15.2b Model 140
Front Power Seats with Memory

Diagnosis - Function Test Component Locations

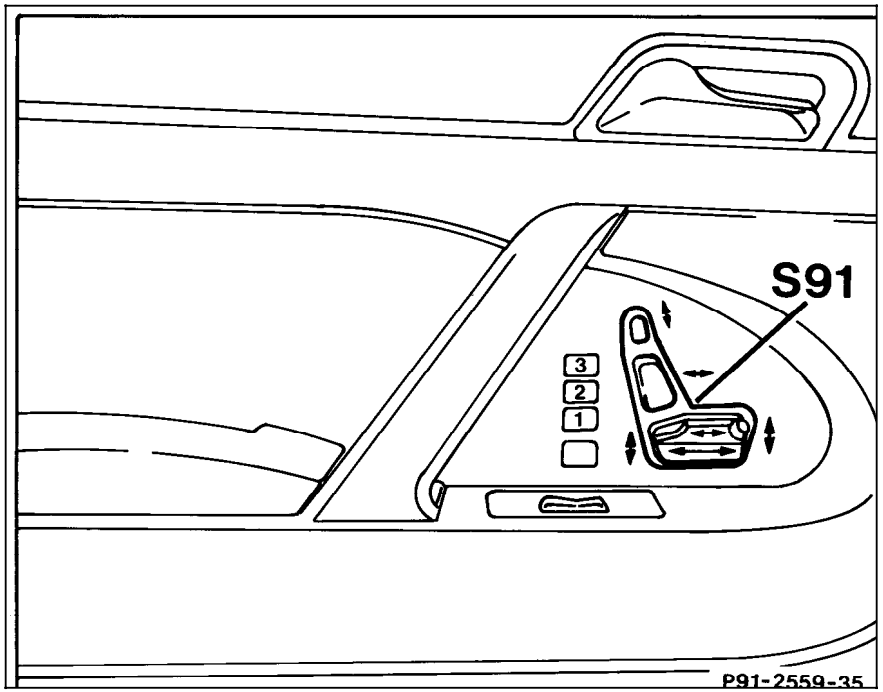


Figure 1

S91 Left front power seat switch group (with memory)

Diagnosis - Function Test

Test step/Test sequence	Test condition	Nominal value	Possible cause/Remedy [1]	
⇒ 1.0 **Seat fore/aft adjustment**	Ignition: **ON** Press fore/aft switch (S91s1, S92s1)	Seat adjusts forward/backward.	Left seat 23 ⇒ 1.0 23 ⇒ 2.0 23 ⇒ 3.0 23 ⇒ 4.0 23 ⇒ 5.0	Right seat 23 ⇒ 24.0 23 ⇒ 25.0 23 ⇒ 26.0 23 ⇒ 27.0 23 ⇒ 28.0
⇒ 2.0 **Front seat height front adjustment**	Ignition: **ON** Press front raise/lower switch (S91s3, S92s3)	Front of seat adjusts up/down.	Left seat 23 ⇒ 1.0 23 ⇒ 2.0 23 ⇒ 6.0 23 ⇒ 7.0 23 ⇒ 8.0	Right seat 23 ⇒ 24.0 23 ⇒ 25.0 23 ⇒ 29.0 23 ⇒ 30.0 23 ⇒ 31.0
⇒ 3.0 **Front seat rear height adjustment**	Ignition: **ON** Press rear raise/lower switch (S91s2, S92s2)	Rear of seat rear adjusts up/down.	Left seat 23 ⇒ 1.0 23 ⇒ 2.0 23 ⇒ 9.0 23 ⇒ 10.0 23 ⇒ 11.0	Right seat 23 ⇒ 24.0 23 ⇒ 25.0 23 ⇒ 32.0 23 ⇒ 33.0 23 ⇒ 34.0
⇒ 4.0 **Backrest fore/aft adjustment**	Ignition: **ON** Press backrest fore/aft switch (S91s5, S92s5)	Seat backrest adjusts forward/backward.	Left seat 23 ⇒ 1.0 23 ⇒ 2.0 23 ⇒ 12.0 23 ⇒ 13.0 23 ⇒ 14.0	Right seat 23 ⇒ 24.0 23 ⇒ 25.0 23 ⇒ 35.0 23 ⇒ 36.0 23 ⇒ 37.0

[1] Observe Preparation for Test, see 22.

Diagnosis - Function Test

Test step/Test sequence	Test condition	Nominal value	Possible cause/Remedy [1]	
⇒ 5.0 **Head restraint adjustment**	Ignition: **ON** Press head restraint raise/lower switch (S91s4, S92s4)	Seat head restraint adjusts up/down.	Left seat 23 ⇒ 1.0 23 ⇒ 2.0 23 ⇒ 15.0 23 ⇒ 16.0 23 ⇒ 17.0	Right seat 23 ⇒ 24.0 23 ⇒ 25.0 23 ⇒ 38.0 23 ⇒ 39.0 23 ⇒ 40.0
⇒ 6.0 **Seat cushion fore/aft adjustment**	Ignition: **ON** Press seat cushion fore/aft switch (S91s10, S92s10)	Seat cushion adjusts fore/aft.	Left seat 23 ⇒ 1.0 23 ⇒ 2.0 23 ⇒ 18.0 23 ⇒ 19.0 23 ⇒ 20.0	Right seat 23 ⇒ 24.0 23 ⇒ 25.0 23 ⇒ 41.0 23 ⇒ 42.0 23 ⇒ 43.0
⇒ 7.0 **Memory 1 button**	Ignition: **ON** Store seat position in memory position 1. Move seat. Press memory button 1.	Seat returns to position stored.	Left seat 23 ⇒ 1.0 23 ⇒ 2.0 23 ⇒ 21.0	Right seat 23 ⇒ 24.0 23 ⇒ 25.0 23 ⇒ 44.0
⇒ 8.0 **Memory 2 button**	Ignition: **ON** Store seat position in memory position 2. Move seat. Press memory button 2.	Seat returns to position stored.	Left seat 23 ⇒ 1.0 23 ⇒ 2.0 23 ⇒ 21.0	Right seat 23 ⇒ 24.0 23 ⇒ 25.0 23 ⇒ 44.0

[1] Observe Preparation for Test, see 22.

