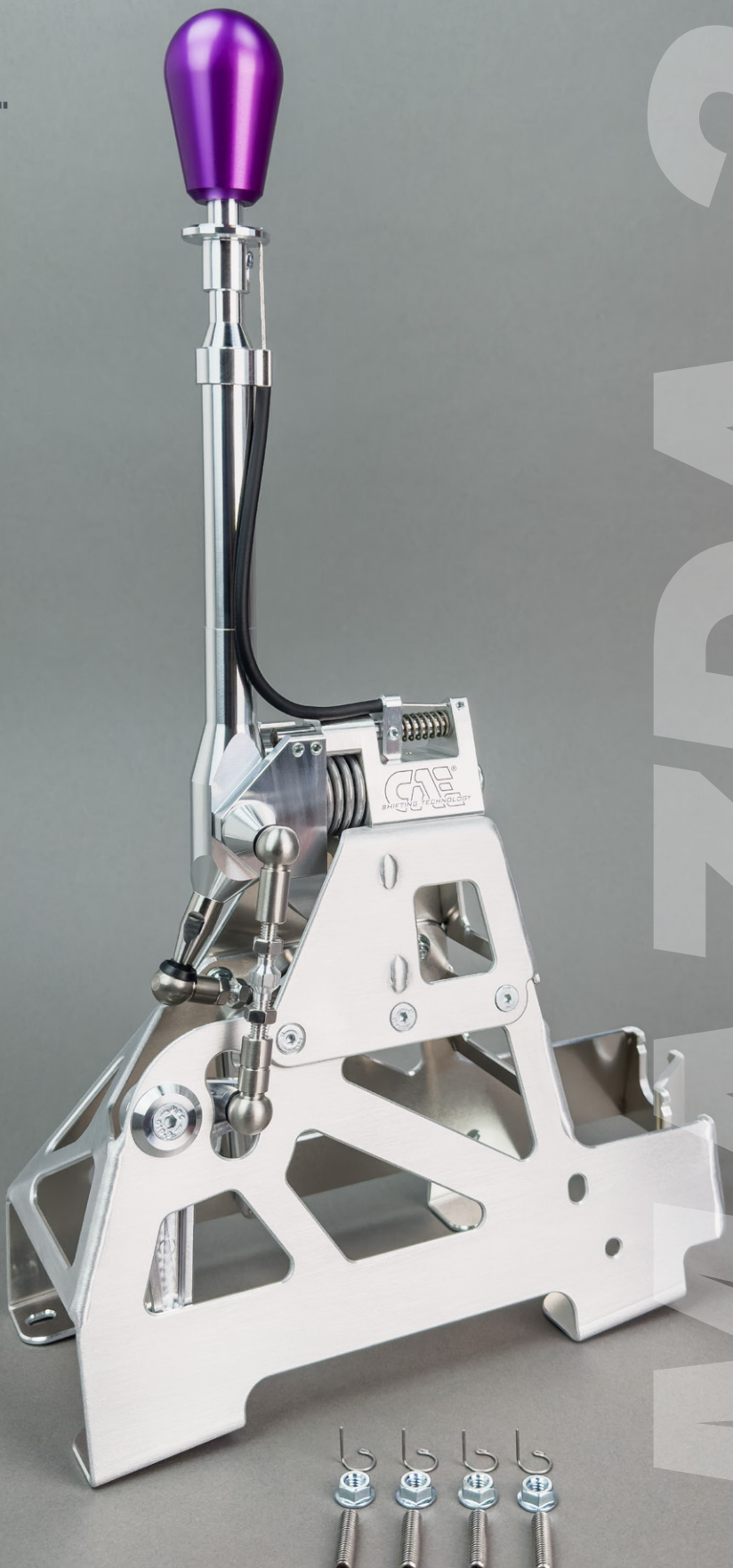
SHIFTING TECHNOLOGY

RACE THE ORIGINAL

# Installation Manual

10071BL

Mazda 3 MPS "BL"
6-Speed gearbox



MAZDA 3 MPS

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# 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

