



ULTRA SHIFTER

Installation instructions

📍 10056

Ford Focus MK4 ST
6-speed gearbox



FORD
MK4 ST

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!

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.

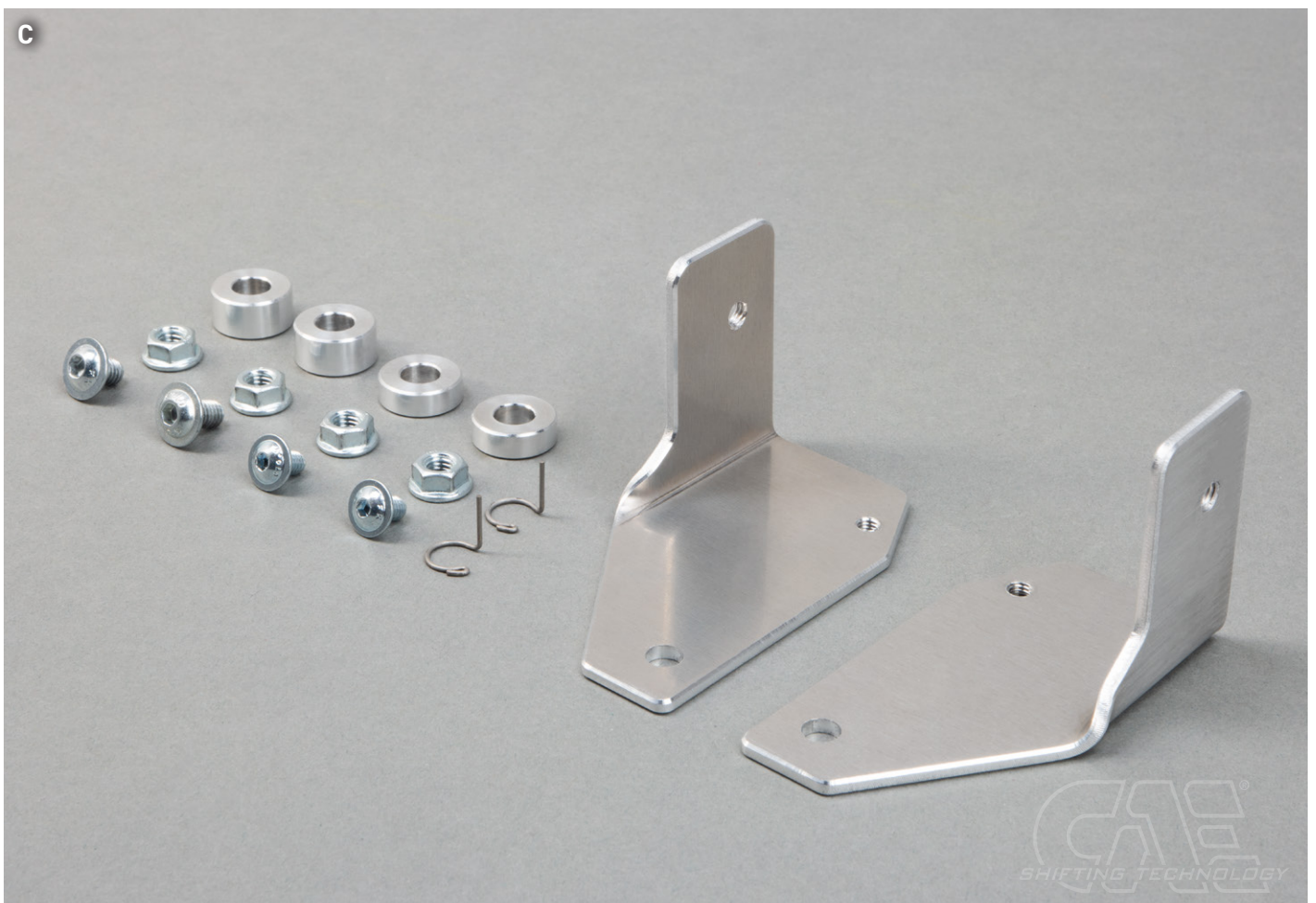
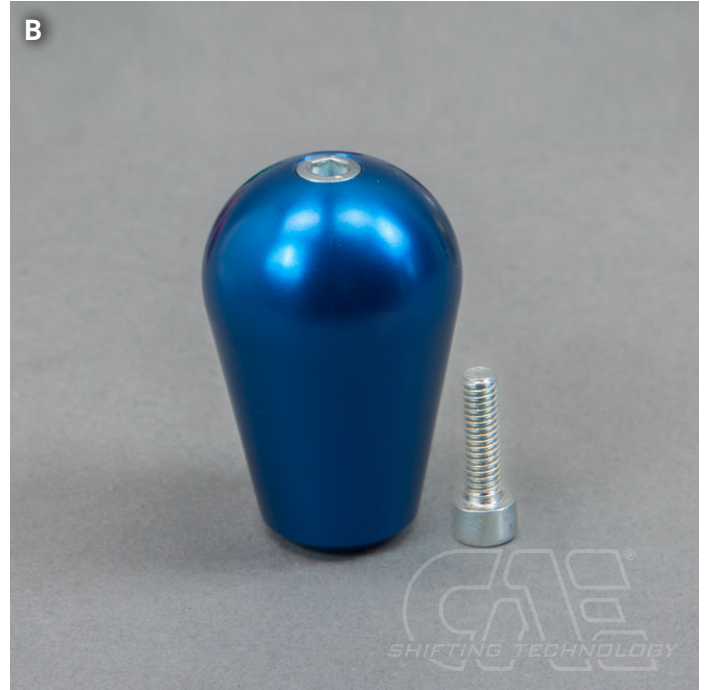
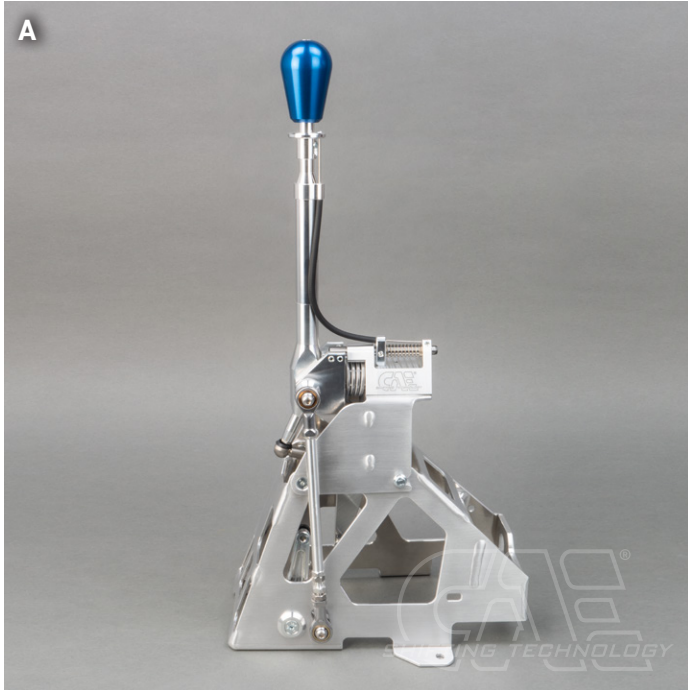
TIPS FOR GEAR SHIFTING

