

# CAE SHIFTING TECHNOLOGY GMBH

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## INSTALLATION MANUAL CAE ULTRA-SHIFTER VW GOLF MK I

### MODIFICATION TO CABLE-CONTROLLED GEARSHIFT - GEARBOX TYPE 020



The shifter is intended for Racing Cars without interior equipment. If center console is mounted, it must be dismantled or modified to achieve an acceptable space for the cables. The new unit should be mounted directly on to the floorboard, so part of the carpet must be removed.

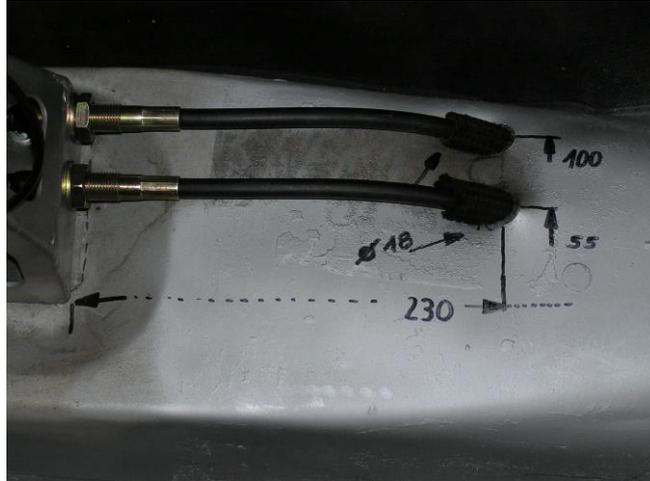
**Before the assembly of the Balljoints lubricate the seat with good grease. After completing the shifter, secure the Ballstud with a cotter pin. All screws and nuts on the shifter must have Lock-Tite or anything that keeps the screws or nuts from coming loose. Never bend the controller cables! To avoid rust film, clean the steel parts with oil ever so often. To clean the Alu-parts use ethyl alcohol**

#### **Remove**

- Remove the original parts of the shifter including the redirection at the steering gear.
- Remove the dual lever

### **Bodywork:**

- Drill two 18mm holes into the floorboard for the cables. The position of this holes is shown in the next picture



The measurements refer to the outer edge of the mounted shifter; there for you mount the shifter with one screw and line it up.

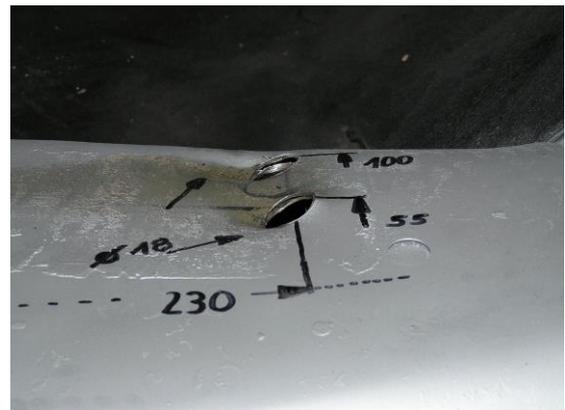
The positions of the holes are the minimum distance to the unit.

**Before drilling you must check if the cables have enough space under the tunnel. If not, change position of holes as far as necessary.**

Place a metal rod into the drilled holes and pull the rod carefully backwards. So that you achieve the best feed through for the cables.

### **Mounting**

- Exchange the dual lever at the gear unit entry through the new shorter one. (if you did not send us an exchange part, you first have to change the lever – see attached Drawing)
- Remove the upper 3 screws of the gear case and mount the shifter cable rack



- Mount connecting Rod „S“ on the gear unit entry lever (Picture shows the old Version)

### **Mounting the shifter and shifter cables**

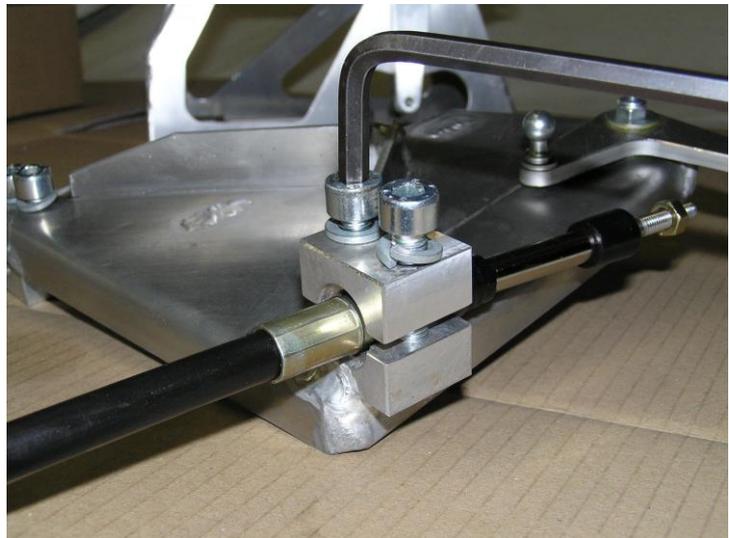
Mount both of the cables at the unit. The choose cable to the L-Lever left has to stand out as much as possible of the case, inside there is no threads to see.



To mount the nuts take off the rubber boot, then the nuts can be mounted easily. The cable with length=1150mm is the selection cable and has to be mounted in driving direction left side. The shorter one (length=1020mm) is the shift cable and has to be mounted in the middle.

After this, mount the balls and press on the levers (adjustment follows later) The mounted cables now have to be fed through the holes and the unit can be mounted on the plate (Middle tunnel) fed the 2 black tube pieces into the 18mm holes. When mounting the back screw lift the unit a bit. Mount shift and select cable in the clamps of the holder plate.

Press the seats on the belonging balls at the levers and secure with Cotter pins. Ensure the space of the cables to the Muffler, if necessary mount additional clamps.



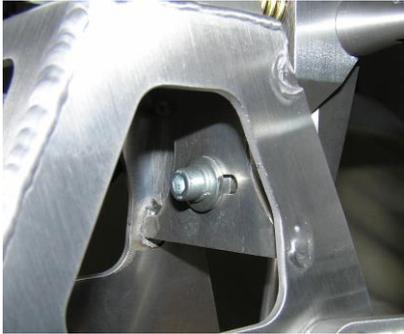
### **Adjusting 5 Speed Gearbox**

Select the 3rd gear manually. The 3rd gear is in driving direction left. To select it, pull the gearshift-lever easy to left.

Now select the wanted middle position of the gearshift and adjust the lower spring stop under the unit with allen wrench.



In middle position the gearshift should be slightly turned to the right.



Secure the seats on the cables in the selector-tower. Select level 1 / 2 with gearshift and adjust the fitting stop screw until the gears 1 and 2 can be selected well.

Now select gear 5 with the gearshift and adjust the fitting turn stop screw until the 5th gear can be selected clearly. Pull the reverse gear lock out mechanism and enter reverse gear. Adjust the fitting stop screw until the rear gear can be selected clearly.



**Attention !!**  
**Protect shiftcables against thermic overheat by delivered blue heat resistant tube.**  
**Protected cables *must not* contact the exhaust system.**

After installation, check all the essential functions of the Shifter while driving and readjust if necessary.  
**Wrong adjustment will destroy your gearbox**  
If you experience any problems or questions, please contact us absolutely, we need YOUR feedback to improve our products

CAE Shifting Technology wishes you a good trip