

How to replace the Bora's rear suspension bushings

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NOTES ON THE REPLACEMENT BUSHING PARTS:
Refer to Maserati Bora Spare Parts Book, Table 18.

1.) A-arm bushings, Table 18, Item 21. Maserati Part no. SLN 68369:

All of the 8 bushings I had on hand were .030-.040 over. I believe I bought them from MIE some years ago. I compared them to an extra group of similar bushings I had leftover from the front suspension I did 4 years ago - they were the same over-dimension. There was no reason to assume MIE would find any proper sized from their inventory. No reason to move backwards, and it wasn't hard using a 20ton press and to press the bushings down to the right size of 1.840".. and even then I "pinched" one side of the washers to bias or taper them for easy fit into their brackets.

2.) Upper and Lower shock absorber bushings, Table 18, Item numbers 2, 3, and 7 MIE part numbers 74910-117T and 74910-0Z.

I had no problems with the Shock bushings.

3.) Sway bar link bushings, Table 18, Item 41. Maserati Part no. SLN 73679:

I had these on hand from a previous order. The inner pipe of the new sway bar bushings was longer than OEM. This reduces the amount of thread the 19mm nut has to engage and prevents the nylon "lock" inserts from engaging. I just tightened the nut firmly. This goes for top and bottom link ends.

REAR SUSPENSION BUSHINGS REPLACEMENT PROCEDURE

- Place wheel chocks on front tires to prevent your Bora from moving.
- Loosen rear lug nuts.
- Install and tighten spring compressors on main rear springs. Tighten until you sense the rear is squatting - 1/2" or more.
- Jack up the rear of the Bora to finish "unseat" the springs and bring them off their perches.
- Remove the upper shock mount nut (7/8"-22mm). Pull the upper shock bolt out forwards to disconnect from the upper shock mount.
- Unbolt the bottom shock mount 19mm bolt.
- Extract the shocks and springs, leaving the spring compressors installed!
- Leave drive shafts installed (in photo below I removed one side to reseal one loose boot).
- Use a length of wire to temporarily suspend the main hub assemblies in their "natural" loaded position. I hung my wire from the rear hood gas strut bracket.

Shock and Spring Assemblies:

- Pull the 1/2-ring keepers from the lower shock plate to separate the shocks from the springs, leave springs compressed!
- Use a sharp knife to remove exposed rubber material such that the socket you use for pressing the old bushing out, mates "steel-to-steel" for best transfer of force.
- Use a press to break loose old bushings.

NOTE: My upper shock mounts had leftover welding snots INSIDE THE BORE that had

caught the bushing sleeves and required the full power of the 20t press to break loose. See photo below.

- Complete the removal and reinstall new shock mount bushings.

NOTE: Upper and Lower bushings are different! The larger bolt bore goes in the Upper mount. The smaller bolt bore goes in the Lower.

NOTE: If you know a classic Mopar mechanic, you might ask to borrow their Upper Control Arm Bushing Removal Tool; it fits the outer tube and inner sleeves really well (aftermarket: American Muscle, Mopar tool #23471, \$45.00 available on eBay)

Upper A-arm:

- Unbolt the inner 19mm nuts and extract the bolts.

- Pull the inner mounts free of their brackets.

NOTE: The upper A-arm brackets are shimmed to achieve wheel alignment. However, these brackets can be misaligned longitudinally, from the front of the A-arm to the back, making the reinstallation of the A-arms very difficult - or make it impossible to pull out the 19mm bolt. If so, without changing the alignment shims, now is the time to get the two upper A-arm brackets aligned longitudinally by loosening the 22mm nuts on the back of the brackets, twisting the brackets into alignment, then re-tightening.

- Unbolt the outer 22mm nuts and extract the long thru-bolt from the wheel hub assembly.

- Extract the upper A-arm.

- Use a press to remove the old bushings. Again, this took a lot of power - wear ear protection for the loud "Crack!" when the bushings break loose.

NOTE: I used various pipes and sockets to match the diameters of the old bushing during the press operations. I achieved best results with steel-on-steel contact, so devised a method to get rubber parts out of the way. I used a 1/2" deep socket to distort and remove the smaller diameter "washer". (See photo below). Subsequently, select larger sockets match the bushing's sleeve - I found a Craftsman 7/8" socket was large enough to press the bushing sleeves out enough without touching or getting stuck in the bore walls of the A-arms. Your situation may vary.

Lower A-arm:

- Exactly the same as the lower A-arm.

- You may find the forward 19mm A-arm bolt can't be extracted without the exhaust being moved slightly out of the way. Deal with it as necessary.

- The geometry of the lower A-arm was such that it couldn't fit into the "jaw" of the 20ton hydraulic press. I used a very large bench vice instead, with extension on the handle. A lot of power was once again necessary.

