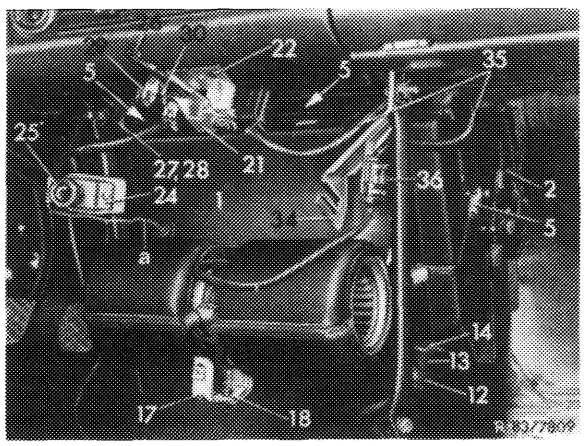
Tightening torques		Nm	(kpm)
Suction hose to pipe line	with Cu seal	60 ± 5	(6.0 ± 0.5)
	without Cu seal	70 ± 5	(7.0 ± 0.5)
Pressure hose to expansion valve	with Cu seal	30 ± 5	(3.0 ± 0.5)
	without Cu seal	45 ± 5	(4.5 ± 0.5)

Special tool	
Pliers for locking rings A 2	conventional

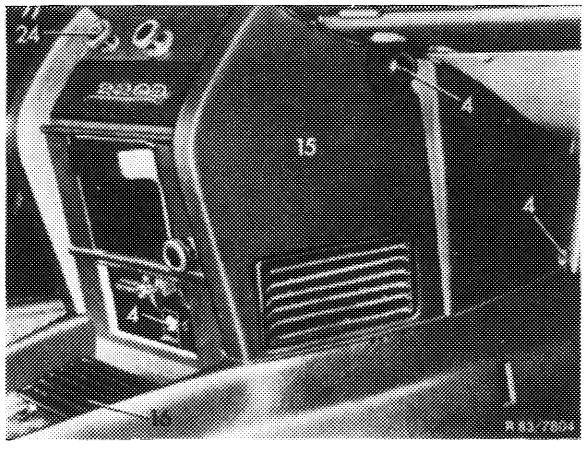
Note

The switch-over flaps of air conditioning system version 1 and the blower changeover switch must be manually actuated with the assistance of two connected bowden wires (28) by means of handle (26) in control unit.



Layout of evaporator housing and control unit (air conditioning system, version 1)

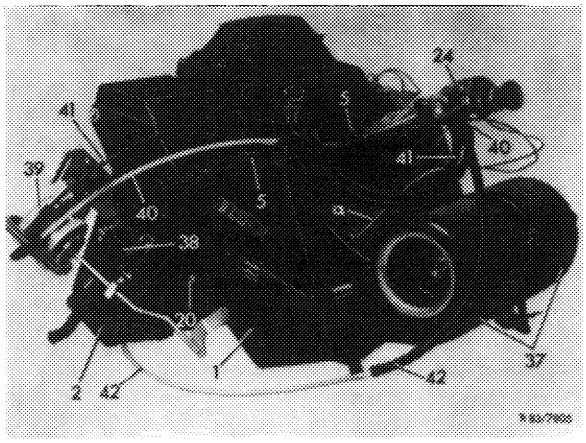
1 Evaporator housing
2 Heater box
5 Tensioning spring
13 Condensate drain hose
12 Grommet
14 Hose clip
17 Holder
18 Screw with washer
21 Control unit
22 Sheet metal screw with toothed washer
24 Temperature switch
25 Knob with rosette
26 Handle
27 Spiral with sleeve
28 Cable control
29 Clamp
30 Screw with washer, snap ring and nut
34 Holder for radio
35 Harness for air conditioning system
36 Clamp



Layout of housing (version 2)

4 Two-hole nut or sheet-metal screw
15 Housing
16 Cover
24 Temperature vacuum switch

On air conditioning system version 2 the functions of closing the heating shaft, opening the cooling shaft, while simultaneously switching-over the current supply of heater blower and vice versa are handled by two vacuum elements (39) which are, however, not coupled mechanically. The vacuum elements are controlled by a combination vacuum-temperature switch (24). This switch is located at the same spot as the temperature switch used up to now.



