Diagnosis – Diagnostic Trouble Code (DTC) Memory (CF)

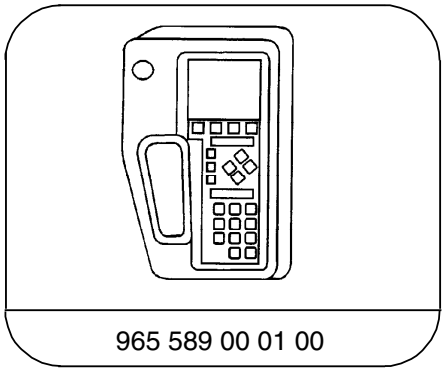
Preparation for Test:

1. Fuses ok,
2. Ignition: **ON**
3. Connect the Hand-Held Tester (HHT) to X11/4, according to diagram, see section 0.
4. Voltage supply to control modules and CAN data lines ok. See DM, B&A, Vol. 2, section 7.1, 23
5. All CAN data lines must be connected properly.

The diagnostic trouble codes (DTC‘s) can only be read out and erased **using the Hand-Held Tester (HHT)**.

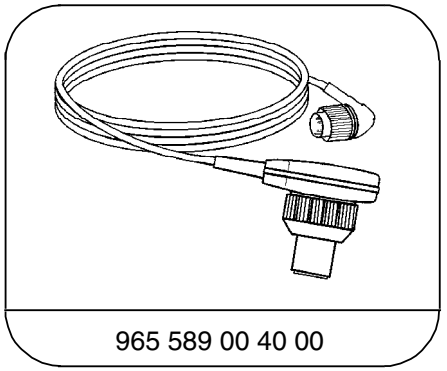
DTC's for one particular system may be stored in other control modules, therefore readout the DTC's from all other relevant control modules as well. When reading out DTC's, all stored DTCs will appear, which means that some of the DTCs that appear, will not be relevant to the system being checked. Non-relevant DTCs will be described in the particular system.

Special Tools



965 589 00 01 00

Hand-Held-Tester



965 589 00 40 00

Test cable

Note regarding DTCs

Only those DTCs as noted in 12, are relevant for the convenience feature system.
Current diagnostic trouble codes are highlighted in black on the display.
Additional detailed fault information based on fault type is displayed with nearly all diagnostic codes (DTC‘s) such as:

> Ω resistance too great
< Ω resistance too low
Γ¬+ short circuit to positive (POS)
Γ¬– short circuit to ground (GND)
–//– open circuit

With some fault codes, additional information as well as fault frequency can be read out.

Fault frequency

Faults are noted by frequency of occurrence, i.e.: 4 periodic faults, 4 occurances.

Diagnosis – Diagnostic Trouble Code (DTC) Memory (CF)

DTC 	Possible cause	Test step/Remedy [1]
B1000	Roof control panel control module (N70) defective.	N70
B1001	Switch illumination, circuit 58d ⌐¬ (short circuit)	Wiring.
B1004	Lower control field control module (N72) does not belong to this model	Check vehicle coding, N72
B1010	Low voltage	See DM, B&A, Vol. 2, section 7.1, 23
B1011	Excessive voltage	See DM, B&A, Vol. 2, section 7.1, 23
B1013	Voltage supply, circuit 15R is missing from circuit 15	See DM, B&A, Vol. 2, section 7.1, 23
B1118	Sliding/pop-up roof switch (N70s1) signal time > 25 seconds or wiring ⌐¬ (short circuit)	Wiring, N70
B1520 001	Relay for sliding/pop-up roof (M12/1) does not switch over	N70
B1520 002	Relay signal time for sliding/pop-up roof (M12/1) is > 25 seconds	N70

[1] Observe Preparation for Test, see 22.