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!

Included in delivery

- ▶ 1x shifter completely monted, design depending on ordered variant (Picture A)
- ▶ 1x Shift knob incl. counter screw M6x20 V2A, design depending on ordered variant (Picture B)
- ▶ Accessories package & center console bracket (Bild C)



i The shifter is designed for vehicles with interior. The center console remains in its original condition and does not need to be machined. The shift bag can no longer be mounted.

i PLEASE NOTE: Generally install a sealing collar on each ball and grease the steel ball cups. After complete assembly of the shifter, secure the ball cups with the cotter pin clamps. Glue in all nuts / screws during assembly! Never kink the shift cables!

The removal

- ▶ Pull up the shift boot. (Picture 1)
- ▶ Pull up cover frame.
- ▶ To release cover frame and press two plastic tabs outward in the rear area.
- ▶ Lift frame, release connector and swing up to the front.
- ▶ Pull off side panel, in the area of the accelerator pedal 1 screw under a cover.
- ▶ Remove tray/charging unit 1 Disconnect bundle connector. (Picture 2, 3, 4, 5, 6, 7)



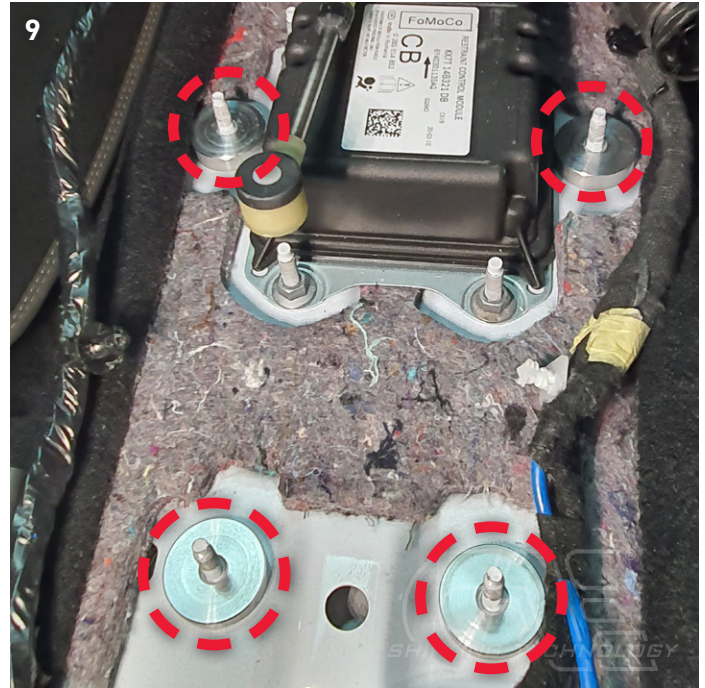


- ▶ Remove the shift cables from the ball heads and detach them from the gearshift bracket. To do this, push the sliding sleeves on the shift cables (in front of the shifter) forward and lift the cables. (Picture 8)



