


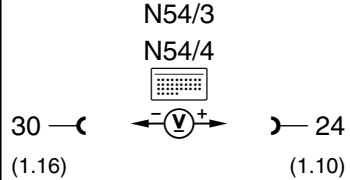
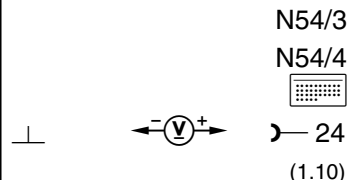


4.10 Infrared Remote Central Locking (RCL)

Models 129, 140, 170 as of M.Y. 1998


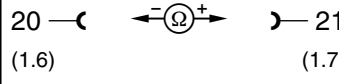

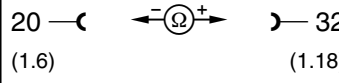

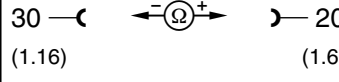

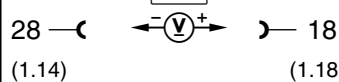
Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
1.0		Radio frequency DAS control module (N54/3) or DAS radio frequency/infrared control module (N54/4) Voltage supply Circuit 30		Ignition: ON	✓ F	Wiring, Battery.
2.0		Radio frequency DAS control module (N54/3) or DAS radio frequency/infrared control module (N54/4) Voltage supply Circuit 15	N54/3 N54/4 	Ignition: OFF Ignition: ON	<1 V 11 – 14 V	Wiring, Circuit 31, ⇒ 2.1
2.1		Circuit 15	N54/3 N54/4 	Ignition: OFF Ignition: ON	<1 V 11 – 14 V	Wiring, Circuit 15

4.10 Infrared Remote Central Locking (RCL)

Models 129, 140, 170 as of M.Y. 1998

Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
3.0		Antenna HF line Γ shield	<p>N54/3 N54/4</p> 	Disconnect N54/3 or N54/4 from  .	>20 kΩ	Wiring.
4.0		Antenna HF line Γ+	<p>N54/3 N54/4</p> 	Disconnect N54/3 or N54/4 from  .	>20 kΩ	Wiring.
5.0		Antenna HF line Γ-	<p>N54/3 N54/4</p> 	Disconnect N54/3 or N54/4 from  .	>20 kΩ	Wiring.
6.0		Left front door IR receiver (A26/1) Voltage supply Models 129/140 only	<p>N54/4</p> 		4.4 – 5.5 V	Wiring, 23 ⇒ 1.0, 23 ⇒ 2.0, N54/4

4.10 Infrared Remote Central Locking (RCL)

Models 129, 140, 170 as of M.Y. 1998


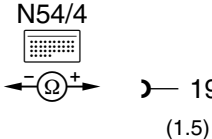

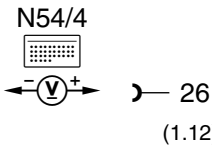
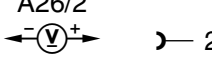
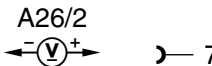
Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
6.1		A26/1 Voltage supply Model 140 Model 129		Remove A26/1	4.4 – 5.5 V	Wiring, 23 ⇒ 1.0, 23 ⇒ 2.0, N54/4
7.0	B1102	Left front door IR receiver (A26/1) IR signal control line Models 129/140 only		Lock vehicle by point transmitter key at driver-side IR receiver, keep button pressed. Read value after locking sequence has completed. Release button, and then read second value.	Difference of values between button pressed and button released approx. 0.1 – 1.0 V (less than button released value).	Wiring, 23 ⇒ 6.0, 23 ⇒ 7.1.0, 23 ⇒ 7.2.0, A26/1, Transmitter key.
7.1	B1102	Left front door IR receiver (A26/1) IR signal control line Γ1 – Models 129/140 only		Disconnect N54/4 from . Disconnect A26/1	>20 kΩ	Wiring.

