



3.4 Central locking (PSE/CL) Models 202, 208, 210 as of M.Y. 1998

	Page
Diagnosis	
Function Test	11/1
Electrical Test Program	
Component Locations	20/1
Connection of Components	21/1
Preparation for Test refer to	22 PSE
Test	23/1
Pneumatic Test Program	
Component Locations	31/1
Test	32/1



The central locking system can only be activated by the IR transmitter or for   activation of the CL system is possible via the mechanical key from the outside as well. Opening and closing of the vehicle using the mechanical key does not have an influence on the central locking system. When unlocking, "global" or "selective" unlocking can be selected.

Global: all lockable locks unlock on the vehicle.

Selective: Only the driver's door and fuel filler flap unlock.

Activation of the Pneumatic System Equipment (PSE):

The radio signal is sent to the antenna of the roof control panel control module (N70). From there the electronic ignition lock control module (N73) is activated via the CAN data line. The IR signal is sent from the left/right front door IR receiver (A26/1, A26/2) to the necessary front driver-side/passenger-side door control module (N69/1, N69/2).

From there the electronic ignition lock control module (N73) is activated via the CAN data lines. If the electronic ignition lock control module recognizes a valid radio or IR signal, the corresponding activation signals are transmitted to the PSE control module (A37) via the CAN data lines.

Specialized Functions of the Central Locking System

- **Emergency unlocking**

Integrated within the PSE Controlmodule is a crash sensor, which upon a vehicle de-acceleration of 6g from all angles will unlock the vehicle. The sensor is only active if the vehicle is unlocked from the outside.

- **Automatic locking**

If the automatic locking feature is activated, the vehicle will lock at a vehicle speed of greater than 9 mph.

- **Subsequent locking**

In order to prevent an unintentional unlocking via the remote central locking system, the vehicle is automatically locked provided none of the vehicle doors are opened within 40 seconds, the key is not in the ignition lock or the interior switch (CL) is not activated (pressed).

Continued...



Function of the trunk release switch (S15/1)

(Model 202/210 sedan, Model 208)

The trunk release switch (S15/1) is located on the trunk lid lock. With the vehicle unlocked via the remote central locking, and the trunk lid lock button is pressed, a ground signal is sent from the trunk release switch (S15/1) to the PSE control module (A37). The PSE control module produces pressure which in turn activates the RTR pneumatic actuator and the trunk lid opens.

If the vehicle has been locked via the IR transmitter, the switch signal is also received by the PSE control module (A37), however the PSE control module recognizes the vehicle as being **locked** and as a result the PSE control module **does not** activate the RTR pneumatic element actuator.

Diagnosis – Function Test (Central Locking)

Preparation for Test:

1. Review C/1, C/2, 11, 12, 13, 20, 21, 22, 31, 32
2. IRCL system for CL is functional,
3. Vehicle unlocked,
4. All doors and trunk lid closed,
5. Side windows open,
6. Battery voltage 11 to 14 V,
7. Fuses ok,
8. Connect HHT and readout DTC'S.

Test step/Test scope	Test condition	Nominal value	Possible cause/Remedy ¹⁾
⇒ 1.0 Locking vehicle by pointing IR transmitter at the RCL receiver (roof frame) (A26/9) or via the IR receivers in the doors (A26/1, A26/2).	Locking vehicle using transmitter key.	All doors and filler flap lock in 3 sec.	Vehicle does not lock and pump motor in PSE control module (A37) does not run : PSE version coding incorrect: see 3.4 PSE C/2, PSE (A37), Vehicle does not lock even though pump motor in PSE control module (A37) runs : 4.9 12, 32 PSE/CL ⇒ 2.0, 32 PSE/CL ⇒ 4.0, 32 PSE/CL ⇒ 6.0, 32 PSE ⇒ 1.0, 32 PSE ⇒ 3.0, 32 PSE ⇒ 5.0

¹⁾ Observe Preparation for Test, see 22.

Diagnosis – Function Test (Central Locking)

Test step/Test scope	Test condition	Nominal value	Possible cause/Remedy ¹⁾
<p>⇒ 2.0 "Selective" unlocking of the vehicle by pointing the IR transmitter at the RCL receiver (roof frame) (A26/9) or via the IR receivers in the doors (A26/1, A26/2).</p>	<p>Select "selective" opening. Unlocking vehicle using transmitter key.</p>	<p>All doors, trunk lid and filler flap unlock in 3 sec.</p>	<p>Vehicle does not unlock and pump motor in PSE control module (A37) does not run: Wiring, PSE version coding incorrect, see 3.4 PSE C/2, PSE (A37).</p> <p>Vehicle does not unlock even though pump motor in PSE control module (A37) runs: 23 PSE/CL ⇒ 1.0, 4.9 12, 32 PSE/CL ⇒ 1.0, 32 PSE/CL ⇒ 5.0, 32 PSE ⇒ 2.0, 32 PSE ⇒ 6.0</p>

1) Observe Preparation for Test, see 22.

Diagnosis – Function Test (Central Locking)

Test step/Test scope	Test condition	Nominal value	Possible cause/Remedy ¹⁾
<p>⇒ 3.0 "Global" unlocking of the vehicle by pointing the IR transmitter at the RCL receiver (roof frame) (A26/9) or via the IR receivers in the doors (A26/1, A26/2).</p>	<p>Select "global" opening. Unlocking vehicle using transmitter key.</p>	<p>All doors, trunk lid and filler flap lock in 3 sec.</p>	<p>Vehicle does not unlock and pump motor in PSE control module (A37) does not run: Wiring, PSE version coding incorrect, see 3.4 PSE C/2</p> <p>Vehicle does not unlock even though pump motor in PSE control module (A37) runs: 23 PSE/CL ⇒ 1.0, 4.9 12, 32 PSE/CL ⇒ 1.0, 32 PSE/CL ⇒ 3.0, 32 PSE/CL ⇒ 5.0, 32 PSE ⇒ 2.0, 32 PSE ⇒ 4.0, 32 PSE ⇒ 6.0</p>

¹⁾ Observe Preparation for Test, see 22.

Diagnosis – Function Test (Central Locking)

Test step/Test scope	Test condition	Nominal value	Possible cause/Remedy ¹⁾
<p>⇒ 4.0 Lock vehicle via interior switch (CL)</p>	<p>Unlock vehicle via IR transmitter. Press interior switch in direction: Lock</p>	<p>All doors lock in 3 sec. Fuel filler flap does not lock.</p>	<p>Vehicle does not unlock and pump motor in PSE control module (A37) does not run: PSE version coding incorrect, see 3.4 PSE C/2, Wiring, PSE (A37).</p> <p>Vehicle does not unlock even though pump motor in PSE control module (A37) runs.</p> <p>23 PSE/CL ⇒ 1.0, 32 PSE/CL ⇒ 2.0, 32 PSE/CL ⇒ 4.0, 32 PSE ⇒ 1.0, 32 PSE ⇒ 3.0</p>

1) Observe Preparation for Test, see 22.

Diagnosis – Function Test (Central Locking)

Test step/Test scope	Test condition	Nominal value	Possible cause/Remedy ¹⁾
⇒ 5.0 Unlock vehicle via interior switch (CL)	Press interior switch in direction: Unlock	All doors unlock in 3 sec.	Vehicle does not unlock and pump motor in PSE control module (A37) does not run: PSE version coding incorrect, see 3.4 PSE C/2, Wiring, PSE (A37). Vehicle does not unlock even though pump motor in PSE control module (A37) runs: 23 PSE/CL ⇒ 1.0, 32 PSE/CL ⇒ 1.0, 32 PSE/CL ⇒ 3.0, 32 PSE ⇒ 2.0, 32 PSE ⇒ 4.0
⇒ 6.0 Unlock vehicle by opening one of the front doors.	Select "selective" opening. Vehicle locked via interior switch. Open one of the front doors via door interior handle.	Door which was unlocked via door interior handle, unlocks.	Vehicle unlocks at all doors and the PSE control module (A37) runs: Transmitter key, PSE (A37).

1) Observe Preparation for Test, see 22.