Evaporator with heater box (air-conditioning system, version 2 with vacuum control)

a Capillary with temperature sensor
1 Evaporator housing
2 Heater box
5 Tensioning spring
20 Oval head or hex. head sheet-metal screw
24 Temperature vacuum switch
37 Cooling blower
38 Changeover switch
39 Vacuum element
40 Control line (cooling, color light green)
41 Control line (heating, color dark green)
42 Vacuum line (color medium green)

Removal

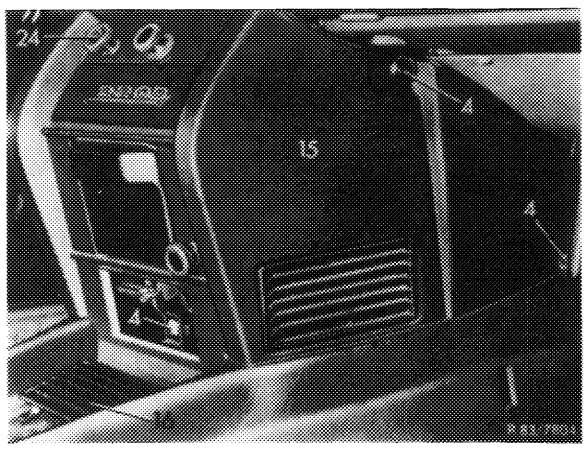
1 Cover both front seats and disconnect grounding cable on battery.

2 Drain air conditioning system (83–516).

3 Remove floor mats at front.

4 Remove cover at left and right under instrument panel.

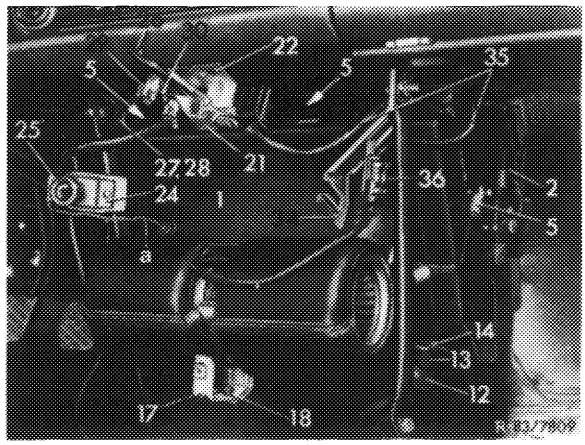
5 Remove housing (15) between instrument panel and tunnel. For this purpose, unscrew all sheet-metal screws and two-hole nuts (4).



Layout of housing (version 2)

4 Two-hole nut or sheet-metal screw
15 Housing
16 Cover
24 Temperature vacuum switch

6 Pull-off handle (26) in control unit (21).



Layout of evaporator housing and control unit (air conditioning system, version 1)

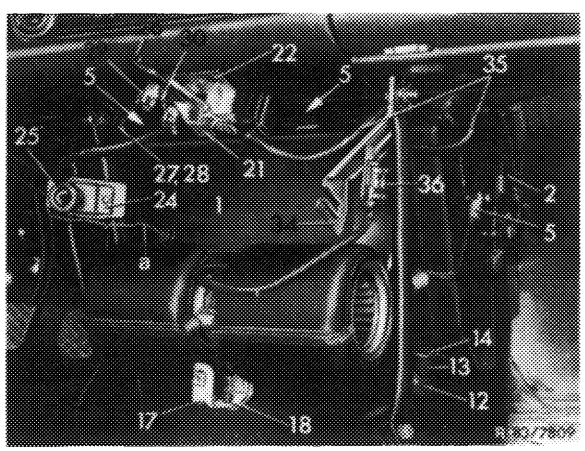
1	Evaporator housing	26	Handle
2	Heater box	27	Spiral with sleeve
5	Tensioning spring	28	Cable control
13	Condensate drain hose	29	Clamp
12	Grommet	30	Screw with washer, snap ring and nut
14	Hose clamp		
17	Holder	34	Holder for radio
18	Screw with washer	35	Harness for air conditioning system
21	Control unit		
22	Sheet-metal screw with toothed washer	36	Clamp
		a	Capillary with temperature sensor
24	Temperature switch		
25	Knob with rosette		

7 Pull-out housing as far as possible and pull hose connections from temperature vacuum switch (24), paying attention to color code. Loosen plug connections on cigar lighter and on installed optional switches. Disconnect electric lines on temperature switch (24) and pull capillary with temperature sensor out of evaporator housing. If a radio is installed, loosen pertinent connections.

