

Instructions Created by an:



**Automotive
Service
Excellence**
MASTER AUTO TECHNICIAN



86-95 Suzuki Samurai Rear Bumper by Low Range Off-Road (SKU# SRB-LR)

Installation Instructions



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:

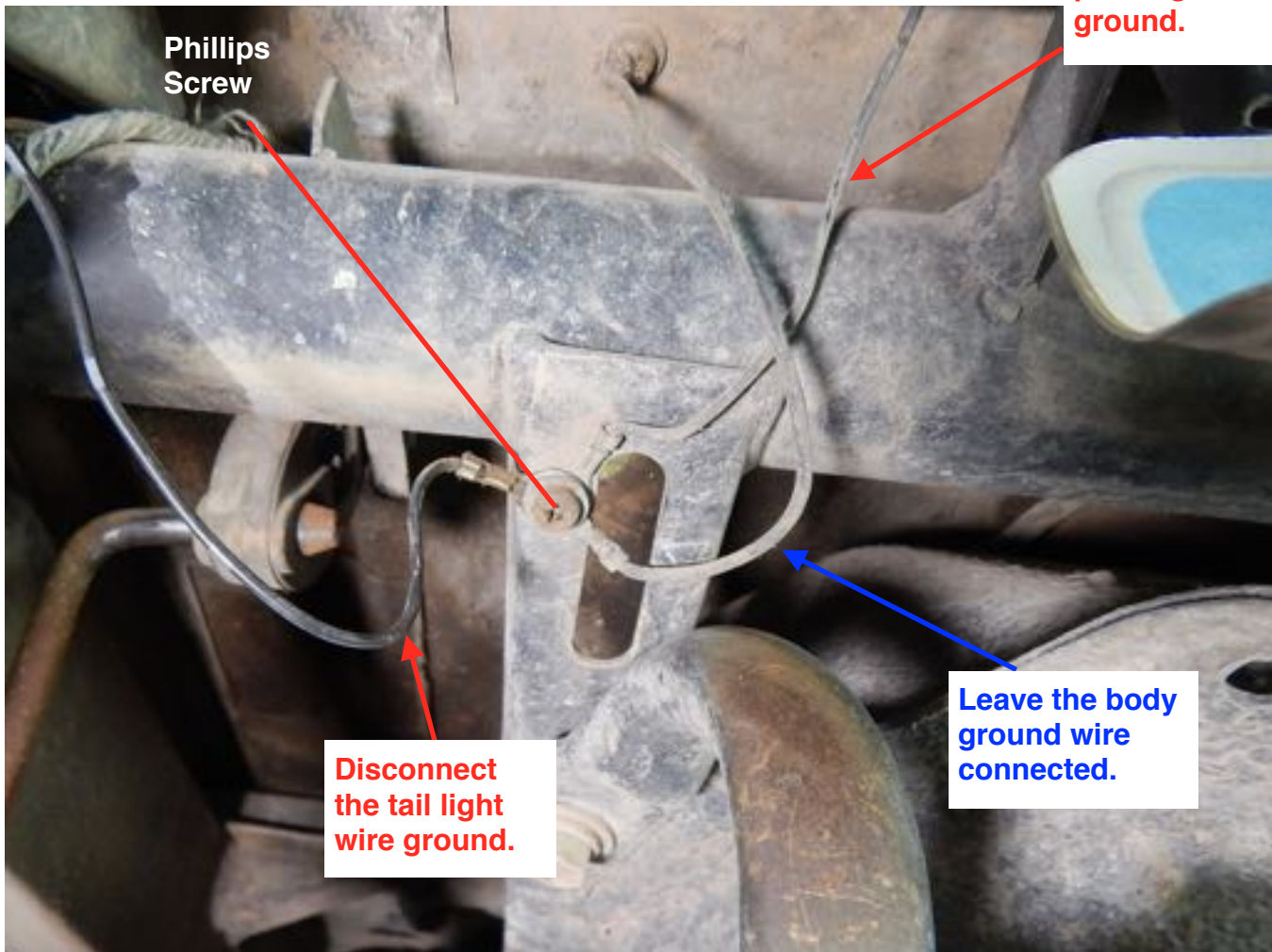
- Socket: 10, 14, 16 & 17mm
- 3/8" Combination Wrench
- Ratchets: 3/8" & 1/2"
- 3/8 Drive Extension: 12" long
- Allen Sockets: 1/8" & 8mm (Supplied)
- #2 Phillips Screwdrivers, Stubby & Regular
- #3 Phillips Screwdriver
- Torque Wrench, 3/8 drive (capable up to 40 ft. lbs.)
- Die Grinder with a cut off wheel
- Felt Tipped Permanent Marker
- Sawzall with Metal Cutting Blade
- Penetrating Oil
- Upholstery Tool
- 13/64 Drill Bit
- Hand Drill

Upholstery Tool



Disconnecting the Driver Side Electrical Wiring

Disconnect the license plate light ground.

