

📍 10090

Hyundai i20N
6-Speed gearbox



HYUNDAI
i20N

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 undrivable 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

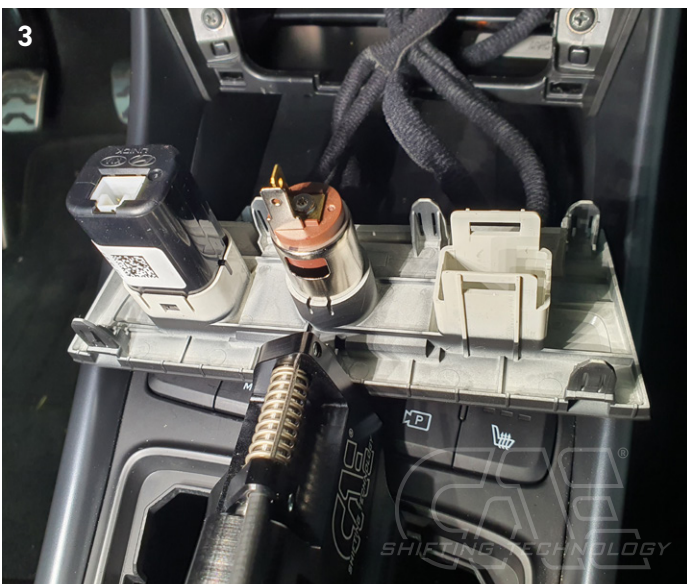
- ▶ 1x shifter completely monted,
design depending on ordered variant (Picture A)
- ▶ 1x Shift knob incl. counter screw M6x20 V2A,
design depending on ordered variant (Picture B)



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.

The removal

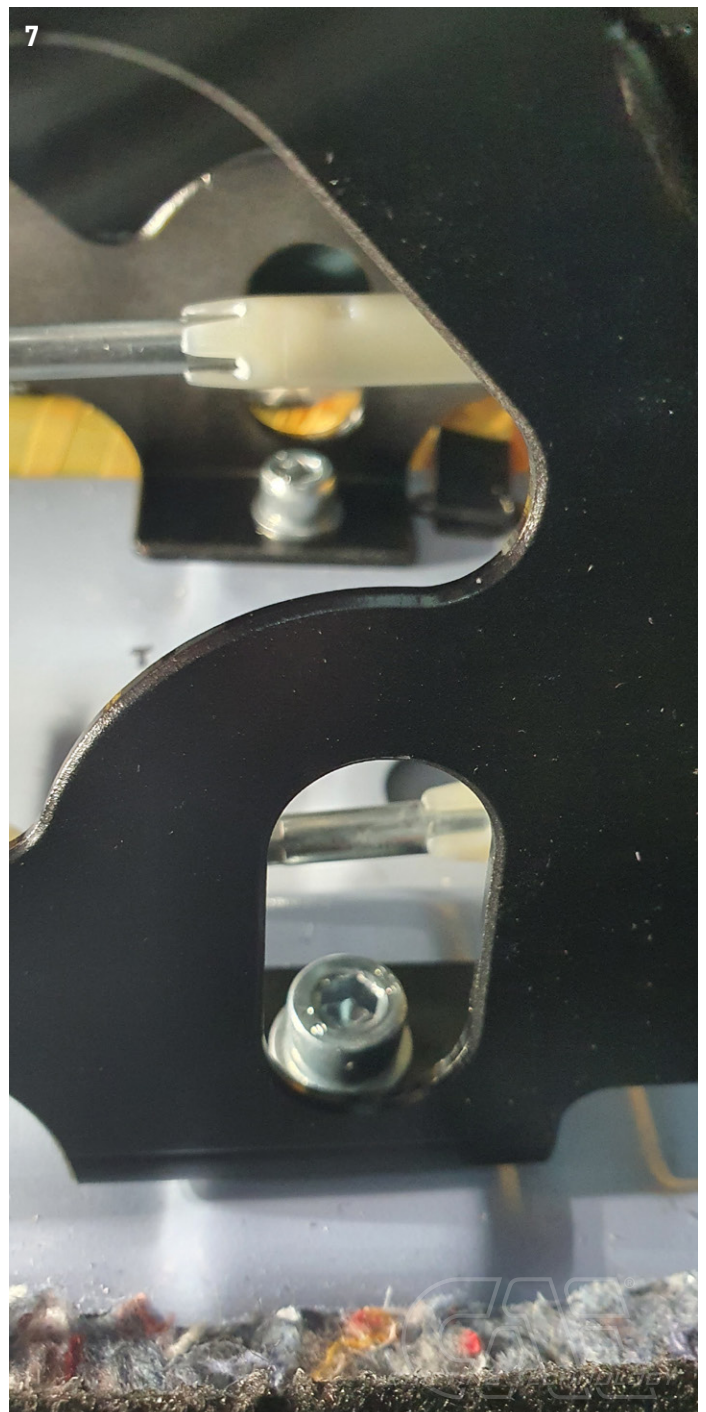
- ▶ Pull up the shift bag (Picture 1, 2)
- ▶ Pull out front upper switch unit and disconnect connector. (Picture 3)
- ▶ Completely remove the center console.
- ▶ Disconnect the shift cables from the original shift lever.
- ▶ Remove original shift lever. (Picture 4)