Note: If the hose lines on vacuum switch are not identified, mark hose lines according to color code on vacuum switch prior to pulling off.

8 Remove glovebox and tunnel covering.

9 Unscrew the two supports between reinforcement of instrument panel and transmission tunnel. Remove holder (34) and loosen electric plug connection for cooling blower.

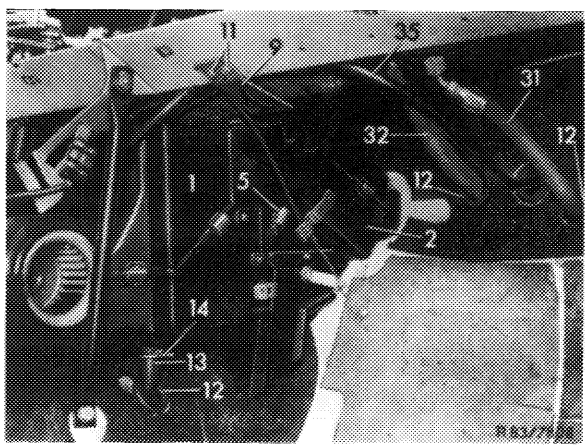


10 On air conditioning systems version 1, pull electric plug connection from control unit and disconnect cable controls for switchover flaps. Remove clamp (29) and unscrew both sheet-metal screws (22).

11 Unscrew sheet-metal screw (18) and remove holder (17).

12 Loosen holder (9) from reinforcement of instrument panel.

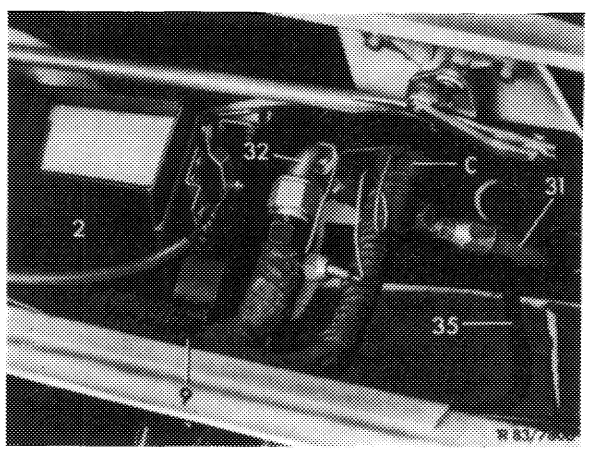
13 Remove condensate drain hoses (13) with hose clip (14) from evaporator housing.



Layout of evaporator housing on heater box

1 Evaporator housing
2 Heater box
5 Tensioning spring
9 Holder
11 Sheet-metal screw
12 Grommet
13 Condensate drain hose
14 Hose clip
31 Hose from receiver dehydrator to expansion valve
32 Hose from evaporator to compressor
35 Harness for air conditioning system

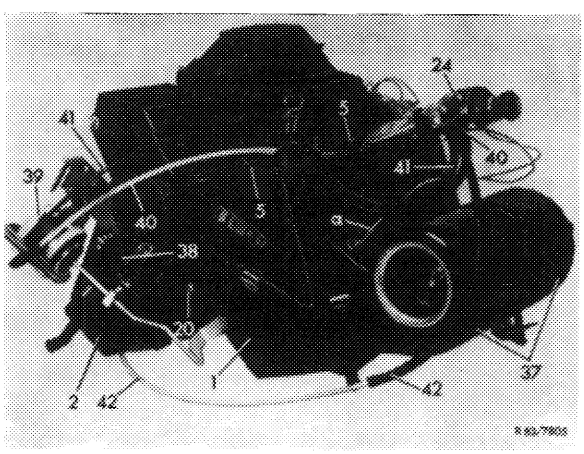
14 Disconnect suction and pressure hose (31 and 32) from evaporator pipe or expansion valve and close immediately with plug.



Hose line on evaporator pipe or expansion valve

2 Heater box
9 Cable strap
31 Hose line from receiver dehydrator to expansion valve
32 Hose line from evaporator to compressor
35 Harness for air conditioning system
c Expansion valve

15 Lift plug clip for spiral of changeover flap from holder on evaporator housing. On systems with vacuum-controlled changeover flaps, pull out lock on piston rod of lefthand vacuum element and disconnect piston rod.



