

Low Range HD 2 Inch Body Lift Kit (Sidekick, GV, Vitara, Tracker, X90) SKU# KSP-BL2

Installation Instructions

Background: These instructions are designed for installing the 2" body lift. They can also be used successfully when installing the 1" body lift. When doing these instructions we raised the entire body and installed all the spacers at once. However, some have found success in installing the spacers, one side at a time. This works particularly well when installing the 1" body lift. This could be a better approach especially if you do not have a twin post lift.



We recommend reading these instructions through completely, before beginning the job. This will insure a greater margin of success and a more pleasurable experience.

CAUTION: Safety glasses should be worn at all times when working with vehicles and related tools and equipment.



FOR ADDITIONAL COPIES OF THESE AND OTHER INSTRUCTIONS GO TO: www.lowrangeoffroad.com and click on the "INSTRUCTIONS" tab.

Suggested Tools:

- Twin Post Lift (or Floor Jack and (4) Safety Stands)
- Standard Screwdriver
- Phillips Screwdriver
- Channel-Lock Pliers
- Sockets: 8, 10, 14, 17, 19 mm
- Deep Sockets: 10 mm
- Ratchet
- Socket Extension: 6"
- Wheel Chocks (2)
- Pick Tool
- Ultra-Gray Gasket Maker (Supplied)

BODY MOUNT PARTS IDENTIFICATION

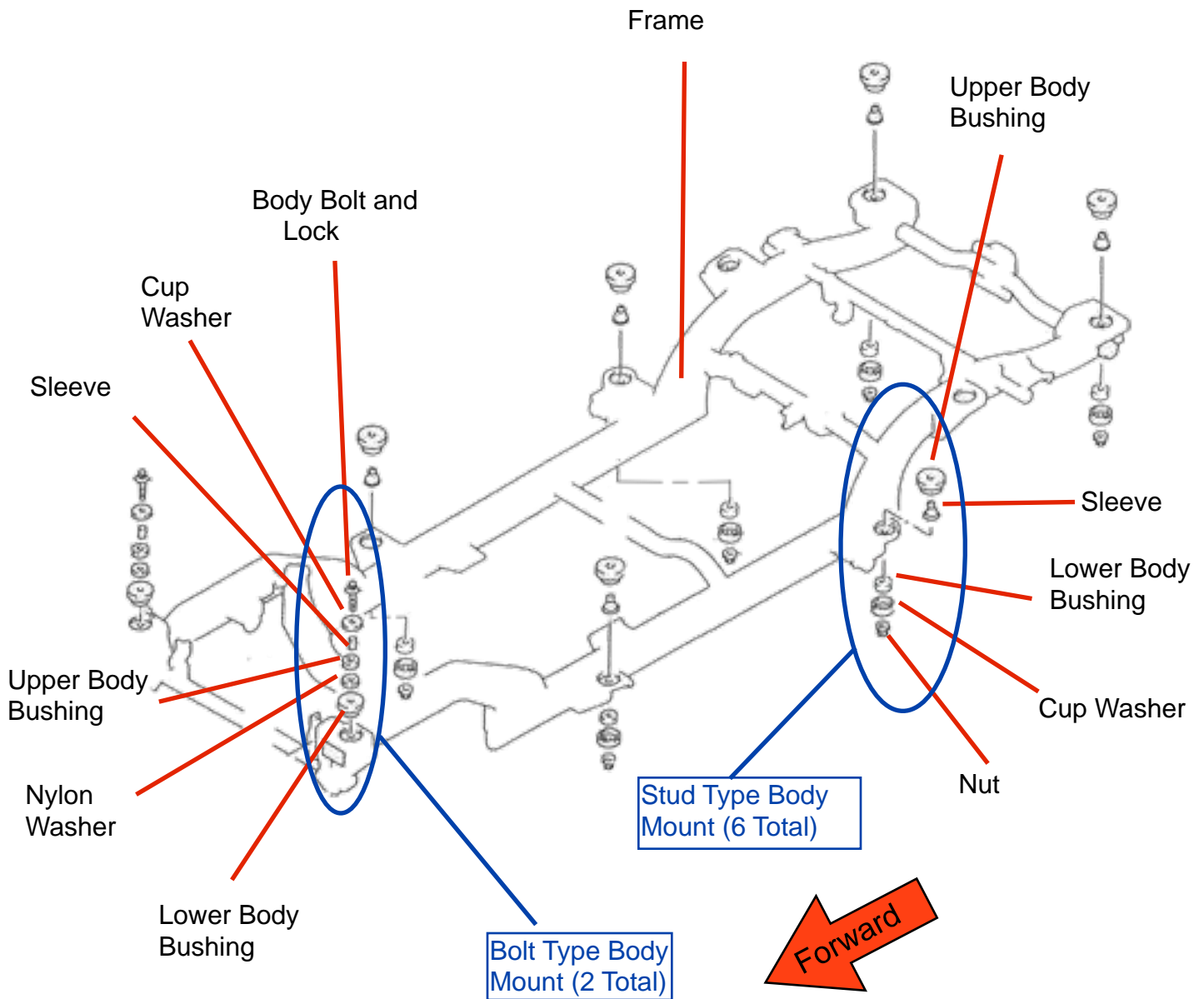


Figure A

KIT SUPPLIED BODY SPACER LOCATIONS & SIZING



A → 3" Diameter Stud Type Spacers (6 ea.)



B → 3" Diameter Bolt Type Spacers (2 ea.)



C → 2" Diameter Spacers W/ No Hole (4 ea.)

