

Angelantoni
Industrie spa

AS

Biomedical division

BLOOD BANKS

SERVICE HANDBOOK

H36B
H36B – ES
H72B
H72B – ES
H108B
H108B - ES

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SPARE PARTS REQUEST FORM

In order to make your order for spare part easier, you are kindly requested to use the following order form.

Angelantoni
Industrie S.p.A.

AS

località Cimacolle
Massa Martana 06056
Perugia (Italy)
tel. (075) 8955.1
telefax (075) 8955.200

SPARE PARTS ORDER

Applicant: _____
Address: _____

Tel.: _____ Fax: _____

Model : _____
Registration N° : _____
Year of manufacture : _____

Please send the spare parts indicated below to our address.

Means of transport : _____

Table N°	Ref. N°	Code	Description	Q.ty

Notes:

in order to avoid any errors, we advise you to carefully copy this form (even by photocopying it) and to send it duly completed to the manufacturer.

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1

SPARE PARTS LIST

1.1) H 36 B - H 36 B-ES

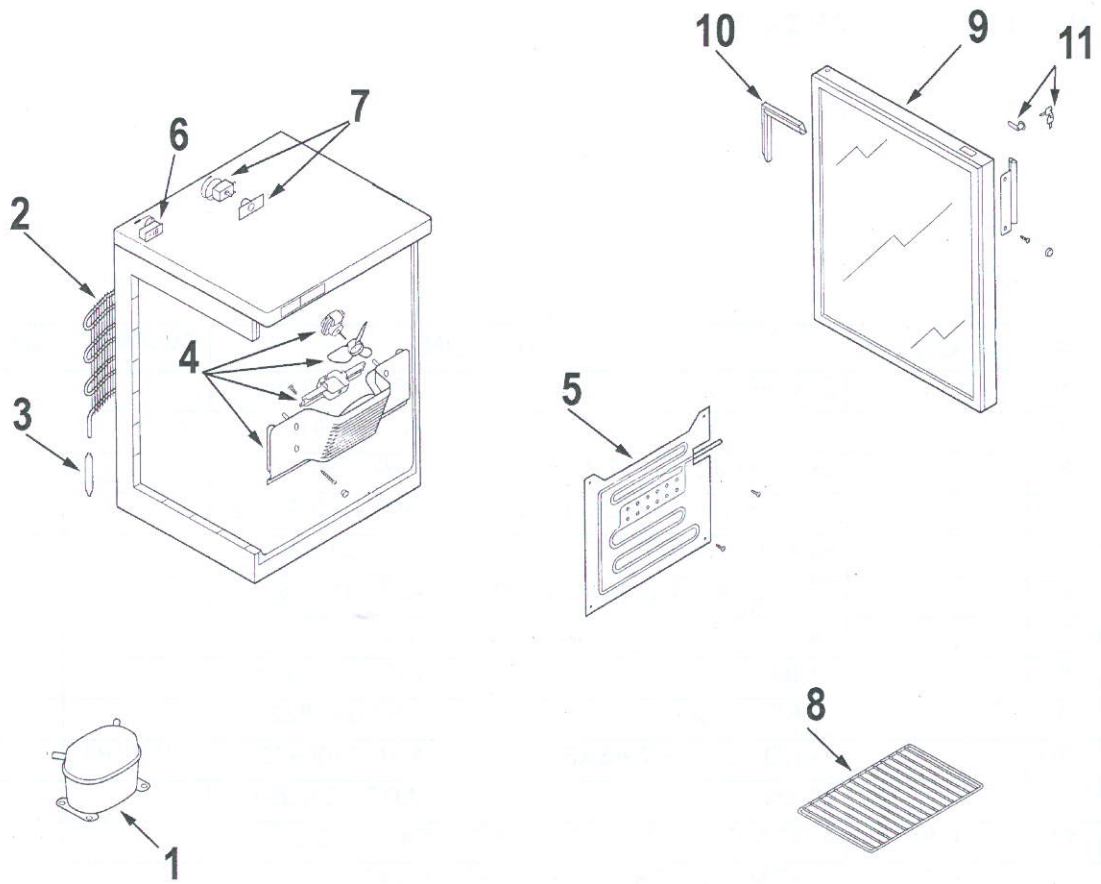
TABLE 1.1

REF	CODE	DESCRIPTION	CLEANING	REPLACEMENT
1		COMPRESSOR ART. 6109999		
2		CONDENSER ART. 5941902	6 MONTHS	
3		DEWATERER FILTER ART. 5942001		
4		INTERNAL FAN MOTOR ART. 6108993 20		
5		STATIC EVAPORATOR ART. 5940995		
6		TEMPERATURE INDICATOR ART. 6111997		
7		REGULATION THERMOSTAT ART. 6151973 19		
8		GRID SHELF ART. 7112053		
9		HAND - DOOR ART. 9808327		
10		HAND - DOOR GASKET ART. 7108979	6 MONTHS	
11		LOCK ART. 7042953		
12	511867	ALARM SYSTEM (THERMOSTAT EXCLUDED)		
13	132965	ALARM TEMPERATURE THERMOSTAT		
14				

The materials are described in the following page.

Notes

In order to order the material with no code number, just indicate the position and description of the part, as well as the model and registration number of the appliance.



1.2) H 72 B - H 72 B-ES

TABLE 1.2

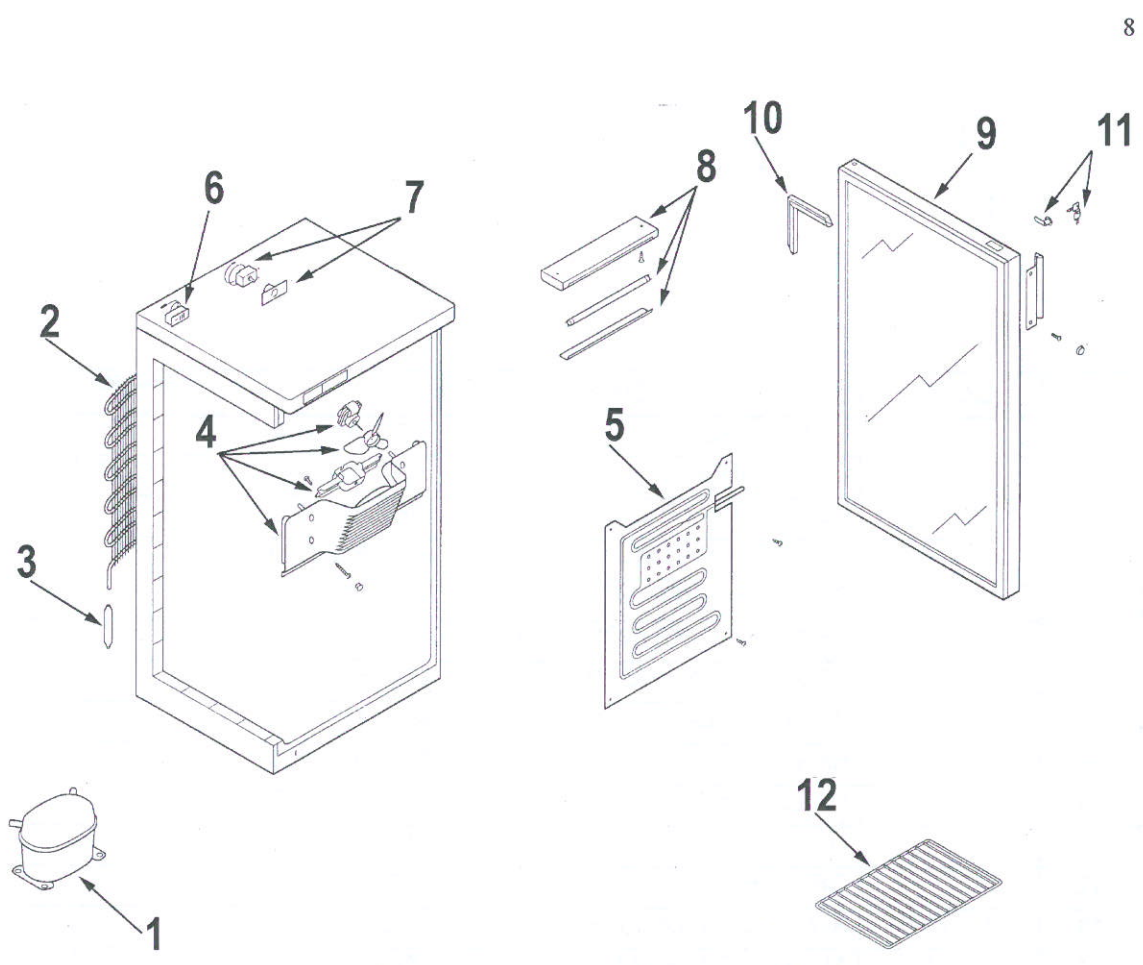
REF.	CODE	DESCRIPTION	CLEANING	REPLACEMENT
1		COMPRESSOR ART. 6109999		
2		CONDENSER ART. 5941904	6 MONTHS	
3		DEWATERER FILTER ART. 5942001		
4		INTERNAL FAN MOTOR ART. 6108993		
5		STATIC EVAPORATOR ART. 5940163		
6		TEMPERATURE INDICATOR ART. 6111997		
7		REGULATION THERMOSTAT ART. 6151973 19		
8		INTERNAL LAMP ART. 6070015		
9		HAND - DOOR ART. 9808325		
10		HAND - DOOR GASKET ART. 7108977	6 MONTHS	
11		LOCK ART. 7042953		
12		GRID SHELF ART. 7112053		
13	511867	ALARM SYSTEM (THERMOSTAT EXCLUDED)		
14	132965	ALARM TEMPERATURE THERMOSTAT		

The materials are described in the following page.

