14.3b Model 210

Heated rear seats

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Diagnosis – Function Test

Test step/Test scope	Test condition	Nominal value	Possible cause/Remedy [1]
⇒ 1.0 Seat heating stage **I**	Ignition: **ON** Press front of left rear seat heater switch (S51/3) or right rear seat heater switch (S51/4).	1 LED in switch will iluminate. Seat cushion and backrest cushion will warm up.	23 ⇒ 1.0, 3.0, 4.0, 8.0, 9.0
⇒ 2.0 Seat heating stage **II**	Ignition: **ON** Press rear of left rear seat heater switch (S51/3) or right rear seat heater switch (S51/4).	2 LED'S in switch will illuminate. Seat cushion and backrest cushion will warm up noticeably more than stage **I.**	23 ⇒ 1.0, 3.0, 4.0, 8.0, 9.0
⇒ 3.0 Dimming of indicator lamps in stages **I** or **II**	Ignition: **ON** Seat heaters switched on. Parking lamps switched on.	LED'S for stage **I** or **II** light up brightly. LED'S become dimmer.	23 ⇒ 2.0, 5.0, 6.0, 7.0, 10.0 – 12.0

[1] Observe Preparation for Test, see 22.

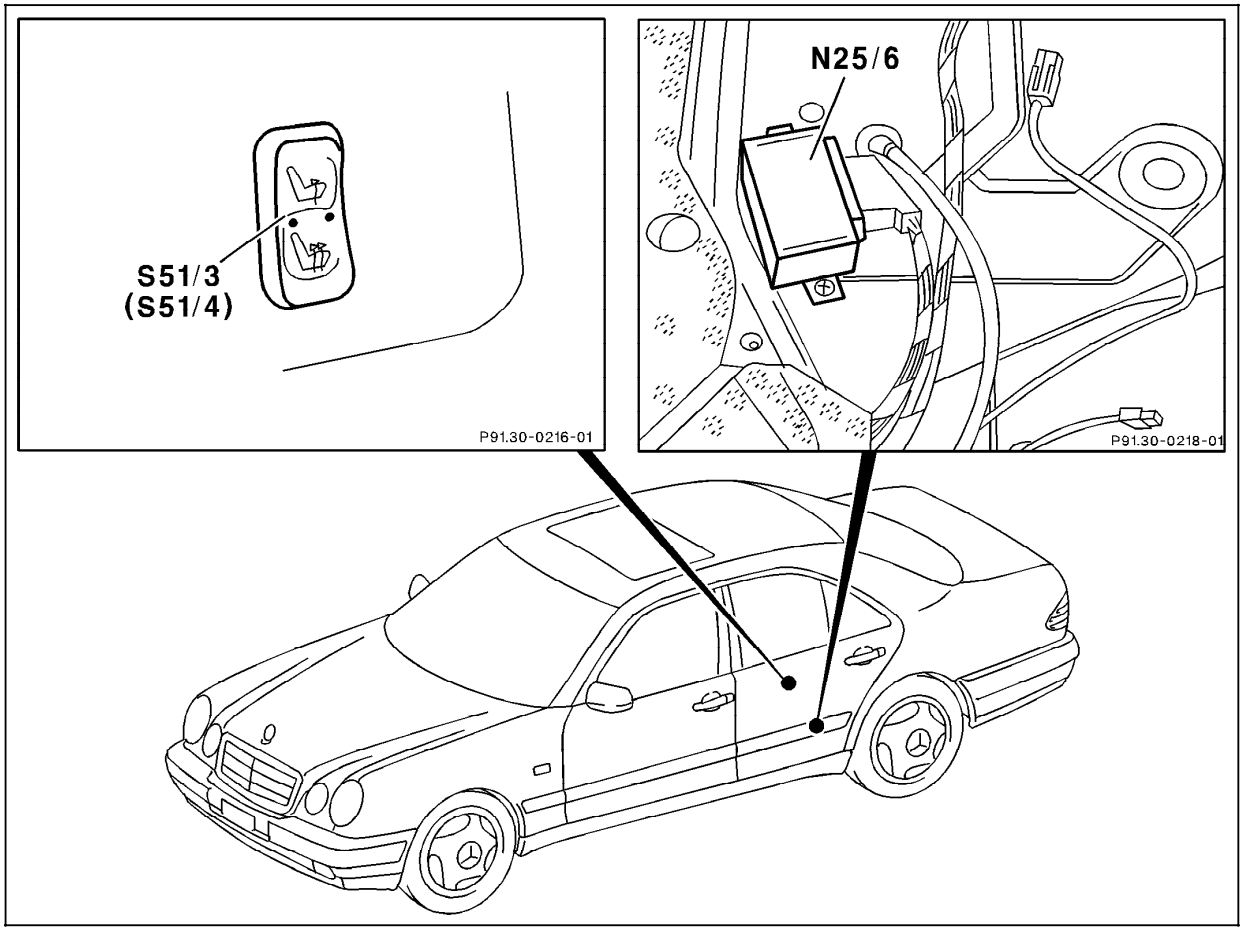
Diagnosis – Complaint Related Diagnostic Chart

