

20
YEARS
EXPERIENCE

CAE
SHIFTING TECHNOLOGY

Installation instructions

📍 10010

Simca
4-speed gearbox



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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!

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 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)
- ▶ Shift rod adapter with universal joint (Picture D)
- ▶ Shift rod (Picture E)



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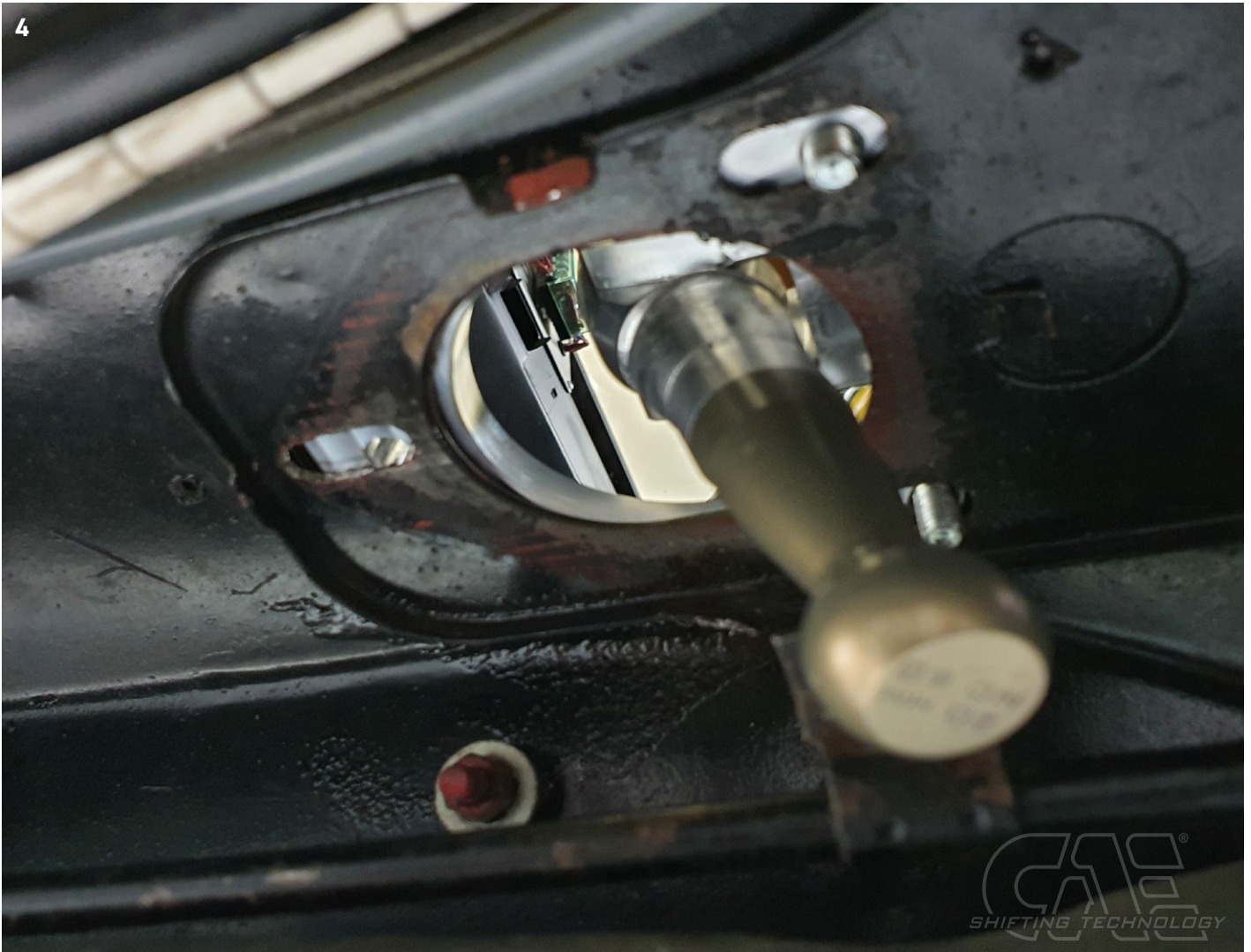


The installation

- ▶ Remove the lower part of the shifter with the rubber bellows. (3x M6 Allen SW 5) (Picture 2, 3)



