\Rightarrow	Test scope	Test connectio	on	Test condition	Nominal value	Possible cause/Remedy
1.0	RCL control module (N54) Voltage supply	27 — (N5) [±] →	Ignition: OFF	11 – 14 V	Wiring, Circuit 30, Circuit 31, ⇒ 1.1
		27 — C		Ignition: OFF Ignition: ON	< 1 V 11 – 14 V	Wiring, Circuit 15, Circuit 31, ⇒ 1.2
1.1	Circuit 30	N5 		Ignition: OFF	11 – 14 V	Wiring, Circuit 30
1.2	Circuit 15	N5 	:::::	Ignition: OFF Ignition: ON	< 1 V 11 – 14 V	Wiring, Circuit 15

\Rightarrow	Test scope	Test conr	nection		Test condition	Nominal value	Possible cause/Remedy
2.0	IR DAS control module (N54/1) Voltage supply	15 — ((1.1)	N54/1) — 26 (1.12)	Ignition: OFF	11 – 14 V	Wiring, Circuit 30, Circuit 31, ⇒ 2.1
		15 — ((1.1)	N54/1	> — 23 (1.9)	Ignition: OFF Ignition: ON	< 1 V 11 – 14 V	Wiring, Circuit 15, Circuit 31, ⇒ 2.2
2.1	Circuit 30		N54/1) — 26 (1.12)	Ignition: OFF	11 – 14 V	Wiring, Circuit 30
2.2	Circuit 15		N54/1 	> — 23 (1.9)	Ignition: OFF Ignition: ON	< 1 V 11 – 14 V	Wiring, Circuit 15

\Rightarrow	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
3.0	Left front door IR receiver (A26/1) Voltage supply Models 140, 202, 210 Model 129	N54 13 - (11 – 14 V 11 – 14 V	Wiring, ⇒ 3.1 A26/1, N54
3.1	A26/1 Voltage supply Models 140, 202, 210 Model 129	$ \begin{array}{ccccc} & & & & & & & \\ 2 & & & & & & & & \\ 3 & & & & & & & & \\ \end{array} $	Remove A26/1	11 – 14 V 11 – 14 V	Wiring, N54

\Rightarrow		Test scope	Test conn	ection		Test condition	Nominal value	Possible cause/Remedy
4.0		Left front door IR receiver (A26/1) IR signal control line	27 — (N54 	> — 18	Lock vehicle by pointing IR transmitter at left front door IR receiver, keep IR transmitter button pressed. After vehicle completes locking process, read value. Afterwards, release button and read second value.	Difference of values between button depressed and button released approx. 0.3 – 1.5 V	Wiring, A26/1, IR transmitter key.
5.0	8005 8009	Left front door IR receiver (A26/1) Red indicator lamps Models 140, 202, 210 Model 129		N54		Disconnect N54 from	Red indicator lamps off. Red indicator lamps light.	Wiring, A26/1

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\Rightarrow		Test scope	Test con	nection		Test condition	Nominal value	Possible cause/Remedy
6.0	8006 8010	Left front door IR receiver (A26/1) Green indicator lamps Models 140, 202, 210	27 10	N54 		Disconnect N54 from	Green indicator lamps off.	Wiring, A26/1
		Model 129	27 20	-()- -()-	13 9	Both bridges connected.	Green indicator lamps light.	
7.0		Trunk lid IR receiver (A26/3) Voltage supply Models 140, 202, 210 Model 129	24 — ఁ 24 — ఁ	N54 (Ŷ) ⁺) —5) —12		11 – 14 V 11 – 14 V	Wiring, ⇒ 7.1, A26/3, N54
7.1		A26/3 Voltage supply Models 140, 202, 210 Model 129	2— ‹ 7— ‹	A26/3 	≻ 3	Remove A26/3	11 – 14 V 11 – 14 V	Wiring, N54

\Rightarrow		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
8.0		Trunk lid IR receiver (A26/3) IR signal control line	N54 	Lock vehicle by pointing IR transmitter at trunk lid IR receiver, keep IR transmitter button pressed. After vehicle completes locking process, read value. Afterwards, release button and read second value.	Difference of values between button depressed and button released approx. 0.3 – 1.5 V	Wiring, A26/3, IR transmitter.
9.0	8005 8009	Trunk lid IR receiver (A26/3) Red indicator lamps		Disconnect N54 from	Red indicator lamps off. Red indicator lamps light.	Wiring, A26/3

