

86-95 Suzuki Samurai Rear Drum Brake Shoes

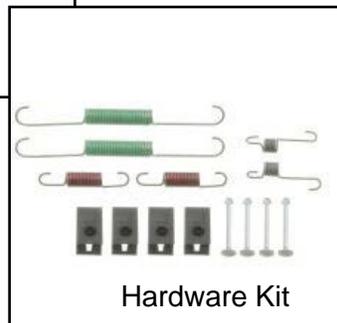
(SKU# SB-RBS)

Instructions also include:

Rear Brake Wheel Cylinder (SKU# SB-SRWC)

SJ413 Rear Drum Brake Hardware Kit (SKU# SB-RBHK)

Installation Instructions



Suggested Tools:

- Penetrating Oil
- Floor Jack
- Safety Stands (2)
- 19 mm Wheel Lug Nut Wrench
- Brake Cleaner (1 Aerosol Can)
- Large Standard Screwdriver
- Needle Nose Pliers
- Larger Ball Peen Hammer
- Combination Wrench: 10 mm
- Large Dead Blow Hammer
- Sockets: 14,17 & 19 mm
- Brake Parts Lubricant
- 10 mm Tubing (Flair Nut) Wrench



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





Step 1

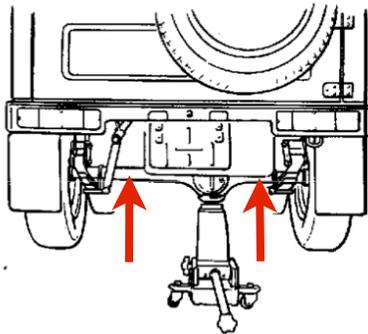
When working on suspension or drive train parts, it is a good idea to spray all fasteners with penetrating oil a day ahead. If not done a day ahead, an hour or even minutes ahead is helpful.

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 (2) safety stands.

These instructions are designed to be used on the DRIVERS side of the vehicle, but can easily be adapted to the passenger side if needed.



Step 3

If you are using a floor jack and safety stands, raise the rear of the vehicle and place the safety stands under the axle housing as indicated by the arrows.

Caution: Be sure to block the front wheels so the vehicle does not roll.

Step 4

Release the parking brake if applied. (Lever down)



Step 5

Remove the wheel center cap by removing the (1) center bolt using a 14 mm socket.



Step 6

Remove the wheel assembly by removing the (5) wheel lug nuts using a 19 mm lug wrench or socket.

Caution - Danger

Some brake shoe lining materials contain asbestos. Consequently, the dust created in the brake drums could have asbestos in it. If this dust becomes airborne and then inhaled by individuals, it could increase the risk of lung cancer and other reparatory diseases. Therefore, you should never clean brake parts by spraying them with compressed air. Always wash brake parts with a safe liquid and then dispose of the liquid in accordance with state and federal regulations. Using a respirator is also a good idea to reduce the risk of inhaling harmful asbestos dust.



Step 7

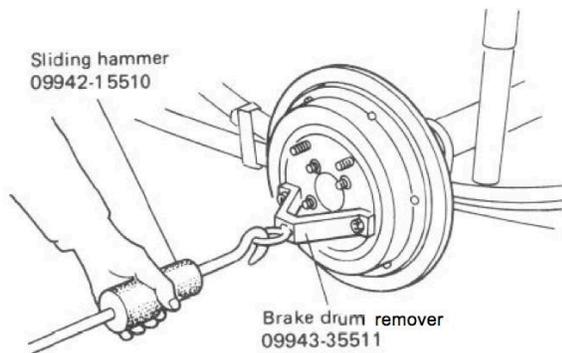
Remove the (4) axle nuts and wheel center cap bracket using a 17 mm socket.



