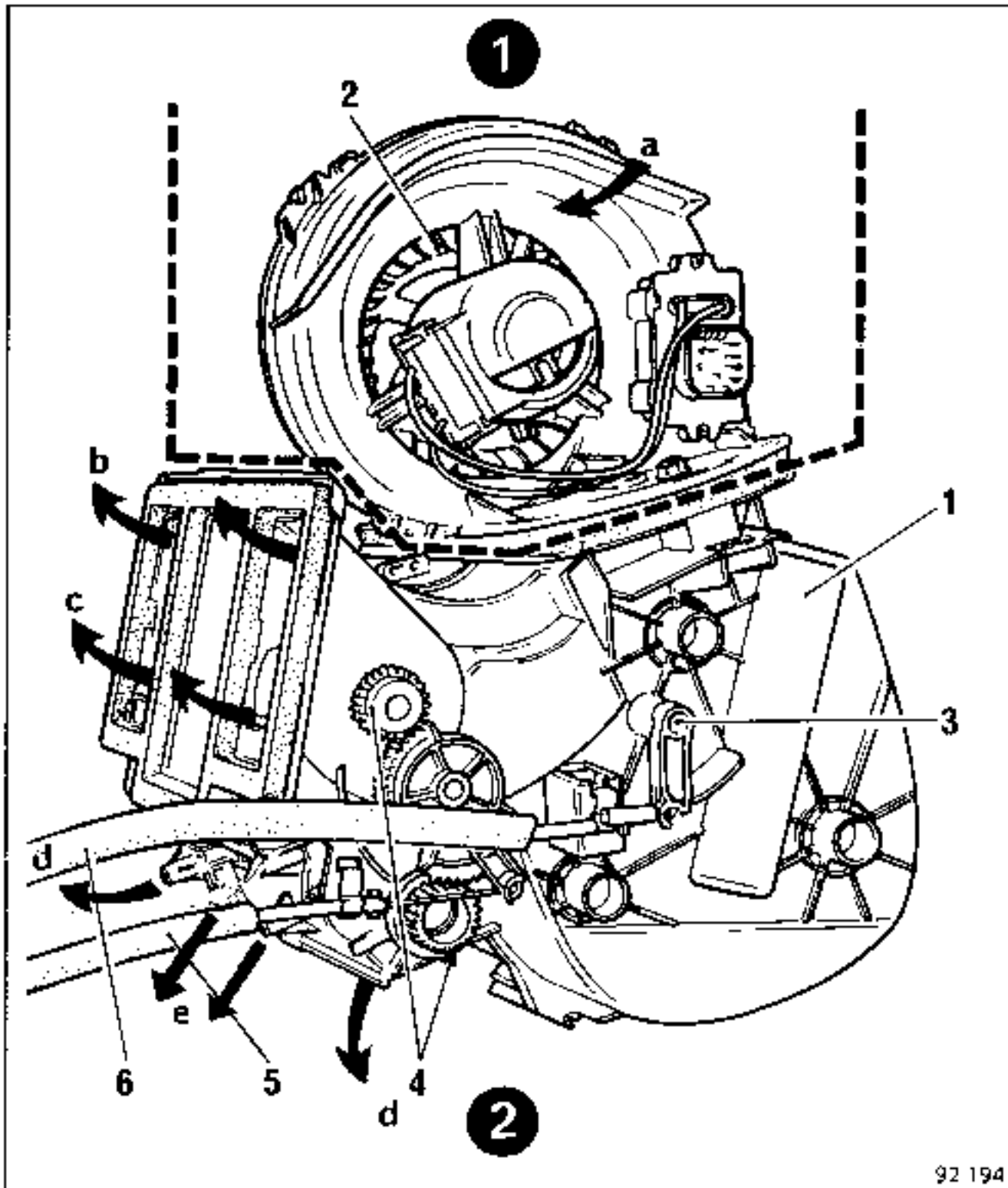


EXPLODED VIEW OF AIR DISTRIBUTION AND BLOWER UNITS



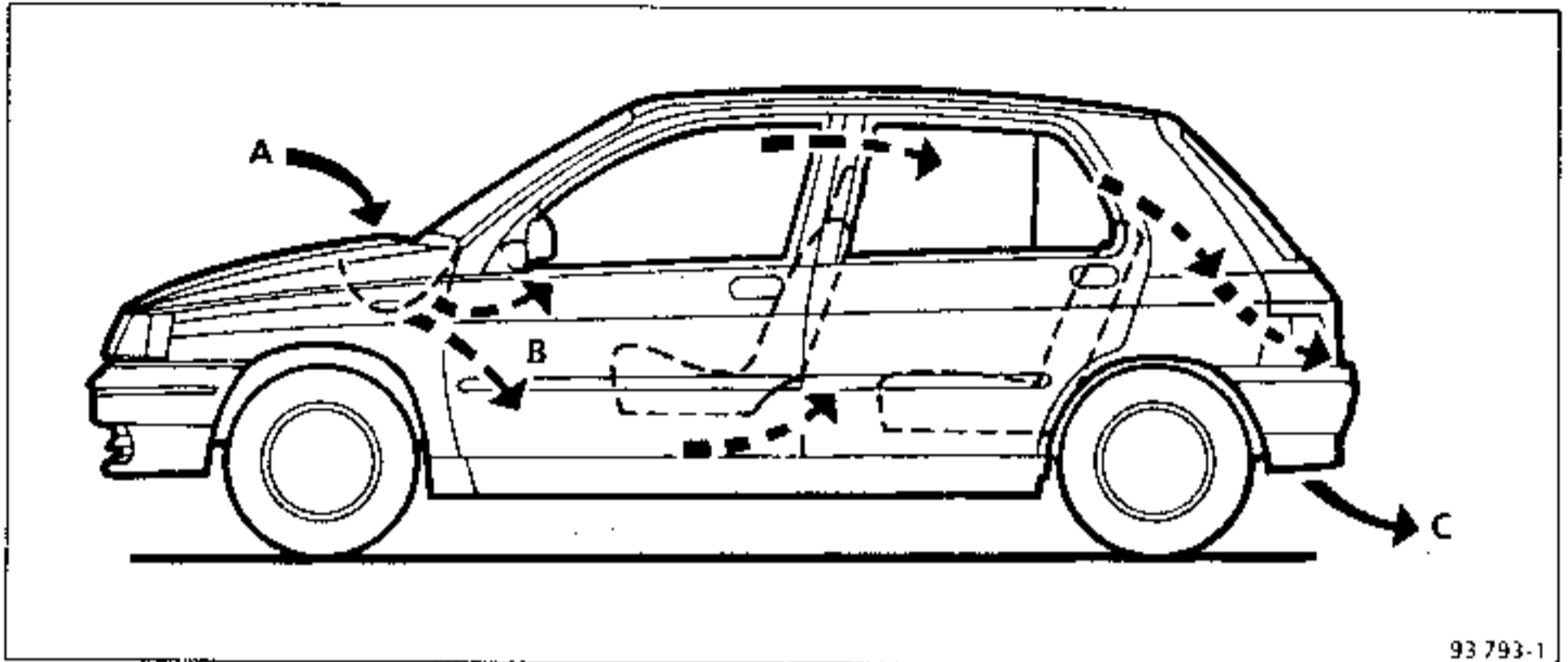
92 194

1 PLENUM CHAMBER

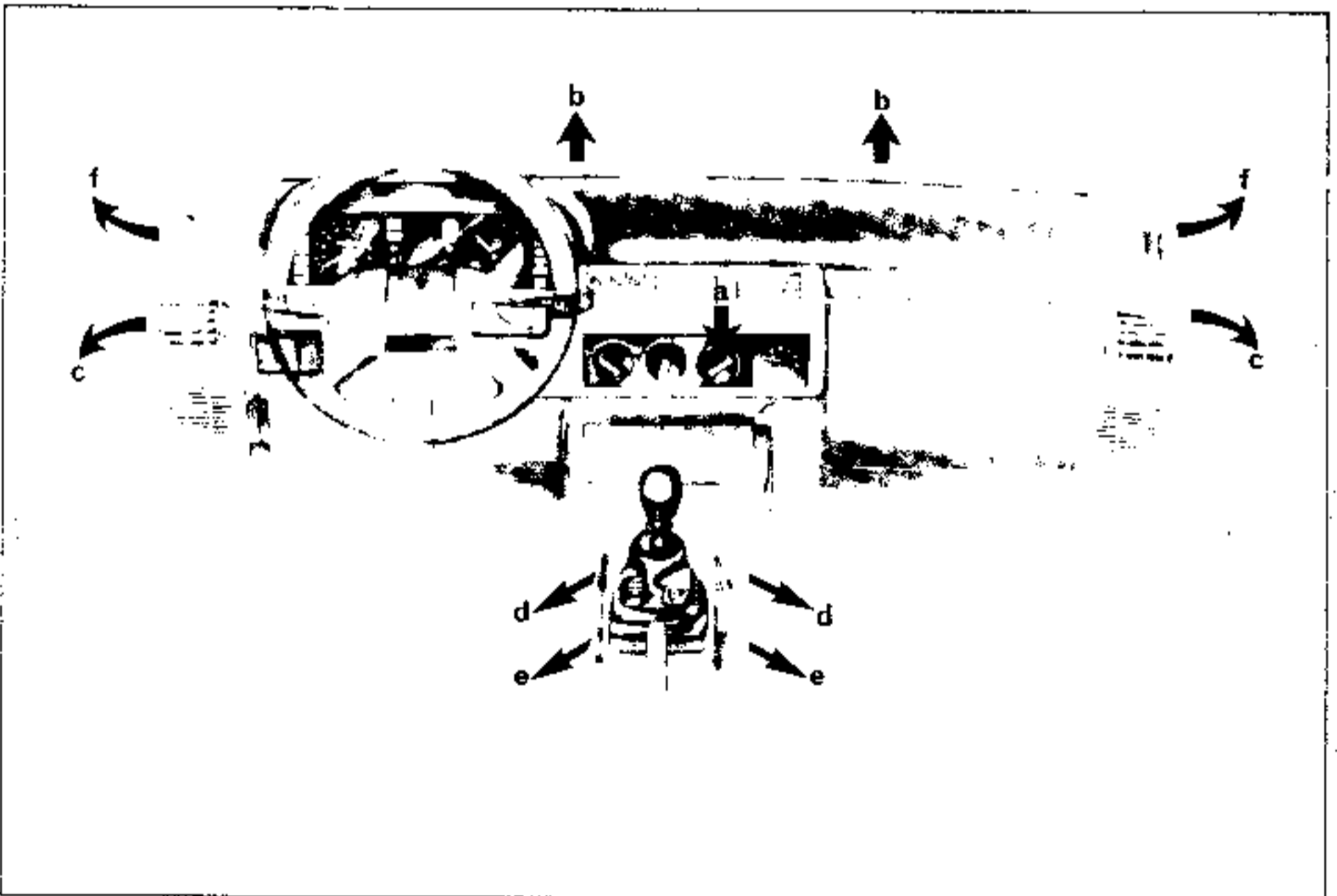
2 PASSENGER COMPARTMENT

- 1 Heater radiator
- 2 Heater fan
- 3 Hot air/cold air flap
- 4 Air distribution flaps
- 5 Air distribution cable
- 6 Air mixer cable
- a Air inlet
- b Windscreen demisting outlet
- c Dashboard ventilator outlet
- d Lower ventilator outlets
- e Ventilator outlets to rear seats (depending on version).

AIR CIRCULATION AND DISTRIBUTION



93 793-1



- A Air inlet for outside air
- B Air distribution
- C Air extraction via luggage compartment

- a Centre ventilator outlet (depending on version)
- b Windscreen demisting outlet
- c Dashboard ventilator outlet
- d Lower ventilator outlets
- e Ventilator outlets to rear seats (depending on version)
- f Demisting outlet to front side windows

TEMPERATURE CONTROL KNOB (A)

Hot air/cold air flap control (3)

COLD AIR



A

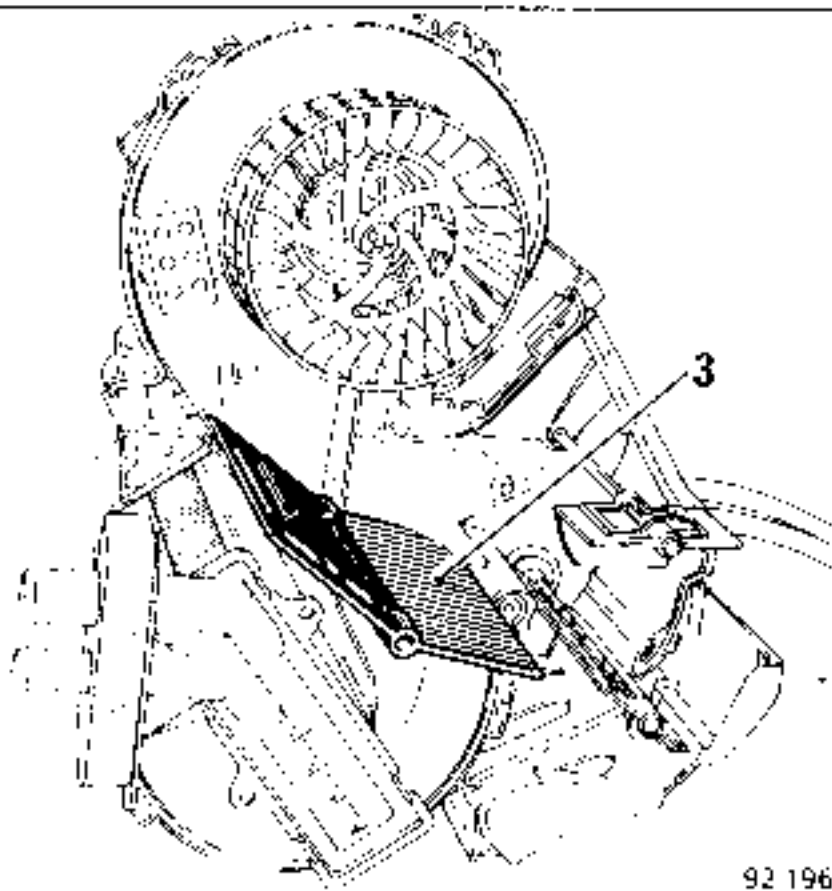
92 033-5

HOT AIR

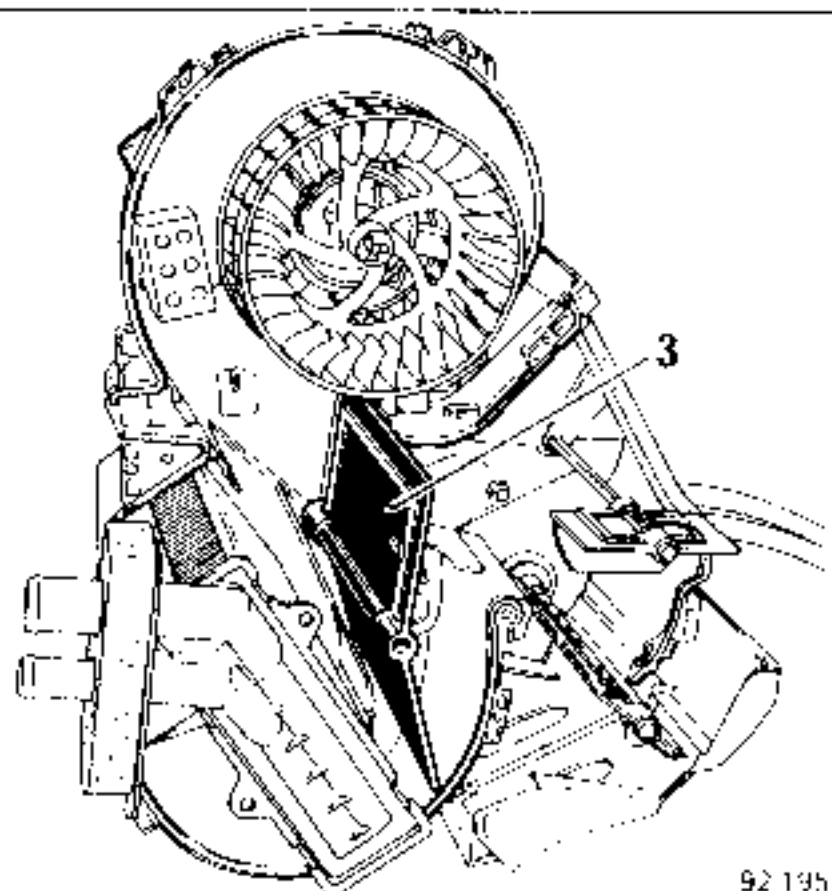


A

92 033-6



92 196

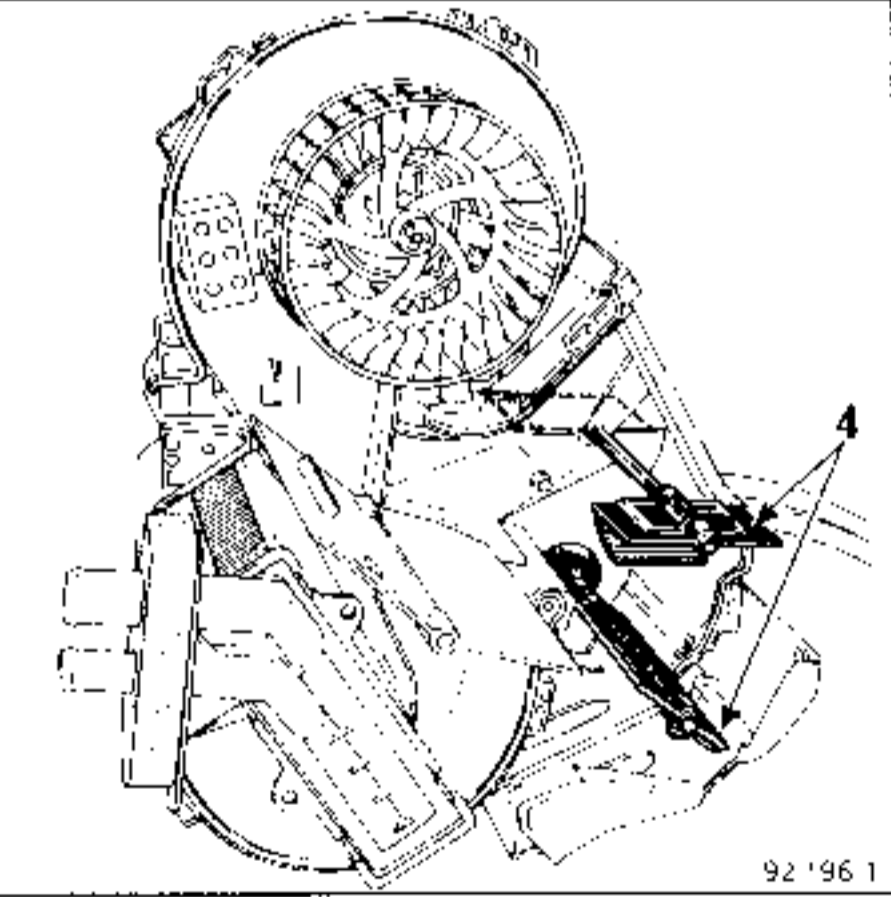
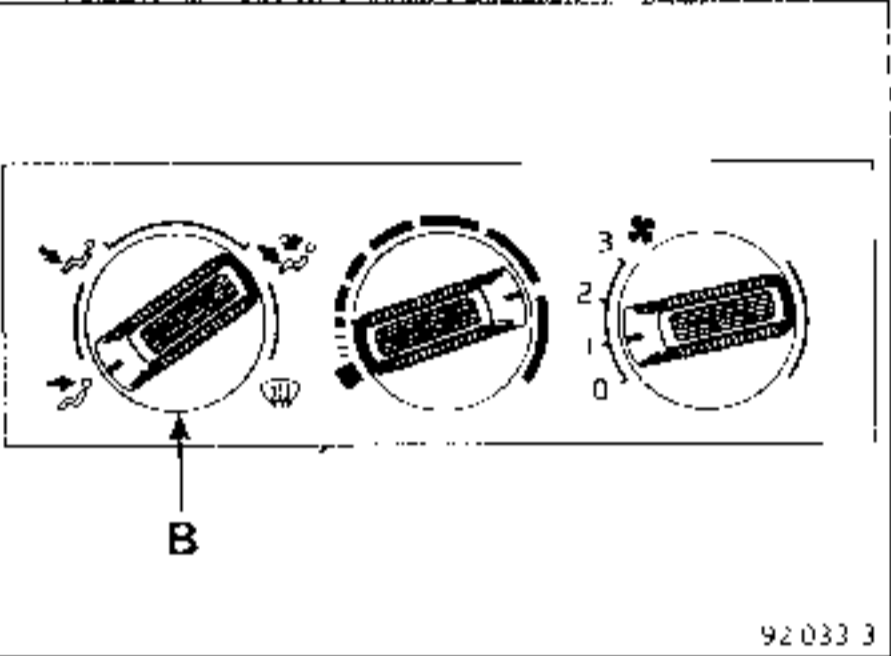


92 195

The blower device does not have a heater valve and is permanently supplied with power. Flap (3) controls the operation of the cool air reheating system.

AIR DISTRIBUTION KNOB (B)

Air distribution flap control (4)



POSITION

The flow of air is directed to the lower ventilators (d) and (e) and dashboard ventilators (c).

POSITION

The air flow is distributed between all ventilators (b), (c), (d), (e), (f)

The dashboard ventilators (c) may be closed.

POSITION

The air flow is directed to the ventilators for the windscreen (b), side windows (f) and dashboard (c).

To improve demisting and defrosting of the windscreen, ventilators (c) may be closed.

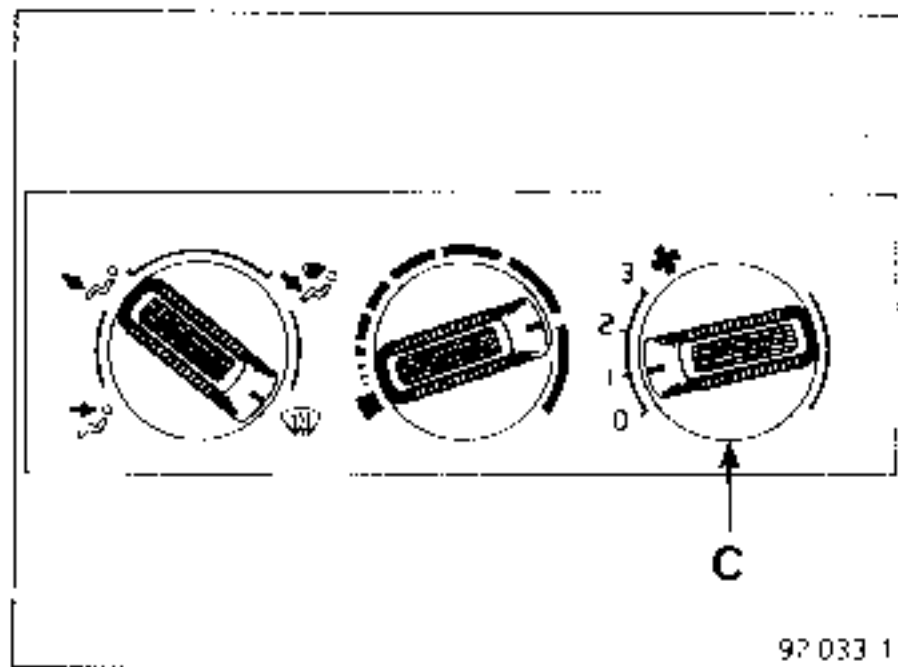
POSITION

The air flow is directed solely to the ventilators in the dashboard (c)

There are 3 settings for each ventilator:

- open or closed,
- vertical regulating,
- horizontal regulating.

FAN CONTROL KNOB (C)



Ventilation is by means of "blown" air. The air flow circulating in the passenger compartment is determined by the settings of knob (C)

NOTE : To improve efficiency of windscreen demisting and defrosting, fan control knob (C) should be placed in the last but one setting.

104 : Ignition/anti-theft switch.

124 : Heater control

209 : Lighting control.

260 : Fuse box

298 : Heating unit

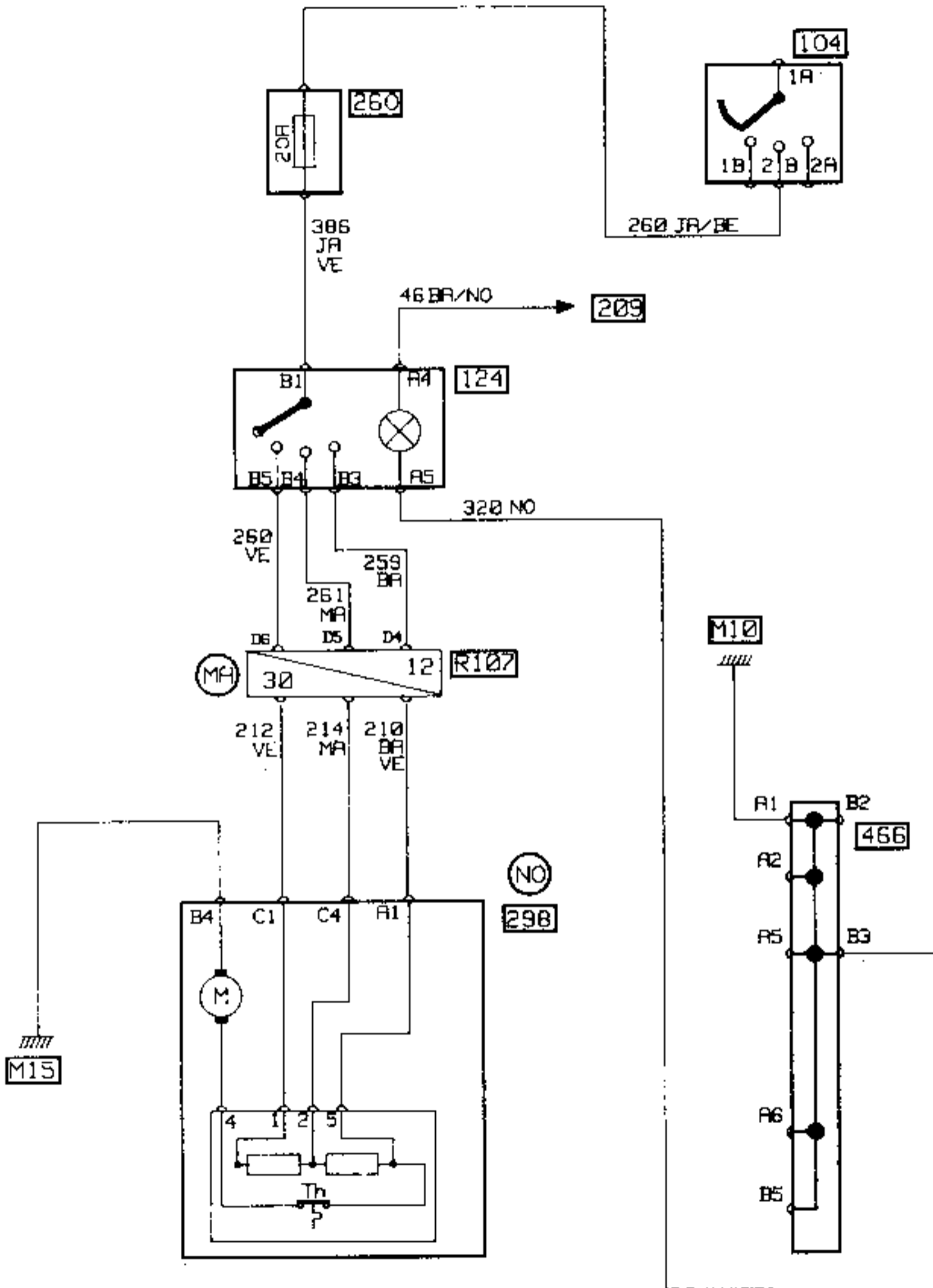
466 : Shunt unit.

List of connections and earthing points

R107 : Dashboard/engine harness.

M10 : Front lefthand pillar earth.

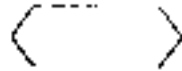
M15 : Heater bulkhead earth



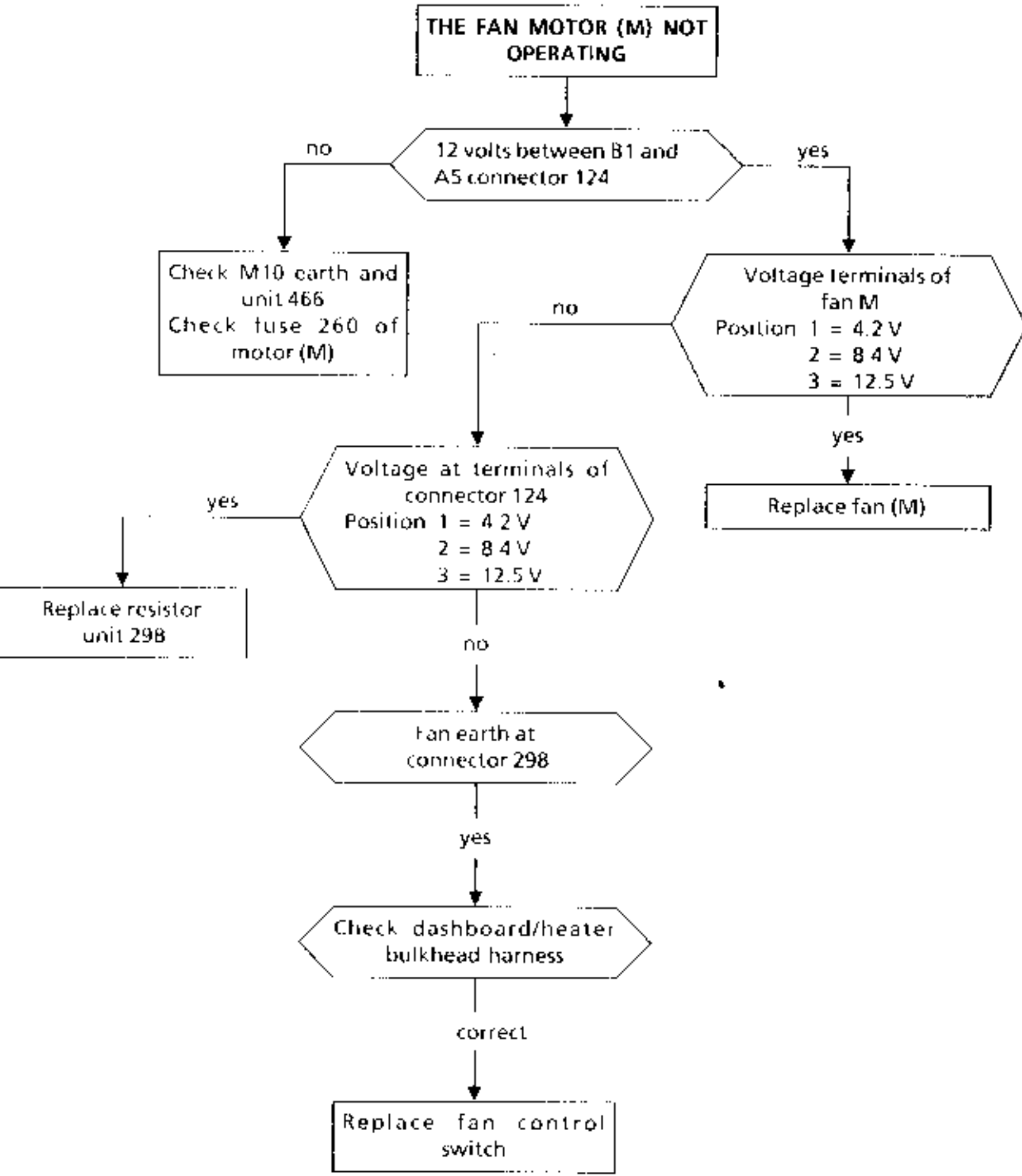
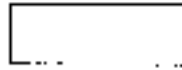
93 836

NOTE : This diagram is valid for all X57 vehicles but may be modified according to the technical developments made to the vehicle.

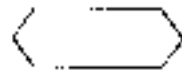
Checks :



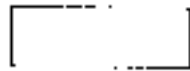
Operations to be performed :



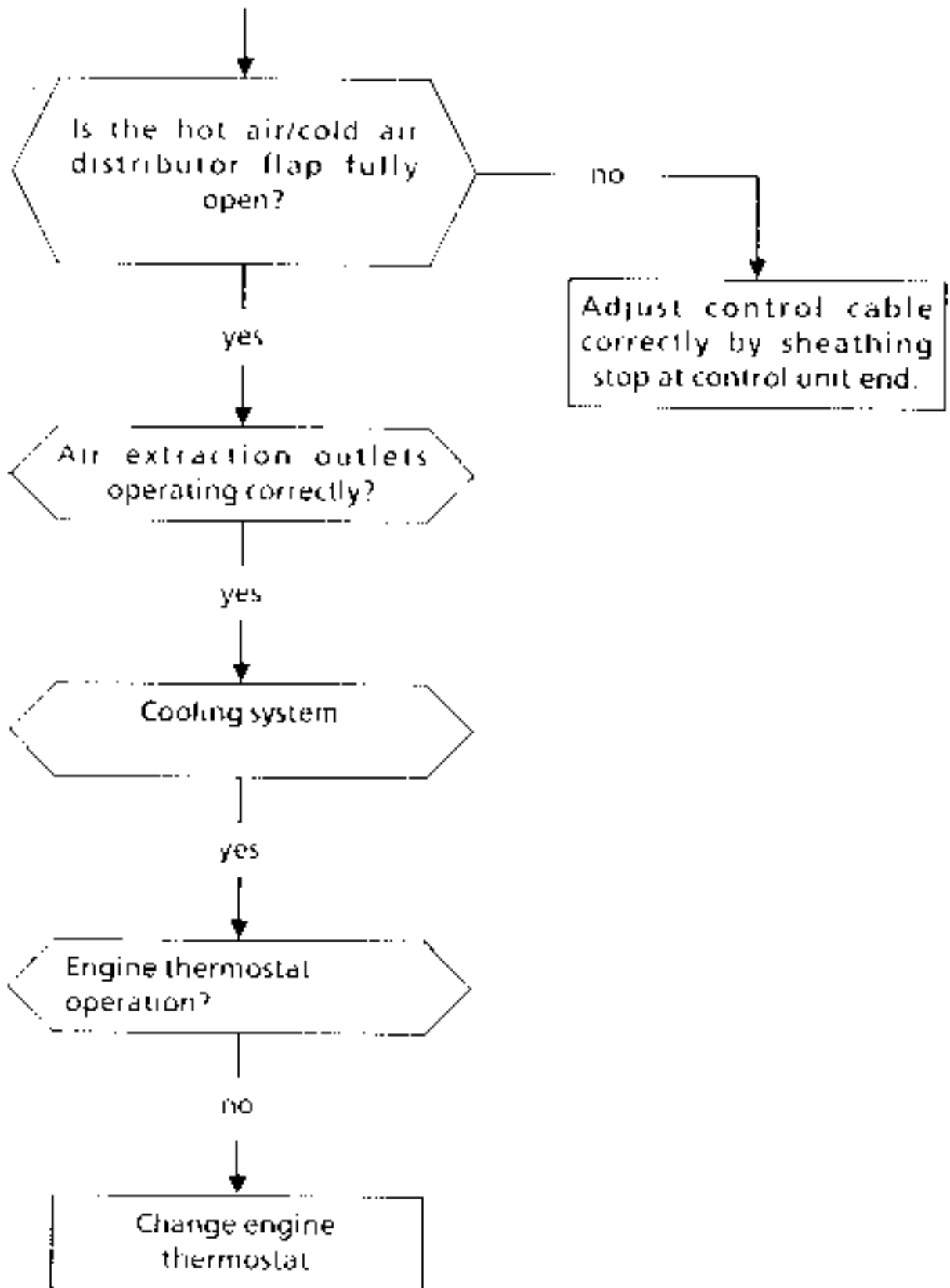
Checks :



Operation to be performed :



HEATING INSUFFICIENT



ESSENTIAL SPECIAL TOOLING	
Mot. 453 -01	Hose clamp
M.S. 583	hose clamp

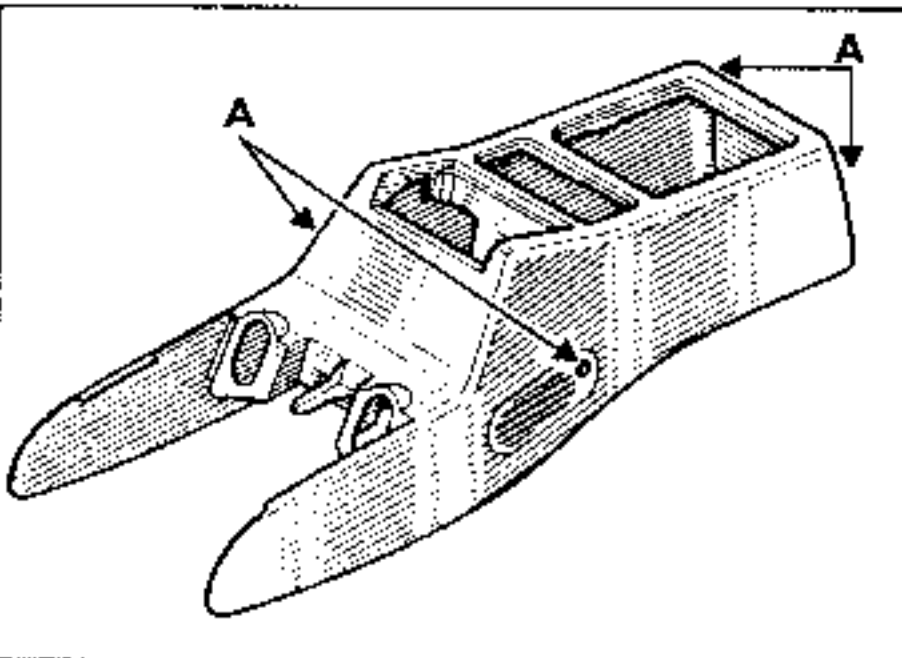
REMOVAL

The dashboard must be removed in order to remove the distributor unit.

