13.2   Model 140

Note:

•   Universal ATA control modules (such as used in models 129, 140, and 202) must be programmed according to menu point 5 on the HHT's display.

ATA control modules manufacturers:

Becker

Temic

Diagnosis – Technical Changes

Prod. code	Model	LL[1] RL[1]	Manuf. plant	As of chassis number	Up to chassis number	As of production date	Up to production date	Type and reason for change	Reference/Remarks
WDB	140					12/93		Activation of starter relay module (K38): Vehicles with RCL via PSE control module.	
WDB	140							Radio contact deleted with later radio versions. (running change during M.Y. 1996)	

[1]   LL: Left hand drive
      RL: Right hand drive

Diagnosis – Function Test

Preliminary work:
Checking/replacing batteries for IRCL transmitter and
synchronizing transmitter signal   . . . .   SMS, Job No. 80-420
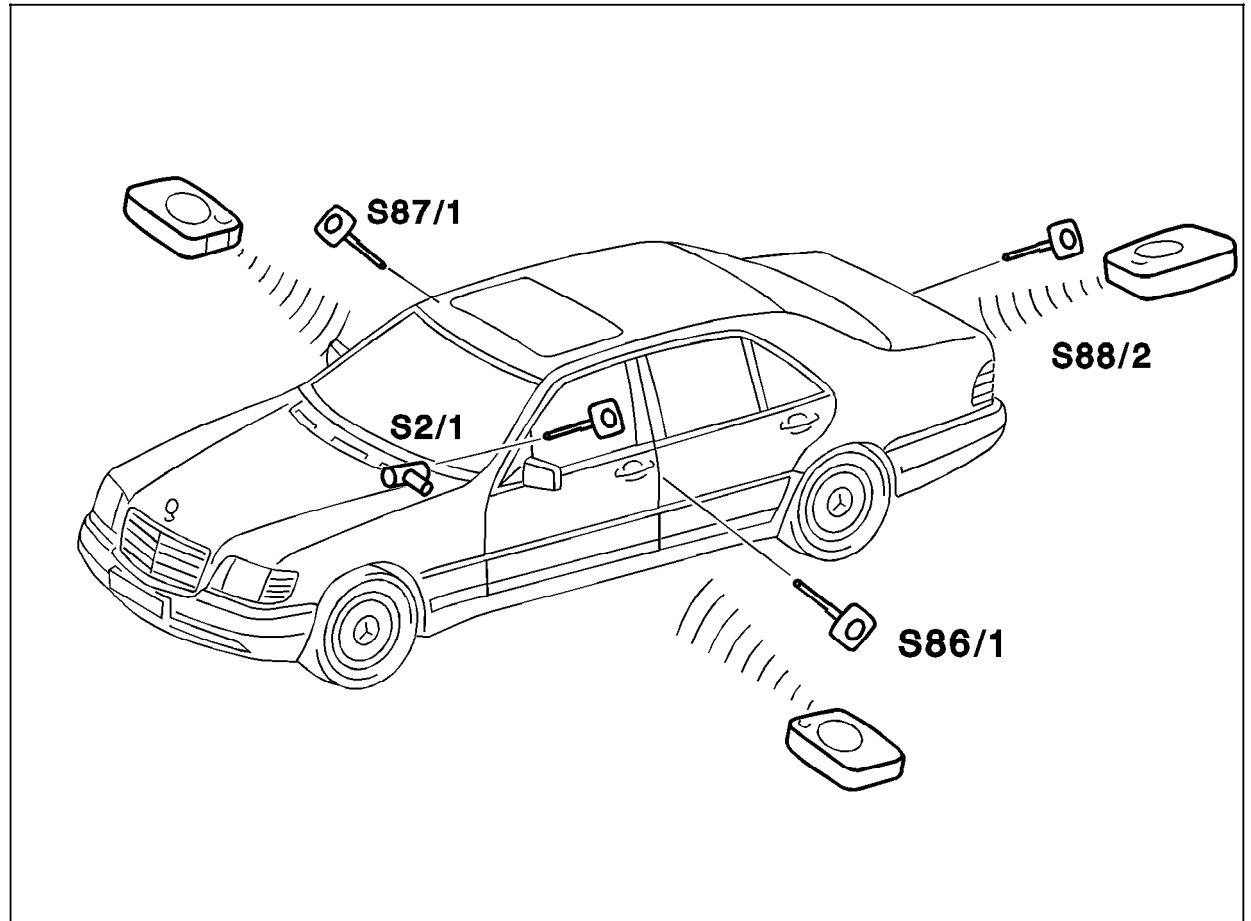
**Model 140 with RCL through model year
1995**

Figure 1

S2/1   Ignition/starter switch
S86/1   Left front door lock switch (CF)
S87/1   Right front door lock switch (CF)
S88/2   Trunk lid lock switch (CF)

P82-7238-55

Diagnosis – Function Test

Preliminary work:
Checking/replacing batteries for IRCL transmitter and
synchronizing transmitter signal   . . . .   SMS, Job No. 80-420

Model 140 with RCL (model 202 shown)

As of M.Y. 1996:
with IR receiver in rear view mirror and
mechanical lock cylinders (USA), (J)

