

MEGANE

6 Air conditioning

62C MANUAL AIR CONDITIONING

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V4

Edition Anglaise

"The repair procedures given by the manufacturer in this document are based on the technical specifications current when it was prepared.

The procedures may be modified as a result of changes introduced by the manufacturer in the production of the various component units and accessories from which his vehicles are constructed."

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1. SCOPE OF THIS DOCUMENT

This document describes the fault finding procedures applicable to all manual heating and ventilation systems with the following specifications:

Vehicle(s): MEGANE Function affected: heating and ventilation system

2. PREREQUISITES FOR FAULT FINDING

Standard documentation:

Fault finding procedures (this manual):

- Paper (Workshop Repair Manual or Technical Note), Dialogys.

Wiring Diagrams:

- Visu-Diagram (CD-ROM), paper.

Special tooling required:

SPECIAL TOOLING REQUIRED
Multimeter and oscilloscope

3. REMINDERS

This heating and ventilation system does not have a computer and therefore cannot have fault finding with the diagnostic tool. The heating and ventilation function is divided among the UCH, Protection and Switching Unit, and the injection.

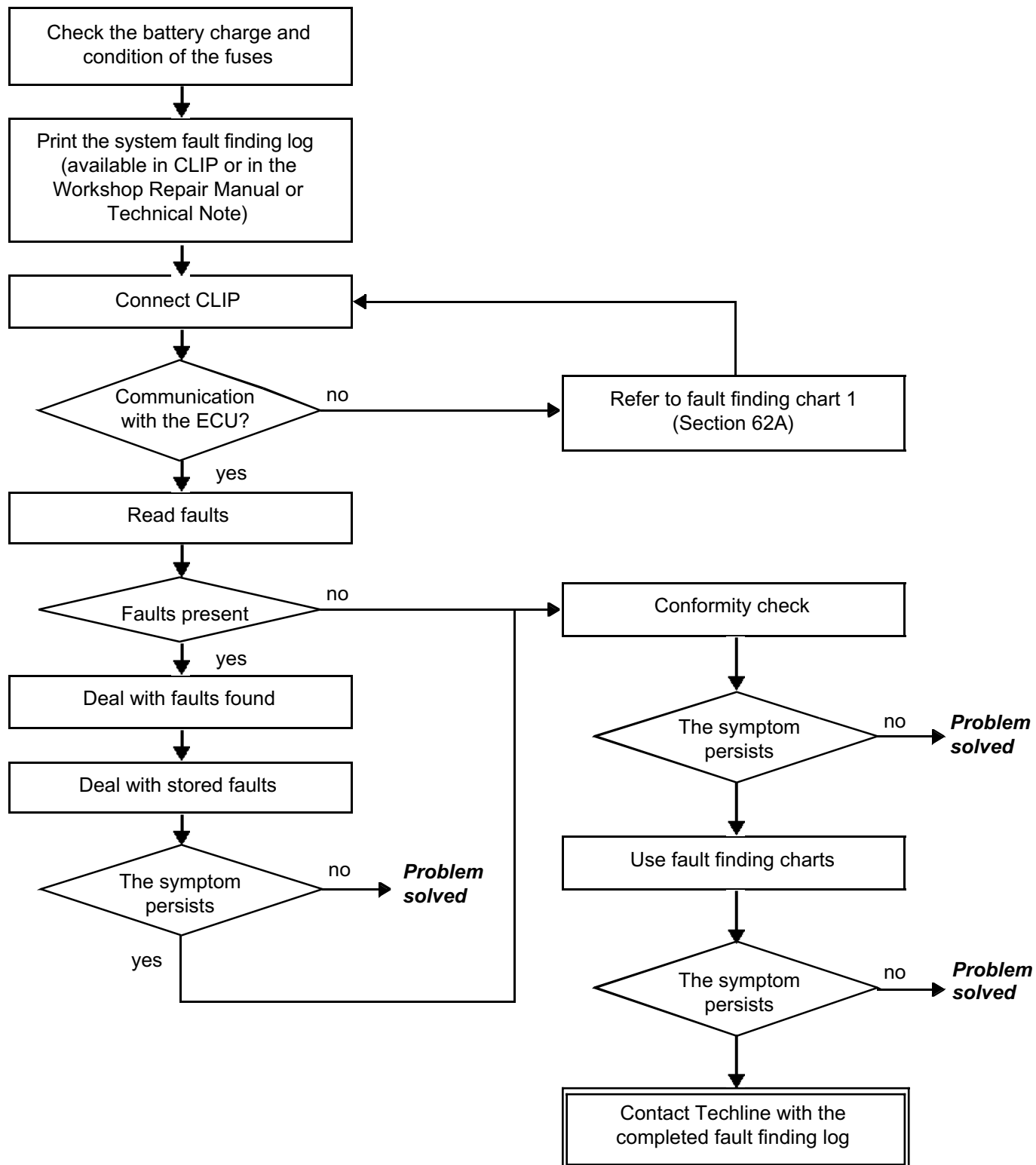
This note only covers diagnostics based on customer complaints. See **Section 62A** and the fault finding of computers associated with heating and ventilation to complete manual heating and ventilation system fault finding.

