

# **CAE SHIFTING TECHNOLOGY GMBH**

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## **INSTALLATION MANUAL**

### **CAE ULTRA-SHIFTER AUDI 01E GEARBOX, TYPE B4 MODIFICATION TO CABLE SHIFT**

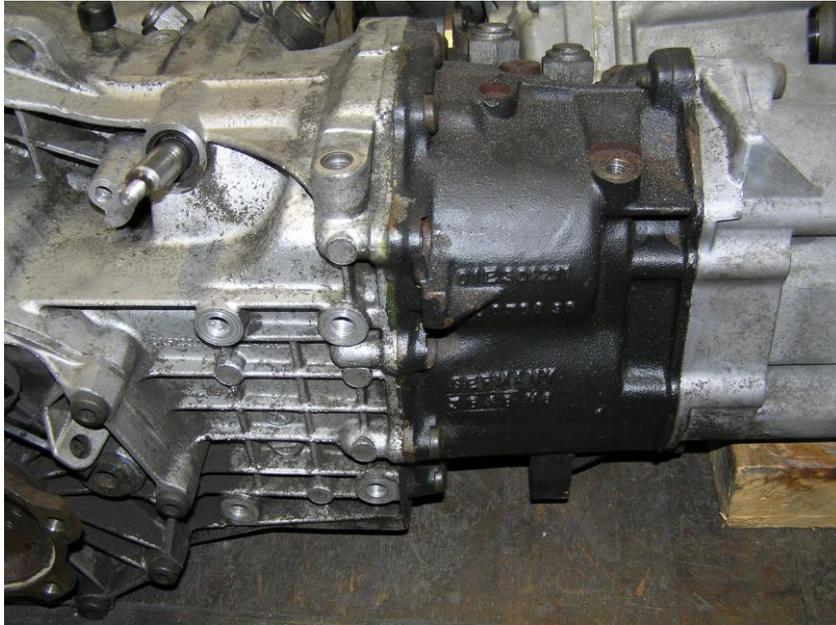


The shifter is intended for racing cars without interior equipment.  
If center console is mounted, it must be dismantled or modified to achieve an acceptable space for the cables.  
The new unit should be mounted directly on to the floorboard, so part of the carpet must be removed.

**Never bend the shiftcables!**  
**To avoid rust film, clean the steel parts with oil ever so often.**  
**To clean the aluminium parts use ethyl alcohol.**

#### **Disassambling:**

- Raise the vehicle safely on car lift, remove exhaust, underbody paneling and exhaust heat shield, loose the Cardan-shaft from gearbox (only Quattro) and let it hang down
- Remove the original shifter, linkages and shift rods completely

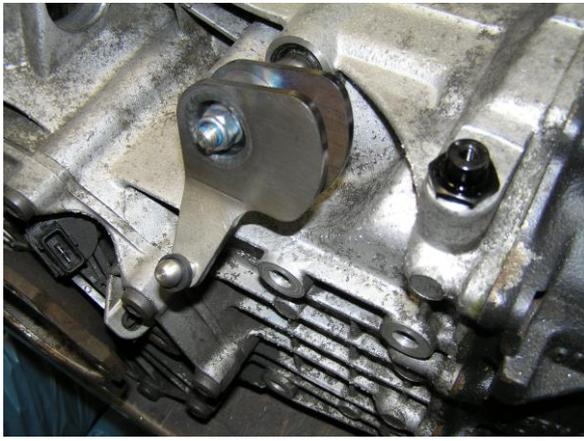


***Attention!***  
***Protect shift cables with the blue/grey heat protection tubes protected from the heat necessarily.***  
***Also the protected cables must not contact the exhaust !!***  
***In vehicles with turbocharged engines must be additional shielding with honeycomb plate to protect the cables by overheat***

