

# 86-95 Suzuki Samurai Defiant Armor Modular Front Bumpers by Low Range Off-Road

(SKU# LROR-309575)

Revised 4-22-14

## Installation Instructions



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

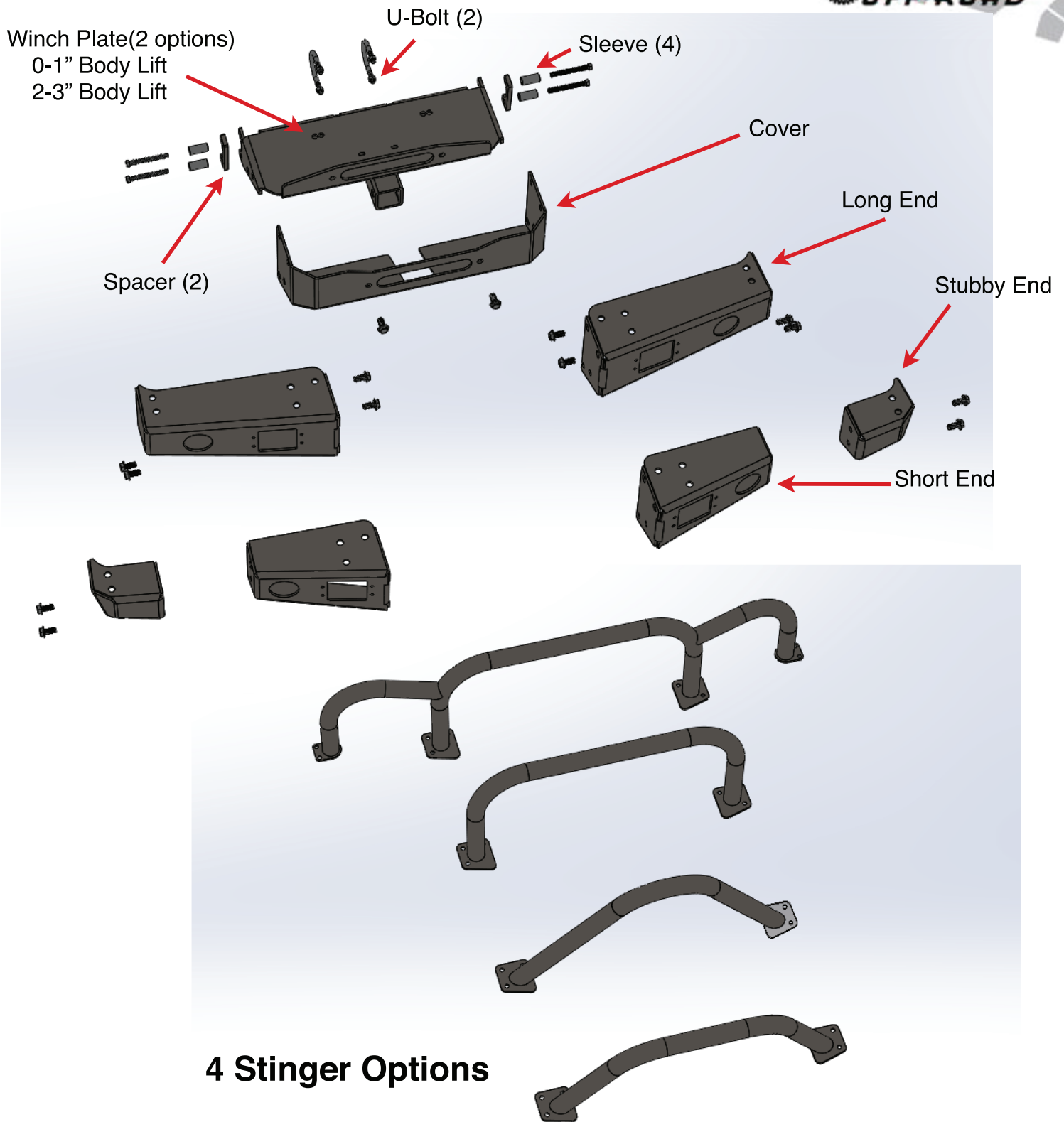


### Suggested Tools:

- Sockets: 15, 16 & 17 mm
- Ratchet
- Allen Sockets: 6mm & 1/8"
- Nut Driver: 3/8"
- Combination (box & open end) Wrenches: 14,15,16 & 17 mm
- Permanent Marker (White preferred)
- Sawzall® or Hacksaw (optional)
- Ladies Foot Pry Bar
- 8mm Deep Well Socket



# Bumper Parts Identification





### Step 1

Remove the existing front bumper by unbolting it from the frame tube.

