

CAE SHIFTING TECHNOLOGY GMBH

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**INSTALLATION MANUAL
CAE ULTRA-SHIFTER
OPEL KADETT D/ E ASTRA F / CALIBRA / VECTRA
F 13, F16, F17, F18, F 20
5 & 6 SPEED GEARBOX
MODIFICATION TO CABLE-CONTROLLED SHIFTING**



If center console is mounted, it must be dismantled or modified to achieve an acceptable space for the cables. The new unit should be mounted directly on to the floorboard, so part of the carpet must be removed.

WARNING!

Due to the design of motor sport and therefore missing rubber damping elements engine and transmission noises and vibrations may transmitted into the interior

Delivery:

- 1 x Pre-mounted shift unit complete
- 1x Shiftcable (S)length 1240 with mounted ball pans
- 1x Selection (W)cable length 1200 with mounted ball pans(1Short inner side)
- 1x Gearbox Lever Unit plus Breather and Gasket
- 1x Gearbox cable bracket
- 2x Rubber caps for Ball Heads
- 6x Cotter pins
- 4x Screws M6x16 Washer and Nuts
- 4xScrews M7x30 and Washer

Installation Instructions

GENERAL INFORMATION

Before the assembly of the Balljoints lubricate the seat with good grease.

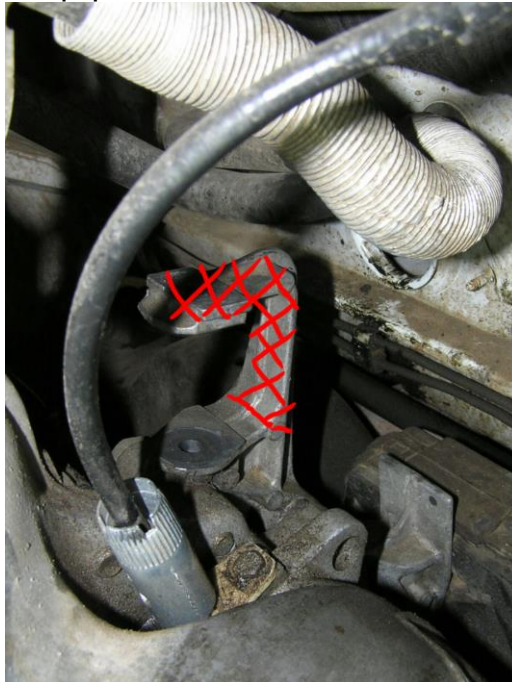
After completing the shifter, secure the Ballstud with a cotter pin. All screws and nuts on the shifter must have Lock-Tite or anything that keeps the screws or nuts from coming loose. Never bend the controller cables! To avoid rust film, clean the steel parts with oil ever so often. To clean the Alu-parts use ethyl alcohol

Remount

- Remove the original parts of the shifter completely.
-

Preparing the Parts:

- Cut off the top part of the stock Shift lever bracket:



- Modifying the sealing rubber:
Cut off the first 2 cm from the rubber small side :

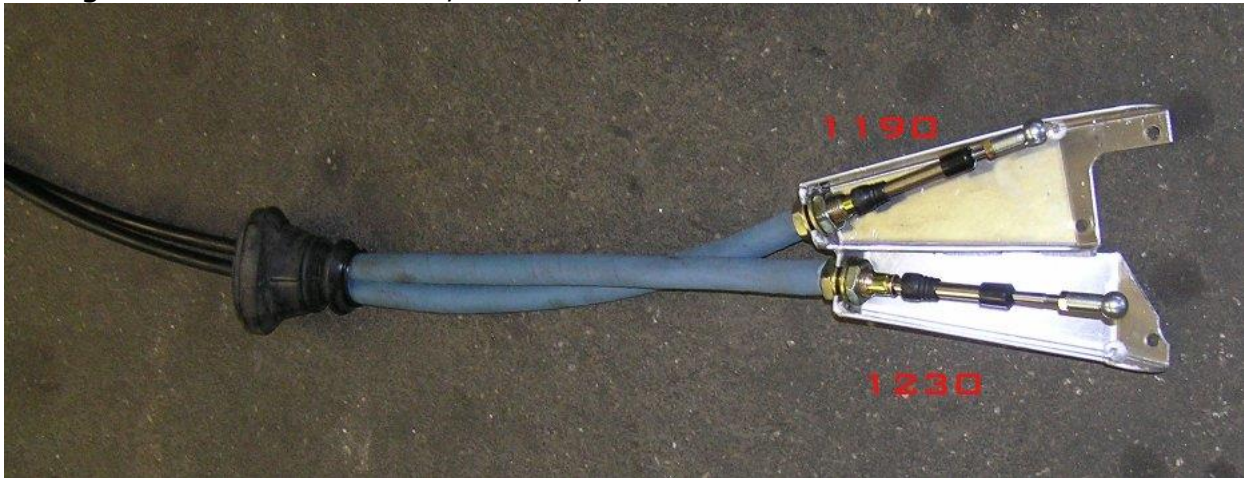


Pre mounting of the shift cables:

Fit the cables to the bracket as shown on the next picture. Pull over the blue heat cover tubes and the Rubber.

Note the cable length, the are printed on the cables. Selection cable 1200 has a 12mm shortened M6 thread at the inner side !!!!