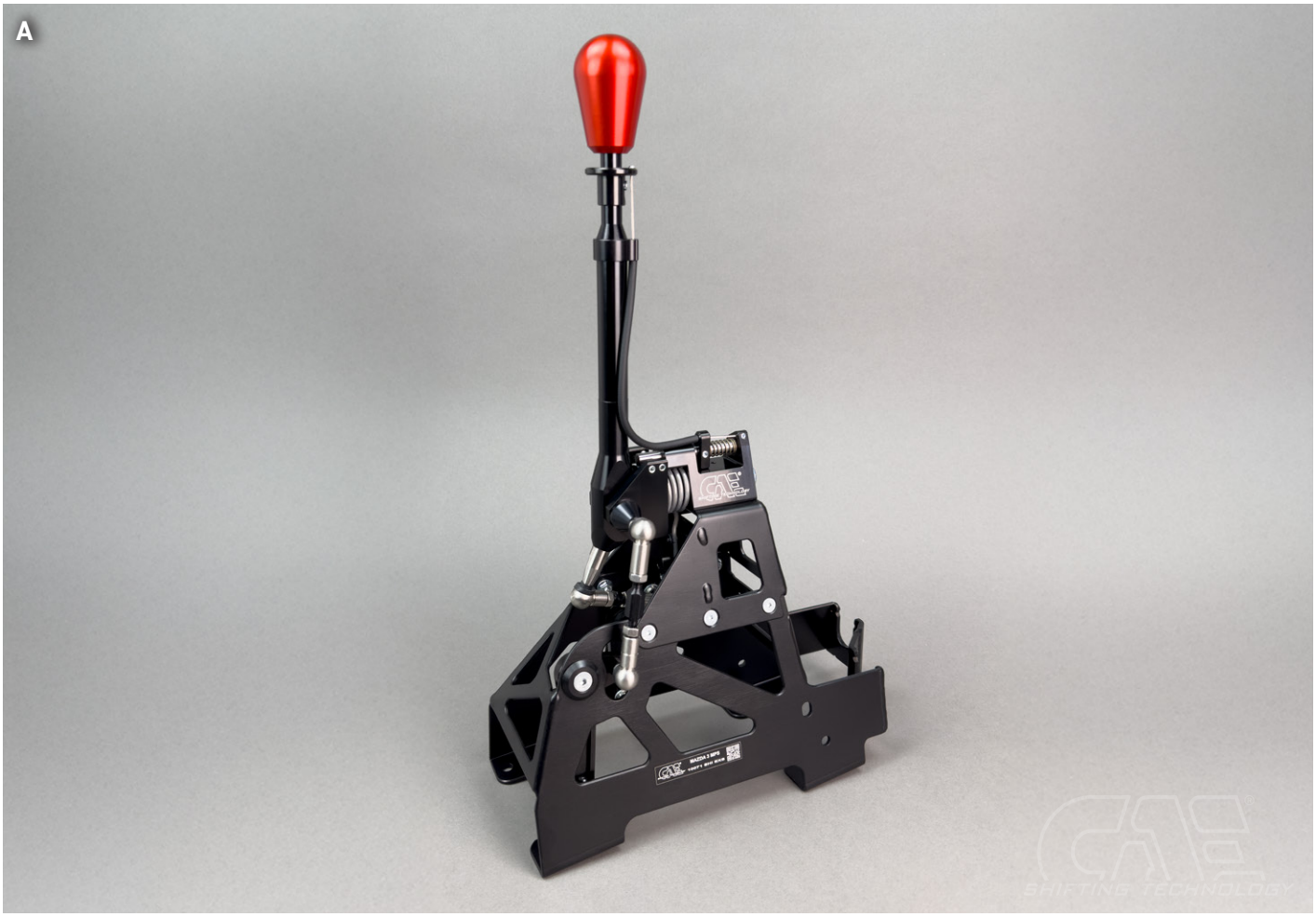
### ⓘ FORCE DOESN'T MAKES YOU FASTER – IT ONLY HARMS THE TRANSMISSION

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 (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 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)

A



B

C

ⓘ 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 is not required.

ⓘ **PLEASE NOTE: A lift is not required to install this shifter.**
**All work must be carried out inside the vehicle.**

## The removal

- Pull up the shift bag (Picture 1), remove the top cover of the center console.
  Remove the handbrake bag with cover.

- Remove the upper part of the center console completely, disconnect the connectors from the switches and pull the handbrake lever up as far as it will go.
  (Picture 1)

- Unbutton the shift cable ends/ball sockets from the shifter. Unclip the shift cables from the bulkhead plate by carefully pressing the two clips per cable holder together and pulling the cables upwards. Unclip the cable holder from the gearshift base. (Picture 4)

- Unscrew the 4 screws from the gearshift base and remove the original gearshift completely.
  (Pictures 2, 3, 4)

