Cayenne E-Hybrid – Thermal Management Fault P26B100 Causes Check Engine Light

Vehicles Affected

Models	Model Year	Model Type	VIN Range	Vehicle-Specific Equipment
Cayenne	As of 2019 up to 2022	9YAAE1 9YACH1 9YADE1 9YBAE1 9YBCH1 9YBDE1	N/A	+0K3

Revision History

Revision	Release Date	Changes
0	August 3, 2022	Original document

Condition

The customer complains of a check engine light. The light may be on continuous or intermittent.

The workshop finds the fault P26B100 - Directional-control valve for high-temperature circuit (UVW3) – function implausible stored in the Thermal Management Control Unit (TME).

Area of Occurrence (DME, Instrument Cluster, etc.)

82740 – Directional-control valve (changeover valve UVW3)

Technical Background

The aforementioned fault code may be caused by a misdiagnosis of the directional control value for the high temperature circuit for interior heating (valve UVW3).

Under certain operating conditions, a lack of temperature difference between the engine coolant circuit and the interior heating circuit may result in the TME diagnosing valve UVW3 as “stuck open”, despite no mechanical fault in the valve.

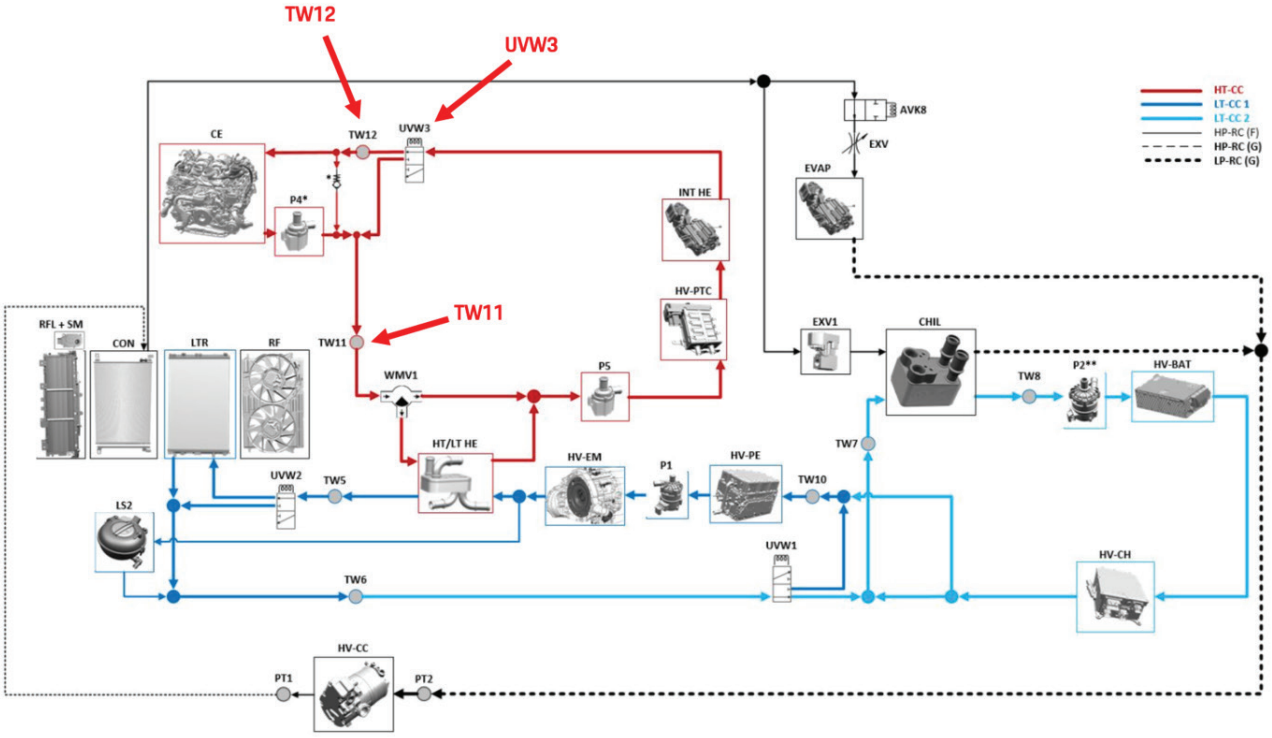

Figure 1 - Cayenne E-Hybrid Cooling Circuits

Valve UVW3 controls the direction of coolant flow based on engine temperature. The valve defaults to closed, such that the high-temp circuit excludes the engine coolant circuit. During this "small-circuit" operation, the HV PTC controls the temperature of the high-temp circuit to meet the heating and air conditioning demands of the customer. Once the engine reaches 40° C, the valve opens ("large-circuit" operation) and the high-temp circuit uses the engine heat instead of the HV PTC.

The status of UVW3 is diagnosed by the absolute value of the temperature difference between TW11 and TW12. The TME expects this difference to be **larger than 7° C while the valve is closed, but smaller than 7° C while the valve is open.** Certain operating conditions may cause the temperature difference to fall below 7° C while the valve is closed. If this condition exists while the TME is performing diagnostics, the valve will be diagnosed as open, although it is closed due to the engine temperature being less than 40° C.

Service Information

A software solution is currently in development. Until a permanent solution is available, please perform the following:

1. Create a VAL to document the occurrence of TME fault P26B100.
2. Verify proper routing of the coolant lines by inspection.
3. Verify proper operation of the valve UVW3 via the Actual values:
   Thermal Management (TME) → Actual Values → High-temperature circuit → Directional-control valve for high-temperature circuit for interior heating (UVW3)
   a. The actual value should display "activated" if the coolant temperature is greater than 40° C.
   b. The actual value should display "not activated" if the coolant temperature is less than 40° C.

To reduce the likelihood of the fault TME P26B100 occurring, the customer may activate interior preconditioning prior to departure. This may be done either via a Departure Timer in the Hybrid menu in the PCM, or via the My Porsche smartphone app.

Warranty

As always, please document the repair completely in PCSS.

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 operation:

03350000	On board diagnostic

Search Items

Cayenne, 9YA, 9YB, check engine light, TME, thermal management, P26B100, hybrid, E-Hybrid