D. x 3/16" thk flat washer
12	7/16" USS washers
1	3/8"-24 x 1-1/4" allen head bolt
2	7/16"-14 x 1-1/2" bolt
2	5/16"-18 x 1" bolt
3	1/4"-20 x 1" bolt
4	5/16" USS washer
8	1/4" SAE washer
2	7/16"-14 prevailing torque nut
2	5/16"-18 prevailing torque nut
5	1/4"-20 prevailing torque nut
4	3/8"-16 x 1" bolt
2	3/8"-16 x 3-1/2" bolt
6	3/8"-16 prevailing torque nut
10	3/8" USS washer



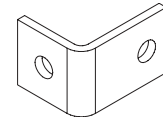
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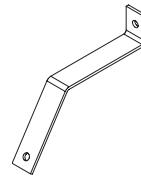
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01611



01642



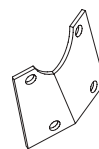
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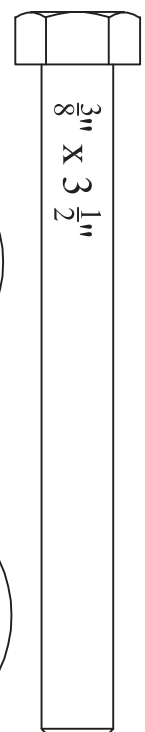
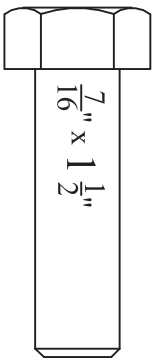
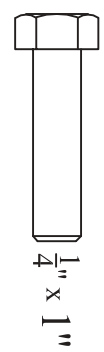
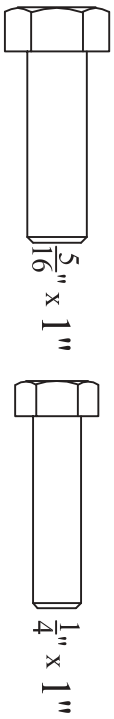
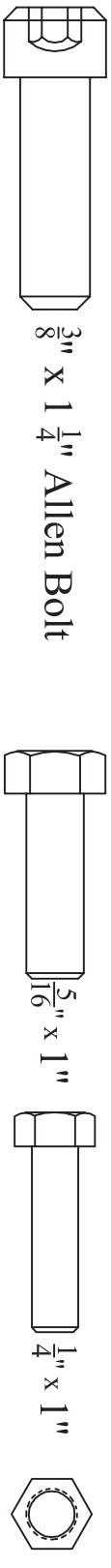
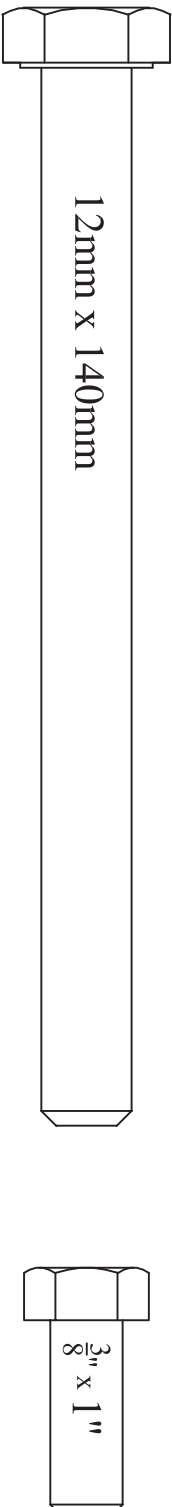
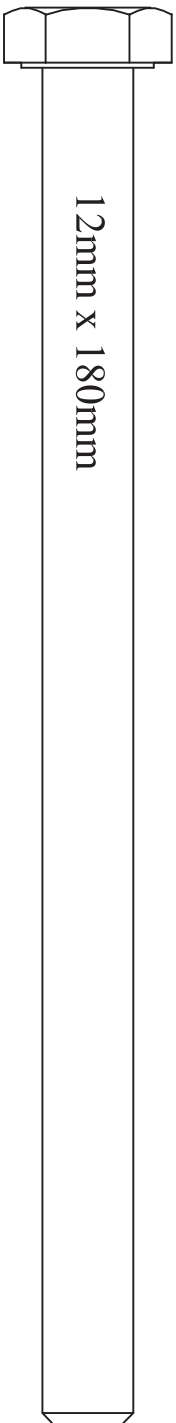
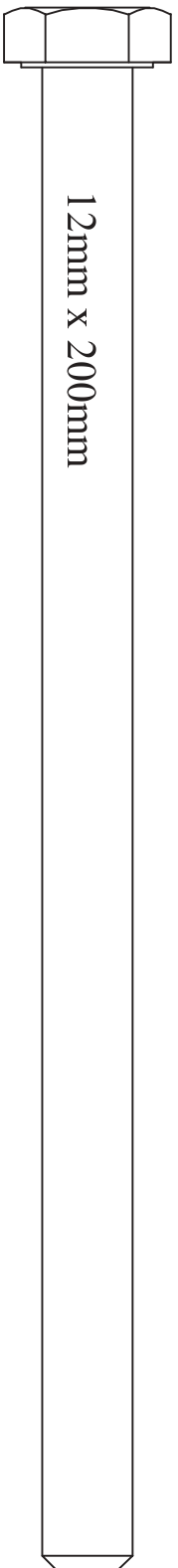
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Bolt Pack 229

