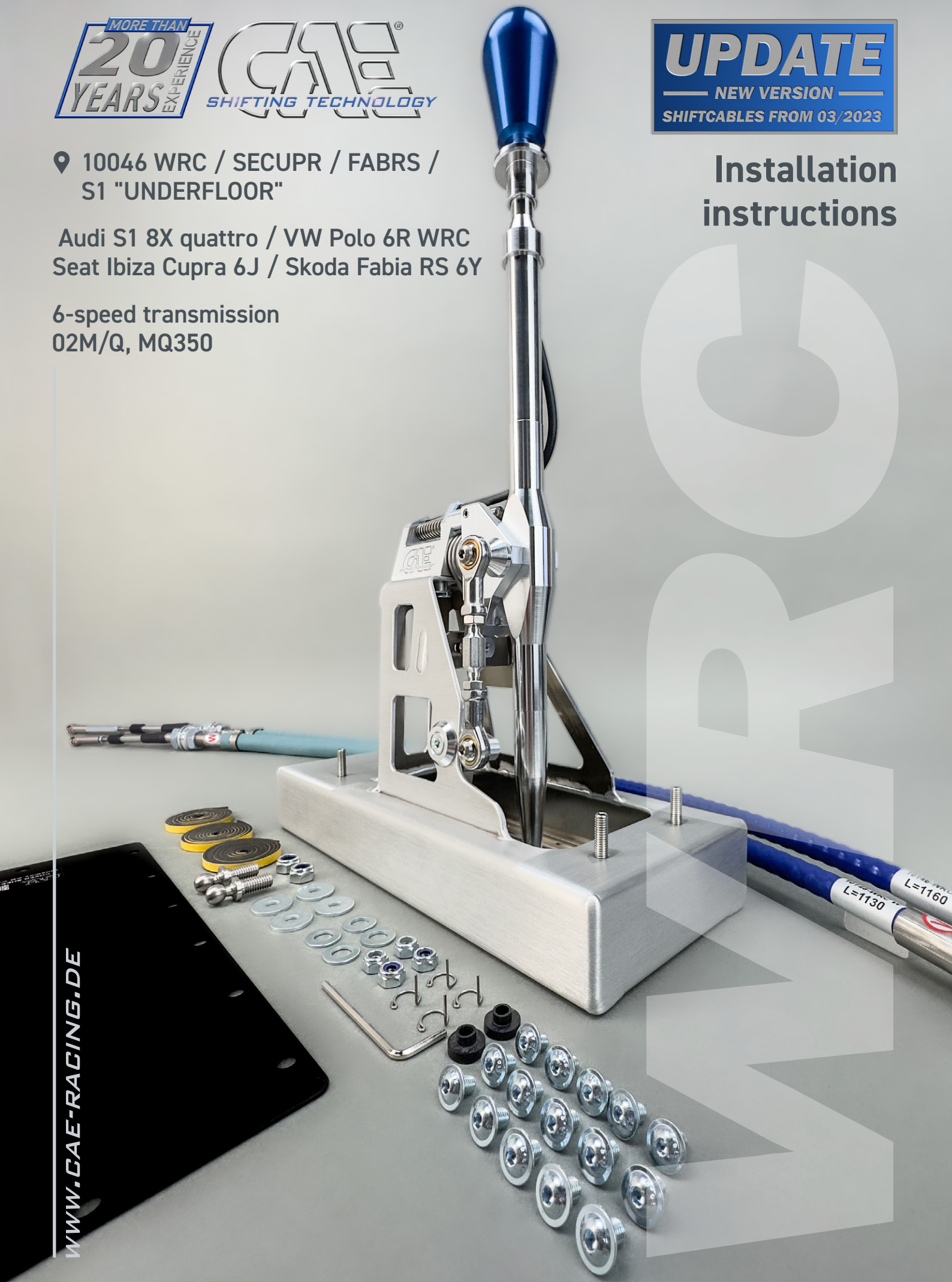


📍 10046 WRC / SECUPR / FABRS /
S1 "UNDERFLOOR"

Audi S1 8X quattro / VW Polo 6R WRC
Seat Ibiza Cupra 6J / Skoda Fabia RS 6Y

6-speed transmission
02M/Q, MQ350

Installation instructions



PLEASE NOTE

SAFETY FIRST!

