

📍 10065

Fiat 500
5 speed transmission

Installation instructions



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!

📍 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

📍 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 (often seen on various YT channels), which looks "important", but in no way makes it faster - but it puts a disproportionately high strain on a transmission and in the worst case causes a fatal wrong shift in gear!

i The shifter is intended for vehicles with a center console without a side storage compartment. This must be modified for installation according to these installation instructions.

i **BITTE BEACHTEN:** Glue all nuts / screws during installation!
Use spirit to clean all aluminum parts. Lubricate all joints regularly, this is the only way to ensure proper functioning in the long term.

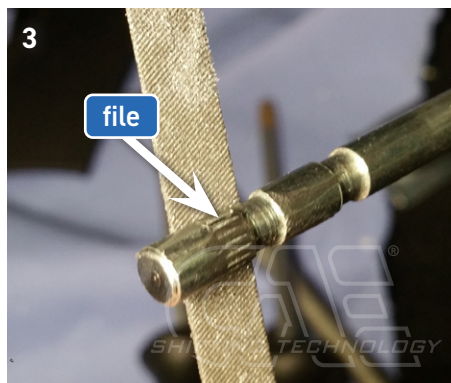
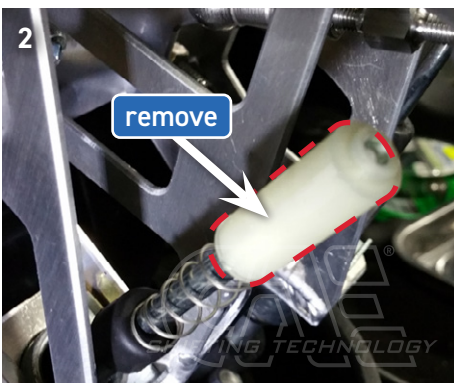
The removal

- ▶ Lever off the cover of the shift knob with a small screwdriver and loosen the screw. Pull off the shift knob and the shift bag.
- ▶ Remove the upper cover frame and center console. (Picture 1)
- ▶ Lever the ball cups of the shift cables off the ball heads and pull the shift cable securing clips off the cables with pliers.
- ▶ Remove the original gearshift.



Conversion selector cable ball socket

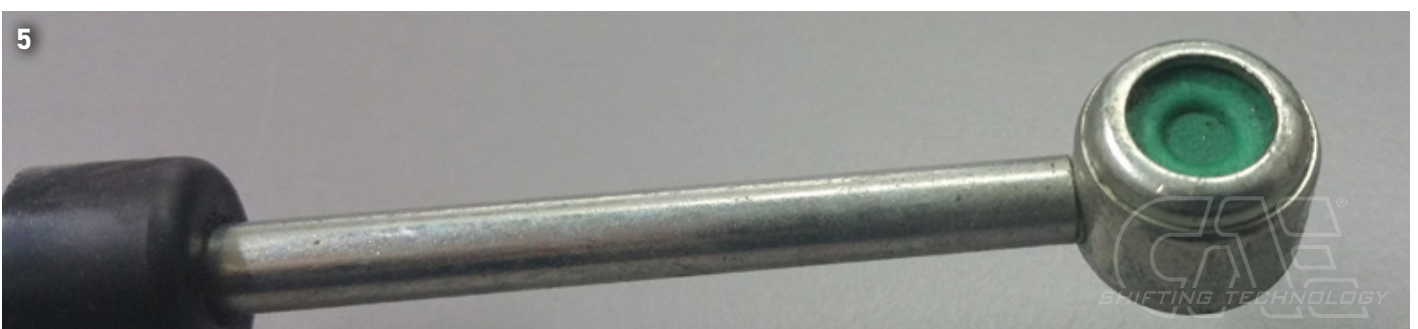
- ▶ Newer models have an adjustable cable end on the selector cable.
- ▶ To mount the center console, this must be converted to the CAE version.



i If the center console is not installed, this step is not necessary.

