



**FORD RANGER, MAZDA PICKUP
3" BODY LIFT
INSTALLATION INSTRUCTIONS
1998-2000 KIT# 883**

**MANUAL TRANSMISSIONS MANUFACTURED
BY MAZDA REQUIRE SHIFT EXTENSION
SE3700**

⚠WARNING

Installation of a body lift will change the center of gravity and the handling characteristics of the vehicle. Because of the higher center of gravity and larger tires, the vehicle will handle and react differently both on and off-road. You must drive it safely! Extreme care must be taken to prevent vehicle rollover or loss of control, which could result in serious injury or death. Avoid sudden sharp turns or abrupt maneuvers and always make sure all vehicle occupants have their seat belts fastened.

⚠WARNING

Read and understand all instructions, warnings, cautions, and notes in this sheet and in your owner's manual before you begin the installation of this body lift kit.

⚠CAUTION

Proper installation of a body lift kit requires knowledge of the factory recommended procedures for disassembly and assembly of original equipment components. We recommend that the factory shop manual and any special tools necessary to your vehicle be on hand during the installation. Installation of this body lift kit without proper knowledge of the factory recommended procedures may affect the performance of these components and the safety of your vehicle. We strongly recommend that a certified mechanic familiar with the installation of similar components install this body lift kit.

⚠WARNING

This body lift kit should only be installed on vehicles in good working condition. Before installation, the vehicle should be thoroughly inspected for evidence of corrosion or deformation of the sheet metal around the factory body mounts. This body lift kit should not be installed on any vehicle that is suspected to have been in a collision or misused. Off-road use of your vehicle with this body lift installed may increase the stress applied to the factory body mounts. We do not recommend that any vehicle with a body lift installed be involved in any extreme off-road maneuvers such as jumping. Failure to observe this warning may result in serious personal injury and/or severe damage to your vehicle.

⚠WARNING

Many states now have laws restricting bumper heights and vehicle lifts. Local laws should be consulted to determine if the changes you intend to make to your vehicle comply with state laws. Before combining a body lift with a suspension lift, consult an installation professional to see how this will affect your specific application.

⚠WARNING

The installation of larger wheel and tire combinations may reduce the effectiveness of the braking system.

⚠WARNING

We will not warranty any damage to the A/C system.

⚠WARNING

Always wear eye protection when operating power tools.

⚠WARNING

Ensure that your vehicle tires are properly blocked and secured before you begin installation of this lift kit.

⚠NOTE

Apply the kit **Loctite®** to the threads of all fasteners unless specified otherwise in these instructions.

1. Carefully read all warnings and instructions completely before beginning.

△ NOTE

Kit parts are prefaced by the word **kit** and appear in **bold print**.

2. Verify all parts have been received in this kit by checking the parts list at the end of this document.

△ NOTE

If parts are missing from kit, please be prepared to provide the following information:

1. **Name** of purchase location
2. **Bar Code** on side of box
3. **Date** above bar code
4. **Date** inside box cover
5. **Inspector #** from inside box cover

3. **Only install this kit on the vehicle for which it is specified.** If anytime during the installation you encounter something different from what is outlined in the instructions, call technical support.
4. Special tools needed:
 - a. Welder (or access to a professional welding shop) to weld the kit **spacers** (bed supports) onto the frame. If necessary, the vehicle can be driven to a shop where the kit **spacers** can be welded onto the frame later.
 - b. Die grinder or similar tool capable of cutting metal.
5. Park the vehicle on a clean, dry, flat, level surface and block the tires so the vehicle cannot roll in either direction.
6. **Measure cab, bed, and bumper locations:** Measure and record the distance between the following components for proper alignment after the body has been lifted:
 - front bumper and fenders
 - cab and bed
 - rear bumper and bed/tailgate
7. **Battery cables:** Disconnect both battery cables. Be sure to disconnect the negative cable first, then the positive cable.
8. **Airbag fuse:** Remove airbag fuses from fuse box in the interior and under hood (refer to owner's manual).