Customer complaints - Fault finding chart

If the diagnostic tool check is correct, but the customer complaint persists, it should be dealt with according to the customer complaint.

A synopsis of the general procedure to follow is provided on the following page in the form of a logic flow chart.
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4. FAULT FINDING PROCEDURE





WARNING:

5. FAULT FINDING LOG

WARNING: *A full fault finding procedure must be carried out for all faults on a complex system using suitable tools. The FAULT FINDING LOG, which should be completed during the fault finding procedure, ensures a record is kept of the procedure carried out. It is an essential item when discussing the fault with the constructor.*

IT IS THEREFORE MANDATORY TO FILL OUT A FAULT FINDING SHEET EACH TIME FAULT FINDING IS DONE.

You will always be asked for this report:

- When requesting technical assistance from the Techline.
- For certification requests when replacing parts that must be certified.
- Which must be attached to monitored parts for which reimbursement is requested. It is therefore used to decide whether a reimbursement will be made under warranty and leads to improved analysis of the removed parts.

6. SAFETY INSTRUCTIONS

All work on components requires obeying safety rules to prevent physical damage or human injury:

- Make sure the battery is properly charged to avoid damaging the computers with a low charge.
- Do not smoke.
- Use the proper tools.

System operation

The manual heating and ventilation system does not have a computer. It consists solely of a control panel from which the compressor (controlled by the Protection and Switching Unit and injection), the passenger compartment heating resistors (controlled by the UCH with permission from the Protection and Switching Unit and injection) and rear de-icer (managed by the Protection and Switching Unit) are started as explained in the synopsis of heating and ventilation system operation in **Section 62A**.

The panel, by means of cables, also controls the air distribution flaps, air distribution and recycling, as well as fan assembly speed through a connecting wire and resistor unit.

Manual heating and ventilation system control panel track allocation

Control panel track	Allocation	Sensor or actuator track
A1	Earth	
A2	Passenger compartment ventilation control speed 1	Resistor unit track 1 connector A
A3	Passenger compartment ventilation control speed 2	Resistor unit track 2 connector A
A4	Passenger compartment ventilation control speed 3	Resistor unit track 3 connector A
A5	Passenger compartment ventilation control speed 4	Resistor unit track 4 connector A
A6	Not used	
B1	Passenger compartment speed signal 0	UCH
B2	+ 12 V side lights	Protection and Switching Unit
B3	Rear screen de-icer operation request	UCH
B4	Rear screen de-icing control indicator light	UCH
B5	Earth	
B6	Air conditioning control indicator light	UCH
B7	Air conditioning operation request	UCH
B8	+ 12 V accessories	Fuse and Relay box
B9	Not used	

FAULT FINDING LOG

System: Air conditioning

Page 1 / 2

List of monitored parts: **Computer**

● Administrative identification

Date:

				2	0		
--	--	--	--	---	---	--	--

Sheet completed by

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VIN

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Engine

--	--	--	--	--	--

Diagnostic tool

	CLIP
--	------

Version

--	--	--

● Customer complaint

	1127	No warm air
--	------	-------------

	1129	Faulty air distribution
--	------	-------------------------

	1130	Incorrect temperature setting
--	------	-------------------------------

	1128	No cool air
--	------	-------------

	1125	Heating/air conditioning: ventilation
--	------	--

	1182	Heating/air conditioning: demisting
--	------	--

Other

Your comments

● Conditions under which the customer complaint occurs

	011	When switched on
--	-----	------------------

	005	While driving
--	-----	---------------

	004	Intermittently
--	-----	----------------

	010	Gradual deterioration
--	-----	--------------------------

	012	When the air conditioning is switched on
--	-----	---

	009	Sudden breakdown
--	-----	------------------

Other

Your comments

● Documentation used in fault finding

Fault finding procedure	
Type of fault finding manual:	Workshop Repair Manual <input type="checkbox"/> Technical Note <input type="checkbox"/> Assisted fault finding <input type="checkbox"/>
Fault Finding Manual No.:	
Wiring diagram used	
Wiring Diagram Technical Note No.:	
Other documentation	
Title and/or part no.:	



RENAULT

FD 04
Fault finding log

FAULT FINDING LOG

System: Air conditioning

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● Identification of the computer and system parts replaced

Part 1 part no.	
Part 2 part no.	
Part 3 part no.	
Part 4 part no.	
Part 5 part no.	

To be read with the diagnostic tool (Identification screen):

Computer part no.	
Supplier no.	
Program no.	
Software version	
Calibration no.	
VDIAG	

● Faults found with the diagnostic tool

Fault no.	Present	Stored	Fault title	Specification

● Conditions when fault occurs

State or parameter no.	Name of parameter	Value	Unit
	External temperature		
	Interior temperature		
	Refrigerant pressure		

● System-specific information

Description:

● Additional information

What factors led you to replace the computer?

What other parts were replaced?

Other faulty functions?

Your comments



RENAULT

FD 04
Fault finding log

NOTES

Special notes:
A general summary of all air-conditioning fault finding charts can be found in **Section 62A**. The customer complaints listed below solely involve the heating and ventilation system control panel. For cold air and warm air production faults, refer to **Section 62A**.

