

Transmission, diagnosis using the Intelligent Predictive Repair (IPR) Tool for DCT transmission

Topic number	LI27.00-P-077141
Version	2
Function group	27.00 - General
Date	8/5/25
Validity	IPR is available for: - 8FDCT conventional - 8FDCT hybrid - 8FDCT AMG Entry Performance (AMG 35)
Reason for change	Availability of IPR expanded

Complaint

Customer complaints regarding automatic transmission 724.1 (8FDCT & 8FDCT hybrid)

For faster, more effective and more targeted diagnosis, Intelligent Predictive Repair (IPR) has been developed and integrated into XENTRY Diagnosis. This ensures an automated diagnosis process.

WIS-References		
Document number	Title	Note
SI27.19-P-0014B	Service Information: Diagnosis on automatic transmission	Transmission 724.1 in model 118, 177, 247

Cause

As part of the on-going quality monitoring process and associated quality and damaged part appraisals, a high number of ineffective repairs have been discovered.

Such ineffective repairs have a negative impact on all those involved. For the customer, it means high costs and long repair times and for the dealer, it may result in the warranty claim being rejected.

Remedy

General note:

IPR is available for:

- 724.1xx: 8FDCT conventional (non hybrid)
- 724.1xx: 8FDCT hybrid
- 724.1xx: 8FDCT AMG Entry Performance (AMG 35)
- 724.1xx: 8FDCT AMG Performance (AMG45, AMG45s)

XENTRY Tips

- 724.1xx: 8FDCT MOPF (TCM8FDCT_PT4)

IPR is currently not available for:

- 724.00x: 7FDCT MFA1
- 724.00x: 7FDCT MFA2
- 700.xxx: 7FDCT300

Steps for the Service Advisor:

Important: The more information and detail that can be given to the workshop about the complaint, then the more effective the subsequent diagnosis with IPR can be. To this end, a detailed service reception questionnaire has been provided to help the Service Advisor ask the right questions about the complaint.

·Ask precise details about the customer complaint and the conditions and context.

Operation steps for the workshop employee:

Perform quick test

·Access the transmission control unit via XENTRY Diagnosis

·Select "A customer complaint has been received" and carry out all subsequent operation steps (IPR diagnosis path).

·The IPR repair instructions are displayed. Carry out the IPR repair instructions without performing any further diagnostic or repair steps.

·Important: The IPR repair instructions are binding and must be carried out.

Differing repairs are possible; such repairs must be documented in XENTRY in free text. Please observe the information regarding the IPR diagnosis process in XENTRY.

·Conventional diagnosis and subsequent appropriate repairs are only permitted if IPR does not specify any repair instructions.

·Invoicing for the guided IPR steps: Operation item 27 0640 and 001 WU (5 minutes).

Notice regarding warranty:

·The use of IPR in association with warranty claims is mandatory.

·If the IPR repair instructions are disregarded without justification, the warranty claims may be rejected.

·Tamper-proof documentation:

The IPR repair instructions are stored in the control unit log.

Please file this document in a tamperproof manner - either in digital form or as a hard-copy printout and also enclose a printout with the damaged part. In this regard, please comply with the country-specific warranty requirements of the MPC/general distributor.

WIS-References		
Document number	Title	Note
OF27.00-P-3000-07A	Analysis sheet for automatic transmission 8G-DCT, form	Transmission 724.1 in model 118, 177, 247

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 > Function > Jolting/shuddering during start-off	
Power transmission > Automatic transmission > Function > Limp-home mode	
Power transmission > Function > Rocking/rodeo effect	
Power transmission > Function > No power flow	
Power transmission > Function > Vibrates	
Power transmission > Automatic transmission > Function > Malfunction	
Power transmission > Automatic transmission > Function > Poor start-off performance	
Power transmission > Automatic transmission > Function > Engaging process	
Power transmission > Automatic transmission > Function > No power flow	
Power transmission > Automatic transmission > Function > Shifts	
Power transmission > Function > Blocks	
Power transmission > Automatic transmission > Function > Shuddering during start-off	
Power transmission > Automatic transmission > Function > Electrical fault/Fault code	
Power transmission > Automatic transmission > Function > Stalls engine	
Power transmission > Automatic transmission > Function > Blocks	
Power transmission > Automatic transmission > Function > Shudders	
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 > Transmission mode selection > Malfunction, shift mode button S / W / C / M	
Power transmission > Automatic transmission > Function > Poor shift quality	
Power transmission > Automatic transmission > Function > Kickdown malfunction	
Control unit/fault code	
Control unit	Fault text
Y3/14 - Transmission control for 8-speed dual-clutch transmission (DKG) (TCM9FDCT)	<p>U300000 - The control unit has a malfunction due to redundant monitoring. _</p> <p>U144D00 - The torque request from control unit 'combustion engine' was not received. _</p> <p>U143300 - An implausible signal 'Status of circuit 15' was received. _</p> <p>U142500 - The signal of accelerator pedal sensor from control unit 'combustion engine' was not received. _</p> <p>U142000 - An implausible signal was received from the electronic selector lever module. _</p> <p>U140C00 - An implausible right rear wheel speed signal was received. _</p>

