

## Special Tool

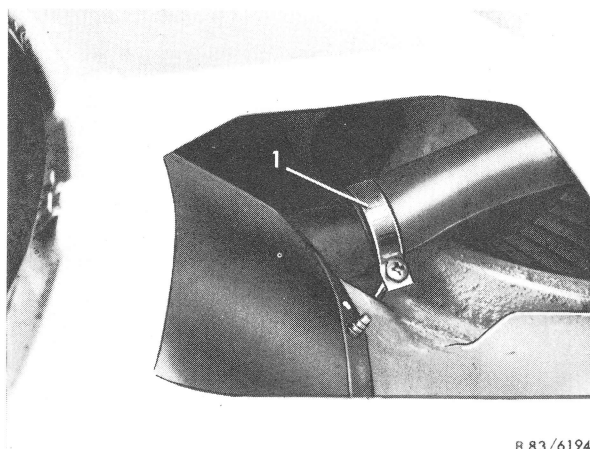
Clip pliers for heater cable controls

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## Removal

- 1 Drain approx. 3 liters cooling water.
- 2 Remove ornamental grille for air inlet on both sides (83.1–140).
- 3 Loosen hose clip (1) on both sides and pull off heater hose (Fig. 1).

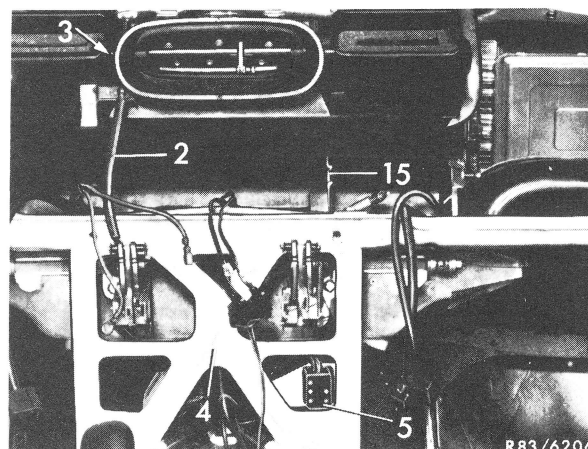
- 4 Remove instrument panel (68.1–100).
- 5 Disconnect cable control (2) on flap actuation (3) and remove holding clip (Fig. 2).
- 6 Remove support (4) and disconnect plug connection (5).
- 7 Remove righthand air duct (6).



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Fig. 1

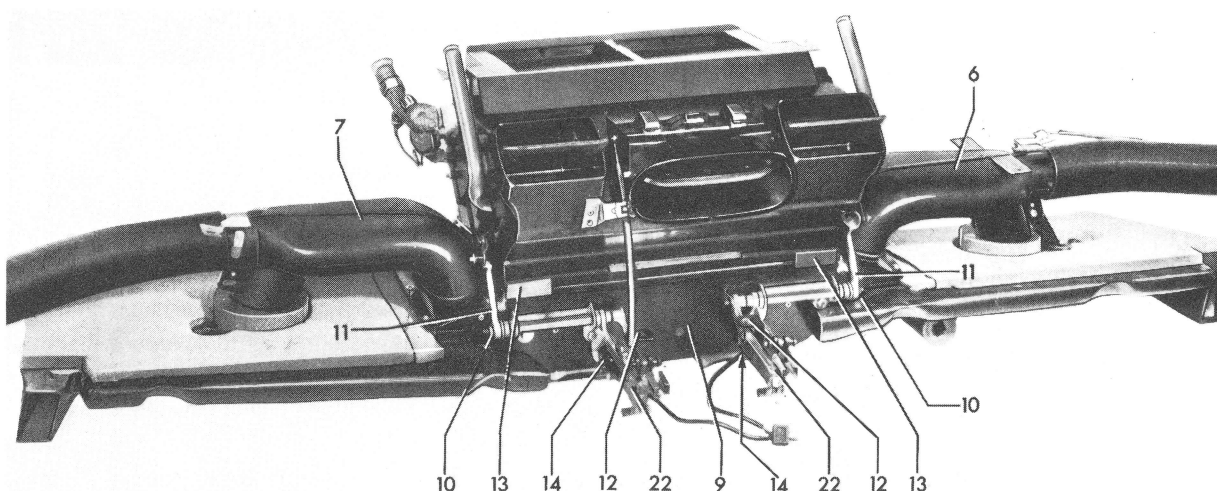
- 1 Hose clip on heater hose



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Fig. 2

- 2 Cable control top  
3 Flap actuation  
4 Support  
5 Plug connection  
15 Radio holder



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Fig. 3

- 6 Air duct right  
7 Air duct left  
9 Air duct center  
10 Nut on connecting lever  
11 Connecting lever  
12 Holding bracket on controls  
13 Clip  
14 Micro switch  
22 Controls

# 83.1 Removal and Installation of Heater Box with Heat Exchanger

- 8** Unscrew screw (8) on lefthand air duct (7) (Fig. 4).

