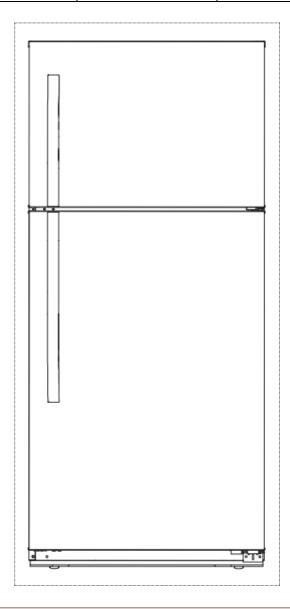
# **Service Manual**

# **TMF No Frost Series**

Applicable Models	Product Models	Applicable Models
HD-663FWEN	UR-BCD510WE-SQ	22031020006981



The picture in this service manual is only for reference, and specific appearance and configuration are subject to the real product.

This manual mainly teaches the method, the specific work skill needs engineer to accumulate through the daily work.



# WARNING

# **Important Safety Notice**

There are special components used in this equipment which are important for safety. These parts are marked by  $\Delta$  in the Schematic Diagrams, Circuit Board Diagrams, Exploded Views and Replacement Parts List. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire or other hazards. Do not modify the original design without permission of manufacturer.



# WARNING

# **Important Safety Notice**

The Maintenance Manual is only for the use of maintenance personnel with certain experience and background in electrical, electronic and mechanical field.

Any attempt to repair main devices may lead to personal injury and property loss. Manufacturers or distributors are not responsible for the content of the Manual and interpretation thereof.

# **Midea Refrigerators**

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1. Significant update notes (None)

# 2. Safety Warning

### 2.1 Warning for operation safety

# **Important Safety Instructions**



# CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN





This symbol indicates that dangerous voltage constituting a risk of electric shock is present within your freezer.



This symbol indicates that there are important operating and maintenance instructions in the literature accompanying your freezer.

### **WARNING**

- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.
- 5) Do not use this appliance near water.
- 6) Clean only with a damp cloth.
- 7) Do not block any ventilation openings.
- 8) Install in accordance with the manufacturer's instructions.
- **9)** Do not install near any heat sources, such as radiators, heat registers, stoves, or other apparatus that produce heat.
- **10)** Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- **11)** Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the appliance.
  - **12)** Do not attempt to modify or extend the power cord of this appliance.
- **13)** Unplug this appliance during lightning storms or when it will not be used for long periods of time.
- **14)** Make sure that the available AC power matches the voltage requirements of this appliance.

### CONNECTING ELECTRICITY

# A WARNING Electrical Shock Hazard.

Plug into a grounded 3-prong outlet.

Do not remove the ground prong.

Do not use an adapter.

Failure to follow these instructions can result in death, fire, or electrical shock.



### WARNING

**Electric Shock Hazard** Failure to follow these instructions can result in electric shock, fire, or

- 1) WARNING-Keep ventilation openings, in both the freezer and the built-in structure, clear of obstruction.
- 2) WARNING-Do not touch the interior of the freezer with wet hands. This could result in frost bite.
- 3) WARNING-Do not use mechanical devices or other means to accelerate the defrosting process, other than those recommended by the manufacturer.
  - **4) WARNING**—Do not damage the refrigerant circuit.
- 5) WARNING-Do not damage the refrigerant tubing when handling, moving, or using the freezer.
- 6) WARNING-DANGER-Never allow children to play with, operate, or crawl inside the freezer. Risk of child entrapment. Before you throw away your old freezer:
  - 6-1) Take off the doors
  - 6-2) Leave the shelves in place so that children may not easily climb inside
  - 7) Unplug the freezer before carrying out user maintenance on it.
- 8) This freezer can be used by children age eight years and older and persons with reduced physical or mental capabilities or lack of experience and knowledge if they are given supervision or instruction concerning the use of the freezer in a safe way and understand the hazards involved. Children should not play with the freezer. Cleaning and maintenance should not be performed by children without supervision.
- 9) If a component part is damaged, it must be replaced by the manufacturer, its service agent, or similar qualified persons in order to avoid a hazard.
- **10)** Please dispose of the freezer according to local regulations as the freezer contains flammable gas and refrigerant.
- 11) Follow local regulations regarding disposal of the freezer due to flammable refrigerant and gas. All refrigeration products contain refrigerants, which under the guidelines of federal law must be removed before disposal. It is the consumer's responsibility to comply with federal and local regulations when disposing of this product.
  - 12) This freezer is intended to be used in household and similar environments.

- **13)** Do not store or use gasoline or any flammable liquids inside or in the vicinity of this freezer.
- **14)** Do not use extension cords or ungrounded (two-prong) adapters with this freezer. If the power cord is too short, have a qualified electrician install an outlet near the freezer. Use of an extension cord can negatively affect the freezer's performance.

# **Grounding requirement**

This freezer must be grounded. This freezer is equipped with a cord having a grounding wire with a grounding plug. The plug must be inserted into an outlet that is properly installed and grounded.

Improper use of the grounding plug can result in a risk of electric shock. Consult a qualified electrician or service person if the grounding instructions are not completely understood, or if doubt exists as to whether the freezer is properly grounded.

## 2.2 Safety instruction for refrigerant



Keep flammable materials and vapors, such as gasoline, away from freezer. Failure to do so can result in fire, explosion, or death.

# Safety instruction for refrigerant

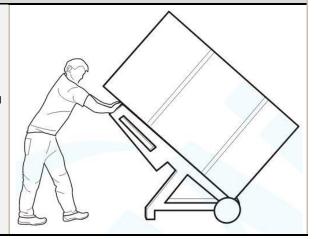
DANGER-Risk of Fire or Explosion. Flammable Refrigerant Used. To Be Repaired Only By Trained Service Personnel. Do Not Use Mechanical Devices. Do Not Puncture Refrigerant Tubing. CAUTION-Risk of Fire or Explosion. Flammable Refrigerant Used. Consult Repair Manual/Owner's Guide Before Attempting To Service This Product. All Safety Precautions Must be Followed. CAUTION-Risk of Fire or Explosion. Dispose of Properly In Accordance With Federal Or Local Regulations. Flammable Refrigerant Used. CAUTION-Risk of Fire or Explosion Due To Puncture Of Refrigerant Tubing; Follow Handling Instructions Carefully. Flammable Refrigerant Used.

# 3. Installation and commissioning

# 3.1 Handling

### **Handling**

- 1) Protect the refrigerator in moving it,Same as shown as left photo, please move it by handcart with cushion
- 2) Remove all packing materials and bottom cushion, the move into house for placement
- 3) After moving it to appropriate location, wait for 2 hours before power on.



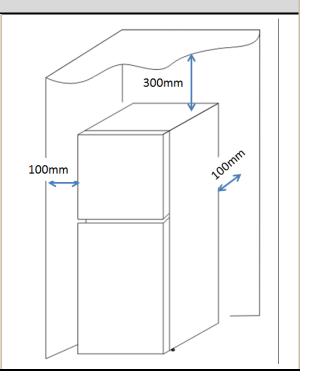
# 3.2 Door Disassembly and Assembly

When the whole refrigerator cannot enter the room, the door can be disassembled, then assembled after entering separately.

# 3.3 Installation location

### **Installation location**

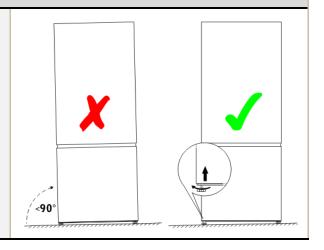
Please select a ventilated place to place the refrigerator, and reserve space according to the recommended size in the picture, which is conducive to heat dissipation, performance improvement and energy consumption reduction.