As of M. Y. 1997:
IR receiver in rear view mirror deleted.
3 IR receivers added in front doors and
trunk lid (as in Figure 1).
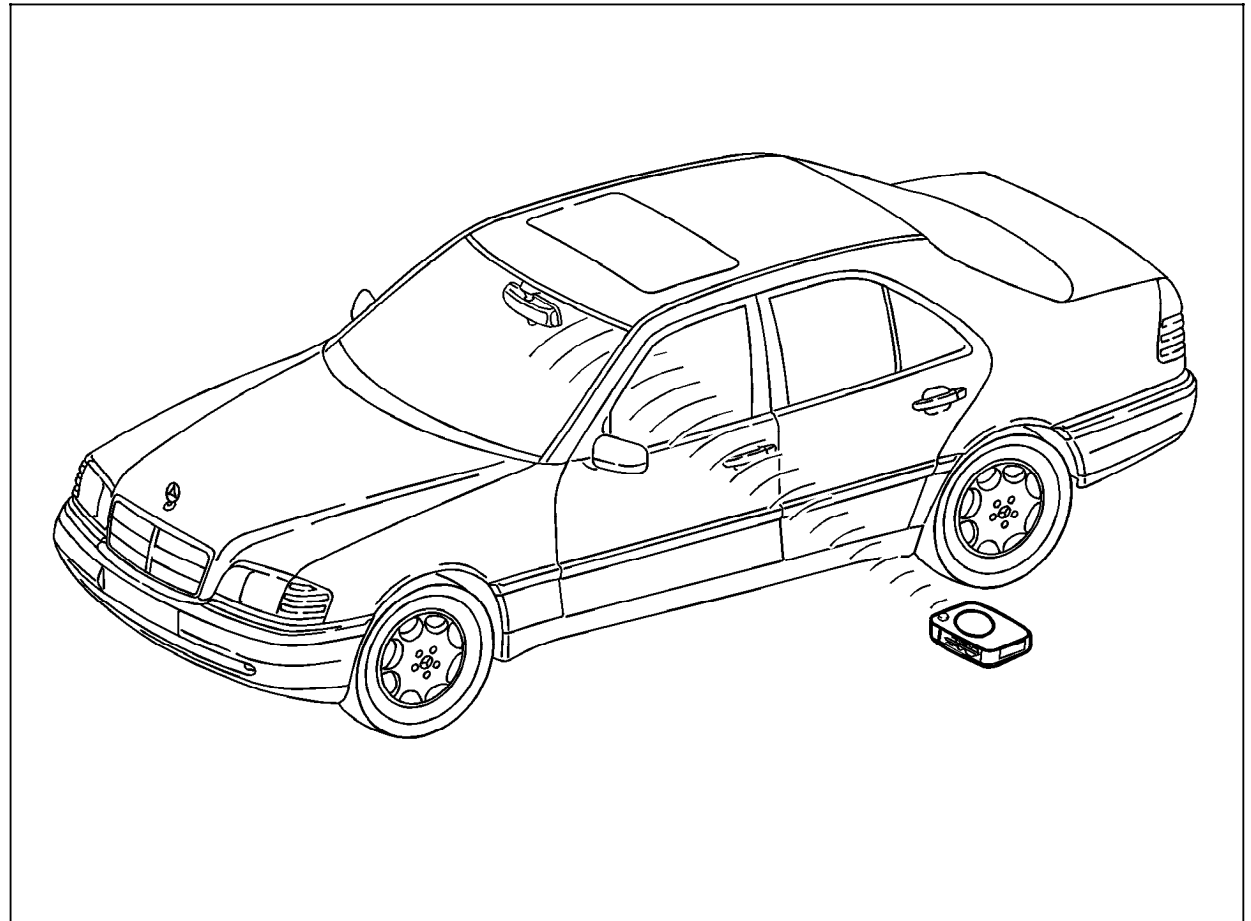**Mechanical lock cylinders retained**
(USA), (J).

Figure 2

P80.30-0219-57

Diagnosis – Function Test

⚠

After performing the Function Test, erase any stored DTC's (see section 0).

Test step/Test scope	Test condition	Nominal value	Possible cause/Remedy [1]
⇒ 1.0 Activate ATA via left front door	• Open driver's window. • Lock driver's door with key. • After approximately 15 seconds open door from inside. • Deactivate ATA.	Alarm horn sounds, lights flash.	23 ⇒ 6.0
⇒ 2.0 Activate ATA via right front door	• Open passenger window. • Lock passenger door with key. • After approximately 15 seconds open door from inside. • Deactivate ATA.	Alarm horn sounds, lights flash.	23 ⇒ 6.0
Except Coupé ⇒ 3.0 Activate ATA via left or right rear door	• Open rear passenger window. • Lock driver's door with key. • After approximately 15 seconds open rear door from inside. • Deactivate ATA.	Alarm horn sounds, lights flash.	23 ⇒ 5.0
⇒ 4.0 Activate ATA via engine hood	• Open driver's window. • Lock left front door with key. • Wait approximately 15 seconds. • Release engine hood through open window of left front door. • Open engine hood. • Deactivate ATA.	Alarm horn sounds, lights flash.	23 ⇒ 8.0

[1]   Observe Preparation for Test, see   22.

Diagnosis – Function Test

Test step/Test scope	Test condition	Nominal value	Possible cause/Remedy [1]
⇒ 5.0 Activate ATA via trunk lid	• Open trunk lid. • Lock driver's door with key. • Turn off trunk lamp (rotary tumbler switch open). • Wait approximately 15 seconds. • Turn on trunk lamp (rotary tumbler switch closed). • Deactivate ATA.	Alarm horn sounds, lights flash.	23 ⇒ 7.0
⇒ 6.0 Activate ATA via ignition	• Sit in driver's seat. • Open driver's window. • Lock vehicle with key from driver's door by reaching through open window. • Wait approximately 15 seconds. • Turn ignition ON. • Measure duration of alarm. (approx. 30 sec.). • Deactivate ATA.	Alarm horn sounds, lights flash.	23 ⇒ 11.0

[1]   Observe Preparation for Test, see   22.

Diagnosis – Function Test

Test step/Test scope	Test condition	Nominal value	Possible cause/Remedy [1]
⇒ 7.0 Activate ATA via service brake	• Sit in driver's seat. • Open driver's window. • Lock vehicle with key from driver's door by reaching through open window. • Wait approximately 15 seconds. • Turn ignition ON. • Measure duration of alarm. (approx. 30 sec.). • When alarm cycle ends, with ignition ON, step on service brake. • Deactivate ATA.	Alarm horn sounds, lights flash. Alarm horn sounds, lights flash.	23 ⇒ 9.0
⇒ 8.0 Activate ATA via Radio (running change during M. Y.1996)	• Sit in driver's seat. • Open driver's window. • Lock vehicle with key from driver's door by reaching through open window. • Wait approximately 15 seconds. • Remove radio. • Deactivate ATA. Note: After Function Test radio must be recoded.	Alarm horn sounds, lights flash.	23 ⇒ 10.0 Radio contact separated.

[1]   Observe Preparation for Test, see 22.

Diagnosis – Function Test

Test step/Test scope	Test condition	Nominal value	Possible cause/Remedy [1]
⇒ 9.0 *Not applicable for U.S.A. vehicles*	–	–	–
⇒ 10.0 *Not applicable for U.S.A. vehicles*	–	–	–
⇒ 11.0 *Not applicable for U.S.A. vehicles*	–	–	–
⇒ 12.0 ATA indicator	• Lock vehicle. • Wait approximately 15 seconds.	LED in center console blinks.	23 ⇒ 26.0
⇒ 13.0 Starter lock-out [2]	• Open driver's window. • Sit in driver's seat. • Lock vehicle with key from driver's window by reaching through open window . • Wait approximately 15 seconds. • Start engine. • Unlock vehicle. • Start engine.	Alarm sounds, engine **will not** crank. Engine starts.	23 ⇒ 25.0
⇒ 14.0 *Not applicable for U.S.A. vehicles*	–	–	–
⇒ 15.0 *Not applicable for U.S.A. vehicles*	–	–	–

[1]   Observe Preparation for Test, see 22.
[2]   As of 01/94, starter lock-out function controlled by central locking system (PSE control module).

