

Shifting quality problems on TRANSMISSION 725.1 (9G TRONIC FACELIFT)

Topic number	LI27.00-P-073532
Version	2
Function group	27.00 - General
Date	1/18/25
Validity	MODEL 206/214/254/223/232 with TRANSMISSION 725.1 (9G TRONIC facelift) STAR3 MODEL 213/238/257/167 with TRANSMISSION 725.1 (9G TRONIC facelift) STAR2.x
Reason for change	Adaptation for STAR3 vehicles

Complaint

If TRANSMISSION 725.1 (9G TRONIC FACELIFT) exhibits any "shift quality" problem symptoms, various optimized diagnosis procedures are available to you for selected vehicle model series with STAR3 architecture,

Cause

Various

Remedy

Despite this, the problem shift mechanism should be verified with XENTRY in the presence of the customer as a preparatory measure.

In event of shift quality problems, before the start of any repair or standard adaptation, the latest quick test, the transmission control unit log and the EEPROM data should be read out as a txt file (*.txt). The EEPROM data must be stored separately on a data medium (USB stick) as it can no longer be reproduced after adaptation has been performed.

Before creating a TIPS case always check that the engine and transmission control unit as well as the dependent powertrain control units (e.g. CPC3, DCDC48EVO1, ISG48V2, LIB48_223) have the latest software release, and update them, if necessary, then perform another test drive.

Note: The latest version of the XENTRY (including all available add-ons) must be used for programming the transmission and engine control unit. Only then can it be ensured that the very latest version of each software is installed.

If the problem still persists, the creation of a CAN-FD measurement (successor to SD-SCAN for vehicles with STAR3) may be necessary, when requested.

For this, the parts specified in the parts scope and the corresponding XENTRY versions / add-ons are required:

XENTRY Tips

- W000589002100 Test box 1
- W223589016300 Adapter cable for vehicles with STAR3

- XENTRY 03/2021 with add-on 19516
- XENTRY 06/2021 with add-on 19604
- XENTRY 09/2021

Note:

- For vehicles of model series 213/238/257/167 with transmission 725.1 and STAR2.x, measurement is carried out according to the old method with SDSCAN at the powertrain CAN.

Attachments	
File	Description
Instruction_XENTRY CAN Tool KIT3_EN_V2 Star 3 Model 223.pdf	Star3
Instruction_XENTRY_SD_Scan_Star2x_P-T4_BR213M_BR167M_EN_V4 1.pdf	725.1 with Star 2

Disclaimer

NOTE: The information contained in this document is intended for use by trained, professional technicians with the knowledge to properly and safely perform diagnosis and repairs on Mercedes-Benz vehicles, using Mercedes-Benz approved tools and equipment. It informs service technicians about conditions that could occur in certain vehicles and provides information that could assist in proper vehicle diagnosis, service, or repair. It does not indicate that a defect is present in any vehicle referenced in this document nor does it imply warranty coverage. DO NOT assume that a symptom or condition, or a described cause of a symptom or condition, affects any particular vehicle or groups of vehicles, or that a described repair applies to any particular vehicle or groups of vehicles. There can be multiple causes resulting in the same or similar symptoms or conditions described in this document, and trained professional service technicians must use their diagnostic skills to make evaluations on a case-by-case basis. The information contained in this document does not guarantee warranty coverage nor does it extend the vehicle's warranty in any way.

Symptoms
Power transmission > Automatic transmission > Function > Engaging process
Power transmission > Automatic transmission > Function > Shifts
Power transmission > Automatic transmission > Function > Slips
Power transmission > Automatic transmission > Function > Shifting is rough
Power transmission > Automatic transmission > Function > Shifting is not performed or is delayed
Power transmission > Automatic transmission > Function > Poor shift quality

Parts						
Part number	ES1	ES2	Designation	Quantity	Note	EPC
W000589002100			Test box	1	WS00.00-P0034B	X
W223589016300			Adapter cable for vehicles with STAR3	1	WS54.00-P-0089B valid for STAR3	X

XENTRY Tips

WIS-References		
Document number	Title	Note
WS00.00-P-0034B	000 589 00 21 00 Test box	-
WS00.00-P0034B	223 589 01 63 00 Adapter cable	Valid for STAR3

Control unit/fault code	
Control unit	Fault text
N15/15 - Transmission control for 9-speed transmission (VGS) (VGS2NAG3M)	-

Operation numbers/damage codes				
Op. no.	Operation text	Time	Damage code	Note