Step 8

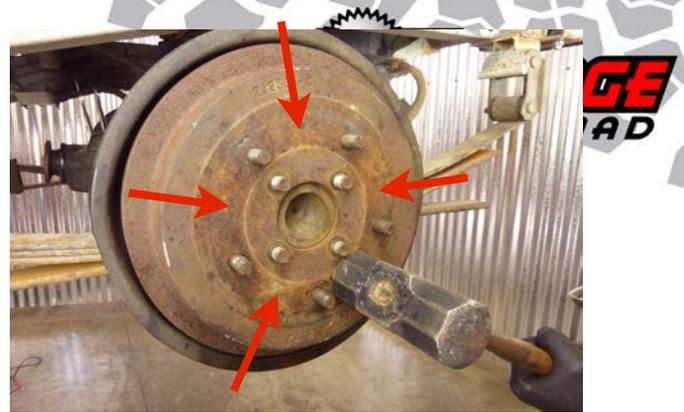
Remove the brake drum and set it aside.





Tech Tip:

Seized brake drums can be removed by using a tool like, or similar to, the one pictured above. If you do not have access to such a tool, move to the next Tech Tip.



Tech Tip:

Seized brake drums can also be loosened by pounding on them with a large ball peen (or small sledge) hammer in the locations shown above.

Caution: Do not hit the wheel studs or hub studs as thread damage will result and the nuts will not thread on properly.



Step 9

Clean all brake parts by placing a pan under the brakes and spraying all brake parts with brake cleaner. If brakes are particularly dirty you may need to use a cleaning brush along with the spray.



Step 10

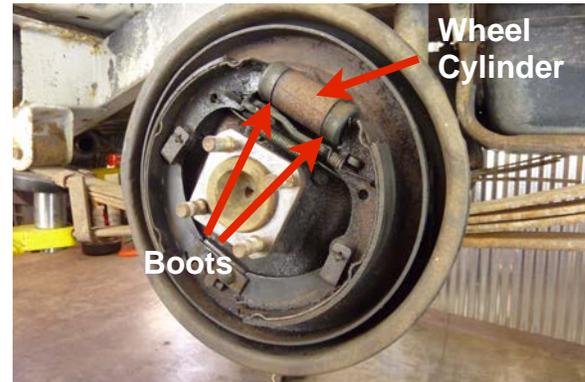
Inspect the drum for cracks, scoring or grooves. If the drum is cracked, the drum is unsafe and will need to be replaced. If scoring is excessive the drum will need to be replaced. If scoring is minor you may be able to have the drum machined. Machining should be performed by a qualified professional who will measure the drum before and after machining to insure it is safe for reuse.



Step 11

Also inspect the drum for excessive wear by measuring the inside diameter of the drum. If the drum measures greater than 8.740" it will need to be replaced.

Note: If you do not have the tools and/or know-how to measure the drum, we recommend you have it measured by a qualified professional.



Step 12

Check the wheel cylinder for leaks by peeling back the boots in the locations indicated by the arrows. If fluid leaks out from behind the boot, the wheel cylinder cup seals have failed and the wheel cylinder will need to be replaced. Click [HERE](#) to see what is available through Low Range Off-Road.



Refer to the illustration below if you are not familiar with brake part names.