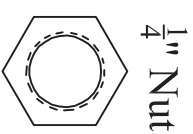
Qty	Description
6	7/16"-14 x 1" bolt
6	7/16"-14 prevailing torque nut
12	7/16" USS flat washer



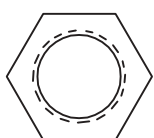
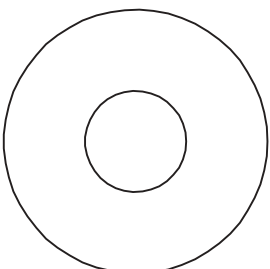
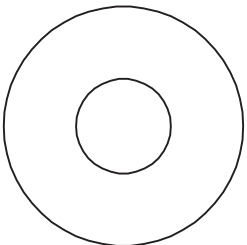
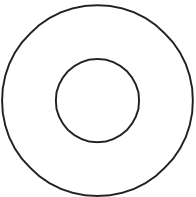
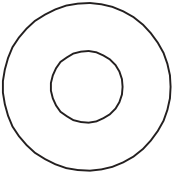
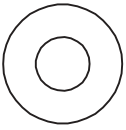
01640



$\frac{5}{16}$ " Nut



$\frac{3}{8}$ " Nut



$\frac{7}{16}$ " Nut

INSTALLATION INSTRUCTIONS

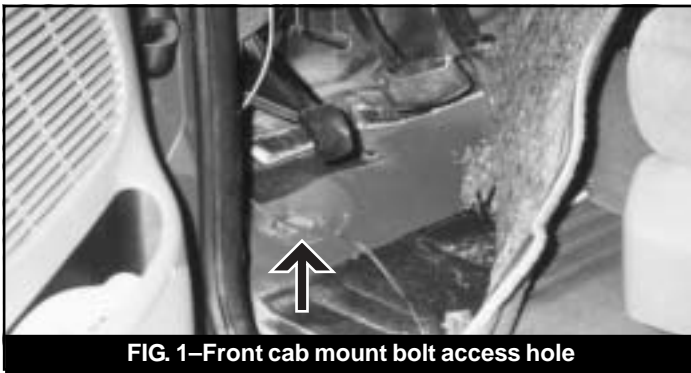
1. Remove negative battery cable, then positive battery cable from the battery. If equipped, the Supplemental Restraint System will be deactivated when the battery is disconnected.

STEERING

2. Lock the steering wheel.
3. Located under the dash, remove the bolt that connects the steering shaft universal joint to the steering column and separate the steering shaft from the steering column.
4. Install the steering extension on the steering column (It only goes on one way).
5. Install the Allen head bolt in the extension. Make sure the bolt goes through the retaining groove on the steering column. Tighten the Allen head bolt securely. The extension will be attached to the steering shaft after lifting operation is complete.

INTERIOR REMOVAL

6. Remove the doorjamb scuff plates by pulling up on them to release the retaining clips. Pull the kick panels back toward the door to release them from the retaining clips.
7. Pull the carpet back to gain access to the front cab mounting bolts (Fig. 1). The bolt head is located under the rubber cap. Pull on the cap to remove.