Notes

In order to order the material with no code number, just indicate the position and description of the part, as well as the model and registration number of the appliance.

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REF.	CODE	DESCRIPTION	CLEANING	REPLACEMENT
1		COMPRESSOR ART. 6109989		
2		CONDENSER ART. 5941906	6 MONTHS	
3		DEWATERER FILTER ART. 5942001		
4		INTERNAL FAN MOTOR ART. 6108993		
5		INTERNAL EVAPORATOR ART. 5940164		
6		TEMPERATURE INDICATOR ART. 6111997		
7		REGULATION THERMOSTAT ART. 6151973		
8		INTERNAL LAMP ART. 6070015		
9		HAND - DOOR ART. 9808323		
10		HAND - DOOR GASKET ART. 7108975	6 MONTHS	
11		LOCK ART. 7042953		
12		GRID SHELF ART. 7112053		
13	511867	ALARM SYSTEM (THERMOSTAT EXCLUDED)		
14	132965	ALARM TEMPERATURE THERMOSTAT		

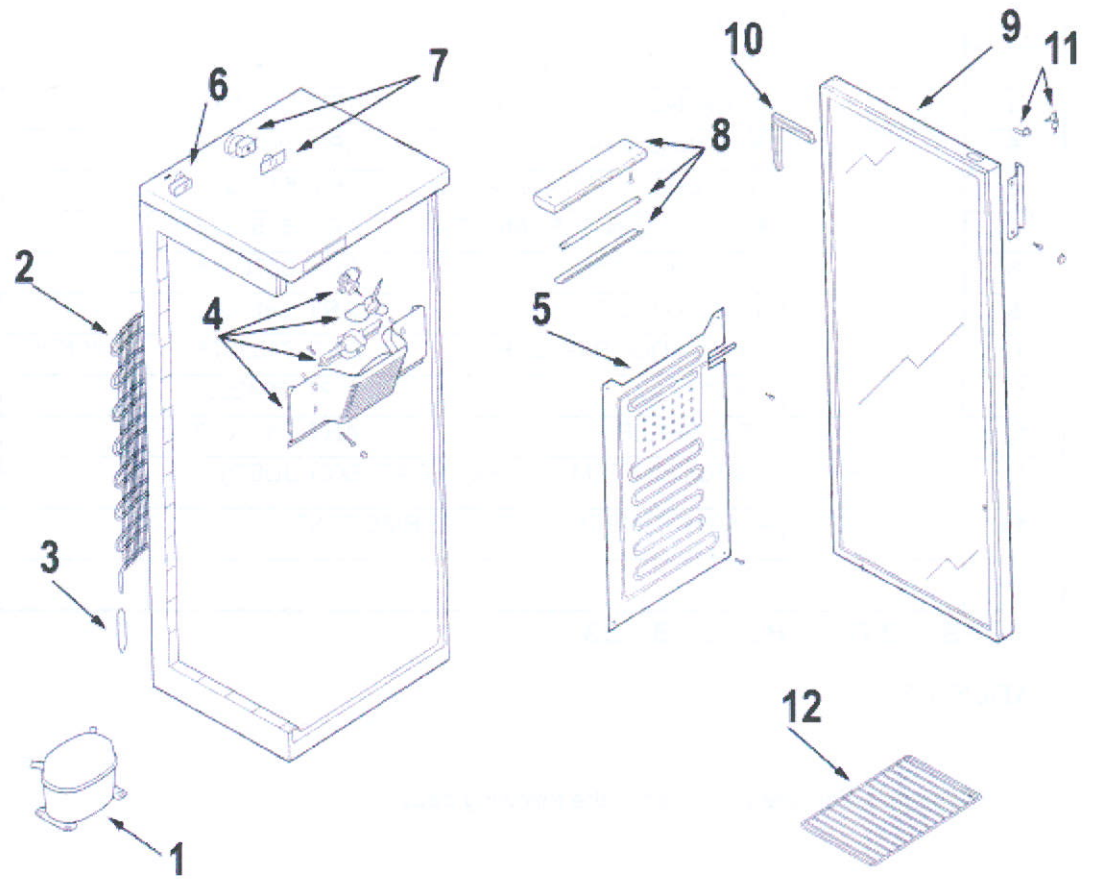
1.3) HB 108 B - HB 108 B - ES

TABLE 1.3

The materials are described in the following page.

Notes

In order to order the material with no code number, just indicate the position and description of the part, as well as the model and registration number of the appliance.



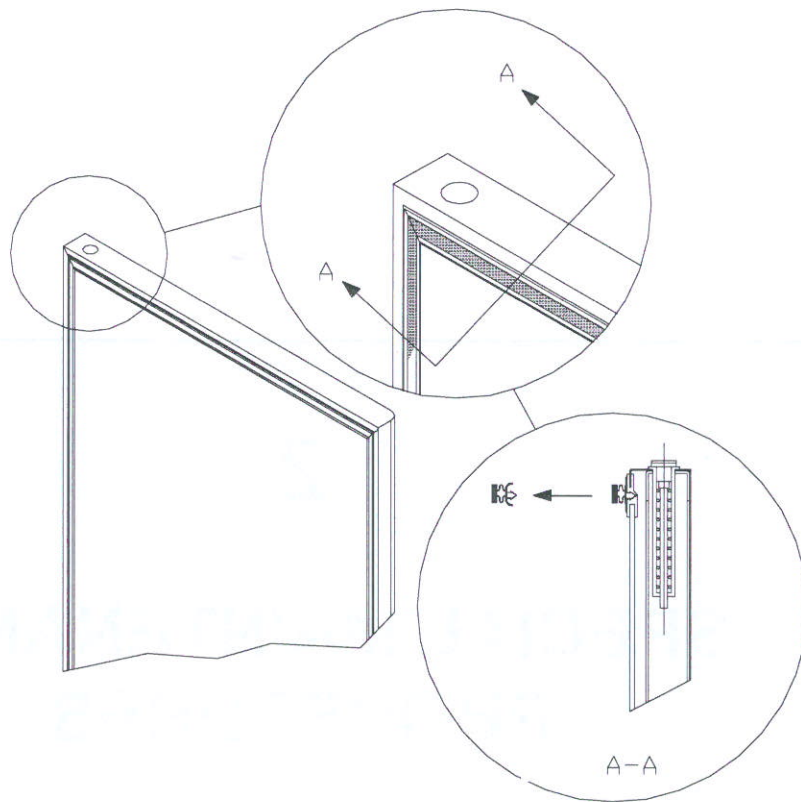
2

**SPECIAL MAINTENANCE
PROCEDURES**

Note

The installation and maintenance procedures, including the replacement of the supply cable, must be carried out by qualified personnel. Make sure that the equipment is switched off from the main supply before removing any protective panel.

Any operation on equipment under voltage must be carried out only by specialized personnel only if there is no alternative; in this case always take precautionary measures and use control instruments equipped with insulated probes.

