



# 86-95 Suzuki Samurai LROR Sport Cage – Rear (SKU# SRC-SCR)

Revised 9-6-16

## Installation Instructions



Picture shows front and rear cage

**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](http://www.lowrangeoffroad.com) and click on the "Instructions" tab.

### Suggested Tools:

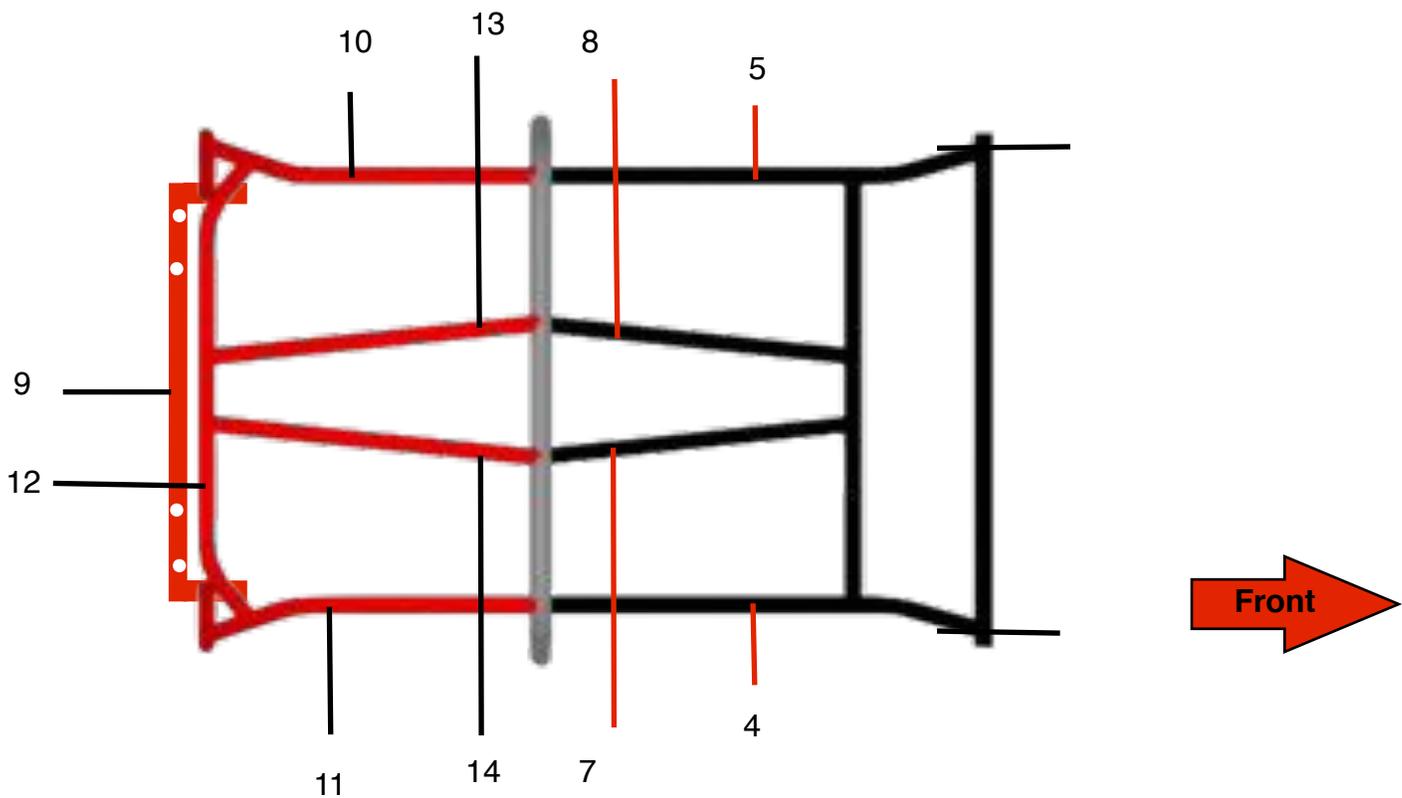
- MIG (or Stick) Welder (and related safety equipment)
- Phillips Screwdriver: #3
- Ratchet Strap (2 each)
- 7/16" Drill Bit
- Power Drill
- Socket: 14 mm
- Ratchet
- Combination Wrench: 14mm
- Permanent Marker: White
- Measuring Tape (Inches)
- Welding Blanket (or Deflection Paper)
- Angle Grinder with a Buffing Wheel
- Wire Brush
- Paint (Your Choice of Color & Brand)