# 3.4 Leveling of the refrigerator

# Leveling of the refrigerator

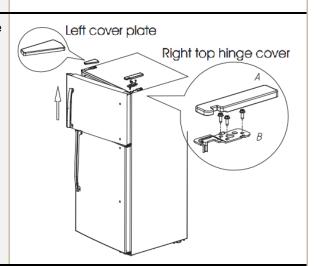
If the refrigerator cannot be placed steadily, adjust the footing to level it. Turn the feet clockwise to raise the refrigerator; turn the feet counterclockwise to lower the refrigerator.



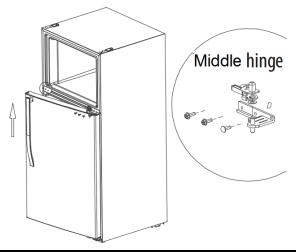
# 3.5 Left or right open door reversal

# Door reversal

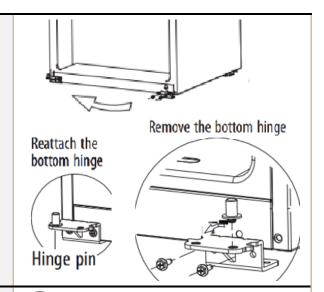
- 1) Power off and remove all food from the fridge.
- 2)Dismantle the upper hinge cover, screws and upper hinge from the right top, and remove the cover plate from the left top.



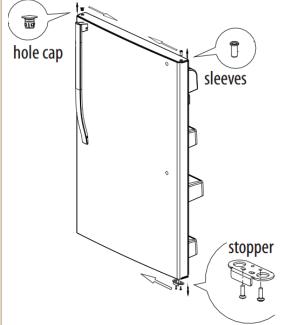
- 3)Take off the freezer door.
- 4)Unscrew the three screws holding the center hinge, remove the hinge, then lift the refrigerator door up and away from bottom hinge.



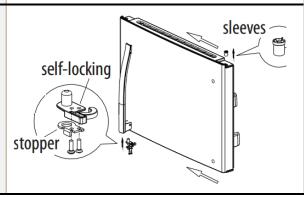
- 5)Remove the bottom hinge and screws.
- 6) Unscrew the hinge shaft from the right side of the bottom hinge and move it to the left side, then secure the bottom hinge to the bottom left side of the refrigerator.



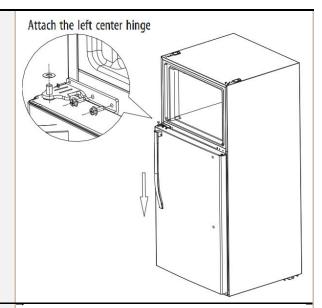
7) Dismantle the sleeves, hole cap, screws and door stopper on the refrigerator door, and assemble them on the other side.



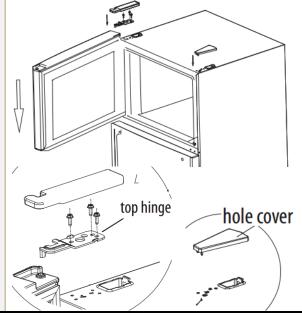
- 8) Dismantle the sleeves, and assemble them on the other side.
- 9) Remove the freezer door self-locking block and stopper, save the to reuse. Take out the left self-locking block and stopper from the accessory plastic bag in the refrigerator and installed on the left of door.



10)Put down the refrigerator door on the bottom hinge, take out the middle hinge of the other side from the accessory plastic bag, then assemble the middle hinge.



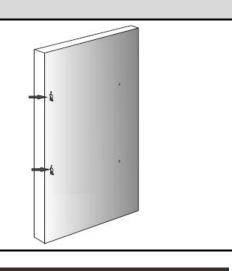
11)Put down the freezer door on the middle hinge, then take out the top hinge and cover of other side from the accessory plastic bag. Then assemble the left top hinge, hinge cover and hole cover.



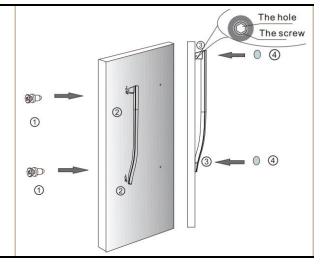
# 3.6 Installation of handle (Option)

### Installation of handle

- 1)Remove the hole covers on the front of the door.
- 2)Take out the door handle, bolts and screw covers from the accessory plastic bag.



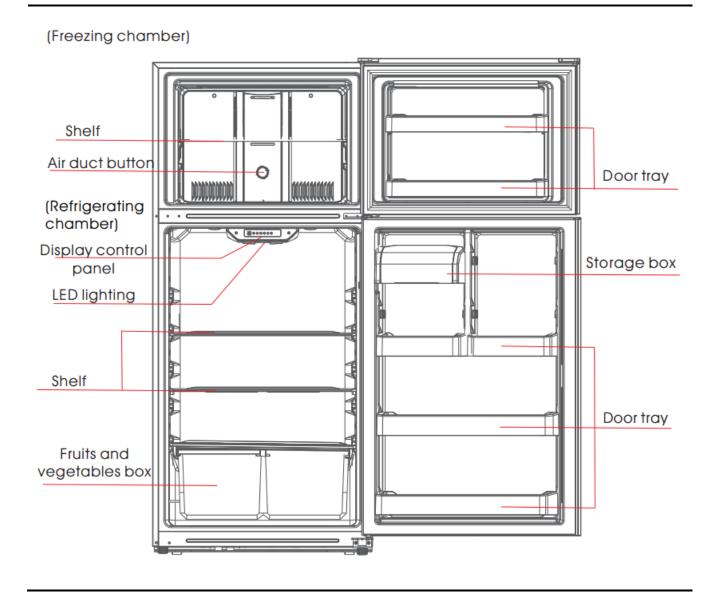
- 3) Fix the bolts① in the screw hole on the front of the door.
- 4) Install the door handle 2 onto the bolts.
- 5) Tighten the Allen screws③ in the door handle hole.
- 6) Install the screw cover④ on the screw of the door handle.



# 4. Main parts and external dimension

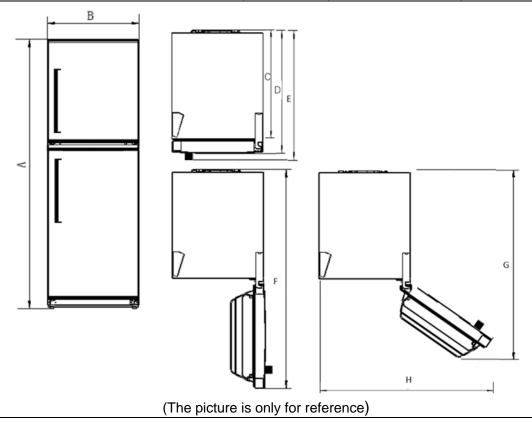
# 4.1 Main parts

(The picture is only for reference, and specific appearance and configuration are subject to the real product)



# 4.2 External dimension

Description	Code	Size (mm)	
Height to top of Cabinet	Α	1677	
Width	В	750	
Depth w/Cabinet	С	705	
Depth w/Door	D	784.5	
Depth w/Handle	Е	\	
Depth (Door open 90 deg. w)	F	1485.5	
Depth (Door open 135 deg. w)	G	1288.5	
Width (Door open 135 deg. w)	Н	1270	

