

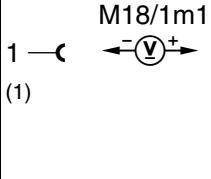
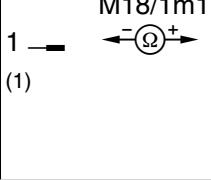
15.2 Electric Seat Adjustment (ESA)

Model 140

Electrical Test Program - Test

Test step DTC	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 1.0	Left rear power seat adjustment switch group (S55/1) Voltage supply	4 —(1) S55/1 —(1) 3	Ignition: ON Connector (1) from switch (S55/1) disconnected.	11–14 V	Wiring
⇒ 2.0	Left rear power seat motor group, cushion inclination raise/lower motor (M18/1m2) Voltage supply	2 —(2) M18/1m2 —(2) 1	Ignition: ON Connector (2) from motor (M18/1m2) disconnected. Press seat switch (S55/1s3): cushion up cushion down	11–14 V -11 to -14 V	Wiring, Left rear power seat adjustment switch group (S55/1).
⇒ 3.0	Left rear power seat motor group, cushion inclination raise/lower motor (M18/1m2) Resistance	1 —(2) M18/1m2 —(2) 2	Connector (2) from motor (M18/1m1) disconnected.	0.5–15 Ω	Left rear power seat motor group, cushion inclination raise/lower motor (M18/1m2)

Electrical Test Program - Test

Test step DTC	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 4.0	Left rear power seat motor group, backrest fore/aft motor (M18/1m1) Voltage supply Left rear power seat motor group, seat cushion fore/aft motor (M18/1m4) Voltage supply At a specific backrest inclination, the seat cushion fore/aft motor (m4) is activated by the limit switches (s1 and s2)	 M18/1m1 (1) (1) M18/1m4 (4) (4)	Ignition: ON Connector (1) from motor (M18/1m1) disconnected. Press seat switch (S55/1s1): forward backward Connect connector (1) to motor (M18/1m1) Connector (4) from motor (M18/1m4) Press seat switch (S55/1s1) rearward until limit switches (M18/1s1 and s2) turn motor (m4) off	11–14 V -11 to -14 V 11–14 V	Wiring, Left rear power seat adjustment switch group (S55/1), Left rear power seat motor group, seat cushion adjustment limit switch (M18/1s2).
⇒ 5.0	Left rear power seat motor group, backrest fore/aft motor (M18/1m1) Resistance	 M18/1m1 (1) (1)	Connector (1) from motor (M18/1m1) disconnected.	0.5–15 Ω	Left rear power seat motor group, backrest fore/aft motor (M18/1m1)

Electrical Test Program - Test

Test step DTC	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 6.0	Left rear power seat motor group, seat cushion fore/aft motor (M18/1m4) Resistance	M18/1m4 1 —  2 (4) (4)	Connector (4) from motor (M18/1m4)	0.5–15 Ω	Left rear power seat motor group, seat cushion fore/aft motor (M18/1m4)
⇒ 7.0	Left rear power seat adjustment switch group, head restraint raise/lower switch (S55/1s2) Electrical circuit	N32/12 17 —  16	Ignition: ON Connector from module (N32/12) disconnected. Press head restraint switch (S55/1s2): head restraint up head restraint down	11–14 V -11 to -14 V	Wiring, Left rear power seat adjustment switch group (S55/1).
⇒ 8.0	Rear head restraint control module (N32/12) Voltage supply	N32/12 12 —  9	Ignition: ON Connector from module (N32/12) disconnected.	11–14 V	Wiring

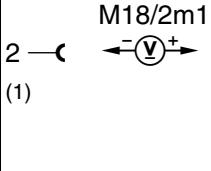
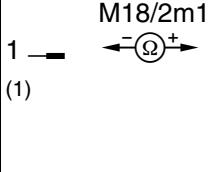
Electrical Test Program - Test

Test step DTC	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 9.0	Left rear power seat motor group, head restraint raise/lower motor (M18/1m3) Voltage supply	M18/1m3 1 —(3) ←—(V)±—→ 2 (3)	Ignition: ON Remove panel behind rear head restraints Connector (3) from motor (M18/1m3) disconnected. Press head restraint switch (S55/1s2): head restraint up head restraint down	11–14 V -11 to -14 V	Wiring, Rear head restraint control module (N32/12).
⇒ 10.0	Left rear power seat motor group, head restraint raise/lower motor (M18/1m3) Resistance	M18/1m3 1 —(3) ←—(Ω)±—→ 2 (3)	Connector (3) from motor (M18/1m3) disconnected.	0.5–15 Ω	Left rear power seat motor group, head restraint raise/lower motor (M18/1m3)
⇒ 11.0	Left rear power seat adjustment switch group illumination (S55/1e1) Voltage supply	S55/1 4 —(1) ←—(V)±—→ 4 (3)	Connectors (1 and 3) from switch (S55/1) disconnected. Headlamps: ON	11–14 V	Wiring
⇒ 12.0	Left rear power seat adjustment switch group illumination (S55/1e1) Resistance	S55/1 4 —(1) ←—(Ω)±—→ 4 (3)	Connectors (1 and 3) from switch (S55/1) disconnected.	approx. 10 Ω	Bulb, Left rear power seat adjustment switch group (S55/1).

