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Training and Operations Support
Technical Support

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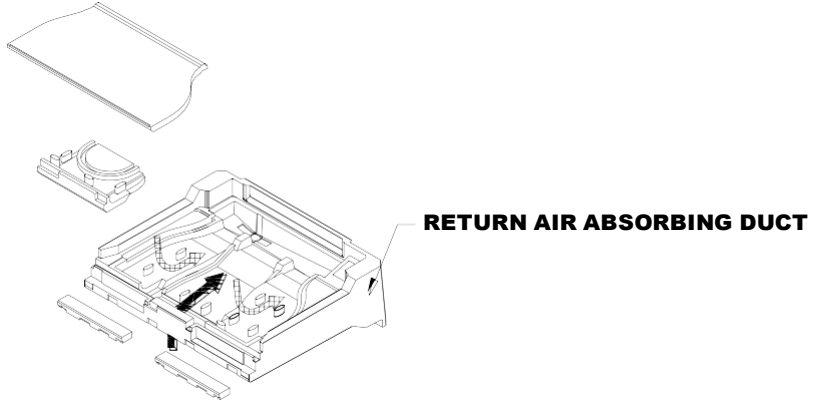
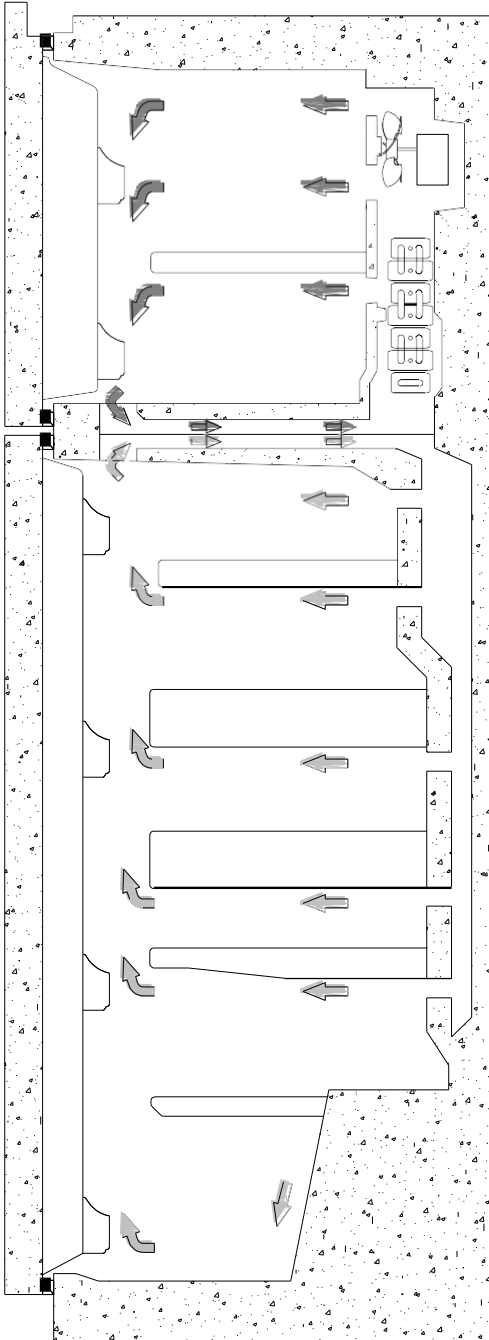