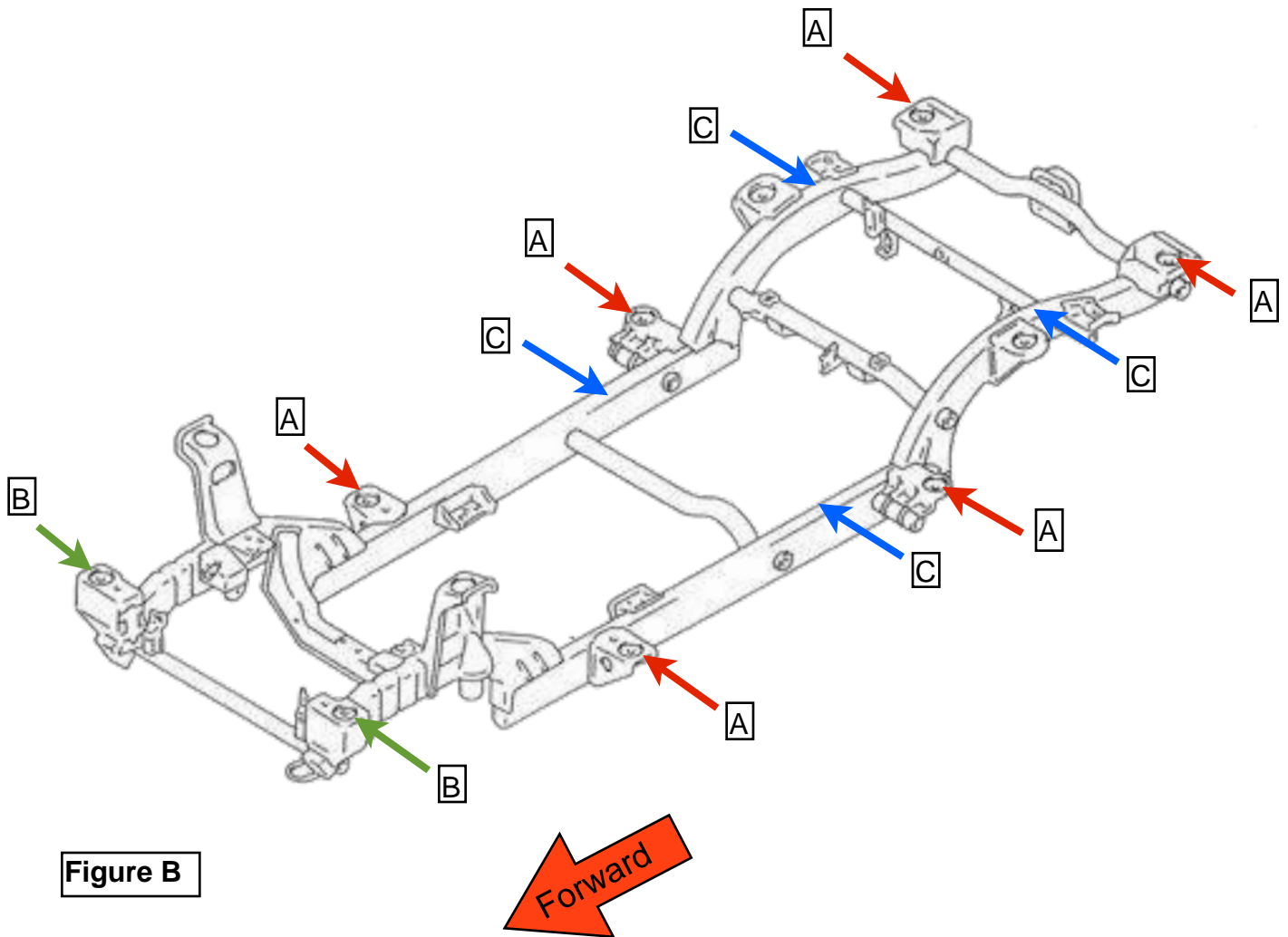


Figure B



BODY LIFT KIT COMPONENT PLACEMENT

STUD TYPE BODY MOUNT ASSEMBLY (TYPE "A")

Blue = Supplied Parts
Red = Existing Parts

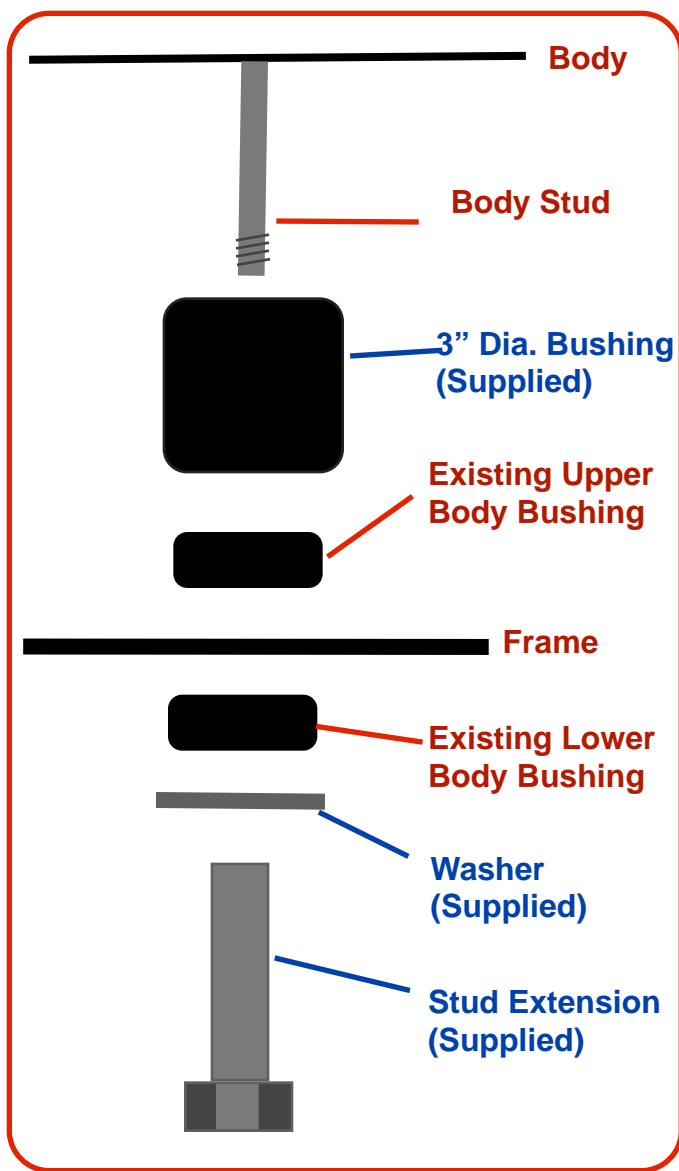


Figure C



BOLT TYPE BODY MOUNT ASSEMBLY (TYPE "B")

