
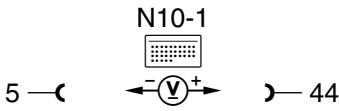
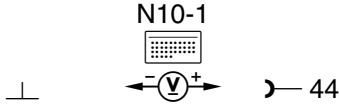
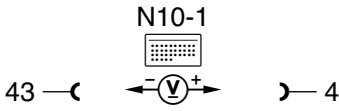
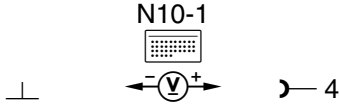
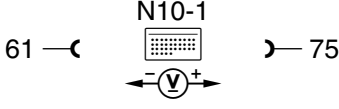
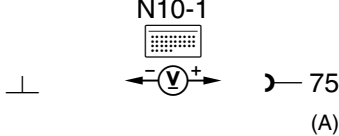

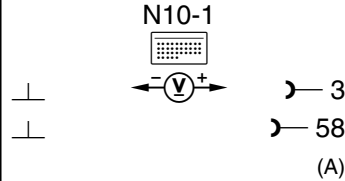
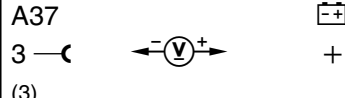
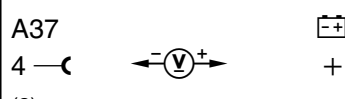
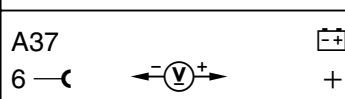
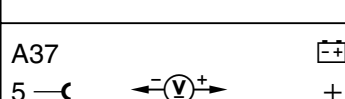



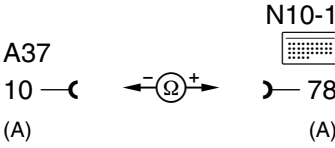
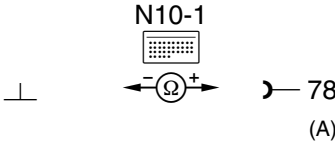
Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
1.0	B1016 B1400 B1401	Voltage supply Circuit 30A, 31A		Ignition: OFF	11 – 14 V	⇒ 1.1 Circuit 31A.
1.1		Circuit 30A		Ignition: OFF	11 – 14 V	Wiring.
2.0	B1017 B1402 B1403	Voltage supply Circuit 30B, 31B		Ignition: OFF	11 – 14 V	2.1, Circuit 31B.
2.1		Circuit 30B		Ignition: OFF	11 – 14 V	Wiring.
3.0	B1010 B1011	Voltage supply Circuit 30E, 31E		Ignition: OFF	11 – 14 V	⇒ 3.1, Circuit 31E.
3.1		Circuit 30E		Ignition: OFF	11 – 14 V	Wiring.


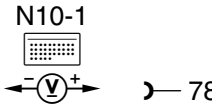
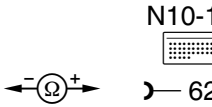
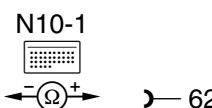
Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
4.0	B1013	Circuit 15, 15R	 <p>N10-1 3 58 (A)</p>	Ignition switch: Position: "1" Position: "2"	11 – 14 V 11 – 14 V	Wiring.
5.0		Left front door switch (S17/3) circuit	 <p>A37 3 — (3) (3)</p>	Ignition: OFF Left front door: CLOSE Left front door: OPEN	0 – 1 V 11 – 14 V	Wiring, S17/3
6.0		Right front door switch (S17/4) circuit	 <p>A37 4 — (3) (3)</p>	Ignition: OFF Right front door: CLOSE Right front door: OPEN	0 – 1 V 11 – 14 V	Wiring, S17/4
7.0		Left rear door switch (S17/5) circuit	 <p>A37 6 — (3) (3)</p>	Ignition: OFF Left rear door: CLOSE Left rear door: OPEN	0 – 1 V 11 – 14 V	Wiring, S17/5
8.0		Right rear door switch (S17/6) circuit	 <p>A37 5 — (3) (3)</p>	Ignition: OFF Right rear door: CLOSE Right rear door: OPEN	0 – 1 V 11 – 14 V	Wiring, S17/6