8. *Super Cab Models Only:* The rear seat must be removed to gain access to the four rear cab mounts. Fold the seat forward and remove the two bolts mounting the seat to the floorboard. Fold the seat back. Remove the three bolts and three nuts that hold the seat legs to the floorboard. Lift the seat off the studs and remove it from the vehicle.
9. Pull the carpet back behind the front seat to expose the rear cab mounting bolts (Fig. 2). There are four on super cabs and two on standard cabs.

SUPER CREW MODELS ONLY

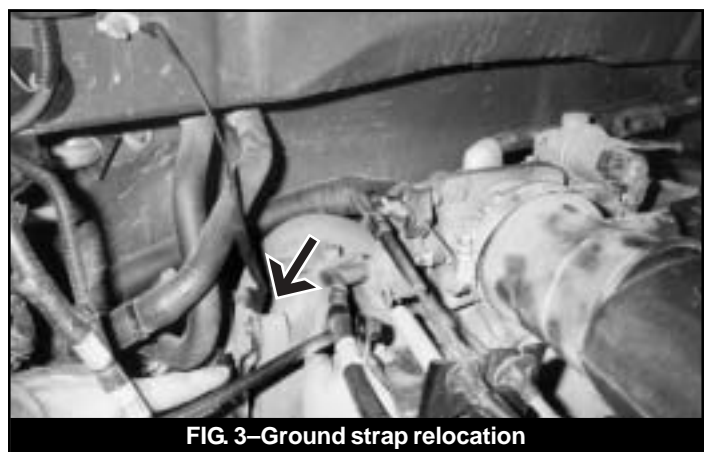
10. The rear seats must be removed to gain access to the four rear cab mounts. Remove the rear door scuff plates. Remove the covers from the feet of the seat legs to expose the seat mounting bolts. Remove the mounting bolts from the front legs.



11. Fold the seat back forward to expose the rear seat mounting bolts. Remove the bolts. Remove the bolt mounting the outer seat belts to the floorboard. Remove the rear seats from the vehicle.
12. Remove the nuts from the four studs holding the rear plastic cover to the floorboard.
13. Pull the carpet back to expose the mounting bolts behind the front seats.
14. Open the two storage doors in the rear panel to access the rear cab mounting bolts. The jack will have to be removed from the passenger's side of the storage area. The plastic panel can be pulled forward to aid in accessing the mounting bolts.

UNDER THE HOOD

15. Relocate the ground strap (if equipped) that runs from the upper firewall to the passenger's side of the intake manifold. Remove the wire that is mounted on the intake manifold and relocated it to the rear fuel rail mount (Fig. 3).



16. Remove the throttle body cover. Loosen and remove the air intake tube from the throttle body. Release the clamp holding the two halves of the air filter box together and move the air intake assembly back out of the way.
17. Remove the two plastic push-in fasteners holding the fan shroud to the upper shroud covering the area between the radiator and the grill.

18. Remove the two bolts that mount the fan shroud to the radiator. Pull up on the fan shroud to release it from the lower retaining clips. Set the shroud over the fan, away from the radiator.
19. Remove the plastic push-in fastener that holds the battery cables to the bottom of the battery box.
Note: It may be necessary to bend battery cable bracket on passenger side frame to gain adequate wire slack after lifting.

FRONT BUMPER REMOVAL

20. Carefully remove the plastic push-in fasteners that hold the air flap located between the bumper and the bottom of the core support from the core support only. Allow the flap to swing down and hang from the bumper to gain access to the bumper mounting bolts.
21. Disconnect driving light wires along with any other wires attached to the front bumper.
22. Remove the four nuts mounting the bumper to the frame and remove the bumper from the vehicle.
23. Remove the tow hooks from the vehicle. Remove the front mounting bolt and loosen but do not remove the rear bolt because it is in a slotted hole. Slide the hook back and remove it from the rear bolt.

ON THE FRAME

24. Remove the bolt that attaches the cab safety cables to the frame located under the driver's and passenger's doors. They will be relocated after lifting.
25. Remove the ground wire that attaches the body to the frame located under the passenger side door. It will be relocated after lifting.
26. Remove the large steel line that runs on the outside of the driver's side frame rail from its front two retaining clamps.
27. Check to see that the large wire loom on the driver's side frame rail has enough slack for three inches of lift. Relocate as necessary.
28. Remove the rear axle breather tube from the bed cross member by pulling down on it, releasing the plastic fastener from the hole. The breather will be relocated after lifting.

OIL COOLERS

29. Remove the transmission and power steering oil coolers from the core support and allow them to hang out of the way so they are not damaged during lifting.

