Electrical Test Program - Test

Test step / DTC	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 1.0 DTC 2, 3, 8, 9, 39	**Voltage supply Circuit 30A**	N57 10 (A.10) — V — 21 (A.21)	Ignition: **OFF**	11 – 14 V	⇒ 1.1, Circuit 31A.
⇒ 1.1	Circuit 30A	N57 ⊥ — V — 21 (A.21)	Ignition: **OFF**	11 – 14 V	Circuit 30A.
⇒ 2.0 DTC 4, 5, 6, 7, 40	**Voltage supply Circuit 30B**	N57 62 (B.21) — V — 53 (B.12)	Ignition: **OFF**	11 – 14 V	⇒ 2.1, Circuit 31B.
⇒ 2.1	Circuit 30B	N57 ⊥ — V — 53 (B.12)	Ignition: **OFF**	11 – 14 V	Circuit 30B.
⇒ 3.0 DTC 37	**Voltage supply Circuit 30E**	N57 11 (A.11) — V — 16 (A.16)	Ignition: **OFF**	11 – 14 V	⇒ 3.1, Circuit 31E.

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 3.1	Circuit 30E	N57 ⊥ V 16 (A.16)	Ignition: **OFF**	11 – 14 V	Circuit 30E.
⇒ 4.0 37	**Voltage supply** **Circuit 15R**	N57 10 (A.10) V 8 (A.8)	Ignition lock in position **1**	11 – 14 V	Circuit 15R, Circuit 31A.
⇒ 5.0	**Front door contact switches (S17/3, S17/4) circuit**	N57 10 (A.10) V 9 (A.9)	Pull fuse (F3-17) Ignition: **OFF** Front doors: **Closed**	11 – 14 V	Wiring, Left door switch (S17/3), Right door switch (S17/4), CF control module (N57), ATA control module (N26), PSE control module (A37 or A37/1).
			Left front door: **OPEN** (right front door closed).	<2 V	Wiring, ⇒ 5.1.
			Right front door: **OPEN** (left front door closed).	<2 V	Wiring, ⇒ 5.1.

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 5.1	S17/3, S17/4	N57 10 (A.10) — V — 9 (A.9)	Ignition: **OFF** Overhead console: all switches in **OFF** position. Disconnect connector 1 of A37 or A37/1. Disconnect connector A of N57. All doors: **CLOSED**	11 – 14 V	Wiring, ⇒ 5.2, ⇒ 5.3.
⇒ 5.2	S17/3	N57 10 (A.10) — V — 9 (A.9)	See ⇒ 5.1 Disconnect S17/4 connector.	11 – 14 V	Wiring, S17/3.
⇒ 5.3	S17/4	N57 10 (A.10) — V — 9 (A.9)	See ⇒ 5.1 Disconnect S17/3 connector.	11 – 14 V	Wiring, S17/4.

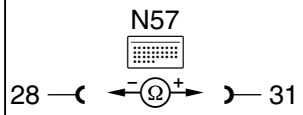
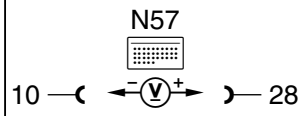
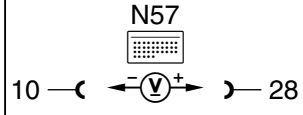
Electrical Test Program - Test

Test step DTC	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 6.0	**Sliding/pop–up roof circuit (S13/2)** Function: Closing sliding/pop–up roof	N57 10 (A.10) — V — 30 (C.3)	Ignition: **ON** S13/2: **Rest position.**	<1 V	Wiring, ⇒ 6.1, ⇒ 6.2.
			Press and hold in close position.	11 – 14 V	Wiring, ⇒ 6.1, ⇒ 6.2.
				Sliding/pop–up roof closes.	Sliding/pop–up roof motor (M12m1), Sliding/pop–up roof relay (M12k1).
⇒ 6.1	S13/2	N57 28 (C.1) — Ω — 30 (C.3)	Ignition: **OFF** Disconnect connector C from N57. S13/2: **Rest position.**	>20 kΩ	Wiring, S13/2.
			Press and hold sun roof in close position.	<1 Ω	Wiring, S13/2.
			Press and hold pop–up roof in close position.	<1 Ω	Wiring, S13/2.

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 6.2	S13/2, N57	N57 10 (A.10) — V — 28 (C.1)	Ignition: **ON**	11 – 14 V	Wiring, ⇒ 6.3.
⇒ 6.3	N57	N57 10 (A.10) — V — 28 (C.1)	Ignition: **OFF** Disconnect connector C of sliding/pop–up roof wiring harness from test cable (22, Figure 1). Ignition: **ON**	 11 – 14 V	 N57.
⇒ 7.0	**Sliding/pop–up roof circuit (S13/2)** Function: Opening sliding roof	N57 10 (A.10) — V — 31 (C.4)	Ignition: **ON** S13/2: **Rest position.** **Press and hold sliding roof in open position.**	 <1V 11 – 14 V Sliding roof opens.	Wiring, ⇒ 7.1, ⇒ 7.2. Wiring, ⇒ 7.1, ⇒ 7.2. Sliding/pop–up roof motor (M12m1), Sliding/pop–up roof relay (M12k1).

Electrical Test Program - Test

Test step **DTC**	Scope of test	Test connection	Test condition	Nominal value	Possible cause/remedy
⇒ 7.1	S13/2		Ignition: **OFF** Disconnect connector C from N57. S13/2: **Rest position.** **Press and hold sliding roof in open position.**	 >20 kΩ <1 Ω	Wiring, S13/2. Wiring, S13/2.
⇒ 7.2	S13/2, N57		Ignition: **ON**	11 – 14 V	Wiring, ⇒ 7.3.
⇒ 7.3	N57		Ignition: **OFF** Disconnect connector C of sliding/pop–up roof wiring harness from test cable (22, Figure 1). Ignition: **ON**	 11 – 14 V	 N57.

