Electrolux
Distriparts

SERVICE MANUAL

REFRIGERATION

Publication Number

599 76 40-70

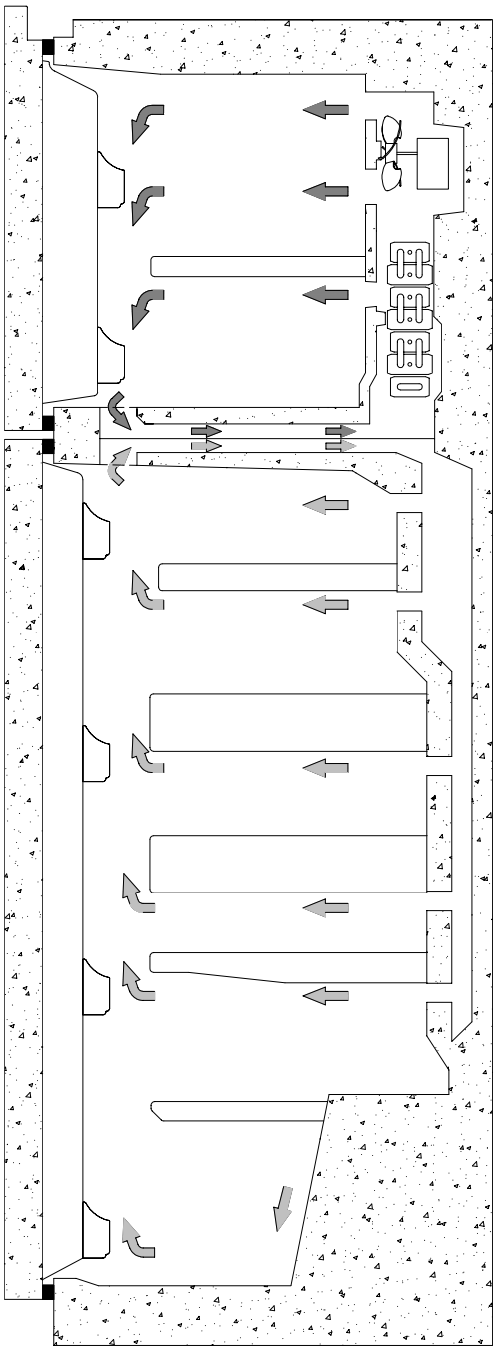
Edition: 02/2013 - Rev. 00

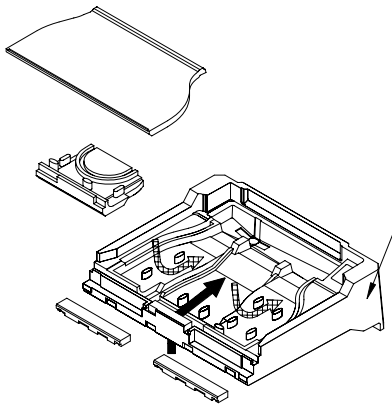
EN

Service

NO-FROST 465-MECHANIC

	NO-FROST 465-MECHANIC	CUSTOMER SUPPORT
	AIR FLOW DIAGRAM	





RETURN AIR ABSORBING DUCT

FREEZER SECTION RETURN AIR
REFRIGERATOR SECTION RETURN AIR

NOTE THAT:RETURN AIRS,
WHICH COMES FROM FREEZER
AND REFRIGERATOR SECTION
DO NOT MIX EACH OTHER

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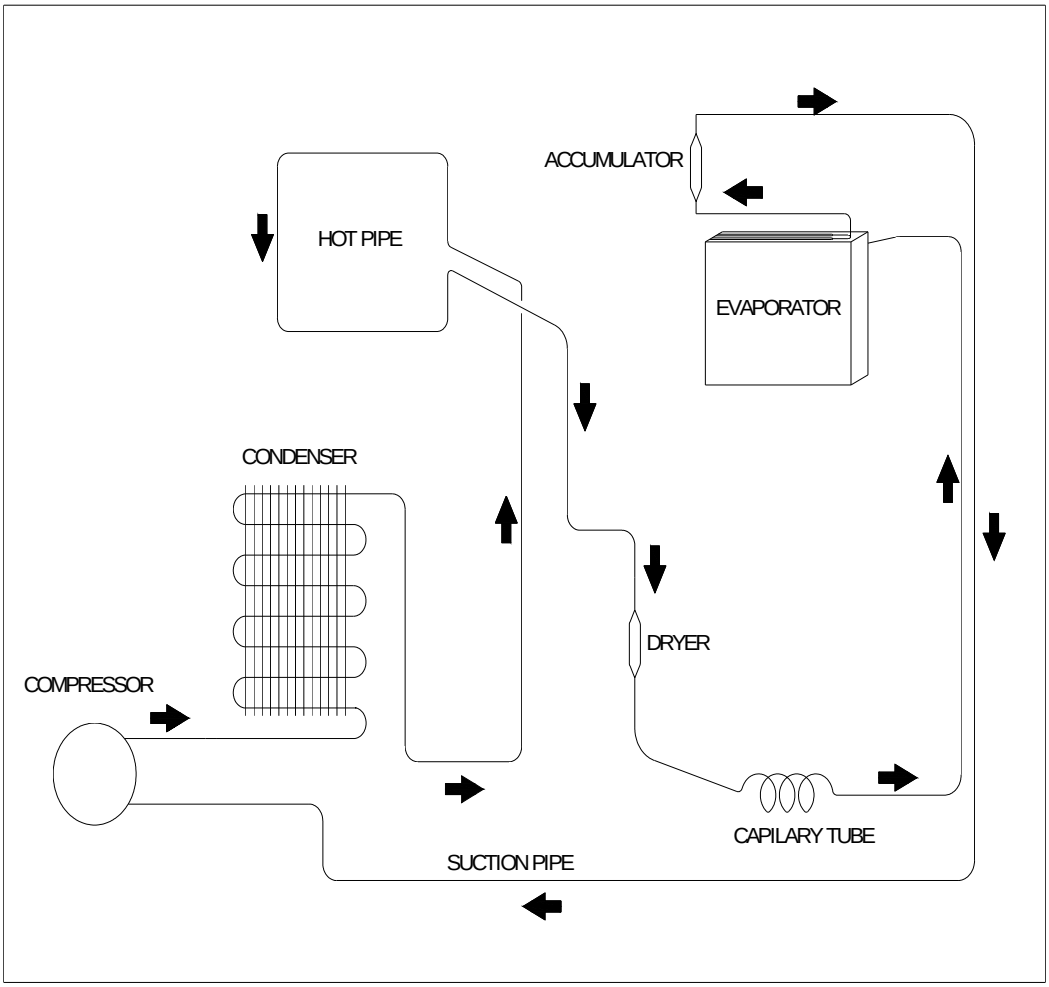
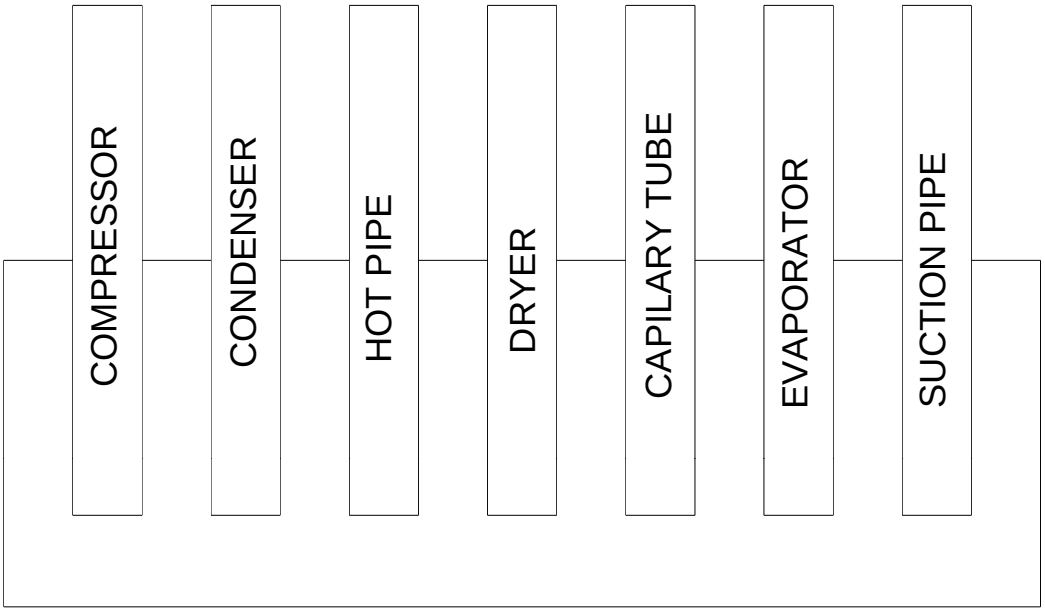
	NO-FROST 465-MECHANIC	CUSTOMER SUPPORT
	REFRIGERANT CYCLE DIAGRAM	





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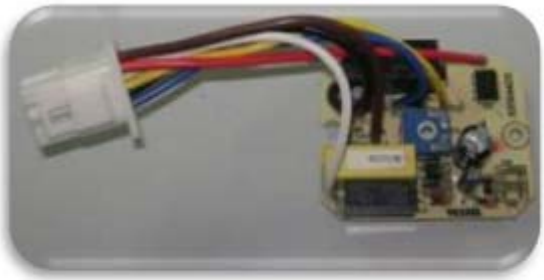
ELECTRO MECHANICAL THERMOSTAT:



It is located at the left upper side of the freezer compartment.
Main function : To decide when the compressor works according to the temperature of freezer compartment.
To decide when to defros accordding to the ambient temperature.

REFRIGERATOR (DUMPER) THERMOSTAT:

Main purpose is to regulate the temperature of the refrigerator compartment. If the refrigerator compartment temperature reaches to 5ºC then the dumper thermostat will be opened. If the refrigerator compartment temperature reaches to –6ºC then the dumper thermostat will be closed.

HEATERS:

1. FIN EVAP HEATER (146W) :

It is placed in the holes on the fin evaporator.
Function : To melt the ice formed on the fin evaporator.

2. DRAIN HOSE HEATER (5W) :

It is located inside the cabinet at the connection point of drain hose and drain tray.
Function : To prevent the ice accumulation inside the hose during the defrost period.
If the drain heater is broken (Unusual) it is not possible to change it.

3. DRAIN TRAY HEATER (50W) :

It is placed in the drain tray.
Function : To melt the ice formed on the fin evaporator.

BI-METAL THERMOSTAT ASSY. :

It is located on the accumulator.
Function : Main function is to switch off the defrost heater after the bi-metal temperature reaches to 8 °C on the accumulator during the defrost period.

THERMAL FUSE :

It is an additional protection. If the bi-metal thermostat does not switch-off the Al tube heater, the thermal fuse will blow off (76ºC). In this case, all functions will stop.

