



**NOT JUST
FOR
RACING**

Installation Manual

📍 10035

Ford Focus MK1 RS/ST
5-Speed MTX75 gearbox



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RS MK1 MTX75

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 (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, gear lever (Picture C)
- ▶ 1x shift cable holder (Picture D)
- ▶ 1x shift cable (S), 1x selector cable (W) (Picture E, F)



- i** The shifter is designed for racing vehicles without interior equipment. If the center console is installed, it must be removed or cut out until there is sufficient clearance for the shift cables.
- The shifter should be screwed directly onto the sheet metal of the center tunnel, any existing carpet must be cut out.

The removal

- ▶ Completely remove the original shift lever and shift cables.

- i** Generally, fit a sealing collar on each ball and grease the ball cups. After complete assembly of the shifter, secure the ball heads with the cotter pin clips. Glue all nuts / screws during assembly! Never kink the shift cables!

Mounting the shift cables on the shifter

- ▶ **Shift cable (S) L=1200mm** --long ball pins and M6 thread - on shifter with bronze extension sleeve from middle hole of shifter, to new shift lever of gearbox.
- ▶ **Selector cable(W) L=1160mm** --internal short ball socket and short M6 thread - from the right hole on the shifter or L-lever on the shifter to the selector lever on the gearbox, short socket = selector cable
- ▶ Fasten the selector cable to the shifter with M16 nuts, no thread of the M16 thread is visible in the shifter. (Picture 1)
- ▶ Fasten the shift cable with extension bush.
- ▶ Nominal dimension outside to ends of steel sleeve 42mm.