2.1) DOOR GASKET REPLACEMENT**Description:**

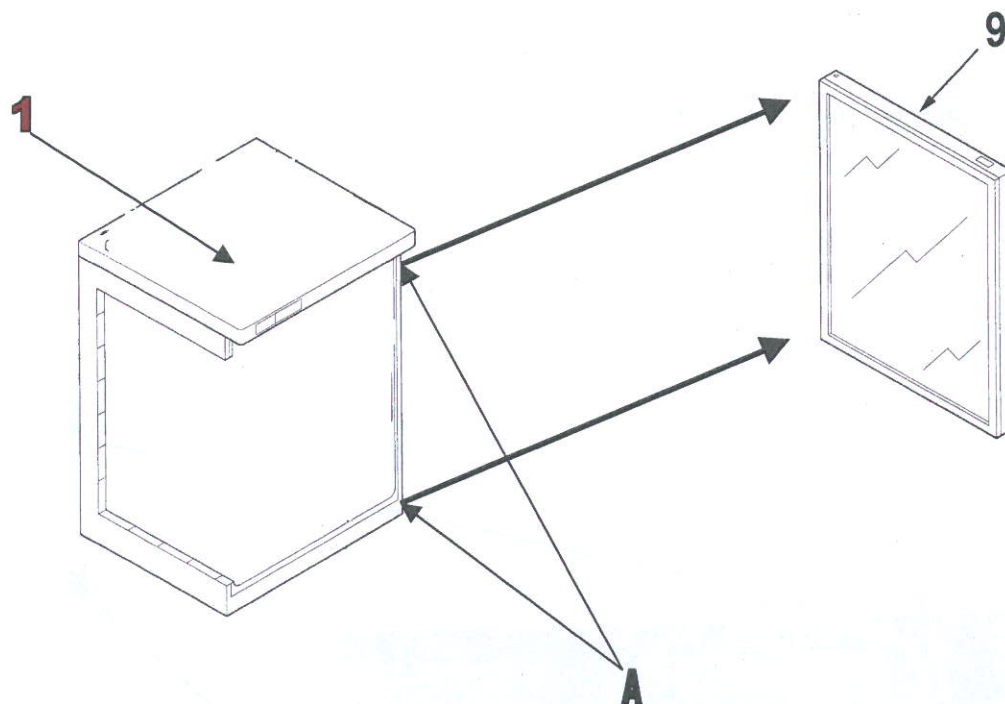
Detach the magnetic door gasket in the arrow sense (A-A), the gasket is fixed to the door by a dovetail.

In order to install a new gasket, insert the dovetail into the door fissure pressing on the gasket center.

Notes:

Don't oil the the gasket dovetail to facilitate the installation, because, in this way, the gasket outlet is facilitated and , because of the ice , the gasket could stick to the tank.

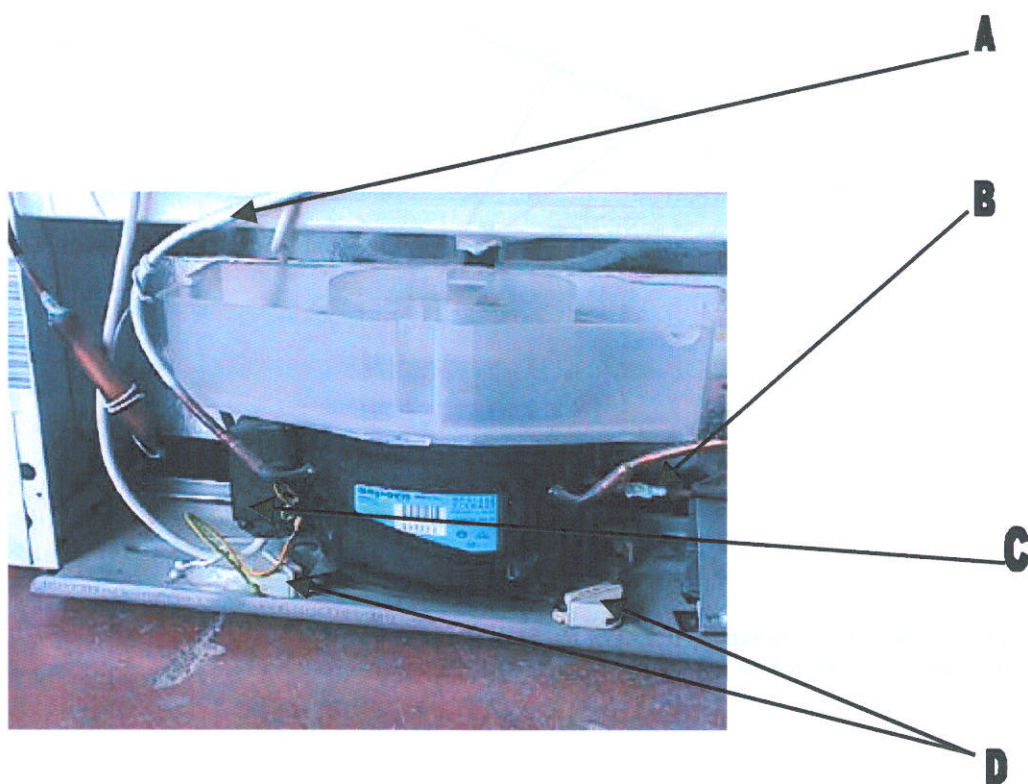
2.2) HAND – DOOR REPLACEMENT



Description:

Unscrew the lower bracket (A) and extract the door (9) from the rotation pin.
To install the new door on the structure (1) follow the removal operations in reverse.

2.3) COMPRESSOR REPLACEMENT



Description:

Before the compressor replacement, empty the gas system.

Unweld the pipes in compressor suction (A) and outlet (B) points.

Use insulating tape or special rubber caps to close the pipes (once they have cooled down) in order to prevent humidity getting in.

Disconnect the supply of the compressor.

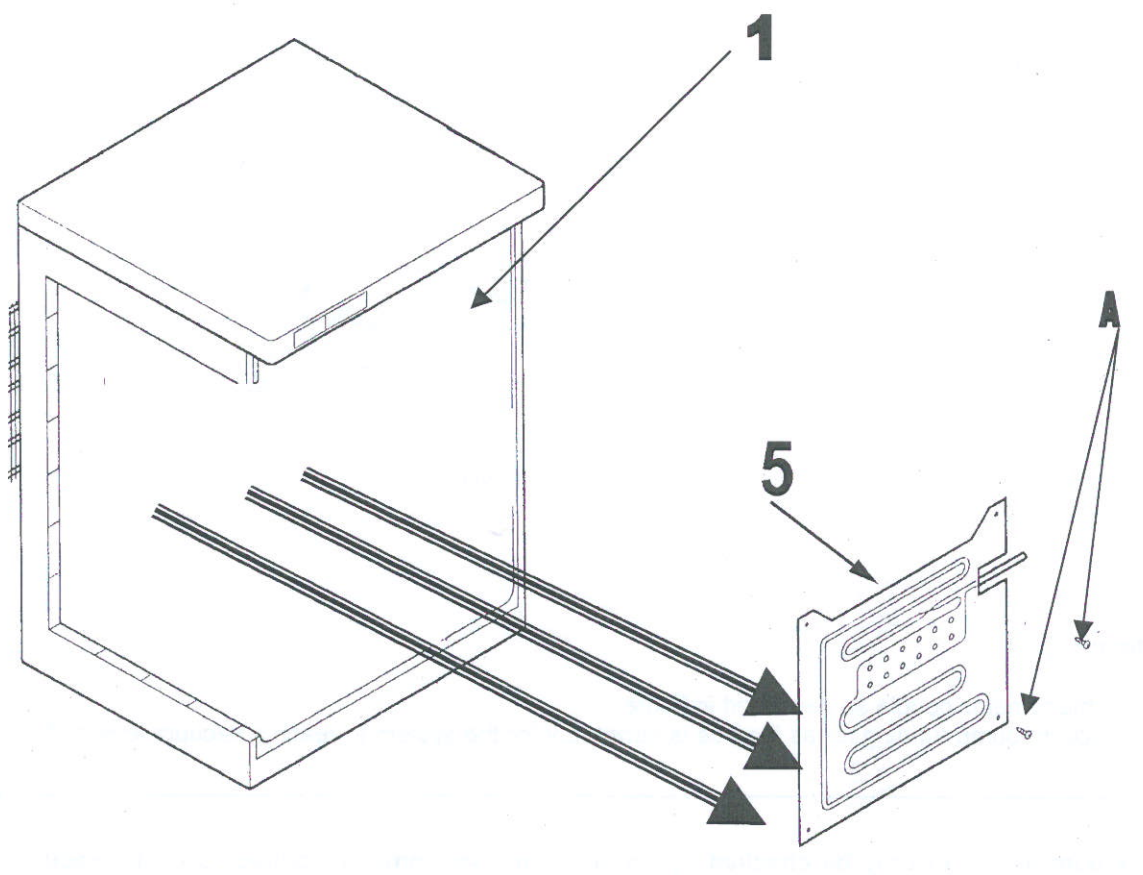
Remove the plastic supports (D) that fix the compressor, extract the compressor.

