
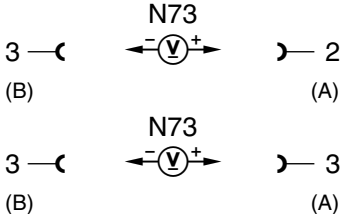
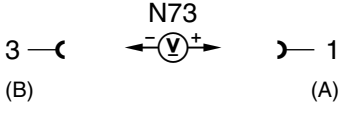
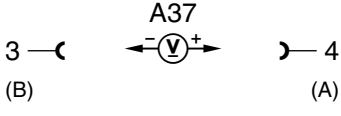
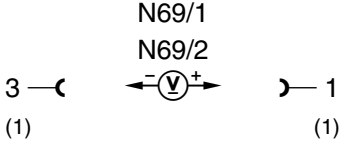







Electrical Test Program – Test

	Test scope	Test connection	Test condition	Nominal value	Possible cause/remedy <sup>1)</sup>
1.0	<b>Electronic ignition switch control module (N73)</b> Voltage supply Circuit 30, 31			11 – 14 V	Wiring.
2.0	<b>Electronic ignition switch control module (N73)</b> Voltage supply Circuit 15		Ignition: <b>ON</b>	11 – 14 V	Wiring.
3.0	<b>Electronic ignition switch control module (N73)</b> Voltage supply Circuit 15R		Ignition: <b>Position 1</b>	11 – 14 V	Wiring.
4.0	<b>Front driver/passenger-side door control module (N69/1, N69/2),</b> Voltage supply Circuit 30, 31			11 – 14 V	Wiring.


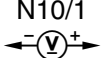
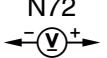
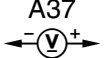
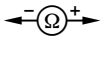
<sup>1)</sup> Observe Preparation for Test, see 22.

## Electrical Test Program – Test

⇒ 	Test scope	Test connection	Test condition	Nominal value	Possible cause/remedy <sup>1)</sup>
5.0	<b>Rear driver/passenger-side door control module (N69/3, N69/4)</b> Voltage supply Circuit 30, 31	N69/3 N69/4 3 —( —  —) 8		11 – 14 V	Wiring.
6.0	<b>Roof control panel control module (N70)</b> Voltage supply Circuit 30, 31	N70 1 —( —  —) 2 (A) (A)		11 – 14 V	Wiring.
7.0	<b>Left/right front ESA control module (with memory) (N32/1, N32/2)</b> Voltage supply Circuit 30, 31	N32/1 N32/2 11 —( —  —) 2 (1) (1)  N32/1 N32/2 11 —( —  —) 3 (1) (1)		11 – 14 V	Wiring.




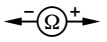


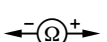




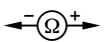


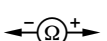

<sup>1)</sup> Observe Preparation for Test, see 22.

## Electrical Test Program – Test

⇒ 	Test scope	Test connection	Test condition	Nominal value	Possible cause/remedy <sup>1)</sup>
8.0	<b>Signal pick-up and activation module (SAM) (N10/1)</b> Voltage supply Circuit 30, 31	N10/1 		11 – 14 V	Wiring.
9.0	<b>Lower control field control module (N72)</b> Voltage supply Circuit 30, 31	N72 		11 – 14 V	Wiring.
10.0	<b>PSE control module (A37)</b> Voltage supply Circuit 30, 31	A37 		11 – 14 V	Wiring.
11.0	<b><i>Non-USA vehicles only, continue to next test step.</i></b>				
12.0	<b>Data line CAN H</b> PSE control module (A37) -//- (open circuit)	X30/7 	Disconnect connector 1 of A37 and connector 10 of X30/7	<1 Ω	Wiring.



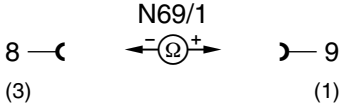
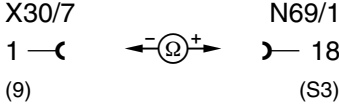
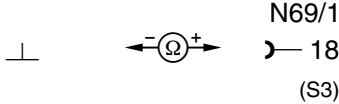
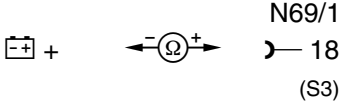

1) Observe Preparation for Test, see 22.

Electrical Test Program – Test

 	Test scope	Test connection	Test condition	Nominal value	Possible cause/remedy <sup>1)</sup>
13.0	<b>Data line CAN H</b> PSE control module (A37) Γ1- (short circuit to grnd)	   A37 8 (1)	Disconnect connector 1 of A37 and connector 10 of X30/7	>20 kΩ	Wiring.
14.0	<b>Data line CAN H</b> PSE control module (A37) Γ1+ (short circuit to pos.)	   A37 8 (1)	Disconnect connector 1 of A37 and connector 10 of X30/7	>20 kΩ	Wiring.
15.0	<b>Data line CAN L</b> PSE control module (A37) -//- (open circuit)	X30/7 2 —◀ (10)	  A37 9 (1)	<1 Ω	Wiring.
16.0	<b>Data line CAN L</b> PSE control module (A37) Γ1- (short circuit to grnd)	   A37 9 (1)	Disconnect connector 1 of A37 and connector 10 of X30/7	>20 kΩ	Wiring.
17.0	<b>Data line CAN L</b> PSE control module (A37) Γ1+ (short to pos.)	   A37 9 (1)	Disconnect connector 1 of A37 and connector 10 of X30/7	> 20 kΩ	Wiring.



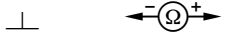



1) Observe Preparation for Test, see 22.

