

Instructions Created by an:



**Automotive  
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MASTER AUTO TECHNICIAN



## Suzuki Samurai Rag Joint Eliminator SKU# SST-RJE

### Installation Instructions



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



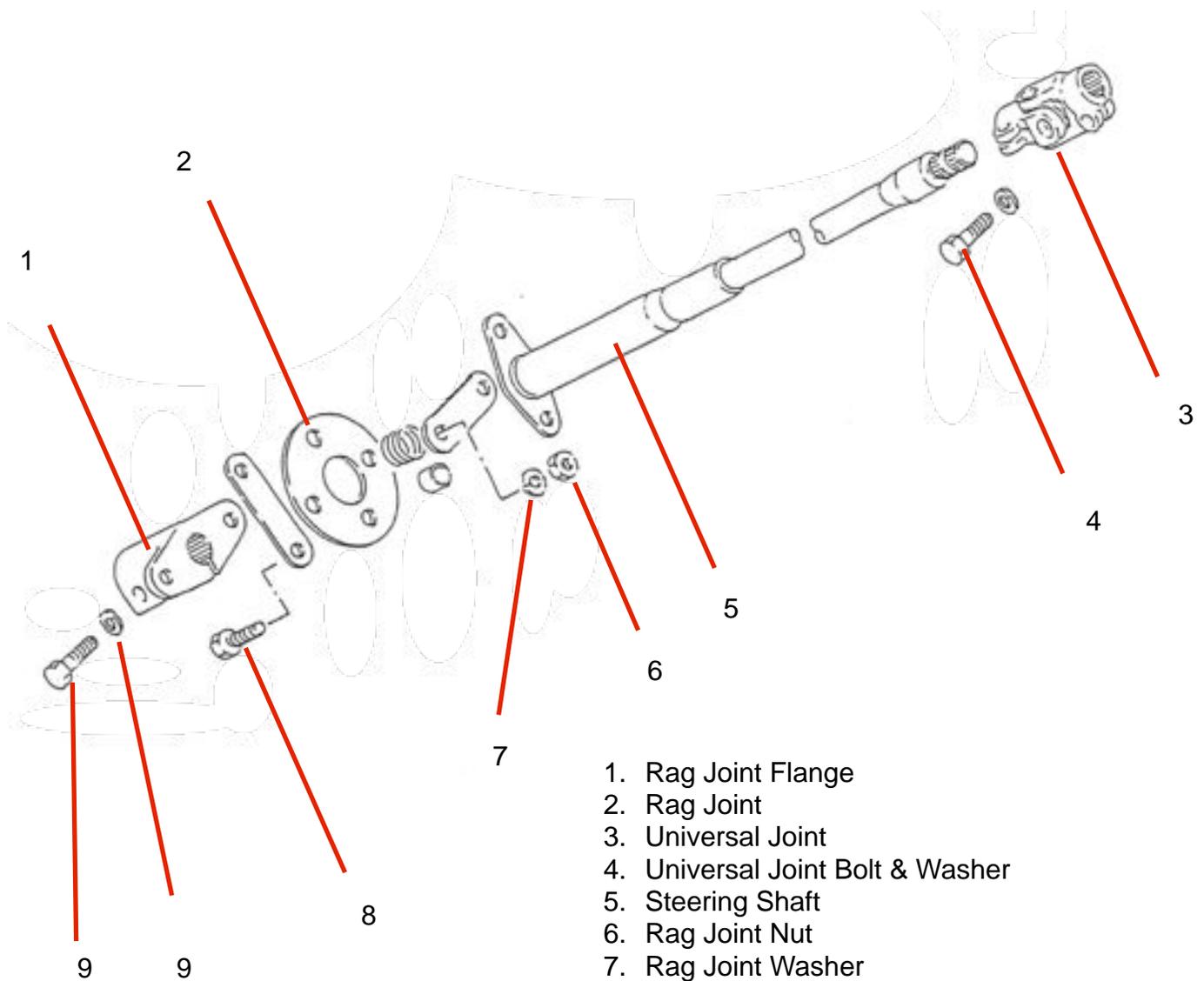
#### Suggested Tools:

- Socket: 12 mm
- Ratchet
- (2) Combination Wrenches: 12mm
- White Permeant Marker

**FOR ADDITIONAL COPIES OF THESE  
AND OTHER INSTRUCTIONS GO TO:**

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

## Steering Shaft Parts



1. Rag Joint Flange
2. Rag Joint
3. Universal Joint
4. Universal Joint Bolt & Washer
5. Steering Shaft
6. Rag Joint Nut
7. Rag Joint Washer
8. Rag Joint Bolt
9. Rag Joint Flange Washer
10. Rag Joint Flange Bolt



