

### Diagnosis – Diagnostic Trouble Code (DTC) Memory (ESA)

#### CAUTION!

Injury hazard from pinching and crushing, in extreme cases extremities can even be severed when caught in the mechanism.

Do not allow any body parts to be in the general area of the moving components.

#### Preparation for Test:

1. Review 12, 20, 21, 31,
2. Check fuses, ok,
3. Ignition **ON**.
4. Connect the Hand-Held Tester (HHT) to X11/4, according to diagram, see section 0.
5. Voltage supply for the control module and CAN wiring ok, refer to DM, Body and Accessories, Volume 2, section 7.1, 23
6. All CAN wiring must be contacted.



The diagnostic trouble codes (DTC's) can only be read out and erased via the Hand-Held-Tester.

The DTC's from one system can be stored in other control modules, therefore the DTC memory from other control modules that are relevant to the system being checked should also be readout.

While performing the DTC readout, it is possible that DTCs may appear that are not relevant to the system being checked, meaning that all stored DTCs in that particular control module are being displayed.

DTC's which are not relevant to the system being checked may also be stored in the respective system's DTC memory.

#### Note regarding DTC's

Current DTC's are highlighted in black on the display. Additional detailed fault information based on fault type is displayed with nearly all DTC's such as:

>  $\Omega$  resistance too great

<  $\Omega$  resistance too low

Γ Γ+ short circuit to positive (POS)

Γ Γ- short circuit to ground (GND)

-// - open circuit

A single DTC may also have additional information such as a readout of repeated faults.

#### Repeated faults

Counting of a faults (e.g.):

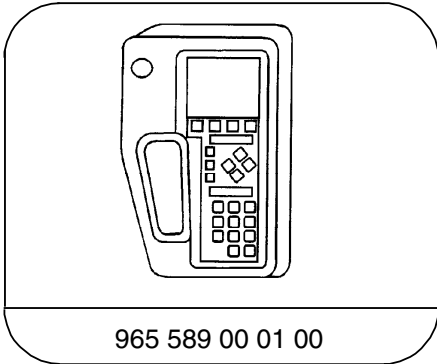
4 = intermittant fault (fault occurred 4 times).

## 15.4 Electric Seat Adjustment (ESA)

Models 208, 210 as of 3/97

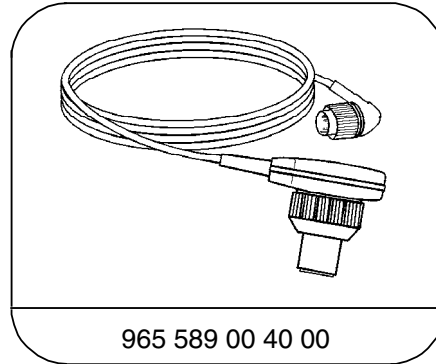
### Diagnosis – Diagnostic Trouble Code (DTC) Memory (ESA)

#### Special Tools



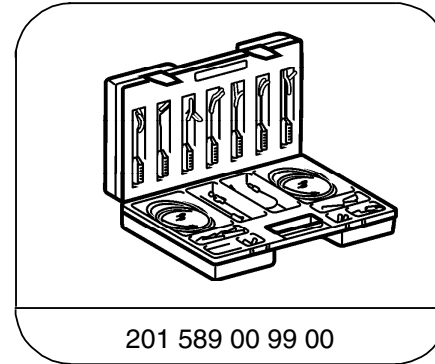
965 589 00 01 00

Hand-Held-Tester



965 589 00 40 00

Test cable



201 589 00 99 00

Electrical connecting set


#### Test equipment; See MBUSA Standard Service Equipment Program

Description	Brand, model, etc.
Digital multimeter	Fluke models 23, 77 III, 83, 85, 87

## 15.4 Electric Seat Adjustment (ESA)


Models 208, 210 as of 3/97

### Diagnosis – Diagnostic Trouble Code (DTC) Memory (ESA, Left-Side)

DTC 	Possible cause	Test step/Remedy <sup>1)</sup>
B1000	Left front ESA control module (N32/1)	N32/1
B1010	Left front ESA control module (N32/1), low voltage	D.M., Body and Accessories, Volume 2, section 7.1, 23
B1011	Left front ESA control module (N32/1), excess voltage	D.M., Body and Accessories, Volume 2, section 7.1, 23
B1156	Left front seatback release microswitch (S91/3) signal > 25 secs or wiring Γ1 (Model 208 up to 6/98 only)  Left front seatback release microswitch (S91/3) or left front hibernation microswitch (S91/1s2) signal > 25 secs or wiring Γ1 (Model 208 as of 06/98 only)	23 ⇒ 19.0        23 ⇒ 20.0
B1200	Left front ESA motor group (with memory), fore/aft motor (M27m1) (Hall sensor defective) or wiring –//–	23 ⇒ 2.0
B1201	Left front ESA motor group (with memory), raise/lower motor (M27m3) (Hall sensor defective) or wiring –//–	23 ⇒ 5.0
B1202	Left front ESA motor group (with memory), rear raise/lower motor (M27m2) (Hall sensor defective) or wiring –//–	23 ⇒ 8.0


<sup>1)</sup> Observe Preparation for Test, see 22.