- ▶ Screw the shifter to the tunnel from above and the lower part from below. One M7 screw is included in delivery! (Picture 4)



- ▶ Attach the front shift rod bearing (20mm) incl. shift rod to the shifter with 2x M8 Allen, thereby put the front pipe head on the ball.
- ▶ Be sure to install the 2 aluminum bushings between the outer half shell and the shifter base plate and observe the correct position of the half shells. (Picture 5)
- ▶ Insert the shifter rod into the tunnel. (Picture 5)

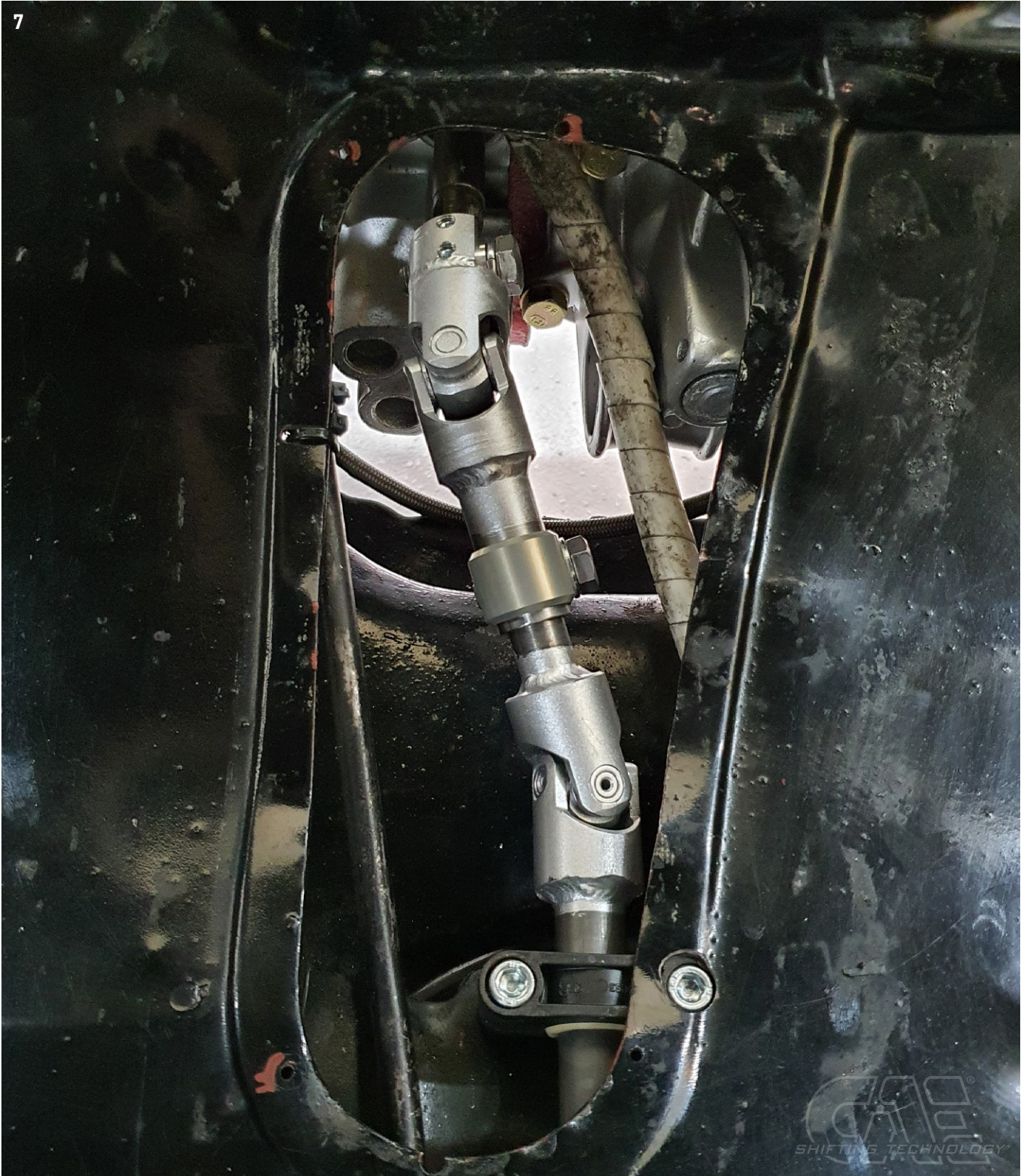


- ▶ Position rear (16mm) shift rod bearing on motor mount and insert shift rod. (Picture 6)
- ▶ Fasten with 2 M6 bolts and nuts placed underneath.
- ▶ Grease the shift rod in the areas of the bearing points.