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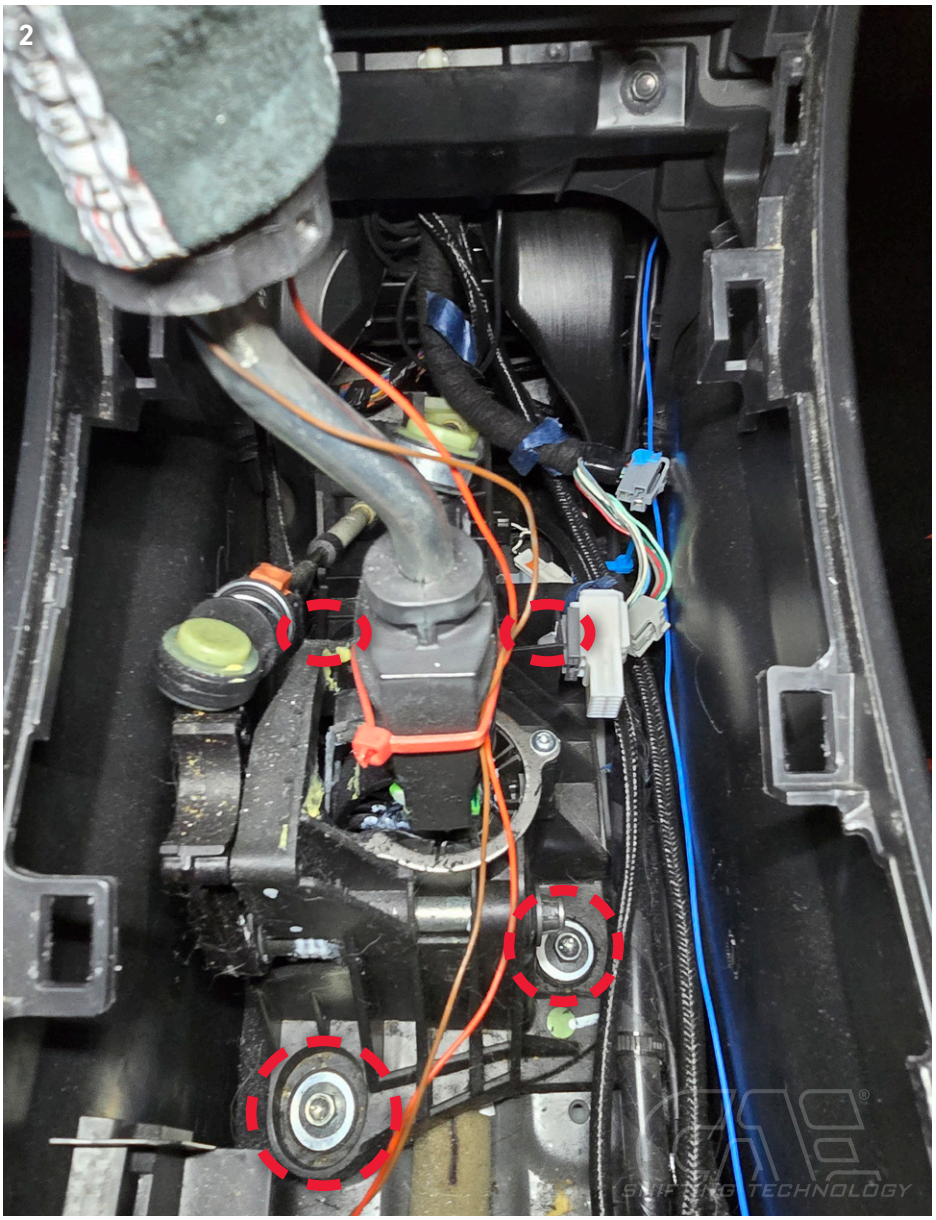