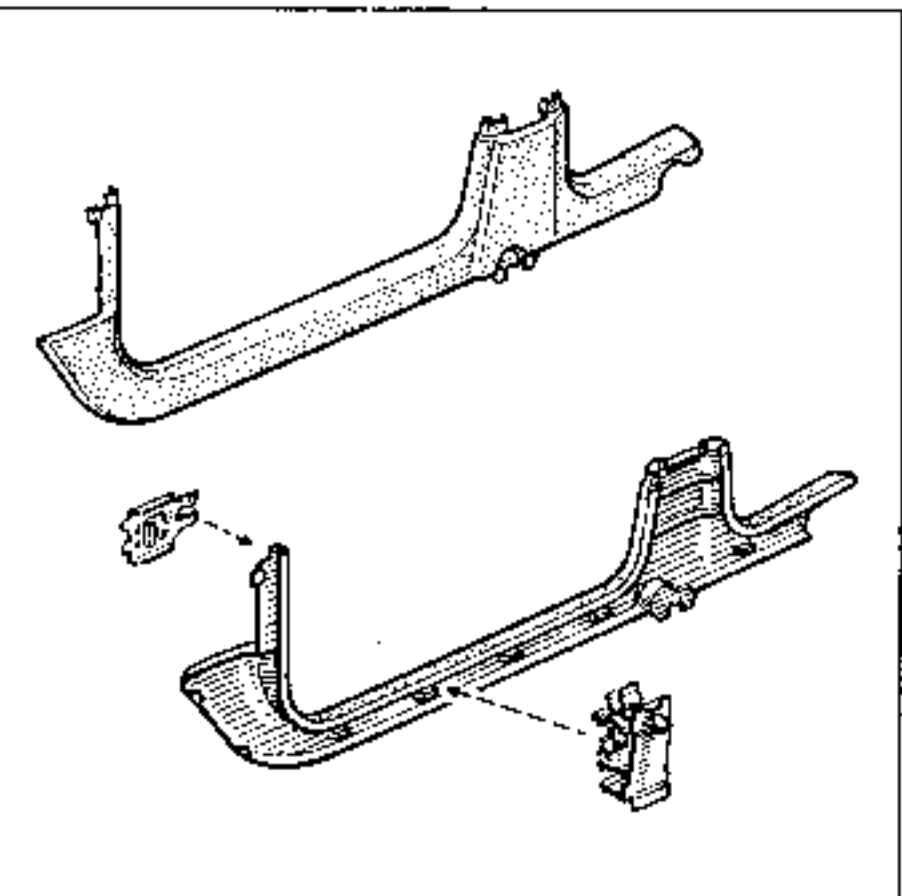
Disconnect the battery

Remove :

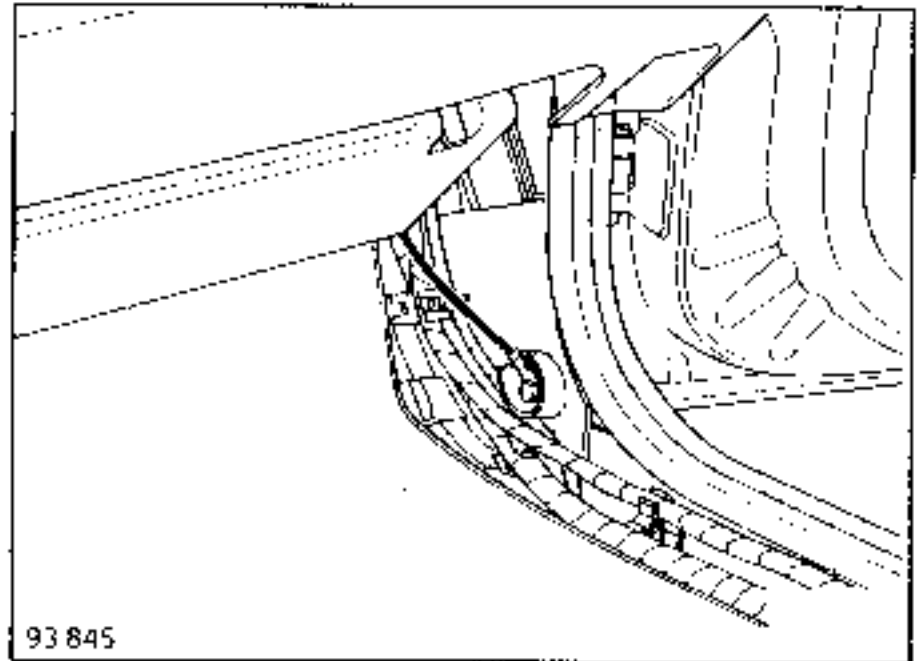
- the steering wheel,
- the centre console (4 screws A),



- the 2 lower trims from the 'A' pillars



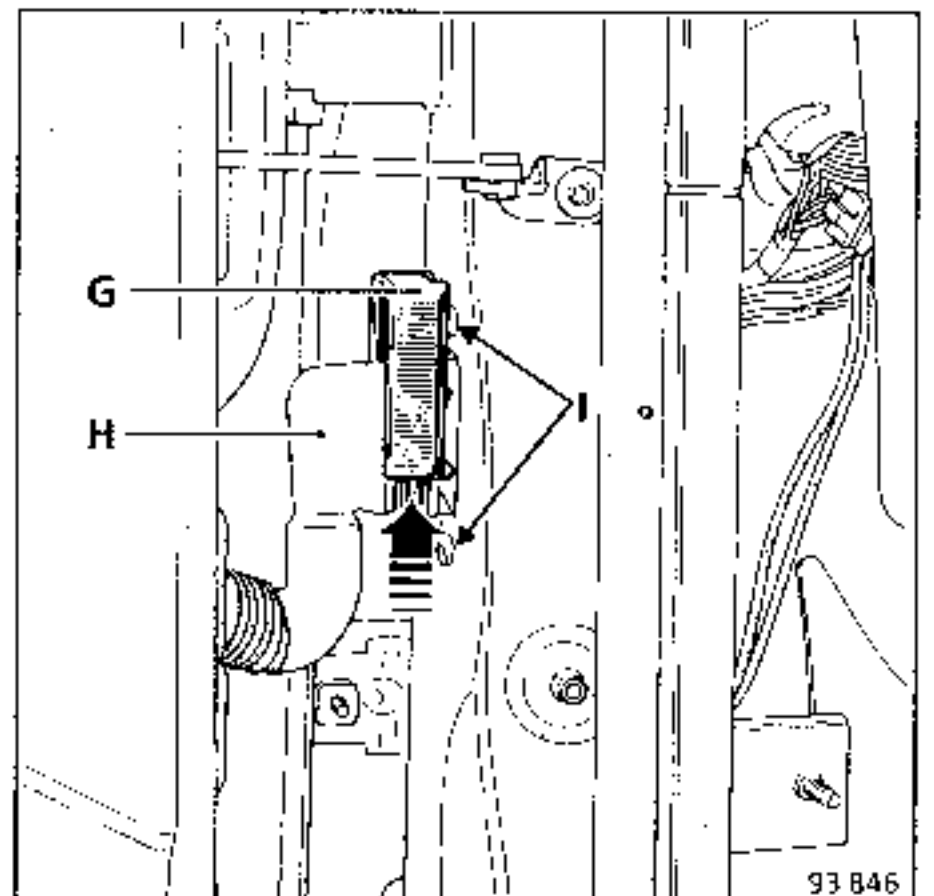
Disconnect the two earth leads.



93 845

Disconnect the electric harnesses from the 'A' pillars as follows :

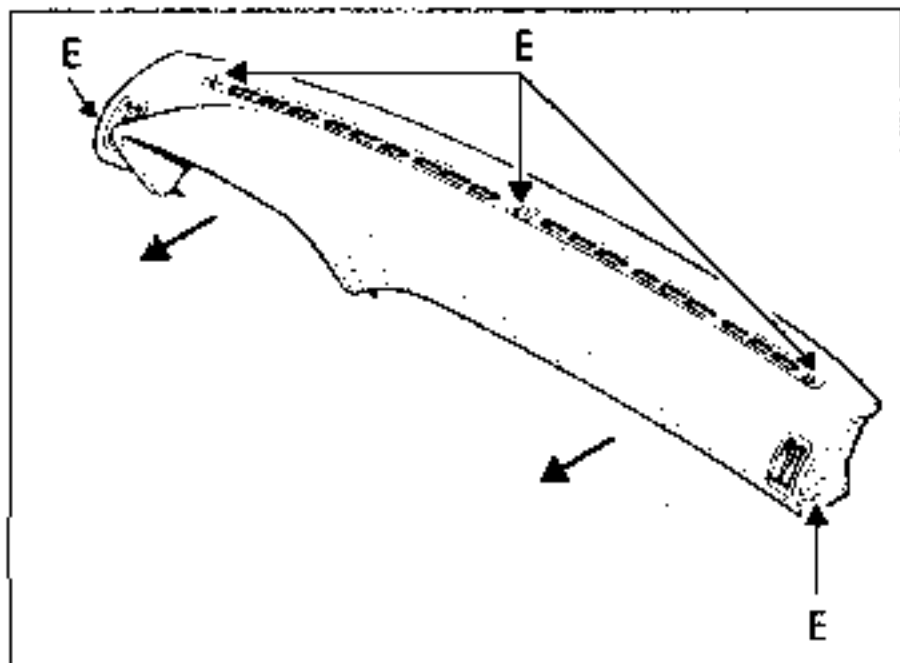
- push plastic clips (G) upwards
- release connector (H),
- remove screws (I).



93 846

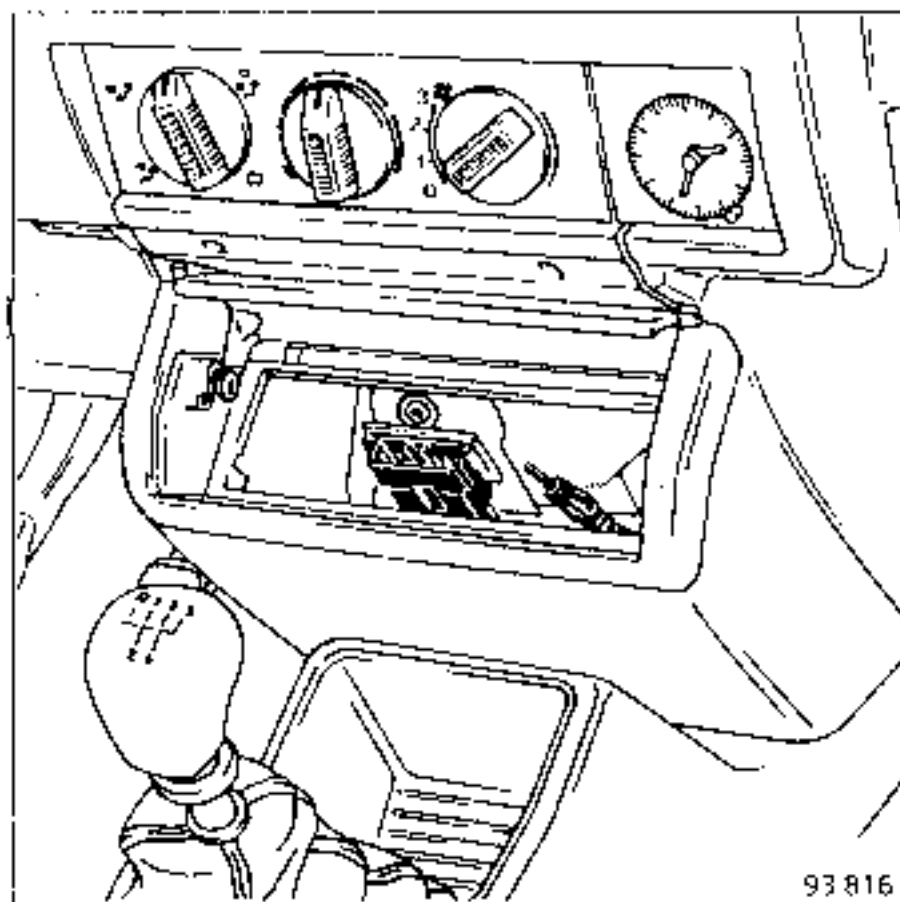
Remove the upper part of the dashboard - 5 screws (E)

Pull the dashboard backwards in order to separate it from the assembly



Remove the radio using the appropriate tools (if necessary)

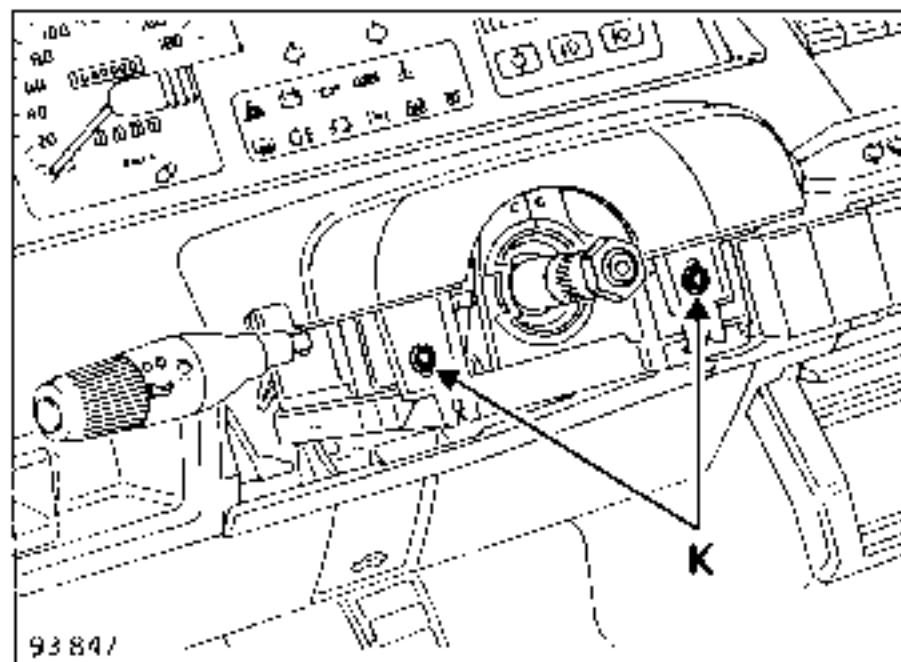
Unclip the connector inside the console.



Remove the half-casings under the steering wheel.

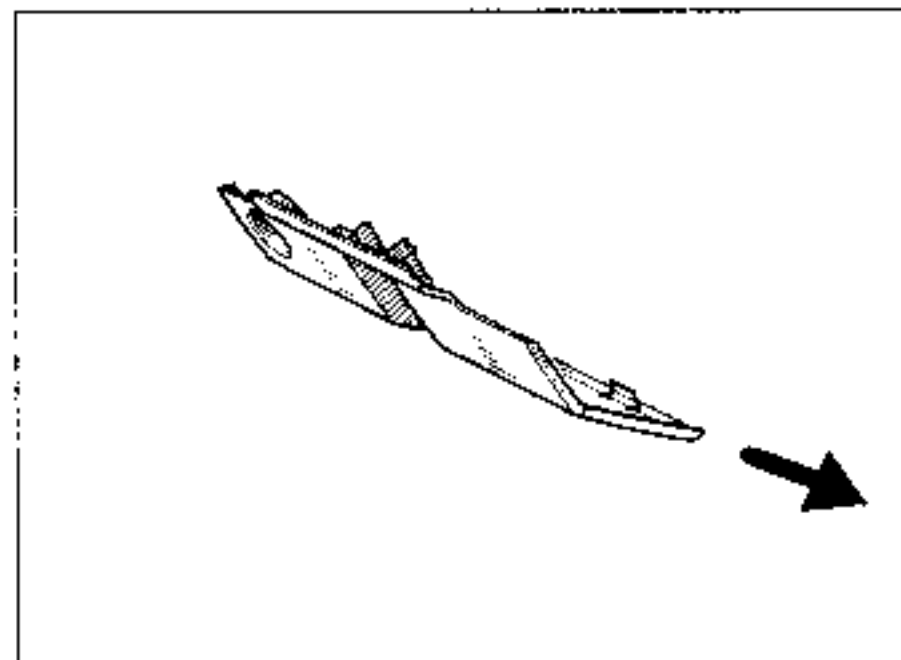
Start at the lower section after removing the 3 screws and unclip carefully.

Remove the upper section - 2 screws (K)



Remove :

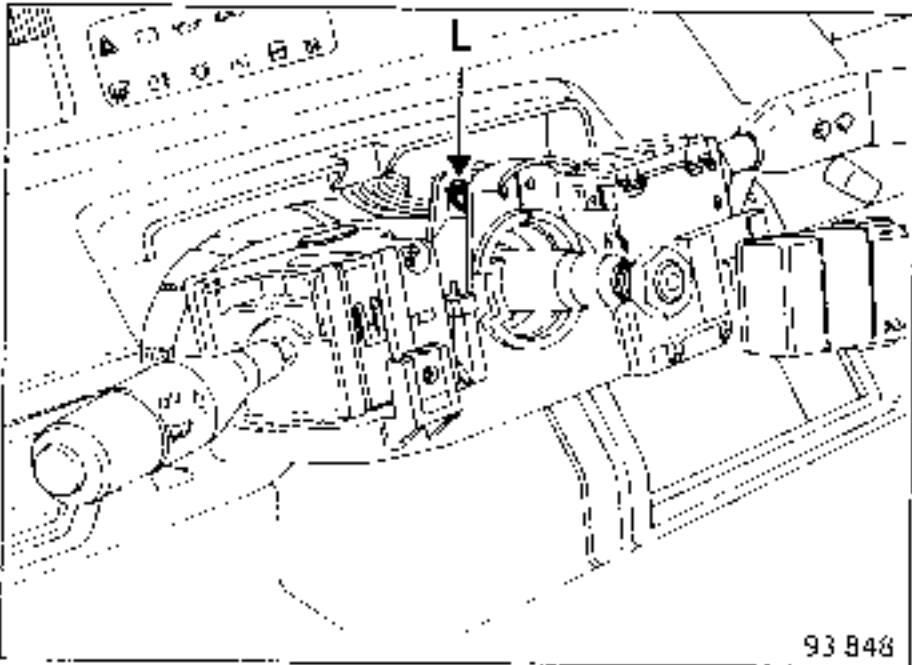
- the steering column cover,
- the 2 upper screws and push downwards to unclip.



Remove the control units.

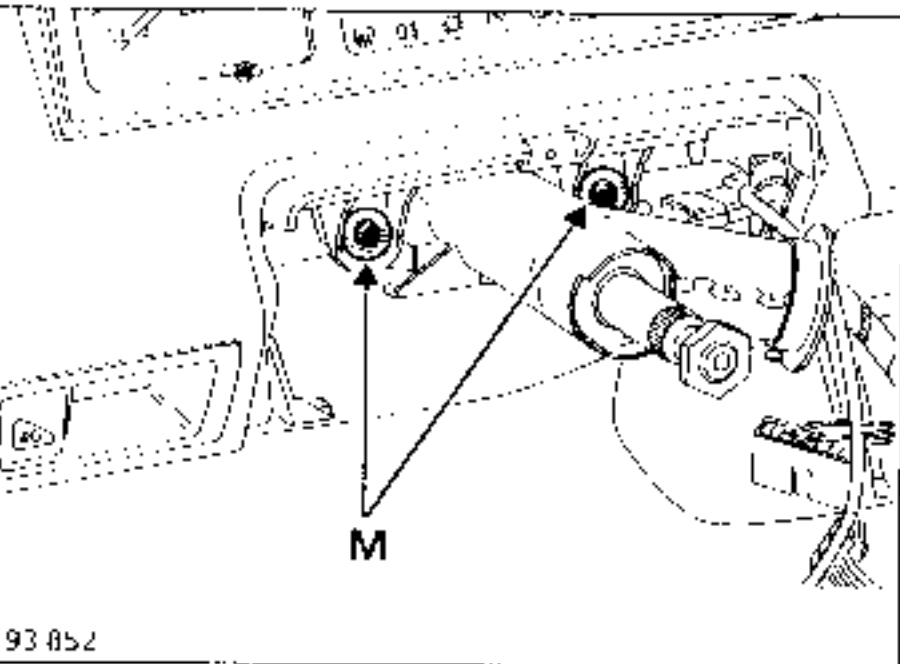
Slacken screw (L) and pull back

Disconnect the connectors

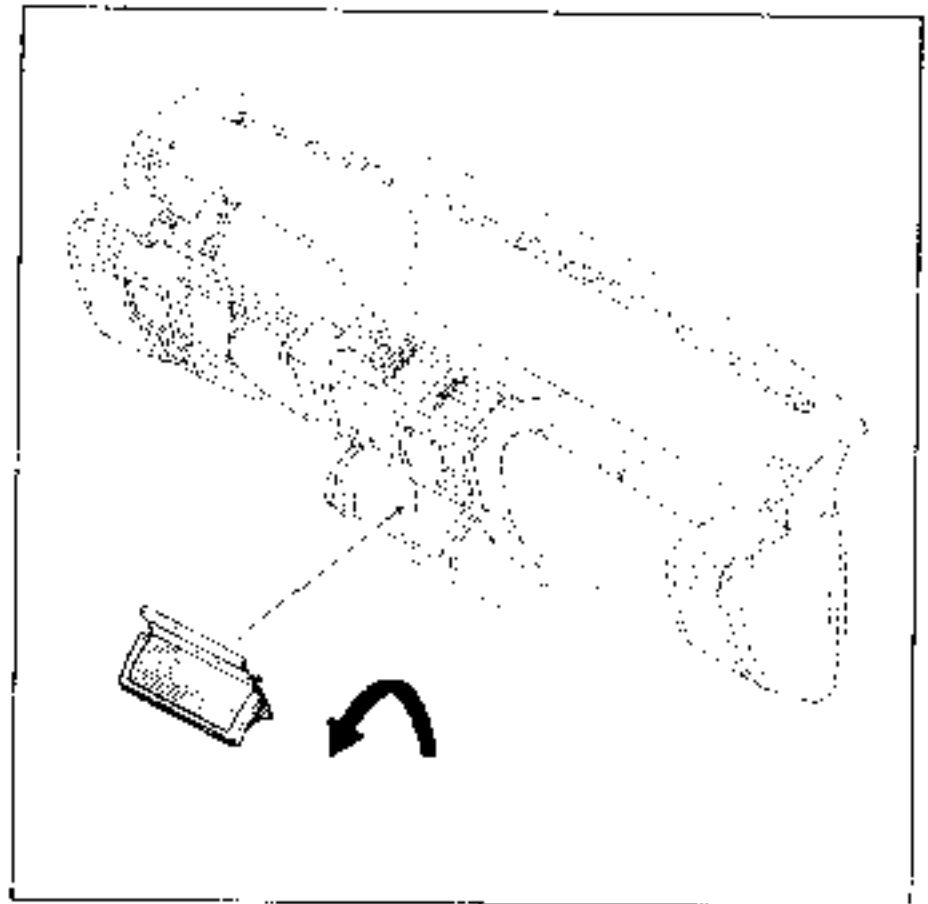


Remove :

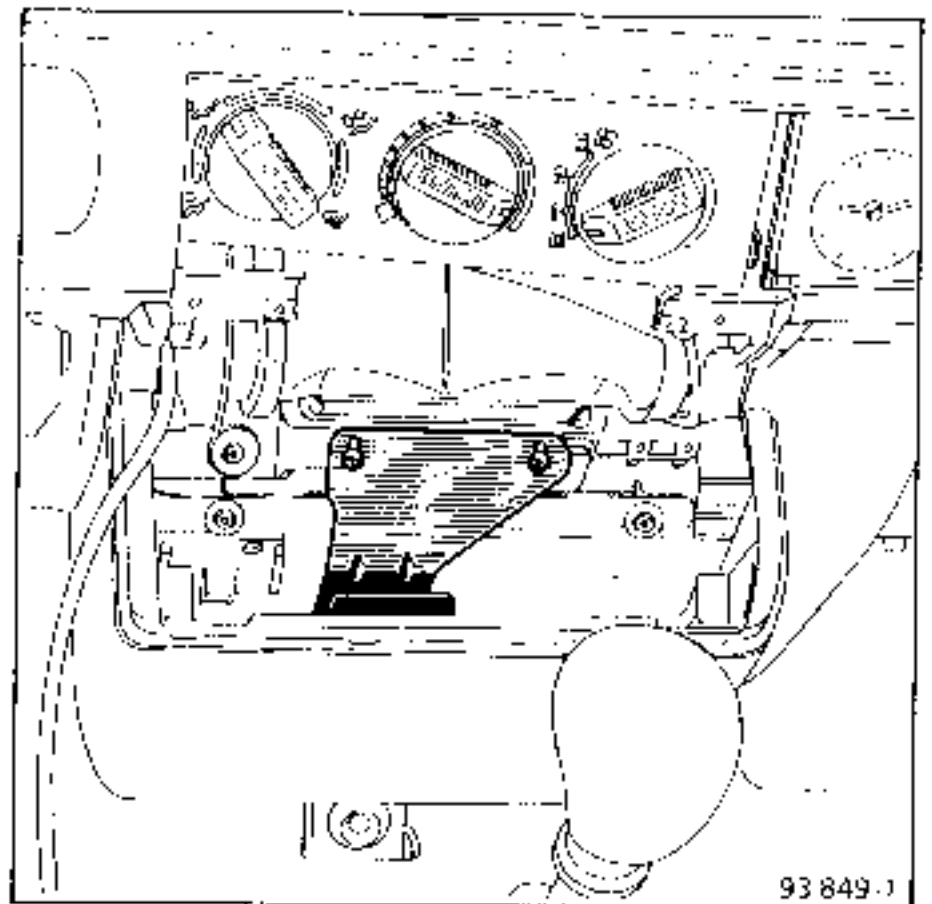
- the 2 screws (M),



- remove the upper section of the radio console (2 screws) and tilt it backwards,



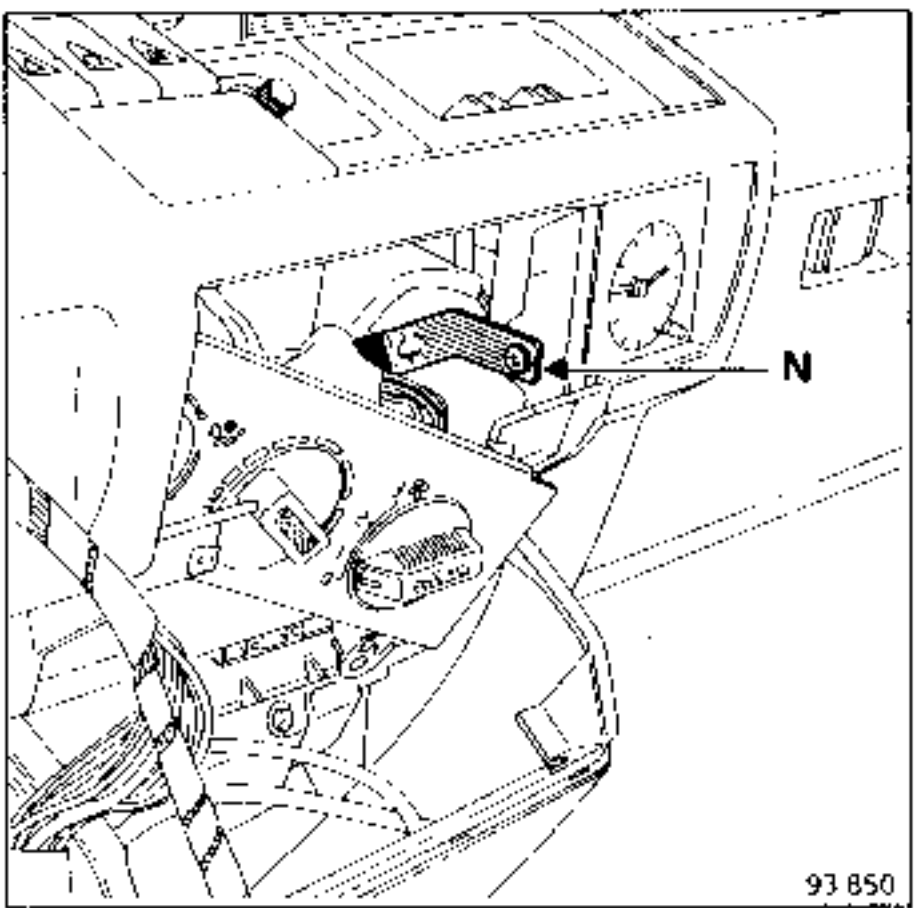
- remove the metal plate inside the console,



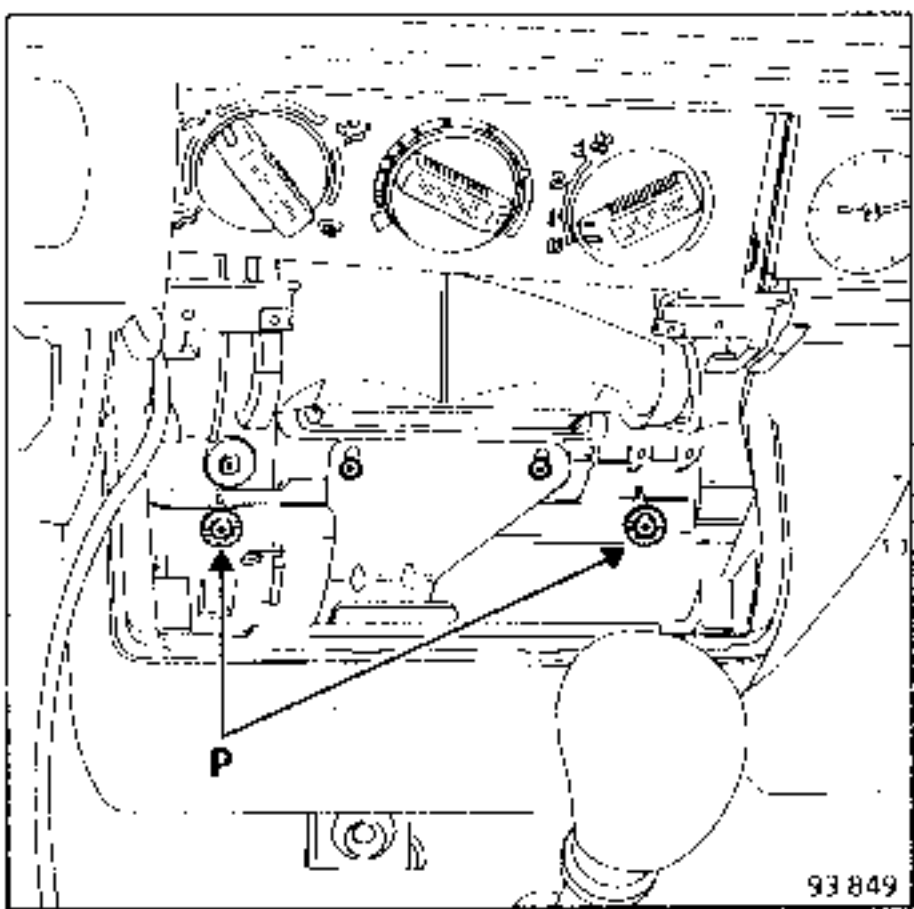
- remove the heater control panel (2 screws)

Leave the cable controlled assembly coupled to the blower unit.

- Remove
- the metal mounting screw at the clock end (N),

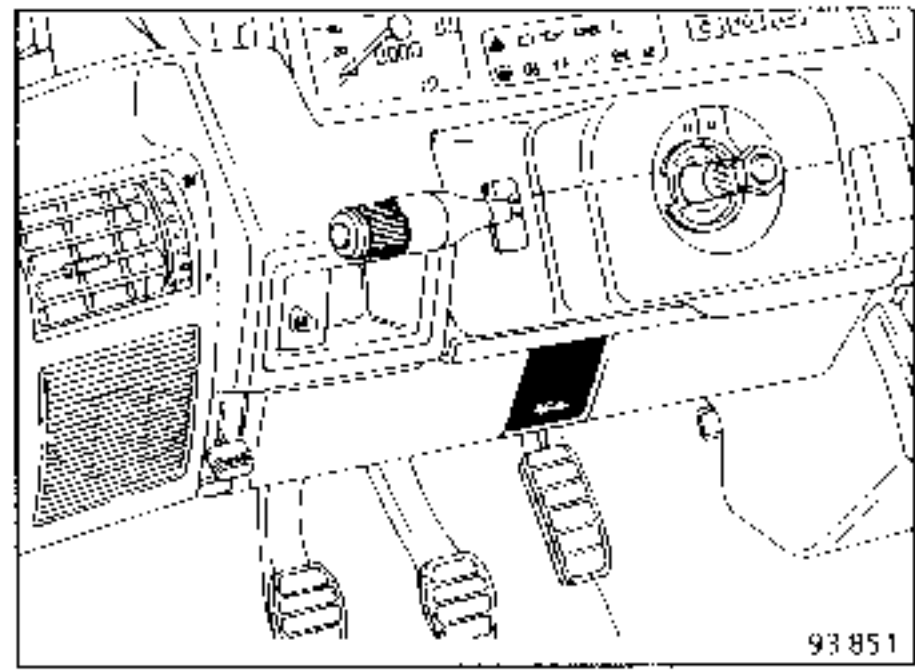


- remove the 2 screws (P) securing the distributor to the blower unit.

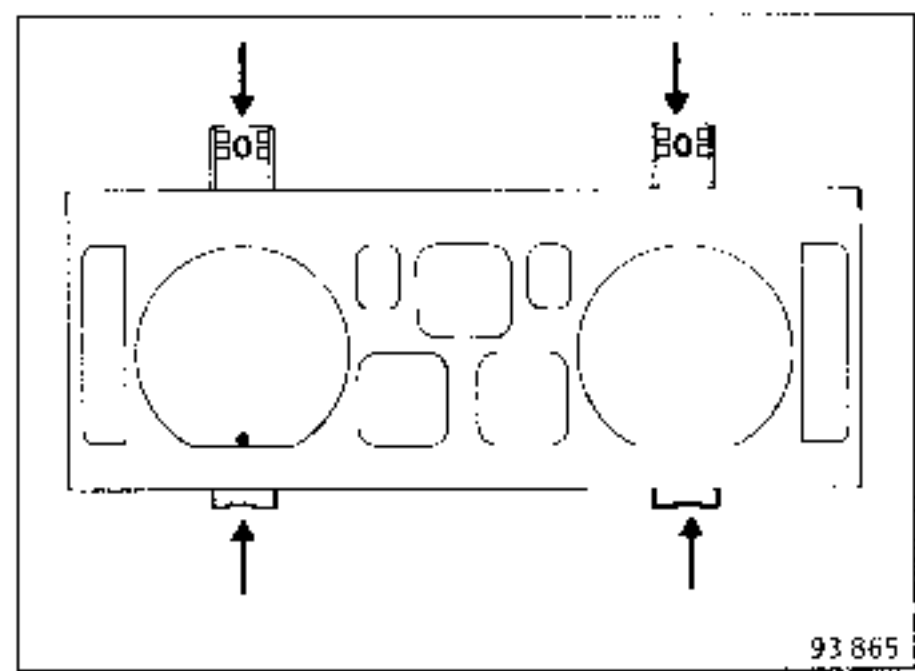


Unfasten the choke cable (if necessary) (at engine end).

