

Panamera E-Hybrid – Thermal Management Control Unit Fault P26B100 Causes Check Engine Light

Vehicles Affected

Models	Model Year	Model Type	VIN Range	Vehicle-Specific Equipment
Panamera	As of 2019 up to 2020	97ABE1 97AFH1 97BBE1 97BFH1 97CBE1 97CFH1	N/A	E-Hybrid
Panamera	2021	97ABX1 97ADZ1 97AFT1 97BBX1 97BDZ1 97BFT1 97CBX1 97CDZ1 97CFT1	N/A	E-Hybrid

Revision History

Revision	Release Date	Changes
0	May 31, 2022	Original document

Condition

The customer complains of the presence of a check engine light in the instrument cluster.

The workshop finds fault code *P26B100 – Directional-control valve for high-temperature circuit (UVW3) – function implausible* stored in the Thermal management control unit (TME).

Technical Background

There is a possibility that the aforementioned fault code sets due to the TME diagnostics not being robust enough.

While the combustion engine temperature is $< 40\text{ }^{\circ}\text{C}$ ($104\text{ }^{\circ}\text{F}$), the changeover valve UVW3 will remain closed such that the passenger compartment is heated via the HV interior heater on the small coolant circuit. During small circuit operation, the absolute value of the temperature difference between temperature sensors TW11 and TW12 should be $> 7\text{ K}$ ($> 7\text{ }^{\circ}\text{C}$).

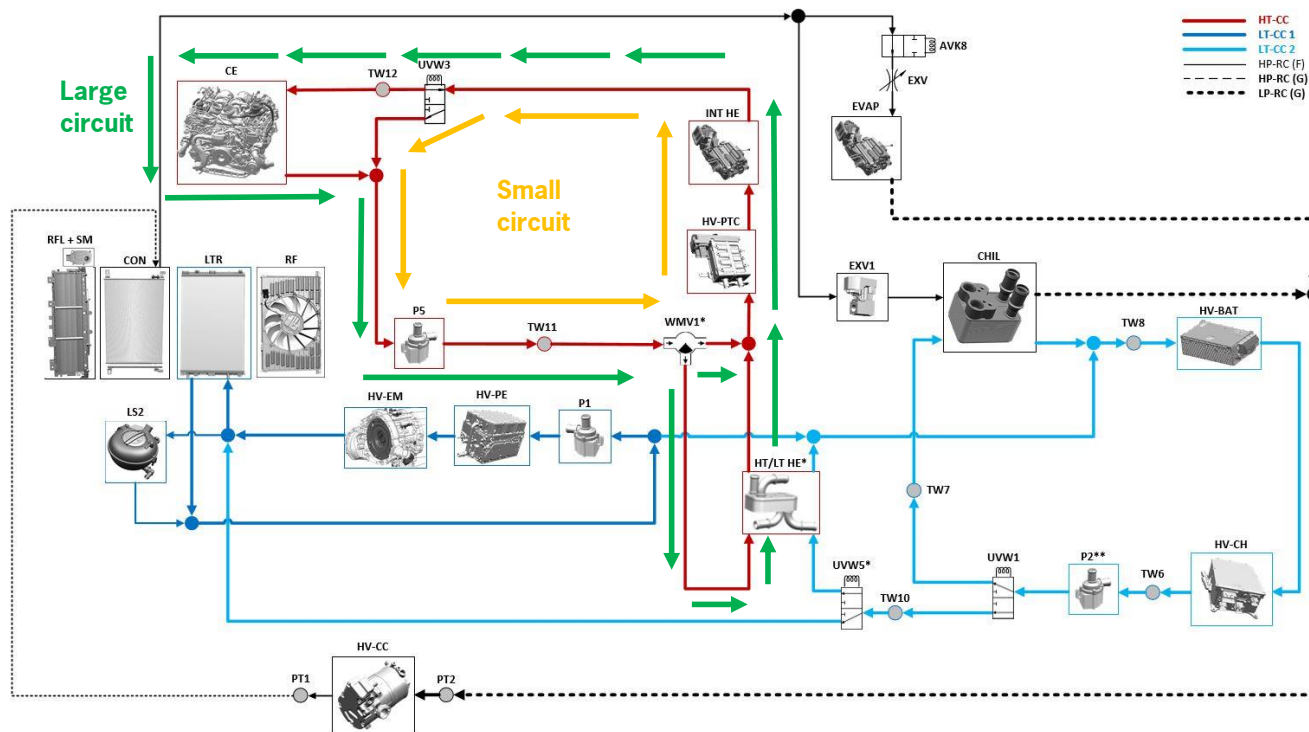


Figure 1: Panamera E-Hybrid Cooling Circuit

Once the combustion engine temperature is within the range of $40\text{ to }60\text{ }^{\circ}\text{C}$ ($104\text{ to }140\text{ }^{\circ}\text{F}$), the valve UVW3 opens and the coolant circuit is operating on the large circuit that includes the combustion engine circuit. During large circuit operation, the absolute value of the temperature difference between temperature sensors TW11 and TW12 should be $< 7\text{ K}$ ($< 7\text{ }^{\circ}\text{C}$).

During short operation of the combustion engine after cold start, the coolant temperature may rise to the range of $40\text{ to }60\text{ }^{\circ}\text{C}$ ($104\text{ to }140\text{ }^{\circ}\text{F}$) and valve UVW3 may or may not open. There is a possibility that the valve remains closed and waste heat from the engine continues to heat up temperature sensor TW12. If the valve is closed and sufficient waste heat exists, the absolute value of the temperature difference between sensors TW11 and TW12 may fall below the 7 K ($7\text{ }^{\circ}\text{C}$) threshold. Such conditions may cause the TME to believe valve UVW3 is stuck in an

incorrect position (e.g., closed when it should be open), despite the system functioning properly. This misdiagnosis may set fault code P26B100 in the TME.

Service Information

To address this concern, please perform the following:

1. Open a PCSS job and create a VAL.
2. In the VAL, find TME fault P26B100 and open the fault information. Check the value of 13_Fault display in the instrument cluster. If this value is "on", this fault is the cause of the check engine light.

13_Fault display in the instrument cluster on

3. Find the Thermal management control unit (TME) in the "Overview" tab in the PIWIS Tester and select it.
4. Navigate to the "Extended Identifications" tab to view the control unit information. Check the current software level in the TME. The current SW level should correspond to one of the two Factory SW Levels given in Table 1 below.
5. Please navigate to the Overview tab in the PIWIS Tester and select "Additional menu" on the bottom toolbar. Select "Campaign" from the list and use the Programming Code given in Table 1 below.

Model Year	Factory SW Level	Programming Code	SW Level after Programming
2019	0303	G2T8E	0305
2020	0303	G2T8E	0305
2021	0304	G2T8E	0305

Table 1: TME Software Update Information

6. After programming is complete, navigate to the "Extended identifications" tab for the TME. Verify that the control unit successfully updated to the Final SW Level given in Table 1. Please also create an "After repair" VAL.
7. If the fault persists after updating the TME to SW Level 0305, please ensure the coolant system is properly filled and bled and that there are no electrical or mechanical faults with valve UVW3 or with temperature sensors TW11 and TW12. Please also check coolant hoses for proper routing and/or restrictions.

Warranty

As always, please document the repair completely in PQIS.

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

Cause location: 82740 Directional-control valve

Cause symptom: 1613 No function occasionally

Use the following troubleshooting labor operations:

03350000 On board diagnostic

19292565 Thermal management control unit program

Search Items

Panamera, 971, 97A, 97B, 97C, check engine light, TME, thermal management, P26B100, hybrid

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