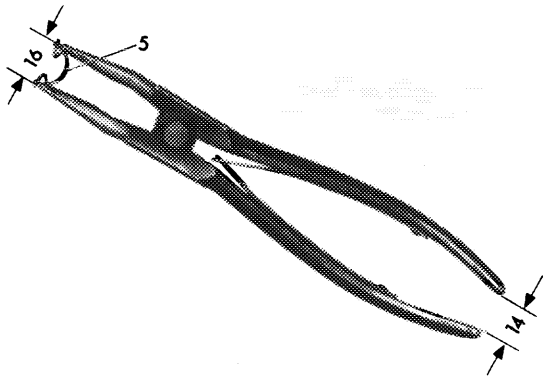
Evaporator with heater box (air conditioning system, version 2, with vacuum control)

a Capillary with temperature sensor
1 Evaporator housing
2 Heater box
5 Tensioning spring
20 Oval head or hex. head sheet-metal screw
24 Temperature vacuum switch
37 Cooling blower
38 Changeover switch
39 Vacuum element
40 Control line (cooling, color light green)
41 Control line (heating, color dark green)
42 Vacuum line (color medium green)

16 Unscrew sheet-metal screw (20) at left on evaporator housing.

Note: Instead of standard sheet-metal screw and sheet-metal nut (20), use screw B 6.3 x 13 when reinstalling evaporator housing.

17 Remove tensioning springs (5) by means of modified pliers for locking rings.



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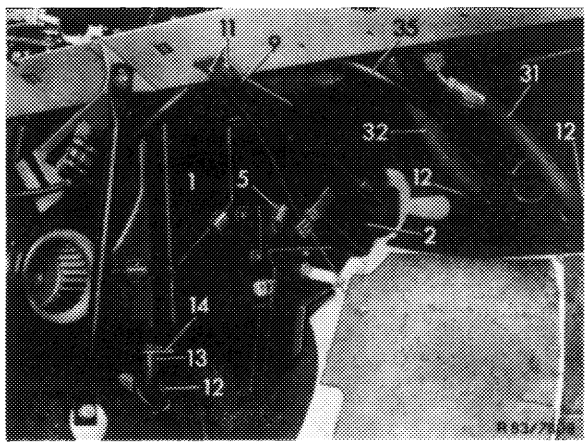
Pliers for locking rings A 2
5 Tensioning spring

18 Loosen evaporator housing (1) from heater box and remove in rearward direction.



Layout of evaporator housing on heater box

1 Evaporator housing
2 Heater box
5 Tensioning spring
9 Holder
11 Sheet-metal screw
12 Grommet
13 Condensate drain hose
14 Hose clip
31 Hose from receiver dehydrator to expansion valve
32 Hose from evaporator to compressor
35 Harness for air conditioning system

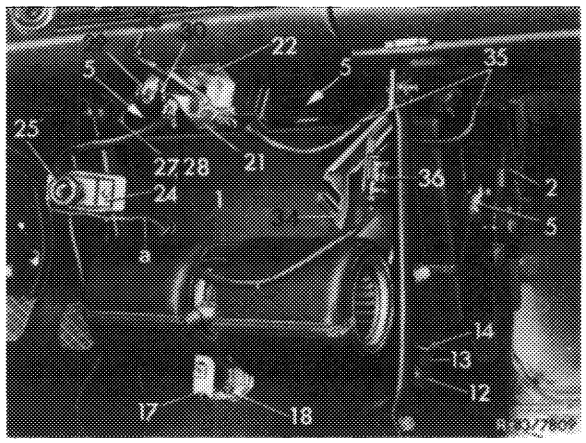
Installation

19 Glue half side of adhesive strip to joint at bottom of heater box.

20 Position evaporator housing (1) on heater box and attach together with tensioning springs (5). Make sure that housing of evaporator rests perfectly against heater box.

