



## Installation Manual TWM Performance Short Shift Kit 2003 and up Mazda 6

**Please Note:** Installation of this product requires the stock shifter to be cut, and re-installation of the stock shifter requires welding.

It's preferable to park on a flat surface, as you will have to engage and disengage the hand brake and shift from gears to neutral. If you can't do so and are obliged to install the short shifter on a slightly inclined surface, place wooden blocks in front or behind the wheels to prevent the car from moving while you're working.

**Estimated Installation Time:** 60 minutes

- Tools required:**
- Flat screw driver (small and large)
  - Philips head screw driver
  - Flash light
  - Needle nose
  - 10 mm socket and 10 mm wrench
  - 12 mm deep socket
  - All purpose grease
  - Hack saw
  - 5 mm or 3/16 Allen key



**1.** Carefully unscrew the shift knob by rotating it counter-clockwise.





**2.** Take the inside of the shift boot and grab the cup holder beside the handbrake and gently pull on it until it unclips. Don't try to get the two parts apart or you may break them.



**3.** Locate the plastic caps on each side of the central console in front of the front seats. Remove them by lightly inserting a little flat screw driver and prying the cap off. Take the cross screws out with the appropriate screw driver and keep them in a safe place. You will need them for re-installation. TWM Performance suggests using your empty ashtray to store the removed hardware during installation.





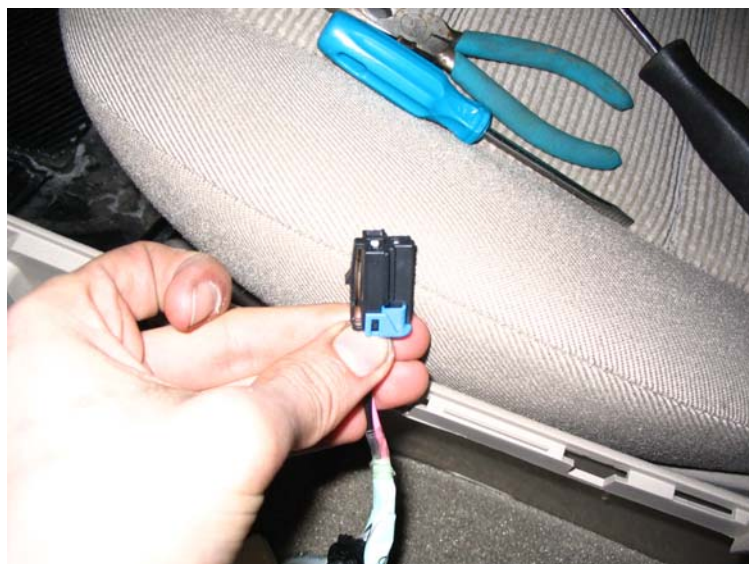
**4.** Move the front seat fully forward. Between the front seat back and the end of the center console, you will find two other plastic caps, similar to those you have removed in front. You will have to be careful for the re-installation of these caps as they only fit one way; one tab is bigger than the other, so don't force them. Remove the 2 screws.

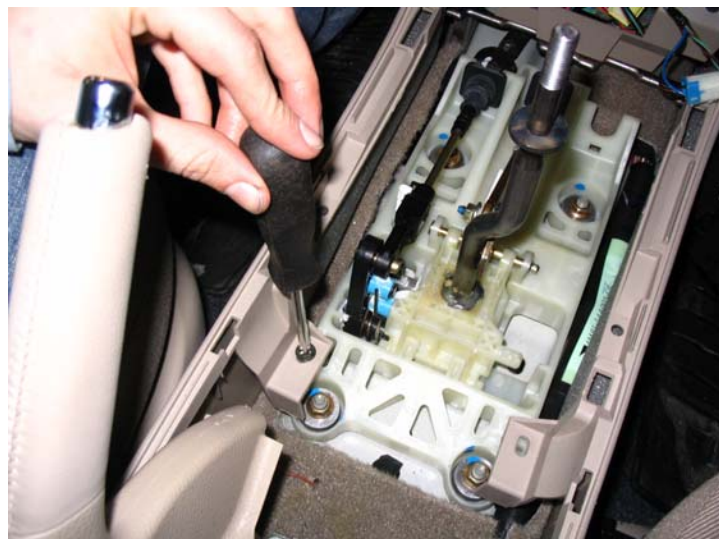


**5.** The next step is to open the lid of the center console and remove the foam in the bottom. You will find 2 screws that need to be removed. The flashlight may be needed here.

