MORE THAN 20 YEARS EXPERIENCE

CAE SHIFTING TECHNOLOGY

Installation instructions

10059

Renault
Megane 4 RS
6-speed gearbox

MEGANE 4 RS

WWW.CAE-RACING.DE

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!

ⓘ 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.

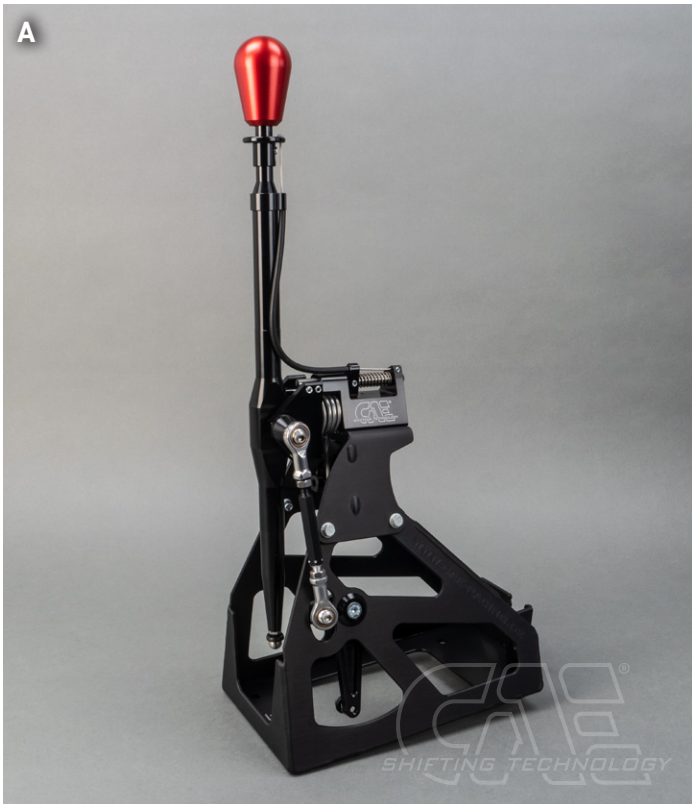
TIPS FOR GEAR SHIFTING

ⓘ 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 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)
- Accessories package (Picture C)
- Cover plate (Picture D)