## Hardware

- |                     |                               |
|---------------------|-------------------------------|
| 1. 4 - M10X1.25X40  | Flange Bolts                  |
| 2. 4 - M10X1.25     | Serrated Flange Nuts          |
| 3. 2 - 7/16X20X1.25 | Flange Bolts (for Seat Belts) |

## Parts Identification



-  Front Sport Cage *(Sold Separately)*
-  Rear Sport Cage

Figure A



## Tech Tip 1

There are several ways to install, weld, and paint this sport cage. The first sport cage we installed was tacked welded together inside the vehicle, removed from the vehicle and welded outside. We then painted and reinstalled it in the vehicle. Reinstallation was very difficult. Therefore, we recommend the following approach: Paint the sport cage parts outside the vehicle before installing them. Be sure to leave the ends unpainted so as not to interfere with the welding process. Once the paint is dry, install the sport cage pieces as shown in these instructions and tack weld them in place. Once you are satisfied that all the pieces are in proper placement, weld all the joints. You will of course, want to protect the interior from sparks and spatter by using a non-flammable protective blanket or deflection paper. 3M makes a good deflection paper. After welding all the sport cage joints, clean the joints with a wire brush or sand paper and paint them.



## Tech Tip 2

We did our installation with the carpet out of the vehicle. You could do a similar “install” by peeling the carpet back out of the way, installing the sport cage and trimming the carpet to fit around the cage pieces.



### Step 1

Remove both rear seat belts using a 14 mm socket.

Note: If you will be welding the sport cage inside the vehicle, temporarily peel the carpet forward, out of the way.



### Step 2

Position piece #9 as shown.



### Step 3

Center piece #9 (side-to-side) and install the supplied 7/16X20X1.25" bolts in the two outside holes. Then torque the bolts to 42 ft. lbs.



### Step 4

Remove the paint from the existing roll bar in 4 locations (see next picture) using an angle grinder and a buffing wheel.

Note: This is done to insure a good clean weld.



### Step 4 Continued

This shows the four locations where paint is to be removed.

Note: The rear sport cage bars will align with the front sport cage bars.



### Step 5

Position piece #10 as shown. See Figure A for parts identification.



### Step 5 Continued

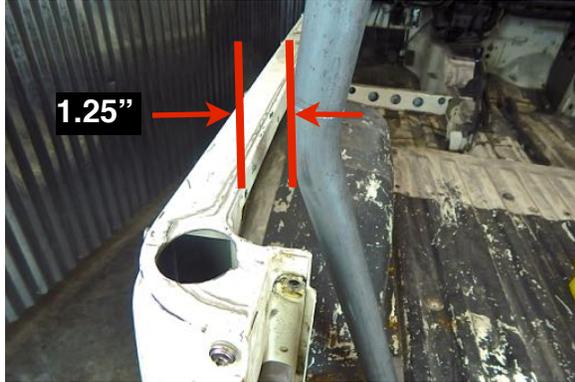
The front of piece #10 should line up with piece #5 of the front sport cage.



### Step 5 Continued

The rear of piece #10 should be positioned on piece #9 as shown.





### Step 5 Continued

Piece #9 should be about 1.25" away from the inside of the fender.



### Step 6

Once piece #10 is in place, tack weld it at both ends. One tach at each end is good enough for now.