Replace the compressor.

In order to re-assemble follow the removal operations in reverse.

Make a vacuum, wire up the compressor and reload the refrigerating gas system (see 2.5).

2.4) EVAPORATOR REPLACEMENT



Description

Empty the gas system.

Cut the connection pipe between the evaporator and the refrigerating system.

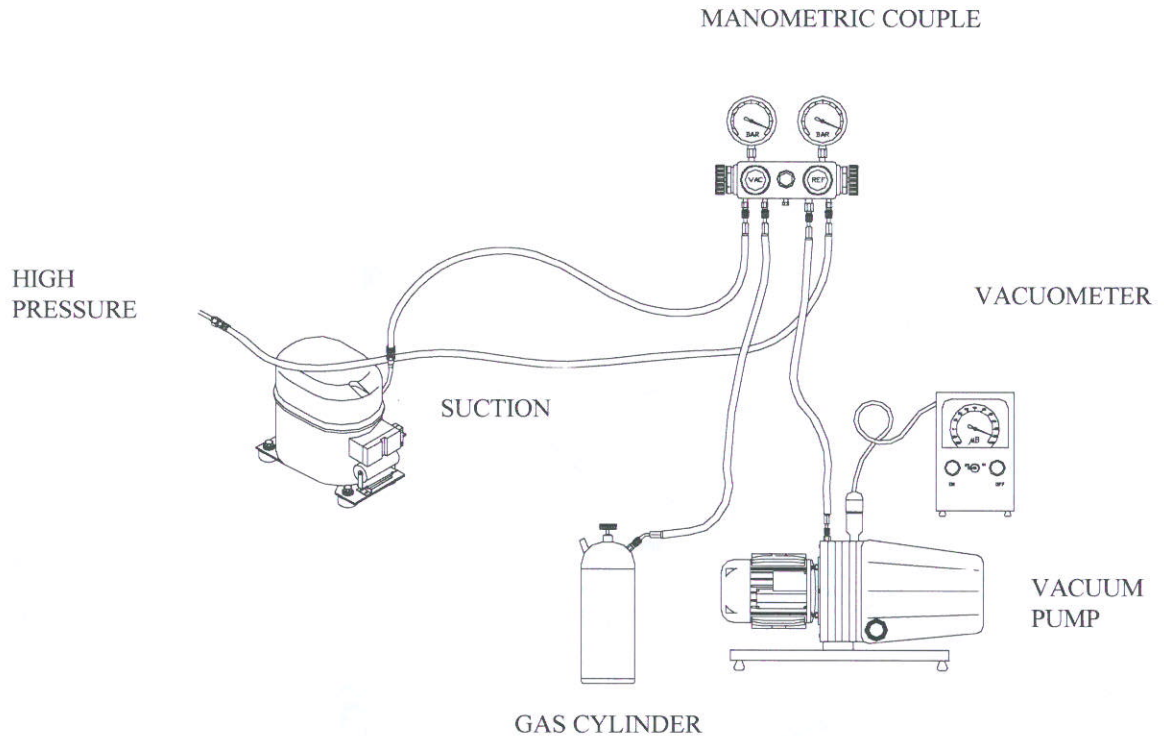
Unscrew the screws (A) that fix the evaporator to the structure (1).

Extract the static evaporator (5) from the blood bank.

In order to re-assemble follow the removal operations in reverse.

Make a vacuum and reload the refrigerating gas system (see 2.5).

2.5) REFRIGERATING SYSTEM - VACCUM AND LOAD



Description:

Connect the manometric couple as described in figure .

Leave the vacuum pump running for as long as is necessary for the system to reach a vacuum level of 0.08 mbar.

Note:

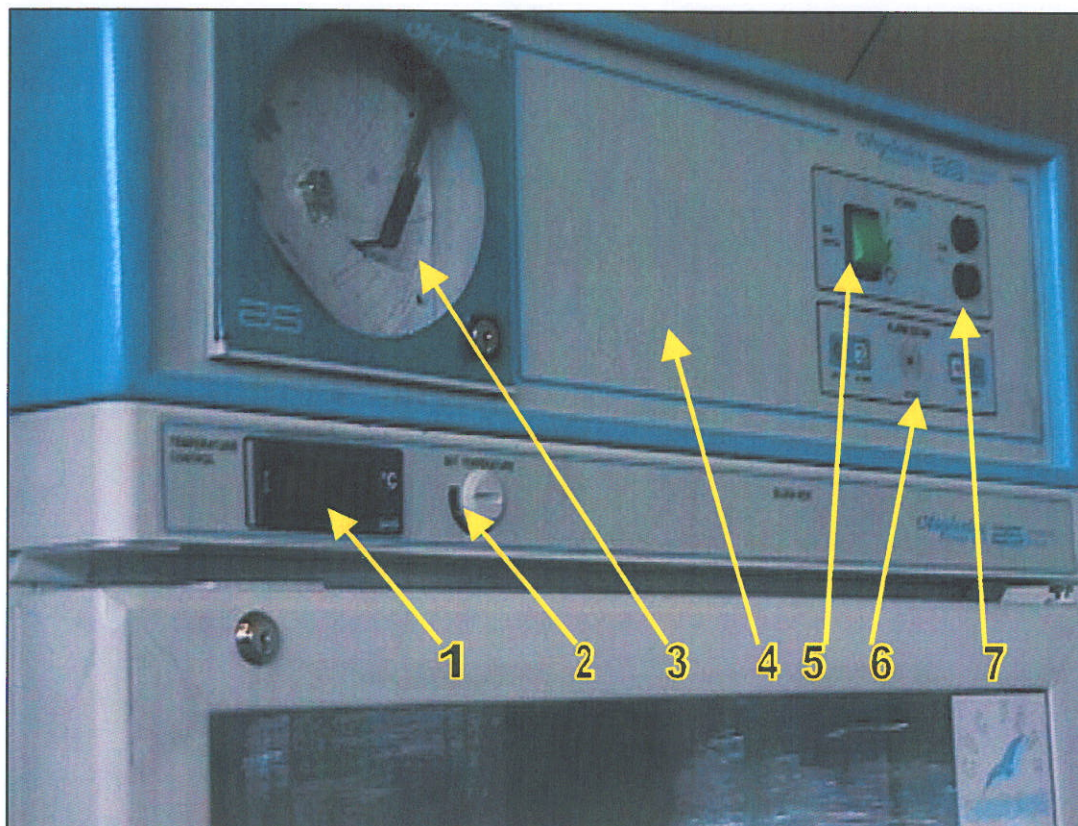
The vacuum level can only be checked by an electronic vacuumeter connected to the vacuum pump.

Load description:

Give a vacuum on the pipe connected with the refrigerating gas cilinder. Cut out the vacuum pump, open the tap on the refrigerating gas cylinder, close the high pressure connection of the manometric couple and switch on the system, the refrigerant gas will flow into the refrigerant gas system through the suction connection.

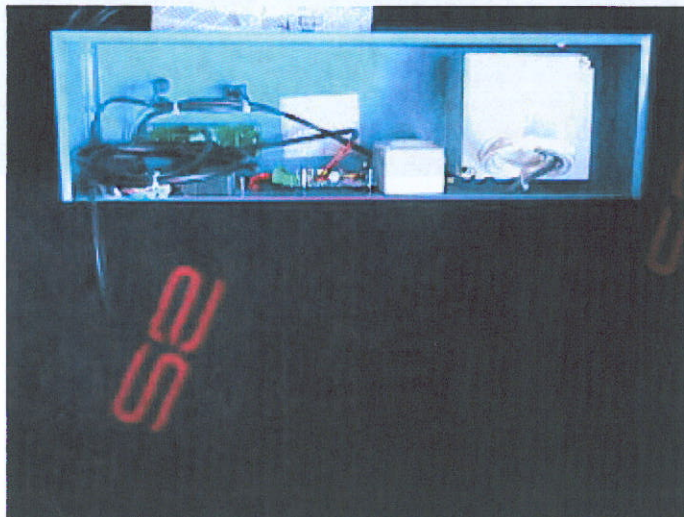
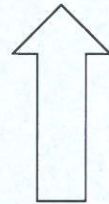
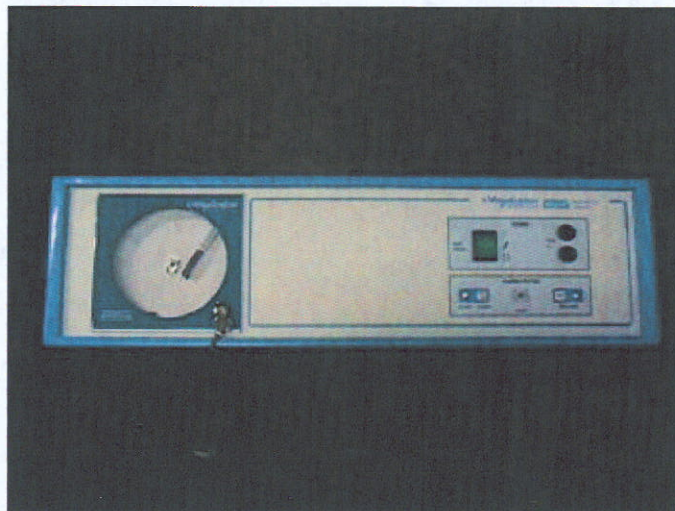
Refrigerant gas: R134a.