9. **Access to cab mount bolts:** Remove four screws holding each door jamb scuff plate to body. Remove side kick panels by gently pulling out on kick panels. Be careful not to damage plastic tabs holding kick panels to body. Pull carpeting back to reveal access covers above cab mounting bolts. Remove access covers. There should be one access hole on each side of the front floorboard, and one access hole on each side of the floorboard behind the rear seat. On extra cab models, fold up rear seats, remove side panels, and pull carpeting back to expose access holes.
10. **Ground strap (frame):** Two ground straps are connected to the body and the middle cab mounts on the frame (one on each side). Disconnect ground straps from frame.
11. **Ground strap (firewall):** A ground strap runs from the back of the engine to a stud on the firewall. Remove nut holding ground strap to stud on firewall. Install kit **bracket** (ground strap) on firewall stud. Install stock nut on stud. Install ground strap on stud protruding from kit **bracket**. Install a kit **washer** (1/4" SAE) and kit **nut** (1/4" Nylock) on stud.
12. **Wire loom (driver side of engine):** A wire loom runs to the battery and the driver side fender well. The wire loom is attached to a bracket on the driver side of the engine. A nut holds the bracket to a stud protruding from the engine. Remove nut from stud. Remove bracket from stud. Remove wire loom from bracket. The bracket will be repositioned on the wire loom and reattached to the engine after the cab has been lifted.
13. **Automatic transmission:** Vehicles with automatic transmission are shifted via a cable. If clips holding cable to body might cause cable to bind, remove cable from clips.
14. **4WD (electronic shift):** Remove wire loom mounting tab from bracket on rear of transfer case. The wire loom will be remounted after lifting the cab.
15. **Air intake hose:** Loosen clamp holding air intake hose to intake manifold. Disconnect any wires or other hoses connected to main intake hose. Remove hose from air cleaner housing by releasing large clamp holding assembly together. Remove hose from vehicle.
16. **Radiator:** Remove two bolts holding top of radiator to core support. Carefully lift radiator up and off of lower mounting pads. Reposition radiator under lower mounting pads. (Later, the radiator will be

installed on the kit **brackets** under the stock pads.)
Remove rubber from lower mounts.

using stock bolt and nut. Tighten fasteners to manufacturer's specification.

⚠ WARNING

When bending the lines, be extremely gentle; they could easily be damaged if they are not bent properly.

- 17. Brake lines:** Remove brake lines from plastic clips on driver side fender well and frame rail. The brake lines will need to be carefully bent to gain slack. Gently bend lines so they can flex while lifting.
- 18. Sheet metal cover:** On some vehicles, a piece of sheet metal on the inside of the frame rail (driver side) covers the lines running to the fender well area. Remove cover. Remove larger diameter line (upper line) from forward mounting bracket and bend it to gain slack. Remove bolt that closes mounting bracket over lines. Remove upper portion of bracket. Install upper portion of bracket and install mounting bolt. Gently bend line upward. Check line again during lifting. Bend line as necessary to gain proper amount of slack. Be especially careful not to damage line or anything attached to it.

⚠ WARNING

While working with the vehicle steering, do not allow the steering wheel to turn independently of the steering gear. If the steering is not reassembled in the exact position that it currently is in, the air bag system could malfunction. If this occurs the repair will be quite costly.

- 19. Steering shaft (engine compartment):** Set front wheels straight ahead. Strap steering wheel so it can't accidentally be turned. Near the firewall, mark upper and lower sections of steering shaft in relation to each other. This will ensure proper connection after the kit **extension** has been installed. Remove bolt holding upper and lower sections of steering shaft together. Slide lower shaft down and off of upper shaft. Install female end of kit **extension** onto upper shaft. Install kit **bolt** (3/8" x 1 1/2") with a kit **washer** (3/8" SAE) through kit **extension** and steering shaft. Install a kit **washer** (3/8" SAE) and a kit **nut** (3/8" Nylock) on kit **bolt**. Connect lower shaft to kit **extension**. Align marks on upper and lower steering shafts. Insert male end of kit **extension** into lower shaft. Fasten kit **extension** to lower shaft

⚠ NOTE

If the vehicle is equipped with front tow hooks, they must be removed and cannot be reinstalled after the bumper has been lifted. If you wish to leave the tow hooks on the vehicle, the front bumper cannot be lifted.

- 20. Front bumper:** Disconnect wiring harness from connector that leads to fog lights (if equipped). Remove three bolts holding each tow hook to frame (if equipped). Remove four nuts and front bumper from frame.

⚠ WARNING

Be sure to reinstall the stock washers and body mount bushings along with the kit **blocks**. DO NOT leave the stock washers and bushings off the vehicle.