AIR DISTRIBUTION PROBLEM

- AIR DISTRIBUTION PROBLEM ALP 2
- AIR FLOW FAULT ALP 3
- INEFFICIENT WINDSCREEN DEMISTING ALP 4
- NO PASSENGER COMPARTMENT VENTILATION ALP 5

PASSENGER COMPARTMENT ODOURS

- UNPLEASANT ODOURS IN PASSENGER COMPARTMENT ALP 11

WATER IN PASSENGER COMPARTMENT

- WATER IS PRESENT IN PASSENGER COMPARTMENT ALP 12

CONTROL PANEL FAULT

- NO CONTROL PANEL LIGHTING ALP 13

NOTES	<p>Special notes:</p> <p>A general summary of all air-conditioning fault finding charts can be found in Section 62A. The customer complaints listed below solely involve the heating and ventilation system control panel. For cold air and warm air production faults, refer to Section 62A.</p>
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COMPRESSOR NOISES

AIR CONDITIONING NOISES DURING OPERATION	ALP 14
PASSENGER COMPARTMENT VENTILATION NOISES	ALP 15

MANUAL AIR CONDITIONING

Fault finding – Fault Finding ALP

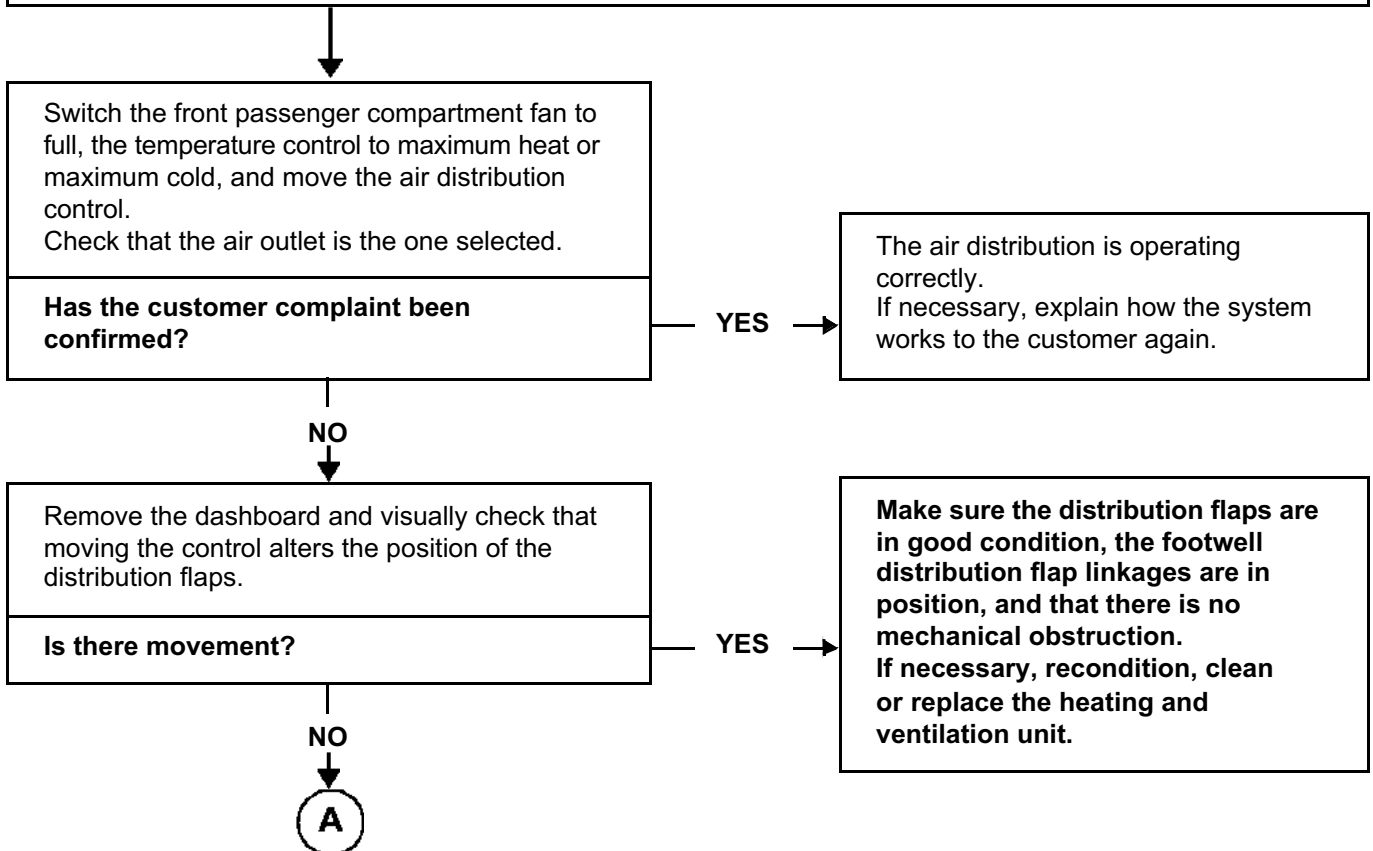
62C

ALP 2	Air distribution fault
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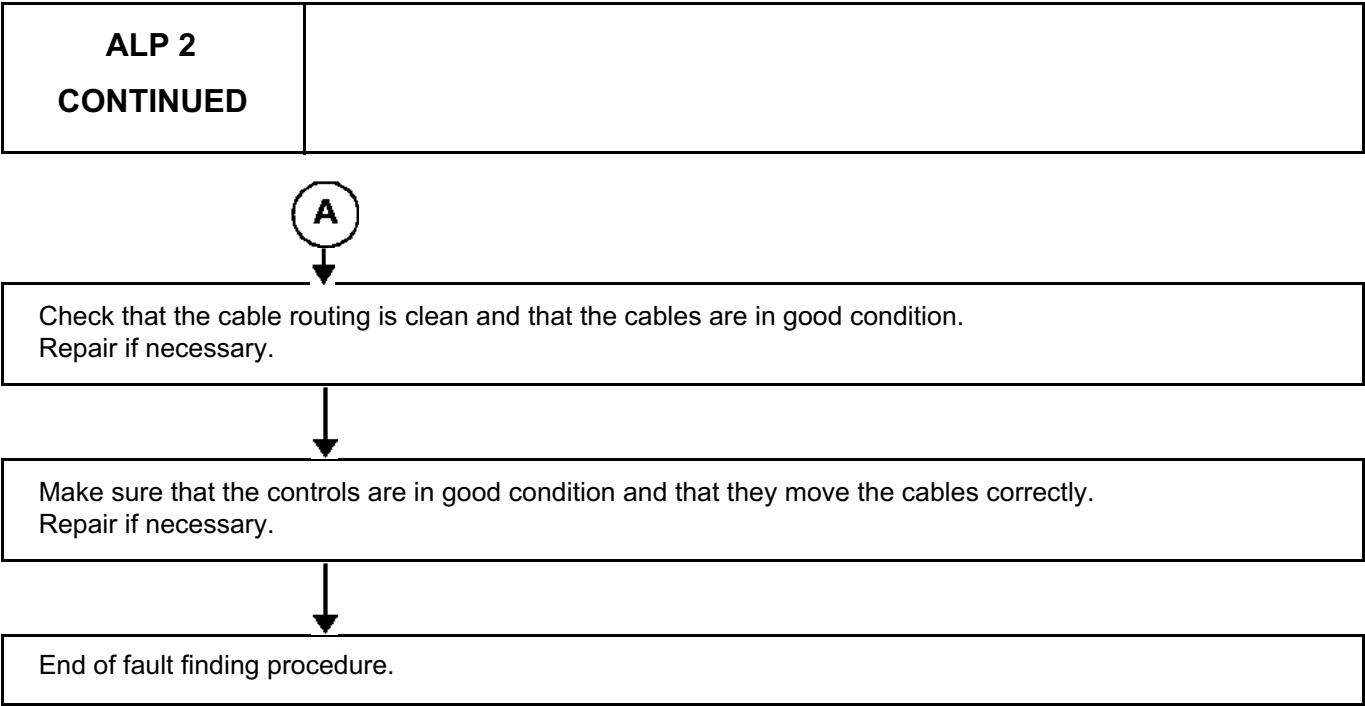
NOTES	None.
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Make sure **the air circuit** (**cabin filter**, scuttle panel grille, air ducts etc.) is not blocked.
Ensure that the passenger compartment ventilator fan is in good condition.
If necessary, repair, clean or replace the cabin filter.

Ensure that the passenger compartment fan unit is properly **sealed**.
Repair if necessary.