Note: Be sure to remove the Park/Signal lights before removing the bumper. The electrical connector can be accessed from under the hood.



### Step 2

Position the winch plate as shown.



### Step 3

Position the (2) supplied U-bolts around the frame tube as shown.

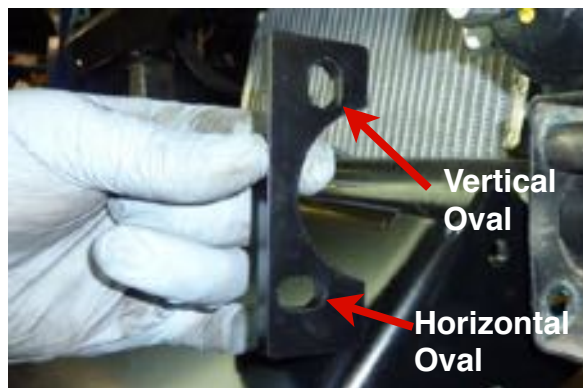


### Step 4

Install the flat washers and nuts. Snug the nuts but do not tighten them all the way yet.



*Begin on the driver side.*



## Step 5

Orient the supplied spacer for correct installation by positioning the vertical oval at the top and the horizontal oval at the bottom as shown.

Note: These spacers may not be needed with some aftermarket suspension systems.

## Step 5 Continued

Insert the spacer between the winch plate and the frame.



## Step 6

Insert the bottom sleeve.

Note: These sleeves are carefully sized. If they do not fit inside the frame, we recommend bending the frame rather than reducing the length of the sleeve. This will result a tighter, stronger fit.

## Step 7

Install the bottom (M10X1.25X90) bolt.

Note: This bolt will be recessed inside a cavity in the frame. This cavity is so small it will not allow room for a tool to fit on the head of the bolt. However, it should fit tight enough inside the frame so that it will not turn when the flange nut is installed.



### Step 8

Insert the top sleeve and (M10X1.25X90 mm) bolt.



### Step 9

Install both flange nuts on the bolts but do not tighten them yet.



### Step 10

Repeat **Steps 5 through 9** on the passenger side. Leave the nuts loose for now.



### Step 11

After all the fasteners are installed, tighten the the U-bolt nuts using a 14 mm box end wrench or deep socket. Beginning at the passenger side, increase tightness of the nuts, alternating top and bottom, until the torque specification is reached (15 ft.lbs.) Then repeat the same tightening procedure on the driver side U-Bolt.



## Step 12

Tighten the (2) nuts on the passenger side using a 14 mm box end wrench. (20 to 25 ft. lbs.)

Note: You will not be able to fit a socket on these nuts so you will need to estimate the torque.



## Step 13

Tighten the (2) nuts on the driver side. (20 to 25 ft. lbs.)

Note: Again, you will need to estimate torque.



## Tech Tip

If you are installing a winch, now is the time to do that. Be sure to follow the manufacturer installation instructions.

Note: Insure that the winch does not hang over the sides of the winch plate.

## Winch Cover Installation



### Step 14

Position the cover as shown.



### Step 15

Beginning on the driver side, install the (2) supplied (M10X1.75X35mm) flange bolts as shown.



### Step 16

Install the (2) passenger side (M12X1.75X25mm) flange bolts as shown. Snug them but do not tighten them yet.



### Step 17

Install the two (M12X1.75X25) bolts and nuts as shown. Bolt heads should be facing forward.

Note: If you are installing a winch, install the fairlead bracket with these bolts.





## Step 18

Now that all (6) bolts and (2) nuts are installed, torque them 35 to 40 ft. lbs.

Note: If you are planning to install bumper ends, you can leave the (4) outside bolts loose for now.





## Frame Tube Removal



This procedure is optional. Frame tubes will not interfere with the bumper, but many people remove them to give greater tire clearance. If you are not removing the frame tubes skip ahead to **Step 23**.



### Step 19

Mark the frame tube as shown.



### Step 20

Using a Sawzall® or hacksaw, cut the mount along the mark.



### Step 21

Grind the mount with an angle grinder (or file) to eliminate any unsafe edges.



### Step 22

Repeat **Steps 19 through 21** on the passenger side.



## Long End Installation



### Step 23

Remove the (2) driver side cover bolts.



### Step 24

Position the driver side long end.



