

Warning Message “Ignition lock faulty - service required” in the Instrument Cluster / Fault Memory Entry “B143C29” in the Rear-End Electronics Control Unit (SY 47/ 24)

Change overview:

Version	Date	Change
1	04/ 09/ 2024	• First publication
2	09/ 18/ 2024	• Adjusted procedure (coding for rear-end electronics)

Model Line: 911 (992)

Model Year: As of 2020

Concerns: Ignition starter switch

Symptom: The white warning message “Ignition lock faulty - service required” is displayed in the instrument cluster during the engine start-up process. The following fault memory entry is stored in the fault memory of the control unit for the rear-end electronics (BCM2):

- B143C29 - Ignition starter switch, signal implausible (010066)

Cause: When the ignition starter switch is actuated, the engine is started through the system from the moment when the ignition starter switch is between switch position -1 - (ignition on) and switch position -2 - (engine start) ⇒ *Ignition starter switch position - Arrow-*.
If the ignition starter switch for the engine start is not fully turned to the switch position “Start engine” ⇒ *Ignition starter switch position -2-* but is released immediately after engine start instead, thus returning to the switch position “Ignition on” ⇒ *Ignition starter switch position -1 -*, the fifth consecutive incomplete start will result in the symptom described above.



Ignition starter switch position

- 1 – Switch position “Ignition on”
- 2 – Switch position “Start engine”

Arrow – Engine start begins

Circle – Engine start release by “pushing brake” at ignition starter switch position ⇒ *Ignition starter switch position*
 -Arrow-



Information

The ignition starter switch is a redundant system with four signals to ensure proper operation even if one of the signals is faulty. The signals are diagnosed by the rear-end electronics control unit at each complete cycle (vehicle off until engine running). If the ignition starter switch is not fully actuated to start the engine, one of the four signals is not switched. Due to the design of the redundant system, the engine can still be started, but a fault memory entry is generated in the diagnostic system by the repeated absence of the signal.



Information

After two full start-ups (“Start engine” switch position is reached completely), the warning message in the instrument cluster automatically disappears; the fault memory entry “B143C29” remains “Passive” in the rear-end electronics control unit.

- Remedial Action: 1 Inform the customer to turn the ignition starter switch to the "Start engine" ⇒ *Ignition starter switch position -2-* switch position each time in order to start the engine so that the system will work as intended.
- 2 Re-code control unit for rear-end electronics (BCM2).
- 3 Delete fault memory entry "B143C29 - Ignition starter switch, signal implausible (010066)" in the rear-end electronics control unit.

**Information**

The coding of the control unit for the rear-end electronics (BCM2) is to increase robustness by increasing the detection time for setting the fault memory and turning on the warning message for subsequent incomplete starting processes.

The control unit for the rear-end electronics (BCM2) continues to monitor the starting process.

**Information**

This complaint does not involve a defect of the ignition starter switch. As a result, this action cannot be invoiced via a warranty claim.

Replacing the ignition starter switch will not correct the problem in this complaint and will not provide any remedy.

Required Tools

- Tools:
- P90999 - PIWIS Tester 4 with PIWIS Tester software release 42.900.020 (or higher) installed
 - Battery charger with a current rating of at least 90 A and a current and voltage-controlled charge map for lithium starter batteries, e.g. VAS 5908 - battery charger 90A. For further information about the battery chargers to be used, see the corresponding Workshop Manual. ⇒ *Workshop Manual '270689 Charge battery and vehicle electrical system'*

Re-code control unit for rear-end electronics (BCM2)

- Work procedure: 1 Connect and switch on the battery charger.
⇒ *Workshop Manual '270689 Charging battery/ vehicle electrical system'*

- 2 Place the original remote control in the emergency start tray.

- 3 Connect the P90999 - PIWIS Tester 4, switch on ignition and start the diagnostic application.

- 4 Re-code control unit for rear-end electronics (BCM2).

The basic procedure to be followed for coding the control unit is described in the Workshop Manual:
⇒ *Workshop Manual '270689 Basic instructions and procedure for control unit programming using the PIWIS Tester'*

Specific information on control unit coding in the context of this Technical Information:

Required PIWIS Tester software release:	42.900.020 (or higher)
Type of control unit coding:	Control unit coding using the 'Automatic coding' function for the control unit for rear-end electronics (BCM2): Control unit for the 'rear-end electronics (BCM2)' – 'Coding/ programming' menu – 'Automatic coding' function.
Coding sequence:	Read and follow the information and instructions on the PIWIS Tester during the guided coding sequence. Do not interrupt the coding process. When coding is complete, the message "Coding has been completed successfully" is displayed and a tick appears in the 'Status' box.
Procedure if control unit coding is not successful:	Repeat control unit coding.

- 5 Exit the diagnostic application. Switch off the ignition. Disconnect P90999 - PIWIS Tester 4 from the vehicle.
- 6 Switch off and disconnect the battery charger.
⇒ *Workshop Manual '270689 Charging battery/ vehicle electrical system'*

Labor position and PCSS encryption

Labor position:

APOS	Labor operation	I No.
57892599	Program control unit for rear-end electronics (BCM2)	

PCSS encryption:

Location (FES5)	28040	Ignition starter switch
Damage type (SA4)	1613	temporarily without function

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