

3.2 Pneumatic System Equipment (PSE)

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3.2 Manifold Vacuum Assist (PSE/MVA) Model 202

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Pneumatic Test Program – Component Locations (MVA)

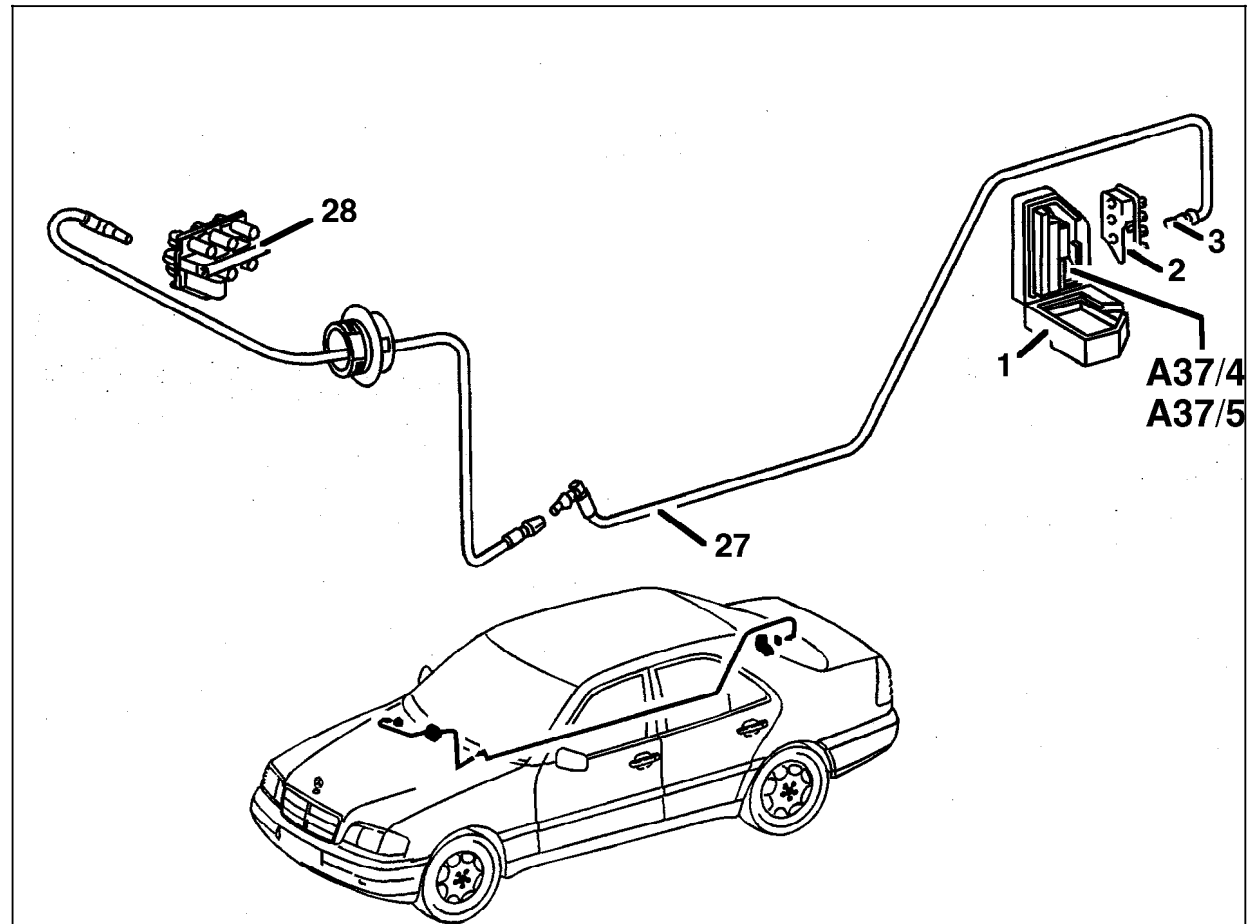


Figure 1

- A37/4 PSE control module (CL, MVA)
- A37/5 PSE control module (CL, OSB, MVA)
- 1 Foam cube
- 2 Pneumatic multiple connector (vehicles up to 12/93 only)
- 3 Pneumatic hose set (color code: yellow = CL; transparent = MVA; grey = OSB)
- 27 MVA pneumatic hose set (disconnect in front passenger footwell)
- 28 Vacuum distribution block