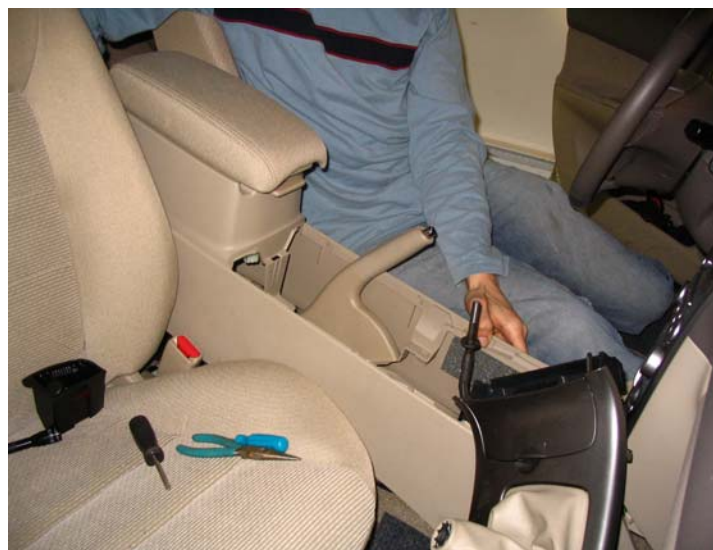


**6.** Now you have to disconnect some wires. The first ones are where the ashtray, in front of the shift boot. Push the tab and disconnect it. The other plug next to it just needs to be pulled while pressing the small tabs on either side, but be careful with it as it's a light bulb. TWM Performance recommends covering it with a paper tissue held with tape to protect it while working on the car. The last wire to disconnect is behind the handbrake. You will need the needle nose pliers to detach the wire from the console. The plastic tabs need to be pressed while pushing on it to get it out. The plug can now be disconnected by pushing on the tab and pulling it off.





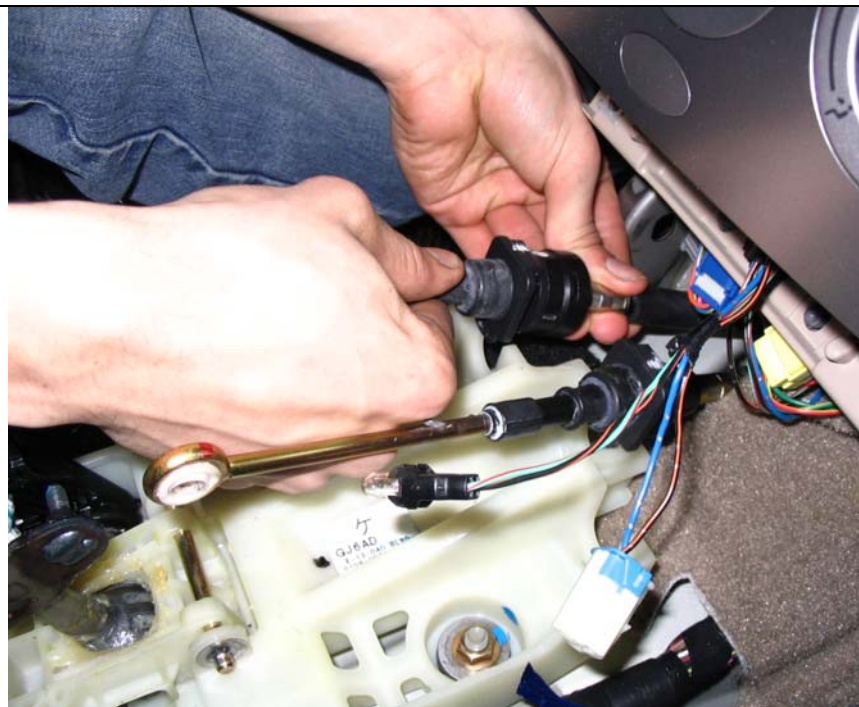
7. You now have access to four (4) screws that hold the central console on the shifter assembly and the front console. Remove these with a Philips head screwdriver. When you are done, remove the whole central console using caution not to scratch any interior components.