Diagnosis – Function Test (Central Locking)

Test step/Test scope	Test condition	Nominal value	Possible cause/Remedy ¹⁾
<p>⇒ 7.0 Unlock vehicle by opening one of the front doors.</p>	<p>Select "global" opening. Vehicle locked via interior switch. Open one of the front doors via door interior handle.</p>	<p>All doors unlock in 3 sec.</p>	<p>Vehicle does not unlock and pump motor in PSE control module (A37) does not run: PSE version coding incorrect, see 3.4 PSE C/2, Wiring, PSE (A37).</p> <p>Vehicle does not unlock even though pump motor in PSE control module (A37) runs:</p> <p>23 PSE/CL ⇒ 2.0, 32 PSE/CL ⇒ 1.0, 32 PSE/CL ⇒ 3.0, 32 PSE ⇒ 2.0, 32 PSE ⇒ 4.0</p>

¹⁾ Observe Preparation for Test, see 22.

Diagnosis – Function Test (Central Locking)

Test step/Test scope	Test condition	Nominal value	Possible cause/Remedy ¹⁾
⇒ 8.0 Unlock vehicle via lock switch on front door or trunk lid lock switch (only USA J).	Turn mechanical key in front door lock switch or trunk lid lock switch towards unlock.	All doors, trunk lid and filler flap unlock in 3 sec.	Vehicle does not unlock and pump motor in PSE control module (A37) does not run: Wiring, PSE (A37). Vehicle does not unlock even though pump motor in PSE control module (A37) runs: 4.9 23, 4.9 23, 32 PSE/CL ⇒ 1.0, 32 PSE ⇒ 2.0

1) Observe Preparation for Test, see 22.

Diagnosis – Function Test (Central Locking)

Test step/Test scope	Test condition	Nominal value	Possible cause/Remedy ¹⁾
⇒ 9.0 Lock vehicle via lock switch on front door or trunk lid lock switch (only USA J).	Turn mechanical key in front door lock switch or trunk lid lock switch towards unlock.	All doors, trunk lid and filler flap lock in 3 sec.	Vehicle does not lock and pump motor in PSE control module (A37) does not run : Wiring, PSE (A37). Vehicle does not lock even though pump motor in PSE control module (A37) runs : 4.9 23, 4.9 23, 32 PSE/CL ⇒ 2.0, 32 PSE ⇒ 1.0


1) Observe Preparation for Test, see 22.

Diagnosis – Function Test (Central Locking)

Test step/Test scope	Test condition	Nominal value	Possible cause/Remedy ¹⁾
<p>⇒ 10.0 Subsequent locking of vehicle via remote central locking (RCL).</p>	<p>Remove ignition key. Lock vehicle via RCL. Unlock vehicle via RCL. Do not open any doors within 40 seconds. Do not press interior switch (CL).</p>	<p>All doors and filler flap lock.</p>	<p>Vehicle does not lock and pump motor in PSE control module (A37) does not run: PSE version coding incorrect, see 3.4 PSE C/2, Wiring, PSE (A37).</p> <p>Vehicle does not unlock even though pump motor in PSE control module (A37) runs:</p> <p>23 PSE/CL ⇒ 2.0, 23 PSE/CL ⇒ 3.0, 23 PSE/CL ⇒ 4.0, 23 PSE/CL ⇒ 5.0, 32 PSE/CL ⇒ 2.0, 32 PSE/CL ⇒ 4.0, 32 PSE/CL ⇒ 6.0, 32 PSE ⇒ 1.0, 32 PSE ⇒ 3.0 32 PSE ⇒ 5.0</p>

1) Observe Preparation for Test, see 22.

Diagnosis – Function Test (Central Locking)

Test step/Test scope	Test condition	Nominal value	Possible cause/Remedy ¹⁾
<p>⇒ 11.0 Automatic locking of vehicle via remote central locking (RCL).</p>	<p>"Automatic locking activated". Drive vehicle with a speed of 9mph.  The "Automatic locking" feature should not have been deactivated via the CL interior switch (S6s1) or via the HHT.</p>	<p>All doors lock. Fuel filler flap does not lock.</p>	<p>Vehicle does not lock and pump motor in PSE control module (A37) does not run: PSE version coding incorrect, see 3.4 PSE C/2, Wiring, PSE (A37).</p> <p>Vehicle does not unlock even though pump motor in PSE control module (A37) runs:</p> <p>32 PSE/CL ⇒ 2.0, 32 PSE/CL ⇒ 4.0, 32 PSE ⇒ 1.0, 32 PSE ⇒ 3.0</p>

1) Observe Preparation for Test, see 22.

Electrical Test Program – Location of Components (CL)

Model 202, 208
(model 202 shown)
(for balance of components
see Figures 2 and 3)

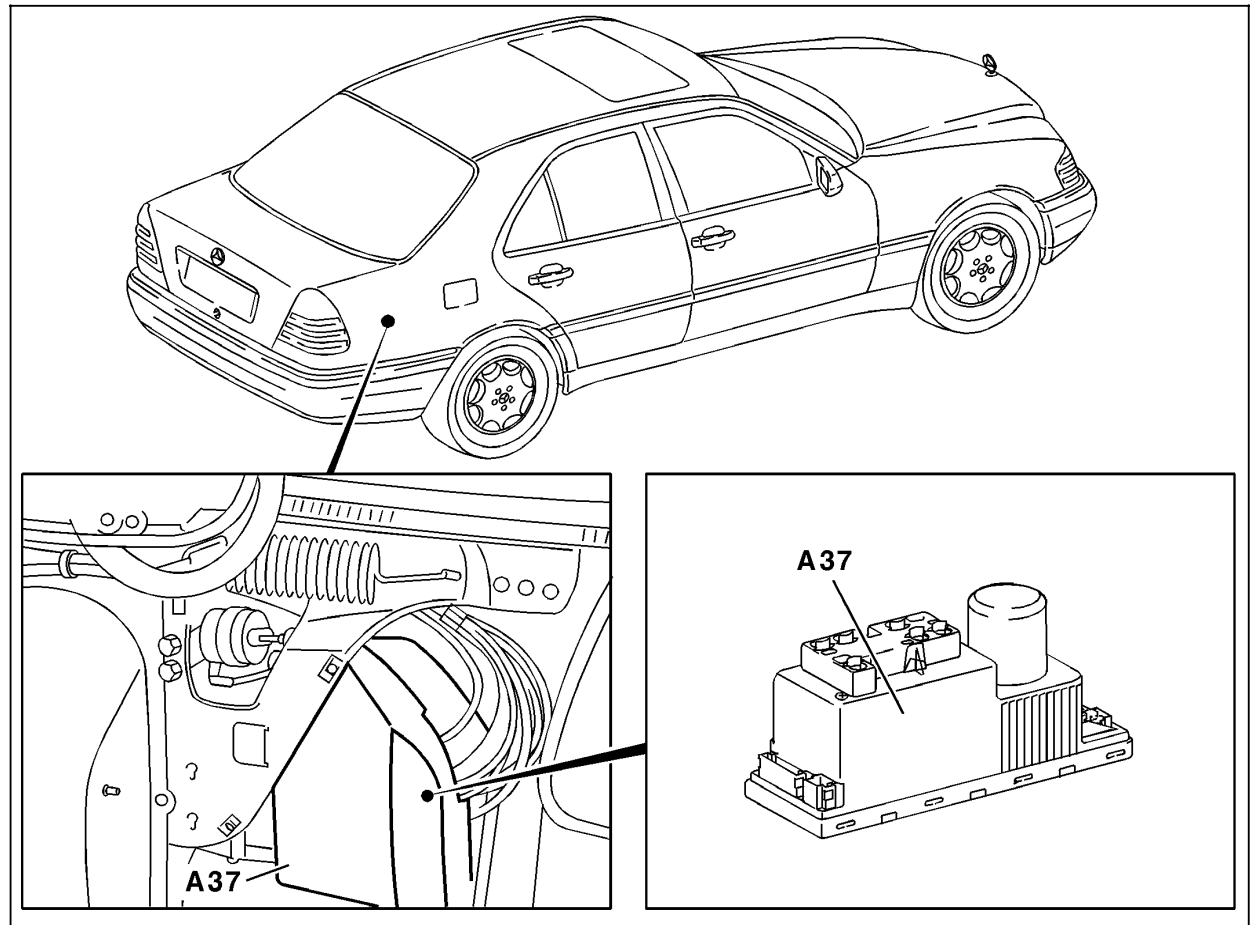


Figure 1

A37 PSE control module, combined functions

P80.20-0365-06

Electrical Test Program – Location of Components (CL)

Model 210
(Model 210 sedan shown)