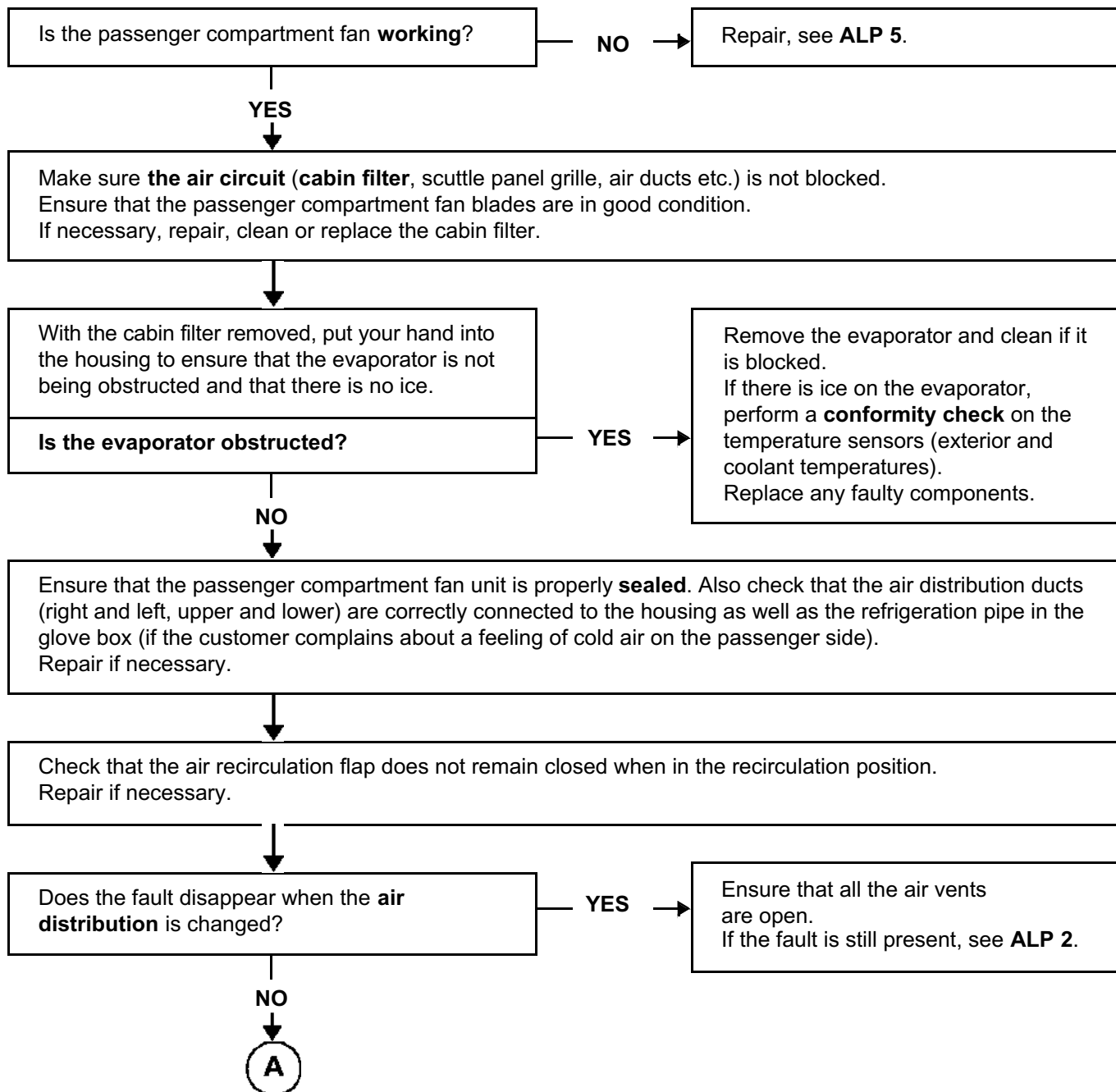
AFTER REPAIR	Check that the system is operating correctly.
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AFTER REPAIR	Check that the system is operating correctly.
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ALP 3	Air flow fault
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NOTES	None.
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AFTER REPAIR	Check that the system is operating correctly.
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ALP 3 CONTINUED



Check that there is a + 12 V accessories supply on track B1 of the resistor unit and an earth on track A1 of the control panel connector.
Repair if necessary.

Make sure that the control panel speed selection button works properly.
Repair if necessary.

Make sure the resistor unit functions properly.
Replace the resistor unit if the resistances of the first three speeds are not:
Speed 1 (**tracks A1 and A4**): **1.97 Ω**
Speed 2 (**tracks A2 and A4**): **1.3 Ω**
Speed 3 (**tracks A3 and A4**): **0.41 Ω**

Check the **insulation, continuity and absence of interference resistance** of the connections:

Control panel track A2	→	Track A1 of the resistor unit
Control panel track A3	→	Track A2 of the resistor unit
Control panel track A4	→	Track A3 of the resistor unit
Control panel track A5	→	Track A4 of the resistor unit

Repair if necessary.

Check the **insulation, continuity and absence of interference resistance** of the connections:
Fan assembly **track 2** → **Track A4** of the resistor unit
Repair if necessary.

Make sure the fan blade is in good condition and not wobbling on its axle.
Repair if necessary.

