5.2 Models 124, 202

Diagnosis - Complaint Related Diagnostic Chart

Complaint/Problem	Possible cause	Test step/Remedy [1]
Sliding/pop-up roof does not operate with sliding/pop-up roof switch.	Sliding/pop-up roof motor (M12, M12/1). Sliding/pop-up roof switch (S13/2).	23 ⇒ 6.0 23 ⇒ 7.0, 8.0, 9.0
Sliding/pop-up roof or **power windows** do not operate with **ignition key in position 1**.	Convenience control module (N57). Convenience relay module (K24).	23 ⇒ 2.0, 3.0 23 ⇒ 4.0
Sliding/pop-up roof does not operate with **either front door open.**	Convenience control module (N57). Front door switch (S17/3, S17/4). Convenience relay module (K24).	23 ⇒ 1.0, 2.0, 3.0 23 ⇒ 5.0 23 ⇒ 4.0
Sliding roof does not **close/lower**.	Sliding/pop-up roof switch (S13/2).	23 ⇒ 7.0
Sliding roof does not **open**.	Sliding/pop-up roof switch (S13/2).	23 ⇒ 8.0
Pop-up roof does not **open**.	Sliding/pop-up roof switch (S13/2).	23 ⇒ 9.0

[1] Observe Preparation for Test, see 22.

Diagnosis - Complaint Related Diagnostic Chart

Complaint/Problem	Possible cause	Test step/Remedy [1]
Left front power window does not **open**.	Convenience control module (N57). Left front power window switch (S21/1). Left front power window motor (M10/3).	23 ⇒ 1.0, 2.0 23 ⇒ 10.0 23 ⇒ 28.0
Left front power window one-touch **opening** does not operate.	Convenience control module (N57). Left front power window switch (S21/1). Left front power window motor (M10/3).	23 ⇒ 1.0, 2.0 23 ⇒ 12.0 23 ⇒ 28.0
Left front power window does not **close**.	Convenience control module (N57). Left front power window switch (S21/1). Left front power window motor (M10/3).	23 ⇒ 1.0, 2.0 23 ⇒ 11.0 23 ⇒ 28.0
Right front power window does not **open**.	Convenience control module (N57). Right front power window switch (S21/2). Right front power window motor (M10/4).	23 ⇒ 1.0, 2.0 23 ⇒ 13.0 23 ⇒ 29.0
Right front power window one-touch **opening** does not operate.	Convenience control module (N57). Right front power window switch (S21/2). Right front power window motor (M10/4).	23 ⇒ 1.0, 2.0 23 ⇒ 15.0 23 ⇒ 29.0
Right front power window does not **close**.	Convenience control module (N57). Right front power window switch (S21/2). Right front power window motor (M10/4).	23 ⇒ 1.0, 2.0 23 ⇒ 14.0 23 ⇒ 29.0

[1] Observe Preparation for Test, see 22.

Diagnosis - Complaint Related Diagnostic Chart

Complaint/Problem	Possible cause	Test step/Remedy [1]
Left rear power window does not **open**.	Convenience control module (N57). Left rear power window switch (S21/3, S21/5). Rear power windows safety switch (S21/7). Left rear power window motor (M10/5).	23 ⇒ 1.0, 2.0 23 ⇒ 16.0 23 ⇒ 20.0 23 ⇒ 30.0
Left rear power window does not **close**.	Convenience control module (N57). Left rear power window switch (S21/3, S21/5). Rear power windows safety switch (S21/7). Left rear power window motor (M10/5).	23 ⇒ 1.0, 2.0 23 ⇒ 17.0 23 ⇒ 20.0 23 ⇒ 30.0
Right rear power window does not **open**.	Convenience control module (N57). Right rear power window switch (S21/4, S21/6). Rear power windows safety switch (S21/7). Right rear power window motor (M10/6).	23 ⇒ 1.0, 2.0 23 ⇒ 18.0 23 ⇒ 20.0 23 ⇒ 31.0
Right rear power window does not **close**.	Convenience control module (N57). Right rear power window switch (S21/4, S21/6). Rear power windows safety switch (S21/7). Right rear power window motor (M10/6).	23 ⇒ 1.0, 2.0 23 ⇒ 19.0 23 ⇒ 20.0 23 ⇒ 31.0

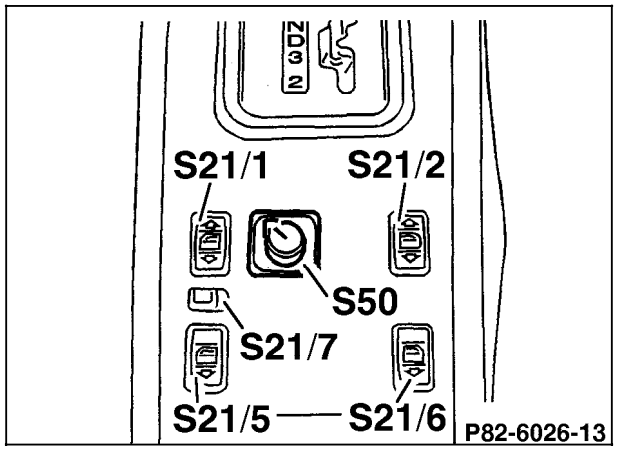
[1] Observe Preparation for Test, see 22.