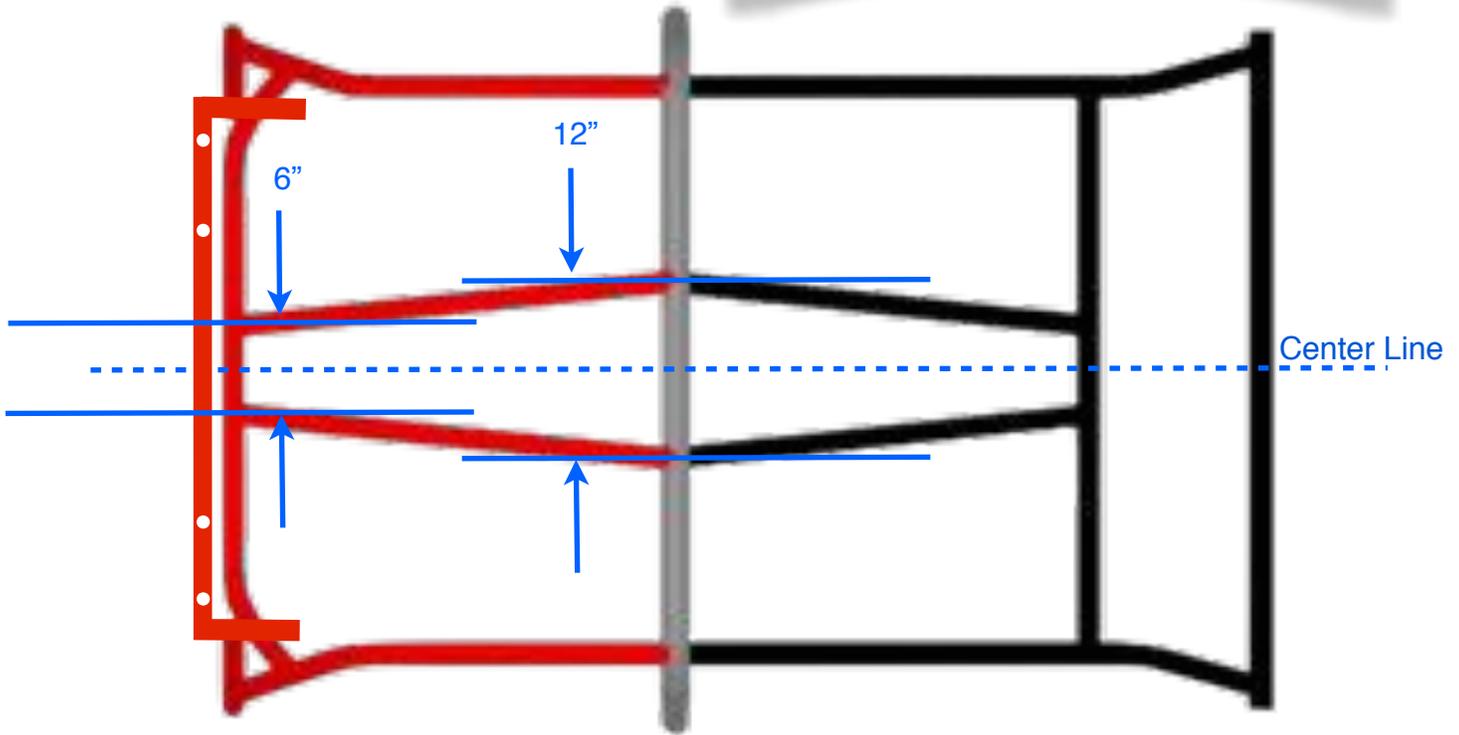
### Step 7

Repeat Steps 5 and 6 on the passenger side (piece #11) and tack weld it in place.

# General Dimensions

**Notice:**

All dimensions shown here are from our original design drawings. They are intended to be used as guidelines only. Feel free to make adjustments to suite your own needs and preferences.

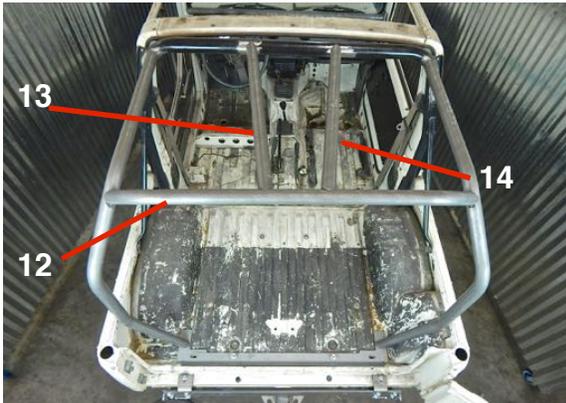


-  Front Sport Cage (Sold Separately)
-  Rear Sport Cage

**Figure B**



## Approximate Positioning of Pieces 12, 13, and 14



### Step 8

Have an assistant hold piece #12 positioned as shown in the picture above. Have another assistant hold pieces #13 and #14 positioned as shown above.