Diagnosis - Function Test

Test step/Test sequence	Test condition	Nominal value	Possible cause/Remedy [1]
⇒ 9.0 **Memory 3 button**	Ignition: **ON** Store seat position in memory position 3. Move seat. Press memory button 3.	Seat returns to position stored.	Left seat 23 ⇒ 1.0 23 ⇒ 2.0 23 ⇒ 21.0 Right seat 23 ⇒ 24.0 23 ⇒ 25.0 23 ⇒ 44.0
⇒ 10.0 **Front power seat switch group illumination**	Turn parking lamps on	Front power seat switch group illuminates.	Left seat 23 ⇒ 22.0 23 ⇒ 23.0 Right seat 23 ⇒ 45.0 23 ⇒ 46.0
Coupé only (if applicable) ⇒ 11.0 **Convenience feature**	Open left or right front door Move left or right front seat backrest forward Move left or right front seat backrest backward Closing front doors during the convenience feature function Backrest is moved backward during forward convenience feature function Backrest is moved forward during backward convenience feature function	Front seat travels forward at increased adjustment speed. Head restraint retracts to 1/3 of its maximum height adjustment. Front seat travels backward at increased adjustment speed (max. of 105 mm before rear stop position). Convenience feature function is terminated. Front seat and head restraint reverse direction. Front seat and head restraint reverse direction.	Left seat 23 ⇒ 47.0 23 ⇒ 49.0 23 ⇒ 50.0 Right seat 23 ⇒ 48.0 23 ⇒ 49.0 23 ⇒ 51.0

[1] Observe Preparation for Test, see 22.

Diagnosis - Complaint Related Diagnostic Chart

Complaint/Problem	Possible cause	Test step/Remedy [1]
Front power seat adjustment does not function at all	Convenience relay module (K24). Front power seat control module (N32/1, N32/2). Front power seat switch group (S91, S92).	DM Body & Accessories Vol. 1 section 5.1 Left seat / Right seat 23 ⇒ 1.0 / 23 ⇒ 24.0 23 ⇒ 2.0 / 23 ⇒ 25.0
Front power seat, seat fore/aft adjustment does not function	Front power seat control module (N32/1, N32/2). Front power seat switch group (S91, S92). Fore/aft switch (S91s1, S92s1). Fore/aft motor (M27m1, M28m1).	Left seat / Right seat 23 ⇒ 1.0 / 23 ⇒ 24.0 23 ⇒ 2.0 / 23 ⇒ 25.0 23 ⇒ 3.0 / 23 ⇒ 26.0 23⇒ 4.0, 5.0 / 23 ⇒ 27.0, 28.0
Front power seat, front height adjustment does not function	Front power seat control module (N32/1, N32/2). Front power seat switch group (S91, S92). Front raise/lower switch (S91s3, S92s3). Front raise/lower motor (M27m3, M28m3).	Left seat / Right seat 23 ⇒ 1.0 / 23 ⇒ 24.0 23 ⇒ 2.0 / 23 ⇒ 25.0 23 ⇒ 6.0 / 23 ⇒ 29.0 23⇒ 7.0, 8.0 / 23 ⇒ 30.0, 31.0

[1] Observe Preparation for Test, see 22.

Diagnosis - Complaint Related Diagnostic Chart

Complaint/Problem	Possible cause	Test step/Remedy [1]	
Front power seat, rear height adjustment does not function	Front power seat control module (N32/1, N32/2). Front power seat switch group (S91, S92). Rear raise/lower switch (S91s2, S92s2). Rear raise/lower motor (M27m2, M28m2).	Left seat 23 ⇒ 1.0 23 ⇒ 2.0 23 ⇒ 9.0 23⇒ 10.0, 11.0	Right seat 23 ⇒ 24.0 23 ⇒ 25.0 23 ⇒ 32.0 23 ⇒ 33.0, 34.0
Front power seat, backrest fore/aft adjustment does not function	Front power seat control module (N32/1, N32/2). Front power seat switch group (S91, S92). Backrest fore/aft switch (S91s5, S92s5). Backrest fore/aft motor (M27m5, M28m5).	Left seat 23 ⇒ 1.0 23 ⇒ 2.0 23 ⇒ 12.0 23⇒ 13.0, 14.0	Right seat 23 ⇒ 24.0 23 ⇒ 25.0 23 ⇒ 35.0 23 ⇒ 36.0, 37.0
Front power seat, head restraint adjustment does not function	Front power seat control module (N32/1, N32/2). Front power seat switch group (S91, S92). Head restraint raise/lower switch (S91s4, S92s4). Head restraint raise/lower motor (M27m4, M28m4).	Left seat 23 ⇒ 1.0 23 ⇒ 2.0 23 ⇒ 15.0 23⇒ 16.0, 17.0	Right seat 23 ⇒ 24.0 23 ⇒ 25.0 23 ⇒ 38.0 23 ⇒ 39.0, 40.0

[1] Observe Preparation for Test, see 22.

