

TR6 Upper Steering Column Bushing Replacement

From the garage of [Allan B. Johnson](#), Princeton, NJ
1971 Triumph TR6

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I couldn't find a good installation tutorial on this on the internet so I thought I would make one to save other's the time and prevent them from making the mistakes I did. Spread out a non mar surface to work on. You don't want to mess up your freshly painted column.

[\(Photo Album\)](#)

Parts & Tools	
A clean cloth/ non mar surface	2 standard 5/16 washers
Straightened, cleaned, painted, outer upper column	1 1/2" washer
Cleaned upper inner column	3 5/16 coarse nuts
2 new uprated column bushings (Moss # 525-021) There is a polyurethane "tire" around a nylon plastic bushing.	Small 3"x3" square of felt with hole in center
Painters tape	Small screwdriver and/or 1/4" punch
11mm 3/8" drive socket (approx)	2 1/2" combination wrench (or 1+1 ratcheting box wrench if you have one)
13/16" 3/8" drive deep socket (approx)	1/2" deep socket and socket wrench
Whiteout / paint and tiny brush / applicator	Hose clamp that will fit around bushing
Sharpie	Silicone grease with PTFE
5/16 coarse threaded rod	Tapered dowel (broken shock link peg)

Part I - Bushing Preparation

1. Align the bumps/bulges on the rubber “tires” and the relief holes on the interior “white” nylon bearings within the bushings by holding the tire and spinning the bearing. This is critical. When the tire compresses on the way into the upper column, the polyurethane needs somewhere to go. If things are not aligned the bushing will not go into the upper outer column. See the picture below.



Inner Relief Hole Bump / Bump

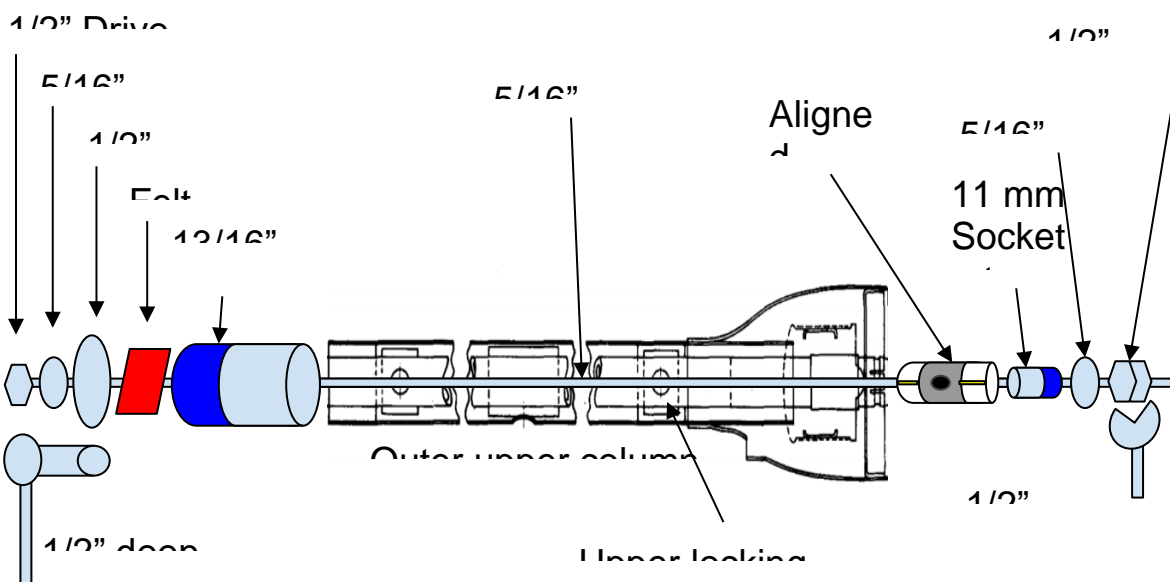
Black Polyurethane

2. Mark the “tire” portion of both bushings with some whiteout or paint along each axial side of the rubber dots. I brightened mine (gray) so you could see them.
3. Mark the white nylon portion of both the bushings with sharpie marker (Orange) next to your painted marks so that they line up. The idea is that you will know if the “tire” becomes misaligned from the nylon portion. The paint will also help you align the entire bushing on the way into the upper outer column. Let the paint dry.

Part II - Upper bushing first (closest to the steering wheel) - diagram below.