TRANSMISSIONS

30. *Automatic Transmissions:* Remove the two bolts that mount the shift cable to the driver's side of the transmission. A relocation bracket will be attached after lifting. The 5.4 liter engine is equipped with a different transmission that does not use the relocation bracket. The cable for this transmission

must be removed from the stud located under the dash and then slid through the floor of the cab.

Manual Transmissions: Make sure that the transmission is in neutral before lifting the vehicle. No modifications to the shift lever are needed.

TRANSFER CASE

31. The transfer case shift lever should require no modification. As the cab is lifted the lever will fall through the floor.

REAR BUMPER

32. Remove the license plate lights and any other wires attached to the rear bumper.
33. Remove the four nuts that mount the rear bumper to the frame and separate the bumper from the vehicle.

FUEL FILLER NECK

Warning: Gasoline is flammable. Use extreme caution when working around fuel lines and tanks. Any sparks could ignite fuel or fuel vapor, causing an explosion or fire resulting in personal injury or death. Clean up all fuel spills.

34. Remove the fuel cap. Remove the three screws that mount the fuel filler neck to the body.
35. Remove the clamp that holds the fuel filler tube to the body. The filler tube will clear everything during the lifting operation and will be removed and extended after the vehicle is lifted.

BODY LIFT

Warning: Cab and bed must be lifted simultaneously. Failure to comply could result in significant body damage to both the cab and bed.

Note: The OE cab bolts are coated with extremely cohesive thread lock. It may not be possible to use air tools to loosen the bolts.

36. Loosen but do not remove all of the cab and bed mounting bolts (A T-50 torx socket is required to loosen the bed mounting bolts—Super Crew models require a T-55).
37. Remove the cab and bed mounting bolts on the passenger's side of the vehicle. Using two hydraulic jacks and two wooden blocks slowly lift the cab and bed together just high enough to install the new body spacers. Check for any wires that may be binding or stretching.
38. Remove the front body bushings from the frame mounts. Drill out the threads of the bushing with a 1/2" drill. Reinstall the bushings in the frame and set the new body spacers in place.
39. Install new mounting bolts with 7/16" USS flat washers in conjunction with stock hardware in the following locations: 12mm x 180mm in front mount, 12mm x 140mm in front floorboard and behind front seat, 12mm x 200mm in rear mount of super cabs, and 12mm x 180mm in all bed locations.

40. Repeat lifting procedure for driver's side of vehicle. Pay special attention to see that the fuel neck falls through the body. Check bed and cab alignment then tighten cab bolts only. *Use Loctite® on all mounting bolts.*
41. Remove the rear-most driver's and passenger's bed bolts. Remove the OE nut clip from the frame.
42. Locate the three rivets mounting the OE rear bumper brackets to the frame (fig).
43. Remove the heads of the rivets with an air chisel, drill or grinder while taking care not to damage the frame rail. Use a hammer and punch to drive the rivets through the frame and remove the brackets from the vehicle.
44. Install the new driver's and passenger's rear bumper brackets using the provided 7/16" x 1" bolts, nuts and 7/16" USS washers in the OE mounting holes. Do not tighten the hardware at this time. Note: In some cases it may be necessary to drill out the OE mounting holes to accept the 7/16" hardware.
45. Reinstall the OE nut clips and rear bed bolts. Note: The bed may need to be lifted slightly to reinstall the clip over the frame/bumper bracket and under the body block.
46. Align the bed to the cab and tighten all the bed mounting bolts. The remainder of the bumper installation will be done later.
47. Install the metal body spacers at the four points where the bed cross members rested on the frame. Remove the rubber pads from the frame at the four contact points. Install the metal spacers and align the holes in the spacers with the holes in the frame where the pads were located. Use 3/8" x 1" bolts, 3/8" USS washers, and lock nuts to secure the spacers to the frame (Fig. 4).