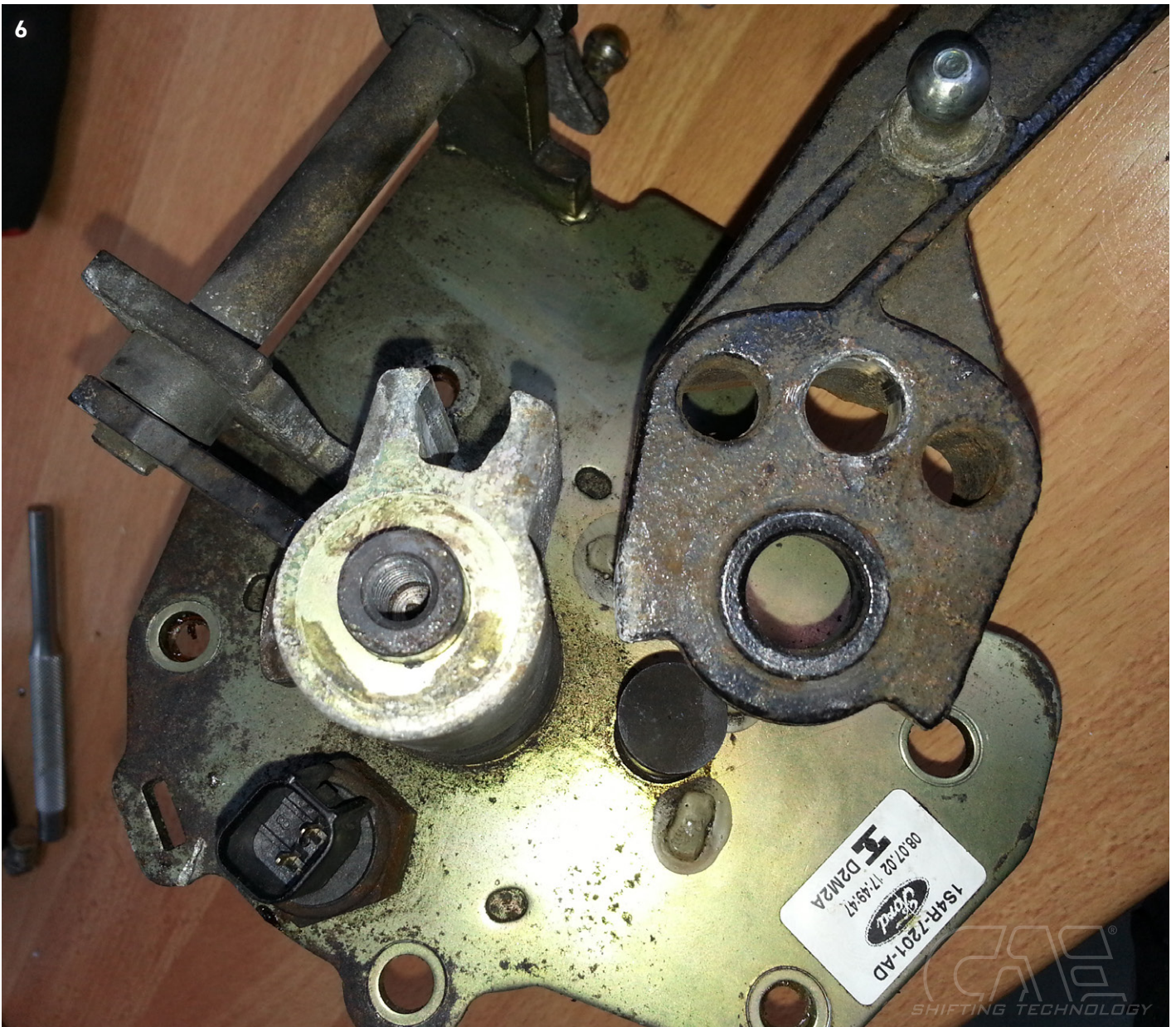
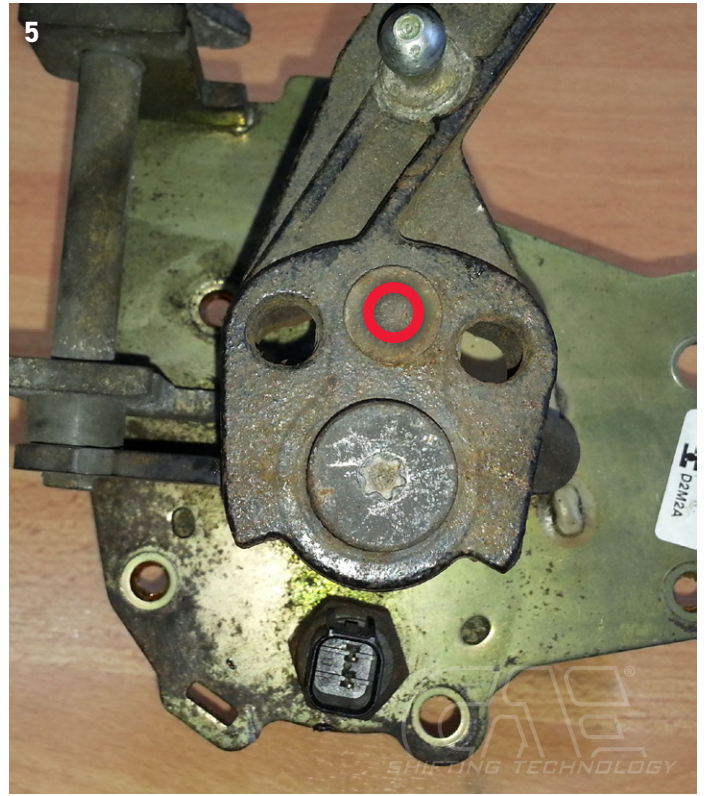


Umbauten am Getriebe

i Shift gearbox to neutral!

- ▶ Remove the original cable holder and process as shown. (Picture 2, Picture 3)
- ▶ Mount the aluminum cable holder to the gearbox with the supplied screw, then mount the just modified steel holder again.
- ▶ The original gearbox shift lever must be removed from the shift shaft.
- ▶ First drill out the rivet (red circle) (\varnothing 12mm), then loosen the Torx screw and pull the lever off the shift shaft.
- ▶ Put on the CAE shift lever and tighten it with the original Torx screw.