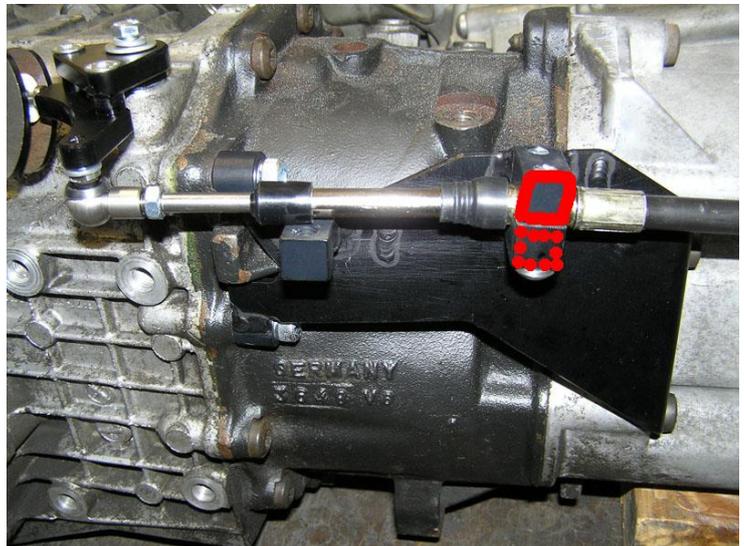
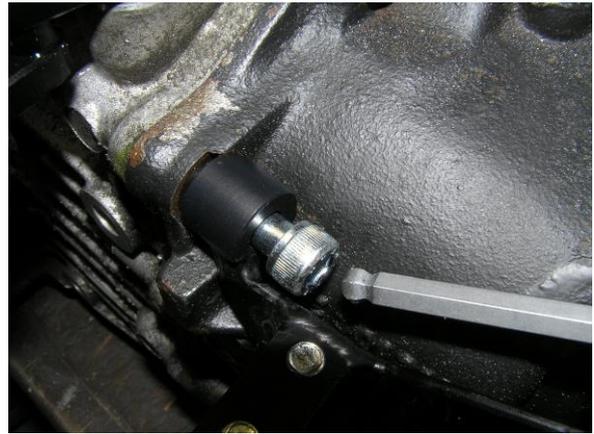
Mount Gearlevers as shown, Grease all moving parts with good Lubricant  
Picture shows high gearbox housing variation

Mount the Cable Bracket

Check if the upper clamp collides with the Tunnel sheet, if necessary remove some material, replace the both front screws by delivered Hex Screws; the two at the back will stay stock one original (T45)



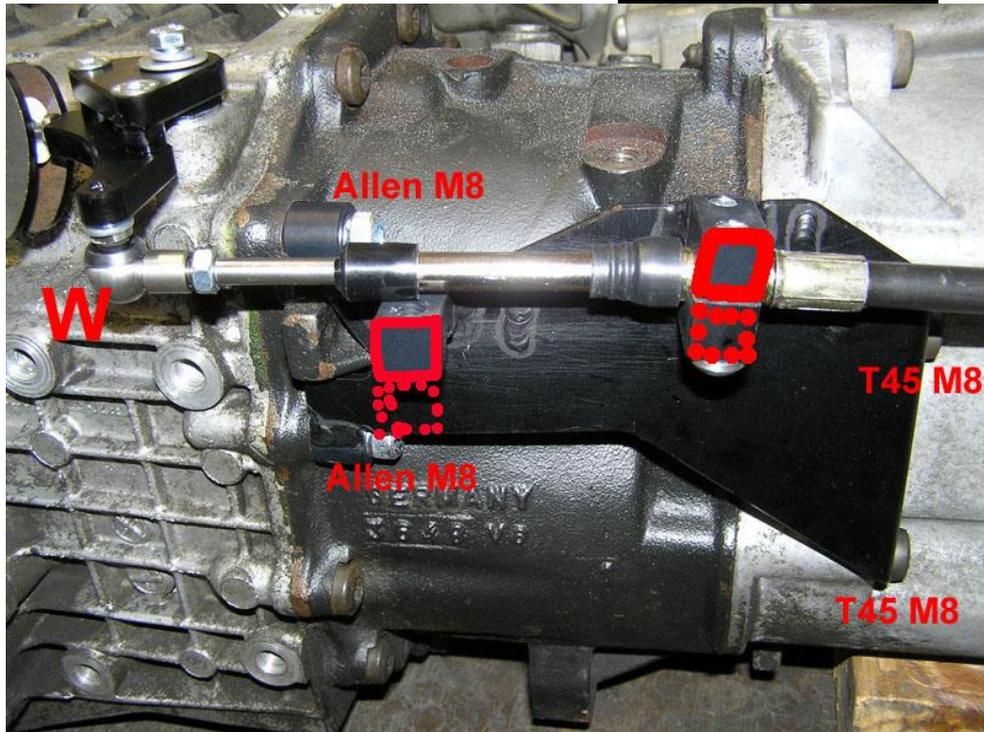
**Dont tighten this bolt too hard, but glue him**