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 8.0 38	**Sliding/pop–up roof circuit (S13/2)** Function: Opening pop–up roof	N57 10 (A.10) — V — 29 (C.2)	Ignition: **ON** S13/2: **Rest position.**	<1 V	Wiring, ⇒ 8.1, ⇒ 8.2.
			Press and hold pop–up roof in open position.	11 – 14 V	Wiring, ⇒ 8.1, ⇒ 8.2.
				Pop–up roof opens.	Sliding/pop–up roof motor (M12m1), Sliding/pop–up roof relay (M12k1).
⇒ 8.1	S13/2	N57 28 (C.1) — Ω — 29 (C.2)	Ignition: **OFF** Disconnect connector C from N57. S13/2: **Rest position.**	>20 kΩ	Wiring, S13/2.
			Press and hold pop–up roof in open position.	<1 Ω	Wiring, S13/2.

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 8.2	S13/2, N57	N57 10 (A.10) — V — 28 (C.1)	Ignition: **ON**	11 – 14 V	Wiring, ⇒ 8.3.
⇒ 8.3	N57	N57 10 (A.10) — V — 28 (C.1)	Ignition: **OFF** Disconnect connector C of sliding/pop–up roof harness from test cable (22, Figure 1). Ignition: **ON**	 11 – 14 V	 N57.
⇒ 9.0	**USA/ECE model recognition** [1]	N57 33 (D.2) — Ω — 34 (D.3)	Ignition: **OFF** Disconnect connector D from N57.	Code USA: <1 Ω Code ECE: >20 kΩ	Wiring. Wiring.

[1] ECE = European version.

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 10.0 11 20	**Left front window circuit (S21/1)** Function: Opening	N57 10 (A.10) — V — 24 (E.3)	Ignition: **ON** S21/1: **Rest position.**	9 – 14 V	Wiring, ⇒ 10.1, CF control module (N57).
			Press and hold to open (position “1“).	<1 V	Wiring, ⇒ 10.1.
			Press and hold to open (position “2“).	<1 V	Wiring, ⇒ 10.1.
⇒ 10.1	S21/1	N57 10 (A.10) — Ω — 24 (E.3)	Ignition: **OFF** Disconnect connector E from (N57). S21/1: **Rest position.**	>20 kΩ	Wiring, S21/1.
			Press and hold to open (position “1“).	<2 Ω	Wiring, S21/1.
			Press and hold to open (position “2“).	<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 10 20	**Left front window circuit (S21/1)** Function: Closing	N57 10 (A.10) — V — 26 (E.5)	Ignition: **ON** S21/1: **Rest position.** **Press and hold to close** (position “1“). **Press and hold to close** (position “2“).	 9 – 14 V <1 V <1 V	Wiring, ⇒ 11.1, CF control module (N57). Wiring, ⇒ 11.1. Wiring, ⇒ 11.1.
⇒ 11.1	S21/1	N57 10 (A.10) — Ω — 26 (E.5)	Ignition: **OFF** Disconnect connector E from N57. S21/1: **Rest position.** **Press and hold to close** (position “1“). **Press and hold to close** (position “2“).	 >20 kΩ <2 Ω <2 Ω	 Wiring, S21/1. Wiring, S21/1. Wiring, S21/1.

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 12.0 11 20	**Left front window circuit (S21/1)** Function: One–touch operation	N57 10 (A.10) — V — 27 (E.6)	Ignition: **ON** S21/1: **Rest position.** **Press and hold to open** (position “1“). **Press and hold to open** (position “2“).	 9 – 14 V 9 – 14 V <1 V	Wiring, ⇒ 12.1, CF control module (N57). Wiring, ⇒ 12.1. Wiring, ⇒ 12.1.
⇒ 12.1	S21/1	N57 10 (A.10) — Ω — 27 (E.6)	Ignition: **OFF** Disconnect connector E from N57. S21/1: **Rest position.** **Press and hold to open** (position “1“). **Press and hold to open** (position “2“).	 >20 kΩ >20 kΩ <2 Ω	 Wiring, S21/1. Wiring, S21/1. Wiring, S21/1.

Electrical Test Program - Test

Test step DTC	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 13.0 10 20	**Left front window circuit (S21/1)** Function: One–touch operation	N57 10 (A.10) — V — 27 (E.6)	Ignition: **ON** S21/1: **Rest position.**	9 – 14 V	Wiring, ⇒ 13.1, CF control module (N57).
			Press and hold to close (position “1“).	9 – 14 V	Wiring, ⇒ 13.1, N57.
			Press and hold to close (position “2“).	<1 V	Wiring, ⇒ 13.1.
⇒ 13.1	S21/1	N57 10 (A.10) — Ω — 27 (E.6)	Ignition: **OFF** Disconnect connector E from N57. S21/1: **Rest position.**	>20 kΩ	Wiring, S21/1.
			Press and hold to close (position “1“).	>20 kΩ	Wiring, S21/1.
			Press and hold to close (position “2“).	<2 Ω	Wiring, S21/1.

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 14.0 13 21	**Right front window circuit (S21/2)** Function: Opening	N57 10 (A.10) — V — 38 (F.3)	Ignition: **ON** S21/2: **Rest position.**	9 – 14 V	Wiring, ⇒ 14.1, CF control module (N57).
			Press and hold to open (position “1“).	<1 V	Wiring, ⇒ 14.1.
			Press and hold to open (position “2“).	<1 V	Wiring, ⇒ 14.1.
⇒ 14.1	S21/2	N57 10 (A.10) — Ω — 38 (F.3)	Ignition: **OFF** Disconnect connector F from N57. S21/2: **Rest position.**	>20 kΩ	Wiring, S21/2.
			Press and hold to open (position “1“).	<2 Ω	Wiring, S21/2.
			Press and hold to open (position “2“).	<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 12 21	**Right front window circuit (S21/2)** Function: Closing	N57 10 — (A.10) — (V) — 36 (F.1)	Ignition: **ON** S21/2: **Rest position.**	9 – 14 V	Wiring, ⇒ 15.1, CF control module (N57).
			Press and hold to close (position “1“).	<1 V	Wiring, ⇒ 15.1.
			Press and hold to close (position “2“).	<1 V	Wiring, ⇒ 15.1.
⇒ 15.1	S21/2	N57 10 — (A.10) — (Ω) — 36 (F.1)	Ignition: **OFF** Disconnect connector F from N57. S21/2: **Rest position.**	>20 kΩ	Wiring, S21/2.
			Press and hold to close (position “1“).	<2 Ω	Wiring, S21/2.
			Press and hold to close (position “2“).	<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 13 21	**Right front window circuit (S21/2)** Function: One–touch operation	N57 10 (A.10) — V — 37 (F.2)	Ignition: **ON** S21/2: **Rest position.**	 9 – 14 V	Wiring, ⇒ 16.1, CF control module (N57).
			Press and hold to open (position “1“).	9 – 14 V	Wiring, ⇒ 16.1, N57.
			Press and hold to open (position “2“).	<1 V	Wiring, ⇒ 16.1.
⇒ 16.1	S21/2	N57 10 (A.10) — Ω — 37 (F.2)	Ignition: **OFF** Disconnect connector F from N57. S21/2: **Rest position.**	 >20 kΩ	 Wiring, S21/2.
			Press and hold to open (position “1“).	>20 kΩ	Wiring, S21/2.
			Press and hold to open (position “2“).	<2 Ω	Wiring, S21/2.