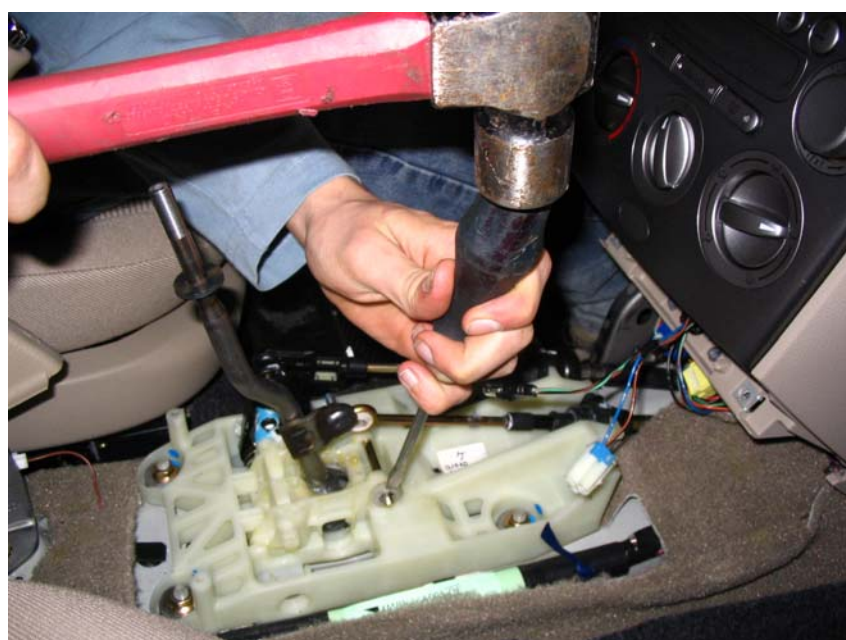


**8.** Disconnect the shift cables by unscrewing the bolt on the front plate that is welded on the shifter shaft. You will need a ratchet coupled with a 10mm socket to do so. For the cable on the side, just pry the cable off with a flat screwdriver.





**9.** Remove the shift cables from the stock plastic assembly by pulling them up. Put them aside so they won't be in the way.

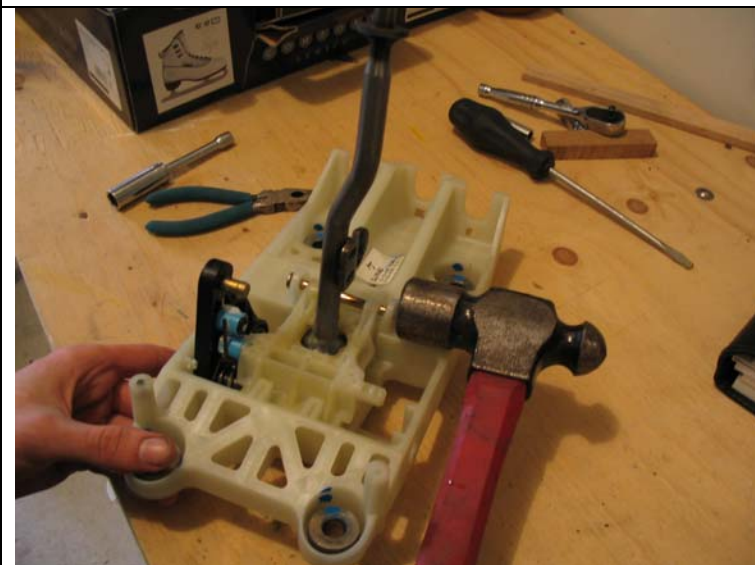


**10.** Locate the push clip holding the pin just in front of the shifter. With a large but sharp flat screwdriver and a hammer, pry between the push clip and the plastic assembly to remove the clip. If you have a Dremel tool, just cut it off as we include 2 clips in the kit as a replacement.





**11.** If you are working alone, TWM Performance suggests you to work with the assembly still bolted to the car. If you are working with an assistant, remove the four (4) nuts that hold down the plastic assembly. You'll need a ratchet with a deep 12 mm socket this time.



