
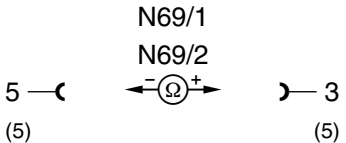


15.4 Electric Seat Adjustment (ESA)

Models 208, 210 as of 3/97


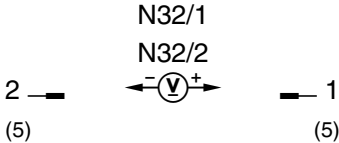
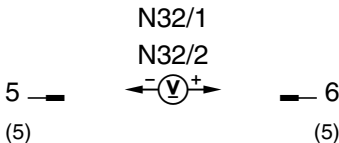
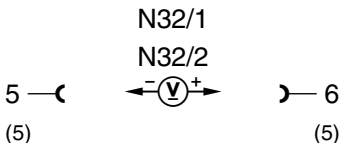
Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
1.0		Fore/aft switch group (S91/2s1, S92/2s1) with memory Resistance	 <p>5 — (5) 3 — (5)</p>	Disconnect connector (5) from N69/1 or N69/2. S91/2s1 or S92/2s1: Pressed forward S91/2s1 or S92/2s1: Pressed aft	approx. 43 Ω approx. 16 Ω	Wiring, S91/2 or S92/2

15.4 Electric Seat Adjustment (ESA)

Models 208, 210 as of 3/97


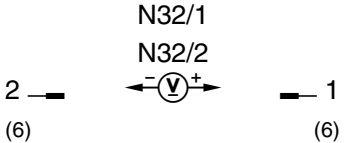
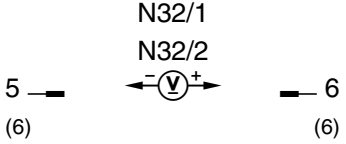
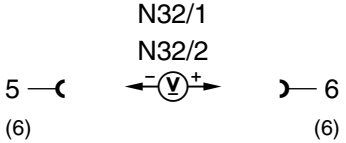
Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
2.0		Fore/aft motor (M27m1 or M28m1) Voltage supply		Connector 1 on N32/1, N32/2 connected. Backrest to vertical position. Connector 5 disconnected from N32/1, N32/2	< 1 V	Wiring, N32/1, N32/2
		Hall-sensor Voltage supply		Fore/aft switch (S91/2s1, S92/2s1) pressed forward. Fore/aft switch (S91/2s1, S92/2s1) pressed aft.	11 – 14 V for approx. 1 sec. –11 to –14 V for approx. 1 sec.	
		Hall-sensor		Connector 5 connected to N32/1, N32/2. Take reading at socket with connector 5 connected.	7.7 – 8.8 V or 11.3 – 12.7 V	

15.4 Electric Seat Adjustment (ESA)

Models 208, 210 as of 3/97



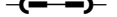





Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
5.0		Front raise/lower motor (M27m3) Voltage supply		Connector 1 on N32/1, N32/2 connected. Connector 6 disconnected from N32/1, N32/2 Raise/lower switch (S91/2s3, S92/2s3) press raise Raise/lower switch (S91/2s3, S92/2s3) press lower	< 1 V 11 – 14 V for approx. 1 sec. –11 to –14 V for approx. 1 sec.	Wiring, N32/1, N32/2 N32/1, N32/2 Wiring, M27m3 or M28m3
		Hall-sensor Voltage supply			11 – 14 V	
		Hall-sensor		Connector 6 connected to N32/1, N32/2. Take reading at socket with connector 6 connected.	7.7 – 8.8 V or 11.3 – 12.7 V	

