

95, 96 & Sonett front wheel bearing replacement

*Note: Although this article is about installing front wheel bearings on a Sonett III, it **can** be used to install front wheel bearings on any V4 95 and 96*

I knew what it was, unfortunately. My 1974 Sonett III started to have that all too familiar wheel bearing noise. It sounds like a hollow growl, almost as if it was coming through a piece of wood and gets louder when going around turns under load. It did not really matter if it was the right or left side, you would have to be a little crazy to change one bearing and not the other.

Bearing replacement is not an easy job for the average shade tree mechanic. If you only have a basic set of tools, I do not recommend trying this in your driveway. But let's face it, most of us know our way around our cars extremely well and have just about every tool ever invented hanging on the wall. We are a *CAN DO* group of maniacs, so let us dive in shall we?



Remove the wheel, remove the cotter pin from the axels castle nut. The next step is to remove the axel nut, but this is best done with the wheel on the ground to prevent the hub from turning. The problem is you cannot get to the nut with a Soccer Ball wheel mounted, so if you have a steel wheel with the large open center, put it on and lower the car back to the ground. With the car in gear and the tire chocked, remove the nut. I hope you have a big socket...

Once the nut is off, jack the car back up and remove the wheel.



Straighten the locking tabs that are peened over the caliper mounting bolts. Remove the two bolts from assembly and hang the caliper from the tie rod so it does not hang from the brake hose. I assume you know how to put the pads that just fell on the floor back in later.

Install a hub puller and remove the disc brake/hub assembly. Since the axel wanted to turn as I tightened the hub puller, I stuck a pipe between the spokes of the puller (see photo) and the floor. If you have a different type of puller than mine, you are on your own.

Dried up bearing grease ruined the bearing.



Remove the dust shield from the hub, it is held in place by large Phillips head machine screws that are often stuck. I used a very small (8") pipe wrench to break them free. The pipe wrench jaws were able to dig into the outside diameter of the screw heads. Now is a good time to unscrew the outer seal-retaining ring on the end of the hub assembly. Note the ring has two safety tabs, peened over into notches on the hub. The tabs must be straightened before attempting to unscrew the ring. The ring has two notches that correspond to two protrusions on Saab special tool # 731762; have one? Yeah, me either... Use a suitable punch and heavy hammer to smack the notches hard enough to loosen the ring.

In case you are wondering, the coil spring does NOT get removed and nothing I am describing will allow it to come loose.



Inside the engine compartment, loosen the large clamp on the big end of the inner axel rubber boot, pull the boot back slightly to confirm it is not stuck to the inner driver. Remove the bolt (1) that holds the lower ball joint to the hub assembly; NOT the 2 bolts that hold it to the lower "A" arm. Straighten the locking tab that is peened over the two bolts that hold the steering arm to the hub assembly, remove the two bolts.

Now for the fun part. Lift the hub up and off the lower ball joint and ever so carefully pull the axel through the inner wheel well. I assume you are aware of the deadly roller bearing caps on the end of the axel, where it goes into the inner drivers. They *should* stay on the axle if you pull the inner boot through the inner wheel well with care. Once the axle is out, remove the two bearing caps and store in a zip lock bag. If you lose some needle bearings in the goo at the bottom of your engine compartment, fear not. Drop me an e-mail sonett1@hvc.rr.com and I will send you replacements at no charge.

If you own a bearing press, press the axel out of the bearing in the hub assembly. If you do not have a bearing press, you can try my method.



At this point I should throw in a disclaimer. Some of the following methods deviate from the recommended procedures in the Saab service manual. They deviate because I do not own the Saab special tools for bearing and seal removal and installation. If you own a spare set of these tools----- I know someone that would like to buy them from you 😊

Reinstall the castle nut to the axel until flush with the end of the axel. Drop the axel on a block of wood (see picture), the axel should come out of the bearing rather easily. Remove the nut.

Remove the old seal from the outer retaining ring. The seals dimensions are 50mm x 70mm x 10mm and can be found on the internet, simply Google the dimensions. You also need to remove the old inner seal from the hub assembly, it's dimensions are 42mm x 65mm x 10mm, also still available. Try not to badly damage the seals during removal because they can come in very handy when installing the new seals. I knocked them out using a large socket as an arbor. The Saab special tool has an outside diameter slightly smaller than the seals, so it was ideal for knocking them out and back in again without damage.