**12.** At this point it is useful to take careful note of how the shifter, assembly, plastic side arm, top plastic cup and spring are assembled to aid during the re-assembly process. Once this is done, pull the pin out. This is easier if you push and pull on the plastic part that goes over the shifter while trying to get the pin out.

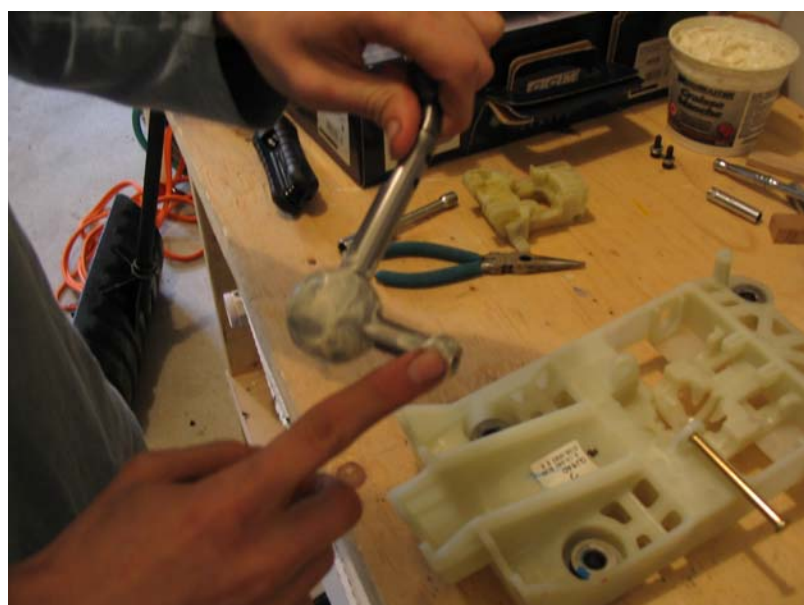
**13.** Pull the whole assembly out and make a note of how the spring is installed, as it may shift during the install and will need to be reinstalled.





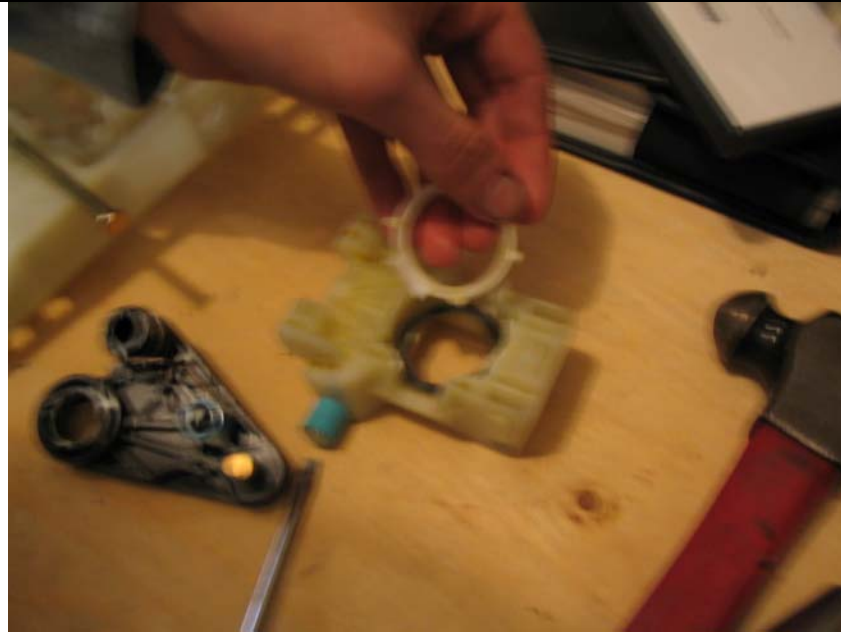
**14.** Place the stock shifter in a vice to cut it in half between the main ball and the plate. This is done to be able to re-use the plastic part which covers the main ball.

If you need to reinstall the stock part, it can be welded back together.