2.6) COMMAND PANEL – DIGITAL INDICATOR – ON/OFF SWITCH– REGULATION THERMOSTAT REPLACEMENT



1. TEMPERATURE INDICATOR
2. REGULATION THERMOSTAT
3. GRAPHIC RECORDER
4. COMMAND PANEL
5. MAIN SWITCH
6. ALARM SYSTEM
7. LINE FUSES

COMMAND PANEL REPLACEMENT



Remove the front case in the arrow sense (above from down).

Disconnect the electrical wiring and extract the graphic recorder probe from the refrigerator.

Remove the back case.

In order to re-assemble follow the removal operations in reverse.

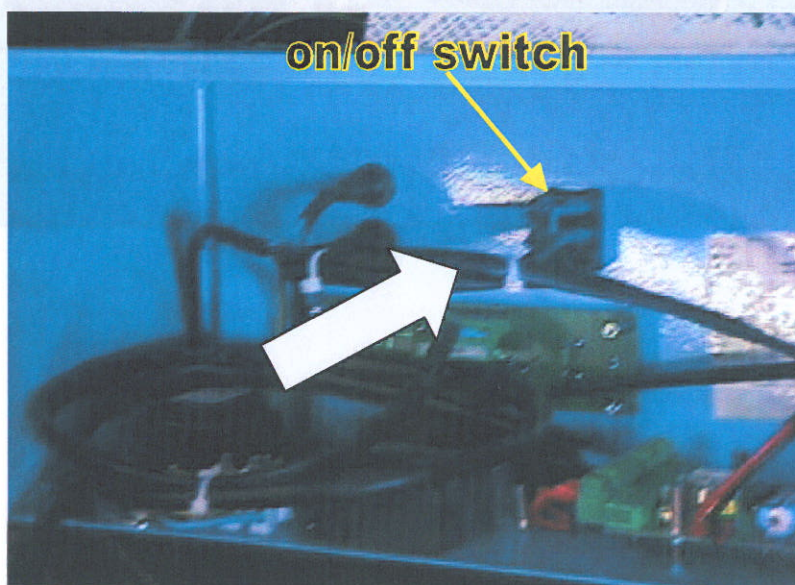
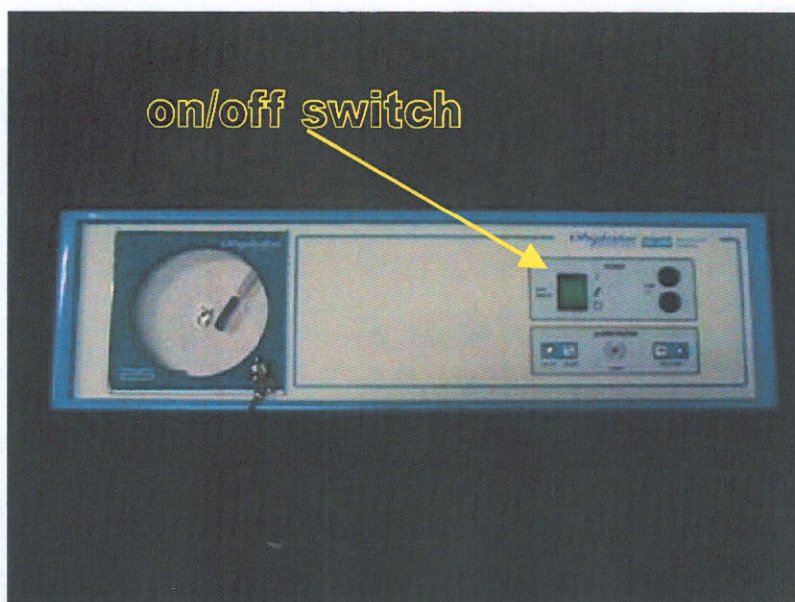
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LINE FUSES REPLACEMENT

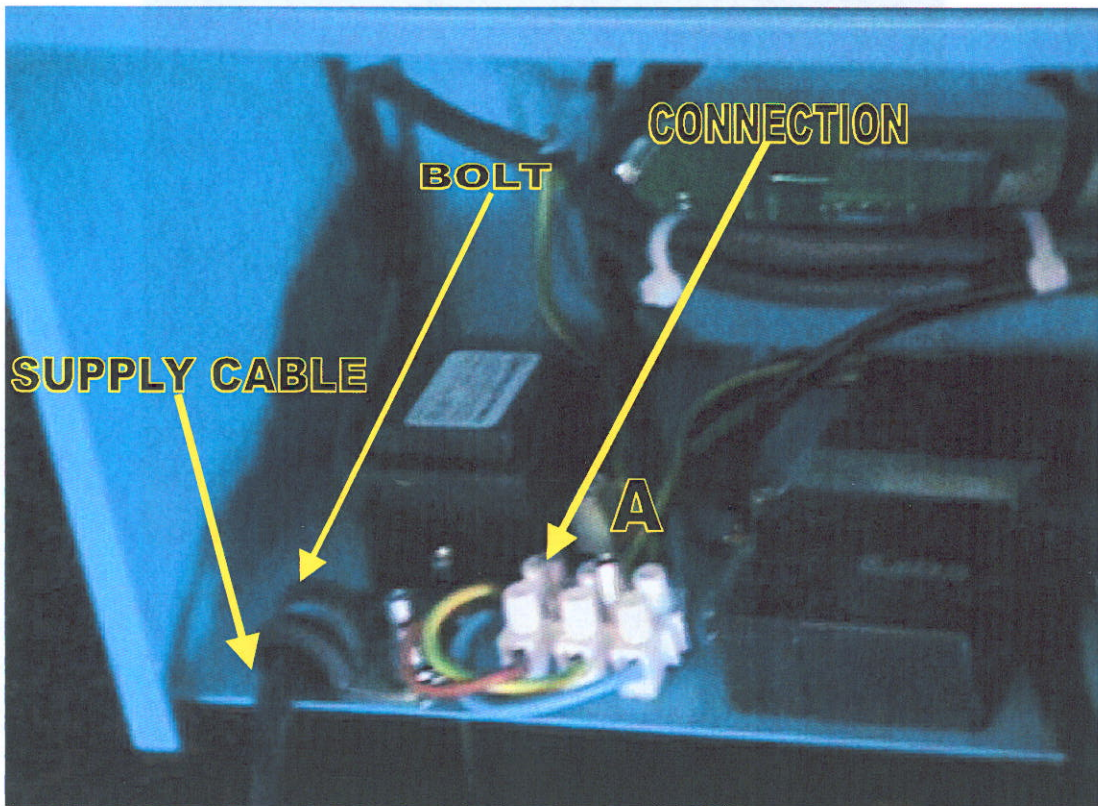
Remove the fuses by pressing them and turning them 90° in an anti clockwise direction using a screwdriver.

To re-assemble carry out these operations in reverse.

