

# CAE ULTRA SHIFTER



📍 10080

Suzuki Swift NZ  
6-speed transmission

## Installation instructions



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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 undrivable 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 (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 designed for vehicles with interior equipment. The center console itself does not need be machined, the cover frame must be cut out for the installation until a corresponding corresponding clearance for the shifter is ensured.

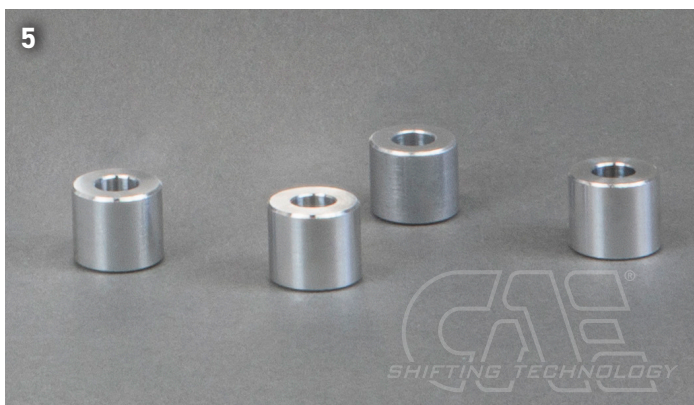
## Deinstallation

- ▶ Grasp the shift bag at the edge and pull up. (Picture 1)
- ▶ Unclip the cover frame upwards.
- ▶ Remove the rear part of the center console.
- ▶ Push the storage compartment out upwards. (Picture 2)
- ▶ Remove front center console. (Picture 3)
- ▶ Dismantle gearshift cables and remove gearshift bracket. Unscrew the 4 nuts of the gearshift bracket. (Picture 4)
- ▶ To release the shift cable socket (white) from the gearshift lever, pull the steel clamp to the rear and press the shift cable down.
- ▶ To release the selector cable, simply lever off the cable end (black) from the L-lever lever, making sure that the rubber grommet remains in the eyelet and pull the dial cable off to the side.
- ▶ The cables are clipped into the front panel of the housing and are pulled upwards. pulled out upwards.
- ▶ The selector cables can remain in the vehicle. (Fig. 3)
- ▶ To remove the gearshift cables, push the white plastic caps forward, then pull the cables up and out of the holder.



## The installation

- ▶ Place the 4 spacer bushes (15mm high) on the threaded bolts. (Picture 5, 6)



- ▶ Place the CAE shifter on the threaded bolts and insert the shift cables into the shifter housing.
- ▶ Screw on the shifter with the original nuts and push the white plastic caps forward to install the shift cables, then press the cables into the bracket. (Picture 6)
- ▶ Press the ball socket onto the shift cable, but not yet the adapter on the selector lever.

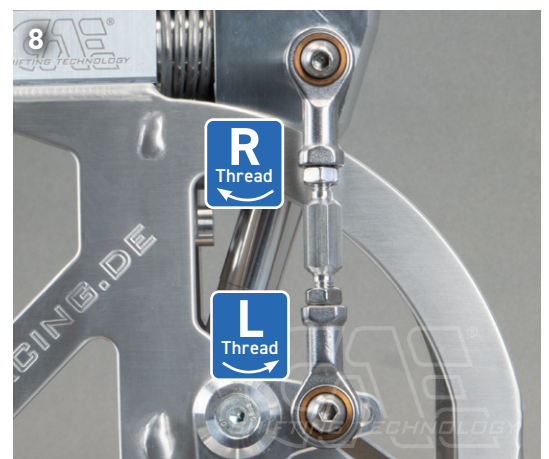


**i** Now first adjust the shifter completely.

### Adjust the shift range 6 speed gearbox

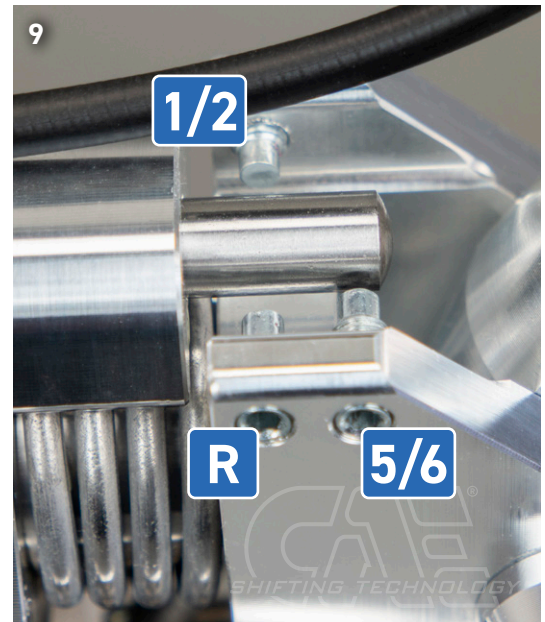
- ▶ Adjust / check the center position of the shifter, it should be as vertical as possible, this is the (neutral) Pos 3/4.
- ▶ Adjust the setting if necessary / desired by moving the spring stop in the housing of the shifter. (Allen key 5mm) (Picture7)
- ▶ The "center position" setting may have to be corrected if the ball socket of the shift cable touches the housing at the bottom left in level 5/6.
- ▶ Now shift the gearbox into 3rd or 4th gear. 3rd and 4th gear are in neutral zero position. To engage them, simply move the shift lever forward or backward without lateral movement.
- ▶ Now adjust the side coupling rod (R/L THREAD) so that the eye of the selector cable fits EXACTLY on the pin on the L lever. (Picture 8)
- ▶ Press the eye onto the L-lever (lightly grease) making sure the grommet is properly seated. (Picture 6)