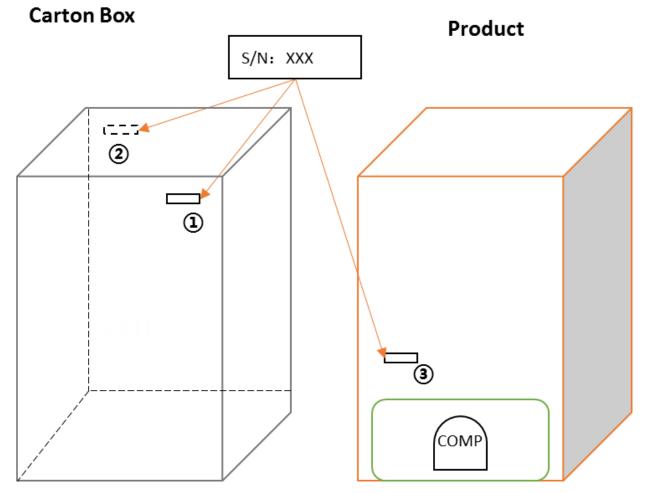


# 4.3 Midea product serial number and location

**1) Product Serial Number** — Including order number, production date and other information. When the product occur problem, it needs to be recorded or photographed and provided to us.



# 2) Paste location



Some products also have S/N on the lower part of the right side of the Cabinet.

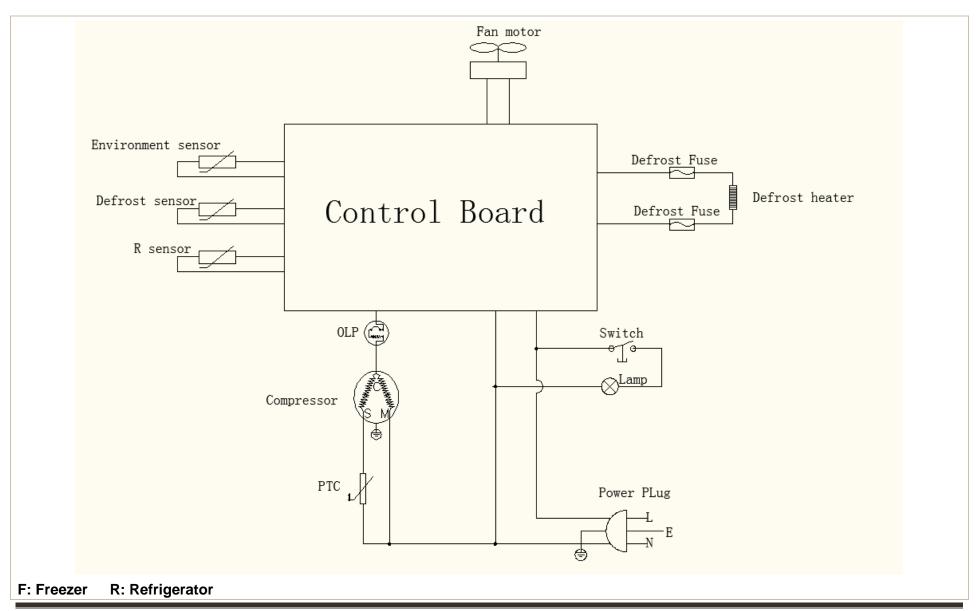
# 5. Electric control system

# 5.1 Electrical parts parameters

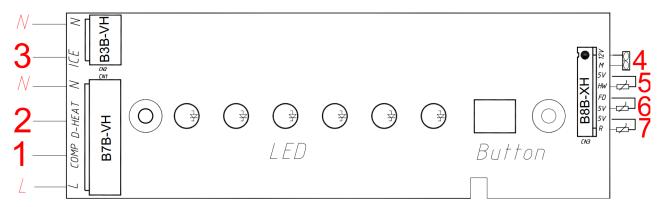
Applicable Model	HD-663FWEN	
Product Model	UR-BCD510WE-SQ	
Product code	22031020006981	
Rated Voltage	115V、60Hz	
Item	Specification	Specification
Refrigerant	R600a	
Compressor	EZ65H1A (GMCC)	
Compressor	(Part code : 11101010012233)	
Starting device type	Fixed Speed	
The COP of compressor	1.72(W/W)	
The max cooling capacity of	133 W	
compressor		
Winding resistance of compressor	Rmc:7.07Ω±7%	
wiring terminal (20°C)	Rsc:6.07Ω±7%	
	Rms = Rmc + Rsc	
Winding resistance picture	R/M S	
0 (DT0)	QP2-4R7(Part co:	
Starter(PTC)	12031000001584)	
Overland protector(OLD)	DRB33T61A1(Part code :	
Overload protector(OLP)	12031000001301)	
Integrate PTC+OLP	None	
Variable frequency driver board	None	
Capacitor	None	
Power filter (EMI)	None	
Power reactor (EU EMC)	None	
Motor		
Fan motor of the freezing chamber	DC12V、4.0 W、1850r/min	
Fan motor of the refrigerating	None	
chamber		
Electric damper	None	
Lights		
Lights inside the refrigerating	125V、40W	None
chamber		
Lights inside the freezing chamber	None	None
Others Lights	None	None

Switch of the light	■Mechanical switch  □Magnetism control switch	None
Defrosting parts		
Defrosting sensor	NTC B3839 ( B5/25=3839K±2% )	
Fuse in freezing chamber	230V、73(0 ∼ -5) °C	
Defrost heater in freezing chamber	115V、180W	

# 5.2 Circuit diagram



# 5.3 Main PCB terminal connection diagram

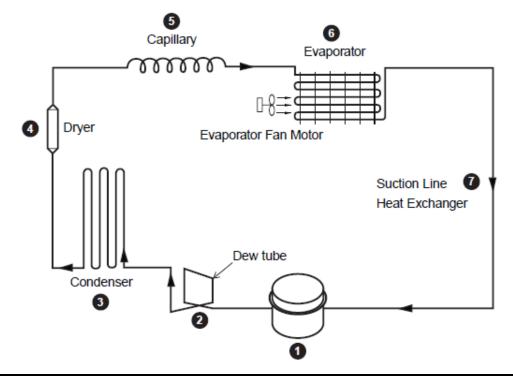


Connecting terminals	Connecting terminals
1. Compressor	5. Ambient temperature sensor
2. Freezing frost heater	6、Freezing defrost sensor
3. Ice maker	7、Refrigeration sensor
4、Freezing fan motor	

# 6. Refrigeration system

# **6.1 Refrigeration system working principle**

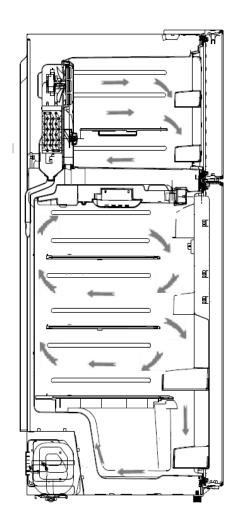




# 6.2 Cooling pipeline and drain pipe inside the cabinet



# 6.3 Circulating route of cooling air



# 6.4 Welding points in chambers or foam layer

1) Welding points on freezer evaporator		
Welding point	Pipe outer diamete	er (mm)
1-Freezer capillary and inlet of evaporator	Conner nine: Ф6	Aluminum pipe:
	Copper pipe: Ф6	Ф6.0
2-Heat transition tube and outlet of evaporator	Connor nino: Ø6	Aluminum pipe:
	Copper pipe: Ф6	Ф6.0
20		·

