

Diagnosis - Fault memory

Prerequisites for reading out fault memory

1. Fuses in order.
2. Battery voltage > 11 V
3. Unlock vehicle with IRCL
3. Ignition: **ON**
4. Connect Hand-Held Tester in accordance with connecting diagram, see index 0.

Notes

The fault memory can **only** be read out and erased with the **Hand-Held Tester**.

Control modules as of part no. 210 820 21 26, 210 820 22 26 can only be desynchronized with the HHT.

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Note on fault codes

The fault is current when the fault code is displayed against a black background.

Depending on the type of fault, detailed information on faults or part of it appear for most faults

- > Ω Resistance too high
- < Ω Resistance too low
- Γ Γ - Short-circuit to -
- Γ Γ + Short-circuit to +
- /- Open-circuit

For some codes the following additional information such as fault frequency can be read out.

Fault frequency

The number of times a fault has occurred, for example:


4 = intermittent fault, has occurred 4 times

Note on drive authorization system

- Dependent on each engine control module, the vehicle has a corresponding drive authorization system (IRCL version). There are two versions. One IRCL version with a CAN connection and one version with PWM connection to the engine control module.

- Engines with mechanical fuel injection receive a shut-off valve control module drive authorization system (DSV) with an integrated fuel shut-off valve which interrupts the fuel supply. This control module is also connected to the IRCL control module via the CAN.

- The immobilization of the engine control or immobilization of the fuel supply comes from the IRCL control module. The IRCL control module is connected to the engine control module or the fuel supply shut-off valve via a CAN databus or via PWM connection. After immobilization of the engine control (vehicle is locked by IRCL), the engine control module immobilizes the injection system. On vehicles with mechanical injection, the fuel supply is interrupted by the fuel supply shut-off valve.

The drive authorization system and the ATA can only be activated or deactivated by the IRCL. Opening and closing the vehicle with the mechanical key has no influence on the drive authorization system and the ATA. : Operation of all systems with IRCL and key remains still possible). The IRCL control module and engine control module are bound together with an identification code. This identification can no longer be erased. An exchange of the IRCL control module or of the engine control module from another vehicle for testing is therefore not possible.

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Injection system	Data transmission by
Continuous fuel injection and ignition system PEC	PWM pulse width modulation
LH sequential multiport fuel injection system HFM-SFI	PWM pulse width modulation
Continuous fuel injection and ignition system HFM-SFI	CAN databus
Electronic distributor-type fuel injection pump EDFI as of 09/94	PWM pulse width modulation
Electronic in-line fuel injection pump EIFI as of 09/94	CAN databus
In-line injection pump M/RSF	CAN databus
Continuous fuel injection and ignition system ME	CAN databus

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Fault code	Possible cause	Remedy/test step ¹⁾
B1000	Infrared remote control module (IRCL) (N54)	replace N54
B1100	Control line unfused, Γ Γ + or Γ Γ -	\square 23 \Rightarrow 13.0, 14.0, 17.0-20.0
B1101	Control line fused, Γ Γ + or Γ Γ -	\square 23 \Rightarrow 15.0-20.0
B1102	Control line, drive authorization system (PWM), Γ Γ + or Γ Γ -	\square 23 \Rightarrow 21.0, 22.0
B1103	Red confirmation signal, Γ Γ + or Γ Γ -	\square 23 \Rightarrow 5.0
B1104	Green confirmation signal, Γ Γ + or Γ Γ -	\square 23 \Rightarrow 6.0
B1701	Incorrect release code, right cylinder row (CAN)	\square 11 \Rightarrow 6.0
B1702	Incorrect release code, left cylinder row (CAN)	\square 11 \Rightarrow 6.0
B1703	Attempt to start using IRCL locked vehicle, carried out	\square 11 \Rightarrow 6.0, erase fault memory

¹⁾ Observe prerequisites for testing.