4.10 Infrared Remote Central Locking (RCL)

Models 129, 140, 170 as of M.Y. 1998



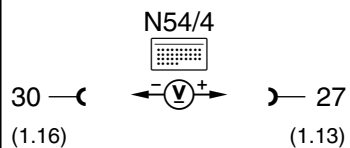

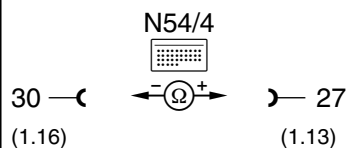

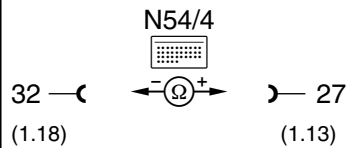

Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
7.2		Left front door IR receiver (A26/1) IR signal control line Γ1 + Models 129/140 only		Disconnect N54/4 from  Disconnect A26/1	>20 kΩ	Wiring.
8.0		Right front door IR receiver (A26/2) Voltage supply Models 129/140 only			4.4 – 5.5 V	Wiring, 23 ⇒ 1.0, 23 ⇒ 2.0, N54/4
8.1		A26/2 Voltage supply Model 140		Remove A26/2	4.4 – 5.5 V	Wiring, 23 ⇒ 1.0, 23 ⇒ 2.0, N54/4
		Model 129				

4.10 Infrared Remote Central Locking (RCL)

Models 129, 140, 170 as of M.Y. 1998


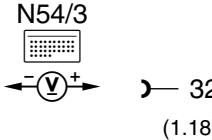
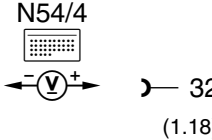
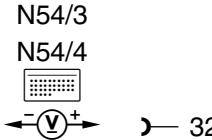
Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
9.0		Right front door IR receiver (A26/2) IR signal control line Models 129/140 only		Lock vehicle by point transmitter key at passenger-side IR receiver, keep button pressed. Read value after locking sequence has completed. Release button, and then read second value.	Difference of values between button pressed and button released approx. 0.1 – 1.5 V (less than button released value).	Wiring, 23 ⇒ 8.0, 23 ⇒ 9.1.0, 23 ⇒ 9.2.0, A26/2, Transmitter key.
9.1		Right front door IR receiver (A26/2) IR signal control line Γ1 – Models 129/140 only		Disconnect N54/4 from  Disconnect A26/2	>20 kΩ	Wiring.
9.2		Right front door IR receiver (A26/2) IR signal control line Γ1 + Models 129/140 only		Disconnect N54/4 from  Disconnect A26/2	>20 kΩ	Wiring.

4.10 Infrared Remote Central Locking (RCL)

Models 129, 140, 170 as of M.Y. 1998


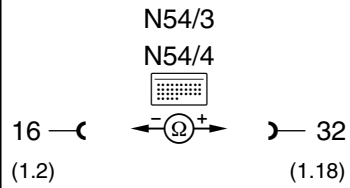

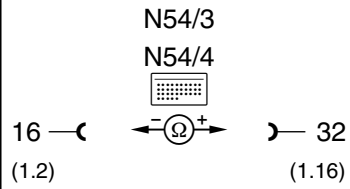

Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
10.0		Locking conformation relay module (K54) Activation Model 170 Combination relay module (N10/2) Activation of blinker system Locking Models 129/140	 	Locking of the vehicle via RCL	11 – 14 V intermittent for approx. 2 seconds. 11 – 14 V For approx. 2 seconds.	Wiring, 23 ⇒ 12.0, 23 ⇒ 13.0, N54/3, N54/4
11.0		Locking conformation relay module (K54) Activation Model 170 Combination relay module (N10/2) Activation of blinker system Unlocking Models 129/140		Unlocking of the vehicle via RCL	11 – 14 V for approx. 0.5 seconds.	Wiring, 23 ⇒ 12.0, 23 ⇒ 13.0, N54/3, N54/4

4.10 Infrared Remote Central Locking (RCL)

Models 129, 140, 170 as of M.Y. 1998






Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
12.0	B1706	Locking conformation relay module (K54) OR Combination relay module (N10/2) Activation Wiring Γ Γ-		Disconnect N54/3 or N54/4 from  Disconnect K54 or N10/2	>20 kΩ	Wiring.
13.0	B1706	Locking conformation relay module (K54) OR Combination relay module (N10/2) Activation Wiring Γ Γ+		Disconnect N54/3 or N54/4 from  Disconnect K54 or N10/2	>20 kΩ	Wiring.