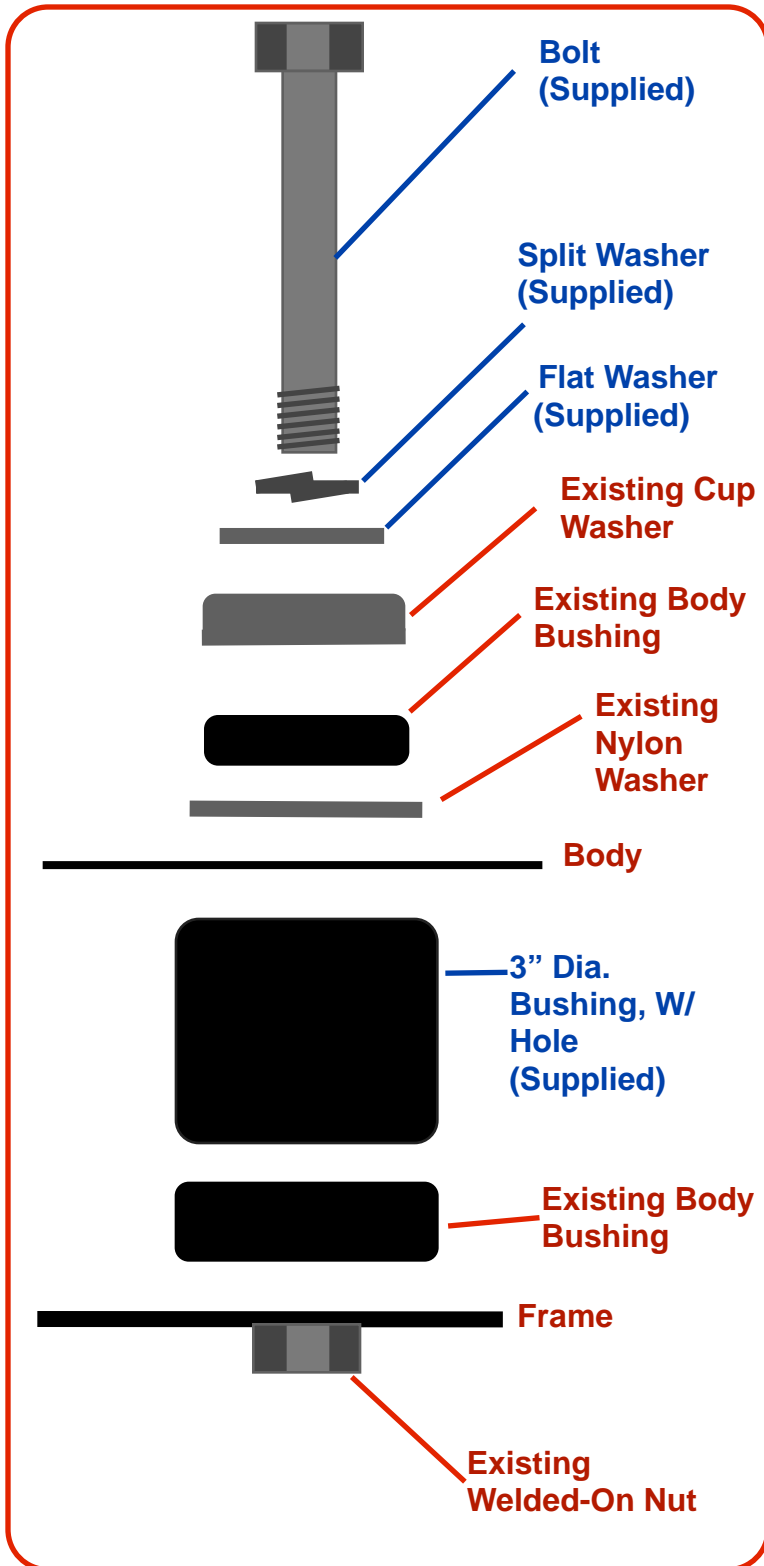


Figure D

GLUE-IN TYPE BODY MOUNT ASSEMBLY (TYPE "C")

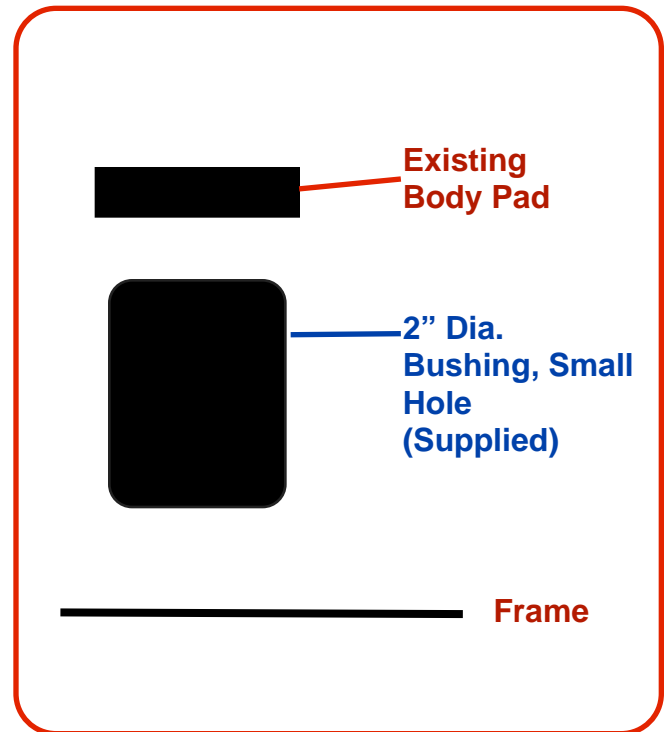


Figure E

Blue = Supplied Parts
Red = Existing Parts



Preparing the Vehicle



Lifting Option 1

The preferred method of lifting and supporting the vehicle is the twin post, frame contact, lift. If this is the method you plan to use, position the vehicle as you normally would, however do not lift it at this time.

A NOTE ABOUT BUMPERS

If the the vehicle you are working with still has the original FRONT bumper it will **NOT** need to be removed. All that is needed is to remove the grill and headlights to access the front body bolts.

If the vehicle you are working with is still equipped with the original REAR bumper, it **WILL** need to be removed in order to raise the body. However, it can be reinstalled and attach reasonably well if you want to reuse it.



Lifting Option 2

If you plan to use another method of lifting and supporting the vehicle, such as a floor jack and safety stands, position the vehicle on a level floor in a clear work area.



Step 1

Disconnect the negative battery terminal using a 10 mm deep socket. This is done to reduce the risk of cable damage and electrical short circuiting resulting electrical fires and component damage.

Removing the Grill



Step 2

Remove the (1) screw securing the grill using a phillips screwdriver.

Tech Tip 2

This picture shows the location of the screw.



Step 3

Remove the driver side of the grill by squeezing the grill with your right hand and pulling forward on the grill with your left hand as shown. This will disengage the snap clips.

Step 4

Remove the passenger side of the grill in the same way as the previous step. Squeeze with the left and pull with the right.

Note: Be careful here. The grill and is easily damaged and the snap clips will most likely brake. New clips can be purchased from Suzuki.





Step 5

Set the grill in a safe place so it is not broken.

Note: Placing it on top of the vehicle is a pretty good place.

Removing the Headlight Assemblies



Step 6

Insert a small screwdriver as shown and while prying slightly, pull the connector toward the rear of the car.

Tech Tip 6

This shows the connector unplugged.