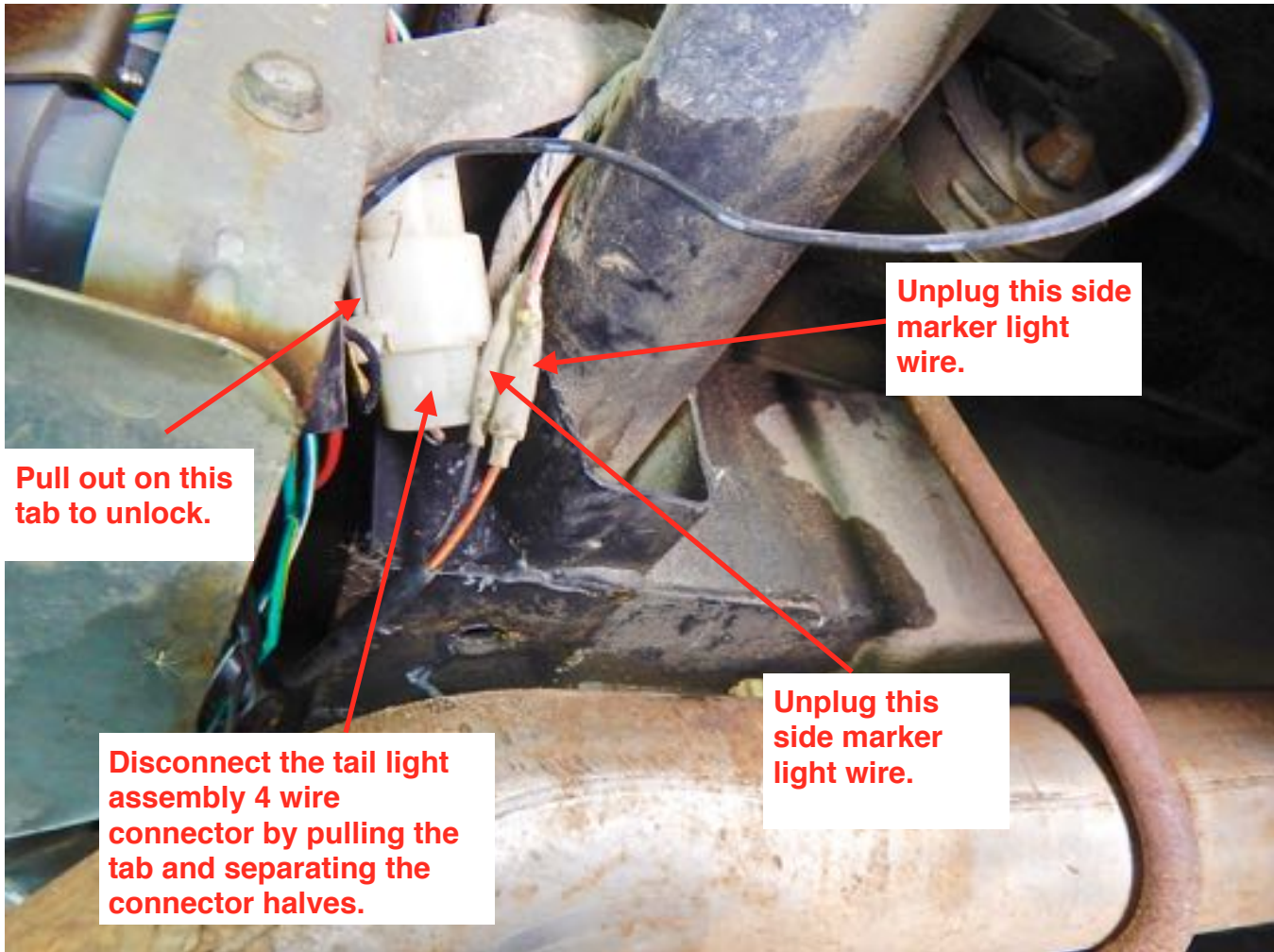


Step 1

Remove the phillips screw using a phillips screwdriver. Disconnect the (2) wires identified by the **RED** arrows. Reinstall the screw securing the body ground. The body ground wire is identified by the blue arrow.

Note: A ground wire from the supplied LED tail light will be added under this screw head later.

