



Installation instructions

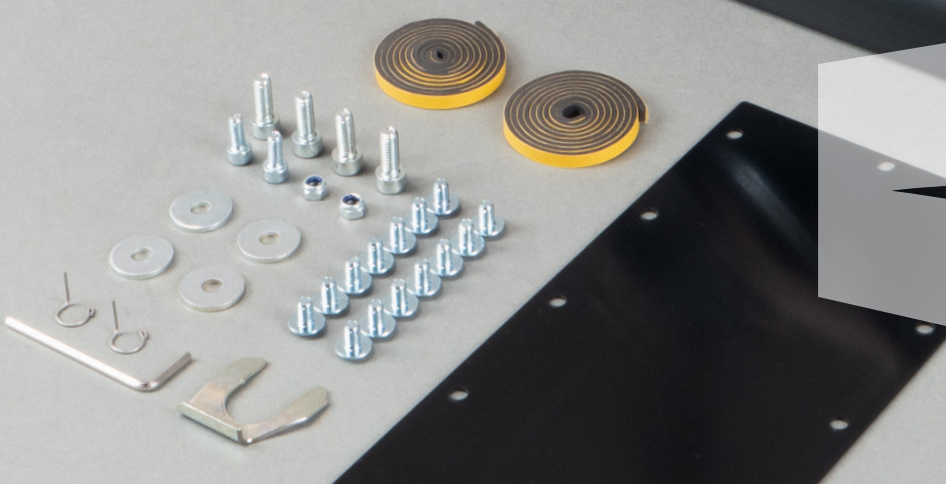
📍 10034

Mini R53 / R56
5 / 6-speed transmission



R53 / R56

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PLEASE NOTE

SAFETY FIRST!

- ⚠ Please only do the installation if you have appropriate experience in the automotive sector and have the right tools! An incorrectly installed Shifter can seriously damage the transmission or make the vehicle undriveable or not shiftable and lead to serious accidents!
- ⚠ If work on the electrical system is necessary, please follow the manufacturer's specifications.
- ⚠ It is essential to leave the ignition switched off when the plugs are disconnected.
Do not leave the car key in the vehicle.
- ⚠ Carry out all work with care and cleanliness! For the professional assembly of a shifter is no force required. All parts are designed to fit your vehicle.
- ⚠ If you are unsure, please contact your trusted workshop about the installation!

BASICALLY

- ⚠ Use ethyl alcohol/brake cleaner to clean all aluminum parts.
- ⚠ Occasionally lubricate all moving parts with spray grease, which has good creeping properties.
Our recommendation: Würth HHS 2000 (WD-40 or similar is unsuitable because it is too thin)
- ⚠ All screws and nuts that are not self-locking or are fitted with tooth lock washers glue in during assembly!
- ⚠ Never kink shift cables, please!

i SURFACES AND THEIR CARE

Please note that an untreated aluminum surface (ALU) is sensitive to aggressive Liquids to which i.a. Hand sweat also counts. Especially the high-strength 7075 aluminum we use has a tendency to form black spots of corrosion due to its high copper content. Under special circumstances, very salty air near the sea and coast can lead to corrosion. The surfaces should therefore be cleaned regularly and treated with care to prevent this. For this purpose, e.g. ethyl alcohol or brake cleaner. Only spray these onto a cloth and wipe the shifter with it, NEVER spray the shifter directly. If stains have already formed, they can be removed with commercially available aluminum polish, but that is also not allowed get into the movable parts of the shifter. The anodized versions of our shifters (EXS, EXGR) are more resistant to corrosion. The steel parts have to be also cared in all variants.