Step 7

Remove the headlight assembly by removing the (3) bolts using a 10 mm socket on an extension.



Step 8

Lift out the headlight assembly.

Note: Be careful here. There is one more wire connector that needs to be disconnected.



Step 9

Disconnect the two wire connector (signal light). This is done by pressing down on the tab and pulling the connector halves apart. Then set the headlight assembly aside in a safe place.



Step 10

Repeat Steps 6 through 9 on the driver side headlamp assembly.

Disconnecting the Front Body Mounts

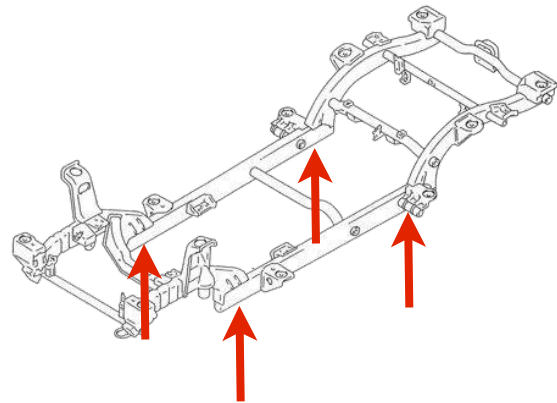


Step 11

Remove the passenger side front body mount bolt, split washer, cup washer and upper body bushing using a 14 mm socket. See Figure A for parts identification.

Tech Tip 11

This shows the parts removed.



Step 12

Repeat Step 5 on the driver side front body mount.

Step 13

Position the lift arms under the frame according to the illustration above and raise the vehicle up to a comfortable working height. If you do not have a lift these next few steps could be done with the vehicle on the floor.

Removing the Rear Bumper Cover



Step 14

Remove these (4) screws using a phillips screw driver.



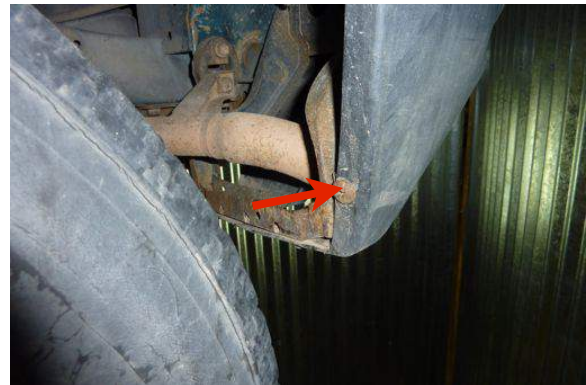
Step 15

Remove these (3) screws using a phillips screw driver.



Step 16

Remove this passenger side screw using a phillips screwdriver.



Step 17

Remove this driver side screw using a phillips screwdriver.



Step 18

Remove these (2) passenger side bolts using a 10 mm socket.



Step 19

Remove these (2) driver side bolts using a 10 mm socket.



Step 20

Detach the driver side bumper cover by flexing it slightly forward, then outward unhooking it from the bracket.



Step 21

Remove the bumper by sliding it straight rearward. See the next tech tip before performing this step.

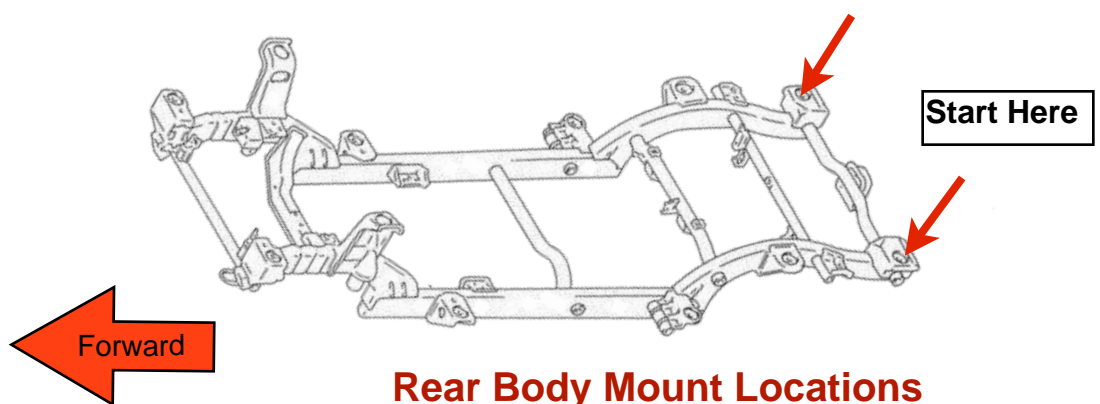


Tech Tip 21

This is the slide clip that attaches the rear bumper cover to the finder on both sides of the vehicle. To release these slide clips, slide the bumper cover straight rearward keeping bumper cover level front-to-back and side-to-side.

Unbolting the Rear Body Mounts

Figure F





Step 22

Unbolt the driver side rear body mount using a 14 mm socket. See **Figure F** for the location of these rear body mounts.



Step 23

Remove the nut, cup washer and lower body bushing.

Note: The nut and cup washer can be discarded. Keep the body bushing. It will be needed later. See **Figure A** for body parts identification.



Step 24

Repeat Steps 22 and 23 on the passenger side body mount.

Removing the Fuel Fill Hose Cover



Step 25

Remove the (3) bolts using a 10 mm socket.



Step 26

Set the cover aside.



Step 27

Remove the (4) fuel neck bolts using an 8 mm socket.



Step 28

Remove the fuel cap.





Step 29

Pull the fuel fill hose out of the fender.

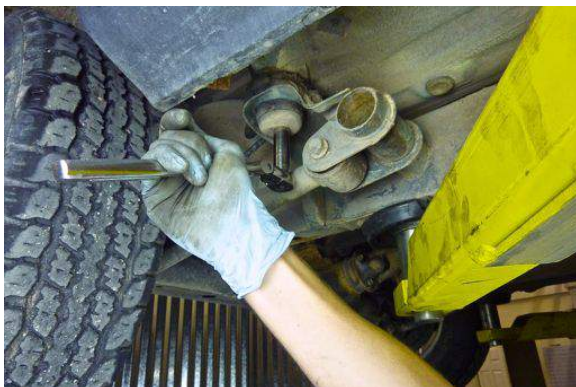


Step 30

Replace the fuel fill cap.

Note: This done mainly to keep dirt from dropping into the fuel tank.

Unbolting the Lower (4) Body Mounts



Step 31

Raise the vehicle up and Loosen the body mount nut located just ahead of the PASSENGER REAR tire using a 14 mm socket. See **Figure G** for the location of this mount.