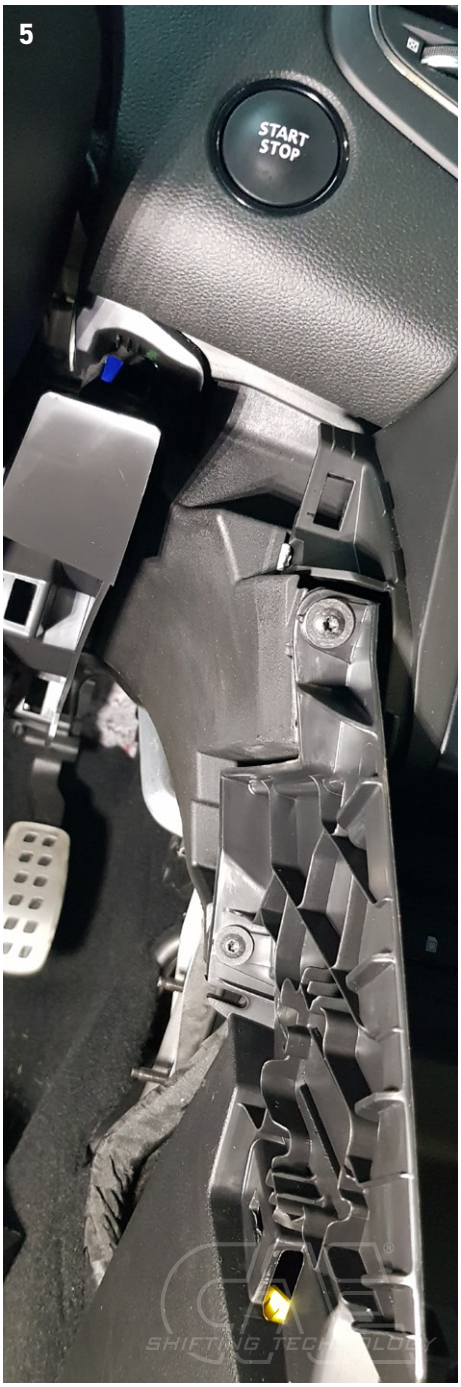


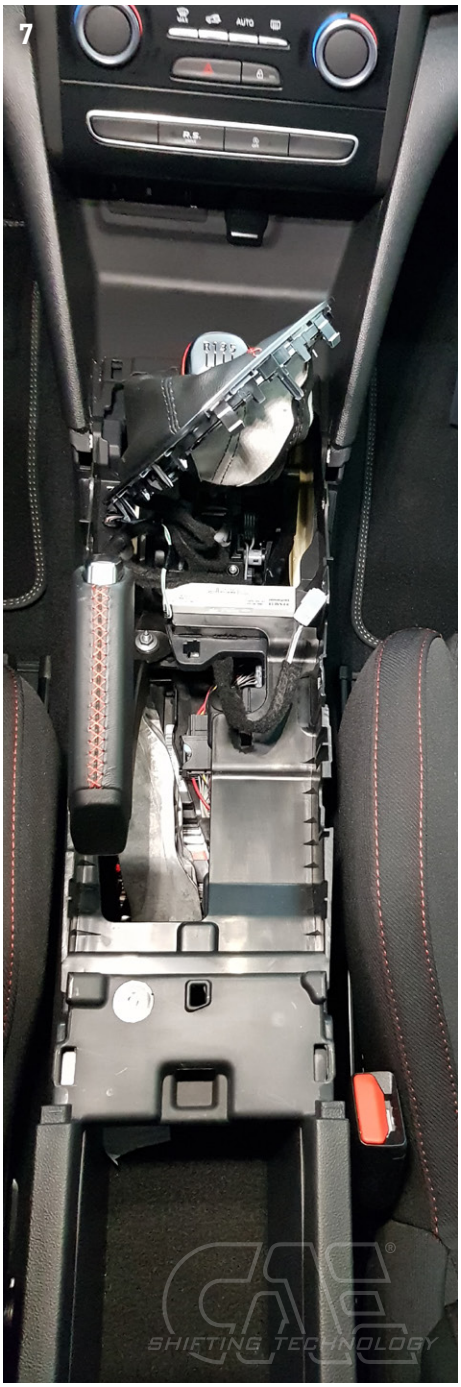
ⓘ The shifter is intended for vehicles with interior equipment.
The center console does not need to be machined for installation.

ⓘ **Lubricate all moving parts occasionally with good spray grease, our recommendation: Würth HHS 2000, e.g. by touching the rubber caps on the ball heads. For cleaning the aluminum parts we recommend brake cleaner.**

The removal

- Remove the center console completely.



