FROST FREE - 273 MECHANIC

Temperature Setting

Thermostat Setting

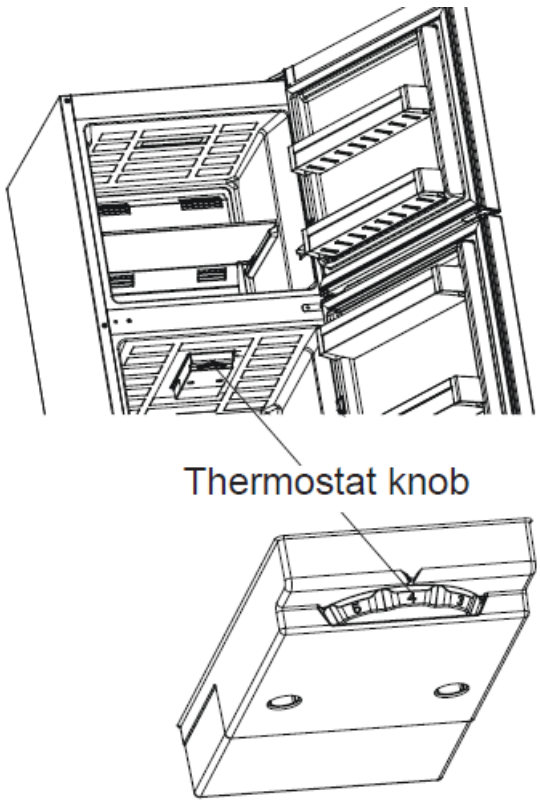
Freezer and refrigerator thermostat automatically regulates the inside temperature of the compartments. Rotate the knob from position 1 to 5 to vary the temperature. set the thermostat a little higher during cold weather to decrease
energy consumption.

Thermostat level

1 – 2 : Set the knob between minimum and medium position for short-term food storage of food in the freezer
compartment.

3 – 4 : For long-term food storage of food in the freezer compartment, set knob to the medium position.

5 – MAX : For freezing fresh food. The appliance will need to work longer. After reaching cooling level you need,the
thermostat setting should be turned to medium set value



Warnings about temperature adjustments

• Temperature adjustments should be made according to the frequency the door is opened and the quantity of food kept inside the fridge.

• This fridge is designed to work in all ambient temperatures. If the ambient temperature is colder than -5 °C, preserving food in the refrigerator compartment is not suggested because the foods that you put in the refrigerator compartment will have a temperature close that is too close to the ambient temperature. Consequently, they will freeze. You can keep your foods in your refrigerator compartment up to -5 °C. Thanks to its special algorithm,appliance will keep your food in low ambient conditions(colder than -5°C) without any problem occuring

• Do not pass to another adjustment before completing an adjustment.

• To be completely cooled, your fridge freezer should be run continuously for up to 24 hours depending on the ambient temperature after being plugged. Keep the doors to your fridge closed as much as possible during this time and only keep a minimal amount of food in it.

• If the unit is switched off or unplugged, you must wait at least 5 minutes before restarting or plugging the unit in again in order not to damage the compressor.

• Your fridge is designed to operate in the ambient temperature intervals stated in the standards, according to the climate class stated in the information label. It is not recommended that fridge freezer should not be operated outside of specified temperature interval in terms of cooling efficiency.

• This appliance is designed for use at an ambient temperature within the 10°C - 43°C range.

Climate class and meaning:

T (tropical): This refrigerating appliance is intended to be used at ambient temperatures ranging from 16 °C to 43 °C.

