Tumble Heat Pump Dryer

Model:

MDM80-CH01/B06E-EU(A2)-P3

Service Manual

Note:

Before service the unit, please read this manual first.

Contact with your service center if meet problem

Contents

1 Precaution

When performing troubleshooting and part replacement during servicing, note the following safety precautions:

§1.1 **Safety Precautions**

1-1-1. Use Genuine Parts

The components of the washing machine have safety features such as non-combustibility and voltage withstanding. Therefore, always use the same part as suggested by the maker. In particular, be sure to use only designated parts in case of major safety parts identified by the marker.

1-1-2. Grounding

Connect the grounding wire to the shell plate, and bury it under at least 25cm of earth : alternatively, connect the ground wire to the appropriate pin on a properly grounded power receptacle. Never connect the wire to a
telephone line, lightning rod, or gas pipe.

§1.2 Servicing Precautions

1-2-1. Observe Warnings

Be sure to follow special warning and precautions that are described on part labels and in the owner's manual.

1-2-2. Parts Assembly and Wiring

Be sure to use insulation material (such as tube and tape). And be sure to restore all parts and wires to their original position. Take special care to avoid contact with sharp edges.

1-2-3. Perform Safety Checks after Servicing

After servicing, check to see that the screws, parts, and wiring are restored to their original positions, and
check the insulation between the external metals and the socket plug. In addition, place the washing machine
in a level position (less than 1(one) degree) to prevent vibration and noise during operations.

1-2-4. Insulation Checks

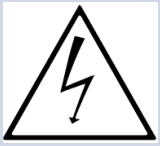
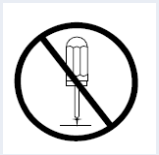
Pull out the plug from the power receptacle, pour water into the spin tub, and then set the timer. Check to see
that the resistance insulation between the terminals of the plug and the externally exposed metal is greater than 1M• .

Note :When it is impossible to perform insulation check with a 500V insulation resistance tester, use other
testers for inspection.

§1.3 CAUTIONS FOR SAFETY

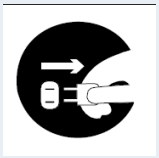
- Please observe the following notes for safety.
- The symbols indicate as follows.

Symbol	Meaning
 **WARNING**	Indicates possibility of death or serious injury of a repair technician and a person nearby through the misconducted work, or of a user by a defect of the product after the work performed by the technician.
 **CAUTION**	Indicates possibility of injury or physical damages* of a repair technician and a person nearby through the misconducted work, or of a user by a defect of the product after the work performed by the technician.

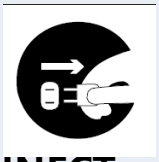
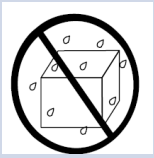
Graphic Symbol	Meaning
 **ELECTRIC SHOCK**	• indicates a caution (including a warning). Specific instruction is followed by a graphic or characters in or near Symbol left warns an electric shock.
 **DO NOT DISASSEMBLE**	• indicates prohibition (act must not be conducted). Specific instruction is followed by a graphic or characters in or near. Symbol left warns not to disassemble.
 **UNPLUG POWER**	• indicates forcing (act must be conducted). Specific instruction is followed by a graphic or characters in or near. Symbol left warns to unplug the power cord.

§1.3 CAUTIONS FOR SAFETY

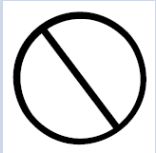
- Please observe the following notes for safety.
- The symbols indicate as follows.

WARNING	
 **OUT OF CHILD**	• Advise the customer to keep children out of the work place. Children may be injured with a tool or a disassembled part.
 **UNPLUG POWER**	• Unplug power cord for the work such as disassembling which is not unnecessary to power on . Do not hold the plug by a wet hand. Failing to unplug may cause an electric shock.
 **USE REPAIR PARTS**	• Use the specified repair parts when repairing the product. Otherwise, a malfunction or a defect may occur. Also, a short circuit, ignition or other danger to the customer may occur.
 **CHECK INSULATION RESISTANCE**	• After repair, measure insulation resistance between the charging part (power cord plug) and the non-charging metallic part (ground) with an insulation resistance meter (500V). The resistance shall be 10M• or more. Failing to check the insulation resistance may cause a short circuit, electric shock or other diseases to the customer.
 **DO NOT MODIFY**	• Do not modify the product. An electric shock or ignition may occur.
 **DO NOT DISASSEMBLE AND REPAIR**	• Only a repair technician can disassemble and repair. An electric shock, ignition or malfunction may cause injury.

