

86-95 Suzuki Samurai Front Shackle (SKU# SSP-HDS1)

Note: These instructions also apply to SKU# SSP-HDS3

Installation Instructions



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



Suggested Tools:

- Penetrating Oil
- Twin Post Lift (or Floor Jack and Safety Stands)
- Socket, 14 mm
- Combination Wrench, 19 mm
- Socket, 19 mm (or a ratcheting box end wrench)
- Large Dead Blow Hammer
- Large Tapered Punch
- Under Hoist Safety Stand

- Small Lady's Foot Pry Bar





Step 1

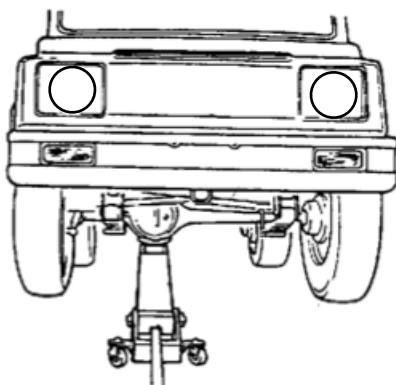
When working on suspension or drive train parts it is a good idea to spray all fasteners with penetrating oil a day ahead. If not done a day ahead, an hour or even minutes before is helpful.



Step 2

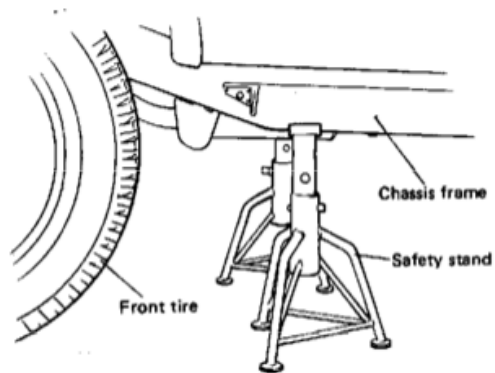
Lift and support the vehicle on a twin post lift.

Note: We used a twin post lift, but this job could easily be done with a floor jack and safety stands.



Tech Tip

Proper positioning of floor jack.



Tech Tip

Proper positioning of safety stands.



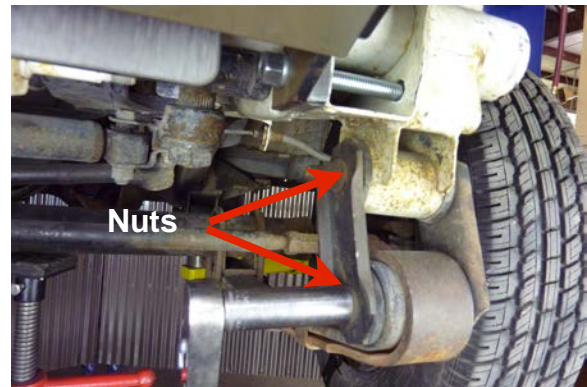
These Instructions begin on the divers side.



Step 3

Slightly lift and support the front axle assembly with an under hoist safety stand.

Note: If you are working on safety stands use a floor jack to lift slightly on the front axle.



Step 4

Remove (2) shackle pin nuts and washers with a 14 mm socket.



Step 5

Remove the inner shackle plate.



Step 6

Remove the outer shackle plate and shackle pins by tapping on the pins with a dead blow hammer.

Note: It may be helpful to slightly raise or lower the front axle assembly with the under hoist jack stand, (or floor jack) to release tension on the shackle pins.

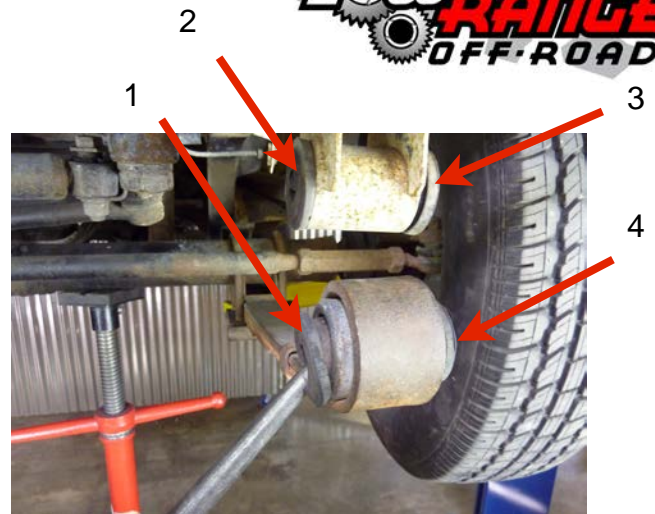




Step 7

It may be necessary to use a tapered punch and hammer to drive the shackle pins out the last couple of inches.