Electrical Test Program – Test

 	Test scope	Test connection	Test condition	Nominal value	Possible cause/remedy <sup>1)</sup>
18.0	<b>Data line CAN H/L</b> PSE control module (A37) Γ1 (short circuit)		Disconnect connector 1 of N69/1 and connector 10 of X30/7	>20 kΩ	Wiring.
19.0	<b>Data line CAN H</b> Front driver-side door control module (N69/1) -//- (open circuit)		Disconnect connector S3 of N69/1 and connector 9 of X30/7	<1 Ω	Wiring.
20.0	<b>Data line CAN H</b> Front driver-side door control module (N69/1) Γ1- (short circuit to grnd)		Disconnect connector S3 of N69/1 and connector 9 of X30/7	>20 kΩ	Wiring.
21.0	<b>Data line CAN H</b> Front driver-side door control module (N69/1) Γ1+ (short to pos.)		Disconnect connector S3 of A37 and connector 10 of X30/7	>20 kΩ	Wiring.
22.0	<b>Data line CAN L</b> Front driver-side door control module (N69/1) -//- (open circuit)		Disconnect connector S3 of N69/1 and connector 9 of X30/7	<1 Ω	Wiring.


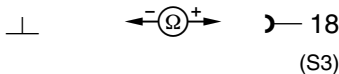
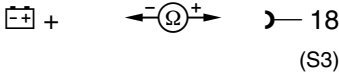
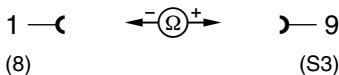
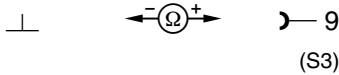
<sup>1)</sup> Observe Preparation for Test, see 22.

Electrical Test Program – Test

 	Test scope	Test connection	Test condition	Nominal value	Possible cause/remedy <sup>1)</sup>
23.0	<b>Data line CAN L</b> Front driver-side door control module (N69/1) Γ1- (short circuit to grnd)	 N69/1 9 (S3)	Disconnect connector S3 of N69/1 and connector 9 of X30/7	>20 kΩ	Wiring.
24.0	<b>Data line CAN L</b> Front driver-side door control module (N69/1) Γ1+ (short to pos.)	 N69/1 9 (S3)	Disconnect connector S3 of N69/1 and connector 9 of X30/7	>20 kΩ	Wiring.
25.0	<b>Data line CAN H/L</b> Front driver-side door control module (N69/1) Γ1 (short circuit)	 N69/1 18 (3)	Disconnect connector S3 of N69/1 and connector 9 of X30/7	>20 kΩ	Wiring.
26.0	<b>Data line CAN H</b> Front passenger-side door control module (N69/2) -//- (open circuit)	 X30/7 1 (8)	Disconnect connector S3 of N69/2 and connector 8 of X30/7	<1 Ω	Wiring.


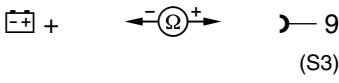
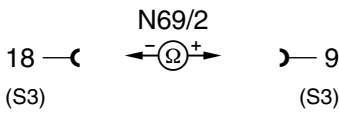
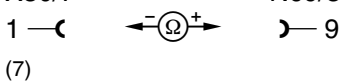
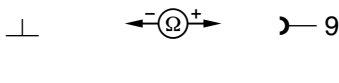
<sup>1)</sup> Observe Preparation for Test, see 22.

Electrical Test Program – Test

⇒ 	Test scope	Test connection	Test condition	Nominal value	Possible cause/remedy <sup>1)</sup>
27.0	<b>Data line CAN H</b> Front passenger-side door control module (N69/2) Γ1- (short circuit to grnd)		N69/2 Disconnect connector S3 of N69/2 and connector 8 of X30/7	>20 kΩ	Wiring.
28.0	<b>Data line CAN H</b> Front passenger-side door control module (N69/2) Γ1+ (short to pos.)		N69/2 Disconnect connector S3 of N69/2 and connector 8 of X30/7	>20 kΩ	Wiring.
29.0	<b>Data line CAN L</b> Front passenger-side door control module (N69/2) -//- (open circuit)		N69/2 Disconnect connector S3 of N69/2 and connector 8 of X30/7	<1 Ω	Wiring.
30.0	<b>Data line CAN L</b> Front passenger-side door control module (N69/2) Γ1- (short circuit to grnd)		N69/2 Disconnect connector S3 of N69/2 and connector 8 of X30/7	>20 kΩ	Wiring.

1) Observe Preparation for Test, see 22.



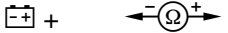

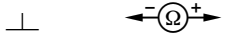

Electrical Test Program – Test

	Test scope	Test connection	Test condition	Nominal value	Possible cause/remedy <sup>1)</sup>
31.0	<b>Data line CAN L</b> Front passenger-side door control module (N69/2) (open circuit) Γ1+ (short to pos.)		Disconnect connector S3 of N69/2 and connector 8 of X30/7	>20 kΩ	Wiring.
32.0	<b>Data line CAN H/L</b> Front passenger-side door control module (N69/2) Γ1 (short circuit)		Disconnect connector S3 of N69/2 and connector 8 of X30/7	>20 kΩ	Wiring.
33.0	<b>Data line CAN H</b> Rear driver-side door control module (N69/3) -//- (open circuit)		Disconnect connector from N69/3 and connector 7 of X30/7	<1 Ω	Wiring.
34.0	<b>Data line CAN H</b> Rear driver-side door control module (N69/3) Γ1- (short circuit to grnd)		Disconnect connector from of N69/3 and connector 7 of X30/7	>20 kΩ	Wiring.

<sup>1)</sup> Observe Preparation for Test, see 22.















Electrical Test Program – Test





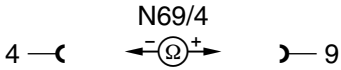
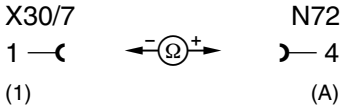
 	Test scope	Test connection	Test condition	Nominal value	Possible cause/remedy <sup>1)</sup>
35.0	<b>Data line CAN H</b> Rear driver-side door control module (N69/3) Γ1+ (short to pos.)	 N69/3 9	Disconnect connector from N69/3 and connector 7 of X30/7	>20 kΩ	Wiring.
36.0	<b>Data line CAN L</b> Rear driver-side door control module (N69/3) -//- (open circuit)	X30/7 2 ←  N69/3 4 (7)	Disconnect connector from of N69/3 and connector 7 of X30/7	<1 Ω	Wiring.
37.0	<b>Data line CAN L</b> Rear driver-side door control module (N69/3) Γ1- (short circuit to grnd)	 N69/3 4	Disconnect connector from of N69/3 and connector 7 of X30/7	>20 kΩ	Wiring.
38.0	<b>Data line CAN L</b> Rear driver-side door control module (N69/3) Γ1+ (short to grnd)	 N69/3 4	Disconnect connector from of N69/3 and connector 7 of X30/7	>20 kΩ	Wiring.