### Step 9

While holding pieces #12, 13 and 14 in position, install and cinch two ratchet straps as shown here.

## Exact Positioning of Pieces 12, 13, and 14



### Step 10

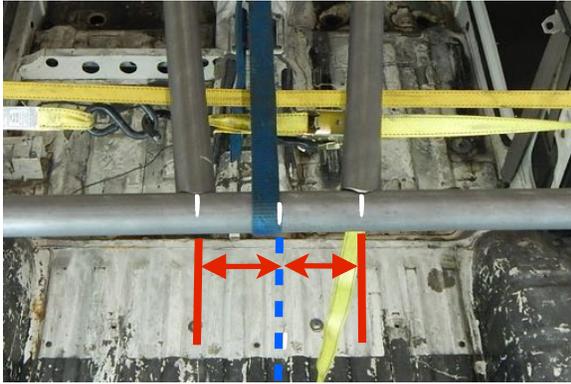
Determine the center of piece #12 by measuring the overall length and dividing by 2. Then make a mark in the center using a permanent marker.

Note: You could use the edge of the ratchet strap as a center reference mark.



### Tech Tip 10

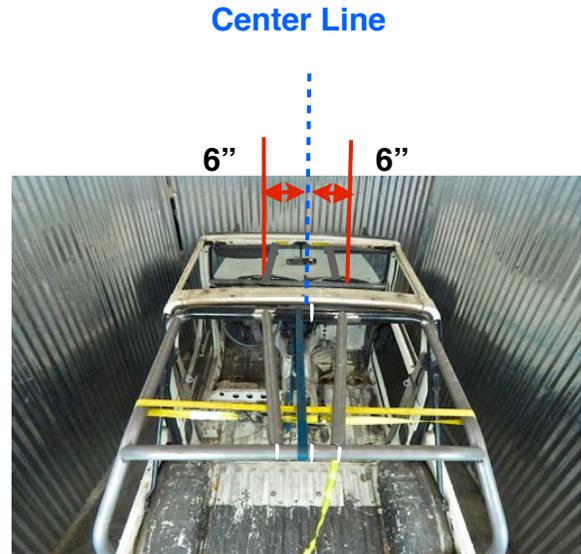
Be sure that pieces 13 and 14 are oriented correctly. The coped ends should fit the existing (2" Dia.) roll bar in the front and (1.5" Dia.) piece #12 in the rear, with little to no gap.



Center Line

### Step 11

Measure out 3" right and 3" left and make marks indicating the location of pieces #13 and #14. Center pieces #13 and #14 on the marks.



### Step 12

Repeat steps 10 and 11 at the front of pieces #13, & #14, the only difference being, that the pieces are 12" apart instead of 6".





## Step 13

Make final adjustments (if needed) according to the following guidelines.

Note 1: Be sure the front of piece #13 and #14 are centered on the existing roll bar, are about 12" apart and aligned with pieces #7 and #8 of the front sport cage.

Note 2: The rear of pieces #13 and #14 should be about 6" apart and centered on the center mark of piece #12.

Note 3: Piece #12 should be level and in the same location on both ends where it contacts pieces #10 and #11.

Note 4: Once all pieces are positioned properly, tack weld them into place and remove the ratchet straps.



## Checking the Soft Top Brace for Proper Clearance



### Step 14

If removed earlier, install the soft top brace and snug the (4) screws using a #3 phillips screwdriver.

### Step 15

Position both brace brackets toward the rear of the vehicle as shown.



### Step 16A

Move the brace back and forth near piece #12 to be sure there is clearance. There should be about .5" of clearance. If the brace hits piece #12, you will need to break the tack welds on pieces #12, 13 and 14, reposition these pieces according to need and re-tack them.

### Step 16B

Its is a good Idea at this point to also put your top on to verify nothing will interfere with getting it all zipped up. If any changes need to be done, now is the time to do so before final welding.



## Installing the Handles

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### Step 17

Determine where the driver side handle will be welded to the existing roll bar by holding it in place. Notice where the paint will need to be removed from the existing roll bar in preparation for welding.



### Step 18

Clean the paint from the roll bar so that a clean weld can be made.

Note: Clean an area about 2" in diameter.