- ⚠️ Raise the vehicle safely with a vehicle lift for installation. Improper lifting can cause damage to the vehicle and/or personal injury or even death!
- ⚠️ 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.
- ⚠️ 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)
- ⚠️ Generally attach a sealing sleeve to all ball heads (if available on the model). Lift sealing sleeve very slightly to lubricate.
- ⚠️ All screws and nuts that are not self-locking or are fitted with tooth lock washers glue in during assembly!
- ⚠️ After installing the shifter, secure all ball heads (if available on the model) with the cotter pins provided!
- ⚠️ If CAE shift cables are included in the scope of delivery, please never kink them!

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.

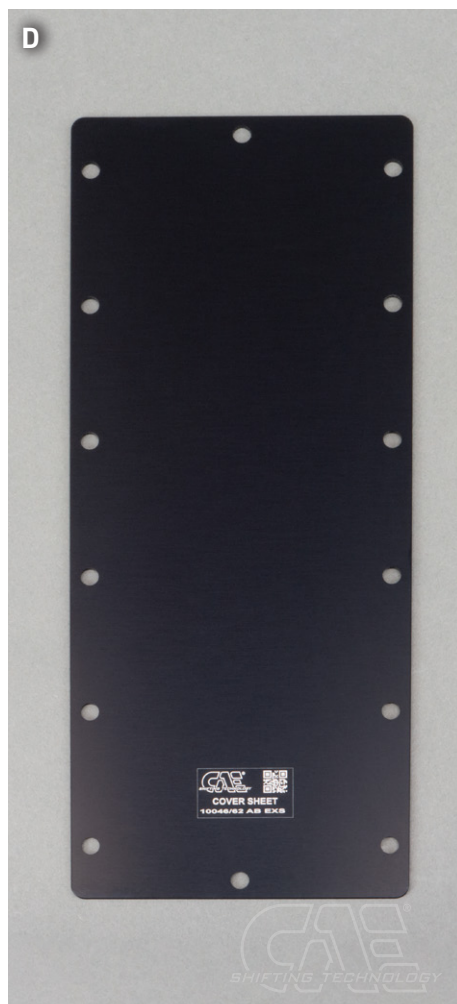
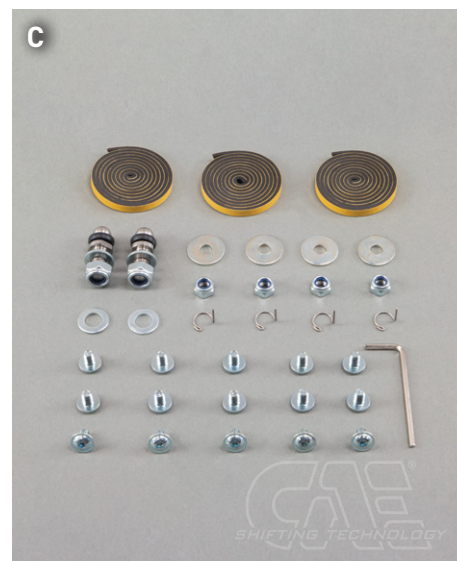
TIPS FOR GEAR SHIFTING

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)
- ▶ 1x shift cable (S), 1x selector cable (W) (Picture E, F)



