BMW GS7 TCM removal and pre-wire guide.

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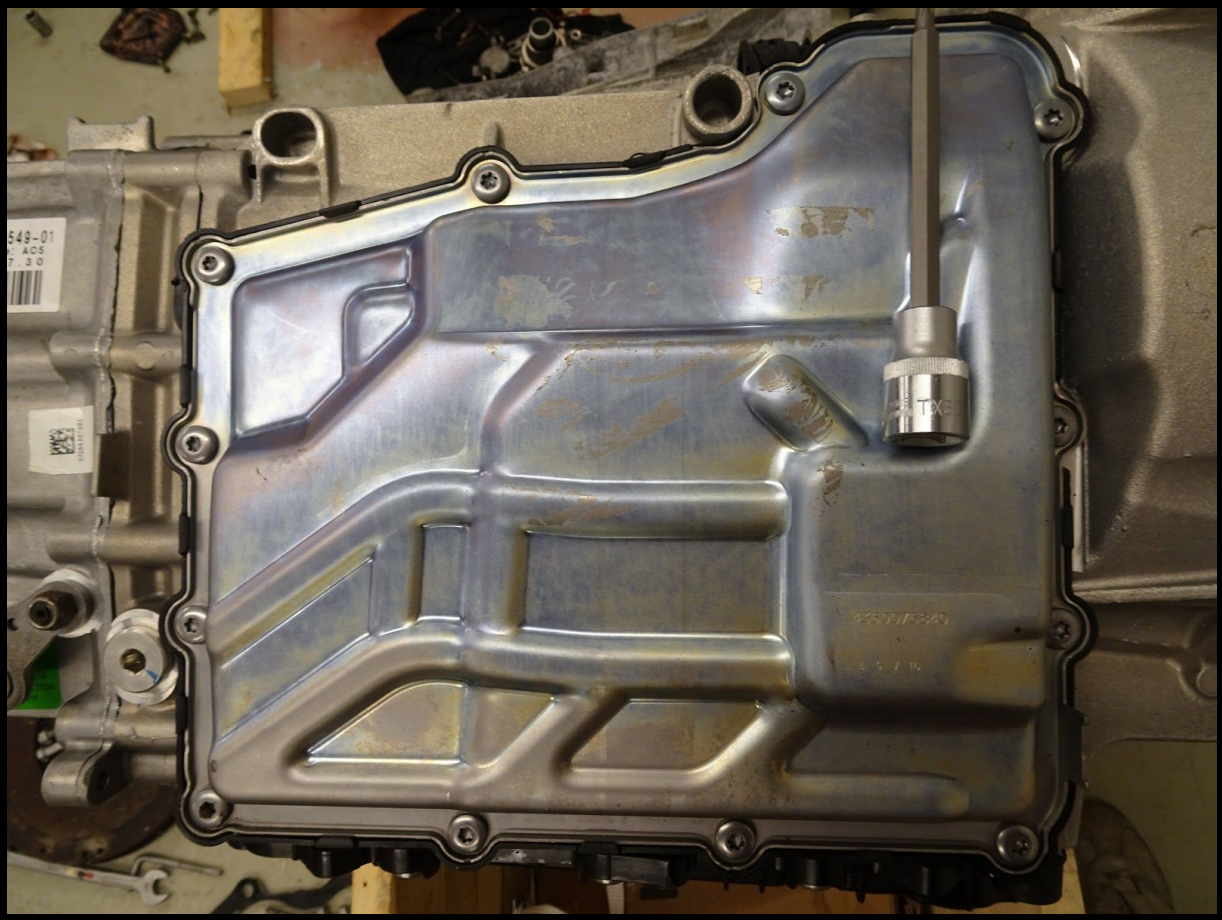
This guide will help you get the mechatronics safely removed.
From there you can pack the unit up and send it to **HTG-tuning** for a full wire harness, or do the wiring yourself with our **DIY wiring kit**. We also offer a wiring service. Contact us for more information.