- ▶ Remove the plastic cable end completely. (Picture 2)
- ▶ File the corrugation smooth until the ball socket fits over it. (Picture 3)
- ▶ Slide the ball socket on completely and tighten the grub screws. (Picture 4)

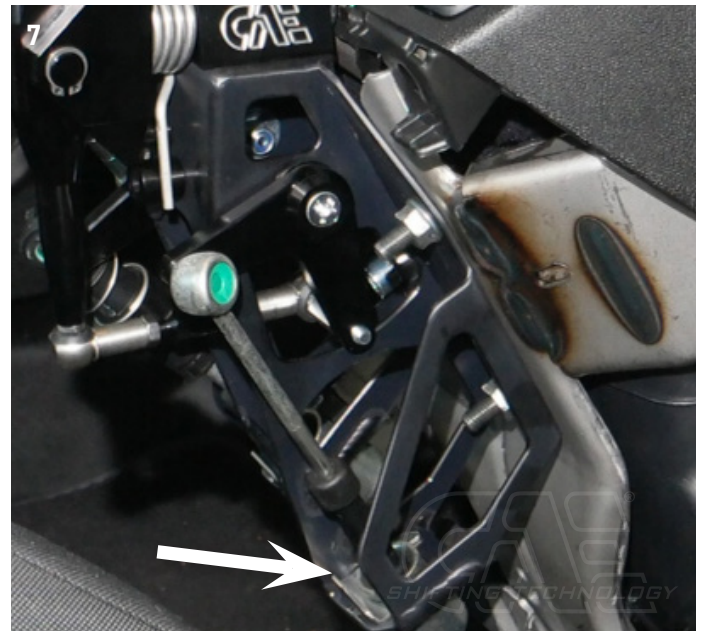
i **PLEASE NOTE:** The standard metal ball cups of the older vehicle models do not need to be modified. (Picture 5)



The installation

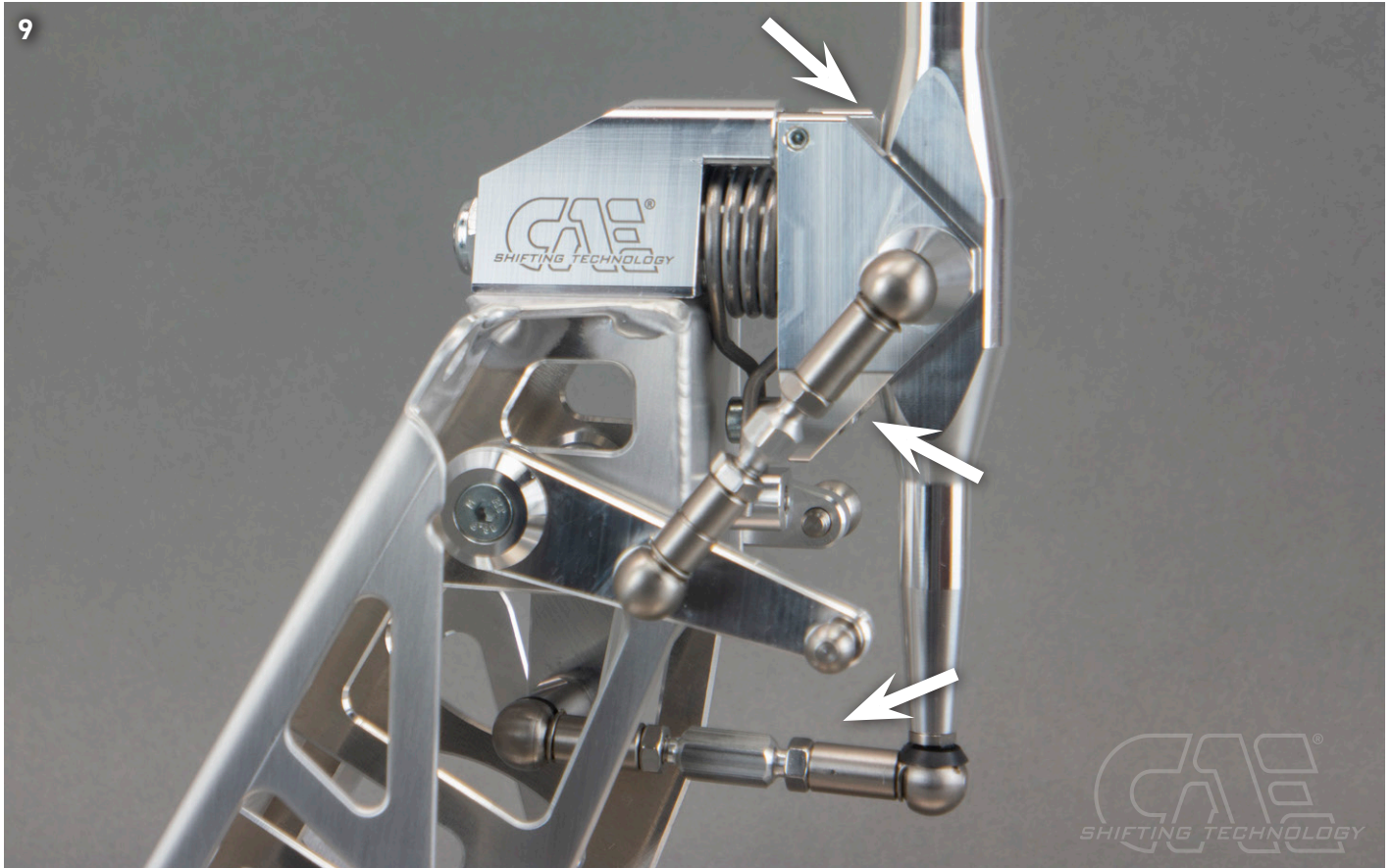
- ▶ Place the spacer washer on the upper left threaded bolt. (Picture 6)
- ▶ Mount the CAE shifter and insert the shift cables into the holes on the shifter. (Picture 7)
- ▶ Tighten shifter with 3 nuts and 1 supplied Allen screw. (Picture 8)
- ▶ Fix the shift cables to the shifter housing with the sheet metal clips, a little grease facilitates the assembly. If necessary, the clamps have to be modified for fitting. (picture 7)