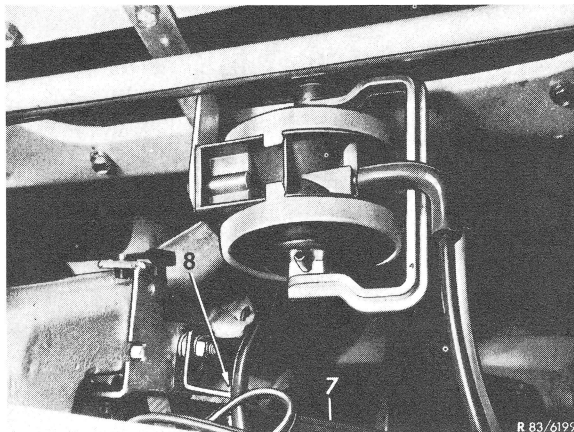


Fig. 4

- 7 Lefthand air duct  
8 Holding screw on lefthand air duct

- 9** Remove lefthand air duct (7) (Fig. 3).

- 10** Remove holder between center air duct (9) and tunnel.

- 11** Loosen nut (10) on both connecting levers (11) and pull connecting lever from shaft including serrated washer.

- 12** Loosen both holding angles (12) of controls on cross member.

- 13** Pull out the four clamps (13) at front and rear end toward side.

- 14** Separate cable to micro switches (14) of controls on plug connection.

- 15** Only for automatic transmissions: Loosen one micro switch (14) from controls.

- 16** Pull out center air duct (9) with controls toward the rear. Remove to the right only on vehicles with automatic transmission.

- 17** Loosen cable clips of cable harness on cross member in range of heater box.

- 18** Remove radio holder (15) on cross member (Fig. 2).

- 19** Remove control unit for electronic injection system.

- 20** Loosen both nuts (16) on holders for heater box (Fig. 5).

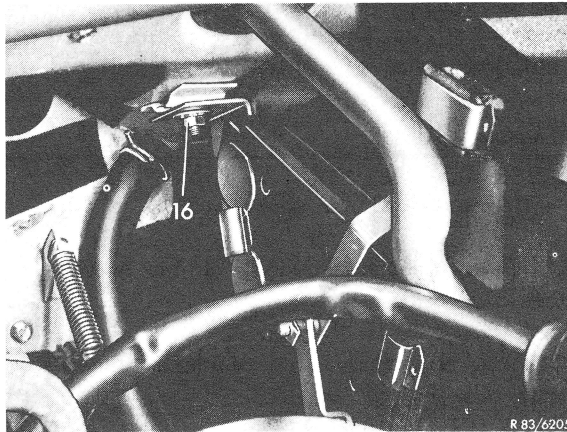


Fig. 5

- 16 Nut

- 21** Pull heater box back until the heater pipes (17) are disconnected from rubber sleeves (18) in front wall (Fig. 6).

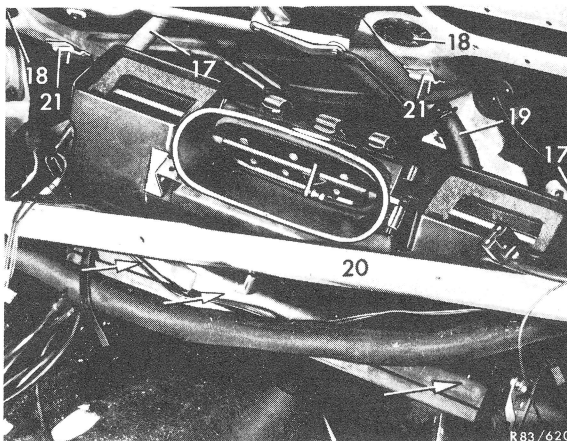


Fig. 6

- 17 Heater tube  
18 Rubber sleeve in front wall  
19 Water drain hose  
20 Cross member  
21 Holder for heater box

- 22** Leave main cable harness hanging down and slide heater box toward the right. Make sure that the lower shoulder (arrows in Fig. 6) remains under cross member (20) and the heater box slides past the water drain hose (19).

- 23** Remove heater box at the right under cross member (20).

**Caution!** When removing the heater box watch out for cooling water flowing out.

**24** Drain heater box and save cooling water with the treating agent contained therein.

### Installation

**25** Lubricate both rubber sleeves (18) in front wall with soap solution or the like (Fig. 6).

**26** Insert heater box under cross member (20) (Fig. 6) without center air duct (9) (Fig. 3) on side of passenger seat and place toward the left on tunnel.

**Note:** Make sure that during the insertion of the heater box toward the left the lower shoulder (arrows Fig. 6) remain under cross member (20).

**27** Guide both heater tubes (17) through rubber sleeves (18).

**28** Screw heater box to both holding brackets (21).

**29** Mount air duct center (9) with clips (13) to heater box (Fig. 3).

**Note:** Make sure that on vehicles without refrigerating system the water drains in the center air duct (9) are closed with rubber plugs (Part No. 115 987 03 40).