Diagnosis - Complaint Related Diagnostic Chart

Complaint/Problem	Possible cause	Test step/Remedy [1]
Child safety lock-out for left rear or right rear door does not operate.	Rear power windows safety switch (S21/7).	23 ⇒ 20.0
Central closing (power windows, sliding/pop-up roof) does not operate with the ignition key via the driver's door, front passenger door or trunk lid lock.	Convenience control module (N57). **Model 202**: Left front door lock switch S86/1), right front door lock switch (S87/1) and trunk lid lock switch (S88/2). **Model 124**: Left front door lock switch (S86/1), right front door lock switch (S87/1) and trunk lid lock switch (S88/2). **Model 124**: Left front door actuator (S47). **Model 124:** Right front door actuator (S48). **Model 124:** Trunk lid lock actuator (S49). Convenience relay module (K24).	23 ⇒ 1.0, 2.0 23 ⇒ 21.0 23 ⇒ 22.0, 23.0 23 ⇒ 24.0 23 ⇒ 25.0 23 ⇒ 26.0 23 ⇒ 4.0, 27.0
Central closing **reverse safety** (power windows sliding/pop-up roof) does not operate (within 10 seconds of central locking) with the ignition key via the driver's door, front passenger door or trunk lid lock.	Convenience control module (N57). **Model 202**: Left front door lock switch S86/1), right front door lock switch (S87/1) and trunk lid lock switch (S88/2). **Model 124**: Left front door lock switch (S86/1), right front door lock switch (S87/1) and trunk lid lock switch (S88/2). **Model 124**: Left front door actuator (S47). **Model 124:** Right front door actuator (S48). **Model 124:** Trunk lid lock actuator (S49). Convenience relay module (K24).	23 ⇒ 1.0, 2.0 23 ⇒ 21.0 23 ⇒ 22.0, 23.0 23 ⇒ 24.0 23 ⇒ 25.0 23 ⇒ 26.0 23 ⇒ 4.0, 27.0

[1] Observe Preparation for Test, see 22.

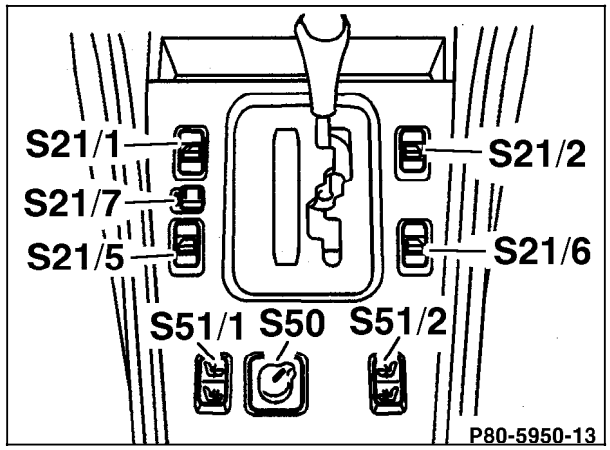
Electrical Test Program - Component Locations



P82-6026-13

Figure 1
Model 124

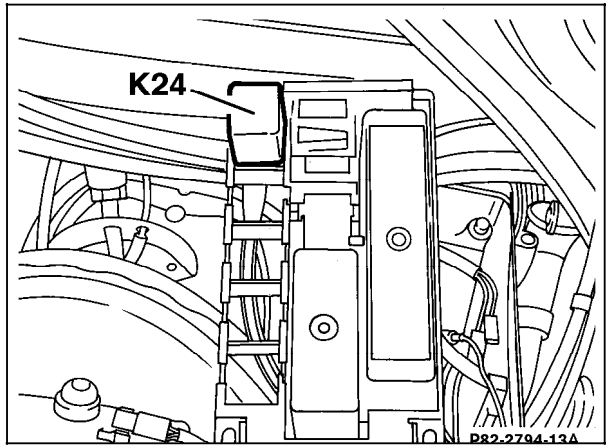
S21/1	Left front power window switch
S21/2	Right front power window switch
S21/5	Left rear power window switch
S21/6	Right rear power window switch
S21/7	Rear power window safety switch



P82-5950-13

Figure 2
Model 202

S21/1	Left front power window switch
S21/2	Right front power window switch
S21/5	Left rear power window switch
S21/6	Right rear power window switch
S21/7	Rear power window safety switch

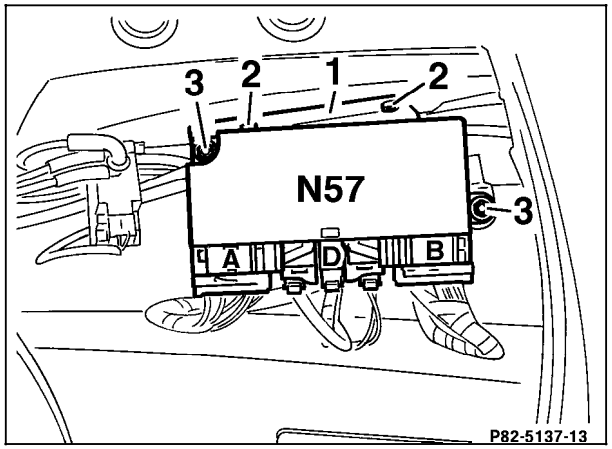


P82-2794-13A

Figure 3
Model 124

K24	Convenience relay module

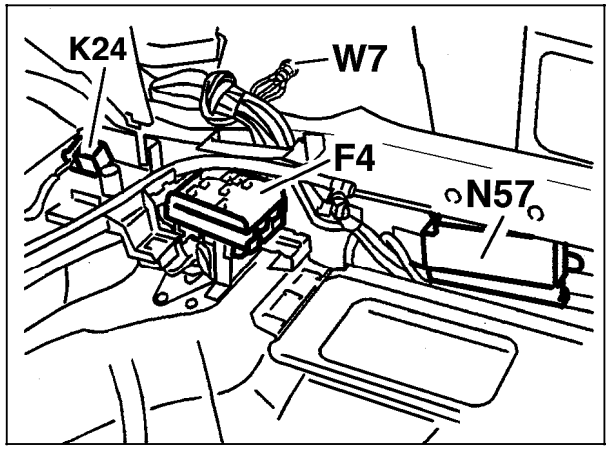
Electrical Test Program - Component Locations



P82-5137-13

Figure 4
Model 124 under left rear seat

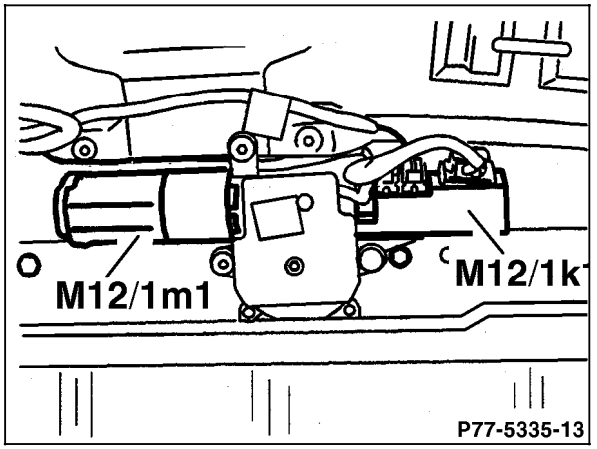
N57	Convenience control module (power windows sliding/pop-up roof)