<sup>1)</sup> Observe Preparation for Test, see 22.

Electrical Test Program – Test




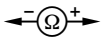

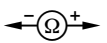
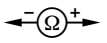

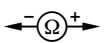
 	Test scope	Test connection	Test condition	Nominal value	Possible cause/remedy <sup>1)</sup>
39.0	<b>Data line CAN H / L</b> Rear driver-side door control module (N69/3) Γ1 (short circuit)	4 —   N69/3 — 9	Disconnect connector from of N69/3 and connector 7 of X30/7	>20 kΩ	Wiring.
40.0	<b>Data line CAN H</b> Rear passenger-side door control module (N69/4) -//- (open circuit)	X30/7 1 —   N69/4 (6) — 9	Disconnect connector from of N69/4 and connector 6 of X30/7	<1 Ω	Wiring.
41.0	<b>Data line CAN H</b> Rear passenger-side door control module (N69/4) Γ1- (short to grd)	  N69/4 — 9	Disconnect connector from of N69/4 and connector 6 of X30/7	>20 kΩ	Wiring.
42.0	<b>Data line CAN H</b> Rear passenger-side door control module (N69/4) Γ1+ (short to pos.)	 +  N69/4 — 9	Disconnect connector from of N69/4 and connector 6 of X30/7	>20 kΩ	Wiring.
43.0	<b>Data line CAN L</b> Rear passenger-side door control module (N69/4) -//- (open circuit)	X30/7 2 —   N69/4 (6) — 4	Disconnect connector from of N69/4 and connector 6 of X30/7	<1 Ω	Wiring.

Electrical Test Program – Test

 	Test scope	Test connection	Test condition	Nominal value	Possible cause/remedy <sup>1)</sup>
44.0	<b>Data line CAN L</b> Rear passenger-side door control module (N69/4) Γ1- (short to grnd)		Disconnect connector from N69/4 and connector 6 of X30/7	>20 kΩ	Wiring.
45.0	<b>Data line CAN L</b> Rear passenger-side door control module (N69/4) Γ1+ (short to pos.)		Disconnect connector from N69/4 and connector 6 of X30/7	>20 kΩ	Wiring.
46.0	<b>Data line CAN H/L</b> Rear passenger-side door control module (N69/4) Γ1 (short circuit)		Disconnect connector from of N69/3 and connector 7 of X30/7	>20 kΩ	Wiring.
47.0	<b>Data line CAN H</b> Lower control field control module (N72) -// - open circuit		Disconnect connector A from of N72 and connector 1 of X30/7	<1 Ω	Wiring.


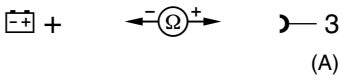
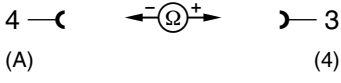
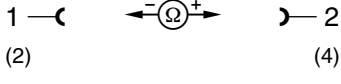

<sup>1)</sup> Observe Preparation for Test, see 22.

Electrical Test Program – Test

 	Test scope	Test connection	Test condition	Nominal value	Possible cause/remedy <sup>1)</sup>
48.0	<b>Data line CAN H</b> Lower control field control module (N72) Γ1- (short to grnd)	  N72 4 (A)	Disconnect connector A from N72 and connector 1 of X30/7	>20 kΩ	Wiring.
49.0	<b>Data line CAN H</b> Lower control field control module (N72) Γ1+ (short to pos.)	  N72 4 (A)	Disconnect connector A from N72 and connector 1 of X30/7	>20 kΩ	Wiring.
50.0	<b>Data line CAN L</b> Lower control field control module (N72) -//- open circuit	X30/7 2 (1)  N72 3 (A)	Disconnect connector A from N72 and connector 1 of X30/7	<1 Ω	Wiring.
51.0	<b>Data line CAN L</b> Lower control field control module (N72) Γ1- (short to grnd)	  N72 3 (A)	Disconnect connector A from N72 and connector 1 of X30/7	>20 kΩ	Wiring.


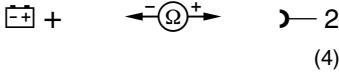
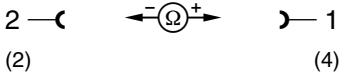
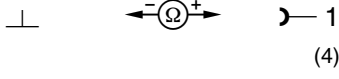
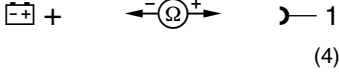
<sup>1)</sup> Observe Preparation for Test, see 22.

Electrical Test Program – Test

	Test scope	Test connection	Test condition	Nominal value	Possible cause/remedy <sup>1)</sup>
52.0	<b>Data line CAN L</b> Lower control field control module (N72) Γ1+ (short to pos.)		Disconnect connector A from N72 and connector 1 of X30/7	>20 kΩ	Wiring.
53.0	<b>Data line CAN H/L</b> Lower control field control module (N72) Γ1 (short circuit)		Disconnect connector 4 from N72 and connector 1 of X30/7	>20 kΩ	Wiring.
54.0	<b>Data line CAN H</b> Signal pick-up and activation module (SAM) (N10/1) -//- (open circuit)		Disconnect connector 4 from of N10/1 and connector 2 of X30/7	<1 Ω	Wiring.
55.0	<b>Data line CAN H</b> Signal pick-up and activation module (SAM) (N10/1) Γ1- (short to grnd)		Disconnect connector 4 from of N10/1 and connector 2 of X30/7	>20 kΩ	Wiring.








<sup>1)</sup> Observe Preparation for Test, see 22.