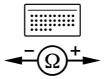
Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 17.0 12 21	**Right front window circuit (S21/2)** Function: One–touch operation	N57 10 (A.10) — V — 37 (F.2)	Ignition: **ON** S21/2: **Rest position.**	 9 – 14 V	Wiring, ⇒ 17.1, CF control module (N57).
			Press and hold to close (position “1“).	9 – 14 V	Wiring, ⇒ 17.1, N57.
			Press and hold to close (position “2“).	<1 V	Wiring, ⇒ 17.1.
⇒ 17.1	S21/2	N57 10 (A.10) — Ω — 37 (F.2)	Ignition: **OFF** Disconnect connector F from N57. S21/2: **Rest position.**	 >20 kΩ	 Wiring, S21/2.
			Press and hold to close (position “1“).	>20 kΩ	Wiring, S21/2.
			Press and hold to close (position “2“).	<2 Ω	Wiring, S21/2.

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 18.0 15 22	**Left rear window switch (S21/3) and front console switch (S21/5) circuit** Function: Opening	N57 10 (A.10) — 39 (F.4)	Ignition: **ON** Rear power window safety switch (S21/7): **OFF** S21/3 and S21/5: **Rest position.**	9 – 14 V	Wiring, ⇒ 18.1, ⇒ 18.2, CF control module (N57).
	S21/3		**Press and hold to open** (position “1“).	<1 V	Wiring, ⇒ 18.1, ⇒ 30.0.
			Press and hold to open (position “2“).	<1 V	Wiring, ⇒ 18.1.
	S21/5		**Press and hold to open** (position “1“).	<1 V	Wiring, ⇒ 18.2.
			Press and hold to open (position “2“).	<1V	Wiring, ⇒ 18.2.

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 18.1	S21/3	N57  10 (A.10) — 39 (F.4)	Ignition: **OFF** Disconnect connector F from N57. S21/3 and S21/5:		
			Rest position.	>20 kΩ	Wiring, S21/3, S21/5.
			Press and hold to open (position “1“).	<3 Ω	Wiring, S21/3.
			Press and hold to open (position “2“).	<3 Ω	Wiring, S21/3.

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 18.2	S21/5, (center console)	N57 10 (A.10) — Ω — 39 (F.4)	Ignition: **OFF** Disconnect connector F from N57. Disconnect left rear door plug connection (X35/3) (Figure 6). S21/5: **Rest position.**	>20 kΩ	Wiring, S21/5.
			Press and hold to open (position “1“).	<2 Ω	Wiring, S21/5.
			Press and hold to open (position “2“).	<2 Ω	Wiring, S21/5.

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 19.0 14 22	**Left rear window switch (S21/3) and front console switch (S21/5) circuit** Function: Closing	N57 10 (A.10) — 41 (F.6)	Ignition: **ON** Rear power window safety switch (S21/7): **OFF** S21/5 and S21/3: **Rest position.**	9 – 14 V	Wiring, ⇒ 19.1, ⇒ 19.2.
	S21/3		**Press and hold to close** (position “1“).	<1 V	Wiring, ⇒ 19.1, ⇒ 26.0.
			Press and hold to open (position “2“).	<1 V	Wiring, ⇒ 19.1.
	S21/5		**Press and hold to close** (position “1“).	<1 V	Wiring, ⇒ 19.2.
			Press and hold to close (position “2“).	<1V	Wiring, ⇒ 19.2.

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 19.1	S21/3	N57 10 (A.10) — Ω — 41 (F.6)	Ignition: **OFF** Disconnect connector F from N57. S21/5 and S21/3: **Rest position.**	>20 kΩ	Wiring, S21/3, S21/5.
			Press and hold to close (position “1“).	<3 Ω	Wiring, S21/3.
			Press and hold to close (position “2“).	<3 Ω	Wiring, S21/3.

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 19.2	S21/5, (center console)	N57 10 (A.10) — Ω — 41 (F.6)	Ignition: **OFF** Disconnect connector F from N57. Disconnect left rear door plug connection (X35/3) (Figure 6). S21/5:		
			Rest position.	>20 kΩ	Wiring, S21/5.
			Press and hold to close (position “1“).	<2 Ω	Wiring, S21/3.
			Press and hold to close (position “2“).	<2 Ω	Wiring, S21/5.

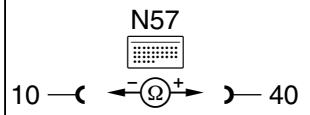
Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 20.0 15 22	**Left rear window switch (S21/3) and front console switch (S21/5) circuit** Function: One–touch operation	N57 10 (A.10) — (V) — 40 (F.5)	Ignition: **ON** Rear power window safety switch (S21/7): **OFF** S21/5 and S21/3: **Rest position.**	9 – 14 V	Wiring, ⇒ 20.1, ⇒ 20.2, CF control module (N57).
	S21/3		**Press and hold to open** (position “1“).	9 – 14 V	Wiring, ⇒ 20.1, N57.
			Press and hold to open (position “2“).	<1 V	Wiring, ⇒ 20.1, ⇒ 26.0.
	S21/5		**Press and hold to open** (position “1“).	9 – 14 V	Wiring, ⇒ 20.2, N57.
			Press and hold to open (position “2“).	<1V	Wiring, ⇒ 20.2.