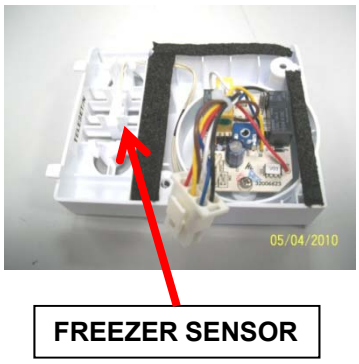
WORKING PRINCIPLE OF ELECTRO MECHANICAL THERMOSTAT

Freezer sensor, placed inside freezer compartment sends temperature information to card. The card (Electromechanic Thermostat) controls compressor's working and stopping period according to signal coming from freezer sensor. When compressor works, the evaporator fan placed on freezer compartment starts to work, and evaporator starts to get cold. By stopping of compressor, evaporator starts to get warm and the fan placed on freezer compartment stops. By the way, freezer compartment temperature has been adjusted.
Below table shows set values according to knob position.

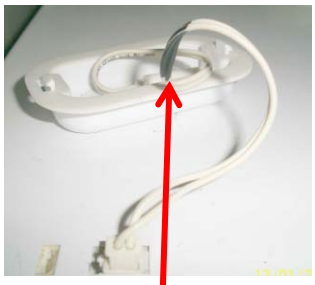
KNOB POSITION	SET VALUES	
	CUT IN	CUT OFF
1	-10,0 ^{0}C	-14,0 ^{0}C
2	-13,0 ^{0}C	-17,0 ^{0}C
3	-16,0 ^{0}C	-20,0 ^{0}C
4	-19,0 ^{0}C	-23,0 ^{0}C
5	-22,0 ^{0}C	-26,0 ^{0}C

Refrigerator compartment temperature is controlled by mechanical damper thermostat.

Time period between two defrosts is controlled by the ambient sensor placed on the top panel and card (electromechanic thermostat) placed in freezer compartment. At ambient temperatures lower than 16^{0}C, card takes the information from the ambient temperature sensor and shortens time duraiton between two defrosts for a better defrosting performance.



FREEZER SENSOR



AMBIENT SENSOR

AMBIENT TEMPERATURE **DEFROST ALGORITHM**

AT ≤ 16°C ..... 16 hours of total time
16°C < AT ..... 8 hours of compressor running accumulated time

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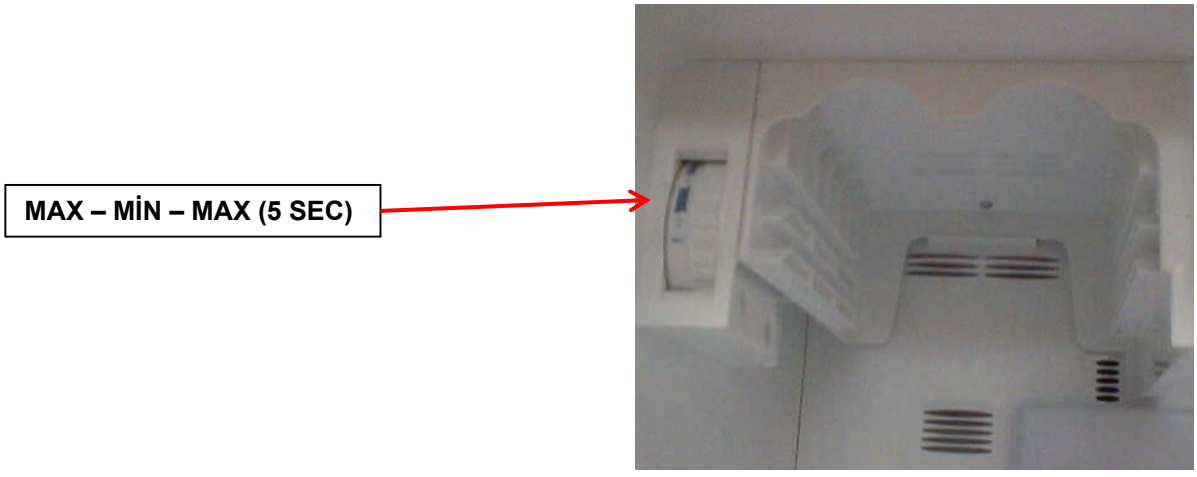
SENSOR DEFECTS	
If There is an Ambient Sensor Defect	**Set Defrost Cycle Time:** 8h of compressor running accumulated time
	Compressor Working : According to normal algorythm => Freezer Sensor
If There is a Freezer Sensor Defect	**Set Defrost Cycle Time:** According to normal algorythm => Ambient Sensor
	Compressor Working : Run compressor for 35min and stop compressor for 30min
If Both of the Sensors are Defected	**Set Defrost Cycle Time:** 8h of compressor running accumulated time
	Compressor Working : Run compressor for 35min and stop compressor for 30min

Note that:

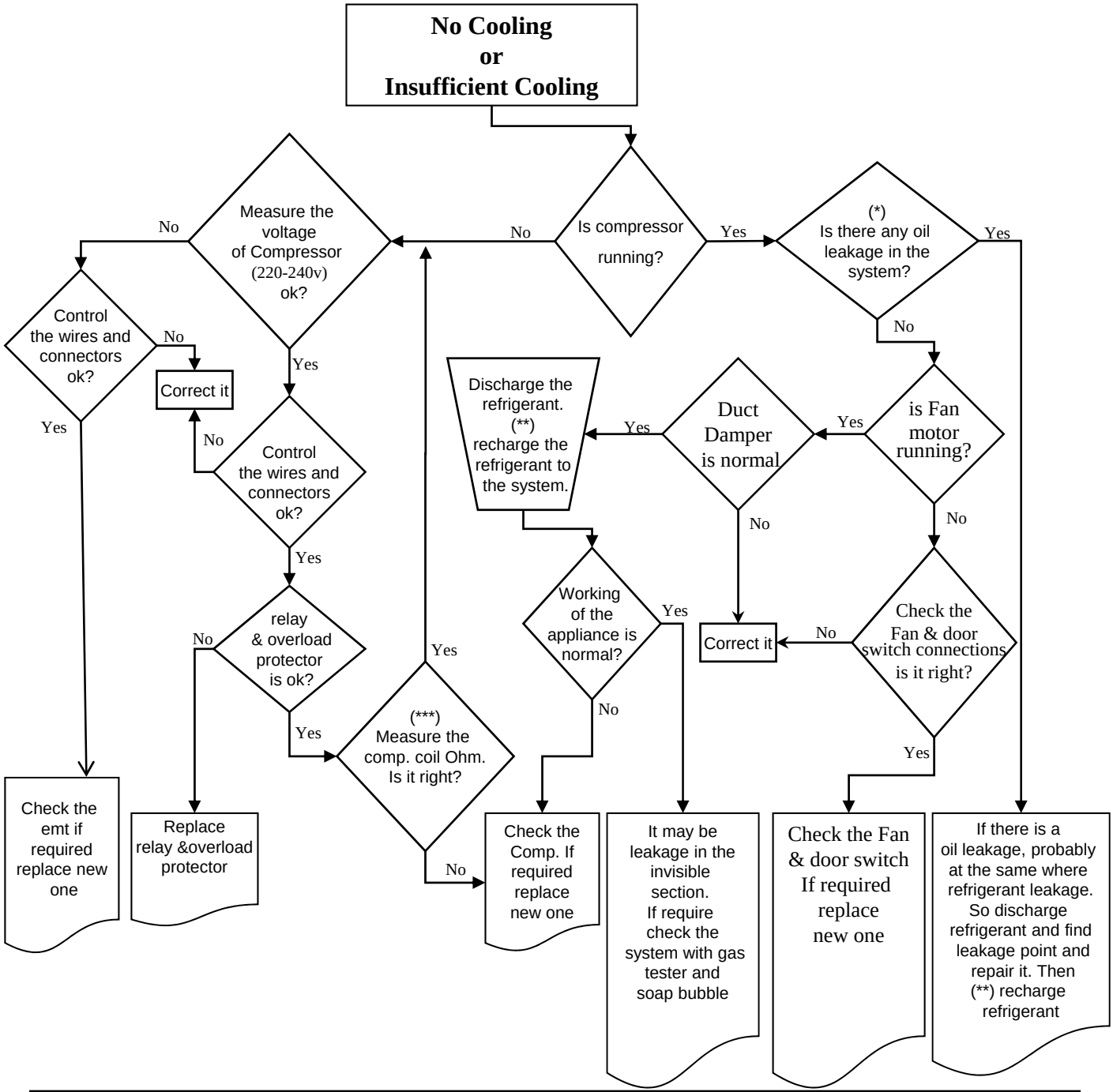
If the bi-metal thermostat is get broken or short circuit then the defrost operation will not be stopped although the frezeer temperature reaches to 8 °C. So defrost heaters continue to run. To prevent overheating, thermal fuse will be blow when the temperature reached to 76 °C inside the evaporator section. If the thermal fuse blow off, the refrigerator will stop all the functions(the compressor will not run and the defrost heaters will not heat). In this case, thermal fuse and bi-metal thermostat must be replaced with a new one.

MANUAL DEFROST:

IF THERMOSTAT KNOB IS TURNED TO MAX – MIN -- MAX POSITION 5 SEC.
APPLIANCE ENTERS INTO DEFROST MANUALLY .
DEFROST CAN BE CANCELLED VIA SAME OPERATION.



	NO-FROST 465-MECHANIC TROUBLE-SHOOTING CHART	CUSTOMER SUPPORT



(*) Check all of the visible pipes and welding points against oil leakage
(**) Before recharging the refrigerant to the system; Dryer must be replaced and at least 30 minutes vacuum must be done
(***) Comp. Main coil and auxiliary coil are 10 Ω and 15 Ω respectively (At 25 ^{0}C ambient temp.)

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Changing The Door Swing Direction to Right Hand

1- Unscrew the two screws which are fixing the middle hinge. (Fig-1)

Figure-1

2- Dismantle the refrigerator and frezeer door from cabinet by pulling towards to you together with the middle hinge. (Fig-2)

Figure-2

3- Remove the kick plate by pulling forward. (Fig-3)

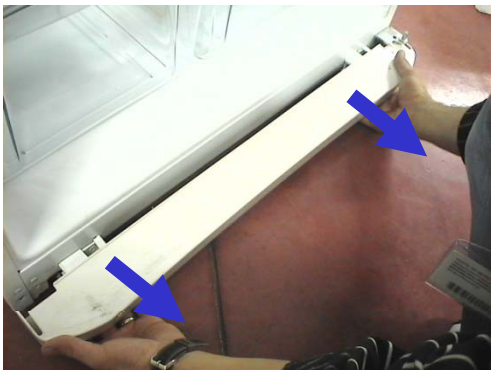

Figure-3

4- Unscrew the bottom hinge fixing screws and remove it. (Fig-4)

Figure-4

5- Unscrew the stationary foot of bottom hinge. (Fig-5)

Figure-5

6- Unscrew the pin of hinge from Hole 1, rotate the bottom hinge 180° and screw the pin to Hole 2. (Fig-6)