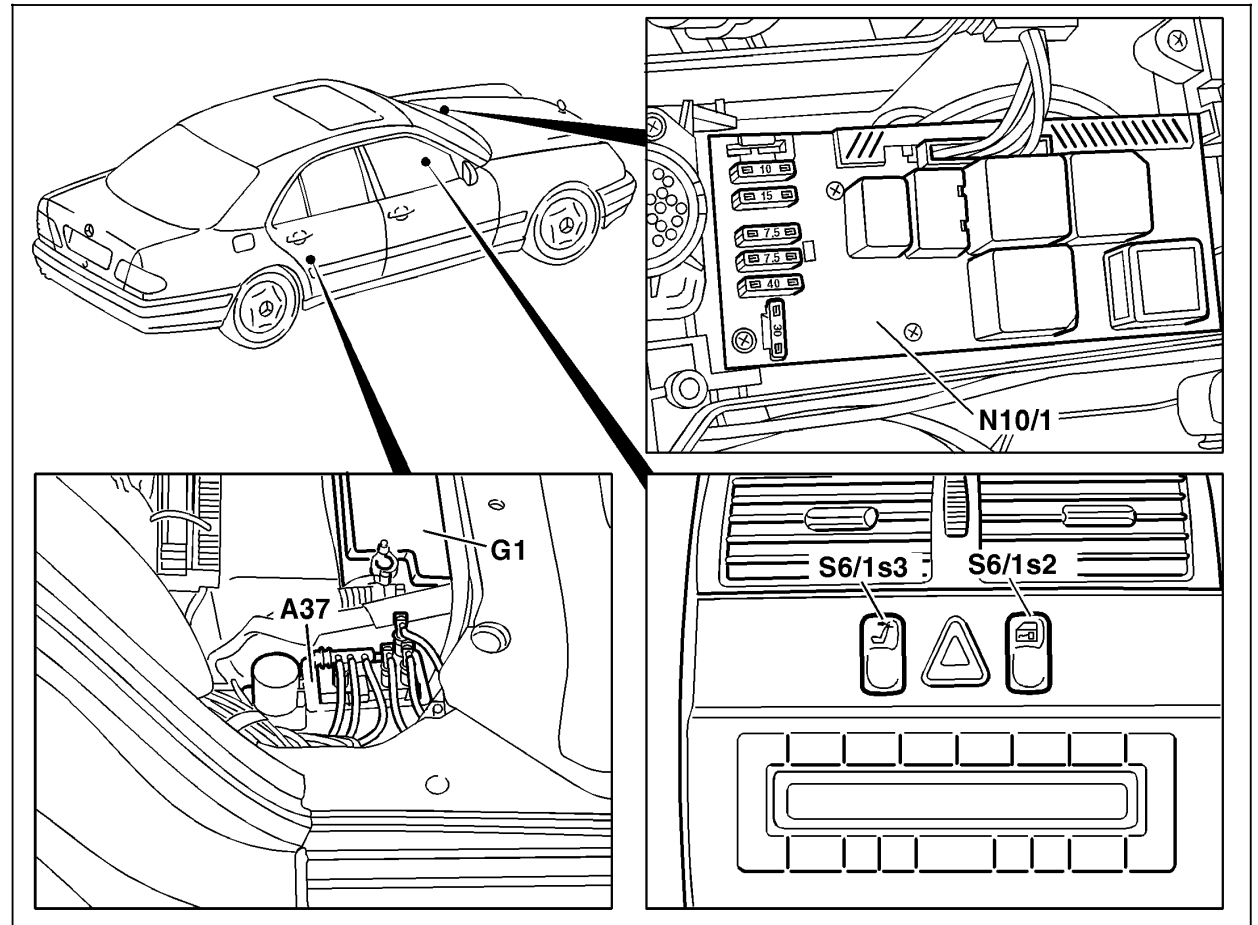


Figure 2

- A37 PSE control module, combined functions
- G1 Battery
- N10/1 Signal pick-up and activation module (SAM) left front
- S6/1s2 Interior switch (CL)
- S6/1s3 RHR unlocking switch

P80.20-0371-06

Electrical Test Program – Location of Components (CL)

Model 210
(Model 210 sedan shown)

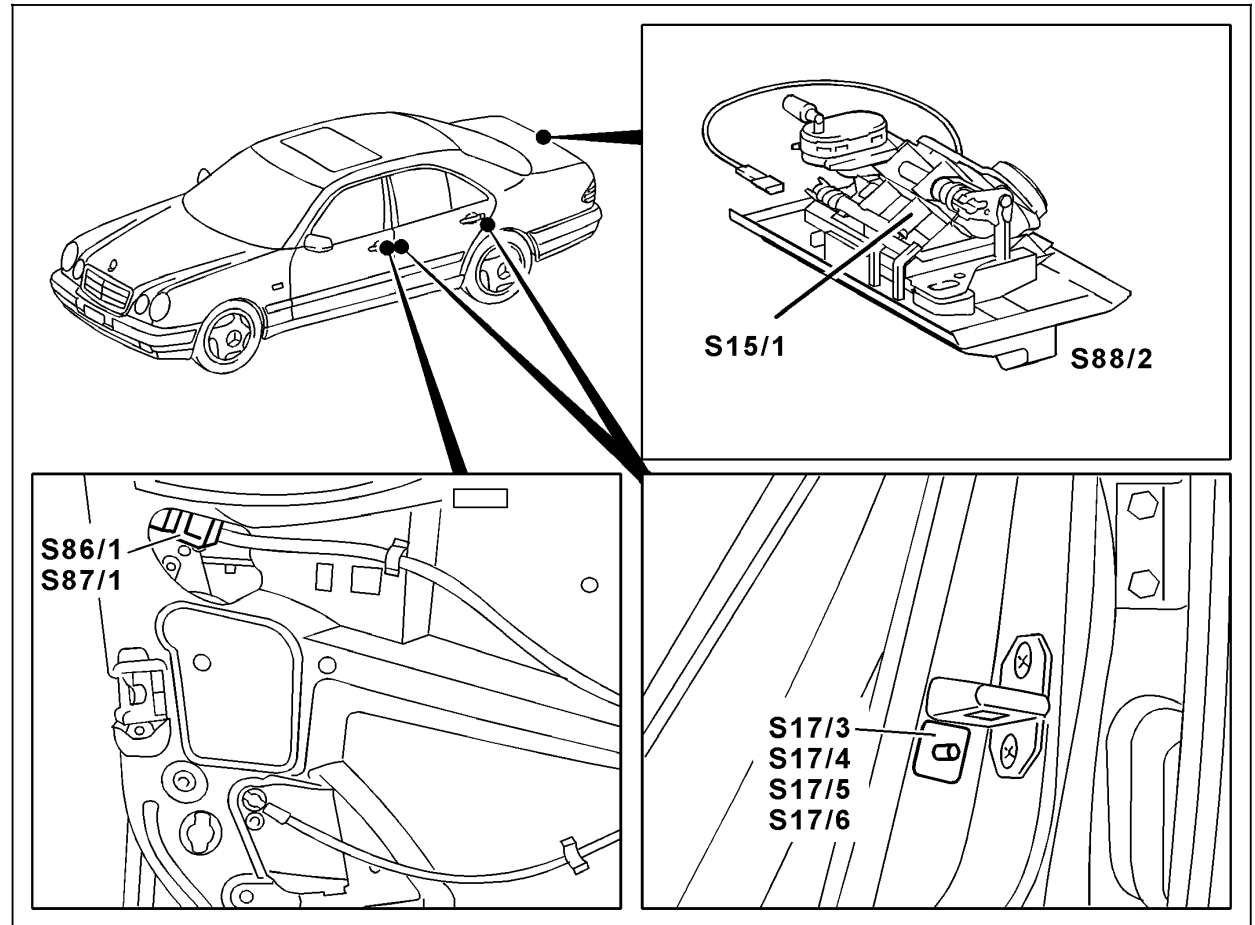


Figure 3

- S15/1 Trunk release switch
- S17/3 Left front door switch
- S17/4 Right front door switch
- S17/5 Left rear door switch
- S17/6 Right rear door switch
- S86/1 Left front door lock switch (CF) (only USA J)
- S87/1 Right front door lock switch (CF) (only USA J)
- S88/2 Trunk lid lock switch (CF) (only USA J)