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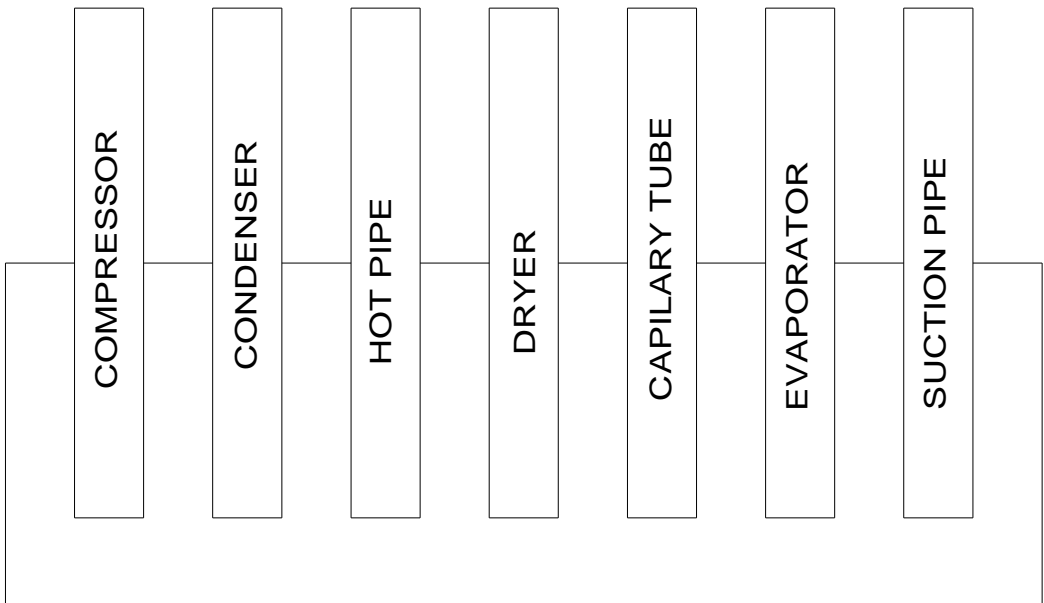
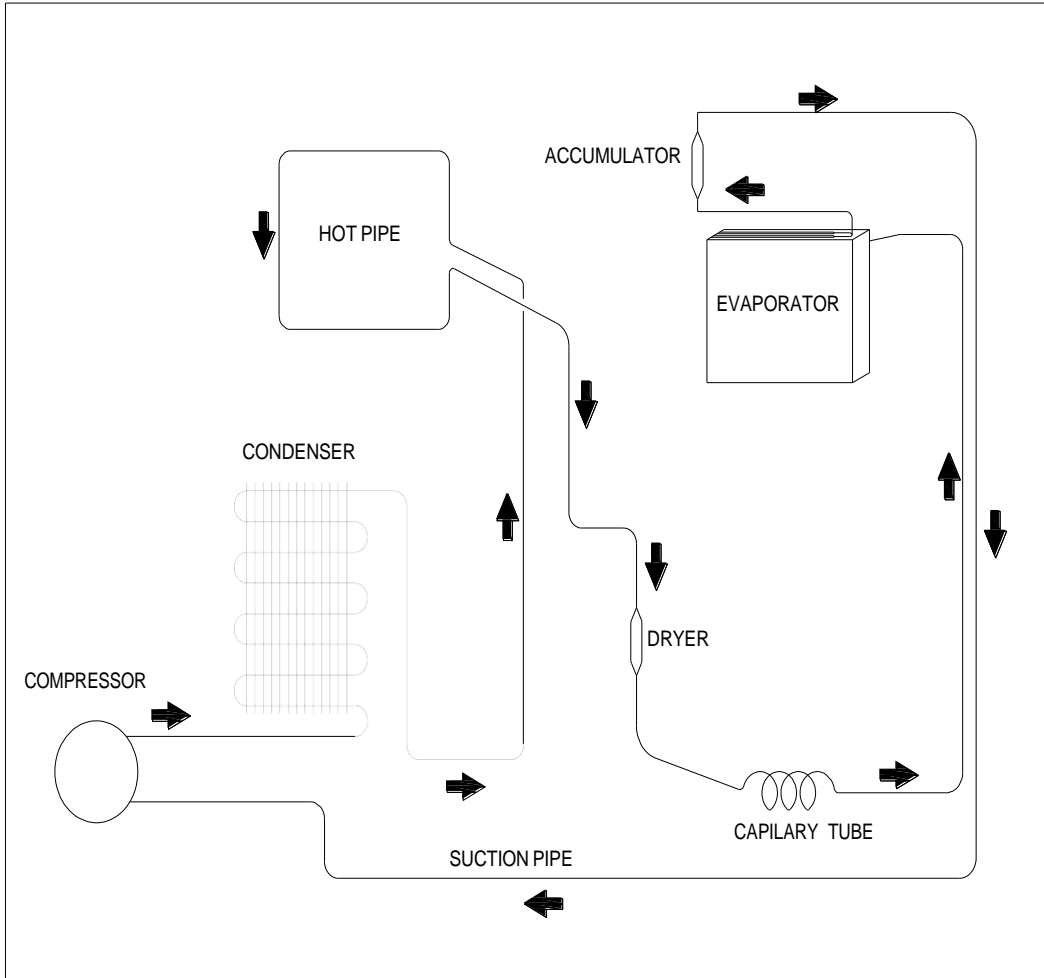
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AIR FLOW DIAGRAM