# 6.5 Welding point in the compressor case



Welding point	Pipe outer diameter (mm)	
1-Inlet of anti-condensation tube and outlet of venting	Steel pipe: Ф4.0	Steel pipe: Ф4.0
connection tube	0.001 p.po. 7 1.0	0.001 pipo: 7 1.0
2-Inlet of condenser tube and outlet of anti-condensation tube	Steel pipe: Ф4.0	Steel pipe: Ф4.0
3-Outlet of left condenser tube and inlet of dry filter	Steel pipe: Ф4. 0	Copper pipe: Ф5.0
4-Outlet of dry filter and inlet of freezer capillary	Copper pipe: Ф2.8	Copper pipe: Ф1.8
5-Heat transition tube and Suction connection tube	Copper pipe: Ф6.0	Copper pipe: Ф6.0
6-Suction connection pipe and compressor intake tube	Copper pipe: Ф6.0	Copper pipe:
	Copper pipe. 46.0	
7-Compressor outlet tube and inlet of venting connection tube Copper pipe:		Stool pino: 04.0
	Ф6.16	Steel pipe: Ф4.0
8-Compressor process tube and refrigerant filling tube	Copper pipe:	Copper pipe: Ф6 0
	Ф8.17	Copper pipe: Ф6.0

# 7. Dismantling of parts

# 7.1 Parts on the door

# Door seal

Door seal is installed into door liner groove.

- 1)Open the refrigerator door;
- 2) Take the door seal out of door liner;



### **Door tray**

While squeezing it inward, lift up the door tray and take it out from door liner.



### **Door stopper**

After removing the door, remove the fixing screws at the position shown in the figure, remove the door sleeve pipe and stopper, and complete the stopper replacement.



# 7.2 Parts inside the refrigerator

### Refrigerator Fruit box cover

Remove the crisper cover of ref. compartement according to below steps:

- 1) Take out the crisper firstly.
- 2) Lift up the Fruit box cover, and then pull out it.



# Shelves

Lift up the division plate with a proper force and pull it out towards yourself;



# Freezer Drawer(None)

None None

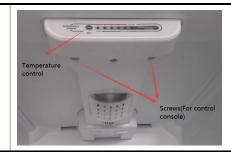
# 7.3 Light system

Light		
Light of the refrigerating		
1) Remove the lamp cover		
2) Remove the light.	Marine Branch Committee Co	
3) The reverse process can complete installation.		
Light of the freezing		
	None	
Light switch		
There is a light switch on the side wall of the refrigerating chamber.1) Loosen the hook with small normal screwdriver and pull out the switch until the wire connector reveals.	E PO	

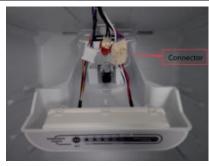
# 7.4 Air duct components refrigerating chamber and fan motor

Air duct components in freezing chamber

1) Remove two screws from the refrigerating air duct with a cross screwdriver;



2) Pull all connector terminals out of the refrigerating air duct to remove its components;



# Fan motor of air duct

None

# 7.5 Air duct components in freezing chamber and fan motor

# Air duct components in freezing chamber

All accessories in the freezing chamber should be dismantled before removing the air duct components.

1) Remove 2 screws on the cover plate of the freezing air duct using a cross screwdriver



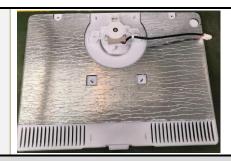
2) Hold the middle position upper of freezer air duct, raise it then pull it outwards gently.



3) Pull out the connector terminal.

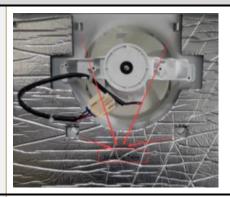


4) Take out the freezing air duct assembly.

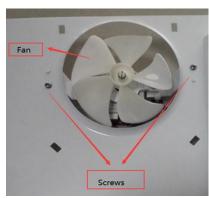


### Fan motor of air duct

1) Disassemble buckles at the back of the freezing air duct and remove 4 front cover plates;



2) Remove screws using a cross screwdriver to get the fan and components of fan brackets;



- 3) Remove 1 screws using a cross screwdriver to separate fan brackets and the fan;
- 4) Separate the fan and fan blade (pull it out using great force);



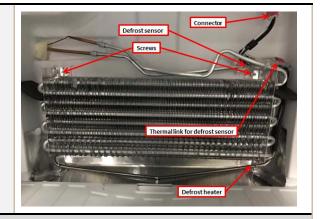
5) Replace the fan in reverse steps;



# 7.6 Evaporator and Defrost system

# **Evaporator in freezing chamber**

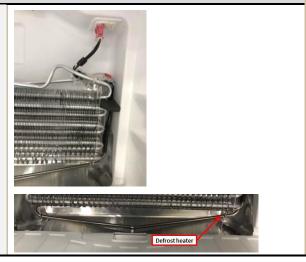
- 1) Remove the air duct components in freezing and variable temperature chamber.
- 2) Disconnect all connecting terminals.
- 3) Remove the welding on inlet and outlet tubes.
- 4) Remove the evaporator.



# Components on the evaporator

Defrost heater with defrost sensor and fuse, it can be replaced separately.

- 1) Cut off wiring terminal
- 2) Cut off the band which fixes the sensor
- 3) Cut off the band which fixes the fuse
- 4) Separate the sensor and the evaporator
- 5) Take off the defrost heater from the supporting plate of evaporator

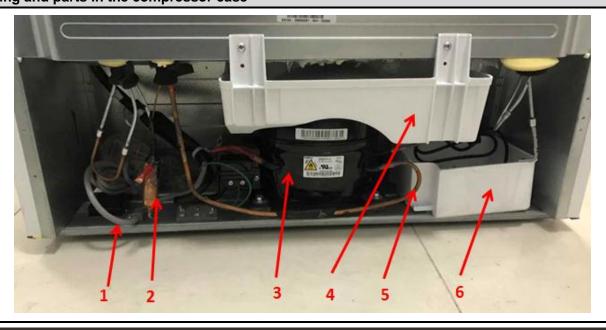


# 7.7 Compressor case

### Rear cover

None

# Piping and parts in the compressor case

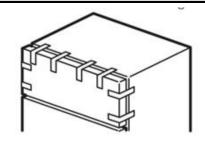


- 1-Power cord
- 2-Dry filter
- 3-Compressor

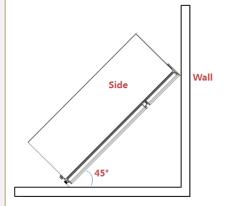
- 4-Drain tray 1
- 5-Suction connection tube6-Drain tray 2

# Disassembly and assembly of compressor

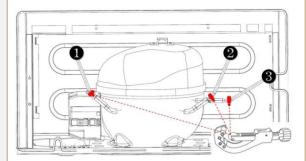
1) Cut off the power, remove the goods in the refrigerator, with the tape to make the door fixed firmly and prevent the door dropping when the refrigerator dumping.



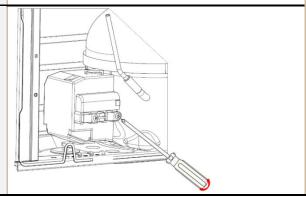
2)Slowly tilt the refrigerator forward, relying on the wall or a solid enough object, leaving space to facilitate the operation. For safety, it should be carried by someone to prevent its falling.



3) Cut off the compressor pipeline.-1 Cut off the process pipeline.-2 Cut off the low-pressure muffler.-3 Cut off the high-pressure exhaust pipe.