4.10 Infrared Remote Central Locking (RCL)

Models 129, 140, 170 as of M.Y. 1998




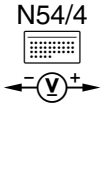

Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
14.0		Lock nut switch (S86/1) Circuit (USA) only Models 129/140	<p>N54/3 N54/4 </p> <p>N54/3 N54/4 </p> <p>N54/4 </p>	Disconnect N54/3 or N54/4 from  Disconnect S88/2 S86/1: Rest position: Press and hold unlock: S86/1: Rest position: Press and hold lock: S86/1: Rest position: Press and hold lock:	<1 V 11 – 14 V <1 V 11 – 14 V <1 V 11 – 14 V	Wiring, S86/1

4.10 Infrared Remote Central Locking (RCL)

Models 129, 140, 170 as of M.Y. 1998



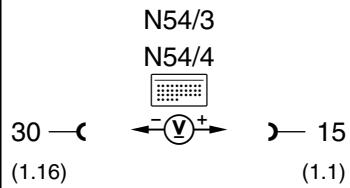

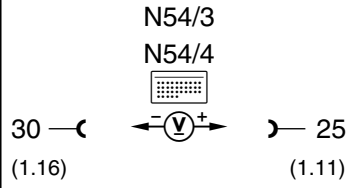
Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
15.0		<p>Lock nut switch (S86/1) and Trunk lid lock switch (S88/2) Circuit (USA) only Models 140/170</p>	<p>N54/3 N54/4 </p> <p>N54/3 N54/4 </p> <p>N54/4 </p>	<p>Disconnect N54/3 or N54/4 from .</p> <p>S88/2:</p> <p>Rest position: <1 V</p> <p>Press and hold unlock: 11 – 14 V</p> <p>S88/2:</p> <p>Rest position: <1 V</p> <p>Press and hold lock: 11 – 14 V</p> <p>S88s1:</p> <p>Rest position: <1 V</p> <p>Press and hold lock: 11 – 14 V</p>	<p><1 V</p> <p>11 – 14 V</p> <p><1 V</p> <p>11 – 14 V</p> <p><1 V</p> <p>11 – 14 V</p>	<p>Wiring, S88/2</p> <p>Wiring, S88s1</p>

4.10 Infrared Remote Central Locking (RCL)

Models 129, 140, 170 as of M.Y. 1998



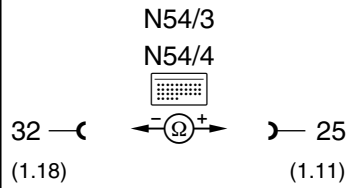


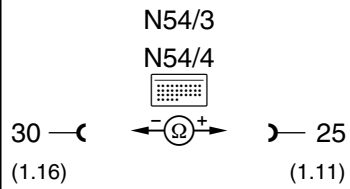

Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
16.0		Radio frequency DAS control module (N54/3) OR DAS radio frequency/infrared control module (N54/4) Output activation (PSE/CL, CF, ATA)		All doors closed and vehicle is unlocked. Lock vehicle using transmitter key.	11 – 14 V <1 V (approx. 0.5 seconds) Turn signal system blinks 3X, vehicle locks.	Wiring, 23 ⇒ 20.0, 23 ⇒ 21.0, N54/3, N54/4, PSE (A37), Model 170: Combination control module (N10-3)
17.0		Radio frequency DAS control module (N54/3) OR DAS radio frequency/infrared control module (N54/4) Output deactivation (PSE/CL, CF, ATA)		All doors closed and vehicle is locked. Unlock vehicle using transmitter key.	11 – 14 V <1 V (approx. 0.5 seconds) Turn signal system blinks 1X, vehicle unlocks.	Wiring, 23 ⇒ 18.0, 23 ⇒ 19.0, N54/3, N54/4, PSE (A37), Model 170: Combination control module (N10-3)

4.10 Infrared Remote Central Locking (RCL)

Models 129, 140, 170 as of M.Y. 1998



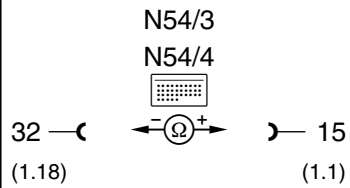


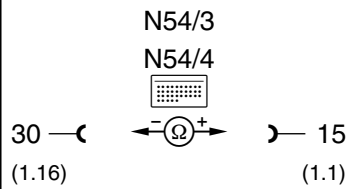

Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
18.0		Control line deactivation (PSE/CL, CF, ATA) Γ Γ +	N54/3 N54/4 	Disconnect N54/3 or N54/4 from  Disconnect PSE (A37). Disconnect grnd cable for battery. Disconnect ATA control module. Model 129 only: Disconnect power soft top control module (N52).	>20 kΩ	Wiring.
19.0		Control line deactivation (PSE/CL, CF, ATA) Γ Γ -	N54/3 N54/4 	Disconnect N54/3 or N54/4 from  Disconnect PSE (A37). Disconnect grnd cable for battery. Disconnect ATA control module. Model 129 only: Disconnect power soft top control module (N52).	>20 kΩ	Wiring.

