

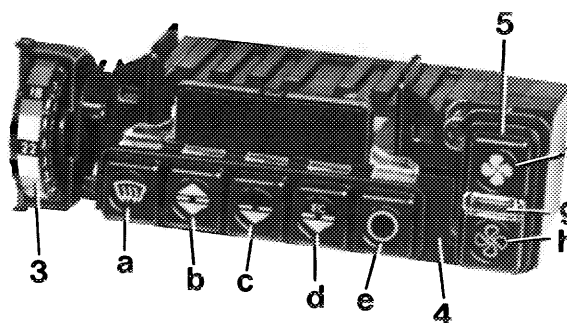
**Note**

Ignition off: vacuum circuit I  
 Ignition on: vacuum circuit II to IV.

**A. Testing vacuum circuit I**

**Switchover valves with red/green vacuum line.**

1 Push function selection button „e“. Switch off ignition.



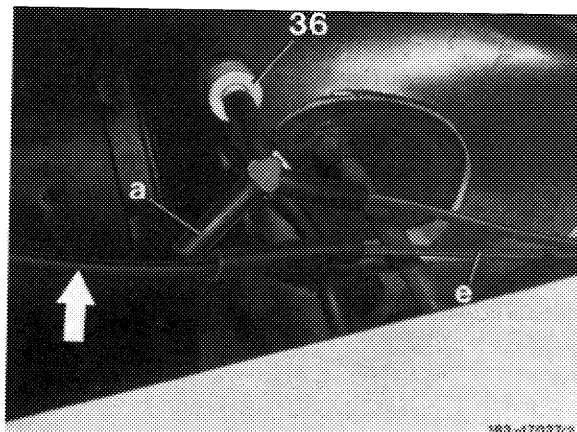
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2 Pull red/green vacuum line out of 3-point distributor (a), connect tester (refer to arrow), evacuate (approx. 600 mbar) and read pressure gauge.

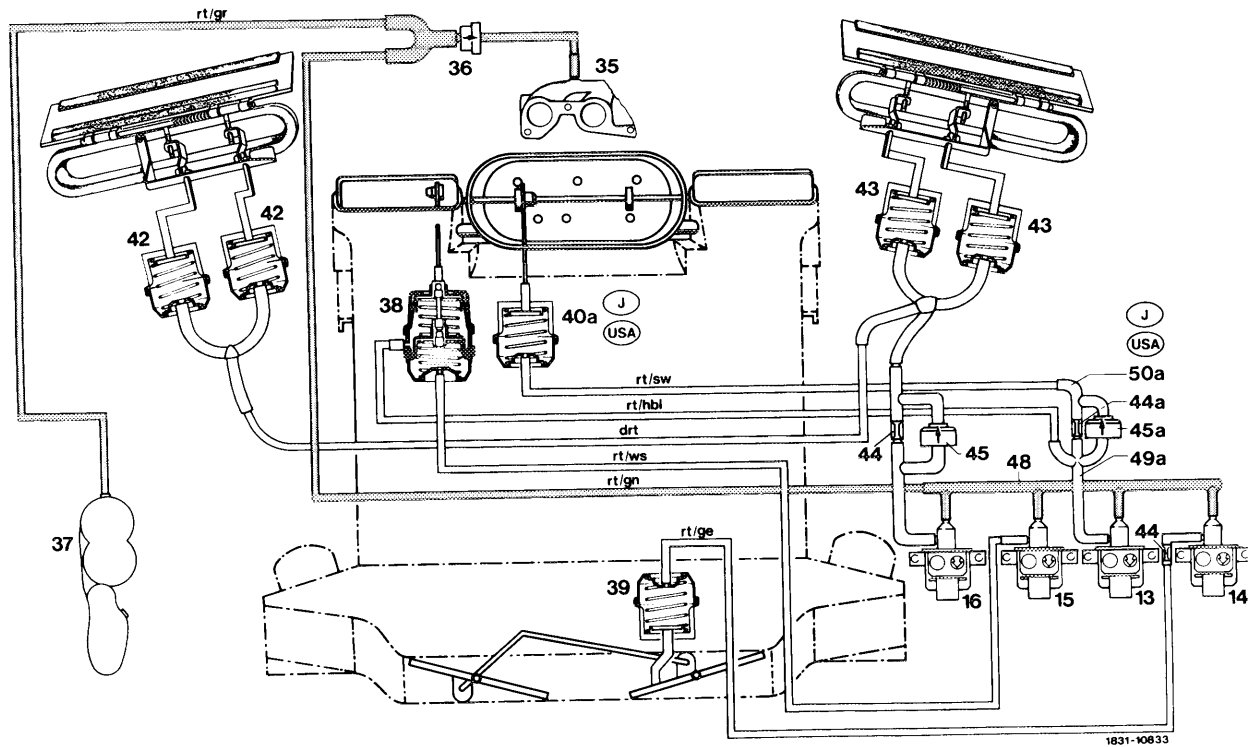
3 If readout on pressure gauge changes, test switchover valves individually (83–620) and replace, if required.