Disconnecting the Driver Side Electrical Wiring — Continued



Step 1 Continued

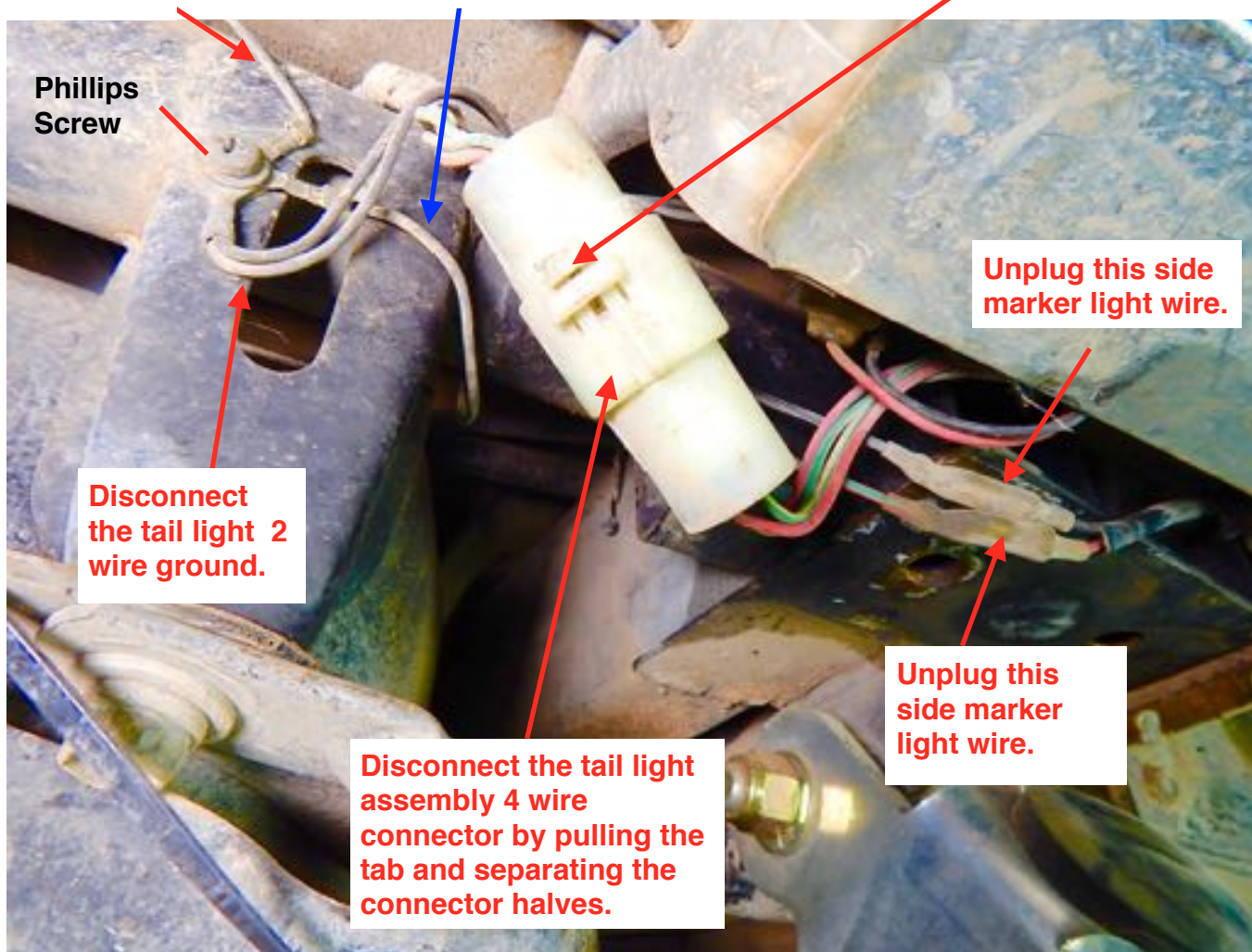
Disconnect all the wires shown above.

Disconnecting the PASSENGER Side Electrical Wiring

Disconnect the license plate light ground.