Note: This step could be done with the vehicle on the floor or on jack stands.

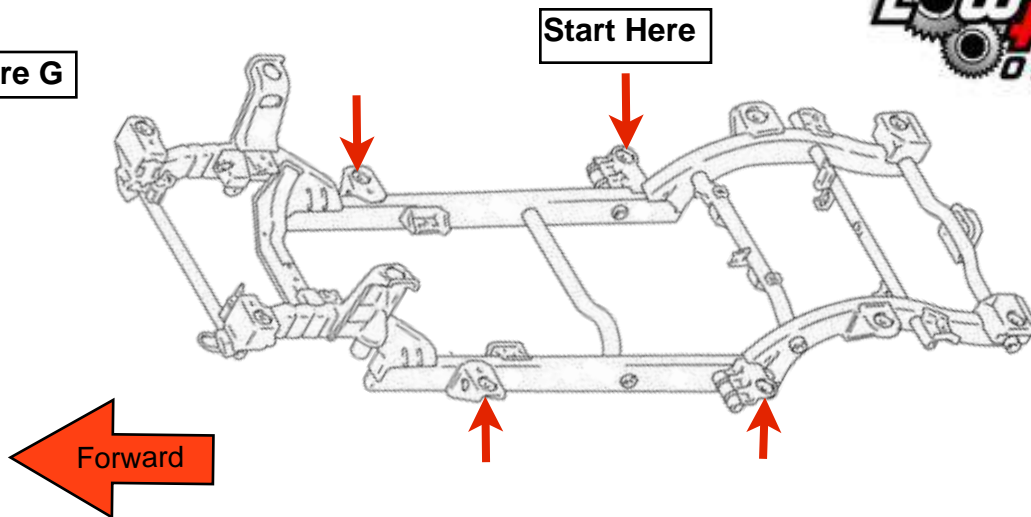


Step 32

Then remove the nut, cup washer and bushing.

Note: You can discard the nut and cup washer but keep the bushing. The bushing will be needed later.

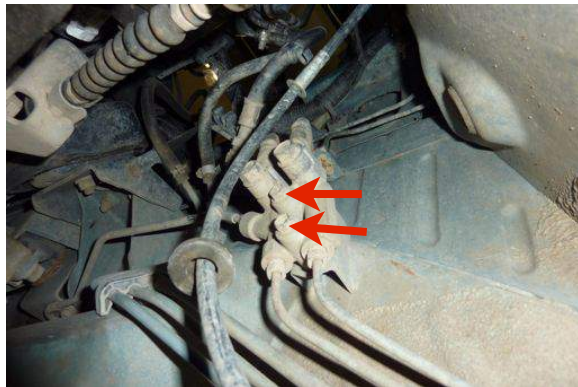
Figure G



Step 33

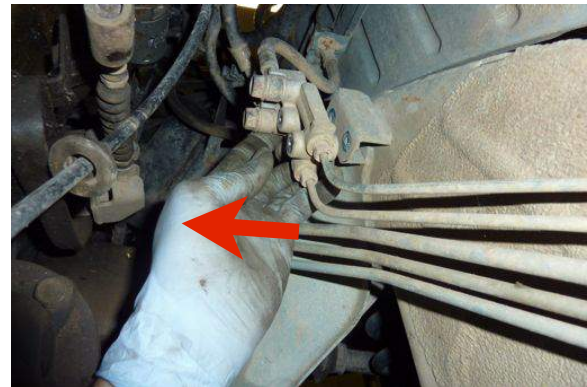
Repeat Steps 31 and 32 on the other 3 body mounts indicated in **Figure G**.

Disconnecting the Brake Components



Step 34

Disconnect the brake junction block from the body by removing the (2) bolts using a 10 mm socket.



Step 35

Pull the brake junction block away from the body by gently bending the brake lines.

Note: The brake lines should rest about one inch away from the body.





Step 36

Disconnect the driver side front brake line retainer clip using a standard screwdriver.



Step 37

Free the brake line from the bracket.

Disconnecting (& Positioning) Other Components



Step 38

If raised, lower the vehicle back down near the floor.



Step 39

Position the transfer case shifter into the "N" (Neutral) position.





Step 40

Position the transmission shifter into the "N" (Neutral) position.



Step 41

Open the hood and unsnap the wiring restraint shown here.

Note: This restraint is located on the passenger side strut tower inside the engine compartment.



Step 42

Slide the coolant reservoir up and out, then lay it aside.



Step 43

Release this zip tie using a standard screwdriver or a pick tool.

Note: This zip tie is located just ahead of the battery.



Step 44

Release this 2nd zip tie as well.



Step 45

Release this zip tie also.

Note: This should allow plenty of slack in the wiring harness. However, a careful inspection of other areas of the wiring harness is advisable. Just to make sure there are no problems when the body is lifted up.



Step 46

Loosen the intake duct hose clamp using a standard screwdriver.



Step 47

Disconnect the intake air duct and lay it aside as shown.



Step 48

Disconnect this vacuum switch by removing the mounting bolt using an 8 mm socket.

Note: Do not disconnect any wires or hoses. Simply lay it aside for now.



Step 49

Disconnect the O2 Sensor (4 wire connector) located near the brake master cylinder on the driver side of the engine compartment. Simply depress the tab and separate the two connector halves.



Step 50

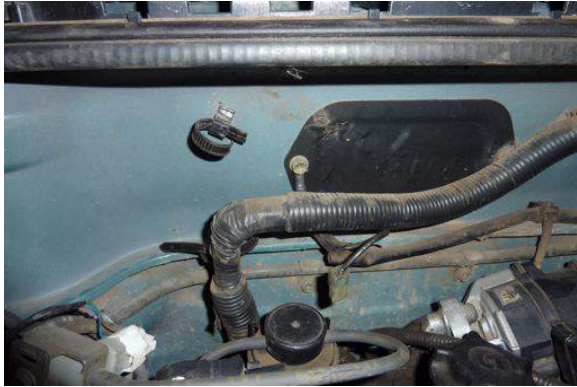
Release this zip tie using a standard screwdriver or a pic tool. This wiring harness is located at the rear of the engine compartment on the passenger side.



Step 51

Disconnect this wiring harness restraint by prying it away from the firewall. This is located at the rear of the engine compartment in the center.

Note: It should simply snap out of the hole.



Step 52

Be sure the wiring harness has plenty of slack. If there is not enough slack, unclip any remaining wiring restrains as needed.



Step 53

Disconnect the rear vacuum hose at the evaporative canister as shown.



Step 54

Unplug this ground wire located at the rear of the engine.