Diagnosis - Complaint Related Diagnostic Chart

Complaint/Problem	Possible cause	Test step/Remedy [1]
Front power seat, cushion fore/aft adjustment does not function	Front power seat control module (N32/1, N32/2). Front power seat switch group (S91, S92). Seat cushion fore/aft switch (S91s10, S92s10). Seat cushion fore/aft motor (M27m6, M28m6).	Left seat / Right seat 23 ⇒ 1.0 / 23 ⇒ 24.0 23 ⇒ 2.0 / 23 ⇒ 25.0 23 ⇒ 18.0 / 23 ⇒ 41.0 23⇒ 19.0, 20.0 / 23 ⇒ 42.0, 43.0
Front power seat memory does not function	Front power seat control module (N32/1, N32/2). Front power seat switch group (S91, S92). Memory button switch (S91s9, S92s9).	Left seat / Right seat 23 ⇒ 1.0 / 23 ⇒ 24.0 23 ⇒ 2.0 / 23 ⇒ 25.0 23 ⇒ 21.0 / 23 ⇒ 44.0
Front power seat switch group illumination does not function	Wiring. Illumination (S91e1, S92e1), Front power seat switch group (S91, S92).	Left seat / Right seat 23 ⇒ 22.0 / 23 ⇒ 45.0 23 ⇒ 23.0 / 23 ⇒ 46.0
Coupé only (if applicable) Front power seat forward and head restraint down adjust (convenience) feature function does not operate with front door open and with the backrest tilted forward	Left/right door switch (S17/3, S17/4). Left/right front seatback microswitch (S91/1, S92/1). Front power seat control module (N32/1, N32/2), Programming	Left seat / Right seat 23 ⇒ 49.0 / 23 ⇒ 49.0 23 ⇒ 47.0 / 23 ⇒ 48.0 23 ⇒ 50.0 / 23 ⇒ 51.0

[1] Observe Preparation for Test, see 22.

Diagnosis - Complaint Related Diagnostic Chart

Complaint/Problem	Possible cause	Test step/Remedy [1]	
Coupé only (if applicable) Front power seat backward and head restraint up adjust (convenience) feature function does not operate with front door open and with the backrest tilted backward	 Left/right door switch (S17/3, S17/4). Left/right front seatback microswitch (S91/1, S92/1). Front power seat control module (N32/1, N32/2), Programming	Left seat 23 ⇒ 49.0 23 ⇒ 47.0 23 ⇒ 50.0	Right seat 23 ⇒ 49.0 23 ⇒ 48.0 23 ⇒ 51.0

[1] Observe Preparation for Test, see 22.

Electrical Test Program - Component Locations

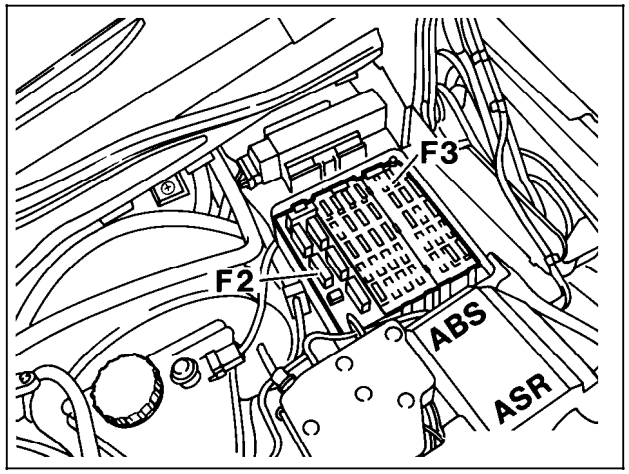


Figure 1 P54-2806-13

F3 Fuse box (35-fuse, in fuse and relay box F1)

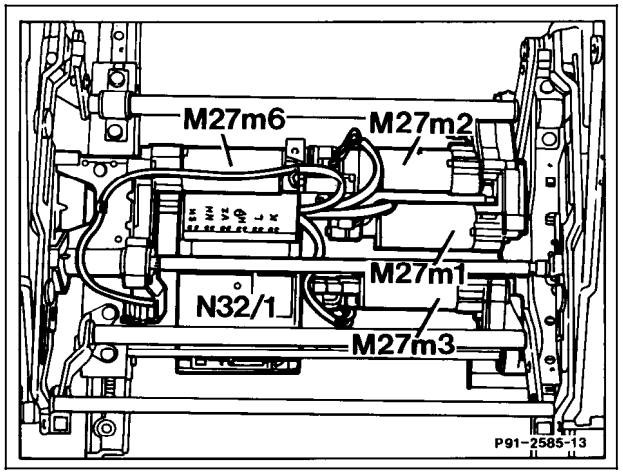


Figure 2 P91-2585-13

M27m1 Fore/aft motor
M27m2 Rear raise/lower motor
M27m3 Front raise/lower motor
M27m6 Seat cushion fore/aft motor
N32/1 Left front power seat control module (with memory)

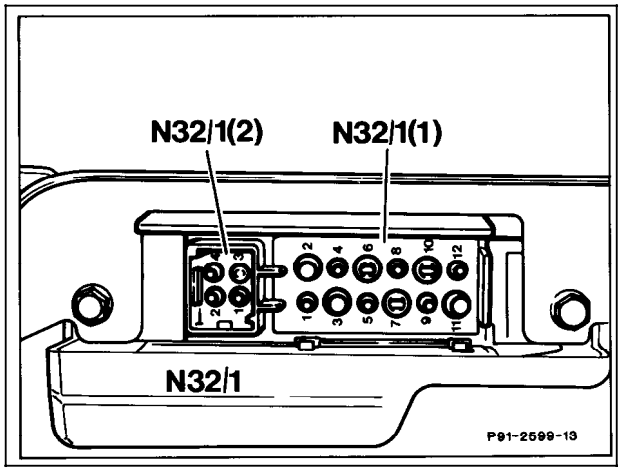


Figure 3 P91-2599-13

N32/1 Left front power seat control module (with memory)
1 Connector
2 Connector

Electrical Test Program - Component Locations

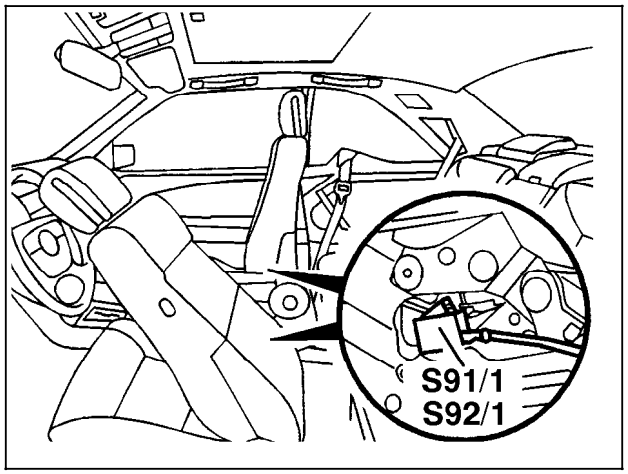


Figure 4 P91-5627-13

Coupé only (if applicable)