Tighten the 24mm Nuts , M16x1,5 threads are shown 6-8mm



- At the inner side of the cables fit only one 24mm Nut each and
- Fit the Breather with tube and optional a tank



- Remount the tacho shaft

Installation Gearbox Unit

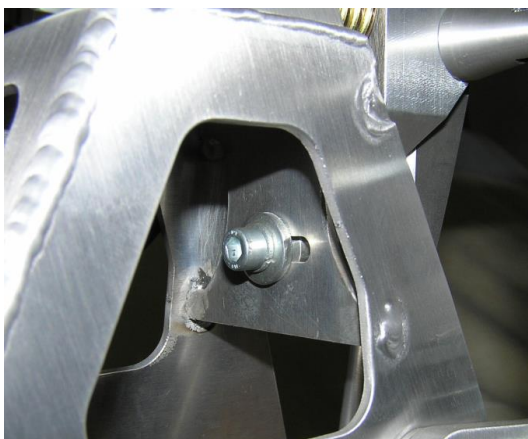
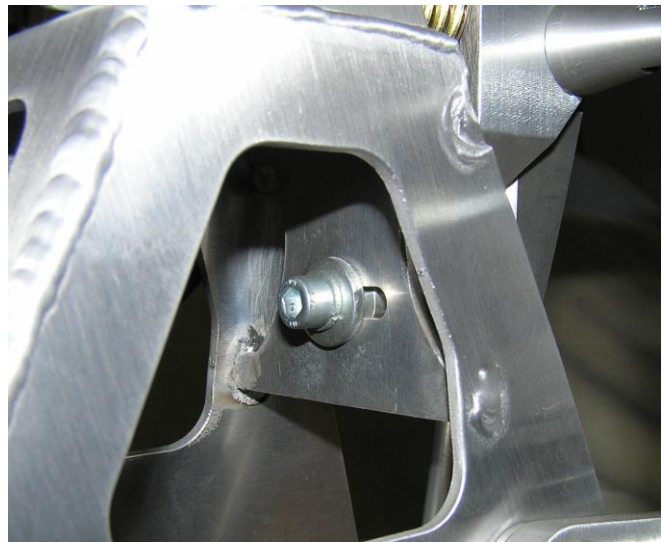
- Fit the Gearbox unit with the new gasket into the gearbox
Be careful for don't destroy any gearbox interior.
Screw in the Left front screw M7x30
- Fit in the cable/Bracket unit through the shift rod hole into the car.
Screw the cable bracket onto the Gearbox Unit with the 3 left Screws M7x30.
- Push the Ball pans to the Ball ends

Installation of Main unit and Cables

- Put the Main unit onto the Middle tunnel and fit in the cables already into the Shift Unit
- Shiftcable (S) 1240 to the Middle selection cable (W)1200 to right side, **short M6 thread !!**
- don't forget a washer on each cable.
- Fix the Main Unit with the 4 special M6x 16 Inbus Screws to the floor
- Regarding to the Seat position it is possible to adjust it 3 cm fw/ bw
- Mount the last 24mm Nuts and washers to the cables inside the shift unit. The selection cable to the L-Lever right has to stand out as much as possible out of the case, inside there is no thread to see
- After this, mount the balls and press on the levers
- **Pull off the coupling rod at the side of the shifter**
- (adjustment follows later)
- mount the tacho shaft

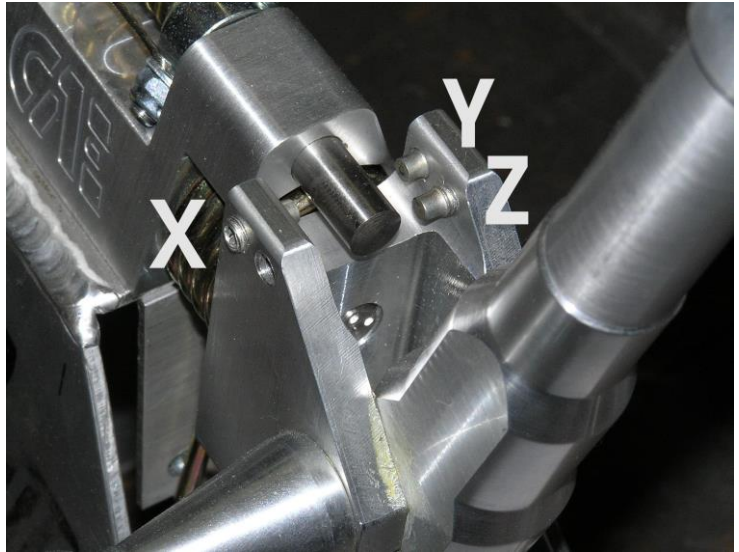
Adjusting Shift Range

- Loosen the Spring stop under the Shifter
Shift lever should be loosen right left now
- Select the 3rd or 4th gear now
- For that pull or push the Shift Lever forward or backwards, the Selection cable (W) is inactive while this !!!
- In neutral position the lever should stand slightly to the right for reaching all ranges from R to 5th gear, then fix the spring stop again
- Now tune the length of side coupling rod that it fits perfect to the L-Lever Ball and the Ball at the Shiftlever expositor Ball
- Now 3rd and 4th gear have to be changed perfect by Gearlever now, otherwise readjust once more



- Select level 1 / 2 with shiftlever and turn stop screw Z until the gears 1 and 2 can be selected well
- Gear 1/ 2 have to be changed perfectly by shiftlever now, otherwise readjust once more

THE ADJUSTMENT SCREWS
CAN BE TURNED STRONG
FOR NO LOOSEN WHILE
OPERATION
USE HD 2.5mm INBUS



- Now search 5th gear by Shiftlever and turn stop screw X until these gear can be selected clearly.
- Pull the Reverse lock and search the Reverse gear by lever turn stop screw Y until these gear can be selected clearly.

After complete installation, check all the essential functions of the Shifter while driving and adjust once more if necessary.

Wrong adjustment will destroy your gearbox

If shifter don't work "smooth" readjust the whole unit

Attention !!
***Protect shiftcables against thermic
overheat by delivered blue
heatresistant tube.***
***Protected cables **must not** contact
the exhaust system.***

CAE wishes having a good trip