

**3.2 Orthopedic Seat Backrest (PSE/OSB)
Model 202**

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Diagnosis - Function Test (Orthopedic Seat Backrest)

A. Multi-contour backrest

Preparation for Test:

1. **Model 202 up to 11/94:** Check fuses F3–33 and F3–35 ok,
2. **Model 202 as of 12/94:** Check fuses F1–24 and F1–27 ok,
3. Battery voltage 11 – 14 V.
4. Ignition: **ON**

Test step/Test scope	Test condition	Nominal value	Possible cause/Remedy ¹⁾
⇒ 1.0 Changing backrest contour in Z-direction (height)	Turn adjuster to position 5. In sequence select the three height adjust buttons.	Backrest must change shape noticeably in lumbar area.	<p>Backrest does not change shape and pump motor in PSE control module (A37/5) does not run. 23 PSE ⇒ 1.0, 2.0, PSE control module (A37/5).</p> <p>Backrest does not change shape even though pump motor in PSE control module (A37/5) runs. 32 PSE ⇒ 3.0, 32 ⇒ 1.0</p>

1) Observe Preparation for Test, see 22.

Diagnosis - Function Test (Orthopedic Seat Backrest)

Test step/Test scope	Test condition	Nominal value	Possible cause/Remedy ¹⁾
⇒ 1.1 Changing backrest contour in X-direction (intensity).	Turn adjuster slowly from position 0 to position 5 at least 5 times.	Backrest must change shape noticeably in lumbar support area.	Backrest does not change shape and pump motor in PSE control module (A37/5) does not run . 23 PSE ⇒ 1.0, 2.0, PSE control module (A37/5).
⇒ 1.2 Changing backrest contour side bolster pressure.	Use side bolster rocker switch to change pressure form minimum to maximum 5 times.	Backrest must change shape noticeably in lumbar support area.	Backrest does not change shape even though pump motor in PSE control module (A37/5) runs . 32 PSE ⇒ 3.0, 32 ⇒ 1.0

¹⁾ Observe Preparation for Test, see 22.

Electrical Test Program – Component Locations (Orthopedic Seat Backrest)