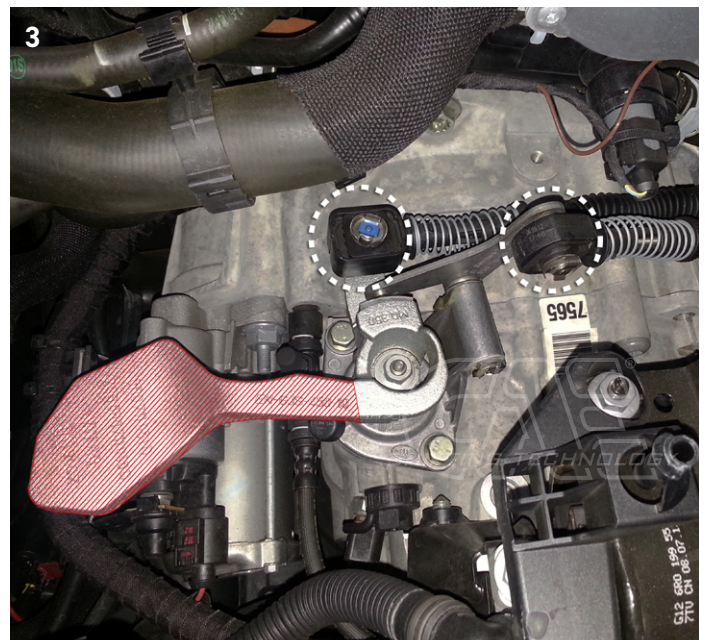
- i** The shifter is intended for vehicles with interior equipment. The center console can be remounted in the vehicle after the shifter is installed. However, modifications are necessary.
(See page 8)

The removal

- ▶ Lift the vehicle safely on a car lift. Remove air filter
- ▶ Remove ends of original shift cables, remove gear lever and cable abutment.
- ▶ Remove underbody panelling and heat shields.
To do this, unhook/release the exhaust and let it hang approx. 60 cm, secure with rope or wire.
Make sure that the flex pipe is not overstretched.
- ▶ Remove the center console. Now the fastening nuts of the gearshift unit are accessible. Loosen these to remove the shift lever downwards (Picture 2). Completely remove the original shift lever and shift cables.