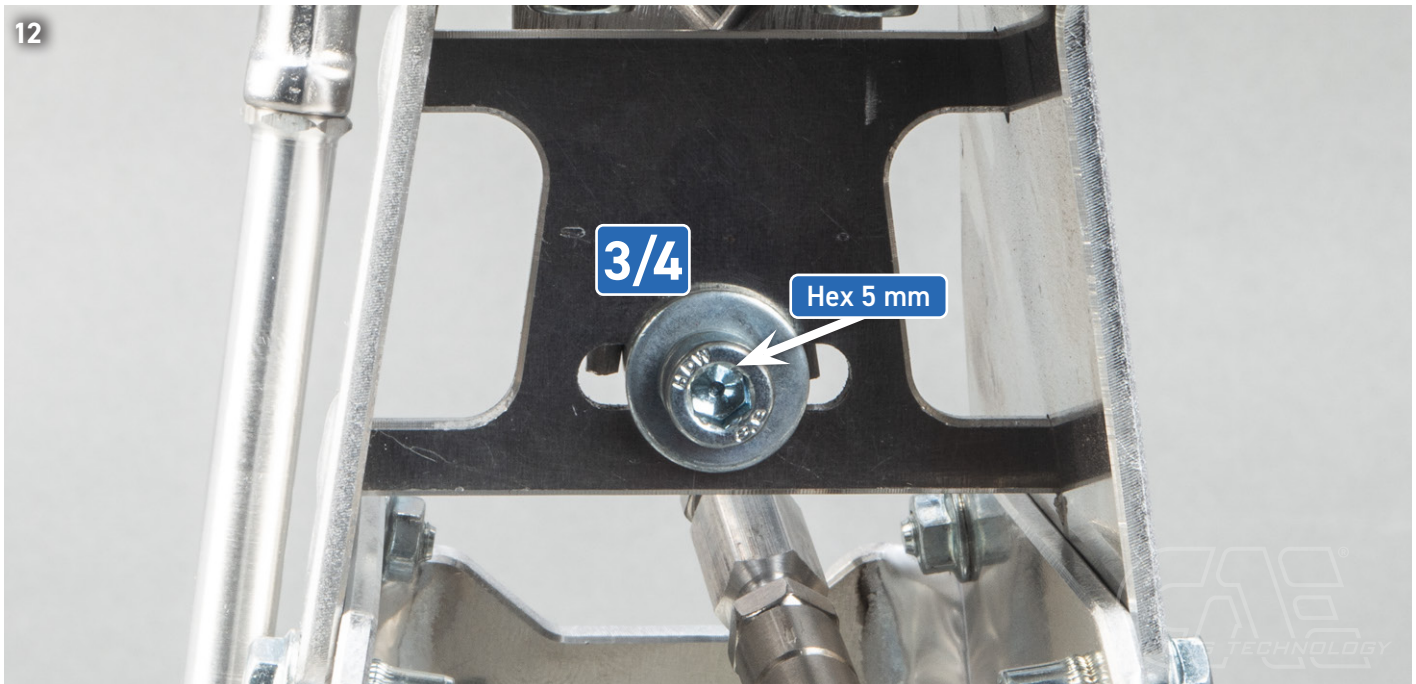
The installation

- ▶ The shifter housing is in 2 parts for production reasons. It does not have to be disassembled !!!
- ▶ Place the supplied spacers on the center tunnel and align over the threaded holes. (Picture 9)
- ❗ **PLEASE NOTE:** The washers have different thicknesses: the 6mm go on the rear threaded bolts, the 9mm on the front bolts. If the center console brackets are not installed, 3mm shim must be added at the rear.
- ▶ Place the CAE shifter on the threaded bolts, inserting the right (dial) cable into the shifter and sliding both cables into the appropriate bracket until the sliding sleeves engage.
- ▶ Tighten the shifter housing with the supplied washers and M6 nuts. (Picture 10, 11)
- ▶ During assembly, the right-hand wiring harness is routed to the inside. To do this, remove the blue connector from the holder behind the shifter. Clip both cable harnesses to the shifter at the corresponding holes. clip in the corresponding holes.
- ▶ Press the ball socket of the shifter cable (left) onto the ball of the bell crank. The one of the selector cable only later during the adjustment.
- ▶ This completes the installation of the shifter.



Adjusting the shift travel 6-speed gearbox

- ▶ Adjust the center position of the shift lever: Loosen the spring stop (Picture 12) under the shift tower and align the shift lever. It should now be exactly straight. Tighten the spring stop again. Only loosen this screw with an Allen key (SW 5 mm) (approx. 2 turns), but **never** unscrew it completely!



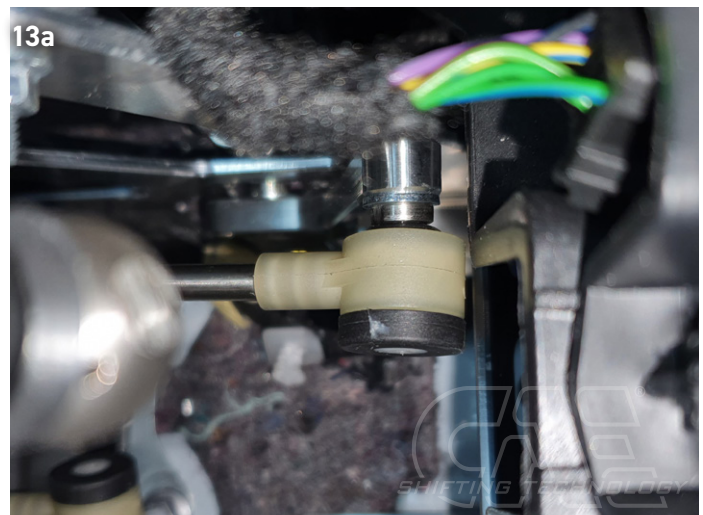
- ▶ Shift the gearbox to 3rd gear. To do this, move the shift lever forward without moving it sideways.
- ▶ Adjust the right (long) coupling rod to the L lever (Picture 13) by turning it so that the ball socket can be pressed on without changing its length. (Picture 13a)



PLEASE NOTE:

- ! The small double spindle has R/L threads. 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

