

Message “Engine Control Fault” in the Instrument Cluster/Fault Memory Entries for the Oxygen Sensor Downstream of the Catalytic Converter (96/23)

Vehicle Type: **Panamera 4 E-Hybrid (971)**
Panamera 4 E-Hybrid Executive (971)
Panamera 4 E-Hybrid Sport Turismo (971)

Model Year: **As of 2017 up to 2023**

Equipment: 2.9-liter twin-turbo V6 engine with hybrid drive

Concerns: **Oxygen sensors downstream of catalytic converter**

Cause: **The message ‘Engine control fault’ is displayed in the instrument cluster and the following entries are stored in the fault memory of the DME control unit:**

- **P227000** - Oxygen sensor downstream of catalytic converter, bank 1 – signal too lean
- **P227200** - Oxygen sensor downstream of catalytic converter, bank 2 – signal too lean
- **P209600** - Oxygen sensor correction downstream of catalytic converter, bank 1 – above lean control limit
- **P209800** - Lambda correction behind catalytic converter, bank 2 – above lean control limit

At high ambient temperatures around the oxygen sensors downstream of the catalytic converter, the measuring electrodes may become contaminated over the service life of the vehicle which can lead to a functional impairment of the oxygen sensors and thus to the described fault pattern.

Action: If there is a customer complaint on vehicles that were manufactured before the deployment date listed below, replace the oxygen sensors on the catalytic converter and the turbocharger shield.

Date of Introduction: Standard use modified turbocharger shield from January 9, 2023.

Required parts

Part No.	Designation – Location	Number
00004330438	⇒ Oxygen sensor – downstream of catalytic converter	2 pieces
PAE119607	⇒ Heat shield – Turbocharger	1 piece

WHT008539	⇒ Hexagon-head bolt with inner multiple-tooth head (Duo) M10 x 80 – Dome strut to body	2 pieces
PAF912696	⇒ M10 hexagon nut – Dome strut to body	2 pieces
N 10664503	⇒ Hexagon-head bolt, M8 x 45 – Side strut to body	2 pieces

Required tools

Tool:

- **3337 - Ring wrench set for oxygen sensor**
- Torque wrench, 2 – 10 Nm (1.5 – 7.5 ftlb.), e.g. **V.A.G 1783 - torque wrench, 2 – 10 Nm (1.5 – 7.5 ftlb.)**
- Torque wrench, 20–100 Nm (15–74 ftlb.), e.g. **VAS 5820 - Torque wrench, 20-100 Nm (15-74 ftlb.)**
- Torque–torque –wrench, 20–400 Nm (15-296 ftlb.), e.g. **VAS 6942 - Digital torque–torque –wrench, 20–400 Nm (15-296 ftlb.)**
- **9866 - Support**
- **9866/2 - Support**
- **9900 - PIWIS Tester 4**
- **VAS 6883A - Insulated tool set**
- Battery charger with a current rating of **at least 90 A, VAS 5908 - battery charger 90 A**

Additional tools required if the **high-voltage system cannot be isolated automatically using the PIWIS Tester:**

- **High-Voltage Test Adapter HVA 280**
- **T40262 - Locking cap**

Replacing oxygen sensors downstream of catalytic converter and turbocharger shield

- Work Procedure: 1 Observe warnings and information on the high-voltage system in hybrid vehicles ⇒ *Workshop Manual '2X00IN General warnings for working on the high-voltage vehicle electrical system'*.
- 2 Isolate the high-voltage system from the power supply using the PIWIS Tester and complete the relevant documentation ⇒ *Workshop Manual '2X00IN Isolating high-voltage system from power supply/Starting high-voltage system'*.



Information

New oxygen sensors are pre-greased.



Information

The electric passenger compartment heater only needs to be loosened and reattached, therefore, it is not necessary to drain coolant.

- 3 Replace oxygen sensors downstream of catalytic converter and, if necessary, turbocharger shield.
⇒ *Workshop Manual '247319 Removing and installing oxygen sensor downstream of catalytic converter (V6 biturbo)'*
- 4 Start the high-voltage system and complete the relevant start-up documentation. ⇒ *Workshop Manual '2X00IN Isolating high-voltage system from power supply/Starting high-voltage system'*.
- 5 Read out all fault memories using the PIWIS tester, process and delete existing faults if necessary.

Labor position and PCSS encryption

Labor position:

APOS	Labor operation	I No.
24735042	Rework oxygen sensor downstream of catalytic converter	

PCSS encryption:

Location (FES5)	24730	Oxygen sensor downstream of catalytic converter
Damage type (SA4)	1611	does not function

Important Notice: Technical Bulletins issued by Porsche Cars North America, Inc. are intended only for use by professional automotive technicians who have attended Porsche service training courses. They are written to inform those technicians of conditions that may occur on some Porsche vehicles, or to provide information that could assist in the proper servicing of a vehicle. Porsche special tools may be necessary in order to perform certain operations identified in these bulletins. Use of tools and procedures other than those Porsche recommends in these bulletins may be detrimental to the safe operation of your vehicle, and may endanger the people working on it. Properly trained Porsche technicians have the equipment, tools, safety instructions, and know-how to do the job properly and safely. Part numbers listed in these bulletins are for reference only. The work procedures updated electronically in the Porsche PIWIS diagnostic and testing device take precedence and, in the event of a discrepancy, the work procedures in the PIWIS Tester are the ones that must be followed.

© 2023 Porsche Cars North America, Inc.