- 4-1) Remove the screws(for some models)
- -Two screws outside
- -One screw inside



# 4-2) Remove the metal clamp(for some models) -Disassembly the metal clamp that is fix the electric appliance shield 5) Remove the clipping strip Slowly pull it out 6) Remove the protective cover -Pry the protective cover slowly from the upper part, -Pull it out and remove it. 7) Remove the starter and protector Unplug the starter and protector (you can use a screwdriver to pry it slowly)

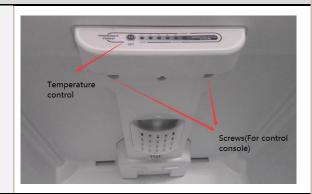
8) Loosen the screw of the compressor bottom plate, remove the floor together with the compressor from the box. 9) Use the wrench to remove the bolts by steps 4 5 6 7, replace the compressor and reverse process can complete installation. 10) Use Pipe cutter cut off the condenser tube 8, then Shear off capillary **9** by the capillary tube scissors. 11) Replace the compressor and welding the compressor pipeline.- Welding the process pipeline.- Welding the low-pressure muffler.- 12 Welding the high-pressure exhaust pipe.

12) Replace the filter, Cu-Fe tubes welding (3) used Ag welding rod, Cu-Cu tubes welding used Cu welding B rod. 13) Vacuum system, The degree of vacuum below 6Pa. 14) Perfusion refrigerant. 15) Use the vise grip pliers clamp the middle of the process pipe, then seal welding process tube 15 16.

# 7.8 Display control board

# Display control board

1)When the display control board is installed on the refrigeration air duct, first remove the refrigeration air duct assembly.



2) Tear off the display control panel surface as shown in the picture.



3) Use a screwdriver to remove the display control panel mounting box.



4) Use a screwdriver to pry off all clips on the mounting box and open the box cover.



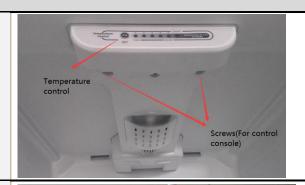
5) Disconnect the wiring terminal, take out the display control board, and complete the replacement.



# 7.9 Main control board

### Main control board

1)When the main control board is installed on the refrigeration air duct, first remove the refrigeration air duct assembly.



2) Tear off the main control panel surface as shown in the picture.



3) Use a screwdriver to remove the main control panel mounting box.



4) Use a screwdriver to pry off all clips on the mounting box and open the box cover.



5) Disconnect the wiring terminal, take out the main control board, and complete the replacement.





# 7.10 Variable frequency driver board (None)

# 7.11 Water dispenser (None)

# 8. Temperature sensing system

# **8.1 Position of sensors**

# Have3 sensors ②Sensor in refrigerating chamber ④Ambient temperature sensor ⑦Defrost sensor in freezing chamber

# 8.2 Replacement of sensors

# Sensor in refrigerating chamber

The refrigerating air duct components should be dismantled before removing this sensor.

- 1) Strip the tape that secures the wiring harness.
- 2) Then remove the sensor.



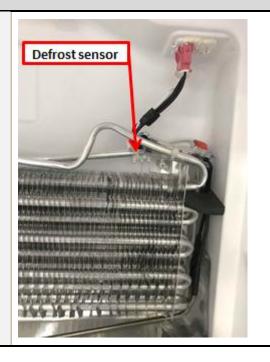
### **Ambient temperature sensor**

The sensor is located in the hinge cover of the refrigerator top.



# **Defrost sensor in freezing chamber**

- 1) Cut off wiring terminal;
- 2) Cut off the band which fixes the sensor;



# 8.3 Sensor without terminal replacement

Sensor replacement guidelines		
Cut off the damaged head of sensor.		
Strip off the sensor wiring.	N AWM 246	
Take out a new sensor to cut the head of sensor.  (Spare parts code: 11201007000795) Its technical specifications apply to all MIDEA refrigerators.		

Strip off the head of the sensor and connect it.	
Wrap the two wires together with insulation tape.	
Wrap the two wires together.	

# 8.4 Sensor R/T table

Tx (°C)	Tx (°F)	R (KΩ)	Tx (°C)	Tx (°F)	R (KΩ)	Tx (°C)	Tx(°F)	R (KΩ)
-30	-22. 00	33. 81	-5	23. 00	8. 392	20	68. 00	2. 501
-29	-20. 20	31. 85	-4	24. 80	7. 968	21	69. 80	2. 391
-28	-18. 40	30. 01	-3	26. 60	7. 568	22	71. 60	2. 287
-27	-16. 60	28. 29	-2	28. 40	7. 190	23	73. 40	2. 188
-26	-14. 80	26. 68	-1	30. 20	6. 833	24	75. 20	2. 094
-25	-13. 00	25. 17	0	32. 00	6. 495	25	77. 00	2. 005
-24	-11. 20	23. 76	1	33. 80	6. 175	26	78. 80	1. 919
-23	-9. 40	22. 43	2	35. 60	5. 873	27	80. 60	1. 838
-22	-7. 60	21. 18	3	37. 40	5. 587	28	82. 40	1. 761
-21	-5. 80	20. 01	4	39. 20	5. 315	29	84. 20	1. 687
-20	-4. 00	18. 90	5	41.00	5. 060	30	86. 00	1. 617
-19	-2. 20	17. 87	6	42. 80	4. 818	31	87. 80	1. 550
-18	-0. 40	16. 90	7	44. 60	4. 589	32	89. 60	1. 486
-17	1. 40	15. 98	8	46. 40	4. 372	33	91. 40	1. 426
-16	3. 20	15. 12	9	48. 20	4. 167	34	93. 20	1. 368
-15	5. 00	14. 310	10	50.00	3. 972	35	95. 00	1. 312
-14	6. 80	13. 550	11	51.80	3. 788	36	96. 80	1. 259
-13	8. 60	12. 830	12	53. 60	3. 613	37	98. 60	1. 209
-12	10. 40	12. 160	13	55. 40	3. 447	38	100. 40	1. 161
-11	12. 20	11. 520	14	57. 20	3. 290	39	102. 20	1. 115
-10	14. 00	10. 920	15	59. 00	3. 141	40	104. 00	1. 071
-9	15. 80	10. 350	16	60. 80	2. 999	41	105. 80	1. 029

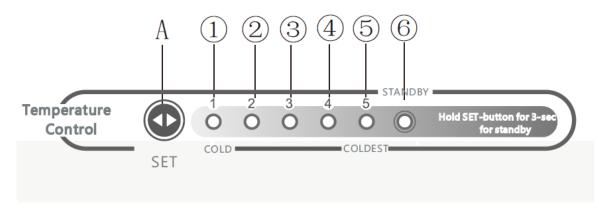
## Service Manual\_2020-V1.0

-8	17. 60	9. 820	17	62. 60	2. 865	42	107. 60	0. 989
-7	19. 40	9. 316	18	64. 40	2. 737	43	109. 40	0. 951
-6	21. 20	8. 841	19	66. 20	2. 616	44	111. 20	0. 914

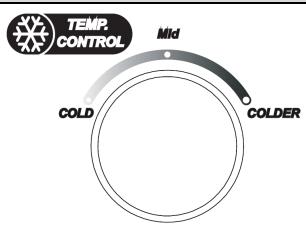
# 9. Function and operation

## 9.1 Display operation panel

Refrigeration chamber temperature control panel			
Button	Icons		
A. Refrigerating chamber temperature gear setting	① Gear 1		
	② Gear 2		
	③ Gear 3		
	④ Gear 4		
	⑤ Gear 5⑥Standby mode (Fridge stop working)		



## Freezing chamber temperature control knob



## 9.2 Temperature control

## 9.2.1Temperature setting of refrigerating chamber

Press the gear setting button 'SET' once, the gear will be changed once, 5 seconds after setting the gear, the refrigerator will be running in accordance with the set value.