- 21. Cab lift blocks (passenger side):** Loosen, but DO NOT remove, six cab mounting bolts (two are near the radiator core support, four are under the cab). Remove bolts from cab mounts on passenger side only. Be sure doors are closed to help prevent cab from flexing during lifting. Using a hydraulic jack and a wood block, slowly lift passenger side of cab just high enough to place kit **blocks** (3" height x 3" diameter) on mounting pads. Be sure to continually check for any hoses, wires, cables, etc. that may be binding. Double-check brake lines and tube on driver side to be sure there is enough slack to continue lifting. Remove front mounting bushing from vehicle. Using a 1/2" drill, drill threads out of bushing sleeve. This will allow the kit **bolt** to slide all the way through the sleeve. Install bushing on vehicle. Place kit **blocks** on top of stock mounting bushings. For front cab mount (near radiator core support), insert a kit **bolt** (12mm x 180mm) through a kit **washer** (7/16" USS), stock lower washer, and stock rubber cone (lower bushing). Insert kit **bolt** through mount from the bottom up. Install stock upper washer and stock nut on kit **bolt**, but DO NOT tighten. For the mount at the front floorboard, install a kit **bolt** (12mm x 140mm) through a kit **washer** (7/16" USS) and stock washer. Insert kit **bolt** through mount from the top down. Install stock washer and stock nut on bolt, but DO NOT tighten. For the mount at the rear of the cab, insert a kit **bolt** (12mm x 160mm) through a kit **washer** (7/16" USS) and stock washer. Insert kit **bolt** through mount from the top down. Install stock washer and stock nut on kit **bolt**, but DO NOT tighten. Lower the body onto kit **blocks**. Remove jack from passenger side of cab.

22. **Cab lift blocks (driver side):** Repeat previous step for driver side of cab. Realign cab and bed using measurements recorded earlier.
23. **Cab bolts:** Remove each kit **bolt** (one at a time), apply Loctite® to threads, install, and tighten to manufacturer's specification.
24. **Fuel filler:** Remove screws holding fuel filler neck to body.
25. **Rear bumper:** Remove three nuts and tow hook from frame (if equipped). Disconnect license plate lights from rear bumper. Remove bolts holding rear bumper brackets to frame. Remove rear bumper from vehicle.
26. **Bed lift blocks (passenger side):** Using a T55 torx socket, loosen (DO NOT remove) all eight bed mounting bolts (six bolts on short bed). Remove bolts from bed mounts on passenger side only. Using a hydraulic jack and a wood block, slowly lift passenger side of bed just high enough to place kit lift **blocks** on frame. Be sure to continually check for any wires, hoses, cables, etc. that may be binding. Install kit **bolts** and kit **washers** (7/16" USS) from the top as follows (DO NOT tighten):
 - 12mm x 200mm bolt in front mount
 - 12mm x 180mm bolt in all other mounts
27. **Bed lift blocks (driver side):** Repeat previous step for driver side of vehicle.
28. **Bed bolts:** Align bed to cab using measurements recorded earlier. Remove each kit **bolt** (one at a time), apply Loctite® to threads, install, and tighten to manufacturer's specification.
29. **Interior covers:** Install access covers in floor above cab mount bolts. Install carpeting in its original position. Install kick panels. DO NOT install shift boot assembly at this time. Install door jamb plates.
30. **4WD (electronic shift):** Wrap kit **bracket** (wire loom) around wires at rear of transfer case. Install kit **bracket** on stock bracket with a kit **bolt** (1/4" x 1"), two kit **washers** (1/4" SAE), and a kit **nut** (1/4" Nylock). Be sure there is ample slack in wires.
31. **4WD (manual shift):** Check 4WD shift lever operation. Be sure shift lever will engage in all 4WD ranges. If shift lever contacts floor, notch floor to allow for complete engagement in all 4WD ranges. Install shift boot assembly. Check shift lever operation again. If necessary, modify boot assembly to allow for proper shift lever operation. Install shift boot on floor. Install shift boot assembly. Check shift lever operation again. It may be necessary to modify boot assembly to allow for proper shift lever operation. Install shift boot on floor. Install shift knob. Check operation of both shift levers again. Be sure that there is ample engagement in all gears and 4WD ranges.
32. **Automatic transmission:** Attach shift cable to mounting clips on firewall/bed housing area. It may not be possible to attach cable to all of the mounting tabs, but attach it to as many as possible.
33. **A/C hose:** To prevent A/C hose from rubbing against bottom of alternator, cut kit **hose** (3/4" x 6") lengthwise. Install kit **hose** over A/C hose at alternator. Tie kit **hose** in place using two kit **zip ties**.
34. **Wire loom (driver side of engine):** Install wire loom mounting bracket on driver side of engine. Install wire loom on mounting bracket. Be sure there is ample slack in wiring to reach battery and driver side fender well.
35. **Sheet metal cover:** Install sheet metal cover on inside of driver side frame rail. The large tube should be routed between the top legs of the cover. Be sure there is ample slack in the line and that it is not rubbing on anything that could wear a hole in the line or hinder the operation of any component.
36. **Brake lines:** Check brake lines that were removed from clips on driver side fender well. Be sure lines have extended and are not binding. If lines are binding, gently bend them to gain more slack.
37. **Radiator:** Install rubber cushion that the radiator sat on in the radiator drop-down tubes. The nipple on the bottom of the cushion should fit in the small hole in the tube. The top of the tube will be installed on the bottom of the stock mount. Slide tube with cushion around arm on radiator so arm will sit on cushion. Install tube with radiator on bottom of stock radiator mount by installing a kit **bolt** (5/16" x 1") and a 5/16" large washer from the top of the stock mount and screwing down into the nut that is attached to the top of the tube. DO NOT tighten. Install kit **brackets** (radiator upper) on core support where radiator was originally installed. Install radiator on studs of kit **brackets** using a kit **washer** (1/4" SAE) and kit **nut** (1/4" Nylock). DO NOT tighten. Adjust clearance between fan and fan shroud. Tighten all radiator fasteners.