**Attention!**

Tester remains connected to vacuum line red/green for testing vacuum circuits II to IV.



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Vacuum circuit I  
Function selection „e”, off (ignition off)

- 13 Switchover valve for defroster nozzle flaps (short stroke) and center nozzle flap (J USA only)
- 14 Switchover valve for legroom flaps
- 15 Switchover valve for defroster nozzle flaps (long stroke)
- 16 Switchover valve for vacuum elements of main air flaps
- 35 Vacuum connection on intake manifold
- 36 Check valve
- 37 Vacuum reservoir
- 38 Vacuum element for defroster nozzle flaps (flaps „open”)
- 39 Vacuum element for legroom flaps (flaps „closed”)
- 40a Vacuum element for center nozzle flap (flap „closed”)
- 42 Vacuum element for main air flap left (flap „closed” with 20 % fresh air share)
- 43 Vacuum element for main air flap right (flap „closed” with 20 % fresh air share)
- 44 Throttle (orifice)
- 45 Check valve
- 48 5-point distributor
- 49 4-point distributor
- 50 3-point distributor
- 40a, 44a, 45a, 49a, 50a (J USA) only

Color code of vacuum lines

bl = blue	gn = green	hbl = light blue
ge = yellow	rt = red	drt = dark red
gr = grey	ws = white	sw = black

## B. Testing vacuum circuit II:

Vacuum element (38) for defroster nozzle flaps (short and long stroke) with vacuum line red/light blue and red/white, as well as for (J) (USA) vacuum element for center nozzle flap (40a) and vacuum line red/black.

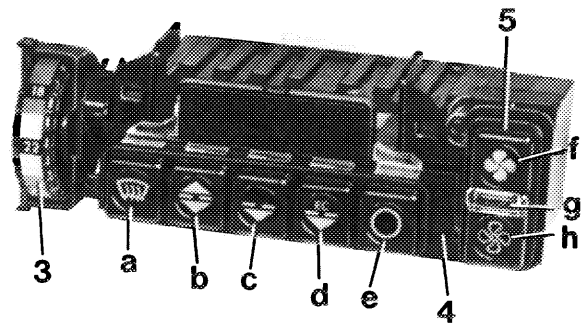
1 Push function button „c” and engage temperature dial (3) „MIN”. Switch on ignition.

2 Evacuate with tester (approx. 600 mbar) and read pressure gauge.

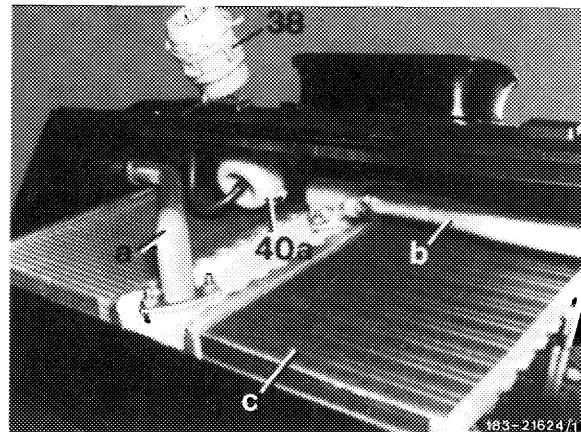
3 If readout on pressure gauge changes, renew vacuum element (38) or vacuum line.