Electrical Test Program - Test

Test step DTC	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 13.0	Right rear power seat adjustment switch group (S55/2) Voltage supply	3 —(4) S55/2 —(4) 4	Ignition: ON Connector (4) from switch (S55/2) disconnected.	11–14 V	Wiring
⇒ 14.0	Right rear power seat motor group, cushion inclination raise/lower motor (M18/2m2) Voltage supply	2 —(2) M18/2m2 —(2) 1	Ignition: ON Connector (2) from motor (M18/2m2) disconnected. Press seat switch (S55/2s3): cushion up cushion down	11–14 V -11 to -14 V	Wiring, Right rear power seat adjustment switch group (S55/2).
⇒ 15.0	Right rear power seat motor group, cushion inclination raise/lower motor (M18/2m2) Resistance	1 —(2) M18/2m2 —(2) 2	Connector (2) from motor (M17/2m1) disconnected.	0.5–15 Ω	Right rear power seat motor group, cushion inclination raise/lower motor (M18/2m2)

Electrical Test Program - Test

Test step DTC	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 16.0	Right rear power seat motor group, backrest fore/aft motor (M18/2m1) Voltage supply Right rear power seat motor group, seat cushion fore/aft motor (M18/2m4) Voltage supply At a specific backrest inclination, the seat cushion fore/aft motor (m4) is activated by the limit switches (s1 and s2)	 (1) (1) (4) (4)	Ignition: ON Connector (1) from motor (M18/2m1) disconnected. Press seat switch (S55/2s1): forward backward Connect connector (1) to motor (M18/2m1) Connector (4) from motor (M18/2m4) Press seat switch (S55/2s1) rearward until limit switches (M18/2s1 and s2) turn motor (m4) off	11–14 V -11 to -14 V 11–14 V	Wiring, Right rear power seat adjustment switch group (S55/2), Right rear power seat motor group, seat cushion adjustment limit switch (M18/2s2).
⇒ 17.0	Right rear power seat motor group, backrest fore/aft motor (M18/2m1) Resistance	 (1) (1)	Connector (1) from motor (M18/2m1) disconnected.	0.5–15 Ω	Right rear seat motor group, backrest fore/aft motor (M18/2m1)

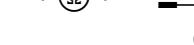
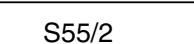
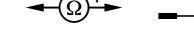
Electrical Test Program - Test

Test step DTC	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 18.0	Right rear power seat motor group, seat cushion fore/aft motor (M18/2m4) Resistance	M18/2m4 1 —  2 (4) (4)	Connector (4) from motor (M18/2m4)	0.5–15 Ω	Right rear seat motor group, seat cushion fore/aft motor (M18/2m4)
⇒ 19.0	Right rear power seat adjustment switch group, head restraint raise/lower switch (S55/2s2) Electrical circuit	N32/12 19 —  18 (3) (3)	Ignition: ON Connector from module (N32/12) disconnected. Press head restraint switch (S55/2s2): head restraint up head restraint down	11–14 V -11 to -14 V	Wiring, Right rear power seat adjustment switch group (S55/2).
⇒ 20.0	Right rear power seat motor group, head restraint raise/lower motor (M18/2m3) Voltage supply	M18/2m3 2 —  1 (3) (3)	Ignition: ON Remove panel behind rear head restraints Connector (3) from motor (M18/2m3) disconnected. Press head restraint switch (S55/2s2): head restraint up head restraint down	11–14 V -11 to -14 V	Wiring, Rear head restraint control module (N32/12).

15.2 Electric Seat Adjustment (ESA)

Model 140

Electrical Test Program - Test

Test step DTC	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 21.0	Right rear power seat motor group, head restraint raise/lower motor (M18/2m3) Resistance	M18/2m3 1 —  2 (3) (3)	Connector (3) from motor (M18/2m3) disconnected.	0.5–15 Ω	Right rear power seat motor group, head restraint raise/lower motor (M18/2m3)
⇒ 22.0	Right rear power seat adjustment switch group illumination (S55/2e1) Voltage supply	S55/2 3 —  3 (4) (6)	Connectors (4 and 6) from switch (S55/2) disconnected. Headlamps: ON	11–14 V	Wiring
⇒ 23.0	Right rear power seat adjustment switch group illumination (S55/2e1) Resistance	S55/2 3 —  3 (4) (6)	Connectors (4 and 6) from switch (S55/2) disconnected.	approx. 10 Ω	Bulb, Right rear power seat adjustment switch group (S55/2).
⇒ 24.0	Rear head restraint raise/lower switch (S52/5) Voltage supply	S52/5 3 —  4	Ignition: ON Connector from switch (S52/5)	11–14 V	Wiring, Rear head restraint raise/lower switch (S52/5).