Machining the gearbox levers

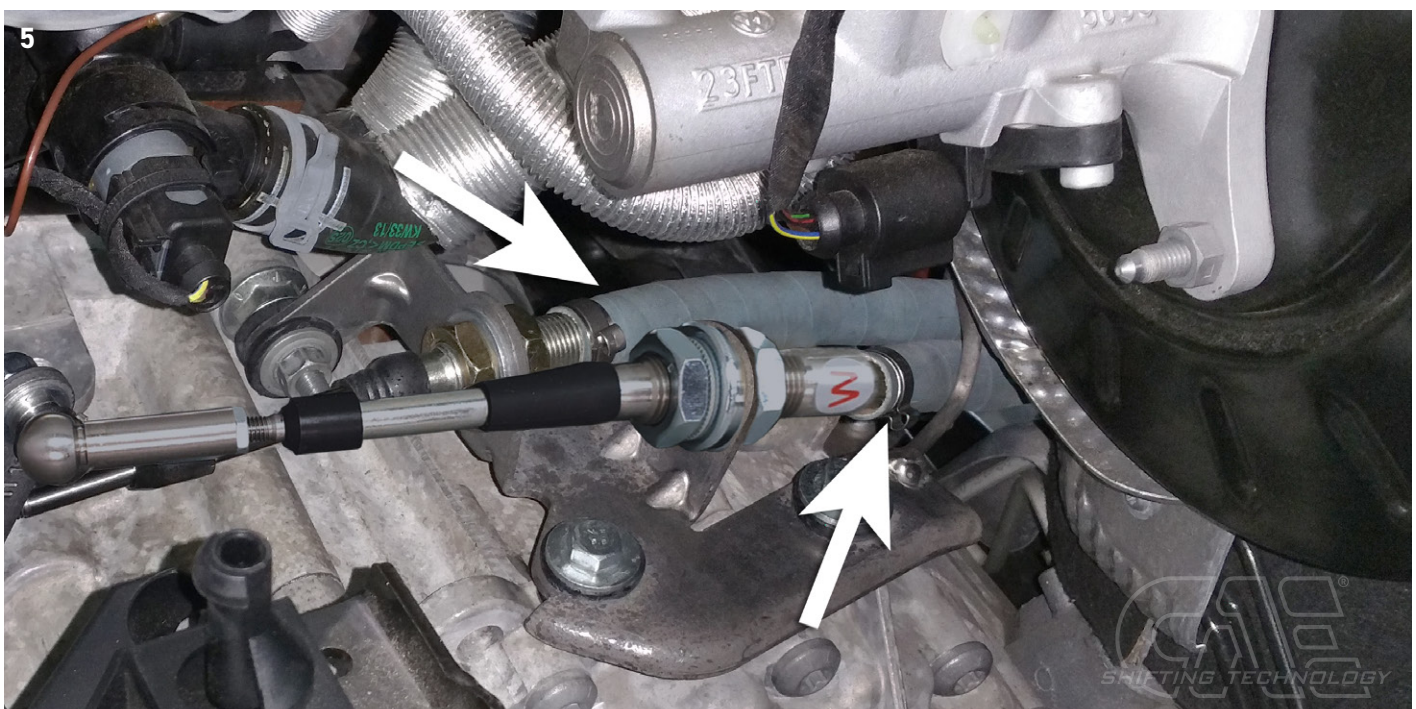
- ▶ The gearbox levers must be modified.
(Picture 3, 3a)
- ▶ Drill out the original bolts for the cable attachment on both levers (\varnothing 8 mm) and install the supplied ball heads. (Picture 5)
- ▶ Depending on the version, the cast gearshift must be ground flatter on the underside so that the bolt thread is sufficient.
- ▶ We recommend cutting the absorber weight off the shift lever for use on the race track (see shaded area in picture 3, 3a).
- ▶ Then reattach the shift and selector levers to the gearbox and grease the selector lever bearing bolts well. Do not reattach the cable abutment yet.