	<p>U140B00 - An implausible left rear wheel speed signal was received. _</p> <p>U140A00 - An implausible right front wheel speed signal was received. _</p> <p>U140900 - An implausible left front wheel speed signal was received. _</p> <p>U140800 - An implausible signal from switch "Brake lights" was received. _</p> <p>U140700 - Implausible signal "Engine torque" was received. _</p> <p>U140600 - The signal 'engine torque' from control unit 'combustion engine' was not received. _</p> <p>U140500 - The signal 'engine torque' from control unit 'combustion engine' was not received. _</p> <p>U140400 - The signal 'engine torque' from control unit 'combustion engine' was not received. _</p> <p>U140200 - The signal 'engine temperature' from control unit 'combustion engine' was not received. _</p> <p>U140100 - The signal 'engine rpm' from control unit 'combustion engine' was not received. _</p> <p>U108B00 - The signal 'park position' was received from control unit 'electric parking brake'. _</p> <p>U108A00 - The signal 'park position' was received from control unit 'traction system'. _</p> <p>U108200 - The signal 'park position' was received from control unit 'electronic ignition lock'. _</p> <p>U054487 - Implausible data were received from control unit 'PARKTRONIC'. _</p> <p>U042900 - Implausible data were received from the steering column module. _</p> <p>U044700 - Implausible data were received from the central gateway. _</p> <p>U042800 - The signal from the steering angle sensor was not received. _</p> <p>U041600 - Implausible data were received from control unit 'Traction system'. _</p> <p>U040400 - Implausible data were received from the electronic selector lever module. _</p> <p>U030068 - An internal fault has occurred in the control unit software. There is incomplete information.</p>
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U030048 - An internal fault has occurred in the control unit software. There is an error in the control memory.

U030005 - An internal fault has occurred in the control unit software. There is a programming fault.

U030000 - An internal fault has occurred in the control unit software. _

U029100 - Communication with the electronic selector lever module has a malfunction. _

U025D00 - Communication with the control unit 'Head unit' has a malfunction.

U021487 - The CAN signals for function 'XENTRY CAN-Tool' are faulty.

U016800 - Communication with the electronic ignition lock has a malfunction. _

U015587 - Communication with the instrument cluster has a malfunction. The message is missing.

U014900 - Communication with control unit "Drivetrain gateway" has a malfunction. _

U014687 - Communication with the central gateway has a malfunction. The message is missing.

U014187 - Communication with the front signal acquisition and actuation module has a malfunction. The message is missing.

U014800 - Communication with control unit 'Drivetrain' has a malfunction. _

U012900 - Communication with control unit "Regenerative braking system" has a malfunction. _

U012887 - Communication with the electric parking brake has a malfunction. The message is missing.

U012100 - Communication with ESP has a malfunction. _

U011500 - Communication with control unit 'Drivetrain' has a malfunction. _

U011187 - Communication with control unit "Battery" has a malfunction. The message is missing.

U010F87 - Communication with control unit 'Electric A/C compressor' has a malfunction. The message is missing.

U010487 - Communication with control unit 'Cruise control' has a malfunction. The message is missing.

U010300 - Communication with the electronic selector lever module has a malfunction. _

U010287 - Communication with the transfer case has a malfunction. The message is missing.

U010000 - Communication with the control unit 'combustion engine' has a malfunction. _

U000100 - Drive train CAN communication has a malfunction. _

P288300 - The temperature of the clutch is too high.

P287C00 - Initial startup of control unit 'transmission' was not completed successfully. _

P286500 - The position sensor of shift fork E has a short circuit to ground. _

P286600 - The position sensor of shift fork E has a short circuit to positive. _

P286400 - The position sensor of shift fork E has a malfunction. _

P286300 - Position sensor disturbed (posN1)

P285900 - Multidisk clutch 1 has a malfunction. _

P285700 - Multidisk clutch 1 does not close. _

P284D00 - Shift fork A moves unprompted. _

P284E00 - Shift fork B moves unprompted. The following test procedure must always be performed in its entirety.