Drum Brake Parts Identification

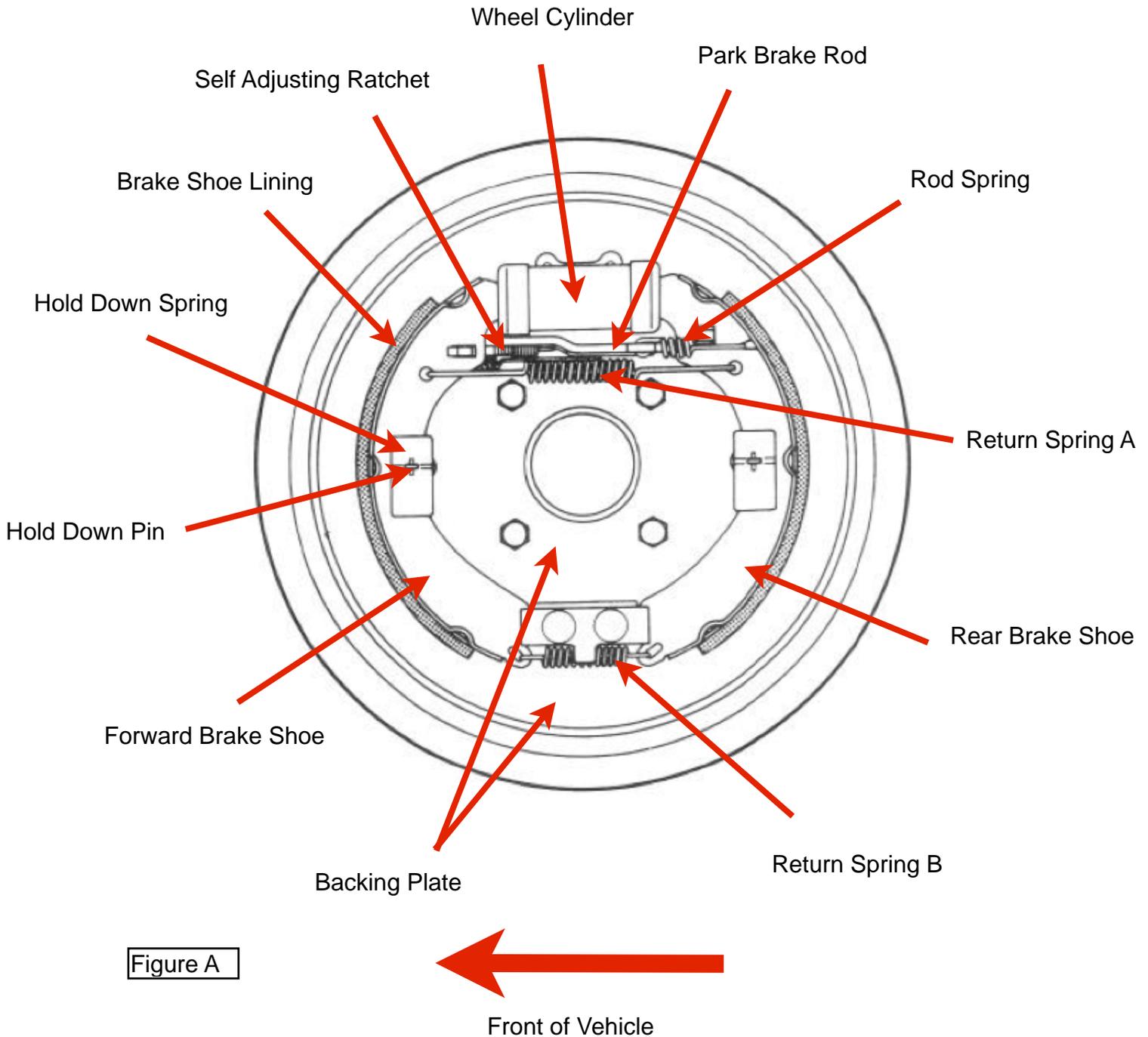


Figure A

Brake Shoe Removal



Step 13

Inspect all the springs and other hardware as the shoes are removed. If the springs are stretched, worn or rusted, they should be replaced. Click [HERE](#) to see what is available through our web site.

Step 14

Using a pair of needle nose pliers, remove return spring B.

Note: Needle nose vice grip pliers work well here too.



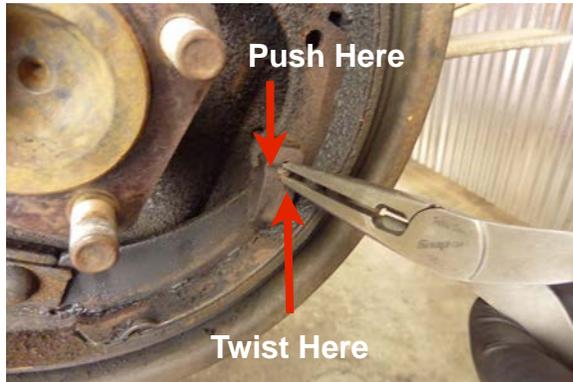
Step 15

Remove the rod spring.

Step 16

Remove return spring A.





Step 17

Remove the rear brake shoe by pushing inward on the brake shoe hold down spring and twisting the hold down pin $\frac{1}{4}$ turn. Remove the pin from the rear of the backing plate and set it aside.

Tech Tip

A good method of removing and installing the hold down spring is to push with a large screwdriver in the groove and turn the hold down pin with the needle nose pliers.



Step 18

Disconnect the rear shoe from the park brake rod and set the shoe aside.

