

971 – Rough PDK II Operation during Adaption Phase

Vehicles Affected

Models	Model Year	Model Type	VIN Range	Vehicle-Specific Equipment
Panamera	As of 2017 up to 2021	971 (all 97A model variants)	N/A	N/A

Revision History

Revision	Release Date	Changes
0	January 21, 2021	Original document

Condition

Rough gear changes with unmatched engine and transmission revolutions further characterized by:

- Brief engine surges in response without full engagement in the transmission
- Engine temperature approaching or at operating temperature (50 – 100°C)
- Low vehicle mileage (0 – 200 miles)
- DME + PDK II programming performed recently, within 200 miles

Technical Background

The aforementioned conditions may result from a transmission that is undergoing adaption. There are numerous pre-requisite operations for successful operations of the PDKII. Examples of such operations include: touch-point adaptations; torque-fill timing, frictional coefficient adaption, control-valve mapping adaptations, and pressure sensor comparison among numerous others. Reprogramming the PDKII necessitates an adaptation.

Therefore, programming should only be conducted when necessary. The following information describes the operating parameters necessary for key adaptations to occur.

Service Information

If it is suspected the PDK II requires adaption, then please observe the following conditions during adaption:

- **Touch-point adaption and torque-fill timing**
 - Final Drive Oil Temperature > 45°C and < 110°C
 - Operation of the transmission from 4th to 8th gear
 - Ideally, driving is to be completed under constant driving conditions by changing gears between engine speeds of 1600 – 2000 rpm
- **Frictional Coefficient adaption**
 - Automatic Transmission Fluid (ATF) Temperature > 65°C and < 95°C
 - These adaptations occur with every upshift conducted under load
 - Adaptions also occur in Launch Control and the temperature behavior thereof
- **Control-valve mapping adaptations**
 - No temperature range limits.
 - Occur during every clutch engagement operation

The driving profile most directly determines the driving distance required by the PDK II to adapt successfully. Following the instructions above coupled with varying driving profiles, will allow the PDK II to adapt within approximately 125 miles (200 km). Driving only short trips, by which operating temperatures remain low relative to those referenced above, will significantly increase the distance required for adaption. Furthermore, adaption attempts should occur over longer distances and launches avoided.

Warranty

As always, please document the case completely in PQIS.

For this repair, please code the "cause" as follows:

Cause location: 37340 "Double clutch transmission"

Cause symptom: 1126 "Jerky gear change"

Use the following troubleshooting labor operation:

03350000 On board diagnostic (Main work) Fault memory read out

03350053 On board diagnostic (Composite) VAL

Search Items

PDK II, Transmission, Clunky, Jerks, Gear change, Adaption

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