Diagnosis – Diagnostic Trouble Code (DTC) Memory (CF)

DTC	Possible cause	Test step/Remedy [1]
B1520 003	Voltage supply for Hall sensors for sliding/pop-up roof motor (M12/1m1)	23 ⇒ 19.0
B1520 004	Hall sensors for sliding/pop-up roof motor (M12/1m1) have wrong direction of rotation	M12/1
B1520 005	Hall sensor 1 for sliding/pop-up roof motor (M12/1b1) defective	23 ⇒ 19.0 M12/1
B1520 006	Hall sensor 2 for sliding/pop-up roof motor (M12/1b2) defective	23 ⇒ 19.0 M12/1
B1000	Lower control field control module (N72) defective.	N72
B1004	Lower control field control module (N72) incorrect	Check vehicle coding, N72
B1010	Low voltage	See DM, B&A, Vol. 2, section 7.1, 23
B1011	Excessive voltage	See DM, B&A, Vol. 2, section 7.1, 23

[1] Observe Preparation for Test, see 22.

Diagnosis – Diagnostic Trouble Code (DTC) Memory (CF)

DTC	Possible cause	Test step/Remedy [1]
B1120	Left front power window switch (N72s1) signal time > 25 seconds or wiring ⌜⌝ (short circuit) All except Model 208.4. On model 208.4, switch (S21/1) is installed in place of switch N72s1. S21/1 is connected to the Roll bar/power soft top control module (N52). Read DTC's out of Roll bar/power soft top control module.	N72 N52
B1121	Right front power window switch (N72s1) signal time > 25 seconds or wiring ⌜⌝ (short circuit) On model 208.4, switch (S21/1) is installed in place of switch N72s1. S21/1 is connected to the Roll bar/power soft top control module (N52). Read DTC's out of Roll bar/power soft top control module.	N72 N52
B1122	Left rear power window switch (N72s3) signal time > 25 seconds or wiring ⌜⌝ (short circuit)	N72
B1123	Right rear power window switch (N72s4) signal time > 25 seconds or wiring ⌜⌝ (short circuit)	N72
B1000	Front driver-side door control module (N69/1) defective.	N69/1

1) Observe Preparation for Test, see 22.

2) (only USA)

Diagnosis – Diagnostic Trouble Code (DTC) Memory (CF)

DTC	Possible cause	Test step/Remedy [1]
B1010	Low voltage	See DM, B&A, Vol. 2, section 7.1, 23
B1011	Excessive voltage	See DM, B&A, Vol. 2, section 7.1, 23
B1100	Left front door lock switch (S86/1s1) [2] (CF) unlock signal time > 25 seconds or wiring ⌐¬ (short circuit)	23 ⇒ 22.0, 23.0
B1101	Left front door lock switch (S86/1s2) [2] (CF) lock signal time > 25 seconds or wiring ⌐¬ (short circuit)	23 ⇒ 22.0, 23.0
B1520 001	Relay for left front power window motor (M10/3) does not switch over	N69/1
B1520 002	Relay signal time for left front power window motor (M10/3) is > 25 seconds	N69/1
B1520 003	Voltage supply for Hall sensors for left front power window motor (M10/3) or wiring ⌐¬ (short circuit)	23 ⇒ 6.0 23 ⇒ 7.0

[1] Observe Preparation for Test, see 22.

Diagnosis – Diagnostic Trouble Code (DTC) Memory (CF)

DTC	Possible cause	Test step/Remedy [1]
B1520 004	Hall sensors for left front power window motor (M10/3) have wrong direction of rotation	M10/3
B1520 005	Hall sensor 1 for left front power window motor (M10/3) defective	Wiring, M10/3
B1520 006	Hall sensor 2 for left front power window motor (M10/3) defective	Wiring, M10/3
B1520 007	Left front power window motor (M10/3) current draw	Check M10/3 for possible binding, M10/3
B1000	Front passenger-side door control module (N69/2) defective.	N69/2
B1010	Low voltage	See DM, B&A, Vol. 2, section 7.1, 23
B1011	Excessive voltage	See DM, B&A, Vol. 2, section 7.1, 23
B1100	Right front door lock switch (S87/1s1) [2](CF) unlock signal time > 25 seconds or wiring ⌐¬ (short circuit)	23 ⇒ 22.0, 23.0

1) Observe Preparation for Test, see 22.