Diagnosis – Diagnostic Trouble Code (DTC) Memory

Preparation for Test

1. Connect impulse counter scan tool or Hand-Held Tester (HHT) according to connection diagram (see section 0).

Note:

ATA deactivated.

Connect yellow wire to socket 23 of 38-pole data link connector (X11/4).

DTC readout begins with the most current fault and ends with the oldest (logic: last in, first out).

Electrical wiring diagrams:

Electrical Troubleshooting Manual, Model 140, Volume 2, group 80 and 82.

Diagnosis – Diagnostic Trouble Code (DTC) Memory

DTC		Possible cause	Test step/Remedy [1]
1	001	No DTC stored in system.	
2	002	ATA activated via rotary tumbler/ trunk lid microswitch (S88/1)	23⇒ 7.0
3	003	ATA activated via engine hood switch (S62)	23⇒ 8.0
5	005	ATA activated via left/right rear door switch (S17/5, S17/6)	23⇒ 5.0
6	006	ATA activated via left/right door switch (S17/3, S17/4)	23⇒ 6.0
7	007	*Not applicable for U.S.A. vehicles*	–
8	008	*Not applicable for U.S.A. vehicles*	–
10	010	ATA activated via radio (A2) (radio contact) (running change during M.Y. 1996)	23⇒ 10.0
12	012	ATA activated via ignition (S2/1)	23⇒ 11.0
14	014	ATA activated via brake switch (S9/1)	23⇒ 9.0
15	015	*Not applicable for U.S.A. vehicles*	–
16	016	*Not applicable for U.S.A. vehicles*	–
17	017	*Not applicable for U.S.A. vehicles*	–
18	018	*Not applicable for U.S.A. vehicles*	–
19	019	ATA control module (N26)	N26

[1]   Observe Preparation for Test, see   22.

Diagnosis – Diagnostic Trouble Code (DTC) Memory

DTC		Possible cause	Test step/Remedy [1]
20	020	Left front door actuator (S47), no ground	23⟹ 12.0
21	021	**Temic control modules only** Starter lock-out relay module (K38) shorted to circuit 30 in armed status	23⟹ 25.0
21	021	**Becker control modules only** ATA status indicator lamp (E33) shorted to circuit 30	23⟹ 15.0
22	022	**Becker control modules only** Starter lock-out relay module (K38) shorted to circuit 30 in armed status	23⟹ 25.0
22	022	**Temic control modules only** Open circuit to circuit 30 in armed status	23⟹ 1.0
23	023	**Becker control modules only** Open circuit to circuit 30 in armed status	23⟹ 1.0

[1]   Observe Preparation for Test, see   22.

Diagnosis – Nominal Values

The following tests and component activations are possible using the HHT.

Nominal values (function status)
- All door contacts including engine hood and trunk lid.
- Left front door lock switch (S86/1), right front door lock switch (S87/1),
  and trunk lid lock switch (S88/2) (arm/disarm ATA) up to 01/94.
- Ignition.
- Service brake.
- Radio contact (running change during M. Y. 1996).
- Left front door actuator (S47).

Diagnosis – Nominal Values

| ⇒	📱	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
1.0	01	Circuit 15	📱	Ignition: **OFF** Ignition: **ON**	OFF ON	23 ⇒ 1.0
2.0	02	Stop lamp switch (S9/1)	📱	Ignition: **ON** Service brake applied not applied	 ON OFF	22 ⇒ 9.0
3.0	03	ATA contact connector (radio) (X42/13) (running change during M.Y. 1996)	📱	Radio installed, X42/13 connected Radio removed or X42/13 disconnected	 ON OFF	23 ⇒ 10.0
4.0	04 05	Activation/deactivation of ATA via RCL on driver's door, passenger door or trunk lid	📱	Using IR transmitter lock vehicle unlock vehicle	 ON ON	23 ⇒ 2.0, 3.0, 4.0
5.0	04 05	Activation/deactivation of ATA via rotary tumbler lock on driver's door, passenger door or trunk lid (up to 01/94)	📱	Using key at: passenger door lock vehicle unlock vehicle	 ON ON	Vehicle uncoupled 23 ⇒ 2.0, 3.0, 4.0
6.0	06	Engine hood switch (S62)	📱	Open engine hood Close engine hood	ON OFF	23 ⇒ 8.0

Diagnosis – Nominal Values

⇒	📟	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
7.0	07	Left front door actuator (S47)	📟	Vehicle unlocked Vehicle locked	OFF ON	23 ⇒ 12.0
8.0	08	Left/right door switch (S17/3, S17/4)	📟	Both front doors closed Open driver's door Close driver's door Open passenger door	OFF ON OFF ON	23 ⇒ 6.0
9.0	09	Left/right rear door switch (S17/5, S17/6)	📟	Both rear doors closed Open left rear door Close left rear door Open right rear door	OFF ON OFF ON	23 ⇒ 5.0
10.0	10	Rotary tumbler/trunk lid microswitch (S88/1)	📟	Trunk lid closed open	OFF ON	23 ⇒ 7.0
11.0	12	*Not applicable for U.S.A. vehicles*	📟	–	–	–
12.0	05	*Not applicable for U.S.A. vehicles*	📟	–	–	–

Diagnosis – Activation

The following components can be activated via the HHT:

- Alarm horn (H3).
- Headlamps.
- Starter lock-out relay module (K38) (up to 01/94).
- ATA status indicator (E33).
- Backup lamps.

Diagnosis – Activation

⇒	📟	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
1.0	1	Alarm horn (H3)	📟	Press F2 Press F3	ON, Horn signals OFF	23 ⇒ 13.0
2.0	2	ATA status indicator (E33)	📟	Press F2 Press F3	ON OFF, ATA indicator illuminates	23 ⇒ 26.0
3.0	3	Starter lock-out relay module (K38) [1] Vehicles with ATA status indicator (E33)	📟	Press F2 Turn ignition key to position "3" (circuit 50) Press F3	ON Engine will not start OFF Engine starts	23 ⇒ 25.0
4.0	4 5 6	*Not applicable for U.S.A. vehicles*	📟	–	–	–
5.0	4	*Not applicable for U.S.A. vehicles*	📟	–	–	–
6.0	4 5	Headlamps	📟	Press F2	ON Headlamps illuminate	23 ⇒ 16.0
7.0	4 5	Backup lamps	📟	Press F2	ON Backup lamps illuminate	23 ⇒ 17.0, 18.0

[1]   As of 01/94, the starter lock-out function is controlled by the central locking system (PSE control moduel).