For this job you will need:

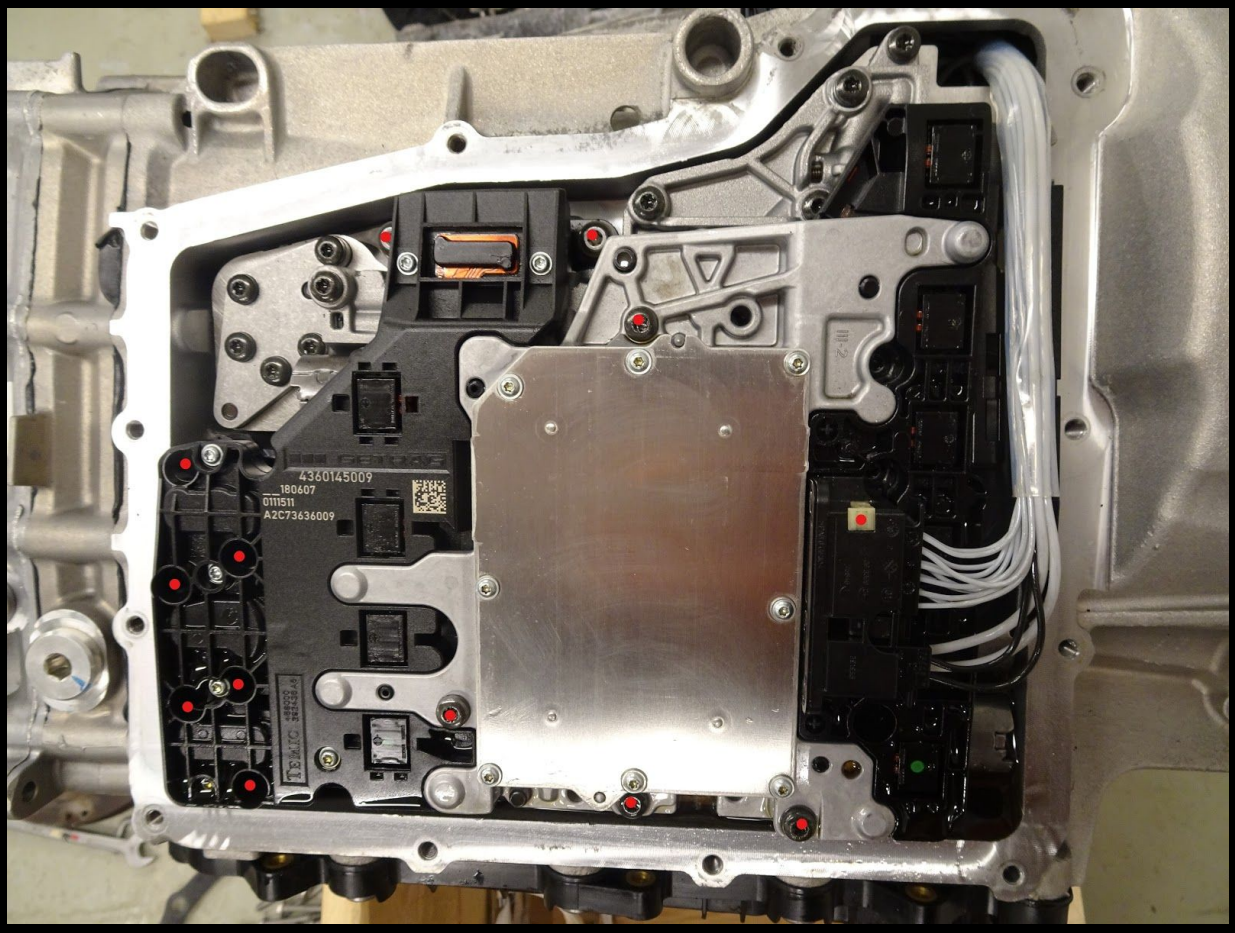
Torx set, pliers, cutters, rags, nitrile gloves, degreaser and some tags for marking cables.

Make sure you have a clean and tidy workspace! Once the box is open you will need to cover it and keep everything as clean as possible.
Clean the box and bolt it to an engine stand or put the box on a solid workbench.

Remove mechatronics cover and place it on a clean rag:



Here's how it should look inside:



Remove the module:

1. Lift up the white plastic tab (marked red) and remove the mechatronics main connector. (MC)
2. Undo all 12 bolts marked in red, leave them in for now.
3. Carefully remove the mechatronics. It is centered and sits on dowel pins, but it should not take excessive force to remove it. Double check that all bolts are removed if you can't get it off.
4. With the mechatronics removed, place the loose bolts back to its original position in the HPU.