### Attention!

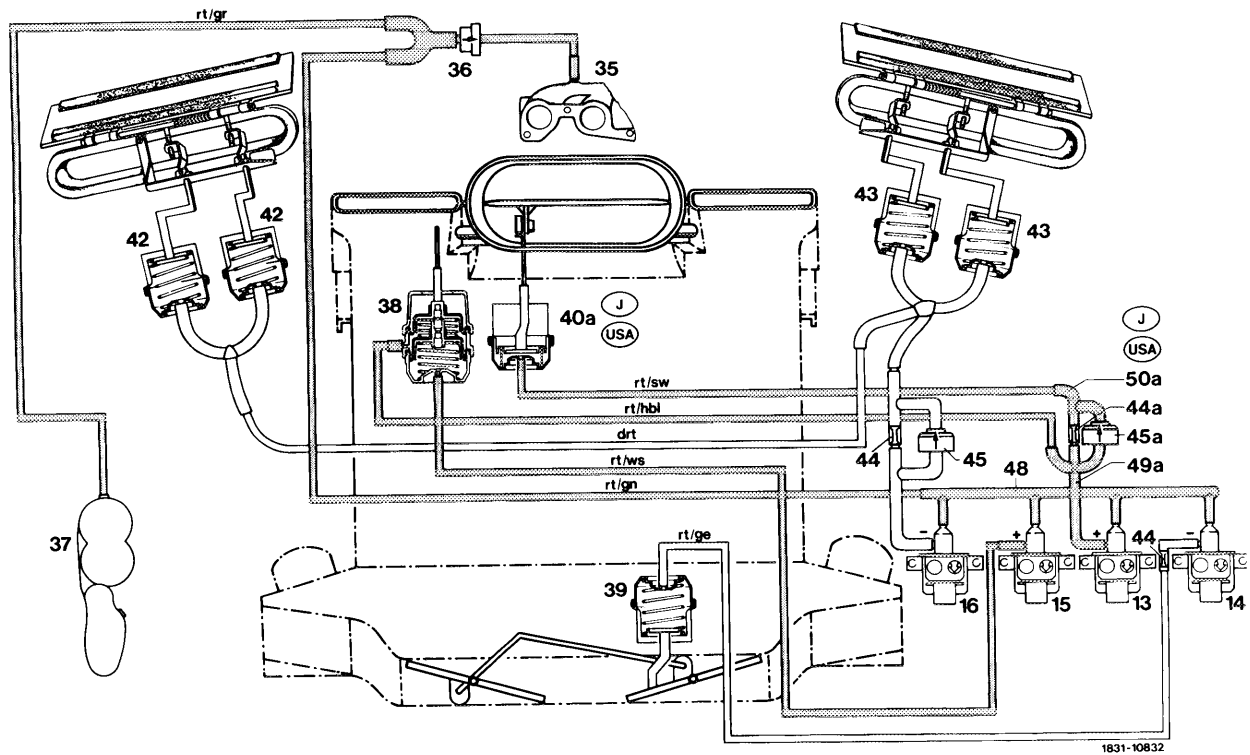
On (J) (USA) check vacuum element (38 and 40a) individually in the event of a leak in circuit II and renew vacuum element found leaking.



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**Vacuum circuit II**

Function selection „c“, max. cooling — recirculating air („MIN“ engaged), ignition on

- 13 Switchover valve for defroster nozzle flaps (short stroke) and center nozzle flap (J USA only)
- 14 Switchover valve for legroom flaps
- 15 Switchover valve for defroster nozzle flaps (long stroke)
- 16 Switchover valve for vacuum elements of main air flaps
- 35 Vacuum connection on intake manifold
- 36 Check valve
- 37 Vacuum reservoir
- 38 Vacuum element for defroster nozzle flaps (flaps „closed“)
- 39 Vacuum element for legroom flaps (flaps „closed“)
- 40a Vacuum element for center nozzle flap (flap „open“)
- 42 Vacuum element for main air flap left (flap „closed“ with 20 % fresh air share)
- 43 Vacuum element for main air flap right (flap „closed“ with 20 % fresh air share)
- 44 Throttle (orifice)
- 45 Check valve
- 48 5-point distributor
- 49 4-point distributor
- 50 3-point distributor
- 40a, 44a, 45a, 49a, 50a (J USA only)

