

Haier SERVICE MANUAL

Order NO. Ref1407S026V0

Refrigerator

**MODEL: HC17SG42RB
HC27SG42RB**



WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings and cautions to advise non-technical individuals of potential dangers in attempting to service a product. Product powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

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Chapter 1 General Information

1-1. General Guidelines

When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed. After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.

- 1) Leakage Current Cold Check
- 2) Leakage Current Hot Check
- 3) Prevention of Electro Static Discharge (ESD) to Electrostatic Sensitive

1-2. Insurance Test

1. Check if there is any leak of current.
2. Cut out the power supply before the repair to avoid an electrical shock hazard.
3. In the case of a live-line test, insulating gloves should be worn to avoid potential electrical shock.
4. Confirm the rated current, voltage and capacity before testing with any kinds of instruments.
5. Watch if the upper door is open when we check something at a lower position.
6. Take out every part in the cabinet before moving the machine, especially things like panels (e.g. glass shelf).
7. Please wear intact cotton gloves when repair any parts of the evaporator, so that scratches by the sharp fins can be avoided.
8. If there is a breakdown with the refrigeration system, please surrender the machine to the service center, else the leaked refrigerant may pollute the atmosphere.
9. The refrigerator use AC of 115V with a frequency of 60Hz.
10. A big fluctuation of voltage may cause a start failure of the refrigerator, a burn-out of the control panel and compressor, or an abnormal sound from the compressor in operation.
11. Take care not to damage the supply line. Don't yank at the line; pull the plug out gently from the

receptacle. Don't press the line under the cabinet or step on it. Take care not to roll on or damage the supply line when moves the machine from the wall.

12. In the case of leakage of inflammable gases like carbon monoxide, open the door and windows.

Don't pull out or insert the plugs of the appliance.

13. Don't touch the refrigeration surface of the freezing compartment when the refrigerator is in operation, especially when our hand is wet, else we may be glued to the surface.

14. Pull out the plug of power supply during clearance or power outage. Wait at least five minutes to resume the power supply in order to prevent damage to the compressor caused by continuous restart.



Photo used in this manual

The illustration and photos used in this Manual may not base on the final design of products, which may differ from the products in some way.

1-3. How to read this Service Manual

1-3-1. Using Icons

Icons are used to attract the attention to specific information. The meaning of each icon is described in the table below:

Note:



A "note" provides information that is not indispensable.

Caution:



A "caution" is used when there is danger that the reader, through incorrect manipulation, may damage equipment, loose data, get an unexpected result or has to restart (part of) a procedure.

Warning:



A "warning" is used when there is danger of personal injury.

Reference:



A "reference" guides to find additional information on a specific topic.