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 20.1	S21/3	N57 10 (A.10) — Ω — 40 (F.5)	Ignition: **OFF** Disconnect connector F from N57. S21/5 and S21/3: **Rest position**	>20 kΩ	Wiring, S21/3, S21/5.
			Press and hold to open (position “1“).	>20 kΩ	Wiring, S21/3.
			Press and hold to open (position “2“).	<3 Ω	Wiring, S21/3.

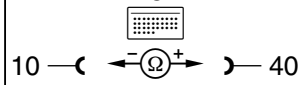
Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 20.2	S21/5, (center console)		Ignition: **OFF** Disconnect connector F from N57. Disconnect left rear door plug connection (X35/3) (Figure 6). S21/5: **Rest position.**	>20 kΩ	Wiring, S21/5.
			Press and hold to open (position “1“).	>20 kΩ	Wiring, S21/5.
			Press and hold to open (position “2“).	<2 Ω	Wiring, S21/5.

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 21.0 14 22	**Left rear window switch (S21/3) and front console switch (S21/5) circuit** Function: One–touch operation	N57 10 (A.10) — 40 (F.5)	Ignition: **ON** Rear power window safety switch (S21/7): **OFF** S21/5 and S21/3: **Rest position.**	9 – 14 V	Wiring, ⇒ 21.1, ⇒ 21.2, CF control module (N57).
	S21/3		**Press and hold to close** (position “1“).	9 – 14 V	Wiring, ⇒ 21.1, N57.
			Press and hold to close (position “2“).	<1 V	Wiring, ⇒ 21.1.
	S21/5		**Press and hold to close** (position “1“).	9 – 14 V	Wiring, ⇒ 21.2, N57.
			Press and hold to close (position “2“).	<1 V	Wiring, ⇒ 21.2.

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 21.1	S21/3	N57  10 (A.10) — 40 (F.5)	Ignition: **OFF** Disconnect connector F from N57. S21/5 and S21/3:		
			Rest position.	>20 kΩ	Wiring, S21/3, S21/5.
			Press and hold to close (position “1“).	>20 kΩ	Wiring, S21/3.
			Press and hold to close (position “2“).	<3 Ω	Wiring, S21/3.

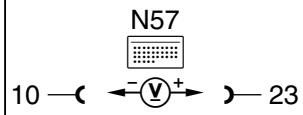
Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 21.2	S21/5, (center console)	N57 10 (A.10) — Ω — 40 (F.5)	Ignition: **OFF** Disconnect connector F from N57. Disconnect left rear door plug connection (X35/3) (Figure 6). S21/5: **Rest position.**	>20 kΩ	Wiring, S21/5.
			Press and hold to close (position “1“).	>20 kΩ	Wiring, S21/5.
			Press and hold to close (position “2“).	<2 Ω	Wiring, S21/5.

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 22.0 17 23	**Right rear window circuit (S21/4, S21/6)** Function: Opening	N57 10 (A.10) — 23 (E.2)	Ignition: **ON** Rear power window safety switch (S21/7): **OFF** S21/4 and S21/6: **Rest position.**	9 – 14 V	Wiring, ⇒ 22.1, ⇒ 22.2, CF control module (N57).
	S21/4		**Press and hold to open** (position “1“).	<1 V	Wiring, ⇒ 22.1, ⇒ 26.0.
			Press and hold to open (position “2“).	<1 V	Wiring, ⇒ 22.1.
	S21/6		**Press and hold to open** (position “1“).	<1V	Wiring, ⇒ 22.2.
			Press and hold to open (position “2“).	<1V	Wiring, ⇒ 22.2.

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 22.1	S21/4		Ignition: **OFF** Disconnect connector E from N57. S21/4 and S21/6: **Rest position.**	>20 kΩ	Wiring, S21/4, S21/6.
			Press and hold to open (position “1“).	<3 Ω	Wiring, S21/4.
			Press and hold to open (position “2“).	<3 Ω	Wiring, S21/4.

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 22.2	S21/6, (center console)	N57 10 (A.10) — Ω — 23 (E.2)	Ignition: **OFF** Disconnect connector E from N57. Disconnect right rear door plug connection (X35/4) (Figure 6). S21/6: **Rest position.**	>20 kΩ	Wiring, S21/6.
			Press and hold to open (position “1“).	<2 Ω	Wiring, S21/6.
			Press and hold to open (position “2“).	<2 Ω	Wiring, S21/6.

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 23.0 16 23	**Right rear window circuits (S21/4, S21/6)** Function: Closing	N57 10 (A.10) — 22 (E.1)	Ignition: **ON** Rear power window safety switch (S21/7): **OFF** S21/4 and S21/6: **Rest position.**	9 – 14 V	Wiring, ⇒ 23.1, ⇒ 23.2, CF control module (N57).
	S21/4		**Press and hold to close** (position “1“).	<1 V	Wiring, ⇒ 23.1, ⇒ 26.0.
			Press and hold to close (position “2“).	<1 V	Wiring, ⇒ 23.1.
	S21/6		**Press and hold to close** (position “1“).	<1V	Wiring, ⇒ 23.2.
			Press and hold to close (position “2“).	<1V	Wiring, ⇒ 23.2.

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 23.1	S21/4	N57 10 (A.10) — Ω — 22 (E.1)	Ignition: **OFF** Disconnect connector E from N57. S21/4 and S21/6: **Rest position.**	>20 kΩ	Wiring, S21/4, S21/6.
			Press and hold to close (position “1“).	<3 Ω	Wiring, S21/4.
			Press and hold to close (position “2“).	<3 Ω	Wiring, S21/4.

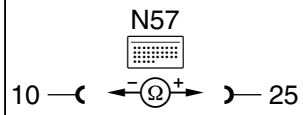
Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 23.2	S21/6, (center console)	N57 10 (A.10) — Ω — 22 (E.1)	Ignition: **OFF** Disconnect connector E from N57. Disconnect right rear door plug connection (X35/4) (Figure 6). S21/6: **Rest position.**	>20 kΩ	Wiring, S21/6.
			Press and hold to close (position “1“).	<2 Ω	Wiring, S21/6.
			Press and hold to close (position “2“).	<2 Ω	Wiring, S21/6.