§1.3 CAUTIONS FOR SAFETY

	WARNING
 **USE EXCLUSIVE SOCKET**	• Use an exclusive A socket for the washing machine. Otherwise, an electric shock or ignition may cause. Sharing the same socket with other instrument causes heating of a branch socket and result in a fire.
 **CONNECT GROUNDING WIRE**	• Unplug power cord for the work such as disassembling which is not unnecessary to power on . Do not hold the plug by a wet hand. Failing to unplug may cause an electric shock.
 **CONNECT GROUNDING WIRE**	• Connect the grounding wire. Failing to do so may cause an electric shock when a short circuit occurs. Consult an electric work shop or a sales shop.
 **DO NOT USE WET PLACE**	• Do not install in a bath room or a place exposed to wind or rain. An electric shock or a short circuit may cause a fire.
 **DO NOT SPLASH WATER**	• Do not pour or immerse electrical parts into water or liquid solution. An electric shock or ignition may occur.
 **REMOVE DUST**	• Wipe off dust adhered to the plug of power cord. Dust may cause a fire.

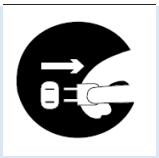
§1.3 CAUTIONS FOR SAFETY

WARNING	
 **AVOID INFLAMMABLE**	• Do not put inflammable into the washing tub. Do not put cloths stained with kerosene, gasoline, benzene, thinner, alcohol, etc. It may cause a fire or explosion.
 **CONNECT GROUNDING WIRE**	• Do not touch the laundry before the spin basket stops completely. The laundry entangles your hand causing an injury even if the basket rotates slowly. Pay special attention to children.
CAUTION	
 **INSTALL CAREFULLY**	• Ask an electric work shop to install the product. Install the product securely and safely according to the electrical equipment technical standard and the wiring standard. Incorrect work causes an electric shock and a fire.
 **DO NOT PULL**	• Do not pull the power cord when unplugging. Hold the power plug to unplug. An electric shock or short circuit may cause a fire.
 **DANGER HAND**	• Do not insert your hand under the washing machine during operation. There is a rotary part under the machine which may cause an injury.
 **WATER LEAKAGE**	• Before starting washing, open the faucet and check water supply hose joint which shall not be loosened for no water leaks. The loose screw or hose joint may cause water leakage resulting in an unexpected damage.

2 Factory Pattern Detection

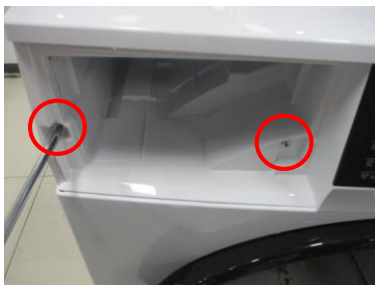
When the repairing work is done, select the "Time" programme to operate the dryer for at least 10 minutes. During this time, check if the dryer the tumble turnning right and there is no undesired noise. After the programme is done, open the door, use your hand to check the tumble. If the tumble is warm, that means the dryer operates well.

WARNING

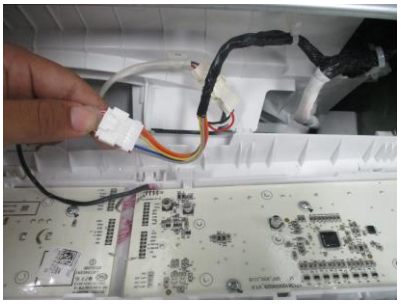
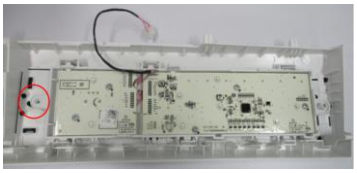
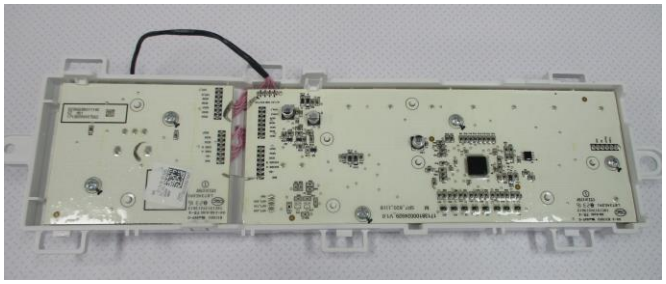
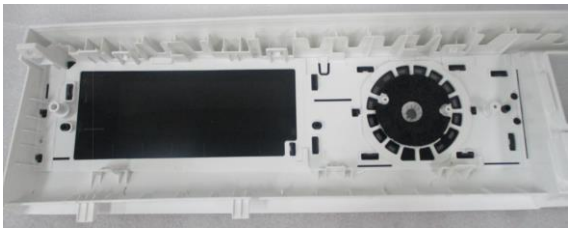