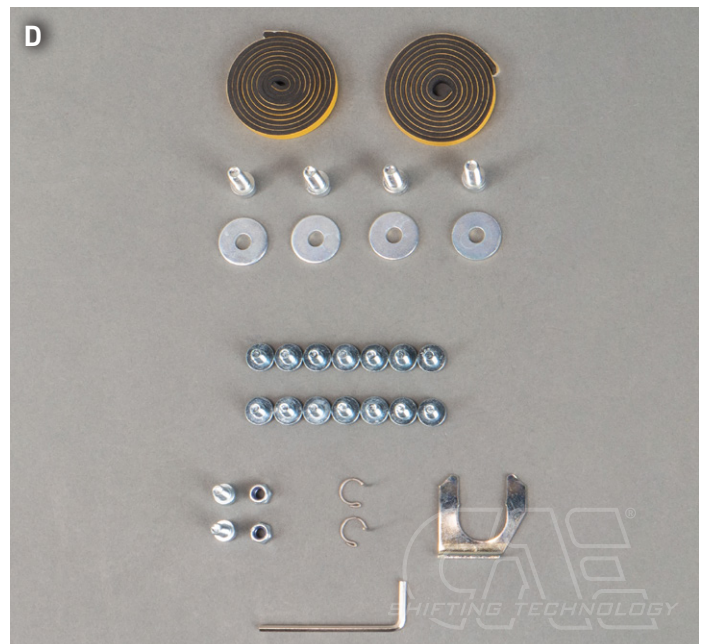
TIPS FOR GEAR SHIFTING

i FORCE DOESN'T MAKES YOU FASTER – IT ONLY HARMS THE TRANSMISSION

The question arises again and again: "Does a CAE shifter puts more strain on a gearbox than a standard gear lever?" The answer is clear: "No!" The things that are most stressful for a synchronizer ring in a transmission are excessive shifting forces or a wrong shift in gear. Basically, the shift travel with a CAE Shifter is significantly shorter than with the standard lever. We achieve 30 - 55 % reduction depending on the vehicle and transmission type. This can only be achieved by using the appropriate gear ratio on the shift lever. You can feel it through the precision of a CAE shifter engaging the gears is much better than with a standard gear lever designed for comfort. The force for this decreases in the same proportion - we put in the gears with significantly less load for the synchronizer rings. In addition, with a correctly adjusted CAE shifter put in the gears is very precise and shifting into the wrong gear is extremely rare. Even in motorsport, fast, precise, but still sensitive shifting leads to the goal! Everything else is pure tugging and tearing which puts a disproportionately high strain on a transmission and in the worst case causes a fatal wrong shift in gear!

Included in delivery

- ▶ 1x shifter completely assembled, design depending on ordered variant (Picture A)
- ▶ 1x Shift knob incl. counter screw M6x20 V2A, design depending on ordered variant (Picture B)
- ▶ Cover plate (Picture C)
- ▶ Accessories package (Picture D)



- i** The shifter is intended for vehicles without interior equipment. If the center console is to continue to be used, it must be trimmed for installation until a corresponding clearance for the shifter is ensured. The shifter should be screwed directly onto the sheet metal of the center tunnel, any existing carpet must be cut out.
- i** We recommend to lubricate all moving parts occasionally with good spray grease, our recommendation: Würth HHS 2000. For this purpose, e.g. touch the rubber caps on the ball heads. For cleaning the aluminum parts we recommend brake cleaner.

