

No voltage present  
→ Check A/C relay.

3. Check A/C relay.

There must be voltage at term. 3.  
No voltage present  
→ Check de-icer.

There must be no ground potential  
at term. 2.  
Ground present  
→ Check water-temperature switch.

4. Check voltage at de-icer.

Voltage at only one pin  
→ Replace de-icer.

No voltage  
→ Replace control switch.

### Checking Vacuum System

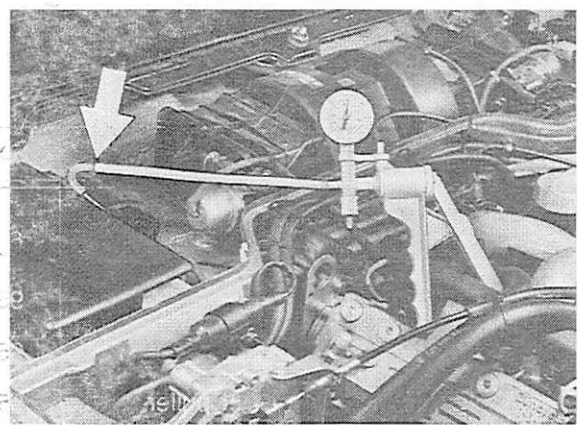
1. Pull off vacuum hose on vacuum reservoir.

2. Switch on vacuum hand pump.

3. Switch on ignition.

4. Press air-circulation button and set temperature pre-selector switch to maximum cooling.

5. Generate vacuum. The fresh/circulation air flaps should close, as well as the heating valve.



6. If the fresh/circulation air flaps and the heating valve do not close, although the vacuum system has no leakage, check voltage at solenoid valves

4. Footwell flaps not adjustable

Pull plug on control motor, switch on ignition, and set footwell slide switch to "closed" position.

Voltmeter at term. 1 and term. 2  
Reading: approx. 6 V

Voltmeter at term. 2 and term. 3  
Reading: approx. 0.1 V

Footwell slide switch in "open" position  
Reading: approx. 6 V

Voltmeter at term. 2 and term. 4  
Reading: approx. 0.1 V

Footwell slide switch in "closed" position  
Reading: approx. 10 V

Voltmeter at term. 2 and term. 5  
Reading: approx. 0.1 V

Footwell slide switch in "open" position.  
Reading: approx. 10 V

Sluggish heating in interior. Temperature Regulation

The system overheats and reacts only very sluggishly. Interior sensor not functioning.

Pull plug on interior sensor blower and switch on ignition.

Voltmeter at term. 1 and term. 3  
Reading: battery voltage

If no voltage present, check fuse No. 17.

Magnetic Coupling Switch

1. Check voltage at compressor plug.  
Voltage present  
→ Replace magnet coils

no voltage present  
→ Check low-pressure switch.

2. Check voltage at low-pressure switch.  
Voltage only at one pin  
→ Check system fill quantity.

System correctly filled  
→ Replace low-pressure switch.

## Heating not controllable

1. The heating regulates in the direction of maximum cooling and heats only starting from a temperature-switch position of approx. 27.

There is a short circuit in the sensor series.

To check the 3 temperature sensors, see "heater heats continuously and can no longer be regulated".

2. Defrost flap not controllable.

Pull plug on control motor, switch on ignition and set defrost slide switch to "closed" position.

Voltmeter at term. 1 and term. 2

Reading: approx. 6 V

Voltmeter at term. 2 and term. 3

Reading: approx. 0.1 V

Defrost slide switch in "open" position.

Reading: approx. 6 V

Voltmeter at term. 2 and term. 4

Reading: approx. 0.1 V

Defrost slide switch in "closed" position

Reading: approx. 10 V

Voltmeter at term. 2 and term. 5

Reading: approx. 0.1 V

Defrost slide switch in "open" position

Reading: approx. 10 V

3. Temperature mixing flap and baffle flap not controllable.

Pull plug on control motor, switch on ignition and set temperature pre-selector to maximum cooling.

Voltmeter at term. 1 and term. 2

Reading: approx. 6 volts

Voltmeter at term. 1 and term. 3

Reading: approx. 2.5 volts

Voltmeter at term. 1 and term. 4

Reading: approx. 10 volt

Set temperature pre-selector to maximum heating

Reading: approx. 0.1 volts

Voltmeter at term. 1 and term. 5

Reading: approx. 10 volts

Set temperature pre-selector to maximum cooling.

Reading: approx. 0.1 volts.

### Inadequate Cooling After Short Period of Operation

Cooling is OK at first, but then decreases in effectiveness during operation.

Vaporizer is iced up. De-icing switch does not turn off compressor. Check capillary tube for damage and correct seating.

or

Expansion valve iced up. Warm expansion valve. The cooling effect of the air-conditioner should start back up.