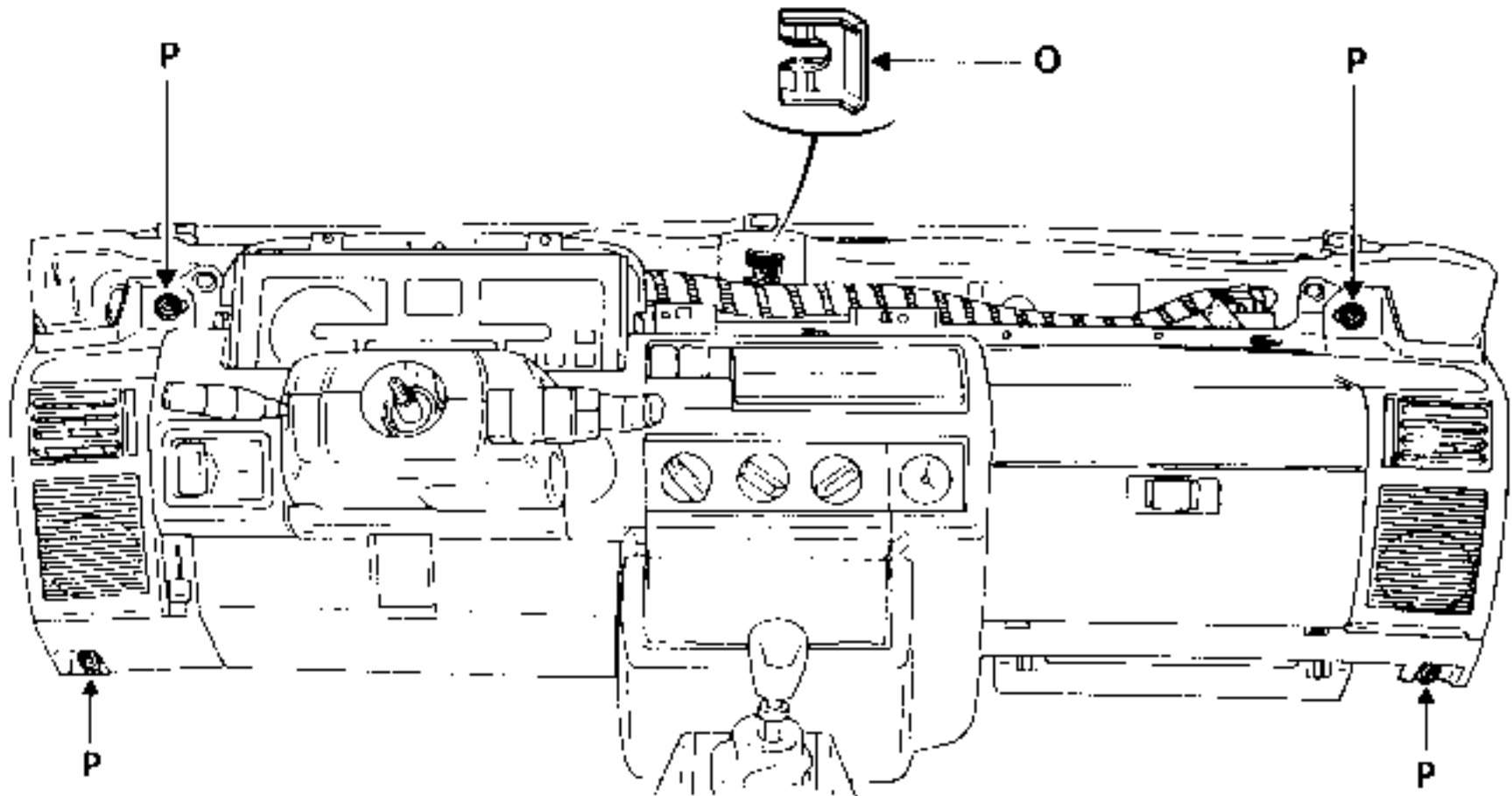
- Remove
- the bonnet opening control,



- remove the instrument panel by removing the 4 screws



- remove the plastic clips (O) and mountings (P)



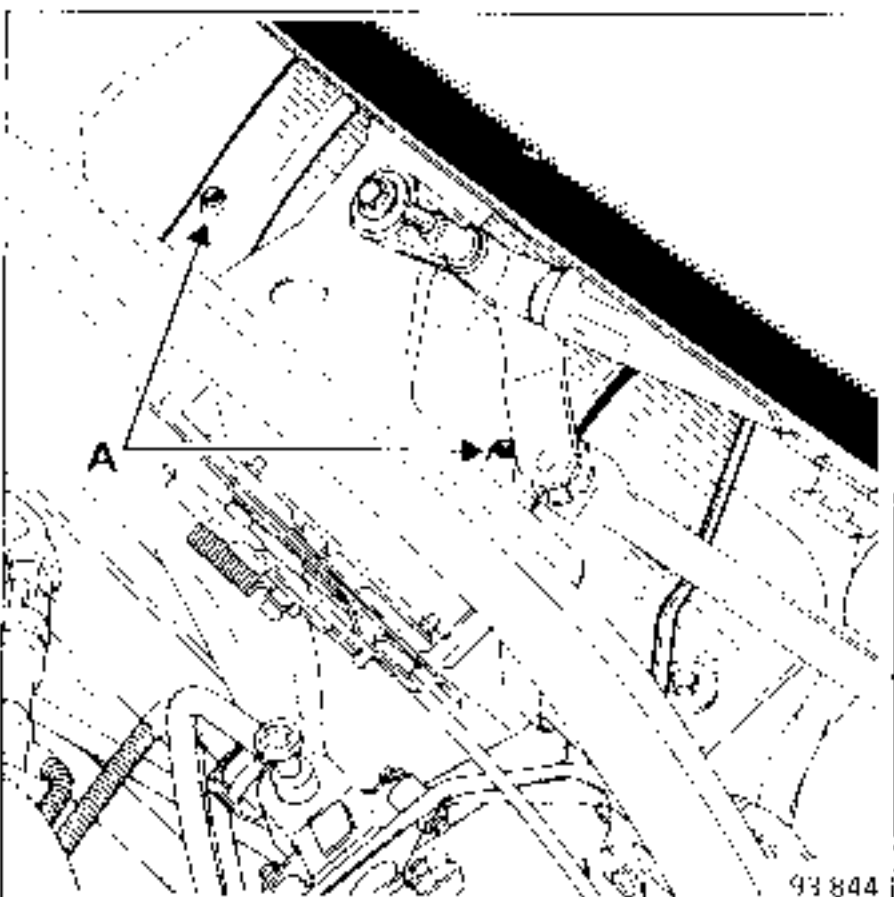
93 884

Gently free the dashboard by moving it backwards so as to disconnect the upper connectors and the ignition/anti-theft switch connectors.

Take out the lower dashboard

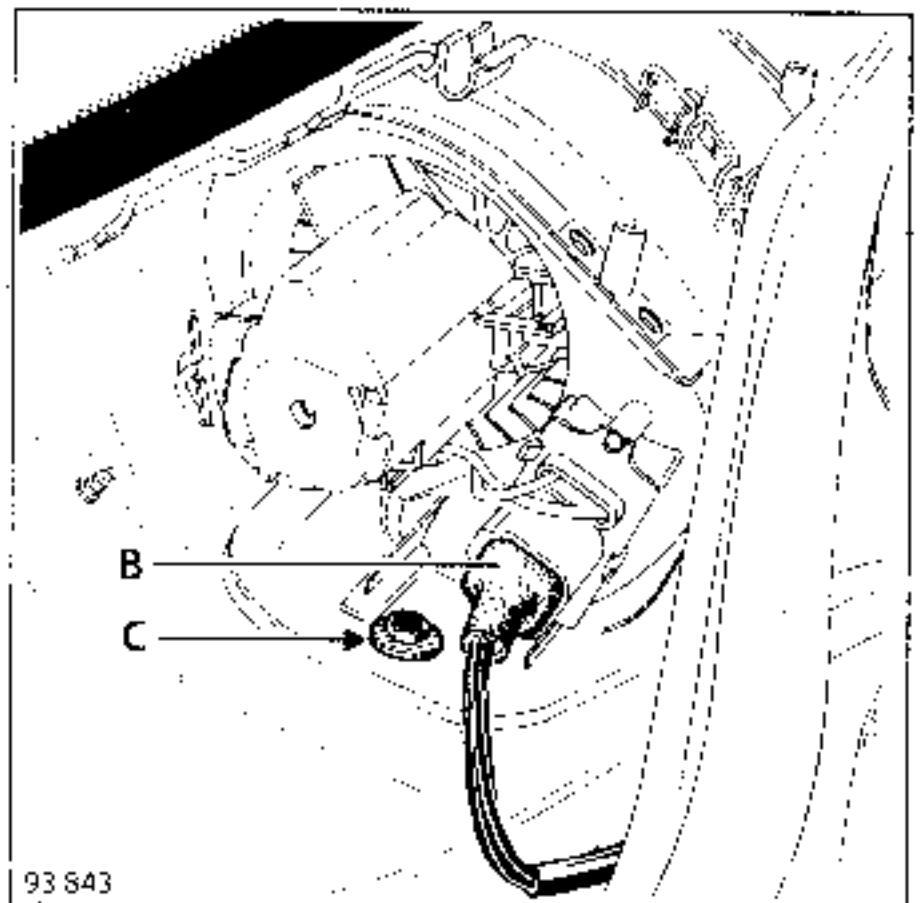
Remove the windscreen wiper arms and the plenum chamber upper seal and inlet grilles for exterior air

Remove the fan motor cover - 2 screws (A).



93 844

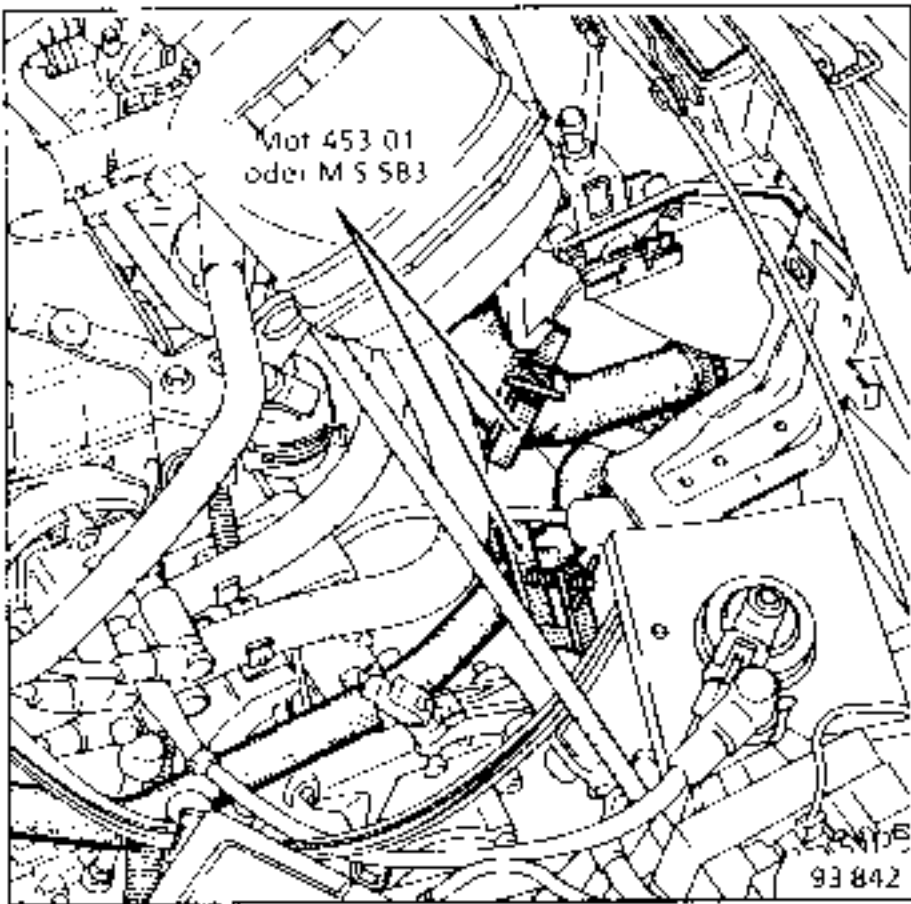
Disconnect feed connector (B) and the 2 mounting screws (C).



93 843

Take out the fan

Fit hose clamps Mot. 453-01 or M.S. 583.



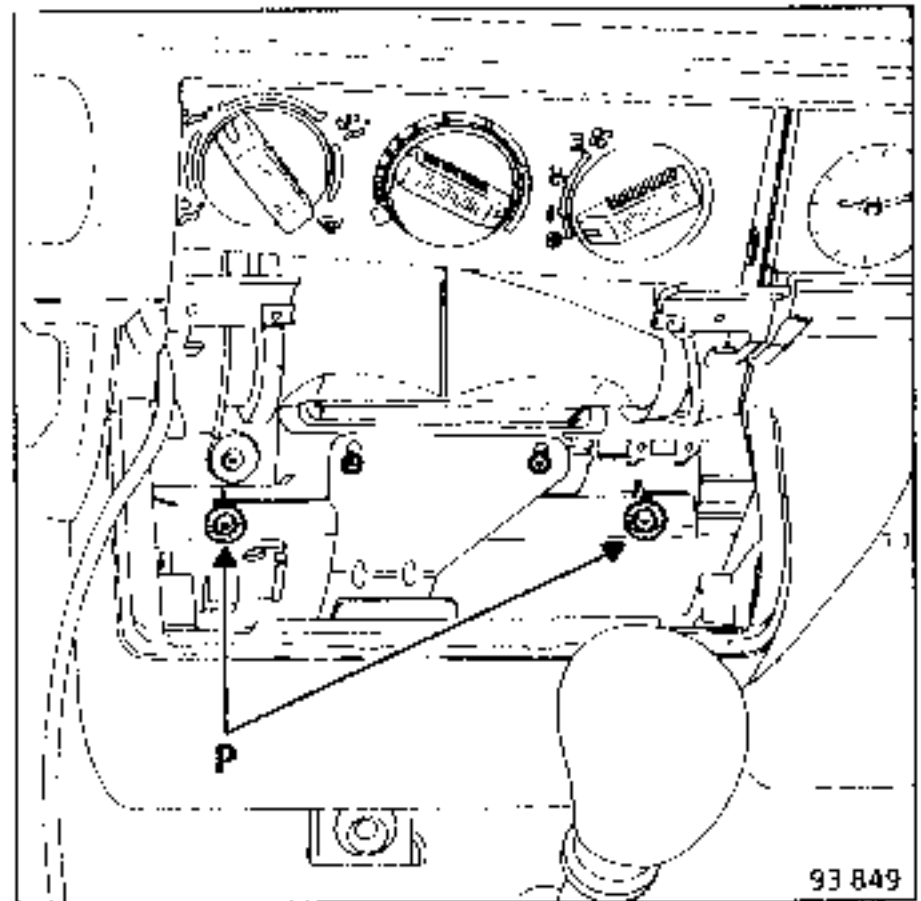
Remove :

- the 2 radiator feed hose clips,
- the air blower unit from inside the vehicle

REFITTING

Offer up the air blower unit to the bulkhead (Ensure that the seals are in good condition).

fit the fan in place using the 2 securing screws (C). Do not tighten them. The blower unit is also held on the dashboard by 2 screws (P).



Refit the dashboard.

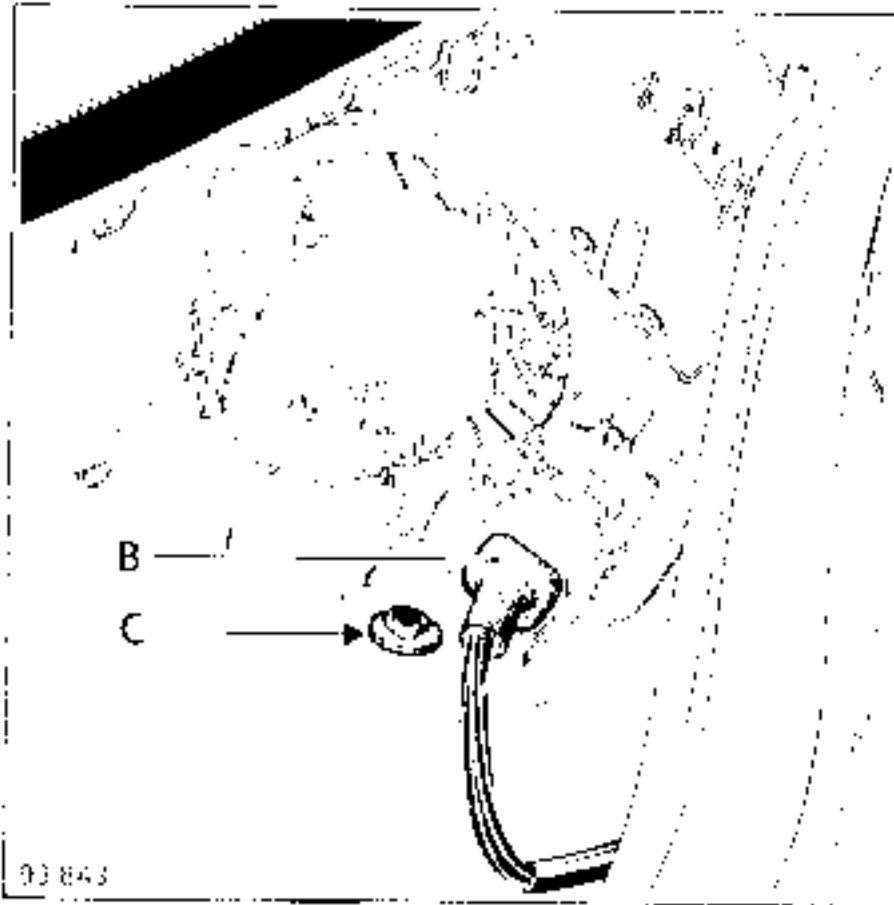
Note : When re-assembling and connecting the door electrical harnesses, engage clip (A) half way after securing the harnesses using the 2 screws on the 'A' pillars.

Connect connector (B) and finish fitting the clip.

Check the adjustment of the control cables and adjust if necessary (see relevant section).

Connect the coolant hoses to the radiator.

Tighten the two mounting screws (C) for the fan and reconnect feed connector (B).



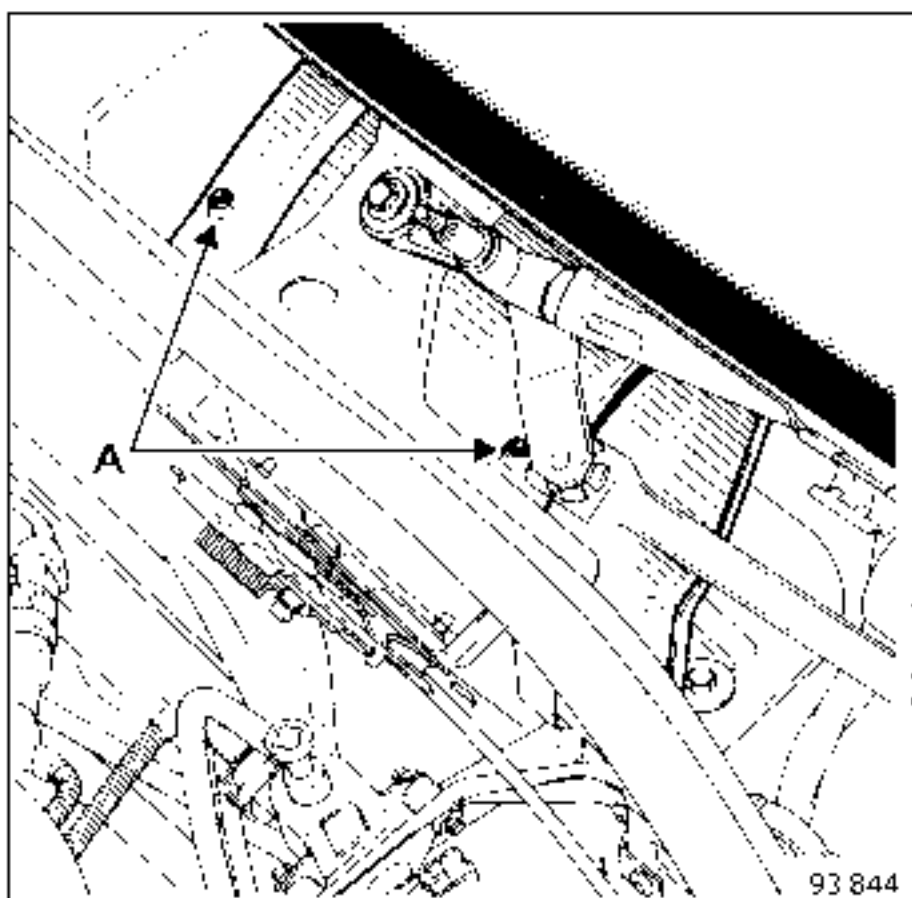
Re-assemble the air inlet grilles and reposition the plenum chamber seal.

Fill and bleed the engine cooling system (see relevant section) if necessary.

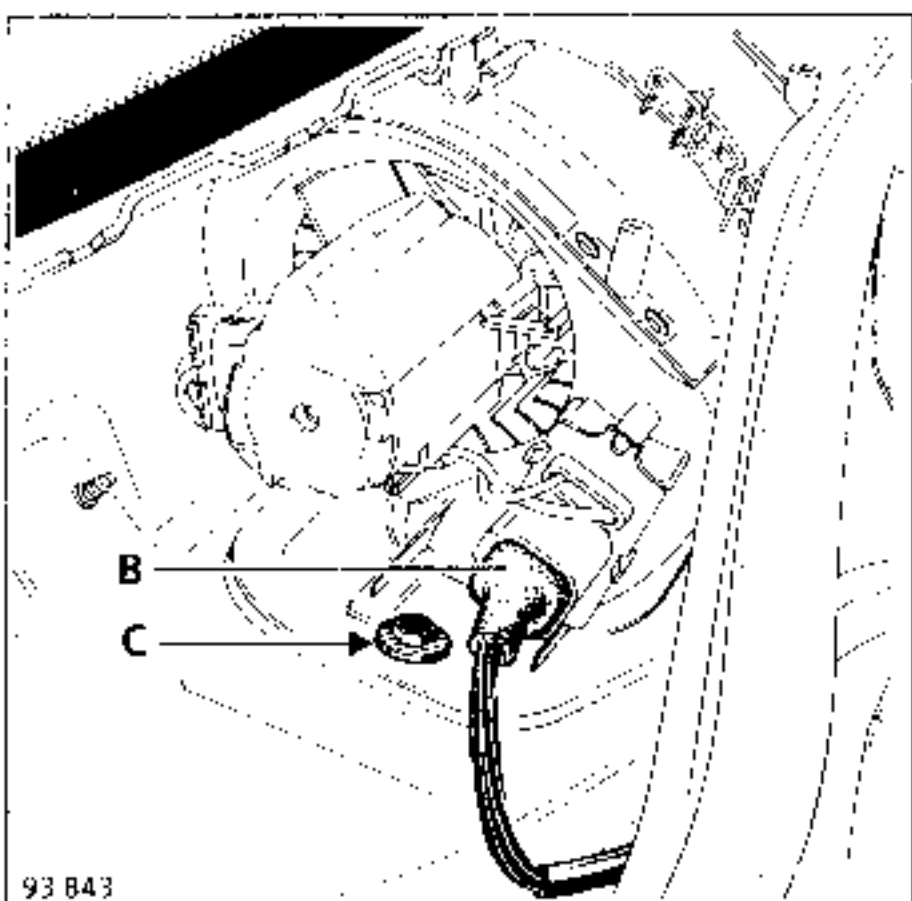
REPLACING

The fan motor is removed when the plenum chamber upper seal and air inlet grille for exterior air have been removed

- Remove :
- the motor cover - 2 screws (A)



- remove the vehicle jack,
- remove the feed connector (B) and the 2 mounting screws (C)

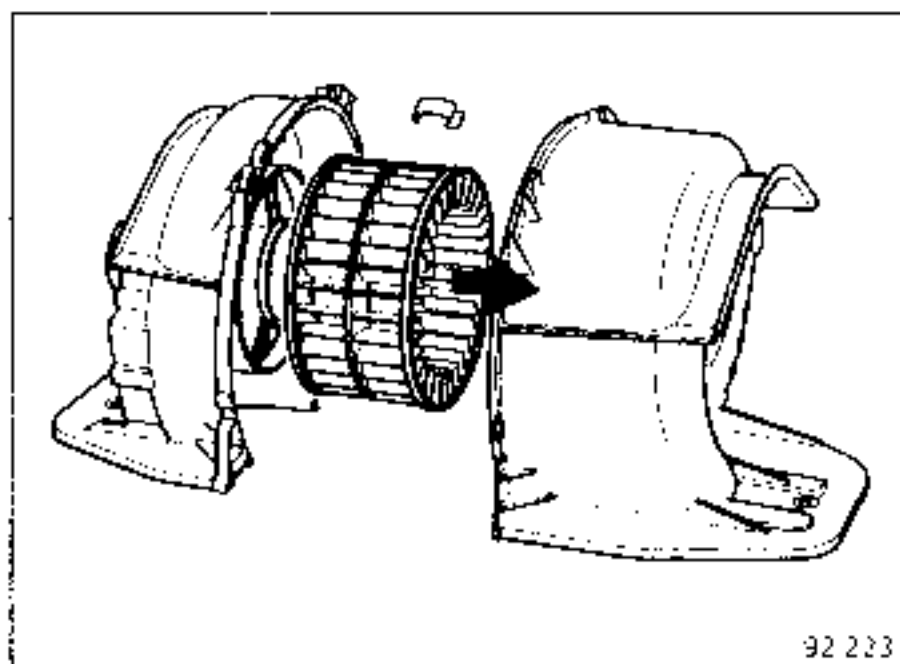


Take out the fan

Disconnect the motor connector

Open the two half-casings.

Pull the motor as shown below and take it out

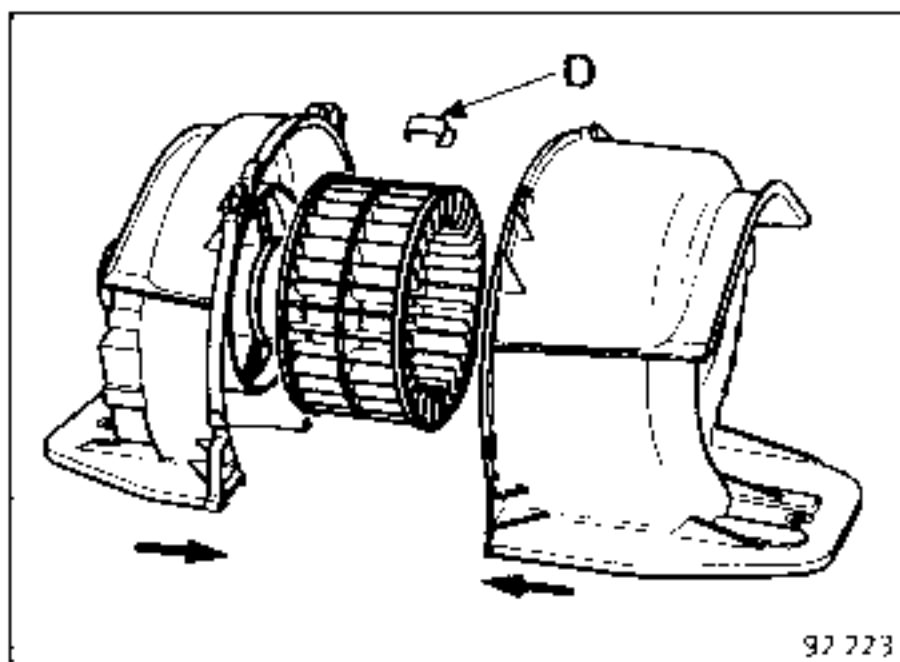


On re assembly, position the motor correctly in its housing so that the connector is secured without stress.

Close the two half-casings again using clips (D) supplied in the kit to replace the "hot crimping" fixtures

Fit the new seal supplied in the kit, to the assembly.

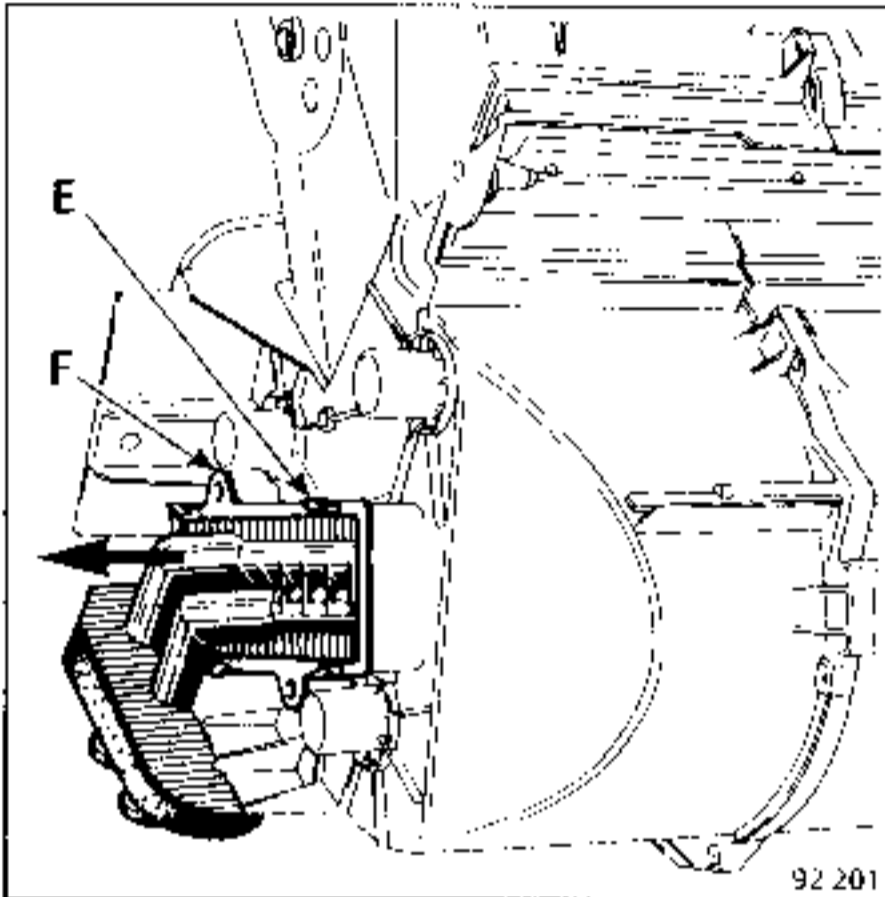
IMPORTANT : The seal must be in perfect condition. Any defect would risk causing large scale water ingress into the passenger compartment.



REPLACING

The heating radiator is removed after the air distribution unit has been removed.

Move apart the 4 retaining clips (E) and take out the radiator by pulling it in the direction shown below.

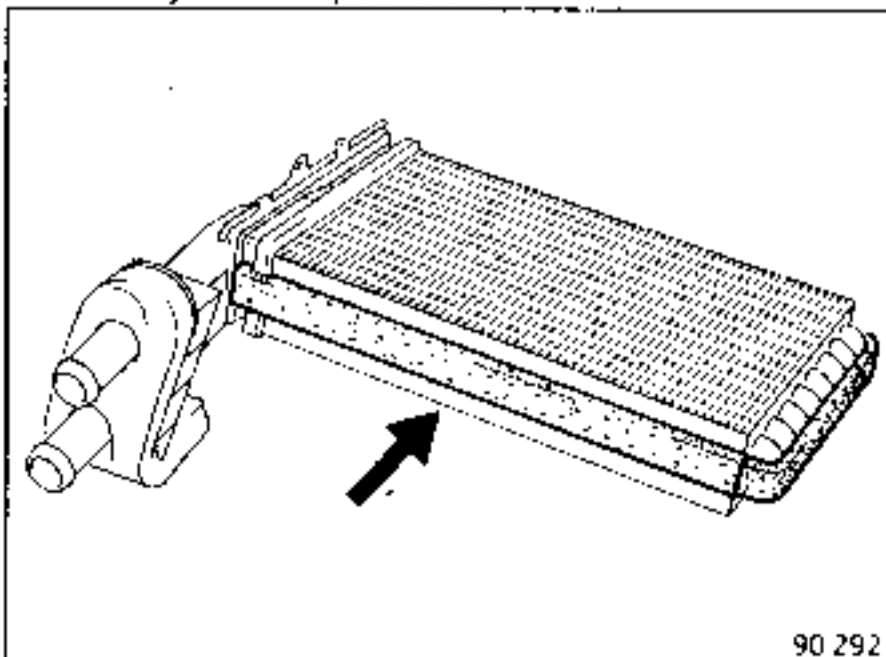


NOTE : Take care not to damage the fins on the radiator.

On refitting, engage the radiator in the body equipped with its strips of sealing foam.

Ensure that the 4 tabs are clipped in place correctly.

Fit in place the 2 securing screws (F) on the blower unit body if the clips are broken.

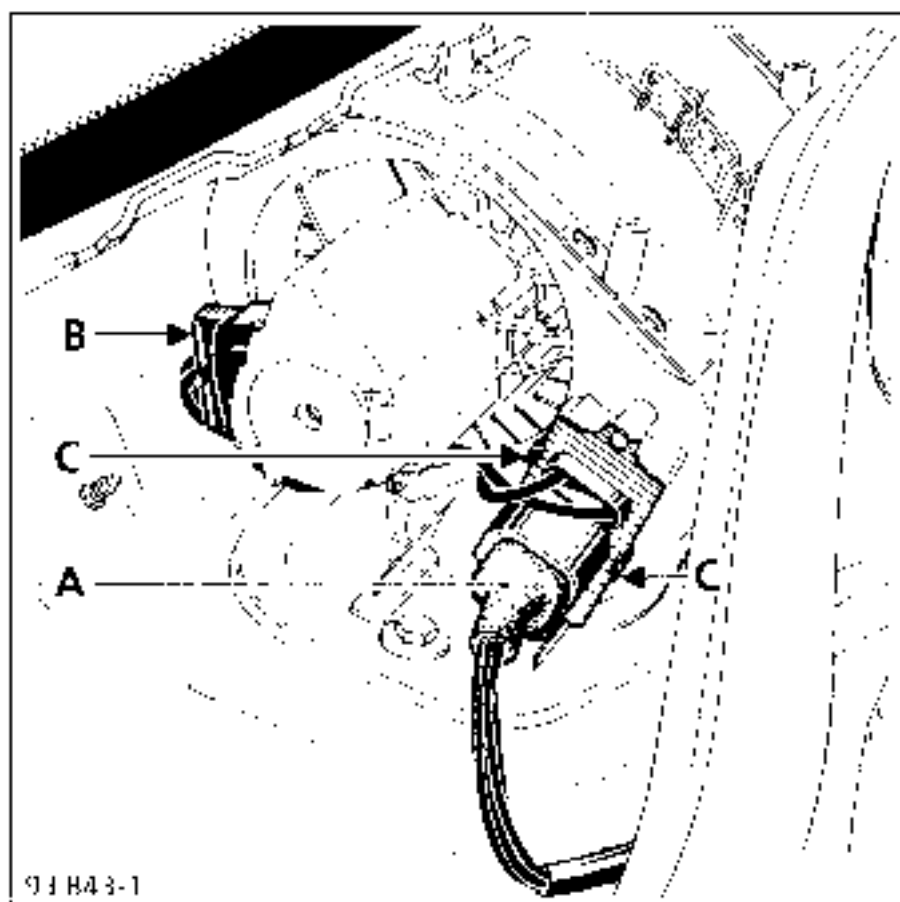


REPLACING

The air inlet grille for exterior air does not have to be removed for this operation.

Disconnect connectors (A) and (B)

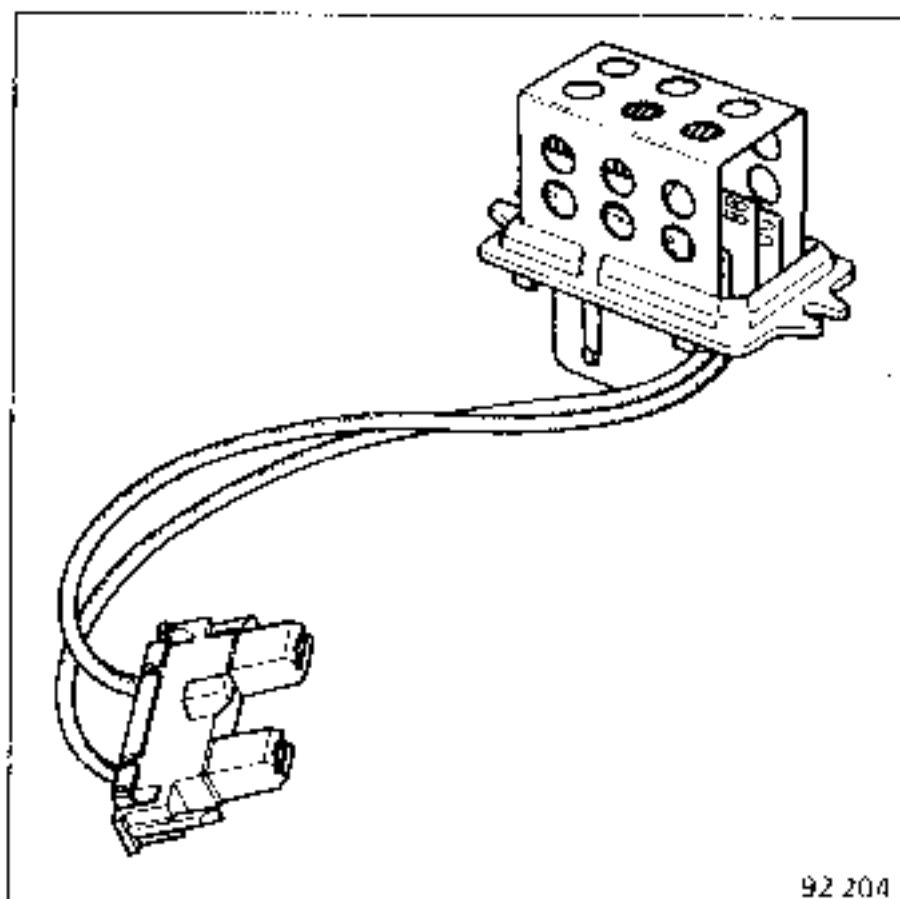
Move the clips (C) apart and take out the resistor unit.



91 H43-1

NOTE : If the resistors are removed because they have been damaged, it is essential to check that the fan rotates freely. If it does not, replace it.

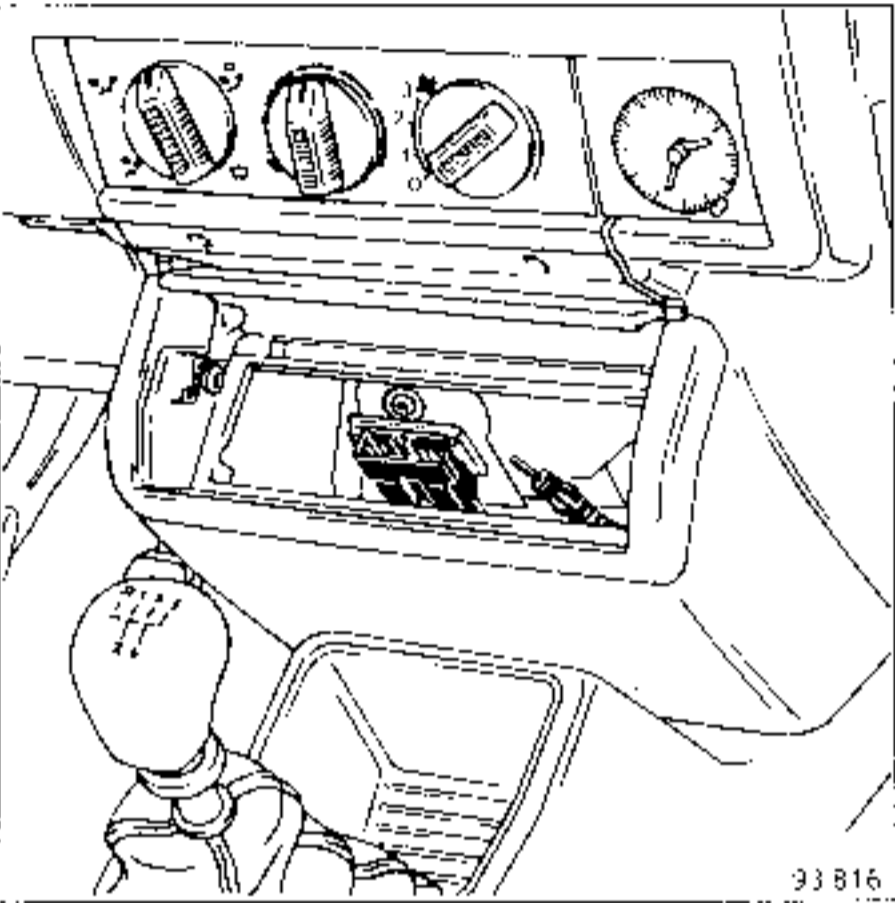
There are no special precautions to be taken on refitting.