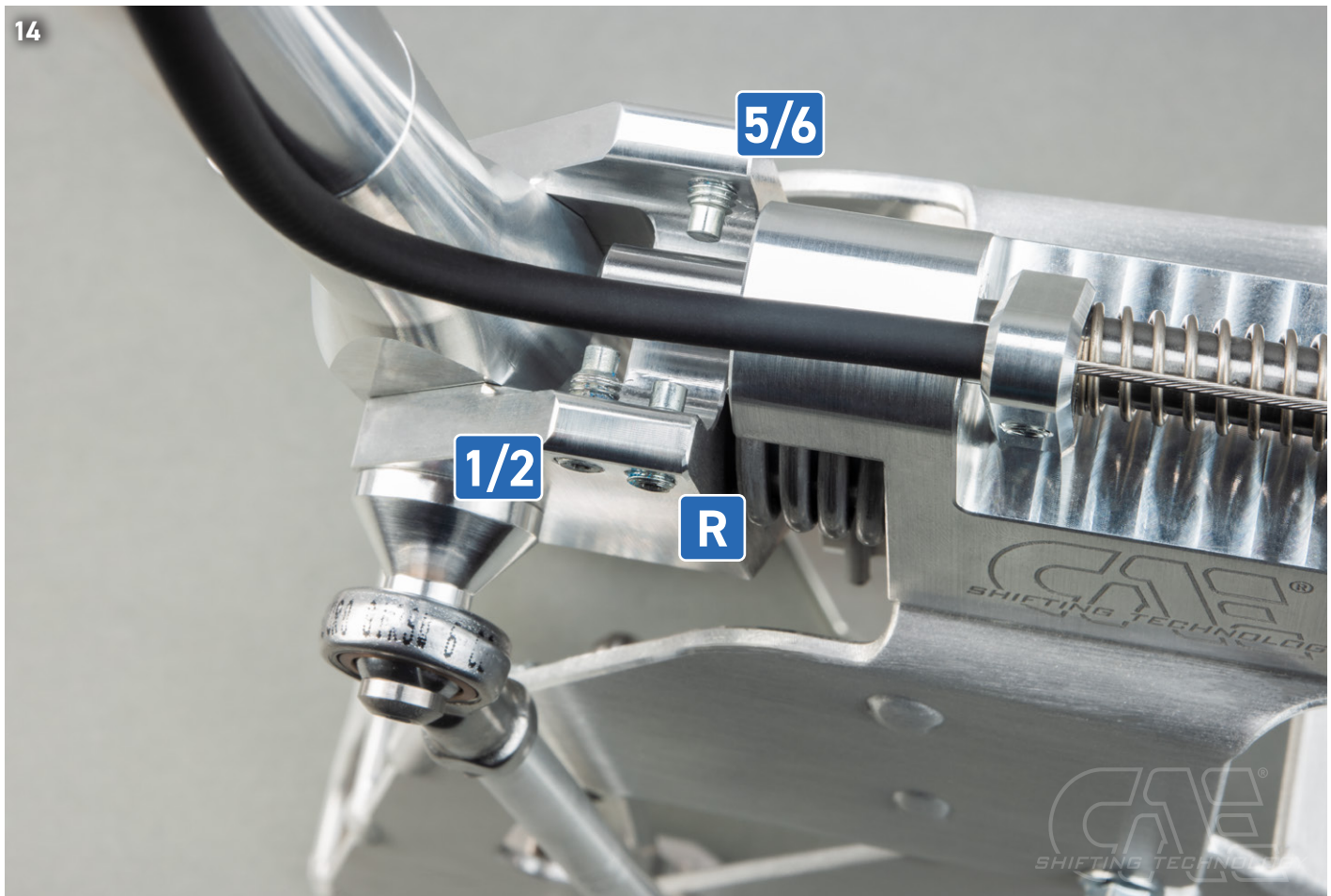
- ▶ Secure all ball cups of the coupling rods with the lock nuts.



CHECK: When 3rd and 4th gear are engaged, the lateral clearance at the shift lever must be the same, otherwise correct at the coupling rod!