- ⇨ FREEZER SECTION RETURN AIR
- ⇨ REFRIGERATOR SECTION RETURN AIR

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

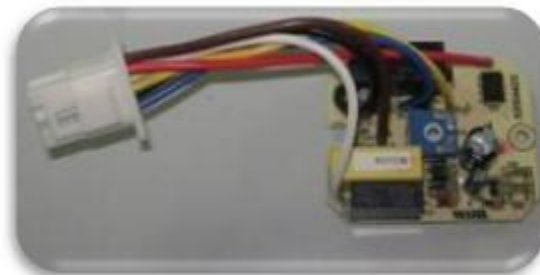


WHITE GOODS	NO-FROST-MECHANIC	CUSTOMER SUPPORT
	MAIN COMPONENTS	

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 defrost according 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 5°C then the dumper thermostat will be opened. If the refrigerator compartment temperature reaches to -6°C then the dumper thermostat will be closed.

HEATERS:

1.FIN EVAP HEATER (154W) :

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 AI tube heater, the thermal fuse will blow off (76°C). In this case, all functions will stop.

WHITE GOODS	NO-FROST-MECHANIC	CUSTOMER SUPPORT
	MAIN COMPONENTS	

WORKING PRINCIPLE OF ELECTRO MECHANICAL THERMOSTAT

Freezer sensor, placed inside freezer compartment sends temperature information to card. The card (Electro mechanic 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 °C	-14,0 °C
2	-13,0 °C	-17,0 °C
3	-16,0 °C	-20,0 °C
4	-19,0 °C	-23,0 °C
5	-22,0 °C	-26,0 °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 (electro mechanic thermostat) placed in freezer compartment. At ambient temperatures lower than 16°C, card takes the information from the ambient temperature sensor and shortens time duration between two defrosts for a better defrosting performance.



FREEZER SENSOR



AMBIENT SENSOR

WHITE GOODS	NO-FROST-MECHANIC	CUSTOMER SUPPORT
	MANUAL DEFROST	

SENSOR DEFECTS	
If There is an Ambient Sensor Defect	Set Defrost Cycle Time: 8h of compressor running accumulated time
	Compressor Working : According to normal algorithm => Freezer Sensor
If There is a Freezer Sensor Defect	Set Defrost Cycle Time: According to normal algorithm => 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 freezer 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 blows 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.

