Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
1.0	B1022 B1023	**Left or right front ESA control module (N32/1 or N32/2) with memory** Voltage supply	N32/1 N32/2 11 (1) —(⊖ V ⊕)— 2 (1)	Disconnect connector (1) from N32/1 or N32/2.	11 – 14 V	Wiring.
1.1		Left or right front ESA control module (N32/1 or N32/2) with memory Voltage supply	N32/1 N32/2 11 (1) —(⊖ V ⊕)— 3 (1)	see step 1.0	11 – 14 V	Wiring.
2.0	B1111 B1112 B1113	**Left or right front switch group (S91 or S92) with memory** Voltage supply	S91 S92 1 —(⊖ V ⊕)— 8	Disconnect connector from S91 or S92. Parking lamps: ON	11 – 14 V	Wiring, ⇒ 20.0
3.0	B1113	**Fore/aft switch group (S91s1 or S92s1) with memory** Resistance	N32/1 N32/2 12 —(⊖ Ω ⊕)— 5 (1)	Disconnect connector (1) from N32/1 or N32/2. S91s1 or S92s1: Press forward S91s1 or S92s2: Press aft	>20 kΩ approx. 43 Ω approx. 16 Ω	Wiring, S91or S92

Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
4.0	B1113	**Left or right front ESA control module (N32/1 or N32/2) with memory** Seat fore/aft	N32/1 N32/2 1 (5) — V — 2 (5)	Fore/aft switch (S91s1 or S92s1): Press forward S91s1 or S92s1: Press aft	(for 1 – 2 sec.) 11 – 14 V – 11 to – 14 V	⇒ 3.0, N32/1 or N32/2
5.0	B1200	**Fore/aft motor (M27m1 or M28m1)**	N32/1 N32/2 2 (1) — 1 (5) N32/1 N32/2 11 (1) — 2 (5)	Ignition: **OFF** ⚠ **CAUTION!** **Disconnect** connector (**1 and 5**) from N32/1 or N32/2. Bridge sockets 1 and 2 with fused jumper wire 124 589 37 63 00	Motor runs.	If nominal values attained, ⇒ 5.1 Wiring, M27m1 or M28m1
5.1		Fore/aft motor (M27m1 or M28m1) Hall-sensor	N32/1 N32/2 5 (5) — V — 6 (5)	Connector 5 and 1 connected.	7 – 12 V	Wiring, M27m1 or M28m1

Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
6.0	B1114	**Front raise/lower switch (S91s3)** Resistance	N32/1 N32/2 12 (1) — Ω — 4 (1)	Disconnect connector (1) from N32/1 or N32/2. S91s3 or S92s3: Press raise S91s3 or S92s3: Press lower	>20 kΩ approx. 43 Ω approx.16 Ω	Wiring, S91 or S92
7.0	B1114	**Left or right front ESA control module (N32/1 or N32/2) with memory** Front seat raise/lower	N32/1 N32/2 2 (6) — V — 1 (6)	Front raise/lower switch (S91s3 or S92s3): Press raise S91s3 or S92s3: Press lower	(for 1 – 2 sec.) 11 – 14 V – 11 to – 14 V	⇒ 6.0, N32/1 or N32/2
8.0	B1201	**Front raise/lower motor (M27m3 or M28m3)**	N32/1 N32/2 2 (1) — 1 (6) N32/1 N32/2 11 (1) — 2 (6)	Ignition: **OFF** ⚠ **CAUTION!** **Disconnect** connector (**1 and 6**) from N32/1 or N32/2. Bridge sockets 1 and 2 with fused jumper wire 124 589 37 63 00	Motor runs.	If nominal values attained: ⇒ 8.1 Wiring, M27m3 or M28m3

Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
8.1		Front raise/lower motor (M27m3 or M28m3) Hall-sensor	N32/1 N32/2 5 (6) — V — 6 (6)	Connector 1 and 6 connected.	7 – 12 V	M27m3 or M28m3.
9.0	B1114	**Rear raise/lower switch (S91s2 or S92s2)** Resistance	N32/1 N32/2 12 (1) — Ω — 5 (1)	Disconnect connector (1) from N32/1 or N32/2. S91s2 or S92s2: Press raise S91s2 or S92s2: Press lower	>20 kΩ approx. 169 Ω approx. 75 Ω	Wiring, Left or right front ESA switch group (S91 or S92).
10.0	B1114	**Left or right front ESA control module (N32/1 or N32/2) with memory**	N32/1 N32/2 2 (4) — V — 1 (4)	Rear raise/lower switch (S91s2 or S92s2): Press raise S91s2 or S92s2: Press lower	(for 1 – 2 sec.) 11 – 14 V – 11 to – 14 V	⇒ 9.0, N32/1 or N32/2

Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
11.0	B1202	**Rear raise/lower motor (M27m2 or M28m2)**	N32/1 N32/2 2 (1) — 1 (4) N32/1 N32/2 11 (1) — 2 (4)	Ignition: **OFF** ⚠ **CAUTION!** **Disconnect** connector (**1 and 4**) from N32/1 or N32/2. Bridge sockets 1 and 2 with fused jumper wire 124 589 37 63 00	Motor runs.	If nominal values are attained, ⇒ 11.1 Wiring, M27m2 or M28m2.
11.1		Rear raise/lower motor (M27m2 or M28m2) Hall-sensor	N32/1 N32/2 5 (4) — 6 (4)	Connector 1 and 4 connected.	7 – 12 V	M27m2 or M28m2.
12.0	B1111	**Backrest fore/aft switch (S91s5 or S92s5)** Resistance	N32/1 N32/2 12 (1) — 1 (1)	Disconnect connector (1) from N32/1 or N32/2. S91s5 or S92s5: Press raise S91s5 or S92s5: Press lower	>20 kΩ approx. 43 Ω approx. 16 Ω	Wiring, Left or right front ESA switch group (S91 or S92).

Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
13.0	B1111	**Left or right front ESA control module (N32/1 or N32/2) with memory** Backrest fore/aft	N32/1 N32/2 2 (7) — V — 4 (7)	Backrest fore/aft switch S91s5 or S92s5: Press forward S91s5 or S92s5: Press aft	(for 1 – 2 sec.) 11 – 14 V – 11 to – 14 V	Wiring, ⇒ 12.0, N32/1 or N32/2
14.0	B1204	**Backrest raise/lower motor (M27m5 or M28m5)**	N32/1 N32/2 2 (1) — 4 (7) N32/1 N32/2 11 (1) — 2 (7)	Ignition: **OFF** ⚠ **CAUTION!** Disconnect connector (1 and 7) from N32/1 or N32/2 and connector (1) from M27m5 or M28m5. Bridge sockets 1 and 2 with fused jumper wire 124 589 37 63 00	Motor runs.	If nominal values are attained, ⇒ 14.1 Wiring, M27m5 or M28m5
14.1		Backrest raise/lower motor (M27m5 or M28m5) Hall-sensor	N32/1 N32/2 5 (7) — V — 4 (7)	Connectors 1 and 7 connected.	7 – 12 V	M27m5 or M28m5

Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
15.0	B1112	**Head restraint raise /lower switch (S91s4 or S92s4)** Resistance	N32/1 N32/2 12 (1) — Ω — 4 (1)	Disconnect connector (1) from N32/1 or N32/2. S91s4 or S92s4: Press raise S91s4 or S92s4: Press lower	>20 kΩ approx. 169 Ω approx. 75 Ω	Wiring, S91 or S92
16.0	B1112	**Left or right front ESA control module (N32/1 or N32/2) with memory** Head restraint raise/lower	N32/1 N32/2 4 (7) — V — 1 (7)	Head restraint raise/lower switch (S91s4 or S92s4): Press raise S91s4 or S92s4 Press lower	– 11 to – 14 V 11 – 14 V	⇒ 15.0, N32/1 or N32/2
17.0	B1203	**Head restraint raise/lower motor (M27m4 or M28m4)**	N32/1 N32/2 2 (1) — 4 (7) N32/1 N32/2 11 (1) — 1 (7)	Ignition: **OFF** ⚠ **CAUTION!** Disconnect connector (1 and 7) from N32/1 or N32/2. Bridge sockets 2 and 4 with fused jumper wire 124 589 37 63 00	Motor runs.	If nominal values are attained, ⇒ 17.1 Wiring, M27m4 or M28m4

Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
17.1		Head restraint raise/lower motor (M27m4 or M28m4) Hall-sensor	M27m4 M28m4 5 (7) — V — 3 (7)	Connectors 1 and 7 connected.	7 – 12 V	Wiring, M27m4 or M28m4
18.0		**Left or right front switch group (S91 or S92) with memory** **Store memory** Resistance	N32/1 N32/2 5 (1) — Ω — 12 (1)	Disconnect connector (1) from N32/1 or N32/2.		Wiring, S91 or S92
				Memory button 1: Rest position Button pressed	 >20 kΩ approx. 330 Ω	
			N32/1 N32/2 4 (1) — Ω — 12 (1)	Memory button 2: Rest position Button pressed	 >20 kΩ approx. 330 Ω	
			N32/1 N32/2 1 (1) — Ω — 12 (1)	Memory button 3: Rest position Button pressed	 >20 kΩ approx. 169 Ω	
			N32/1 N32/2 1 (1) — Ω — 12 (1)	Memory store button Rest position Button pressed	 >20 kΩ approx. 330 Ω	

Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
19.0	81105	**Left front power seat memory**	N10-1 43 (A) — V — 6 (A)	Ignition: **OFF**	11 – 14 V	Wiring, ⇒ 21.0, 22.0, Combination control module (N10-1).
20.0		**Left or right front switch group (S91 or S92) with memory** Illumination	S91 S92 3 — V — 8	Disconnect connector from S91 or S92. Parking lamps: ON	11 – 14 V	Wiring, S91 or S92
21.0		**CAN H data line from left or right front ESA control module (N32/1 or N32/2) with memory to combination control module (N10-1)** –//–	N32/1 N32/2 7 (1) — Ω — N10-1 78 (A)	Ignition: **OFF** ⚠ **CAUTION!** Disconnect connector 1 from N32/1 or N32/2, connector (A) from N10-1 and connector (1) from PSE (A37).	< 1 Ω	Wiring, ⇒ 21.1
21.1		CAN H data line from left or right front ESA control module (N32/1 or N32/2) with memory to combination control module (N10-1) ⌈⌉–	N10-1 ⊥ — Ω — 78 (A)	Ignition: **OFF** ⚠ **CAUTION!** Disconnect connector 1 from N32/1 or N32/2, connector (A) from N10-1 and connector (1) from PSE (A37).	< 20 K Ω	Wiring, ⇒ 21.2

Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
21.2		CAN H data line from left or right front ESA control module (N32/1 or N32/2) with memory to combination control module (N10-1) Γ⌉+	N10-1 4 (A) — V — 78 (A)	Ignition: **OFF** ⚠ **CAUTION!** Disconnect connector 1 from N32/1 or N32/2, connector (A) from N10-1 and connector (1) from PSE (A37).	< 1 V	Wiring, ⇒ 22.3
22.0		**CAN L data line from left or right front ESA control module (N32/1 or N32/2) with memory to combination control module (N10-1)** –//–	N32/1 N32/2 6 (1) — Ω — N10-1 62 (A)	Ignition: **OFF** ⚠ **CAUTION!** Disconnect connector 1 from N32/1 or N32/2, connector (A) from N10-1 and connectors (1 and 3) from PSE (A37).	< 1 Ω	Wiring, ⇒ 22.1
22.1	B1022 B1023 B1024	CAN L data line from left or right front ESA control module (N32/1 or N32/2) with memory to combination control module (N10-1) Γ⌉–	N10-1 ⊥ — Ω — 62 (A)	Ignition: **OFF** ⚠ **CAUTION!** Disconnect connector 1 from N32/1 or N32/2, connector (A) from N10-1 and connectors (1 and 3) from PSE (A37).	< 20 k Ω	Wiring, ⇒ 22.2

Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
22.2	81022 81023 81024	CAN L data line from left or right front ESA control module (N32/1 or N32/2) with memory to combination control module (N10-1) ⌈⌉+	N10-1 4 (A) — V — 62 (A)	Ignition: **OFF** ⚠ **CAUTION!** Disconnect connector 1 from N32/1 or N32/2, connector (A) from N10-1 and connector (1 and 3) from PSE (A37).	< 1 V	Wiring, ⇒ 25.0
23.0	81022 81023 81025	**CAN H data line from right front ESA control module (N32/2) with memory to left front ESA control module (N32/1) with memory** –//–	N32/1 7 (1) — Ω — N32/2 7 (1)	Ignition: **OFF** ⚠ **CAUTION!** Disconnect connector 1 from N32/1 or N32/2, connector (A) from N10-1 and connectors (1 and 3) from PSE (A37).	< 1 Ω	Wiring, ⇒ 24.0
24.0	81022 81023 81024	**CAN L data line from right front ESA control module (N32/2) with memory to left front ESA control module (N32/1)** –//–	N32/1 6 (1) — Ω — N32/2 6 (1)	Ignition: **OFF** ⚠ **CAUTION!** Disconnect connector 1 from N32/1 or N32/2, connector (A) from N10-1 and connectors (1 and 3) from PSE (A37).	< 1 Ω	Wiring, ⇒ 25.0

Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
25.0	81022 81023 81024 81025	**CAN L /CAN H data lines** ⌈⌉ to each other	N32/1 N32/2 6 — ☾ ⊖Ω⊕ ☽ — 7	Ignition: **OFF** ⚠ **CAUTION!** Disconnect connector 1 from N32/1 or N32/2, connector (A) from N10-1 and connectors (1 and 3) from PSE (A37).	>20 kΩ	Wiring, D.M., Body and Accessories, Volume 1, 5.2, 23 ⇒ 10.0