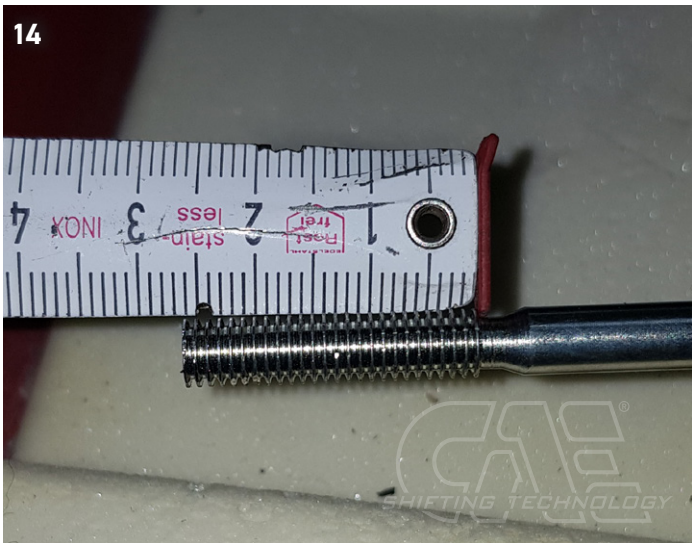


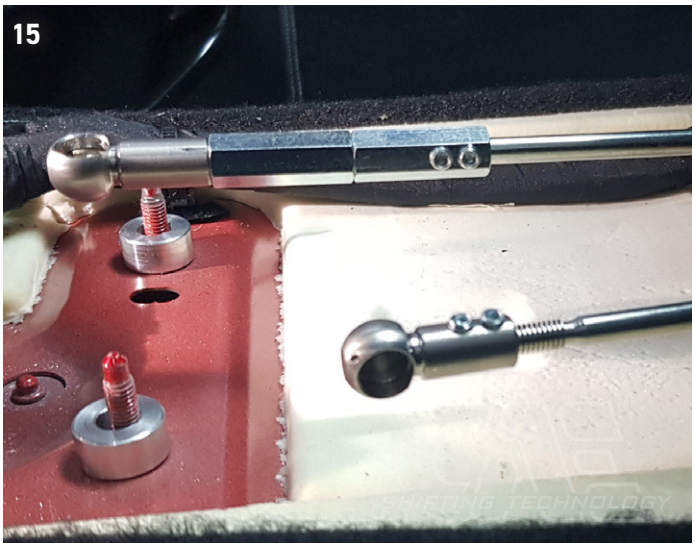
- Remove the shift cables from the original gearshift bracket and loosen the 4 nuts.
  Remove the gearshift bracket.

Rework shift and selector cable

- Replace the original ball cups of the shift cables with the CAE variant.
- For this purpose, the socket of the shift cable must be destroyed. Reduce the teeth of the core with a file until it fits into the CAE ball socket (Ø=6mm).

- The core of the selector cable (GASSE) must be shortened as shown in (Picture 14).



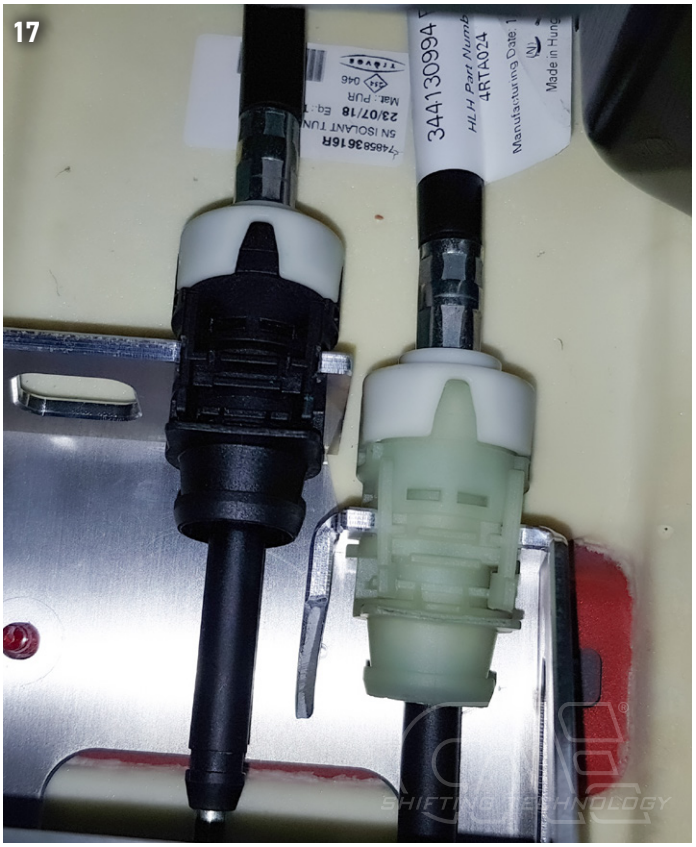


- Slide the CAE cable ends/ball cups onto the machined cable cores and align them. (Picture 15) Tighten the grub screws with a 2.5 mm Allen key.