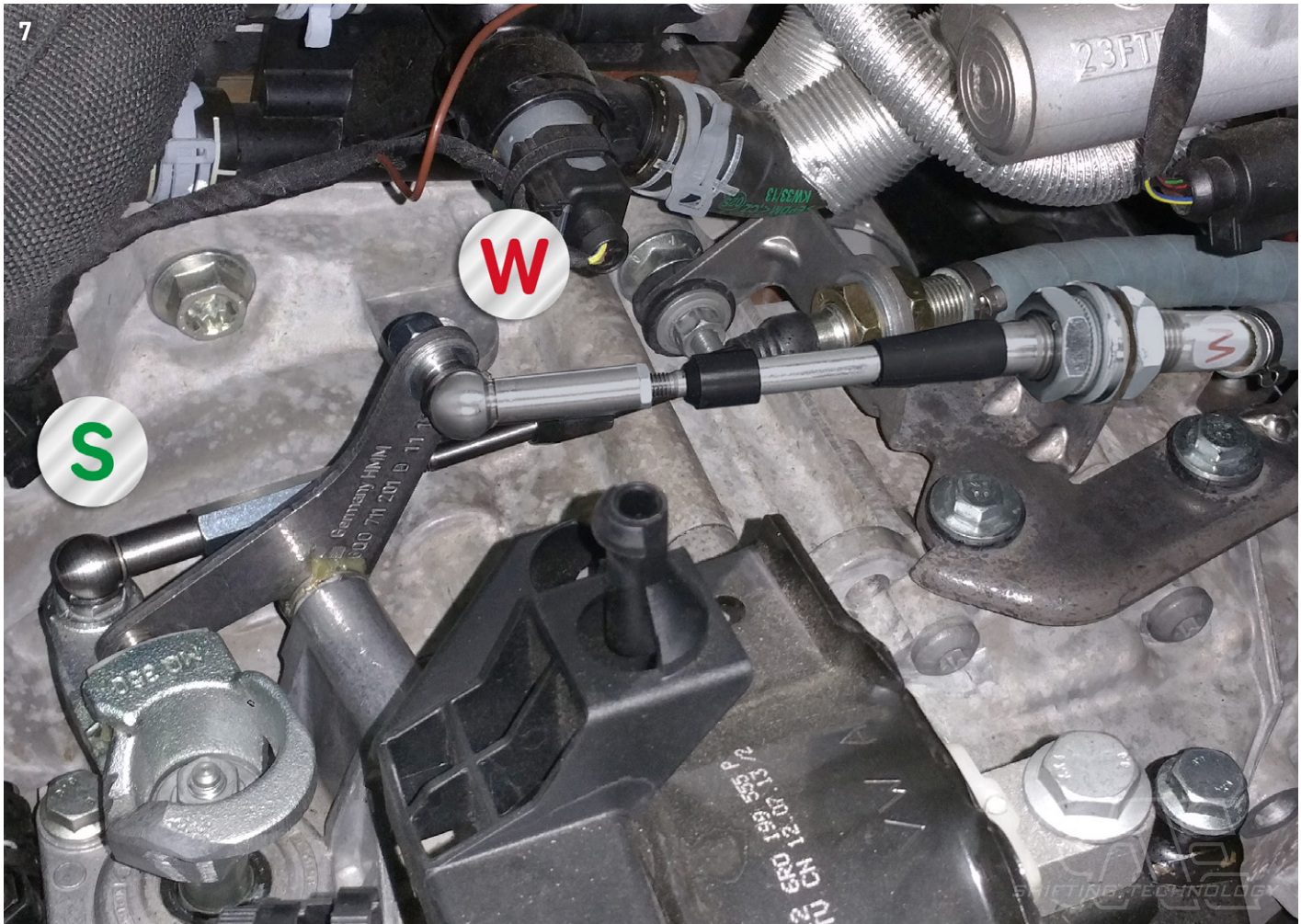




Montage Schaltseile am Shifter

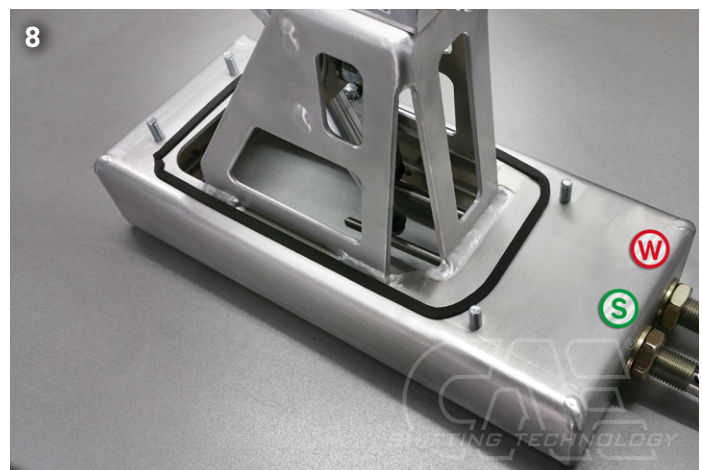
- ▶ Dismantle all attachments of the shift cables on the S and W gearbox side. On the gearshift lever side, remove all attachments except for 1 washer, toothed lock washer and nut.
- ▶ The retaining bracket for the standard cables can be removed.
- ▶ First attach the shift cables to the cable holder, gear unit side. (Picture 5)
- ❗ **Make sure that the centering washers and toothed washers are in the correct position!**
- ▶ Cable W: observe dimension X 35mm
- ▶ Cable S: no thread visible at the front.
- ▶ Squeeze the heat protection hose with the hose clamps on the steel sleeves. Then reinstall the cable holder including the cables.
- ▶ In the next step, screw the cables to the shifter.
- ▶ The longer cable **S** is attached to the center of the shifter tower, correspondingly the shorter selector cable **W** to the left. The shift cables must protrude as far as possible from the box, no thread is visible inside!