Note: The shackle pins and plates will not be used again and can be discarded.



Step 8

Pry out all four bushings with a large tapered punch.



New Bushing

Step 9

Install the (4) new bushings by tapping them into place with a dead blow hammer.

Note: Bushings are sold separately.

Large Washer Bolt Small Washer



Step 10

Position the new LROR shackle with the supplied bolt, small washer and large washer (if needed) as shown.

Note: Make sure the LROR emblem is right side up and the bolt is installed from the outside in.



Large Flat Washer

Tech Tip

There are several bushing styles available for this application. Each style may require a slight variation from what is shown in these instructions. It may be necessary to eliminate one or more large flat washers to make all components fit properly.



Tech Tip

It may be necessary to drive this washer between the bushing and the shackle with a dead blow hammer.



Step 11

Install the 2nd large flat washer as shown if needed.

Note: This washer may not be needed with the bushings you are using. However, it is important that all the parts fit tightly together. So if there is room for this washer, use it.



Step 12

Align all the parts (washers and bushings, shackle, etc.) with a large tapered punch and insert the supplied bolt and small washer.



Step 13

Tap the bolt into place with a dead blow hammer.

Note: Be careful not to damage the threads on the bolt. The bolt should go in relatively easy.



Step 14

Install the 2nd small supplied washer.



Step 15

Install the supplied Nylock® nut and leave the nut loose for now.



Step 16

Align the leaf spring with the shackle by raising or lowering the front axle using the under hoist safety stand (or floor jack).

Note: In some cases we have found the leaf spring would not align with the shackle properly. If this happens, have an assistant turn the steering wheel "hard" all the way right, or "hard" all the way left, to get the spring to shift right or left as needed.



Step 17

Insert the large washer as shown if needed.



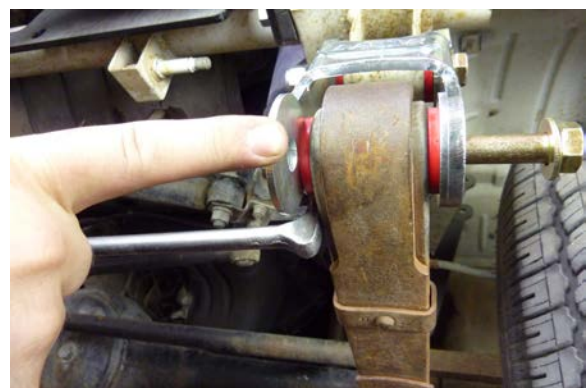
Step 18

Insert the bolt and small washer as shown.



Step 19

Install the 2nd large washer as shown if needed.



Tech Tip

It may be necessary to pry between the shackle and spring to make room for the 2nd large washer.

Note: The use of a dead blow hammer may also be necessary to drive the washer in.



Step 20

Once all the parts are installed and aligned, tap the bolt into place with a dead blow hammer.

Note: Again, be careful not to damage the threads on the bolt. If the bolt will not go in easily, use a tapered punch to better align the parts and try again.



Step 22

Install the Nylock® nut.



Step 21

Install the 2nd small flat washer.



Step 23

While holding the bolt with a 19 mm box end wrench, tighten the nut with a 19 mm ratcheting box end wrench (or socket) until all parts are drawn tightly together.

Caution: Do not over-tighten. It is not necessary to tighten until the bushings bulge as with some suspension applications. Just tighten until bushings are in firm contact with the shackles (or large washers if used).



Step 24

Tighten the top nut and bolt in the same manner as the bottom.

Step 25

Congratulations! One shackle down and one to go. The second shackle always goes better. Repeat steps 4 through 24 on the passenger side shackle. If you are installing shackles on the rear, the procedures for the rear are pretty much the same as the front. Thanks for choosing Low Range Off-Road products. We appreciate your business.



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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