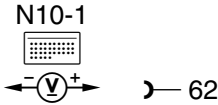
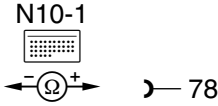
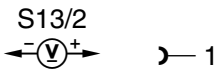
Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
9.0	B1021 B1025	CAN H data line from PSE control module (A37) to combination control module (N10-1) -//-		Ignition: OFF Disconnect coupling 1 and 3 from PSE (A37) and coupling A from combination control module (N10-1).	< 1 Ω	Wiring, ⇒ 9.1
9.1		CAN H data line from PSE control module (A37) to combination control module (N10-1) ΓΓ-		Ignition: OFF ⚠ CAUTION! Disconnect coupling 1 and 3 from PSE (A37) and coupling A from combination control module (N10-1). Disconnect coupling 1 from seat memory at left/right ESA control module (N32/1, N32/2).	>20 kΩ	Wiring, ⇒ 9.2


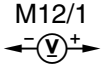

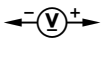

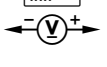
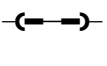

Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
9.2		CAN H data line from PSE control module (A37) to combination control module (N10-1) Γ1+		Ignition: OFF CAUTION! Disconnect coupling 1 and 3 from PSE (A37) and coupling A from N10-1. Disconnect coupling 1 from seat memory at N32/1, N32/2.	< 1 V	Wiring.
10.0	B1021 B1024 B1025	CAN L data line from PSE control module (A37) to combination control module (N10-1) -//-		Ignition: OFF CAUTION! Disconnect coupling 1 and 3 from PSE (A37) and coupling A from N10-1. Disconnect coupling 1 from seat memory at N32/1, N32/2.	< 1 Ω	Wiring, ⇒ 10.1
10.1		CAN L data line from PSE control module (A37) to combination control module (N10-1) Γ1-		Ignition: OFF CAUTION! Disconnect coupling 1 and 3 from PSE (A37) and coupling A from N10-1. Disconnect coupling 1 from seat memory at N32/1, N32/2.	>20 kΩ	Wiring, ⇒ 10.2



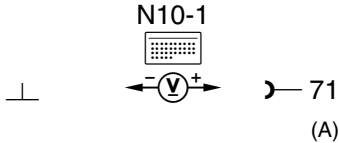

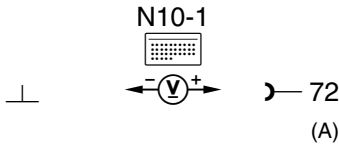
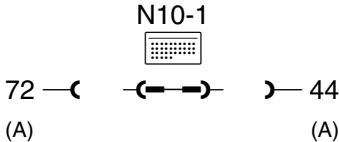
Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
10.2		CAN L data line from PSE control module (A37) to combination control module (N10-1) Γ1+		Ignition: OFF CAUTION! Disconnect coupling 1 and 3 from PSE (A37) and coupling A from N10-1. Disconnect coupling 1 from seat memory at N32/1, N32/2.	< 1 V	Wiring, ⇒ 10.3
10.3		CAN L/CAN H data line Γ1- to each other		Ignition: OFF CAUTION! Disconnect coupling 1 and 3 from PSE (A37) and coupling A from N10-1. Disconnect coupling 1 from seat memory at N32/1, N32/2.	>20 kΩ	Wiring.
11.0		Voltage supply Sliding/pop-up roof Sliding/pop-up roof switch (S13/2)		S13/2: Rest position	11 – 14 V	Wiring.