38. **Air intake hose:** Connect air intake hose to air cleaner assembly and intake manifold. Reconnect any wires or hoses that were disconnected from air intake hose.

⚠ WARNING

Gasoline is highly flammable and can ignite with the slightest spark. Use extreme care when working around gasoline. Take precautions to prevent any leakage of fuel while the filler neck is disconnected. Fuel vapors can be harmful; be sure that the work area is well ventilated and free from sources of ignition (cigarettes, fire, sparks, etc.).

⚠ NOTE

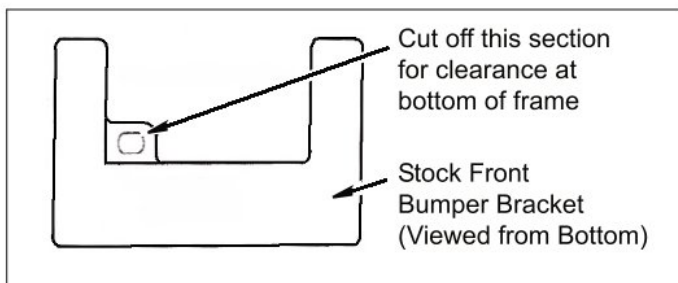
In the following step, if the vehicle is equipped with a large diameter vent hose, it is not necessary to extend the vent hose. Simply adjust the hose.

39. **Fuel filler:** Cut through fuel filler hose about halfway between fuel tank and filler neck. Disconnect vent hose from filler neck. Slide a kit **clamp** (#28) over each piece of filler hose (top and bottom). Install kit **extension** between two pieces of filler hose. Be sure filler neck can be reconnected to body. Adjust hose as necessary. Tighten kit **clamps** at kit **extension**. Cut through middle of vent hose. Reconnect upper part of hose to filler neck. Slide a kit **clamp** (#10) over each piece of vent hose. Insert kit **extension** between two pieces of vent hose. Adjust vent hose and tighten kit **clamps**.

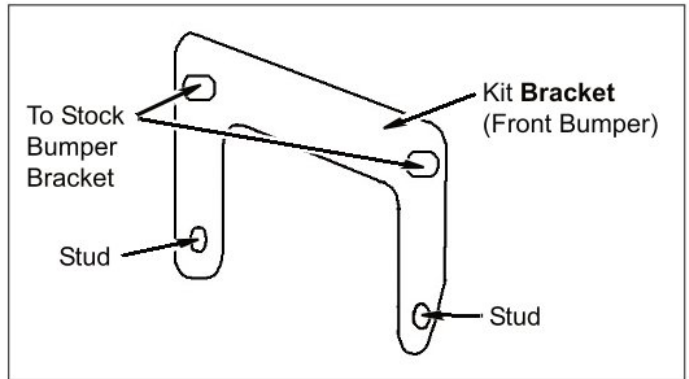
40. **Ground strap (frame):** On each frame rail, install a kit **bracket** ("L") using stock fasteners. Install ground strap on kit **bracket** using a kit **bolt** (1/4" x 1"), two kit **washers** (1/4" SAE), and a kit **nut** (1/4" Nylock).