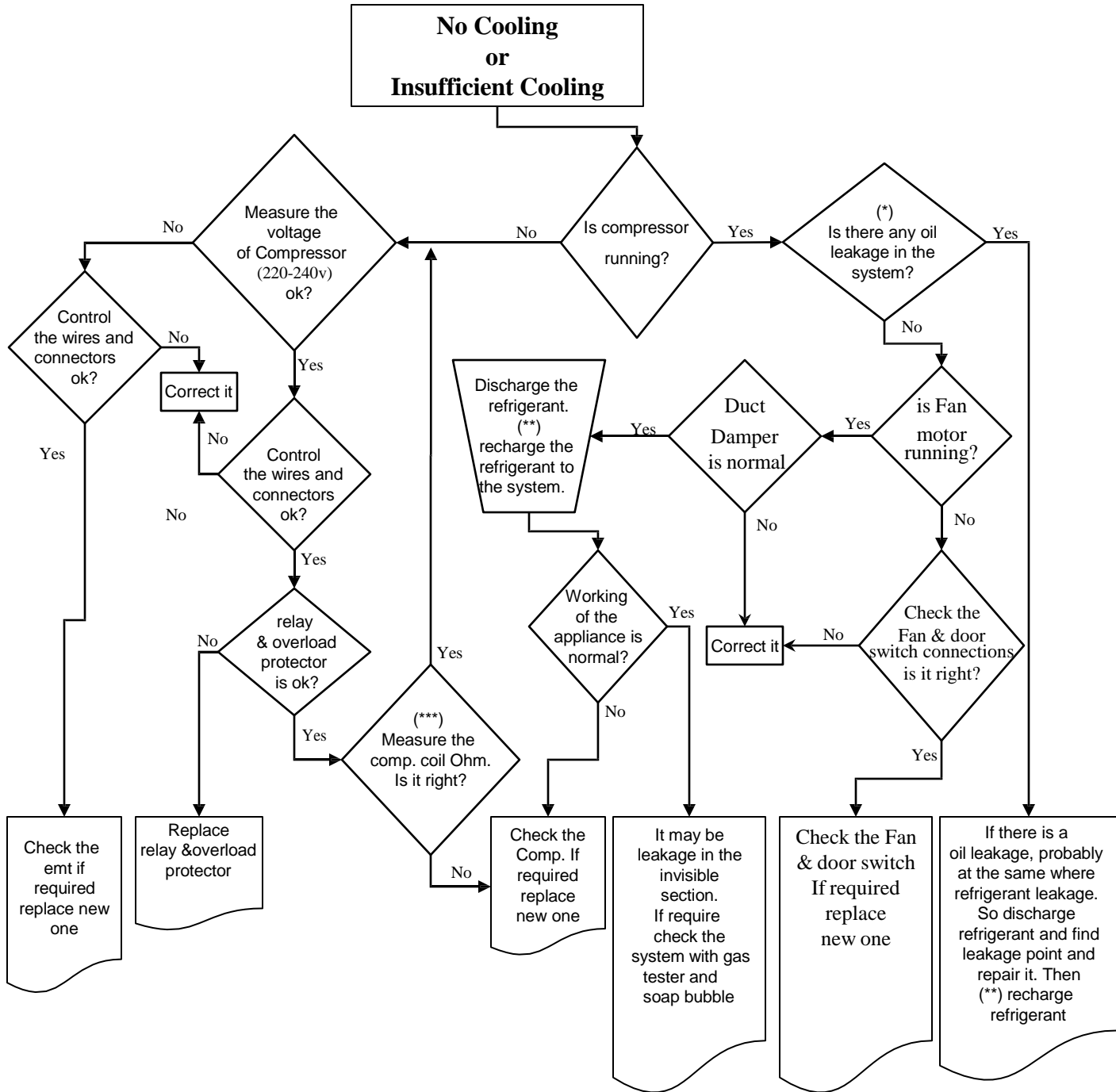
MANUAL DEFROST:

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

MAX – MIN – MAX (5 SEC)



WHITE GOODS	NO-FROST-MECHANIC	CUSTOMER SUPPORT
	TROUBLE-SHOOTING CHART	



(*) 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 °C ambient temp.)

WHITE GOODS	NO-FROST-MECHANIC	CUSTOMER SUPPORT
	FREEZER COMPARTMENT	

Replacement of Freezer Thermostat

1) Remove the icematic group. Then unscrew the three screws which are fixing the icematic holder and remove it.



2) Unscrew the two screws which are fixing the thermostat cover and remove it by pulling forward.



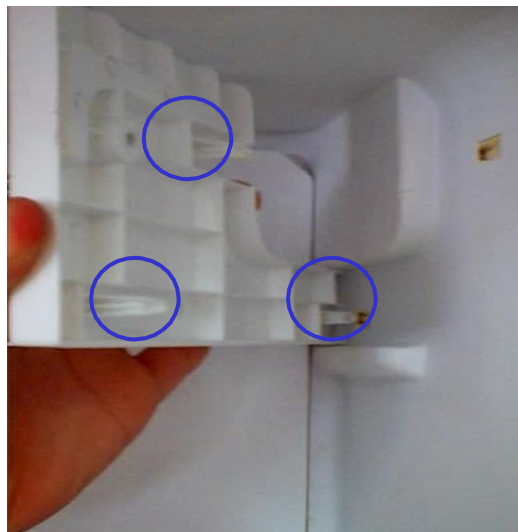
3) Disconnect the housing and take out the Electro mechanical thermostat with its cover.