### Diagnosis – Diagnostic Trouble Code (DTC) Memory (ESA, Left-Side)

DTC 	Possible cause	Test step/Remedy <sup>1)</sup>
B1203	Left front ESA motor group (with memory), head restraint raise/lower motor (M27m4) (Hall sensor defective) or wiring –//–	23 ⇒ 14.0
B1204	Left front ESA motor group (with memory), backrest fore/aft motor (M27m5) (Hall sensor defective) or wiring –//–	13 ⇒ 11.0
B1510 <b>Model 208</b>	Left front ESA control module (N32/1)	N32/1
B1850 B1851	Left front ESA control module (N32/1) does not communicate with front driver-side door control module (N69/1)	D.M., Body and Accessories, Volume 2, section 7.1, 23
B1852 <b>Model 208</b>	Left front ESA control module (N32/1) does not communicate with electronic ignition lock control module (N73)	D.M., Body and Accessories, Volume 2, section 7.1, 23
B1853 <b>Model 208</b>	Left front ESA control module (N32/1) does not communicate with PSE control module (A37)	D.M., Body and Accessories, Volume 2, section 7.1, 23
B1854 <b>Model 208</b>	Left front ESA control module (N32/1) does not communicate with electronic ignition lock control module (N73)	D.M., Body and Accessories, Volume 2, section 7.1, 23


<sup>1)</sup> Observe Preparation for Test, see 22.

### Diagnosis – Diagnostic Trouble Code (DTC) Memory (Door Control Module)

DTC 	Possible cause	Test step/Remedy <sup>1)</sup>
B1111	Backrest fore/aft switch (S91/2s5), memory button 3 (S91/2s8) or memory store button switch (S91/2s9) binding or wiring ⌈	23 ⇒ 10.0, 17.0
B1112	Front raise lower switch (S91/2s3), headrest raise lower/switch (S91/2s4) or memory button 2 switch (S91/2s7) signal > 25 secs or wiring ⌈	23 ⇒ 4.0, 13.0, 17.0
B1113	Rear raise /lowerswitch (S91/2s2), fore/aft switch (S91/2s1) or memory button 1 switch (S91/2s6) signal > 25 secs or wiring ⌈	23 ⇒ 1.0, 7.0, 17.0


<sup>1)</sup> Observe Preparation for Test, see 22.

## Diagnosis – Diagnostic Trouble Code (DTC) Memory ESA (Right-Side)

DTC 	Possible cause	Test step/Remedy <sup>1)</sup>
B1000	Right front seat ESA control module with memory (N32/2)	N32/2
B1010	Right front seat ESA control module with memory (N32/2), low voltage	D.M., Body and Accessories, Volume 2, section 7.1, 23
B1011	Right front seat ESA control module with memory (N32/2) excess voltage	D.M., Body and Accessories, Volume 2, section 7.1, 23
B1156 <b>Model 208</b>	Right front seatback release microswitch (S92/3) signal > 25 secs or wiring Γ1 (Model 208 up to 6/98 only)  Left front seatback release microswitch (S92/3) or right front hibernation microswitch (S92/1s2) signal > 25 secs or wiring Γ1 (Model 208 as of 06/98 only)	23 ⇒ 19.0  23 ⇒ 20.0
B1200	Fore/aft motor (M28m1) (Hall sensor defective) or wiring –//–	23 ⇒ 2.0
B1201	Front raise/lower motor (M28m3) (Hall sensor defective) or wiring –//–	23 ⇒ 5.0
B1202	Rear raise/lower motor (M28m2) (Hall sensor defective) or wiring –//–	23 ⇒ 8.0


<sup>1)</sup> Observe Preparation for Test, see 22.

### Diagnosis – Diagnostic Trouble Code (DTC) Memory ESA (Right- Side)

DTC 	Possible cause	Test step/Remedy <sup>1)</sup>
B1203	Head restraint raise/lower motor (M28m4) (Hall sensor defective) or wiring –//–	13 ⇒ 14.0
B1204	Backrest fore/aft motor (M28m5) (Hall sensor defective) or wiring –//–	13 ⇒ 11.0
B1510 <b>Model 208</b>	Right front ESA control module (N32/2)	N32/2
B1850 B1851	Right front ESA control module (N32/2) does not communicate with front passenger-side door control module (N69/2)	D.M., Body and Accessories, Volume 2, section 7.1, 23
B1852 <b>Model 208</b>	Right front ESA control module (N32/2) does not communicate with electronic ignition lock control module (N73)	D.M., Body and Accessories, Volume 2, section 7.1, 23
B1853 <b>Model 208</b>	Right front ESA control module (N32/2) does not communicate with PSE control module (A37)	D.M., Body and Accessories, Volume 2, section 7.1, 23
B1854 <b>Model 208</b>	Right front ESA control module (N32/2) does not communicate with electronic ignition lock control module (N73)	D.M., Body and Accessories, Volume 2, section 7.1, 23

<sup>1)</sup> Observe Preparation for Test, see 22.

### Diagnosis – Diagnostic Trouble Code (DTC) Memory (Door Control Module)

DTC 	Possible cause	Test step/Remedy <sup>1)</sup>
B1111	Backrest fore/aft switch (S92/2s5), memory button 3 (S92/2s8) or memory store button switch (S92/2s9) binding or wiring Γ 1	23 ⇒ 10.0, 17.0
B1112	Front raise lower switch (S92/2s3), headrest raise lower/switch (S92/2s4) or memory button 2 switch (S92/2s7) binding or wiring Γ 1	23 ⇒ 4.0, 13.0, 17.0
B1113	Rear raise /lowerswitch (S92/2s2), fore/aft switch (S92/2s1) or memory button 1 switch (S92/2s6) binding or wiring Γ 1	23 ⇒ 1.0, 7.0, 17.0

<sup>1)</sup> Observe Preparation for Test, see 22.