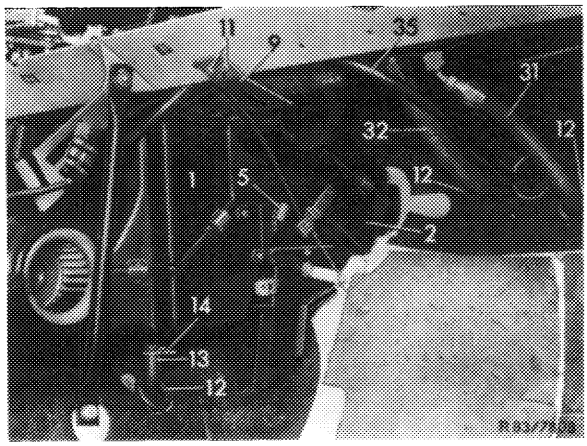
21 Screw evaporator housing with holder (17) and sheet-metal screw with washer (18) to transmission tunnel.

22 Push adhesive strip at bottom of heater box against evaporator housing by means of a screwdriver. Then seal the remaining joints at left and right on climate cabinet with adhesive tape or Terostat-putty.



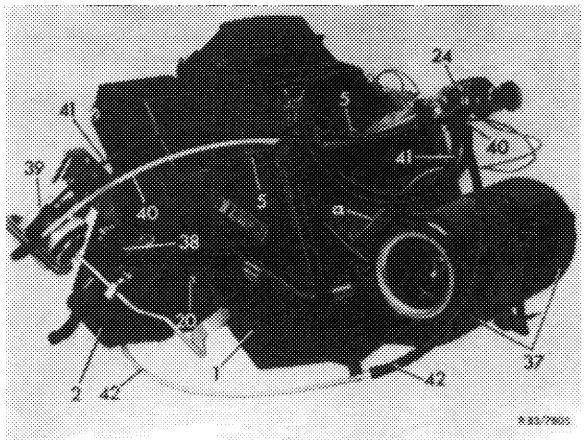
Layout of evaporator housing with control unit (air conditioning system, version 1)

1 Evaporator housing
2 Heater box
5 Tensioning spring
13 Condensate drain hose
12 Grommet
14 Hose clip
17 Holder
18 Screw with washer
21 Control unit
22 Sheet-metal screw with toothed washer
24 Temperature switch
25 Knob with rosette
26 Handle
27 Spiral with sleeve
28 Cable control
29 Clamp
30 Screw with washer snap ring and nut
34 Holder for radio
35 Harness for air conditioning system
36 Clamp
a Capillary with temperature sensor



Layout of evaporator housing on heater box

1 Evaporator housing
2 Heater box
5 Tensioning spring
9 Holder
11 Sheet-metal screw
12 Grommet
13 Condensate drain hose
14 Hose clip
31 Hose from fluid reservoir to expansion valve
32 Hose from evaporator to compressor
35 Harness for air conditioning system



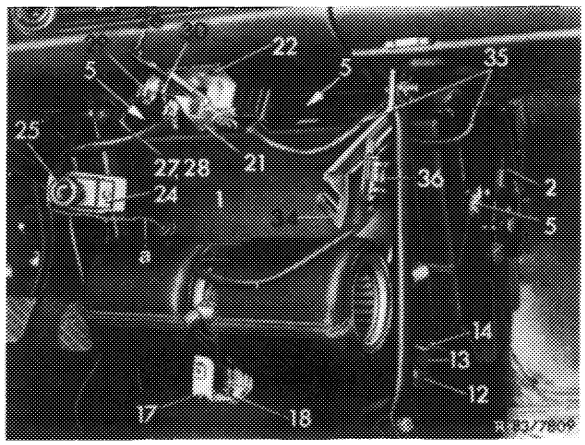
Evaporator with heater box (air conditioning system, version 2 with vacuum control)

1 Evaporator housing
2 Heater box
5 Tensioning spring
20 Oval head or hex. head sheet-metal screw
24 Temperature vacuum switch
37 Cooling blower
38 Changeover switch
39 Vacuum element
40 Control line (cooling, color light green)
41 Control line (heating, color dark green)
42 Vacuum line (color medium green)
a Capillary with temperature sensor

23 Connect vacuum or pressure hose to evaporator pipe or expansion valve.

24 Attach cable control with spiral to holder on evaporator housing by means of plug clamp (version 1).

25 Screw control unit (21) at bottom to instrument panel by means of sheet-metal screws and toothed washers (version 1).



Layout of evaporator housing and control unit (air conditioning system, version 1)