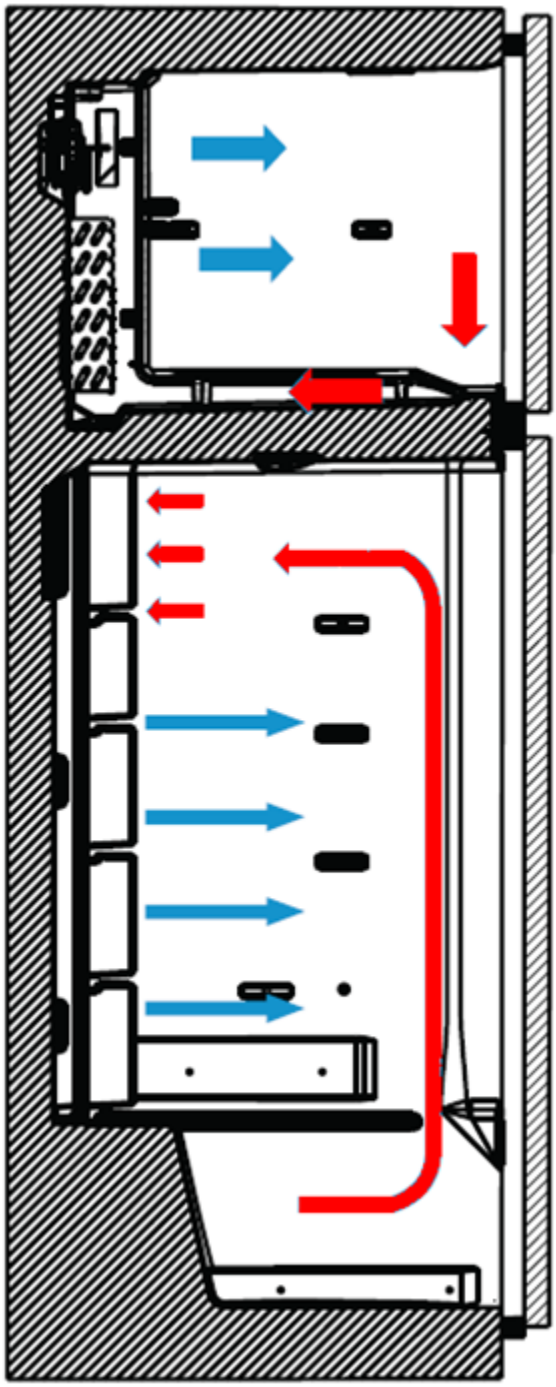
ST (subtropical): This refrigerating appliance is intended to be used at ambient temperatures ranging from 16 °C to
38 °C.

N (temperate): This refrigerating appliance is intended to be used at ambient temperatures ranging from 16 °C to
32 °C.

SN (extended temperate): This refrigerating appliance is intended to be used at ambient temperatures ranging from
10 °C to 32 °C.

Note:

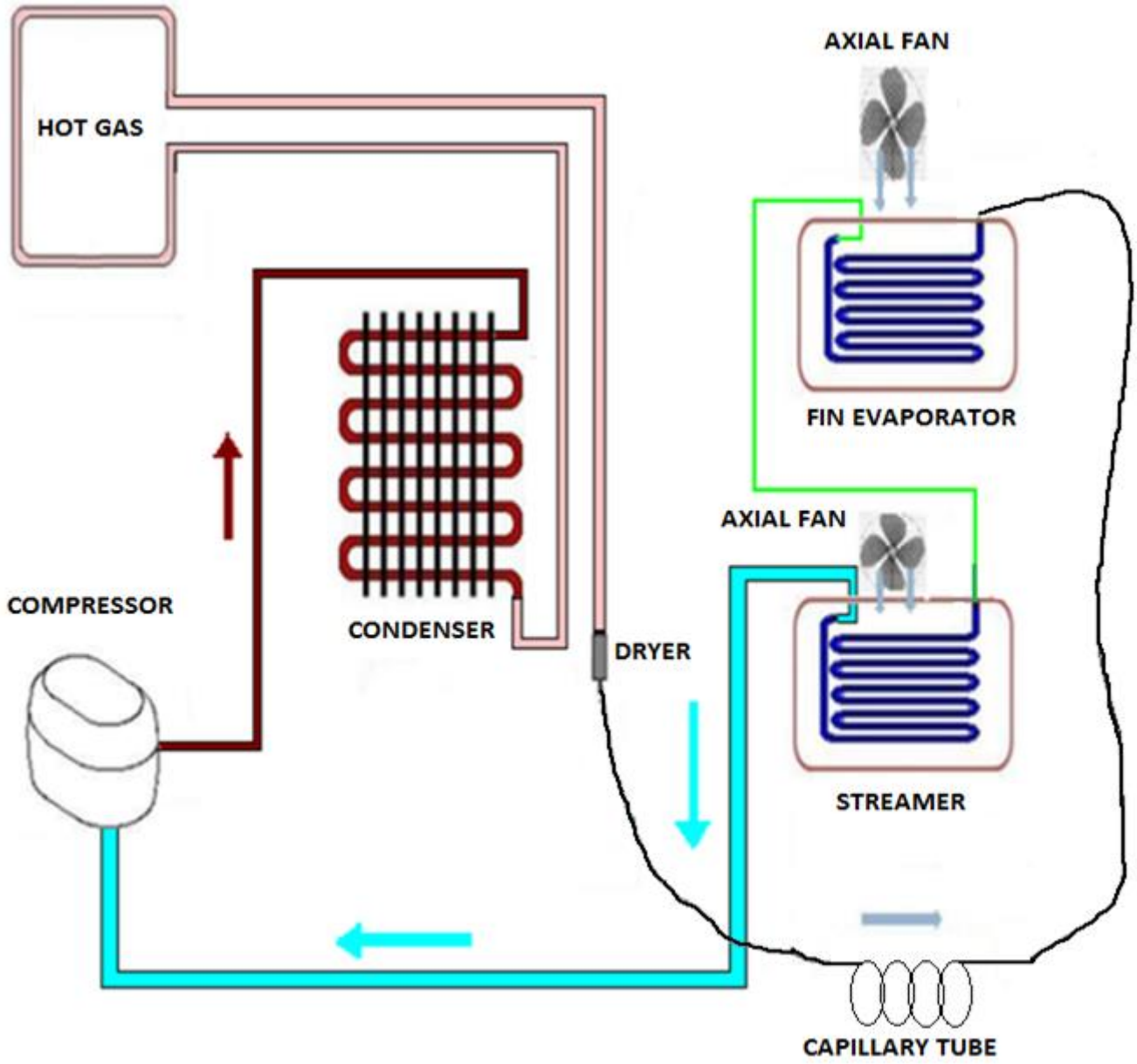
This appliance is designed to work at 43 °C ambient temperature. Below -5 °C ambient temperature, do not use refrigerator compartment. When you place your foods into refrigerator compartment, they will freeze. You can continue using freezer compartment.



Cutaway view: Air Flow Direction

Blown : Cold Air

Returned: Hot Air



The freezer fan motor and the condenser fan motor work parallel time with the compressor. The freezer fan motor works when the freezer compartment door is opened. It is normal.

The cooler fan motor works parallel time with the compressor. However it could work while the compressor is stopped or the cooler is defrosting.

• Fin Evaporator Resistance	230V/150W
• Evaporating Tray Resistance	230V/32W (Drain Heater)
• Thermal Fuse	72 ºC
• Cooler Defrost Resistance	230V/10W
• Cooler Fan Motor	DC 12V
• Evaporator Fan Motor	AC 230 V 50 Hz
• Mainboard (Power Card	VESTEL ELECTRONİC(on the right top of rear panel)
• Thermostat Card	VESTEL ELECTRONİC(on right side panel of cooler compartment)
• Freezer Defrost Sensor	EPCOS - VISHAY
• Cooler Defrost Sensor	EPCOS (it is not possible to change in the body)
• Cooler Sensor	EPCOS - VISHAY
• LED Illumination	3.9W
• Transformer	On the mainboard

Resistance Values According To The Temperature Sensor (°C/Ohm Rates)

(For The Freezer Defrost and The Cooler Ambient Sensor)

45 °C/1kΩ	-1 °C/6.2kΩ
35 °C/1.5kΩ	-3 °C/6.8kΩ
30 °C/1.8kΩ	-5 °C/7.5kΩ
25 °C/2.2kΩ	-7 °C/8.2kΩ
19 °C/2.7kΩ	-12 °C/10kΩ
14 °C/3.3kΩ	-15 °C/12kΩ
10 °C/3.9kΩ	-20 °C/15kΩ
5.5 °C/4.7kΩ	-24 °C/18kΩ
1.5 °C/5.6kΩ	-31.5 °C/27kΩ
0 °C/6kΩ	-35.5 °C/33kΩ