P82-5949-13

Figure 5
Model 202

F4	Rear fuse box (19-fuse, in trunk)
K24	Convenience relay module
N57	Convenience control module (power windows sliding/pop-up roof)



P77-5335-13

Figure 6
Model 202 behind overhead console

M12/1	Sliding/pop-up roof
M12/1k1	Sliding/pop-up roof relay
M12/1m1	Sliding/pop-up roof motor

Electrical Test Program - Preparation for Test

Preparation for Test:

1. Battery voltage 11-14 V.
2. Model 124: Check fuses F1-A, F1-G, F1-H, F1-1, F1-2, F1-9.
3. Model 202: Check fuses F3-26, F4-7, F4-9, F4-10, F4-13, F4-19.

Electrical Wiring Diagrams

See Electrical Troubleshooting Manual, Model 124.
Model 202.

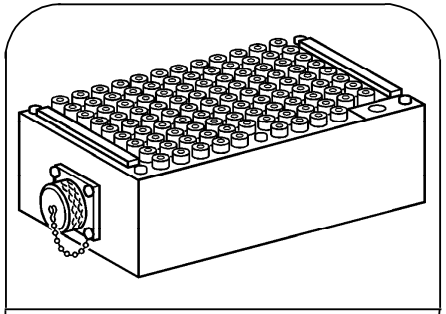
Note regarding test connection column:

The letters and numbers in parentheses, for example in 23 ⇒ 2.0 (A.2), indicate the following:

A = Connector A
2 = Socket 2 of connector A in wiring diagram

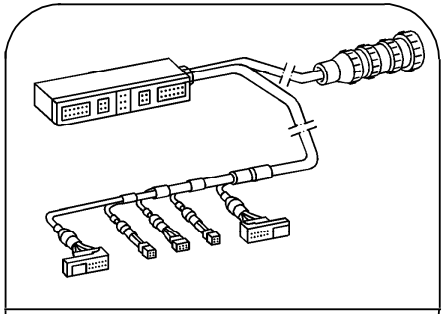
Electrical Test Program - Preparation for Test

Special Tools



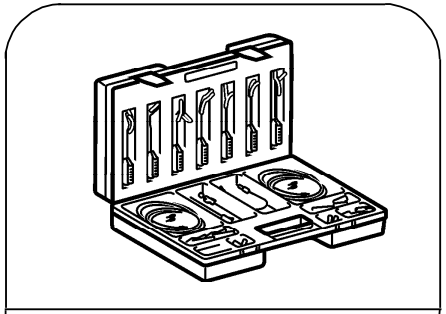
129 589 00 21 00

126-pin socket box



202 589 03 63 00

Test cable



201 589 00 99 00

Electrical connecting set

Equipment

Multimeter [1]	Fluke, Model 23, 83, 85, 87

[1] Available through the MBUSA Standard Equipment Program.

Electrical Test Program - Preparation for Test

Connection Diagram - Socket Box

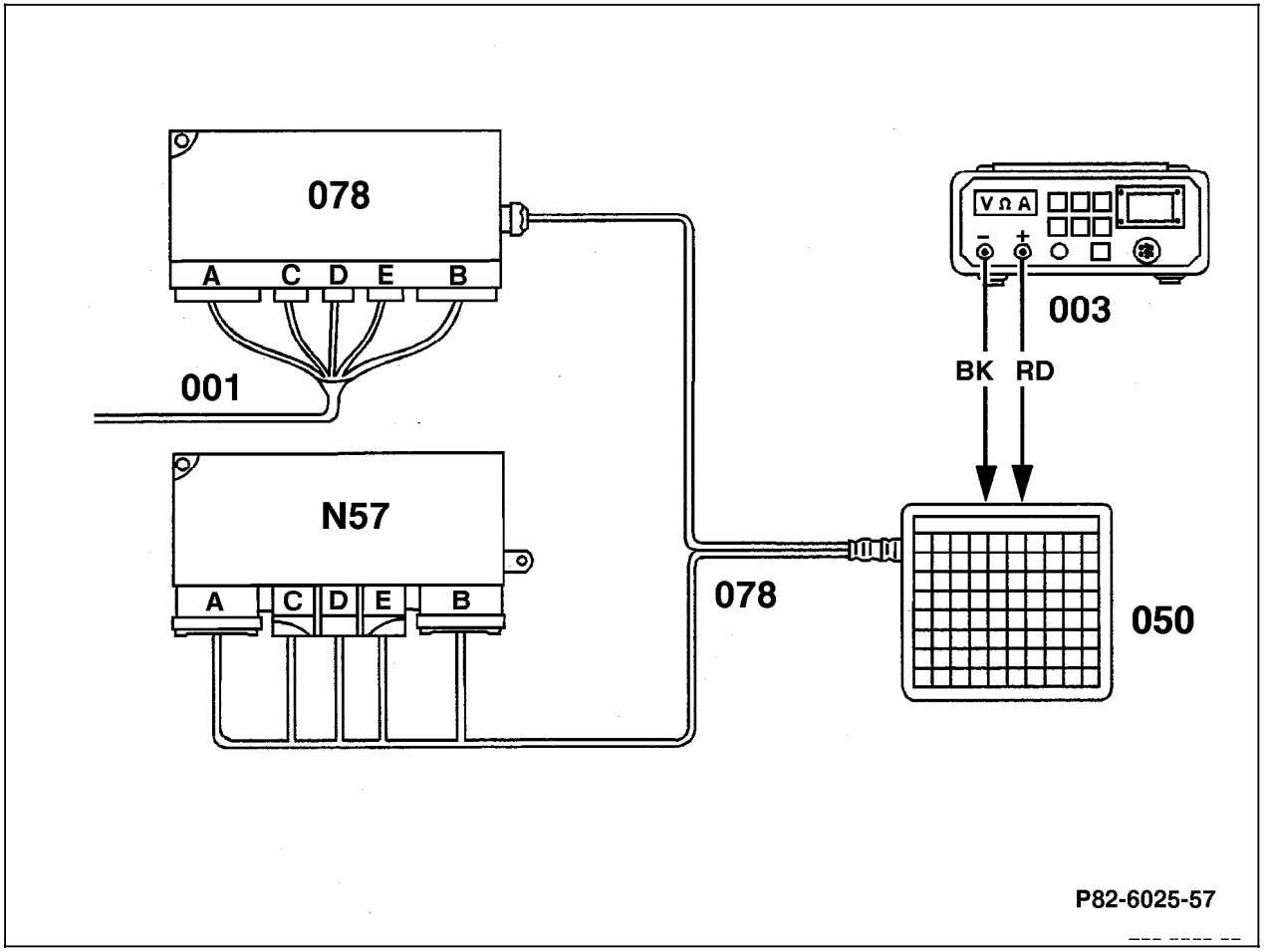
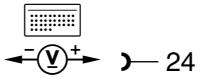
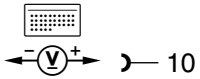
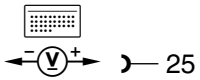