Electrical Test Program - Test

Test step DTC	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 25.0	Rear head restraint raise/lower switch (S52/5) Left electrical circuit	N32/12 16 —(—  +)— 17	Ignition: ON Connector from module (N32/12) disconnected. Press switch (S52/5): head restraint up head restraint down	11–14 V -11 to -14 V	Left rear power seat adjustment switch group (S55/1), Rear head restraint raise/lower switch (S52/5).
	Right electrical circuit	N32/12 19 —(—  +)— 18	Press switch (S52/5): head restraint up head restraint down	11–14 V -11 to -14 V	
⇒ 26.0	Rear head restraint raise/lower switch (S52/5) Voltage supply	S52/5 3 —(—  +)— 5	Connector from switch (S52/5) disconnected. Headlamps: ON	11–14 V	Wiring, Rear head restraint raise/lower switch (S52/5).
⇒ 27.0	Rear head restraint raise/lower switch (S52/5) Resistance	S52/5 3 —(—  +)— 5	Connector from switch (S52/5) disconnected.	approx. 10 Ω	Wiring, Rear head restraint raise/lower switch (S52/5).

Electrical Test Program - Test

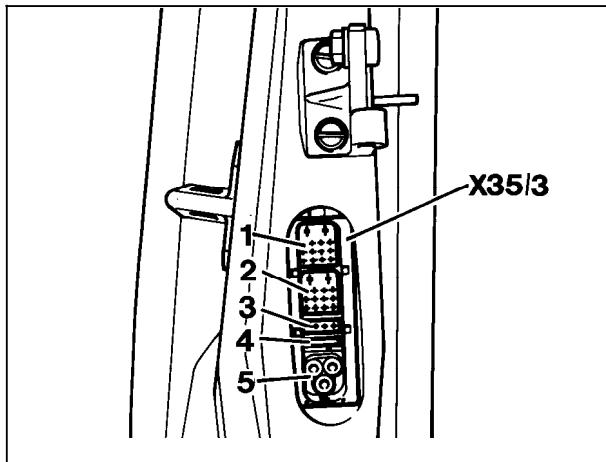


Figure 1
X35/3 Left rear door plug connection

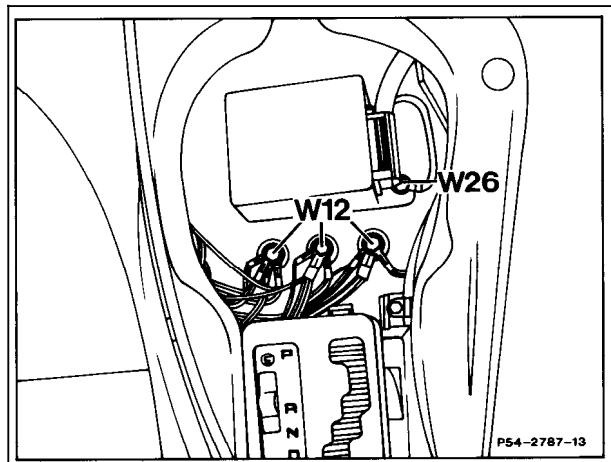


Figure 2
W12 Ground (center console)

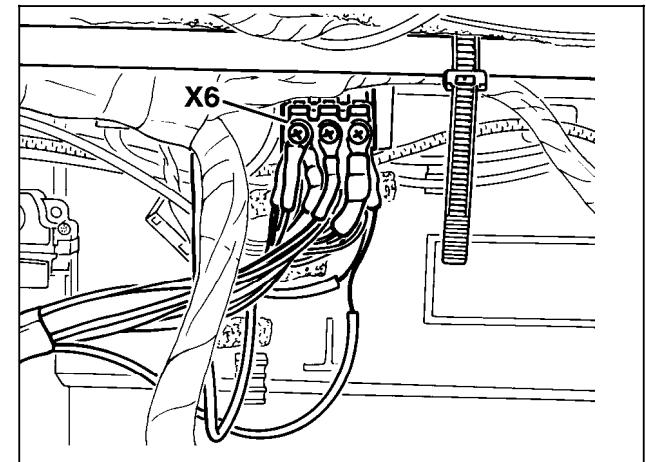


Figure 3
X6 Terminal block (terminal 58d) (3- or 4-pole)

Electrical Test Program - Test

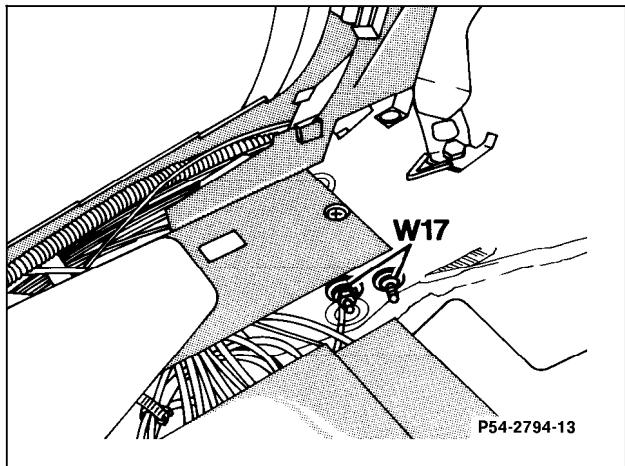


Figure 4

W17 Ground (right rear seat)

P54-2794-13