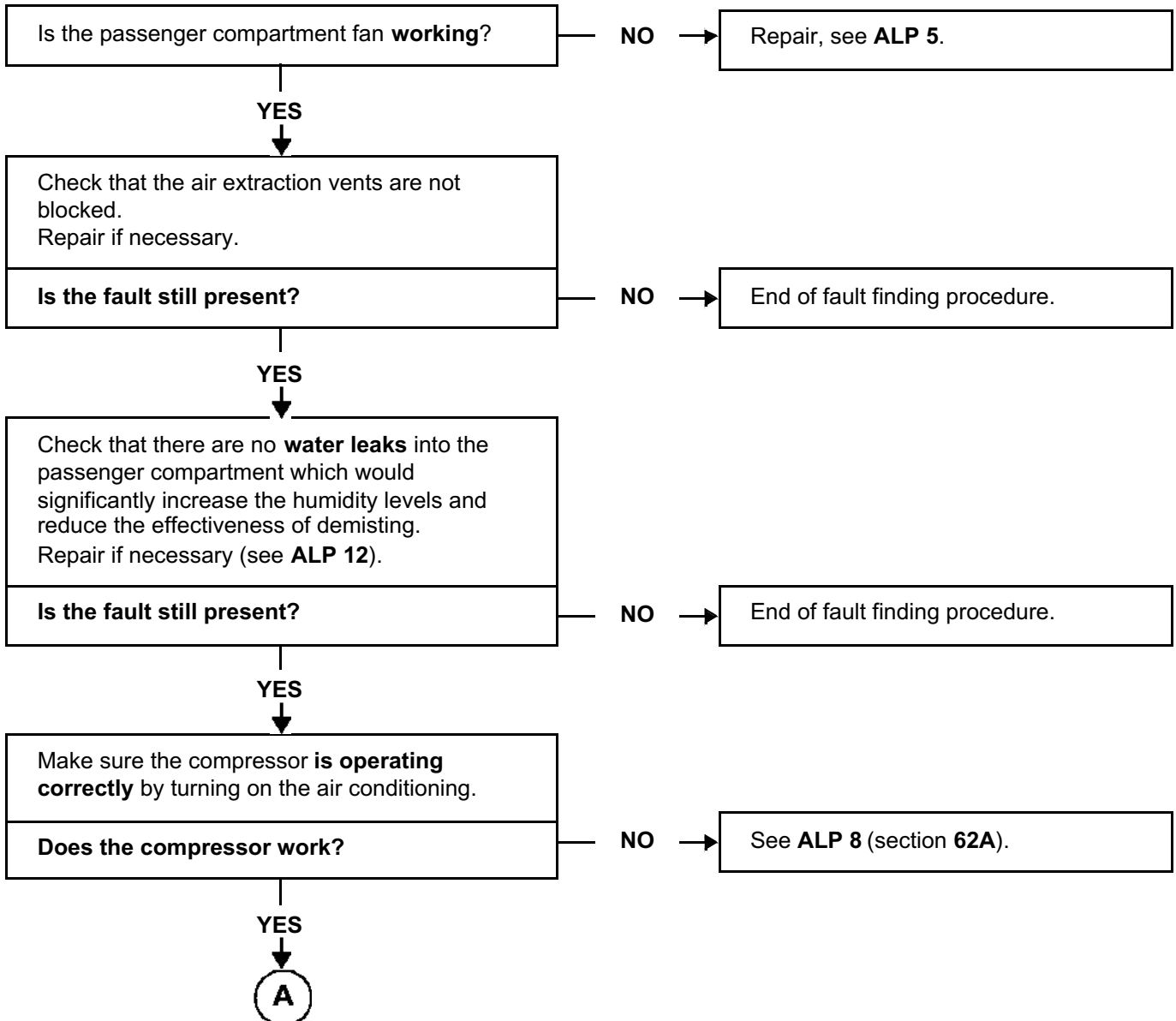
End of fault finding procedure.

AFTER REPAIR

Check that the system is operating correctly.

ALP 4	Inefficient windscreen demisting
--------------	---

NOTES	Special notes: Check that the inside of the windows are not dirty, as this reduces the efficiency of demisting.
--------------	---



AFTER REPAIR	Check that the system is operating correctly.
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ALP 4
CONTINUED



Check that the condensation evacuation outlet (water from the evaporator) is not blocked.
Repair if necessary.

Is it an **air distribution** fault?

YES

See ALP 2.

NO

Is it an **air flow** fault?

YES

See ALP 3.

NO

Is it a **heater performance** fault?

YES

See **Fault Finding ALP 6**
(Section **62A**).

NO

Check that the recirculation flap is in the **exterior air** position.
Repair if necessary.

End of fault finding procedure.

AFTER REPAIR

Check that the system is operating correctly.

ALP 5

No passenger compartment ventilation

NOTES

None.

Check that the **fuses** are in good condition.



Make sure that **the air circuit** (**cabin filter**, scuttle panel grille, air vents and extractors etc.) is not blocked.
Ensure that the passenger compartment fan blades are in good condition.
Repair, clean or change the cabin filter if necessary.



Ensure that the passenger compartment fan unit is properly **sealed**.
Repair if necessary.



Check that the air recirculation flap does not remain closed when in the recirculation position.
Repair if necessary.



Does the fault disappear when the **air distribution** is changed?

YES →

Ensure that all the air vents are open.
If the fault is still present, see **ALP 2**.

NO
↓

Ensure that there is + 12 V accessories supply on **track B1** of the resistor unit and an earth on **track A1** of the control panel connector.
Repair if necessary.



A

AFTER REPAIR

Check that the system is operating correctly.

ALP 5 CONTINUED



Make sure that the control panel speed selection button works properly.
If necessary, recondition or replace the control panel.

Make sure the resistor unit functions properly.
Replace the resistor unit if the resistances of the first three speeds are not:
Speed 1 (**tracks A1 and A4**): **1.97 Ω**
Speed 2 (**tracks A2 and A4**): **1.3 Ω**
Speed 3 (**tracks A3 and A4**): **0.41 Ω**

Check the **insulation, continuity and absence of interference resistance** of the connections:

Control panel track A2	→	Track A1 of the resistor unit
Control panel track A3	→	Track A2 of the resistor unit
Control panel track A4	→	Track A3 of the resistor unit
Control panel track A5	→	Track A4 of the resistor unit

Repair if necessary.

Check the **insulation, continuity and absence of interference resistance** of the connections:

Fan assembly track 2	→	Track A4 of the resistor unit
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Repair if necessary.

Make sure the fan blade is in good condition and not wobbling on its axle.
Repair if necessary.