Electrical Test Program – Test

	Test scope	Test connection	Test condition	Nominal value	Possible cause/remedy <sup>1)</sup>
56.0	<b>Data line CAN H</b> Signal pick-up and activation module (SAM) (N10/1) Γ1+ (short to pos.)		Disconnect connector 4 from N10/1 and connector 2 of X30/7	>20 kΩ	Wiring.
57.0	<b>Data line CAN L</b> Signal pick-up and activation module (SAM) (N10/1) -//- (open circuit)		Disconnect connector 4 from N10/1 and connector 2 of X30/7	<1 Ω	Wiring.
58.0	<b>Data line CAN L</b> Signal pick-up and activation module (SAM) (N10/1) Γ1- (short to grd)		Disconnect connector 4 from N10/1 and connector 2 of X30/7	>20 kΩ	Wiring.
59.0	<b>Data line CAN L</b> Signal pick-up and activation module (SAM) (N10/1) Γ1+ (short to pos.)		Disconnect connector 4 from N10/1 and connector 2 of X30/7	>20 kΩ	Wiring.

<sup>1)</sup> Observe Preparation for Test, see 22.

Electrical Test Program – Test

	Test scope	Test connection	Test condition	Nominal value	Possible cause/remedy <sup>1)</sup>
60.0	<b>Data line CAN H/L</b> Signal pick-up and activation module (SAM) (N10/1) Γ Γ (short circuit)	N10/1 2 —  — 1 (4) (4)	Disconnect connector 4 from N10/1 and connector 2 of X30/7	>20 kΩ	Wiring.
61.0	<b>Data line CAN H</b> Roof control panel control module (N70) -//- (open circuit)	X30/7 1 —  — 6 (3) (A)	Disconnect connector A from N70 and connector 3 of X30/7	<1 Ω	Wiring.
62.0	<b>Data line CAN H</b> Roof control panel control module (N70) Γ Γ- (short to grd)	 —  — 6 (A)	Disconnect connector A from of N70 and connector 3 of X30/7	>20 kΩ	Wiring.
63.0	<b>Data line CAN H</b> Roof control panel control module (N70) Γ Γ+ (short to pos.)	 + —  — 6 (A)	Disconnect connector A from N70 and connector 3 of X30/7	>20 kΩ	Wiring.

<sup>1)</sup> Observe Preparation for Test, see 22.



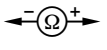

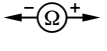

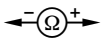

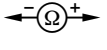
Electrical Test Program – Test

	Test scope	Test connection	Test condition	Nominal value	Possible cause/remedy <sup>1)</sup>
64.0	<b>Data line CAN L</b> Roof control panel control module (N70) -//- (open circuit)	X30/7 2 —  (3)  N70 3 —  (4)	Disconnect connector A from N70 and connector 3 of X30/7	<1 Ω	Wiring.
65.0	<b>Data line CAN L</b> Roof control panel control module (N70) Γ1- (short to grd)	  N70 3 —  (A)	Disconnect connector A from N70 and connector 3 of X30/7	>20 kΩ	Wiring.
66.0	<b>Data line CAN L</b> Roof control panel control module (N70) Γ1+ (short to pos.)	  N70 3 —  (A)	Disconnect connector A from of N70 and connector 3 of X30/7	>20 kΩ	Wiring.
67.0	<b>Data line CAN H/L</b> Roof control panel control module (N70) Γ1 (short circuit)	6 —  (A)  N32/1 3 —  (A)	Disconnect connector A from N70 and connector 3 of X30/7	>20 kΩ	Wiring.

<sup>1)</sup> Observe Preparation for Test, see 22.



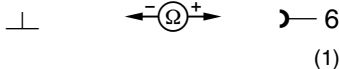
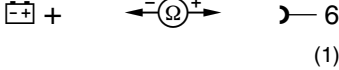
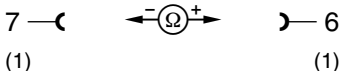
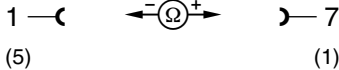


Electrical Test Program – Test

	Test scope	Test connection	Test condition	Nominal value	Possible cause/remedy <sup>1)</sup>
68.0	<b>Data line CAN H</b> Left front ESA control module (with memory) (N32/1) -//- (open circuit)	X30/7 1 —  (4)  N32/1 ) — 7 (1)	Disconnect connector 1 from N32/1 and connector 4 of X30/7	<1 Ω	Wiring.
69.0	<b>Data line CAN H</b> Left front ESA control module (with memory) (N32/1) Γ 1- (short to grnd)	  N32/1 ) — 7 (1)	Disconnect connector 1 from N32/1 and connector 4 of X30/7	>20 kΩ	Wiring.
70.0	<b>Data line CAN H</b> Left front ESA control module (with memory) (N32/1) Γ 1+ (short to pos.)	 +  N32/1 ) — 7 (1)	Disconnect connector 1 from N32/1 and connector 4 of X30/7	>20 kΩ	Wiring.
71.0	<b>Data line CAN L</b> Left front ESA control module (with memory) (N32/1) -//- (open circuit)	X30/7 2 —  (4)  N32/1 ) — 6 (1)	Disconnect connector 1 from N32/1 and connector 4 of X30/7	<1 Ω	Wiring.



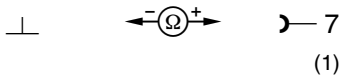
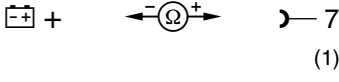
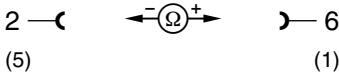
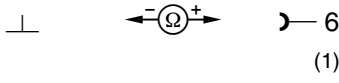
<sup>1)</sup> Observe Preparation for Test, see 22.

Electrical Test Program – Test

 	Test scope	Test connection	Test condition	Nominal value	Possible cause/remedy <sup>1)</sup>
72.0	<b>Data line CAN L</b> Left front ESA control module (with memory) (N32/1) Γ1- (short to grnd)		Disconnect connector 1 from N32/1 and connector 4 of X30/7	>20 kΩ	Wiring.
73.0	<b>Data line CAN L</b> Left front ESA control module (with memory) (N32/1) Γ1+ (short to pos.)		Disconnect connector 1 from of N32/1 and connector 4 of X30/7	>20 kΩ	Wiring.
74.0	<b>Data line CAN H/L</b> Left front ESA control module (with memory) (N32/1) Γ1 (short circuit)		Disconnect connector 1 from N32/1 and connector 4 of X30/7	>20 kΩ	Wiring.
75.0	<b>Data line CAN H</b> Right front ESA control module (with memory) (N32/2) -//- (open circuit)		Disconnect connector 1 from N32/2 and connector 5 of X30/7	<1 Ω	Wiring.