Figure 1

001	Vehicle harness
003	Multimeter
050	Socket box (126-pole)
078	Test cable 202 589 03 63 00 (63-pole)
N57	Convenience control module

P82-6025-57

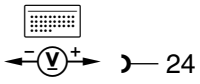
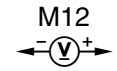
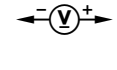
Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 1.0	**Convenience control module (N57)** Voltage supply, circuit 30	N57  2 (A.2) — 24 (E.2)	Ignition: **OFF**	11 – 14 V	Wiring.
⇒ 2.0	**Convenience control module (N57)** Voltage supply, circuit 15R/30	N57  2 (A.2) — 10 (A.10) 33 (B.7) — 32 (B.6)	Turn ignition key to position “1”. Doors: **closed**	11 – 14 V 11 – 14 V	Wiring, Convenience relay module (K24).
⇒ 3.0	**Convenience control module (N57)** Voltage supply, circuit 15R	N57  2 (A.2) — 25 (E.3)	Turn ignition key to position “1”.	11 – 14 V	Wiring.

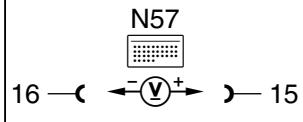
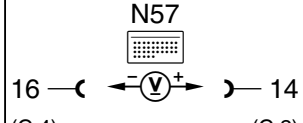
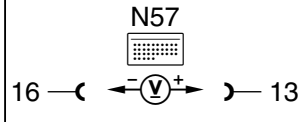
Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 4.0	**Convenience relay module (K24)** Voltage supply	K24 5 — (V) — 3	Ignition: **OFF** K24 disconnected.	11 – 14 V	Wiring.
		5 — (V) — 2		11 – 14 V	
		5 — (V) — 4	Turn ignition key to position “1”.	11 – 14 V	
⇒ 5.0	**Front door contact switches (S17/3, S17/4)** Circuit	K24 6 — (V) — 2	Ignition: **OFF** K24 disconnected.		Wiring, ⇒ 5.1
			Both front doors: **CLOSED**	0 – 2 V	
			Left front door: **OPEN**	11 – 14 V	
			Front doors: **CLOSED**	0 – 2 V	
			Right front door: **OPEN**	11 – 14 V	

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 5.1	Voltage supply	N57  23 (E.1) — 24 (E.2)	Ignition: **OFF** Both front doors: **CLOSED** Left front door: **OPEN** Front doors: **CLOSED** Right front door: **OPEN**	 0 – 2 V 11 – 14 V 0 – 2 V 11 – 14 V	Wiring, S17/3, S17/4. Model 124 PSE control module (A37/2), Model 202: See section 3.2 PSE/CL. Values are OK: N57.
⇒ 6.0	**Model 124:** **Sliding/pop-up roof (M12)** Voltage supply **Model 202:** **Sliding/pop-up roof (M12/1)** Voltage supply	M12  6 — 1 M12/1  6 — 4	 Ignition: **ON** Ignition: **ON**	 11 – 14 V 11 – 14 V	Wiring.

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 7.0	**Sliding/pop–up roof circuit (S13/2)** Function: Closing sliding/pop–up roof Voltage supply		Ignition: **OFF** Disconnect connector C of N57. Ignition: **ON** S13/2 in **rest position.** Switch held in sliding/pop–up roof **close position**.	 0 – 1 V 11 – 14 V	Wiring, S13/2. Values are OK: Sliding/pop–up roof relay (M12k1 or M12/1k1). Sliding/pop–up roof motor (M12m1 or M12/1m1).
⇒ 8.0	**Sliding/pop–up roof switch (S13/2)** Function: Opening sliding roof Voltage supply		Ignition: **OFF** Disconnect connector C of N57. Ignition: **ON** S13/2 in **rest position.** S13/2 held in sliding roof **open** position	 0 – 1 V 11 – 14 V	Wiring, S13/2. Values are OK: Sliding/pop–up roof relay (M12k1 or M12/1k1). Sliding/pop–up roof motor (M12m1 or M12/1m1).
⇒ 9.0	**Sliding/pop–up roof switch (S13/2)** Function: Opening pop-up roof Voltage supply		Ignition: **OFF** Disconnect connector C of N57. Ignition: **ON** S13/2 in **rest position.** S13/2 held in pop-up roof **open** position	 0 – 1 V 11 – 14 V	Wiring, S13/2. Values are OK: Sliding/pop–up roof relay (M12k1 or M12/1k1). Sliding/pop–up roof motor (M12m1 or M12/1m1).

