

Sulastic Rubber Springs Installation Guide for Model Type SAJ-03.

PRE-INSTALLATION NOTES:

For some vehicles, the size of the bolt head for the leaf spring is larger than the space between the body of the vehicle and the frame, making it difficult to remove and replace the upper shackle bolts as described in step 12. In this case, the installer should consult a dealership mechanic for instructions.

The installer must consult in advance the vehicle manufacturer's manual, to determine the proper torque for the bolts that attach the springs to the hangers. A torque wrench will be needed in steps 22 and 25 of the installation.

While every Sulastic Suspension Kit includes the following for standard installation: **2 sulastic shackles, 4 washers, 2 bolts (ea. with flat washer, lock washer and nut)**; for some vehicles: additional washers and/or steel spacers, may be needed and are available upon request from Sulastic. See steps 16 and 17.

Notice: Before installation begins, it is the customer/installer responsibility:

- To make sure that all parts are on hand. If any parts are missing, please feel free to call our customer service representatives.
- To read and understand all steps before installation begins. OEM Manual should be used as a reference guide. In addition Sulastic highly recommends that a qualified and/or certified mechanic performs this installation and as to **keep the original shackles of the truck.**
- To make sure that the model received fits the corresponding truck by checking the shackle set-up, see below:

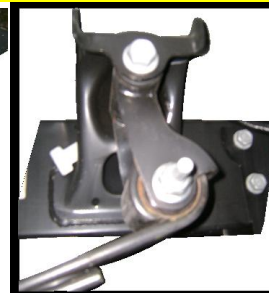
SA MODELS

When the truck has the shackles **BELOW** the leaf springs, the shackle is under **TENSION**. In that case the truck will use a **"SA-MODEL"**.



SC MODELS

When the truck has the shackles **ABOVE** the leaf spring, the shackle is under **COMPRESSION** in such situation the **"SC-MODEL"** is used.



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HOW TO INSTALL?



1. Make sure the hydraulic jack and jack stands or mechanical track jacks are strong enough to safely support the vehicle.



2. Put the parking brake on, and position the chocks in front of the front tires, to prevent the vehicle from moving.

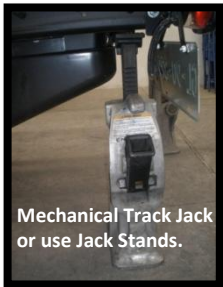


3. Using a tape measure, record the distance from the ground to any point on the chassis or other reference point to know the height of the vehicle that is directly above each tire. **MAKE SURE THAT THE TAPE INTERSECTS THE CENTER OF EACH TIRE, AT THE AXLE.**



Record each measurement. You will need these four measurements after the installation is finished. (See step 29)

4. **Option 1:** Safely and securely position the mechanical track jack to lift the right rear side of the vehicle, until the tire is **3"** above the ground.



Option2. Safely and securely position the hydraulic jack, Safely and securely position one jack stand under the right side of the vehicle. Lower and remove the hydraulic jack.

5. Repeat steps 4 for the left rear of the vehicle. The vehicle is now supported in the rear by 2 jack stands or two mechanical track jacks.



WARNING: DO NOT REMOVE THE JACK AND JACK STANDS UNTIL INDICATED.

6. Position the hydraulic jack under the differential (at the center point of the rear axle), and carefully lift the axle a sufficient distance, in order to relieve the bolts of the axle's weight.



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7. With a pair of wrenches, carefully remove the nut and bolt that attach the right rear shock absorber to the axle.
8. Repeat step 8 for the left rear shock absorber.



9. By Using a pair of wrenches, remove **ONLY** the two nuts that attach the shackle to the right hanger and to the right leaf spring.

Notice: DO NOT REMOVE THE BOLTS!

10. Repeat step 9 for the left rear leaf spring.



11. Now use the jack to carefully LOWER the rear axle to its lowest position. In this position, the bolts are bearing the weight of the axle. With the jack in the same position, gradually RAISE the axle UNTIL it is high enough to easily REMOVE first the right, and then **the left LOWER** hanger bolts.



12. Now, with the jack still in place, gradually raise the axle until you can easily remove both the left and right **UPPER shackle bolts** that are attached to the leaf springs. You may need to use the jack to raise or lower the axle by increments, in order to manipulate and remove each bolt. With the two shackles removed from the leaf springs, you are now ready to install the Sulastic springs.



WARNING: For safety, support the heavy shackles when removing the bolts, to prevent them from falling and causing injury.

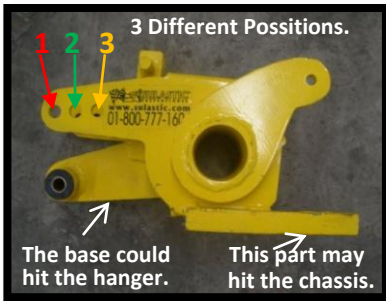
Notice: In some trucks you might need to raise the shackle above the frame, pay close attention to avoid hitting the bed with the shackle.



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13. The Sulastic springs are labeled as to either the driver or passenger side of the vehicle. If not please see the figure.