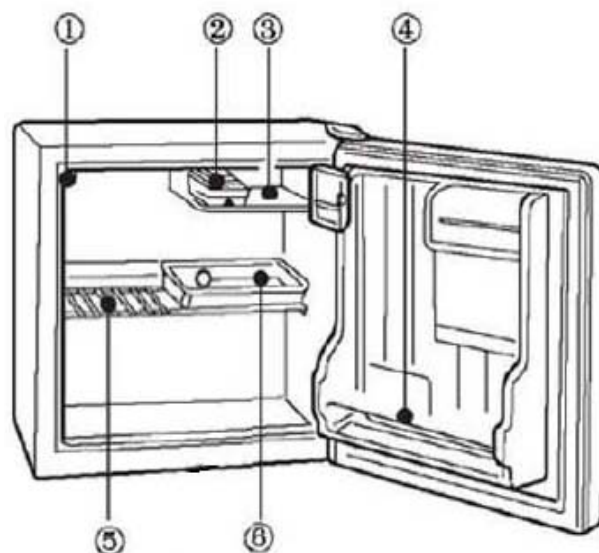
Chapter 2 Product Feature

2-1. SPECIFICATIONS

1	Model		HC17SG42RB	HC27SG42RB
	Product description		Refrigerator	Refrigerator
2	Key features			
	Total net capacity	L	52	76
	Defrosting (H=manual A=automatic)		H	H
	Kind of coolant		R600A 20g	R600A 22g
3	Technical data			
	Voltage / frequency	V/Hz	115V/ 60Hz	115V/ 60Hz
	Temperature range	°C	-2-5	-2-5
	Input power	W	85	85
4	Product net dimensions			
	Unit dimensions (H / W / D)	mm	505×495×465	685×495×465
	Net weight	kg	15.5	18
	Packing dimensions (H / W / D)	mm	492×479×454	664×479×454
	Gross weight	kg	17	20
5	Service			
	User instruction (languages)		English	English

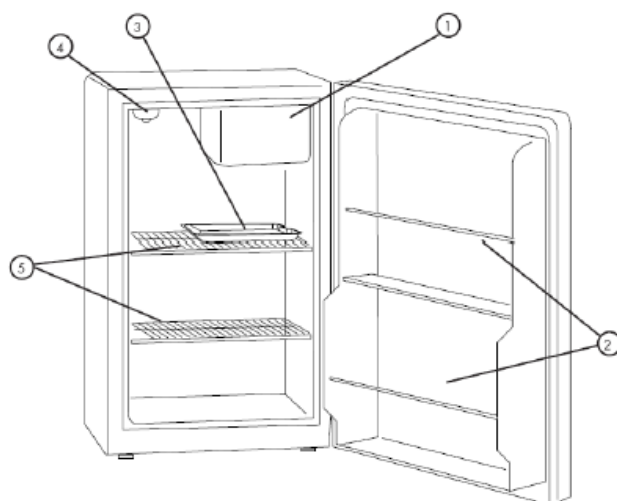
2-2. External views

HC17SG42RB



1. Thermostat
2. Ice tray
3. Freezer compartment
4. Bottle rack
5. Shelf
6. Water tray

HC27SG42RB

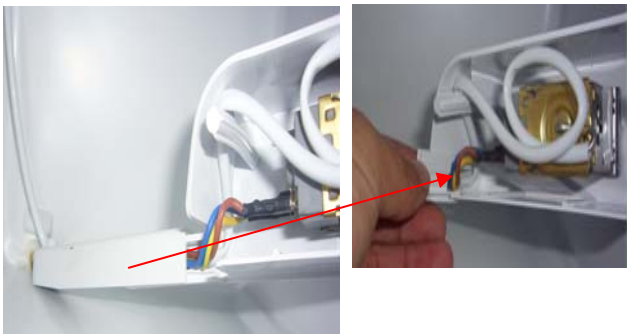


1. Freezer compartment
2. Wire basket
3. Water tray
4. Thermostat
5. shelf

Chapter 3 Disassembly

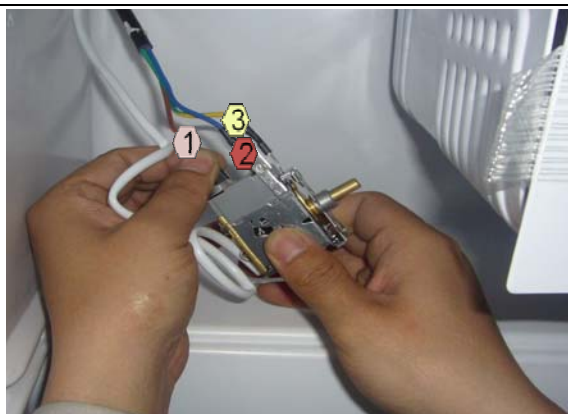
7

3-1. Thermostat disassembly

1	First take down the thermostat knob	
2	Unscrew the screw like the picture	
3	Take down the wire groove	
4	Rotate the thermostat axes counter-clockwise and take down the thermostat	

5

Disconnect the thermostat terminal according to the order of the picture.
And then remove the thermostat.