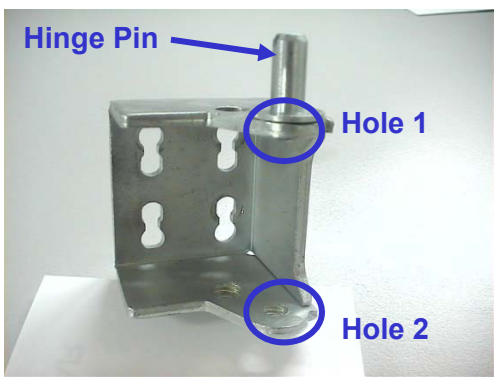

Figure-6

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7- Unscrew the stationary foot support fixing screws and remove it. (Fig-10) Then screw the right side of refrigerator

Figure-7

8- Then screw the bottom hinge to the left side of refrigerator and screw the stationary foot. (Fig-11)

Figure-8

9. Remove the middle hinge cover on the left. (Fig-9)

Figure-9

10- Insert the middle hinge cover to the right side. (Fig-10)

Figure-10

11- Remove the head panel hinge covers (Fig-11)

Figure-11

12- Unscrew the two screws fixing the top hinge and remove it. (Fig-12)

Figure-12

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13- Unscrew the pin of the top hinge. Turn the hinge by 180° then screw it to the left side hinge holes. (Fig-13)

Figure-13

14- Srew the top hinge to the left side (Fig-14)

Figure-14

15- Insert the head panel hinge covers (Fig-15)

Figure-15

16- Replace the refrigerator door top bushing (Fig-16.1) and top bushing cap for the refrigerator door. (Fig-16.2) (You can find the new bushing cap in the user manuel bag)

Figure-16.1

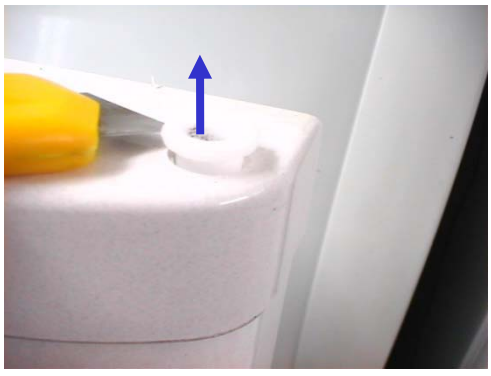

Figure-16.2

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17- Remove the refrigerator door bottom bushing and bottom stopper and then insert them the left side. (Fig-17)

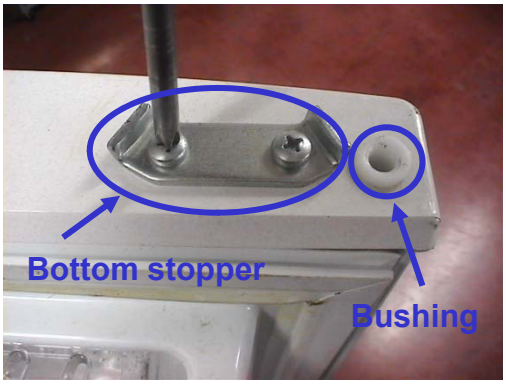

Figure-17

18- Remove the frezer door top bushing and insert it into left hole. (Fig-18)

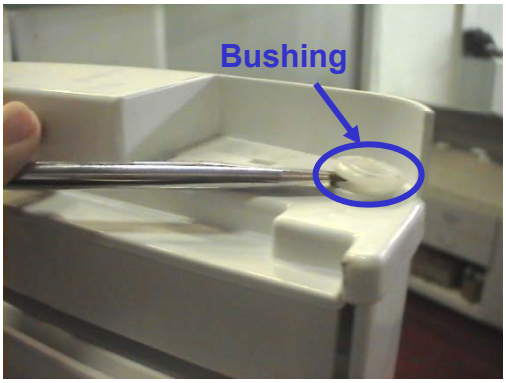

Figure-18

19- Remove the right door catcher (Fig-19.1) and assemble the left door catcher to the left. (Fig-19.2) (You can find the left door catcher in the user manuel bag)

Figure-19.1

Figure-19.2

20- Turn the middle hinge 180º. Assemble the freezer door and refrigerator door together with middle hinge (Reverse operation of item 2) Fix the middle hinge by tighting the screws. (Fig-20)

Figure-20

21- Finally,by using a knife cut left side of the kick plate and assemble it. (Fig-21)

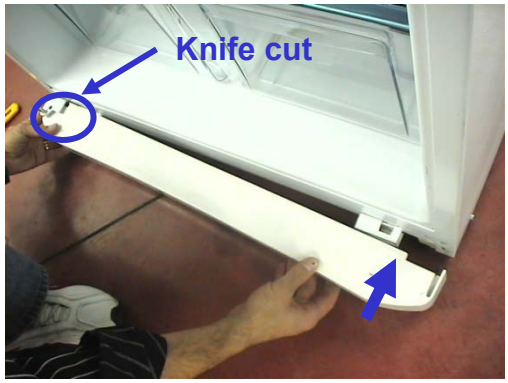

Figure-21

Replacement of Freezer Lamp

1) Insert a screwdriver into a groove and pull the lamp cover.

2) Loosen the lamp and replace it.

Replacement of Freezer Thermostat

1) Remove the ice matic group. Then unscrew the three screws which are fixing the ice matic holder and remove it.
(KA 40*14 WN 1411(INOX) EJOT)

2) Unscrew the two screws which are fixing the thermostat cover and remove it by pulling forward.
(PLS KA 40*13(INOX-S.UÇ) SUS 430)

3) Disconnect the housing and take out the Electro mechanical thermostat with its cover.