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 24.0 17 23	**Right rear window circuit (S21/4, S21/6)** Function: One–touch operation	N57 10 (A.10) — 25 (E.4)	Ignition: **ON** Rear power windows safety switch (S21/7): **OFF** S21/4 and S21/6: **Rest position.**	9 – 14 V	Wiring, ⇒ 24.1, ⇒ 24.2, CF control module (N57).
	S21/4		**Press and hold to open** (position “1“).	9 – 14 V	Wiring, ⇒ 24.1, N57.
			Press and hold to open (position “2“).	<1 V	Wiring, ⇒ 24.1, ⇒ 26.0.
	S21/6		**Press and hold to open** (position “1“).	9 – 14 V	Wiring, ⇒ 24.2, N57.
			Press and hold to open (position “2“).	<1V	Wiring, ⇒ 24.2.

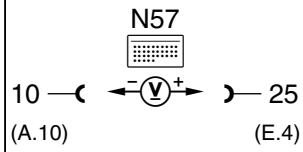
Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 24.1	S21/4		Ignition: **OFF** Disconnect connector E from N57. S21/4 and S26/6: **Rest position.**	>20 kΩ	Wiring, S21/4, S21/6.
			Press and hold to open (position “1“).	>20 kΩ	Wiring, S21/4.
			Press and hold to open (position “2“).	<3 Ω	Wiring, S21/4.

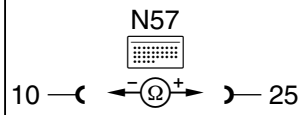
Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 24.2	S21/6, (center console)	N57 10 (A.10) — Ω — 25 (E.4)	Ignition: **OFF** Disconnect connector E from N57. Disconnect right rear door plug connection (X35/4) (Figure 6). S26/6:		
			Rest position.	>20 kΩ	Wiring, S21/6.
			Press and hold to open (position “1“).	>20 kΩ	Wiring, S21/6.
			Press and hold to open (position “2“).	<2 Ω	Wiring, S21/6.

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 25.0 16 23	**Right rear window circuit (S21/4, S21/6)** Function: One–touch operation		Ignition: **ON** Rear power window safety switch (S21/7): **OFF** S21/4 and S21/6: **Rest position.**	9 – 14 V	Wiring, ⇒ 25.1, ⇒ 25.2, CF control module (N57).
	S21/4		**Press and hold to close** (position “1“).	9 – 14 V	Wiring, ⇒ 25.1, N57.
			Press and hold to close (position “2“).	<1 V	Wiring, ⇒ 25.1.
	S21/6		**Press and hold to close** (position “1“).	9 – 14 V	Wiring, ⇒ 25.2, N57.
			Press and hold to close (position “2“).	<1V	Wiring, ⇒ 25.2.

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 25.1	S21/4		Ignition: **OFF** Disconnect connector E from N57. S21/4 and S26/6: **Rest position.**	>20 kΩ	Wiring, S21/4, S21/6.
			Press and hold to close (position “1“).	>20 kΩ	Wiring, S21/4.
			Press and hold to close (position “2“).	<3 Ω	Wiring, S21/4.

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 25.2	S21/6, (center console)	N57 10 (A.10) — Ω — 25 (E.4)	Ignition: **OFF** Disconnect connector E from N57. Disconnect right rear door plug connection (X35/4) (Figure 6). S21/6: **Rest position.**	>20 kΩ	Wiring, S21/6.
			Press and hold to close (position “1“).	>20 kΩ	Wiring, S21/6.
			Press and hold to close (position “2“).	<2 Ω	Wiring, S21/6.

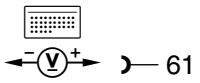
Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 26.0	**Rear power windows safety switch (center console) (S21/7)**	N57 10 (A.10) — (V) — 39 (F.4)	Ignition: **ON** Hold left rear power window switch (S21/3) in **open** position. S21/7: **OFF**	<1 V	Wiring, ⇒ 26.1, CF control module (N57).
			S21/7: **ON**	9 – 14 V	Wiring, ⇒ 26.1, ⇒ 18.0.

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 26.1	S21/7, (center console)	N57 10 (A.10) — Ω — 39 (F.4)	Ignition: **OFF** Disconnect connector F from N57. Hold left rear power window switch (S21/3) in **open** position.		
			S21/7: **OFF**	>20 kΩ	Wiring, S21/7.
			S21/7: **ON**	<2 Ω	Wiring, S21/7.

Electrical Test Program - Test

Test step / DTC	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 27.0 19	**Lock switch circuit: Left front (S86/1), right front (S87/1) and trunk lid (S88/2)** Function: Opening	N57  10 (A.10) — 61 (B.20)	S86/1, S87/1 and S88/2: **Rest position.**	9 – 14 V	Wiring, ⇒ 27.1, ⇒ 27.2, ⇒ 27.3, CF control module (N57), PSE control module (A37 or A37/1).
	S86/1		**Hold to open position.**	<1 V	Wiring, ⇒ 27.1.
	S87/1		**Hold to open position.**	<1 V	Wiring, ⇒ 27.2.
	S88/2		**Hold to open position.**	<1 V	Wiring, ⇒ 27.3.

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ [27.0]	Function: Closing	N57 10 (A.10) — V — 57 (B.16)	S86/1, S87/1 and S88/2: **Rest position.**	9 – 14 V	Wiring, ⇒ 27.1, ⇒ 27.2, ⇒ 27.3, CF control module (N57), PSE control module (A37 or A37/1).
	S86/1		**Hold to close position.**	<1 V	Wiring, ⇒ 27.1.
	S87/1		**Hold to close position.**	<1 V	Wiring, ⇒ 27.2.
	S88/2		**Hold to close position.**	<1 V	Wiring, ⇒ 27.3.

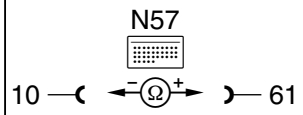
Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 27.1	S86/1	⊥ Ω X35/1 (AL.3)	Ignition: **OFF** Disconnect plug connection A, left front door (X35/1) (Figure 5). S86/1:		
			Rest position.	>20 kΩ	Wiring, S86/1.
			Hold to open position.	<10 Ω	Wiring, S86/1.
			Hold to close position.	>20 kΩ	Wiring.
		⊥ Ω X35/1 (AL.4)	S86/1: **Rest position.**	>20 kΩ	Wiring, S86/1.
			Hold to open position.	<10 Ω	Wiring, S86/1.
			Hold to close position.	>20 kΩ	Wiring.