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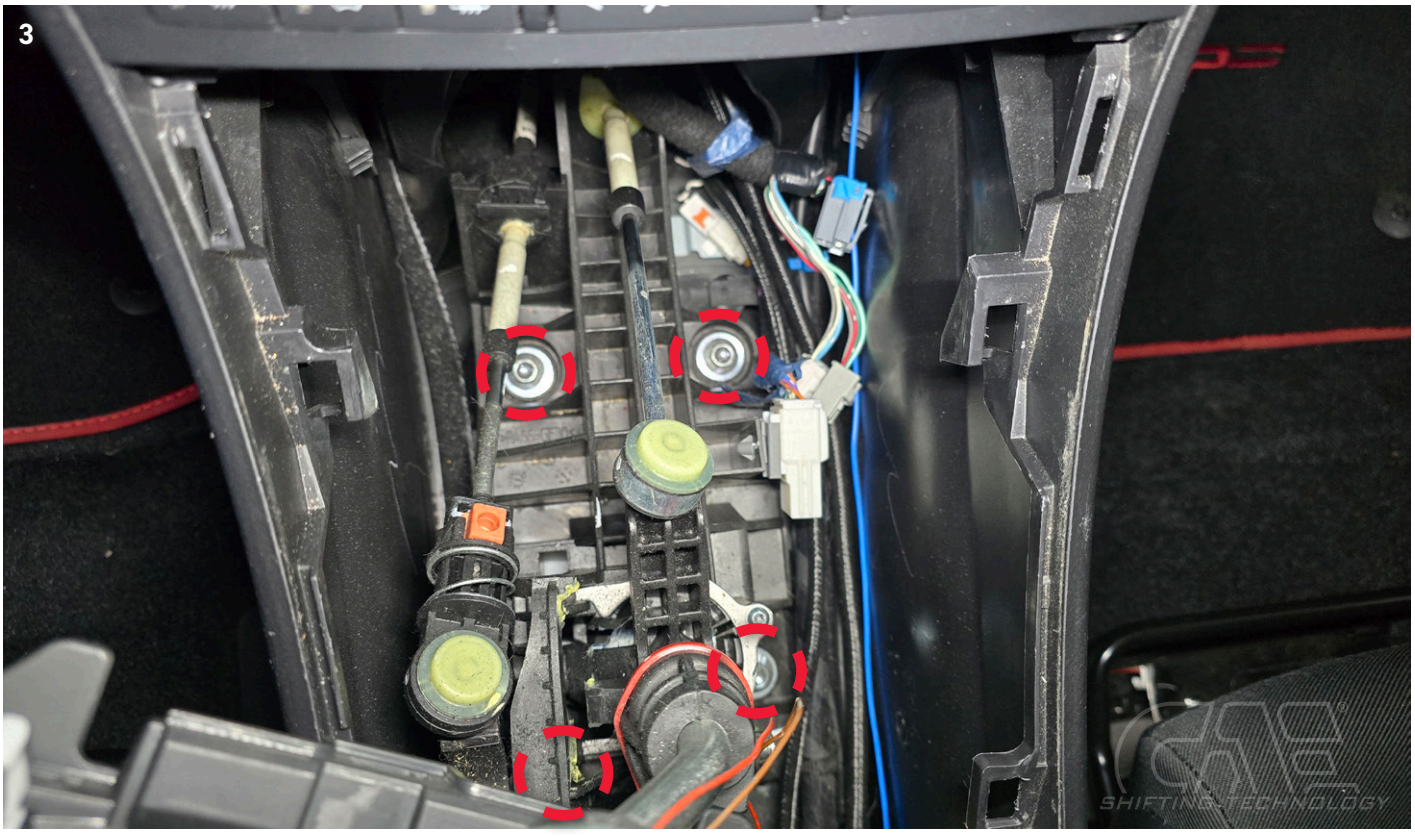
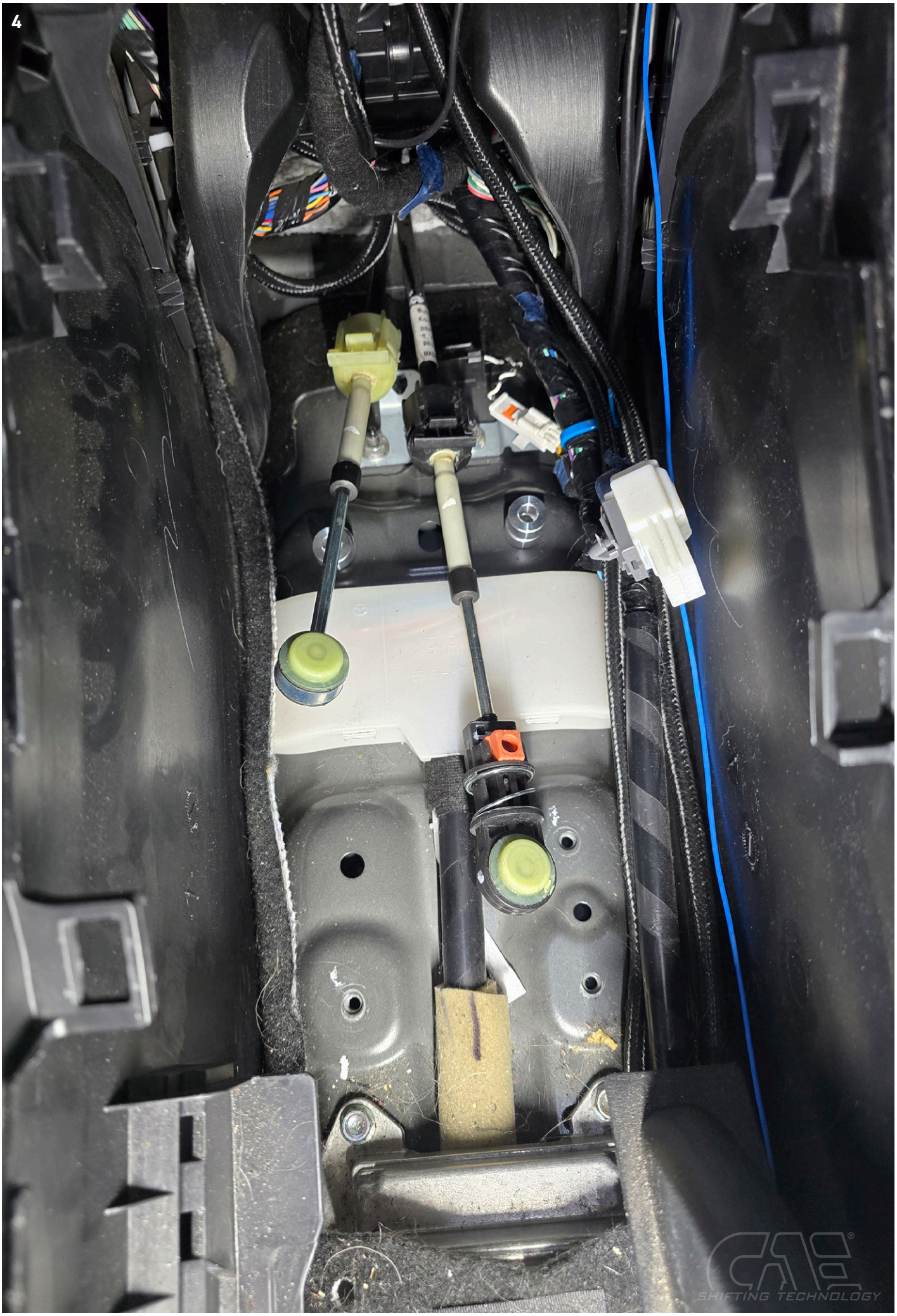