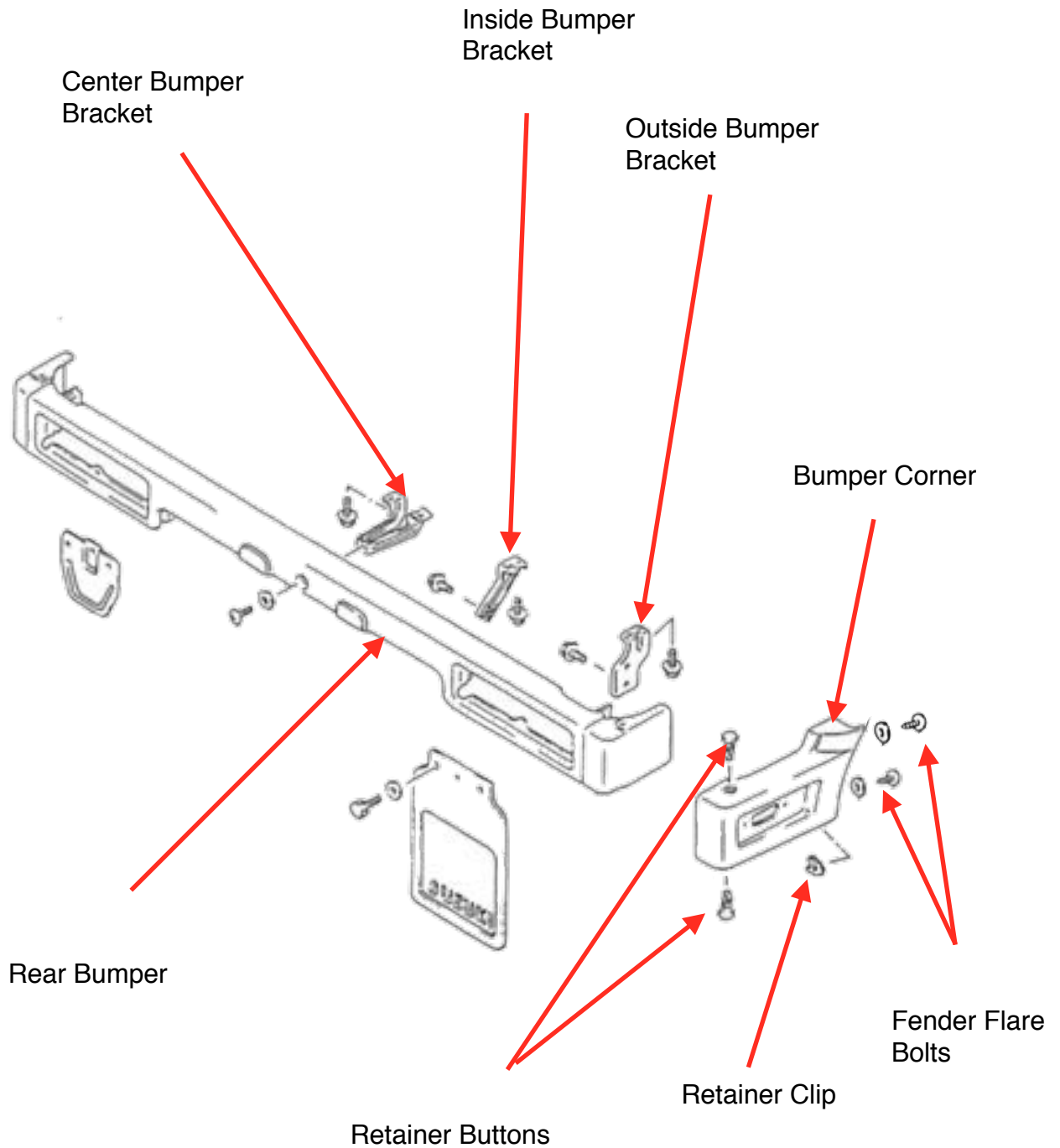
Leave the body ground wire connected under the screw.

Pull up on this tab to unlock



Step 2

Disconnect all the wires identified by the RED arrows by unplugging the (3)connectors and removing the phillips screw. Reinstall the phillips screw with the body ground wire under the screw head. The body ground wire is identified by the blue arrow.



Removing the Bumper Corners



Step 3

Remove the passenger side marker light using a phillips screwdriver.



Step 4

Remove the (2) fender flare bolts using a 10mm socket.



Step 5

Remove the top retainer button using an upholstery tool.



Step 6

Remove the bottom retainer button using an upholstery tool.





Step 7

Remove the bumper corner by snapping it loose at the top and bottom.



Step 8

Remove the driver side bumper corner following the same steps used on the passenger side.



Removing the Bumper



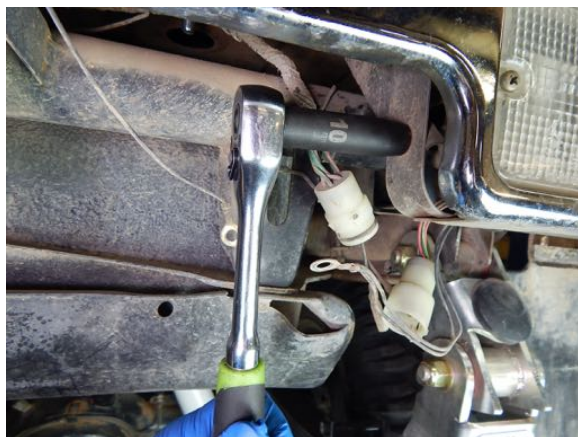
Step 9

Remove the license plate using a phillips screwdriver.