Cause: Moisture in refrigerant.  
Replace refrigerant tank.  
Refill system.

Heater heats continuously and can no longer be regulated.

Interruption in sensor series. Check outside sensor, interior sensor, and mixing chamber sensor.

Remove control switch and pull plug A.

Outer sensor: Connect ohmmeter with term.9 and ground

Reading: at 0°C - 34 kohm  $\pm$  10%  
at 10°C - 20 kohm  $\pm$  10%  
at 25°C - 10 kohm  $\pm$  10%

Interior sensor: Connect ohmmeter with term.2 and ground

Reading: As for outside sensor

Mixing chamber sensor: Connect with term.1 and ground

Reading: As for outside sensor

## AIR-CONDITIONING SYSTEM TROUBLE-SHOOTING

### General Requirements

Heating is off. Polyrib belt correctly tensioned.

At an engine speed of 2000 1/min, an ambient temperature of approx. 20° C, and with the compressor running, the following pressures must be attained:

Low pressure: approx. 0.5 - 2.0 bar

High pressure: approx. 10 - 20 bar

Temperature at center nozzle: approx. 2 - 4° C.

### Complete Cooling Failure

1. When bursting seal on refrigerant tank has been destroyed.

The system was overheated. Check direction of rotation of cooler and condenser blowers. If the blowers do not run, check fuses, relays.

2. Connect service unit and read off pressure values.

Low pressure: too low  
High pressure: too low

No refrigerant in system. Look for leakage. Fill air-conditioning system.

3. Turn on air-conditioner and read off pressures.

Low pressure: too high  
High pressure: too low

Compressor is defective.

Low pressure: too low  
High pressure: too high

Expansion valve is defective.

### Insufficient Cooling

1. Low pressure: normal  
High pressure: high

System is too full. Drain and refill system.

2. Low pressure: too low  
High pressure: too low

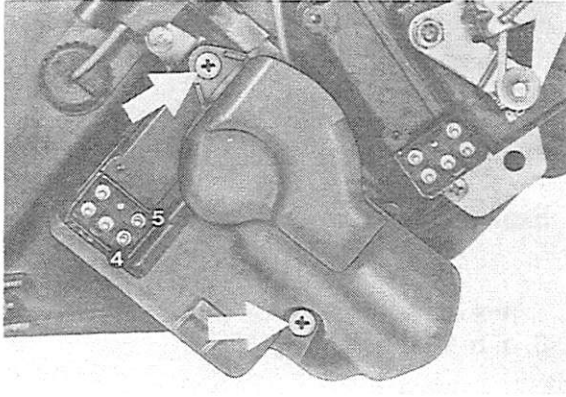
Insufficient refrigerant in system. Look for leakage. Refill system.

3. Low pressure: too high  
High pressure: normal

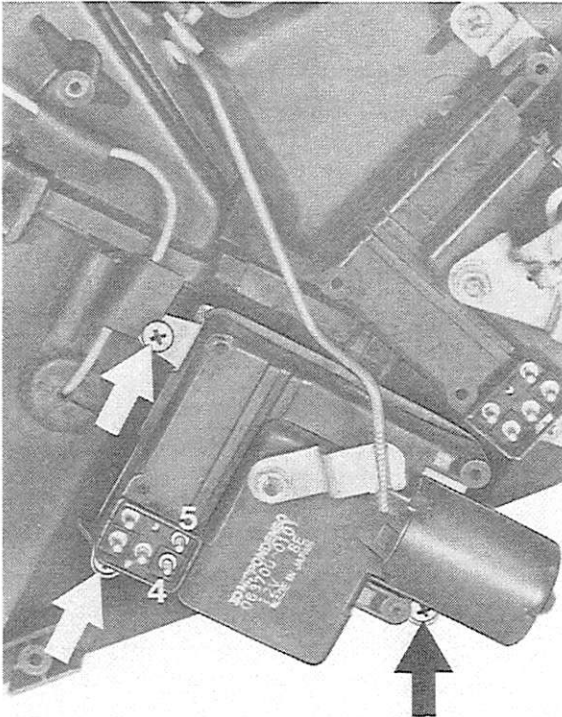
Expansion valve is defective.

### REMOVING AND INSTALLING CONTROL MOTOR FOR FOOTWELL FLAPS

1. Remove plug housing.
2. Unscrew cover.



3. Unclip linkage.
4. Unscrew fastening screws.



### Adjusting the Footwell Flaps

1. Set control motor to final "closed" position. To do this, connect pin 4 with + and pin 5 with - of a 12 voltage source.
2. Close footwell flaps and connect linkage.