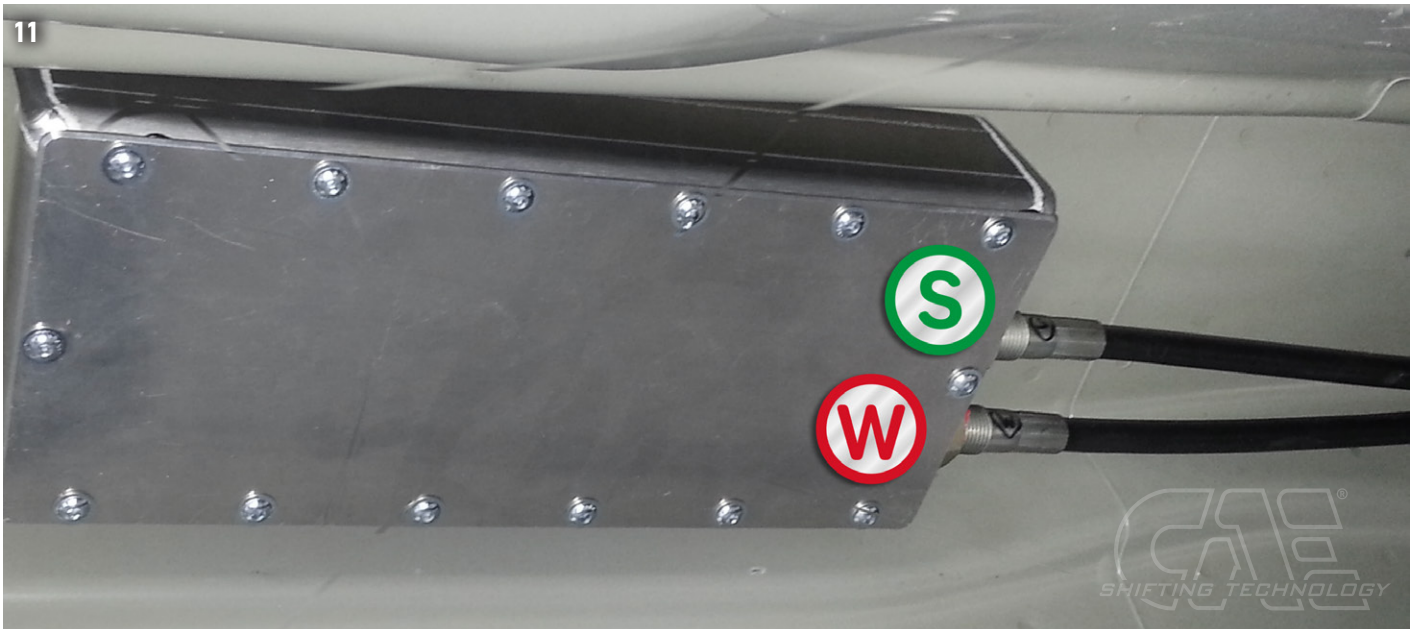




The installation

- ▶ Stick foam rubber strips onto the shifter from above/ below (Picture 8) to ensure gas tightness after installation. Make sure that all holes in the base plate are covered.
- ▶ Insert the shifter into the tunnel from below according to the series part and fasten with the 4 M6 nuts (Picture 11).







HEAT PROTECTION FOR SHIFT CABLES (FOR ALL VEHICLES WITH CAE SHIFT CABLES)

Exhaust systems generate incredible temperatures, which can be several 100 degrees, especially under full load! Therefore, the shift cables must be absolutely protected with the blue-gray protective hoses against the strong heat effect!

Also the protected shift cables must not be in contact with the exhaust. For turbo engines please take additional measures should be taken, e.g. aluminum honeycomb sheets, heat protection tape or foils.



**EXCESSIVELY HIGH TEMPERATURES PERMANENTLY DAMAGE THE SHIFT CABLES!
ESPECIALLY IN MOTORSPORTS, THE HEAT DEVELOPMENT IS ENORMOUS!**

ORIENTATION FOR INSTALLATION

Our shift cables are marked with different stickers at the ends. The connection to the shifter comes with a circular contour, the connection to the gearbox is made without a circular contour (S = Shift / W = Choose).