S91/1 Left front seatback microswitch
S92/1 Right front seat back microswitch

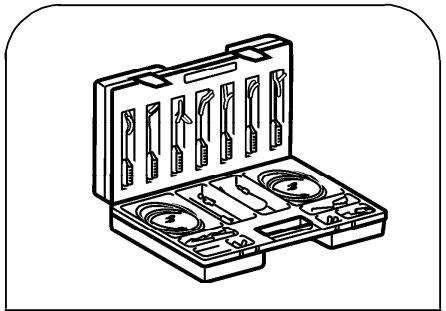
Electrical Test Program - Preparation for Test

1. Battery voltage 11 – 14 V.
2. Fuses F3-30, F3-37, F3-38, F3-40, F3-41 O.K.
3. Loosen seat cushion at front and fold upward.

Electrical wiring diagrams

Electrical Troubleshooting Manual, Model 140.

Special Tools



201 589 00 99 00

Electrical connecting set

Equipment

Digital multimeter [1]	Fluke models 23, 83, 85, 87

[1] Available through the MBUSA Standard Equipment Program.

Electrical Test Program - Test (left seat)

Test step	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 1.0	**Left front power seat control module (N32/1)** Voltage supply	N32/1 11 — (V) — 2 11 — (V) — 3 (1) (1)	Ignition: **ON** Connector (1) from N32/1 disconnected.	11 – 14 V	Wiring.
		N32/1 11 — (V) — 9 (1) (1)	Ignition: **OFF** Connector (1) from N32/1 disconnected. Door open	11 – 14 V	
⇒ 2.0	**Left front power seat switch group (S91)** Voltage supply	S91 6 — (V) — 1 6 — (V) — 8 6 — (V) — 3 6 — (V) — 5	Ignition: **ON** Connector (1) from N32/1 disconnected.	approx. 5 V	Wiring, N32/1.
⇒ 3.0	**Fore/aft switch (S91s1)** Resistance	N32/1 5 — (Ω) — 12 (1) (1)	Connector (1) from N32/1 disconnected. Press switch (S91s1): forward backward	approx. 2.2 kΩ approx. 42 Ω approx. 16 Ω	Wiring, S91.

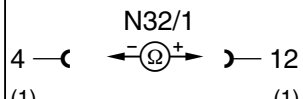
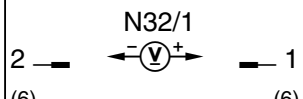
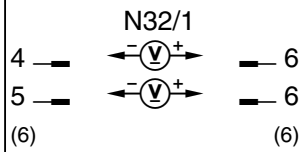
Electrical Test Program - Test (left seat)

Test step	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 4.0	**Fore/aft motor (M27m1)** Voltage supply	N32/1 2 (5) – V – 1 (5)	Ignition: **ON** Connector (5 VZ) from N32/1 disconnected. Press switch (S91s1): forward backward	< 1 V 11 – 14 V -11 to -14 V	S91s1, N32/1, Left front seatback microswitch (S91/1) (Coupé only, if applicable).
		N32/1 3 (5) – V – 1 (5)	Fold left front seat backrest: forward backward	< 1 V 11 – 14 V -11 to -14 V	
		Convenience feature **Coupé only** **(if applicable)** N32/1 4 – V – 6 5 – V – 6 (5) (5)		approx. 5 V	

Electrical Test Program - Test (left seat)

Test step	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 5.0	**Fore/aft motor (M27m1)** Resistance	N32/1 6 (5) — Ω — 5 (5)	Connector (5 VZ) from N32/1 disconnected.	approx. 2.2 kΩ	M27m1.
		N32/1 4 (5) — Ω — 5 (5)	Note value.		
		N32/1 6 (5) — Ω — 4 (5)	Note value.		
			Total of two values:	approx. 2.2 – 2.4 kΩ	
		N32/1 1 (5) — Ω — 2 (5)		0.5 – 15 Ω	
		Convenience feature **Coupé only** **(if applicable)** N32/1 1 (5) — Ω — 3 (5)		0.5 – 15 Ω	

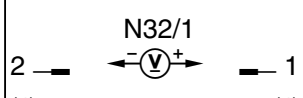
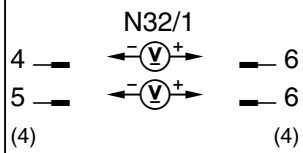
Electrical Test Program - Test (left seat)

Test step	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 6.0	**Front raise/lower switch (S91s3)** Resistance		Connector (1) from N32/1 disconnected. Press switch (S91s3): raise front lower front	 approx. 2.2 kΩ approx. 42 Ω approx. 16 Ω	Wiring, S91.
⇒ 7.0	**Front raise/lower motor (M27m3)** Voltage supply	 	Ignition: **ON** Connector (6 HV) from N32/1 disconnected. Press switch (S91s3): raise front lower front	 < 1 V 11 – 14 V -11 to -14 V approx. 5 V	N32/1.