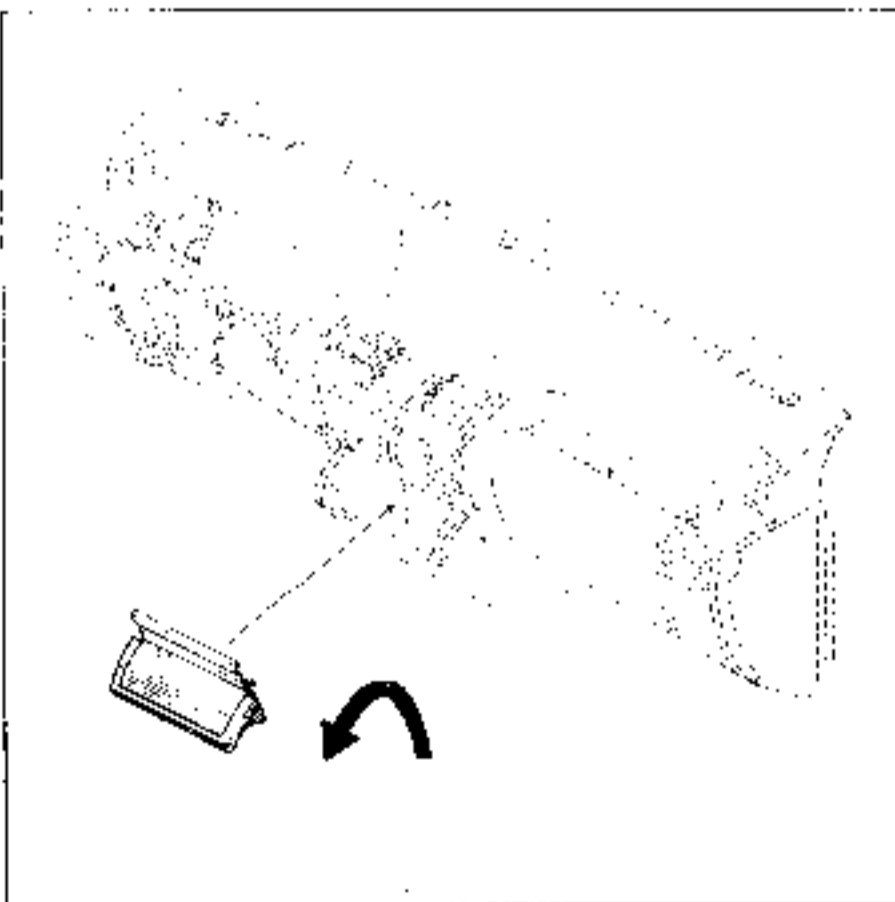
92 204

REPLACING

Remove the radio (if necessary) and unclip the connector inside the console



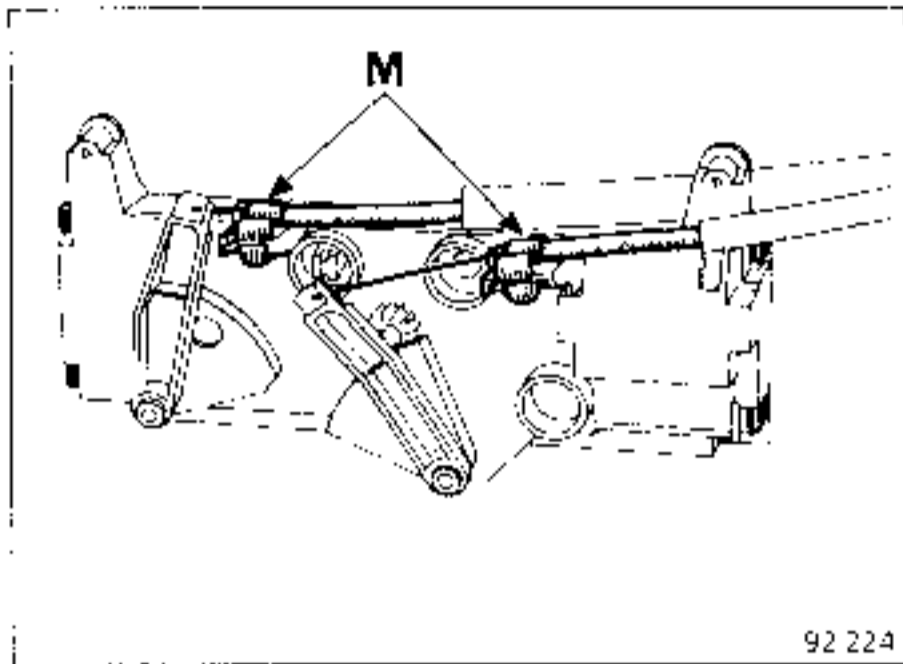
Remove the upper part of the radio console (2 screws) and tilt it backwards.



Remove the 2 screws securing the control unit to the dashboard.

Push the panel back towards the interior and release it at the bottom.

On re-assembly, fit the sheathing stops and clips (M).

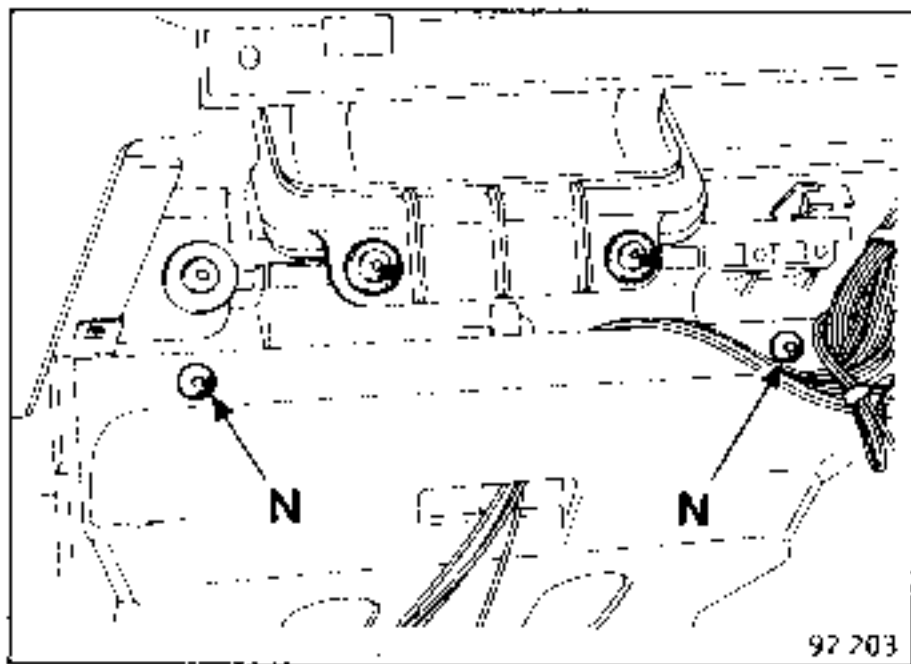


REPLACING

The control cables may be removed without removing the air distribution unit.

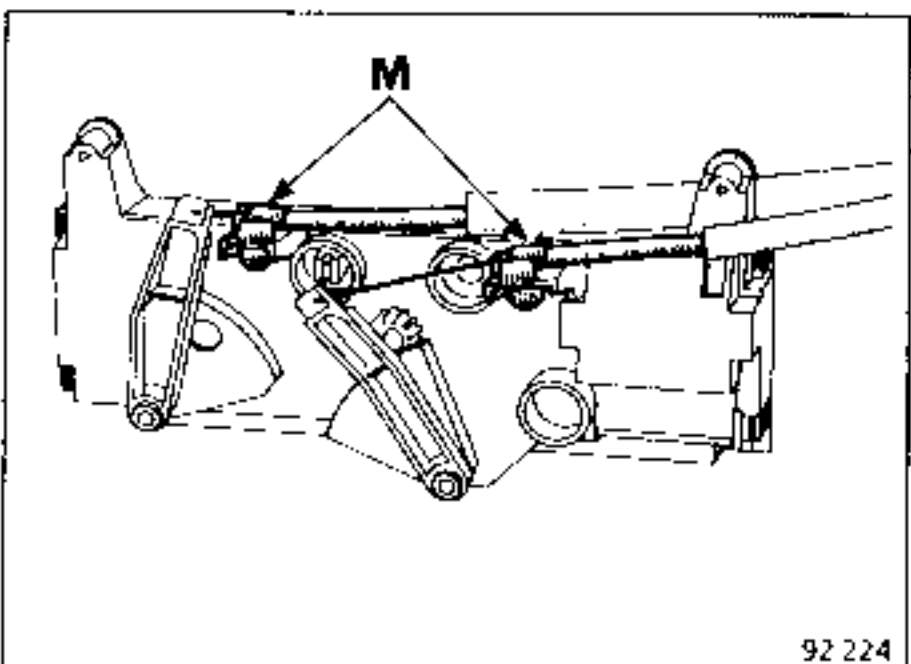
Remove :

- the control panel as described on the preceding page,
- the 2 screws (N) securing the air deflector

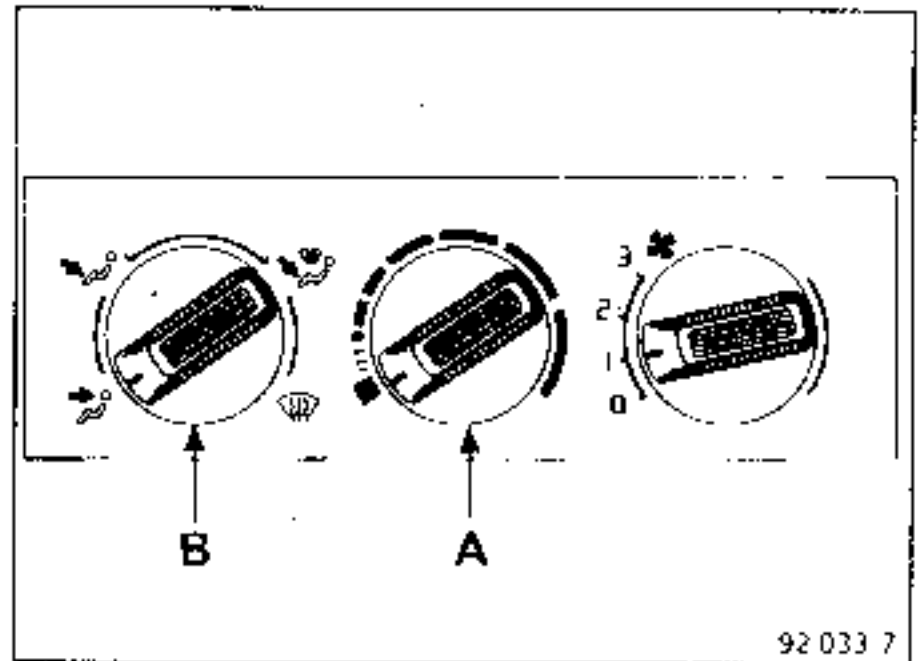


Unclip the cable to be replaced and turn it through 1/4 of a turn so as to release it from the flap control lever

On re-assembly, clip the cable to the control panel against the sheathing stops (clips M).



Turn the controls to the "ventilation" (B) and "cold" (A) settings.



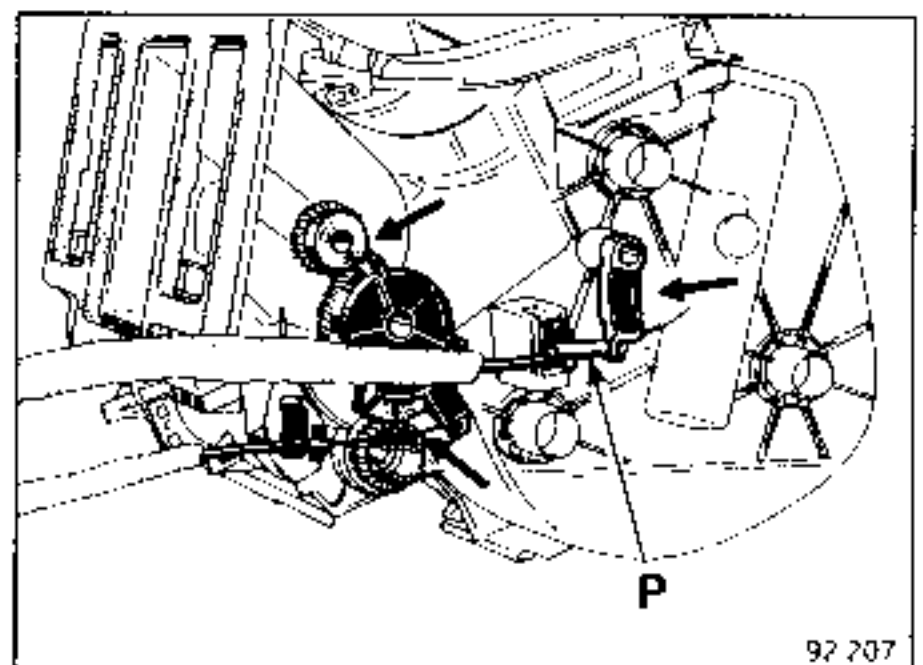
Refit the control panel.

Clip the control cables sheaths to the air distribution unit

Place the flap levers in the following settings :

- cold air
- ventilation

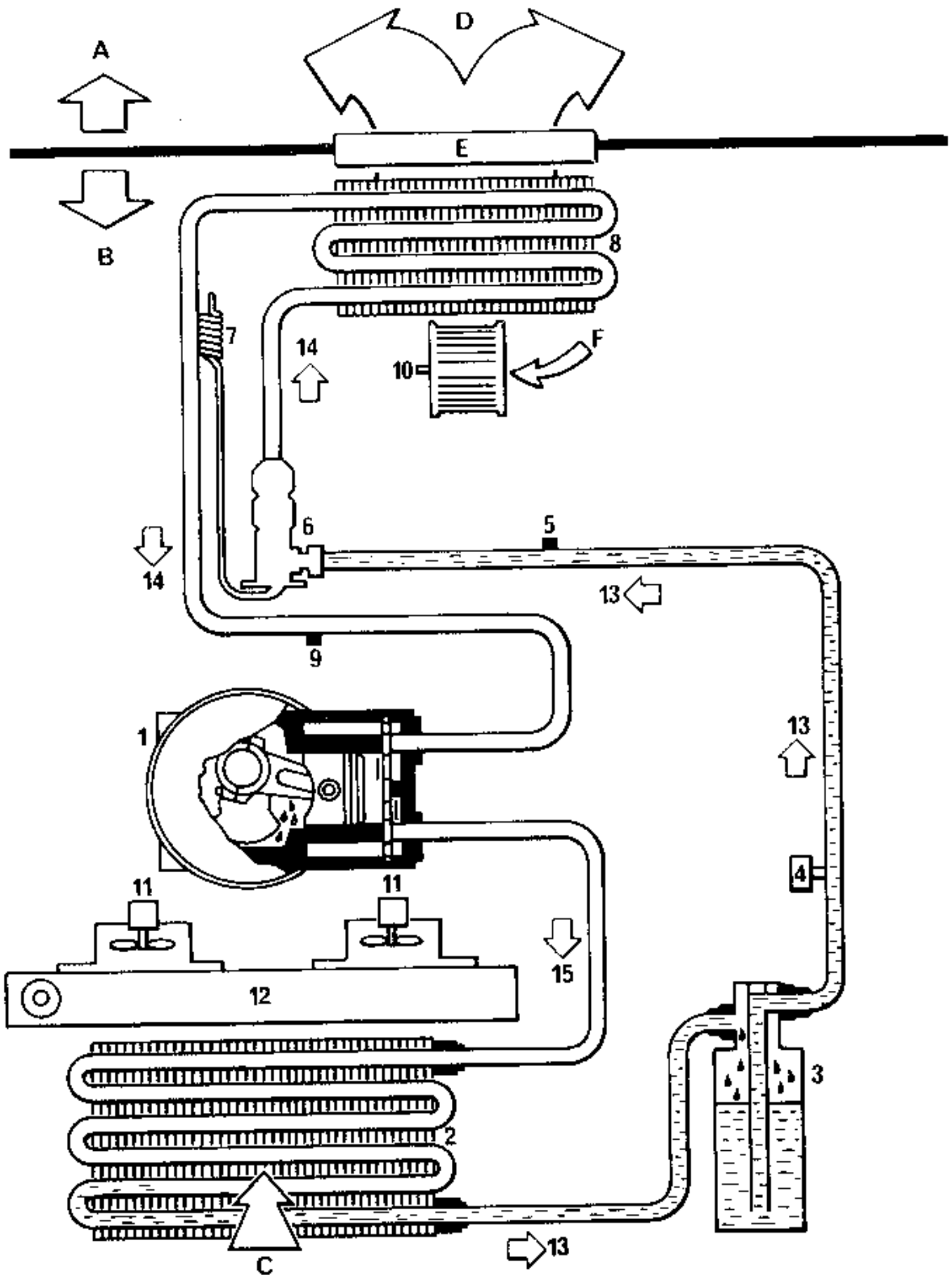
The flap control sector markings should be aligned.



Refit :

- mixer flap return spring (P) (solely for the air mixing control),
- the air deflector.

NOTE : The flap control cables are of different lengths; the longest controls the mixer flap .



- A Passenger compartment
- B Engine compartment
- C Outside air
- D To air mixing casing
- E Scuttle
- F Exterior or recycled air

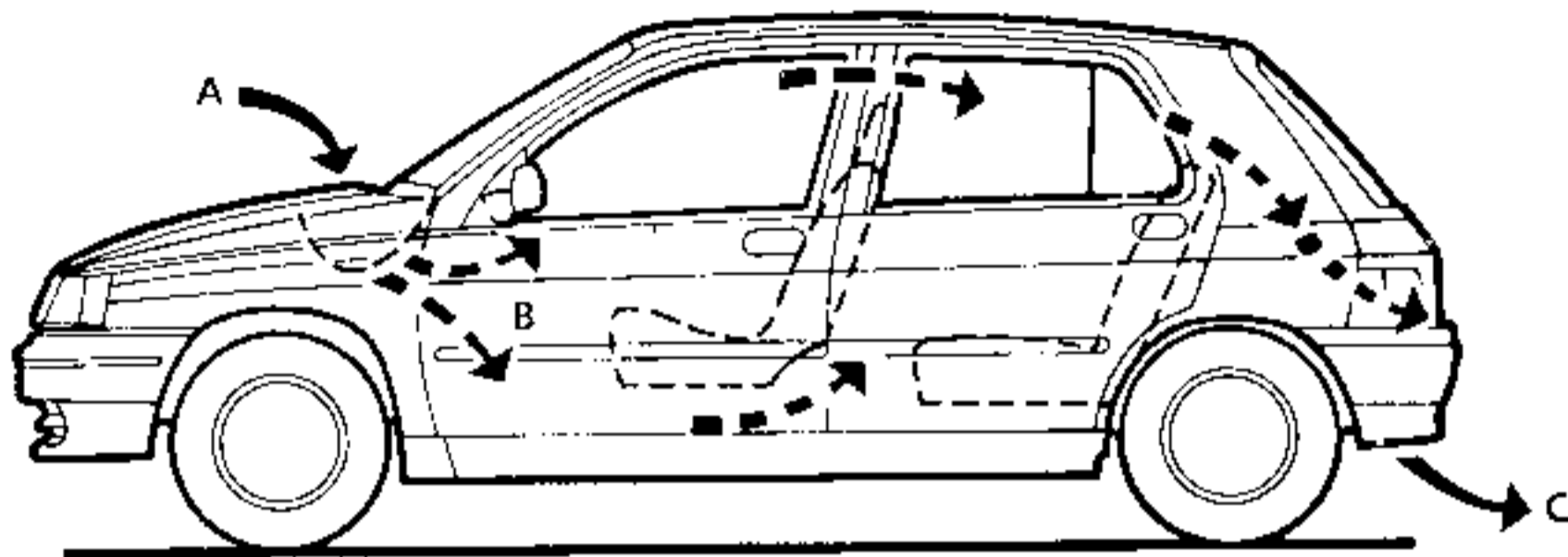
CONSUMABLES

Compressor oil :
ELF RIMA 100 : 135 cm³ ± 15 for SD 709

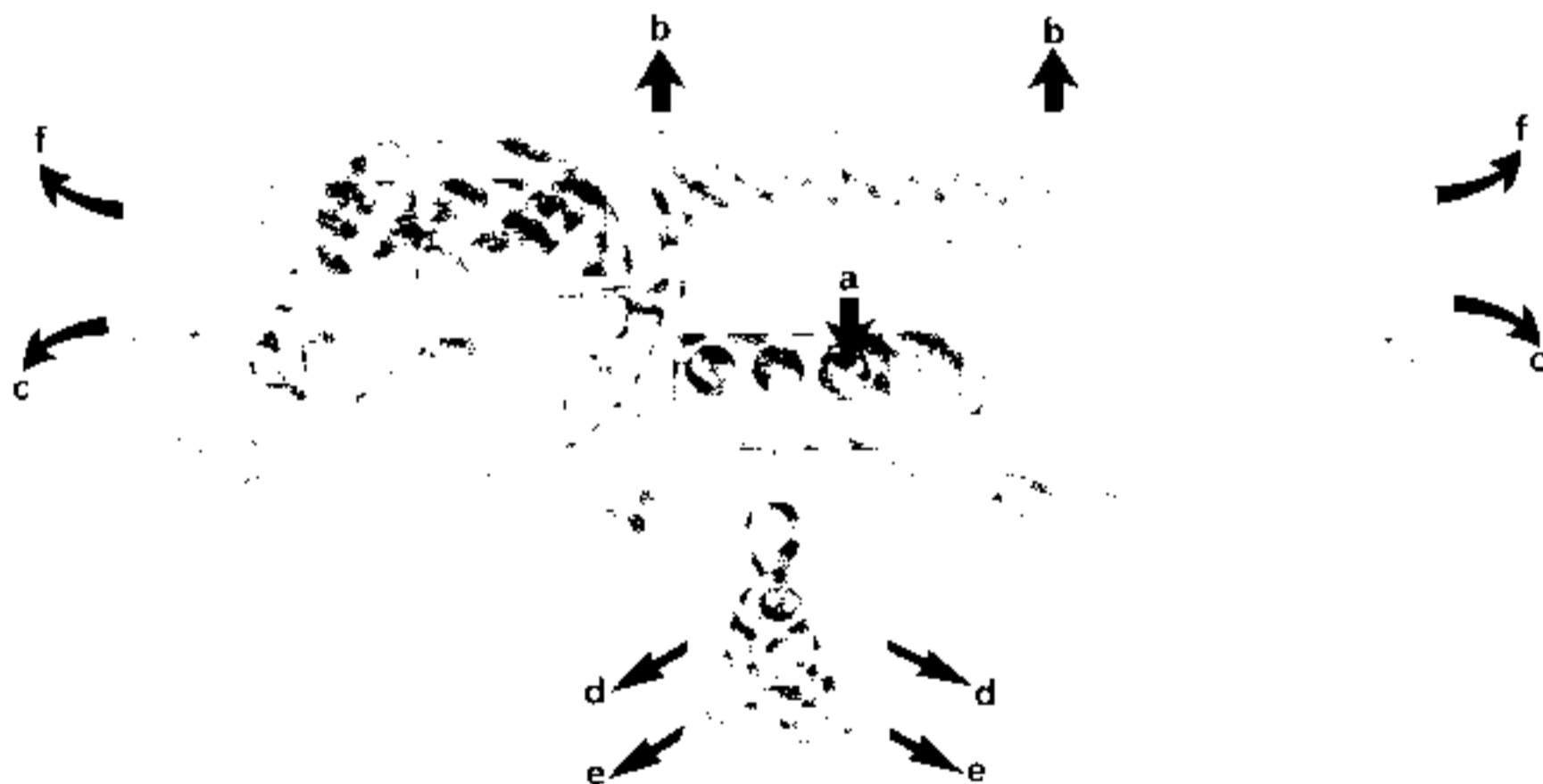
Refrigerant :
FREON R12 → 950 g ± 25 g (all types)

- 1 Compressor SANDEN : SD 709
- 2 Condenser
- 3 Freon reservoir
- 4 Three-function pressostat
- 5 High pressure bleed
- 6 Expansion valve
- 7 Expansion valve thermostatic regulator
- 8 Evaporator
- 9 Low pressure bleed
- 10 Air conditioning fan unit
- 11 Cooling fan unit
- 12 Engine cooling radiator
- 13 Liquid at high pressure
- 14 Vapour at low pressure
- 15 Vapour at high pressure

AIR DISTRIBUTION AND CIRCULATION



93793-1

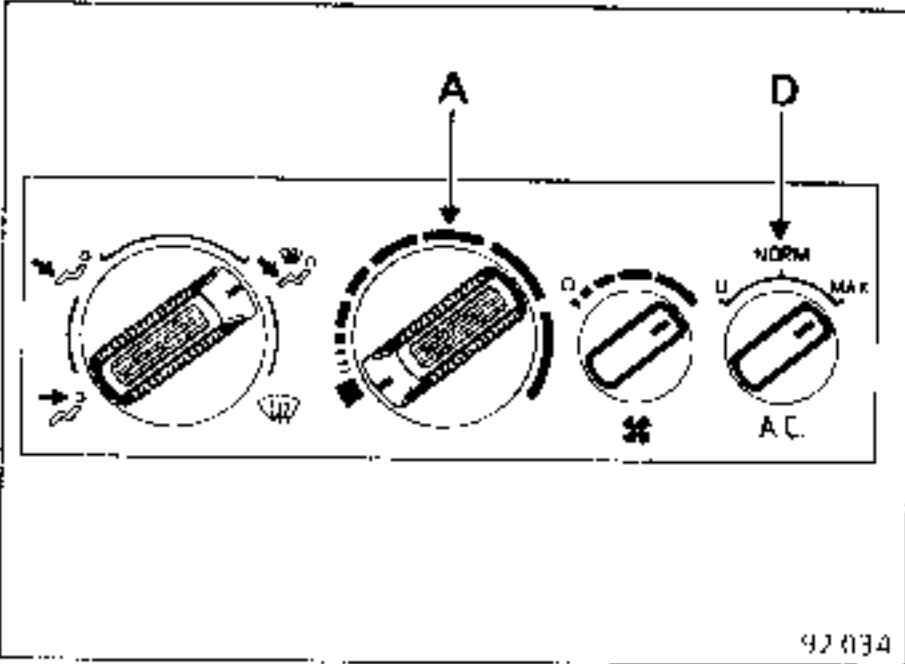


- A Air intake from outside
- B Air distribution
- C Air extraction through luggage compartment

- a Centre ventilator outlet (depending on version)
- b Windscreen demister outlet
- c Dashboard ventilator outlet
- d Lower ventilator outlets
- e Rear seat ventilator outlets (depending on version)
- f Demister outlets to front side windows

TEMPERATURE CONTROL KNOB (A)

If the air conditioning control (D) is at 0, the temperature control knob operates in the same way as described in the section on heating (page 61-3).



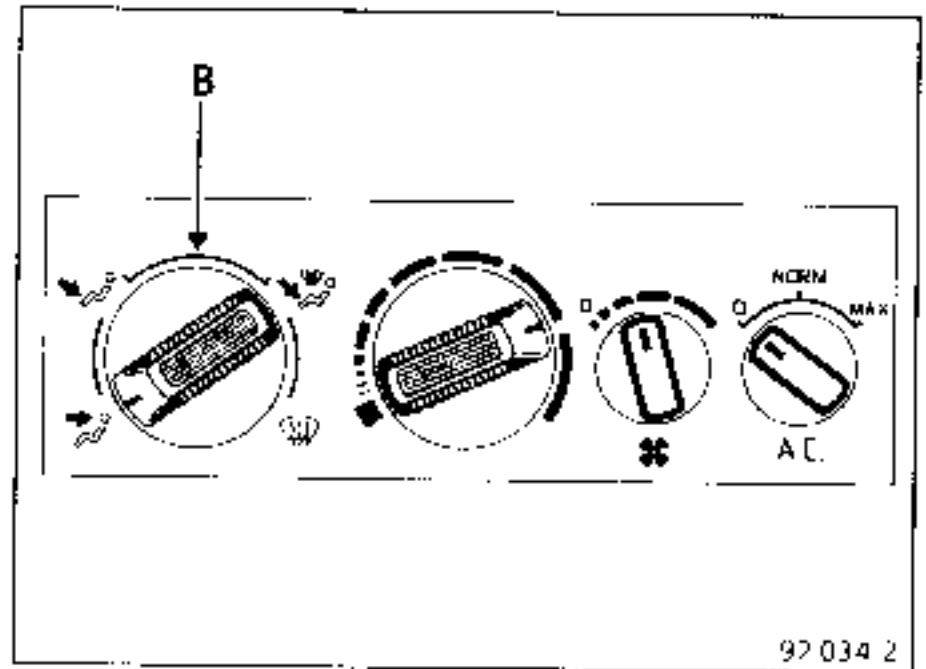
When the air conditioning (D) is in position "NORM" or "MAX", the air is first cooled and dried in the evaporator; then a varying amount is heated as it passes through the radiator.

When the knob is fully to the left, the air is not heated and is therefore at its lowest possible temperature

The air temperature is progressively increased by moving the knob to the right.

AIR DISTRIBUTION KNOB (B)

This control operates in the same way as described in the section on heating (page 61-49).

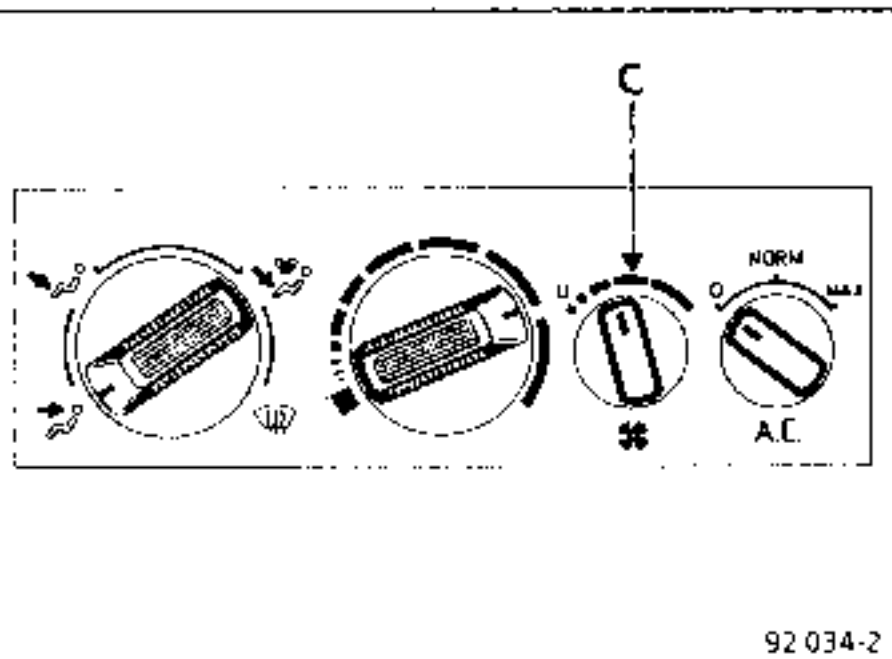


FAN CONTROL KNOB (C)

This provides blown air ventilation. The amount of air flowing into the passenger compartment is determined by the six knob settings (C).

POSITION 0 : No ventilation. The air intake is closed off by the recycle flap. The air conditioning cannot be used.

This position completely shuts down the installation, no matter what the positions of the other controls are.



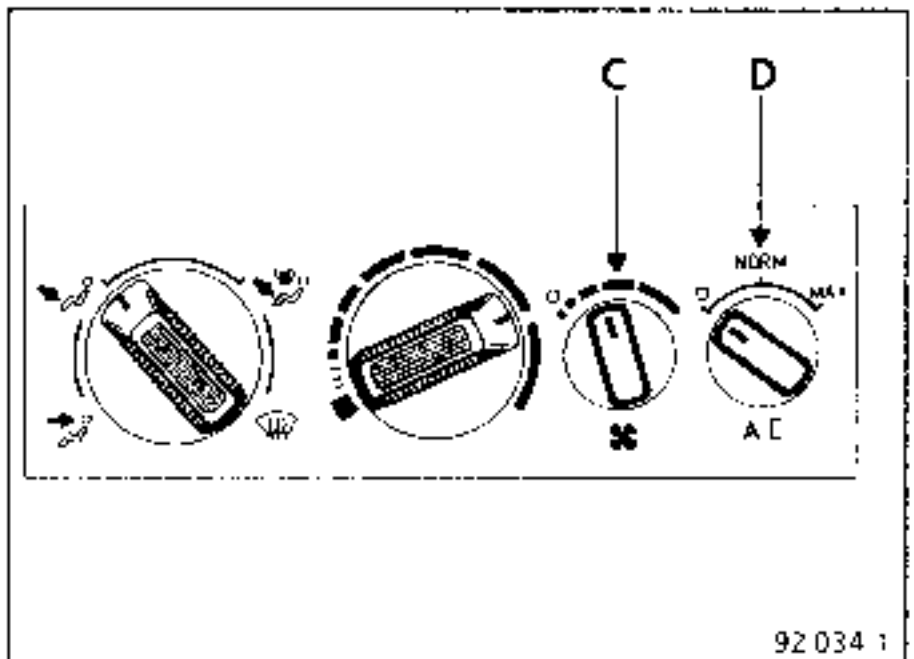
NOTE : To obtain the best possible efficiency from the windscreen demisting/defrosting system, the fan control knob (C) should be in the last position but one.

AIR CONDITIONING CONTROL KNOB (D)

This knob switches the air conditioning system on or off.

The air conditioning system offers the following functions:

- to lower the air temperature in the passenger compartment,
- to reduce the humidity of air blown into the passenger compartment (assisting demisting)



- **POSITION 0** : Air conditioning system off. Heating and ventilation operates in the same way as a vehicle without air conditioning.
- **POSITION "NORM"** : Air conditioning system operating. This is the normal operating position. Fresh air is taken from outside the vehicle and continuously renewed.
- **POSITION "MAX"** : Air conditioning operating. Air taken from inside the passenger compartment and recirculated without additional air from the outside.

This position permits the temperature of the air in the passenger compartment to be lowered very quickly and to be isolated from the outer atmosphere (when driving in polluted air zones).

However, prolonged operation in this position may cause the used air to mist up slightly (fog).

It is therefore desirable to return to the "NORM" position as soon as the vehicle leaves the polluted air zone or the required temperature is reached.

NOTE : The air conditioning control will only switch on the system if the air distribution knob (C) is in a position other than 0

LIST OF COMPONENT UNITS

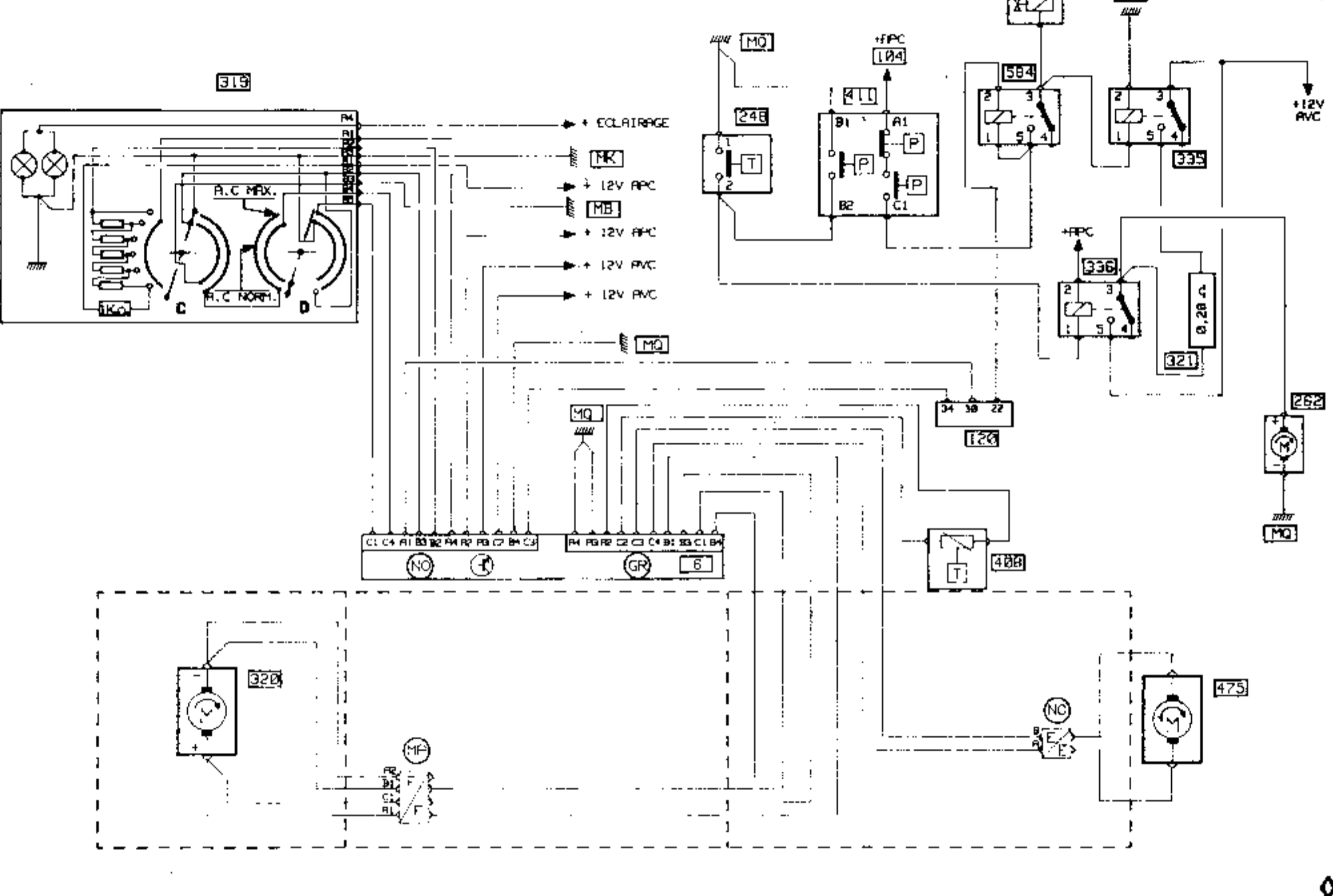
- + APC** : + after ignition switch.
- + AVC** : + before ignition switch.
- E** : Recycling motor connector
- F** : Connector for fan unit 320.