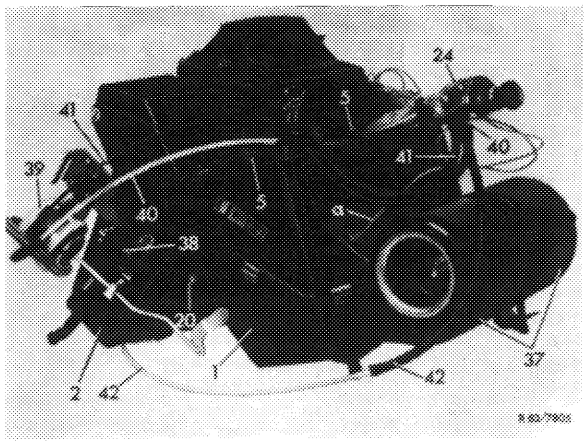
1	Evaporator housing	26	Handle
2	Heater box	27	Spiral with sleeve
5	Tensioning spring	28	Cable control
13	Condensate drain hose	29	Clamp
14	Hose clip	30	Screw with washer snap ring and nut
17	Holder	34	Holder for radio
18	Screw with washer	35	Harness for air conditioning system
21	Control unit	36	Clamp
22	Sheet-metal screw with toothed washer	a	Capillary with temperature sensor
24	Temperature switch		
25	Knob with rosette		

26 Connect cable controls with spirals (28) to control unit (21) by means of parts item 29 and 30. Then check whether both changeover flaps are completely opening and closing and whether flap is pushed against heat exchangers, which can be heard after overcoming dead center (version 1).

27 Attach piston rod of lefthand vacuum element to lever of lower changeover flap and secure with lock (version 2).

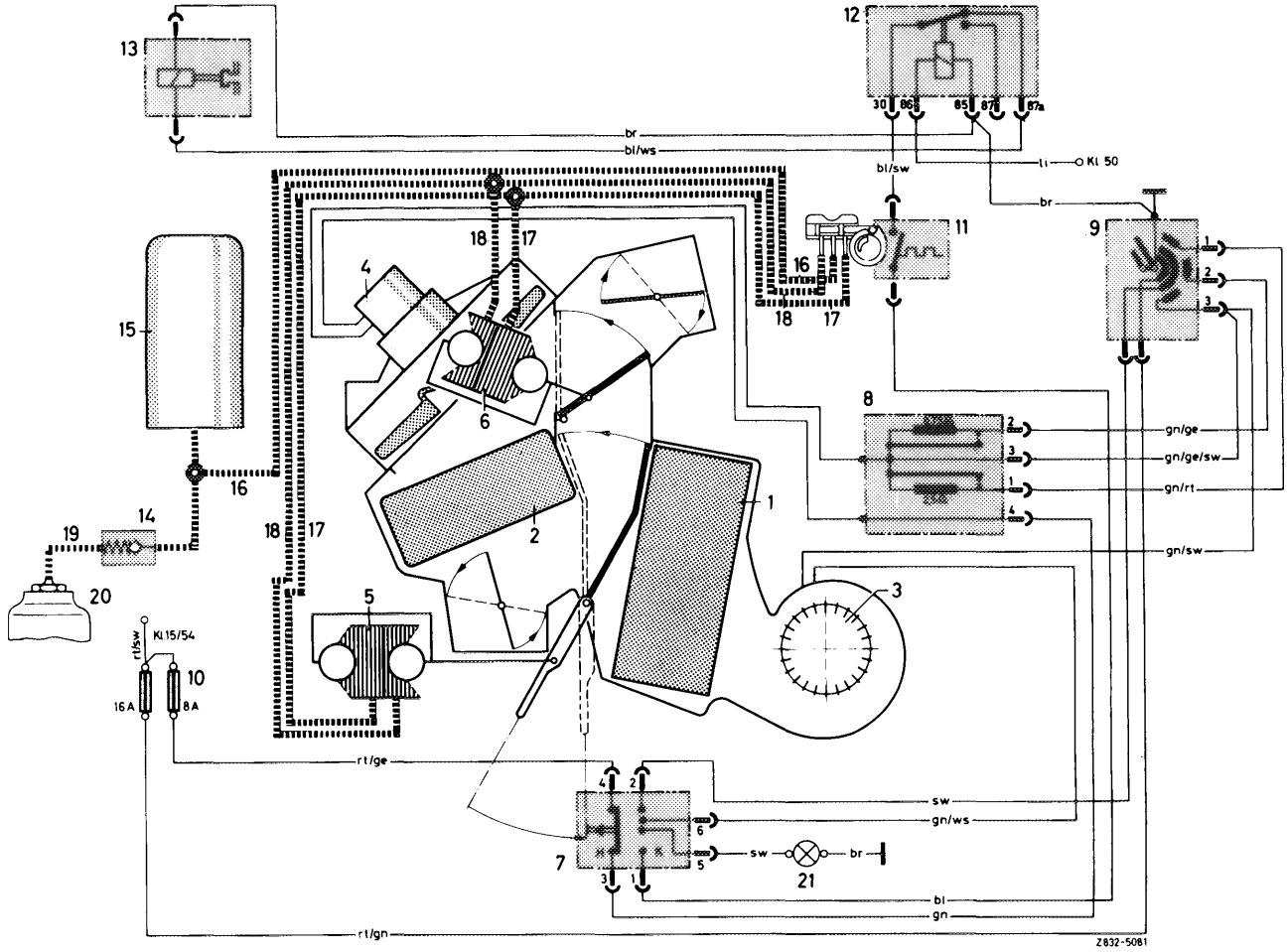
28 Screw evaporator housing to heater box by means of a sheet-metal screw B 6.3 x 13 (20) (version 2).