Sensor Resistance Values According To The Temperature (°C/Ohm Rates)

(For The Cooler Defrost Sensor)

45 °C/2.15kΩ	-1 °C/17.1kΩ
35 °C/3.26kΩ	-3 °C/19kΩ
30 °C/4.02k5Ω	-5 °C/21.1kΩ
25 °C/5kΩ	-7 °C/23.5kΩ
19 °C/6.53kΩ	-12 °C/30.8kΩ
14 °C/8.23kΩ	-15 °C/36.5kΩ
10 °C/9.95kΩ	-20 °C/48.6kΩ
5.5 °C/12.3kΩ	-24 °C/61.5kΩ
1.5 °C/15kΩ	-31.5 °C/98kΩ
0 °C/16.3kΩ	-35.5 °C/12.6kΩ

NTC Sensor

There are three types of sensors. They are cooler, freezer defrost, cooler defrost sensors. Cooler and freezer defrost sensors have the same features but their cable length is different. The resistance values of all sensors decrease when the temperature values of the sensors increase. For example, the resistance value that is 33 kΩ in the -35.5 ºC goes down to 1kΩ in the 45 ºC and therefore the ambient temperature should be considered while the sensor is being checked. If the ambient temperature is 25 ºC, the measuring device shows about 2.2kΩ (if ntc sensor is steady).

When the refrigerator works on first time;

If the cooler compartment defrost sensor and the freezer compartment defrost sensor are hotter than -5°C, the test system works automatically. These below components are tested automatically every 5 seconds.
(If the automatic control process doesn't start initially and started after ten minutes this means one of the sensors are open or short circuit, please check sensors.)
Automatic control steps:

- ❖The compressor starts and stops after 5 seconds.
- ❖The defrost resistance stars and stops after 5 seconds.
- ❖The cooler defrost resistance starts and stops after 5 seconds.
- ❖The DC Radial Fan starts and stops after 5 seconds.

After these steps, the system waits 5 minutes and then it will switch normal mod.

Freezer Defrost Program

- According to the conditions of usage, the defrost might be activated after the min compressor running time; 8 hours or max total time; 55 hours. Below matters are also effected;
- Consisted ice amount,
- Door open-close,
- Sudden usage variance,
- Cooler sudden temperature rise,

Cooler Defrost Program

The cooler defrost and the freezer defrost are operated parallel except those below.
If the cooler defrost sensor does not feel 5°C three times during a particular period of time.

- Defrost will be activated after the refrigerator works max 9 hours. According to the conditions of usage, the defrost might be activated (due to mentioned those below) after the compressor works min 5 hours.
- Consisted ice amount,
- Door open-close,
- Sudden usage variance,
- Cooler sudden temperature rise,

Freezer Defrosting Time

The Defrost is disabled when the defrost sensor temperature feels 8ºC.If defrost time passes 37 minutes, defrost completing temperature will be rise to 15ºC.

Cooler Defrosting Time

The cooler defrost and the freezer defrost are operated parallel except those below. The cooler defrost will not work if the freezer defrost stops.

The defrost process stops when the defrost sensor temperature feels 7ºC. At the low ambient temperature or when the compressor stops; to balance, defrost stops when the defrost sensor temperature feels 15^{o}C. But if the defrost time or the compressor stopping time goes over 6 hours, the resistance will be stopped.

Compressor delay: First, the defrost process ends, the system waits 5 minutes, just after that the compressor is active.

In Case of Power Cut

- All regulated parameters and functions are kept in memory when the power cut.
- In case compressor stops due to any reason, it waits to protect itself for 5 minutes .
- When the electricity comes; if the defrost sensor temperature is colder than -5 ºC, starting test is not activated. If it is hotter than -5 ºC, starting test is activated.

Other Features

Warnings : The door open warning is active 2 minutes later and it alarms.

Door Direction : It is possible to reverse the door.