### Step 19

Hold the handle in position and tack weld it into place.



### Step 20

Repeat **Steps 17 through 19** on the passenger side handle.

## Welding and Painting

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### Step 21

Once all the pieces are positioned and tach welded, and you are SURE everything is exactly the way you want it, fully weld all the joints.

**Caution:** Be sure to protect interior and exterior parts from the spatter and heat associated with welding. You could use a non-flammable blanket or deflection paper. (See Page 3)

### Step 22

Once all the joints are welded and cooled, use a wire brush to smooth and clean the welded joints. Paint any exposed metal to reduce rust and improve appearance.

**Note:** Be sure to cover interior components to protect from paint overspray.

## Securing the Rear of the Sport Cage to the Floor

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### Step 23

Beginning on the passenger side, remove the body plug.



### Step 24

Check to see if there are any electrical wires near the area to be drilled. Move them if needed.





### Step 25

Drill the mounting hole in the vehicle floor using a 7/16" drill bit.



### Step 26

Insert the supplied serrated flange nut through the body hole as shown. Thread the supplied M10X1.25X40mm flange bolt into the nut.



### Step 27

While holding the flange nut with your finger, tighten the bolt using a 14 mm box end wrench or socket. Torque the bolt to 25 ft. lbs.

Note: The serrations on the nut should keep it from turning. If the nut turns with the bolt, you will need to put a wrench on the nut from underneath.



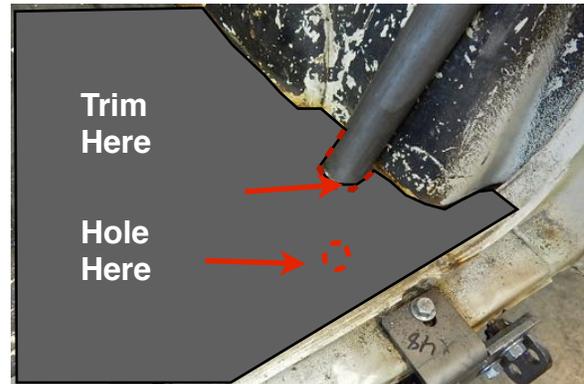
### Step 28

Replace the body plug.



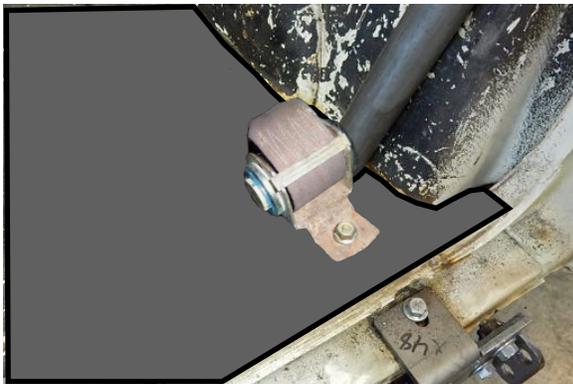
### Step 29

Repeat **Steps 23 through 28** on the driver side bolt and nut.



### Step 30

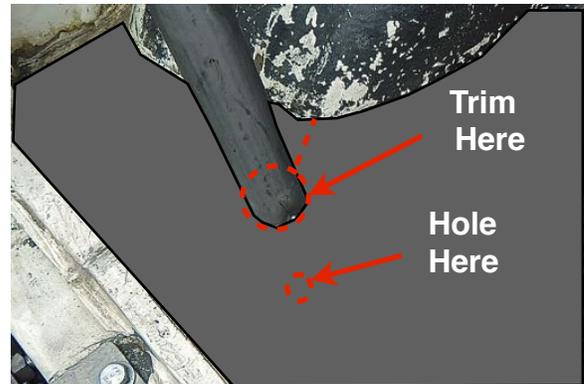
Reposition the carpet and trim out a hole such that the carpet can be fitted around the Sport Cage using a utility knife or carpet scissors. Also, you will need to make a hole for the seat belt bolt.



### Step 31

Install the seat belt and torque the bolt to 40 ft. lbs.

Note: If you are not installing a seat belt the bolt is still needed to secure the sport cage.



### Step 32

Repeat **Steps 30 and 31** on the driver side.



## Congratulations!

You have successfully installed the Rear Sport Cage. 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](mailto: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 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.

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