29 Reattach vacuum lines to evaporator housing by means of line clip and spreader clip (version 2).



Evaporator with heater box (air conditioning system, version 2 with vacuum control)

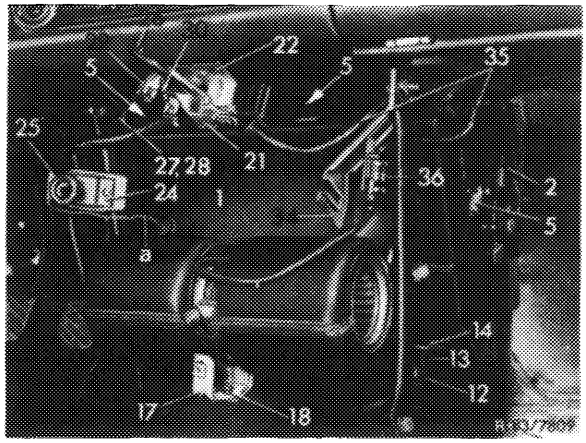
1	Evaporator housing
2	Heater box
5	Tensioning spring
20	Oval head or hex. head sheet-metal screw
24	Temperature vacuum switch
37	Cooling blower
38	Changeover switch
39	Vacuum element
40	Control line (cooling, color light green)
41	Control line (heating, color dark green)
42	Vacuum line (color medium green)
a	Capillary pipe with temperature sensor



Wiring diagram of air conditioning system (version 2)

1 Evaporator
2 Heat exchanger
3 Cooling blower
4 Heater blower
5 Vacuum element
6 Vacuum element
7 Changeover switch (heating/cooling)
8 Pre-resistor
9 Blower switch
10 Fuse for heater and cooler blower (8 or 16 amps)
11 Temperature vacuum switch
12 Relay
13 Electromagnetic clutch
14 Check valve
15 Vacuum reservoir
16 Vacuum line (color medium green)
17 Control line (cooling, color light green)
18 Control line (heating, color dark green)
19 Indicator lamp
20 Vacuum connection on intake pipe
21 Indicator lamp

30 Reattach struts as well as condensate water drain hoses (13).

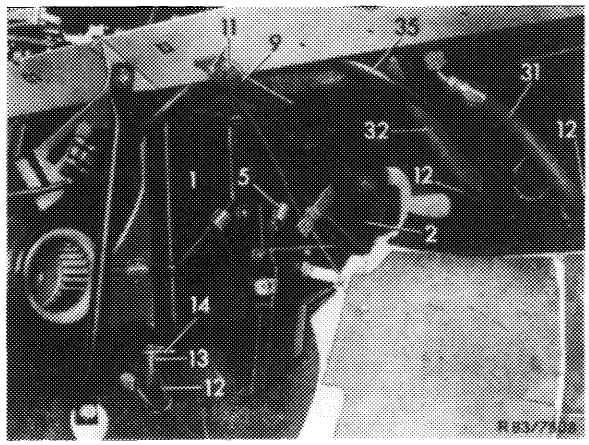


Layout of evaporator housing and control unit (air conditioning system, version 1)