- MB** : Front lefthand earth
- MK** : Front lefthand pillar earth.
- MQ** : Heater bulkhead earth.

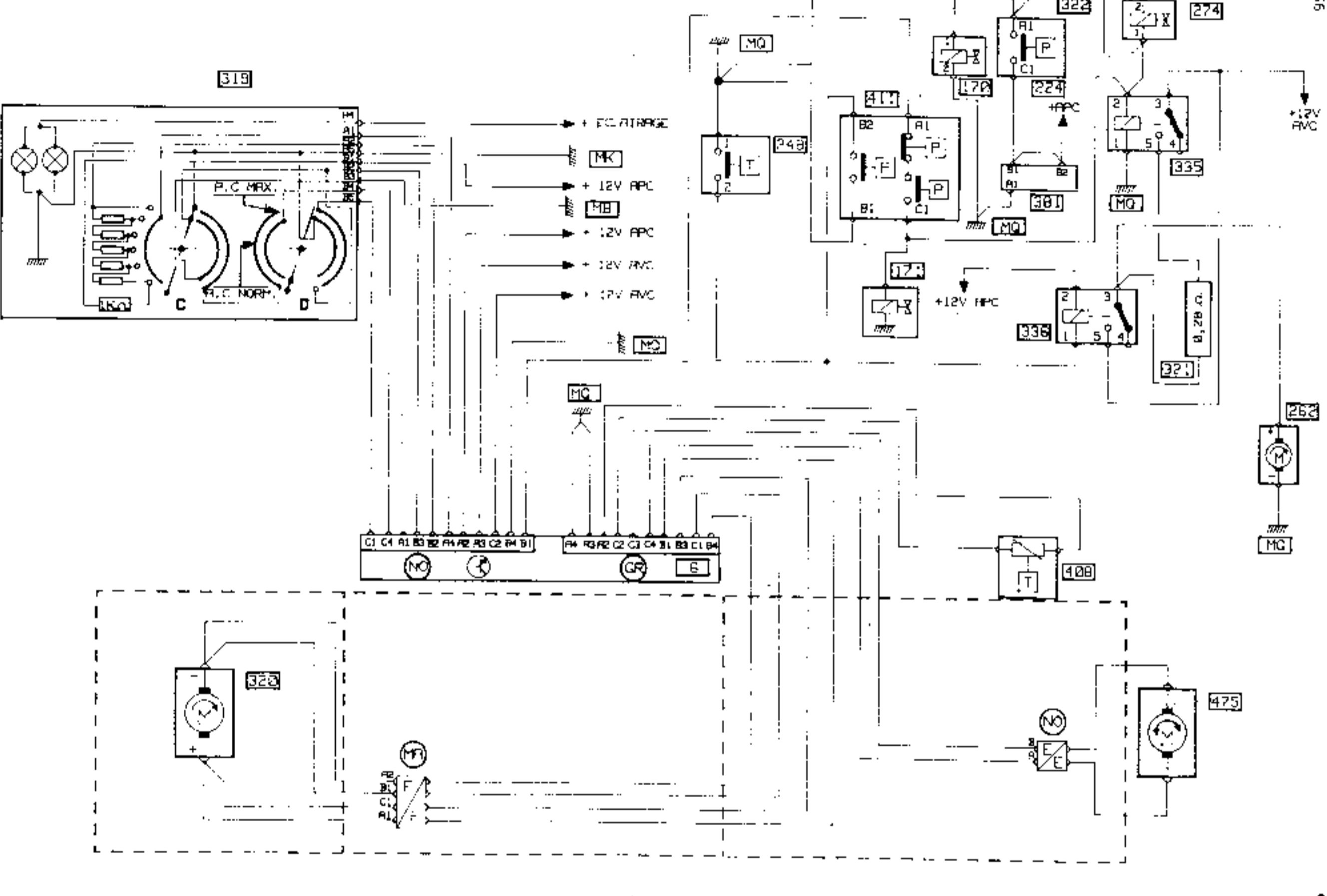
- 6** : Electronic module
- 104** : Ignition/anti-theft switch
- 120** : Injection computer.
- 170** : Power-assisted steering solenoid valve
- 171** : Air conditioning compressor
- 224** : Power-assisted steering pressostat
- 248** : Fan motor assembly thermal switch
- 262** : Air conditioning cooling fan assembly
- 274** : Air conditioning solenoid valve.
- 319** : Air conditioning control panel.
- 320** : Fan motor assembly
- 321** : Air conditioner cooling fan assembly resistor
- 322** : Power-assisted steering/air conditioning diode
- 335** : Fan motor assembly (262) 1st speed relay.
- 336** : Relay for high-speed fan motor assembly(262).
- 381** : Carburettor
- 408** : Evaporator temperature sensor
- 411** : Air conditioning pressostat (three functions).
- 475** : Air recycling motor.
- 584** : Air conditioning compressor relay

SF TYPE: EQUIP: CONDIONNEMENT D'AIR GHI: X57
MOT: T. TYPES INJECTION

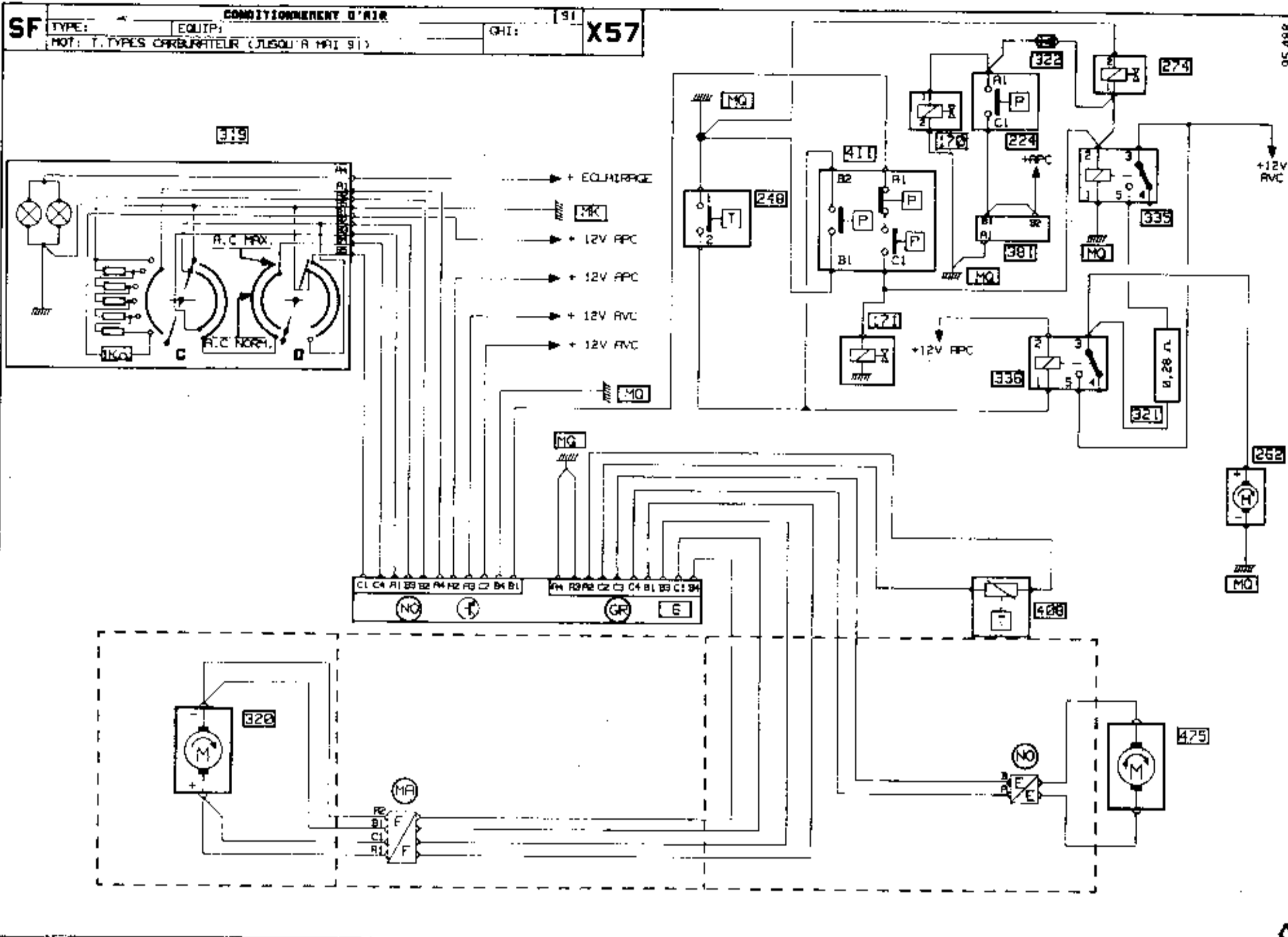
95 486

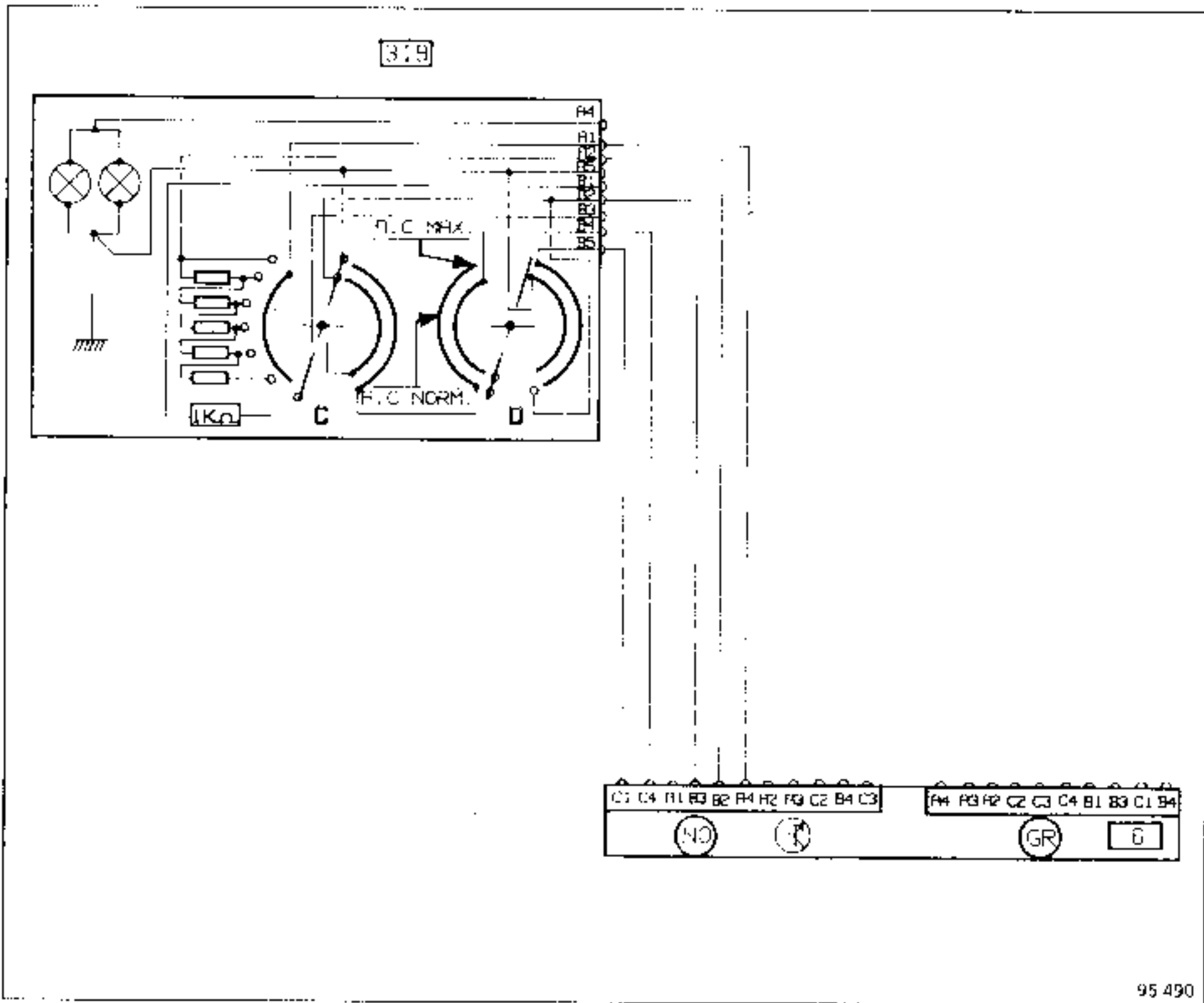


SF TYPE: _____ EQUIP: _____ CONDITONNEMENT D'AIR
 MOT: * TYPES CARBURATEUR (A PARTIR DE MAX 93) GTI: 51 X57



95 487





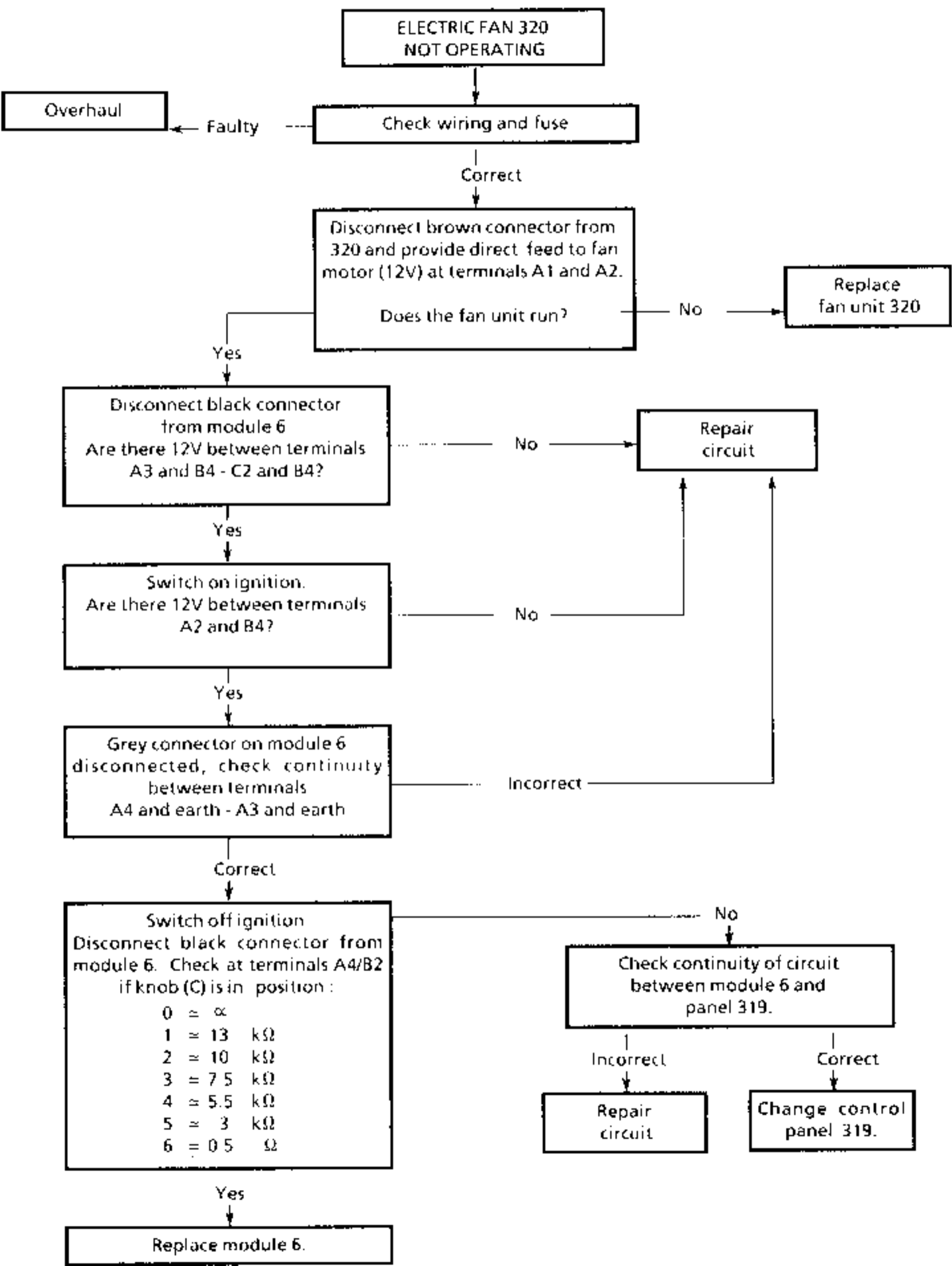
Control panel
319

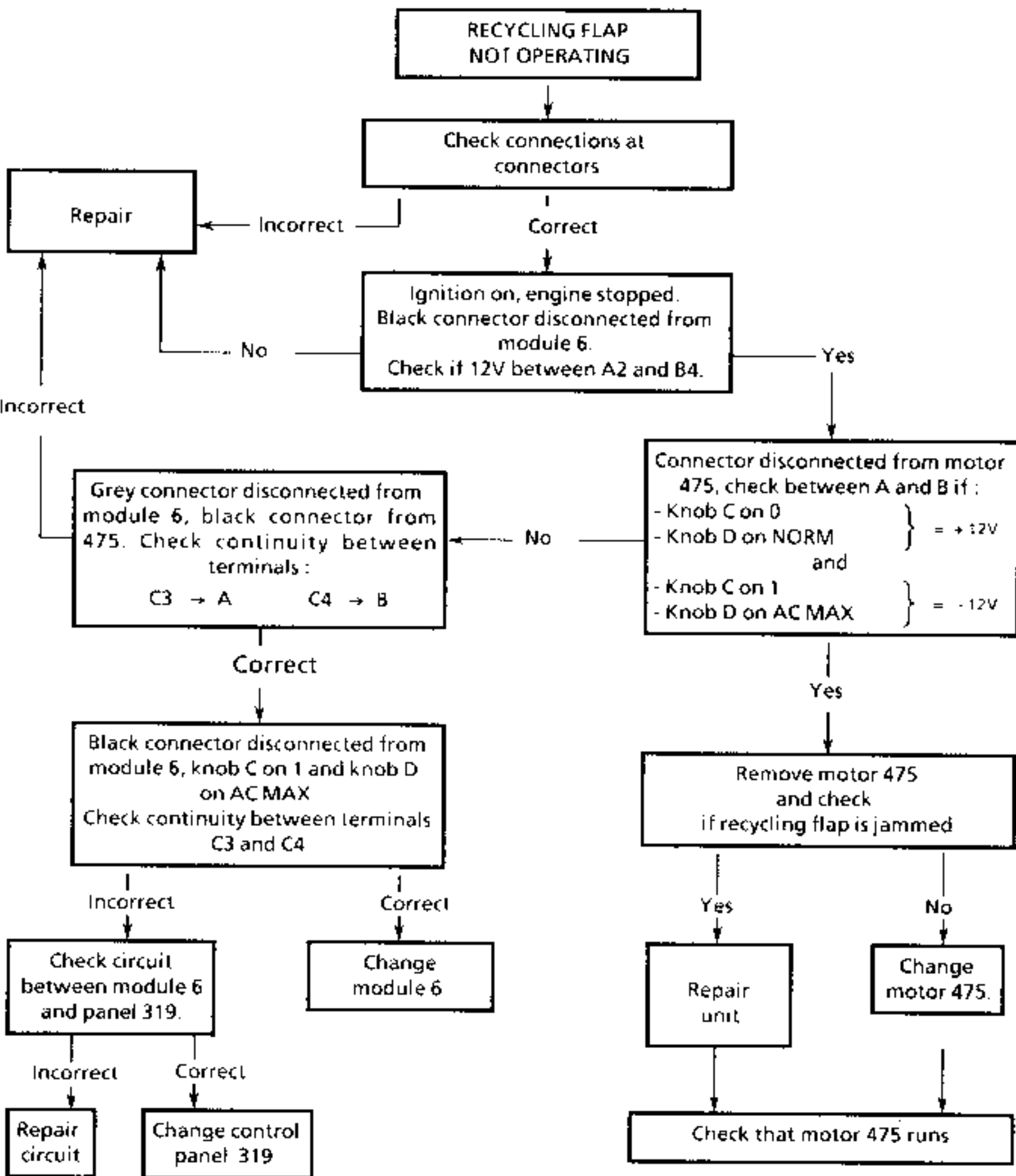
Electronic module
6

B5
B4
B2
A2
A1

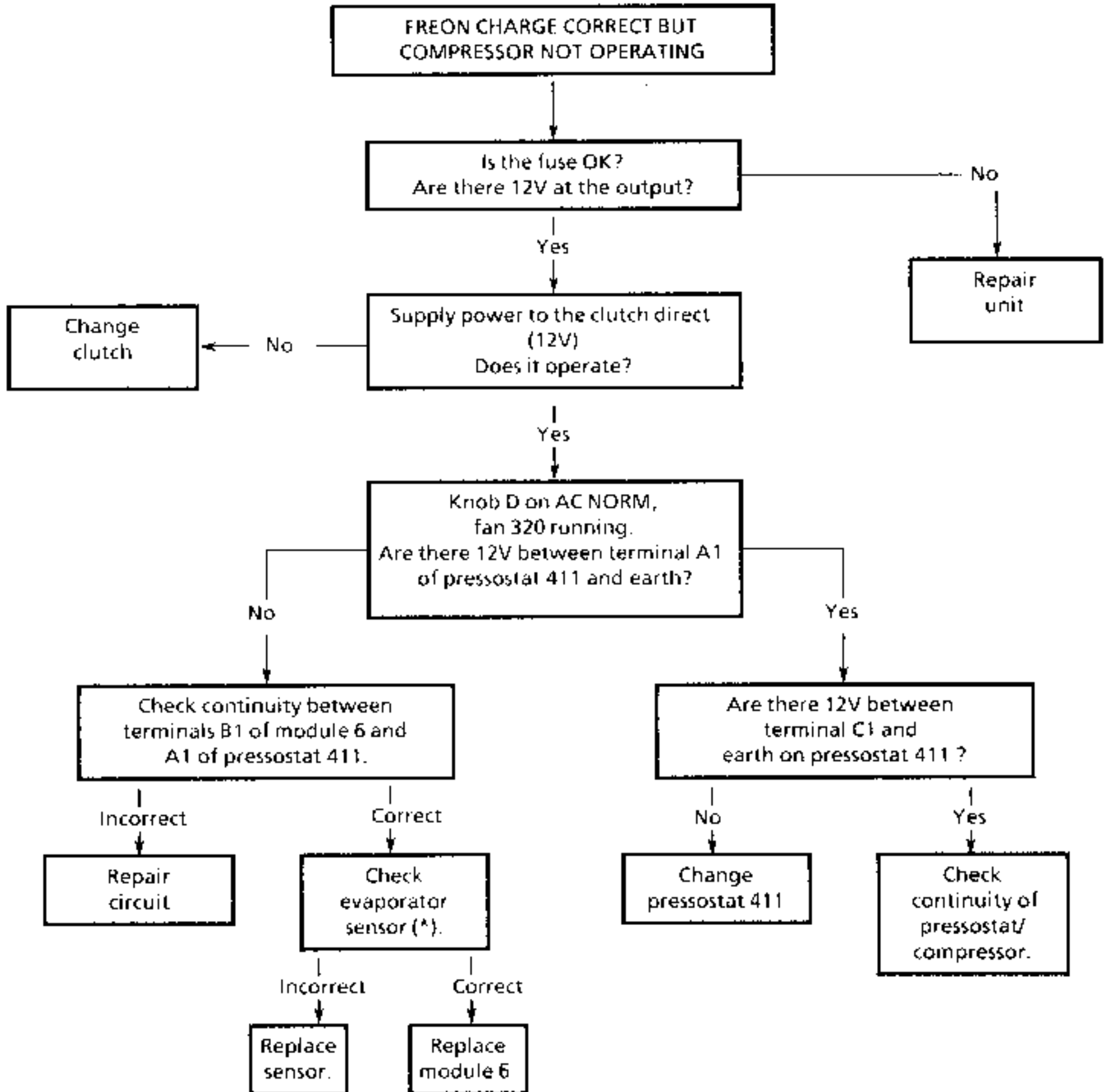
C1
C4
B3
B2
A4

- command for high-speed fan
- command for thermostat
- command for air recycling
- command for potentiometer
- command for potentiometer cursor





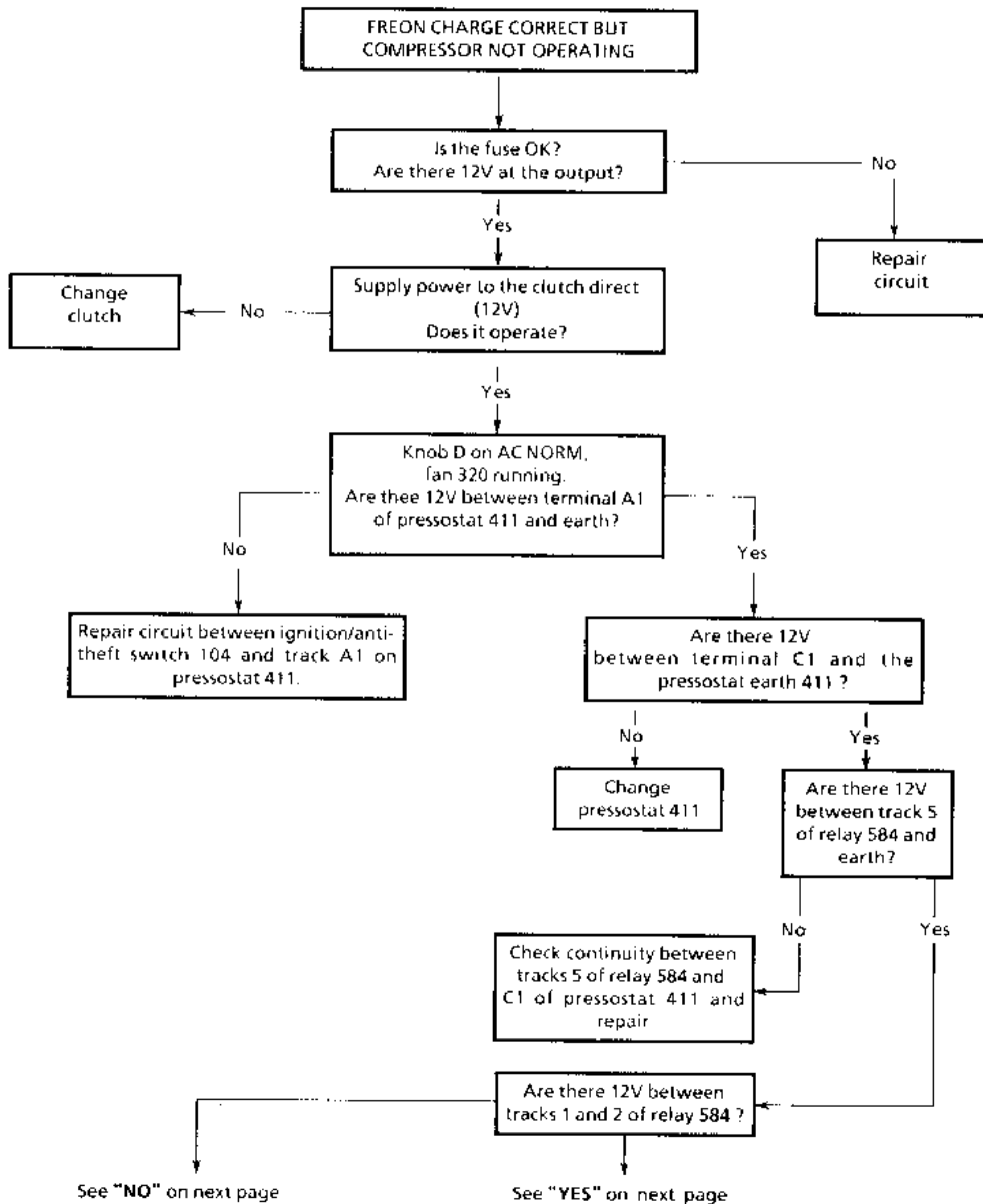
NOTE : The air conditioning system can only be tested if the temperature in the workshop is higher than + 5°C.

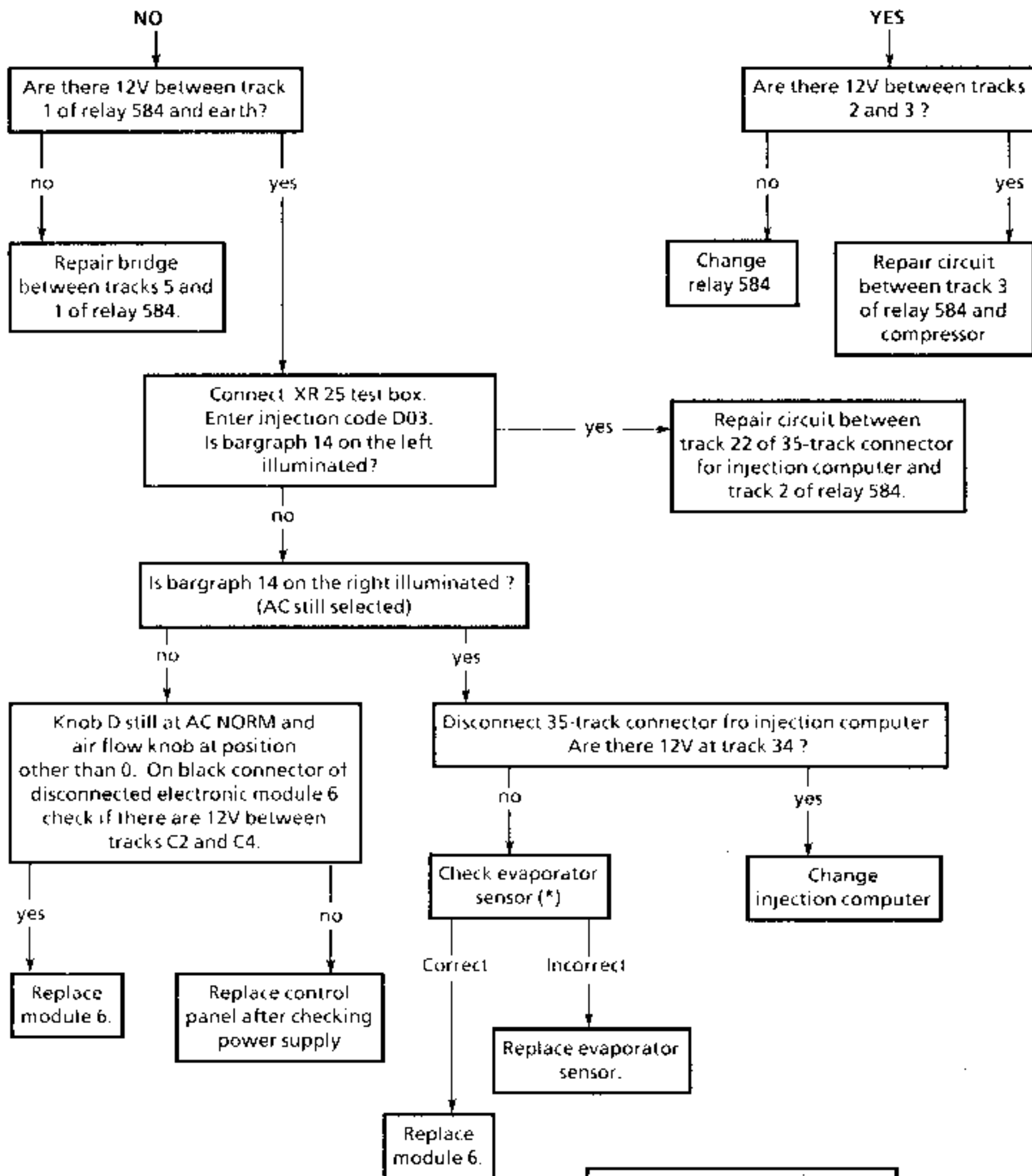


(*) Sensor checking values
(see page 62 - 39)

0°C	8500 to 9500 Ω
5°C	6500 to 7500 Ω
10°C	5000 to 6000 Ω
15°C	3700 to 4700 Ω
20°C	2800 to 3800 Ω
25°C	2200 to 3200 Ω

NOTE : The air conditioning system can only be tested if the temperature in the workshop is higher than + 5°C.





(*) Sensor checking values (see page 62 - 39)

0°C	8500 to 9500 Ω
5°C	6500 to 7500 Ω
10°C	5000 to 6000 Ω
15°C	3700 to 4700 Ω
20°C	2800 to 3800 Ω
25°C	2200 to 3200 Ω

INEFFICIENT OPERATION

Is the compressor running?

no → See next page

Check tension of compressor belt and condition and clearance of clutch (slipping possible cause). Retension belt or change compressor clutch. Does the problem still persist?

no → Success

Check resistance of evaporator sensor (*) If necessary, change sensor. Does the problem persist?

no → Success

Make sure that the recycling flap is in the recycling position at AC MAX. Rectify if necessary. Does the problem persist?

no → Success

Check that the mixing flap can move through its entire travel. Repeat cable adjustment, if necessary. Does the problem persist?

no → Success

Is there a problem with air flow?

yes → See page 62-19

Connect HP/HP pressure gauges and check pressure. Vehicle stationary, engine idling and AC MAX. If HP > 25 bars there is too much freon in the circuit, the cooling fan is permanently at low speed, the condenser is clogged, or the motor heats up too much. In this particular case, the pressostat's cycle is with the HP pressostat. Is the HP correct?

yes → It is possible that moisture in the condenser forms ice in the expansion valve or that the expansion valve is faulty. Change the drying unit and the expansion valve and replace the freon in the system.

Check that condenser matrix is clean. Clean or change condenser. Does the problem persist?

no → Success

Check the operation of the cooling fan at low and high speeds.
PV if HP ≤ 16 bars
GV if HP ≥ 19 bars
Does the fan operate normally at both speeds?

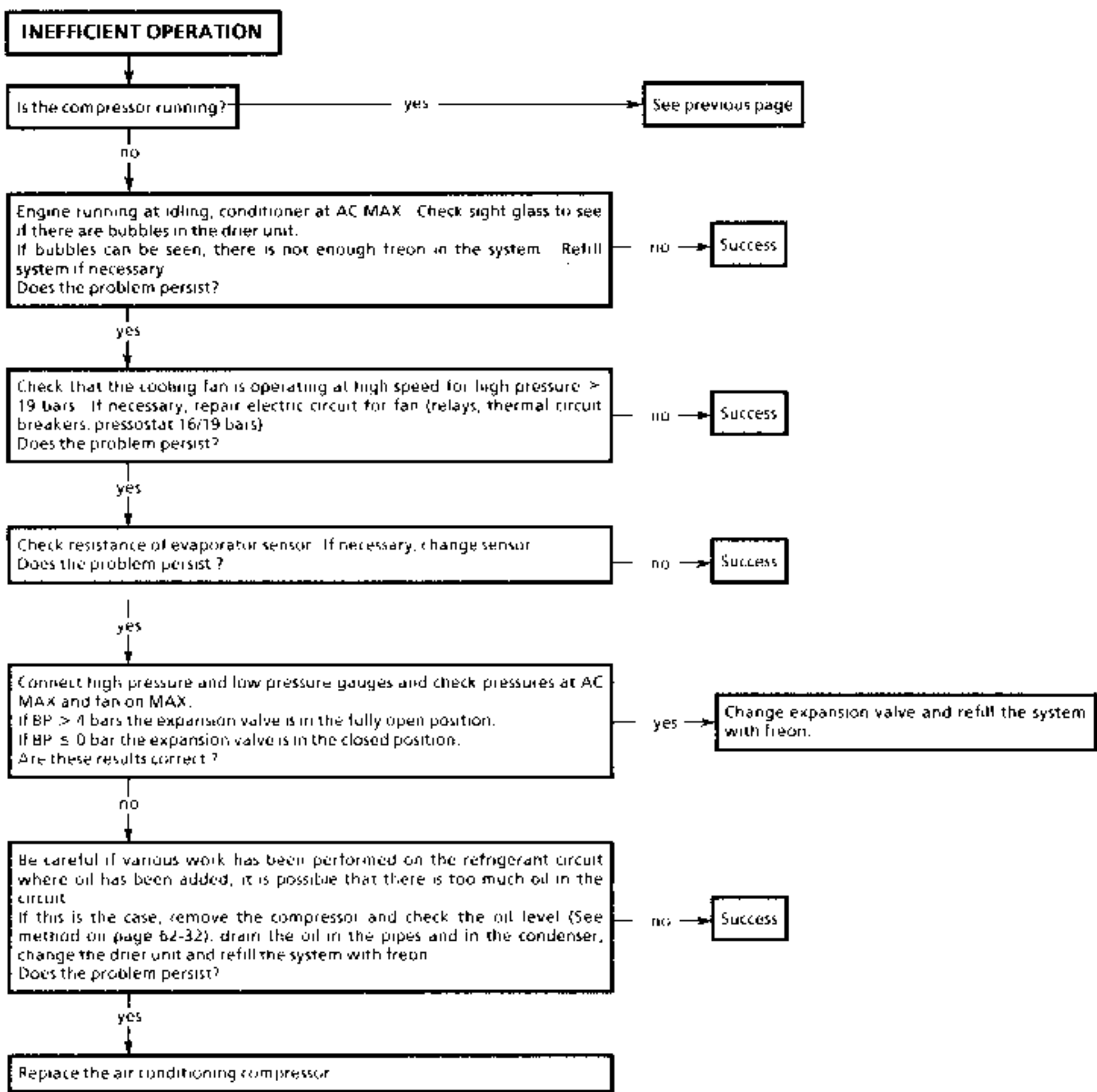
no → Check the cooling fan electrical circuit, relays, thermal circuit breakers, pressostat 16/19 bars. Repair electric circuit.