ON/OFF SWITCH REPLACEMENT

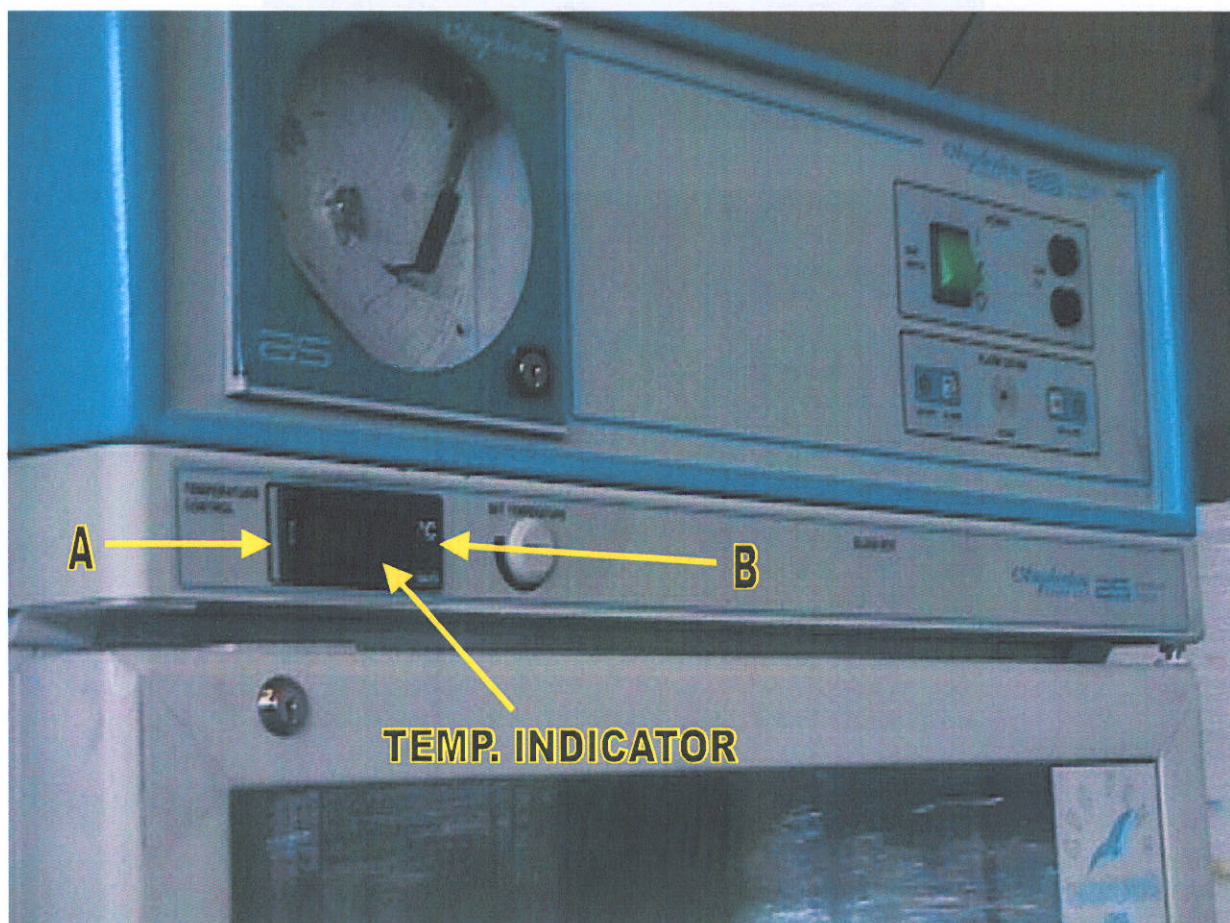


Disconnect the on-off switch electrical wiring, press the switch in the arrow sense and extract it.
To re-assemble carry out these operations in reverse.

SUPPLY CABLE REPLACEMENT

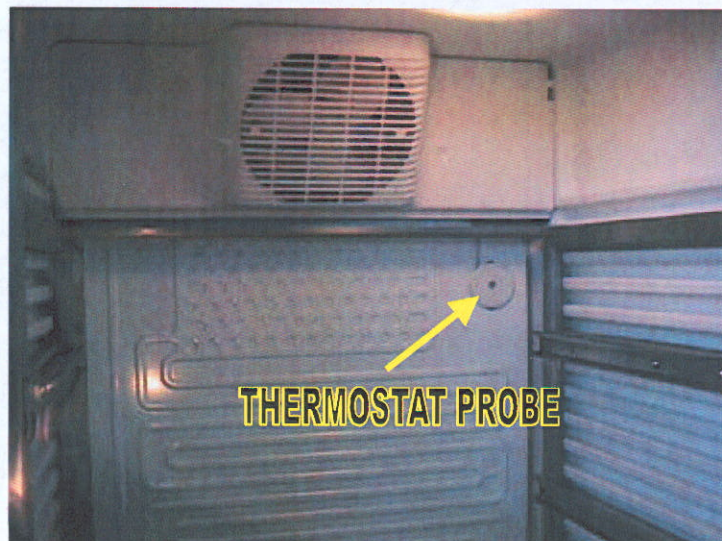
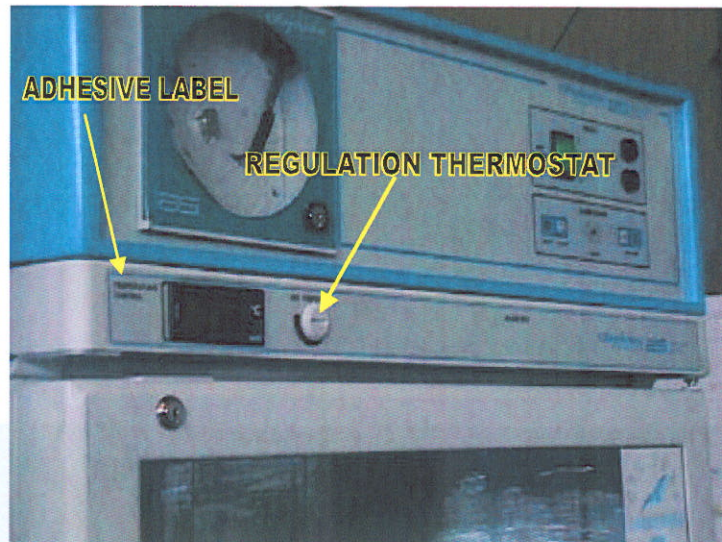
Disconnect the supply cable on point A .
Reconnect the supply cable.

TEMPERATURE INDICATOR REPLACEMENT



With a small screwdriver press on A and B.
Extract the indicator.
Disconnect the supply cable and the probe from the indicator.
To re-assemble carry out these operations in reverse.

REGULATION THERMOSTAT REPLACEMENT



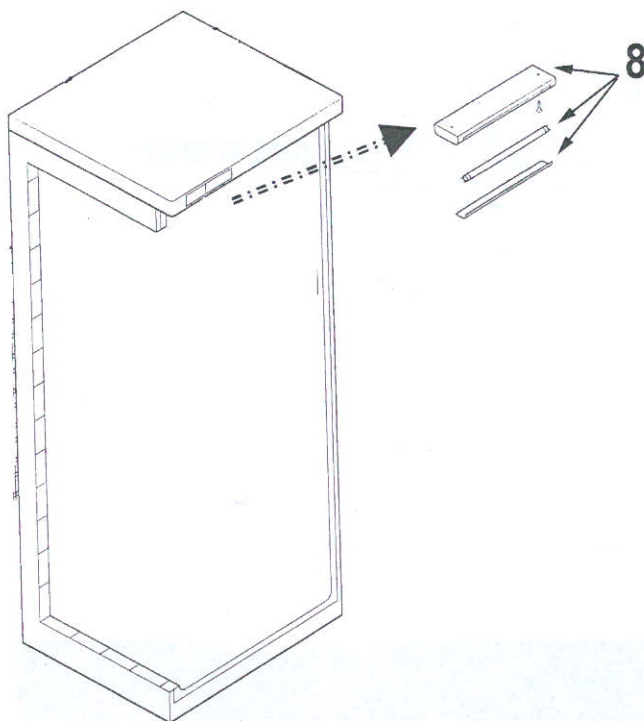
- Extract the temperature indicator.
- Remove the graduate tap of regulation thermostat, sideways pressing with a screwdriver.
- Extract the thermostat fixing structure.
- Unscrew the thermostat nut.
- Disconnect the electrical wirings.
- Unscrew the thermostat probe fixing support on the static evaporator, disconnect the probe from the thermostat.
- Install a new thermostat carrying out these operations in reverse.