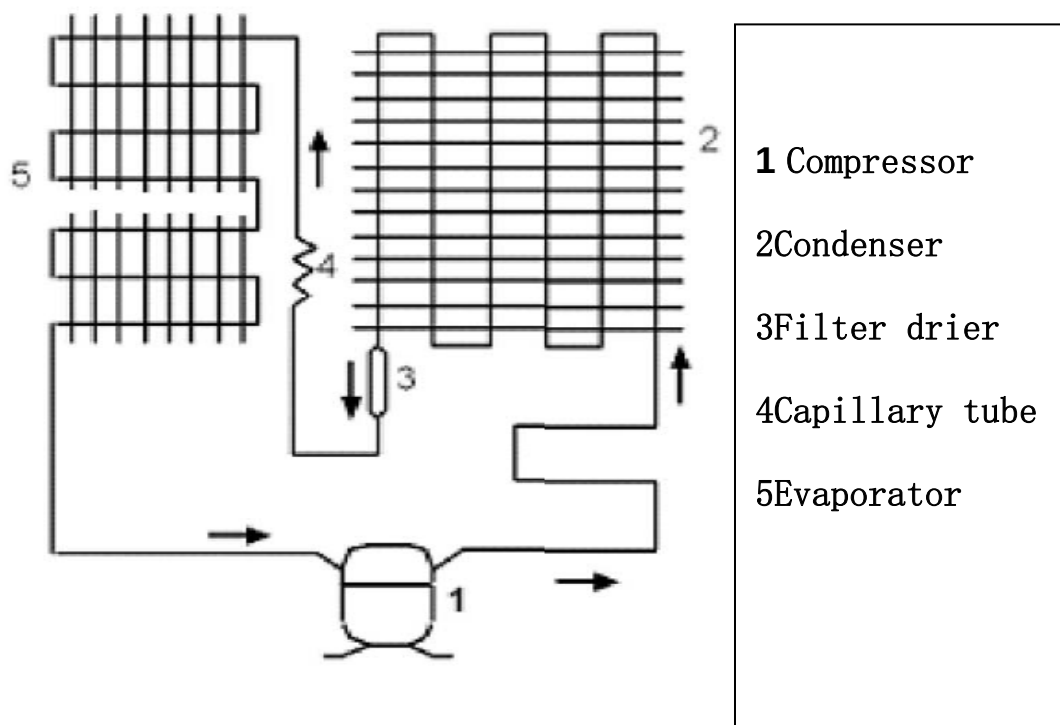


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Install the thermostat according to the reverse order.

Chapter 4 System flow principle

4-1. Refrigeration flow chart

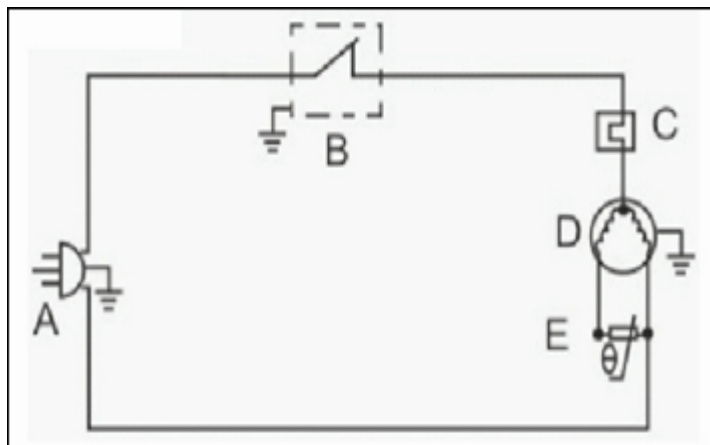


Chapter 5 Circuit diagram

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5-1. Brief principle diagram

HC17SG42RB:

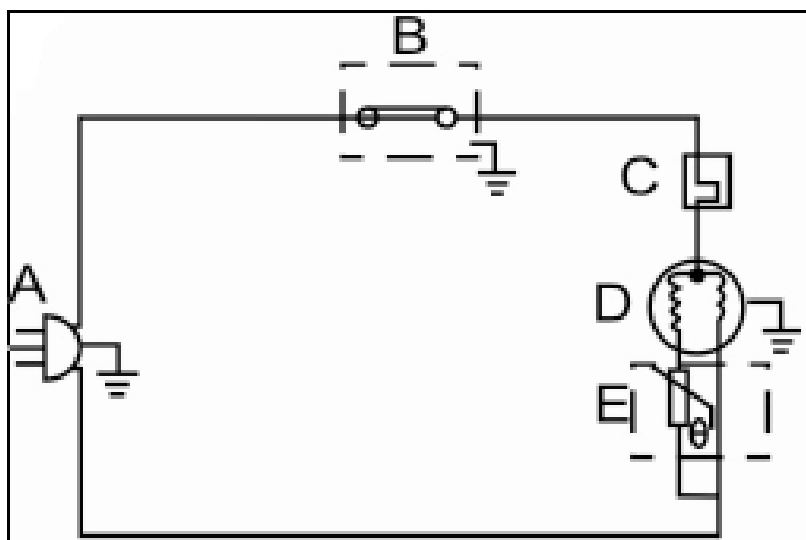


A POWER PLUG
D COMPRESSOR

B THERMOSTAT
E PTC

C OVERLOAD PROTECTOR

HC27SG42RB:



A POWER PLUG
D COMPRESSOR

B THERMOSTAT
E PTC

C OVERLOAD PROTECTOR

Chapter 6 Trouble shooting

6-1.Compressor parameter

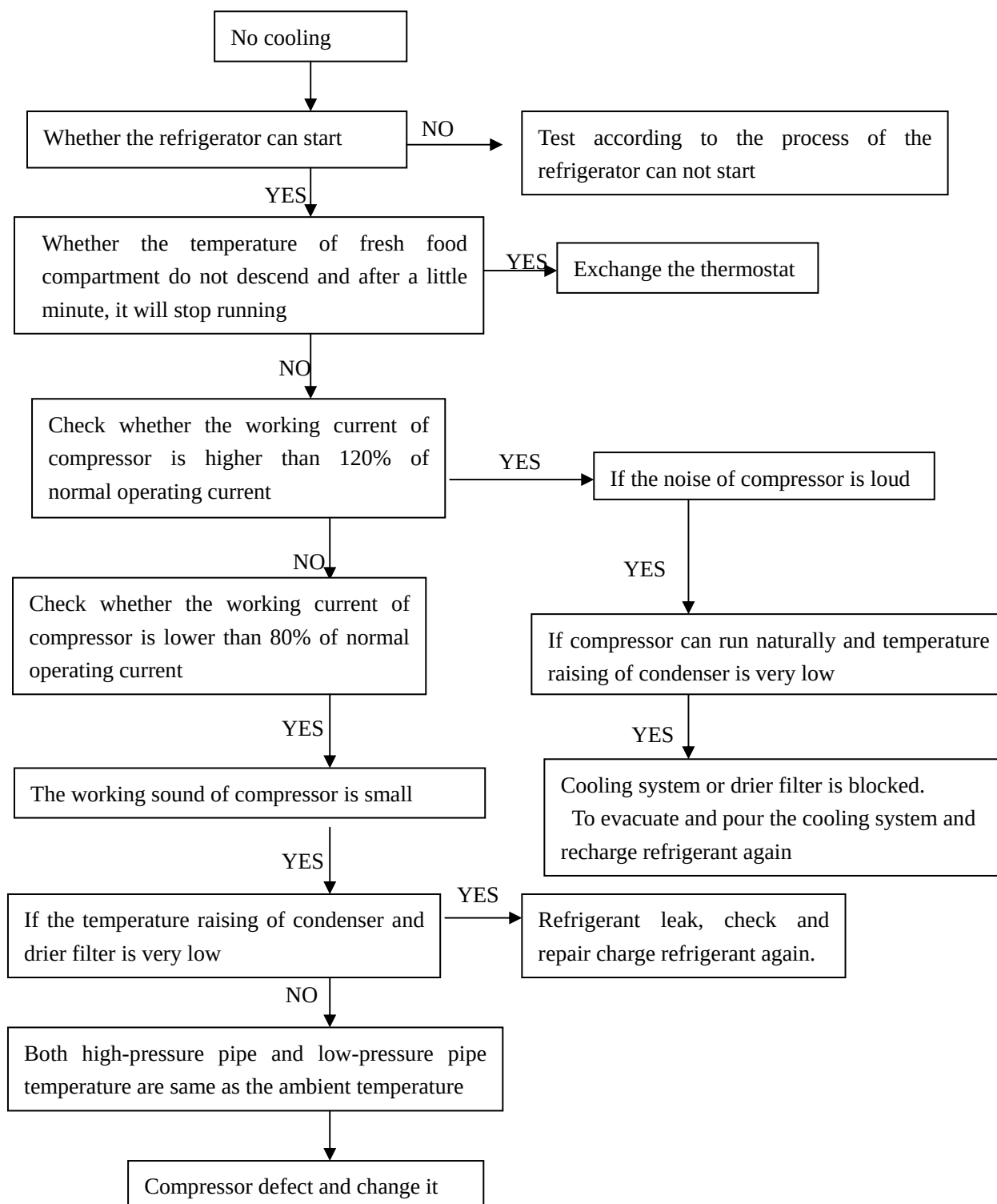
Part Name	Check Method and Criterion (Ambient temperature : Room temperature 25°C)		
Compressor	Model	Main wiring	Auxiliary wiring
	L35C5L	$11 \pm 10\% \Omega$	$7.75 \pm 10\% \Omega$
Starter	Model	QP2-4.7	
	Current(max)	10 A	
	Voltage(max)	180 V	
Overload protector	Model	BT48-125A61D2	
	Open temperature	$125 \pm 5^{\circ}\text{C}$	
	Close temperature	$61 \pm 9^{\circ}\text{C}$	