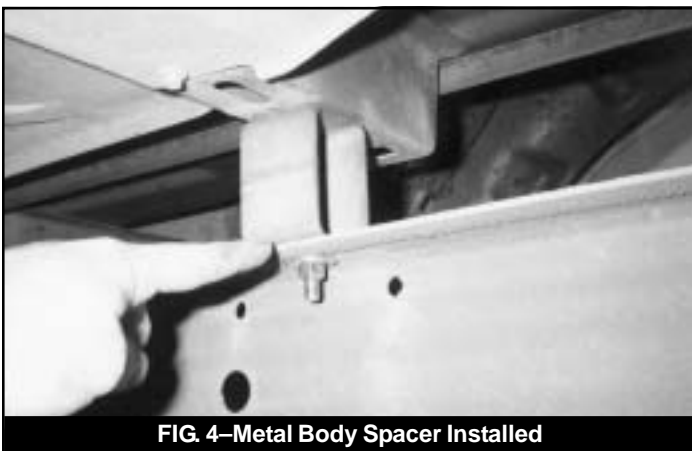


FIG. 4—Metal Body Spacer Installed

48. Check to see that the parking brake cable has enough slack and pulled through the rubber grommet in the floor properly. Make sure that the grommet is still mounted in the floorboard securely.

INTERIOR REINSTALLATION

49. Reinstall the rubber caps over the front cab mounting bolt access holes. Replace carpet to the original position. Install scuff plates and kick panels in reverse of removal.
50. **Super Cab:** Replace carpet to original position. Install the rear seats, scuff plates and kick panels in reverse of removal.
51. **Super Crew:** Replace carpet to original position. Replace jack to original location. Fasten back panel using four stock nuts. Install rear seats, scuff plates, seat belts, and seat mounting bolt covers.

STEERING

52. Connect the steering extension to the steering shaft (It only goes on one way). Make sure the steering wheel and steering shaft have not moved from their original positions. Using the stock steering bolt tighten the steering extension to the steering shaft (Make sure the bolt runs through the slot in the steering extension).
53. *Vehicles equipped with adjustable pedal option:* Check clearance between the steering shaft and the pedal assembly when the pedals are adjusted all the way to the firewall. If there is contact between the shaft and the pedal assembly **CAREFULLY** bend the pedal mounting bracket slightly to the left to provide adequate clearance.

SHIFT CABLE RELOCATION

4.6 Liter Engine

54. Using stock bolts, mount the transmission shift cable relocation bracket to the original cable bracket mounting holes (Fig. 5).

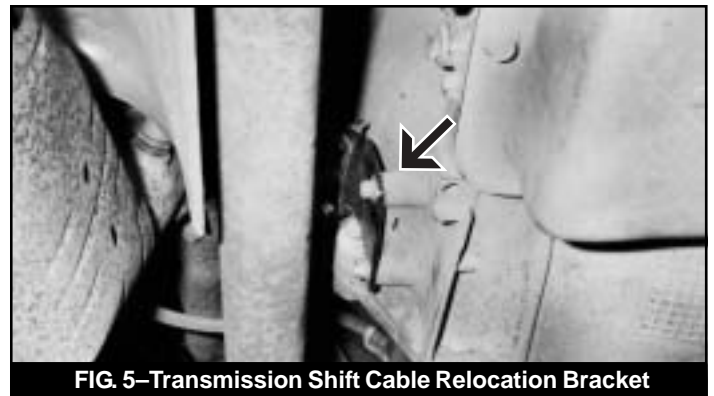


FIG. 5—Transmission Shift Cable Relocation Bracket

55. Mount the stock cable bracket to the relocation bracket using two 5/16" x 1" bolts, four 5/16" USS washers, and two 5/16" lock nuts. Tighten all hardware securely.
56. It may be necessary to make some adjustments to the transmission cable to ensure that it operates properly. The transmission shift lever may need to be bent to better align with the new angle of the cable. The shift indicator can be adjusted using the adjustment wheel located under the dash.

5.4 Liter Engine

- Slide the nut up the cable and reattach to the original stud on the firewall. The 5.4 liter transmission does not require any adjustment.

SAFETY CABLE RELOCATION

- On the frame, about 8" forward of the original mounting hole is an existing hole (on both frame rails) where the safety cable can be relocated (Fig. 6).
- Insert the stock bolt from the inside of the frame. As the bolt is tightened, the locating tab on the cable will flatten out and the cable end will mount flush on the frame.