Sway bar links:

- Remove the 19mm locknuts.

- Pull the upper link end off the threaded sway bar end.

- Put a tightly fitting screwdriver into the bushing's bore and leverage the bushing into an alignment that let's it be pulled of the threaded sway-bar end, otherwise it tends to bind up hard (use the same method for alignment during reinstallation).

- Press out the old and press in the new swaybar link bushings.

Helpful notes:

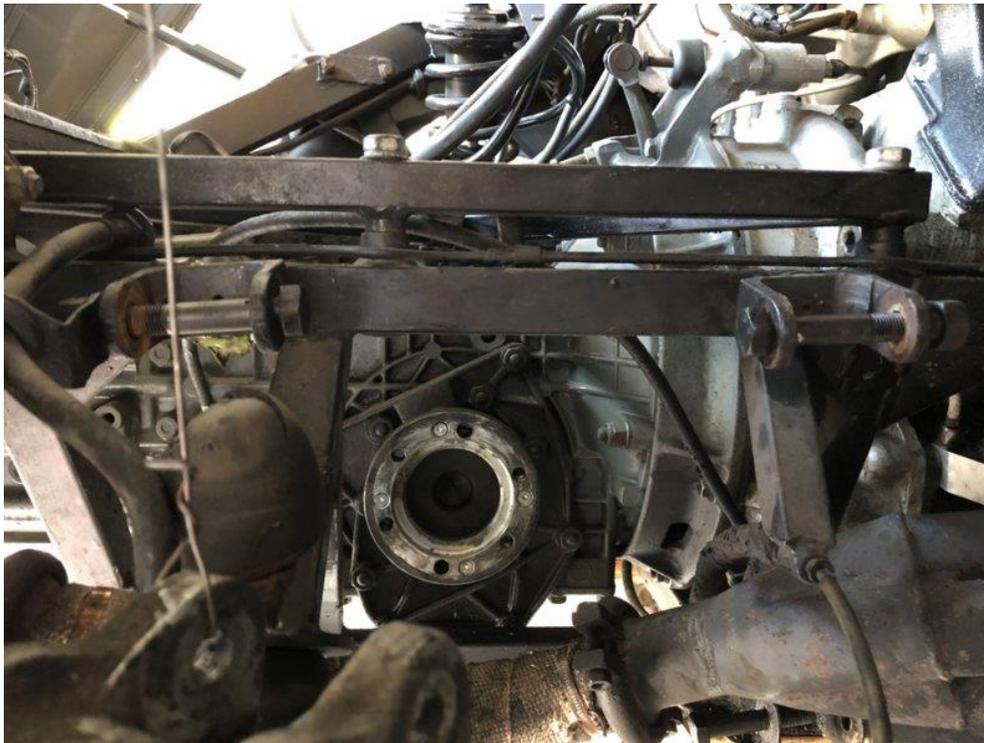
1. You need proper diameter pipes (outside the bores) and sockets (inside the bores) to achieve removal of the bushings. I found that 2" ductile iron plumbing pipe was useful at the A-arms, to fit outside of the bores. The ductile nature of the iron pipe means it distorted and conformed to the uneven geometry of the A-arm while still transmitting the necessary force. See photo below.

2. When choosing sockets or pipes to mate against the bushing's sleeve surfaces, be aware of the edge condition of the pipe or socket and choose it deliberately. I.e. a rounded edge will not mate as well as a sharper cut edge, it can slip out of alignment and 'bugger up' the sleeve's edge, but a rounded edge has the benefit of not gouging into adjacent bore surfaces as it pushes the bushing out. A sharp-edged pipe or socket mates much better, but can gouge into the bore. So, this is a selection to make individually. I usually started with a sharp edge pipe/socket for the "breaking loose" phase, because it yields the most stability with alignment and offers the most surface area that mated up for pressing the bushing loose. Once I broke the bushing free, I switched to a rounded-edge pipe/socket so as to reduce the risk of gouging the inside surface of the bore.. Capice? - During the pressing-out procedures, but sure to get the best possible alignment of the sockets you are using against the sleeve of the old bushing before you start pressing out. Your goal is to achieve "steel-to-steel" mating surfaces.

3. PB Blaster seemed to help release the old bushings.

4. I used copper based anti-seize on all the new bushings.

Reinstallation is basically everything above in reverse.



Notice the Upper A-arm brackets are not longitudinally aligned



Destroying the bushing washer to achieve 'steel-to-steel' contact



Typical situation at the press - using pipes and sockets



The ductile pipe distorted itself to conform to the A-arm



Typical situation at the bench vice.. That's the lower A-arm with a 7/8" socket on the "pushing" side and a piece of ductile iron on the other, "receiving" end



The welding snots inside the Upper Shock bore



And we are back on the road!