Step 10

Remove the driver side, inside bumper bracket bolt using a 10 mm socket.



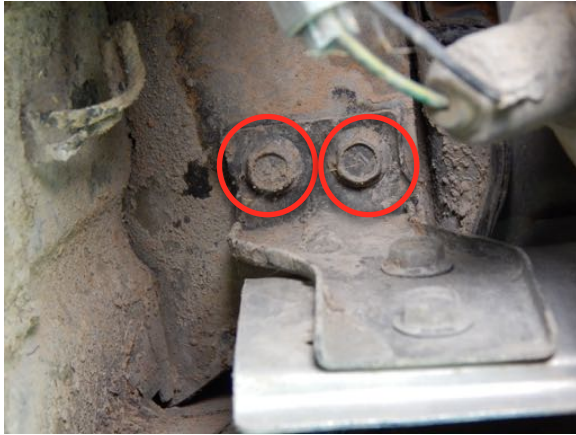
Step 11

Remove the passenger side, inside bumper bracket bolt using a 10 mm socket.



Step 12

Remove the 2 passenger side, outside bumper bracket bolts using a 10mm socket. (See next picture)



Tech Tip 12

These are the passenger side, outside bumper bracket bolts.



Step 13

Remove the driver side, outside bracket mounting bolts using a 10mm socket.



Step 14

Remove the center mounting screw using a #3 Phillips screwdriver.



Step 15

Remove the bumper and set it aside.





Step 16

Spray the driver side body mount bolt threads with a good quality penetrating oil if rust is present.



Step 17

Loosen the driver side body mount bolt using a 14mm socket.



Step 18

Remove the body mount bolt and flat washer.



Step 19

Remove the rubber bushing.



Step 20

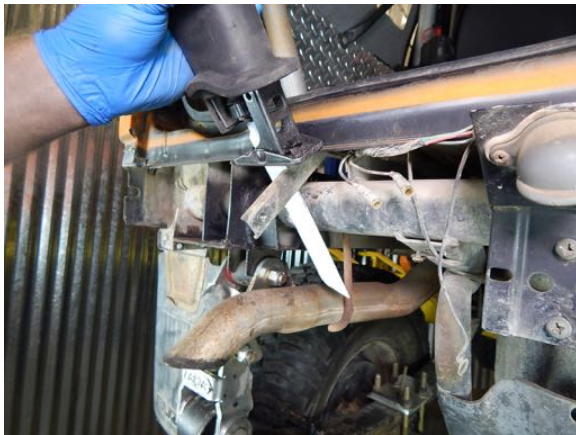
Remove the passenger side body mount bolt, washer and rubber bushing.



Step 21

Unplug the (2) license plate light electrical wires.

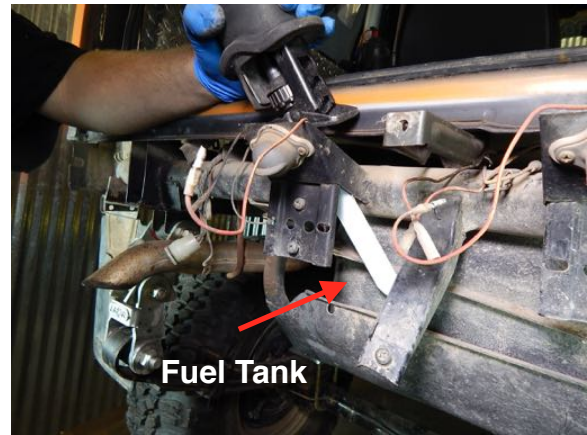
Caution: The next few steps require the use of a sawzall or similar tool. Always wear safety glasses when using these types of tools. Additionally, take extra care not to damage the fuel tank or any electrical wiring while cutting. If the fuel tank is damaged there is the potential of a fire. Please be careful!!



Step 22

Cut off the driver inside bumper bracket using a sawzall, cutoff wheel, or hacksaw.

Note: Be sure to cut the bracket so that the remaining piece does not extend out past the body. Be careful not to damage the fuel tank or electrical wiring.



Step 23

Cut off the driver side license plate light bracket.

Note: Be sure to cut the bracket so that the remaining piece does not extend out past the body. Be careful not to damage the fuel tank or electrical wiring.



Step 24

Cut the center bumper bracket flush with the body.



Step 25

Cut off the passenger side license plate light bracket.