Electrical Test Program - Test (left seat)

Test step	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 8.0	**Front raise/lower motor (M27m3)** Resistance	N32/1 6 (6) — Ω — 5 (6)	Connector (6 HV) from N32/1 disconnected.	approx. 2.2 kΩ	M27m3.
		N32/1 4 (6) — Ω — 5 (6)	Note value.		
		N32/1 6 (6) — Ω — 4 (6)	Note value.		
			Total of two values:	approx. 2.2 – 2.4 kΩ	
		N32/1 1 (6) — Ω — 2 (6)		0.5 – 15 Ω	

Electrical Test Program - Test (left seat)

Test step	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 9.0	**Rear raise/lower switch (S91s2)** Resistance		Connector (1) from N32/1 disconnected. Press switch (S91s2): raise rear lower rear	 approx. 2.2 kΩ approx. 156 Ω approx. 72 Ω	Wiring, S91.
⇒ 10.0	**Rear raise/lower motor (M27m2)** Voltage supply	 	Ignition: **ON** Connector (4 HH) from N32/1 disconnected. Press switch (S91s2): raise rear lower rear	 < 1 V 11 – 14 V -11 to -14 V approx. 5 V	N32/1.

Electrical Test Program - Test (left seat)

Test step	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 11.0	**Rear raise/lower motor (M27m2)** Resistance	N32/1 6 (4) — Ω — 5 (4)	Connector (4 HH) from N32/1 disconnected.	approx. 2.2 kΩ	M27m2.
		N32/1 4 (4) — Ω — 5 (4)	Note value.		
		4 (4) — Ω — 6 (4)	Note value.		
			Total of two values:	approx. 2.2 – 2.4 kΩ	
		N32/1 1 (4) — Ω — 2 (4)		0.5 – 15 Ω	

Electrical Test Program - Test (left seat)

Test step	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 12.0	**Backrest fore/aft switch (S91s5)** Resistance	N32/1 12 (1) — Ω — 1 (1)	Connector (1) from N32/1 disconnected. Press switch (S91s5): forward backward	 approx. 2.2 kΩ approx. 42 Ω approx. 16 Ω	Wiring, S91.
⇒ 13.0	**Backrest fore/aft motor (M27m5)** Voltage supply	N32/1 2 (7) — V — 1 (7) N32/1 4 (7) — V — 6 (7) 5 (7) — V — 6 (7)	Ignition: **ON** Connector (7) from N32/1 disconnected. Press switch (S91s5): forward backward	 < 1 V 11 – 14 V -11 to -14 V approx. 5 V	N32/1.

Electrical Test Program - Test (left seat)

Test step	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 14.0	**Backrest fore/aft motor (M27m5)** Resistance	N32/1 6 (7) — Ω — 5 (7)	Connector (7) from N32/1 disconnected.	approx. 2.2 kΩ	M27m5.
		N32/1 4 (7) — Ω — 5 (7)	Note value.		
		N32/1 6 (7) — Ω — 4 (7)	Note value.		
			Total of two values:	approx. 2.2 – 2.4 kΩ	
		N32/1 1 (7) — Ω — 2 (7)		0.5 – 15 Ω	

Electrical Test Program - Test (left seat)

Test step	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 15.0	**Head restraint raise/lower switch (S91s4)** Resistance	N32/1 4 (1) — Ω — 12 (1)	Connector (1) from N32/1 disconnected. Press switch (S91s4): raise lower	 approx. 2.2 kΩ approx. 156 Ω approx. 72 Ω	Wiring, S91.
⇒ 16.0	**Head restraint raise/lower motor (M27m4)** Voltage supply	N32/1 1 (8) — V — 2 (8) N32/1 4 — V — 6 5 — V — 6 (8) (8)	Ignition: **ON** Connector (8) from N32/1 disconnected. Press switch (S91s4): raise lower	 < 1 V -11 to -14 V 11 – 14 V approx. 5 V	N32/1.

Electrical Test Program - Test (left seat)

Test step	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 17.0	**Head restraint raise/lower motor (M27m4)** Resistance	N32/1 6 (8) — Ω — 5 (8)	Connector (8) from N32/1 disconnected.	approx. 2.2 kΩ	M27m4.
		N32/1 5 (8) — Ω — 4 (8)	Note value.		
		N32/1 6 (8) — Ω — 4 (8)	Note value.		
			Total of two values:	approx. 2.2 – 2.4 kΩ	
		N32/1 2 (8) — Ω — 1 (8)		0.5 – 15 Ω	

Electrical Test Program - Test (left seat)

Test step	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 18.0	**Seat cushion fore/aft switch (S91s10)** Resistance	N32/1 8 (1) — Ω — 12 (1)	Connector (1) from N32/1 disconnected. Press switch (S91s10): forward backward	 approx. 2.2 kΩ approx. 43 Ω approx. 16 Ω	Wiring, S91.
⇒ 19.0	**Seat cushion fore/aft motor (M27m6)** Voltage supply	N32/1 1 (3) — V — 2 (3) N32/1 4 — V — 6 5 — V — 6 (3) (3)	Ignition: **ON** Connector (3) from module N32/1 disconnected. Press switch (S91s10): forward backward	 < 1 V 11 – 14 V -11 to -14 V approx. 5 V	N32/1.

Electrical Test Program - Test (left seat)

Test step	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 20.0	**Seat cushion fore/aft motor (M27m6)**		Connector (3) from N32/1 disconnected.		M27m6.
	Resistance	N32/1 5 (3) — Ω — 6 (3)		approx. 2.2 kΩ	
		N32/1 5 (3) — Ω — 4 (3)	Note value.		
		N32/1 6 (3) — Ω — 4 (3)	Note value.		
			Total of two values:	approx. 2.2 – 2.4 kΩ	
		N32/1 2 (3) — Ω — 1 (3)		0.5 – 15 Ω	

Electrical Test Program - Test (left seat)

Test step	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 21.0	**Memory button switch (S91s9)** Resistance	N32/1 5 (1) — Ω — 12 (1)	Connector (1) from N32/1 disconnected. Memory button 1 switch: Rest position: Push button:	 2.2 kΩ approx. 290 Ω	Wiring, S91.
		N32/1 4 (1) — Ω — 12 (1)	Memory button 2 switch: Rest position: Push button:	 2.2 kΩ approx. 290 Ω	
		N32/1 1 (1) — Ω — 12 (1)	Memory button 3 switch: Rest position: Push button:	 2.2 kΩ approx. 156 Ω	
		N32/1 1 (1) — Ω — 12 (1)	Green memory button switch: Rest position: Push button:	 2.2 kΩ approx. 290 Ω	

Electrical Test Program - Test (left seat)

Test step	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 22.0	**Illumination (S91e1)** Voltage supply	S91 4 — ☾ (V) ☽ — 2	Connector disconnected. Parking lamps: **ON**	11 – 14 V	Wiring.
⇒ 23.0	**Illumination (S91e1)** Resistance	S91 4 — ▬ (Ω) ▬ — 2	Connector (1) at seat switch group (S92) disconnected.	approx. 10 Ω	Lamp, S91.