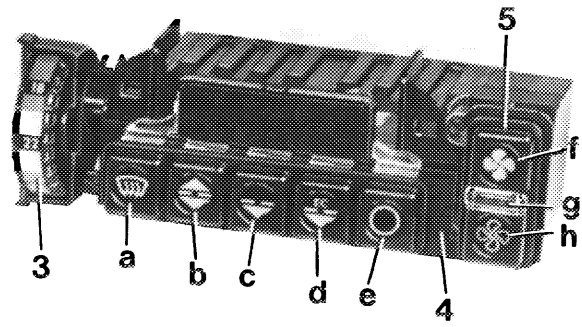
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### C. Testing vacuum circuit III.

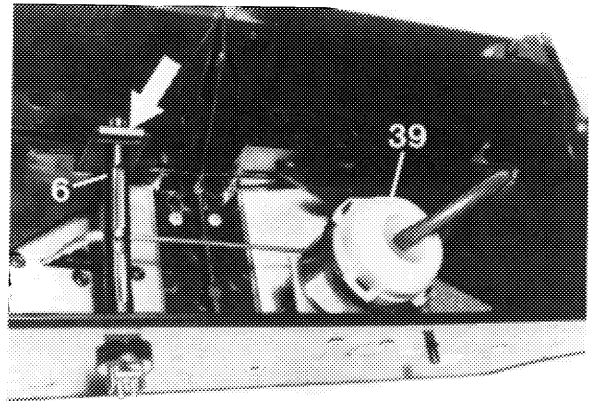
Vacuum element (39) for legroom flap with red/yellow vacuum line.

- 1 Push function button „b”, temperature dial (3) remains engaged at „MIN”.
- 2 Evacuate with tester (approx. 600 mbar) and read pressure gauge.