14. Select the hole on which you will mount the sulastic to the leaf springs .This is a very important step because it will determine the inclination of the sulastic which will avoid any interference with the sulastic.



15. Each set of springs includes metal washers in a plastic bag. Some, but not all sets include an extra set of washers attached on the side of the hardware. (Refer to step 16, to determine if you need to use extra washers.)



16. You must first determine how many washers are needed to tightly secure the bolts. To do this, first position the wide end of the Sulastic spring next to the wide end of the shackle, end-to-end. Compare the distance between the holes on the inside of the shackle with the distance between the holes on the inside of the Sulastic spring. Use as many washers as needed to equalize the two distances.

Always place the washers on the inside of the hardware. If only one washer is needed, place it on the hole that is further in distance from the center of the axle of the truck.



Secure the washers with plastic cellophane tape, for easier installation. It is very important to do so in order to avoid any hardware deformation when tightening the bolts.

17. Repeat step 16 above in comparing the narrow (bushing) end of each Sulastic spring with the narrow end of its shackle, to determine how many washers are needed in order to tighten the bolts. Note: In some cases no additional washer are required, but is highly recommended using at least one between the frame and the Sulastic bushing to avoid in any case interference with the hanger.

18. Make sure that the washers used in step 17 are positioned on the side of the bushing that is closest to the vehicle's frame. Sometimes when the bolts are tightened, the hanger becomes deformed and too narrow. If this happens, open the hanger space a little bit.



Notice: We highly suggest you do this before step 19!

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The purpose for this step is to expand the distance between the two holes on the hanger, to make it wide enough for the bushing on the Sulastic spring to fit. For this step, you will need the 1/2" tread rod, two washers, and two nuts that were enclosed in your Sulastic Kit. Insert the bolt through only one of the holes of the hanger. Place onto the bolt a washer, nut, nut, and washer, in that order of sequence. Then, push the bolt through the second hole. With two wrenches, turn the nuts in opposite directions, gradually expanding the space between the two holes until there is just enough space between the two sides of the hanger for the bushing of the Sulastic spring and at least one washer. To remove the tread rod, washers, and nuts, simply loosen and remove the nuts on the bolt.



19. Now, with the washers secured on the spring with tape, attach the left Sulastic spring to the leaf spring by inserting and tightening the connecting bolt. Be sure to closely align the two holes on the bushing with the two holes on the hanger. Repeat this procedure to attach the right Sulastic spring.



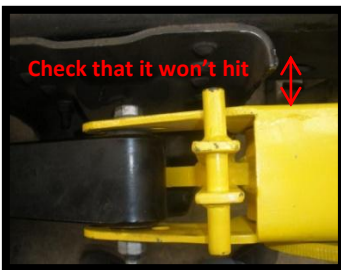
20. At this time, each Sulastic spring should be attached only to the leaf spring with nut and bolt. You are now ready to attach each Sulastic spring to its hanger.



21. Carefully and gradually lower the axle with the jack until the hole in the left hanger lines up with the hole in the Sulastic spring. Then, insert and tighten the bolt. Repeat this step for the right Sulastic spring.



22. Now, using a torque wrench, carefully tighten each nut to the required torque value, as indicated in the manufacturer's manual.



23. Look for any possible interference with the equipment by following the next steps:

a. By using the hydraulic jack lower the vehicle completely. This will reduce the distance between the bolts to the point where they are barely touching one another.



b. Now raise the hydraulic jack in order to open the sulastic and hits the stop member During this step check that nothing interferes with the operation of the sulastic in given case please give us a call to advice you and if possible provide photos as reference.

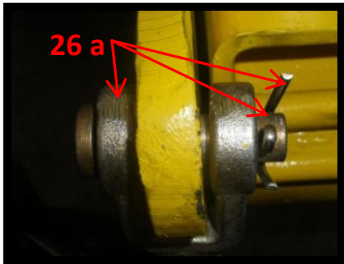
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24. To reinstall the shock absorbers, carefully and gradually use the jack to raise the axle until the holes line up with the holes on each shock absorber.

25. With the jack still in the same position, attach the left and right shock absorbers to the axles. Tighten the nuts with a torque wrench, as indicated in the manufacturer's manual.

26. The **tensioning device** is installed by following these steps on the right side:



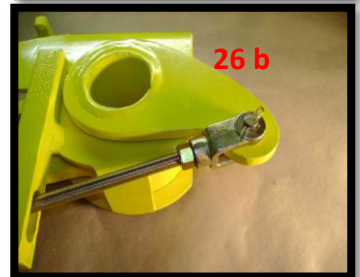
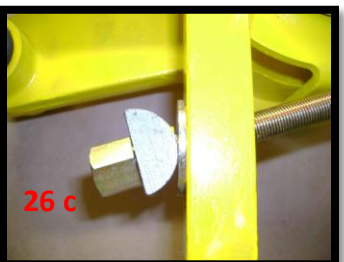
a. First, Position the yoke end to the ear of the Sulastic then insert the clevis pin followed by the insertion of the cotter to pin (open the cotter pin ends after inserting it) to avoid the yoke end from losing its position. Then pass the rod through the slot of the rectangular bar and insert a nut on top of the rod and screw the nut about two inches down the rod.