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 27.2	S87/1	⊥ Ω X35/2 (AR.3)	Ignition: **OFF** Disconnect plug connection A, right front door (X35/2) (Figure 5). S87/1:		
			Rest position.	>20 kΩ	Wiring, S87/1.
			Hold to open position.	<10 Ω	Wiring, S87/1.
			Hold to close position.	>20 kΩ	Wiring.
			S87/1:		
		⊥ Ω X35/2 (AR.4)	**Rest position.**	>20 kΩ	Wiring, S87/1.
			Hold to close position.	<10 Ω	Wiring, S87/1.
			Hold to open position.	>20 kΩ	Wiring.

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 27.3	S88/2		Disconnect battery ground cable. Disconnect connector B from N57. Disconnect PSE control module (A37 or A37/1). Disconnect plug connections A, left front door (X35/1) and right front door (X35/2) (Figure 5). S88/2:		
			Rest position.	>20 kΩ	Wiring, S88/2.
			Hold to open position.	<10 Ω	Wiring, S88/2.
			Hold to close position.	>20 kΩ	Wiring.

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ [27.3]	S88/2	N57 10 (A.10) — Ω — 57 (B.16)	S88/2: **Rest position.**	>20 kΩ	Wiring, S88/2.
			Hold to close position.	<10 Ω	Wiring, S88/2.
			Hold to open position.	>20 kΩ	Wiring.
⇒ 28.0	**Convenience relay module circuit (K24)**	⊥ — V — F3-32	Ignition: **OFF** All doors: **Closed**	<2 V	Wiring, ⇒ 28.1, ⇒ 5.0, ⇒ 28.2.
			Left front door: **Open**	11 – 14 V	Wiring, ⇒ 28.1, ⇒ 5.0, ⇒ 28.2.

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 28.1	K24	N57 21 (A.21) — 32 (D.1) F3-32 (Input side of fuse 32) ⊥ — V —)	Ignition: **OFF** Disconnect connector D of N57.	11 – 14 V	Wiring, K24.
⇒ 28.2	N57	N57 10 (A.10) — V — 32 (D.1)	Ignition: **OFF** Disconnect connector D of taillamp harness from test cable (22, Figure 1). All doors: **Closed** Left front door: **Open**	<2 V 11 – 14 V	⇒ 5.0, N57. ⇒ 5.0, N57.

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 29.0 2 3 24 32	**Left front power window motor (M10/3) circuit**	N57 18 — (A.18) 19 — (A.19)	Ignition: **ON**	6 – 12 V	Wiring, ⇒ 29.2.
		N57 12 — (A.12) 15 — (A.15)	S21/1: **Rest position.**	<2 V	Wiring, CF control module (N57).
			Press and hold to open position.	8 – 14 V while window opens	Wiring, ⇒ 10.0, ⇒ 29.1, N57.

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ [29.0]	M10/3 circuit	N57 12 (A.12) — V — 15 (A.15)	S21/1: **Press and hold to close position.**	–8 to –14 V while window closes	Wiring, ⇒ 11.0, ⇒ 29.1, CF control module (N57).
		N57 18 (A.18) — V — 13 (A.13)	**Press and hold to open position.**	2 – 3 V while window opens	Wiring, M10/3, N57.
		N57 18 (A.18) — V — 3 (A.3)	**Press and hold to open position.**	2 – 3 V while window opens	Wiring, M10/3, N57.
⇒ 29.1	M10/3	N57 15 (A.15) — 21 (A.21)	Ignition: **OFF,** window closed ⚠ **CAUTION !** **Disconnect connector A** from N57. Bridge sockets 15 and 21 using fused jumper wire 124 589 37 63 00.	Window opens.	Wiring, M10/3.
		12 (A.12) — 10 (A.10)	Bridge sockets 12 and 10.		

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 29.2	N57	N57 16 (A.16) — 53 (B.12) 8 (A.8) — 53 (B.12) 11 (A.11) — 62 (B.21) 18 (A.18) — 19 (A.19)	Disconnect connector A of taillamp harness from test cable (22, Figure 1). Socket box bridge connections provide voltage supply and ground for N57 (circuits 30E, 15R, 31E).	6 – 12 V	CF control module (N57).
⇒ 30.0 4 5 25 33	**Right front power window motor (M10/4) circuit**	N57 59 (B.18) — 44 (B.3)	Ignition: **ON**	6 – 12 V	Wiring, N57, ⇒ 30.2.

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ [30.0]	M10/4	N57 48 (B.7) — V — 51 (B.10)	S21/2: **Rest position.**	<2 V	Wiring, CF control module (N57).
			Press and hold to open position.	8 – 14 V while window opens.	Wiring, ⇒ 14.0, ⇒ 30.1, N57.
			Press and hold to close position.	–8 to –14 V while window closes.	Wiring, ⇒ 15.0, ⇒ 30.1, N57.
		N57 59 (B.18) — V — 45 (B.4)	S21/2: **Press and hold to open position.**	2 – 3 V while window opens.	Wiring, M10/4.
		N57 59 (B.18) — V — 50 (B.9)	S21/2: **Press and hold to open position.**	2 – 3 V while window opens	Wiring, M10/4.

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 30.1	M10/4	N57 51 (B.10) — 21 (A.21) 48 (B.7) — 10 (A.10)	Ignition: **OFF,** window closed. ⚠ **CAUTION !** **Disconnect connector B** from N57. Bridge sockets 51 and 21 using fused jumper wire 124 589 37 63 00. Bridge sockets 48 and 10.	Window opens	Wiring, M10/4.
⇒ 30.2	N57	N57 59 (B.18) — V — 44 (B.3)	Disconnect connector B of taillamp wiring harness from test cable (22, Figure 1). Ignition: **ON**	6 – 12 V	N57.