Raising the Body and Installing the Spacers



Step 55

Block the passenger side front wheel, front and rear. Position the lift arms on the BODY pinch welds as shown.

Note: It may be necessary to place a block between the rear lift arms and the body, so the body lifts evenly front-to-rear.

Important: If you place a block on the passenger side rear, be sure to do the same to the driver side.



Step 57

Once the body has been raised about 3 inches off the frame, beginning with the body support that is just ahead of the passenger side rear wheel, separate the upper body bushing from the body using a standard screwdriver.

Step 56

Carefully raise the body a little at a time.

CAUTION: Be sure to check all areas of the vehicle where you have disconnected things as well as all other areas that could have been accidentally overlooked, to insure that no damage will occur as the body is being lifted.



Step 58

If the sleeve did not come off with the upper body bushing, remove the sleeve from the stud.





Step 59

Install one of the 3" Dia. spacers on the body stud.

Note: It may be necessary to raise the body a little more to make room for this spacer. If raising the body is needed, be sure to check the wires, vacuum hoses, brake lines, etc. to insure that no damage is occurring while lifting.

CAUTION: DO NOT raise the body any higher than is absolutely necessary.



Tech Tip 59

If the stud is rusted, it may be necessary to clean the stud with a file before installing the supplied spacer.



Step 60

Push the supplied 3" Dia. spacer up the stud and install the original upper body bushing under the supplied spacer as shown.

IMPORTANT NOTICE: Be sure the sleeve has been removed from the original body bushing before installing it.

Step 61

Repeat Steps 57 through 60 on the other (5) body mounts shown in **Figure H** below.

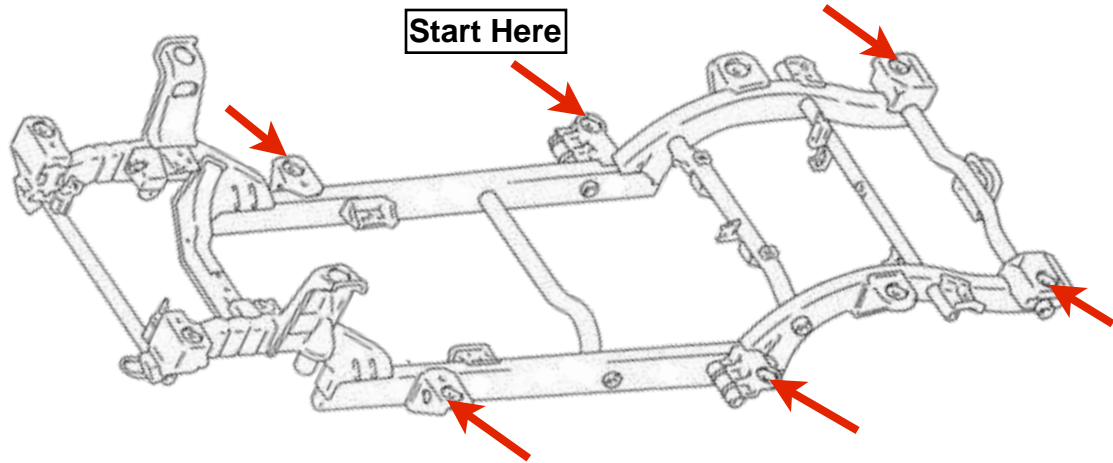


Figure H



Installing the Front (2) Spacers

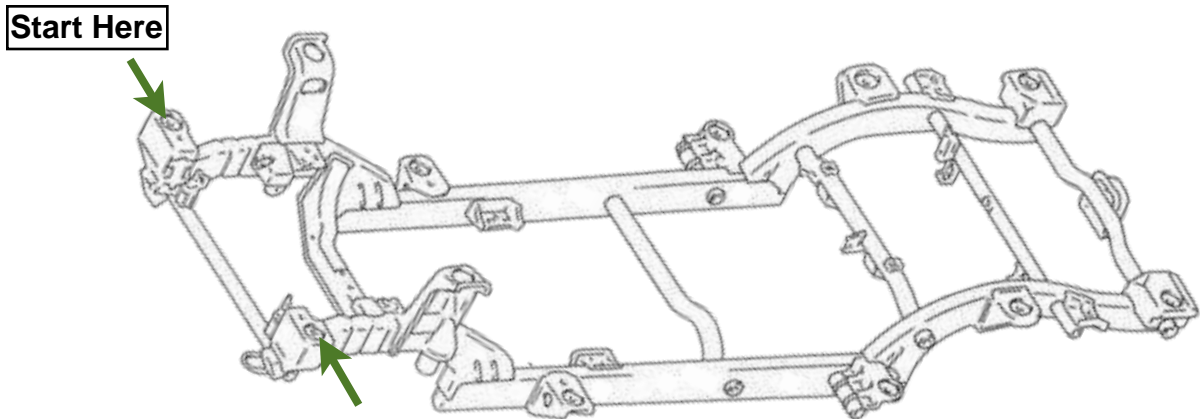


Figure I





Original Body Mount Bushing

Step 62

Begin at the passenger side front body mount. (See **Figure I**) If the sleeve is still in place, remove it.

Notice: Be sure to leave the original body mount bushing in place.



Step 64

Repeat Steps 62 and 63 on the driver side front mount. See **Figure I**.



Step 63

Place a supplied 3" Dia. body spacer on top of the original body bushing.