P284300 - The position sensor of shift fork D has a short circuit to positive. _

P284200 - The position sensor of shift fork D has a short circuit to ground. _

P284100 - The position sensor of shift fork D has a malfunction. _

P284000 - The position sensor of shift fork D has an electrical fault. _

P283E00 - The position sensor of shift fork C has a short circuit to positive. _

P283D00 - The position sensor of shift fork C has a short circuit to ground. _

P283C00 - The position sensor of shift fork C has a malfunction. _

P283B00 - The position sensor of shift fork C has an electrical fault. _

	<p>P283900 - The position sensor of shift fork B has a short circuit to positive. _</p> <p>P283800 - The position sensor of shift fork B has a short circuit to ground. _</p> <p>P283700 - The position sensor of shift fork B has a malfunction. _</p> <p>P283600 - The position sensor of shift fork B has an electrical fault. _</p> <p>P283400 - The position sensor of shift fork A has a short circuit to positive. _</p> <p>P283300 - The position sensor of shift fork A has a short circuit to ground. _</p> <p>P283200 - The position sensor of shift fork A has a malfunction. _</p> <p>P283100 - The position sensor of shift fork A has an electrical fault. _</p> <p>P282B00 - Pressure regulating valve 10 has an electrical fault. _</p> <p>P282800 - Pressure regulating valve 10 has a malfunction. _</p> <p>P282200 - Pressure regulating valve 9 has an electrical fault. _</p> <p>P281F00 - Pressure regulating valve 9 has a malfunction. _</p> <p>P281900 - Pressure regulating valve 8 has an electrical fault. _</p> <p>P281600 - Pressure regulating valve 8 has a malfunction. _</p> <p>P281000 - Pressure regulating valve 7 has an electrical fault. _</p> <p>P280700 - Pressure regulating valve 7 has a malfunction. _</p> <p>P278798 - The temperature of the clutch is too high. The component or the system has overtemperature.</p> <p>P274500 - Rpm sensor 2 has an electrical fault. _</p> <p>P274600 - Rpm sensor 2 has a malfunction. _</p> <p>P273300 - Pressure regulating valve F has a malfunction.</p> <p>P273200 - Pressure regulating valve F has a malfunction.</p>
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	<p>P272800 - Actuation of pressure regulating valve 5 has a malfunction. _</p> <p>P272400 - Pressure regulating valve F does not open.</p> <p>P272300 - Pressure regulating valve F does not close.</p> <p>P272200 - Pressure regulating valve 5 has a malfunction. _</p> <p>P271600 - Pressure regulating valve 4 has an electrical fault. _</p> <p>P271300 - Pressure regulating valve 4 has a malfunction. _</p> <p>P271100 - The actuator of hollow shaft and internal shaft has a malfunction. _</p> <p>P267F00 - The temperature sensor of the control unit has a malfunction. _</p> <p>P263797 - Feedback on the torque control is not received. The system function is restricted.</p> <p>P24F100 - The wake-up line to the control unit 'Y3/14n4 (Dual clutch transmission fully integrated transmission control unit)' has a short circuit to positive.</p> <p>P0C2A00 - The electric machine for the oil pump in the transmission is blocked. _</p> <p>P0C2900 - The electric oil pump in the transmission has a malfunction. _</p> <p>P0B0D00 - The electric oil pump in the transmission has an internal fault. _</p> <p>P0B0900 - The electric oil pump in the transmission has an electrical fault or open circuit. _</p> <p>P0A9200 - The alternator of the hybrid system has a malfunction. _</p> <p>P0A2F00 - Electrical Machine A has overtemperature. _</p> <p>P094200 - The hydraulic unit has a malfunction. _</p> <p>P092500 - The shift valve of the hollow shaft has a malfunction. _</p> <p>P085100 - Position sensor "Park pawl" has an electrical fault. Short circuit to ground</p> <p>P092100 - The shift valve of the inner shaft has a malfunction. _</p> <p>P085200 - Position sensor "Park pawl" has an electrical fault. Short circuit to positive</p>