Diagnosis – Activation

⇒	📟	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
8.0	Ƅ˥	*Not applicable for U.S.A. vehicles*	📟	–	–	–
9.0	Ƅ˥	*Not applicable for U.S.A. vehicles*	📟	–	–	–
10.0	Ƅ˥	*Not applicable for U.S.A. vehicles*	📟	–	–	–

Electrical Test Program – Component Locations

Up to 05/96

Figure 1

A37   PSE control module
(A37/1)
F4   Rear fuse box
H3   Alarm horn
N10/2   Combination relay module (turn signal, heated rear
         window, wiper motor, ATA)
N26   ATA control module
N54   RCL control module
S47   Left door actuator
S62   Hood switch
S85   Interior CL switch
S86/1   Left front door lock switch
S87/1   Right front door lock switch
S88/2   Trunk lid lock switch
X11/4   Data link connector
X11/15   Diagnostic intermediate connector
X21/1   Terminal block
X35/1   Left front door separation point
X35/2   Right front door separation point
X42/13   ATA contact connector (radio)
         Up to 01/94
K38   Starter lock-out relay module
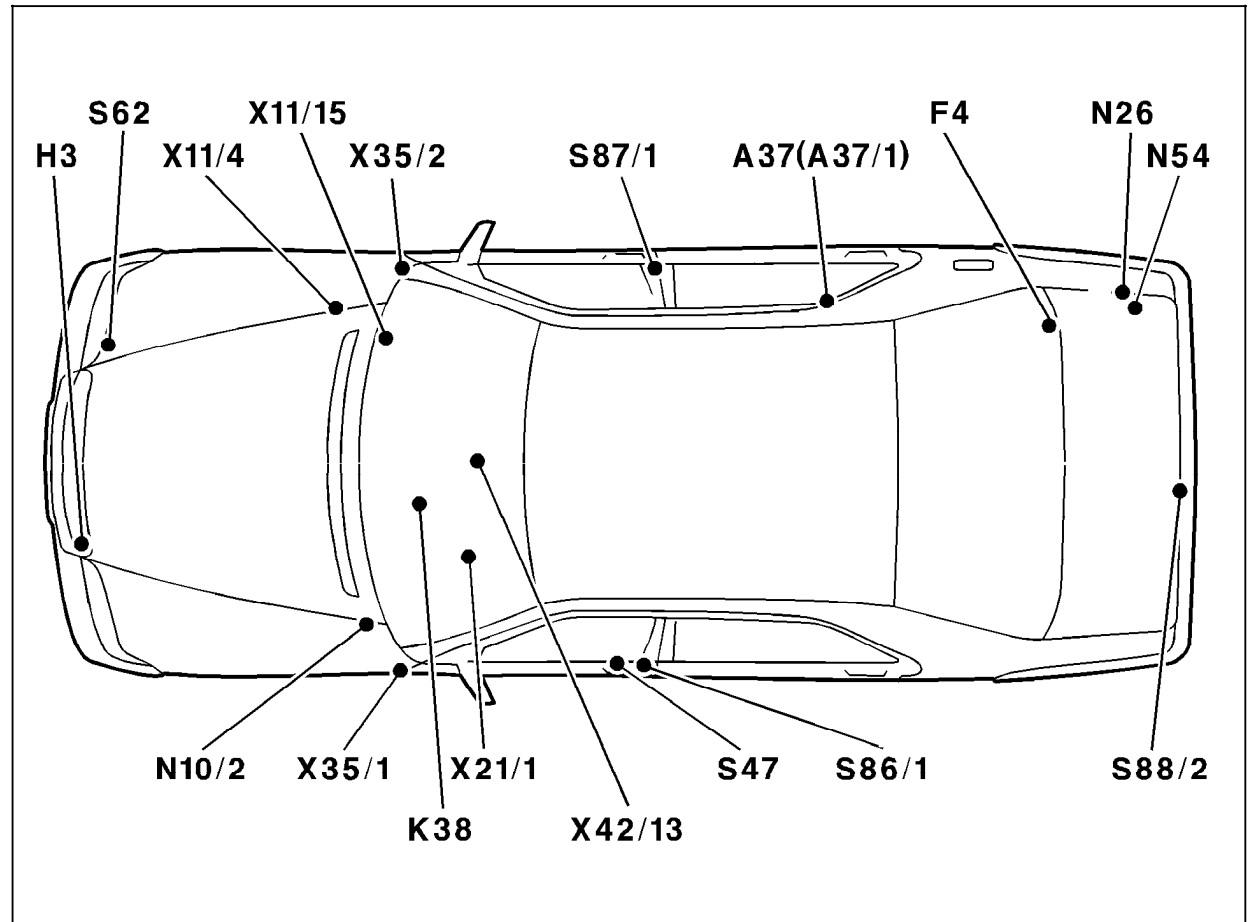
U82-7234-57