WHITE GOODS	NO-FROST-MECHANIC	CUSTOMER SUPPORT
	FREEZER COMPARTMENT	

Dismantle of Freezer Partition

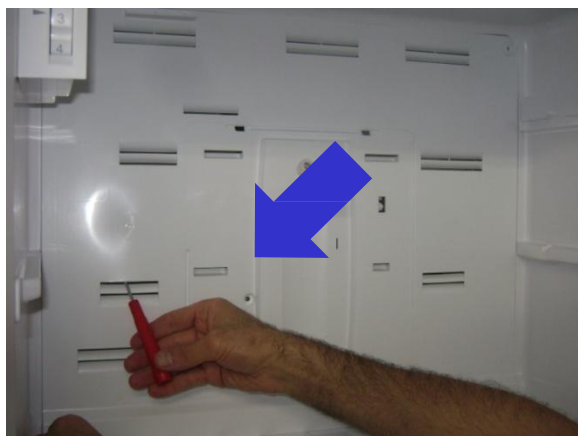
- 1) Unscrew the screw fixing the freezer partition.
(KA 40*14 WN 1411(INOX) EJOT)
- 2) Remove the freezer partition by pulling forward.



Replacement of Freezer Multiflow

Cover

- 1) Unscrew the screw fixing the multiflow cover and remove it.

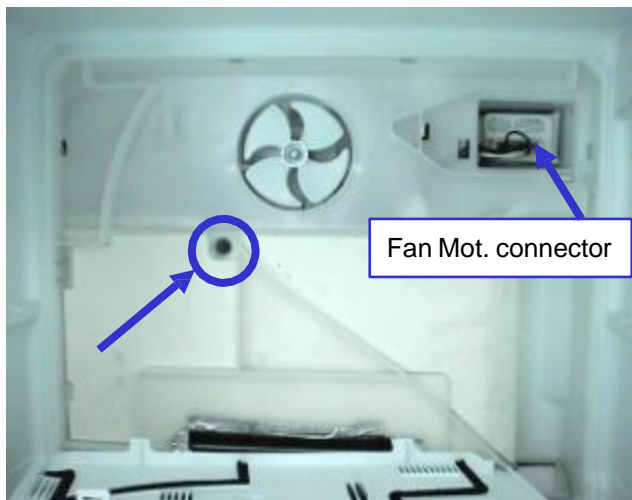


There are 6 catchers and isolation sponges on the back side of the cover. During dismantling of the cover be careful not to damage them.



WHITE GOODS	NO-FROST-MECHANIC	CUSTOMER SUPPORT
	FREEZER COMPARTMENT	

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)

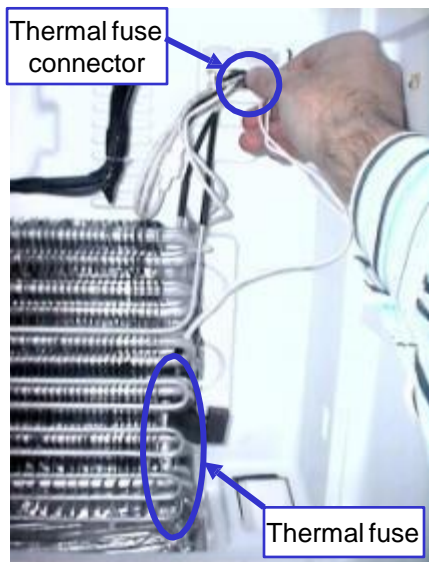
Remove the multiflow assy by pulling forward.



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.

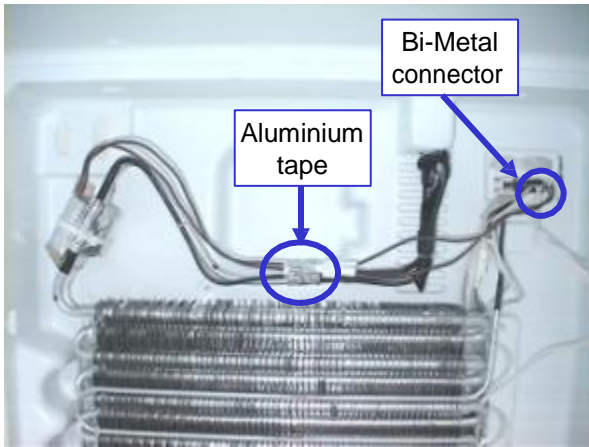
Replacement of Thermal Fuse Assy.