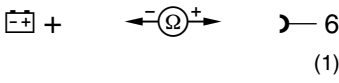
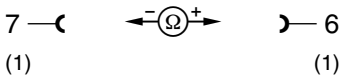
<sup>1)</sup> Observe Preparation for Test, see 22.

Electrical Test Program – Test

 	Test scope	Test connection	Test condition	Nominal value	Possible cause/remedy <sup>1)</sup>
76.0	<b>Data line CAN H</b> Right front ESA control module (with memory) (N32/2) Γ 1- (short to grnd)		Disconnect connector 1 from of N32/2 and connector 5 of X30/7	>20 kΩ	Wiring.
77.0	<b>Data line CAN H</b> Right front ESA control module (with memory) (N32/2) Γ 1+ (short to pos.)		Disconnect connector 1 from of N32/2 and connector 5 of X30/7	>20 kΩ	Wiring.
78.0	<b>Data line CAN L</b> Right front ESA control module (with memory) (N32/2) -// (open circuit)	X30/7 	Disconnect connector 1 from of N32/2 and connector 5 of X30/7	<1 Ω	Wiring.
79.0	<b>Data line CAN L</b> Right front ESA control module (with memory) (N32/2) Γ 1- (short to grnd)		Disconnect connector 1 from of N32/2 and connector 5 of X30/7	>20 kΩ	Wiring.


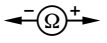
<sup>1)</sup> Observe Preparation for Test, see 22.

Electrical Test Program – Test

	Test scope	Test connection	Test condition	Nominal value	Possible cause/remedy <sup>1)</sup>
80.0	<b>Data line CAN L</b> Right front ESA control module (with memory) (N32/2) Γ1+ (short to pos.)		Disconnect connector 1 from of N32/2 and connector 5 of X30/7	>20 kΩ	Wiring.
81.0	<b>Data line CAN H/L</b> Right front ESA control module (with memory) (N32/2) Γ1 (short circuit)		Disconnect connector 1 from N32/1	>20 kΩ	Wiring.
82.0	<b>Non-USA vehicles only, continue to next test step.</b>				
83.0	<b>Non-USA vehicles only, continue to next test step.</b>				


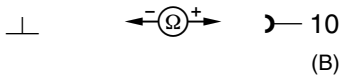
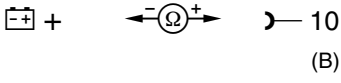
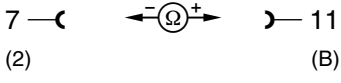
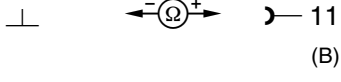
<sup>1)</sup> Observe Preparation for Test, see 22.

Electrical Test Program – Test

	Test scope	Test connection	Test condition	Nominal value	Possible cause/remedy <sup>1)</sup>
84.0	<b>Non-USA vehicles only, continue to next test step.</b>				
85.0	<b>Non-USA vehicles only, continue to next test step.</b>				
86.0	<b>Non-USA vehicles only, continue to next test step.</b>				
87.0	<b>Non-USA vehicles only, continue to next test step.</b>				
88.0	<b>Non-USA vehicles only, continue to next test step.</b>				
89.0	<b>Data line CAN H</b> Electronic ignition switch control module (N73) -//- (open circuit)	N10/1 6 —  — 10 (2) (B)	Disconnect connector B from N73 and connector 2 of N10/1	<1 Ω	Wiring.



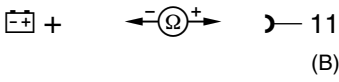
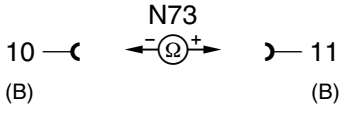
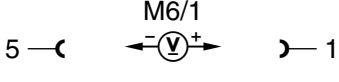
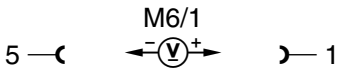
1) Observe Preparation for Test, see 22.

Electrical Test Program – Test

	Test scope	Test connection	Test condition	Nominal value	Possible cause/remedy <sup>1)</sup>
90.0	<b>Data line CAN H</b> Electronic ignition switch control module (N73) ΓΓ- (short to grnd)		Disconnect connector B from N73 and connector 2 from N10/1	>20 kΩ	Wiring.
91.0	<b>Data line CAN H</b> Electronic ignition switch control module (N73) ΓΓ+ (short to pos.)		Disconnect connector B from N73 and connector 2 from N10/1	>20 kΩ	Wiring.
92.0	<b>Data line CAN L</b> Electronic ignition switch control module (N73) -//- (open circuit)		Disconnect connector B from N73 and connector 2 from N10/1	<1 Ω	Wiring.
93.0	<b>Data line CAN L</b> Electronic ignition switch control module (N73) ΓΓ- (short to grnd)		Disconnect connector B from N73 and connector 2 from N10/1	>20 kΩ	Wiring.


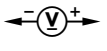
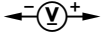
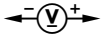



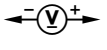

<sup>1)</sup> Observe Preparation for Test, see 22.

Electrical Test Program – Test

 	Test scope	Test connection	Test condition	Nominal value	Possible cause/remedy <sup>1)</sup>
94.0	<b>Data line CAN L</b> Electronic ignition switch control module (N73) Γ1+ (short to pos.)		Disconnect connector B from N73 and connector 2 from N10/1	>20 kΩ	Wiring.
95.0	<b>Data line CAN H/L</b> Electronic ignition switch control module (N73) Γ1 (short circuit)		Disconnect connector B from N73 and connector 2 of N10/1	>20 kΩ	Wiring.
96.0	<b>Wiper motor (M6/1)</b> <b>Stage: Interval wipe</b> Voltage supply		Ignition: <b>ON</b> Disconnect connector from M6/1, Set combination switch (S4) to: Stage: Interval wipe	11 – 14 V, approx. 10 seconds are measureable.	Wiring, ⇒ 100.0, 102.0, 106.0, 110.0, Driver-side fuse and relay module box (K40/2), Wiper stage 1 relay (K40/2k1)
97.0	<b>Wiper motor (M6/1)</b> <b>Stage 1</b> Voltage supply		Ignition: <b>ON</b> Disconnect connector from M6/1, Set combination switch (S4) to: Stage 1	11 – 14 V, approx. 10 seconds are measureable.	Wiring, ⇒ 100.0, 102.0, 106.0, 110.0, K40/2, K40/2k1

<sup>1)</sup> Observe Preparation for Test, see 22.