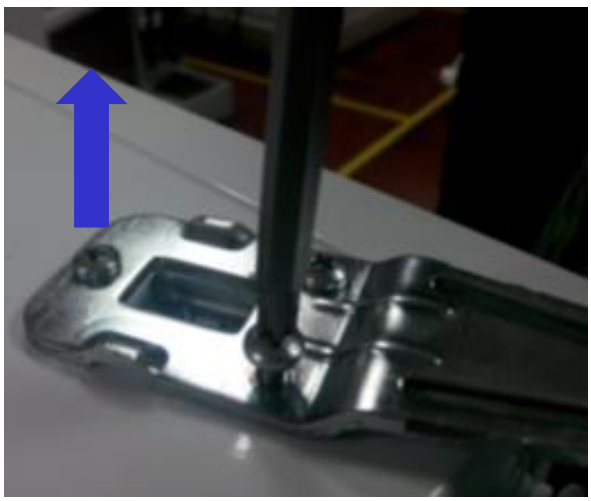
Gasket : It is possible to change the gasket.

Unsufficient cooling	Is the appliance too close to wall or heat sources (stove, central heating, oven, cooker etc.)?	It should be placed min 50cm distance from heat sources and min 5 cm from electrical ovens.
	Is the ambient temperature high?	Raise the thermostat value.
	Check whether putting the hot foods in the refrigerator?	Put the foods after get cold.
	Is there any gas leakage in refrigerant system?	Check all welding points in the system.
The foods in the cooler compartment are freezing.	Were the foods placed close to cooling air outlet?	Please do not block air outlets
	Is the cooler thermostat value high ? Is there any hot foods close to the cooler sensor?	Decrease the cooler thermostat value and do not put hot things close to the sensor.
Are there any sweating or icing?	Were the liquid foods in the closed containers?	Put the liquid foods into the closed containers.
	Were the hot foods put into the refrigerator?	Put it into after getting cold.
	Was the refrigerator door opened?	Do not leave the refrigerator door open and do not often open or close.
Abnormal Noise	Is the appliance on the flat surface?	The floor should be straight and balance the refrigerator with the help of the adjustable feet.
	Is the compressor feet loose	Fix it.
	Is the condenser or fan stationary normal?	Fix it.
	Do the capillary tube or all other tubes touch any where?	Fix it.

1.Hold the top hinge cover and remove it toward that direction (Pic-1)

Picture-1

2.Unscrew the three screws fixing the top hinge and remove it. (Pic-2)



Picture-2

3. Displace the top door (Pic-3)

Picture-3

4. Unscrew the two screws fixing the middle hinge and remove it.(Pic-4)

Picture-4

5. Displace the bottom door. (Pic-5)

Picture-5

6. Unscrew the adjustable foot (Pic-6)

Picture-6

7. Unscrew the bottom hinge screws. (Pic-7)

Picture-7

8. Unscrew the bottom hinge pin and screw it to other hole. (Pic-8)

Picture-8

9. Unscrew the left bottom adjustable foot and the screws fixing roller. After that screw them to other side (Pic-9)

Picture-9

10. Screw the bottom hinge to the left bottom side of refrigerator. Screw the adjustable foot there. (Pic-10)

Picture-10

11. Unscrew the two screws fixing stopper and stopper support plate under the cooler door. After that screw the other side. (Pic-11)

Picture-11

12. Replace the top bushing and the top bushing cap at the bottom door. (Pic-12)

Picture-12

13. Unscrew the two screws fixing stopper and stopper support plate under the freezer door. After that screw the other side. (Pic-11)