Electrical Test Program - Test (right seat)

Test step	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 24.0	**Right front power seat control module (N32/2)** Voltage supply	N32/2 11 — (V) — 3 11 — (V) — 2 (1) (1)	Ignition: **ON** Connector (1) from N32/2 disconnected.	11 – 14 V	Wiring.
		N32/2 11 — (V) — 9 (1) (1)	Ignition: **OFF** Connector (1) from N32/2 disconnected. Door open.	11 – 14 V	
⇒ 25.0	**Right front power seat switch group (S92)** Voltage supply	S92 5 — (V) — 2 5 — (V) — 7 5 — (V) — 4 5 — (V) — 6	Ignition: **ON** Connector (1) from N32/2 disconnected.	approx. 5 V	Wiring, N32/2.
⇒ 26.0	**Fore/aft switch (S92s1)** Resistance	N32/2 5 — (Ω) — 12	Connector (1) from N32/2 disconnected. Press switch (S92s1): forward backward	 approx. 2.2 kΩ approx. 42 Ω approx. 16 Ω	Wiring, S92.

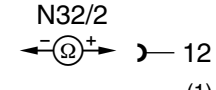
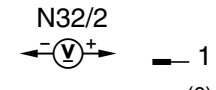
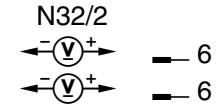
Electrical Test Program - Test (right seat)

Test step	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 27.0	**Fore/aft motor (M28m1)** Voltage supply	N32/2 2 (5) – V – 1 (5)	Ignition: **ON** Connector (5 VZ) from N32/2 disconnected. Press switch (S92s1): forward backward	 < 1 V 11 – 14 V -11 to -14 V	Fore/aft switch (S92s1), Left front power seat control module (N32/2), Right front seatback microswitch (S92/1) (Coupé only, if applicable).
		N32/2 3 (5) – V – 1 (5)	 Fold right front seat backrest: forward backward	< 1 V 11 – 14 V -11 to -14 V	
		Convenience feature **Coupé only** **(if applicable)** N32/2 4 (5) – V – 6 (5) 5 (5) – V – 6 (5)		 approx. 5 V	

Electrical Test Program - Test (right seat)

Test step	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 28.0	**Fore/aft motor (M28m1)** Resistance	N32/2 6 (5) — Ω — 5 (5)	Connector (5 VZ) from N32/2 disconnected.	approx. 2.2 kΩ	M28m1.
		N32/2 4 (5) — Ω — 5 (5)	Note value.		
		N32/2 6 (5) — Ω — 4 (5)	Note value.		
			Total of two values:	approx. 2.2 – 2.4 kΩ	
		N32/2 1 (5) — Ω — 2 (5)		0.5 – 15 Ω	
		Convenience feature **Coupé only** **(if applicable)** N32/2 1 (5) — Ω — 3 (5)		0.5 – 15 Ω	

Electrical Test Program - Test (right seat)

Test step	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 29.0	**Front raise/lower switch (S92s3)** Resistance		Disconnect connector (1) from N32/2. Press switch (S92s3): raise front lower front	 approx. 2.2 kΩ approx. 42 Ω approx. 16 Ω	Wiring, S92.
⇒ 30.0	**Front raise/lower motor (M28m3)** Voltage supply	 	Ignition: **ON** Connector (6 HV) from N32/2 disconnected. Press switch (S92s3): raise front lower front	 < 1 V 11 – 14 V -11 to -14 V approx. 5 V	N32/2.

Electrical Test Program - Test (right seat)

Test step	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 31.0	**Front raise/lower motor (M28m3)** Resistance	N32/2 6 (6) — Ω — 5 (6)	Connector (6 HV) from N32/2 disconnected.	approx. 2.2 kΩ	M28m3.
		N32/2 4 (6) — Ω — 5 (6)	Note value.		
		N32/2 6 (6) — Ω — 4 (6)	Note value.		
			Total of two values:	approx. 2.2 – 2.4 kΩ	
		N32/2 1 (6) — Ω — 2 (6)		0.5 – 15 Ω	

Electrical Test Program - Test (right seat)

Test step	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 32.0	**Rear raise/lower switch (S92s2)** Resistance	N32/2 5 (1) — Ω — 12 (1)	Connector (1) from N32/2 disconnected. Press switch (S92s2): raise rear lower rear	 approx. 2.2 kΩ approx. 156 Ω approx. 72 Ω	Wiring, S92.
⇒ 33.0	**Rear raise/lower motor (M28m2)** Voltage supply	N32/2 2 (4) — V — 1 (4) N32/2 4 (4) — V — 6 (4) 5 (4) — V — 6 (4)	Ignition: **ON** Connector (4 HH) from N32/2 disconnected. Press switch (S92s2): raise rear lower rear	 < 1 V 11 – 14 V -11 to -14 V approx. 5 V	N32/2.