UNPLUG POWER

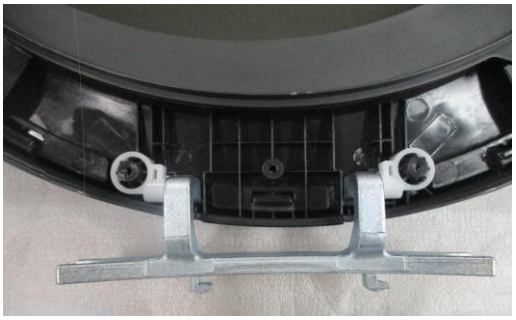
• Unplug power cord for the work such as disassembling which is not unnecessary to power on . Do not hold the plug by a wet hand.
Failing to unplug may cause an electric shock.

ITEM	PICTURE
Unfasten the two screws behind the top cover board with cross screwdriver and take it out backwards to remove the top cover board	
Pull out the water container	
Unfasten the two screws in the front of control panel with cross screwdriver	
Unfasten the 4 screws on the top with cross screwdriver.	

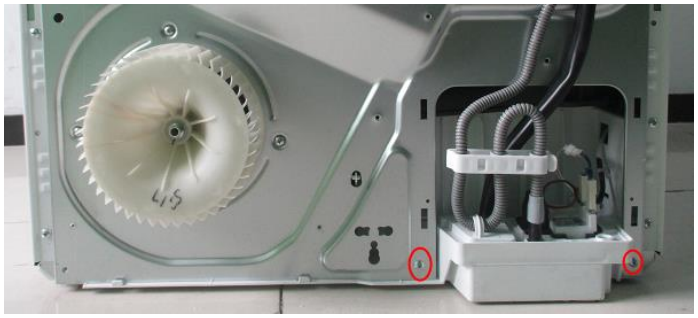
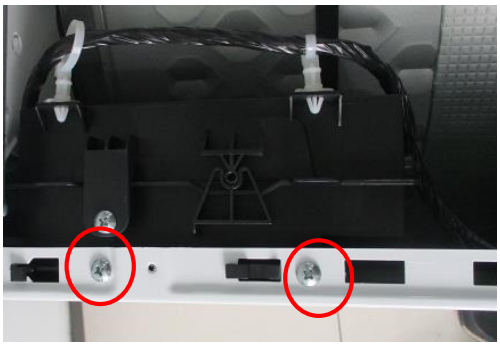
3 UNPACKING WAYS OF MAIN PARTS

ITEM	PICTURE
Pull out the knob cover	
Pull out all connection pin behind the Control panel sub	
Remove 1 pcs of screws, then take off the control box	 
The control box	
The central panel	

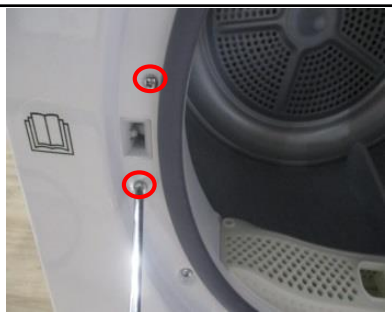
3 UNPACKING WAYS OF MAIN PARTS

ITEM	PICTURE
Unfasten the 2 screws on the door hinge	
Unfasten 11 screws on the inner ring	
Remove the inner ring	
Take off the door hinge	
Take off the door plunger	

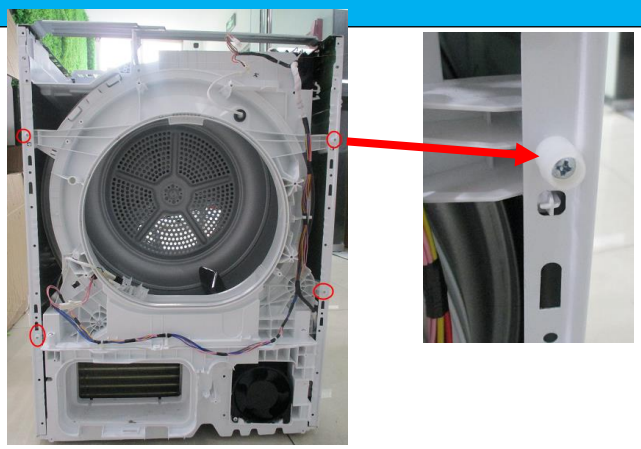
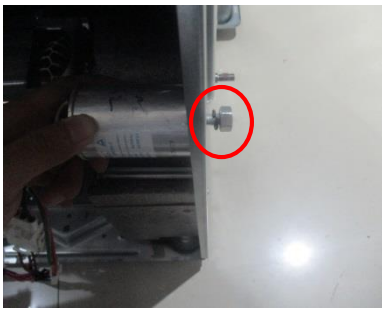
3 UNPACKING WAYS OF MAIN PARTS