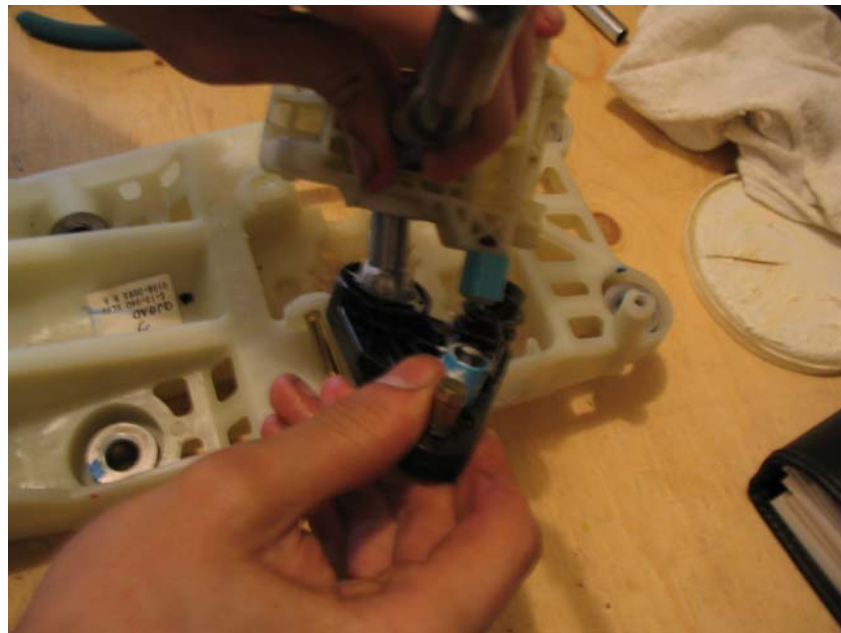


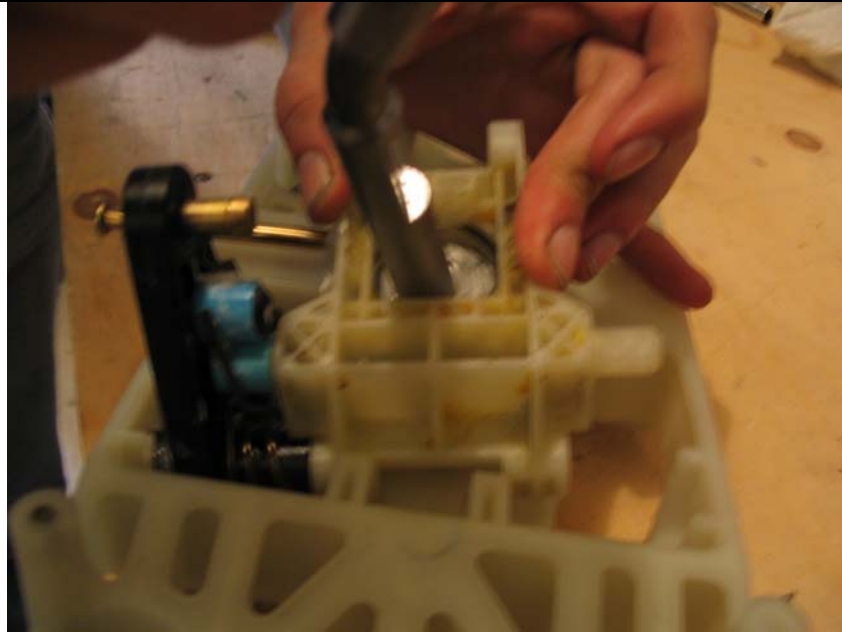
**15.** Apply all-purpose grease on the main and side ball of the TWM shifter.