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Pneumatic Test Program – Test (MVA)

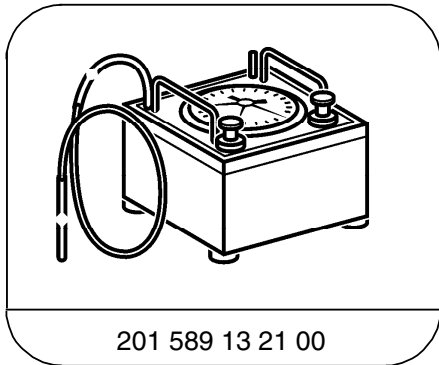
Preliminary work:

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

Data (mbar)

Test procedure	Permissible deviation
Allowable leakage of pneumatic multiple connector, pneumatic lines and vacuum distribution block at 300 mbar vacuum in 1 minute.	30 mbar
Allowable leakage of vacuum distribution block with line at 300 mbar vacuum in 1 minute.	25 mbar

Special Tools



201 589 13 21 00

Tester

Pneumatic Test Program – Test (MVA)

A. Pneumatic multiple connector, pneumatic line with vacuum distribution block

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 **SRU** (MVA) using connector 129 805 04 44.

Vehicles as of approx. 01/94:

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

All vehicles:

1. Provide access to vacuum distribution block in right component compartment and pry off all pneumatic lines except **transparent** MVA line at connection 1.

Parts Required for Test:

1	Connector	129 805 04 44
1	Connector, 50 mm long	007 997 61 82

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	Multiple connector, pneumatic line with vacuum distribution block	Black connector on tester to connector SRU on bottom of pneumatic multiple connector.	Apply 300 mbar vacuum to entire system.	Vacuum loss 30 mbar in 1 minute.	33 PSE ⇒ 2.0, 32 ⇒ 2.0

Pneumatic Test Program – Test (MVA)

B. Line with vacuum distribution block

Preparation for Test:

Vehicles up to approx. 12/93:

1. Pry off **transparent** MVA pneumatic line at pneumatic multiple connector (using a 7 mm open end wrench) .
2. Connect tester to **transparent** MVA pneumatic line using connector 007 997 61 82.

Vehicles as of approx. 01/94:

1. Disconnect **transparent** MVA pneumatic line from PSE control module.
2. Connect tester to disconnected pneumatic line using connector 129 805 04 44.

All vehicles:

1. Provide access to vacuum distribution block in right component compartment and pry off all pneumatic lines except **transparent** MVA line at connection 1.

Parts Required for Test:

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
2.0	Vacuum applied to vacuum distribution block and pneumatic line	Black connector on tester.	Apply 300 mbar vacuum to vacuum distribution block and line.	Vacuum loss 25 mbar in 1 minute.	32 ⇒ 3.0, 32 ⇒ 4.0

Pneumatic Test Program – Test (MVA)

C. Vacuum distribution block

Preparation for Test:

1. Remove vacuum distribution block.
2. Connect vacuum/pressure tester to connection 1.

Parts Required for Test:

- | | | |
|---|-----------------------|---------------|
| 1 | Connector | 129 805 04 44 |
| 1 | Connector, 50 mm long | 007 997 61 82 |

⇒	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
3.0	Vacuum leakage	Black connector on tester.	Apply 300 mbar vacuum to vacuum distribution block.	Vacuum loss 25 mbar in 1 minute.	Vacuum distribution block.

Pneumatic Test Program – Test (MVA)

D. Line

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

Notes:

If vacuum is not available at the vacuum distribution block with the PSE control module operating correctly, check the effected line for clogging or kinks.

⇒	Test scope	Test connection	Test condition	Nominal value	Possible cause/Remedy
4.0	Vacuum leakage	Black connector on tester.	Apply 300 mbar vacuum to pneumatic line	Vacuum loss 0 mbar in 1 minute.	Pneumatic line.