Temperature gear of refrigerator chamber	Gear 1	Gear 2	Gear 3	Gear 4	Gear 5
Temperature value	5°C	4°C	3°C	2°C	1°C

9.2.2 Temperature setting of freezing chamber

Temperature gear of freezer chamber	COLD	Mid	COLDER
Temperature value	<-12°C	<-17.8°C	<-21°C

#### 9.3 Mode setting

#### 9.3.1 Standby mode

- 1) When the refrigerator is working, keep pressing the "**SET**" button for 3 seconds, the standby indicator will light up and the refrigerator will stop working.
- 2) When the refrigerator is in standby mode, press the "**SET**" button once, the standby indicator will light off and the refrigerator will operate normally.**9.3.2 Locking and unlocking (None)**

#### 9.4 Defrosting function

#### **◆** Defrosting theory:

The defrosting of evaporator is realized by the heating of heater, following the temperature rise, the frost on evaporator becomes water, and the water flow into the evaporating pan via the draining system, the water in evaporating pan evaporate away finally

#### **◆** Defrosting steps:

The fan motor stop work--- Compressor shutdown--- the heater start working --- the heater stop when the temperature rise to setting--- after 7 minutes, if the start-up condition is reached, the compressor will start--- after 3 minutes, the fan motor will start work

#### ◆ Meet one of the following conditions, defrost heating exit:

- 1) When the frozen defrosting sensor has no fault, the measured temperature Tfd ≥ the set temperature which defrost heating exit
- 2) When the frozen defrosting sensor has no fault, the defrosting time is  $\geq$  60 minutes
- 3) When the frozen defrosting sensor is faulty, the heater will stop after work 20 minutes

#### 9.5 Open door alarm (None)

#### 9.6 Error code and solutions

Error code	Fault Type	Troubleshooting and Solutions
LED① and LED② together lighten	Refrigerator chamber sensor failure (E1)	<b>Step 1</b> : Check whether the connection terminals are plugged in place and whether there are foreign matters in them; after cleaning the terminals, plug them in again.
LED① and LED③ together lighten	Freezer defrost sensor failure(E5)	Step 2: If the fault still occurs, pull out the corresponding connection terminal on the main PCB, use a multimeter to check the resistance value of the sensor, and confirm whether it is normal.
LED① and LED④ together lighten	Ambient temperature sensor failure (E7)	Step 3: If the resistance value is wrong, replace the sensor.  Step 4: If the fault still occurs, replace the main PCB.

## 9.7 Test mode

All below functions are only for diagnosis and test purpose, we advise to restart the refrigerator by power on/off if have used these functions.

Test items	Setting Method	Setting result
Enter Test Mode	Keep pressing the "SET" for 15 seconds and release	The indicator lights of gears 1, 3 and 5 are on, and the indicator lights of other gears are off
	No need to operate	The compressor and the freezing fan will stop working, the freezing defrost heater starts to work.
Select to enter into forced defrosting mode in all rooms	In forced defrosting mode, when the freezing defrosting sensor reach a temperature of 12°C and the defrosting heater has been working for at least 3 minutes.	then the refrigerator will exit the test mode and return to normal operation mode
	In forced defrosting mode, if the defrosting heater has been working for 60 minutes,	then the refrigerator will exit the test mode and return to normal operation mode
Select to exit the test mode	In test mode, power off or enter standby mode	The refrigerator will exit the test mode

## 9.8 Demo mode (None)

## 9.9 Backup data for power fail

- 1) The running state of the refrigerator is remembered after compressor running for 1 hour continuously.
- 2) The running state of the refrigerator is remembered after change function settings and lock.
- 3) When the refrigerator is out of power and recharged, the running state of the refrigerator is same as before.

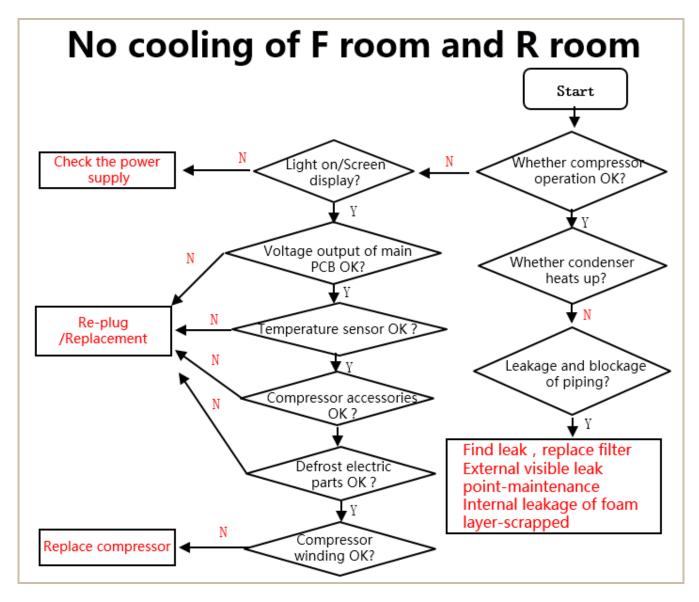
## 10. Compressor

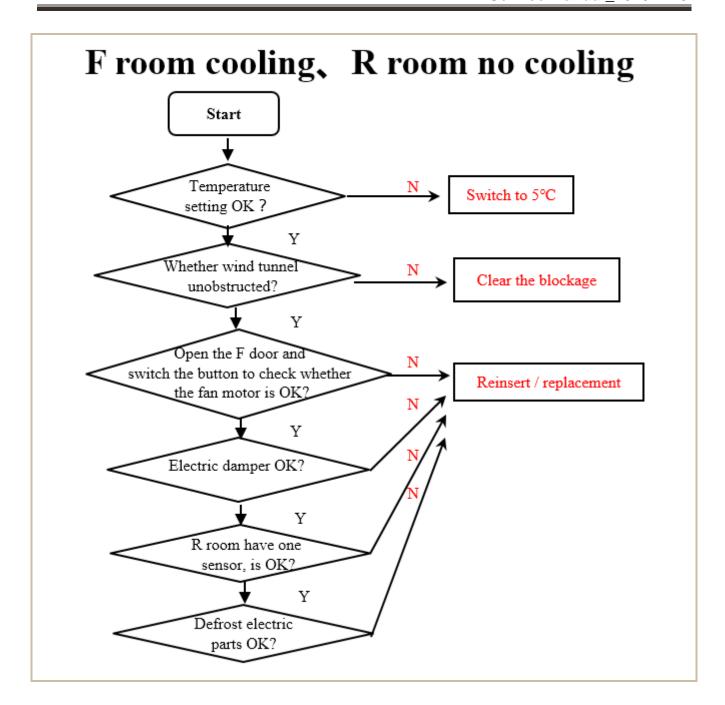
## 10.1 Compressor on and off control specifications