Mount the Box to the Tunnel from downside; use Hex screws M6x20. Use delivered self adheasing rubber stripe to seal it, or use body sealant

### **Cable Installation**



Cable bracket with selection cable (W) mounted

Begin with shorter cable (W)

- Slide blue hoses over the shift cable and mount the cable into the upper position at the bracket, push the pan on the ball and the other side into the left hole in the box
- Clamp it at the bracket and mount the next washer and nut at the inner side of the box, also 2 sealing rubbers.

Do it again with the longer cable (S) to the lower position at the bracket and the middle hole in the box



## **Installation of the shift unit**

Put the shifter to the projecting screws and lock him with 4x hex nut M6 & washer

Mount the pans of the shiftcables to the balls at the levers



### **Checking Cables for End position.**

At **selected gear** the cables don't have to go into the end position. Required are about 3mm space in each gear

***A hard metallic noise while entering the gear is ever a bad signal for missing rest way.***

#### ***You have to check:***

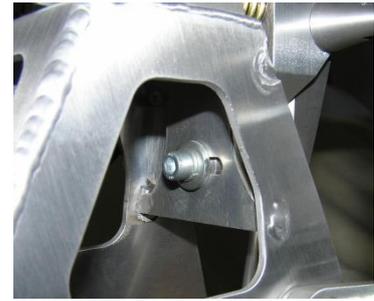
While **selected** 3rd or 4th gear pull off the pan from the Gearbox lever and check that the cable is not in end position.

Do it for the „front“ gears R,1,3,5 with retracted cable and also for the „rear“ gears 2,4 with extended cable. If necessary adjust it by screwing the pans at the cables.



## Tune the shifting range 5&6 Speed

- Pull the connector rod from the side of the shift unit
- Select the 3<sup>rd</sup> or 4<sup>th</sup> gear manually. To select it, pull the gearlever easy forwards/ backwards .
- 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 left.



- Push the connector rod back to ball pins on the left side of the shift unit and adjust the connector rod (right/left spindle) for pushing on without moving the lever. Now the 3<sup>rd</sup> /4<sup>th</sup> gear have to be moved clearly.

- Select level 1st/ 2nd gear with lever and turn stop screw Z until the gears 1/2 can be selected well.

- Now select gear 5 / 6 by the gearlever and turn stop screw X until the 5<sup>th</sup>/ 6<sup>th</sup> gear can be selected clearly. Pull reverse gear mechanism and enter reverse gear. Turn stop screw Y until the reverse gear can be selected clearly.



- Check the cables don't come to the final Position!! also all screws and nuts for tighten

Close the Box by delivered sheet and use body sealant for sealing it

Refit the exhaust, Kardan-shaft, all trim parts and check for tightness

**Check out all functions of the shifter by road test and if necessary readjust  
Incorrect settings may destroy your gearbox**

CAE SHIFTING TECHNOLOGY  
WISH YOU A GOOD TRIP