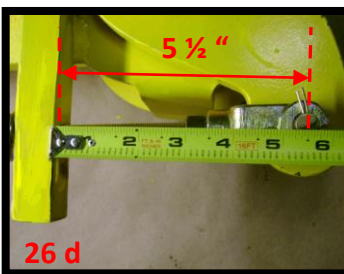
b. Afterwards, screw the rod into the yoke end about one inch. In order to tighten the rod into the yoke end, place two nuts at the other end of the rod and tight one nut while you hold the other one in place. Once the rod is tight to the yoke end remove the two nuts and tight the nut you place in the step a. to secure the rod in place.



c. Now, place a flat washer, steel spacer and two nuts into the rod in that order at the opposite side of the yoke end.



d. Finally tighten the nuts the specific range that corresponds to the vehicle's weight load over the rear axle. (the range is the distance between the end of the rectangle closest to the yoke end and the center of the clevis pin) Please refer to chart below to know how much you need to tighten the bolt.



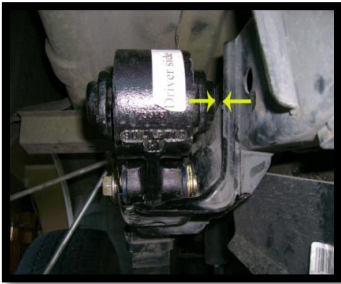
Range (in inches)	Load on Unloaded Rear Axle (lbs)
5 ½	3400
5 ¼	4600
5	5200
4 ¾	6000
4 ½	6600
4 ¼	7200

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27. Repeat step 26 for left side
28. Lower the axle with the hydraulic jack, and remove the jack from the underside of the vehicle.
29. Raise the left side of the vehicle with the hydraulic jack, to remove the left jack stand.
30. Then, lower the vehicle to ground level with the hydraulic jack.
31. Repeat steps 31 and 32 for the right side of the vehicle.
32. With the vehicle now on ground level. Make sure that the distance between the bolts of the Sulastic is between 4" and 4 ½" If not please repeat step 28 and 29 until reaching the correct distance. And remember lift the truck until the tires are at least 2" above the ground before doing any tension adjustment.

(Note when the load of tension adjustments is over 4000 lbs is necessary to use a hydraulic equipment to do this adjustment.)

With the vehicle now on ground level, Repeat step 3, to insure that the distance now measures between ¼ " higher or ¼ " lower than the previous distance. (except for some models like tundra 2007-2011 that the height should be increased by 1 ½" or for vehicles with modified suspension)



33. Finally, check the vehicle to insure that nothing interferes with the free movement of the vehicle and Sulastic rubber springs.

Congratulations on having successfully installed Sulastic Rubber Springs on your vehicle, for a safer and more comfortable riding experience.



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LIMITED LIFETIME WARRANTY

What Does This Warranty Cover?

This Warranty covers the original buyer of any Sulastic products during the warranty period.

What Does This Warranty Not Cover?

The warranty does not cover any Sulastic product(s) that were damaged under the following circumstances:

1. Were installed in vehicles with higher load range than the one established in the vehicle's specification.
2. Any and all modifications and/or alterations made to the Sulastic product.
3. Were used under abnormal working conditions.
1. The device is welded, burned, or heated.
2. It was not installed in accordance with the instructions.

What is the lifetime for the product?

The product was designed to perform from five to ten years under normal conditions.

What Is the Period of Coverage for each part?

This warranty remains valid for ten years from the date of purchase for the steel materials.
The rubber components, sleeves and washers are covered by the period of three years from the date of purchase.

What Will We Do?

In case that some rubber or steel part breaks or damages we will replace the Sulastic product at no charge.
In all warranties the product will be sent for free within the U.S., for international customers the shipping costs are not covered.

What Will We Not Do?

We will not be liable for any incidental or consequential damages, including the cost of installation, reinstallation or personal injury.
Some states do not allow limitations on how long a warranty lasts or the exclusion or limitation on incidental or consequential damages. So the above exclusions or limitations may not apply to you.

How to apply the warranty?

Within the 30 days of purchase you can return the product to the place of purchase for immediate replacement.
After 30 days, but before the end of the ten year warranty period, you may return the product (Two parts and accessories) with an authorization number provided by:

Customer Service Department
Sulastic Rubber Springs
(210) 492 4469

We suggest that you retain your original packing material and the original shackle in the event you need to ship the product. When sending your product include your name, address, phone number, proof of date of purchase, and a brief description of the problem. After receiving your product we will send you a new one free of charge.

What Must You Do to Keep The Warranty in Effect?

- 1.- Install and use the device according to instructions.
2. - Keep proof of the date of purchase.

How Does State Law Relate to This Warranty?

This warranty gives you specific legal rights and you may also have other rights that may vary from state to state. This warranty is the only one we give for our product, and it sets forth all our responsibilities regarding our product. There are no warranties which extend beyond the description set forth above.