4
SHIFTING TECHNOLOGY

## The installation

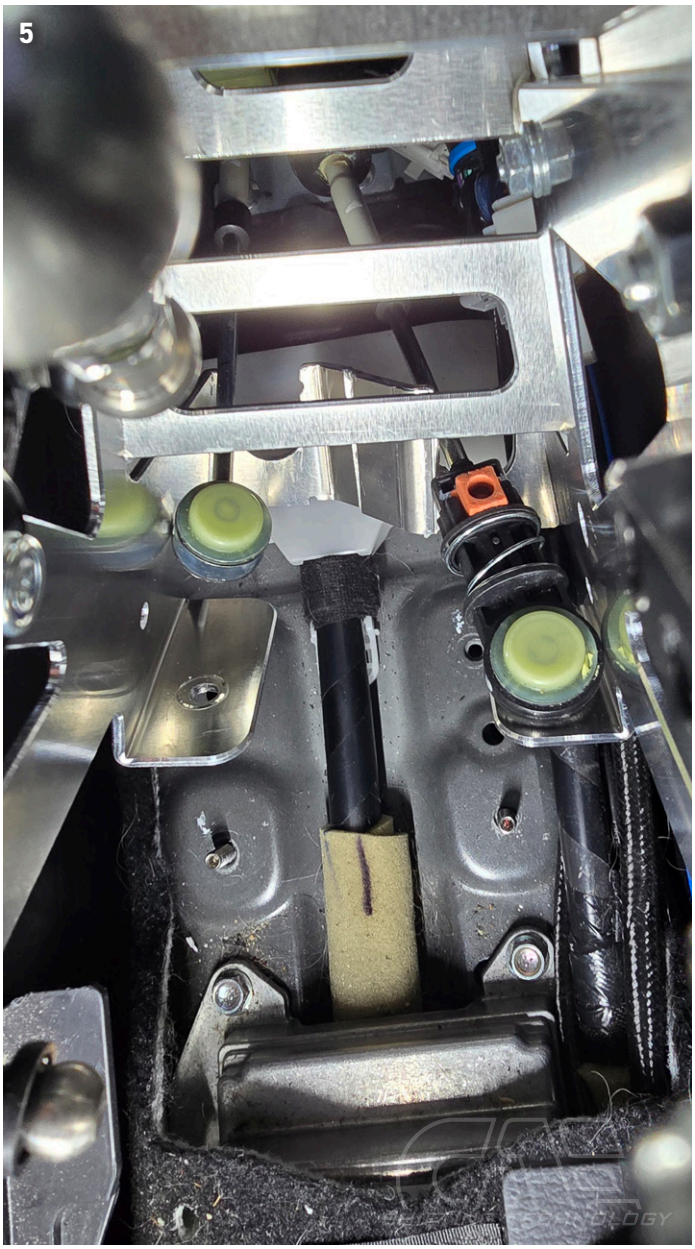
- Screw the 4 grub screws into the threads on the center tunnel.
  tunnel. At least 12 mm must protrude (Picture 5)