\Rightarrow		Test scope	Test con	nection		Test condition	Nominal value	Possible cause/Remedy
10.0	8006 8010	Trunk lid IR receiver (A26/3) Green indicator lamps Models 140, 202, 210	27 20	N54 		Disconnect N54 from	Green indicator lamps off.	Wiring, A26/3
		Model 129	27 2	-(-)- -(-)-	24 9	Both bridges connected.	Green indicator lamps light.	
11.0		Right front door IR receiver (A26/2) Voltage supply Model 140 Model 129	13 — ‹ 15 — ‹	N54 	> —22 > —22		11 – 14 V 11 – 14 V	Wiring, ⇒ 11.1, A26/2, N54
11.1		A26/2 Voltage supply Model 140 Model 129	2 — ‹ 7 — ‹	A26/2 (Ŷ)+ (Ŷ)+	> −3	Remove A26/2	11 – 14 V 11 – 14 V	Wiring, N54

\Rightarrow		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
12.0		Right front door IR receiver (A26/2) IR signal control line Models 129, 140	N54 	Lock vehicle by pointing IR transmitter at right front door IR receiver, keep IR transmitter button pressed. After vehicle completes locking process, read value. Afterwards, release button and read second value.	Difference of values between button depressed and button released approx. 0.3 – 1.5 V	Wiring, A26/2, IR transmitter.
13.0	8005 8009	Right front door IR receiver (A26/2) Red indicator lamps Model 140 Model 129			Red indicator lamps off. Red indicator lamps light.	Wiring, A26/2

\Rightarrow		Test scope	Test con	nection		Test condition	Nominal value	Possible cause/Remedy
14.0	8006 8010	Right front door IR receiver (A26/2) Green indicator lamps Model 140 Model 129	27 2 27 10	N54 -(Disconnect N54 from	Green indicator lamps off. Green indicator lamps light.	Wiring, A26/2
15.0		RCL receiver (interior rear view mirror) (A26/7) Voltage supply Models 202, 210	16 — ((1.2)	N54/1 	> — 25 (1.11)		4.5 – 5.5 V	Wiring, ⇒ 15.1 A26/7, N54, N54/1
15.1		A26/7 Voltage supply	13 — c	A26/7 ~ ¯ (Y) ⁺ ~	> —8	Remove A26/7	4.5 – 5.5 V	Wiring, N54/1

\Rightarrow	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
16.0	RCL receiver (interior rear view mirror) (A26/7) IR signal control line Models 202, 210	N54 	Lock vehicle by pointing IR transmitter at RCL receiver (interior rear view mirror), keep IR transmitter button pressed. After vehicle completes locking process, read value. Afterwards, release button and read second value.	Difference of values between button depressed and button released approx. 0.3 – 1.0 V	Wiring, A26/7, IR transmitter key.
17.0	RCL receiver (interior rear view mirror) (A26/7) Red indicator lamps Models 202, 210	N54 1	No or only 1 bridge (part no. 124 589 37 63 00)	Red indicator lamps off. Red indicator lamps light.	Wiring, A26/7

\Rightarrow	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
18.0	RCL receiver (interior rear view mirror) (A26/7) Green indicator lamps Models 202, 210		Disconnect N54 from	Green indicator lamps off. Green indicator lamps light.	Wiring, A26/7

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\Rightarrow	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
19.0	RCL control module (N54) Output SN1 Models 140, 202, 210	N54 	All doors closed and locked.	11 – 14 V	Wiring, ⇒ 1.0, N54
			Unlock vehicle by pointing IR transmitter at left front door IR receiver (A26/1), keeping IR transmitter button pressed.	< 1V Green indicator lamps blink.	Wiring, ⇒ 1.0, 3.0, 6.0, A26/1, N54
			Unlock vehicle by pointing IR transmitter at right front door IR receiver (A26/2) (model 140 only), keeping IR transmitter button pressed.	< 1V Green indicator lamps blink.	Wiring, ⇒ 1.0, 11.0, 14.0, A26/2, N54
			Unlock vehicle by pointing IR transmitter at trunk lid IR receiver (A26/3), keeping IR transmitter button pressed.	< 1V Green indicator lamps blink.	Wiring, ⇒ 1.0, 7.0, 10.0, A26/3, N54
			Unlock vehicle by pointing IR transmitter at RCL receiver (interior rearview mirror) (A26/7) (models 202, 210 only), keeping IR transmitter button pressed.	< 1V Green indicator lamps blink.	Wiring, ⇒ 1.0, 2.0, 15.0, 18.0, A26/7, N54, N54/1

