REPLACING REAR SPRING BUSHINGS IN A TC

Submitted by Carl Fritz, TC #6756, Gainesville, Florida

Based on my experience with installing rear spring bushings on my TC, here are a few tips which should make the job somewhat easier:

1. ALL of the nuts & bolts need liberal doses of penetrating (loosening) oil and persistence before they release their hold. Took me almost a full day to get all the fasteners loosened. Start early with the oil. (Alfie, the guy who installed springs at Abingdon, must have been a
real gorilla !!!)

2. When you remove the nut on the large, lower rear shackle, you will find a very thick washer. It may be difficult to budge, but DO NOT try to twist it! off!! The stud and washer have matching "flats" on them which are intended keep the washer from rotating. More penetrating oil, and a bit of prying & wiggling will finally make it yield

3. Place a pair of jack-stands under the chassis side-rails, then put a floor-jack under the centre of the differential to take its weight off the springs as you go about slackening fasteners & removing the springs themselves. This really makes things a whole lot easier!

4. It is not necessary to remove the two smallish-diameter studs which help connect the axle to the spring. Just take off their nuts, and leave them be, but try not to bend them when you remove the spring.

5. I've fitted polyurethane upper and lower shackle bushings from Moss. Moss says that the rubber variety of upper bushing needs to be trimmed in length by 1/8 inch before installation--However, they neglected to say that the polyurethane ones MUST ALSO be trimmed. (They are MUCH less compressible than the originals, so it's really IMPOSSIBLE to fit them unless they are the right length) A disk or belt sander makes the shortening job easy. The bushings sand away quite quickly, so be careful not to over-shorten them. You'll need to enlarge the hole in the new fibre washer that goes between the two large lower shackle bushings. (The ones I got from Moss would not go over the stud.) The old washers could probably be re-used if they are not damaged. I chose the more expensive polyurethane bushings on the basis of the Moss claim that these last much longer than the rubber originals.

6. I wire-brushed, de-rusted, and painted the springs, but did not disassemble them, since mine are not held together with removable bolt-on clips. (BTW, now is a good time to manually "cycle" the shocks {dampers} to check their condition, and to rebuild and/or rebush them if
needed.)

7. Place marks on the outer edges of all spring leaves in line with the "dimples" and "bumps", which are there to align the leaves with each other. (I used a white wax crayon for this.) The leaves can slip out of alignment, which will cause problems when you go to reattach the axle
to them.

8. After the springs were mounted at both ends, but not yet bolted to the axle, I packed high-quality graphite chassis grease into the spaces between the leaves until it came out the other side, and "buttered" the mating surfaces of the three loose leaves. In order to get the 3 loose
leaves and the bottom spring plate back in place I used two 6 in. long bolts on diagonally-opposed corners of the mount to draw them up into place, then substituted the standard-length new "grade 8" high-strength bolts and nuts.

9. Before the final tightening of the axle mounting bolts, measure the distance from the front of the axle mount to the silentbloc stud on both sides of the car. These two measurements must be made as close to identical as possible. (If this is not done, the axle will not be
correctly oriented to the chassis, and your car will "dog-track" down the road.) When the axle is correctly positioned, the axle mounting bolts can be tightened firmly, and lock-nutted.

10. Leave the nuts on the shackles and the silentbloc stud a bit loose, then do final tightening of them after getting the car's weight back on the wheels, so that the bushings are in a "neutral" position before being firmly clamped in place.

11. I used anti-seize compound on all fasteners and metal-to-metal contact points to make it easier next time I do this job (hopefully not for another 50+ years!) Another TABCer (Neil Nelson) suggested using one of the removable "thread-lock " compounds now available, instead of anti-seize compound -- I think that's a really good suggestion.

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Some of the above is so obvious that I'm almost reluctant to mention it, but it may save someone some trouble, so there it is. Some of you may be wondering if all this is worth the effort, and if the polyurethane bushings will adversely affect the ride quality. I now have a few miles on the new set-up, and can say it was definitely very worth doing. The car is noticeably more directionally stable, responds more precisely and predictably to steering inputs, is less
affected by road irregularities, and generally rides better, with no increase in harshness. As a bonus, the car now sits level from side to side, instead of listing slightly to the right as it did with the old worn-out bushings in place. I will shortly install polyurethane bushings in the shackles of the front springs, even though the standard rubber bushings there were installed only a few months ago.

ADDITION:

Moss (US) supplied both the upper & lower polyurethane bushings that I used, plus the silenbloc busing for the front end of the rear springs. They have a web-site at www.mossmotors.com, and their overseas phone number is 808-681-3400 (I think this must be preceded with the international "Country Code number for the USA)

Part names and #'s are:
Shackle pin bush, large, urethane 280-615 (need 4) $6.45ea.
Shackle pin bush, small, urethane 280-625 (need 4) $5.50ea.
(These same small bushings are used on the shackles of the front springs; same part #'s, need 8 to do both shackles)
Siletbloc bushing 265-170 (need 2) $14.15ea.

I'm pretty sure that Abingdon Spares up in New Hampshire (USA) also carries the urethane bushings, but I can't find their catalog at the moment. They have a website and on-line catalog at: www.abingdonspareslt d.com . Their prices are usually a bit lower than Moss, but not always. Moss seems to deliver a bit more quickly. BTW, I don't recall if my report mentioned this, but it's a good idea to place a mark on the edge of each leaf in line with the locating "dimple & bump / projection". (I used white wax school crayon) Some of the leaves
shifted positions on me while re-installing the spring; having the visible alignment marks made it easy to see that they'd shifted and to get things lined up properly.

Neil Nelson, one of our TABC experts, commented that he uses a thread-locking compound, rather than anti-seize compound. That sounds like a better idea to me, and I'll follow it in future. Hope this answers your questions adequately.

Regards,
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