Installation of shift rod

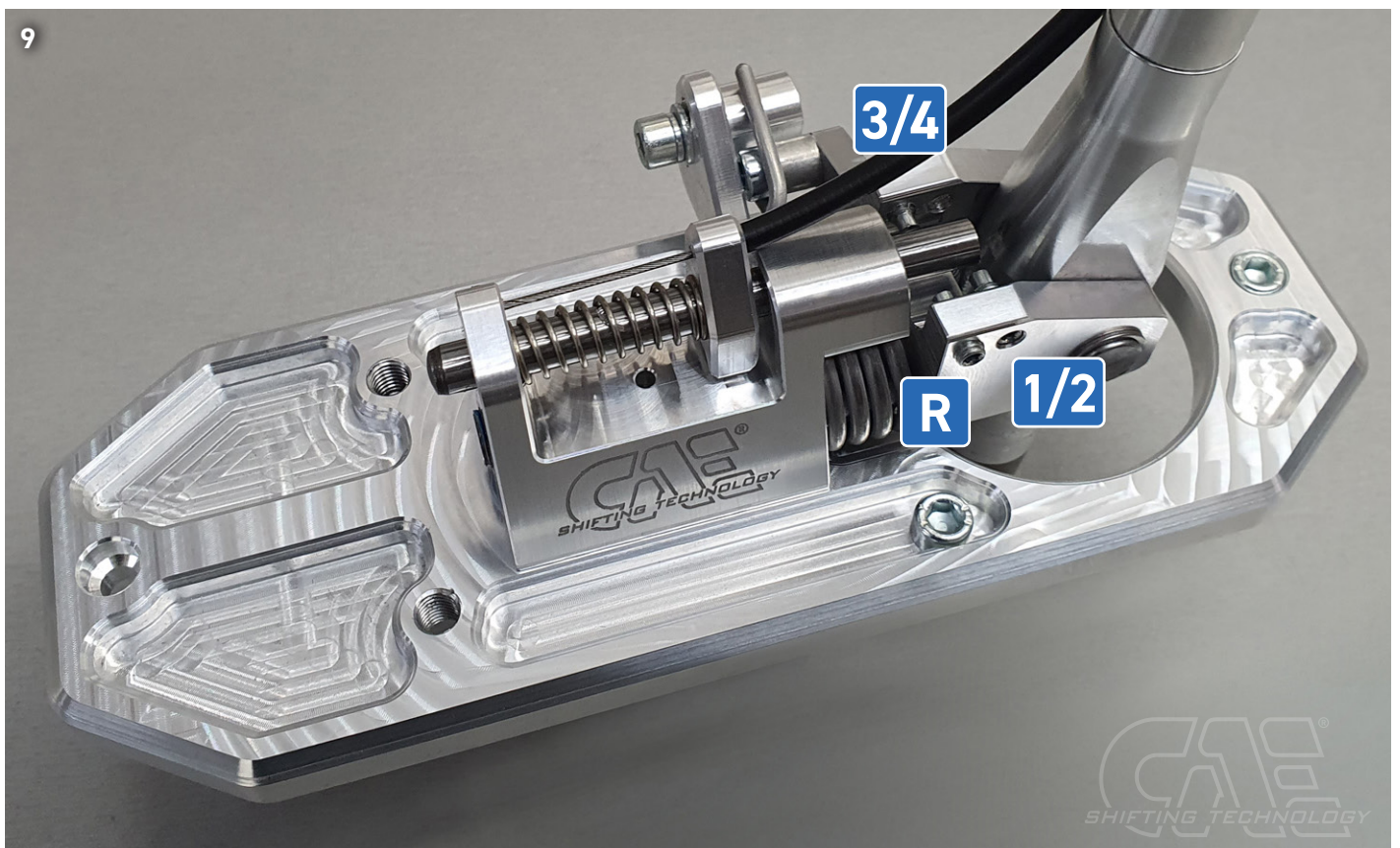
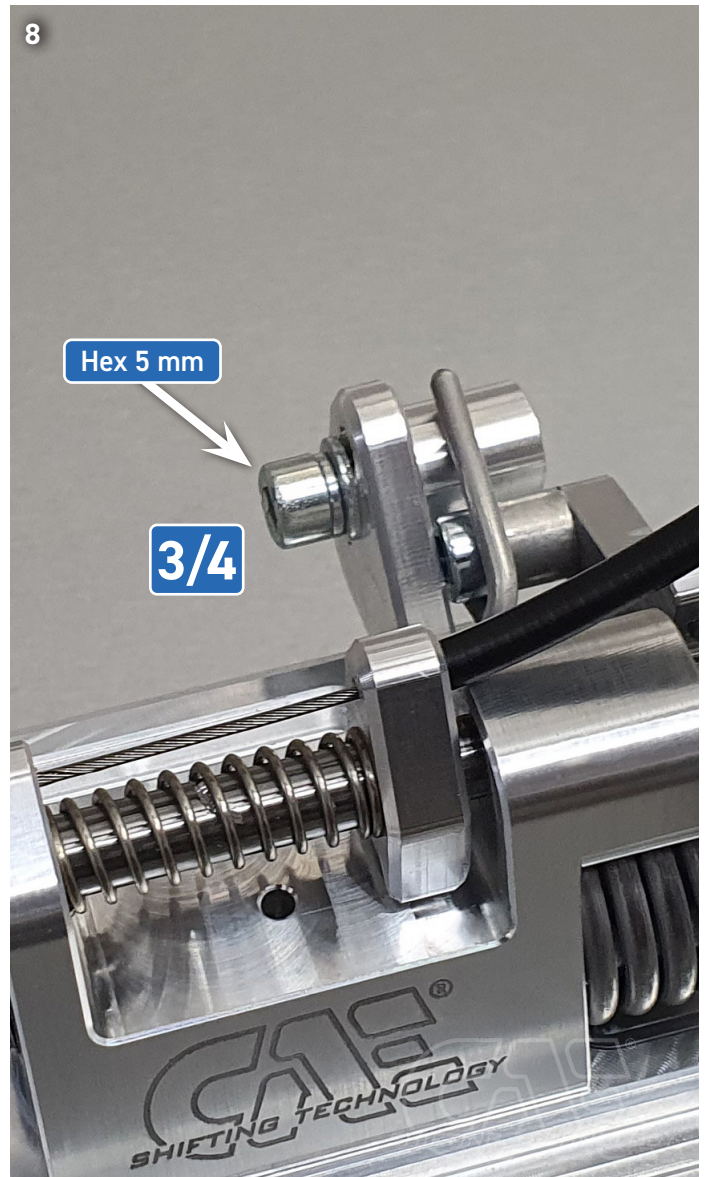
- ▶ Fasten the universal joint with the "gear unit" connecting piece, pushing the opposite side onto the bolt of the shift rod. (Picture 7)



- ▶ Mount the gear connection as follows: Slightly tighten the M8x1 screw with the aluminum spacer sleeve, then screw in the M5 grub screws until contact. Then tighten the M8x1 with 20 Nm and the grub screws with 1-2 Nm.
- ▶ The clamp is only clamped when the shifter is adjusted. (47 Nm)

Adjusting the shift travel of the 4-speed gearbox

- ▶ Loosen lower spring stop of center position spring.
- ▶ Shift gearbox to 3rd or 4th gear by hand. (This is the "zero position" of the gearbox; to do this, move the shift rod forwards or backwards without rotating it).
- ▶ Determine the desired center position of the shift lever and tighten the lower spring stop under the shift bracket using an allen key.
- ▶ For the 4-speed gearbox, screw in the stop screw "3/4" until it is in position 3/4 (center position). (Picture 8)
- ▶ Now clamp the fork on the shift rod. The gears 3-4 must now be able to be changed without problems, otherwise readjust.
- ▶ Now 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 9)
- ▶ Actuate locking pin via cable and shift gearbox to reverse gear level. Adjust stop screw R until the reverse gear can be engaged cleanly. (Picture 9)





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.

CAE wishes you a good trip.



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