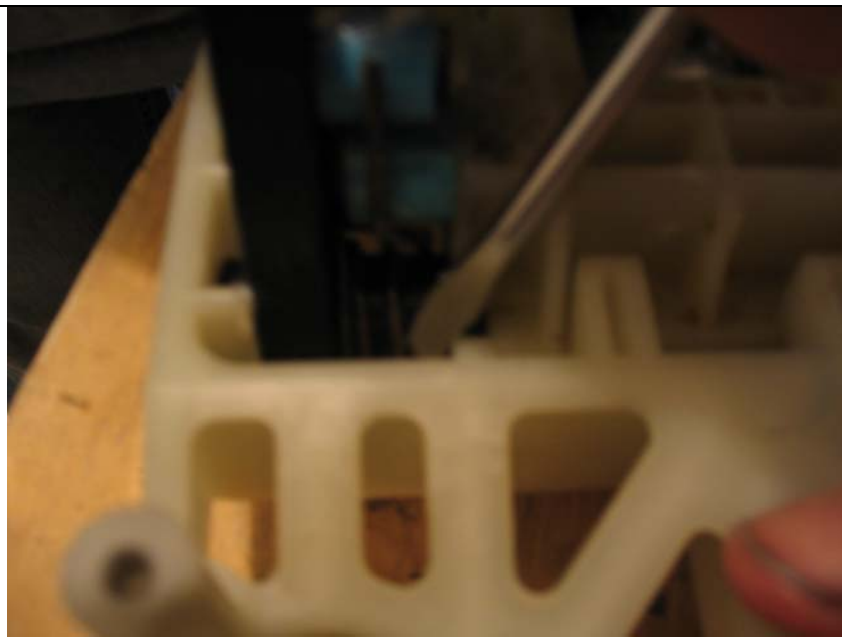


**16.** Place the thin metal o-ring and plastic insert in the upper cup you have just removed. Now place the plastic upper cup on to the main ball of the TWM Performance shifter. Press the black plastic part onto the side ball and before putting everything back together, be sure the spring is correctly set in the black plastic part. Always keep contact between the main ball and the plastic insert or the assembly won't enter correctly.



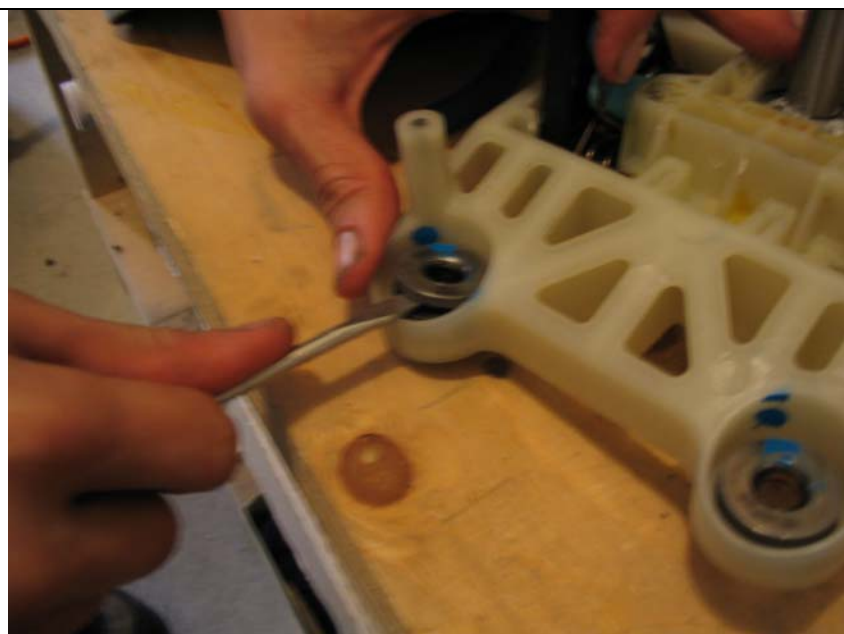


**17.** The next 2 steps are easier if you have an assistant to help you. The round leg on the plastic part holding the main ball must be inserted between the spring coil and the other similar leg on the black plastic side arm.