Electrical Test Program – Component Locations

As of 06/96
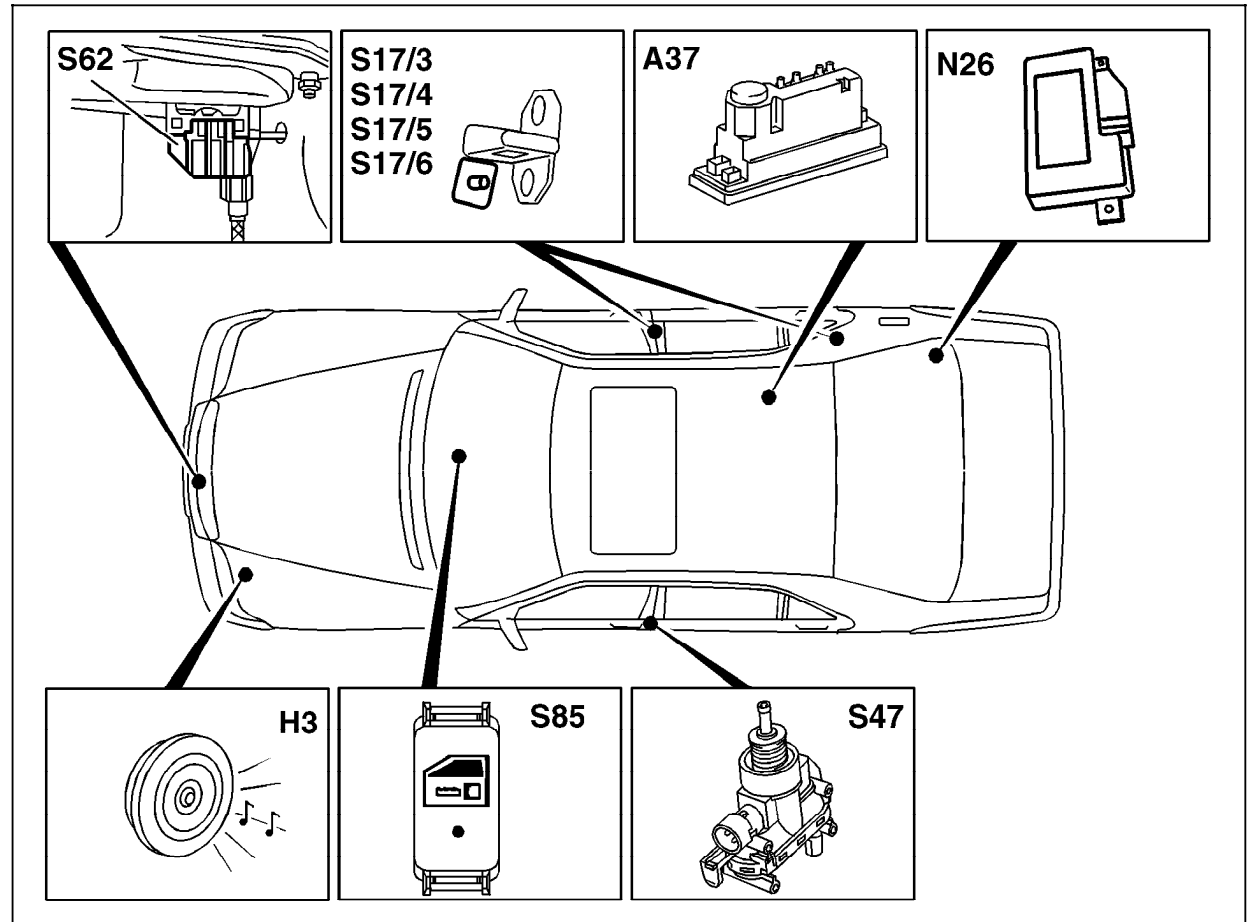
Figure 2

A37	PSE control module, combined functions
H3	Alarm horn
N26	ATA control module
S17/3	Left front door switch
S17/4	Right front door switch
S17/5	Left rear door switch
S17/6	Right rear door switch
S47	Left door actuator
S62	Hood switch
S85	Interior CL switch

U82.50-0511-57

Electrical Test Program – Component Locations
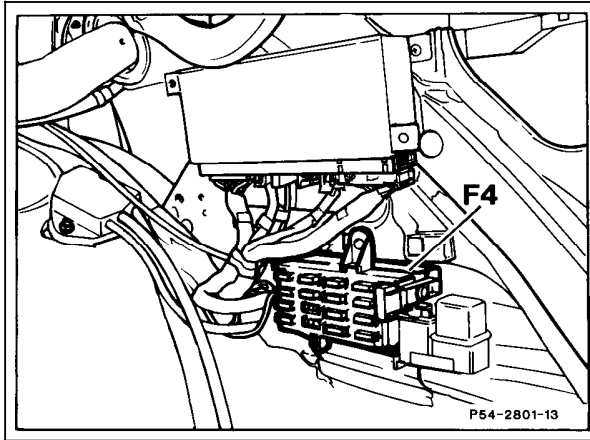
P54-2801-13

Figure 3

F4   Fuse box in trunk
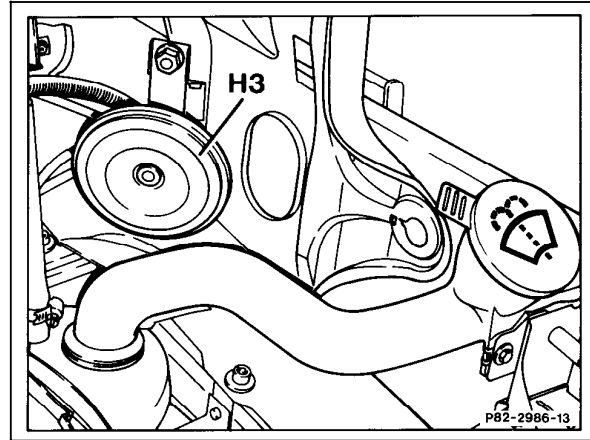
P82-2986-13

Figure 4

H3   Alarm horn
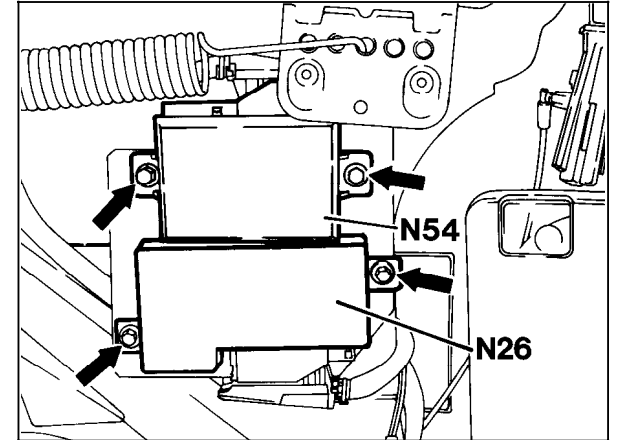
P80-2214-13

Figure 5

N26   ATA control module
N54   RCL control module

Electrical Test Program – Component Locations

P15-5167-13
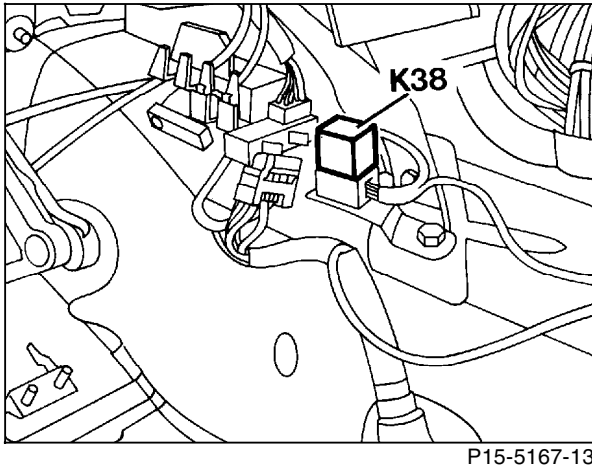
Figure 6

K38   Starter lock-out relay module

P80-5080-13A
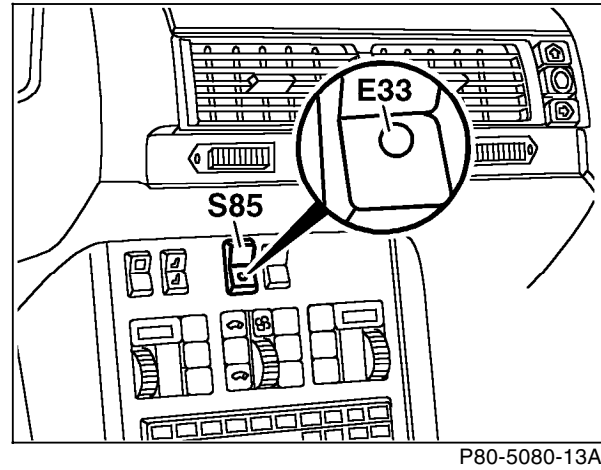
Figure 7

E33   ATA status indicator
S85   Interior CL switch

Electrical Test Program – Preparation for Test

1. Battery voltage 11–14 V.
2. Fuses F1/1-1, F1/1-7 okay.
3. Central locking system okay.
4. RCL okay.
5. Parking lamps, headlamps, fog lamps, directionals and brake lamps okay.