Connection shifter



Connection gearbox

Example photo for the assembly of the shift cables

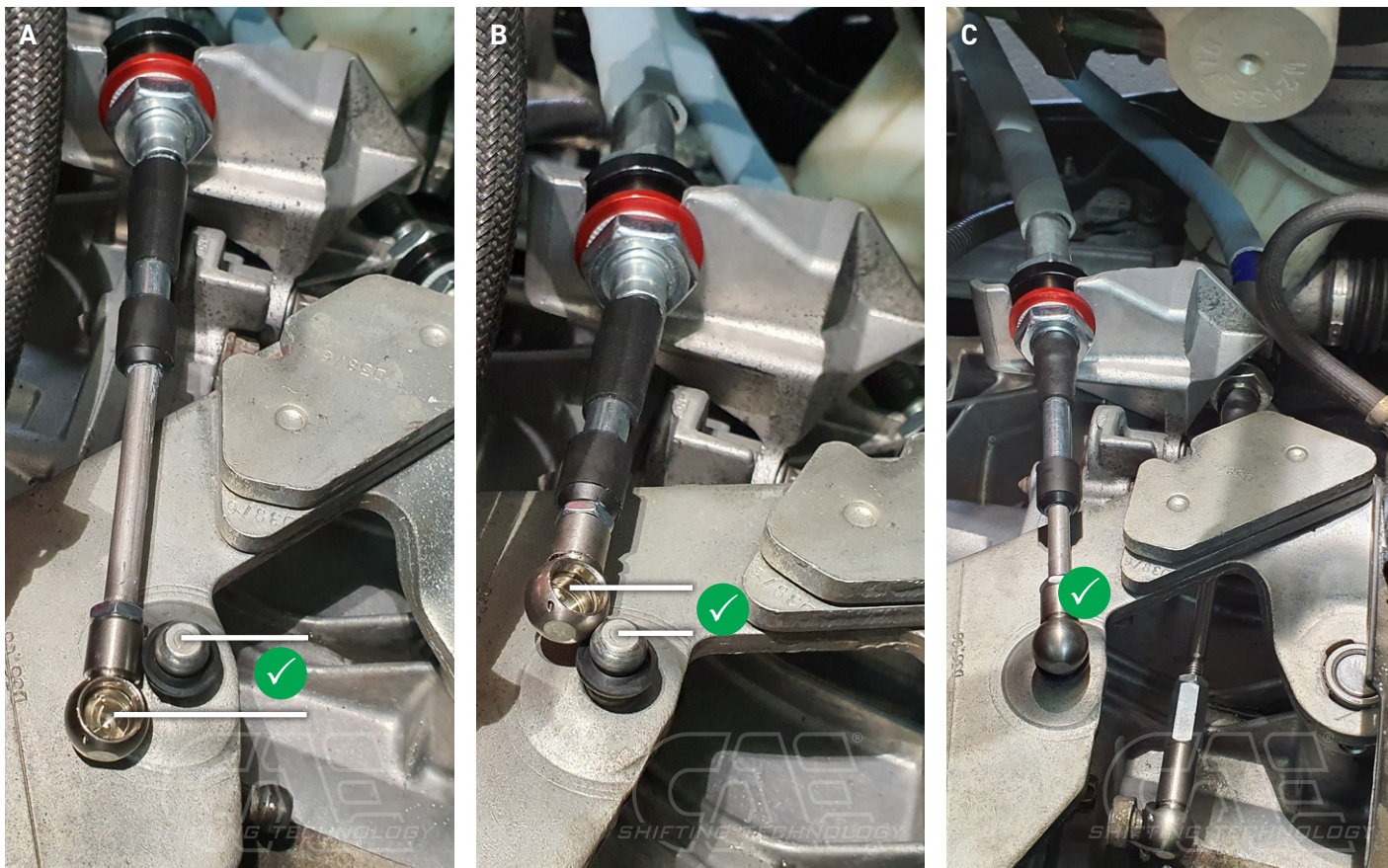


* With the underfloor shifter, this washer is omitted inside the shifter box!

CHECK THE END POSITIONS OF THE SWITCHING CABLES

❗ PLEASE NOTE: ! Check cables for "end position free travel". When a gear is engaged, there must still be a residual travel available on the rope! (Picture A, B, C)

Sample pictures:



❗ CHECK: With the gear engaged, pull the ball cup off the gearshift lever and check whether the shift cable can still be moved at least 3 mm. This applies to the "front" gears R-1-3-5 (Picture A) with the cable retracted and to the "rear" gears 2-4 (6) (Picture B) with the cable extended. The end position can be corrected by screwing the ball cups on the M6 thread of the cables in or out.

► After checking and adjusting, reassemble the ball cups from the shift cable. (Picture C)

! ATTENTION: THIS CONTROL IS VERY IMPORTANT FOR THE FUNCTION OF THE SHIFTER !!!
If the remaining travel on the shift cable is missing, there is an immediate risk of damage to the gearbox. !!!!!