Step 26

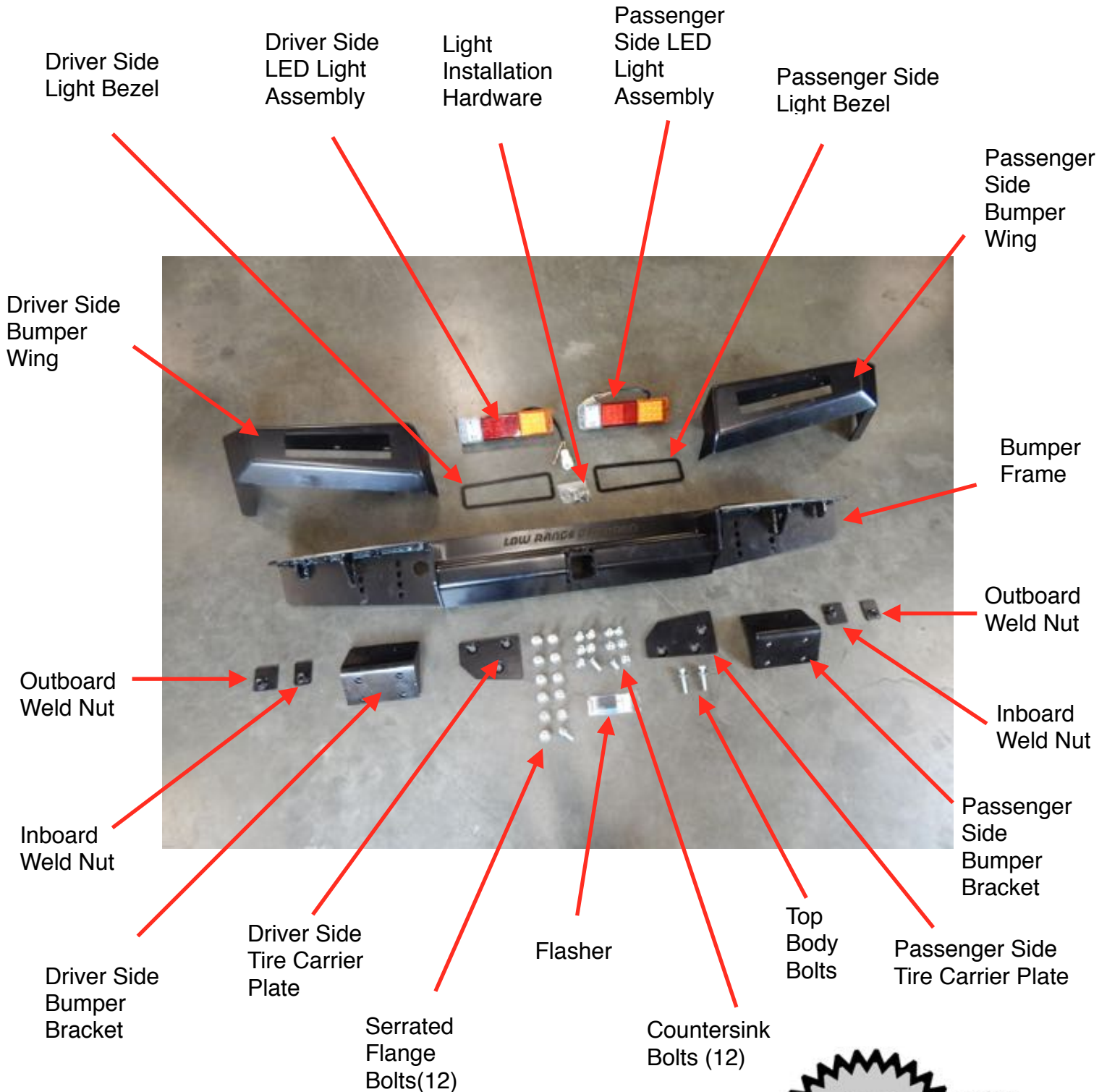
Cut off the license plate bracket.



Step 27

Remove the driver side brace plate if it is still present using a 10mm socket.

Kit Parts Identification



Installing the Bumper Brackets



Step 28

Position the driver side outboard weld nut as shown and align the nut with the hole in the body.



Step 29

Position the driver side inboard weld nut as shown and align the nut with the hole.



Step 30

Insert one of the flange head bolts in the bumper bracket as shown

Note: Bumper brackets are not side specific. Brackets will fit either side.



Step 31

. . . . and thread the bolt through the bracket, the body and into the inboard welded nut. Leave the bolt loose for now.



Step 32

Thread in the second flange head bolt into the outboard weld nut. Leave it loose as well.



Step 33

Position the passenger side inboard weld nut as shown and align the nut with the hole in the body.



Step 34

Position an the passenger side outboard weld nut as shown and align the nut with the hole.



Step 35

Position the passenger side bumper bracket and install two flange bolts leaving both bolts loose for now.