**30** Mount holding bracket between air duct center (9) and tunnel.

**31** Screw both holding brackets (12) of controls to cross member.

**32** Connect cable control (2) for upper air flaps (Fig. 2).

**33** Set both outer operating levers upwards and insert the assembly aid (23) into levers of flap actuation as shown in Fig. 7.

**Note:** When adjusting the connecting lever (11) (Fig. 8) without assembly aid (23), push both flap actuations in direction of arrow up to stop and hold in this position. The assembly aid is inserted only in replacement heater box.

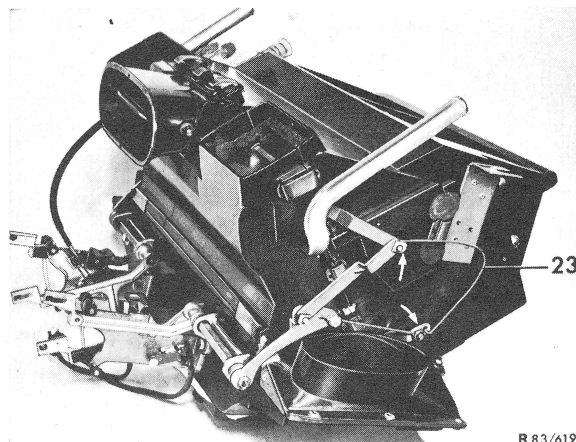


Fig. 7

23 Assembly aid

**34** Place serrated washer (25) and connecting lever (11) on actuating lever (24) (Fig. 8).

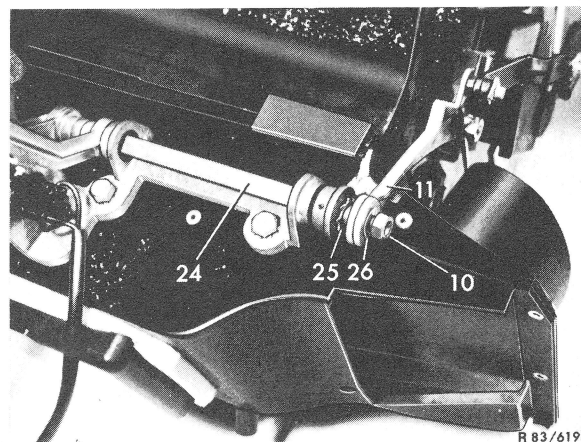


Fig. 8

10 Nut  
11 Connecting lever  
24 Actuating lever

25 Serrated washer  
26 Shaft washer

**35** Screw-on connecting lever in this position by means of shaft washer (26) and nut (10). Counterhold with open end wrench (SW 8) on actuating lever (24) (Fig. 8 and 9).

**36** Disconnect assembly aid.

## 83.1 Removal and Installation of Heater Box with Heat Exchanger

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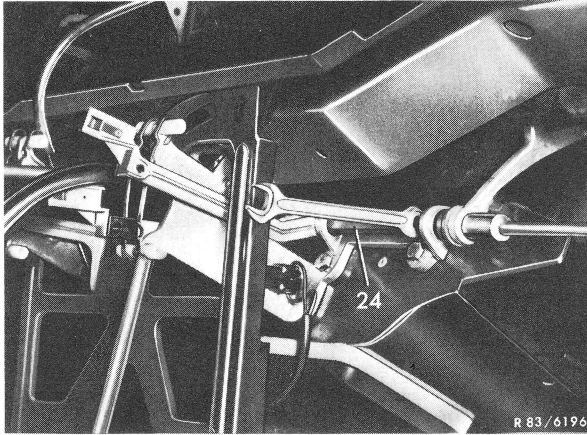


Fig. 9  
24 Actuating shaft

**37** Check whether the micro switch (28) is actuated in the lower position of both heater operating levers. If required, adjust micro switch accordingly (arrow in Fig. 10).

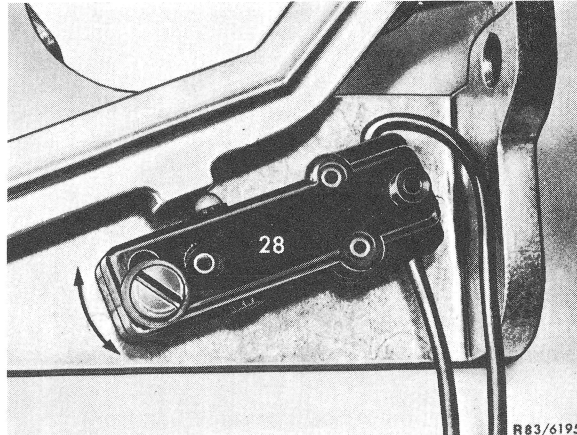


Fig. 10  
28 Micro switch

**28** For further installation proceed vice versa.