2.7) INTERNAL FAN MOTOR AND GRID REPLACEMENT



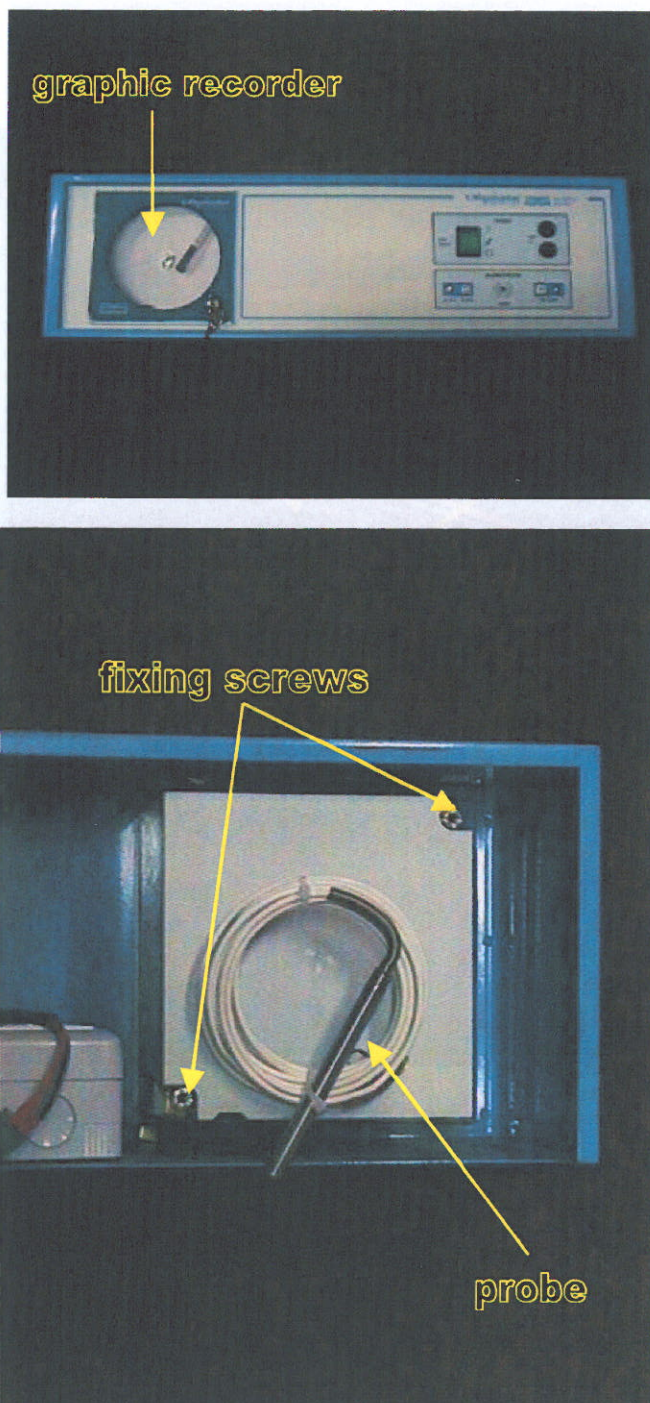
Remove the white screw taps with a screwdriver.
Unscrew the 4 screws that support the internal fan set.
Extract the internal fan set and disconnect the electrical wirings.
To re-assemble, carry out these operations in reverse.

2.8) INTERNAL LAMP REPLACEMENT



Unscrew the lamp set fixing screws (N° 8), open the covering and replace the neon lamp.

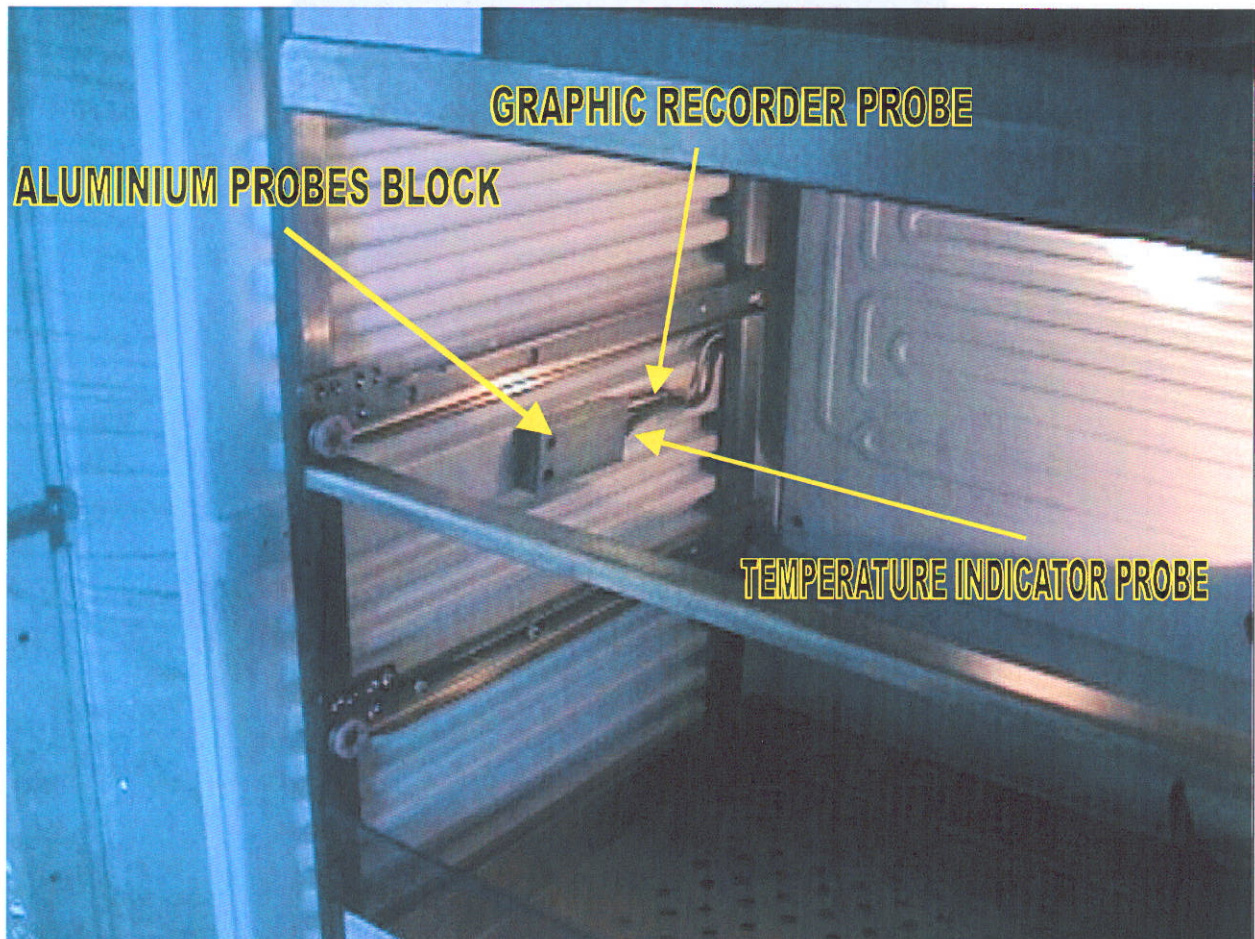
2.9) GRAPHIC RECORDER REPLACEMENT



How to install a new graphic recorder

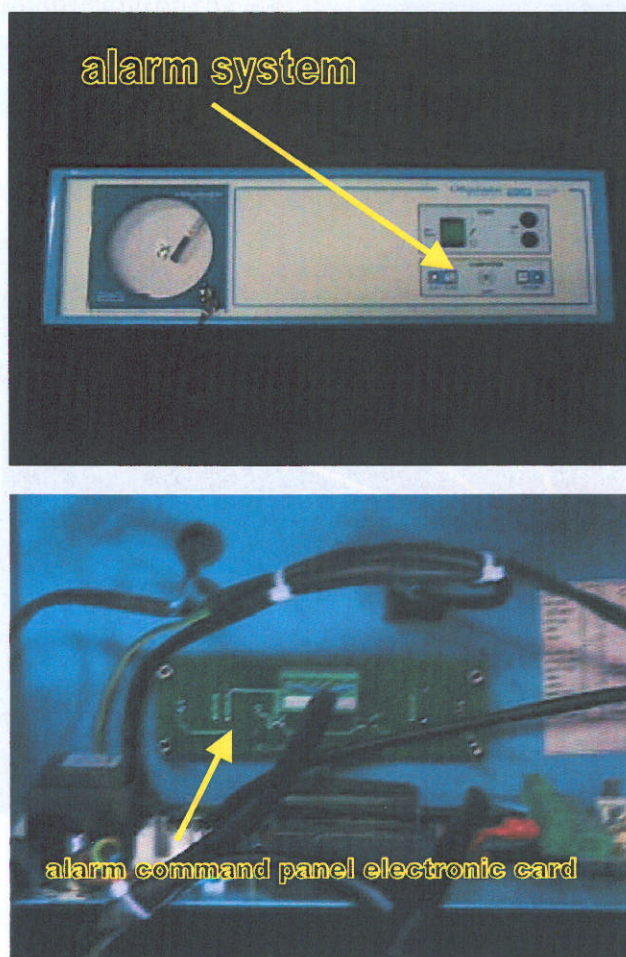
Remove the front case extracting it above from down.
Fix the graphic recorder as indicated in figures.
Place the graphic recorder probe inside the aluminium block.