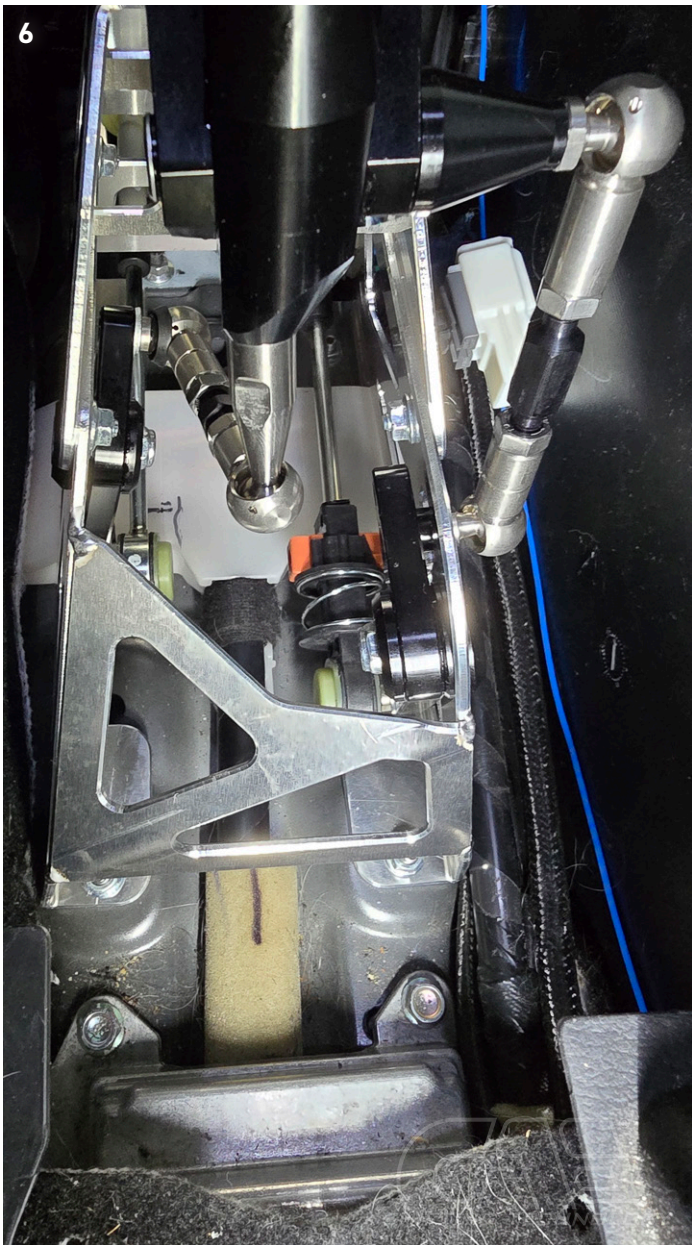
- Place the CAE shifter over the grub screws in the center tunnel and insert the shift cables into the shifter housing.

- Push the shift cables into the front plate from above until they click into place. Then press the ball sockets onto the lower balls of the L-levers.

ⓘ **PLEASE NOTE: Hold the left lever in place, otherwise the housing will deform and the lever will rub against the lower edge of the housing!**

- Tighten the shifter housing with the M6 nuts supplied.



## Adjustment of gear shift paths 6-speed transmission

- Adjust the center position of the shift lever: Release the spring stop (Picture 7) 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 into 3rd gear. To do this, move the gearshift forwards without moving it sideways.

- Adjust the right-hand (long) coupling rod to the L-lever by turning it so that the ball socket can be pressed on without changing its length. (Picture 8)

ⓘ **PLEASE NOTE: The socket with ring groove on the neck has a left-hand thread!**