Electrical wiring diagrams:

Electrical Troubleshooting Manual, Model 140, Volume 2, groups 80and 82.

Special Tools
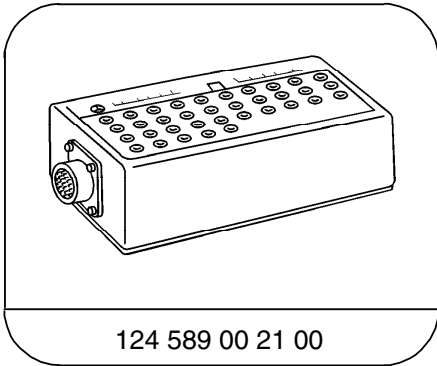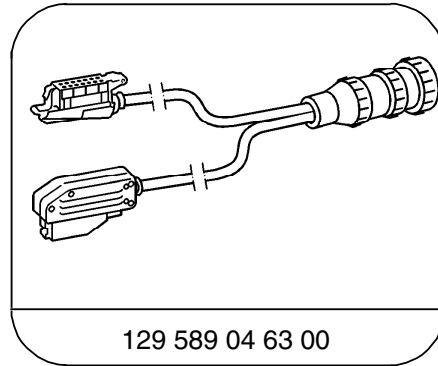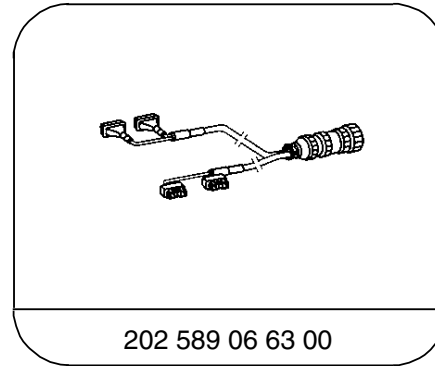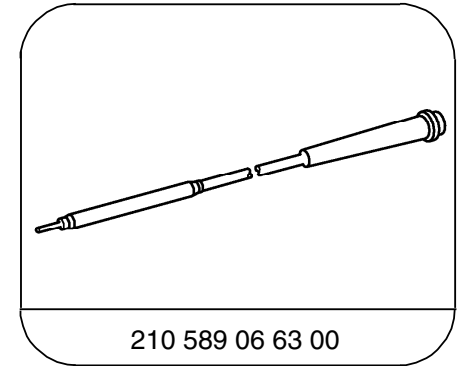
124 589 00 21 00	129 589 04 63 00	202 589 06 63 00	210 589 06 63 00
35-pin socket box	33-pin test cable	Test cable, 20 pin	Adapter cable
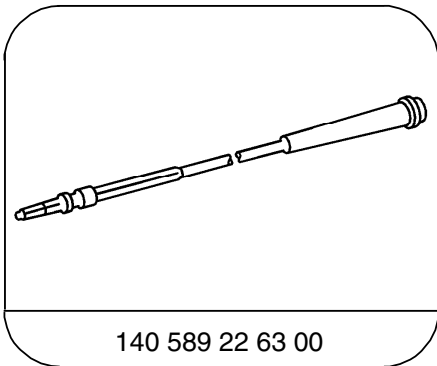
140 589 22 63 00
Adapter cable

Electrical Test Program – Preparation for Test

Conventional tools, test equipment

Description	Brand, model, etc.
Digital multimeter [1]	Fluke models 23, 83, 85, 87

[1]   Available through the MBUSA Standard Equipment Program.

Electrical Test Program – Preparation for Test

Connection Diagram – Socket Box
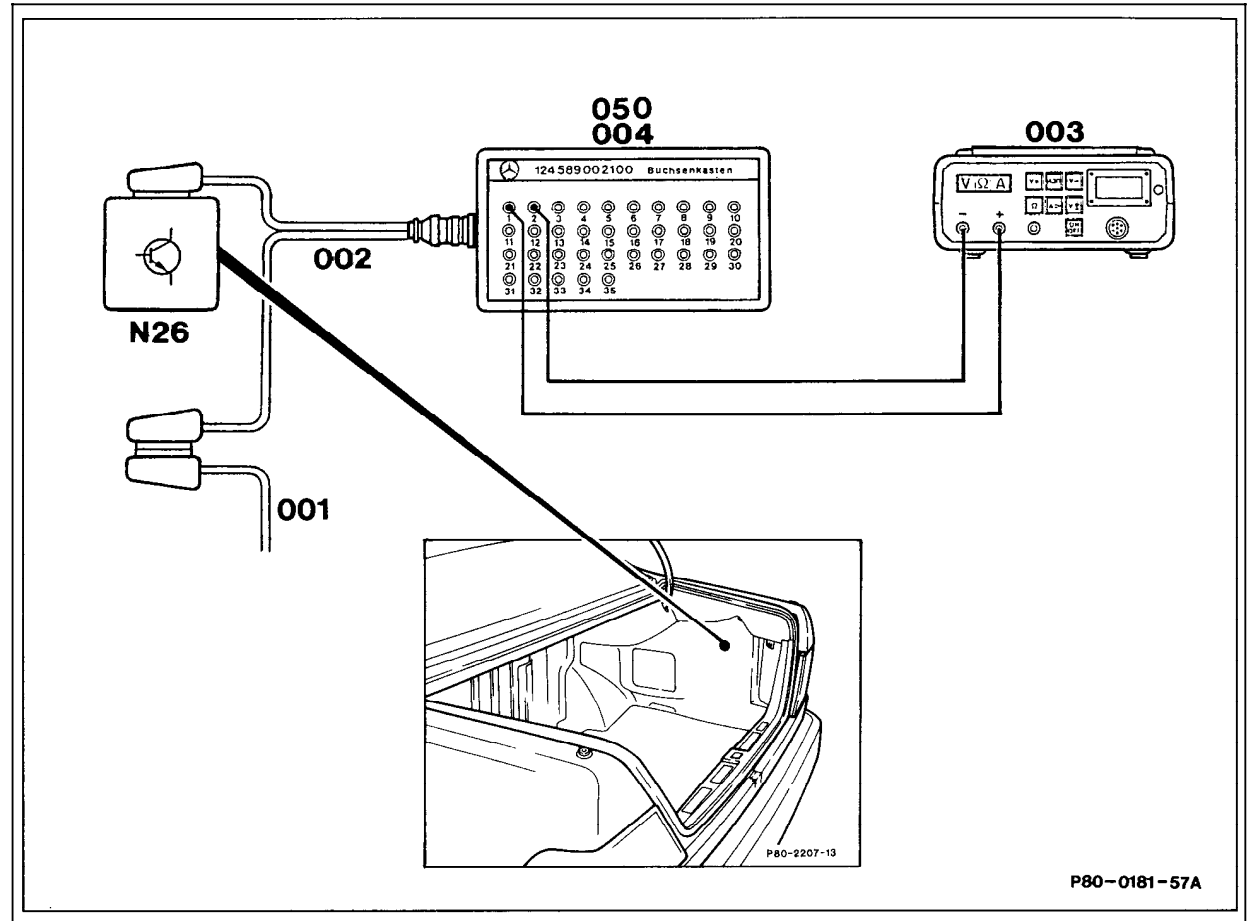
Figure 1