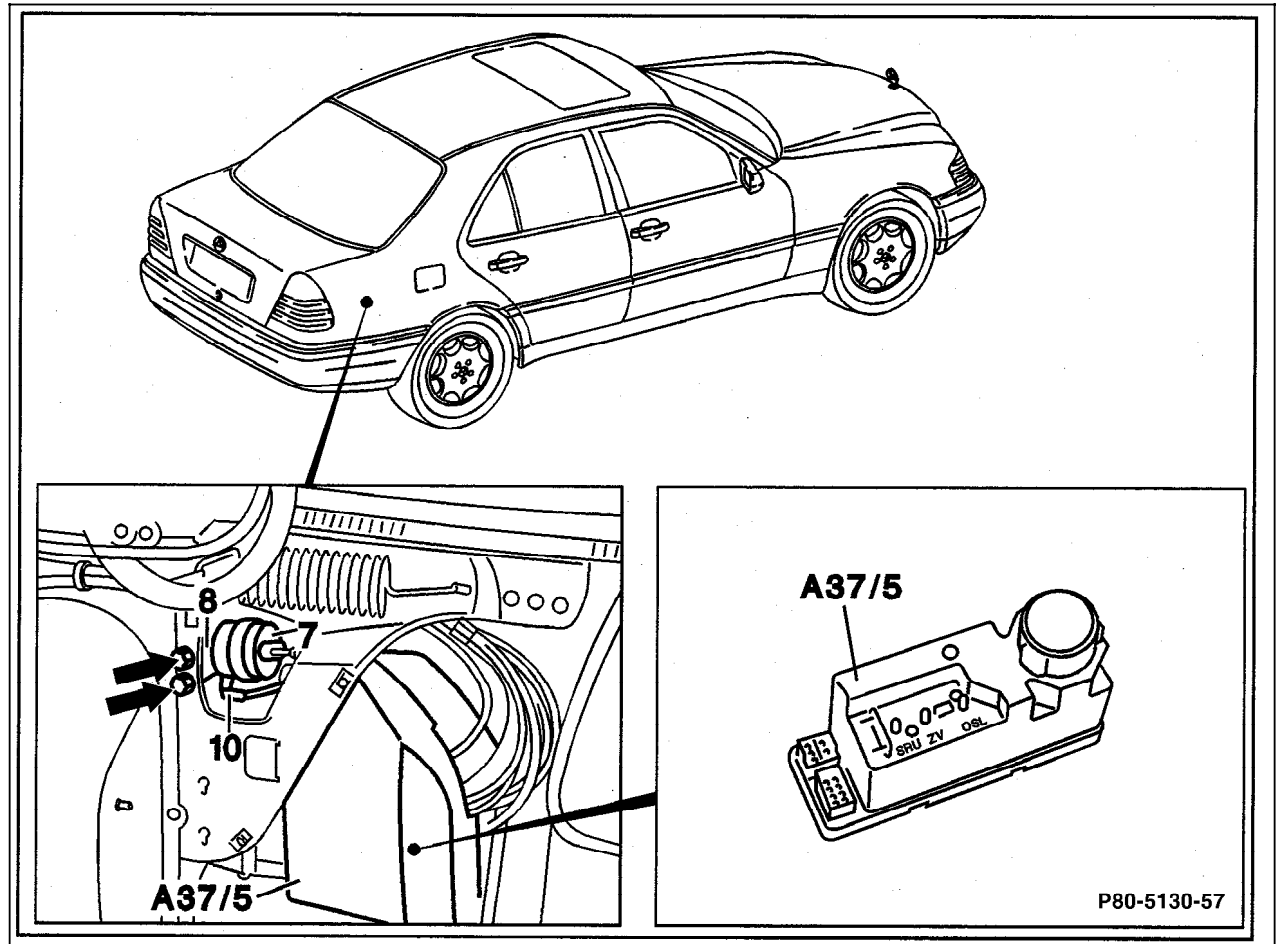


Figure 1
A37/5 PSE control module

P80-5130-57

Pneumatic Test Program – Component Locations (OSB)