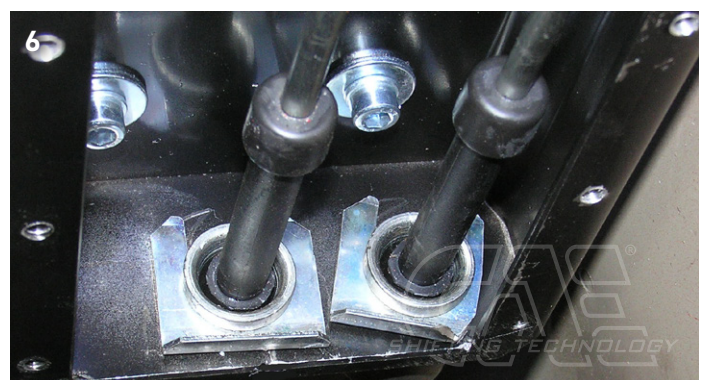
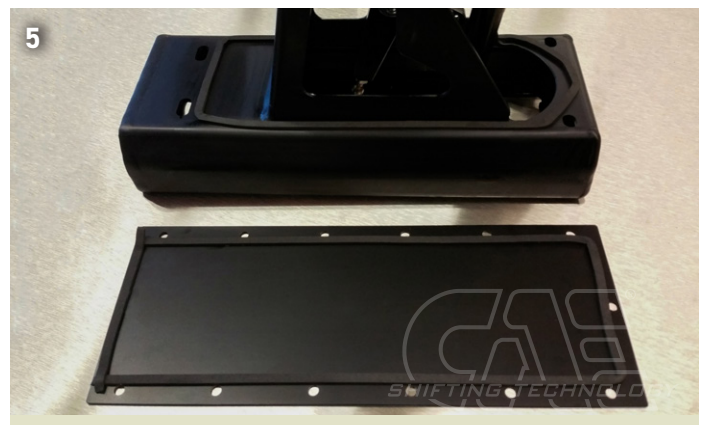
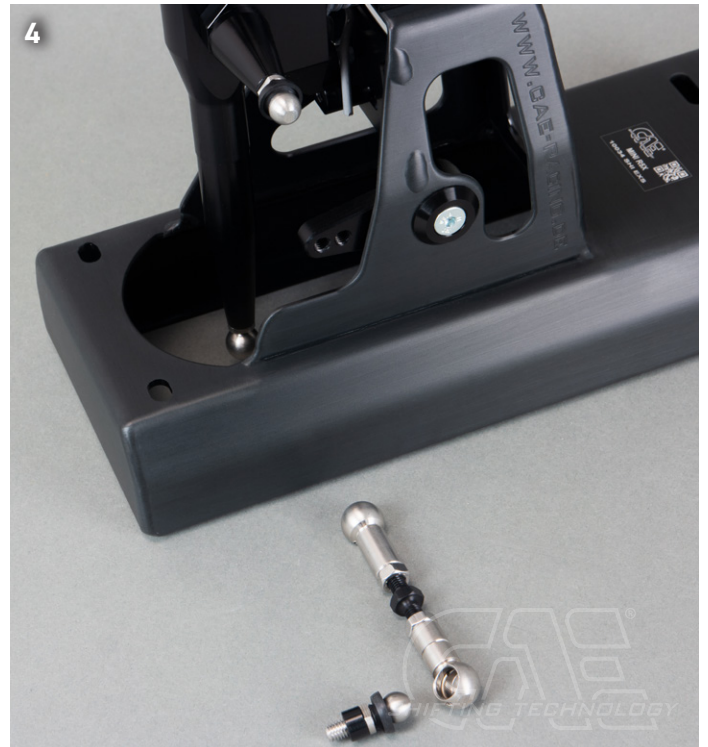
The removal

- ▶ Lift the vehicle safely onto a lifting platform. Completely remove the exhaust, the heat shields and the original gearshift lever. The shift boot can remain on the shift lever and is removed completely downwards.
- ▶ Only remove the shift cables if they are to be replaced. (applies to R53 Pre Facelift)
The correct/matching shift cables have the following part numbers:
BMW part no. 2511 7 547 370 & 2511 7 547 371.
- ▶ Pry open and remove the lower plastic cover of the shift lever housing.
- ▶ Pull shift cable ball cups off of the ball heads.
- ▶ Then pull out the clamps of the shift cables with a waterpumppliers.
- ▶ Then unscrew the shift lever housing (Torx30) and pull it out downwards.
- ▶ Remove the rubber sealing washers from the bulkhead fasteners of the shift cables.



Installation CAE Shifter

- ▶ Remove the side coupling rod from the L lever.
- ▶ Unscrew the lateral ball head on the L-lever (SW8) otherwise it will interfere when inserting the shifter into the center tunnel.
- ▶ To achieve gas tightness, glue the supplied foam rubber strips onto the shifter and the cover plate around the tunnel cutout.
- ▶ Insert the shifter into the center tunnel from below; at the same time, insert the shift cables into the front plate holes and fasten the shifter with the 4 supplied M6 x 16 screws + spring washers + large washers.
- ▶ The supplied safety clip (selector cable) is slightly trimmed on the right side so that it fits into the shifter housing. Attach the shift cables to the shift tower with the safety clips and attach to the shift lever and L selector lever of the tower like the original.
- ▶ Screw the cover plate with 13 pcs. M5x 8 to screw it on.