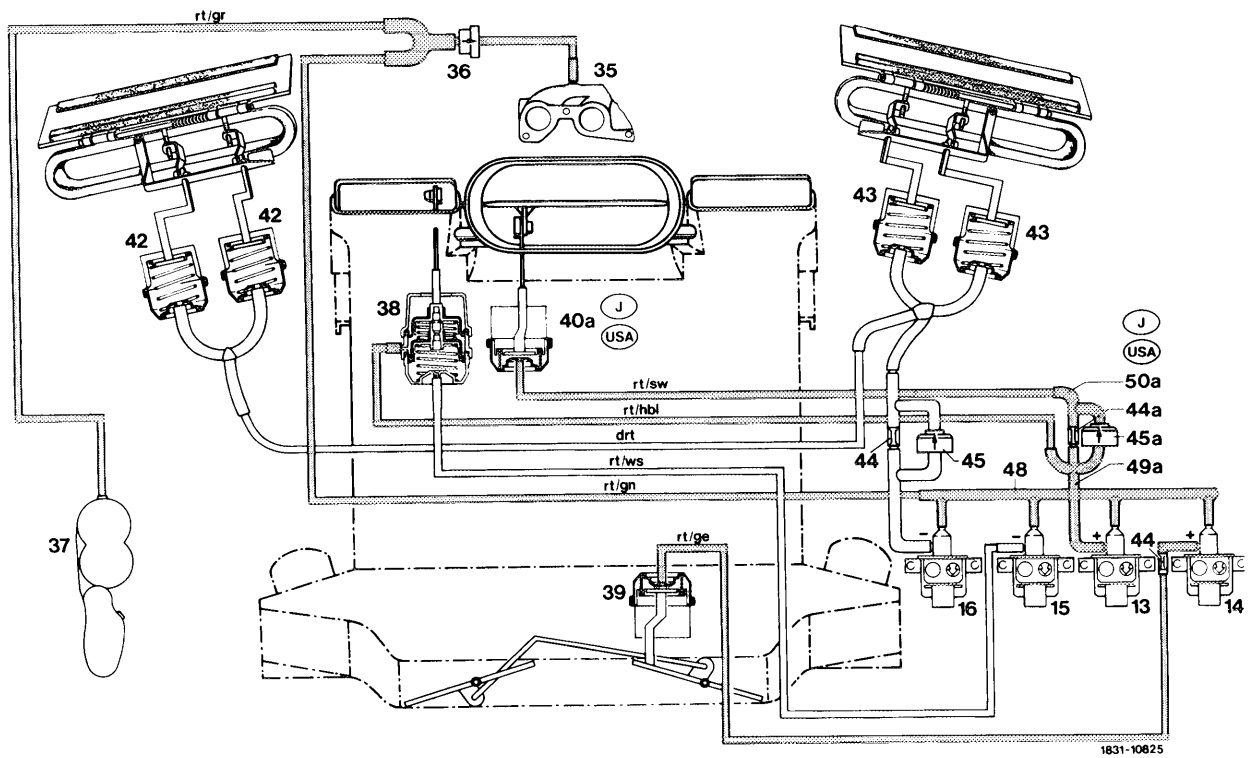


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- 3 If readout on pressure gauge changes, check red/yellow vacuum line for leaks or renew vacuum element (39).



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Vacuum circuit III  
Function selection „b“, max. cooling („MIN“ engaged), ignition on

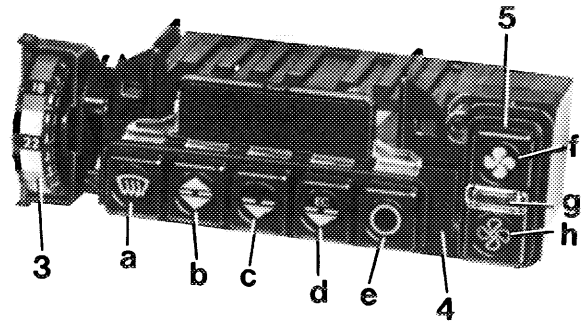
- 13 Switchover valve for defroster nozzle flaps (short stroke) and center nozzle flap (J USA only)
- 14 Switchover valve for legroom flaps
- 15 Switchover valve for defroster nozzle flaps (long stroke)
- 16 Switchover valve for vacuum elements of main air flaps
- 35 Vacuum connection on intake manifold
- 36 Check valve
- 37 Vacuum reservoir
- 38 Vacuum element for defroster nozzle flaps (flaps „open“)
- 39 Vacuum element for legroom flaps (flaps „open“)
- 40a Vacuum element for center nozzle flap (flap „open“)
- 42 Vacuum element for main air flap left (flap „closed“ with 20 % fresh air share)
- 43 Vacuum element for main air flap right (flap „closed“ with 20 % fresh air share)
- 44 Throttle (orifice)
- 45 Check valve
- 48 5-point distributor
- 49 4-point distributor
- 50 3-point distributor
- 40a, 44a, 45a, 49a, 50a (J USA) only

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D. Testing vacuum circuit IV.

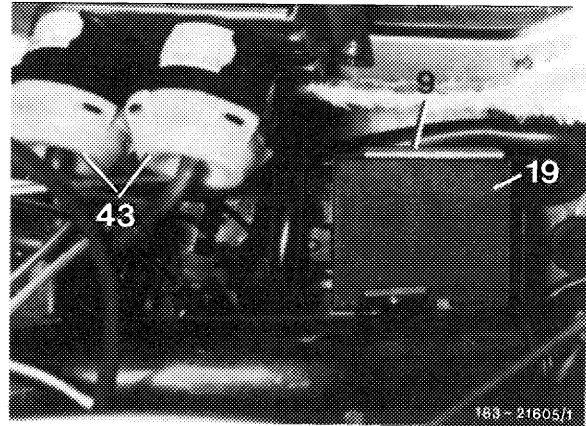
Test vacuum elements (42) and (43) for main air flaps with dark red vacuum line.

- 1 Push function button „a”.
- 2 Evacuate with tester (approx. 600 mbar) and read pressure gauge.