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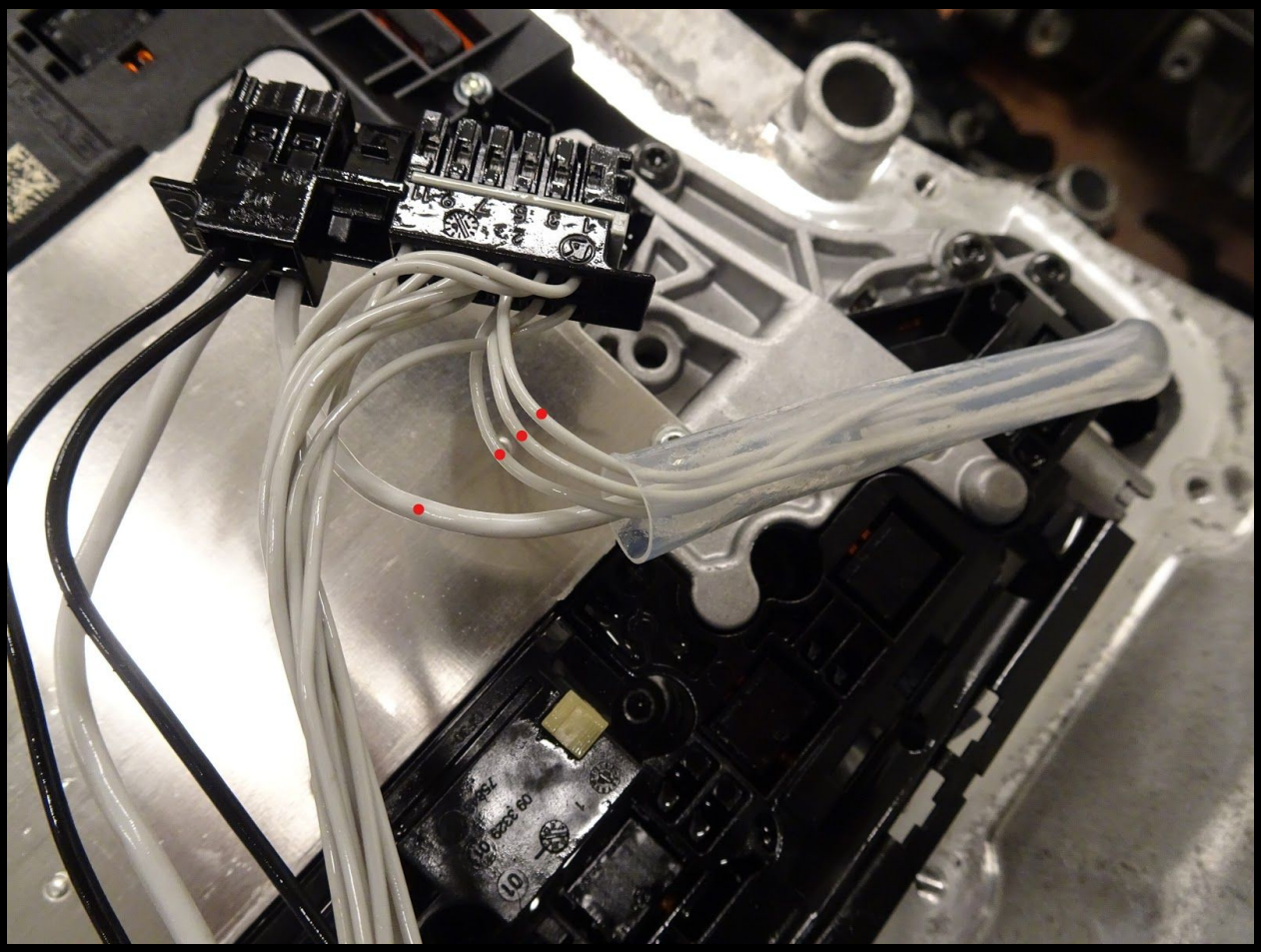


Removing the original wiring and mechatronics main connector. (MC)

1. Remove the round connector from the gearbox housing, and carefully pull it out.

2. Cut off all cables as close to the connector as possible.

3. Carefully pull out the loose cables in the MC end (shown at the bottom of the picture.)

   If you are sending it to HTG-tuning for wiring service:
   Remove Clutch cover to remove the plug that attaches the above 3 wires. Alternatively you can remove HPU to remove the plug as well. The internal loom will need to be sent with TCM.