- 1.1 When one of the following conditions is met, the compressor stops:
  - Measured temperature in refrigerator chamber ≤ Shutdown temperature of refrigerator chamber
  - 2) Enter defrosting cycle
  - 3) The compressor runs continuously for more than 3 hours, will stop at least 5 minutes
- 1.2 When compressor shutdown time has been more than 5 min, one of the following conditions is met, the compressor starts up:
  - 1) Measured temperature in refrigerator chamber ≥ Start up temperature of refrigerator
  - 2) Refrigerator is set to forced cooling mode
- ★When 1.1 and 1.2 are not satisfied, the compressor maintains the original state

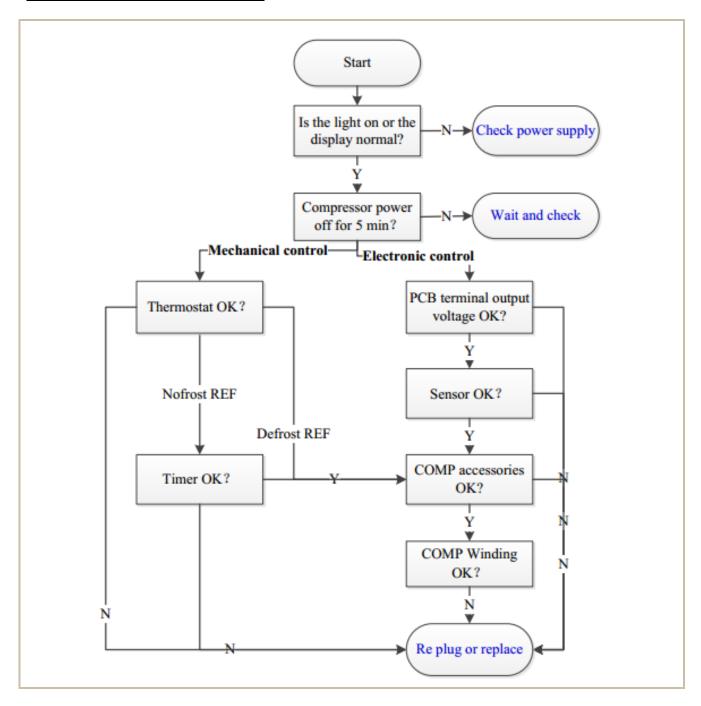
# 11. Troubleshooting Method

## 11.1 No cooling (Air cooling-Electronic)

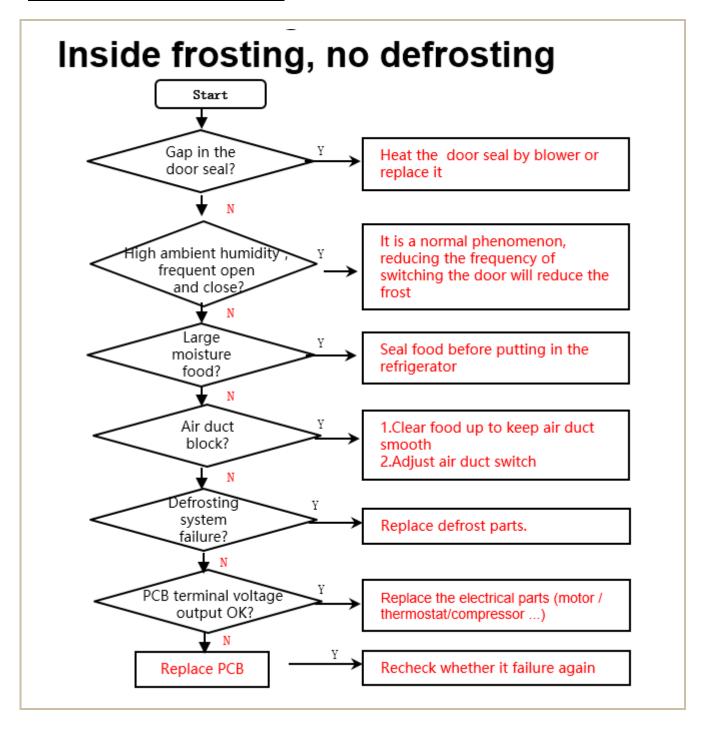




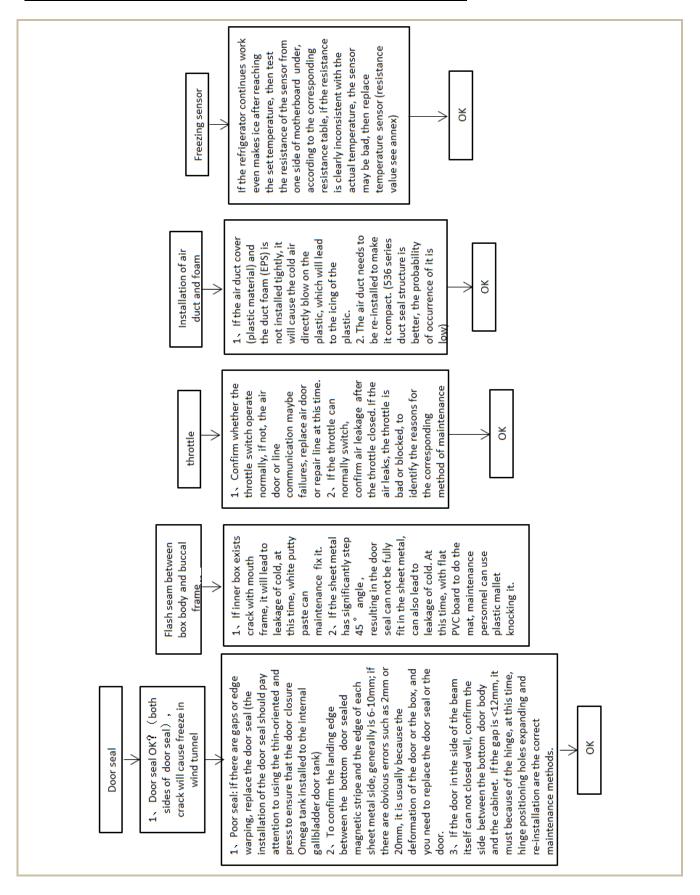
# 11.2 No working of compressor

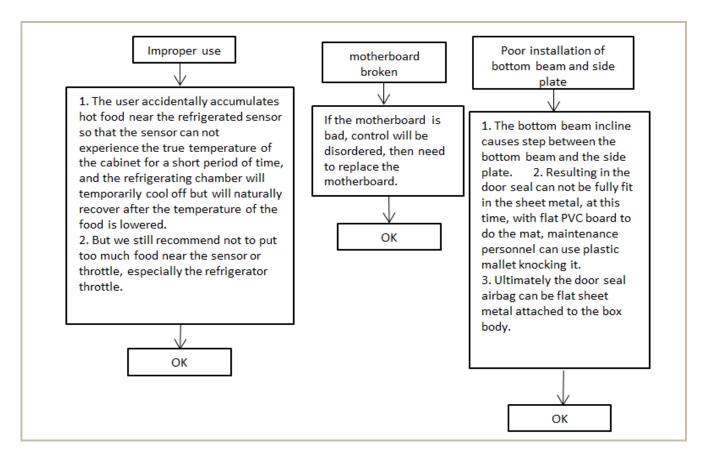


#### 11.3 Inside frosting, no defrosting

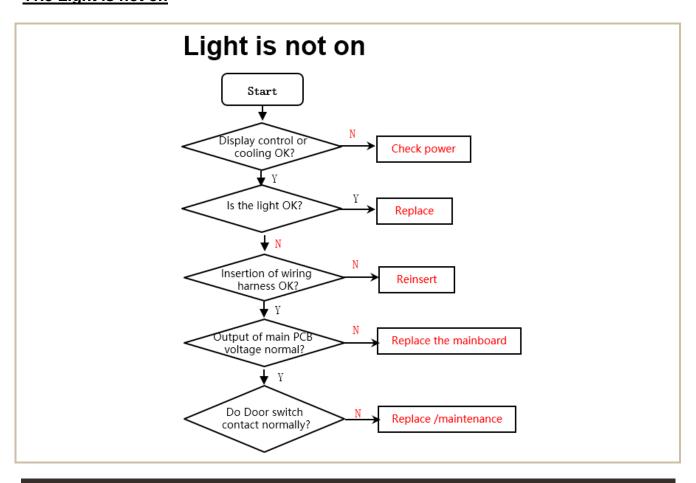


#### 11.4 Inside frosting, no defrosting-Maintenance guidelines

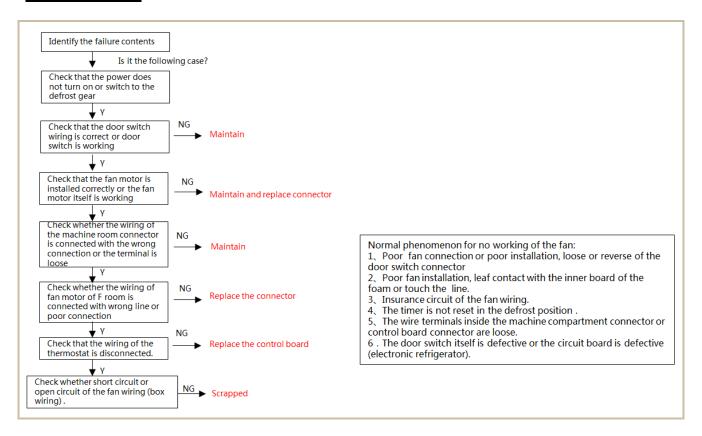




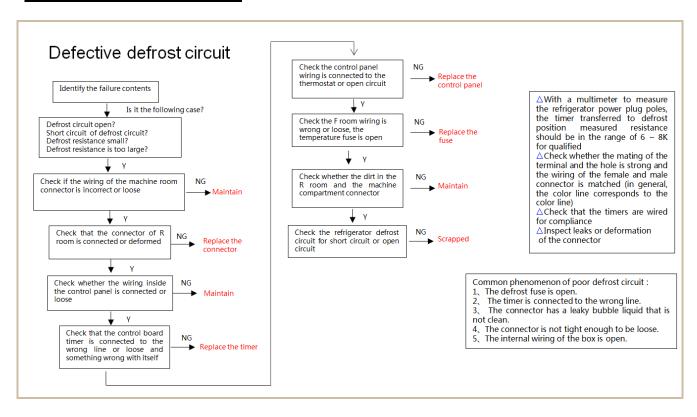
#### 11.5 Light is not on



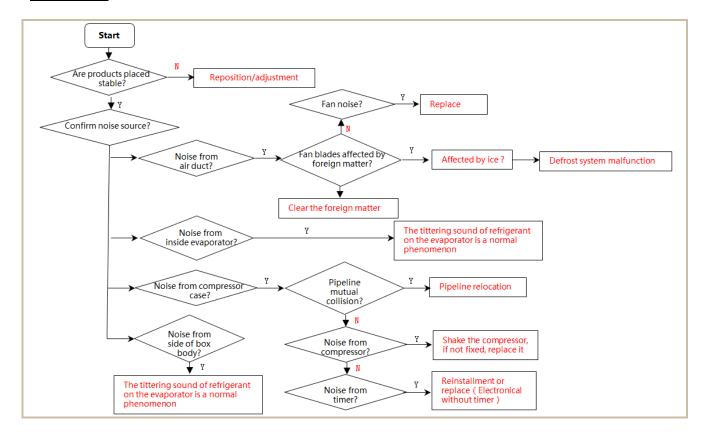
#### 11.6 Fan failure



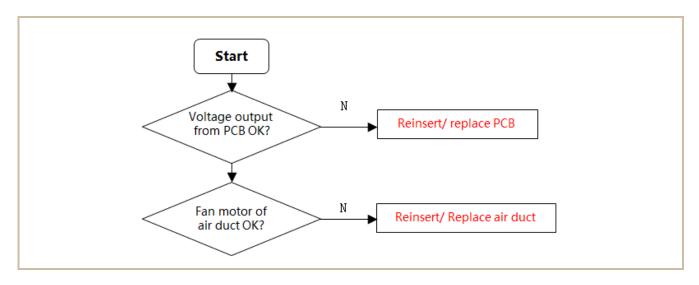