Survey of Recallable Test Functions

Complaint/Problem	Possible cause	Test step/Remedy [1]
Entire rear seat heater system does not function.	Voltage supply, rear HS control module (N25/6)	23 ⇒ 1.0
Left rear seat cushion and seat backrest heating does not function.	Voltage supply, rear HS control module (N25/5) Left rear heater switch (S51/3) Left rear seat cushion heater element (R13/5) and left rear backrest heater element (R13/6)	23 ⇒ 1.0 23 ⇒ 3.0 23 ⇒ 4.0
Right rear seat cushion and seat backrest heating does not function.	Voltage supply, rear HS control module (N25/5) Right rear heater switch (S51/4) Right rear seat cushion heater element (R13/7) and right rear backrest heater element (R13/8).	23 ⇒ 1.0 23 ⇒ 8.0 23 ⇒ 9.0
LED'S in left rear heater switch (S51/3) or right rear heater switch (S51/4) **do not** function. Seat heating **does** function.	S51/3 LED'S S51/4 LED'S	23 ⇒ 6.0 23 ⇒ 11.0
Dimming of indicator lamps in left rear heater switch (S51/3) or right rear heater switch (S51/4) does not function.	S51/3 dimming S51/4 dimming	23 ⇒ 2.0, 7.0 23 ⇒ 2.0, 12.0
Illumination of indicator lamps in left rear heater switch (S51/3) or right rear heater switch (S51/4) does not function.	S51/3 illumination S51/4 illumination	23 ⇒ 5.0 23 ⇒ 10.0

[1] Observe Preparation for Test, see 22.

ElectricalTest Program – Component Locations (HS)



P91.30-0217-06

N25/6 Rear HS control module
S51/3 Left rear seat heater switch
S51/4 Right rear seat heater switch

Electrical Test Program – Preparation for Test

Preliminary work:
Diagnosis - Diagnostic Trouble Code (DTC) Memory 12

Preparation for Test:

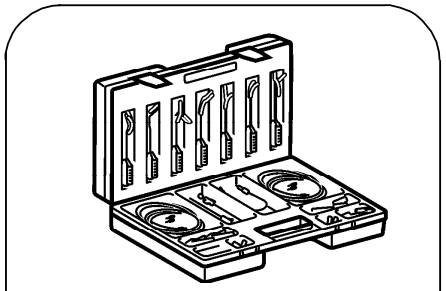
1. Check fuses F1–12 and F4–17 OK.
2. Battery voltage 11 – 14 V,
3. Rear seat removed.

Electrical wiring diagrams :
Electrical Troubleshooting Manual, Model 210, Volume 2, group 91

i

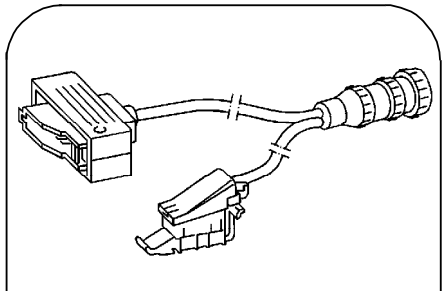
The test cable, part no. 124 589 47 63 00 for model 210 must be modified.

Special Tools



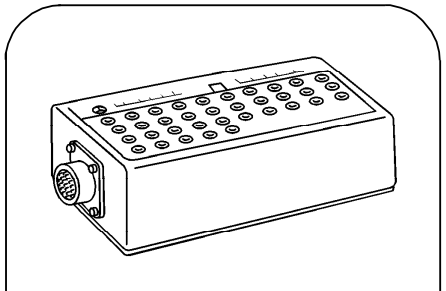
201 589 00 99 00

Electrical connecting set



124 589 47 63 00

21-pin test cable



124 589 00 21 00

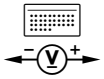
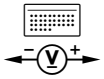
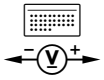
35-pin socket box

Conventional tools, test equipment

Description	Brand, model, etc.
Multimeter 1)	Fluke models 23, 83, 85, 87

1) Available through the MBUSA Standard Equipment Program.

Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
1.0		**Rear HS control module (N25/6)** Voltage supply Circuit 30	N25/6  9 — 1	Ignition: **OFF**	11 – 14 V	Wiring, Combination control module (N10/2).
		Circuit 15R	N25/6  9 — 17	Ignition: **ON**	11 – 14 V	Wiring.
2.0		**Rear HS control module (N25/6)** Voltage supply Circuit 58d	N25/6  9 — 18	Parking lamps: OFF Parking lamps: ON	0 – 1 V 11 – 14 V	Wiring.
3.0		**Left rear seat heater switch (S51/3)** Voltage supply	N25/6  9 — 13	Ignition: **ON** S51/3: Hold pressed in stage **II** S51/3: Hold pressed in stage **I**	6 – 8 V 0 – 1 V 2 – 4 V	⇒ 3.1, Rear HS control module (N25/6)

Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
3.1		S51/3 Resistance	N25/6 9 — Ω — 13	Ignition: **OFF** Disconnect test cable from N25/6. S51/3: Hold pressed in stage **II** S51/3: Hold pressed in stage **I**	 >20 kΩ 1 – 2 Ω approx. 165 Ω	Wiring, S51/3
4.0		**Left rear seat cushion heater element (R13/5) and left rear backrest heater element (R13/6)** Voltage supply	N25/6 9 — V — 8	Ignition: **ON** S51/3: Hold pressed in stage **II** S51/3: Hold pressed in stage **I**	0 – 1 V 9 – 14 V proper interval indicated on multimeter.	⇒ 6.1, Rear HS control module (N25/6).
4.1		R13/5, R13/6 Resistance	N25/6 9 — Ω — 8	Ignition: **OFF** Disconnect test cable from N25/6.	1.1 – 1.7 Ω	Wiring, R13/5, R13/6

Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
5.0		**Left rear seat heater switch (S51/3) illumination** Voltage supply	S51/3 6 — (V) — 5	Disconnect connector from S51/3. Parking lamps: ON	11 – 14 V	Wiring, R13/5, R13/6
6.0		**Left rear seat heater switch (S51/3) LEDs** Voltage supply	N25/6 9 — (V) — 12 N25/6 9 — (V) — 20	Ignition: **ON** S51/3: press stage **I** S51/3: press stage **II** S51/3: press stage **I** S51/3: press stage **II**	0 – 1 V 8 – 13 V 8 – 13 V 0 – 1 V 8 – 13 V	Wiring, S51/3, Rear HS control module (N25/6).
7.0		**Left rear seat heater switch (S51/3) dimming** Voltage supply	N25/6 9 — (V) — 12 N25/6 9 — (V) — 12	Ignition: **ON** S51/3: press stage **I** Parking lamps: ON Parking lamps: OFF S51/3: press stage **II** Parking lamps: ON	 8 – 13 V 2.0 – 2.8 V 8 – 13 V 2.0 – 2.8 V	Wiring, S51/3, N25/6

Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
8.0		**Right rear seat heater switch (S51/4)** Voltage supply	N25/6 9 — (V) — 11	Ignition: **ON** S51/4: Press and hold stage **II** S51/4: Press and hold stage **I**	6 – 8 V 0 – 1 V 2 – 4 V	⇒ 8.1, Rear HS control module (N25/6).
8.1		S51/4 Resistance	N25/6 9 — (Ω) — 11	Ignition: **OFF** Disconnect test cable from N25/6. S51/4: Press and Hold stage **II** S51/4: Press and hold stage **I**	 >20 kΩ 0 – 2 Ω approx. 165 Ω	Wiring, S51/4
9.0		**Right rear seat cushion heater element (R13/7) and right rear backrest heater element (R13/8)** Voltage supply	N25/6 9 — (V) — 2	Ignition: **ON** S51/4: press stage **II** S51/4: press stage **I**	0 – 1 V 9 – 14 V proper interval indicated on multimeter.	⇒ 9.1, N25/6

Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
9.1		R13/7, R13/8 Resistance	N25/6 9 — Ω — 2	Ignition: **OFF** Disconnect test cable from N25/6.	1.1 – 1 7 Ω	Wiring, R13/7, R13/8
10.0		**Right rear seat heater switch (S51/4) illumination** Voltage supply	S51/4 6 — V — 5	Disconnect connector from S51/4. Parking lamps: ON	11 – 14 V	Wiring.
11.0		**Right rear seat heater switch (S51/4) LEDs** Voltage supply	N25/6 9 — V — 5 N25/6 9 — V — 10	Ignition: **ON** S51/4: press stage **I** S51/4: press stage **II** S51/4: press stage **I** S51/4: press stage **II**	0 – 1 V 8 – 13 V 8 – 13 V 0 – 1 V 8 – 13 V	Wiring, S51/4, Rear HS control module (N25/6).

Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
12.0		**Right rear seat heater switch (S51/4) dimming** Voltage supply	N25/6 9 — (V) — 5	Ignition: **ON** S51/4: press stage **I** Parking lamps: ON Parking lamps: OFF	0 – 1 V 8 – 13 V 2.0 – 2.8 V	Wiring, S51/4, Rear HS control module (N25/6).
			N25/6 9 — (V) — 10	S51/4: press stage **II** Parking lamps: ON	8 – 13 V 2.0 – 2.8 V	