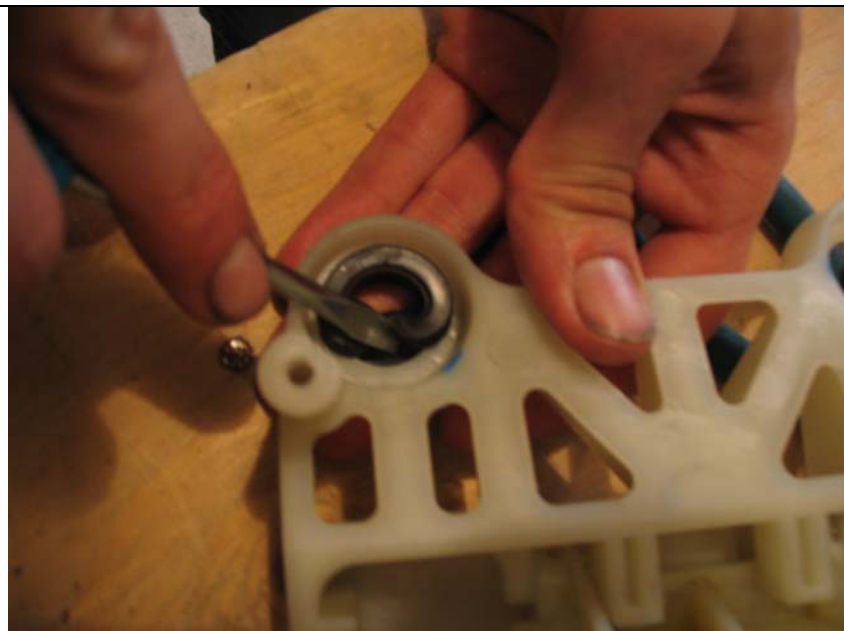


**18.** Once the white plastic part and black plastic part are together again, you must insert the round black plastic leg in the hole on the side of the assembly, while holding everything together. The two round tabs must go under the plastic assembly. At this point you will need to pry the spring toward the exterior of the assembly, because it may interfere with the assembly and not fully seat in its original location. Once completed, the white plastic assembly should go right in its place.

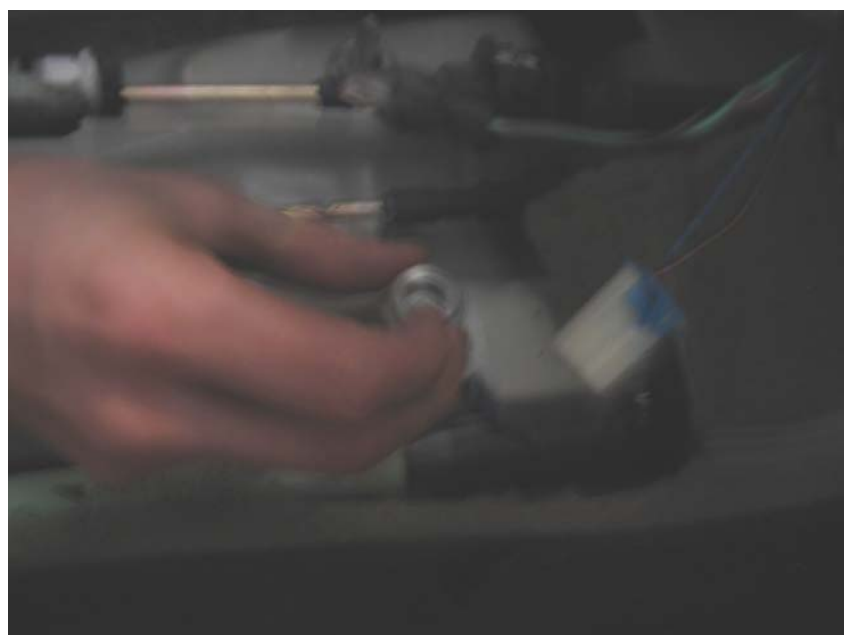
**19.** Once the assembly is back in place, re-insert the pin you have removed in step 12. Once it's fully inserted, install the supplied push clip onto the pin. You can do so using a 10 mm socket.



**20.** In order to install the new steel bushings, you need to remove the rubber ones first. Simply push the steel sleeve out by prying up with a flat head screwdriver and pushing it out from below.