#### 11.7 Defective defrost circuit



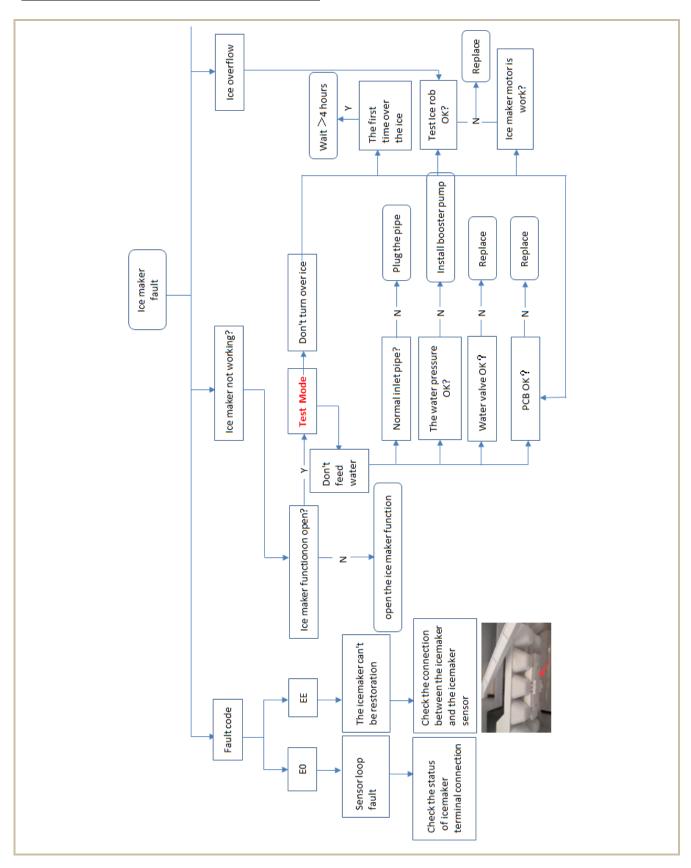
## **11.8 Noise**



## 11.9 Air duct not operated



# 11.10 Ice makernot make ice (Option)



REF: Jamie Liu(liujc5@midea.com)

## 12. Product exploded view and spare parts list

Please log in to TSP system to view and download these contents.

# **Entry Guidelines (TSP System)**

■ Where

Google

https://tsp.midea.com

How

International users or customers:

Account: MC\*\*\*\*\* (provided by TSP administrator or Sales Manager).

If you buy different categories from Midea group, you can see all the product information by one account.

<u>Preliminary password:</u> Please contact the TSP administrator or sales manager for the password.

If the input error more than 5 times, account will be locked, need contact the administrator to unlock.

Administrator:



The symbol on the product or its packaging indicates that this product must not be disposed of with your other household waste. Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste for recycling, please contact your local authority, or where you purchased your product.

# **Midea Refrigerators**

If you need to get detailed technical information from the manufacturer, please contact:

xxx@midea.com

Refrigeration Division
Overseas Sales Company

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