001   ATA control module connector
002   Test cable
003   Digital multimeter
004/050   Socket box
N26   ATA control module
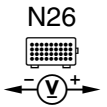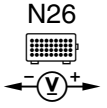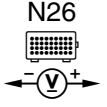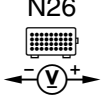
P80-0181-57A
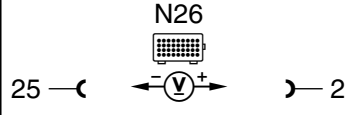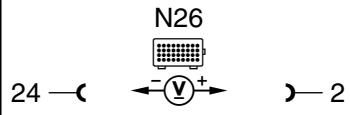
Electrical Test Program – Test

⇒	📟	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
1.0	022 023	**ATA control module (N26)** Voltage supply Circuit 30 Circuit 15	N26 ▭ 4 —⟨ ⟵ = ⊽ + ⟶ ⟩— 2 4 —⟨ ⟵ = ⊽ + ⟶ ⟩— 18	 Ignition: **ON**	 11 – 14 V 11 – 14 V	Wiring, ⇒ 1.1
2.0		**Left front door lock switch (S86/1, up to 01/94)** or **Activation via RCL**	N26 ▭ 11 —⟨ ⟵ = ⊽ + ⟶ ⟩— 2 N26 ▭ 19 —⟨ ⟵ = ⊽ + ⟶ ⟩— 2	Ignition: **OFF** Hold key in unlock position or depress and hold IR transmitter button (green lamp flashes). Hold key in lock position or depress and hold IR transmitter button (red lamp flashes).	< 1 V 11 – 14 V 11 – 14 V	Wiring, PSE control module (A37) (see D.M., Body and Accessories, Vol. 1, section 3.1 23), RCL (see D.M., Body and Accessories, Vol. 1, section 4.2 23).

Electrical Test Program – Test

⇒	📱	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
3.0		**Right front door lock switch (S87/1, up to 01/94)** or **Activation via RCL**	N26 ▦ 11 —❬ ◄─=Ⓥ+► ❭— 2	Ignition: **OFF** Hold key in unlock position or depress and hold IR transmitter button (green lamp flashes).	< 1 V 11 – 14 V	Wiring, PSE control module (A37) (see D.M., Body and Accessories, Vol. 1, section 3.1 23), RCL (see D.M., Body and Accessories, Vol. 1, section 4.2 23).
			N26 ▦ 19 —❬ ◄─=Ⓥ+► ❭— 2	Hold key in lock position or depress and hold IR transmitter button (red lamp flashes).	11 – 14 V	
4.0		**Trunk lid lock switch (S88/2, up to 01/94)** or **Activation via RCL**	N26 ▦ 11 —❬ ◄─=Ⓥ+► ❭— 2	Ignition: **OFF** Hold key in lock position or depress and hold IR transmitter button (red lamp flashes).	< 1 V 11 – 14 V	Wiring, PSE control module (A37) (see D.M., Body and Accessories, Vol. 1, section 3.1 23), RCL (see D.M., Body and Accessories, Vol. 1, section 4.2 23).
			N26 ▦ 19 —❬ ◄─=Ⓥ+► ❭—2	Hold key in unlock position or depress and hold IR transmitter button (green lamp flashes).	11 – 14 V	

Electrical Test Program – Test

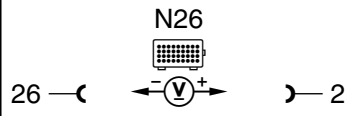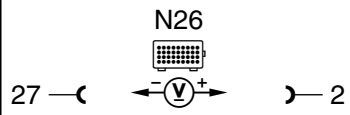| ⇒	📟	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
5.0	005	**Except Coupé** **Left/right rear door switch (S17/5, S17/6) alarm circuit**	N26 25 —❬ ←⁻Ⓥ⁺→ ❭— 2	Close left/right rear door. Open left/right rear door and then close .	< 1 V 11 – 14 V	Wiring, S17/5, S17/6, PSE control module (A37) (see D.M., Body and Accessories, Vol. 1, section 3.1 23).
6.0	006	**Left/right front door switch (S17/3, S17/4) alarm circuit**	N26 24 —❬ ←⁻Ⓥ⁺→ ❭— 2	Close left/right front door. Open left/right front door and then close .	< 1 V 11 – 14 V	Wiring, S17/3, S17/4, PSE control module (A37) (see D.M., Body and Accessories, Vol. 1, section 3.1 23).
7.0	002	**Rotary tumbler/trunk lid microswitch (S88/1) alarm circuit**	N26 26 —❬ ←⁻Ⓥ⁺→ ❭— 2	Close rotary lock switch by hand. Open rotary lock switch by hand.	< 1 V 11 – 14 V	Wiring, PSE control module (A37) (see D.M., Body and Accessories, Vol. 1, section 3.1 23).
8.0	003	**Engine hood switch (S62) alarm circuit**	N26 27 —❬ ←⁻Ⓥ⁺→ ❭— 2	Engine hood closed. Engine hood open.	< 1 V 11 – 14 V	Wiring, S62, N26.