Multi-contour backrest

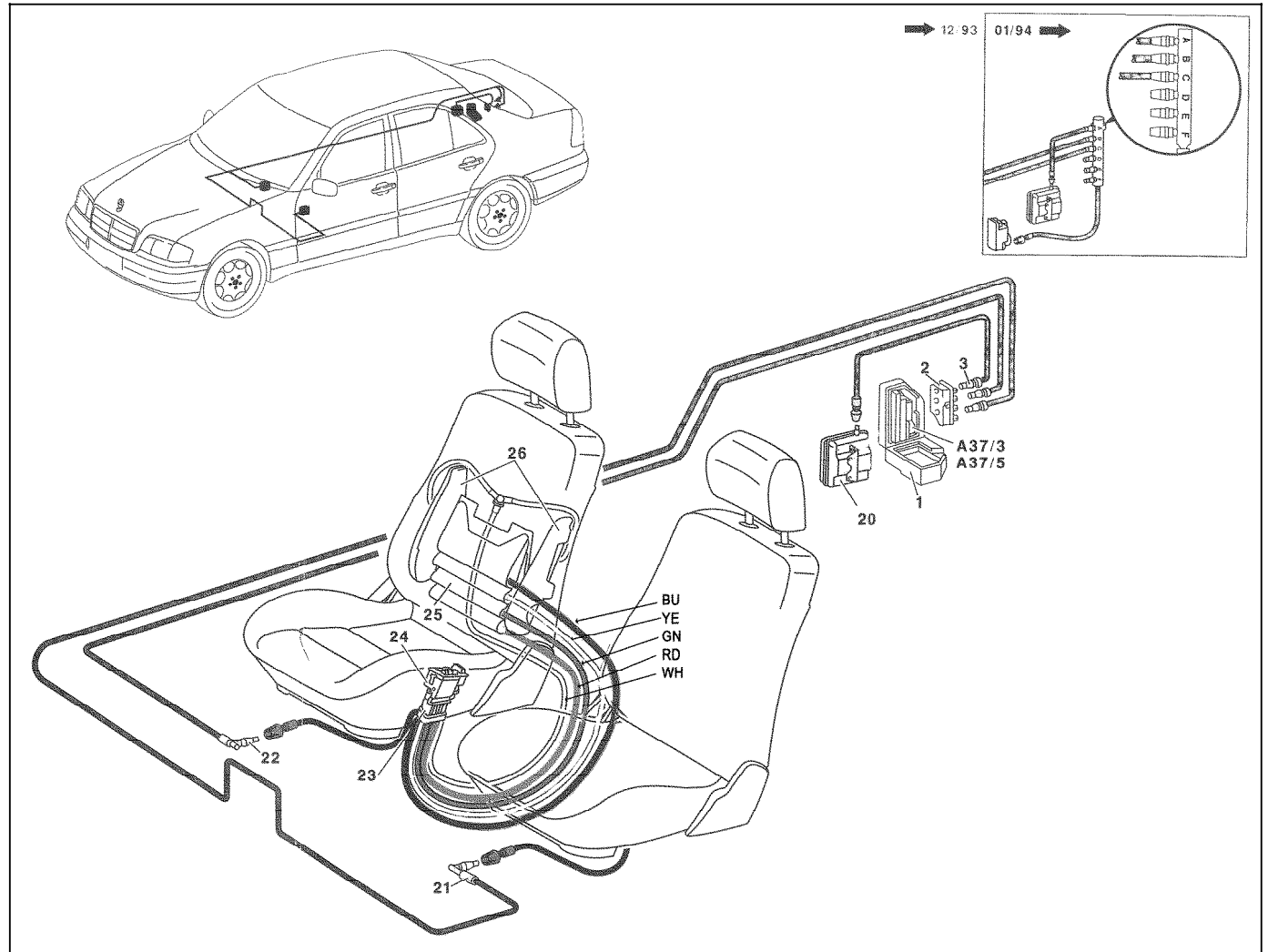


Figure 1

- A37/5 PSE control module (CL, MVA, OSB)
- 1 Foam cube
- 2 Pneumatic distributor connector
- 3 Pneumatic hose set (color code: yellow = CL; transparent = MVA; grey = OSB)
- 20 OSB reservoir
- 21 OSB pneumatic hose (left front seat)
- 22 OSB pneumatic hose (right front seat)
- 23 OSB pneumatic hose set (right front seat, left front seat is mirror image)
- 24 OSB control valve (right front seat, left front seat is mirror image)
- 25 OSB center insert (right front seat, left front seat is mirror image)
- 26 OSB side bolster inserts (right front seat, left front seat is mirror image)
- BU Blue
- YE Yellow
- GN Green
- RD Red
- WH White

P80-5184-06x

Pneumatic Test Program – Test (OSB)

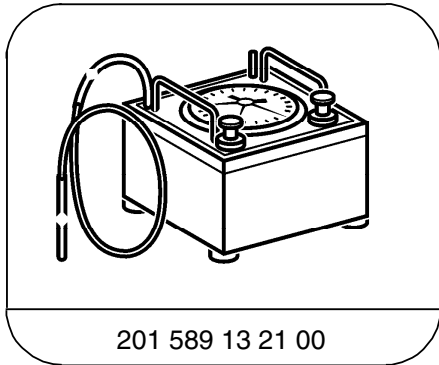
Preliminary work:

PSE control module voltage supply 23 PSE ⇒ 1.0, 2.0
 PSE Control Module Test 32 PSE

Data (mbar)

Test Procedure	Permissible deviation
Allowable system leakage at 600 mbar pressure in 1 minute.	30 mbar

Special Tools



201 589 13 21 00

Tester

Pneumatic Test Program – Test (OSB)

A. Entire system

Preparation for Test:

Vehicles up to approx. 12/93:

1. Disconnect pneumatic multiple connector from PSE control module.
2. Connect tester to bottom side of pneumatic multiple connector at **PÜ** (OSB) using connector 129 805 04 44.