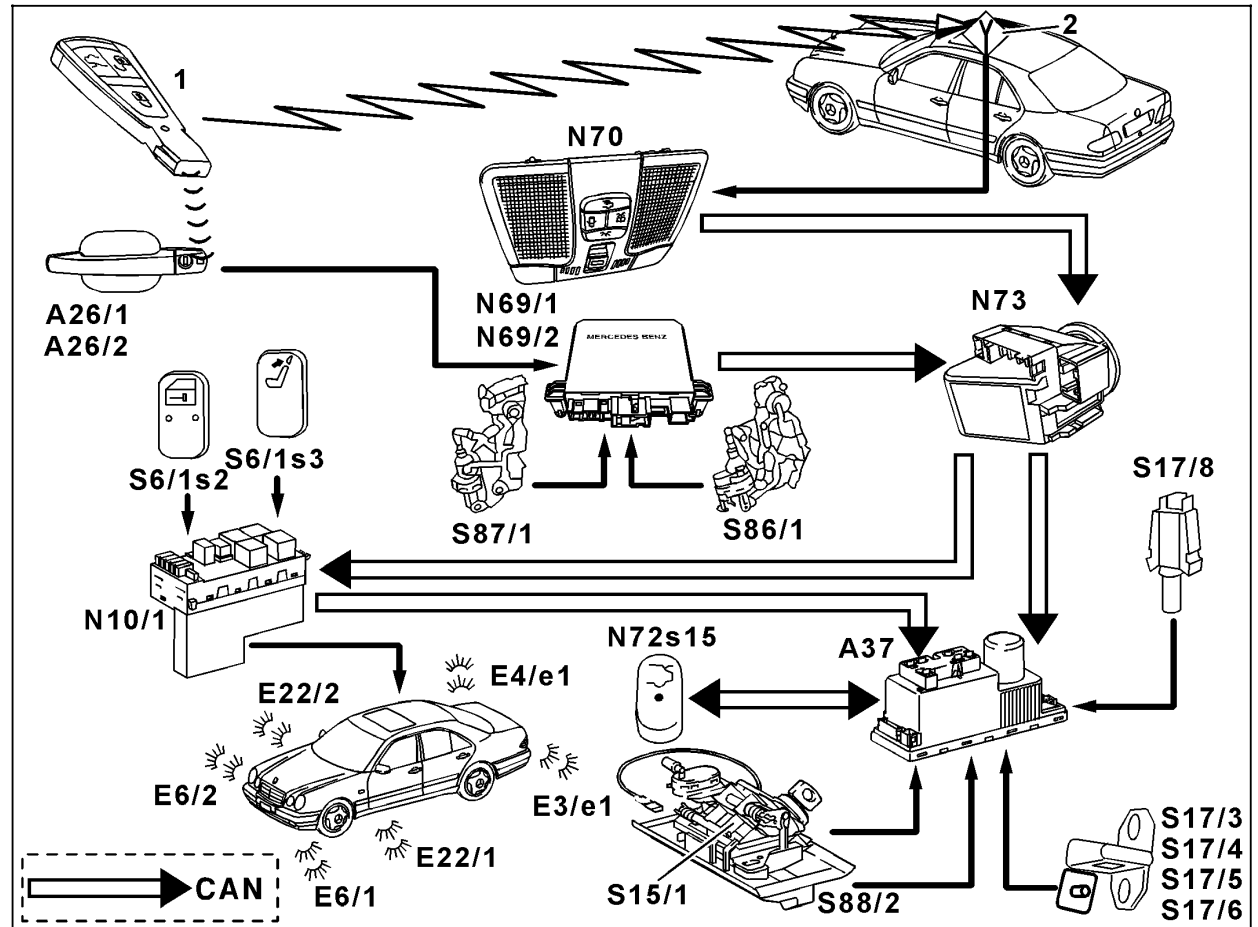
P80.20-0382-06

Electrical Test Program – Connection of Components (CL)

Model 210 sedan shown

Figure 1

- A26/1 Left front door IR receiver
- A26/2 Right front door IR receiver
- A37 PSE control module, combined functions
- CAN Control-Area-Network
- E3e1 Turn signal lamp
- E4e1 Turn signal lamp
- E6/1 Left turn signal/side marker lamp (USA)
- E6/2 Right turn signal/side marker lamp (USA)
- E22/1 Left auxiliary turn signal lamp
- E22/2 Right auxiliary turn signal lamp
- N10/1 Signal pick-up and activation module (SAM) left front
- N69/1 Front driver-side door control module
- N69/2 Front passenger-side door control module
- N70 Roof control panel control module
- N72s15 RTR switch
- N73 Electronic ignition lock control module
- S6/1s2 Interior switch (CL)
- S6/1s3 RHR unlocking switch
- S15/1 Trunk release switch
- S17/3 Left front door switch
- S17/4 Right front door switch
- S17/5 Left rear door switch
- S17/6 Right rear door switch
- S17/8 Trunk lamp switch
- S86/1 Left front door lock switch (CF) (only USA J)
- S87/1 Right front door lock switch (CF) (only USA J)
- S88/2 Trunk lid lock switch (CF) (only USA J)
- 1 Transmitter key
- 2 Antenna



P80.20-0368-06

Electrical Test Program - Preparation for Test

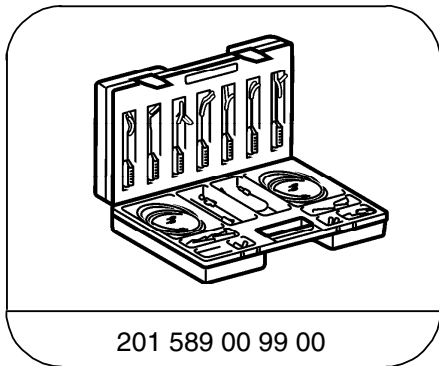
Preparation for Test:

1. Voltage supply to all control modules and CAN data lines ok,
2. Battery voltage 11 – 14 V,
3. Review section 0,
4. Review C/1, C/2, 11, 12, 20, 21, 22, 31, 32,
5. Connect HHT, see section 0,
6. For model 202 and 208, review PE80.00-P-1100D and for model 210 review PE80.00-P-1100A, prior to starting test.

Electrical Wiring Diagrams:

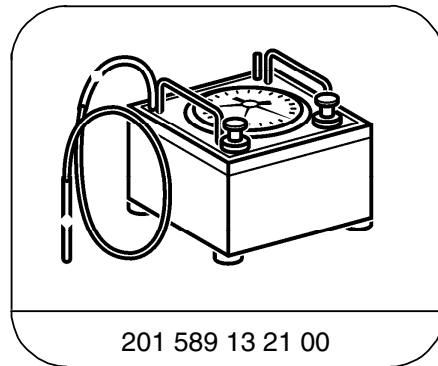
See Electric Troubleshooting Manual, Model 202/208, group 80,
Model 210, Volume 2, group 80

Special Tools



201 589 00 99 00

Electrical connecting set



201 589 13 21 00

Tester

Test equipment; See MBUSA Standard Service Equipment Program

Description	Brand, model, etc.
Digital multimeter	Fluke models 23, 77 III, 83, 85, 87

Electrical Test Program - Preparation for Test

Connection Diagram - Socket Box
Model 210
 (sedan shown)