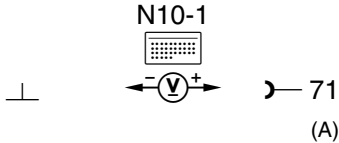
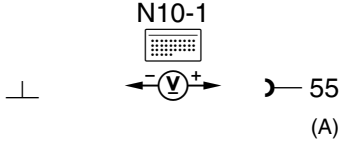
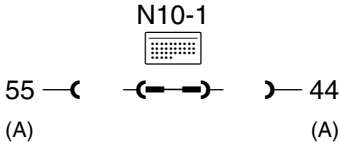
Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
11.1		Voltage supply Sliding/pop-up roof Sliding/pop-up roof motor (M12/1)	6 —(—  —) 4 M12/1		11 – 14 V	Wiring.
12.0		Activation of combination control module (N10-1) by sliding/pop-up roof switch (S13/2) Function: Close sliding/pop-up roof	⊥  —) 71 N10-1 (A)	Ignition: OFF S13/2: Close sliding/pop-up roof	6 – 9 V	Wiring, Sliding/pop-up roof switch (S13/2).
13.0		Activation of sliding/pop-up roof relay (M121k1) by combination control module (N10-1) Function: Close sliding/pop-up roof	⊥  —) 56 N10-1 (A)	Ignition: OFF S13/2 (Set in position): Close sliding/pop-up roof	11 – 14 V, while sliding/pop-up roof is closing.	Nominal value achieved, ⇒ 13.1 ⇒ 12.0, N10-1
13.1		Activation of sliding/pop-up roof relay (M121k1) by combination control module (N10-1) Function: Close sliding/pop-up roof	56 —(—  —) 44 (A) (A)	Ignition: OFF  CAUTION! Disconnect coupling A from N10-1. Bridge sockets 56 and 44 with fused jumper wire 124 589 37 63 00	Sliding/pop-up roof closes.	Wiring, Sliding/pop-up roof relays (M12/1k1, M12/1k2), Sliding/pop-up roof motor (M12/1m1).


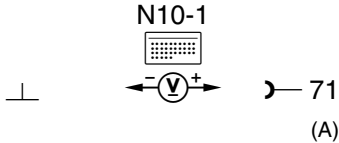
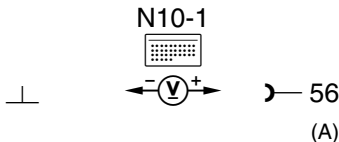
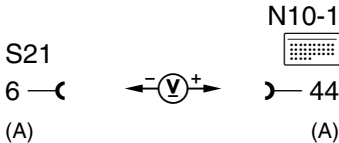
Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
14.0		<p>Activation of combination control module (N10-1) by sliding/pop-up roof switch (S13/2) Function: Open sliding/pop-up roof</p>		Ignition: OFF S13/2 (Set in position): Open sliding/pop-up roof	3 – 5 V	Wiring, Sliding/pop-up roof switch (S13/2).
15.0		<p>Activation of sliding/pop-up roof relay (M121k1) by combination control module (N10-1) Function: Open sliding/pop-up roof</p>		Ignition: ON S13/2 (Set in position): Open sliding/pop-up roof	11 – 14 V, within 25 seconds.	Nominal value achieved, ⇒ 15.1 ⇒ 14.0, N10-1
15.1		<p>Activation of sliding/pop-up roof relay (M121k1) by combination control module (N10-1) Function: Open sliding/pop-up roof</p>		Ignition: OFF ⚠ CAUTION! Disconnect coupling A from N10-1. Bridge sockets 56 and 44 with fused jumper wire 124 589 37 63 00	Sliding/pop-up roof opens.	Wiring, Sliding/pop-up roof relays (M12/1k1, M12/1k2), Sliding/pop-up roof motor (M12/1m1).