Adjust the shift ranges 5 / 6 speed gearbox

i Coupling rod to L lever is not yet mounted.

- ▶ Determine the center position of the shift lever. In the center position, the shift lever should be slightly inclined (approx. 5 degrees) to the right. This can be adjusted under the gearshift bracket with a 5 mm Allen key by moving the lower spring stop.
- ▶ Shift the gearbox into 3rd or 4th gear by moving the shift lever forwards or backwards.
- ▶ NOW MOUNT THE COUPLING ROD
Adjust the length of the R/L spindle between the L lever and the lateral extension so that it can be pressed perfectly onto the ball heads. It must now be possible to engage 3rd & 4th gear without any problems. Lock the nuts of the spindle, left-hand thread can be recognized by the groove on the shaft.

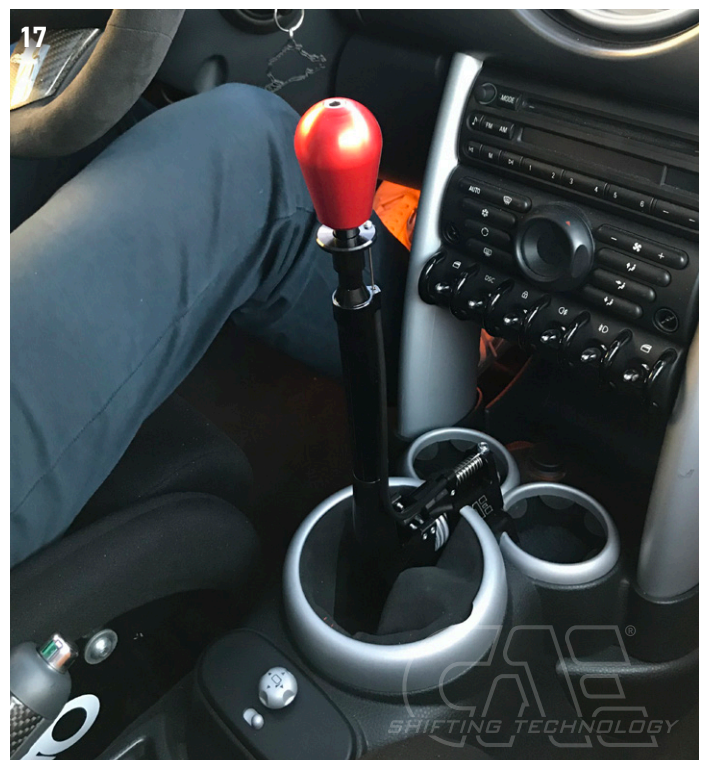
i Check: When 3rd/4th gear is engaged, the lateral play on the shift lever must be the same, otherwise readjust with the coupling rod.

- ▶ Move shift lever to the left and "search" for gears 1/2. Screw in the stop screw until the gears can be changed cleanly in level 1/2.
- ▶ Now shift gearbox to 5th/6th gear level using shift lever and screw in stop screw until 5th and 6th gear can be engaged cleanly.
- ▶ Actuate reverse gear lock pin via cable and shift transmission to reverse gear level. Screw in stop screw until reverse gear can be engaged cleanly.
- ▶ If the total lateral travel to one side is not sufficient to reach all gear levels, the center position must be readjusted.
Re-adjust all other settings accordingly.
- ▶ Reinstall the heat shields and exhaust.



Machining the center console

- ▶ If the center console is to be reassembled, it must be machined appropriately to ensure enough clearance for all moving parts of the gearshift. (Picture 11-17)





FINALLY! Check all functions and settings during the test drive and readjust if necessary!

Incorrect or inaccurate settings can cause damage to the gear box and consequential damage!

If you have any questions or problems, please be sure to contact us, we look forward to your feedback to improve our products.

RACE THE ORIGINAL



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