Installing the shifter/routing the shift cables

- ▶ Move the shifter to its installation location with the shift cables already installed, passing the shift cables through the grommet toward the engine compartment; bolt the shifter to the tunnel.



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!**

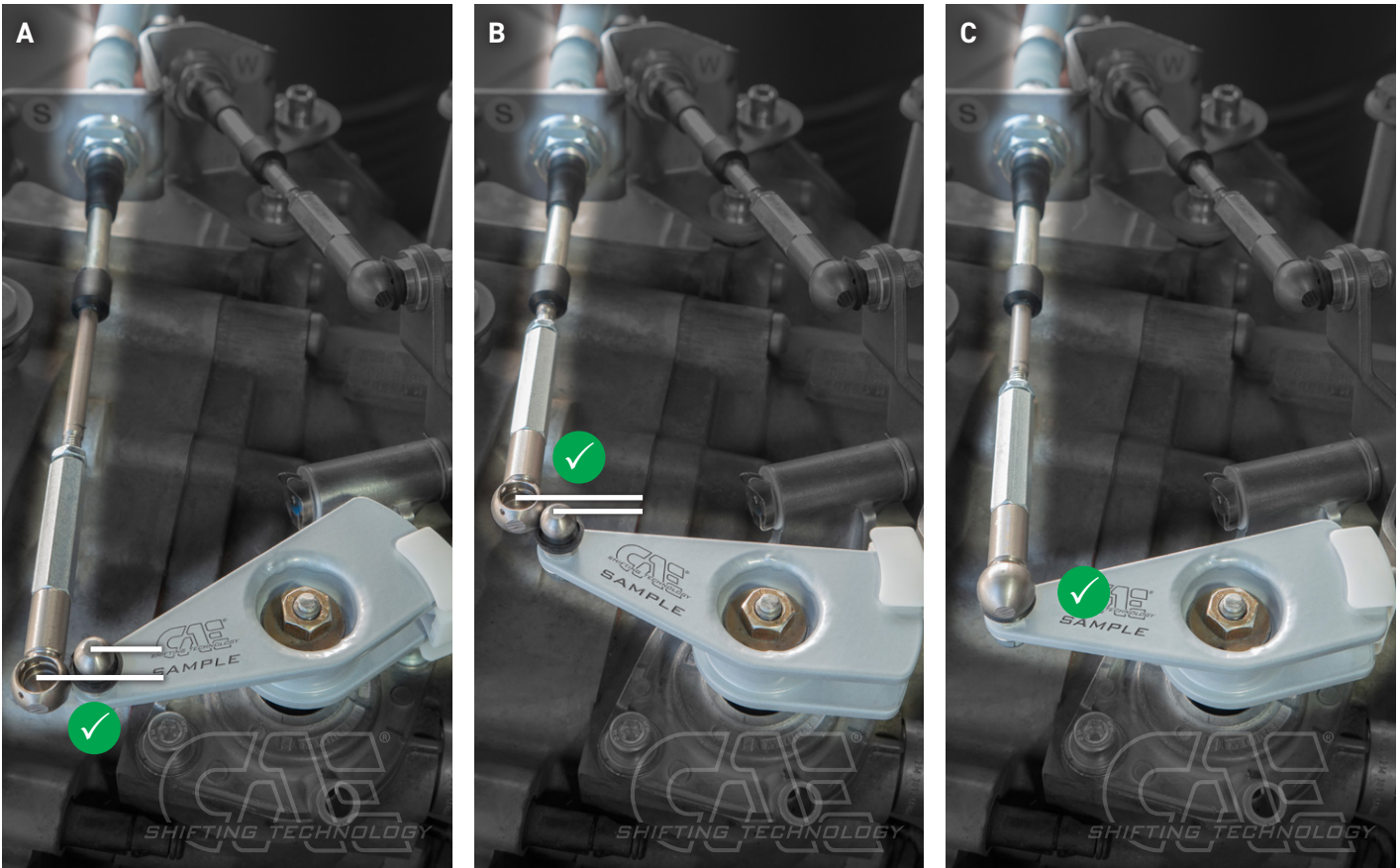
- ▶ Attach shift cable to original bracket; use large washers and centering washer.
Attach shift cable to new aluminum bracket Cables should not be "tight"