15.4 Electric Seat Adjustment (ESA)

Models 208, 210 as of 3/97


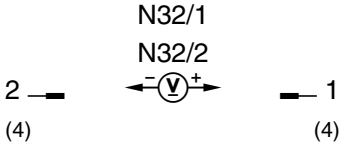
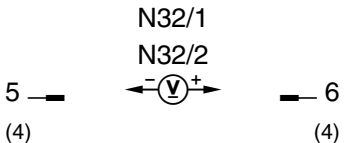
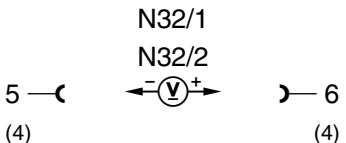
Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
6.0		Front raise/lower motor (M27m3 or M28m3)	<p>N32/1 N32/2</p> <p>3 —  —  — 1 (1) (6)</p> <p>11 —  —  — 2 (1) (6)</p>	<p>Disconnect connectors 1 and 6 from N32/1 or N32/2</p> <p> CAUTION! Injury hazard due to crushing!</p> <p>Bridge sockets 3 and 1 with fused jumper wire 124 589 37 63 00</p>	Motor (M27m3, M28m3) runs.	Wiring, M27m3, M28m3
7.0		Rear raise/lower switch (S91/2s2, S92/2s2) Resistance	<p>N69/1 N69/2</p> <p>3 —  —  — 5 (5) (5)</p>	<p>Disconnect connector (5) from N69/1, N69/2</p> <p>S91/2s2 or S92/2s2: Press raise</p> <p>S91/2s2 or S92/2s2: Press lower</p>	<p>approx. 169 Ω</p> <p>approx. 75 Ω</p>	Wiring, S91/2 or S92/2

15.4 Electric Seat Adjustment (ESA)

Models 208, 210 as of 3/97


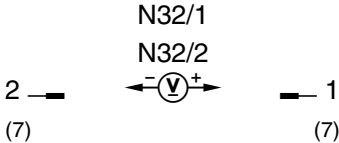
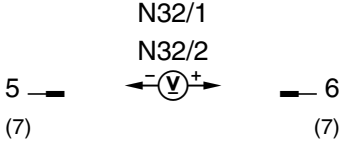
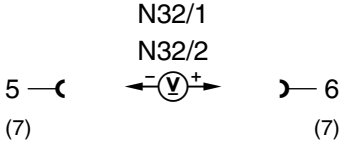
Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
8.0		Raise/lower motor (M27m2 or M28m2) Voltage supply		Connector 1 on N32/1, N32/2 connected. Connector 4 disconnected from N32/1, N32/2 Raise/lower switch (S91/2s3, S92/2s3) pressed to raise. Raise/lower switch (S91/2s3, S92/2s3) pressed to lower.	< 1 V 11 – 14 V for approx. 1 sec. –11 to – 14 V for approx. 1 sec.	Wiring, N32/1, N32/2
		Hall-sensor Voltage supply			11 – 14 V	N32/1, N32/2
		Hall-sensor		Connector 4 connected to N32/1, N32/2. Take reading at socket with connector 4 connected.	7.7 – 8.8 V or 11.3 – 12.7 V	Wiring, M27m2, M28m2

15.4 Electric Seat Adjustment (ESA)

Models 208, 210 as of 3/97



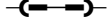

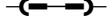



Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
11.0		Fore/aft motor (M27m5 or M28m5) Voltage supply		Connector 1 on N32/1, N32/2 connected. Connector 7 disconnected from N32/1, N32/2.	< 1 V	Wiring, N32/1, N32/2
		Hall-sensor Voltage supply		Fore/aft switch (S91/2s5, S92/2s5) pressed forward.	11 – 14 V for approx. 1 sec.	
		Hall-sensor		Fore/aft switch (S91/2s5, S92/2s5) pressed aft. Connector 7 connected to N32/1, N32/2. Take reading at socket with connector 7 connected.	– 11 to –14 V for approx. 1 sec. 7.7 – 8.8 V or 11.3 – 12.7 V	