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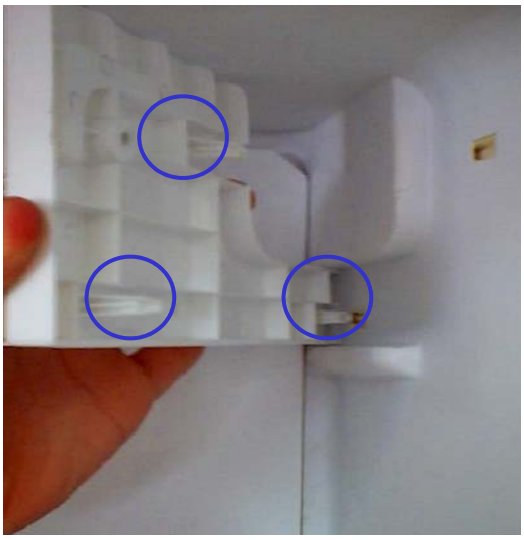
Dismantle of Freezer Partition

1) Unscrew the screw fixing the freezer partition. **(KA 40*14 WN 1411(INOX) EJOT)**

2) Remove the freezer partition by pulling forward.

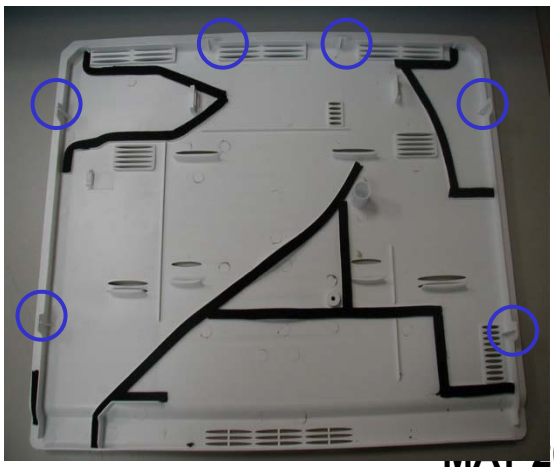


Replacement of Freezer Multiflow Cover

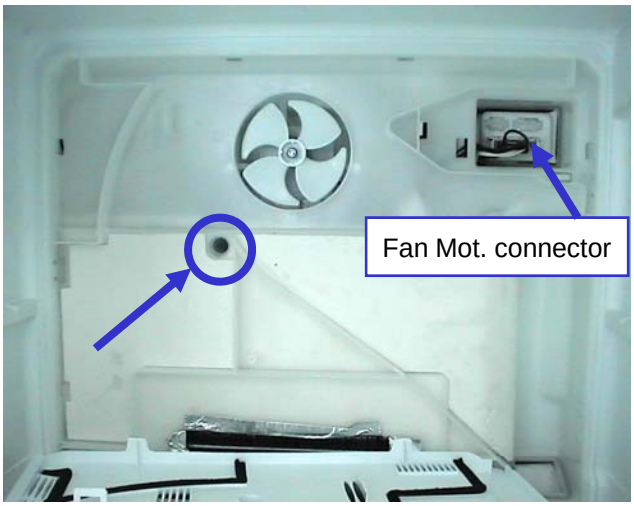
1) Unscrew the screw fixing the freezer lamp cover and remove it.

2) Unscrew the screw fixing the multiflow cover and disconnect the lamp socket and remove it.

There are 6 catchers and isolation sponges on the back side of the cover. During dismantling of the cover, be careful not to damage them.



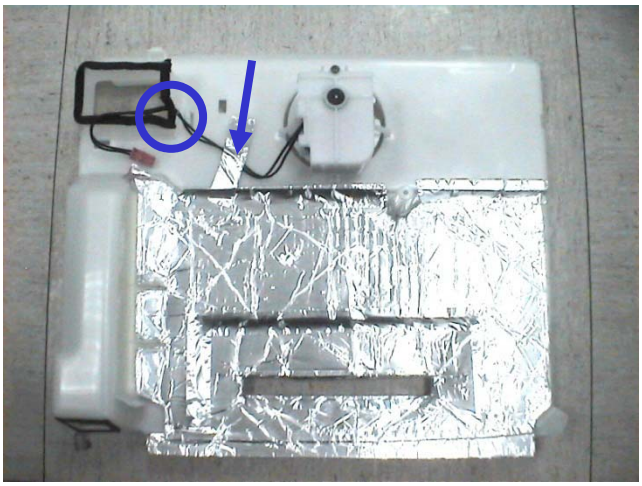
Replacement of Freezer MultiFlow Assy



Unscrew the screw fixing the freezer multiflow assembly. **(KA 40*14 WN 1411(INOX) EJOT)**

Disconnect the fan motor connector.
(pink connector)

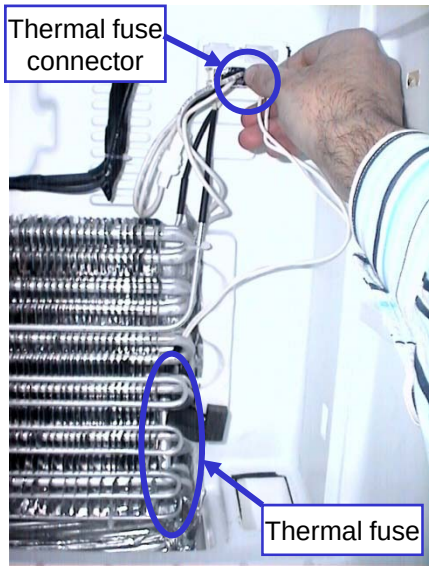
Remove the multiflow assy by pulling forward.