Installing the Bumper Frame



Step 36

Open the rear door.



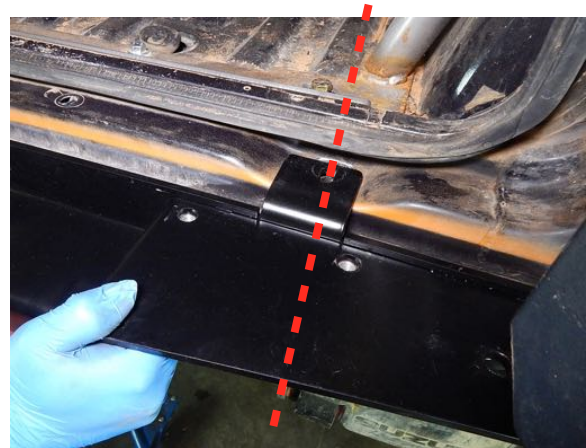
Step 37

Place the bumper frame on a transmission jack for support (or have others assist you) and align the top bumper frame holes



Step 38

. . . . with the body bolt holes



Step 39

. . . . on both sides.





Step 40

Insert and start the (2) original washers and body mount bolts. Leave both bolts loose for now.

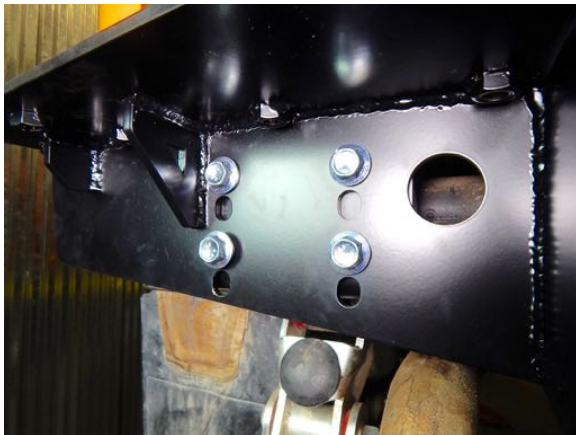
Note 1: Do **NOT** reuse the rubber bushings removed earlier.

Note 2: If the vehicle you are working with has a body lift, it may be necessary to use the (2) bolts (M10X1.25X50mm) supplied with this kit.



Step 41

Align the driver side bumper frame holes with the bumper bracket and start the (4) flange head bolts. Leave these bolts loose for now.



Tech Tip 41

In this application we used the upper holes of the bumper frame. If the vehicle you are working with has a body lift, you will need to use the lower holes.



Step 42

Align the passenger side bumper frame holes with the bumper bracket and start the (4) flange head bolts. Leave these bolts loose for now.

Installing the Bumper Wings



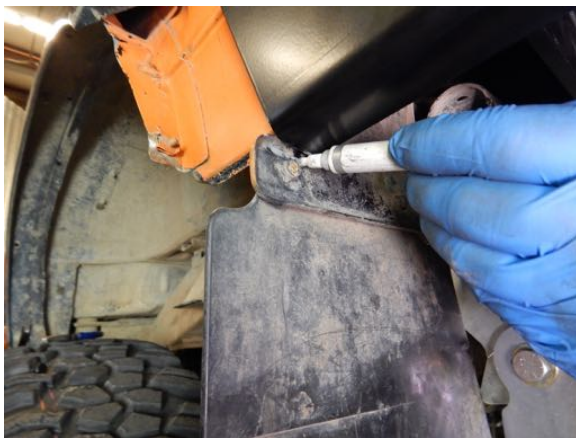
Step 43

Position the driver side bumper wing on the bumper frame and align the top countersink holes. If the holes do ***NOT*** align properly due to body interference, go to the next step. If the holes ***DO*** align properly skip to **Step 46**.



Step 44

If the bumper wing holes do not align, check for obstruction. In our installation the mud flap bracket interfered. So we had to notch out the mud flap bracket. See next Tech Tip.



Tech Tip 44

Mark the mud flap bracket where cuts need to be made using a permanent marker.



Tech Tip 44 Continued

Remove the bumper wing and trim along the marks.



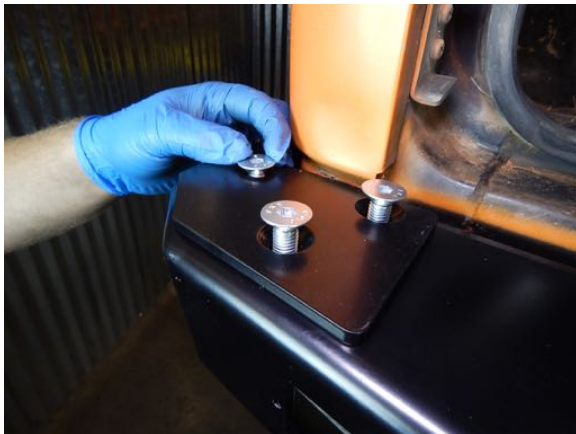
Step 45

Reposition the bumper wing and check for interference. Trim away any needed obstruction as required.