GREASE THE BALL CUPS!

Installation CAE Shifter

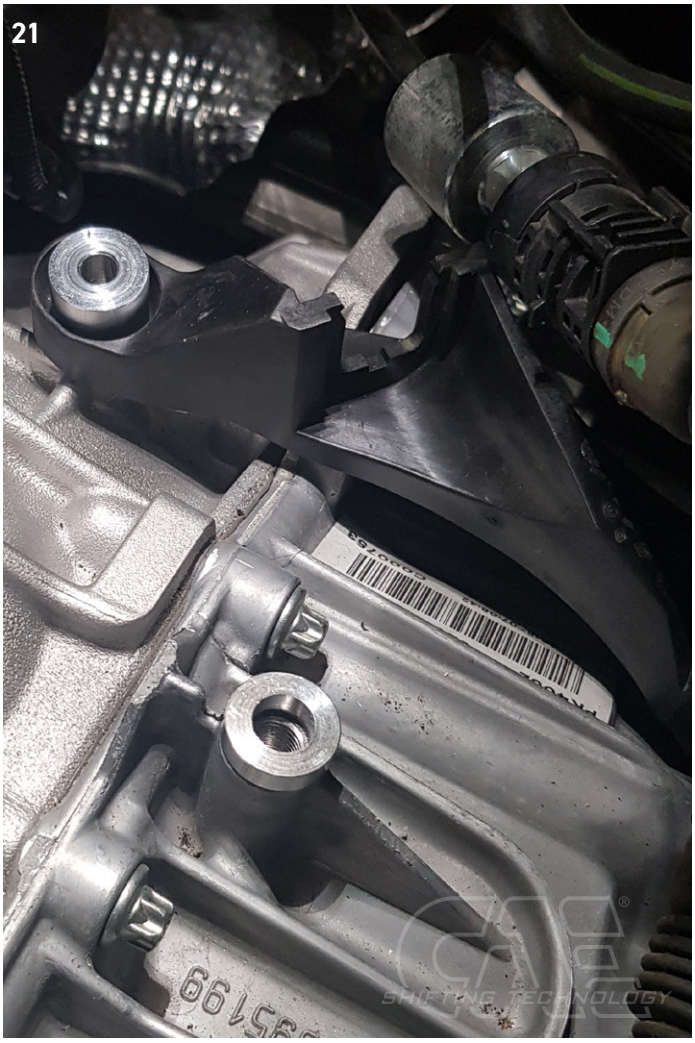
- Place the 4 spacer bushings (9mm high) on the threaded bolts. (Picture 16)
- Then place CAE Shifter, inserting the shift cables into the front housing opening. (Picture 17)
- Screw on shifter and then clip the cables to the bulkhead plate. (Picture 18) The cables can be pulled the missing centimeters into the interior.
- Press the ball cups onto the shift and selector levers. (Picture 19)
- Secure only the selector cable socket with cotter pin. (Picture 19)



Installation of transmission cable holder / gearshift levers

- Disconnect the battery and remove it including the battery tray.
- Remove the air filter.
- Remove shift cable from transmission shift lever and unclip shift cable from cable holder.
- Unscrew screw from cable holder.
- Remove lug with nut and grub screw.
- Knock out 3mm and 7mm dowel pin and remove shift lever from transmission.
  (many small hammer blows)
- Place the two spacer sleeves in the appropriate position. (Picture 21)
- Mount the shift cable holder on it with supplied pan head screw and the original bolt.
  (Picture 22)
- Now first mount the plastic washer and then the supplied gearshift lever on the gearshift shaft.
  (Picture 23, 24)

- Spannhülse wieder einschlagen. Die 7mm Spannhülse vorher am Hebel ansetzten, die mitgelieferte dient als Ersatz.
- Jetzt das Schaltseil in den neuen Seilhalter fest einclipsen und das Seilende mit der Kugelpfanne auf den Kugelkopf am Getriebeschalthebel aufdrücken. (Auf richtigen Sitz achten!)