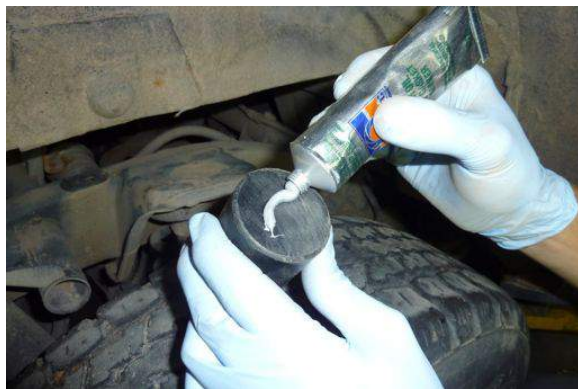
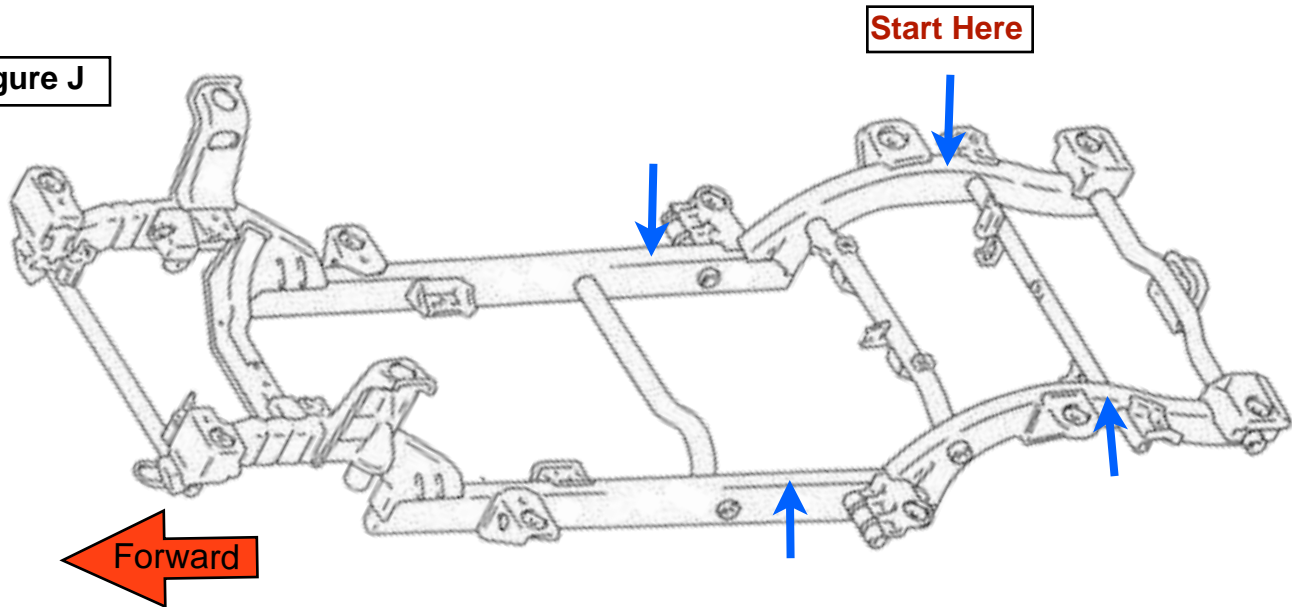
Step 65

Once all 6 (4 lower and 2 rear) of the 3" Dia. spacers are in place, carefully lower the body, a little at a time. While lowering the body, observe all (6) of the body studs. Insure that they are alining with the holes in the frame. If the studs are not alining with the holes in the frame, move the frame as needed. If the frame needs to move front-to-back, unblock the wheels and roll it. If the frame needs to move side-to-side, place a floor jack under the front (or rear) axle assembly and move the frame.

IMPORTANT: Be sure the studs are perfectly centered in the holes before continuing to the next step.

Installing the (4) 2" Diameter "Glue-In" Spacers

Figure J



Step 66

Begin at the passenger side rear mount location. (See **Figure J**) Apply some of the supplied Ultra-Gray Gasket Maker to one end of a 2" Dia. Spacer.

Note: Apply about 1/16" layer of Ultra-Gray to the entire surface of the spacer.



Step 67

Apply Gasket Maker to the other end of the 2" Dia. Spacer the same way it was done in the previous step.





Step 68

Insert the spacer directly below the existing spacer as shown.

Note: It may be necessary to raise the body slightly to allow room for these spacers.



Step 69

Repeat Steps 66 through 68 on the other (3) 2" Dia. Spacers. See **Figure J** for spacer placement.



Step 70

Once all the 2" Dia. spacers are in place, lower the body until the body is **JUST BEGINNING** to rest on the 2" Dia. spacers.

Note: Do not place full body weight on the spacers yet.

Installing the (6) Stud Type Body Bushings and Stud Extenders.



Step 71

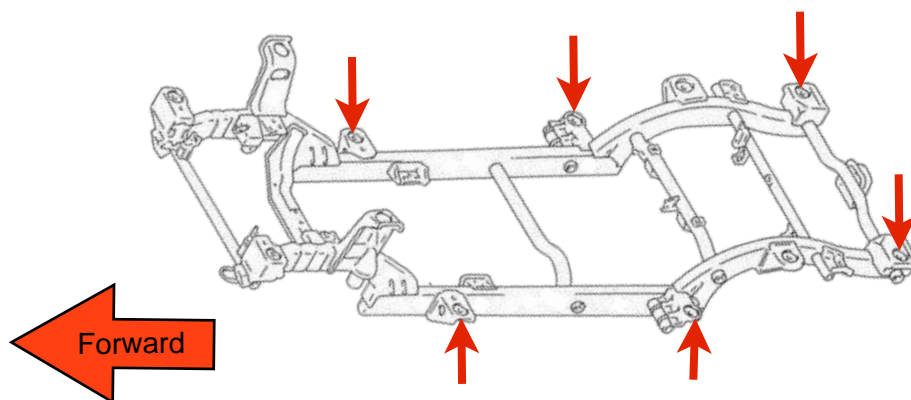
Beginning at the mount just ahead of the right rear wheel, separate the cup washer from the lower body bushing if not done previously. See **Figure K** below for mount locations. Also see **Figure C** for hardware and bushing placement.

Step 72

Place one of the supplied washers on one of the supplied stud extenders as shown. Then insert the stud extender into the lower body bushing.

Figure K

Start Here





Step 73

Install the assembled stud extender, washer and bushing through the frame bracket as shown. Start the stud extender on the stud 3 or 4 turns only.

Note: Do NOT tighten the stud extender all the way at this point.



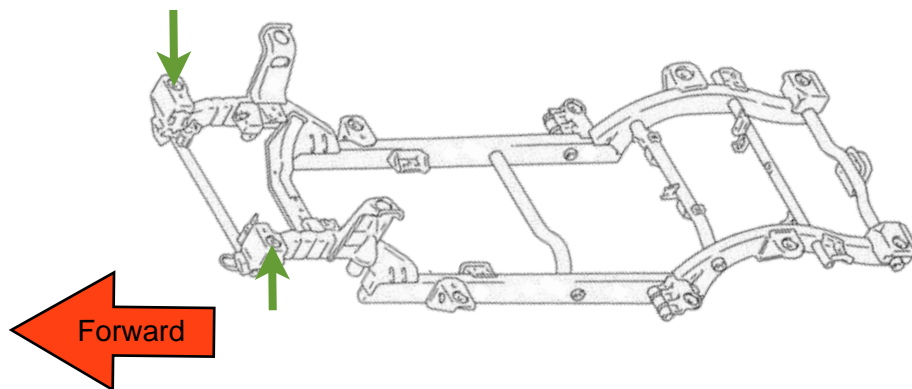
Step 74

Repeat Steps 71 through 73 at the other 5 locations. See **Figure K**.