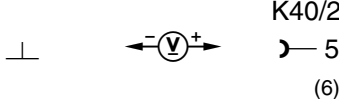
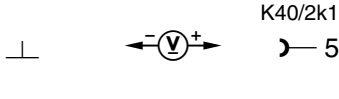
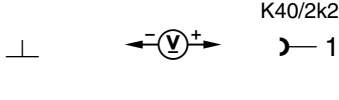
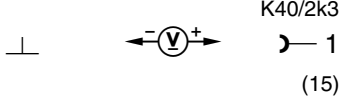
## Electrical Test Program – Test

⇒ 	Test scope	Test connection	Test condition	Nominal value	Possible cause/remedy <sup>1)</sup>
98.0	<b>Wiper motor (M6/1) Stage 2</b> Voltage supply	M6/1 5 —  — 3 (M7) (M7)	Ignition: <b>ON</b> Disconnect connector from M6/1, Set combination switch (S4) to: Stage 2	11 – 14 V, approx. 5 seconds are measurable.	Wiring, ⇒ 100.0, 103.0, 107.0, 110.0, K40/2, Wiper stage 2 relay (K40/2k2).
99.0	<b>Windshield washer pump (M5/1)</b> Voltage supply	M5/1 1 —  — 2 (M7) (M7)	Disconnect connector from M5/1, Set combination switch (S4) to: Wash	11 – 14 V	Wiring, ⇒ 100.0, 104.0, 108.0, 111.0, K40/2, Windshield washer relay (K40/2k3).
100.0	<b>Wiper motor (M6/1) Circuit 31</b>	M6/1 5 —  —  +	Ignition: <b>OFF</b>	11 – 14 V	Wiring, ⇒ 100.1
100.1	<b>Circuit 31</b>	K40/2 4 —  —  + (M7)	Ignition: <b>OFF</b>	11 – 14 V	Wiring, ⇒ 100.2, K40/2
100.2	<b>Circuit 31</b>	K40/2 4 —  —  + (C1)	Ignition: <b>OFF</b>	11 – 14 V	Wiring.

<sup>1)</sup> Observe Preparation for Test, see 22.


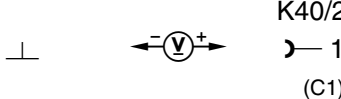
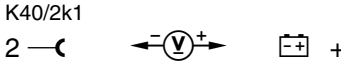
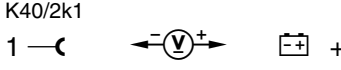
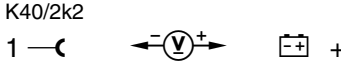


Electrical Test Program – Test

⇒ 	Test scope	Test connection	Test condition	Nominal value	Possible cause/remedy <sup>1)</sup>
101.0	<b>Windshield wiper system Circuit 31b</b> Activation of: Signal pick-up and activation module (SAM) (N10/1) by wiper motor (M6/1)		Remove N10/1 from K40/2 Ignition: <b>ON</b> Wiper arm "parked"	<1 V	Wiper motor (M6/1)
102.0	<b>Wiper stage 1 relay (K40/2k1)</b> Voltage supply Circuit 15R		Remove wiper stage 1 relay (K40/2k1). Ignition: <b>ON</b>	11 – 14 V	Wiring, ⇒ 105.0, K40/2
103.0	<b>Wiper stage 2 relay (K40/2k2)</b> Voltage supply Circuit 15R		Remove wiper stage 2 relay (K40/2k2). Ignition: <b>ON</b>	11 – 14 V	Wiring, ⇒ 105.0, K40/2
104.0	<b>Windshield washer relay (K40/2k3)</b> Voltage supply Circuit 15R		Remove windshield washer relay (K40/2k3). Ignition: <b>ON</b>	11 – 14 V	Wiring, ⇒ 105.0, K40/2


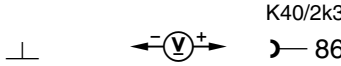
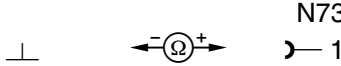
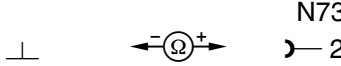
<sup>1)</sup> Observe Preparation for Test, see 22.

Electrical Test Program – Test

⇒ 	Test scope	Test connection	Test condition	Nominal value	Possible cause/remedy <sup>1)</sup>
105.0	<b>Driver-side fuse and relay module box (K40/2)</b> Voltage supply Circuit 15R		Remove connector C1 from K40/2 Ignition: <b>ON</b>	11 – 14 V	Wiring.
106.0	<b>Windshield wiper system Interval wipe</b> Activation of: Wiper stage 1 relay (K40/2k1) by Signal pick-up and activation module (SAM) (N10/1)		Remove wiper stage 1 relay (K40/2k1). Ignition: <b>ON</b> Combination switch (S4) set to: Interval wipe	Cycled voltage: 11 – 14 V	⇒ 110.0, N10/1, K40/2, Electronic ignition switch control module (N73).
107.0	<b>Wiper stage 1</b> Activation of: Wiper stage 1 relay (K40/2k1) by Signal pick-up and activation module (SAM) (N10/1)		Remove wiper stage 1 relay (K40/2k1). Ignition: <b>ON</b> Combination switch (S4) set to: Stage 1	11 – 14 V	⇒ 110.0, N10/1, K40/2, Electronic ignition switch control module (N73).
108.0	<b>Wiper stage 2</b> Activation of: Wiper stage 2 relay (K40/2k2) by Signal pick-up and activation module (SAM) (N10/1)		Remove wiper stage 2 relay (K40/2k2). Ignition: <b>ON</b> Combination switch (S4) set to: Stage 2	11 – 14 V	⇒ 110.0, N10/1, K40/2, Electronic ignition switch control module (N73).
