41. **Front bumper mounting flange (trim for fog lights):** If the vehicle is equipped with fog lights, trim outer edge of front bumper mounting flange at end of each frame rail. Use the template at end of this document as a guide for trimming. This will prevent contact with the fog lights.

42. **Front bumper:** Remove stock bumper brackets from bumper. Trim bottom of stock bumper bracket as shown.



- Install stock bumper brackets on rear bumper. Install kit **brackets** on bumper using stock nuts (studs on kit **brackets** should be pointing away from bumper). DO NOT tighten.



- Install rear bumper on vehicle with studs going through original mounting holes. Install a kit **washer** (1/2" USS) and a kit **nut** (1/2" Nylock) on each stud. DO NOT tighten. Adjust bumper using measurements recorded earlier. Tighten all front bumper fasteners.

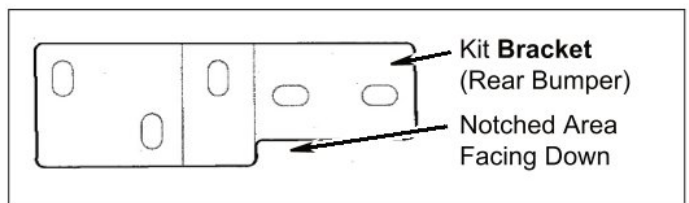
⚠ WARNING

The kit rear bumper **brackets** are intended to enhance the appearance of the vehicle only. They are not rated for towing. Any attempt to tow using the rear bumper after the kit **brackets** have been installed could result in damage to the vehicle and serious personal injury.

⚠ NOTE

If the outside supports are welded to the center area of the rear bumper, it will not be possible to install the outside supports on the kit **brackets**.

43. **Rear bumper:** Remove stock rear bumper brackets from bumper (the outside supports will remain on the bumper). Using stock fasteners, install kit **brackets** on bumper with notched area facing down. DO NOT tighten.



- Install outside support brackets to center hole (between the bends) of the kit **brackets**. Hold bumper assembly in installed position. Using holes in kit **brackets** as a template, mark frame (two holes in each rail). Remove bumper from vehicle. Drill a 1/2" hole where marked. On vehicles with a rear tow

hook, drill an additional hole in each kit **bracket** corresponding to bolts for tow hook. Align holes in passenger side kit **bracket** with holes in frame for the tow hook. Mark kit **bracket** through third hole in frame. Be sure mark lines up with bolt pattern for the tow hook. Drill a 1/2" hole at this location. Install rear bumper on frame using four kit **bolts** (7/16" x 1 1/2"), eight kit **washers** (7/16" USS), and four kit **nuts** (7/16" Nylock). On vehicles with tow hooks, use stock fasteners on right side and 7/16" kit fasteners (described above) on the left. Adjust bumper according to measurements recorded earlier. Be sure tailgate will open without contacting bumper. Tighten all rear bumper fasteners. Connect license plate light connectors.

△ NOTE

After the rear bumper has been lifted, the spare tire crank will need to be accessed from behind the license plate. For access to the spare tire, keep a screwdriver in the vehicle so the license plate can be removed.

44. **Bed support spacers:** The kit **spacers** support the bed where the bed cross channels rested on the frame (near the wheel wells) before the bed was lifted. Weld kit **spacers** onto frame in four locations (two locations on short bed). A certified welder should perform all welding.
45. **Battery cables:** Reconnect both battery cables. Be sure to connect the positive cable first, then the negative cable.
46. **Airbag fuse:** Install airbag fuse in fuse box.
47. **Warning label:** Apply kit **label** (warning) on dash in plain sight of all vehicle occupants.

48. **Double-check vehicle:** Check wires, hoses, cables, etc. to be sure they are not binding. Check clearance between fan and fan shroud. Start engine. Listen for unusual noises. Check steering operation. Check transmission and transfer case operation. Be sure transmission and transfer case engage properly in all gears and four wheel drive ranges. Test-drive vehicle in all transmission and 4WD ranges. Check all fasteners in 500 miles and as part of your regular maintenance schedule.