Securing the (2) Front Body Spacers

Figure L

Start Here





Step 75

Beginning on the passenger side, position the original nylon body washer, upper body bushing and cup washer as shown. See **Figure D** for correct spacer and hardware placement.



Step 76

Install the supplied bolt, flat washer and lock washer as shown. Start the bolt 3 or 4 turns only.

Note: Do not tighten the bolt all the way at this Time.



Step 77

Repeat Steps 75 and 76 on the driver side body mount.



Step 78

Lower the body so that the full body weight is resting on the spacers.





Step 79

Tighten, then torque the driver side front mount 16-25 ft. lbs.



Step 80

Tighten, then torque the passenger side front mount 16-25 ft. lbs.

Tightening the (6) Stud Extenders



Step 81

Reposition the lift arms under the frame and raise the vehicle to where you can comfortably work on the under side.



Step 82

Tighten, then torque all (6) stud extenders 16-25 ft. lbs. See **Figure K** for stud extender locations.

Reattaching Other Body Components



Step 83

Reattach the brake line junction block and torque the bolts to 3-5 ft. lbs.



Step 84

The driver side front brake line cannot be attached to the bracket as it was before. You could build a custom bracket or install longer brake lines. Click [HERE](#) to see what Low Range has to offer.



Step 85

Lower the vehicle so you can comfortably work under the passenger side rear wheel well.



Step 86

Loosen the small hose clamp using a standard screwdriver.





Step 87

Using a pair of cannel lock pliers, lightly grip the hose, twist and slide it down about 1/2”.

Caution: Do not damage the hose.



Step 88

Repeat Steps 86 through 87 on the large hose.



Tech Tip 88

If you find the larger hose difficult to break loose and slide down, you may want to try reconnecting the fuel tank fill neck to the body with the (4) screws (See Steps 89 through 91) and then slide the hose down the pipe.



Step 89

Remove the fuel cap.



Step 90

Position the fuel fill nozzle back in the body and install the (4) bolts.



Step 91

Snug the bolts. Do not over-tighten. These are easily stripped.



Step 92

Adjust both hoses as close to their original position as you can without causing the hoses to kink or rub.



Step 93

Reinstall and tighten both hose clamps.



Step 94

Reinstall the fuel fill cap.

Reattaching the Under-Hood Components



Step 95

Reposition the air intake duct and snug the hose clamp.

Caution: Do not over tighten this hose clamp.



Tech Tip 95

It may be necessary to disconnect the upper air cleaner assembly, reattach the duct, then reinstall the upper air cleaner assembly. Use an 8 mm socket to remove the (4) bolts.



Step 96

Reconnect O2 Sensor wire.



Step 97

Reconnect this ground wire located on the rear of the engine.



Step 98

Reconnect this wiring harness restraint in both places.



Step 99

Reattach this vacuum switch.





Tech Tip 99

Do not over-tighten this bolt. Just snug is enough.



Step 100

Reconnect these (2) wire restraints.



Step 101

Reinstall the coolant recovery bottle.



Step 102

Reconnect the evaporative canister rear hose.

Installing the Headlights, Grill and Front Bumper



Step 103

Hold the driver side headlight assembly close to its original location and plug in the two wire connector as shown.



Step 104

Reposition the headlight assembly in its original location

Note: Be sure the headlight adjusters are positioned properly.



Step 105

Install the (3) bolts and snug them down.



Step 106

Reconnect the headlamp electrical connector. Push it into place until it snaps.



Step 107

Repeat Steps 104 through 106 on the passenger side headlamp assembly.



Step 108

Reposition the grill and snap it into place.



Step 109

Reinstall the (1) screw as shown.



Installing the Rear Bumper



Notice: The rear bumper cover attaches to the frame and the body. Since the body is now 2" higher than it was originally the bumper will not fit exactly as it did. However, with a bit of flexing, the bumper will fit and look reasonably good. Of course you could also use a custom bumper in its place if you wish. Click [HERE](#) to see rear bumpers available through Low Range Off-Road.



Step 110

Position the rear bumper as shown

Note: The slide clips will not engage after the body has been lifted.

Step 115

Reinstall the bumper cover upper screws but leave them loose for now.



Step 116

Flex the passenger side of the bumper cover over the bracket as shown.

Step 117

Flex the driver side bumper cover over the bracket and install the screw. Leave the screw loose for now.





Step 118

Install the (3) lower-center bumper cover screws and leave them loose for now.



Step 119

Install the passenger side lower screws and leave them loose as well.



Step 120

Repeat previous step on the driver side lower bumper cover screws.



Step 121

Now that all the bumper cover screws are in place and started, tighten them using a phillips screwdriver and 10 mm socket.





Step 122

Reinstall the fuel fill hose cover. One of the 3 screws will not be installed. You could build custom bracket or simply leave it out as we did. It is up to you. We feel the cover is secure enough with only two screws.



Step 123

Lower the vehicle to the floor.



Step 124

Reconnect and tighten the negative battery cable.



Step 125

Sit in the driver seat, push down on the clutch, start the engine and check to see that the transfer case and transmission shifters move all the way into each gear. We did not have any trouble with our installation. However, if you do, it may be necessary to remove the shifter boots and enlarge the shifter openings in the body.



Congratulations:

You have successfully completed a Sidekick body lift. We hope these instructions have been helpful. If you have suggestions on how we can improve these instructions or our products, email us at sales@lowrangeoffroad.com or call us at 801-805-6644.





As always, If you experience any difficulty during the installation of this product please contact Low Range Off-Road Technical Support at 801-805-6644 M-F 7:30am-5:30pm MST. Thank you for purchasing from Low Range Off-Road.



These instructions are designed as a general installation guide. Installation of many Low Range Off-Road products require specialized skills such as metal fabrication, welding and mechanical trouble shooting. If you have any questions or are unsure about how to proceed, please contact our shop at 801-805-6644 or seek help from a competent fabricator. Using fabrication tools such as welders, torches and grinders can cause serious bodily harm and death. Please operate equipment carefully and observe proper safety procedures.

Rock crawling and off-road driving are inherently dangerous activities. Some modifications will adversely affect the on-road handling characteristics of your vehicle. All products sold by Low Range Off-Road are sold for off road use only. Any other use or application is the responsibility of the purchaser and/or user. Some modifications and installation of certain aftermarket parts may under certain circumstances void your original dealer warranty. Modification of your vehicle may create dangerous conditions, which could cause roll-overs resulting in serious bodily injury or death. Buyers and users of these products hereby expressly assume all risks associated with any such modifications and use.

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