2.10) GRAPHIC RECORDER AND TEMPERATURE INDICATOR PROBES INSTALLATION



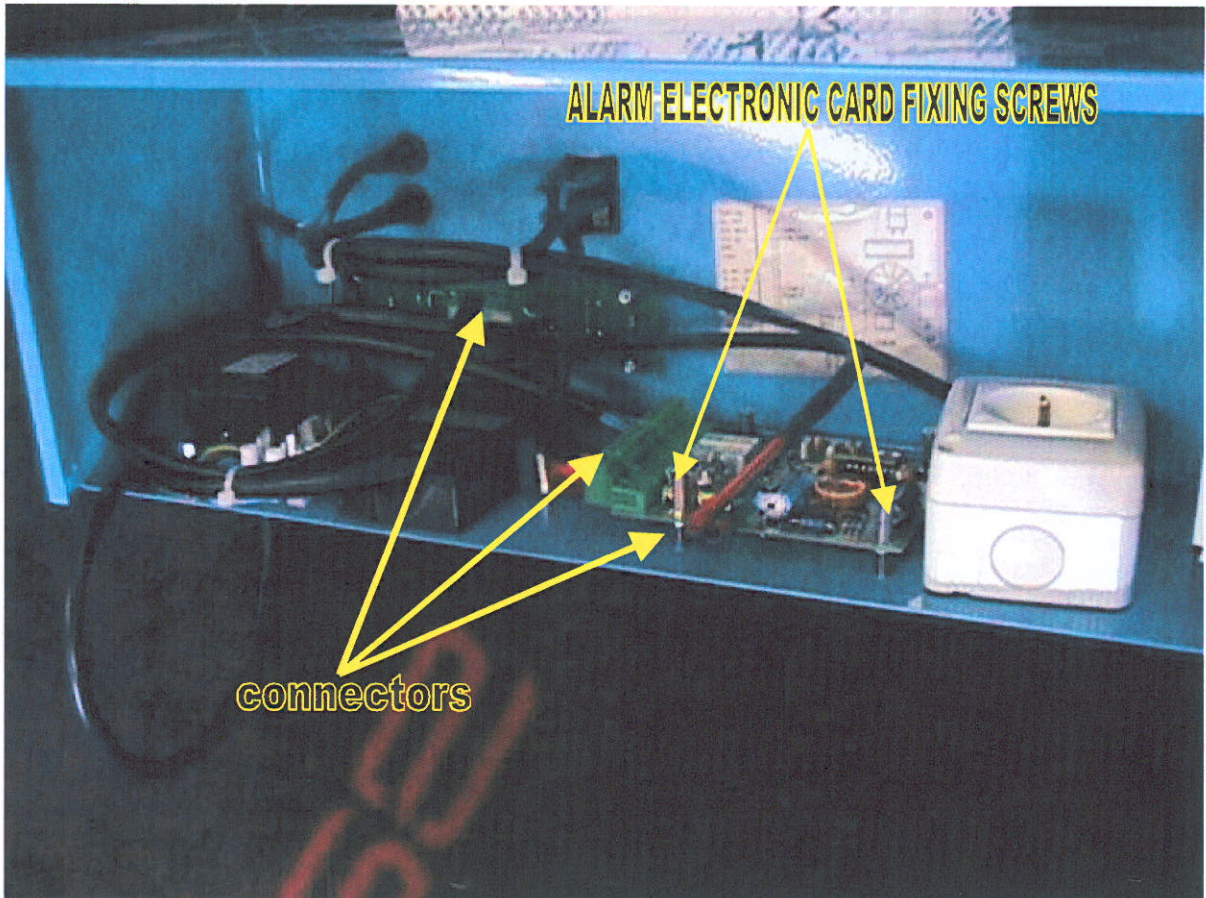
Pass the probes through the existing hole on the structure.
The probes have to be fixed to an aluminium block (see figure).

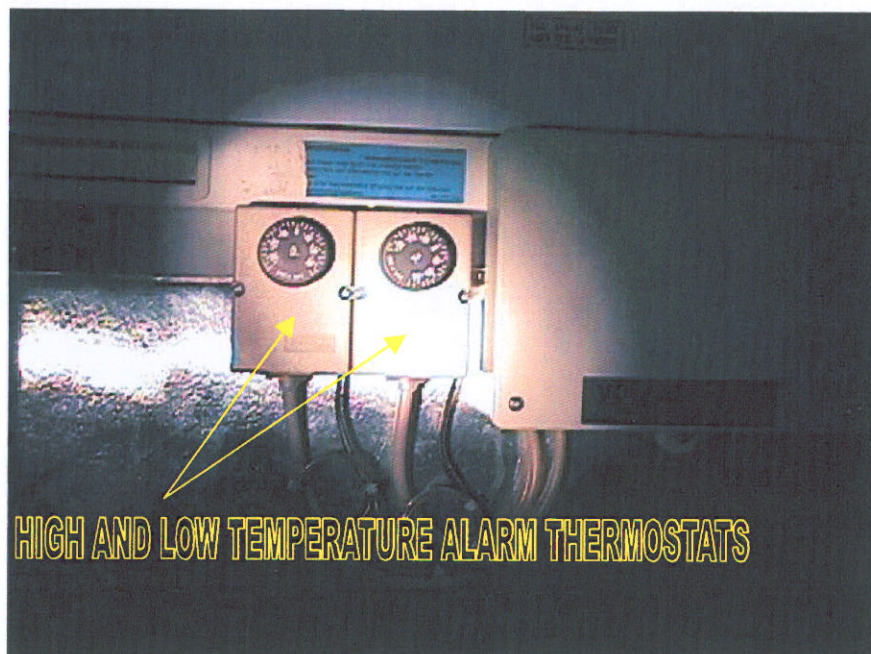
2.11) ALARM SYSTEM INSTALLATION



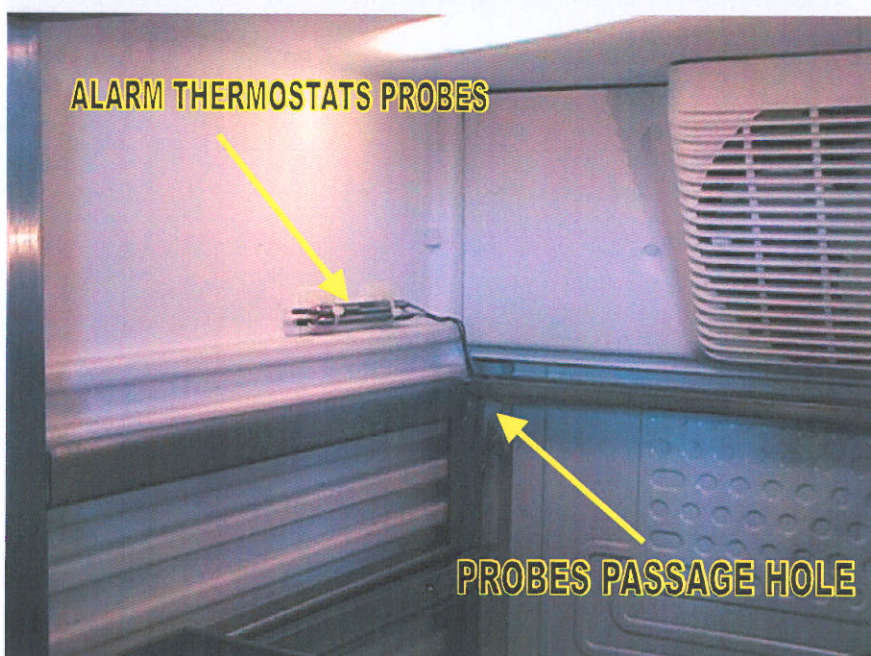
Description

There is an alarm command panel (with its electronic card) and an electronic card that receives the electrical signal from two mechanic thermostat (one for high temperature alarm and one for low temperature alarm).





HIGH AND LOW TEMPERATURE ALARM THERMOSTATS



ALARM THERMOSTATS PROBES

PROBES PASSAGE HOLE