Electrical Test Program - Test

Test step / DTC	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 31.0 DTC 6 DTC 7 DTC 26 DTC 34	**Left rear power window motor (M10/5) circuit**	N57 46 (B.5) — V — 58 (B.17)	Ignition: **ON**	6 – 12 V	Wiring, ⇒ 31.2.
		N57 42 (B.1) — V — 56 (B.15)	S21/5: **Rest position.**	<2 V	Wiring, N57.
			Press and hold to open position.	8 – 14 V while window opens.	Wiring, ⇒ 18.0, ⇒ 31.1, Convenience control module (N57).
			Press and hold to close position.	–8 to –14 V while window closes.	Wiring, ⇒ 19.0, ⇒ 31.1, N57.

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ [31.0]	M10/5	N57 46 (B.5) — 52 (B.11)	S21/5: **Press and hold to open position.**	2 – 3 V while window opens.	Wiring, M10/5.
		N57 46 (B.5) — 54 (B.13)	S21/5: **Press and hold to open position.**	2 – 3 V while window opens.	Wiring, M10/5.
⇒ 31.1	M10/5	N57 56 (B.15) — 21 (A.21)	Ignition: **OFF,** window closed. ⚠ **CAUTION !** **Disconnect connector B** from N57. Bridge sockets 56 and 21 using fused jumper wire 124 589 37 63 00.	Window opens.	Wiring, M10/5.
		42 (B.1) — 10 (A.10)	Bridge sockets 42 and 10.		

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 31.2	N57	N57 46 (B.5) — V — 58 (B.17)	Disconnect connector B to taillamp harness from test c able (22, Figure 1). Ignition: **ON**	 6 – 12 V	 CF control module (N57).
⇒ 32.0 8 9 27 35	**Right rear power window (M10/6) circuit**	N57 4 (A.4) — V — 5 (A.5)	Ignition: **ON**	6 – 12 V	Wiring, ⇒ 32.2
		N57 1 (A.1) — V — 7 (A.7)	S21/6: **Rest position.**	 <2 V	 Wiring, N57.
			Press and hold to open position.	8 – 14 V while window opens.	Wiring, ⇒ 22.0, ⇒ 32.1, N57.
			Press and hold to close position.	–8 to –14 V while window closes.	Wiring, ⇒ 23.0, ⇒ 32.1, N57.

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ [32.0]	M10/6 circuit	N57 4 (A.4) — 2 (A.2)	S21/6: **Press and hold to open position.**	2 – 3 V while window opens.	Wiring, M10/6.
		N57 4 (A.4) — 20 (A.20)	**Press and hold to open position.**	2 – 3 V while window opens.	Wiring, M10/6.
⇒ 32.1	M10/6	N57 7 (A.7) — 21 (A.21)	Ignition: **OFF,** window closed. ⚠ **CAUTION !** **Disconnect connector A** from N57. Bridge sockets 7 and 21 using fused jumper wire 124 589 37 63 00.	Window opens.	Wiring, M10/6.
		1 (A.1) — 10 (A.10)	Bridge sockets 1 and 10.		

Electrical Test Program - Test

Test step **DTC**	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
⇒ 32.2	N57	N57 16 (A.16) — 53 (B.12) 8 (A.8) — 53 (B.12) 11 (A.11) — 62 (B.21) 4 (A.4) — V — 5 (A.5)	Disconnect connector A of taillamp harness from test cable (22, Figure 1). Socket box bridge connections provide voltage supply and ground for N57 (circuits 30E, 15R, 31E).	6 – 12 V	N57.
⇒ 33.0	**Left door rotary tumbler microswitch (S86s2)** (Coupé only) Voltage supply	N57 62 (B.21) — V — 43 (B.2)	Left door: open closed	0 - 1 V 11 - 14 V	Wiring, S86s2.
⇒ 34.0	**Right door rotary tumbler microswitch (S87s2)** (Coupé only) Voltage supply	N57 62 (B.21) — V — 49 (B.8)	Right door: open closed	0 - 1 V 11 - 14 V	Wiring, S87s2.

Electrical Test Program - Test

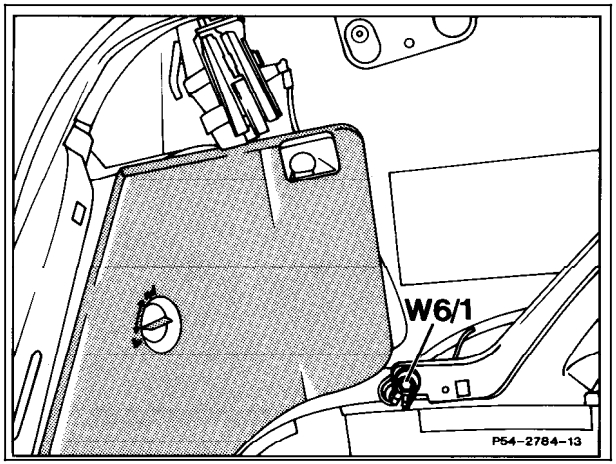


Figure 1 P54-2784-13

W6/1 Ground (left taillamp in trunk)

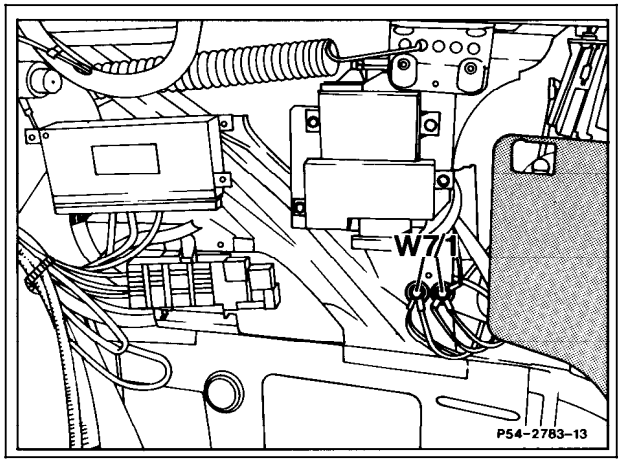


Figure 2 P54-2783-13

W7/1 Ground (right rear taillamp in trunk)