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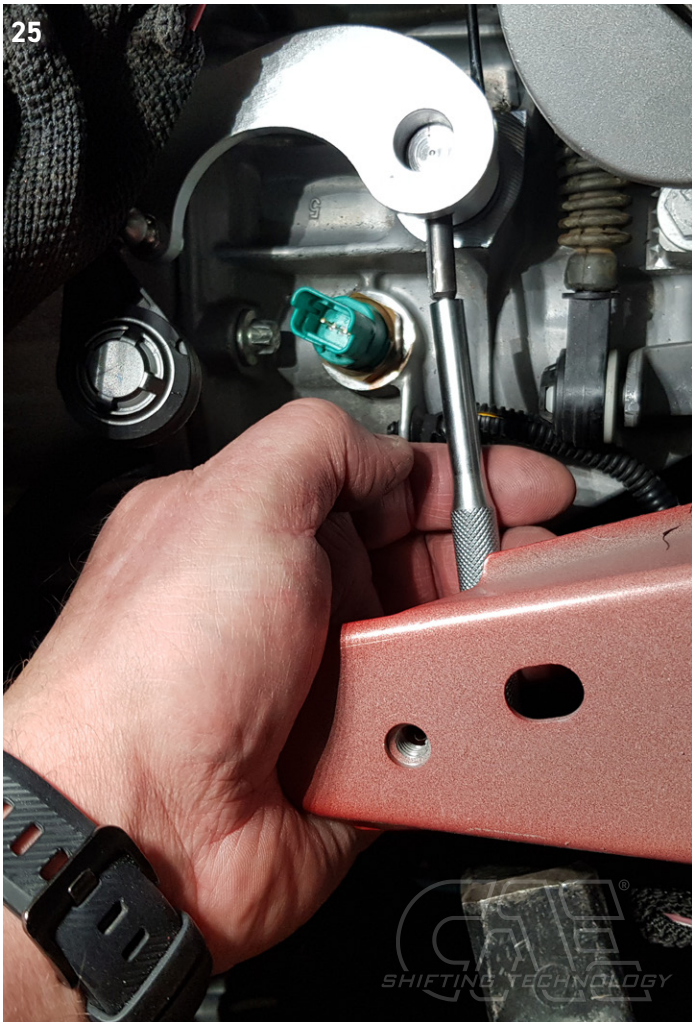
MEG IV RS
10069 GSLEV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Adjusting the shift travel of the 6-speed gearbox

- Adjust/check the center position of the shift lever, it should be inclined minimally to the right, this is pos. 3/4 (Picture 27).

- Adjust if necessary / desired by moving the spring stop. (Picture 27a)

- Now shift the gearbox into 3rd or 4th gear. The 3rd and 4th gears are in neutral zero position. To engage them, simply move the shift lever forward or backward without load.
- Now adjust the coupling rod (R/L THREAD) so that it fits exactly on the ball pin. With 3rd/4th gear engaged, the lateral play on the shift lever must be the same, otherwise readjust the coupling rod. Tighten lock nuts.

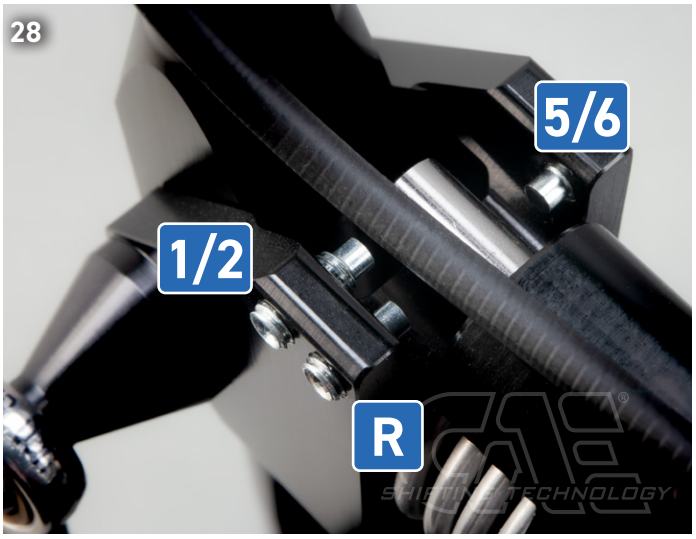
PLEASE NOTE:
The small double spindle has R/L thread.
At the bottom of the Unibal joint is the left-hand thread. The spindle is made of aluminum!
Tightening torque of the nuts max. 3Nm!