Installation CAE Shifter

- ▶ Convert the plastic cup from the lower ball of the original shifter to the CAE shifter. (Picture 5)
- ▶ Then install CAE Shifter while clicking the shift cables into the bracket. (Picture 6)
- ▶ Screw the CAE Shifter directly onto the tunnel using the supplied Allen screws and washers (Picture 7).
- ▶ Clip the end of the shift cable onto the plastic adapter of the shift lever. The spring clip must engage over the adapter. The selector cable is not clipped on until the shifter is adjusted (Picture 5).

ⓘ PLEASE NOTE: Generally grease each ball socket and bearing bolts & bushings.
Glue all nuts/bolts during assembly! Never kink shift cables!



Adjusting the gearshift travel 6-speed gearbox

- ▶ Adjust the center position of the shift lever: Loosen the spring stop (Picture 8) 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!
- ▶ The shift lever must be slightly inclined to the right in aisle 3/4. (approx. 5 degrees) Tighten the spring stop again.
- ▶ Now adjust the coupling rod (R/L THREAD) so that first the eye of the selector cable can be put on. Then secure with the cotter pin. (Picture 9)
Now adjust the coupling rod so that the lateral clearance at the shift lever is the same when 3rd/4th gear is engaged, otherwise readjust the coupling rod. (here it is a matter of millimeters)



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!

- ▶ Shift the gearbox to level 1/2 using the shift lever and screw in the stop screw until the gears can be changed cleanly. (Picture 10)
- ▶ Now shift the gearbox to gear level 5/6 using the shift lever and screw in the stop screw, also until the gears can be engaged cleanly. (Picture 10)
- ▶ Proceed in exactly the same way with reverse gear and the corresponding adjusting screw. Check the settings later during a test drive and readjust if necessary. (Picture 10)

i PLEASE NOTE: The stop screws (Picture 12) must under no circumstances be in contact with the bolt when the gear is engaged. A gap of approx. 0.5 mm is okay.

! CHECK: When 3rd and 4th gear are engaged, the lateral clearance at the shift lever must be the same, otherwise adjust at the coupling rod! (Picture 11)



Reinstalling the center console

- ▶ To install the center console, the upper part of the shifter must be removed.
- ▶ To do this, pull off the ball socket at the bottom of the shifter again and unscrew the upper screw of the side coupling rod. (Picture 11)
- ▶ Loosen the front 2 housing screws only, do not unscrew them. Remove the rear ones incl. nuts. Then unscrew the shifter upper part to install the center console. (Picture 12, 13, 14))
- ▶ Install the center console completely.
- ▶ Place the shifter upper part on the front 2 screws and replace the rear ones. Replace the screws on the inside, nuts on the outside. (Picture 13,14) tighten with a 8mm open end wrench or ratchet wrench.
- ▶ Push the ball socket from the shift cable back on (fiddling) and screw the coupling rod back on. (Picture 15)





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.



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

WWW.CAE-RACING.DE