ITEM	PICTURE
Pull out the drain pipe and unscrew 1 screw on the rear cover of drain pump kit.	
Remove all of the screws on the back cover and take it off.	
Unscrew 2 screws at the back of side plates.	
Unscrew screws on the side plates(left and right).	
Unscrew 2 screws to remove the control board and Pull out all connection pin on the filter (notice the sequence of the pins)	

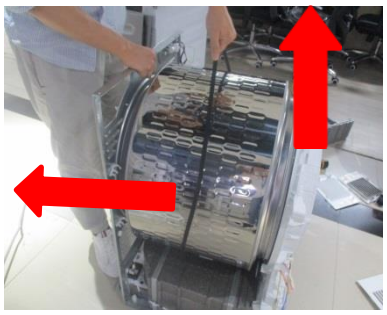
3 UNPACKING WAYS OF MAIN PARTS

ITEM	PICTURE
Take off the strainer and door sealing ring.	 
Unscrew two screws to take off door lock assembly, open the movable cover plate	 
Move the Yellow clasp and take off the maintenance cover.	 
Unfasten screws on the front cover(two at the bottom).	 

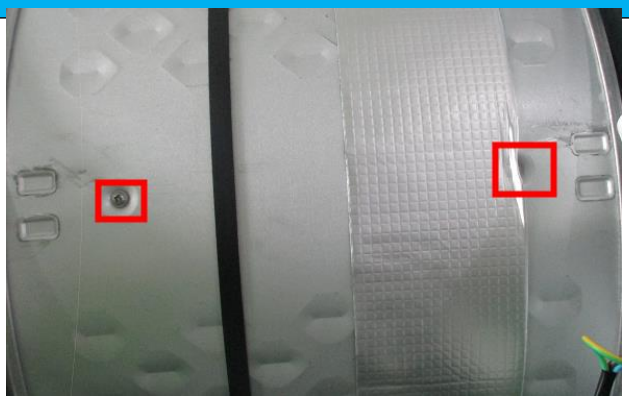
3 UNPACKING WAYS OF MAIN PARTS

ITEM	PICTURE
Unscrew 2 screws on the side plates(left and right).	
Take off two side plates, unfasten the belt by pulling it outward.	
Fix the motor shaft with a spanner and rotate the wind wheel anticlockwise to take it off.	
Unfasten the nut (M8) and screw of the capacitance	 

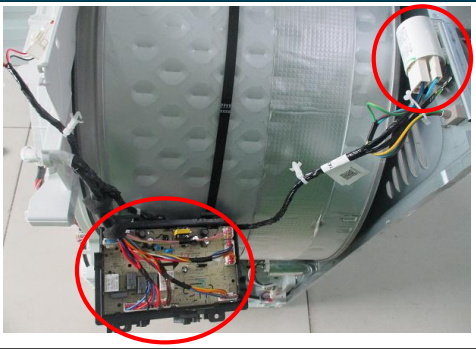
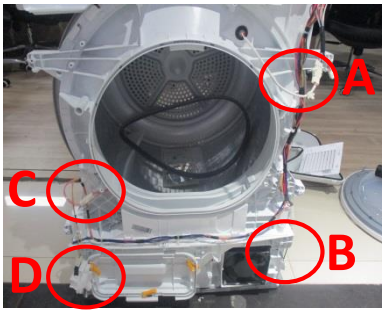
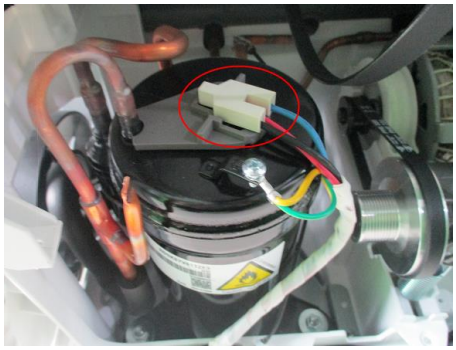
3 Disassembling Ways of Main Parts

ITEM	PICTURE
Unfasten the screw of the bearing box.	
Pull out the inlet and return pipes from all the buckles.	
Lift up the tub assembly and move it backwards to separate it	
Unscrew 4 screws on the bearing house assembly and remove the bearing cover.	
Unscrew the nut(M8) and remove the bearing house assembly, Separate the back cover from the tub.	