- Shift the gearbox to level 1 / 2 using the shift lever and adjust the stop screw until the gears in level 1 / 2 can be changed cleanly. (Picture 28)

- Now shift gearbox to 5th/6th gear level using shift lever and screw in stop screw until 5th gear can be engaged cleanly.

- Actuate reverse gear lock pin via cable and shift transmission to reverse gear level. Screw in corresponding stop screw until reverse gear can be engaged cleanly.

- Now reinstall the battery and the air filter box.



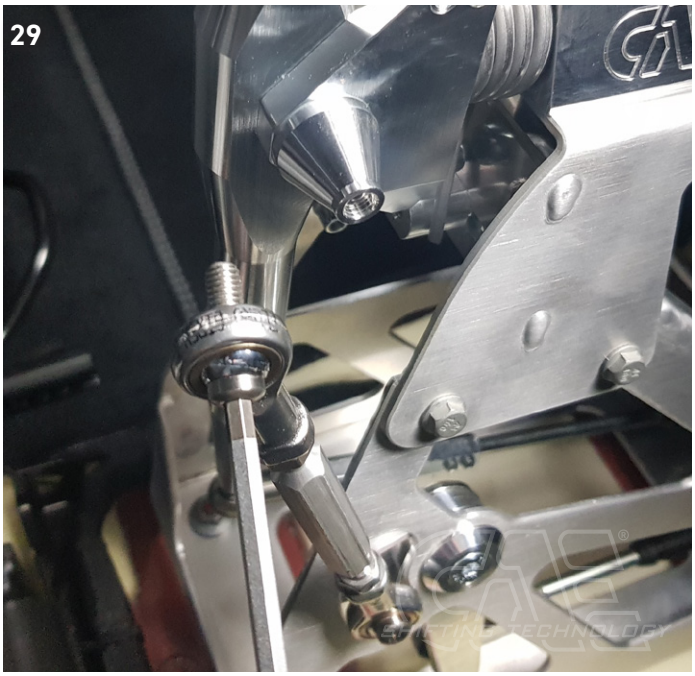
FINALLY! Check all functions and settings during the test drive and readjust if necessary!

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

- If the shifter works properly in the road test and all settings are correct, the center console is mounted.

Installation of the center console

- Unclip the ball socket at the bottom of the shift lever.
- Unscrew the upper screw of the coupling rod. screw out.
- Remove the upper part of the shifter completely.
- Now carefully put the center console over the shifter and mount it.
- Now replace the shifter upper part, place the side fastening screws and tighten them.
- Now tighten the upper unibal again, glue the screw with a small drop of Loctite.
- Clip off the ball socket at the bottom of the gearshift again and secure it with a cotter pin.
- Now mount all other fairings.
- Then check all settings again.