7

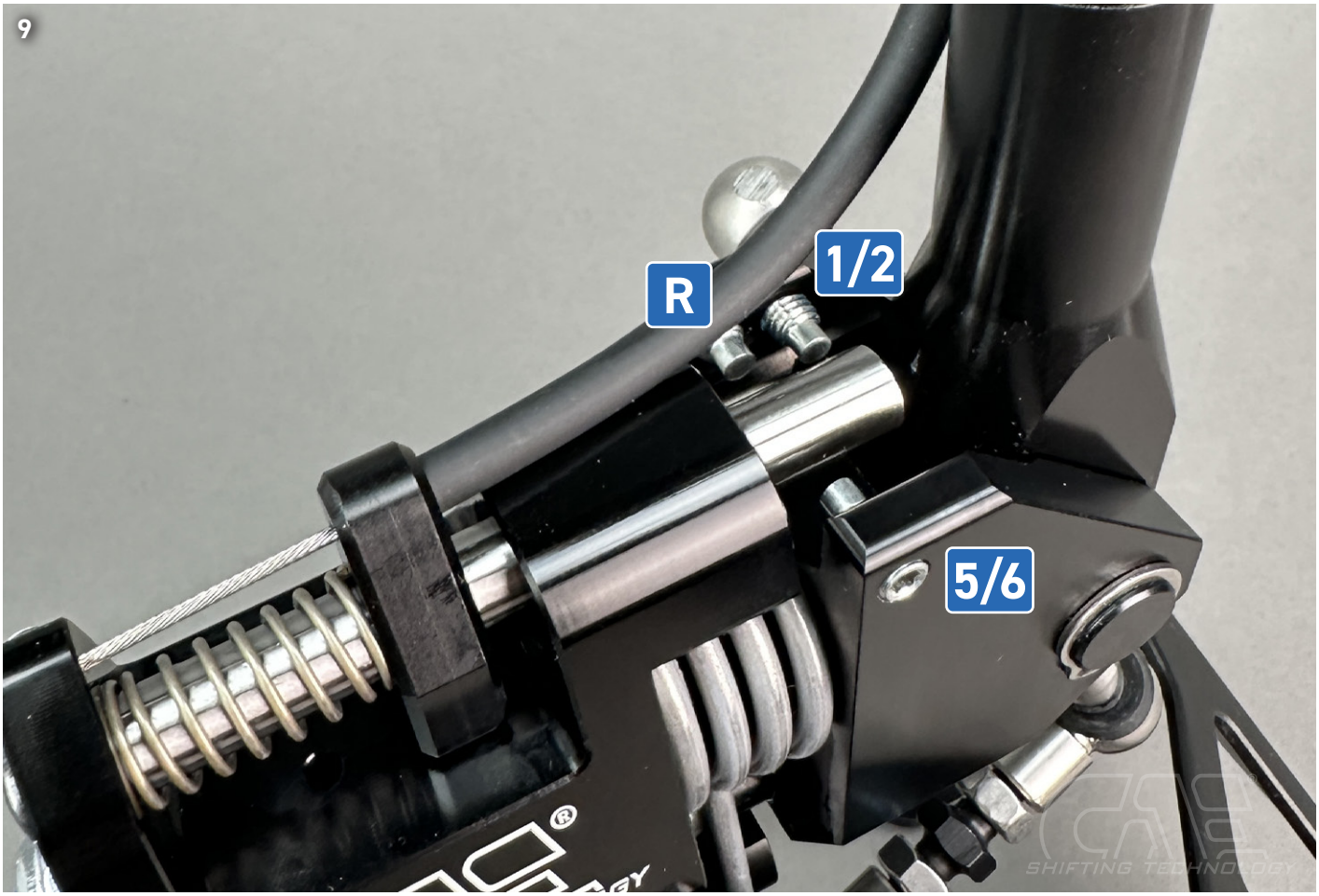

8

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

**TEST: With 3rd and 4th gear engaged, the lateral clearance at the shift lever must be equal, otherwise readjust at the coupling rod!**

- Shift the transmission to level 1/2 using the shift lever and screw in the stop screw until the gears can be changed cleanly.
- Now shift the transmission to gear level 5/6 using the shift lever and screw in the stop screw until the gears can be engaged cleanly.
- Proceed in exactly the same way with the reverse gear and the associated adjusting screw. Check the settings later during a test drive and readjust if necessary.

ⓘ **PLEASE NOTE: The stop screws (Picture 9) must never touch the bolt when the gear is engaged. A gap of approx. 0.5 mm is okay.**