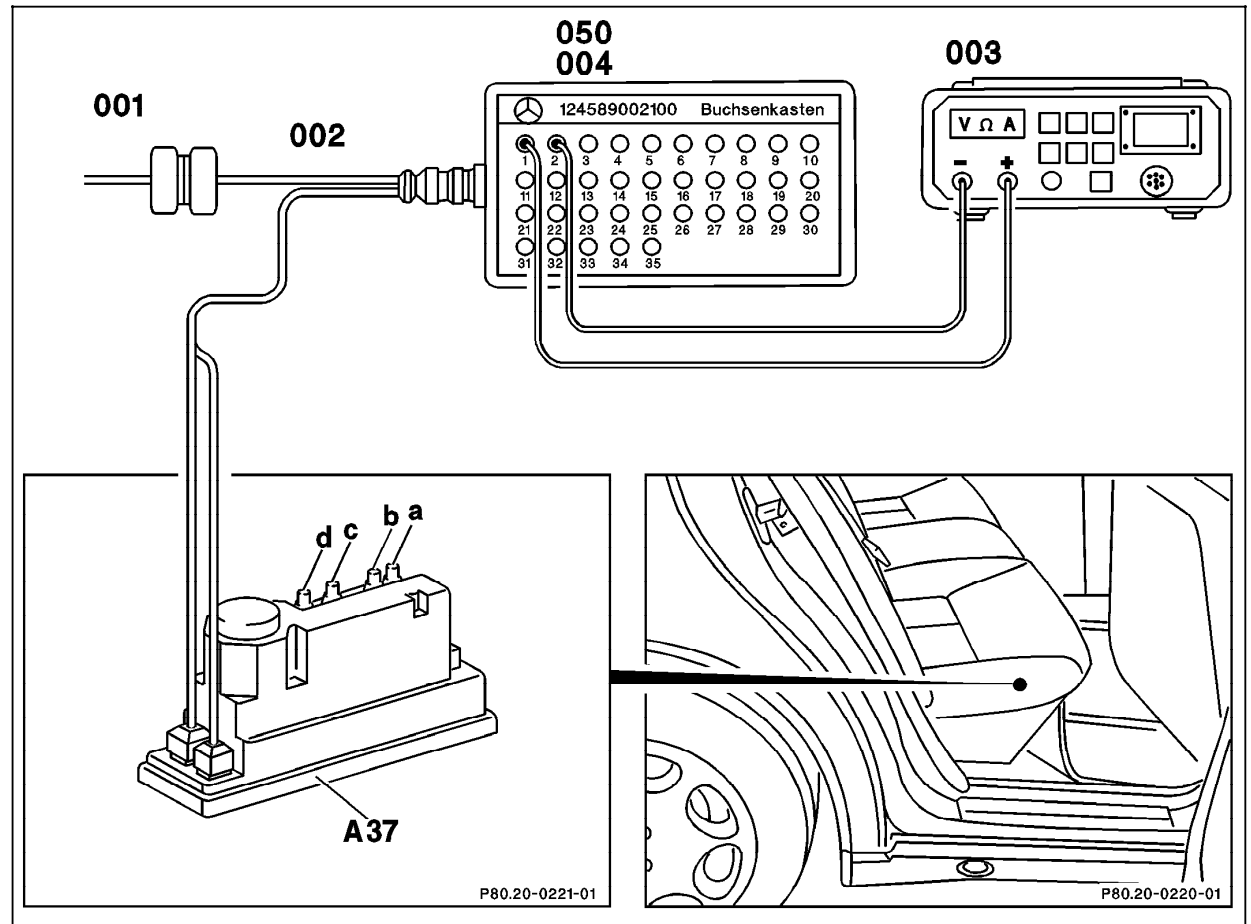


Figure 1

- A37 PSE control module, combined functions
- 001 PSE control module connector
- 002 Test cable
- 003 Multimeter
- 004/050 Socket box (35-pole)

P80.20-0213-06

Electrical Test Program - Preparation for Test

Connection Diagram - Socket Box

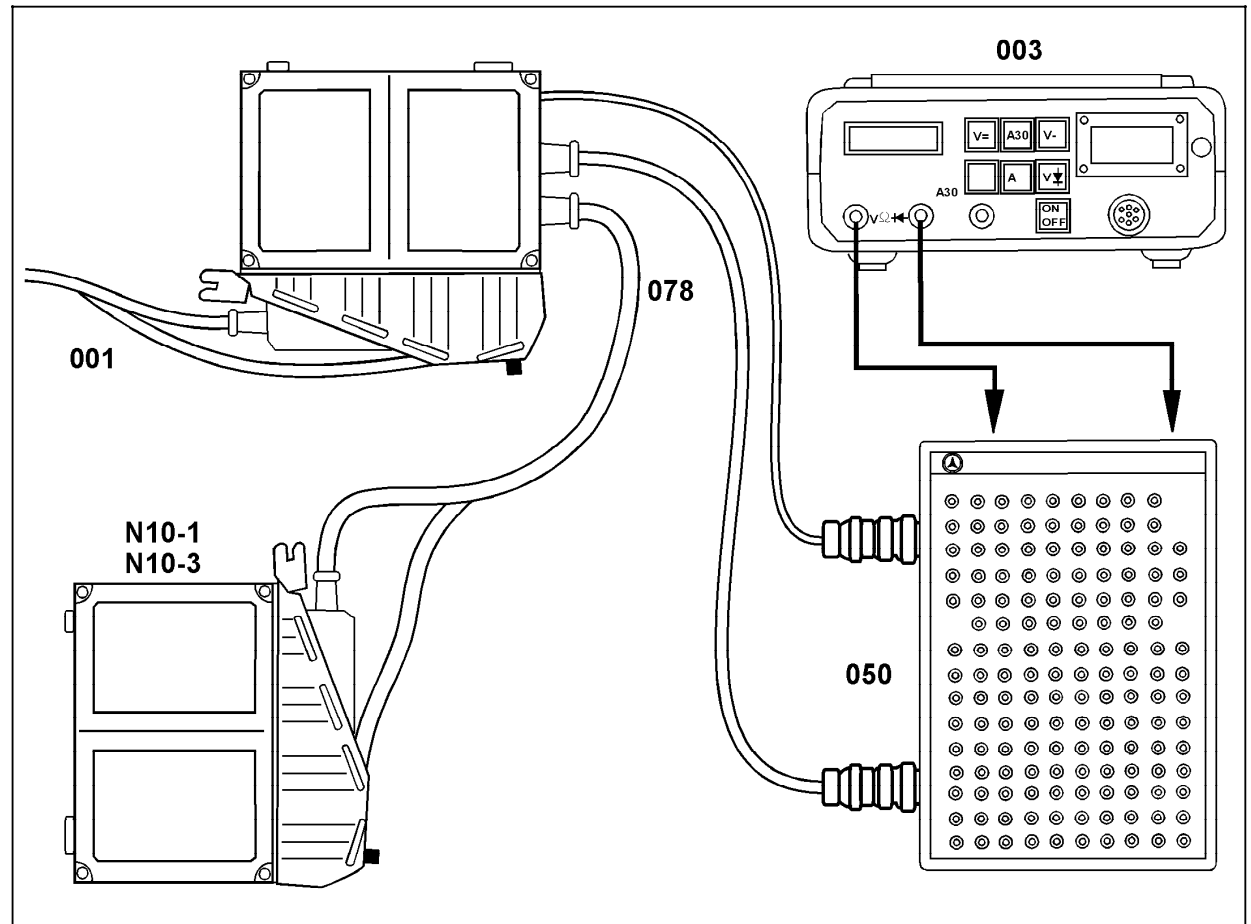


Figure 2

- N10-1 Combination control module (model 210)
- 001 PSE control module connector
- 002 Test cable
- 003 Multimeter
- 050 Socket box (35-pole)

P82.40-0214-06

Electrical Test Program - Preparation for Test

Connections - PSE control module (A37)

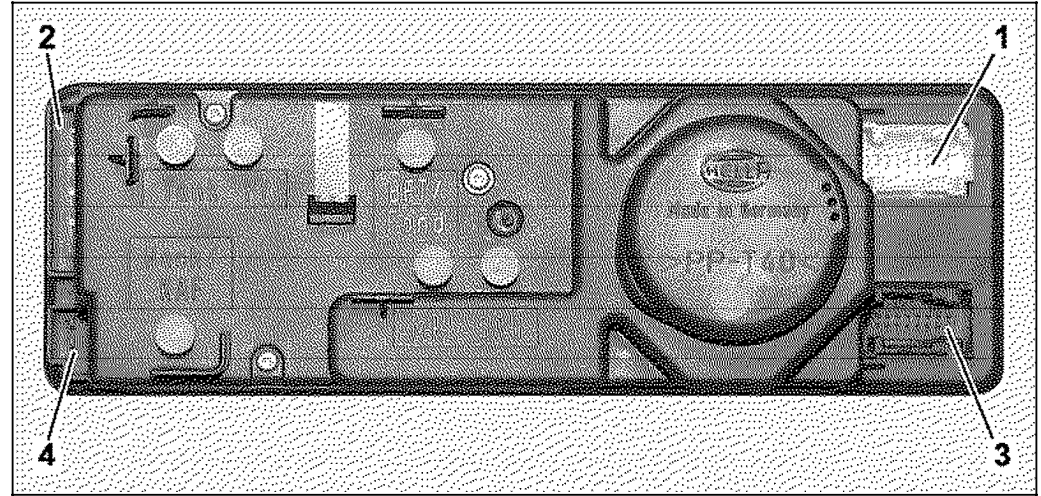


Figure 4


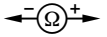
- 1 Connector 1 (control line PSE)
- 2 Connector 2 (voltage supply PSE)
- 3 Connector 3 (control line ATA)
- 4 Connector 4 (load connections ATA)

P80.20-2037-10

Electrical Test Program – Test

Preparation for Test:


1. Review section 0,
2. Review PSE 22

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
1.0		Interior switch (CL) (S6/1s2)	<p>N10/1 6 —  (1)</p>	<p>Disconnect connector 1 from signal pick-up and activation module (N10/1)</p> <p>S6/1s2: Rest position</p> <p>Press to lock and hold</p> <p>S6/1s2: Rest position</p> <p>Press to unlock and hold</p>	<p>>20 kΩ</p> <p>approx. 200 Ω</p> <p>>20 kΩ</p> <p><1 Ω</p>	<p>Wiring, S6/1s2, S6/1s3</p>
2.0		Left front door switch (S17/3) Circuit		<p>Vehicle unlocked with IR transmitter via "global" selection.</p> <p>Both front doors closed.</p> <p>Vehicle locked via interior switch (S6/1s2).</p> <p>Open driver door.</p>	<p>CL unlocks vehicle.</p>	<p>Wiring, 23 PSE ⇒ 1.0, 32 PSE/CL ⇒ 4.0, 32 ⇒ 3.0</p>


3.4 Pneumatic System Equipment (PSE)

Models 202, 208, 210 as of M.Y. 1998

Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
3.0		Right front door switch (S17/4) Circuit		Vehicle unlocked with IR transmitter via "global" selection. Both front doors closed. Vehicle locked via interior switch (S6/1s2). Open passenger-side door.	CL unlocks vehicle.	Wiring, 23 PSE ⇒ 2.0, 32 PSE/CL ⇒ 2.0, 32 ⇒ 1.0
4.0		Left rear door switch (S17/5) Circuit		Vehicle unlocked with IR transmitter. Ignition key removed. All doors closed. Lock vehicle using RCL, then open left rear door within 30 seconds.	Time elapsed >40 seconds, subsequent locking without function.	Wiring, PSE (A37).

Electrical Test Program – Test

⇒		Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
5.0		Right rear door switch (S17/6) Circuit		Vehicle unlocked with IR transmitter. Ignition key removed. All doors closed. Lock vehicle using RCL, then open right rear door within 30 seconds.	Time elapsed >40 seconds, subsequent locking without function.	Wiring, PSE (A37).

Pneumatic Test Program – Component Locations (CL)

Model 210 sedan

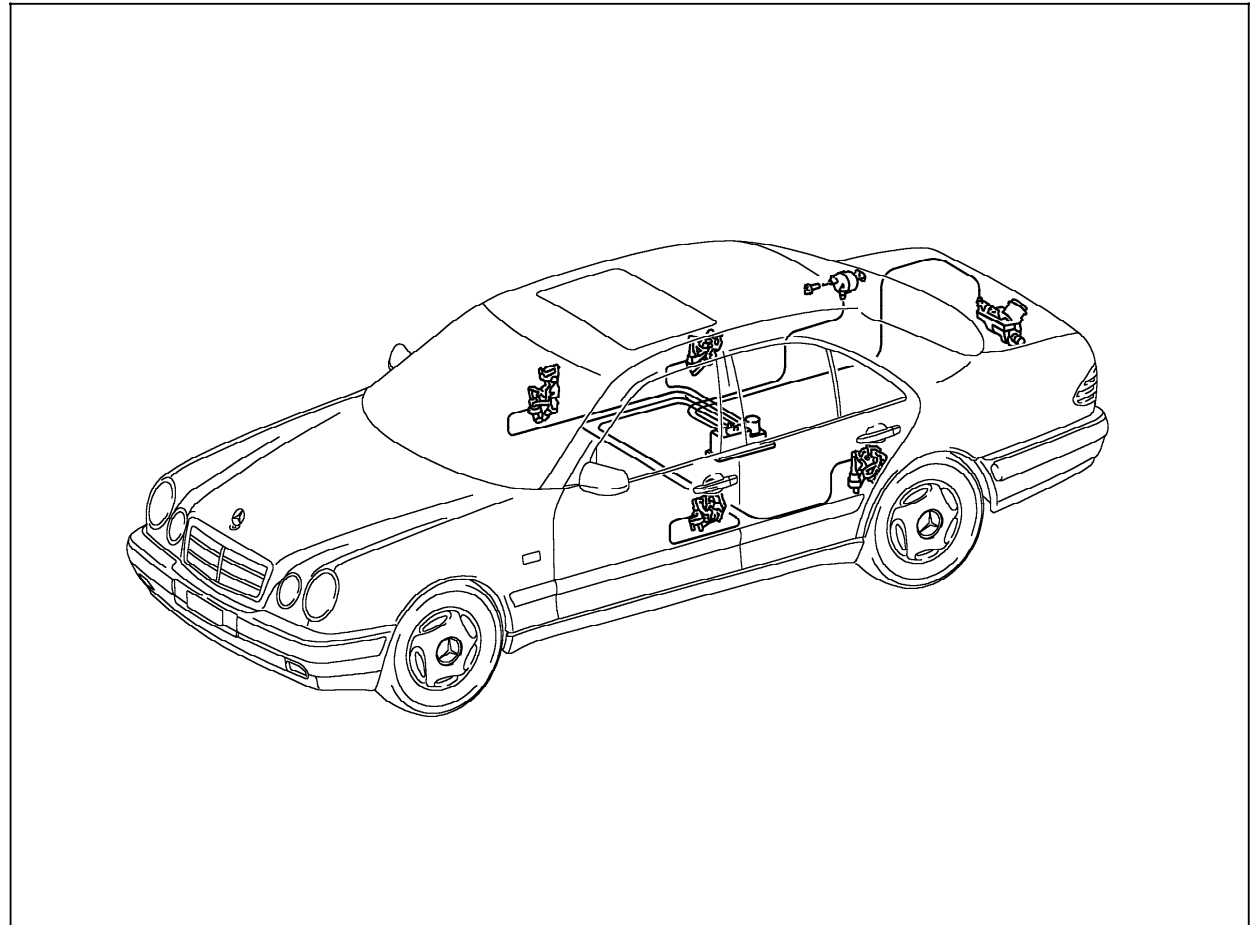


Figure 1

See Figure 2 for component designations

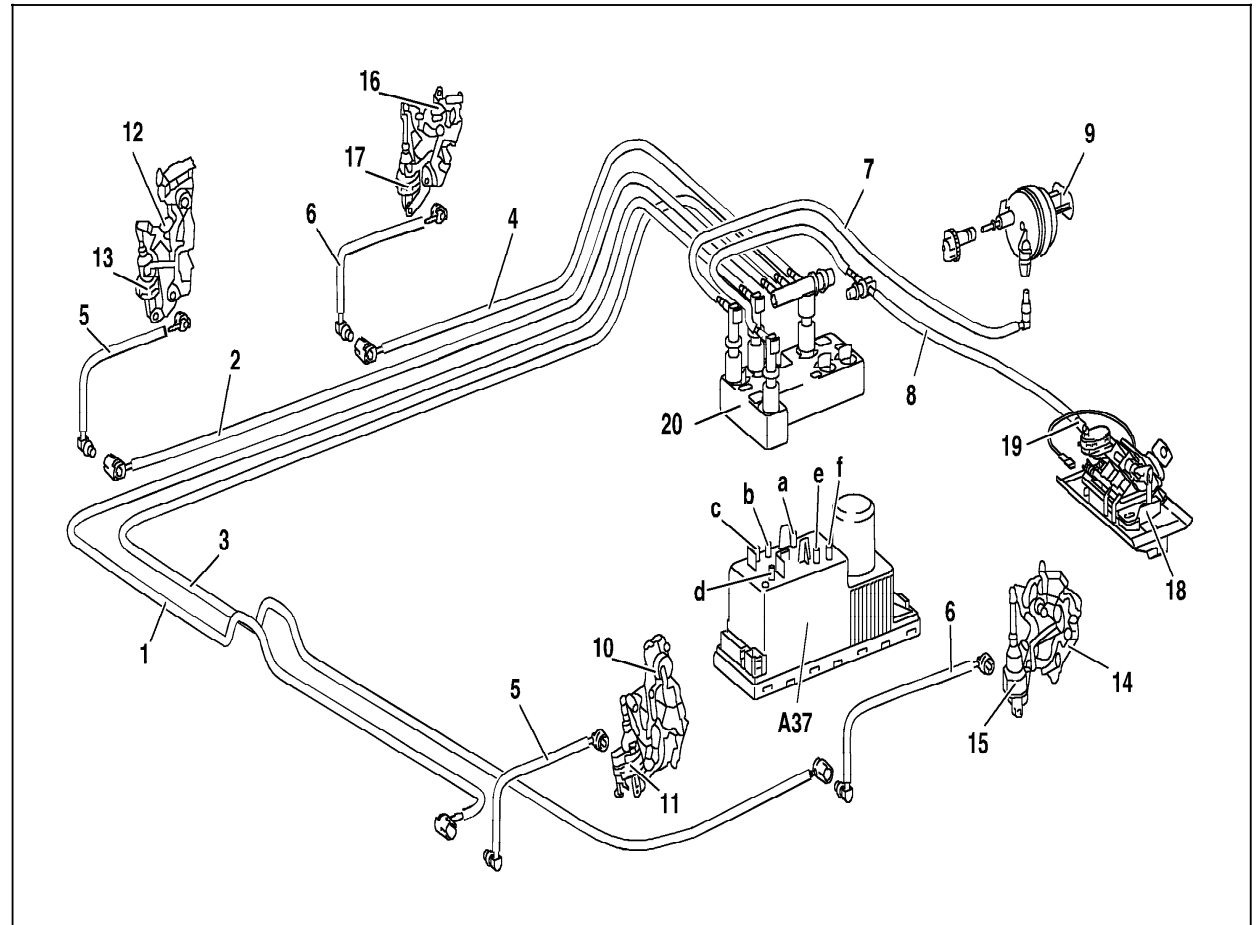
P80.20-0499-09

Pneumatic Test Program – Component Locations (CL)