ⓘ PLEASE NOTE: Regularly spray penetrating oil into the bearing points of the shift lever and bell crank. This is absolutely necessary for proper function. We recommend Würth HHS2000.



Adjusting the shift travel and check

- ▶ The position of the shift lever can be varied by approx. 4 cm in the direction of travel using the connection rod at the lower end of the shift lever coupling rod.
- ▶ In the shortest setting, the shift lever is in the rearmost position; in the longest setting, it is in the foremost position. Make sure that the shift lever does not touch the pin at the top or the rocker at the bottom. (Picture 9)



- ▶ Now shift the transmission to 3rd or 4th gear. This is the "middle position" of the transmission. To do this, move the shift lever forwards or backwards without moving it sideways.
- ▶ Now synchronize the center position of the shift lever and transmission at the LEFT connection rod; with 3rd/4th gear engaged, the play at the shift lever must be the same on both sides, otherwise readjust the coupling rod accordingly.

- ▶ Tighten the nuts of the left connection rod, secure the ball cups with the U-clamps. (Picture 10)



- ▶ Adjustment of the lateral stops with 2.5 mm Allen key, screws are self-locking. (Picture 11)
- ▶ Shift gearbox to level **(1/2)** by shift lever (search) and adjust right stop screw until gears in level 1 / 2 can be changed cleanly. The screw must not touch the bolt when the gear is engaged, approx. 0.5mm play is ok.
- ▶ Now shift gearbox via shift lever to **(5/R)** Gear level and adjust left stop screw until 5th / (R.) Gear can be engaged cleanly. The screw must not touch the bolt when the gear is engaged, approx. 0.5mm play is ok.