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	<p>P085000 - The button 'Gear range P' has a malfunction. _</p> <p>P084800 - Oil pressure sensor B has a short circuit to positive. _</p> <p>P084700 - Oil pressure sensor B has a short circuit to ground. _</p> <p>P084600 - Oil pressure sensor B has a malfunction. _</p> <p>P084500 - Oil pressure sensor "B" has an electrical fault. _</p> <p>P084300 - Oil pressure sensor 'A' has a short circuit to positive. _</p> <p>P084200 - Oil pressure sensor 'A' has a short circuit to ground. _</p> <p>P084100 - Oil pressure sensor 'A' has a malfunction. _</p> <p>P084000 - Oil pressure sensor "A" has an electrical fault. _</p> <p>P081C00 - Position sensor "Park pawl" has an electrical fault. _</p> <p>P07E600 - Park position cannot be deselected. _</p> <p>P07E400 - Park position cannot be engaged. _</p> <p>P07C800 - Rpm sensor 2 has a short circuit to positive. _</p> <p>P07C700 - Rpm sensor 2 has a short circuit to ground. _</p> <p>P07FF00 - The transmission malfunctions during a cold start. _</p> <p>P07C600 - Rpm sensor 1 has a short circuit to positive. _</p> <p>P07C500 - Rpm sensor 1 has a short circuit to ground. _</p> <p>P07C000 - Rpm sensor 'Turbine wheel' has a short circuit to positive. _</p> <p>P07B571 - Sensor A of the park pawl has an electrical fault. The actuator is blocked.</p> <p>P07B500 - Sensor A of the park pawl has an electrical fault. _</p> <p>P07B200 - At the wake-up signal from control unit 'Transmission control for 8-speed dual-clutch transmission', component part 'Park pawl' has an open circuit.</p> <p>P07A771 - Multidisk clutch 3 does not open. The actuator is blocked.</p> <p>P07A500 - Multidisk clutch 2 does not open. _</p>
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	<p>P07A300 - Multidisk clutch 1 does not open. _</p> <p>P079B00 - Slip was detected at multidisk clutch 2. _</p> <p>P079A00 - Slip was detected at multidisk clutch 1. _</p> <p>P079800 - Pressure regulating valve 3 has an electrical fault. _</p> <p>P079500 - Pressure regulating valve 3 has a malfunction. _</p> <p>P079200 - Rpm sensor 1 has a malfunction. _</p> <p>P079100 - Rpm sensor 1 has an electrical fault. _</p> <p>P077800 - Pressure regulating valve 2 has an electrical fault. _</p> <p>P077600 - Pressure regulating valve 2 does not close. _</p> <p>P077500 - Pressure regulating valve 2 has a malfunction. _</p> <p>P076300 - Solenoid valve 3 has an electrical fault. _</p> <p>P076100 -</p> <p>P076077 - Solenoid valve 3 has a malfunction. The commanded position cannot be reached.</p> <p>P074800 - Pressure regulating valve 1 has an electrical fault. _</p> <p>P074600 - Pressure regulating valve 1 does not close. _</p> <p>P074500 - Pressure regulating valve 1 has a malfunction. _</p> <p>P071600 - The rpm sensor 'Turbine wheel' has a malfunction. _</p> <p>P071500 - The rpm sensor 'Turbine wheel' has an electrical fault. _</p> <p>P070246 - Control unit "Transmission" has a malfunction. There is an error in the calibration or parameterization memory.</p> <p>P070200 - Control unit "Transmission" has a malfunction. _</p> <p>P070100 - Control unit "Transmission" has a malfunction. _</p> <p>P06E400 - Sensor A of the park pawl has an electrical fault. _</p>
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	<p>P06AB01 - Internal temperature sensor 2 of the control unit has an electrical fault. There is a general electrical fault.</p> <p>P06A800 - Output 3 for the reference voltage of the sensors has a malfunction. _</p> <p>P06A700 - Output 2 for the reference voltage of the sensors has a malfunction. _</p> <p>P06A600 - Output 1 for the reference voltage of the sensors has a malfunction. _</p> <p>P066900 - The internal temperature sensor of the control unit has a short circuit to positive. _</p> <p>P066800 - The internal temperature sensor of the control unit has a short circuit to ground. _</p> <p>P066700 - The internal temperature sensor of the control unit has a malfunction. _</p> <p>P066600 - The internal temperature sensor of the control unit has an electrical fault. _</p> <p>P064F00 - An unauthorized software calibration was detected. _</p> <p>P063400 - The temperature in the control unit is too high. _</p> <p>P061B00 - The torque calculation of the control unit has a malfunction. _</p> <p>P061000 - The coding of the control unit is incorrect. _</p> <p>P060A00 - The monitoring function in the control unit has a malfunction. _</p> <p>P060700 - The control unit has a malfunction. _</p> <p>P060300 - There is an internal control unit fault in the NV-RAM memory. _</p> <p>P060200 - The control unit is not programmed. _</p> <p>P056300 - The on-board power supply voltage is too high. _</p> <p>P056200 - The on-board power supply voltage is too low. _</p> <p>P051300 - The start enable was not issued. _</p> <p>U300104 - The control unit was switched off improperly. There is an internal fault.</p> <p>U140D64 - An implausible wheel speed signal was received. There is an implausible signal.</p>
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XENTRY Tips

P021800 - Transmission oil temperature sensor 1 has detected overtemperature. _

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

Op. no.	Operation text	Time	Damage code	Note
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