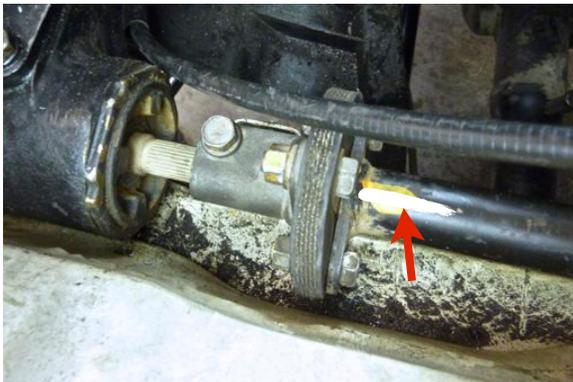
### Step 1

Place the front wheels in the straight ahead position.



### Step 2

Place the steering wheel in the level position.



### Step 3

Mark the steering shaft such that it can be reinstalled in the same position.

Note: The mark should be facing up when the shaft is reinstalled.



### Step 4

Mark the universal joint and the steering shaft so they can be reinstalled in the same relationship.





### Step 5

Disconnect the rag joint from the rag joint flange by removing the (2) rag joint bolts using (2) 12 mm combination wrenches.

**Caution:** Be sure the front tires are not moved (right to left) until the job is complete.



### Step 6

Remove the universal joint bolt and washer using a 12mm socket.



### Step 7

Lift up on the steering gear end of the steering shaft and slide the steering shaft from the universal joint.

**Caution:** Be sure the steering wheel is not moved until the job is complete.



### Step 8

Install the rag joint eliminator onto the steering gear shaft making sure the joint and shaft are splined together in the same orientation as they were originally. Torque the bolt to 10 ft. lbs.

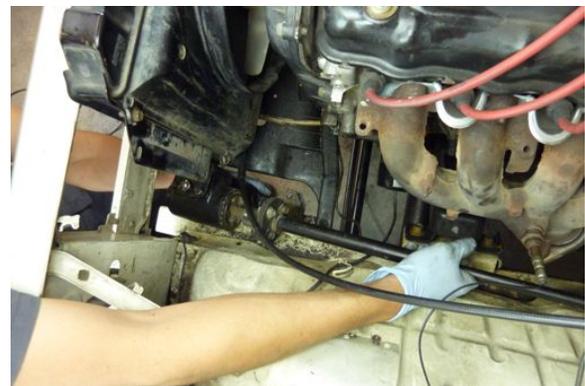
Note: This bolt will not go into place unless the shaft is oriented properly with the rag joint eliminator.



## Step 9

With the rag joint eliminator installed, the steering shaft will be too long. It will need to be shortened or collapsed. Estimate the amount that the steering shaft needs to be collapsed by temporarily installing the steering shaft in the universal joint up at the firewall and measuring at the rag joint end.

Note: It is a good idea to temporarily install the bolt in the universal joint to insure that the shaft is fitted in it's exact location for an accurate measurement.



## Step 10

After measuring the steering shaft, remove it from the vehicle.



### Step 11

Collapse the steering shaft by placing the spline end on a piece of wood (to protect the splines) and striking the rag joint end with a hammer as shown.

Note: This will free the plastic sheer pin inside the shaft, forcing the shaft to telescope making it shorter in overall length. Continue this process until the steering shaft is the correct length.



### Step 13

Reinstall the bolt in the universal joint and tighten to 10 ft. lbs.



### Step 12

Install the steering shaft, beginning with the splined end by inserting it in the universal joint as shown.

Note: Be sure it is oriented in the exact position it was originally. If it is only one spline off, the steering wheel will not be level when the vehicle is being driven down the road.



### Step 14

Lengthen the steering shaft if needed. Install the two supplied flange bolts, and torque them to 11 ft. lbs. Be sure the white mark is up. After the bolts are torqued, install the supplied washers and nylock nuts on the bolts and tighten to 11 ft. lbs.

Note: The nylock nuts are installed to reduce the risk of the bolts backing out over time.



**Negative Camber**



**Positive Camber**



**Toe In**



**Toe Out**



**Negative Caster**



**Positive Caster**

## Congratulations!

You have completed the installation of a LROR Rag Joint Eliminator. We hope these instructions have been helpful. If you have suggestions on how we could improve our instructions (or products) please email us at [sales@lowrangeoffroad.com](mailto:sales@lowrangeoffroad.com)

## Step 15

If the vehicle is to be used on hard surfaced roads, it is advisable to have the steering professionally aligned as soon as possible.



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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