Picture-13.1

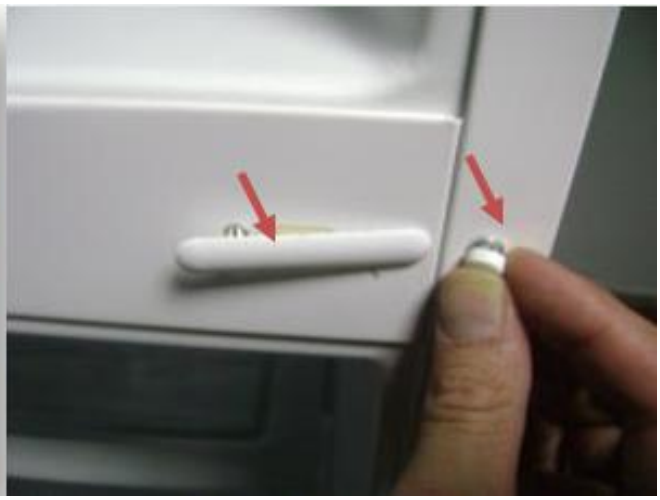
Picture-13.2

14. Remove the hinge cover on the top panel and replace to other side.(Pic-14)

Picture-14

15. Remove the middle hinge cover and then screw the screw on the side panel (Pic-15.1) and assemble to the right side panel (Pic-15.2)

Picture-15.1



Picture-15.2

16. Place the bottom door (Pic-16.1) and rotate the middle hinge by 180º. After that, Screw to the right side on the middle sheet. (Pic-16.2)

Picture-16.1

Picture-16.2

17. Place the top door to the middle hinge and then screw the top hinge to the top panel. (Pic-17)

Picture-17

18. Place the top hinge cover. (Pic-18)

Picture-18

1. Remove the cooler glass shelves and the chiller. (Pic-1/ Pic-2/Pic-3)

Picture-1

Picture-2

Picture-3

2. Stick one tape to each air duct to avoid scratching. Remove the screw caps by using a flat screwdriver and screw the screws. (Pic-4)

Picture-4

3. Flex the multi flow by holding the fan cover and remove it. Disconnect the connector after removing the multi flow. (Pic-5)

Picture-5

1.Remove the fan cover by flexing the fan cover detail and then remove the fan motor by flexing the fan motor rubbers. (Pic-1/ Pic-2/Pic-3)

Picture-1

Picture-2

Picture-3

2. Place the rubbers to the fan motor. After that, first place the bottom two details of the fan motor and place the top two details by pressing-flexing it. (Pic-4/ Pic-5/Pic-6)

Note : The fan motor cable outlet should be at the top-left corner of it.

3. After the connector is connected, place it by flexing it and then reassemble the multi flow by screwing.

Picture-4

Picture-5

Picture-6

1. Displace the glass shelf or the ice box group if there is. (Pic-1)
2. Insert a flat screwdriver into the gap and then support the lateral surface of the multi flow with the help of a hand and remove the freezer multi flow group. (Pic-2)
3. Removing the freezer bottom cover by flexing back side of it. (Pic-3)

Picture-1

Picture-2

Picture-3

Assembling The Freezer Multi Flow Group

1. Recline the bottom cover against one side and place the freezer multi flow cover details. (Pic-4)
2. Hold the back side of the bottom cover and flex it. After that, reassemble the other side details. Finish the assembly by pulling the cover. (Pic-5 / Pic-6)
3. First, place the freezer multi flow details to the backside of the bottom cover (Pic-7/Pic-8) and reassemble the freezer multi flow cover by pushing back. (Pic-9)
Note: The freezer multi flow should be removed before the freezer bottom cover.

Picture-4

Picture-5

Picture-6

Picture-7

Picture-8

Picture-9

CAUTION: The plug must be pulled out before the mainboard group is removed.

1. Remove the putty around the freezer defrost sensor. (Pic-1)

Picture-1

2. Disconnect the sensor connector. (Pic-2)

Picture-2

3. Assemble the new sensor to the evaporator resistance as shown in the picture. (Pic-3)

Picture-3

4. Connect the sensor socket and apply putty. (Pic-4)

Picture-4

Chancing The Cooler Sensor

1. Remove the sensor cover with the help of a screwdriver and then disconnect the sensor connector. (Pic-1)

Picture-1

2. Place the bottom-front details of the cover to its housing and then place the top cover detail to the housing by flexing it with a screwdriver. (Pic-2)

Picture-2

CAUTION: Pay attention not to damage to the sensor cover details!

1.Remove the fin evaporator resistance connectors from the sockets. (Pic-1) (**blue** connector)

Picture-1

2. Displace the fin evaporator balanced by holding on both sides. (Pic-2)

Picture-2

CAUTION: The fin evaporator should not be pulled upward-downward. Otherwise, the fin evaporator fixing plastics might be broken.