1. Wrap a 11 mm 3/8" drive socket (or whatever size suits) in painters tape so that it snugly (but not too snug) fits into the inner section of the bushing.
2. Wrap the 13/16" 3/8" drive deep socket in painters tape so that it loosely fits into the outer upper column tube. Don't make it too tight or you will have to get creative to remove it from the tube later.
3. Run the 5/16 threaded rod completely through the upper outer column.
4. Working from the steering wheel end, make sure the internal and external portions of the bushing are aligned with themselves and the upper locking holes in the upper column and position it with the 5/16 rod through it.
5. Slide the 11mm socket+tape through the inner part of the bushing. This is to keep the rod aligned when pulling the bushing in.
6. Place a 5/16 washer on the rod. This washer needs to be smaller than the tube diameter but as close as possible to the outer diameter of the bushing.
7. Place a pair of 5/16" nuts on the end of the rod and lock them together with the 1/2" wrenches.
8. Go to the steering rack end of the column and slide the 13/16" deep socket into the outer upper column so that the rod runs through the center. This again is to keep things aligned.
9. Pass the rod through a piece of felt (with hole in center) to protect your paint job on the outer column.
10. Place a 1/2" Inner diameter washer onto the rod. This must be bigger than the end of the outer upper column. You might be able to use a 5/16" fender washer if the outer diameter is large enough.
11. Place a 5/16" washer onto the rod (so the nut does not bind in the 1/2" hole).
12. Spin a single 5/16" "drive" nut onto the end of the rod.

13. Tighten the drive nut slowly with the 1/2" deep socket while holding the lock nuts with a wrench. (Eventually the rod will become too long to use the ratchet + 1/2" deep socket and you will need to go to the combination wrench or use a ratcheting box wrench.)
14. The bushing will begin to draw into the upper end of the tube.
15. When the bulges hit the edge of the tube, you may need to push them gently in towards the center of the shaft (into the relief depression in step 3) simultaneously while drawing the bushing in. You can use a screwdriver or a punch for this.
16. Make sure the tire stays on the bushing. If it starts riding off, release the tension and start over making sure that the bushing is still aligned with itself and the locking holes. I had to do this repeatedly but eventually it went in. (FYI, I felt like grease made things too slippery here as the tire kept coming off the nylon - must have gotten too much grease in the bushing. I used the other bushing I had for the lower end that had no grease on it yet and it worked much better.)
17. Draw the bushing down until the bulges completely pop through the upper locking holes.
18. Remove the rod, sockets, washers, nuts and felt.





Part III - Inner Shaft - **This is an important step!**

1. Feed the inner shaft in, steering wheel splines first, through the bottom of the upper outer steering column. **This is an important step. Forget to do it and you are likely to be out a bushing.** Push it in until it seats into your newly fitted upper bushing and it doesn't go any further. It is not in its final position at this point but you need the room for the next part. Double check you have it in the right direction. The splines for the steering wheel should be visible at the end that holds the switches.

Part IV - Lower bushing second (steering rack end) - diagram below. Since the inner column is now in place we cannot use the threaded rod. Things are about to get tricky.

1. Liberally coat the bottom end inside part of the outer upper column bottom tube with silicone PFTE grease.
2. Make sure the bushing is aligned with itself. (See Part I)
3. Coat the outside tire portion of the bushing liberally with silicone PFTE grease. Try not to get the grease under or behind the tire part of the bushing.
4. Position a hose clamp around the tire close to one of the tire edges (the hose clamp width is most likely different than the tire width) and clamp it down lightly. It is best if the screw part of the clamp is off 90° from the bump. Make sure everything is aligned and tighten it down all the way. This should depress the bumps flat and essentially make the hose clamp have the same inner diameter as the upper outer column tube body.
5. Align the bushing to the the lower locking holes and so that the edge of the clamp that is positioned with the edge of the tire (step 4) is up against the bottom of the tube.



6. Invert the assembly so that the bushing is on a flat surface.
7. Guide the inner column into the bushing from the top just so it just starts to go in.

8. Triple check your bushing internal alignment and alignment to the lower locking holes.

This is a one shot deal.

9. Grab the tube portion firmly and push down slowly. Make sure you are still aligned as you go. The grease should allow for the bushing to enter the tube and keep the bumps depressed (due to the tube and hose clamp having essentially the same inner diameter).

As it slides into tube the bushing should start to shed its hose clamp.

10. Push until the hose clamp becomes flush with your work surface and the bushing bottom.

11. Insert a tapered dowel into the bushing and continue to push as far as you can. The hose clamp will come off when the bushing tire is completely in the upper outer column. Eventually the inner shaft will get in the way and you won't be able to push anymore.



12. Remove the tapered dowel.

13. Make sure the inner column is aligned and moving into the bushing correctly.

14. Remove the painters tape from your 13/16 deep socket.

15. Insert the socket big end first into the column. This will allow you to continue to push the bushing up into the outer column around the inner shaft. Continue to push until you see the bulges/bumps pop through the lower locking holes. If your socket isn't long enough, put a 3/8" extension on it.



16. Push the upper inner column down into its correct position so that you see the steering lock "barrel" on the inner shaft through the upper outer column hole that the locking mechanism passes through.