Step 19

Remove the forward brake shoe in the same way as the rear brake shoe.





Step 19 Continued

Forward shoe removed.



Step 20

Clean the backing plate with a wire brush.

Wheel Cylinder Replacement

If you are not replacing the wheel cylinder skip to Step 30.



Step 21

Place a pan under the brake bleeder screw and remove the brake bleeder screw using a 10 mm box end wrench.

Note: This step is not required but it makes the next step easier.



Step 22

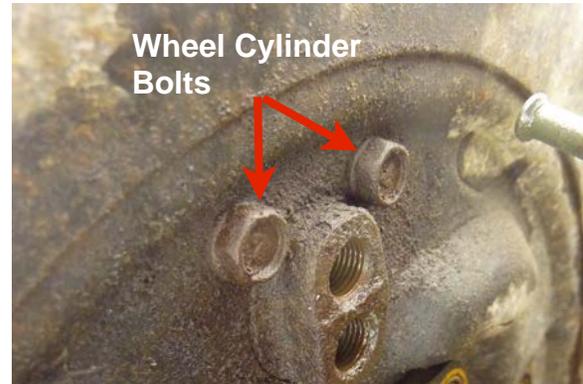
Remove the brake line from the wheel cylinder. It is highly recommended that you use a tubing wrench (10 mm) instead of an open end wrench for brake line removal. Using a tubing wrench will reduce the risk of rounding up the flare nut corners.





Tech Tip

If you are changing the brake fluid let it drain into a pan. If you are not, you will want to plug the brake line with something to keep the fluid from draining out of the system. A piece of vacuum hose and a golf tee works well.



Step 23

Remove the Wheel Cylinder by removing (2) bolts using a 10 mm box end wrench or socket.



Step 24

If the wheel cylinder does not come out easily (and most do not) it may be necessary to jar it loose with a dead blow hammer.



Step 24 Continued

Wheel cylinder removed.





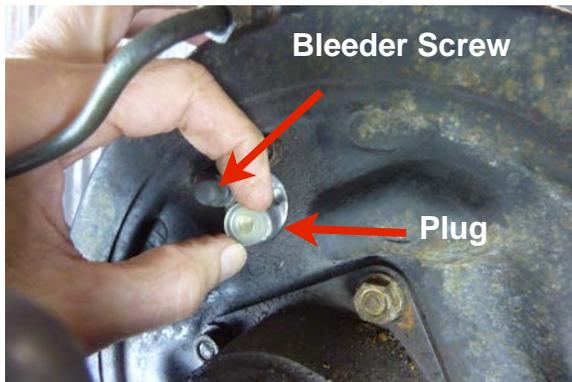
Step 25

Position the new wheel cylinder as shown.



Step 26

While holding the wheel cylinder in place, install the bolts. Then torque the bolts to 6 to 8.5 ft. lbs.



Step 27

Remove the plug and bleeder screw.

Note: It is not required that you remove the bleeder screw. But, it makes installing the brake line easier.



Step 28

Install the brake line to the wheel cylinder and tighten. (10.5 to 13.0 ft. lbs.)

Caution: Brake line flare nuts are easily cross-threaded. You will want to start the flare nut by hand for several turns before using a wrench on it. You may need to flex or bend the brake line slightly to get the fitting to align and thread properly.



Step 29

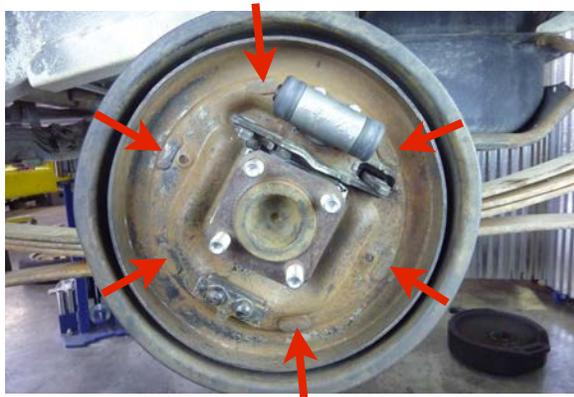
Reinstall and tighten the brake bleeder screw.