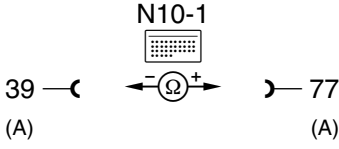
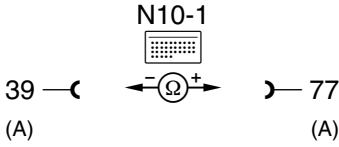
Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
16.0	B1118	Activation of combination control module (N10-1) by sliding/pop-up roof switch (S13/2) Function: Open pop-up roof		Ignition: OFF S13/2 (Set in position): Open pop-up roof	11 – 14 V	Wiring, Sliding/pop-up roof switch (S13/2).
17.0	B1405	Activation of sliding/pop-up roof relay (M121k1) by combination control module (N10-1) Function: Open pop-up roof		Ignition: ON S13/2 (Set in position): Open pop-up roof	11 – 14 V, within 25 seconds.	Nominal value achieved, ⇒ 17.1 ⇒ 16.0, N10-1
17.1		Activation of sliding/pop-up roof relay (M121k1) by combination control module (N10-1) Function: Open pop-up roof		Ignition: OFF ⚠ CAUTION! Disconnect coupling A from N10-1. Bridge sockets 55 and 44 with fused jumper wire 124 589 37 63 00	Pop-up roof opens.	Wiring, Sliding/pop-up roof relays (M12/1k1, M12/1k2), Sliding/pop-up roof motor (M12/1m1).


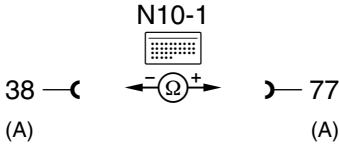
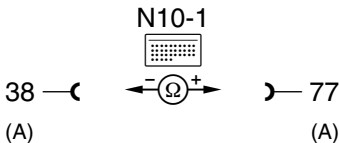
Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
18.0	B1118	<p>Activation of combination control module (N10-1) by sliding/pop-up roof switch (S13/2) Function: Close pop-up roof</p>		<p>Ignition: OFF S13/2 (Set in position): Close pop-up roof</p>	6 – 9 V	Wiring, Sliding/pop-up roof switch (S13/2).
19.0	B1405	<p>Activation of sliding/pop-up roof relay (M121k1) by combination control module (N10-1) Function: Close pop-up roof</p>		<p>Ignition: ON S13/2 (Set in position): Close pop-up roof</p>	11 – 14 V, while pop-up roof closes.	<p>Nominal value achieved, ⇒ 13.1 ⇒ 18.0, N10-1</p>
20.0		<p>Activation of center console switch group (S21) by combination control module (N10-1)</p>			11 – 14 V	Wiring, N10-1



Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
21.0	B1120	Left front power window switch (S21s1) circuit Function: Open window		Ignition: OFF Disconnect coupling A from N10-1. S21s1: Rest position S21s1: Press and hold to open. (position "1"). Press to open. (position "2")	>20 kΩ approx. 750 Ω <10 Ω	Wiring, Left front power window switch (S21s1).
22.0	B1120	Left front power window switch (S21s1) circuit Function: Close window		Ignition: OFF Disconnect coupling A from N10-1. S21s1: Rest position S21s1: Press and hold to close	>20 kΩ approx. 200 Ω	Wiring, S21s1



Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
23.0	B1121	<p>Right front power window switch (S21s2) circuit Function: Open window</p>		<p>Ignition: OFF Disconnect coupling A from N10-1. S21s2: Rest position</p> <p>S21s2: Press and hold to open. (position "1").</p> <p>Press to open. (position "2")</p>	<p>>20 kΩ</p> <p>approx. 750 Ω</p> <p><10 Ω</p>	<p>Wiring, Right front power window switch (S21s2).</p>
24.0	B1121	<p>Right front power window switch (S21s2) circuit Function: Close window</p>		<p>Ignition: OFF Disconnect coupling A from N10-1. S21s2: Rest position</p> <p>S21s2: Press and hold to close</p>	<p>>20 kΩ</p> <p>approx. 200 Ω</p>	<p>Wiring, S21s2</p>