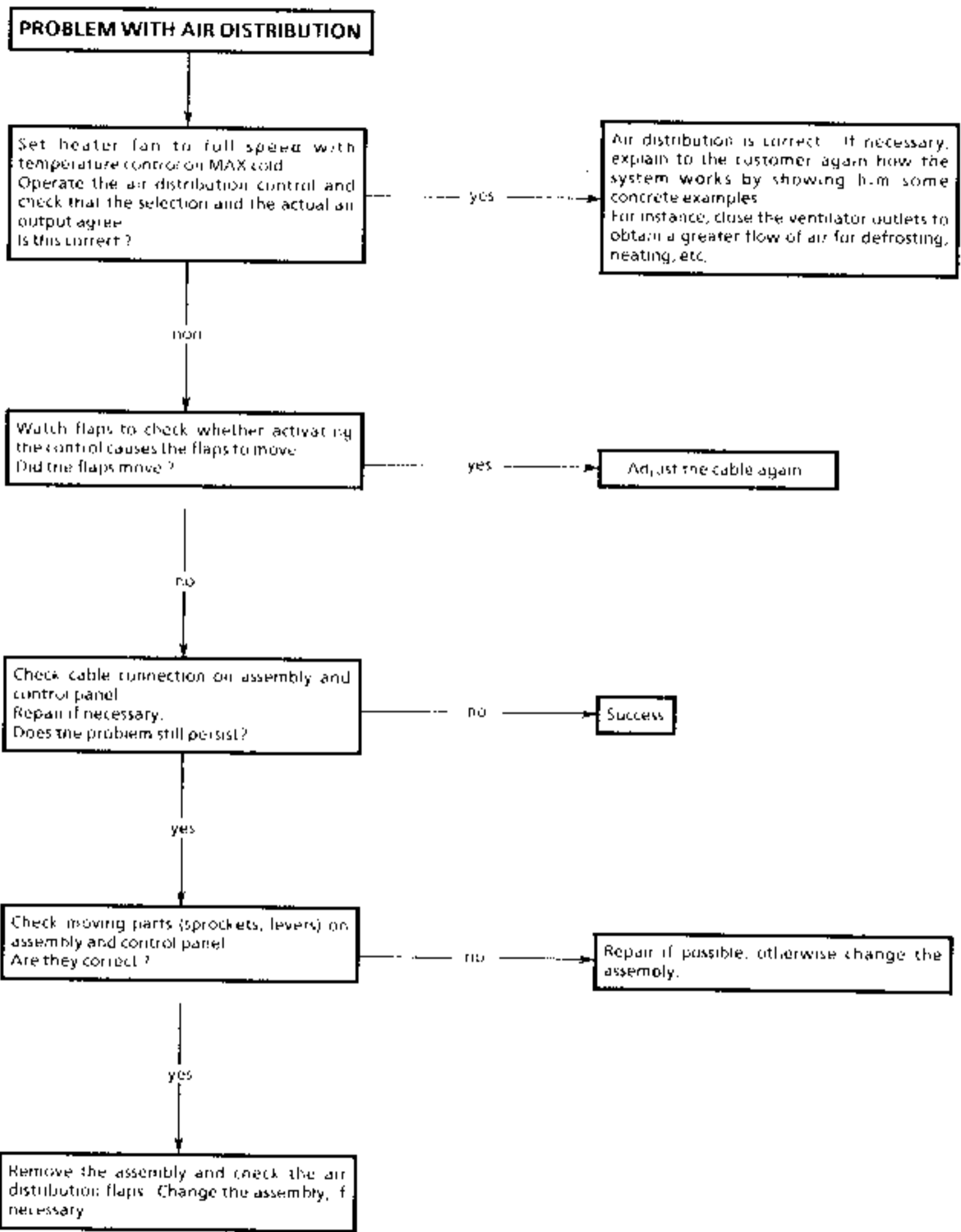
Replace freon in system. Cause of problem may be that system is overfilled with freon. Refill with freon.

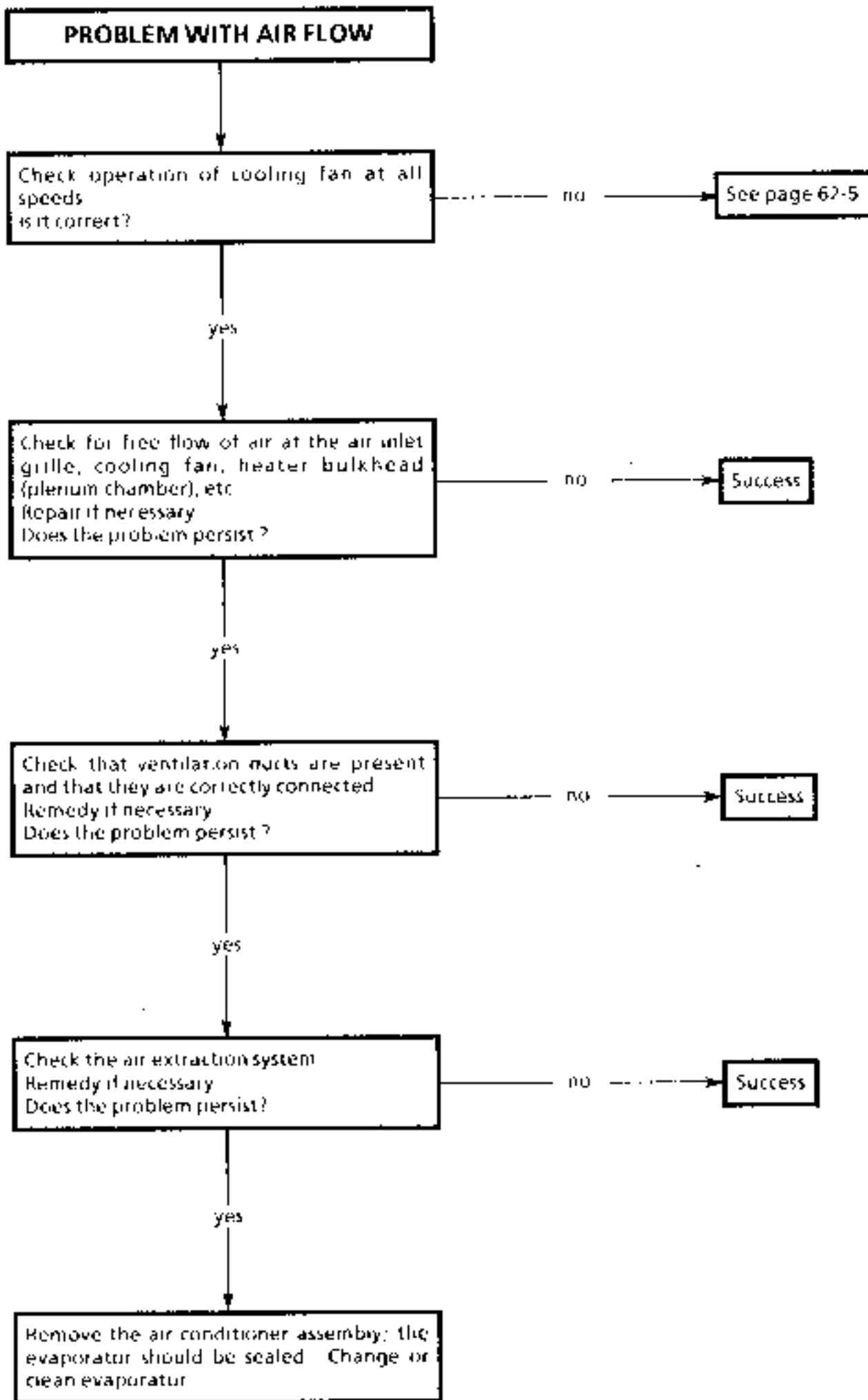
NOTE : If the system is filled with too much freon, the compressor will run unevenly and the efficiency of the AC will be reduced.

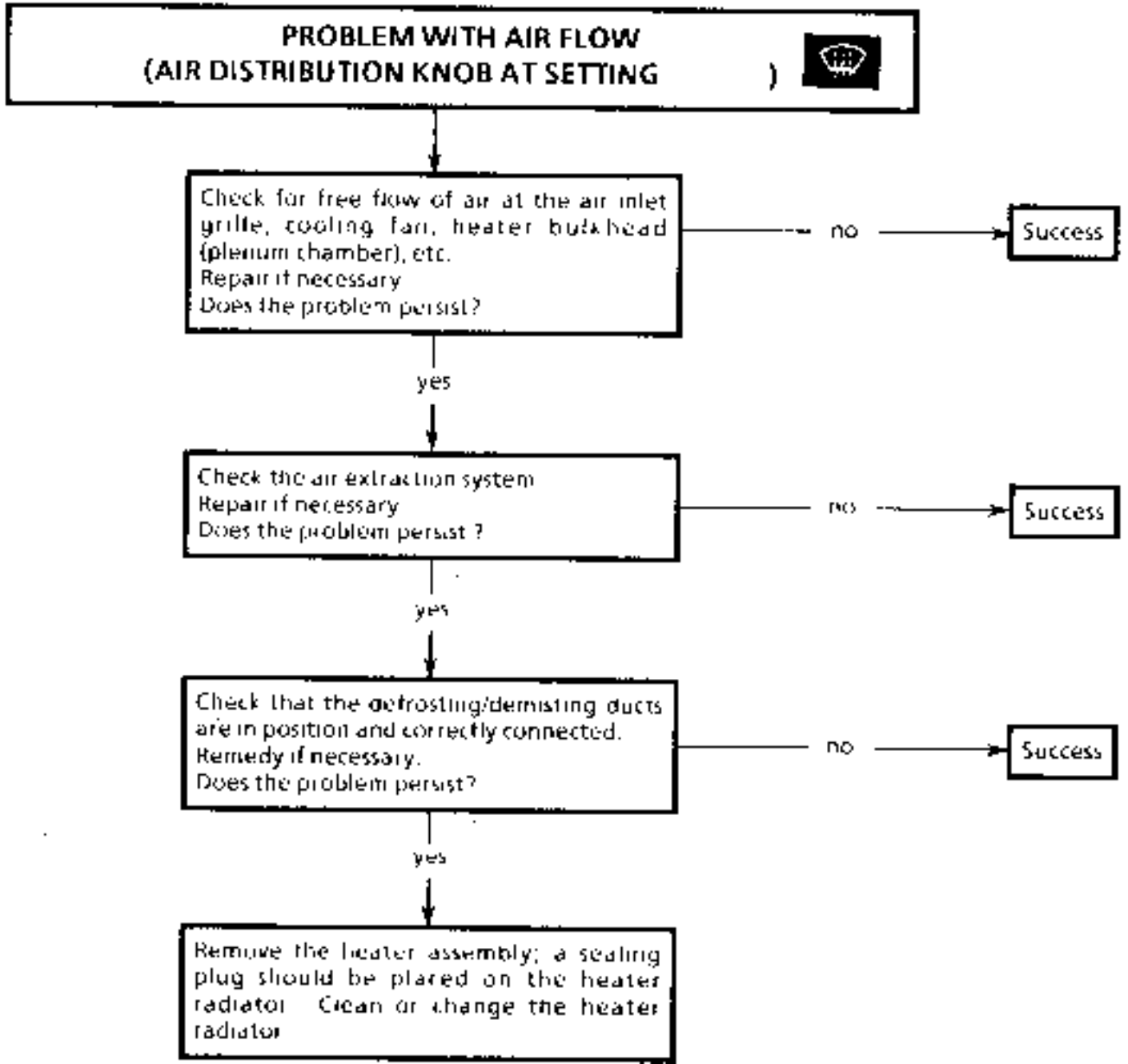
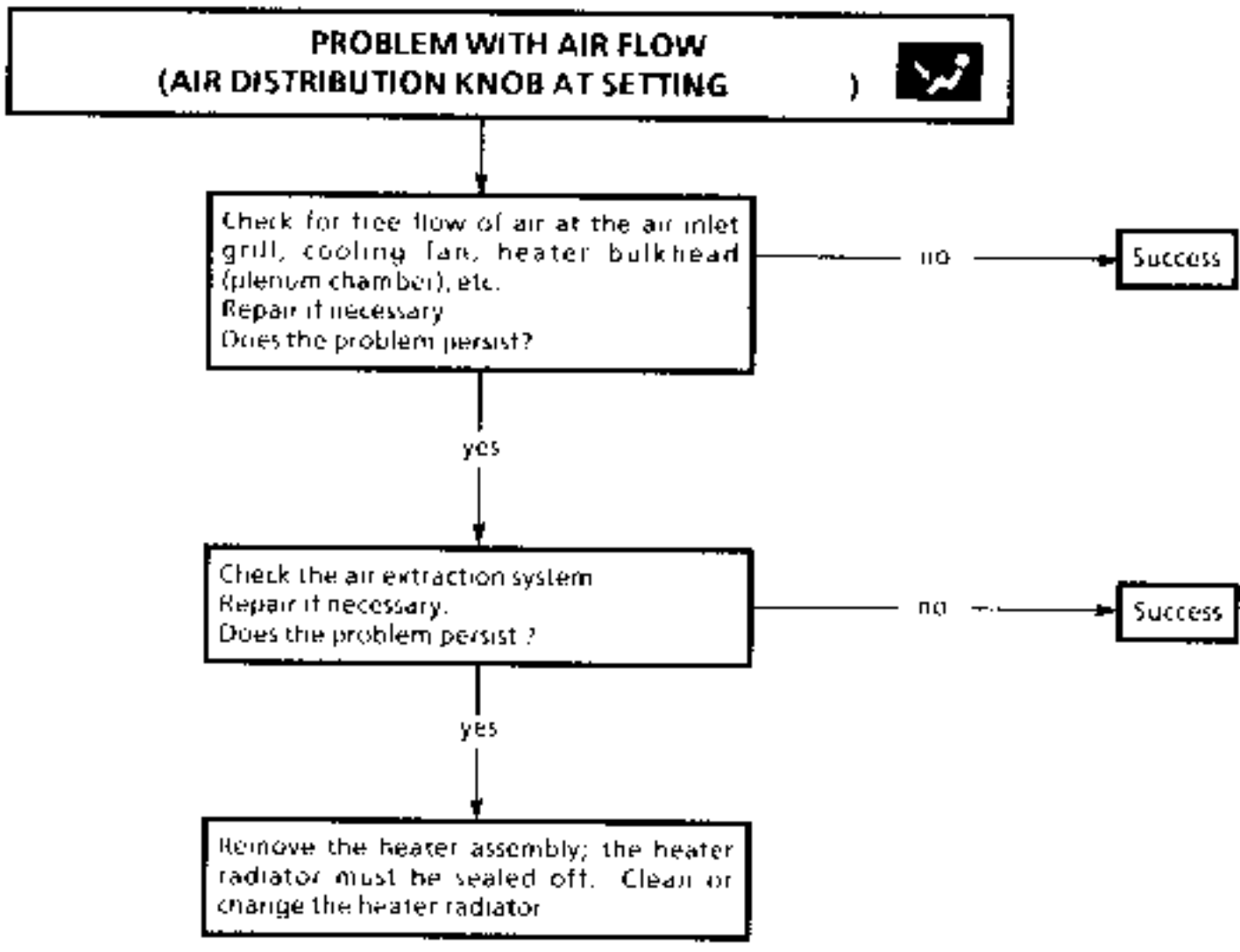
- (*) if the resistance of the sensor is incorrect.
- 1) **Outside maximum tolerance :**
The compressor cuts in too early and there is a reduction in efficiency
 - 2) **Outside minimum tolerance:**
The compressor cuts in too late and the evaporator ices up, reducing its efficiency and the flow of air.


(*) Sensor checking values (see page 62 - 39)	
0°C	8500 to 9500 Ω
5°C	6500 to 7500 Ω
10°C	5000 to 6000 Ω
15°C	3700 to 4700 Ω
20°C	2800 to 3800 Ω
25°C	2200 to 3200 Ω









PROBLEM WITH AIR FLOW 
(AIR DISTRIBUTION KNOB AT SETTING
To perform test, open all dashboard ventilator outlets.
Air mixing control on very hot.

Check for free flow of air at the air inlet grille, cooling fan, heater bulkhead (plenum chamber), etc
 Repair if necessary.
 Does the problem persist?

no

Success

yes

Check the air extraction system
 Repair if necessary
 Does the problem persist?

no

Success

yes


Check that ventilation ducts are in position and correctly connected.
 Remedy if necessary
 Does the problem persist?

no

Success

yes

Remove the heater assembly; a sealing plug should be placed on the heater radiator. Clean or change the heater radiator.

PROBLEM WITH AIR FLOW 
(AIR DISTRIBUTION KNOB AT SETTING
Air mixing control on very cold.

Check for free flow of air at the air inlet grille, cooling fan, heater bulkhead (plenum chamber), etc
 Repair if necessary
 Does the problem persist?

no

Success

yes

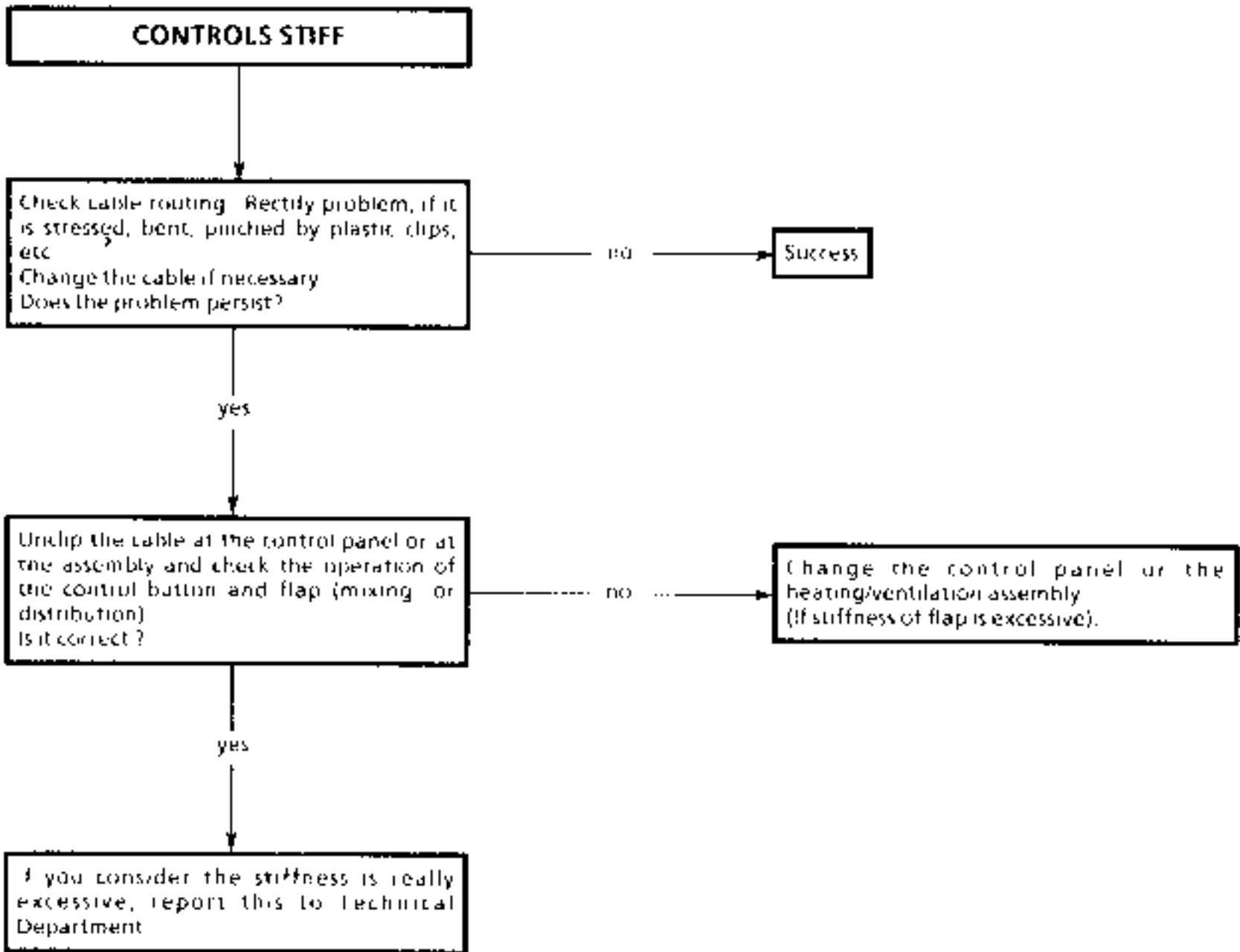
Check the air extraction system
 Repair if necessary
 Does the problem persist?

no

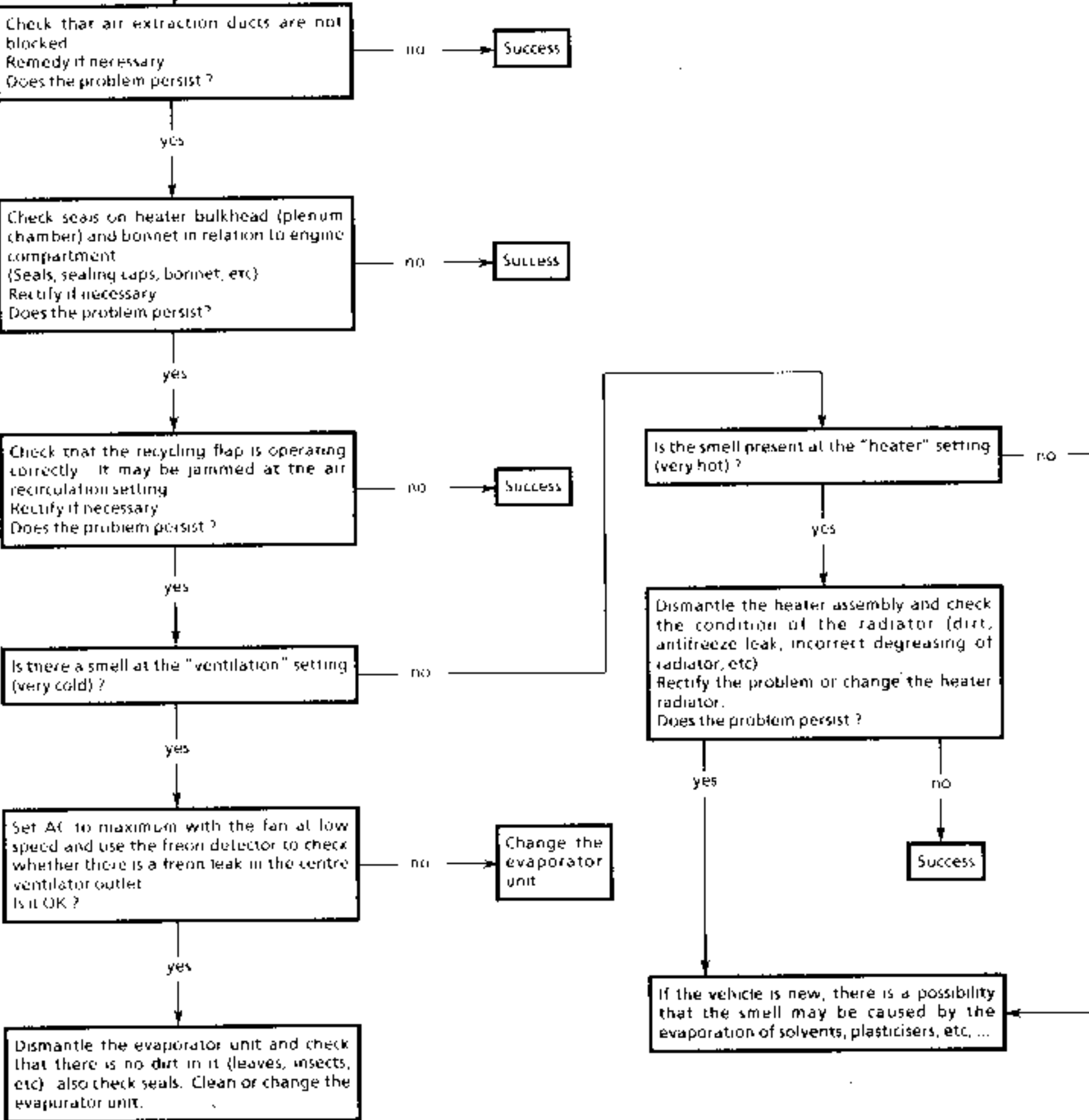
Success

yes

Check that the ventilation ducts are in position and correctly connected.
 Remedy if necessary.



SMELLS IN THE PASSENGER COMPARTMENT



WATER IN THE PASSENGER COMPARTMENT

Check that the leak is not from the heater radiator
Change the radiator if necessary
Does the problem persist?

no → Success

yes

Check the thermal insulation of the evaporator unit and the low pressure pipe (if a section of this pipe is inside the passenger compartment)
Repair if necessary
Does the problem persist?

no → Success

yes

Check the condensation outlet pipe. Make sure that the water runs away properly
Set system to AC NORM and check the flow of water under the vehicle
Repair if necessary
Does the problem persist?

no → Success

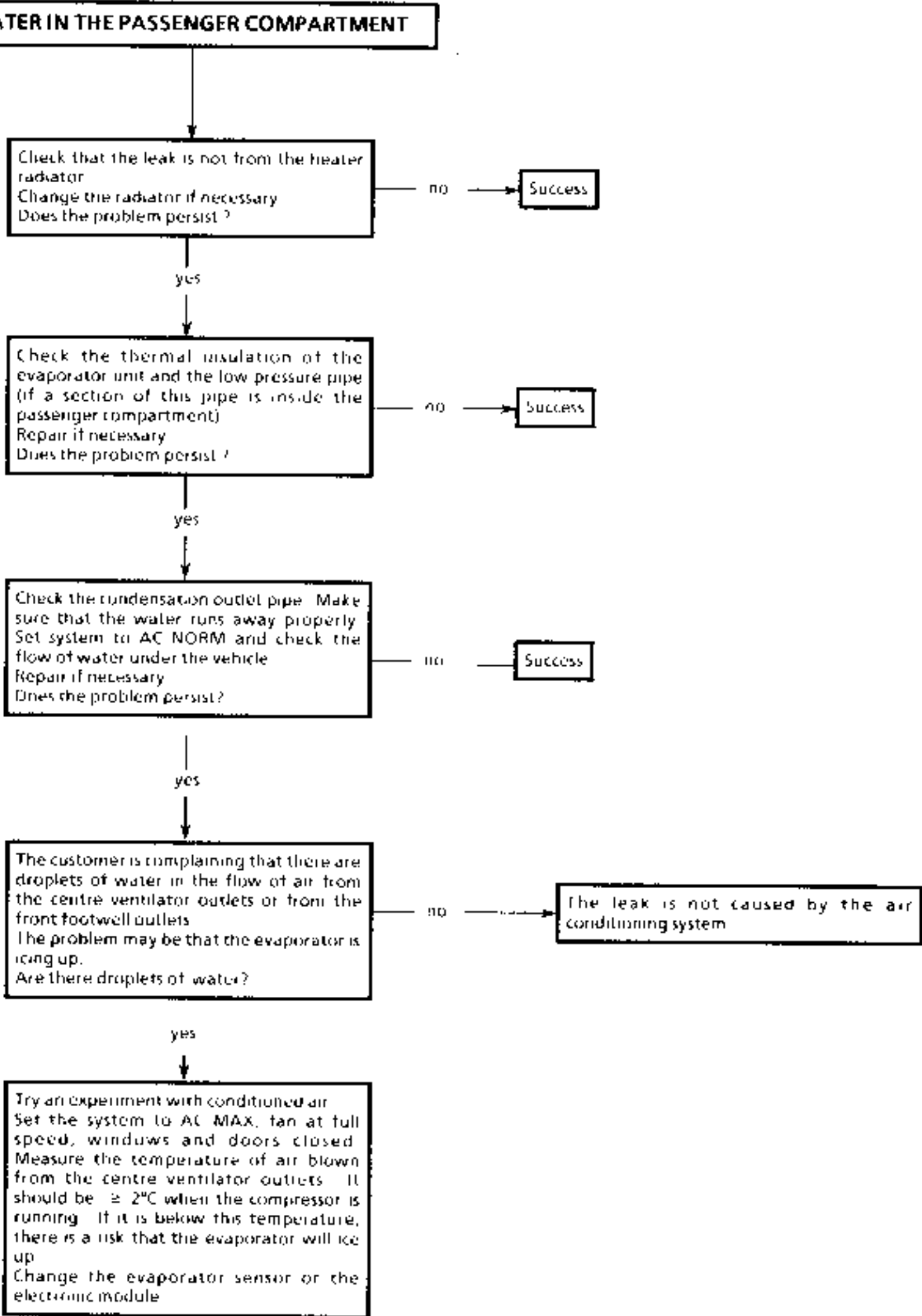
yes

The customer is complaining that there are droplets of water in the flow of air from the centre ventilator outlets or from the front footwell outlets
The problem may be that the evaporator is icing up.
Are there droplets of water?

no → The leak is not caused by the air conditioning system

yes

Try an experiment with conditioned air
Set the system to AC MAX, fan at full speed, windows and doors closed
Measure the temperature of air blown from the centre ventilator outlets. It should be $\geq 2^{\circ}\text{C}$ when the compressor is running. If it is below this temperature, there is a risk that the evaporator will ice up.
Change the evaporator sensor or the electronic module



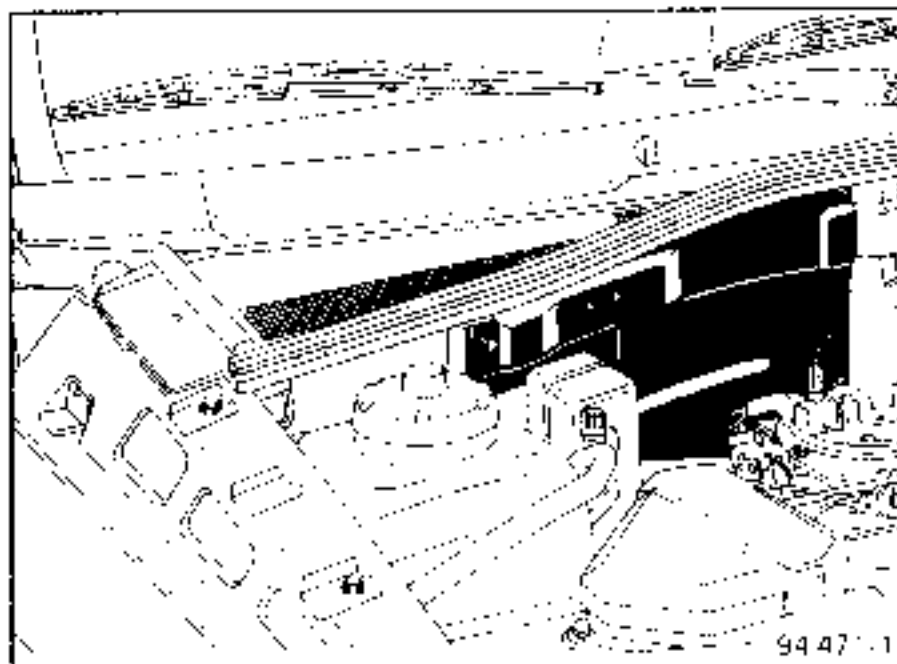
REMOVAL

Disconnect the battery.

Remove :

- the bonnet,
- the air filter,
- the plenum chamber upper seal and the air intake grille for outside air (1).

- remove the plenum chamber bulkhead (6 screws)



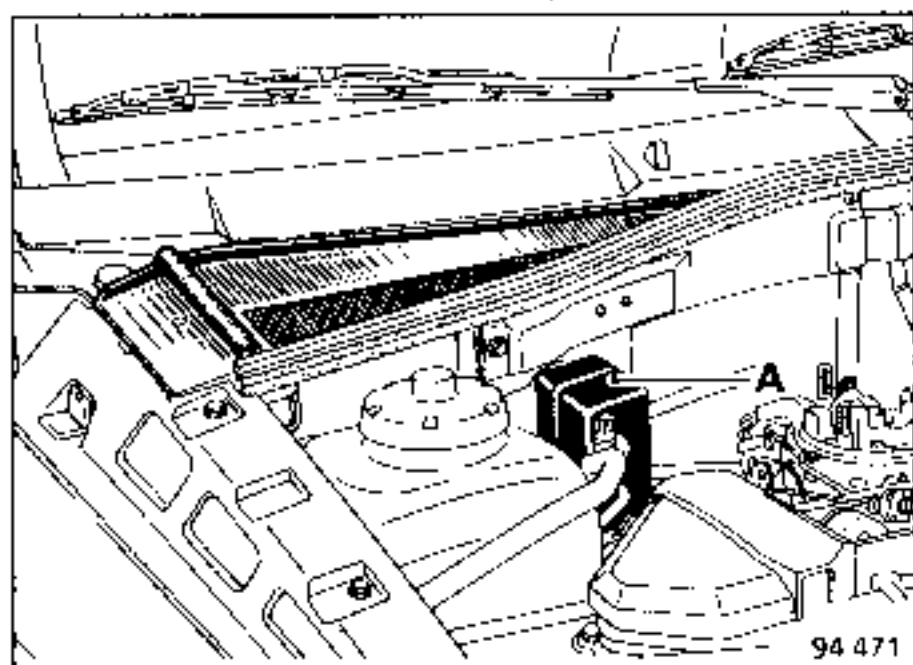
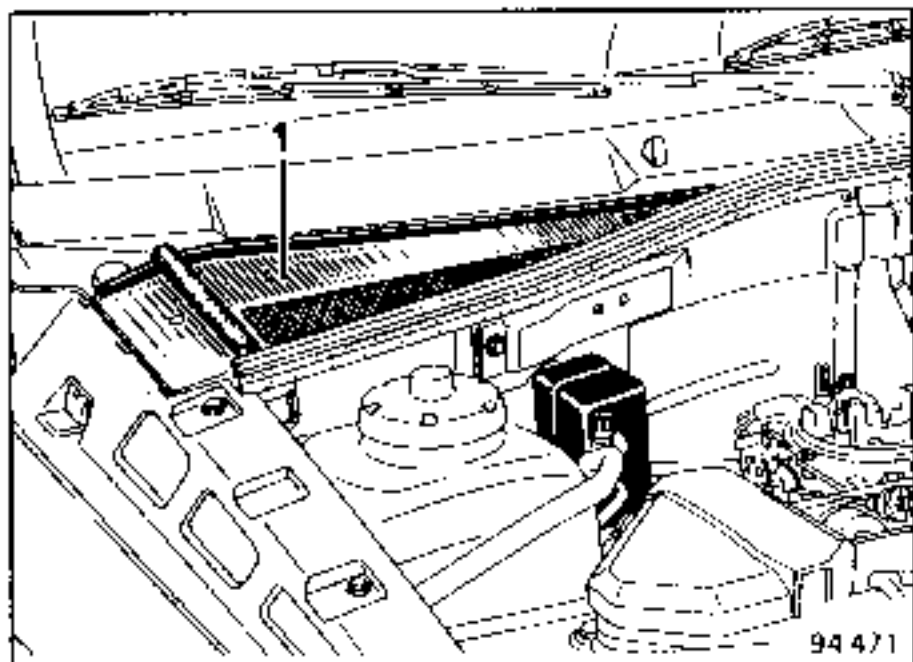
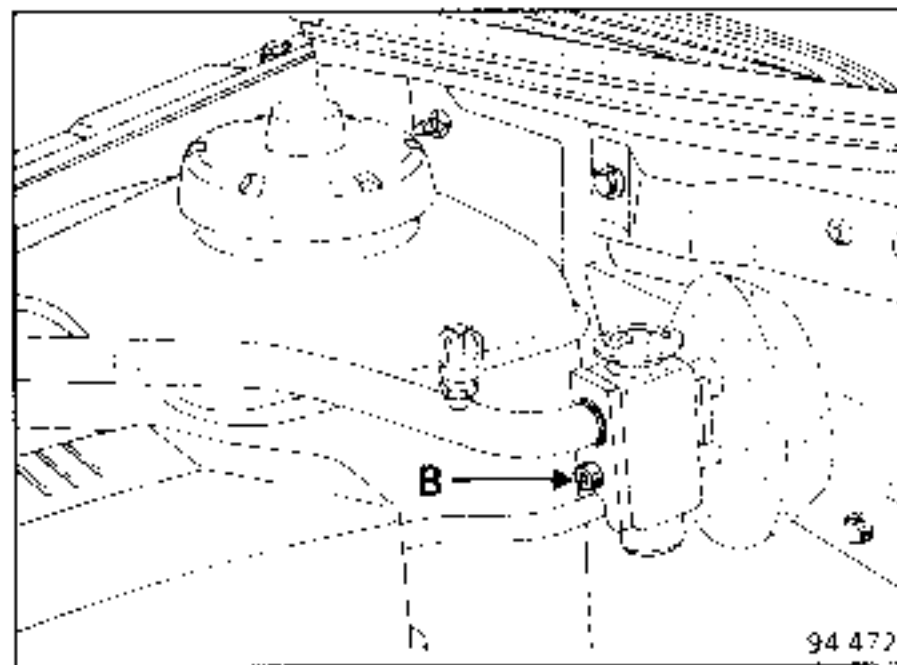
Drain the freon circuit using the charging unit. (See method described in the air conditioning manual)

Disconnect the pipes that connect the freon system to the expansion valve (screw B).