### Step 25

Insert the two (M12X1.75X25) flange bolts as shown. Do not tighten them yet.



### Step 25 Continued

Reinstall the two lower cover bolts that were removed earlier, but do not tighten them yet.





## Step 26

Repeat Steps 23 through 25 on the passenger side.



## Step 27

After all the bolts (passenger and driver side) are installed, tighten them to 35 to 40 ft. lbs.



## Short End Installation



### Step 28

Remove the (2) driver side cover bolts.



### Step 29

Position the driver side short end.



### Step 30

Insert the two (M12X1.75X25) flange bolts as shown. Do not tighten them yet.



### Step 30 Continued

Reinstall the two lower cover bolts removed earlier, but do not tighten them yet.





### Step 31

Repeat **Steps 28 to 30** on the passenger side. Leave the bolts loose for now.



### Step 32

After all the bolts (passenger and driver side) are installed, tighten them 35 to 40 ft. lbs.



## Stubby End Installation



### Step 33

Position the driver side stubby end as shown.



### Step 34

Install the (2) supplied (M12X1.75X25) flange bolts.



### Step 35

Tighten 35 to 40 ft. lbs.



### Step 36

Repeat steps 33 through 35 on the passenger side.



## Stinger Installation



This section applies to the Single Bend, Double Bend, and Grill Guard Stingers. If installing the Grill Guard with Headlight Bars, skip to Step 40.



### Step 37

Position the stinger (Single Bend, Double Bend, or Grill Guard Styles) as shown.



### Step 38

Start all six of the (M10X1.5X25mm) allen bolts.

Note: You may need to flex the stinger a bit, in or out, to get the holes to align.



### Step 39

Once all (6) bolts are started, tighten them with a 6 mm allen socket to 20 ft. lbs.



## Stinger Installation



This sections applies to the Grill Guard W/Headlight Bars Only



### Step 40

Position the grill guard as shown.

### Step 41

Start all ten of the (M10X1.5X25mm) allen bolts.

Note 1: You may need to flex the grill guard a bit, in or out, to get the holes to align.

Note 2: The pointed end of a ladies foot pry bar may be helpful in aligning the holes.



*Ladies Foot Pry Bar*

### Step 42

Once all (10) bolts are started, tighten them using a 6 mm allen socket to 20 ft. lbs.





## Light Installation

Lights sold separately.



**Note:** installing these lights on the sides can be done prior to the sides being mounted to the rest of the bumper.

### Step 43

Install the LED light pod by feeding the wire through the hole and fastening it down with the included hardware.



### Step 45

Insert rubber mount ring into the hole on the bumper side.



### Step 44

Tighten down using included allen wrench and 8mm deep well socket.





### Step 46

On LED turn signal light, remove plastic covering to expose connectors.



### Step 47

Press the wire terminals into the connectors on the back side of the light.



### Step 48

Feed wires through the hole as shown.

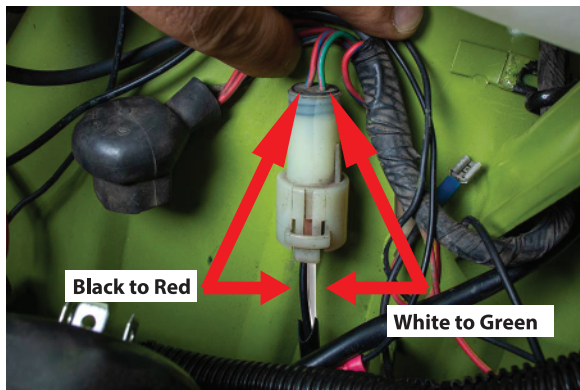


### Step 49

Press the turn signal light in until it is fully seated in the rubber mount.

Repeat Steps **43-49** for the opposite side.





## Step 50

Connect the turn signal wires to the appropriate wires on the vehicle harness. The BLACK wire coming from the turn signal light needs to be grounded to a good chassis ground or connected to the RED wire coming into the original turn signal connector. The WHITE wire coming from the turn signal light needs to be connected to the GREEN wire coming into the original turn signal connector. If possible, we recommend cutting the turn signal connector off the old turn signal light and then splicing the new turn signal wires onto the old turn signal connector.

## Step 52

Replace your existing turn signal flasher with the one supplied in the kit. The flasher is located above the fuse box which is located under the dash and left of the steering column.



## Step 51

Install the supplied plastic plugs in any bolt hole that does not have a bolt in it.

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 8am-5pm 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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