**i** CHECK: With 3rd/4th gear engaged, the lateral play on the shift lever must be the same, otherwise readjust the coupling rod.





- ▶ Shift gearbox to level 1/2 using shift lever and adjust stop screw until gears can be changed cleanly. (min 0.5mm space from screw tip to stop bolt) (Picture 9)
- ▶ Shift gearbox to 5th / 6th gear using shift lever and adjust stop screw until gears can be changed cleanly. (approx. 0.5 mm space from tip of screw to stop bolt).
- ▶ Operate reverse gear lock via cable and shift gearbox to reverse-gear level. Screw in the stop bolt until reverse gear can be engaged cleanly.



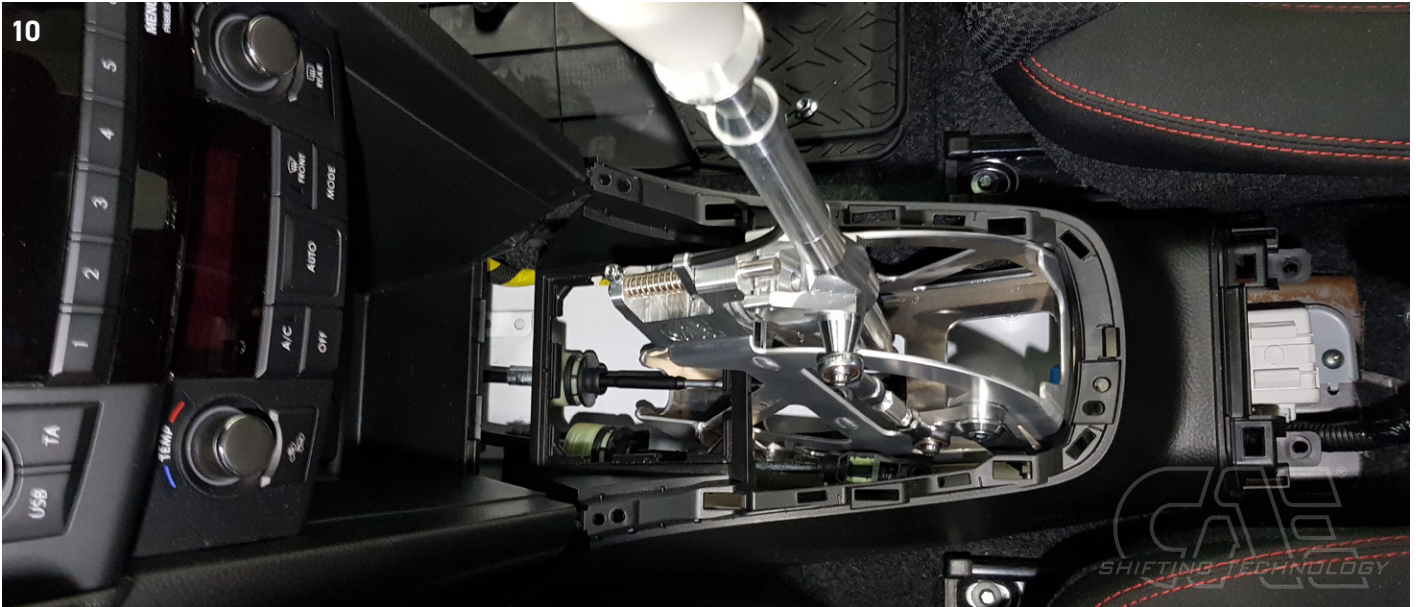
**i** After complete assembly of the shifter, lubricate all moving parts, we recommend Würth HHS 2000. Glue in all nuts / screws during assembly!  
 Never kink shift cables!

**!** **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 and installation of the center console

**i** After the adjustment and test drive, the center console can be refitted.

- ▶ To do this, loosen the shifter and shift cables again, push them backwards and put the center console over them. (Screw vL is under the selector cable) Now first tighten the shifter again, fasten the shift cables and then finally install the center console. (Picture 10)



- ▶ Process center console frame according to the following pictures so that it can be mounted above the shifter (Picture 11, 12):



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



Alte Bottroper Strasse 103  
D-45356 Essen  
0049. 201. 8 777 802  
service@cae-racing.de

[WWW.CAE-RACING.DE](http://WWW.CAE-RACING.DE)