\Rightarrow	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
20.0	RCL control module (N54) Output SN2 Models 140, 202, 210	N54 	All doors closed and unlocked.	11 – 14 V	Wiring, ⇒ 1.0, N54
			Lock vehicle by pointing IR transmitter at left front door IR receiver (A26/1), keeping IR transmitter button pressed.	< 1V Red indicator lamps blink.	Wiring, ⇒ 1.0, 3.0, 5.0, A26/1, N54
			Lock vehicle by pointing IR transmitter at right front door IR receiver (A26/2) (model 140 only), keeping IR transmitter button pressed.	< 1V Red indicator lamps blink.	Wiring, ⇒ 1.0, 11.0, 13.0, A26/2, N54
			Lock vehicle by pointing IR transmitter at trunk lid IR receiver (A26/3), keeping IR transmitter button pressed.	< 1V Red indicator lamps blink.	Wiring, ⇒ 1.0, 7.0, 9.0, A26/3, N54
			Lock vehicle by pointing IR transmitter at RCL receiver (interior rearview mirror) (A26/7) (models 202, 210 only), keeping IR transmitter button pressed.	< 1V Red indicator lamps blink.	Wiring, ⇒ 1.0, 2.0, 15.0, 17.0, A26/7, N54, N54/1

\Rightarrow	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
21.0	IR DAS control module (N54/1) Input SN1 Models 140, 202, 210	N54/1	All doors closed and locked. Unlock vehicle by pointing IR transmitter at left front door IR receiver (A26/1), keeping IR transmitter button pressed.	11 – 14 V < 1V Green indicator lamps blink.	Wiring, ⇒ 1.0, N54 Wiring, ⇒ 1.0, 19.0 A26/1, N54
			Unlock vehicle by pointing IR transmitter at right front door IR receiver (A26/2) (model 140 only), keeping IR transmitter button pressed.	< 1V Green indicator lamps blink.	Wiring, ⇒ 1.0, 19.0 A26/2, N54
			Unlock vehicle by pointing IR transmitter at trunk lid IR receiver (A26/3), keeping IR transmitter button pressed.	< 1V Green indicator lamps blink.	Wiring, ⇒ 1.0, 19.0 A26/3, N54
			Unlock vehicle by pointing IR transmitter at RCL receiver (interior rearview mirror) (A26/7) (models 202, 210 only), keeping IR transmitter button pressed.	< 1V Green indicator lamps blink.	Wiring, ⇒ 1.0, 2.0, 19.0 A26/7, N54, N54/1

⇒	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
22.0	IR DAS control module (N54/1) Input SN2 Models 140, 202, 210	N54 	All doors closed and unlocked. Lock vehicle by pointing IR transmitter at left front door IR receiver (A26/1), keeping IR transmitter button pressed.	11 – 14 V < 1V Red indicator lamps blink.	Wiring, N54 Wiring, ⇒ 1.0, 20.0, A26/1, N54
			Lock vehicle by pointing IR transmitter at right front door IR receiver (A26/2) (model 140 only), keeping IR transmitter button pressed.	< 1V Red indicator lamps blink.	Wiring, ⇒ 1.0, 20.0, A26/2, N54
			Lock vehicle by pointing IR transmitter at trunk lid IR receiver (A26/3), keeping IR transmitter button pressed.	< 1V Red indicator lamps blink.	Wiring, ⇒ 1.0, 20.0, A26/3, N54
			Lock vehicle by pointing IR transmitter at RCL receiver (interior rearview mirror) (A26/7) (models 202, 210 only), keeping IR transmitter button pressed.	< 1V Red indicator lamps blink.	Wiring, ⇒ 1.0, 2.0, 20.0, A26/7, N54, N54/1

\Rightarrow	Test scope	Test connec	ction		Test condition	Nominal value	Possible cause/Remedy
23.0	Lock switch circuit Left front door lock switch (S86/1) (model 140), Right front door lock switch (S87/1) (models 202, 210), Trunk lid lock switch (S88/2) (models 140, 202, 210)		N54/1 	(1.12)	Disconnect N54/1 from	< 1V 11 – 14 V	Wiring, S86/1 or S87/1
			N54/1 	— 26 (1.12)	S86/1 or S87/1: Rest position S86/1 or S87/1: Hold: lock	< 1V 11 – 14 V	
	Left front door lock switch (S86/1) (model 129) and ATA/CF microswitch (S88s1)		N54 		Disconnect N54 from	< 1V 11 – 14 V	Wiring, S86/1