Model 210 sedan

Figure 2

- A37 PSE control module, combined functions
- a Pneumatic connection, passenger/rear doors
- b Pneumatic connection, driver-side door
- c Pneumatic connection, fuel tank filler flap
- d Pneumatic connection, RTR/RHR
- e Pneumatic connection, OSB
- f Pneumatic connection, MVA
- 1 Pneumatic line (CL), driver-side door frame floor
- 2 Pneumatic line (CL), passenger-side door frame floor
- 3 Pneumatic line (CL), left rear door frame floor
- 4 Pneumatic line (CL), right rear door frame floor
- 5 Pneumatic line, front doors
- 6 Pneumatic line, rear doors
- 7 Pneumatic line (CL), fuel filler flap frame floor
- 8 Pneumatic line (CL), trunk lid release frame floor
- 9 Pneumatic actuator, fuel filler flap
- 10 Driver-side door lock
- 11 Pneumatic actuator, driver-side door
- 12 Passenger-side door lock
- 13 Pneumatic actuator, passenger-side door
- 14 Left rear door lock
- 15 Pneumatic actuator, left rear door
- 16 Right rear door lock
- 17 Pneumatic actuator, right rear door
- 18 Trunk lid lock
- 19 Pneumatic actuator, trunk lid release
- 20 Control module connector



P80.20-0500-09

Pneumatic Test Program – Component Locations (CL)