4.10 Infrared Remote Central Locking (RCL)

Models 129, 140, 170 as of M.Y. 1998


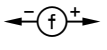
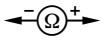
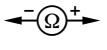
Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
20.0		Control line activation (PSE/CL, CF, ATA) Γ 1+		Disconnect N54/3 or N54/4 from  . Disconnect PSE (A37). Disconnect grnd cable for battery. Disconnect ATA control module. Model 129 only: Disconnect power soft top control module (N52).	>20 kΩ	Wiring.
21.0		Control line activation (PSE/CL, CF, ATA) Γ 1-		Disconnect N54/3 or N54/4 from  . Disconnect PSE (A37). Disconnect ATA control module. Model 129 only: Disconnect power soft top control module (N52).	>20 kΩ	Wiring.

4.10 Infrared Remote Central Locking (RCL)

Models 129, 140, 170 as of M.Y. 1998









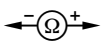



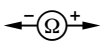


Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy	
22.0	B1704	Coil for transponder (L11) Activation	N54/3 N54/4 1 — (3)	 N54/3 N54/4 — 2 (3)	Disconnect connector 3 from N54/3 or N54/4 Ignition: ON	125 kHz for approx. 0.2 – 0.8 seconds. (measurable by Fluke 83, 88)	23 ⇒ 1.0, 23 ⇒ 2.0, N54/3, N54/4
23.0	B1704	Coil for transponder (L11) Resistance	L11 1 —	 L11 — 2	Disconnect connector 3 from N54/3 or N54/4 Ignition: ON	4 – 6 Ω	L11
24.0		CAN H/CAN L data line Motor electronics activation Γ to each other	N54/3 N54/4 1 — (2)	 N54/3 N54/4 — 2 (2)	Disconnect connector 2 from N54/3 or N54/4 Disconnect engine control module.	>20 kΩ	Wiring.

4.10 Infrared Remote Central Locking (RCL)

Models 129, 140, 170 as of M.Y. 1998

Electrical Test Program – Test




⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
25.0		CAN L data line Motor electronics activation -//-	N54/3 N54/4 1 —  ←  →  2) (2)	Disconnect connector 2 from N54/3 or N54/4 Disconnect engine control module, see foot note.	>1 Ω	Wiring.
26.0		CAN H data line Motor electronics activation -//-	N54/3 N54/4 1 —  ←  →  2) (2)	Disconnect connector 2 from N54/3 or N54/4 Disconnect engine control module, see foot note.	>1 Ω	Wiring.
27.0		CAN L data line Motor electronics activation Γ 1 +	N54/3 N54/4 1 —  ←  →  32 (2)	N54/3 N54/4  Disconnect engine control module. (1.18)	>20 kΩ	Wiring.
28.0		CAN H data line Motor electronics activation Γ 1 +	N54/3 N54/4 2 —  ←  →  32 (2)	N54/3 N54/4  Disconnect engine control module. (1.18)	>20 kΩ	Wiring.

2) Prior to testing, please see appropriate ETM to determine engine control module harness socket number.

4.10 Infrared Remote Central Locking (RCL)

Models 129, 140, 170 as of M.Y. 1998

Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy	
29.0		CAN L data line Motor electronics activation Γ Γ-	N54/3 N54/4 1 ← Ω → (2)	N54/3 N54/4  30 (1.16)	Disconnect connector 2 from N54/3 or N54/4 Disconnect engine control module.	>20 kΩ	Wiring.
30.0		CAN H data line Motor electronics activation Γ Γ-	N54/3 N54/4 2 ← Ω → (2)	N54/3 N54/4  30 (1.16)	Disconnect connector 2 from N54/3 or N54/4 Disconnect engine control module.	>20 kΩ	Wiring.