1) Observe Preparation for Test, see 22.

## Electrical Test Program – Test

⇒ 	Test scope	Test connection	Test condition	Nominal value	Possible cause/remedy <sup>1)</sup>
109.0 B14B4	<b>Windshield wiper system Wash</b> Activation of: windshield washer relay (K40/2k3) by Signal pick-up and activation module (SAM) (N10/1)	 K40/2k3 86	Remove windshield washer relay (K40/2k3). Ignition: <b>ON</b> Combination switch (S4) set to: Wash	11 – 14 V	⇒ 111.0, N10/1, K40/2, Electronic ignition switch control module (N73).
110.0	<b>Combination switch (S4)</b> Activation of electronic ignition switch control module (N73)	 N73 1 (B)	Disconnect connector B from N73 Ignition: <b>ON</b>  <b>Interval wipe:</b> <b>Stage 1:</b> <b>Stage 2:</b>	31.5 – 31.7 Ω 31.0 – 31.1 Ω 30.8 – 30.9 Ω	Wiring, S4
111.0	<b>Combination switch (S4) Wash function</b> Activation of electronic ignition switch control module (N73)	 N73 2 (B)	Remove connector B from N73 Ignition: <b>ON</b> Combination switch (S4) set to:  Single wipe: Wash:	31.0 – 31.1 Ω 30.8 – 30.9 Ω	Wiring, S4





1) Observe Preparation for Test, see 22.

Electrical Test Program – Test

⇒ 	Test scope	Test connection	Test condition	Nominal value	Possible cause/remedy <sup>1)</sup>
112.0 B14B4 B1643	<b>Rain sensor (B38)</b> Actuation line for rain sensor (B38) -//- (open circuit)	B38 3 —  ←  → N70 3 —  ←  → 3 (E)	Disconnect connector (E) from N70 and connector from B38	<1 Ω	Wiring.
113.0 B1217 B1643	<b>Rain sensor (B38)</b> Actuation line for rain sensor (B38) Γ1+ (short circuit to pos.)	B38 3 —  ←  →  +	Disconnect connector (E) from N70 and connector from B38	>20 kΩ	Wiring.
114.0 B1217 B1643	<b>Rain sensor (B38)</b> Actuation line for rain sensor (B38) Γ1- (short circuit to grnd)	B38 3 —  ←  → N70 3 —  ←  → ⊥	Disconnect connector (E) from N70 and connector from B38	>20 kΩ	Wiring.
115.0	<b>Rear window wiper motor (M6/4)</b> Activation by PSE control module (A37)	M6/4 3 —  ←  →  + (1)	Disconnect connector from M6/4 Tailgate window wiper switch (S6/1s4): <b>Activate Wipe</b>	11 – 14 V	Wiring, ⇒ 118.0, A37, Signal pick-up and activation module (SAM) (N10/1).


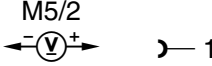


1) Observe Preparation for Test, see 22.

Electrical Test Program – Test

⇒ 	Test scope	Test connection	Test condition	Nominal value	Possible cause/remedy <sup>1)</sup>
116.0 B1483	<b>Windshield washer pump (M5/1)</b> <b>Model 210 Wagon</b> <b>Activate relay: Wash function</b>	1 —  4	Tailgate window wiper switch (S6/1s4): <b>Activate Wash</b>	11 – 14 V	Wiring, ⇒ 117.0, 118.0, N10/1, K40/2
117.0 B1483	<b>Windshield washer relay (K40/2k3)</b> Activation by: Signal pick-up and activation module (SAM) (N10/1)	K40/2k23 88.1 —  +	Remove windshield washer relay (K40/2k3) Tailgate window wiper switch (S6/1s4): <b>Activate Wash</b>	11 – 14 V	Wiring, ⇒ 111.0, N10/1, K40/2
118.0 B1142	<b>Tailgate window wiper switch (S6/1s4)</b> Activation by: Signal pick-up and activation module (SAM) (N10/1)	⊥  N10/1 4 (1)	Disconnect connector 2 from N10/1 Switch (S6/1s4): <b>Rest position:</b> <b>Press wipe and keep depressed:</b> <b>Press wash and keep depressed:</b>	>20 kΩ 200 Ω <1 Ω	Wiring, (S6/1s4).


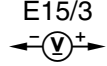
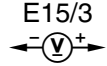
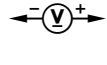
<sup>1)</sup> Observe Preparation for Test, see 22.

Electrical Test Program – Test

⇒ 	Test scope	Test connection	Test condition	Nominal value	Possible cause/remedy <sup>1)</sup>
119.0	<b>Headlamp washer pump (M5/2)</b> Activation of HCS pump relay (K40/2k5)	M5/2 2 —  — 1	Press HCS switch (S4/1).	11 – 14 V, measurable for approx. 1 second.	Wiring, ⇒ 121.0, N10/1, K40/2
120.0	<b>HCS pump relay (K40/2k5)</b> Activation of: Signal pick-up and activation module (SAM) (N10/1)	K40/2k5 1 —  +	Remove HCS pump relay (K40/2k5). Press HCS switch (S4/1).	11 – 14 V, measurable for approx. 1 second.	Wiring, ⇒ 121.0, N10/1, K40/2
121.0 B1141	<b>HCS switch (S4/1)</b> Activation of: Signal pick-up and activation module (SAM) (N10/1)	N10/1 7 —  + (1)	Disconnect connector 1 from N10/1. Press HCS switch (S4/1).	11 – 14 V	Wiring, N10/1, K40/2
122.0	<b>Dome lamp with delay/front reading lamp (N70e1)</b> Activation by PSE control module (A37)		Ignition: <b>OFF</b> Door switch ON/OFF (N70s2)  Driver/passenger door: <b>OPEN</b> <b>CLOSED</b>	N70e1  <b>ON</b> <b>OFF</b>	DM, B&A, Vol. 1, 3.4 PSE, 23, N70, A37


<sup>1)</sup> Observe Preparation for Test, see 22.