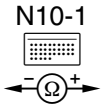
Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
25.0	B1122	<p>Left rear power window switch (S21s3, S21/3) circuit Function: Open window</p>	<p style="text-align: center;">N10-1 </p> <p>37 —◀ —(Ω)—▶ — 77 (A) (A)</p>	<p>Ignition: OFF Disconnect coupling A from N10-1. Rear power window safety switch (S21s5) in position: Unlock</p> <p>S21s3 and S21/3: Rest position</p> <p>S21s3: Press and hold to open. (position “1”).</p> <p>S21/3: Press and hold to open.</p>	<p>>20 kΩ</p> <p><10 Ω</p> <p><10 Ω</p>	<p>Wiring, S21s3, S21/3.</p> <p>Wiring, S21s3</p> <p>Wiring, ⇒ 29.0,30.0, S21/3</p>


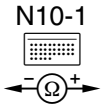
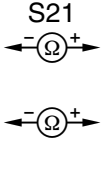
Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
26.0	B1122	<p>Left rear power window switch (S21s3, S21/3) circuit Function: Close window</p>	<p style="text-align: center;">N10-1 </p> <p>37 —◀ —(Ω)—▶ — 77 (A) (A)</p>	<p>Ignition: OFF Disconnect coupling A from N10-1. Rear power window safety switch (S21s5) in position: Unlock</p> <p>S21s3 and S21/3: Rest position</p> <p>S21s3: Press and hold to close. (position “1”).</p> <p>S21/3: Press and hold to close.</p>	<p>>20 kΩ</p> <p>approx. 470 Ω</p> <p>approx. 470 Ω</p>	<p>Wiring, S21s3, S21/3.</p> <p>Wiring, S21s3.</p> <p>Wiring, ⇒ 29.0,30.0, S21/3</p>


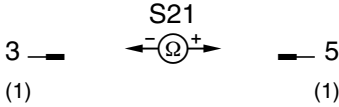
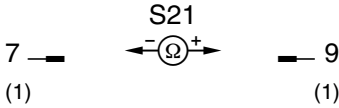
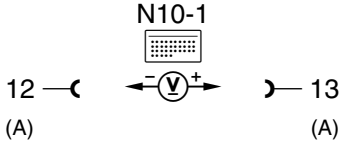
Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
27.0	B1123	<p>Right rear power window switch (S21s4, S21/4) circuit Function: Open window</p>	<p>N10-1 </p>	<p>Ignition: OFF Disconnect coupling A from N10-1. Rear power window safety switch (S21s5) in position: Unlock</p> <p>S21s4 and S21/4: Rest position</p> <p>S21s4: Press and hold to open. (position "1").</p> <p>S21/4: Press and hold to open.</p>	<p>>20 kΩ</p> <p><10 Ω</p> <p><10 Ω</p>	<p>Wiring, S21s4, S21/4.</p> <p>Wiring, S21s4.</p> <p>Wiring, ⇒ 29.0, 31.0, S21/4</p>

Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
28.0	B1123	<p>Right rear power window switch (S21s4, S21/4) circuit Function: Close window</p>	<p>N10-1 </p>	<p>Ignition: OFF Disconnect coupling A from N10-1. Rear power window safety switch (S21s5) in position: Unlock</p> <p>S21s4 and S21/4: Rest position</p> <p>S21s4: Press and hold to close. (position "1").</p> <p>S21/4: Press and hold to close.</p>	<p>>20 kΩ</p> <p><470 Ω</p> <p><470 Ω</p>	<p>Wiring, S21s4, S21/4</p> <p>Wiring, S21s4</p> <p>Wiring, ⇒ 29.0,31.0, S21/4</p>
29.0		<p>Rear power window safety switch (S21s5) for left/right rear power window switch (S21/3, S21/4) Child safety</p>	<p>S21 </p>	<p>Ignition: OFF Disconnect connector from center console switch group (S21). S21s5: unlocks</p>	<p><10 Ω</p>	<p>Center console switch group (S21).</p>