4.8

\Rightarrow	Test scope	Test conr	nection		Test condition	Nominal value	Possible cause/Remedy
24.0	Lock switch circuit Left front door lock switch (S86/1) (model 140), Right front door lock switch (S87/1) (models 202, 210),		N54/1		Disconnect N54/1 from		Wiring, S88/2
	Trunk lid lock switch (S88/2) (models 140, 202, 210)	22 — ((1.8)	<u> </u>) — 26 (1.12)	S88/2: Rest position S88/2: Hold: unlock	< 1V 11 – 14 V	
		24 — ((1.10)	N54/1 	> ─ 26 (1.12)	S88/2: Rest position S88/2: Hold: lock	< 1V 11 – 14 V	
	Left front door lock switch (S86/1) (model 129) and ATA/CF microswitch (S88s1)		N54		Disconnect N54 from		Wiring, S88s1
		11 —€	<u></u>) —9	S88/2: Rest position S88/2: Hold: lock	< 1V 11 – 14 V	

\Rightarrow	Test scope	Test con	nection		Test condition	Nominal value	Possible cause/Remedy
25.0	Left front door actuator (S47) Switch and working element Model 129	27 (N54	> — 6	Disconnect N54 from	11 – 14 V	Wiring, S47
26.0	RCL control module (N54) output deactivation (PSE/CL) Model 129	27 — (N54/1) —23	All doors closed and locked. Disconnect supply pump (M14/1, M14/2) Unlock vehicle by pointing IR transmitter at one IR receiver, keeping IR transmitter button pressed.	Green indicator lamps blink, vehicle unlocks. 11 – 14 V for approx. 0.6 seconds. (values measurable by using Fluke 83, 88).	Wiring, ⇒ 3.0, 4.0, 6.0 – 8.0, 10.0 –12.0, 14.0, N54

\Rightarrow	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
27.0	IR DAS control module (N54/1) output deactivation (PSE/CL, CF, ATA) Models 140, 202	N54/1	All doors closed and locked.	11 – 14 V	Wiring, N54, N54/1, PSE control module (A37), CF control module (N57), ATA control module (N26).
			Unlock vehicle by pointing IR transmitter at one IR receiver, keeping IR transmitter button pressed.	< 1V Green indicator lamps blink, vehicle unlocks.	Wiring, ⇒ 3.0, 4.0, 6.0 – 8.0, 10.0 – 12.0, 14.0 – 16.0, 18.0, 19.0, 21.0, N54, N54/1

\Rightarrow	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
28.0	IR DAS control module (N54/1) output deactivation (PSE/CL, CF, ATA) Model 210	N54/1 	All doors closed and locked.	< 1V	Wiring, N54, N54/1, Combination control module (N10-1).
			Unlock vehicle by pointing IR transmitter at one IR receiver, keeping IR transmitter button pressed.	6 – 8 V Green indicator lamps blink, vehicle unlocks.	Wiring, ⇒ 3.0, 4.0, 6.0 – 8.0, 10.0, 15.0, 16.0, 18.0, 19.0, 21.0, N54, N54/1

\Rightarrow	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
29.0	RCL control module (N54) output activation (PSE/CL) Model 129	9 → → → → 23	All doors closed and unlocked. Lock vehicle by pointing IR transmitter at one IR receiver, keeping IR transmitter button pressed.	< 1V Red indicator lamps blink, vehicle locks. 11 – 14 V for approx. 0.6 seconds. (values measurable by using Fluke 83, 88).	Wiring, ⇒ 3.0 – 5.0, 7.0 – 9.0, 11.0 – 13.0, N54, N54/1, Supply pump (M14/1, M14/2), Power soft top control module (N57), ATA control module (N26).

\Rightarrow	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
30.0	IR DAS control module (N54/1) output activation (PSE/CL, CF, ATA) Models 140, 202	N54/1 	All doors closed and unlocked.	11 – 14 V	Wiring, N54/1, A37, N57, N26
			Lock vehicle by pointing IR transmitter at one IR receiver, keeping IR transmitter button pressed.	< 1V Red indicator lamps blink, vehicle locks.	Wiring, ⇒ 3.0 – 5.0, 7.0 – 9.0, 11.0 – 13.0, 15.0 – 17.0, 20.0, 22.0, N54/1

\Rightarrow	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
31.0	IR DAS control module (N54/1) output activation (PSE/CL, CF, ATA) Model 210	N54/1 17 — (— () +) — 2 (1.3) (1.12)		< 1V	Wiring, N54, N54/1, N10-1
			Lock vehicle by pointing IR transmitter at one IR receiver, keeping IR transmitter button pressed.	11 – 14 V Red indicator lamps blink, vehicle locks.	Wiring, ⇒ 3.0 – 5.0, 7.0 – 9.0, 15.0 – 17.0, 20.0, 22.0, N54, N54/1