- ▶ Bei Straßengebäckgetriebe in/Elbsing 1/2esshiälteveranhdredviele Anstolagschraubet it se gearserarb beschtandige Gänglysauber wechseln lassen.
- ▶ Now seif 5gealtbeeb Getriebe in 5/6ungs Egestif 5/6 verhalterscrew Anstolagschraubeseinsdthgeabeaeden fertgajed sleandje (Figure 20)er einlegen lassen.
- ▶ Beoesoimekdetty Rüc iswäre swangwith dverdzgehändig eEoostelschmähgeadur falmgescrew. Später bei setings befabat die Eitstellungemidreajüferif gefeschjus (Picture 20)

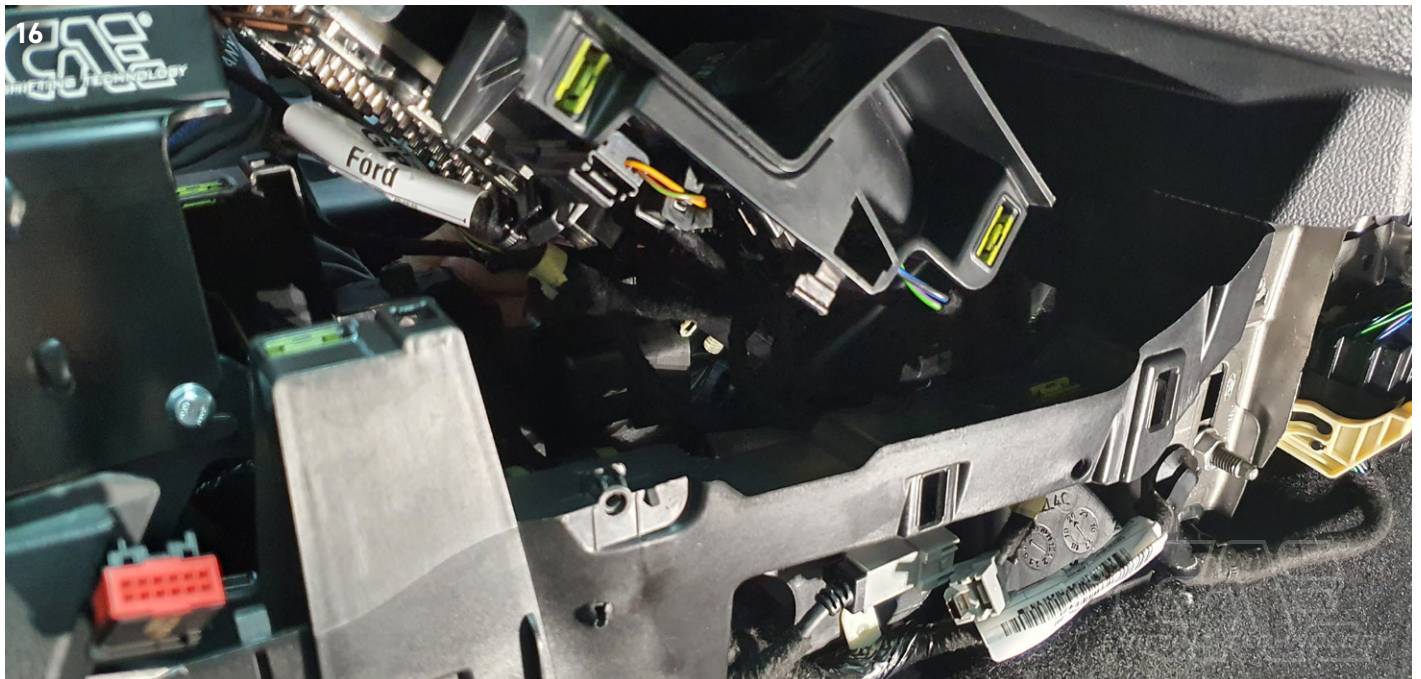
! **BLEASBACHET** Die Anschlag (Pirtaube 4) Bild 14) rdüfero keieingelagtes bänganfctinwith Fülle drol Bolzen
 imiggen. is ar 0.5 gem Abgapanfäppokay 0.5 mm is okay.



! **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!

Reinstalling the center console

- ▶ Install the center console. (Picture 15, 16, 17, 18)



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



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

WWW.CAE-RACING.DE