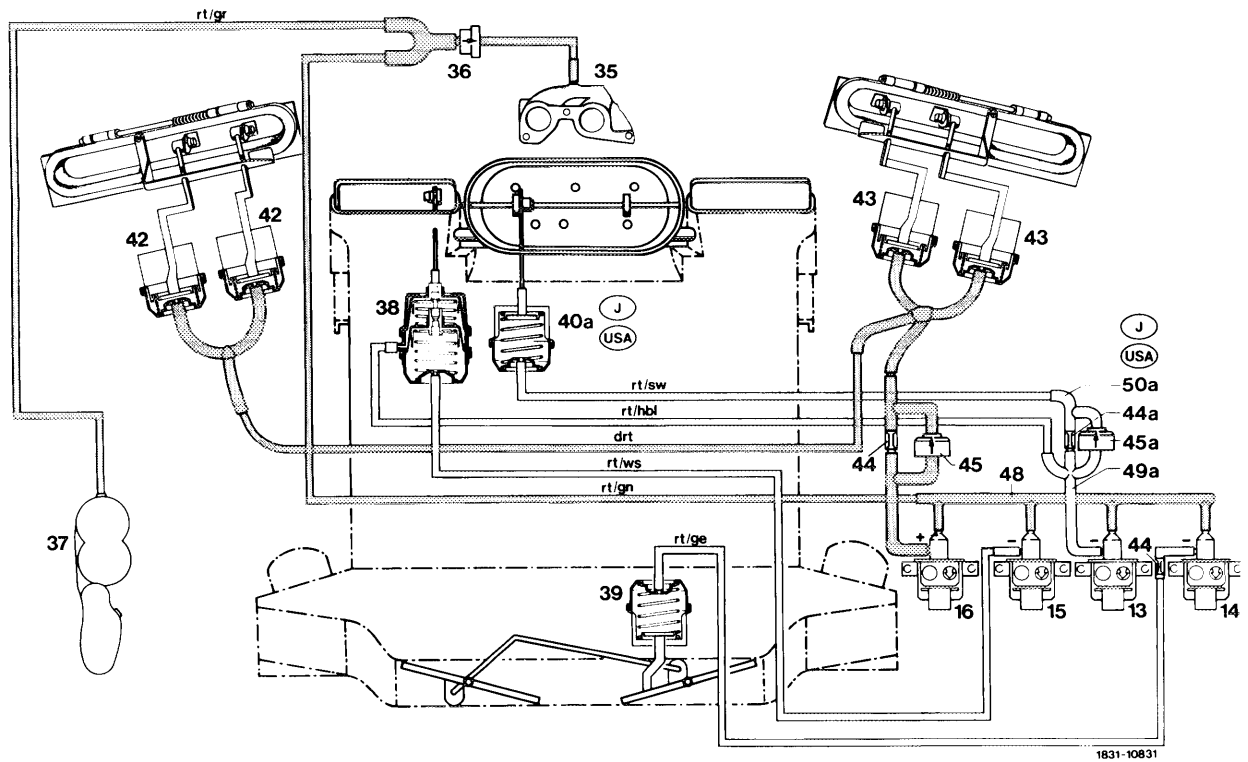


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- 3 If readout on pressure gauge changes, test vacuum element (42) and (43) individually as well as dark red vacuum line and renew, if required.



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Vacuum circuit IV  
Function selection „a”, defrosting, ignition on

- 13 Switchover valve for defroster nozzle flaps (short stroke) and center nozzle flap (J USA only)
- 14 Switchover valve for legroom flaps
- 15 Switchover valve for defroster nozzle flaps (long stroke)
- 16 Switchover valve for vacuum elements of main air flaps
- 35 Vacuum connection on intake manifold
- 36 Check valve
- 37 Vacuum reservoir
- 38 Vacuum element for defroster nozzle flaps (flaps „open”)
- 39 Vacuum element for legroom flaps (flaps „closed”)
- 40a Vacuum element for center nozzle flap (flap „closed”)
- 42 Vacuum element for main air flap left ( flap „open”)
- 43 Vacuum element for main air flap right (flap „open”)
- 44 Throttle (orifice)
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