Model 210 wagon

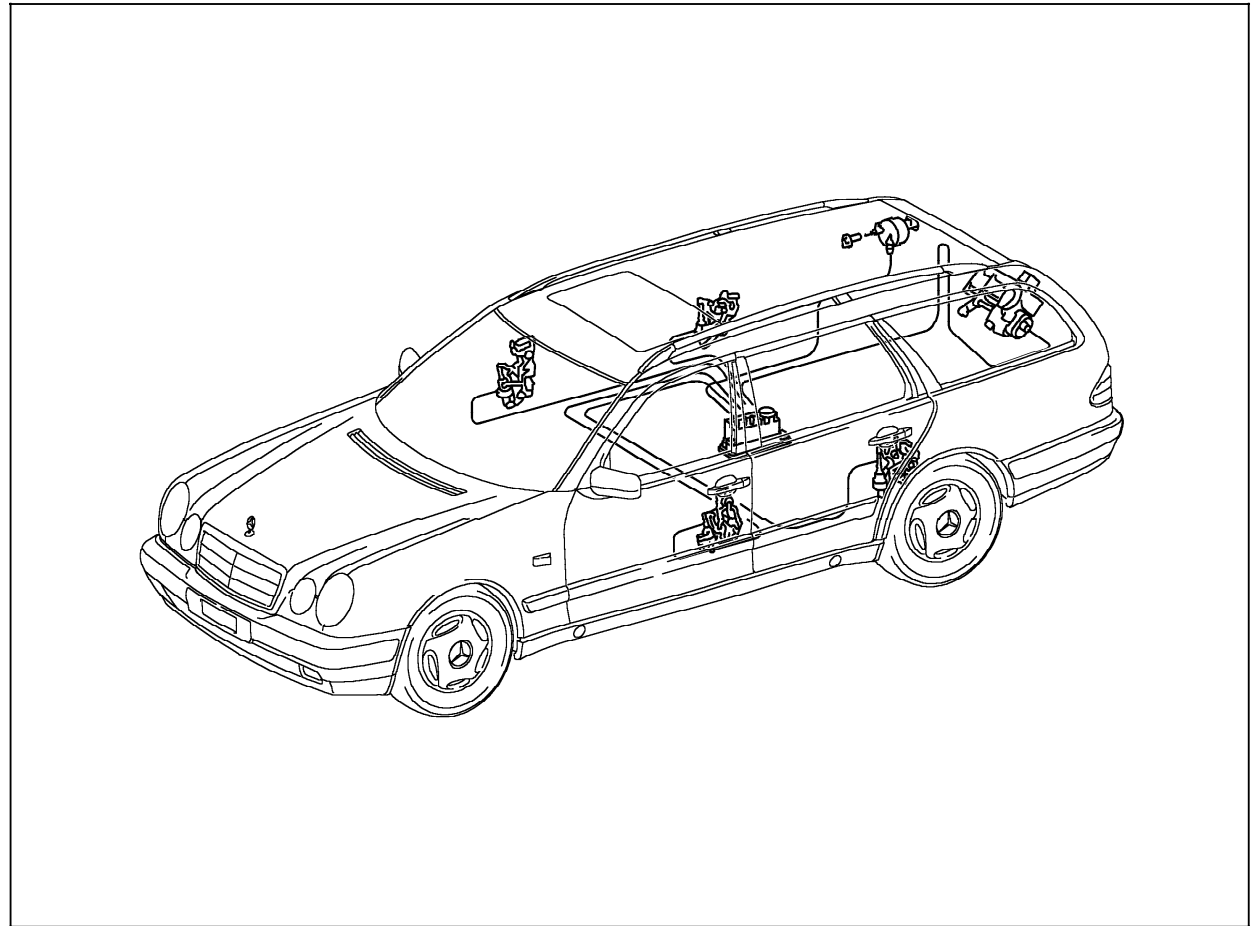


Figure 3

See Figure 4 for component designations

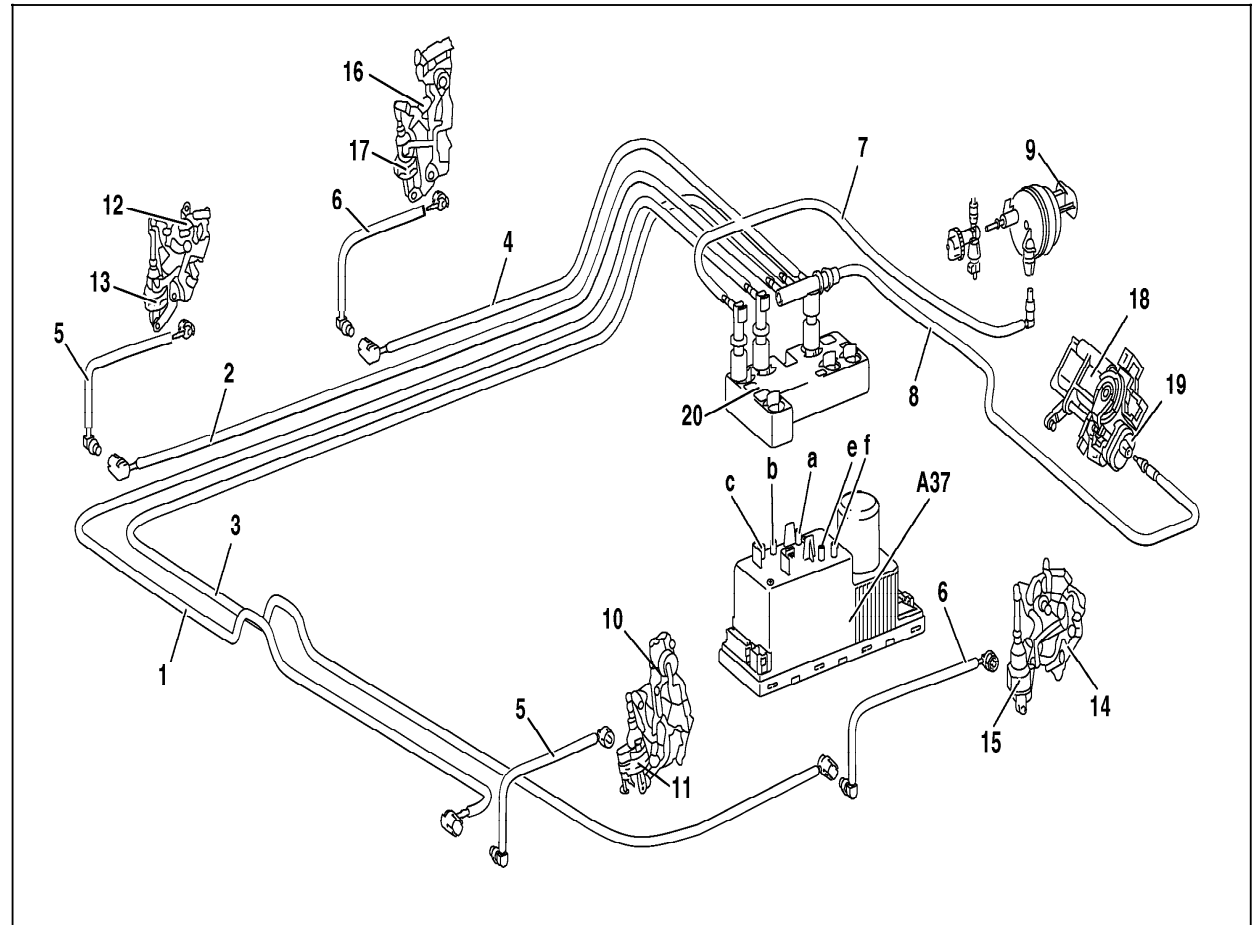
P80.20-0497-09

Pneumatic Test Program – Component Locations (CL)

Model 210 wagon

Figure 4

- A37 PSE control module, combined functions
- a Pneumatic connection, passenger/rear doors
- b Pneumatic connection, driver-side door
- c Pneumatic connection, fuel tank filler flap
- e Pneumatic connection, OSB
- f Pneumatic connection, MVA
- 1 Pneumatic line (CL), driver-side door frame floor
- 2 Pneumatic line (CL), passenger-side door frame floor
- 3 Pneumatic line (CL), left rear door frame floor
- 4 Pneumatic line (CL), right rear door frame floor
- 5 Pneumatic line, front doors
- 6 Pneumatic line, rear doors
- 7 Pneumatic line (CL), fuel filler flap frame floor
- 8 Pneumatic line, tailgate frame floor
- 9 Pneumatic actuator, fuel filler flap
- 10 Driver-side door lock
- 11 Pneumatic actuator, driver-side door
- 12 Passenger-side door lock
- 13 Pneumatic actuator, passenger-side door
- 14 Left rear door lock
- 15 Pneumatic actuator, left rear door
- 16 Right rear door lock
- 17 Pneumatic actuator, right rear door
- 18 Actuation actuator, tailgate
- 19 Pneumatic actuator, tailgate
- 20 Control module connector



P80.20-0498-09

Pneumatic Test Program – Test (CL)

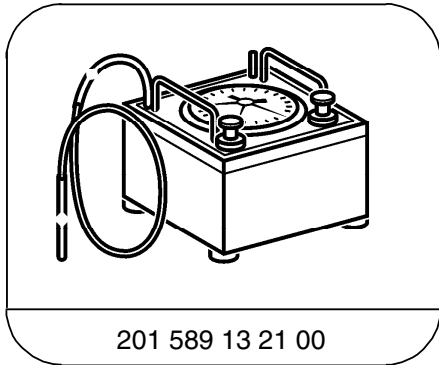
Preparation for Test:

1. Review section 0,
2. Review C/1, C/2, 11, 12, 13, 20, 21, 22, 31, 32

Data (mbar)

Test procedure	Permissible deviation
Allowable system leakage at 600 mbar pressure or 300 mbar vacuum in 1 minute.	30 mbar
Allowable leakage of actuators with lines at 600 mbar pressure or 300 mbar vacuum in 1 minute.	25 mbar

Special Tools



201 589 13 21 00

Tester

Pneumatic Test Program – Test (CL)

A. Entire system

Preparation for Test:

1. Provide access to PSE control module (A37) and disconnect **yellow** pneumatic line with socket from PSE control module.
2. Connect tester to disconnected pneumatic line using with connector 129 805 03 44.



If an actuator does not operate correctly and no leakage is found, check the respective lines for kinks or blockages.

Parts Required for Test:

- | | | |
|---|-----------------------------|---------------|
| 1 | Connector | 202 805 03 44 |
| 2 | Connection hose, 50 mm long | 007 997 61 82 |
| 1 | Pneumatic line, 1 m long | 000 158 14 35 |

Note:

The connections on the PSE control module and pneumatic multiple connector are marked with their German acronyms. In other words:
ZV (German) = **CL** (English),
SRU (German) = **MVA** (English),
OSL (German) = **OSB** (English).

⇒	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
1.0	Complete system pressurized	Yellow connector on tester.	Apply 600 mbar pressure to entire system.	Pressure loss 30 mbar in 1 minute.	32 PSE/CL ⇒ 7.0
2.0	Complete system evacuated	Black connector on tester.	Apply 300 mbar vacuum to entire system.	Vacuum loss 30 mbar in 1 minute.	32 PSE/CL ⇒ 8.0

Pneumatic Test Program – Test (CL)

B. Individual lines with actuators

Preparation for Test:

1. Disconnect pneumatic line leading to the non-operating pneumatic actuator at the pneumatic distributor. Letters on the distributor indicate to which of the CL actuators the pneumatic line leads.

- | | | | |
|-----|------------------|-----|-----------------------|
| A → | Left front door | D → | Right rear door |
| B → | Right front door | E → | Fuel tank filler flap |
| C → | Left rear door | F → | Trunk lid |



1. If an actuator does not operate correctly and no leakage is found, check the respective lines for kinks or blockages.
2. Disconnected pneumatic lines are to be reconnected to the distributor with connector 007 997 61 82.

Parts Required for Test:

- | | | |
|---|----------------------------|---------------|
| 1 | Pneumatic hose, 50 mm long | 007 997 61 82 |
|---|----------------------------|---------------|

Parts Required for Repair:

- | | | |
|---|-----------------------------|---------------|
| 1 | Pneumatic hose, (as needed) | 007 997 61 82 |
|---|-----------------------------|---------------|

⇒	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
3.0	Line and actuator pressurized	Yellow connector on tester.	Apply 600 mbar pressure to line and actuator.	Pressure drop 25 mbar in 1 minute.	32 PSE/CL ⇒ 5.0 32 PSE/CL ⇒ 7.0
4.0	Line and actuator evacuated	Black connector on tester.	Apply 300 mbar vacuum to line and actuator.	Vacuum loss 25 mbar in 1 minute.	32 PSE/CL ⇒ 6.0 32 PSE/CL ⇒ 8.0

Pneumatic Test Program – Test (CL)

C. Actuators

Preparation for Test:

1. Remove nonfunctioning actuator.
2. Connect vacuum/pressure tester to pneumatic connection of actuator.

Parts Required for Test:

- | | | |
|---|----------------------------|---------------|
| 1 | Pneumatic line | 129 800 95 15 |
| 1 | Pneumatic line, 1 m long | 000 158 14 35 |
| 1 | Pneumatic hose, 50 mm long | 007 997 61 62 |
| 1 | Connector | 202 805 03 44 |

⇒	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
5.0	Actuator holds pressure	Yellow connector on tester.	Apply 600 mbar pressure to actuator.	Pressure drop 25 mbar in 1 minute.	Actuator leaks. Replace actuator.
6.0	Actuator holds vacuum	Black connector on tester.	Apply 300 mbar vacuum to actuator.	Vacuum loss 25 mbar in 1 minute.	Actuator leaks. Replace actuator.

Pneumatic Test Program – Test (CL)

D. Lines

Preparation for Test:

1. Connect tester to one end of pneumatic line and plug other end with cap 000 987 29 45.

Parts Required for Test:

- | | | |
|---|----------------------------|---------------|
| 1 | Cap | 000 987 11 45 |
| 1 | Pneumatic hose, 50 mm long | 007 997 61 82 |

⇒	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
7.0	Line holds pressure	Yellow connector on tester.	Apply 600 mbar pressure to lines.	Pressure drop 0 mbar in 1 minute.	Pneumatic line leaks, repair/replace line.
8.0	Line holds vacuum	Black connector on tester.	Apply 300 mbar vacuum to lines.	Vacuum loss 0 mbar in 1 minute.	Pneumatic line leaks, repair/replace line.