Knock out the bearing with a suitable arbor (AKA a piece of pipe). Now it is time to install the new seals. First, clean the mating surfaces, the last thing you need is dirt or corrosion preventing the new seals from going in straight. Spray the mating surfaces and the outside diameter of the seals with silicone and place them squarely in the ring or hub. Look at the pictures. I placed the ring/hub on my vice and put the old seal on top of the new seal. The biggest socket I own was placed on the old seal; a 5-pound hammer was used to knock it in. If I had a socket large enough, it would not have been necessary to use the old seal during installation. Do not go hog wild with the hammer! Start with a tap and check to see if the seal is going in square, make necessary adjustments and continue to hit in the seal, checking progress after each hit. Once the seal cannot go in any further, you are done.



New seal and bearing loaded with grease, ready for installation.

Fill the lip in the inner seal with grease prior to installing the bearing. Grease up the new bearing; make sure every nook and cranny is filled. If the new bearing has been in storage for 40 years, it would be wise to clean out the old grease and replace. As you can see in the photo, I used the old bearing on top of the new one and a block of wood to knock the new bearing into the hub.

The wheel bearings dimensions are 30mm bore x 72mm outside diameter x 30.2mm width. They are available from NTN part number 5306 or SKF part number 3306A/C3 and cost between \$75 and \$100 each. The bearings supplied by Skandix have plastic bearing retainers and are terrible, do not buy them.

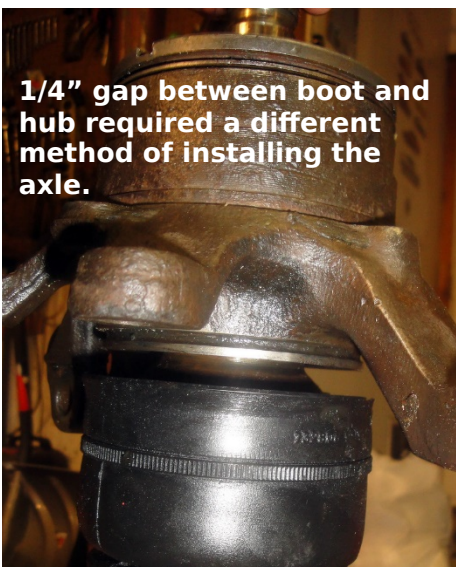
Now it is time to press the axel back into the hub. I used the same technique as removal, dropping it on a block of wood, only this time with the threaded end of the axel facing up. I was not able to drive the axel in all the way (see photo). The outer axel boot fell about $\frac{1}{4}$ " short of touching the hub and I did not want to damage the bearing by dropping it with more force. This was when I wished I had a bearing press. I decided to draw the axel in the last quarter inch by tightening the castle nut, but I first had to reinstall everything to the car.

Clean out all of the old grease from the inner axel rubber boot. Remove the needle bearings from the bearing caps, clean and re-grease. The grease will

help hold the caps to the axel stubs, make sure you use enough grease for it to squish out of the cap.

Put the car in neutral, rotate the inner driver so the axel recess is horizontal to the floor, put the transmission back in gear. The reason for this is simple. During installation, the bearing caps are more inclined to fall off the axel when they are vertical—the bottom one can drop off.

Mark the inner axel boot with a smear of paint, so you know where the bearing caps are located when viewed from the wheel well. Insert the axle through the wheel well with the bearing caps positioned vertically, pinching the rubber boot with your hand so the caps do not fall off. Once the boot clears the wheel well, rotate the axle 90 degrees to match the horizontal position of the inner drivers.



$\frac{1}{4}$ " gap between boot and hub required a different method of installing the axle.

After the axle hits home inside the inner drivers, press the lower ball joint onto the hub assembly, followed by securing the two bolts that attach the steering arm to the hub assembly, do not forget the locking tabs.

From inside the engine compartment, stick your finger inside the inner boot and feel the bearing caps to confirm they did not fall off the axle. Fill the boots with grease and secure the clamps.

Now is a good time to reinstall the outer seal retainer. Make sure you fill the seals lip with grease, and then spin on the retainer until tight. Tap the notches with a suitable punch until the locking tabs once again line up with the notches

in the hub. Peen the tabs over. Completely fill the gap between the seal and bearing with grease. Reattach the shock absorber and rotor dust shield. Place the hub/disc brake assembly back on the axle. Replace the washer and castle nut. This is when I tightened the nut to finish pulling the axle through the bearing. I had to place a bar between a lug nut and the floor to prevent the hub from rotating while tightening the nut. (See photo)

Reattach the caliper assembly; do not forget the locking tabs behind the two mounting bolts. Install the wheel, lower the car, pump the brakes and go for a test drive!

The truth of the matter is, if the wheel bearings are removed, cleaned and repacked with grease every decade or so they would never go bad. Maybe it is time to service yours.

Bruce Turk