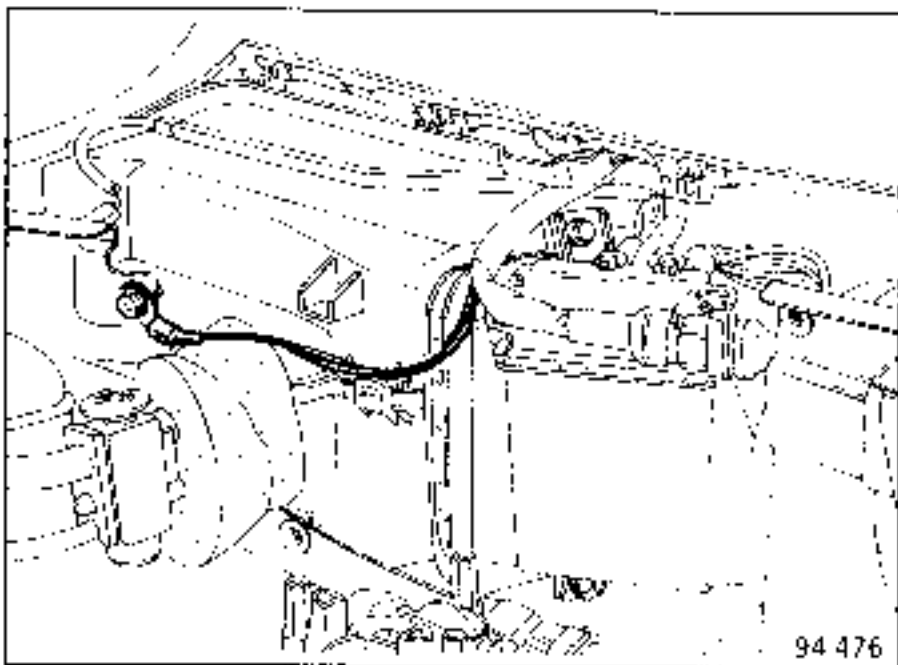
Retrieve the seals.

Remove :

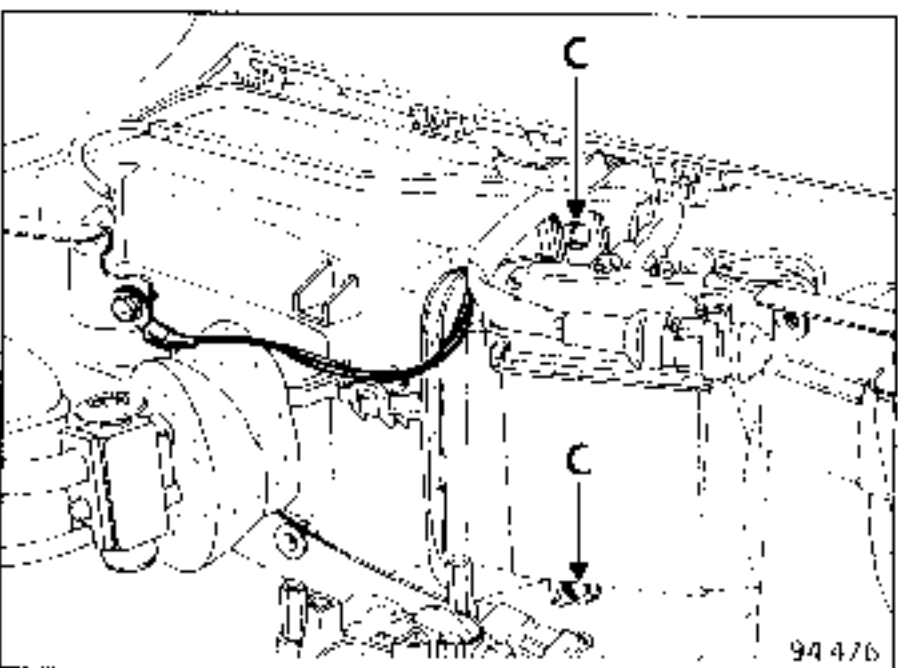
- the cover from the expansion valve (A)



Remove the earth wires



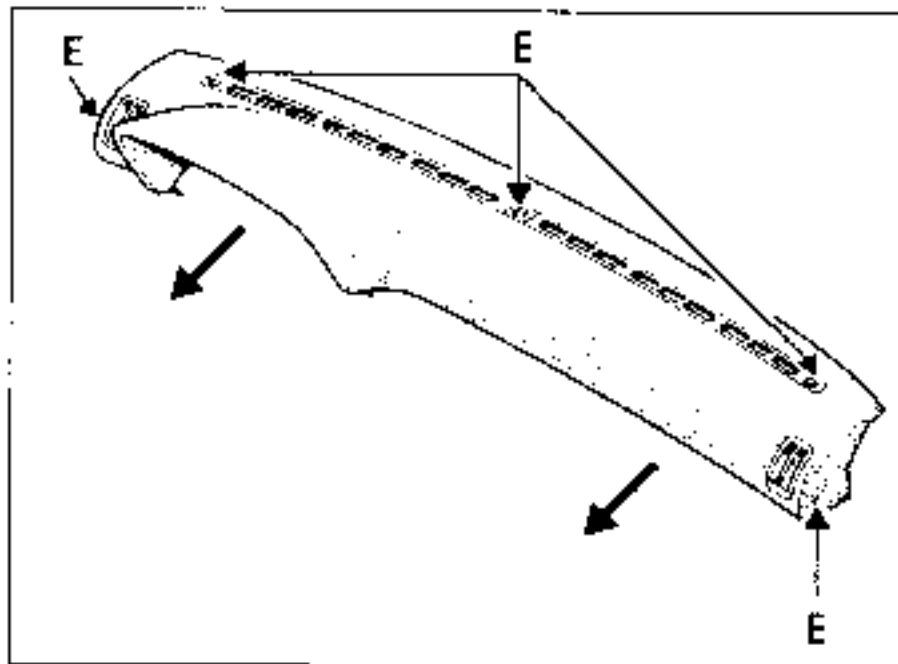
After removing the two securing screws (C) and the plastic clip, take out the intermediate unit



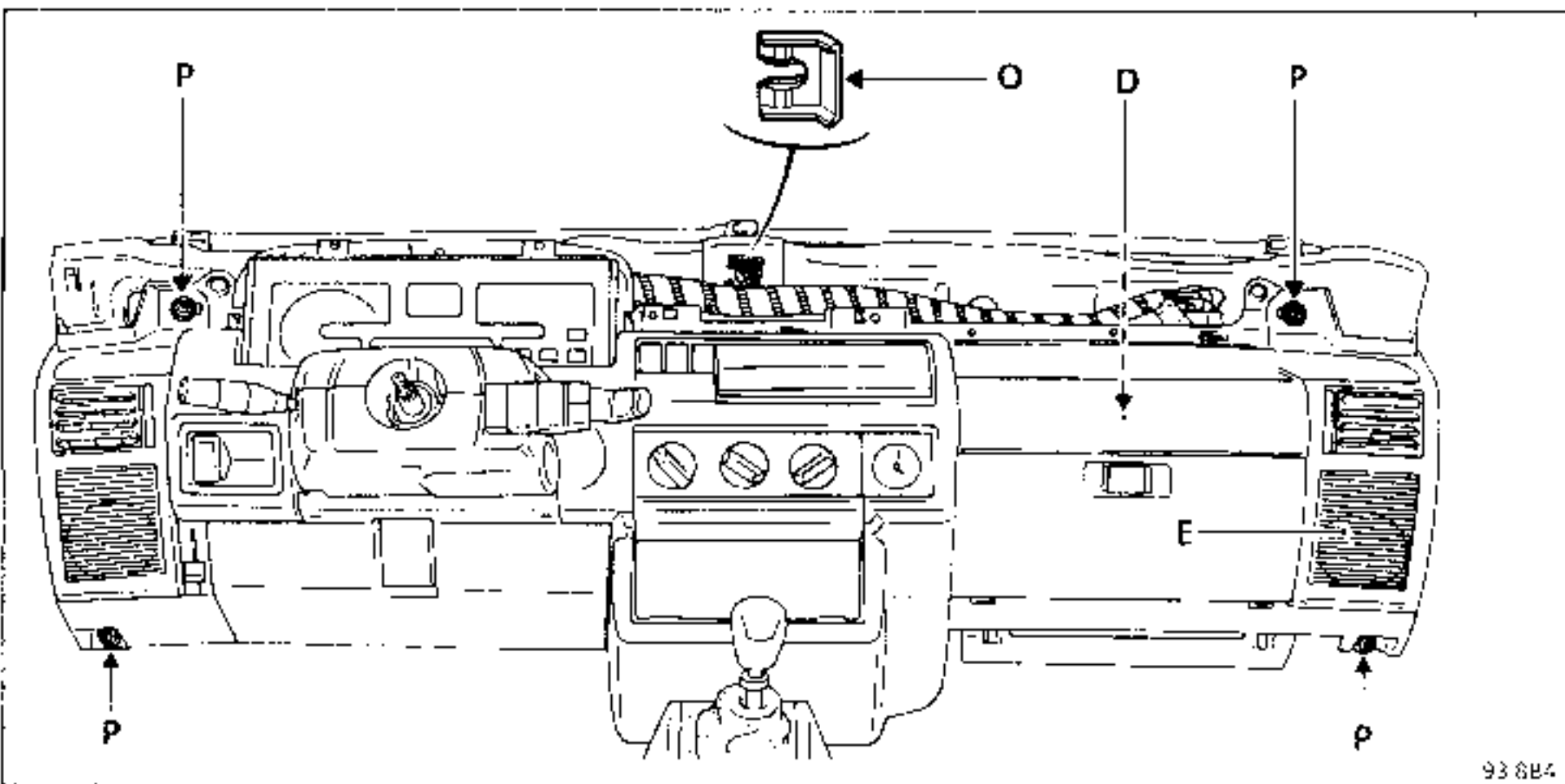
INSIDE THE VEHICLE

Remove the upper part of the dashboard - 5 screws (E).

Pull the dashboard rearwards to disconnect the assembly.



Remove the plastic clips (O) and the fastenings (P)



93 6B4

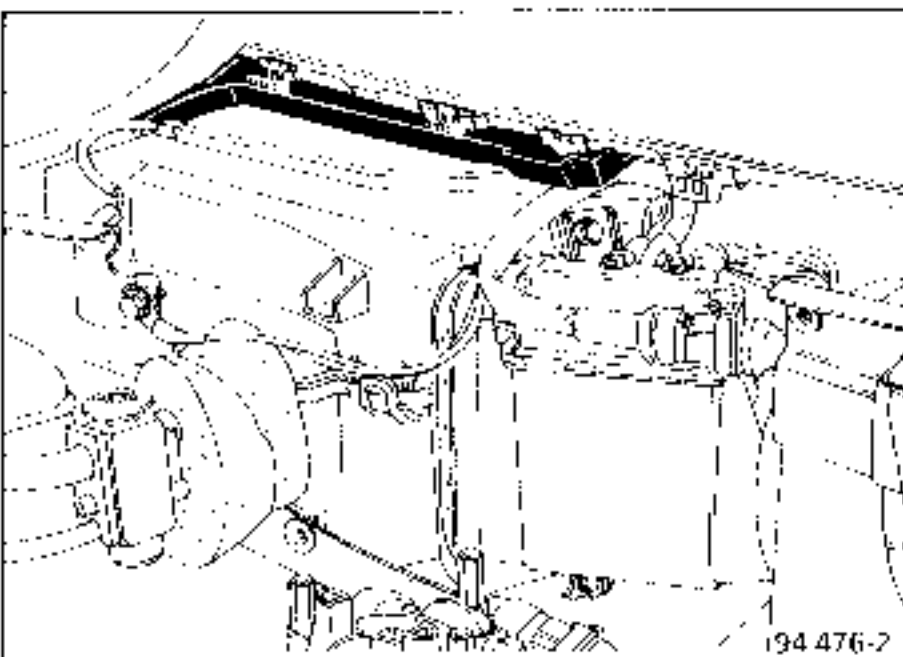
Pull the dashboard slightly rearwards to gain access to the nut that secures the evaporator unit to the scuttle (D).

Remove the screw (E) that secures the evaporator unit to the scuttle (This operation can be made easier by removing the righthand speaker grill)

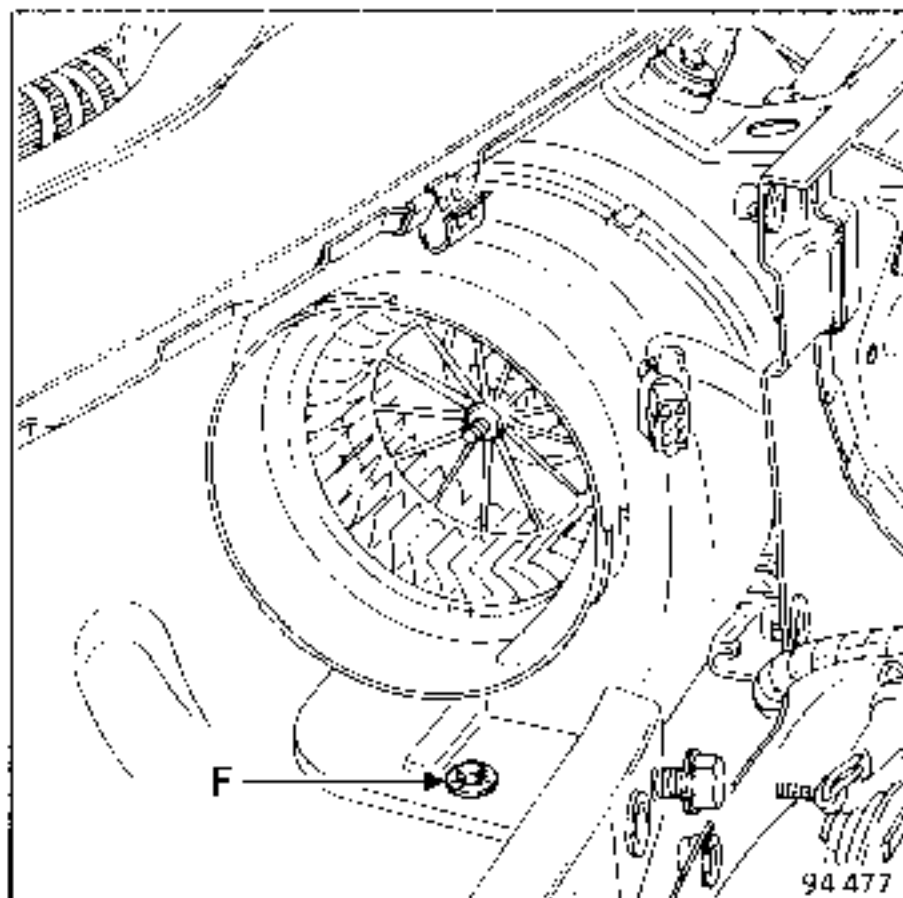
Remove :

- the windscreen channel

- remove the evaporator unit,
- remove the two screws (F) that secure the fan unit casing in place,
- remove the fan unit casing.



194 476-2



94 477

REFITTING

Refitting the unit represents no particular problem.

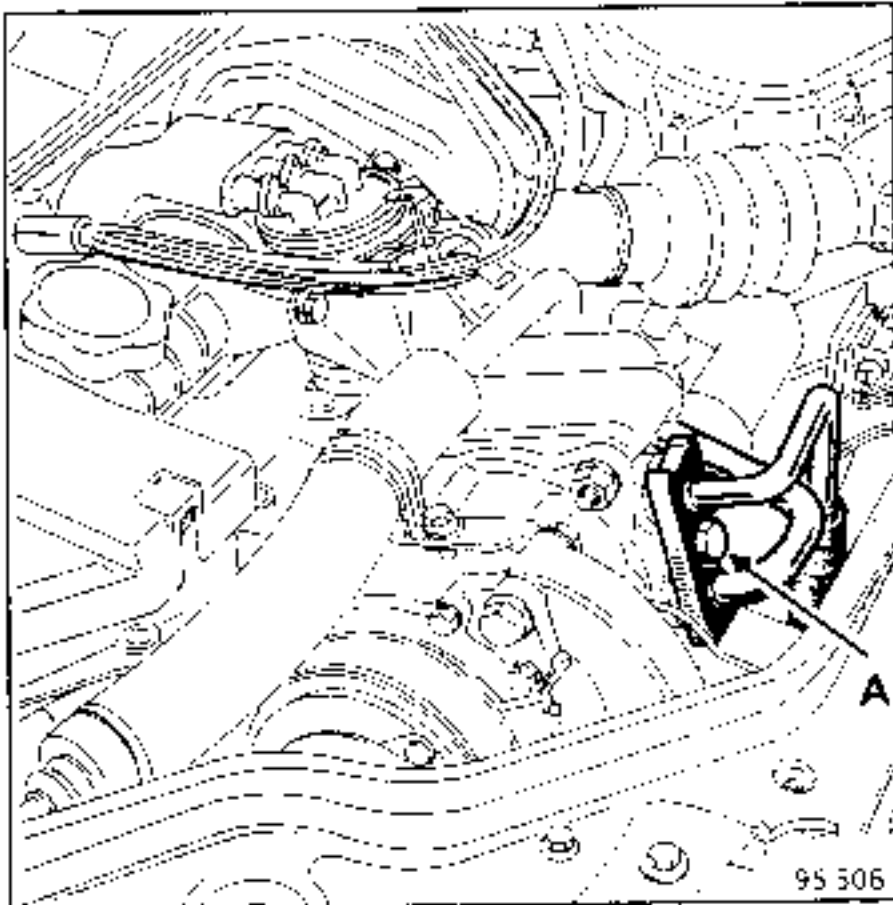
Replace all the foam seals with new ones.

Fill the freon circuit by means of the charging unit. (Follow the method described in the air conditioning manual).

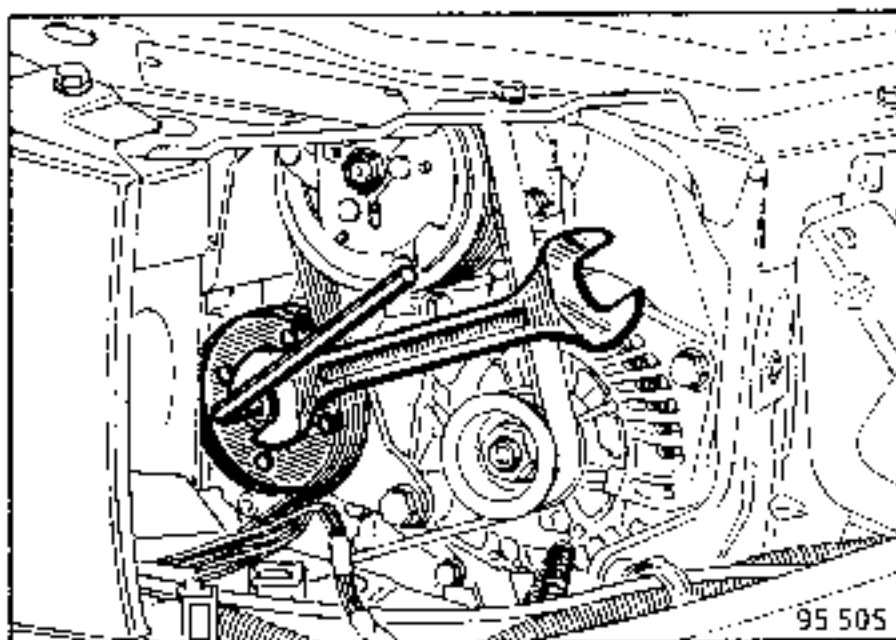
IMPORTANT : When replacing the evaporator, add an additional 30 cc of ELF RIMA 100 oil in the compressor (approximately 1/4 glass).

REPLACING

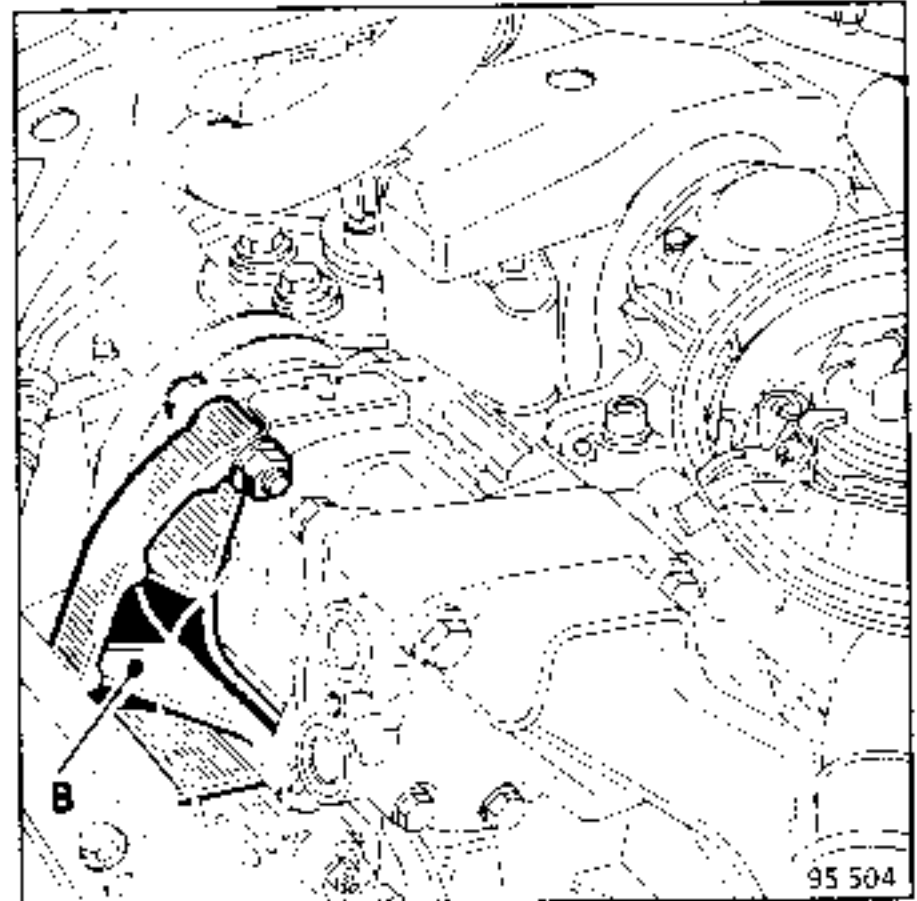
- Disconnect the battery
- Remove the bonnet.
- Drain the Freon circuit. (See method described in the "Air Conditioning" manual).
- Remove the screw (A) that secures the connecting pipes.



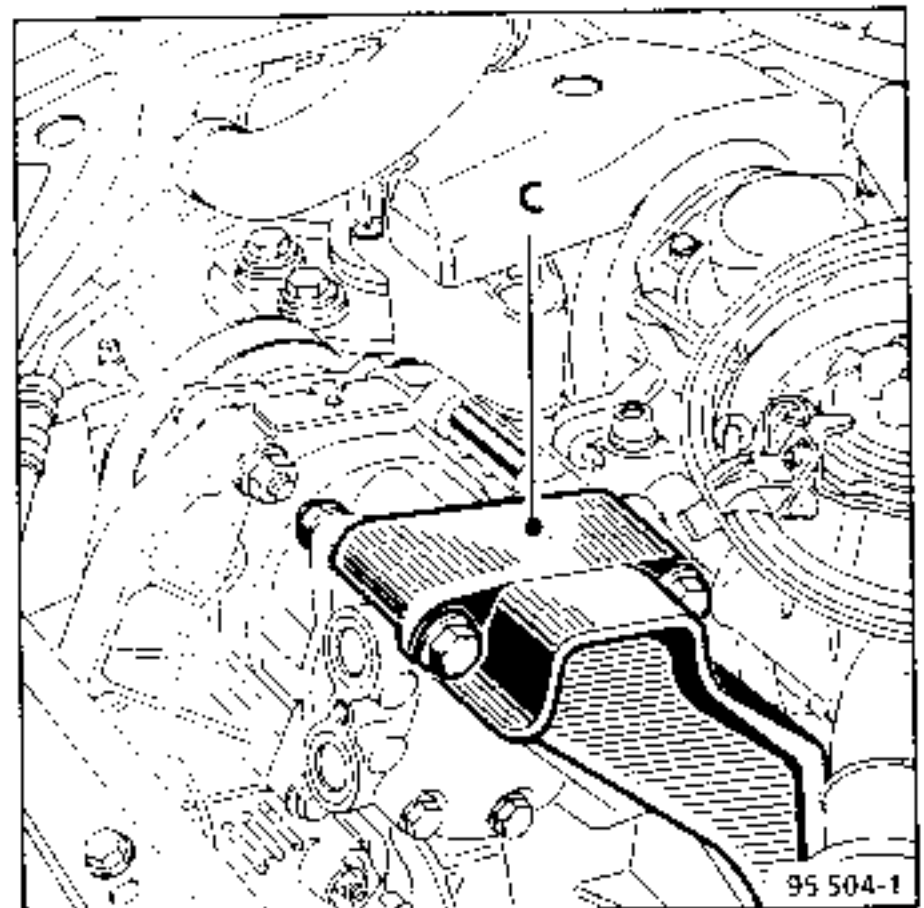
- Remove the righthand lamp unit
- Unscrew the hexagon socket head bolt for the tensioning roller (using an open ended spanner to hold the tensioning roller in place), and slacken off the drive belt.



- Remove the drive belt.
- Disconnect the compressor clutch power supply.
- Remove the compressor/alternator mounting (B).



- Remove the rear compressor mounting (C).



- Remove the lower compressor mounting bolt.
- Remove the compressor.

REFITTING

If the compressor is replaced by a new one, the new unit will be supplied full of oil. However, it is advisable to check this.

REPLACE THE PIPE SEALS WITH NEW ONES :

Tighten the pipe retaining screws (A) on the compressor to a torque of $3,5 \pm 0,5$ daN.m.

Fill the freon circuit using the charging unit. (See the method described in the "Air Conditioning" manual)

Check that lights are adjusted correctly.

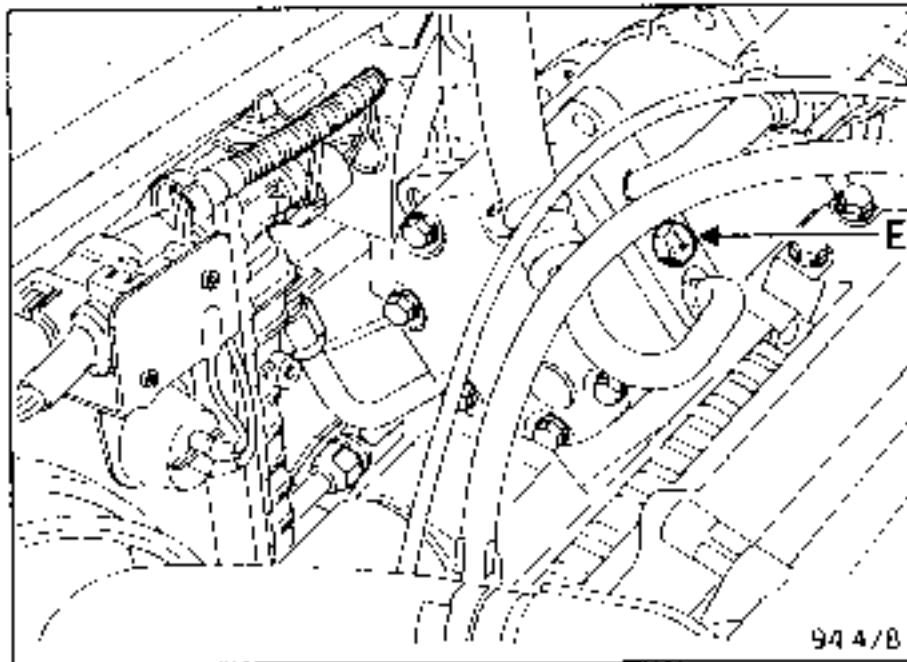
REPLACING

Disconnect the battery

Remove the bonnet.

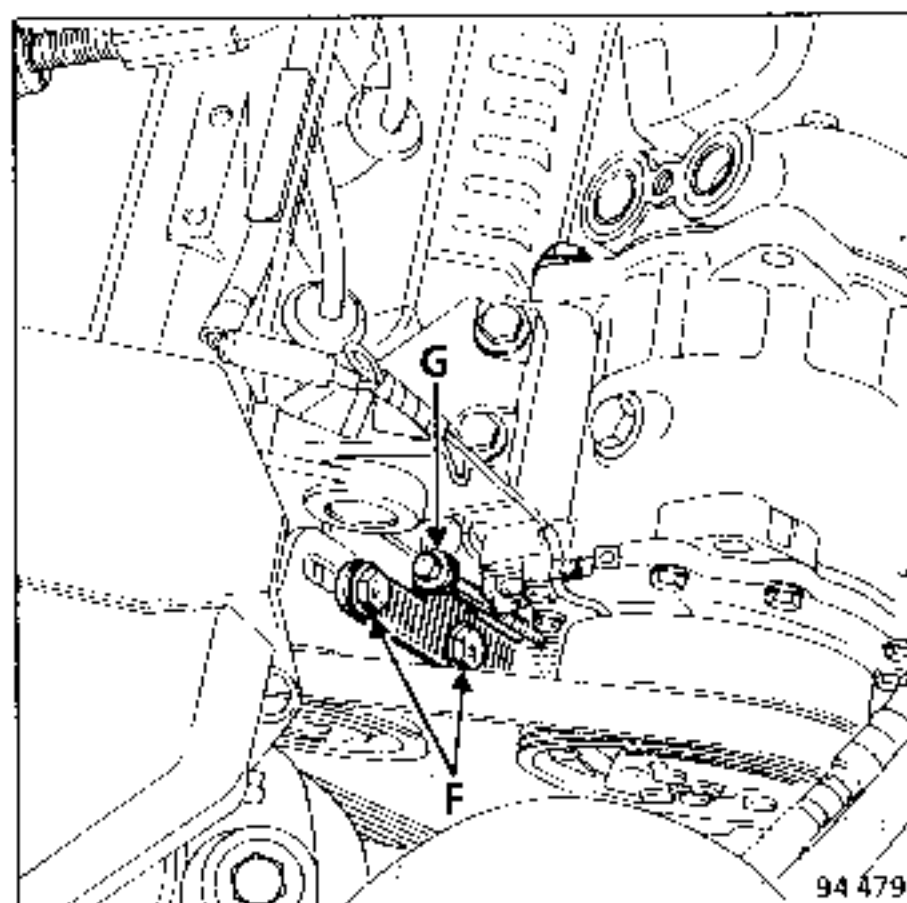
Drain the freon circuit. (See method described in the "Air Conditioning" manual).

Remove the screw (E) that retains the connecting pipes.



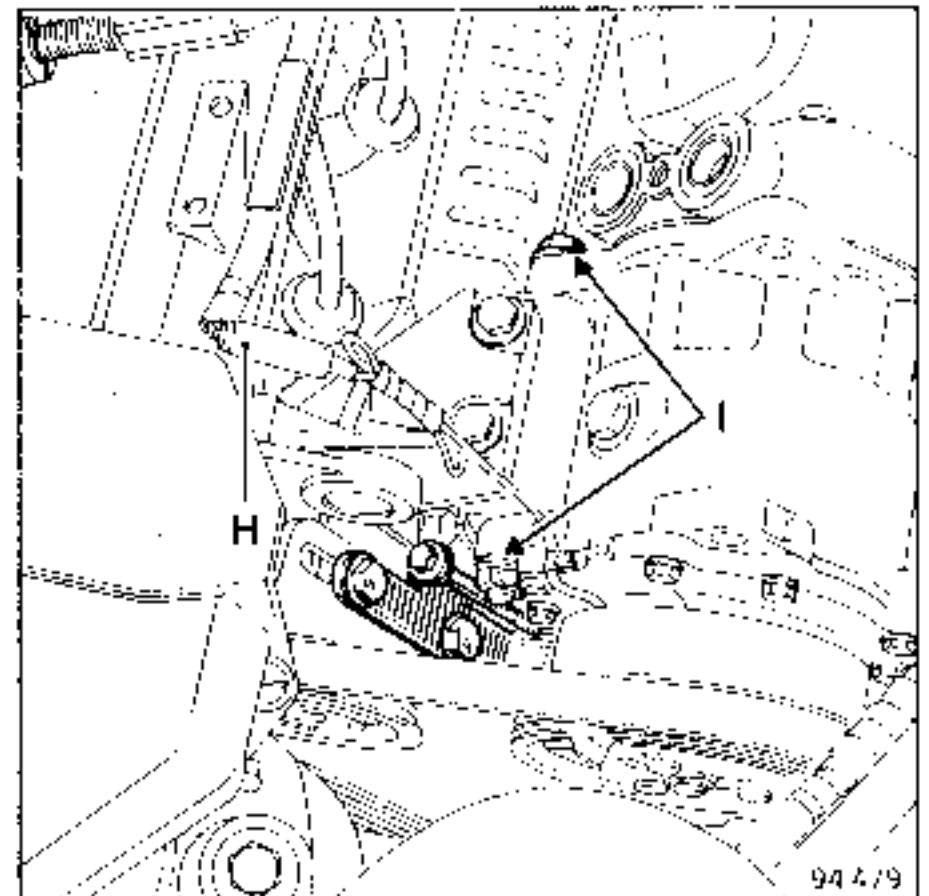
Slacken off the two screws (F) and slacken off the drive belt at the bolt (G).

Remove the drive belt.



Disconnect the compressor feed (H)

Remove the compressor upper securing bolts (I).



Remove the lower securing fixing.

Remove the compressor.

If the compressor is replaced with a new one, the new unit will be supplied full of oil. However, it is advisable to check this

Replace the pipe seals with new ones.

Tighten the pipe retaining screws (E) to a torque of

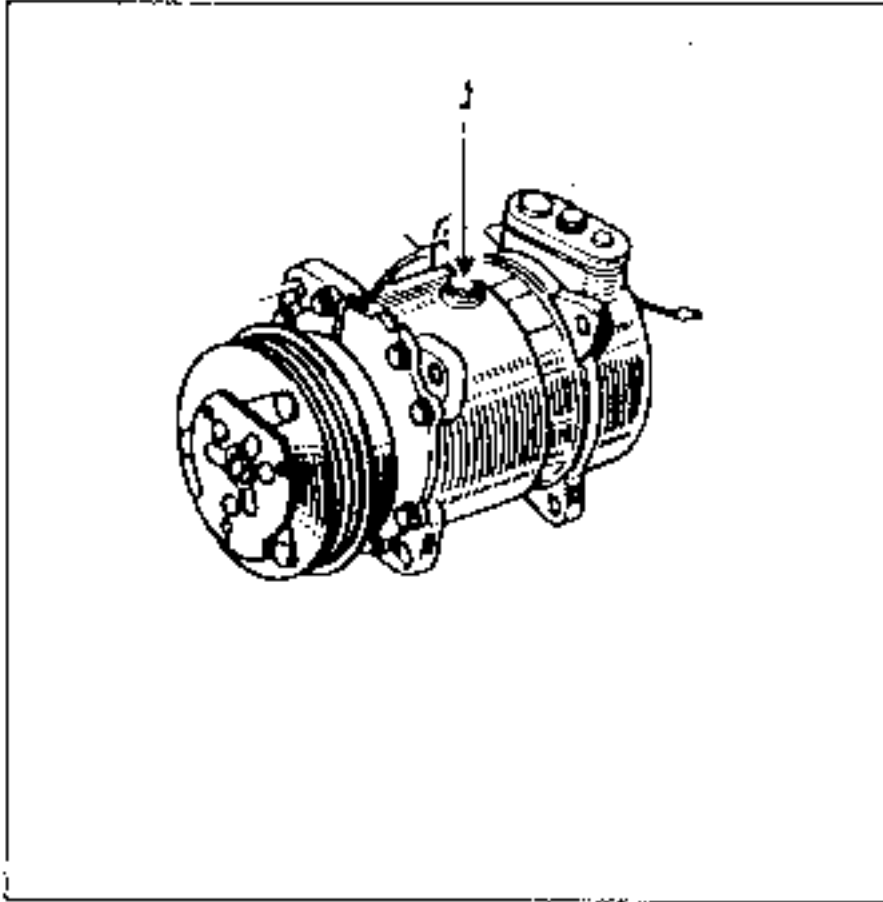
$3.5 \begin{matrix} +0.5 \\ 0 \end{matrix} \text{ daN.m.}$

Fill the freon circuit using the charging unit. (See the method described in the "Air Conditioning" manual)

OIL LEVEL

It is essential to remove the compressor from the vehicle.

Unscrew and remove the oil plug (J).



Turn the compressor over and allow the oil to run out of its housing (to remove as much oil as possible, turn the compressor by hand)

Refill the compressor by injecting 120 cc (in theory 15 cc of oil will remain in the compressor despite the fact that it has been drained) of **ELF RIMA 100** oil (approximately a glass full) into the unit

Refit the drain plug, ensuring that the sealing area and the seal are both clean (torque tighten the plug to 1 daN.m).