Disconnect the black **2-track** connector of the engine cooling fan and check the resistance of the motor between **tracks 1 and 2**.
Replace the engine cooling fan if the resistance is not between **0.2 Ω** and **0.5 Ω** .

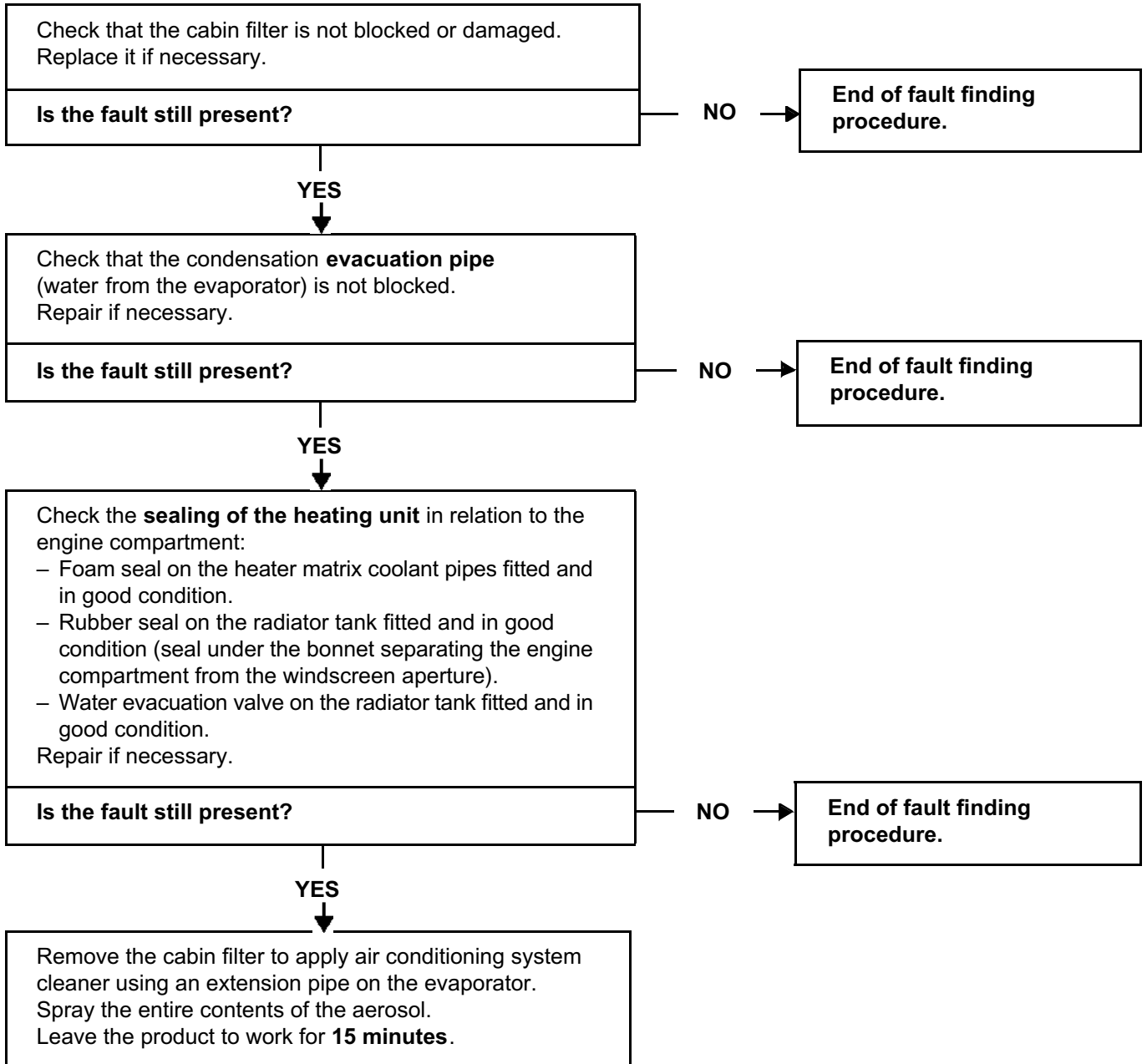
End of fault finding procedure.

AFTER REPAIR

Check that the system is operating correctly.

ALP 11	Unpleasant odours in the passenger compartment
---------------	---

NOTES	None.
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AFTER REPAIR	Check that the system is operating correctly.
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ALP 12

Water is present in the passenger compartment

NOTES

None.

Pressurise the cooling circuit.

Is there any coolant leaking into the vehicle?

YES

Repair.

NO

Check that the condensation **evacuation pipe** (water from the evaporator) is not blocked.
Repair if necessary.

Is the fault still present?

NO

End of fault finding procedure.

YES

Ensure that the plenum chamber (under the windscreen aperture) is not filled with water.
If it is, check that the water evacuation valve is fitted to the plenum chamber and is in good condition.
Replace the valve if necessary.

Has the customer just washed the vehicle?

NO

End of fault finding procedure.

YES

Explain to the customer that when washing the vehicle using a hose pipe, the water jet must not be left for too long on the air inlet in the plenum chamber (on the bonnet).