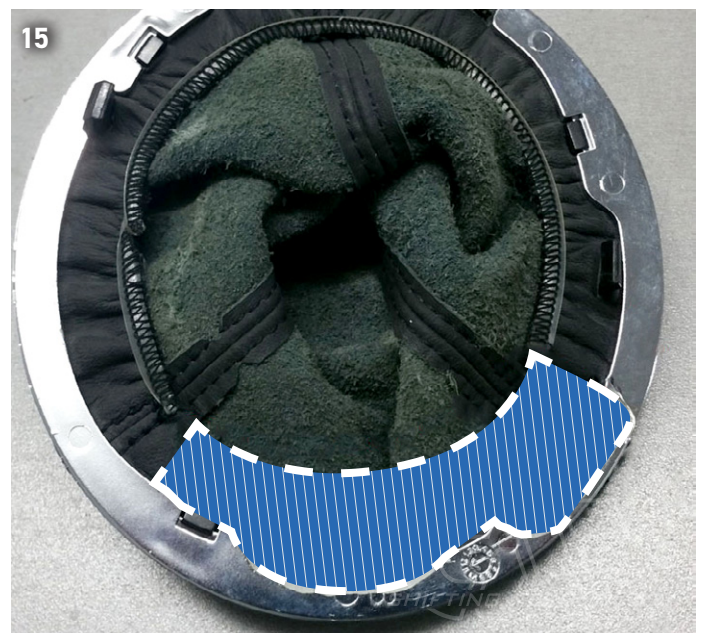
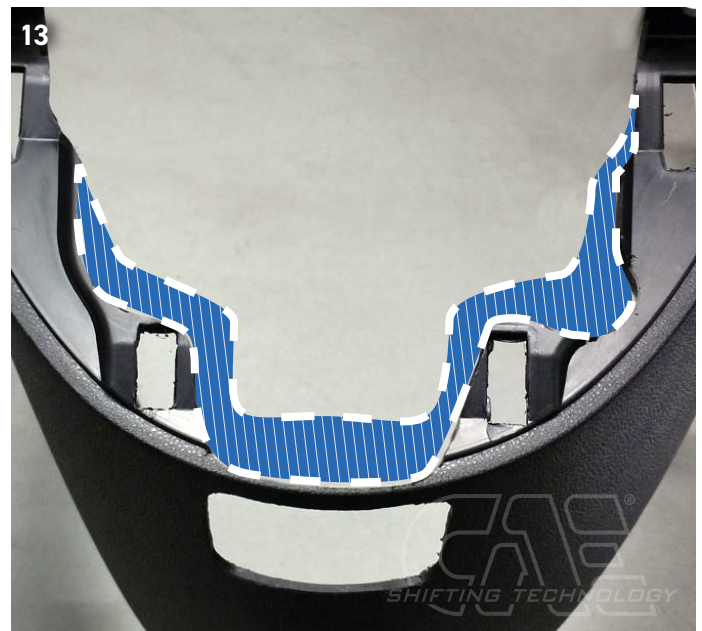
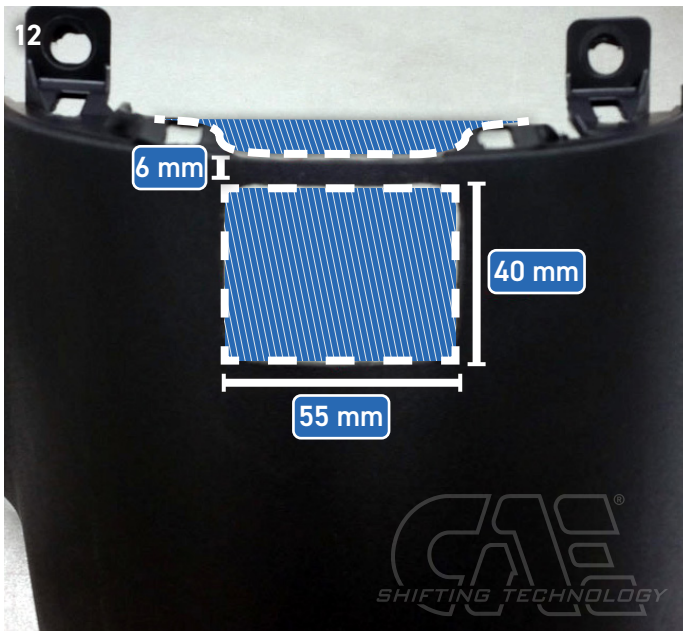
ⓘ ATTENTION: Reverse gear can only be engaged from neutral, not directly from 5th gear.



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!

Machining center console

- ▶ We recommend the center console without storage compartment: FIAT ART NO 0 735 481 675
- ▶ Process and reinstall the center console according to the pictures. (Picture 12-15)
- ▶ Check all parts for free movement.



If any questions or problems please be sure to contact us, we need YOUR feedback to improve our products.

RACE THE ORIGINAL



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