6-2. Normal phenomena

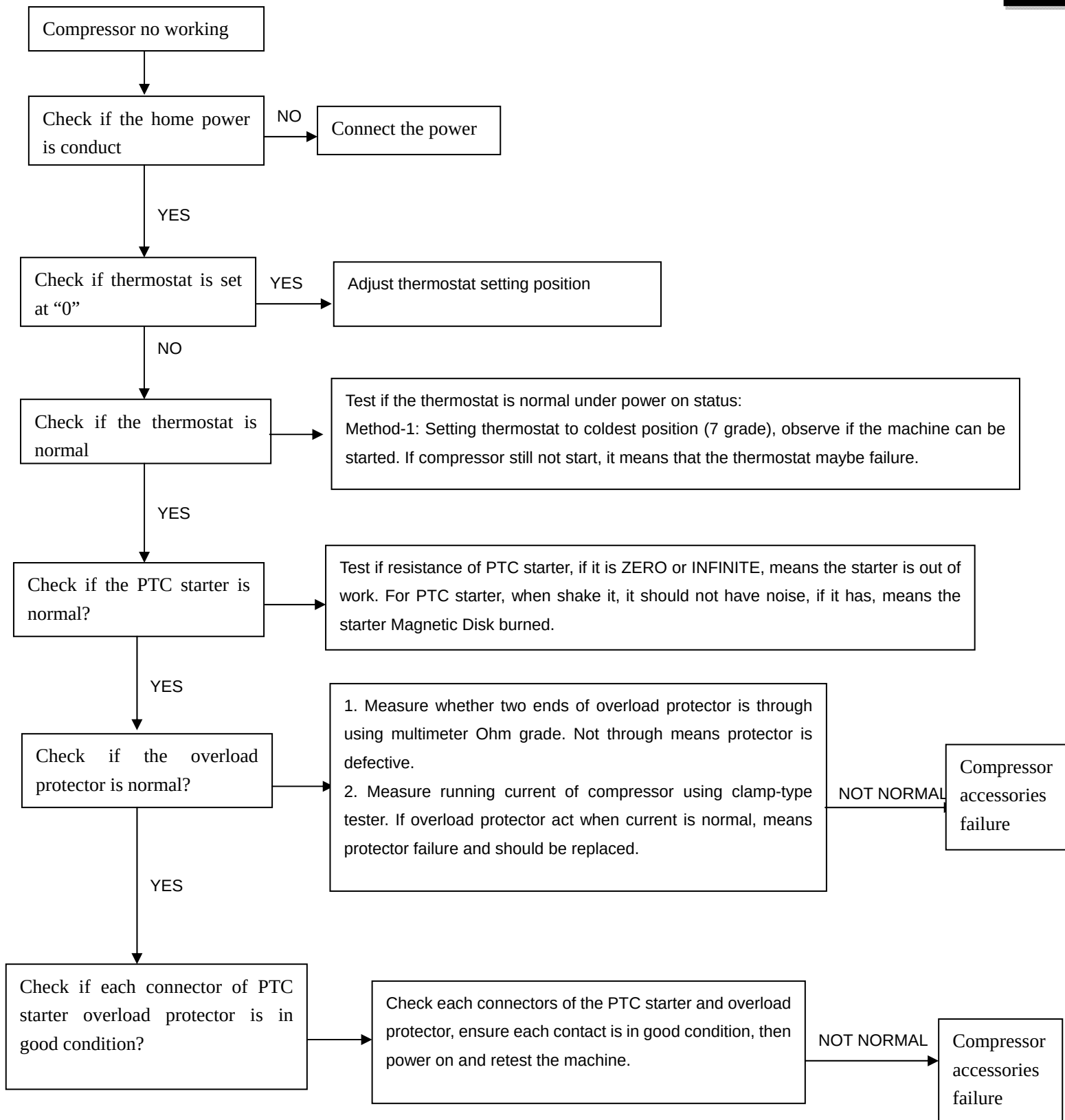
Problems	Reasons	Solving methods
Compressor can not be started	1. Cable broken. The contact of plug, socket, and cable is broken. 2. The voltage is too low ,and lower than the rated voltage115V 3. The knob of the thermostat is at "0" position (When ambient temperature is higher than "30" degree centigrade ,set the knob to "1-2" position; When ambient temperature is between "16-30" degree centigrade ,set the knob to the "3-4" position, and when it lower than "16" degree centigrade ,set the knob to the "4-5"position) 4. The thermostat is out of order	1. Check and contact normally, or else, change damaged part. 2. Use until the voltage rise to the rated voltage ,or attach the voltage stabilizer 3 Set the knob of the thermostat to the suitable position 4. Change the thermostat
Compressor starts too frequently	1.The distance between protection and the heater is too close 2.The door gasket does not seal enough or the cabinet' heat insulation is not good 3.The setting of the thermostat knob is too low	1. Adjust the overload adjustable screw, and increase their distance. 2. Check and repair the cabinet or the door gasket.(check if the door gasket flashed and repair it) 3. Set the knob of the thermostat to the suitable position
Compressor runs without stopping	1. The refrigerant leakage or insufficient 2. The refrigerant is superfluous 3. The condenser is dirty 4. The refrigerator insulation layer is destroyed, and the door gasket' sealing is bad.	1. Check and find the leakage point, let out the refrigerant, then meld it and vacuumed and fill the refrigerant again. 2. Let out the suitable refrigerant 3. Make sure the condense clean 4. the door gasket.(check if the door gasket flashed and repair it)