Electrical Test Program - Test (right seat)

Test step	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 34.0	**Rear raise/lower motor (M28m2)**		Connector (4 HH) from N32/2 disconnected.		M28m2.
	Resistance	N32/2 6 (4) — Ω — 5 (4)		approx. 2.2 kΩ	
		N32/2 4 — Ω — 5	Note value.		
		6 (4) — Ω — 4 (4)	Note value.		
			Total of two values:	approx. 2.2 – 2.4 kΩ	
		N32/2 1 (4) — Ω — 2 (4)		0.5 – 15 Ω	

Electrical Test Program - Test (right seat)

Test step	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 35.0	**Backrest fore/aft switch (S92s5)** Resistance	N32/2 1 (1) — Ω — 12 (1)	Connector (1) from N32/2 disconnected. Press switch (S92s5): forward backward	 approx. 2.2 kΩ approx. 42 Ω approx. 16 Ω	Wiring, S92.
⇒ 36.0	**Backrest fore/aft motor (M28m5)** Voltage supply	N32/2 2 (7) — V — 1 (7) N32/2 4 — V — 6 5 — V — 6 (7) (7)	Ignition: **ON** Connector (7) from N32/2 disconnected. Press switch (S92s5): forward backward	 < 1 V 11 – 14 V -11 to -14 V approx. 5 V	N32/2.

Electrical Test Program - Test (right seat)

Test step	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 37.0	**Backrest fore/aft motor (M28m5)**		Connector (7) from N32/2 disconnected.		M28m5.
	Resistance	N32/2 6 (7) — Ω — 5 (7)		approx. 2.2 kΩ	
		N32/2 4 (7) — Ω — 5	Note value.		
		N32/2 6 (7) — Ω — 4 (7)	Note value.		
			Total of two values:	approx. 2.2 – 2.4 kΩ	
		N32/2 1 (7) — Ω — 2 (7)		0.5 – 15 Ω	

Electrical Test Program - Test (right seat)

Test step	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 38.0	**Head restraint raise/lower switch (S92s4)** Resistance	N32/2 4 (1) — Ω — 12 (1)	Connector (1) from N32/2 disconnected. Press switch (S92s4): raise lower	 approx. 2.2 kΩ approx. 156 Ω approx. 72 Ω	Wiring, S92.
⇒ 39.0	**Head restraint raise/lower motor (M28m4)** Voltage supply	N32/2 1 (8) — V — 2 (8) N32/2 4 — V — 6 5 — V — 6 (8) (8)	Ignition: **ON** Connector (8) from module (N32/2) disconnected. Press switch (S92s4): raise lower	 < 1 V -11 to -14 V 11 – 14 V approx. 5 V	N32/2.

Electrical Test Program - Test (right seat)

Test step	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 40.0	**Head restraint raise/lower motor (M28m4)** Resistance	N32/2 5 (8) — Ω — 6 (8)	Connector (8) from N32/2 disconnected.	approx. 2.2 kΩ	M28m4.
		N32/2 5 (8) — Ω — 4 (8)	Note value.		
		N32/2 6 (8) — Ω — 4 (8)	Note value.		
			Total of two values:	approx. 2.2 – 2.4 kΩ	
		N32/2 1 (8) — Ω — 2 (8)		0.5 – 15 Ω	

Electrical Test Program - Test (right seat)

Test step	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 41.0	**Seat cushion fore/aft switch (S92s10)** Resistance	N32/2 8 (1) — Ω — 12 (1)	Connector (1) from N32/2 disconnected. Press switch (S92s10): forward backward	 approx. 2.2 kΩ approx. 43 Ω approx. 16 Ω	Wiring, S92.
⇒ 42.0	**Seat cushion fore/aft motor (M28m6)** Voltage supply	N32/2 1 (3) — V — 2 (3) N32/2 4 (3) — V — 6 (3) 5 (3) — V — 6 (3)	Ignition: **ON** Connector (3) from module (N32/2) disconnected. Press switch (S92s10): forward backward	 < 1 V 11 – 14 V -11 to -14 V approx. 5 V	N32/2.

Electrical Test Program - Test (right seat)

Test step	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 43.0	**Seat cushion fore/aft motor (M28m6)** Resistance	N32/2 6 (3) — Ω — 5 (3)	Connector (3) from N32/2 disconnected.	approx. 2.2 kΩ	M28m6.
		N32/2 5 (3) — Ω — 4 (3)	Note value.		
		N32/2 6 (3) — Ω — 4 (3)	Note value.		
			Total of two values:	approx. 2.2 – 2.4 kΩ	
		N32/2 1 (3) — Ω — 2 (3)		0.5 – 15 Ω	

Electrical Test Program - Test (right seat)

Test step	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 44.0	**Memory button switch (S92s9)** Resistance	N32/2 5 (1) — Ω — 12 (1)	Connector (1) from N32/2 disconnected. Memory button 1 switch: Rest position: Push button:	 2.2 kΩ approx. 290 Ω	Wiring, S92.
		N32/2 4 (1) — Ω — 12 (1)	Memory button 2 switch: Rest position: Push button:	 2.2 kΩ approx. 290 Ω	
		N32/2 1 (1) — Ω — 12 (1)	Memory button 3 switch: Rest position: Push button:	 2.2 kΩ approx. 156 Ω	
		N32/2 1 (1) — Ω — 12 (1)	Green memory button switch: Rest position: Push button:	 2.2 kΩ approx. 290 Ω	

Electrical Test Program - Test (right seat)

Test step	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 45.0	**Illumination (S92e1)** Voltage supply	S92 3 — (V) — 1	Connector disconnected. Parking lamps: **ON**	11 – 14 V	Wiring.
⇒ 46.0	**Illumination (S92e1)** Resistance	S92 3 — (Ω) — 1	Connector (1) disconnected at seat switch group (S92).	approx. 10 Ω	Lamp, S92.
⇒ 47.0 **Coupé only (if applicable)**	**Left front seatback microswitch (S91/1)** Resistance	N32/2 1 — (Ω) — 2	Connector (9) disconnected N32/2. Left front seatback: forward backward	 0 – 2 Ω >20 kΩ	Wiring, S91/1.
⇒ 48.0 **Coupé only (if applicable)**	**Right front seatback microswitch (S92/1)** Resistance	N32/2 1 — (Ω) — 2	Connector (9) disconnected N32/2. Right front seatback: forward backward	 0 – 2 Ω >20 kΩ	Wiring, S92/1.