Vehicles as of approx. 01/94:

1. Disconnect **grey** OSB pneumatic line with socket from PSE control module.
2. Connect tester to disconnected pneumatic line using connector 129 805 04 44.

Parts Required for Test:

1	Connector	129 805 04 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 multi-contour backrest system pressurized in each of the 3 height positions with maximum side bolster setting	Yellow connector on tester. Connector PÜ on bottom side of multiple connector.	Apply 600 mbar pressure in each of the 3 height settings. Set adjuster to position 5, Side bolster rocker switch to maximum.	Pressure loss in each height setting 30 mbar in 1 minute.	33 PSE ⇒ 1.0, 32 ⇒ 2.0, 3.0

Pneumatic Test Program – Test (OSB)

B. Line with pressure reservoir/line with control valve

Preparation for Test:

Vehicles up to approx. 12/93:

1. Pry off **grey** OSB pneumatic line at pneumatic multiple connector (using a 7mm open end wrench).
2. Connect tester in sequence to each of the **grey** OSB pneumatic lines which lead to either the pressure reservoir in the trunk or one of the two control valves at the front seats using connector 007 997 61 82.

Vehicles as of approx. 01/94:

1. Disconnect **grey** OSB pneumatic lines at pneumatic distributor.

Letters on the distributor indicate whereto the pneumatic lins are leading.

- A → Vacuum reservoir B → Left front seat
- C → Right front seat

On vehicles as of approx. 01/94, the disconnected pneumatic lines are to be reconnected to the distributor with connector 007 997 61 82.

Parts Required for Test:

- 1 Connector, 50 mm long 007 997 61 82

⇒	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
2.0	Line and reservoir	Yellow connector on tester.	Apply 600 mbar pressure to line and pressure reservoir.	Pressure drop 5 mbar in 1 minute.	32 ⇒ 5.0, Reservoir leaks. Replace reservoir.
3.0	Line and control valve	Yellow connector on tester.	Apply 600 mbar pressure to line and control valve. Set adjuster to position 0. (On vehicles with multi-contour seat back, set rocker switch to minimum).	Pressure drop 5 mbar in 1 minute.	32 ⇒ 4.0, 5.0

Pneumatic Test Program – Test (OSB)

C. Control valve

Preparation for Test:

1. Remove OSB control valve.
2. Cap all connections on control valve except connection **P** with caps, part no. 000 987 29 45.
3. Connect vacuum/pressure tester to connection **P** of control valve.

Parts Required for Test:

- | | | |
|---|-----------------------|---------------|
| 5 | Cap | 000 987 29 45 |
| 1 | Connector, 50 mm long | 007 997 61 82 |

⇒	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
4.0	OSB control valve pressurized in each of the 3 height positions	Yellow connector on tester.	Apply 600 mbar pressure to pressure regulator. Set adjuster to 0. Side bolster rocker switch to minimum.	Pressure drop 5 mbar in 1 minute.	Control valve.

Pneumatic Test Program – Test (OSB)

D. Lines

Preparation for Test:

1. Connect tester to one end of pneumatic line and plug other end with cap, part no. 000 987 29 45.

Parts Required for Test:

1	Cap	000 987 29 45
1	Connector, 50 mm long	007 997 61 82
1	Connector	129 805 04 44

⇒	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
5.0	Leakage while pressurized	Yellow connector on tester.	Apply 600 mbar pressure to lines.	Pressure drop 0 mbar in 1 minute.	Pneumatic line.

Pneumatic Test Program – Test (OSB)

E. Air cushion

Preparation for Test:

1. Provide access to connector between control valve and pneumatic lines.

⇒	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
6.0	Air cushion and pneumatic line leakage	Yellow connector on tester.	Apply 200 mbar pressure individually to each line in the pneumatic harness.	Pressure drop 5 mbar in 1 minute.	Air cushion and pneumatic line in backrest leak, replace.