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 10.0	**Left front power window switch (S21/1)** Function: Opening Voltage supply	N57 2 (A.2) — (V) — 5 (A.5)	Ignition: **ON** S21/1 in **rest position** S21/1 held in **open** position “1”. S21/1 held in **open** position “2”.	9 – 14 V 0 – 1 V 0 – 1 V	Wiring, ⇒ 10.1 Convenience control module (N57).
⇒ 10.1	Resistance	N57 2 (A.2) — (Ω) — 5 (A.5)	Ignition: **OFF** Disconnect connector A of N57. S21/1 in **rest position** S21/1 held in **open** position “1”. S21/1 held in **open** position “2”.	>20 kΩ 0 – 2 Ω 0 – 2 Ω	Wiring, S21/1.

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 11.0	**Left front power window switch (S21/1)** Function: Closing Voltage supply	N57 2 (A.2) — V — 8 (A.8)	Ignition: **ON** S21/1 in **rest position.** S21/1 held in **close position.**	9 – 14 V 0 – 1 V	Wiring, ⇒ 11.1, Convenience control module (N57).
⇒ 11.1	Resistance	N57 2 (A.2) — Ω — 8 (A.8)	Ignition: **OFF** Disconnect connector A of N57. S21/1 in **rest position**. S21/1 held in **close position.**	>20 kΩ 0 – 2 Ω	Wiring, S21/1.

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 12.0	**Left front power window switch (S21/1)** Function: One–touch operation Voltage supply	N57 2 (A.2) — (V) — 12 (A.12)	Ignition: **ON** S21/1 in **rest position.** S21/1 held in **open** position “1”. S21/1 held in **open** position “2”.	9 – 14 V 9 – 14 V 0 – 1 V	Wiring, ⇒ 12.1, Convenience control module (N57).
⇒ 12.1	Resistance	N57 2 (A.2) — (Ω) — 12 (A.12)	Ignition: **OFF** Disconnect connector A of N57. S21/1 in **rest position.** S21/1 held in **open** position “1”. S21/1 held in **open** position “2”.	>20 kΩ >20 kΩ 0 – 2 Ω	Wiring, S21/1.

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 13.0	**Right front power window switch (S21/2)** Function: Opening Voltage supply	N57 2 (A.2) — (V) — 1 (A.1)	Ignition: **ON** S21/2 in **rest position.** S21/2 held in **open** position. “1”. S21/2 held in **open** position “2”.	9 – 14 V 0 – 1 V 0 – 1 V	Wiring, ⇒ 13.1, Convenience control module (N57).
⇒ 13.1	Resistance	N57 2 (A.2) — (Ω) — 1 (A.1)	Ignition: **OFF** Disconnect connector A of N57. S21/2 in **rest position**. S21/2 held in **open** position “1”. S21/2 held in **open** position “2”.	>20 kΩ 0 – 2 Ω 0 – 2 Ω	Wiring, S21/2.

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 14.0	**Right front window circuit (S21/2)** Function: Closing Voltage supply	N57 2 (A.2) — V — 4 (A.4)	Ignition: **ON** S21/2 in **rest position.** S21/2 held in **close** position.	9 – 14 V 0 – 1 V	Wiring, ⇒ 14.1, Convenience control module (N57).
⇒ 14.1	Resistance	N57 2 (A.2) — Ω — 4 (A.4)	Ignition: **OFF** Disconnect connector A of N57. S21/2 in **rest position.** S21/2 held in **close** position.	>20 kΩ 0 – 2 Ω	Wiring, S21/2.

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 15.0	**Right front window circuit (S21/2)** Function: One–touch operation Voltage supply	N57 2 (A.2) — (V) — 9 (A.9)	Ignition: **ON** S21/2 in **rest position.** S21/2 held in **open** position “1”. S21/2 held in **open** position “2”.	9 – 14 V 9 – 14 V 0 – 1 V	Wiring, ⇒ 15.1, Convenience control module (N57).
⇒ 15.1	Resistance	N57 2 (A.2) — (Ω) — 9 (A.9)	Ignition: **OFF** Disconnect connector A N57. S21/2 in **rest position.** S21/2 held in **open** position “1”. S21/2 held in **open** position “2”.	>20 kΩ >20 kΩ 0 – 2 Ω	Wiring, S21/2.

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 16.0	**Left rear power window switch (door) (S21/3), Left rear power window switch (center console) (S21/5)** Function: Opening Voltage supply	N57 33 (B.7) — V — 27 (B.1)	Ignition: **ON** Rear power windows safety switch (center console) (S21/7): **OFF** S21/3 and S21/5 in **rest position.** S21/3 held in **open** position. S21/5 held in **open** position.	 9 – 14 V 0 – 1 V 0 – 1 V	Wiring, ⇒ 16.1 Values are OK: ⇒ 20.0, Convenience control module (N57).
⇒ 16.1	Left rear power window switch (door) (S21/3) Resistance	N57 33 (B.7) — Ω — 27 (B.1)	Ignition: **OFF** Disconnect connector B of N57. S21/3 and S21/5 in **rest position.** S21/3 held in **open** position.	 >20 kΩ 0 – 3 Ω	Wiring, S21/3, S21/5, ⇒ 16.2

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 16.2	Left rear power window switch (center console) (S21/5) Resistance	N57 33 (B.7) — Ω — 27 (B.1)	Ignition: **OFF** Disconnect connector B of N57. Disconnect S21/3 from wiring harness. S21/5 in **rest position.** S21/5 held in **open** position.	 >20 kΩ 0 – 2 Ω	Wiring, S21/5.
⇒ 17.0	**Left rear power window switch (door) (S21/3), Left rear power window switch (center console) (S21/5)** Function: Closing Voltage supply	N57 33 (B.7) — V — 34 (B.8)	Ignition: **ON** Rear power windows safety switch (center console) (S21/7): **OFF** S21/3 and S21/5 in **rest position.** S21/3 held in **close position**. S21/5 held in **close position.**	 9 – 14 V 0 – 1 V 0 – 1 V	Wiring, ⇒ 17.1 Values are OK: ⇒ 20.0, Convenience control module (N57).