15.4 Electric Seat Adjustment (ESA)

Models 208, 210 as of 3/97


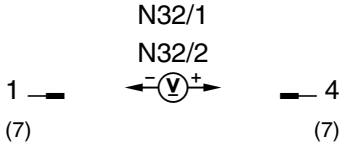
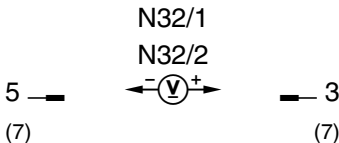
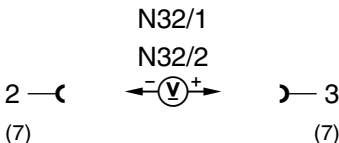
Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
12.0		Backrest fore/aft motor (M27m5 or M28m5)	<p>N32/1 N32/2</p> <p>4 —  —  — 3 (7) (1)</p> <p>2 —  —  — 11 (7) (1)</p>	<p>Disconnect connectors 1 and 7 from N32/1 or N32/2.</p> <p>Backrest to vertical position.</p> <p> CAUTION! Injury hazard due to crushing!</p> <p>Bridge sockets 4 and 3 with fused jumper wire 124 589 37 63 00</p>	Motor (M27m5, M28m5) runs.	Wiring, M27m5 or M28m5
13.0		Front raise/lower switch (S91/2s4, S92/2s4) Resistance	<p>N69/1 N69/2</p> <p>5 —  —  — 7 (5) (5)</p>	<p>Disconnect connector (5) from N69/1, N69/2.</p> <p>S91/2s4 or S92/2s4: Pressed raise</p> <p>S91/2s4 or S92/2s4: Pressed lower</p>	<p>approx. 170 Ω</p> <p>approx.75 Ω</p>	Wiring, S91/2 or S92/2

15.4 Electric Seat Adjustment (ESA)

Models 208, 210 as of 3/97



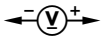
Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
14.0		Head restraint raise/lower motor (M27m4 or M28m4) Voltage supply		Connector 1 on N32/1, N32/2 connected. Connector (7) disconnected from N32/1, N32/2. Raise/lower switch (S91/2s4, S92/2s4) press to raise. Raise/lower switch (S91/2s4, S92/2s4) press to lower.	< 1 V – 11 to – 14 V for approx. 1 sec. 11 – 14 V for approx. 1 sec.	Wiring, S91/2, S92/2, N32/1, N32/2
		Hall-sensor Voltage supply			11 – 14 V	N32/1, N32/2
		Hall-sensor		Connector 7 connected to N32/1, N32/2. Take reading at socket with connector 7 connected.	7.7 – 8.8 V or 11.3 – 12.7 V	Wiring, M27m4 or M28m4

15.4 Electric Seat Adjustment (ESA)

Models 208, 210 as of 3/97


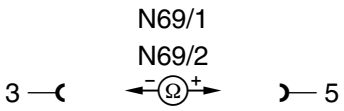
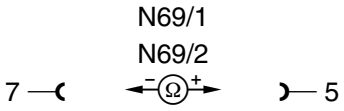
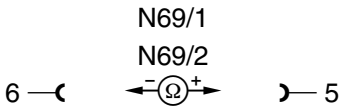
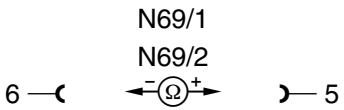
Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
15.0		Head restraint raise/lower motor (M27m4 or M28m4)	<p>N32/1 N32/2</p> <p>1 —(—(—(—) 3 (7) (1)</p> <p>4 —(—(—(—) 11 (7) (1)</p>	<p>Disconnect connector (1 and 7) from N32/1 or N32/2.</p> <p> CAUTION! Injury hazard due to crushing! Bridge sockets 1 and 3 with fused jumper wire 124 589 37 63 00</p>	Motor (M27m4, M28m4) runs.	Wiring, M27m4 or M28m4
16.0		Backrest unlocking (M27m8 or M28m8) (Motor) (Model 208 only)	<p>N32/1 N32/2</p> <p>5 — — — — — 1 (8) (8)</p> <p></p>	<p>Ignition: OFF. Backrest locked in upright position, Take reading at connector</p> <p>S91/3: Activated</p> <p>S91/3: Not activated</p>	<p>11 – 14 V for approx. 4 secs.</p> <p>< 1V</p>	Wiring, ⇒ 19.0 M27m8 or M28m8