Removing The Thermal Fuse

1. Remove the thermal fuse connector. (Pic-1) (**black** connector)

Picture-1

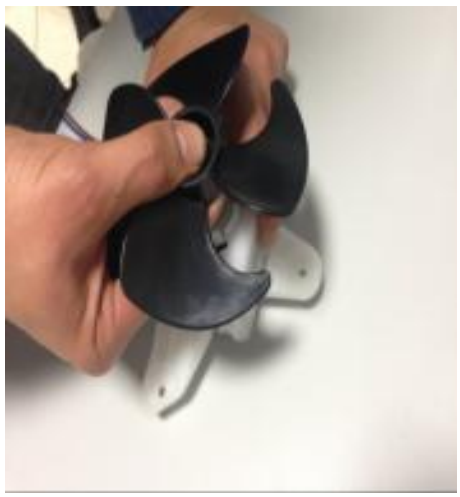
2. Cut the thermal fuse cable tie at right side of the fin evaporator group and take the thermal fuse out.(Pic-2)

Picture-2

1. Remove the fan motor connector. (Pic-1)
2. Unscrew the fan motor fixing screws and displace the fan motor. (Pic-2)
3. Remove the propeller. (Pic-3)

Picture-1

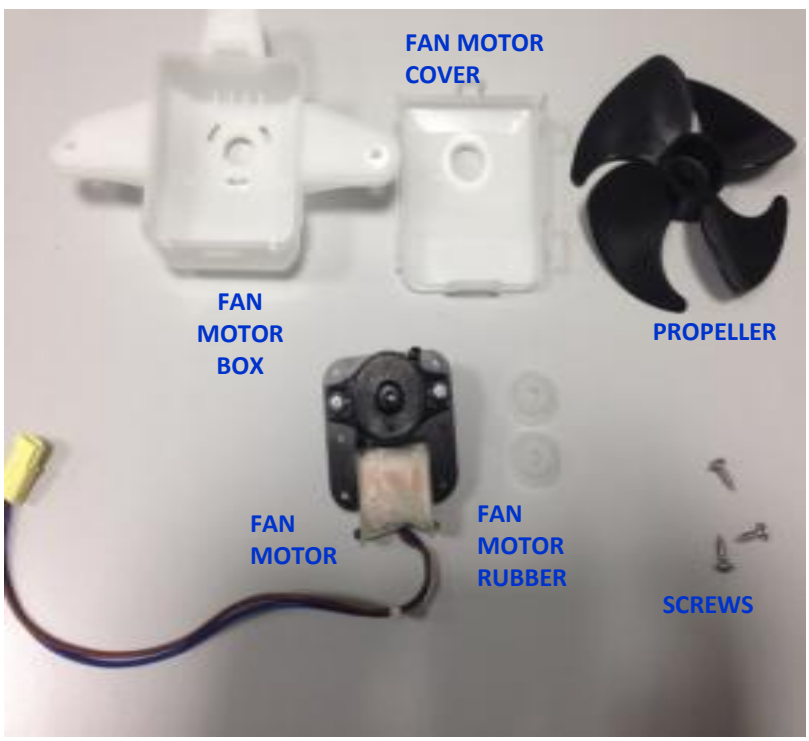
Picture-2



Picture-3

4. Displace the details on the fan motor box. (Pic-4)

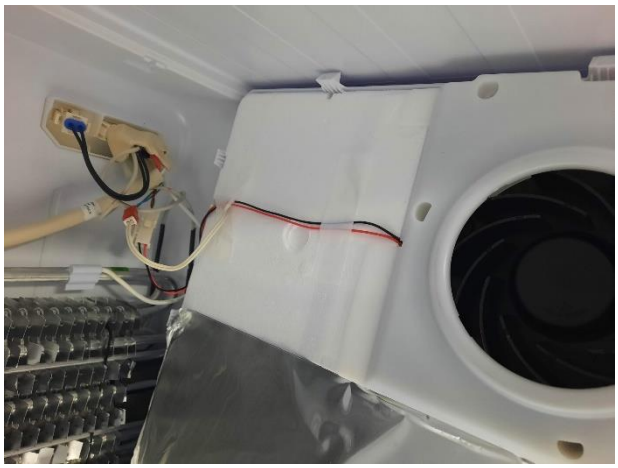
Picture-4



Fan Motor Components

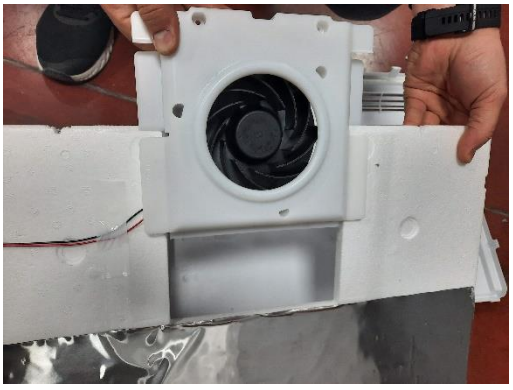
1. Remove the fan motor.

2. Remove the multiflow cover group.



3. Displace the details on the cover group.

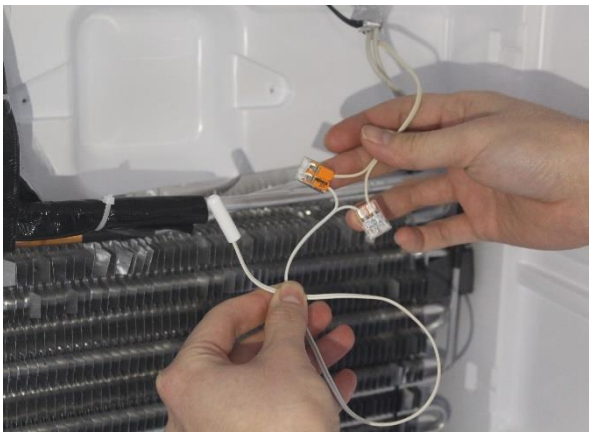
4. Remove the freezer fan motor.

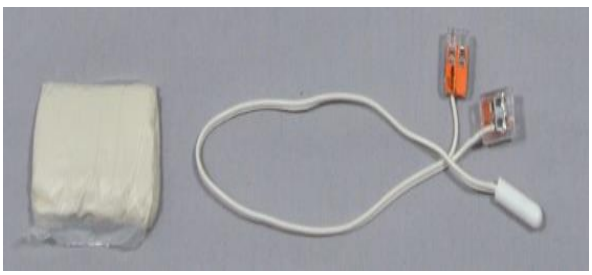


FROST FREE - 273 MECHANIC

Removing Fin Evaporator Sensor

Displace the defrost sensor from its location. Cut the end of the sensor cable by using pliers/side cutting pliers.
Connect the cut sensor cable ends to each other as separate clips.
Immobilize the sensor resistance's end its previous position by using cable bant.
In order to prevent oxidation on the metal end of clips. You can use paste which is founded in kit.
Excessive part of the cable should not be left scattered in order not entanglement on the fan motor. It should be fixed with a separate cable bant.





32030727 - SENSOR SERVICE KIT

FEBRUARY 2019

Replacement of Refrigerator LEDs and LED's Covers

The plug must be pulled out before the led lamp is removed.

1. Press the snap fit cover with finger and remove the box cover . After that operations, you can change the LED bulb.

2. For assembling, reverse the above operations..

1. Stick a tape to protect the body plastic. Flex it with the help of a tool like a slotted screwdriver. (Pic-1)

Picture-1

2. Also flex the top-side of the switch and then displace by pulling. (Pic-2)

Picture-2

3. Put the switch connector cable in the housing. First place the top-side of the switch and then push the bottom side.(Pic-3.1/Pic-3.2)

Picture-3.1

Picture-3.2

4. After the switch is placed, complete the assembly by pushing. (Pic-4)

Picture-4.1

Picture-.43.2

CAUTION: The bottom-top details of the switch are different from each other to avoid assembling wrong!