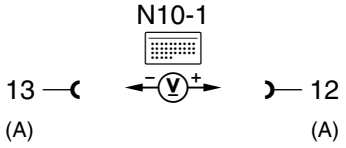
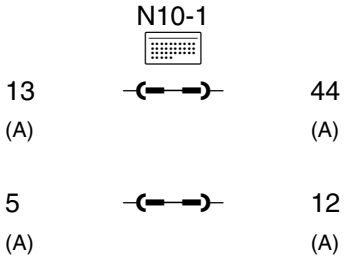
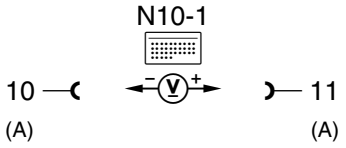
Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
30.0		Center console switch group (S21) internal connection between: left rear power window switch (S21s3) and left rear power window switch (S212/3)		Ignition: OFF Disconnect coupling 1 from S21.	<1 Ω	S21
31.0		Center console switch group (S21) internal connection between: right rear power window switch (S21s3) and rightrear power window switch (S212/4)		Ignition: OFF Disconnect coupling 1 from S21.	<1 Ω	S21
32.0	B1400	Activation of left front power window motor (M10/3)		Ignition: ON Left front power window switch (S21s1): Press and hold to open. (position "1"). Press to open. (position "2").	Within 25 seconds: 11 – 14 V 11 – 14 V	Wiring, ⇒ 21.0 ⇒ 32.1


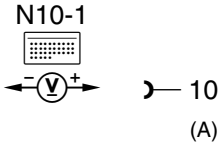
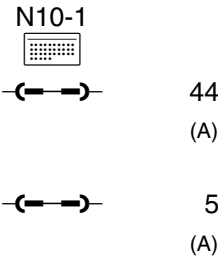

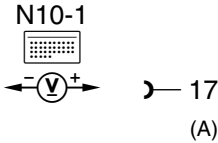
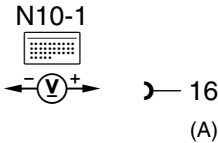
5.3 Convenience Feature (CF)

Model 210






Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
32.1		Activation of left front power window motor (M10/3)		Ignition: ON Left front power window switch (S21s1): Press and hold to close.	Within 25 seconds: 11 – 14 V	Wiring, ⇒ 22.0, Combination control module (N10-1).
33.0	81400	Left front power window motor (M10/3)		Ignition: OFF ⚠ CAUTION! Disconnect coupling A from N10-1. Bridge sockets 13 and 44 with fused jumper wire 124 589 37 63 00	Left front power window opens.	Wiring, M10/3
34.0	81401	Activation of right front power window motor (M10/4)		Ignition: ON Left front power window switch (S21s2): Press and hold to open. (position "1"). Press to open. (position "2").	Within 25 seconds: 11 – 14 V 11 – 14 V	Wiring, ⇒ 23.0, ⇒ 34.1



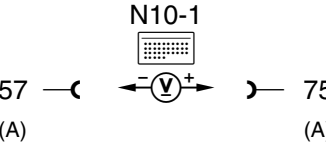
Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
34.1		Activation of right front power window motor (M10/4)		Ignition: ON Right front power window switch (S21s2): Press and hold to close.	Within 25 seconds: 11 – 14 V	Wiring, ⇒ 24.0, Combination control module (N10-1).
35.0	B1401	Right front power window motor (M10/4)		Ignition: OFF  CAUTION! Disconnect coupling A from N10-1. Bridge sockets 11 and 44 with fused jumper wire 124 589 37 63 00	Right front power window opens.	Wiring, M10/4
36.0	B1402	Activation of left rear power window motor (M10/5)		Ignition: ON Left rear power window switch (S21s3 or S21/3): Press and hold to open. (position "1").	within 25 seconds: 11 – 14 V	Wiring, ⇒ 25.0, ⇒ 36.1
36.1		Activation of left rear power window motor (M10/5)		Ignition: ON Left rear power window switch (S21s3 or S21/3): Press and hold to close.	within 25 seconds: 11 – 14 V	Wiring, ⇒ 26.0, N10-1


