

## [BMW 2002 FAQ: Engine and Drivetrain](#)

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### Shifter Rebuild By [Steve Kupper](#)

If your shifter is a bit looser than you'd like, and you want it to feel like new again (do you know how it felt when it was new?) here are a few simple and very inexpensive things you can do to get the like-new effect.

#### Part list:

##### Few more parts needed (don't have them yet):

8	Spacer ring	25 11 1 220 199
9	Circlip	25 11 1 220 379
10	O-Ring	25 11 1 221 243
11	Spacer Ring	25 11 1 220 439
12	Circlip	25 11 1 220 379
13	Tension Bush	25 11 1 203 682
14	Rubber Washer	23 41 1 466 118
15	Dowel Pin	23 41 1 466 134
16	Gear Selector Rod Joint	25 11 1 220 198

#### Optional:

- λ UUC Motorworks Short Shift kit. (Kit will include Spacer Ring 8 and Circlip 9.)
- λ UUC Motorworks Cartridge Bearings

Other Short Shift kits are available, but this is the one I happened to have used and liked.

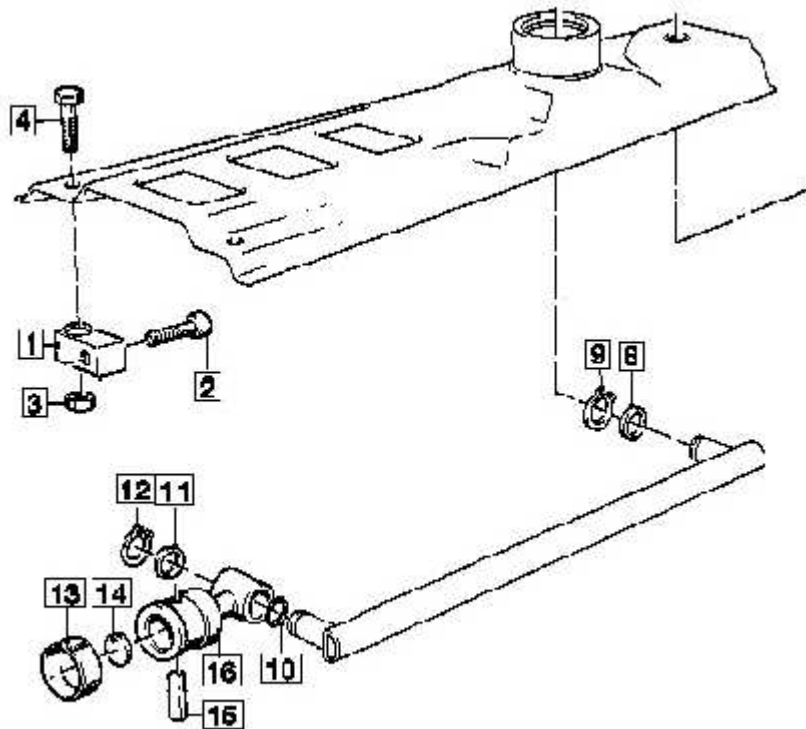
#### Time needed: about an hour

#### Instructions:

##### Removal:

- λ Lift the car and put it on jack stands. The usual disclaimers apply. Use a solid, flat, ideally level surface and jack from under the front subframe with a block of wood on top of the cradle to protect the subframe. Place the jackstands under the

- stamped steel frame rails that are welded to the front floors, again with a short piece of 2x4 wood on the stands to protect the frame rails and spread the load.
- λ Once the car is SECURELY in the air, get under it and remove the Circlip from the shifter. (It might be a good idea to print out the diagram included in this article so you know where everything is.) Slide the Shifter out from the Selector Rod. Remove the Gear Selector Rod Joint by removing the tension Bushing and then sliding out the Dowel Pin.
  - λ Now go inside the car and remove the shifter boot. Remove the Circlip and the Spring and then pull on the Shifter. It might require a bit of force, but be careful not to hit yourself in the teeth. :D
  - λ Go to the workbench and remove the Selector Rod from the Gear Selector Rod joint by removing the Circlip.



### Assembly:

- λ Connect the Gear Selector Rod to the Joint using the O-Ring, Spacer Ring and Circlip. Wet the Rubber or Sponge Washer with oil and slide it into the Joint.
- λ Get under the car and connect the rod to the transmission using the Dowell Pin and Tension Bushing. This is the hardest part of the whole installation. It might take you a while to aim the Dowel Pin correctly. And it is hard to do with the driveshaft in place.
- λ Get into the car and install the plastic bushing and the Shifter.
- λ Get under the car and slide the Selector Rod into the Shifter and attach it with

- another Circlip. Make sure to remember to use a spacer ring.
- λ Pull the Shifter boot back in place and you are all done. Enjoy the like-new shifter!

If you have any questions, post them on the [Message Board](#)!

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