Dismantle the fan motor cover by removing the screw and detach the fan blower spring, and then take out the fan motor.

Note That : Fan motor wires must be pass under the sponge and aluminium tape as shown in picture.

Replacement of Thermal Fuse Assy.



Disconnect to thermal fuse connector. (black connector)
Remove the thermal fuse by pulling which mounted on the right side of the evaporator.
Take out the thermal fuse.

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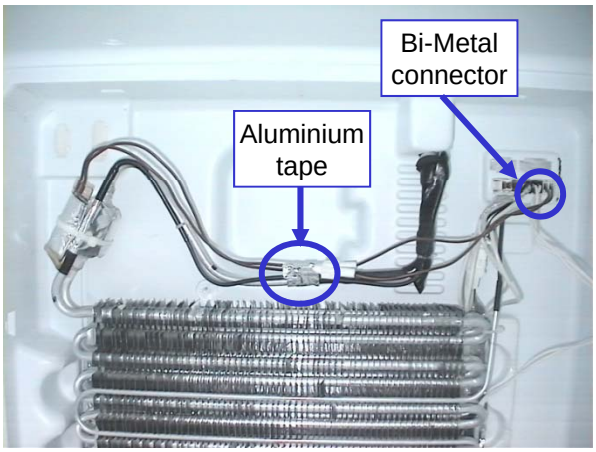
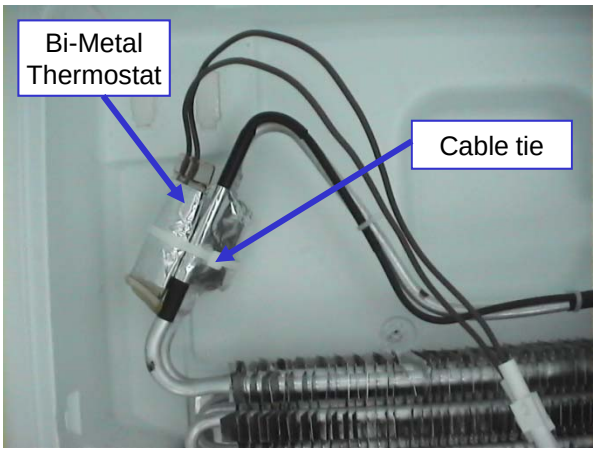
Replacement of Bi-Metal Thermostat

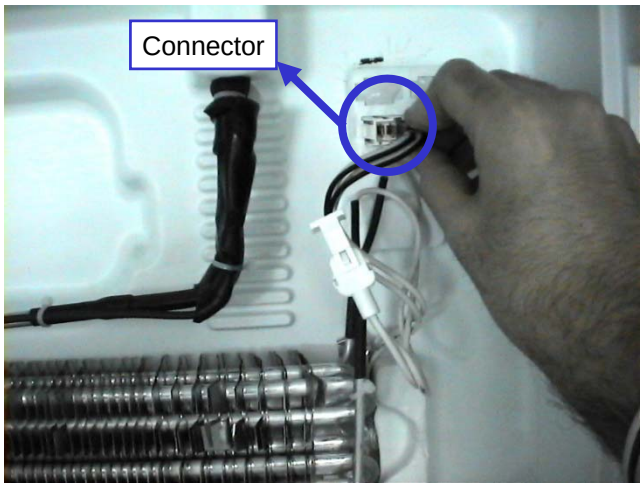


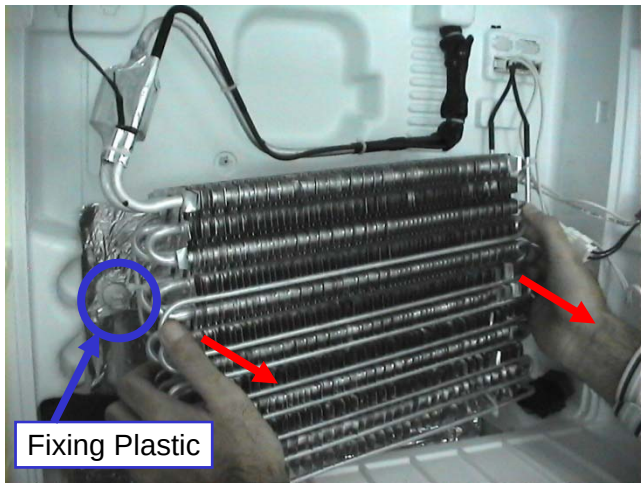
Disconnect to bi-metal thermostat connector. (white connector)



Cut off the cable tie and take out the bi-metal thermostat.

Replacement of Evaporator





Disconnect to evaporator connector. (blue connector)
Remove the evaporator by pulling forward in a horizantal dicretion.
Do not push it up or down. You may broke the fixing plastics.