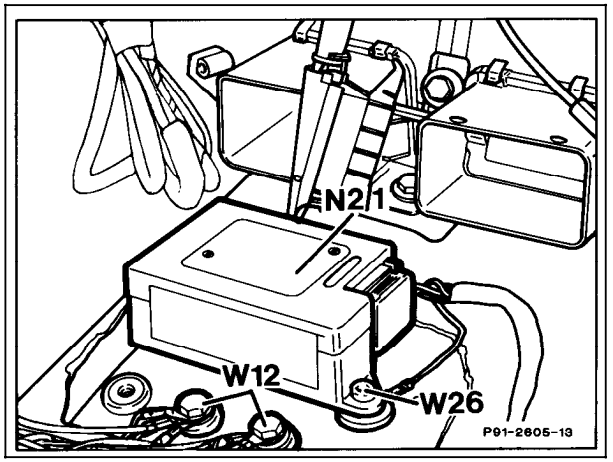
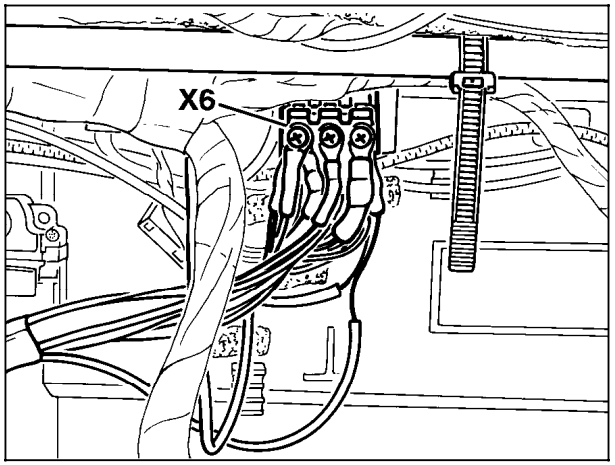


Figure 3 P91-2605-13

W12 Ground (center console)

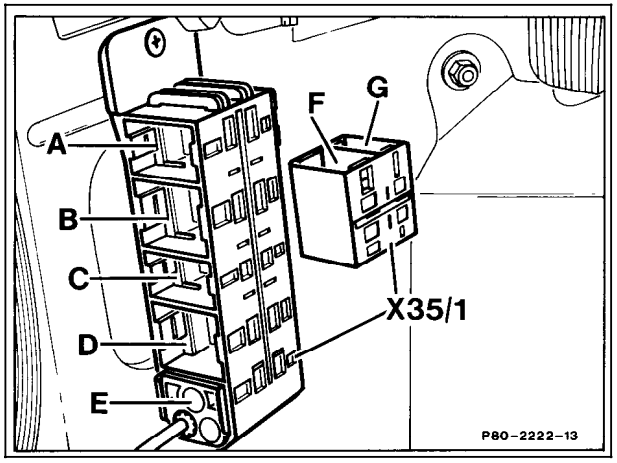
Electrical Test Program - Test



P82-3066-13

Figure 4

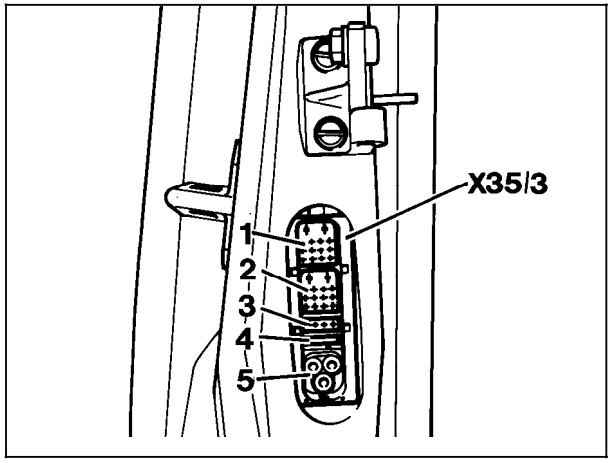
X6 Terminal block (terminal 58d) (3- or 4-pole)



P80-2222-13

Figure 5

X35/1 Left front door separation point
X35/2 Right front door separation point

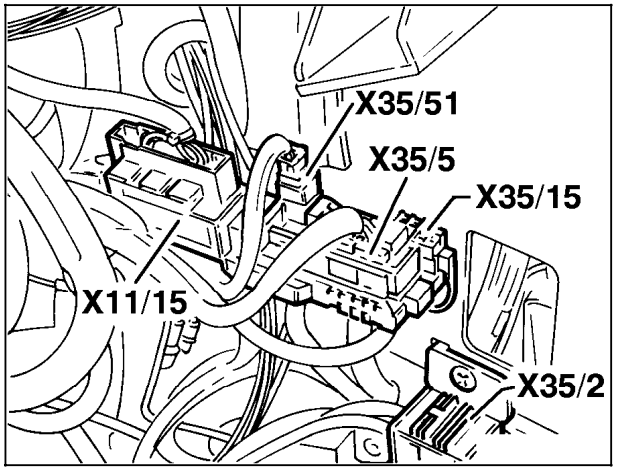


P54-2808-13

Figure 6

X35/3 Left rear door separation point
X35/4 Right rear door separation point
(mirror image of left shown)

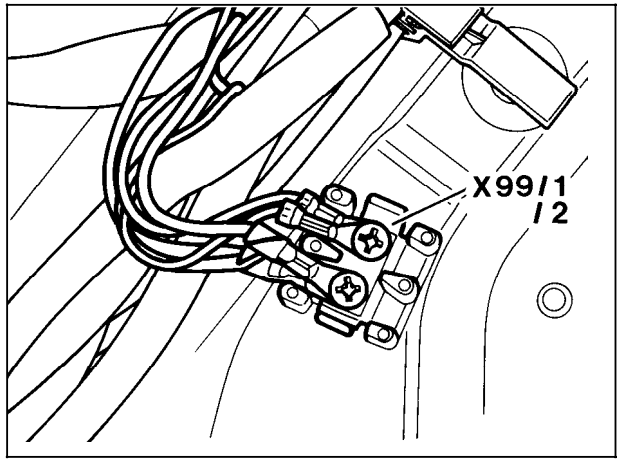
Electrical Test Program - Test



P54-2842-13

Figure 7

X35/5 Module box/taillamp harness plug connection (ABS/ASR/ASD) (12-pole)



P82-2995-13A

Figure 8

X99/1 Terminal block (left front door ground)
X99/2 Terminal block (right front door ground) (mirror image of left shown)