NOTE

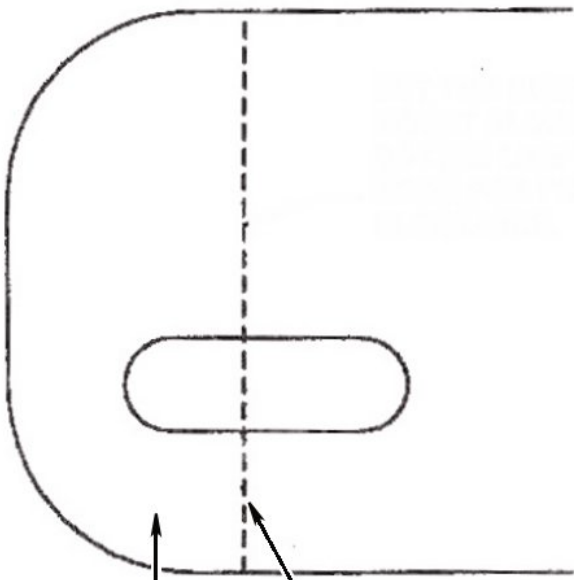
If steering binds during operation, perform the following procedures:

1. Locate mounting flange for steering column under dashboard.
2. Unbolt flange from firewall.
3. Drill out holes in top of flange as far as possible.
4. Pull steering column down as far as possible.
5. Install factory bolts and tighten.

Parts List

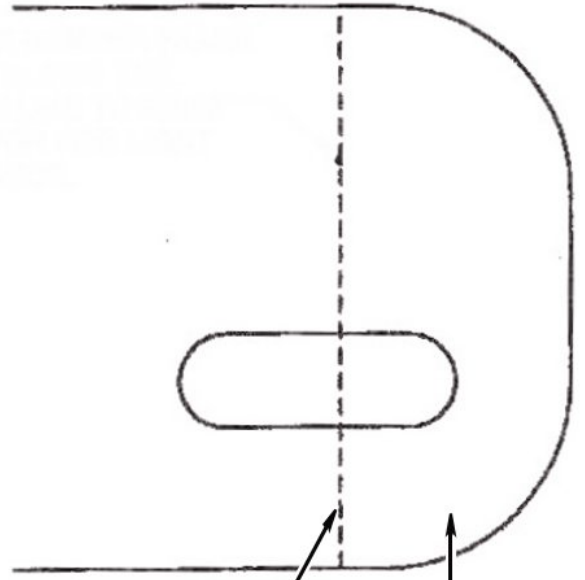
Qty. Description

14	Block , 3" height x 3" diameter
2	Bolt , 12mm x 140mm Bolts
2	Bolt , 12mm x 160mm Bolts
8	Bolt , 12mm x 180mm Bolts
2	Bolt , 12mm x 200mm
3	Bolt , 1/4" x 1"
2	Bolt , 5/16" x 1"
1	Bolt , 3/8" x 1 1/2"
4	Bolt , 7/16" x 1-1/2"
1	Bracket , front bumper driver side
1	Bracket , front bumper passenger side
1	Bracket , ground strap (flat, 3" hole-to-hole)
2	Bracket , ground ("L")
2	Bracket , radiator lower (2" x 3" x 1" steel w/ hole)
2	Bracket , radiator upper (flat, 3" hole-to-hole)
1	Bracket , rear bumper driver side
1	Bracket , rear bumper passenger side
1	Bracket , wire loom
1	Extension , fuel filler (1 1/2" x 5")
1	Extension , fuel filler vent (3/8" x 3")
1	Extension , steering
2	Clamp , hose (#10)
2	Clamp , hose (#28)
1	Hose , rubber (3/4" x 6")
1	Label , warning
1	Loctite® , 262ml bottle
6	Nut , 1/4" Nylock
1	Nut , 3/8" Nylock
4	Nut , 7/16" Nylock
4	Nut , 1/2" Nylock
4	Spacer , bed support (2" x 3" x 1" steel)
2	"U"-Nut , 5/16" (attached to Bracket , radiator lower)
9	Washer , 1/4" USS
2	Washer , 5/16" USS
2	Washer , 3/8" SAE
22	Washer , 7/16" USS
4	Washer , 1/2" USS
3	Zip tie



Cut along dotted line to
make room for fog light

Outer Edge of Front Bumper
Mounting Flange at End of Frame
(Passenger Side)



Cut along dotted line to
make room for fog light

Outer Edge of Front Bumper
Mounting Flange at End of Frame
(Driver Side)