4. **If you are doing your own wiring, you can do as per above, or you can:**
   Mark the 3 thin wires (marked red) with its corresponding numbers according to the MC connector, 3, 4 and 5. **Make sure you get it right!**

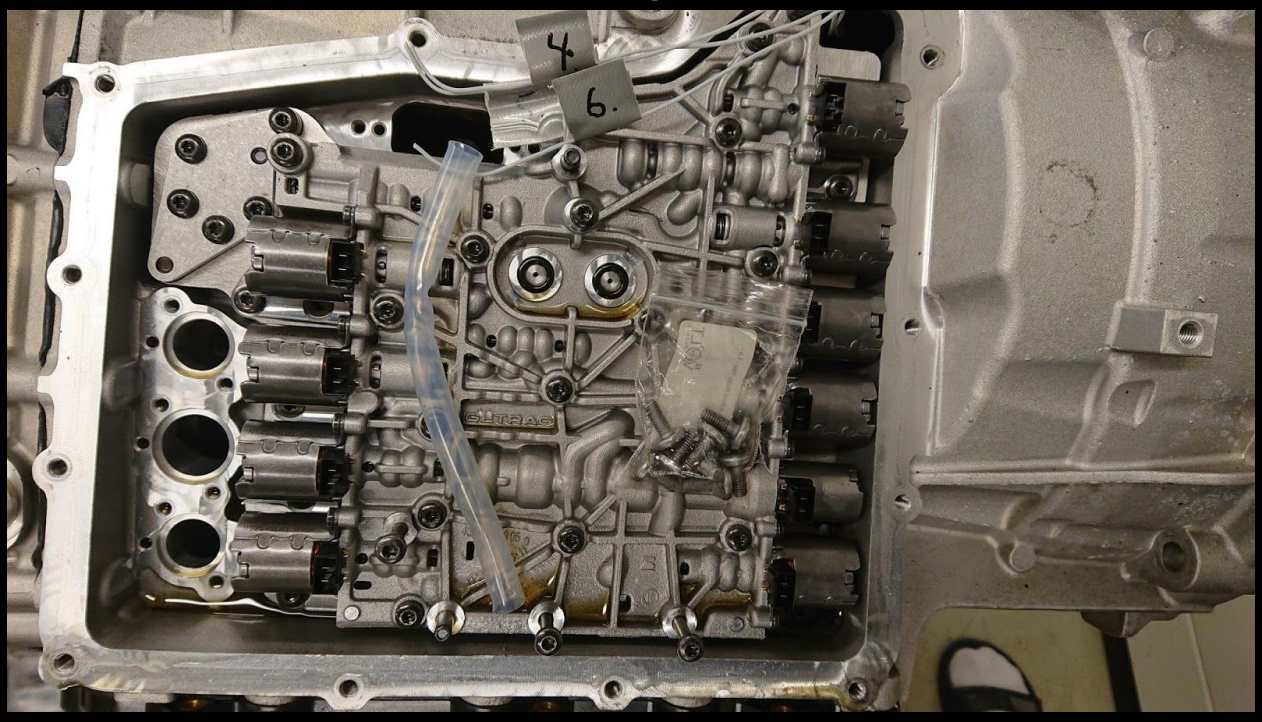
5. Cut cable 3, 4 and 5 as close to the MC as possible.
   If you are unsure of the marking or you get it wrong, here is a solution:
   Looking down at the 3 pin connector, it's wired 3,4,5 from front to rear of the gearbox.

6. Follow the red marked (large) wire down to its grounding point and cut it as close to ground as possible. You will not need those grounds for the new wiring configuration

7. Note the M8 Boss for GND connection at the below picture. Do not forget to connect this to a good ground source.

8. You will find a similar ground cable going out of the box as well. Cut it off as close to gnd as possible and make sure its away from rotating components.

With the Mechatronics TCM removed, and the gearbox,s HPU and solenoids becomes visible:



Inspect shift fork holes 3x to the left and torque/speed sensor hole on middle top.
Most likely there are metallic debris down there that can be cleaned with a Q-tip/cotton swab.
Close up the mechatronics cover and seal the hole for the gearbox connector.

Now start your wiring job!

Or you can send it to HTG for their harness:

Degrease mechatronics TCM and get it ready for shipping

Use a small box under the unit to support the sensors, bubble wrap it and put it in a larger box. Then you are done. Send it away!