RACE THE BORIGINAL

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Citroen AX, Citroen Saxo, Peugeot 106

6-speed BE 3-6 gearbox 🕌

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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)
- 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)
 - (i) The coupling rod on the side of the shifter is removed for transport and is in the accessories bag.
- > 1x Shift knob incl. counter screw M6x20 V2A, design depending on ordered variant (Picture B)
- Accessories package (Picture C)
- Gearbox linkage (Picture D)
- > 1x shift cable (S), 1x selector cable (W) (Picture E)



(i) The shifter is intended for vehicles without interior fittings. If the center console is installed, it must be removed or cut out until clearance is guaranteed. If a carpet is fitted, this must be cut out or the supplied spacers including the additional cover plate must be fitted.

The removal

Completely remove original shift lever incl. shift rod.

Installing the gearbox linkage

- Disassemble the CAE transmission linkage into the 2 main components S and W. (Picture 1, 2)
- Screw the 4 bolts from the linkage into the corresponding holes on the gearbox.
- > To tighten the bolts, screw an M6 screw into the M6 thread of the bolt with washer.
- Clean the threads in the gearbox and glue in the threaded bolts.
- Fit the supplied selector lever to the gearbox, bolting it to the original 7 mm dowel pin. (Picture 3, 4)



Drill a feedthrough for the shift cables

- Drill two 18 mm holes in the bulkhead (Picture 5)
 Deburr the holes and protect the edges against rust.
- In addition, the holes in the plate holder in front of the shifter must be widened so that the shift cables fit through.

Alternatively, this can also be removed if the center console is no longer installed. (Picture 6)



Installation CAE Shifter

- Attach the shift cables to the shifter. Pay attention to the assignment. The cables have corresponding stickers: (S) (W) No M16 thread is visible inside the shifter. (Picture 5)
- The centering washer must be fitted to the selector cable. W
- Remove the M16 nuts from the cables on the gearbox side.
- Glue the supplied foam rubber strip around the original gearshift hole. (Picture 6)
- Fit the shifter and insert the shift cables, including the protective hoses, into the holes in the bulkhead and the plate holder.

Insert the selector cable "W" immediately into the lower hole and the shift cable "S" into the upper hole. (Picture 7)





- Now fit the lower gearbox linkage W to the gearbox.
 Fit the coupling rod from the gearbox selector lever to the reduction lever, grease all sockets.
- Place the 4 spacer bushes on the bolts
- Fit the selector cable with the M16 nuts and the ball socket, insert into the holder and tighten. Press the ball socket onto the ball on the reducing lever. (Picture 8)



Now fit the upper gear linkage "S" to the gearbox.
 Tighten the 4 screws in the bolts and the 3 nuts on the spacer sleeves.

- Fit the shift cable with the M16 nuts and the ball socket, insert into the holder and tighten. (Picture 9)
- Attach the coupling rod from the bellcrank to the gearbox shift lever.



Fitting the shift cables (Picture 10, 11)



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

Sample pictures:



- (i) CHECK: With the gear engaged, pull the ball cup off the gearshift lever and check whether the shift cable s 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 IMPORT-ANT 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 shift travel of the 6-speed gearbox

- Determine the desired center position of the shift lever and tighten the lower spring stop under the shift bracket using a 5 mm Allen key. (Picture 12)
- The gearshift should be slightly inclined to the left in position 3/4.
- (i) CHECK: When 3rd and 4th gear are engaged, the lateral play on the gearshift must be the same. If this is not the case, the spring stop must be readjusted. (0.5 mm is already a lot here). This is the basic setting of the shifter and must be carried out very precisely.
- Now use the gearshift to shift the gearbox to level 1 / 2 and adjust the stop screw until the gears in level 1 / 2 can be changed cleanly.

The screw has no contact with the bolt when the gear is engaged (approx. 0.5mm play) (Picture 14)

 Now use the gearshift to shift the gearbox to 5th / 6th gear level and screw in the stop bolt until 5th gear can be engaged cleanly.

The screw has no contact with the bolt when the gear is engaged, the shifter shifts back to 3rd/4th gear as far as possible. (Picture 14)

- Actuate the reverse gear locking bolt via the cable and shift the transmission into reverse gear. Screw in the corresponding stop screw until reverse gear can be engaged cleanly. Screw has no contact with the bolt when gear is engaged (approx. 0.5 mm play) (Picture 14)
- Fit the split-pin clamps to the ball sockets.







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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