2) (only USA)

Diagnosis – Diagnostic Trouble Code (DTC) Memory (CF)

DTC	Possible cause	Test step/Remedy [1]
B1101	Right front door lock switch (S87/1s2) [2](CF) lock signal time > 25 seconds or wiring ⌐¬ (short circuit)	23 ⇒ 22.0, 23.0
B1520 001	Relay for right front power window motor (M10/4) does not switch over	N69/2
B1520 002	Relay signal time for right front power window motor (M10/4) is > 25 seconds	N69/2
B1520 003	Voltage supply for Hall sensors for right front power window motor (M10/4) or wiring ⌐¬ (short circuit)	23 ⇒ 11.0 23 ⇒ 12.0
B1520 004	Hall sensors for right front power window motor (M10/4) have wrong direction of rotation	M10/4
B1520 005	Hall sensor 1 for right front power window motor (M10/4) defective	Wiring, M10/4
B1520 006	Hall sensor 2 for right front power window motor (M10/4) defective	Wiring, M10/4

[1] Observe Preparation for Test, see 22.

Diagnosis – Diagnostic Trouble Code (DTC) Memory (CF)

DTC	Possible cause	Test step/Remedy [1]
B1520 007	Right front power window motor (M10/4) current draw	Check M10/3 for possible binding, M10/4
B1000	Rear driver-side door control module (N69/3) defective.	N69/3
B1010	Low voltage	See DM, B&A, Vol. 2, section 7.1, 23
B1011	Excessive voltage	See DM, B&A, Vol. 2, section 7.1, 23
B1155	Left rear power window switch (S21/3) signal time > 25 seconds or wiring ⌜⌝– (short circuit to ground)	23 ⇒ 15.0
B1407 006	Short circuit between rear driver-side door control module (N69/3) and left rear power window switch (S21/3), Illumination for left rear power window switch (S21/3), End stage for rear driver-side door control module (N69/3).	Wiring. S21/3 N69/3
B1520 001	Relay for left rear power window motor (N69/3m1) does not switch over	N69/3
B1520 002	Relay signal time for left rear power window motor (N69/3m1) is > 25 seconds	N69/3

[1] Observe Preparation for Test, see 22.

[2] (only USA)

Diagnosis – Diagnostic Trouble Code (DTC) Memory (CF)

DTC	Possible cause	Test step/Remedy [1]
B1520 003	Voltage supply for Hall sensors for left rear power window motor (N69/3m1) or wiring ⌜⌝ (short circuit)	N69/3
B1520 004	Hall sensors for left rear power window motor (N69/3m1) have wrong direction of rotation	N69/3
B1520 005	Hall sensor 1 for left rear power window motor (N69/3m1) defective	N69/3
B1520 006	Hall sensor 2 for left rear power window motor (N69/3m1) defective	N69/3
B1000	Rear passenger-side door control module (N69/4) defective.	N69/4
B1010	Low voltage	See DM, B&A, Vol. 2, section 7.1, 23
B1011	Excessive voltage	See DM, B&A, Vol. 2, section 7.1, 23
B1155	Right rear power window switch (S21/4) signal time > 25 seconds or wiring ⌜⌝– (short circuit to ground)	23 ⇒ 17.0

[1] Observe Preparation for Test, see 22.

Diagnosis – Diagnostic Trouble Code (DTC) Memory (CF)

DTC	Possible cause	Test step/Remedy [1]
B1407 006	Short circuit between rear passenger-side door control module (N69/4) and right rear power window switch (S21/4), Illumination for right rear power window switch (S21/4), End stage for rear passenger-side door control module (N69/4).	Wiring, S21/4 N69/4
B1520 001	Relay for right rear power window motor (N69/4m1) does not switch over	N69/4
B1520 002	Relay signal time for right rear power window motor (N69/4m1) is > 25 seconds	N69/4
B1520 003	Voltage supply for Hall sensors for right rear power window motor (N69/4m1) or wiring ⌐¬ (short circuit)	N69/4
B1520 004	Hall sensors for right rear power window motor (N69/4m1) have wrong direction of rotation	N69/4
B1520 005	Hall sensor 1 for right rear power window motor (N69/4m1) defective	N69/4
B1520 006	Hall sensor 2 for right rear power window motor (N69/4m1) defective	N69/4

1) Observe Preparation for Test, see 22.

2) (only USA)