AFTER REPAIR

Check that the system is operating correctly.

ALP 13

No control panel lighting

NOTES

None.

Check that the fuses are in good condition.
Repair if necessary.



Check that the bulbs are sound.
Repair if necessary.



Check for the presence of an earth on **track B5** and **track A1** of the control panel.
Repair if necessary.



With the side lights switched on, ensure that there is + 12 V side light supply on **track B2** of the control panel.
Repair if necessary.



If the fault persists, contact your Technline

AFTER REPAIR

Check that the system is operating correctly.

ALP 14	Air conditioning noises during operation
---------------	---

NOTES	Only deal with this customer complaint after a full check with the diagnostic tool (fault reading and configuration checks).
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<p>Check that the computers involved in the air conditioning function (Injection, Protection and Switching Unit, UCH and Air conditioning control panel) are correctly configured. Reconfigure if necessary (see 62A, Air conditioning, Configurations and Configuration reading).</p>
<p>Check that:</p> <ul style="list-style-type: none"> – the compressor fitted to the vehicle corresponds correctly to the engine (see MR 364 Mechanical, 62A, Air conditioning, Air conditioning: Parts and consumables for the repair). <p>Replace the compressor if necessary (see MR 364, Mechanical, 62A, Air conditioning, Compressor: Removal - Refitting).</p> <ul style="list-style-type: none"> – the compressor is correctly fixed (see MR 364 Mechanical, 62A, Air conditioning, Compressor: Removal - Refitting).
<p>Check the condition of the compressor belt and check its tension. Replace the belt if necessary (see MR 364 Mechanical, 11A, Top and front of engine, Accessories belt: Removal - Refitting).</p>
<p>Check that the intermediate pipes, condenser and dehydrator reservoir are correctly fitted.</p> <ul style="list-style-type: none"> – Check the mountings and brackets of the components. – Check the contact between and proximity of the components. <p>(See MR 364 Mechanical, 62A, Air conditioning, Air conditioning: List and location of components).</p>
<p>Check the correct operation of the cooling fan assembly or passenger compartment fan assembly and condenser:</p> <ul style="list-style-type: none"> – check the electrical supply of the fan using parameters ET007 High speed fan assembly control, AC009 Low speed fan assembly and AC010 High speed fan assembly (see 62A, Air conditioning, Conformity check, Cold loop sub-function).
<p>Check the quantity of refrigerant (see MR 364 Mechanical, 62A, Air conditioning, Air conditioning: Parts and consumables for the repair).</p> <p>If the quantity of refrigerant is:</p> <ul style="list-style-type: none"> – Greater than the manufacturer's information, recharge according to the manufacturer's values (see MR 364 Mechanical, 62A, Air conditioning: Draining - Filling). – Less than the manufacturer's information, check for leaks (see MR 364 Mechanical, 62A, Air conditioning, Refrigerant circuit: Check).
<p>If the fault is still present, replace the compressor (see MR 364, Mechanical, 62A, Air conditioning, Compressor: Removal - Refitting).</p>

AFTER REPAIR	Carry out a complete check using the diagnostic tool.
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ALP 15	Passenger compartment ventilation noises
---------------	---

NOTES	Only deal with this customer complaint after a full check with the diagnostic tool (fault reading and configuration checks).
--------------	---

The aim of the following operations is to check and, if necessary, eliminate any foreign bodies (leaves, insects, other, etc.) in:

- the passenger compartment air inlet,
- the cabin filter housing,
- the housing and on the fan assembly.

Check the passenger compartment air inlet:

Remove:

- the scuttle panel grille (see **MR 365 Bodywork, 55A, Exterior equipment, Scuttle panel grille: Removal - Refitting**),
- the scoop under the scuttle panel grille.

Check that there are no foreign bodies (leaves, insects, other, etc.) and, if necessary, clean the passenger compartment air inlet and the cabin filter housing.

Refit:

- the scoop under the scuttle panel grille,
- the scuttle panel grille (see **MR 365 Bodywork, 55A, Exterior equipment, Scuttle panel grille: Removal - Refitting**).

Check the cabin filter housing:

Remove the cabin filter (see **MR 364 Mechanical, 61A, Heating system, Cabin filter: Removal – Refitting**).

Check that there are no foreign bodies (leaves, insects, other, etc.) and, if necessary, clean the cabin filter housing.
Refit the cabin filter (see **MR 364 Mechanical, 61A, Heating system, Cabin filter: Removal – Refitting**).

AFTER REPAIR	Carry out a complete check using the diagnostic tool.
---------------------	---

ALP 15
CONTINUED

Check the housing and the fan assembly:

Remove the fan assembly (see **MR 364 Mechanical, 61A, Heating system, Fan assembly: Removal - Refitting**).

Check that there are no foreign bodies (leaves, insects, other, etc.) and, if necessary, clean the fan assembly housing.

Check that there are no foreign bodies (leaves, insects, other, etc.) and, if necessary, clean the fan assembly.

Refit the fan assembly (see **MR 364 Mechanical, 61A, Heating system, Fan assembly: Removal - Refitting**).

AFTER REPAIR

Carry out a complete check using the diagnostic tool.