Electrical Test Program – Test

⇒ 		Test scope	Test connection	Test condition	Nominal value	Possible cause/remedy <sup>1)</sup>
123.0		<b>Rear dome lamp (E15/3)</b> Activation of PSE (A37) via Roof control panel control module (N70)  <b>Except Model 208.4</b>	2 —  — 1 E15/3	Rear dome lampswitch on/off (N70s2): <b>ON</b>	11 – 14 V	Wiring, N70, A37
124.0		<b>Rear dome lamp (E15/3)</b> Activation via PSE control module (A37)	2 —  — 1 E15/3	Rear dome lampswitch on/off (N70s2): <b>OFF</b> Dome lamp switch on/off (N70s4): <b>ON</b>  Left/right rear door: <b>OPEN</b> Left/right rear door: <b>CLOSED</b>	11 – 14 V  11 – 14 V <1 V	Wiring, DM, B&A, Vol. 1, 3.4 PSE, 23, N70, PSE control module (A37)
125.0		<b>Left/right D-pillar interior lamp (E25/3, E15/4), Model 210 Wagon</b> Activation of PSE control module (A37) by roof control panel control module (N70)	2 —  — 1 E25/3 E25/4	Rear dome lampswitch on/off (N70s2): <b>ON</b>	11 – 14 V	Wiring, N70, A37

<sup>1)</sup> Observe Preparation for Test, see 22.


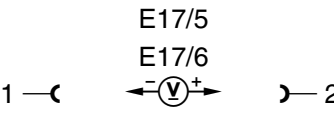
Electrical Test Program – Test

⇒ 		Test scope	Test connection	Test condition	Nominal value	Possible cause/remedy <sup>1)</sup>
126.0		<b>Left/right D-pillar interior lamp (E25/3, E15/4), Model 210 Wagon</b> Activation of rear dome lamp (E15/3) by PSE control module (A37)	E25/3 E25/4 2 —( ←(V)→ )— 1	Rear dome lampswitch on/off (N70s2): <b>OFF</b> Dome lamp switch on/off (N70s4): <b>ON</b> <b>Rear door left/right:</b> <b>OPEN</b> 11 – 14 V <b>CLOSED</b> <1 V <b>Tailgate:</b> <b>OPEN</b> 11 – 14 V <b>CLOSED</b> <1 V	11 – 14 V <1 V 11 – 14 V <1 V	Wiring, DM, B&A, Vol. 1, 3.4 PSE, 23, Tailgate closing assist switch/interior illumination switch (A12s1), A37, N70
127.0 B1407		<b>Left/right front door entrance/exit lamp (E17/9, E17/10)</b> Activation from frontdriver/passenger-side door control module (N69/1, N69/2)	E17/9 E17/10 1 —( ←(V)→ )— 2	Ignition: <b>OFF</b> Rear dome lamp switch on/off (N70s2): <b>ON</b> <b>Driver/passenger door:</b> <b>OPEN</b> 11 – 14 V <b>CLOSED</b> <1 V	11 – 14 V <1 V	Wiring, DM, B&A, Vol. 1, 3.4 PSE, 23, A37, N70, N69/1, N69/2

1) Observe Preparation for Test, see 22.


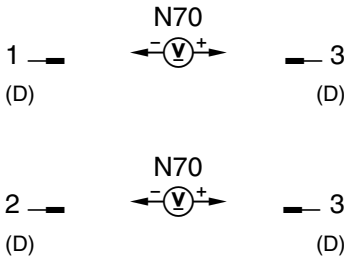
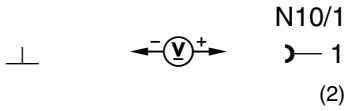
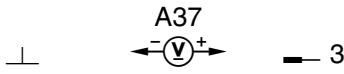


Electrical Test Program – Test

⇒ 		Test scope	Test connection	Test condition	Nominal value	Possible cause/remedy <sup>1)</sup>
128.0 B1407		<b>Left/right rear door entrance/exit lamp (E17/5, E17/6)</b> Activation from rear driver/passenger-side door control module (N69/3, N69/4)		Ignition: <b>OFF</b> Rear dome lampswitch on/off (N70s2): <b>ON</b>  <b>Left/right rear door:</b> <b>OPEN</b> <b>CLOSED</b>	11 – 14 V,  11 – 14 V, <1 V	Wiring, DM, B&A, Vol. 1, 3.4 PSE, 23, A37, N70, N69/3, N69/4
129.0		<b>Front dome lamp with delay/reading lamp (N70e1)</b> <b>Delay: 5 min.</b> Roof control panel control module (N70)		Ignition: <b>OFF</b> Door: <b>OPEN</b>  After approx. 5 minutes:	N70 illuminated.  N70 goes out.	N70
130.0		<b>Entrance/exit lamps (E17/5, E17/6, E17/9, E17/10)</b> Roof control panel control module (N70)		Ignition: <b>OFF</b> Door: <b>OPEN</b>  After approx. 5 minutes:	Entrance/exit lamps illuminated.  Entrance/exit lamps go out.	N70

1) Observe Preparation for Test, see 22.

Electrical Test Program – Test

⇒ 		Test scope	Test connection	Test condition	Nominal value	Possible cause/remedy <sup>1)</sup>
131.0 B1212		<b>Left and right vanity mirror (E14/5)</b> Voltage supply Activation by Roof control panel control module (N70)		Ignition: <b>OFF</b> Disconnect connector D from N70	11 – 14 V	⇒ 6.0 N70
132.0 B1115		<b>Heated rear window</b> Activation of signal pick-up and activation module (SAM) (N10/1) by switch in A/C pushbutton control module (Automatic A/C) (N22)		Ignition: <b>ON</b>  Heated rear window on, keep button depressed:  Switch not pressed:  Heated rear window off, keep button depressed:	6.2 – 8.0 V  <1 V  6.2 – 8.0 V	Wiring, N22
133.0		<b>Heated rear window</b> Activation of relays in A37		Ignition: <b>ON</b>  Heated rear window on.	11– 14 V	Wiring, A37

1) Observe Preparation for Test, see 22.