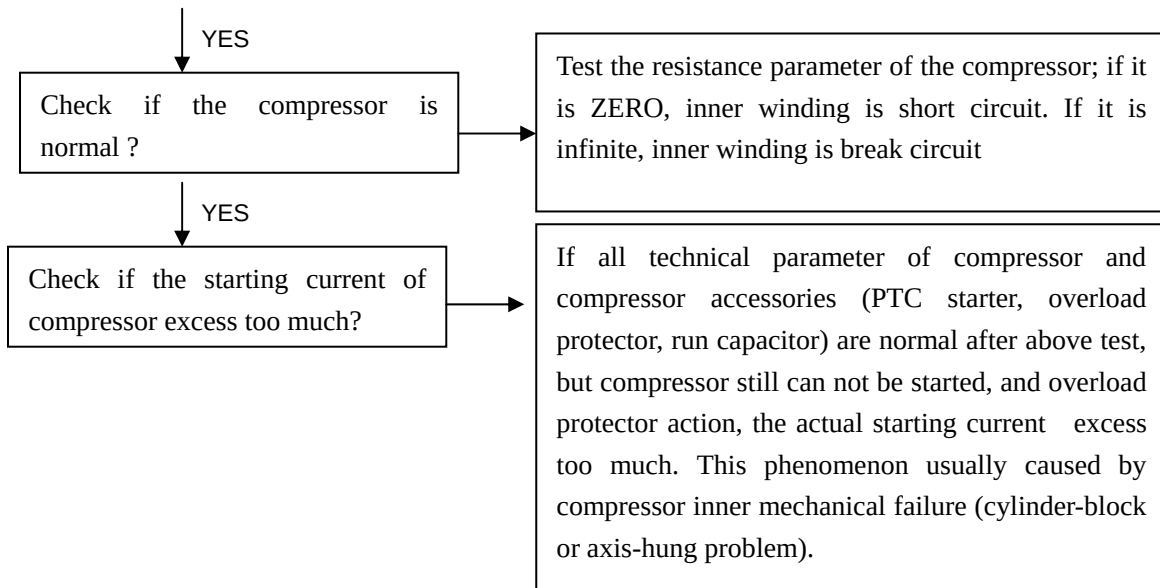
There is noise when the compressor running	1.The fridge body is not stable and in level. 2.When the compressor is running ,there is friction in tube and fridge that lead to syntony 3. Compressor fixed screw is too loose 4.The damping washer fixed too tight or loose or ageing	1.Make the refrigerator stable 2.Move the tube and avoid the friction (the distance between tube and tube and side of cabinet is more than 1cm) 3.Fasten the screw 4.Adjust the fixed angle or change the damping washer
There is no frost on evaporator	1.The refrigerant leakage 2.There is ice block or dirty block in the capillary or the system.	1.Check and find the leakage point, let out the refrigerant, then meld it and vacuumed and fill the refrigerant again. 2.Clean the system with blowing nitrogen, change the capillary and vacuum and fill the refrigerant again.
No frosting	1. The knob of thermostat is setted too high 2. The door gasket flashed and lead to the cold air out of the fridge	1. Change the thermostat (the method as up saying) 2. Repair the door gasket (Use the electric blower to move 3~5 times come-and-go along with the direction of door gasket, make the door gasket and cabinet fit well. Noting: The distance between the blower air out and the door gasket is more than 20cm. Do not touch the door gasket with our hand .And when blowing the door gasket, pat the door slightly with our hand.) 