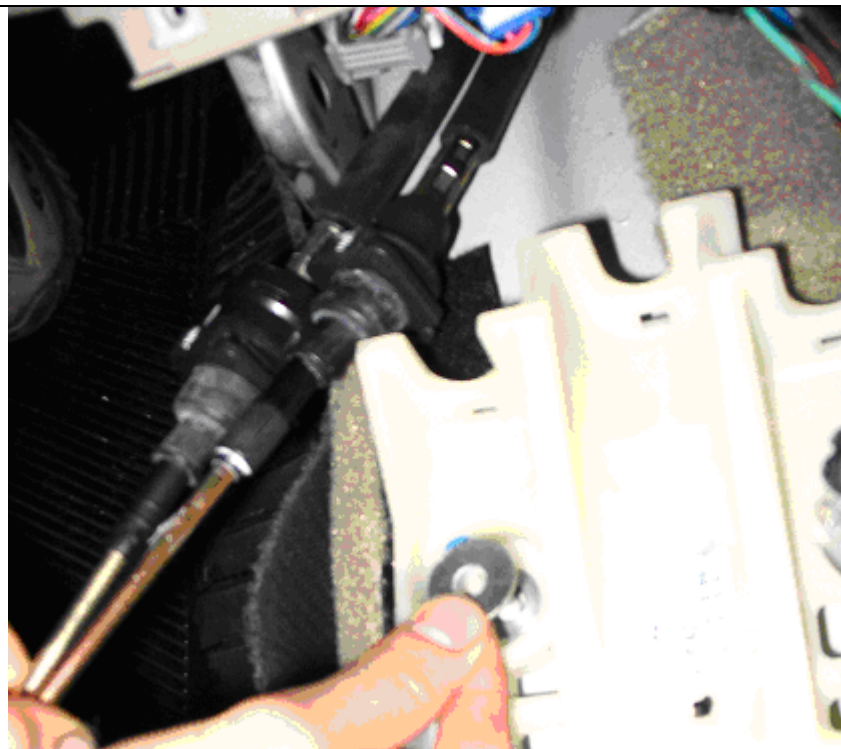


**21.** Next, push the rubber grommet with your finger or screwdriver out through the bottom of the plastic assembly. Repeat step 20 and 21 for all three remaining bushings.



**22.** The assembly is now ready to be bolted back in place. Insert the steel bushings onto the studs and install the assembly over top of them, ensuring that they are all centered and the upper smaller diameter of the bushing is completely inserted into the holes in the plastic assembly.



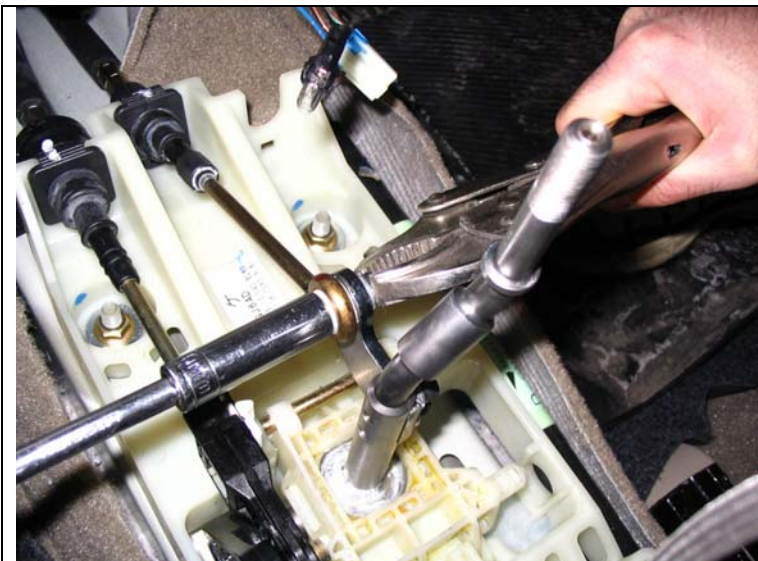


**23.** Insert the provided washers on the studs.

**24.** Bolt the assembly in place with the 12 mm socket and stock nuts.



**25.** Install the new main plate with the provided bolts and washers, ensuring that the pin on the main plate points upward as in the picture to the left. Be careful with the washer stacking order. First slide a provided lock washer onto one of the two bolts followed by a regular washer. Bolt it to the shaft and repeat with the other bolt.



**26.** Re-install the shift cables by pushing the side one into place and by securing the main cable to the TWM shifter plate. Secure the main cable with the provided M6 lock nut to sandwich the cable between the plate and the nut. Be sure that the cable still moves freely.

**27.** Re-install center console in reverse order (start at step 7).

**28. Enjoy the ride!**



#### Legal Disclaimer

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Warranty does not cover the following:

- Damage incurred to related vehicle components
- Regular day to day wear on vehicle
- Shipping costs for replacements
- Installation costs and vehicle down time
- Products that have been modified, incorrectly installed or misused.
- Mounting hardware and bearings



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