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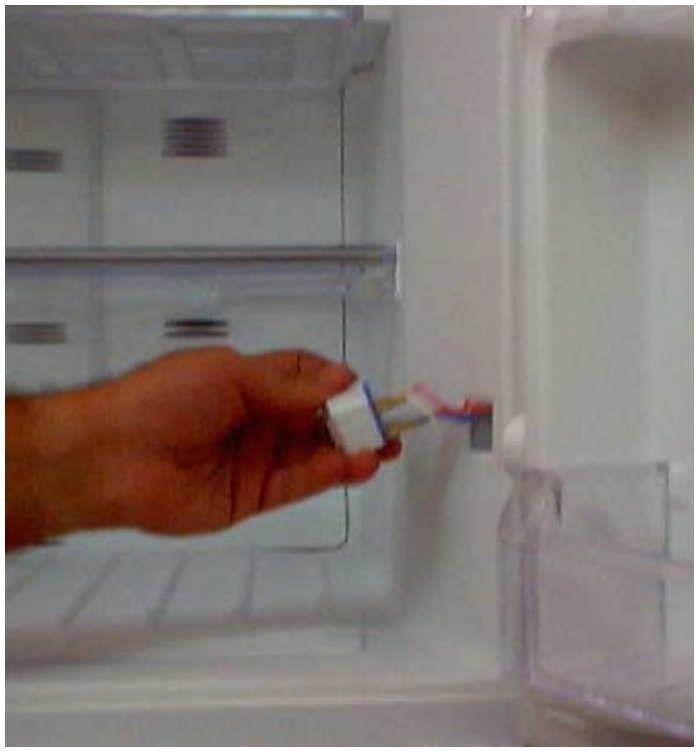
Insert a screwdriver into the gap and pull the door switch.

Disconnect the connectors. And take out the door switch.



Replacement of Refrigerator Lamp

Remove the refrigerator lamp cover using a screwdriver and by pulling forward.

Loosen the lamp and replace it.

Replacement of Refrigerator Thermostat Knob:

Slightly pull the thermostat knob towards you.

When removing the thermostat knob, be careful not to damage the sponge which is prevent leakage. So if it is damaged, replace with a new one.

Replacement of Refrigerator Multi-Flow Assy. :

Firstly, remove out the chiller cover and chiller shelf then unscrew the four screws which are fixing the chiller shelf partition and remove it.
(KA 40*14 WN 1411(INOX) EJOT)

Unscrew the five screws which are fixing the refrigerator multiflow cover.
(KA 40*14 WN 1411(INOX) EJOT)

After unscrew the fixing screws detach the multi-flow cover by pulling from bottom to forward.

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Replacement of Refrigerator Multi-Flow Assy. (Continue):

Push to upper catch by a screwdriver and pull multi-flow cover towards to you

After extraction all of the catch, detach the multi-flow cover by pulling from bottom to forward.

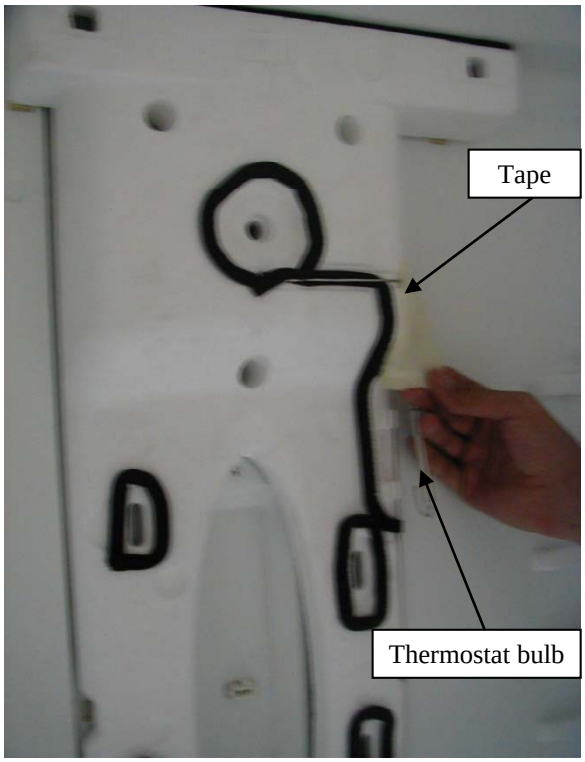
Replacement of Refrigerator Multi-Flow Assy. (Continue):

Pull the multi-flow cover.

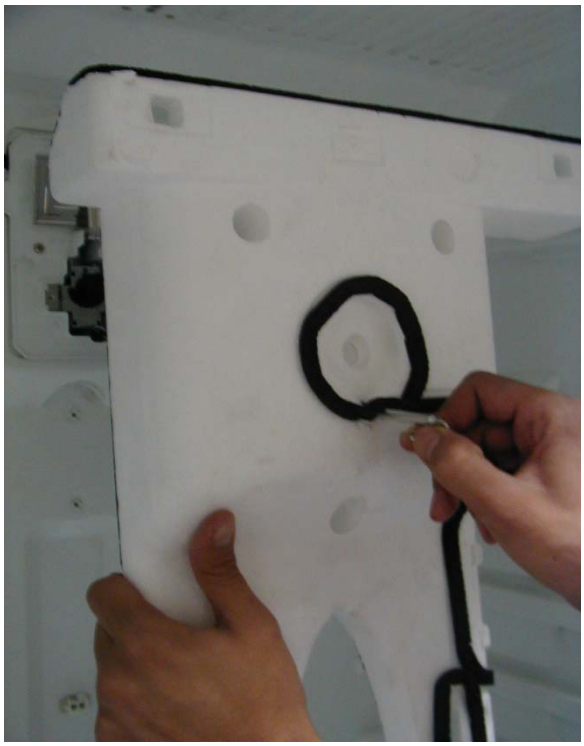
Disconnect to connector then take out multi-flow cover.

Replacement of Refrigerator Multi-Flow Assy. (Continue):

Remove the tape which is fixing the thermostat bulb.



Straigth to the bulb and remove it from multi flow insulation then take out multi-flow insulation.



Replacement of Dumper Thermostat:

Unscrew the dumper termostat fixing screws and take out it by pulling forward.

<u>Note That :</u> When dismantle the multi-flow insulation be careful not to damage the sponge which is prevent leakage. So if it is damaged, replace with a new one.

Carry out the reassemble operations in reverse order.

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