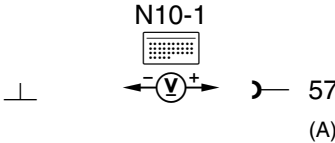
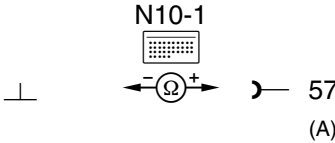
Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
37.0	B1402	Left rear power window motor (M10/5)	<p>N10-1</p>  <p>17 (A) ← → 4 (A)</p> <p>16 (A) ← → 43 (A)</p>	<p>Ignition: OFF</p> <p>CAUTION!</p> <p>Disconnect coupling A from N10-1.</p> <p>Bridge sockets 17 and 4 with fused jumper wire 124 589 37 63 00</p>	Left rear power window opens.	Wiring, M10/5
38.0	B1403	Activation of right rear power window motor (M10/6)	<p>N10-1</p>  <p>14 (A) ← (V) → 15 (A)</p>	<p>Ignition: ON</p> <p>Right rear power window switch (S21s4 or S21/4): Press and hold to close. (position "1").</p>	within 25 seconds: 11 – 14 V	Wiring, ⇒ 27.0, ⇒ 38.1
38.1		Activation of right rear power window motor (M10/6)	<p>N10-1</p>  <p>15 (A) ← (V) → 14 (A)</p>	<p>Ignition: ON</p> <p>Right rear power window switch (S21s4 or S21/4): Press and hold to close.</p>	within 25 seconds: 11 – 14 V	Wiring, ⇒ 28.0, N10-1
39.0	B1403	Right rear power window motor (M10/6)	<p>N10-1</p>  <p>15 (A) ← → 4 (A)</p> <p>14 (A) ← → 43 (A)</p>	<p>Ignition: OFF</p> <p>CAUTION!</p> <p>Disconnect coupling A from N10-1.</p> <p>Bridge sockets 15 and 4 with fused jumper wire 124 589 37 63 00</p>	Right rear power window opens.	Wiring, M10/6

Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
40.0		Activation of combination control module (N10-1) from RCL control module (N54) Function: Lock vehicle using convenience feature		Ignition: OFF Using IR transmitter (RCL): Press and hold lock. S86/1 and S88/2 in: Rest position Using ignition key: S86/1: Press and hold to close. Using ignition key: S88/2: Press and hold to close.	11 – 14 V < 1 V 11 – 14 V 11 – 14 V	⇒ 40.1 ⇒ 40.2 ⇒ 40.2 ⇒ 40.2

Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
40.1		Activation of combination control module (N10-1) from RCL control module (N54) Function: Unlock vehicle using safety opening		Ignition: OFF Using IR transmitter (RCL): Press and hold unlock. S86/1 and S88/2 in: Rest position Using ignition key: S86/1: In position: Open. Using ignition key: S88/2: In position: Open.	4 – 6 V 11 – 14 V 4 – 6 V 4 – 6 V	⇒ 40.2 ⇒ 40.2 ⇒ 40.2 ⇒ 40.2
40.2		Activation of combination control module (N10-1) from RCL control module (N54) Function: Lock and unlock vehicle using convenience feature Γ1–		Ignition: OFF Disconnect coupling 1 from RCL control module (N54) and coupling A from combination control module (N10-1)	>20 kΩ	Wiring, D.M., Body and Accessories, Vol. 1, 4.5 11 RCL