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 17.1	Left rear power window switch (door) (S21/3) Resistance	N57 33 (B.7) — Ω — 34 (B.8)	Ignition: **OFF** Disconnect connector B from N57. S21/3 and S21/5 held in **rest position.** S21/3 held in **close position.**	 >20 kΩ 0 – 3 Ω	Wiring, S21/3, S21/5, ⇒ 17.2
⇒ 17.2	Left rear power window switch (center console) (S21/5) Resistance	N57 33 (B.7) — Ω — 34 (B.8)	Ignition: **OFF** Disconnect connector B of N57. Disconnect S21/3 from wiring harness. S21/5 in **rest position.** S21/5 in **close position.**	 >20 kΩ 0 – 2 Ω	Wiring, S21/5.

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 18.0	**Right rear power window switch (door) (S21/4), Right rear power window switch (center console) (S21/6)** Function: Opening Voltage supply	N57 33 (B.7) — V — 38 (B.12)	Ignition: **ON** Rear power windows safety switch (center console) (S21/7): **OFF** S21/4 and S21/6 in **rest position.** S21/4 held in **open position.** S21/6 held in **open position.**	 9 – 14 V 0 – 1 V 0 – 1 V	Wiring, ⇒ 18.1 Values are OK: ⇒ 20.0, Convenience control module (N57).
⇒ 18.1	Right rear power window switch (door) (S21/4) Resistance	N57 33 (B.7) — Ω — 38 (B.12)	Ignition: **OFF** Disconnect connector B of N57. S21/4 and S21/6 held in **rest position.** S21/4 held in **open position.**	 >20 kΩ 0 – 3 Ω	Wiring, S21/4, S21/6, ⇒ 18.2

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 18.2	Right rear power window switch (center console) (S21/6) Resistance	N57 33 (B.7) — Ω — 38 (B.12)	Ignition: **OFF** Disconnect connector B from N57. Disconnect S21/4 from wiring harness. S21/6 in **rest position.** S21/6 held in **open** position	 >20 kΩ 0 – 3 Ω	Wiring, S21/6.
⇒ 19.0	**Right rear power window switch (S21/4), Right rear power window switch (center console) (S21/6)** Function: Closing Voltage supply	N57 33 (B.7) — V — 35 (B.9)	Ignition: **ON** Rear power window safety switch (center console) (S21/7): **OFF** S21/4 and S21/6 in **rest position.** S21/4 held in **close position.** S21/6 held in **close position.**	 9 – 14 V 0 – 1 V 0 – 1 V	Wiring, ⇒ 19.1 Values are OK: ⇒ 20.0, Convenience control module (N57).

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 19.1	Right rear power window switch (door) (S21/4) Resistance	N57 33 (B.7) — Ω — 35 (B.9)	Ignition: **OFF** Disconnect connector B of N57. S21/4 and S21/6 in **rest position.** S21/4 in **close position.**	>20 kΩ 0 – 3 Ω	Wiring, S21/4, S21/6, ⇒ 19.2
⇒ 19.2	Right rear power window switch (center console) (S21/6) Resistance	N57 33 (B.7) — Ω — 35 (B.9)	Ignition: **OFF** Disconnect connector B of N57. Disconnect S21/4 from wiring harness. S21/6 in **rest position.** S21/6 held in **close position.**	>20 kΩ 0 – 2 Ω	Wiring, S21/6.

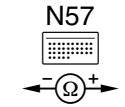
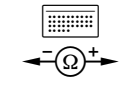
Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 20.0	**Rear power windows safety switch (center console) (S21/7)** Voltage supply	N57 33 (B.7) — V — 27 (B.1)	Ignition: **ON** Rear power windows safety switch (center console) (S21/7): **Unlocked** S21/3 held in **open position.** Rear power window safety switch (center console) (S21/7): **Locked** S21/3 held in **open position.**	 0 – 1 V 9 – 14 V	Wiring, ⇒ 20.1 Values are OK: ⇒ 16.0, Convenience control module (N57).
⇒ 20.1	Resistance	N57 33 (B.7) — Ω — 27 (B.1)	Ignition: **OFF** Disconnect connector B of N57. S21/7 in **unlocked position**. S21/3 held in **open position.** S21/7 in **locked position**. S21/3 held in **open position**.	 0 – 3 Ω >20 kΩ	Wiring, S21/7.

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 21.0 **Model 202 only**	**Left and right front door lock switch (convenience) (S86/1, 87/1) and trunk lid lock switch (convenience) (S88/2)** Function: Opening Voltage supply	N57 2 (A.2) — V — 18 (D.2)	S86/1, S87/1 and S88/2 in **rest position**. S86/1 in **open position.** S87/1 in **open position.** S88/2 in **open position.**	9 – 14 V 0 – 1 V 0 – 1 V 0 – 1 V	Wiring, ⇒ 21.1
	Function: Closing Voltage supply	N57 2 (A.2) — V — 22 (D.6)	S86/1, S87/1 and S88/2 in **rest position**. S86/1 in **close position.** S87/1 in **close position.** S88/2 in **close position.**	9 – 14 V 0 – 1 V 0 – 1 V 0 – 1 V	

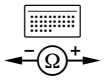
Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 21.1 **Model 202 only**	S86/1, S87/1 and S88/2 Function: Opening Resistance	 (A.2) (D.2)	Disconnect and cover battery negative cable. Disconnect connector D of N57. S86/1, S87/1 and S88/2 in **rest position.**	>20 kΩ	Wiring, S86/1, S87/1, S88/2, PSE control module (A37/4, A37/5). See section 3.2 (PSE/CL).
			S86/1 in **open position.**	0 – 5 Ω	
			S87/1 in **open position.**	0 – 5 Ω	
			S88/2 in **open position.**	0 – 5 Ω	
	Function: Closing Resistance	 (A.2) (D.6)	S86/1, S87/1 and S88/2 in **rest position.**	>20 kΩ	
			S86/1 in **close position.**	0 – 5 Ω	
			S87/1 in **close position.**	0 – 5 Ω	
			S88/2 in **close position.**	0 – 5 Ω	