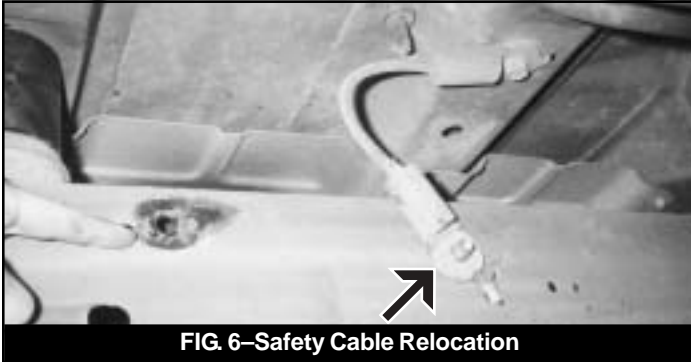


FIG. 6—Safety Cable Relocation

GROUND WIRE RELOCATION

- Mount the "L" shaped ground wire relocating bracket to the original ground mounting hole. The long end of the bracket should be against the frame. Attach the ground wire to the bracket using a 1/4" x 1" bolt, lock nut and washers.

FAN SHROUD RELOCATION

- In order to lower the fan shroud the lower mounting tabs must be removed. On some models it may be necessary to remove the radiator to allow for the removal of the fan shroud. In most cases it is possible to remove the mounting tabs without removing the shroud from the vehicle.
- Cut the lower fan shroud mounting tabs off flush with the side of the shroud.
- Mount the fan shroud relocation brackets to the original top shroud mounting points with stock hardware.
- Mount the shroud on the new studs and secure with 1/4" lock nuts and washers.
- Attach the lower fan shroud relocation bracket to the core support using the existing bolt that secures the cross member in the center of the support (Fig. 7).

Note: Some models are equipped with fan shrouds that have a lip which wraps around the bottom of the radiator. In this case, measure up 1-1/4" and mark the shroud end of the relocation bracket. Bend the bracket at the mark so the end is parallel to the bottom of the core support (Fig 7b).

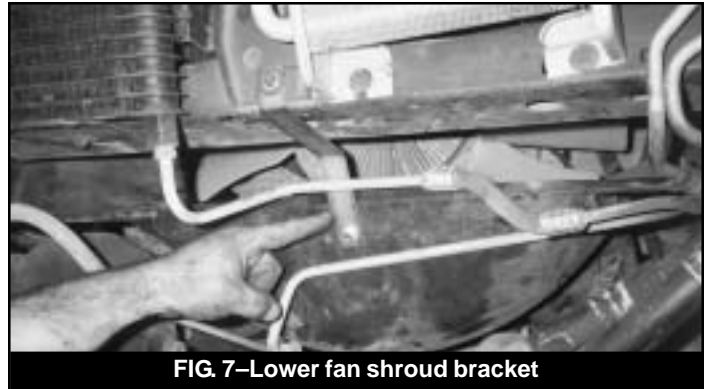


FIG. 7—Lower fan shroud bracket

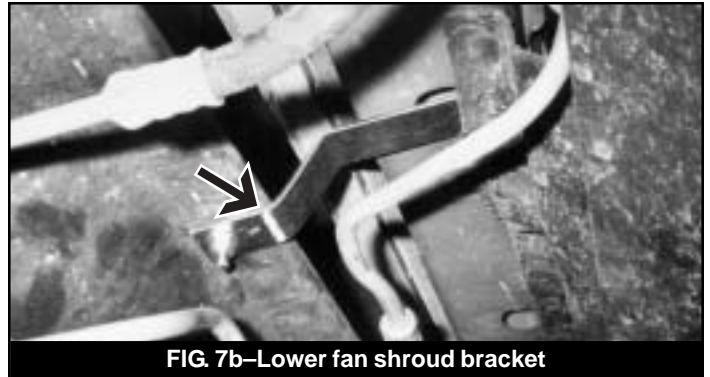


FIG. 7b—Lower fan shroud bracket

- Hold the fan shroud in place and using the lower relocation bracket as a template, mark the hole location on the shroud. Drill a 5/16" hole in the shroud. Attach the fan shroud to the relocation bracket using a 1/4" bolt, nut, and washers.
- Check for fan-to-shroud clearance.

OIL COOLERS

- Reattach oil coolers to original locations on core support using stock hardware.
- CAREFULLY bend oil cooler lines as needed to adequately clear the fan shroud.

FRONT BUMPER INSTALLATION

- Mount the front bumper relocation brackets to the stock bumper location with 7/16" x 1-1/2" bolts, lock nuts, and 7/16" USS washers in the lower holes in the frame and bracket. **Note: Do not tighten any bumper mounting hardware until the bumper is mounted and adjusted to desired position.**
- Using the stock nuts mount the bumper to the middle and upper holes in the relocating brackets. The lower bumper stud now mounts through the relocating bracket and the frame (Fig. 8).
- Adjust the bumper to the proper position and tighten all hardware.
- Reconnect all wires removed from bumper and replace the rubber air flap to its original location.