Electrical Test Program – Test

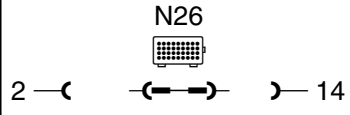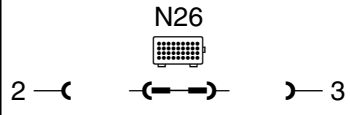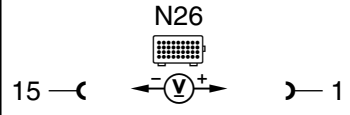| ⇒	📟	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
9.0	0I4	**Stop lamp switch alarm circuit**	N26 4 —❲ ←▭▭▭▭ ←═Ⓥ±→ ❳—23	Ignition: **ON** Apply service brakes.	< 1 V 11 – 14 V	Wiring, Stop lamp switch (S9).
10.0	0I0	**ATA contact connector (radio) alarm circuit (running change during M.Y. 1996)**	N26 17 —❲ ←═Ⓥ±→ ❳— 2	Radio installed and connector connected. Radio removed.	11 – 14 V < 1 V	Wiring, ATA contact connector (X42/13), Radio ground.
11.0	0I2	**Ignition alarm circuit**	N26 4 —❲ ←═Ⓥ±→ ❳— 18	Ignition: **OFF** Ignition: **ON**	< 1 V 11 – 14 V	Wiring, Ignition/starter switch (S2/1).
12.0	020	**Left front door actuator (S47)**	N26 32 —❲ ←═Ⓥ±→ ❳— 2	Disconnect RCL control module (N54) connector (vehicles up to 01/94 only). Unlock vehicle at driver's door or via RCL. Lock vehicle from driver's door or via RCL.	 < 1 V 11 – 14 V	Wiring, S47

Electrical Test Program – Test

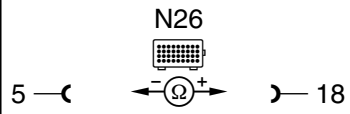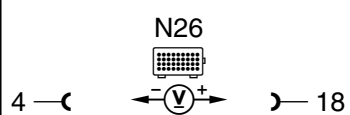| ⇒	🖳	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
13.0		**Alarm horn (H3)** [1]	N26 ⬛ 2 —(—(━ ━)—)— 13	Connect horn to circuit 30.	Horn sounds.	Wiring, H3.
14.0		**Diagnosis output**	N26 ⬛ 22 —(←⚊(V)⁺→)— 2	Ignition: **OFF** Disconnect N26 connector Connect adapter for impluse counter to X11/4. 1 —(—(━ ━)—)— 23 Disconnect N26 connector	11 – 14 V	Wiring, N26.
15.0		*Not applicable for U.S.A. vehicles*	—　　—　　—　—	—	—	—
16.0		**Headlamp alarm circuit** [1]	N26 ⬛ 2 —(—(━ ━)—)— 12		Headlamps illuminate (low beams).	Wiring, Headlamp unit.

[1]   Can be activated using HHT.

Electrical Test Program – Test

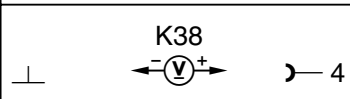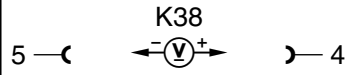| ⇒	📱	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
17.0		**Left taillamp unit, backup lamp (E3e3)**	N26 2 —〔 —〔━━〕— 〕— 14		Left backup lamp illuminates.	Wiring, E3e3
18.0		**Right taillamp unit, backup lamp (E4e3)**	N26 2 —〔 —〔━━〕— 〕— 3		Right backup lamp illuminates.	Wiring, E4e3
19.0	015 016 017 018	*Not applicable for U.S.A. vehicles*	– – –	–	–	–
20.0		**ATA control module (N26)** Voltage supply Circuit 30 output	N26 15 —〔 ◀—(V)— 〕— 1	Connect 🔲 to N26	11 – 14 V	⇒ 1.0, N26
21.0	008 016 017	*Not applicable for U.S.A. vehicles*	– – –	–	–	–

Electrical Test Program – Test

⇒	📱	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
22.0	008 016 017 018	*Not applicable for U.S.A. vehicles*	— — — —		—	—
23.0	015 016 017 018	*Not applicable for U.S.A. vehicles*	— — — —		—	—
24.0		*Not applicable for U.S.A. vehicles*	— — — —		—	—
25.0	021	**Starter lock-out relay module (K38)** [1] [2] Resistance	N26 ▦ 5 —❬ ←Ω→ ❭— 18	Ignition: **OFF** Disconnect N26 connector.	50 – 60 Ω	Wiring, K38, ⇒ 25.1
25.1		Circuit 15	N26 ▦ 4 —❬ ←V→ ❭— 18	Ignition: **ON**	11 – 14 V	Wiring, Circuit 15, ⇒ 25.2
25.2		Circuit 15	K38 ⊥ ←V→ ❭— 4	Ignition: **ON**	11 – 14 V	Wiring, ⇒ 25.3

[1]   Can be activated using HHT.

[2]   As of 01/94, starter lock-out function controlled by central locking system (PSE control module).
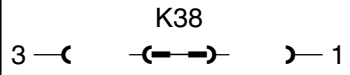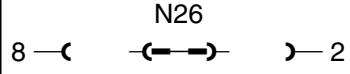
Electrical Test Program – Test

⇒	📱	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
25.3		Control signal (circuit 31) from N26	K38 5 —(←⁻Ⓥ⁺→)— 4	Ignition: **ON**	11 – 14 V	Wiring, N26, ⇒ 25.4
25.4		K38 circuit 50	K38 3 —(←(●—●)→)— 1	Disconnect K38. Using a 2.5mm wire (12 AWG) , bridge K38, ignition switch to position "3" (start)	Engine starts.	Wiring, K38, Ignition/starter switch (S2/1), Starter (M1).
26.0		**ATA status indicator (E33) in Interior CL switch (S85)**	N26 8 —(←(●—●)→)— 2		ATA status indicator (E33) illuminates.	Wiring, ⇒ 2.0, 3.0, 4.0, 12.0, S85, N26

Electrical Test Program – Test

⇒	📱	Test scope	Test connection			Test condition	Nominal value	Possible cause/Remedy
27.0		*Not applicable for U.S.A. vehicles*	–	–	–	–	–	–
28.0		*Not applicable for U.S.A. vehicles*	–	–	–	–	–	–
29.0		*Not applicable for U.S.A. vehicles*	–	–	–	–	–	–
30.0		*Not applicable for U.S.A. vehicles*	–	–	–	–	–	–
31.0		*Not applicable for U.S.A. vehicles*	–	–	–	–	–	–
32.0		*Not applicable for U.S.A. vehicles*	–	–	–	–	–	–

Version coding

Menu item 5 on the HHT allows programming of those ATA control modules
which require programming. Only upon completion of the programming is
the control module operable. The programming is menu driven.

Follow the instructions shown on the HHT display screen.

Possible programming

Equipment	Model 140
Country version	**X**
ATA Ⓤ🇸🇦	
Delayed headlamp shutoff duration, 0 - 120 secs. Ⓤ🇸🇦	