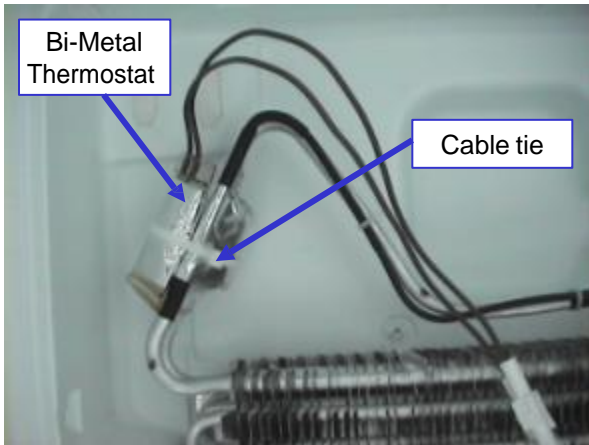
Disconnect to thermal fuse connector. (black connector)
Remove the thermal fuse by pulling which mounted on the right side of the evaporator.
Take out the thermal fuse.

WHITE GOODS	NO-FROST-MECHANIC	CUSTOMER SUPPORT
	FREEZER COMPARTMENT	

Replacement of Bi-Metal Thermostat

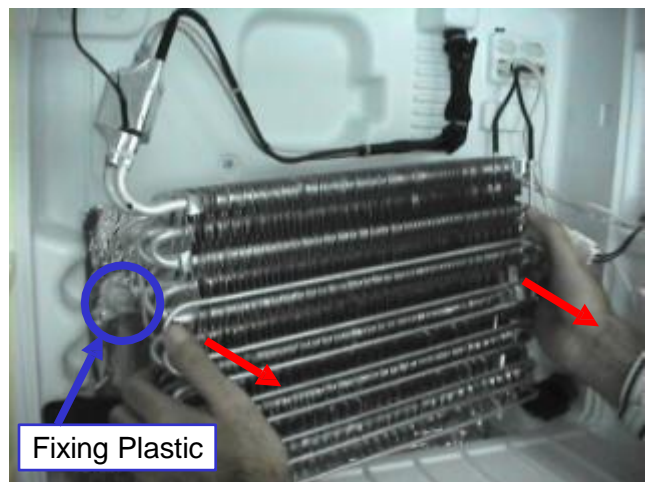
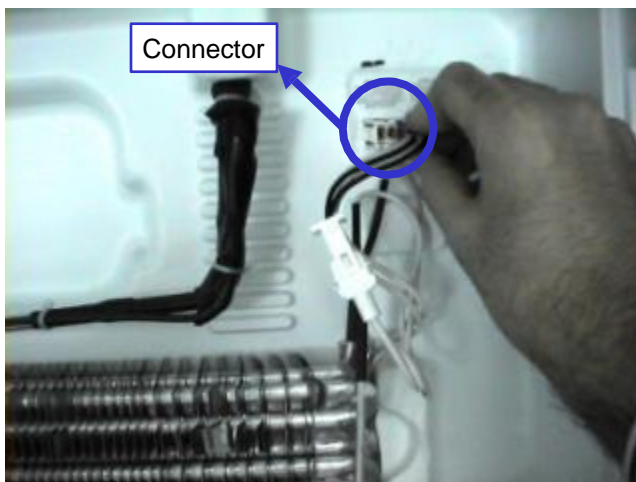


Disconnect to bi-metal thermostat connector. (white connector)



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 horizontal direction.
 Do not push it up or down. You may break the fixing plastics.

WHITE GOODS	NO-FROST-MECHANIC	CUSTOMER SUPPORT
	REPLACEMENT OF DOOR SWITCH	

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



Disconnect the connectors. And take out the door switch.