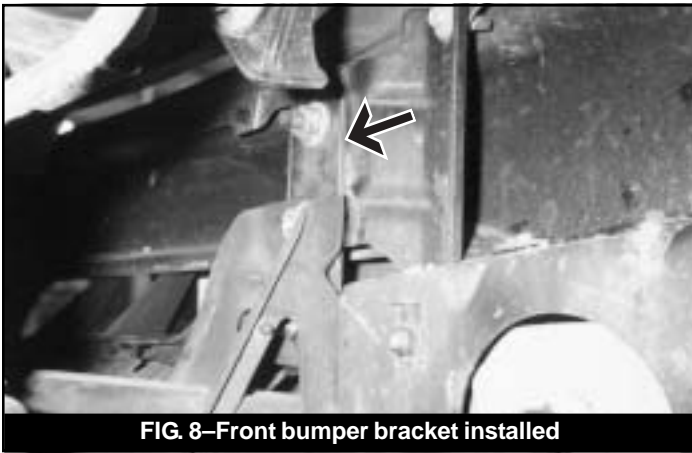


FIG. 8—Front bumper bracket installed

TOW HOOK INSTALLATION

74. The front valance must be trimmed if the tow hooks are to be reattached to the frame. Set the tow hook up to the frame, against the valance and mark the valance for trimming.
75. Trim the valance where marked. **Note:** It may be desirable to leave the portion of the valance that is against the frame intact (Fig. 9). The valance can be “sandwiched” in between the frame and the tow hook.
76. Install tow hook in reverse of disassembly.



FIG. 9—Valance trimmed

FUEL FILLER EXTENSION

77. Loosen the clamps holding the fuel filler and vent hoses to the fuel tank. Remove the filler assembly from the vehicle.
78. Loosen the clamp securing the vent hose to the metal vent tube and replace with the new one provided.
79. Cut the fuel filler hose in half below the bottom bend. Using the metal extension and two hose clamps, reassemble the fuel filler tube (Fig. 10). Do not tighten clamps at this time.

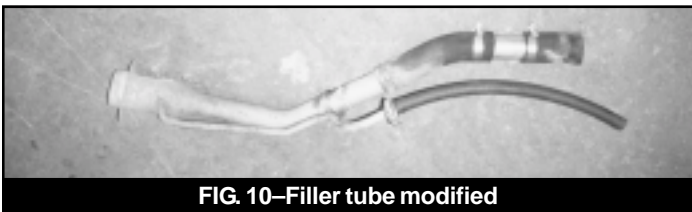


FIG. 10—Filler tube modified

80. Reinstall the fuel filler assembly in the vehicle. Attach the filler neck to the body with the stock screws. Remount the steel filler tube to the tab on the body using the stock hose clamp. Attach the vent and filler hoses to the fuel tank and adjust the filler extension. Tighten all clamps.

SPARE TIRE HOIST RELOCATION

81. Lower the spare tire from its stowed position and remove it from the hoist. Remove the two bolts securing the hoist to the frame cross member.
82. Lift the hoist from its original position using two 2-1/2” spacers (Fig. 11). Run 3/8” x 3-1/2” bolts with 3/8” washers through the stock mounting holes, through the spacers, and thread into the hoist. Use 3/8” lock nuts on the top side of the hoist to secure the bolts.



FIG. 11—Spare tire hoist relocated

REAR BUMPER RELOCATION

83. Mount the rear bumper to the new bumper brackets using the OE nuts. Use the top set of holes for the 3” lift and the lower set for the 2” lift. Leave bumper loose.
84. Adjust the bumper to the appropriate location and tighten all bracket and bumper mounting hardware.
85. Return spare tire to stowed position.
86. If possible, reattach axle breather in original location. If not, relocate breather to an appropriate location using zip ties provided.
87. Reattach the air intake to the throttle body and secure the hose clamp. Reassemble the air filter box. Replace the throttle body cover.
88. Reconnect the battery cables. Connect positive cable first and then negative cable.

Note: Check all fasteners for proper torque. Check all fasteners again after 100 miles.