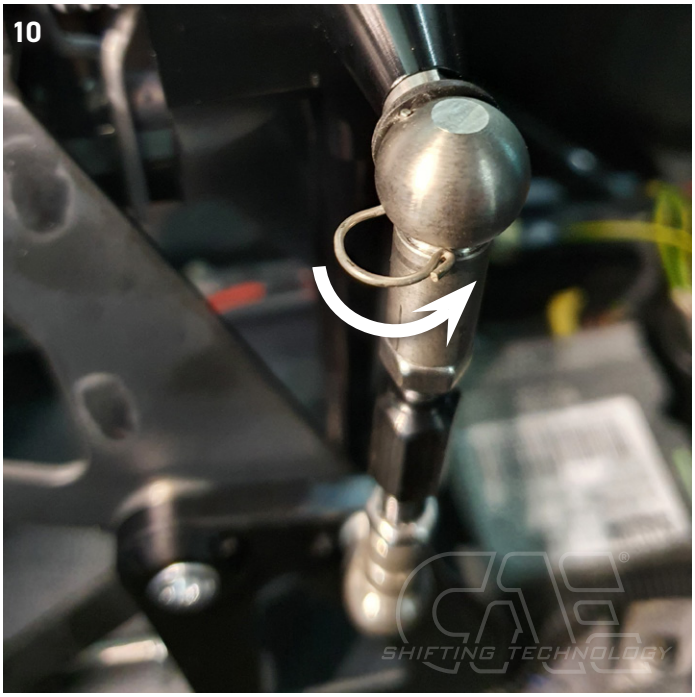



**FINALLY! Check all functions and settings during the test drive and readjust if necessary!**

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

## Reinstalling the center console

- Fit the cotter pin clips of the coupling rods. (Picture 10, 11)
- Install the center console. (Picture 12)

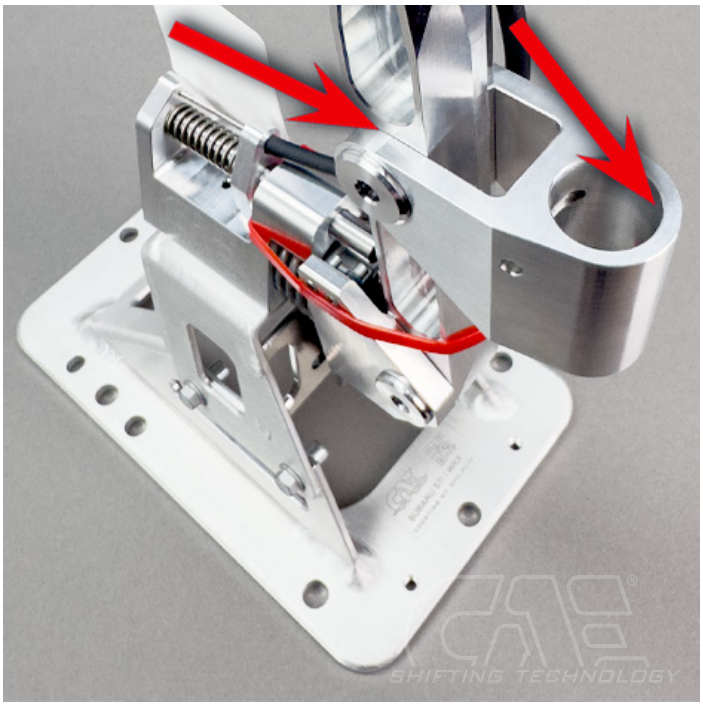


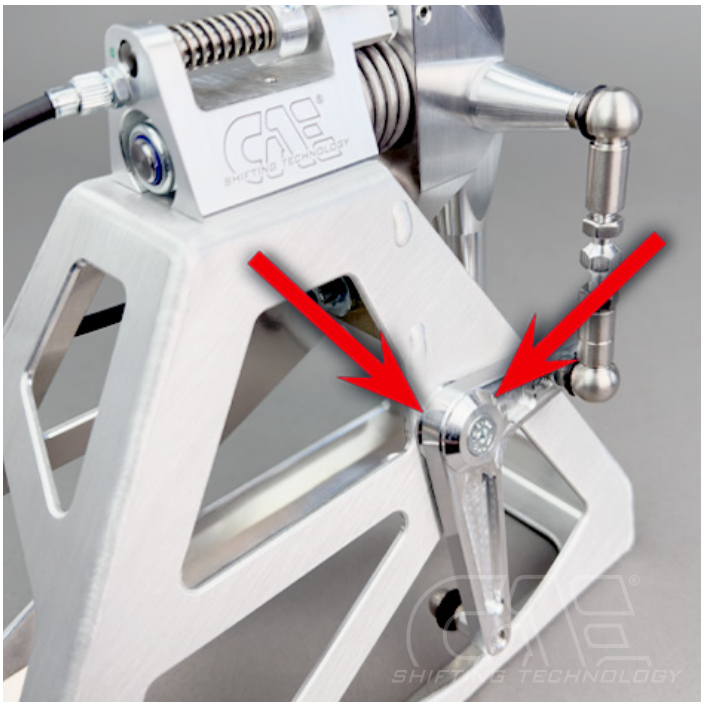


# Maintenance instructions

- You can clean the shifter preferably with brake cleaner or IPA (isopropanol alcohol) and a soft cloth. Do not spray the cleaner directly onto the shifter (so as not to degrease the moving parts), but moisten the cloth well and then wipe it off.
- The moving parts of the shifter should be lubricated with adhesive lubricant two to three times a year. We recommend the adhesive lubricant HHS 2000 from Würth.
- Below you can see which areas should be lubricated with a spray (HHS 2000). (Depending on the model, some parts may look different or may not be present).

SCAN ME



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