Refit the compressor

Refill the circuit with **Freon R12** (825 g \pm 25 g)

IMPORTANT : It is essential to top up the compressor oil level if a pipe has burst.

REPLACING

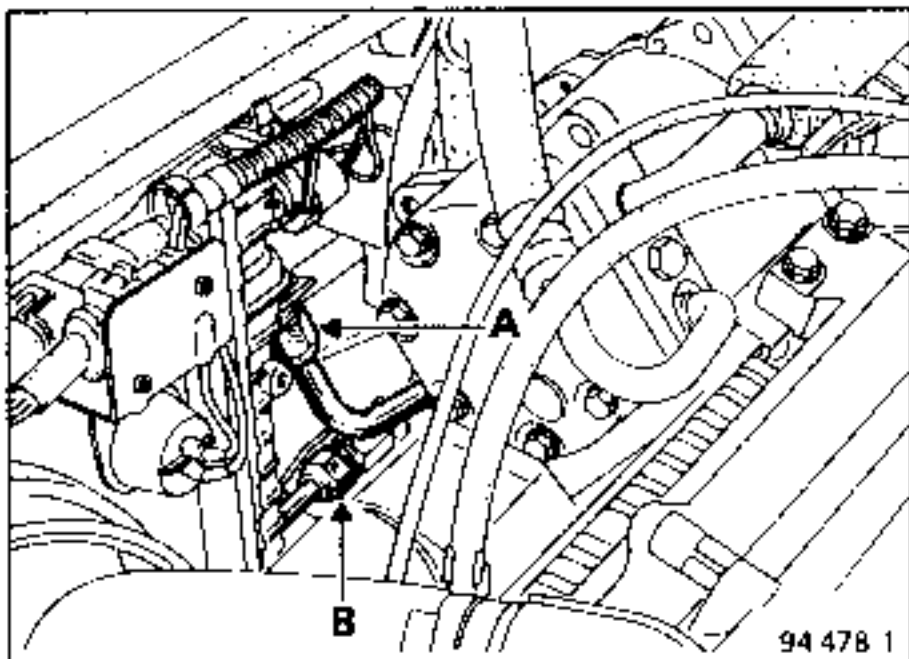
Disconnect the battery.

Remove the bonnet.

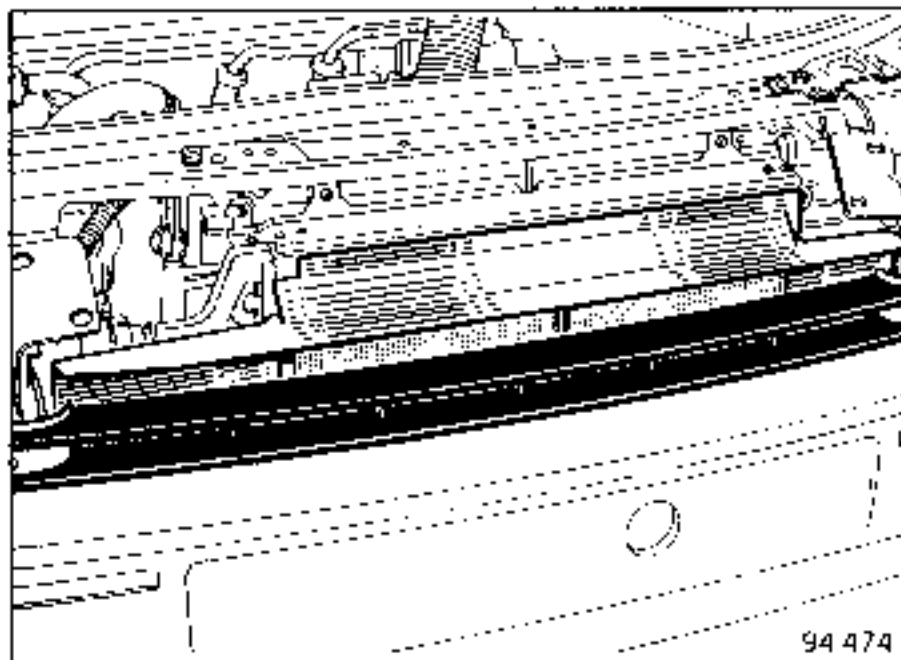
Drain the freon circuit. (See method described in the "Air Conditioning" manual).

Remove the compressor (See methods on pages 62-29, 62-30, 62-31)

Remove the freon pipes connecting the condenser (A) and the drier bottle (B).

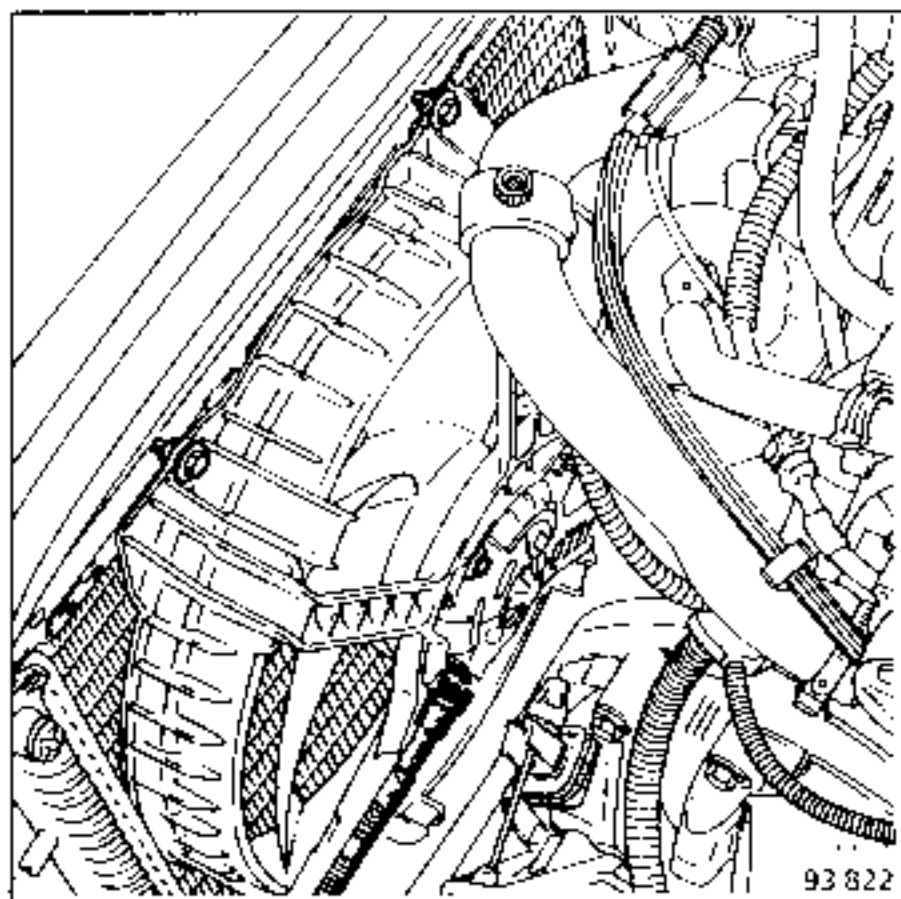


Remove the radiator grille and radiator air intake casing.



Remove the radiator upper fastenings.

Remove the two bolts that secure the fan unit to the radiator

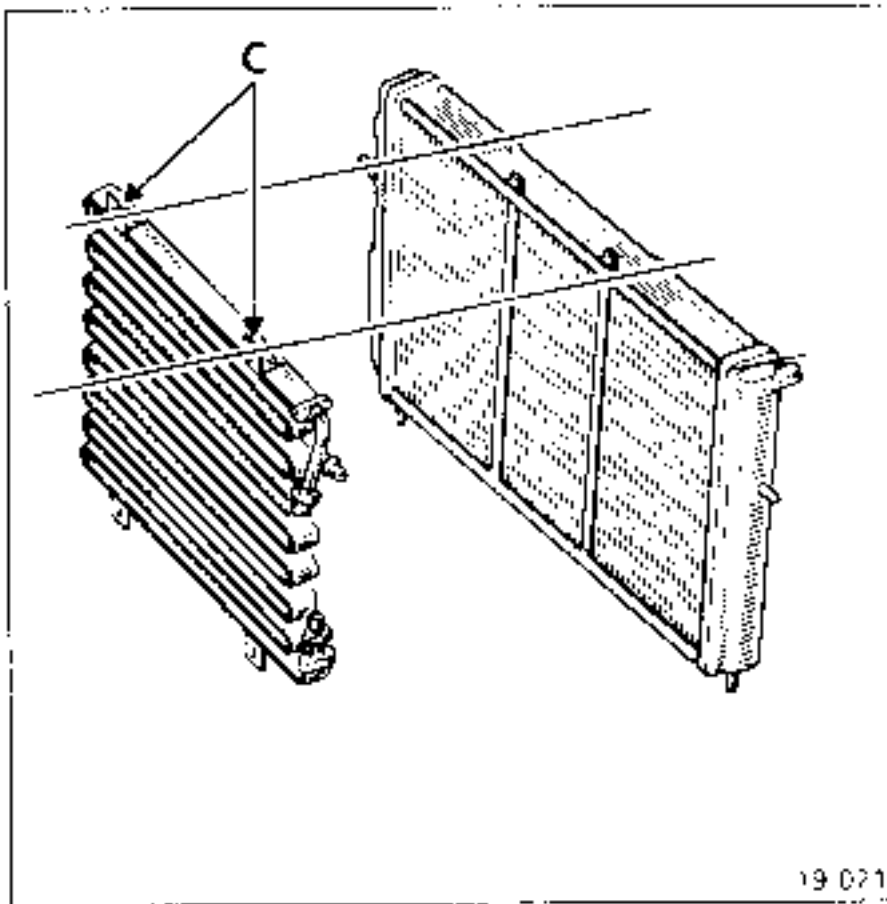


Disconnect the fan unit feed connector and free this in an upward direction.

Disconnect the radiator hoses

Take out the radiator - condenser assembly in an upward direction.

Remove the condenser (screws C)



Refitting the assembly presents no particular difficulty, except when connecting the tubes to the condenser. Do not forget to oil and retain the tubes when tightening the unions with an open-ended spanner. Replace the pipe seals with new ones.

Refit all the components previously removed

Fill the engine cooling system (See corresponding section).

Fill the freon circuit using the charging unit. (See method described in the "Air Conditioning" manual).

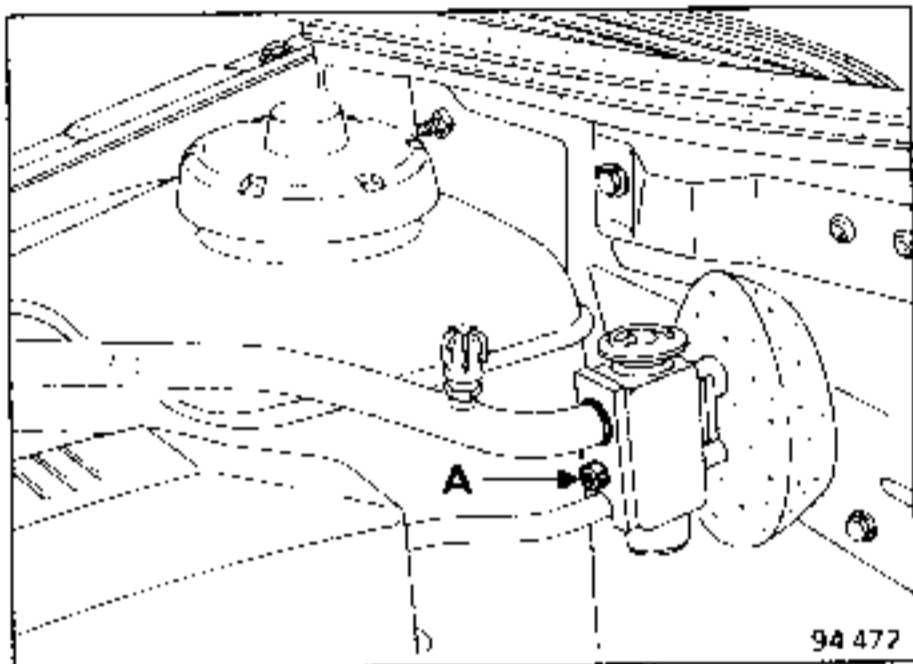
IMPORTANT : When replacing the condenser, pour an additional quantity of approximately 30 cm³ of ELF RIMA 100 oil into the compressor. (approximately 1/4 of a glass).

REPLACING

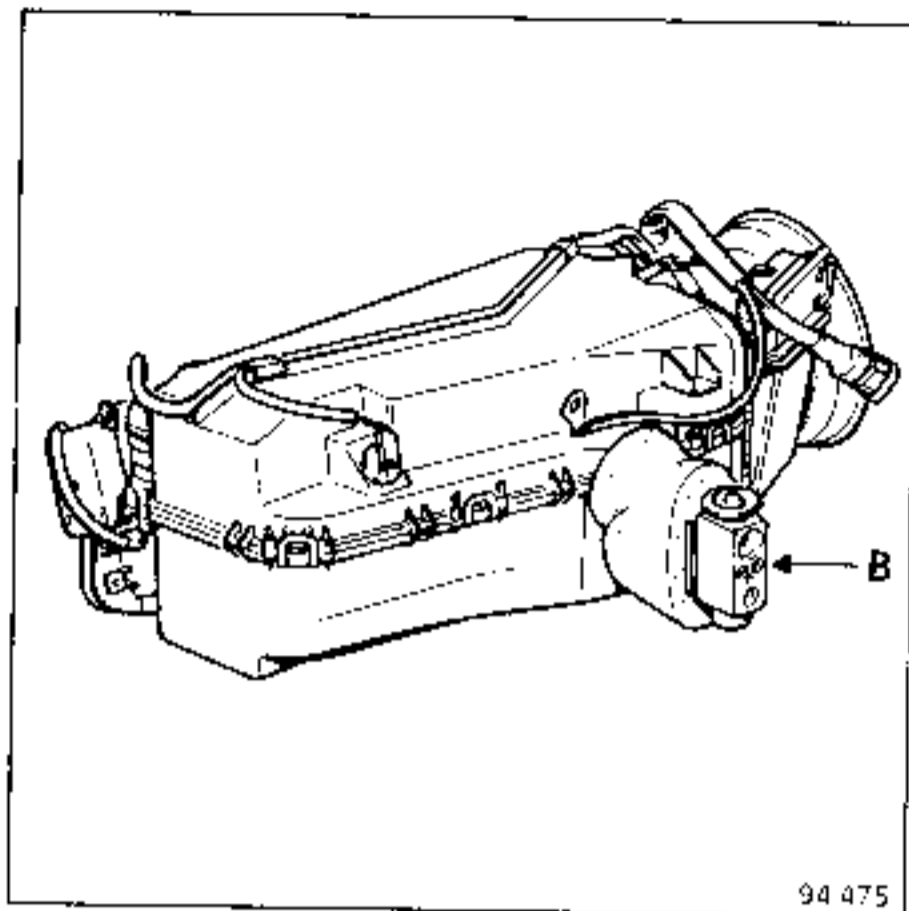
Drain the freon circuit using the charging unit. (See method described in the "Air Conditioning" manual).

Remove :

- screw (A) that retains the connecting pipes,



Remove the two screws (B) that secure the expansion valve to the evaporator.



When refitting, replace the pipe seals with new ones.

Tightening torques for bolts (A) and (B)
= 1 daN.m.

Fill the freon circuit using the charging unit. (See the method described in the "Air Conditioning" manual).

REPLACING

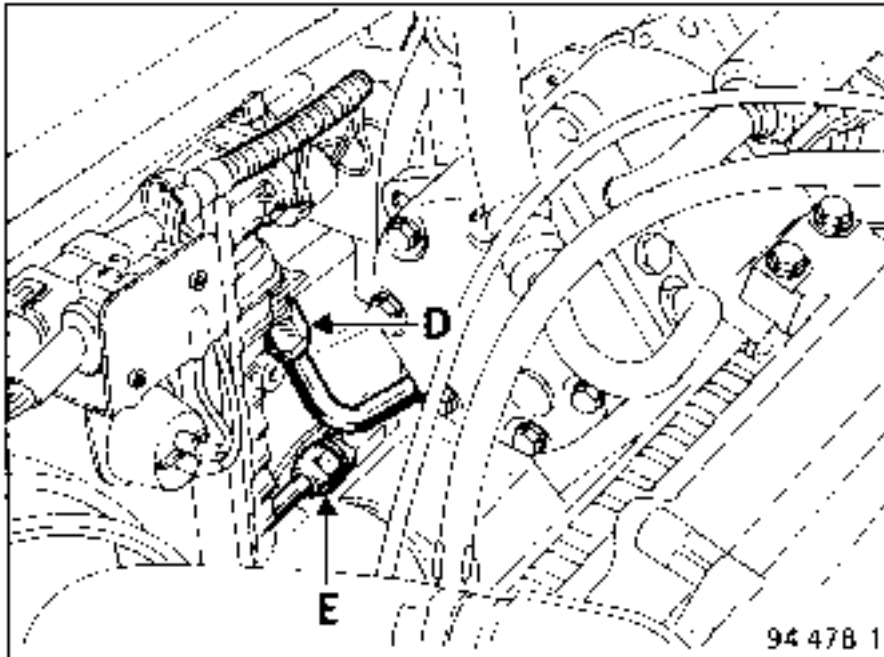
Drain the freon circuit using the charging unit.
(See method described in the "Air Conditioning"
manual).

Disconnect the connecting pipe (D) at the
condenser end.

Disconnect the freon input pipe (E) at the bottle.

Take out the bottle in an upwards direction

Disconnect the freon output pipe



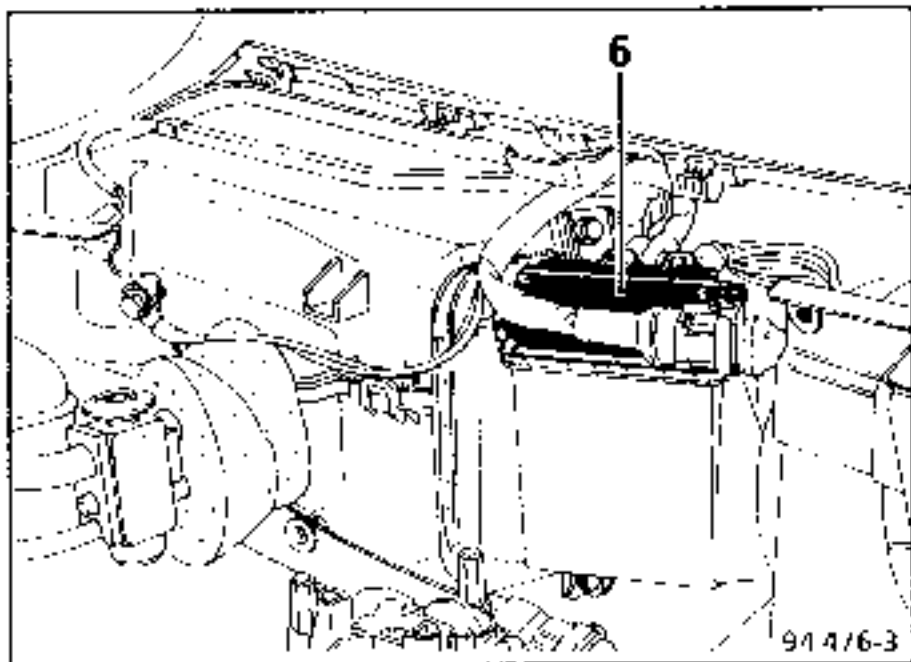
When refitting, oil the threads with compressor
oil and ensure that the threads are in good
condition.

Replace the pipe seals with new ones .

ELECTRONIC MODULE (6)

The electronic module is secured to the air conditioning unit body, in the plenum chamber, by two screws.

To gain access to it, remove the external air intake half grille.

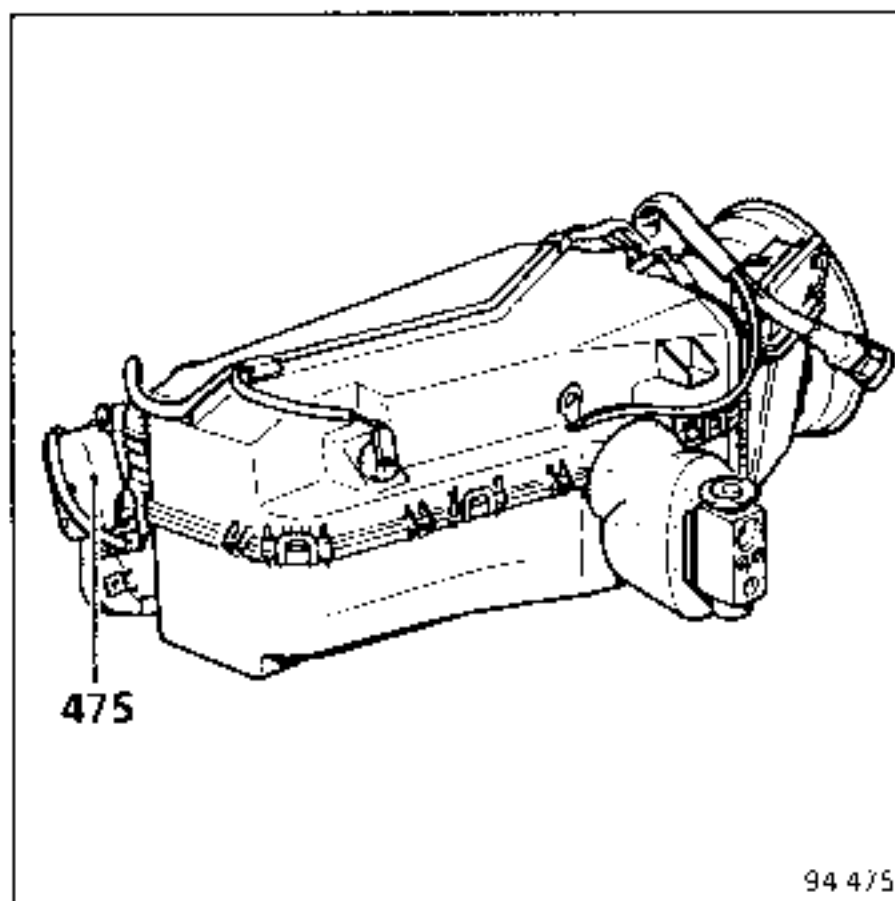


RECYCLING MOTOR (475)

To gain access to the recycling motor, the blower unit must first be removed. (See corresponding section).

Remove the two securing screws on the recycling casing.

The motor has no particular angular position and requires no adjustment after refitting

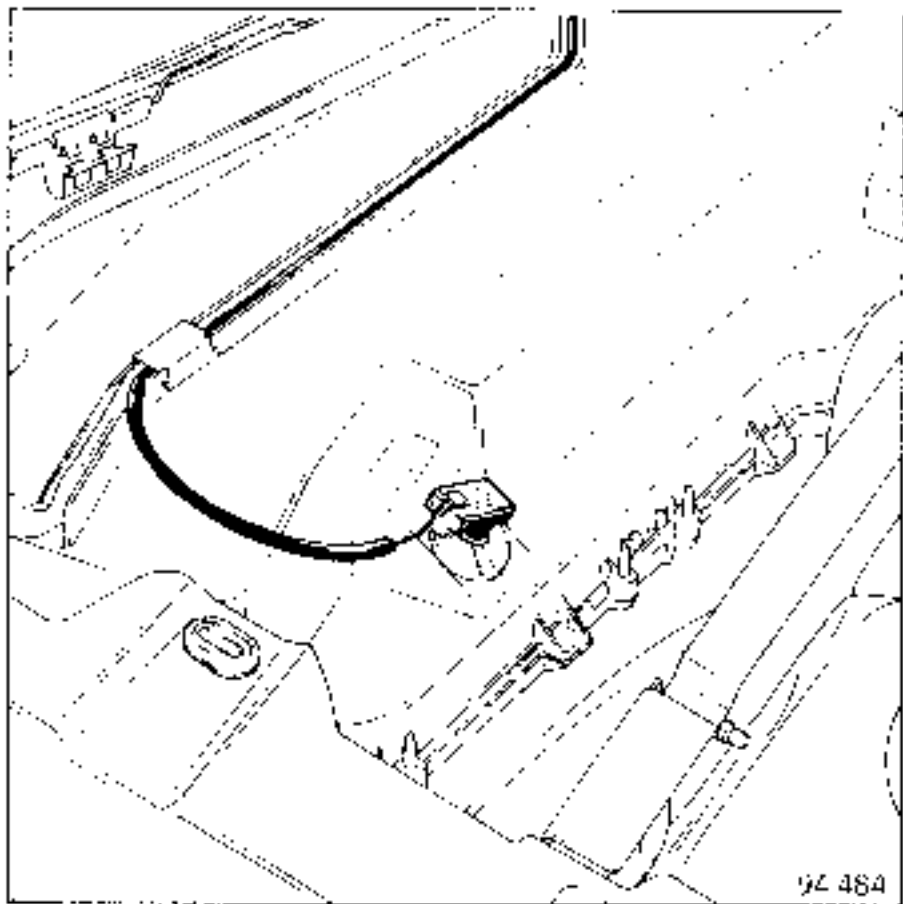


EVAPORATOR SENSOR (408)

The temperature sensor is secured to the air conditioning unit, in the plenum chamber

To gain access to it, remove the external air intake grille

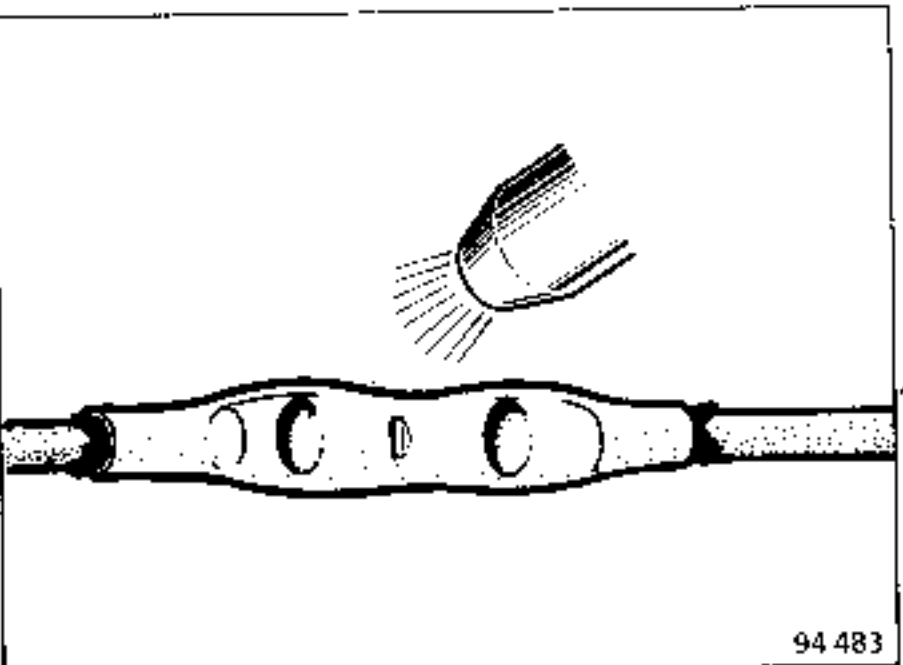
The new sensor is supplied as a kit with heat shrink sleeves.



Remove the sensor from its location and cut the wires approximately 15 cm from it..

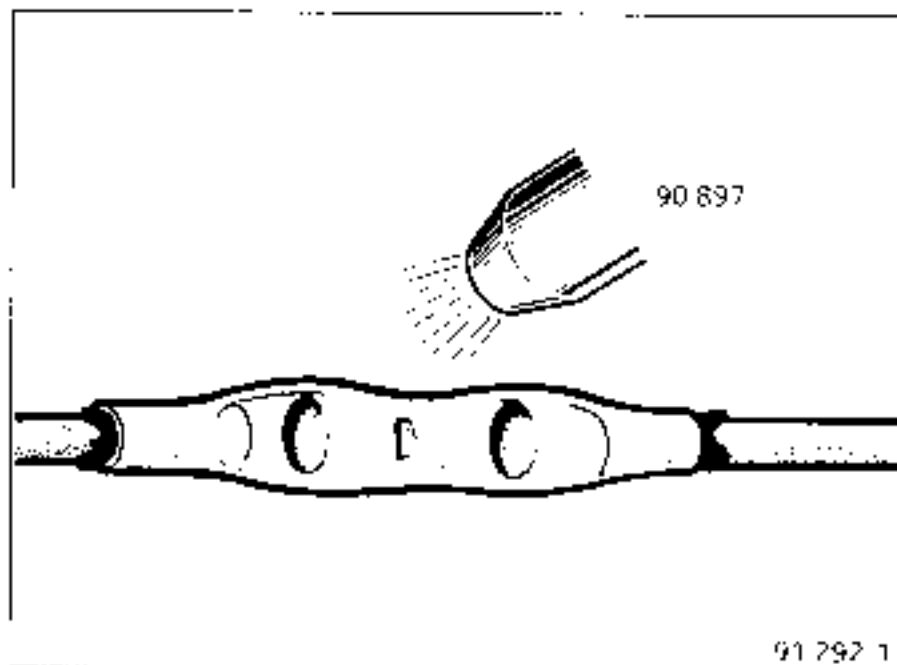
Strip 5 mm of insulation wire off the end of each wire (at the blower unit and sensor end)

Pass the large heat shrink sleeve over both wires and fit the small sleeves to each wire



Solder the wires together to form a joint. (It is not recommended that junction connectors be used, the connections can be made to either of the wires - it has no importance).

Shrink the three sleeves in place using a hot air gun.



Relit the sensor in its location.

Sensor test values

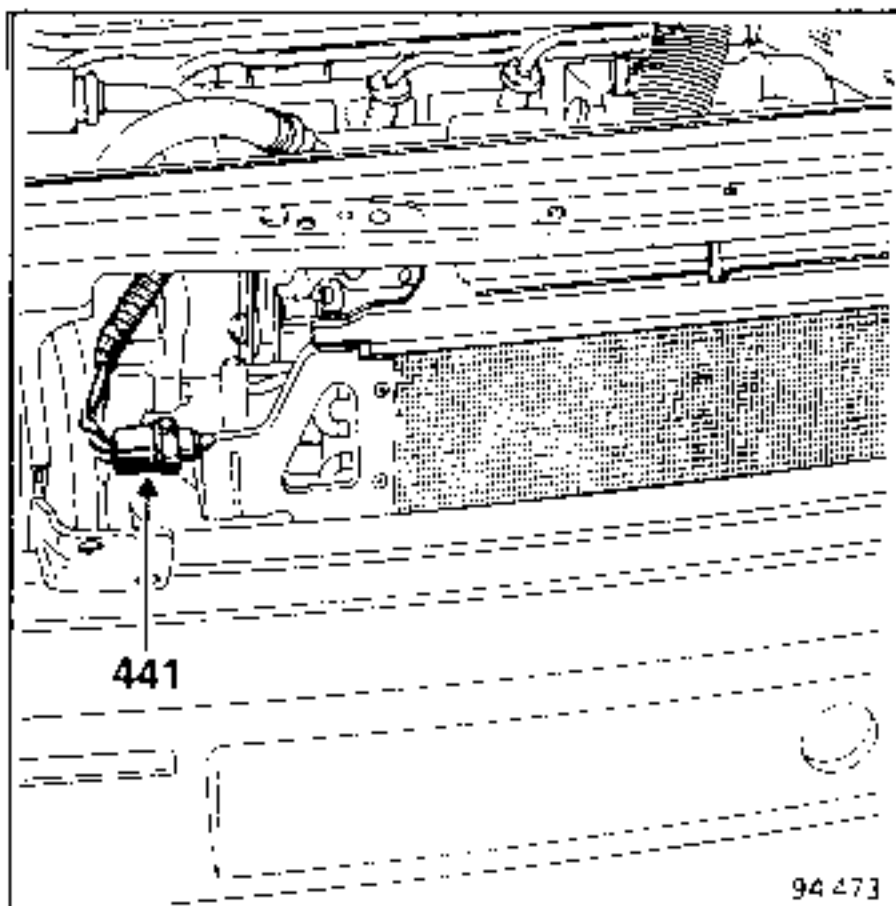
0°C	=	8500 to 9500 Ω
5°C	=	6500 to 7500 Ω
10°C	=	5000 to 6000 Ω
15°C	=	3700 to 4700 Ω
20°C	=	2800 to 3800 Ω
25°C	=	2200 to 3200 Ω

The test is carried out with the sensor in position, the fan unit running at full speed, knob (D) on 0, knob (C) in the demisting position, between tracks A2 and C2 on the electronic module (6) grey connector

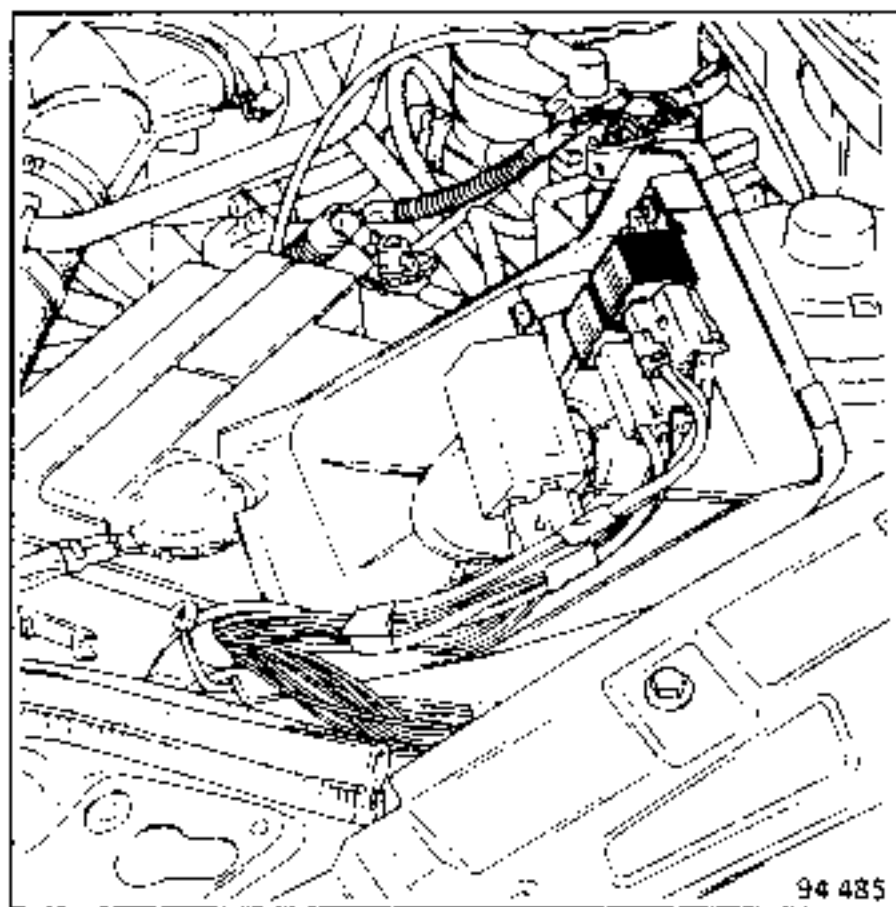
THREE-FUNCTION PRESSOSTAT (411)

This is mounted on the condenser

It can be worked on without draining the freon system. It is secured to a "SKRADER" valve.



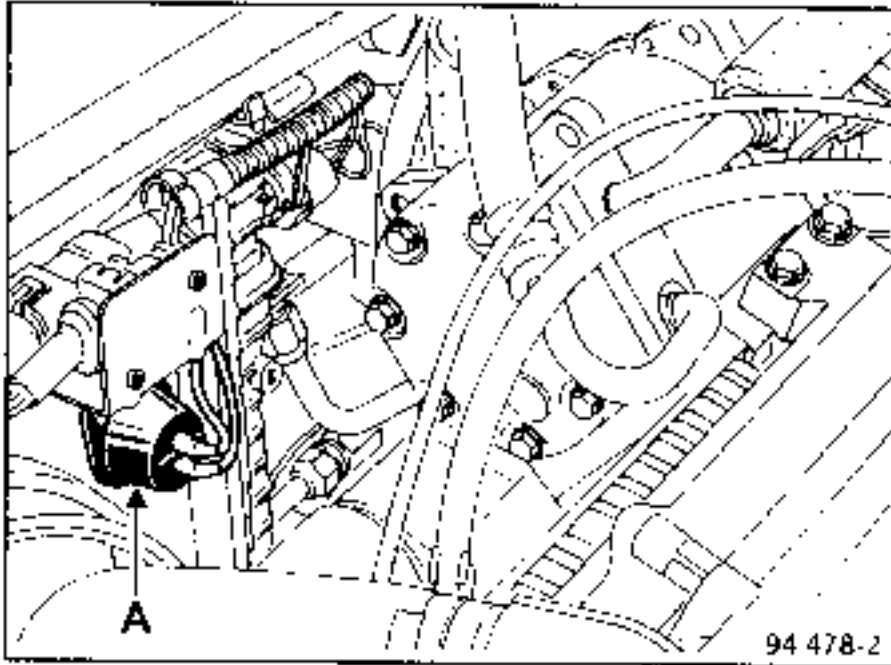
1st SPEED RELAY (335) AND 2ND SPEED RELAY (336) FOR THE COOLING FAN UNIT (262)



As soon as the air conditioning is switched on, power is supplied to relay coil 335. The circuit also contains a 0.28 Ω resistance which reduced the strength of the current in the circuit and therefore causes the fan unit to run at its minimum speed.

If the freon circuit becomes over-pressurised or the motor overheats, the relay coil 336 is supplied with power. The current in this relay coil supplies power directly to the cooling fan which runs at maximum speed.

0.28 Ω RESISTANCE (A)



Disconnect the connector to check the strength of the resistance (A).