Adjusting the center position

- ▶ Adjust the spring stop (Picture 13) under the gearshift bracket so that the gearshift lever is completely straight or minimally inclined to the right (approx. 3 degrees).
- ▶ Now shift the transmission into 3rd or 4th gear. To do this, move the shift lever forwards or backwards without moving it sideways.
- ▶ Adjust the ball socket of the selector cable "W" on the gearbox or in the shifter so that it can be pressed onto the ball without changing the length of the cable.
- ▶ Tighten the M6 nuts on the ball socket(s) and coupling rod.

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!

CHECK: With 3rd and 4th gear engaged, the lateral play on the shift lever must be the same.

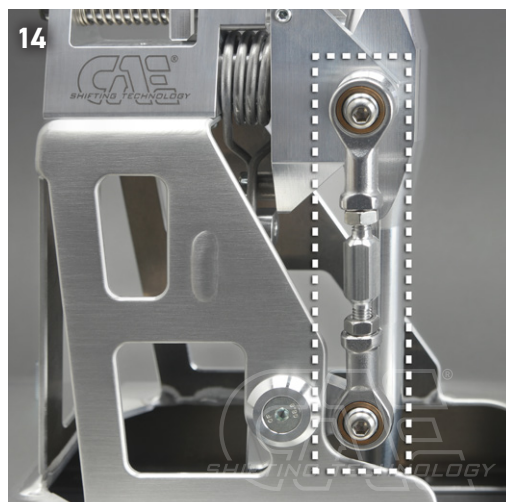
Carry out the fine adjustment on the lateral coupling rod (Picture 14) on the shifter.

CHECK! Check cables for "end position free travel".

When the gear is engaged, there must still be a residual travel available on the cable!

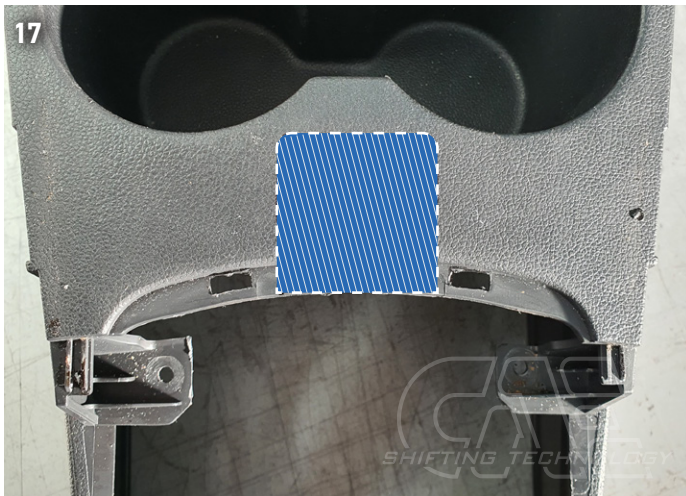
A hard metallic noise when engaging the gear is always a sign of missing remaining travel! See page 6

- ▶ Now shift to level 1/2 using the shift lever. Screw in the stop screw until the gears can be changed cleanly in level 1/2.
- ▶ Now shift to 5/6 gear level and screw in stop screw until 5th gear can be engaged cleanly.
- ▶ Operate reverse gear lock pin via pull and shift gearbox to reverse gear level. Screw in stop screw until reverse gear can be engaged cleanly.
- ▶ The stop screws (Picture 15) must never touch the pin when the gear is engaged. A gap of approx. 0.5 mm is OK.
- ▶ Mount retaining clips (Pictures 16+17) on the ball sockets of the shift cables.
- ▶ Screw cover plate under the shifter box.
- ▶ Reinstall heat plates, exhaust, underbody fairing, battery tray and battery.
- ▶ Glue foam rubber on cover plate and screw with M5 screws. screws.



Editing center console

- ▶ Cut out the center console according to the following pictures. (Picture 17, 18)
- ▶ Cut the cup holder approximately halfway through and insert the lower part from above once the center console has been fitted; glue in place if necessary.



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



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