15.4 Electric Seat Adjustment (ESA)

Models 208, 210 as of 3/97


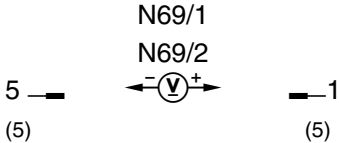
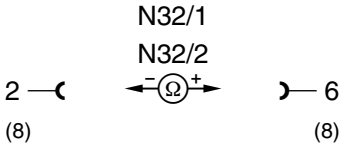
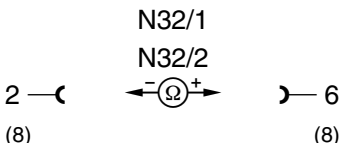
Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
17.0		Left front door ESA switch group (S91/2, S92/2) Resistance	<p>  </p> <p>  </p> <p>  </p> <p>  </p>	<p>Disconnect connector (5) from N69/1, N69/2.</p> <p>Button 1: Rest position Press button:</p> <p>Button 2: Rest position Press button:</p> <p>Button 3: Rest position Press button:</p> <p>Green button: Rest position Press button:</p>	<p>> 20K Ω</p> <p>approx. 330 Ω</p> <p>> 20K Ω</p> <p>approx. 330 Ω</p> <p>> 20K Ω</p> <p>approx. 169 Ω</p> <p>> 20K Ω</p> <p>approx. 330 Ω</p>	Wiring, S91/2 or S92/2

15.4 Electric Seat Adjustment (ESA)

Models 208, 210 as of 3/97


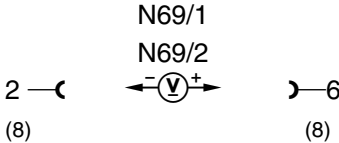
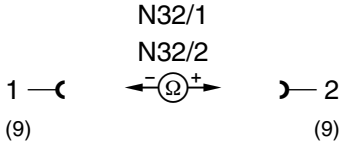
Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
18.0		Left/right front door ESA switch group with memory (S91/2, S92/2) Voltage supply		Parking lights: ON	9 – 13 V	N69/1, N69/2
19.0		Left front seatback release microswitch (S91/3, S92/3) (Model 208 up to 6/98 only)		Disconnect connector 1 from N32/1, N32/2 Backrest: Locked Unlocked	 > 20 K Ω < 1 K Ω	Wiring, S91/3, S92/3
20.0		Left/right front seatback release microswitch (S91/3, S92/3) with left/right front hibernation microswitch (S91/1s2, S92/1s2) Resistance test of switching circuit (Model 208 as of 06/98 only)		Ignition: OFF Disconnect connector 1 from N32/1, N32/2 Backrest: Vertical (locked) Pull on unlock lever of seatback, seatback remains in vertical position.	 > 20 K Ω < 1 K Ω	Wiring, S91/3, S92/3 If values are OK; ⇒ 20.1

15.4 Electric Seat Adjustment (ESA)

Models 208, 210 as of 3/97

Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
20.1		Left/right front seatback release microswitch (S91/3, S92/3) with left/right front hibernation microswitch (S91/1s2, S92/1s2) Resistance test of switching circuit		Ignition: OFF Tilt backrest forward approx. 20 degrees.	< 1 Ω	S91/1s2, S92/1s2
21.0		Left/right front seatback inclination microswitch (S91/1, S92/1) (Model 208 only)		Disconnect connector 1 from N32/1, N32/2 Backrest: Locked (vertical): Tilted forward:	> 20 K Ω < 1 K Ω	Wiring, S91/1, S92/1