Tech Tip

Bleeding brake systems typically takes two people and requires quite a bit of time. But, with Russell Speed Bleeders, brake system bleeding requires only 1one person and goes a lot faster. Click [HERE](#) for more information on this time saving product.

Brake Shoe Installation



Step 30

Lube the backing plate bosses with a good quality brake parts lubricant in the (6) locations shown above.



Step 31

Install the forward shoe hold down pin from the rear of the backing plate.





Step 32

Position the forward brake shoe as shown.

Note: Be sure the park brake rod is fitted properly in the top of the shoe.



Step 33

Depress the brake shoe hold down spring, twist the hold down pin $\frac{1}{4}$ turn and then release the spring.



Step 34

Install the rear shoe hold down pin from the rear of the backing plate.



Step 35

Position the rear brake shoe as shown.





Step 36

Depress the brake shoe hold down spring, twist the hold down pin $\frac{1}{4}$ turn and then release the spring.



Step 37

Install the return spring B.



Step 38

Install the rod spring.



Step 39

Be sure the self-adjusting ratchet is at its smallest setting. This means the ratchet should be positioned as shown.





Step 40

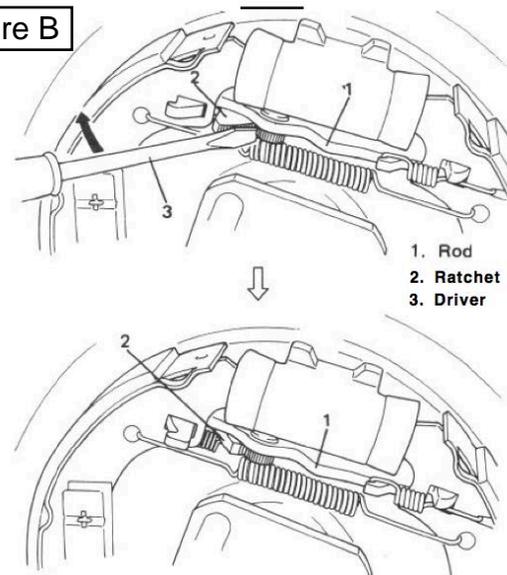
Install return spring A.



Tech Tip

This is what the brake shoes should look like when properly installed.

Figure B



- 1. Rod
- 2. Ratchet
- 3. Driver

Self adjusting ratchet at its lowest setting.



Step 41

Install the brake drum.

Tech Tip

If the drum will not fit over the shoes, check to see that the shoes are in their proper position. If the drum is still not fitting, check to see that the self adjusting ratchet is adjusted to its lowest setting (See Figure B). If the drum still will not fit, you may need to open the bleeder screw, force the shoes together, and close the bleeder screw.



Step 42

Install the center cap bracket and axle hub nuts and torque. (36 to 57.5 ft. lbs.)



Step 43

Install the wheel assembly and torque the wheel lug nuts. (36.5 to 57.5 ft. lbs.)



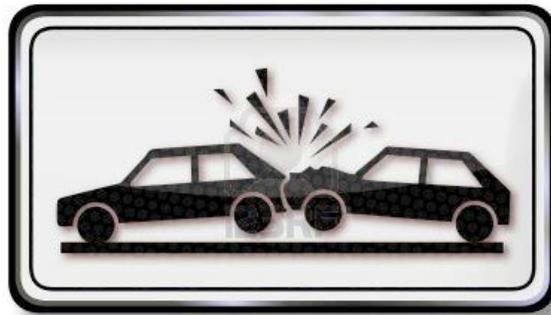
Step 44

Install the wheel center cap and tighten the bolt.

Step 45

Repeat procedures on the passenger side wheel as needed.





Step 46

Danger: If the wheel cylinders were removed for any reason, the brake lines were disconnected. This means there is air in the brake hydraulic system and the brakes will **NOT** work. Therefore, it is **EXTREMELY IMPORTANT** to bleed the brake system before moving this vehicle. Brake Bleeding instructions can be found in our “Instruction Library” at www.lowrangeoffroad.com

Note: It is also possible for air to enter the hydraulic system during a routine drum brake shoe remove and replace procedure. Therefore we recommend doing a brake system bleed after completing **ANY** brake system work.

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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