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\Rightarrow		Test scope	Test connection	on	Test condition	Nominal value	Possible cause/Remedy
32.0	81101	Control line activation (PSE/CL, CF, ATA)		54/1 	Disconnect N54/1 from	>20 kΩ	Wiring.
33.0	B1100 B1101	Control line deactivation/ activation (PSE/CL) ΓΊ+ Model 129		154 	Disconnect N54 from	>20 kΩ	Wiring.
34.0	81100 81101	Control line deactivation/ activation (PSE/CL) ΓΊ- Model 129		154 ∰∰ ② ⁺ → 27	Disconnect N54 from	>20 kΩ	Wiring.
35.0	81100 81101	Control line deactivation/ activation (PSE/CL, CF, ATA) Г¬+ Model 210		54/1	Disconnect N54/1 from Disconnect combination control module (N10-1). Disconnect ground wire from 🖼.	>20 kΩ	Wiring.

\Rightarrow		Test scope	Test con	nection		Test condition	Nominal value	Possible cause/Remedy
36.0	B1100	Control line deactivation (PSE/CL, CF, ATA) Γ1+ Models 140, 202 Model 129	26 — (1.12) 26 — (1.12)	N54/1	> —17 (1.3) > —17 (1.3)	module (A37 or M14/1, M14/2). Disconnect ground wire from 🗐. Disconnect ATA control	>20 kΩ	Wiring.
37.0	81100	Control line deactivation (PSE/CL, CF, ATA) ΓΊ- Models 140, 202 Model 129	15 — ((1.1)	N54/1 □□□□ □□□□ N54 □□□□ □□□ □□□□ □□ □	> —17 (1.3) > —27	Disconnect N54/1 from	>20 kΩ	Wiring.

4.8

\Rightarrow		Test scope	Test connection		Test condition	Nominal value	Possible cause/Remedy
38.0	81101	Control line activation (PSE/CL, CF, ATA)	N54/1 		Disconnect N54/1 from Disconnect PSE control module (A37). Disconnect ground wire from =	>20 kΩ	Wiring.
39.0	B1100 B1101	Control line deactivation/ activation (PSE/CL, CF, ATA) [7- Model 210	N54/1) — 17 (1.13)	Disconnect N54/1 from iiiiiii. Disconnect combination control module (N10-1).	>20 kΩ	Wiring.
40.0	B1704	Coil for transponder (L11) activation	N54/1 1 _ _ (3)	N54/1 2 (3)	Disconnect connector 3 from N54/1 Ignition: ON	125 kHz for approx. 0.2 – 0.8 seconds. (values measurable by using Fluke 83, 88).	N54/1
41.0	вілоч	Coil for transponder (L11) Resistance	L11 1—(—————————————————————————————————	L11) — 2	Disconnect connector 3 from N54/1	4 – 6 Ω	L11

\Rightarrow	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
42.0	CAN L data line Motor electronics activation -//- (CAN only)	N54/1 13 — (—————————————————————————————————	Disconnect N54/1 from Disconnect engine control module.	<1 Ω	Wiring.
43.0	CAN H data line Motor electronics activation _// (CAN only)	N54/1 14 — (— ② +) — 1)	Disconnect N54/1 from Disconnect engine control module.	<1 Ω	Wiring.
44.0	CAN L data line Motor electronics activation Γ1+ (CAN only)		Disconnect N54/1 from Disconnect ground wire from Disconnect engine control module.	>20 kΩ	Wiring.
45.0	CAN H data line Motor electronics activation Γ1+ (CAN only)	N54/1 	Disconnect N54/1 from Disconnect ground wire from 1. Disconnect engine control module.	>20 kΩ	Wiring.

¹⁾ Prior to testing, please see appropriate ETM (group 7) to determine control module harness socket number.

\Rightarrow	Test scope	Test connection		Test condition	Nominal value	Possible cause/Remedy
46.0	CAN L data line Motor electronics activation ΓΊ– (CAN only)	N54/1 □□□□□ 15 — (1.1)) —13	Disconnect N54/1 from Disconnect engine control module.	>20 kΩ	Wiring.
47.0	CAN H data line Motor electronics activation ΓΊ– (CAN only)	N54/1 □□□□□□ 15 — (□□□□ (1.1)) — 14	Disconnect N54/1 from iiiiiii. Disconnect engine control module.	>20 kΩ	Wiring.
48.0	CAN H/CAN L data line Motor electronics activation Γ to each other (CAN only)	N54/1) — 14	Disconnect N54/1 from Disconnect engine control module.	>20 kΩ	Wiring.