6-3. No cooling



6-4. Refrigerator compressor no start

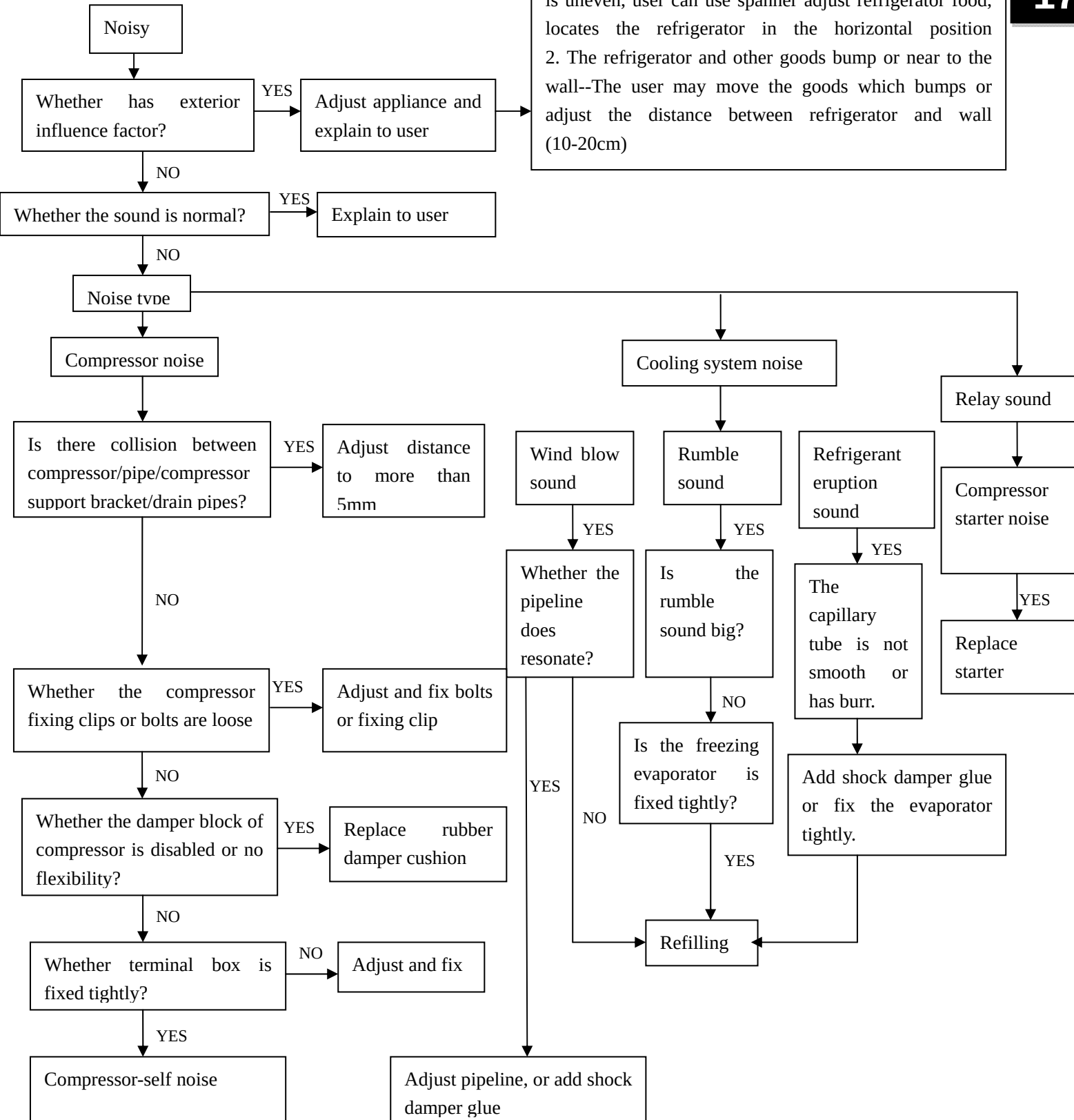




6-5.Noisy

Exterior factor and solution measure :

1. The adjustable foot is not level.--Explained the ground is uneven, user can use spanner adjust refrigerator food, locates the refrigerator in the horizontal position
2. The refrigerator and other goods bump or near to the wall--The user may move the goods which bumps or adjust the distance between refrigerator and wall (10-20cm)



Sincere forever

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