Step 46

Align the bumper wing holes and start the (3) short (M12X1.75X 25mm) counter sink bolts in the 3 inboard holes. Leave these bolts loose for now.



Step 47

Position the driver side tire carrier plate and start the (3) long (M12X1.75X 35mm) counter sink bolts as shown. Leave these bolts loose for now.



Step 48

Install the passenger side bumper wing following the same steps shown on the driver side bumper wing. **Steps 43 through 47.**

Final Tightening and Adjusting



Step 49

Once all (12) counter sink bolts are started, snug them using the supplied 8mm allen socket.



Step 50

Then torque all 12 bolts to 40 ft. lbs.



Step 51

Now that all the counter sink bolts are torqued to spec, check the bumper alignment. Split the distance between the bumper and fender on the passenger side . . .



Step 52

. . . and the bumper and fender on driver side.



Step 53

With the bumper positioned properly, torque the (12) flange head mounting bolts to 40 ft. lbs. using a 16mm (or 5/8") socket.



Step 54

Torque the (2) body mount bolts to 25 ft. lbs.



Installing the Tail Lights



Step 55

Position the driver side light bezel and align the holes.



Step 56

Start the (6) supplied button head screws (#10-24X3/4"). Leave the (2) end holes vacant for now. They will be used to mount the LED Tail light later. Once all (6) screws are started, tighten them using the supplied 1/8" allen wrench.



Step 57

Ready the tail light for installation by removing the (2) phillips screws using a phillips screwdriver.



Step 58

Drill out both holes using the supplied 13/64" drill bit.

Hole in
Bumper
Frame



Step 59

Feed the wires up from the bottom of the bumper and through the hole in the bumper frame as shown.



Step 60

Feed the LED tail light assembly up from the bottom and position it as shown.

Note: Be sure the tail light is oriented with the white reverse light inboard and the amber signal light outboard.



Step 61

Begin securing the LED tail light assembly to the bumper by installing the supplied (10-24X2") outboard screw.



Step 62

Install a supplied flat washer and nylock nut on the screw but leave the nut loose for now.



Step 63

Install the screw, flat washer and nylock nut on the inboard side of the light. Now that both screws, washers and nuts are installed, hold the nut with a 3/8" wrench and snug the screw.

Caution: Do not over tighten the screw. The LED Tail Light housing could be damaged.



Step 64

Connect the LED tail light ground (white) wire with the existing ground (black) wire and tighten the screw using a phillips screwdriver.

Note: Be sure this connection is clean and tight.



Step 65

Connect the 4 wire connector to the existing connector by aligning the tabs and pushing the connector halves together. Be sure it snaps and locks into place.



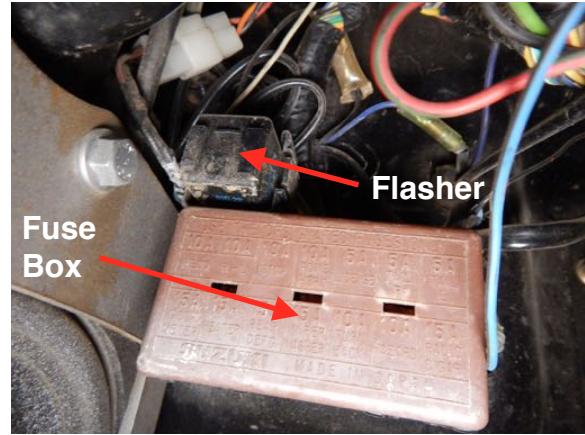
Step 66

Install the passenger side LED tail light following the same steps shown on the driver side. **See Steps 55 to 65.**



Tech Tip 66

Be aware that you will likely need a stubby phillips screwdriver to tighten the screw on the passenger side ground connection. It is a little more difficult to access.



Step 67

Replace the flasher with the one supplied in the kit.

Note: This flasher is located above the fuse box which is under the dash left of the steering column.



Step 68

Turn the ignition key to the "on" position and check to see that the signal (yellow), brake and park (red) and the reverse (white) are working properly on the driver side



Step 69

. . . . as well as the passenger side.

Be sure to turn off the key and your done!





Congratulations!

You have successfully installed the Low Range Off-Road Rear Bumper. We hope these instructions have been helpful. If you have suggestions on how to make these instructions (or products) better, please email us at: sales@lowrangeoffroad.com



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 during regular store hours. 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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