1 Evaporator housing
2 Heater box
5 Tensioning spring
13 Condensate drain hose
12 Grommet
14 Hose clip
17 Holder
18 Screw with washer
21 Control unit
22 Sheet-metal screw with toothed washer
24 Temperature switch
25 Knob with rosette
26 Handle
27 Spiral with sleeve
28 Cable control
29 Clamp
30 Screw with washer snap ring and nut
34 Holder for radio
35 Harness for air conditioning system
36 Clamp
a Capillary with temperature sensor

31 Screw holder (9) with screws (11) to reinforcement of instrument panel.

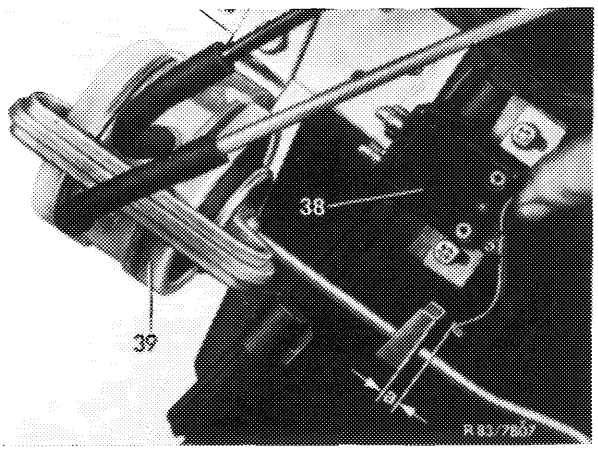
32 Install tunnel covering.



Layout of evaporator housing on heater box

1 Evaporator housing
2 Heater box
5 Tensioning springs
9 Holder
11 Sheet-metal screw
12 Sleeve
13 Condensate drain hose
14 Hose clip
31 Hose from receiver dehydrator to expansion valve
32 Hose from evaporator to compressor
35 Harness for air conditioning system

33 On systems with temperature vacuum switch (24) mount vacuum lines according to color code on vacuum switch. Run engine and check adjustment of changeover switch (38), and correct, if required (version 2).

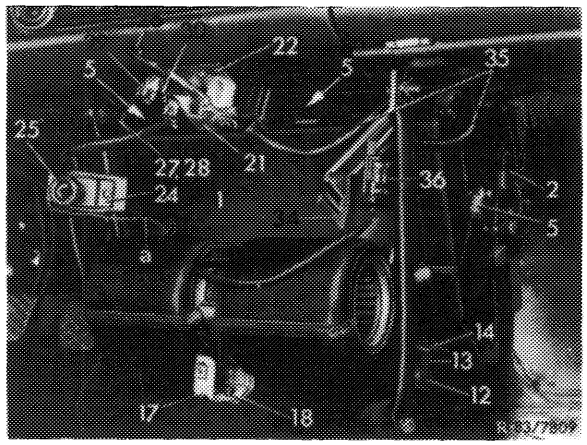


Layout and adjustment of changeover switch for heating or cooling blower

38 Changeover switch
39 Vacuum element

34 Install housing, making sure that the capillary with temperature sensor of temperature switch is completely introduced into evaporator housing.

35 Insert handle (26) into control unit and throw smoothly from position "N" completely to the left to position "K". Check once again whether flap on heat exchangers is audibly pressed on after overcoming dead center.



Layout of evaporator housing and control unit (air conditioning system, version 1)

1	Evaporator housing	26	Handle
2	Heater box	27	Spiral with sleeve
5	Tensioning spring	28	Cable control
13	Condensate drain hose	29	Clamp
12	Grommet	30	Screw with washer, snap ring and nut
14	Hose clip		
17	Holder	34	Holder for radio
18	Screw with washer	35	Harness for air conditioning system
21	Control unit		
22	Sheet-metal screw with toothed washer	36	Clamp
		a	Capillary with temperature sensor
24	Temperature switch		
25	Knob with rosette		

36 If not, the flaps will not close completely with housing installed. In such a case, extend the slot of rosette and in housing at the left (position "K") for a few millimeters by means of a warding file.

37 Install glovebox and reconnect grounding line to battery.

38 Evacuate air conditioning system, fill again and check for leaks (83–512 and 514).

39 Check air conditioning system for function (83–510).

40 Install cover at left and right under instrument panel.