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 22.0 **Model 124 without ATA only**	**Left and right front door lock switch (convenience) (S86/1, S87/1) and trunk lid lock switch (convenience) (S88/2)** Function: Opening Voltage supply	N57 2 (A.2) — V — 20 (D.4)	S86/1, S87/1 and S88/2 in **rest position.**	9 – 14 V	Wiring, ⇒ 22.1
			S86/1 in **open position.**	0 – 1 V	
			S87/1 in **open position.**	0 – 1 V	
			S88/2 in **open position.**	0 – 1 V	
	Function: Opening Voltage supply		S86/1 in **close position**.	0 – 1 V	
			S87/1 in **close position**.	0 – 1 V	
			S88/2 in **close position**.	0 – 1 V	

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 22.1	S86/1, S87/1, and S88/2 Function: Opening Resistance	N57  2 (A.2) — 20 (D.4)	Disconnect and cover battery negative cable. Disconnect connector D of N57. S86/1, S87/1 and S88/2 in **rest position.**	>20 kΩ	Wiring, S86/1, S87/1, S88/2.
			S86/1 in **open position.**	0 – 5 Ω	
			S87/1 in **open position.**	0 – 5 Ω	
			S88/2 in **open position.**	0 – 5 Ω	
	Function: Closing Resistance		S86/1 in **close position.**	0 – 5 Ω	
			S87/1 in **close position.**	0 – 5 Ω	
			S88/2 in **close position.**	0 – 5 Ω	

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 23.0 **Model 124 with ATA only**	**Left and right front door lock switch (convenience) (S86/1, S87/1) and trunk lid lock switch (convenience) (S88/2)** Voltage supply	N57 2 (A.2) — V — 18 (D.2)	S86/1 and S87/1 in **rest position.**	9 – 14 V	Wiring, ⇒ 23.1
			S86/1 in **open position.**	0 – 1 V	
			S87/1 in **open position.**	0 – 1 V	
		N57 2 (A.2) — V — 22 (D.6)	S86/1 and S87/1 in **rest position.**	9 – 14 V	
			S86/1 in **close position.**	0 – 1 V	
			S87/1 in **close position.**	0 – 1 V	
		N57 2 (A.2) — V — 20 (D.4)	S88/2 in **rest position.**	9 – 14 V	
			S88/2 in **open position.**	0 – 1 V	
			S88/2 in **open position.**	0 – 1 V	

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 23.1	S86/1and S87/1 Resistance	N57 2 (A.2) — Ω — 18 (D.2)	Ignition: **OFF** Disconnect connector D of N57. S86/1 and S87/1 in **rest position.** S86/1in **open position.** S87/1 in **open position.**	 >20 kΩ 0 – 5 Ω 0 – 5 Ω	Wiring, S86/1, S87/1, ⇒ 23.2
		N57 2 (A.2) — Ω — 22 (D.6)	S86/1 and S87/1 in **rest position.** S86/1in **close position.** S87/1 in **close position.**	>20 kΩ 0 – 5 Ω 0 – 5 Ω	
⇒ 23.2	S88/2 Resistance	N57 2 (A.2) — Ω — 20 (D.4)	Ignition: **OFF** Disconnect connector D of N57. S88/2 in **rest position.** S88/2 in **open position.** S88/2 in **open position.**	 >20 kΩ 0 – 5 Ω 0 – 5 Ω	Wiring, S88/2.

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 24.0 **Model 124 only**	**Left front door actuator (S47)** Voltage supply	N57 21 (D.5) — V — 24 (E.2)	Ignition: **OFF** Vehicle unlocked. Vehicle locked.	 0 – 1 V 11 – 14 V	Wiring, S47, Supply pump (central locking system/orthopedic backrest) (M14/2). Anti-theft alarm control module (N26).
		2 (A.2) — V — 21 (D.5)	Vehicle unlocked. Vehicle locked.	11 – 14 V 0 – 1 V	
⇒ 25.0 **Model 124 only**	**Right front door actuator (S47)** Voltage supply	N57 19 (D.3) — V — 24 (E.2)	Ignition: **OFF** Vehicle unlocked. Vehicle locked.	 0 – 1 V 11 – 14 V	Wiring, S48, Warning buzzer contact (exterior lamps/central locking system) (S88/2). Supply pump (central locking system/orthopedic backrest)(M14/2). Anti-theft alarm control module (N26).
		2 (A.2) — V — 19 (D.3)	Vehicle unlocked. Vehicle locked.	11 – 14 V 0 – 1 V	

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 26.0 **Model 124 only**	**Trunk lid actuator (S49)** Voltage supply	N57 17 (D.1) — V — 24 (E.2)	Ignition: **OFF** Vehicle unlocked Vehicle locked	 0 – 1 V 11 – 14 V	Wiring, S49, Supply pump (central locking system/orthopedic backrest) (M14/2). Anti-theft alarm control module (N26).
		2 (A.2) — V — 17 (D.1)	Vehicle unlocked Vehicle locked	11 – 14 V 0 – 1 V	
⇒ 27.0	**Convenience relay module (K24)** Function:Convenience feature Voltage supply	K24 6 — V — 2	Ignition: **OFF** Doors: **Closed** Lock vehicle and hold key in lock position.	 0 – 2 V 11 – 14 V	Wiring, Convenience control module (N57).

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 28.0	**Left front power window motor (M10/3)**	N57 2 (A.2) — 6 (A.6)	Ignition: **OFF** ⚠ **CAUTION!** **Disconnect connector A** of control module (N57).		Wiring, M10/3.
		11 (A.11) — 10 (A.10)	Ignition: **ON** Bridge sockets 11 and 10 with fused jumper wire 124 589 37 63.	Window opens.	
⇒ 29.0	**Right front power window motor (M10/4)**	N57 2 (A.2) — 7 (A.7)	Ignition: **OFF** ⚠ **CAUTION!** **Disconnect connector A** of control module (N57).		Wiring, M10/4.
		3 (A.3) — 10 (A.10)	Ignition: **ON** Bridge sockets 3 and 10 with fused jumper wire 124 589 37 63.	Window opens.	