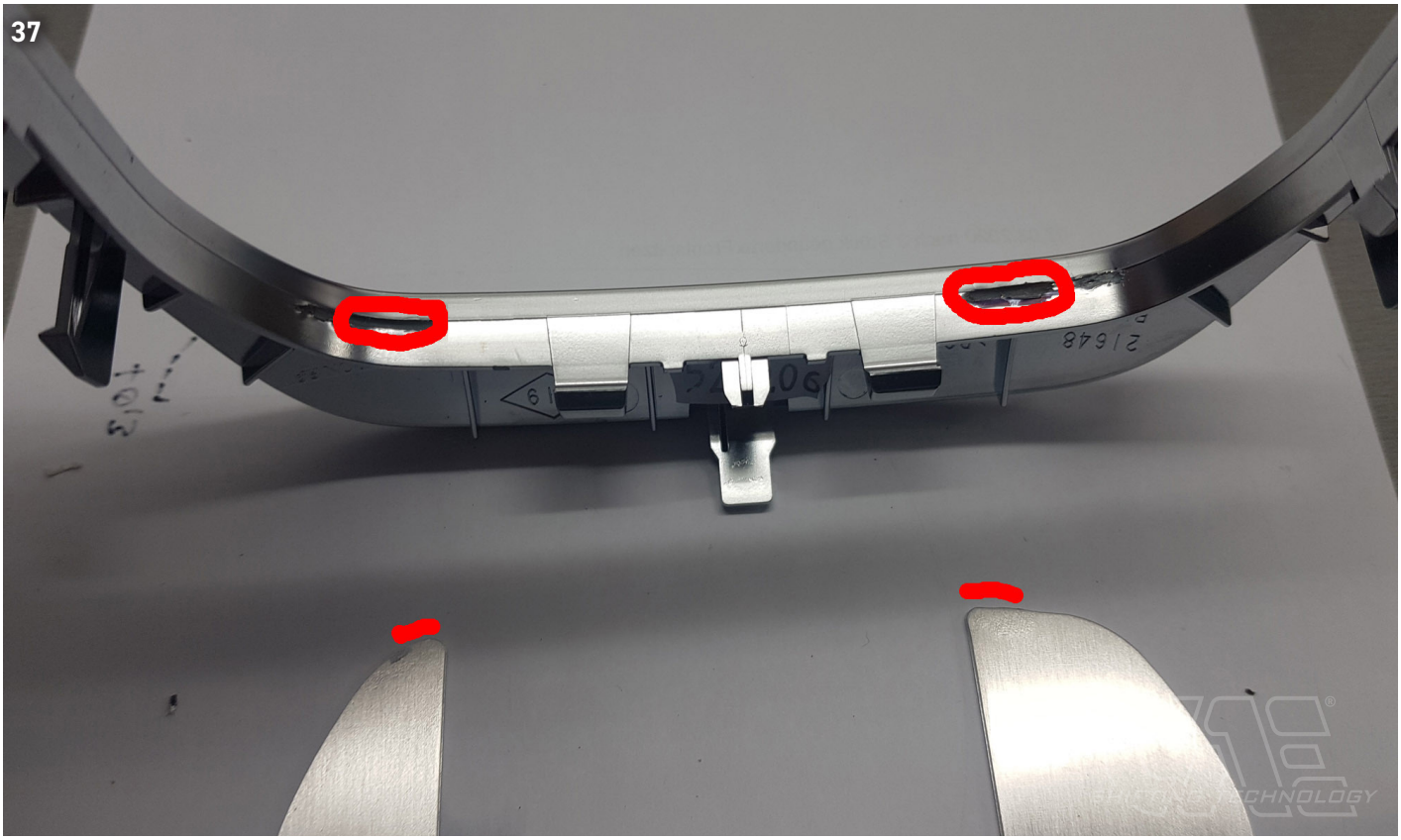


If you have any questions or problems, please be sure to contact us,
we look forward to your feedback to improve our products.

CAE wishes you a good trip.

Cover plate

- For fastening, 2 slots must be made in the front area of the cover frame on the right and left. (Dremel / cutter knife)
  Then the cover plate can be clipped into the frame.
- Make sure that the slots are not too high, otherwise the plate cannot be fastened. 0.5-1mm is sufficient, the width is given by the lugs on the sheet.
- Install the sheet metal together with the plastic frame. Place both parts around the shifter in position, click the sheet into the frame, then press the frame into the center console.



SHIFTING TECHNOLOGY

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