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 cable! (Picture A, B, C)

Sample pictures:



❗ CHECK: 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 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 gearshift travel 5-speed MTX75 transmission

- ▶ Pull the side coupling rod on the shifter off one of the balls.
- ▶ Shift the transmission to 3rd gear. To do this, move the shift lever forward without moving it sideways.
- ▶ Loosen the center bearing screw under the shift tower and align the shift lever. It should now be exactly straight and tighten the spring stop again.
- ▶ Adjust the L-lever by turning the side coupling rod so that the ball socket can be pressed on without changing its length.

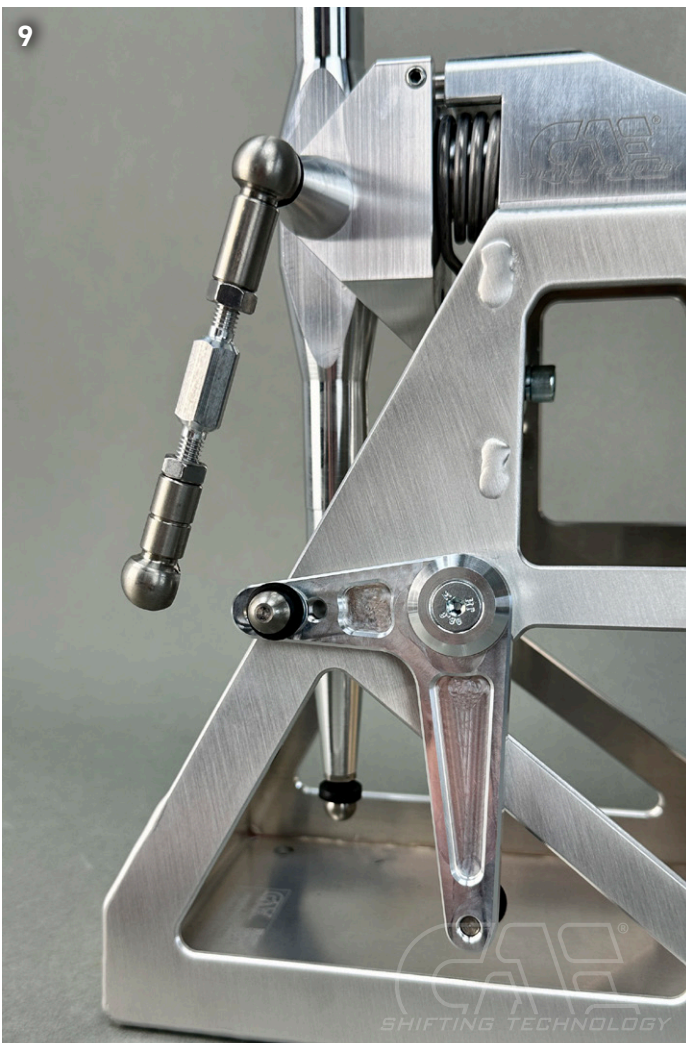


TEST: With 3rd and 4th gear engaged, the lateral clearance at the shift lever must be equal, otherwise readjust at the coupling rod!

- ▶ Secure all ball cups on the shift cables in the shift tower with the lock nuts.
- ▶ Shift the gearbox to level 1 / 2 using the shift lever and screw in the right-hand stop screw until the gears in level 1 / 2 can be changed cleanly.
- ▶ Now shift gearbox to 5th - R. gear level using shift lever and screw in left stop screw until 5th & R. gear can be engaged cleanly.
- ▶ The adjusting screws must not touch the bolt when the gear is engaged; approx. 0.5mm clearance is ok.

PLEASE NOTE: Reverse gear can only be engaged from neutral!

- ▶ Check the settings by test drive/ test run, readjust if necessary.
- ▶ Press on all cotter pin clamps and retighten all screws.







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.



RACE THE
ORIGINAL



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

WWW.CAE-RACING.COM