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 30.0	**Left rear power window motor (M10/5)**	N57 33 (B.7) — 29 (B.3)	Ignition: **OFF** ⚠ **CAUTION!** **Disconnect connector B** of control module (N57).		Wiring, M10/5.
		28 (B.2) — 32 (B.6)	Ignition: **ON** Bridge sockets 28 and 32 with fused jumper wire 124 589 37 63	Window opens.	
⇒ 31.0	**Right rear power window motor (M10/6)**	N57 33 (B.7) — 36 (B.10)	Ignition: **OFF** ⚠ **CAUTION!** **Disconnect connector B** of control module (N57).		Wiring, M10/6.
		37 (B.11) — 32 (B.6)	Ignition: **ON** Bridge sockets 32 and 37 with fused jumper wire 124 589 37 63	Window opens.	

Electrical Test Program - Test

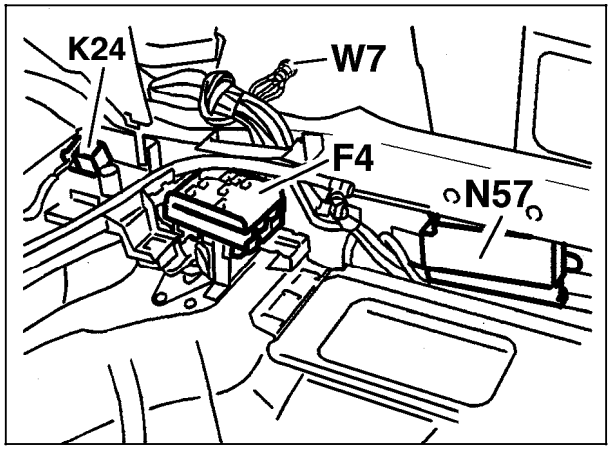


Figure 1
Model 202

W7/1 Ground (right rear tail lamp in trunk)

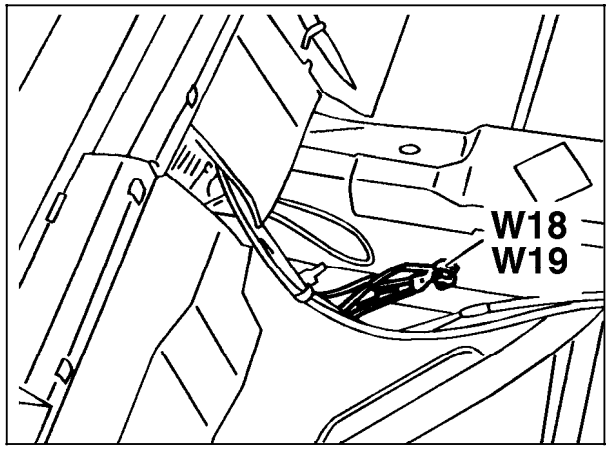


Figure 2
Model 202

W18 Ground (left front seat crossmember)
W19 Ground (right front seat crossmember)

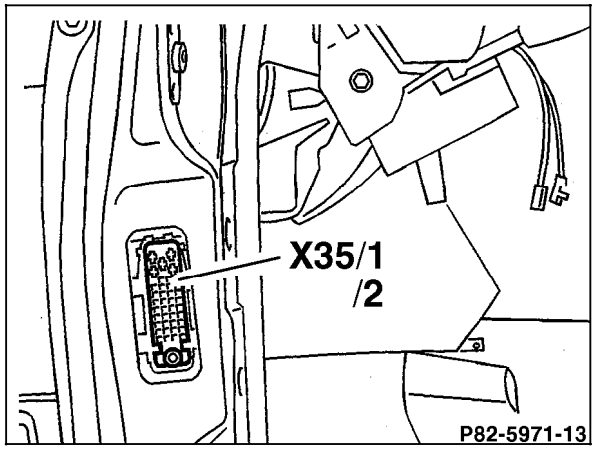


Figure 3
Model 202

X35/1 Left front door plug connection
X35/2 Right front door plug connection
(mirror image of left shown)

Electrical Test Program - Test

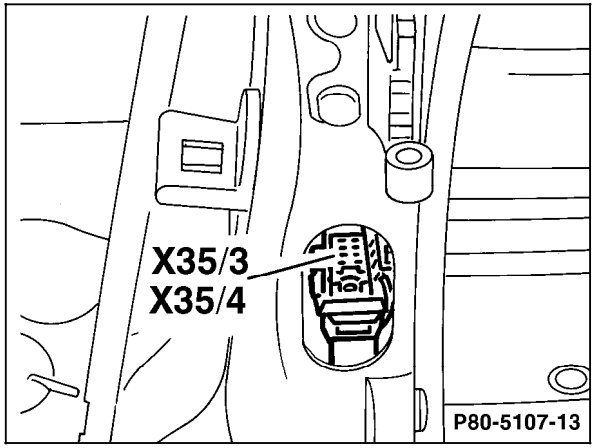


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Figure 4
Model 202

X35/3 Left rear door plug connection
X35/4 Right rear door plug connection
(mirror image of left shown)

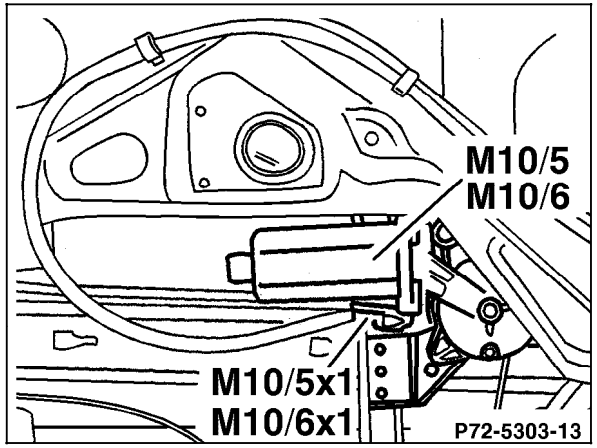

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Figure 5
Model 202

M10/5x1 Left rear power window motor connector
M10/6x1 Right rear power window motor connector
(mirror image of left shown)