Electrical Test Program - Test (right seat)

Test step	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 49.0 **Coupé only** **(if applicable)**	**Left/right front door switch (S17/3, S17/4)** Voltage supply	N32/1 11 (5) — V — 10 (5)	Remove fuse (F3-17). Connector (1) disconnected. Ignition: **OFF** Front doors: **CLOSED** Drivers door: **OPEN** Right front door: **OPEN**	 11 – 14 V <2 V <2 V	Wiring, S17/3, S17/4, Convenience control module (N57), ATA control module (N26), PSE control module (A37), N32/2.
⇒ 50.0 **Coupé only** **(if applicable)**	**Left front power seat control module (N32/1)** Programming	N32/1 3 (2) — +	Connector (2) disconnected. Press memory button 1 on left front power seat switch group. Contact connector (2). Using S91 operate head restraint to upper and lower stops.	Front seat travels automatically to front and rear stops. Head restraint travels up and down.	N32/1.

Electrical Test Program - Test (right seat)

Test step	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 51.0 **Coupé only (if applicable)**	**Left front power seat control module (N32/2)** Programming	N32/1 (-+) 3 —▬ —(▬—▬)— + (2)	Connector (2) disconnected Press memory switch 2 on S92. Contact connector (2) Using S92 operate head restraint to upper and lower stops.	Front seat travels automatically to front and rear stops. Head restraint travels up and down.	N32/2.

Electrical Test Program - Test

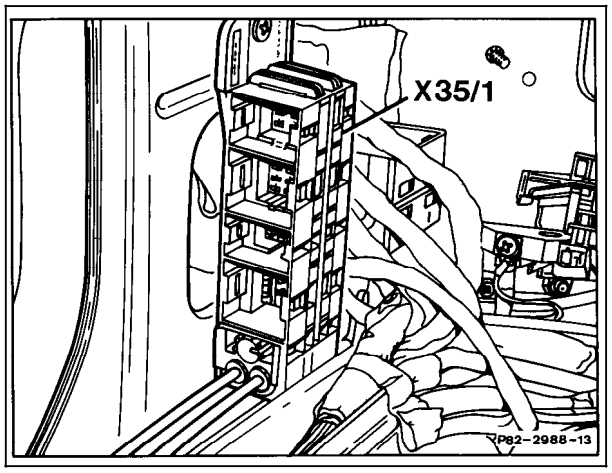


Figure 1 P82-2988-13

X35/1 Left front door plug connection

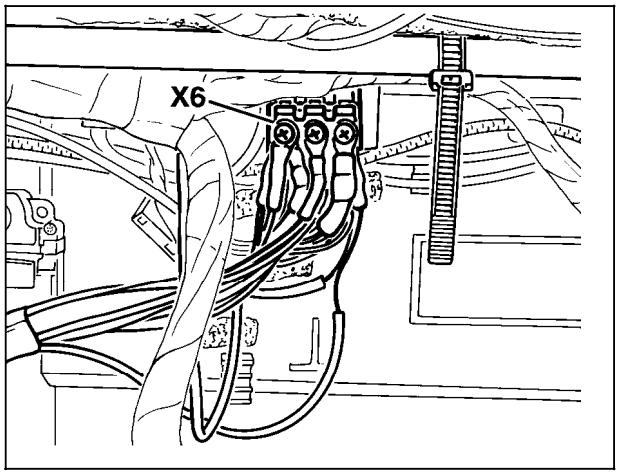


Figure 2 P82-3066-13

X6 Terminal block (terminal 58d) (3 or 4-pole)

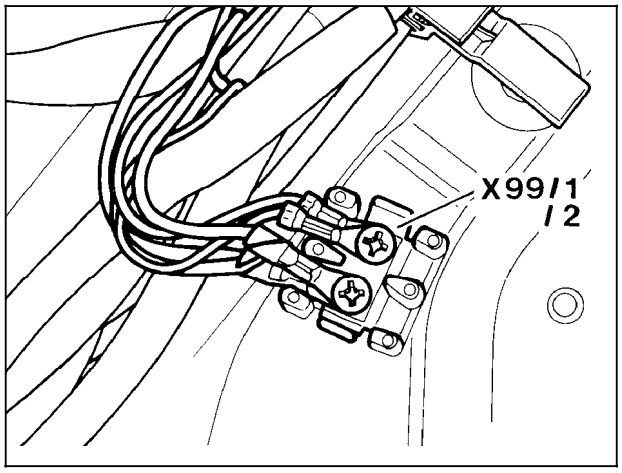
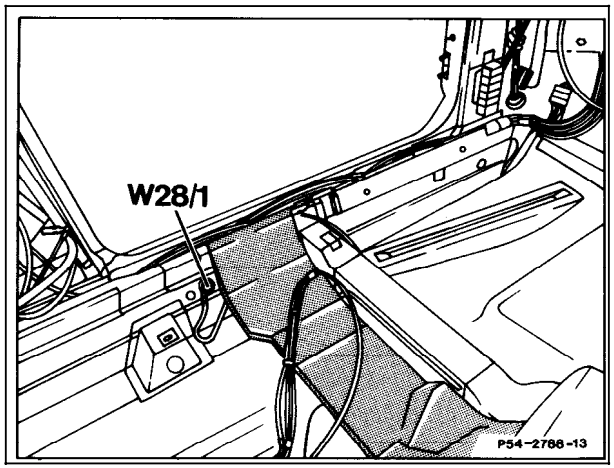


Figure 3 P82-2995-13

X99/1 Engine/chassis harness connector

Electrical Test Program - Test



P54-2788-13

Figure 4

W28/1 Ground (inside left rocker panel)