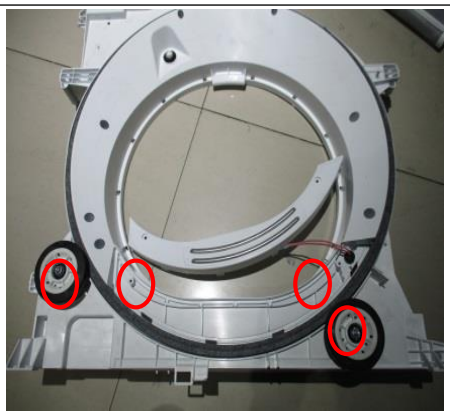
3 Disassembling Ways of Main Parts

ITEM	PICTURE
Unscrew 4 screws on barrel.	
Remove 2 lifters.	
Unfasten 3 screws(2 in the front and 1 in the back) and take off the front support.	
Unfasten the screw on the cooling fan.	

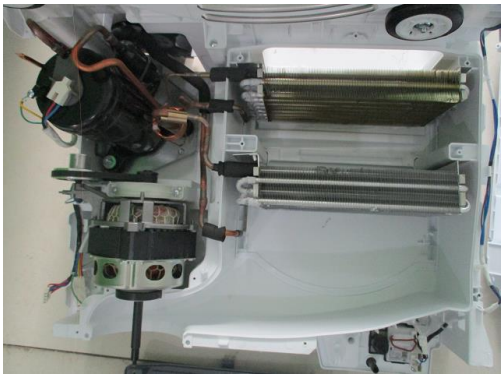
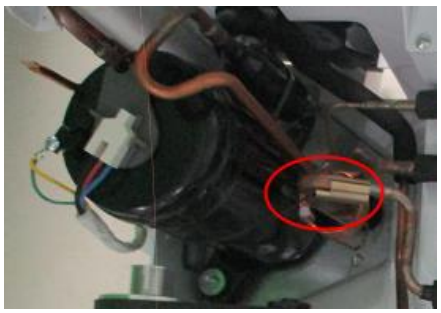
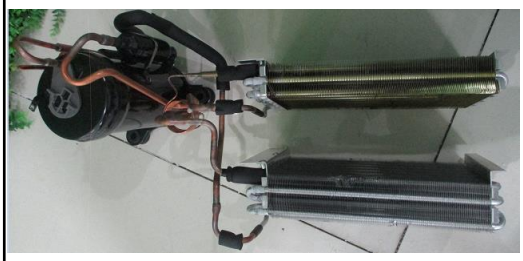
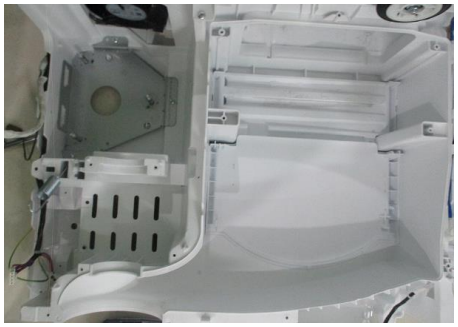
3 Disassembling Ways of Main Parts

ITEM	PICTURE
Pull out all the connections of the filter and control box.	 
A: connection of the tub lamp B: connection of the cooling fan C: connection of the humidity sensor D: connection of the door lock	
Pull out the connection of temperature sensor and three terminals on the compressor.	
Pull out the connections of the motor and capacitance.	
Unfasten 1 screws，Pull out the terminals of the water pump and water-level detector.	 

3 Disassembling Ways of Main Parts

ITEM	PICTURE
The front support assembly contains a bucket lamp, two wheels, a humidity sensor, and a felt ring seal .	
Pull out the wire terminals of the lamp and pull it out.	
Take off the felt ring seal on the front support and unscrew the nuts(M6) and remove the wheels.	
Remove 2 screws on the humidity sensor support.	

3 UNPACKING WAYS OF MAIN PARTS

ITEM	PICTURE
Unfasten the screws of reinforcing plate and unscrew the compression gasket.	
Remove the upper foam duct.	
Unfasten 2 screws to remove the motor and unfasten 3 screws to remove the motor bracket	
Unfasten the nuts(M6) and pull out the pin of temperature sensor and the connection pin behind the cover	 
Remove the Air conditioning unit from the bottom plate. (two people cooperate) Remove the lower foam duct from the floor and take off the condenser baffle.	 

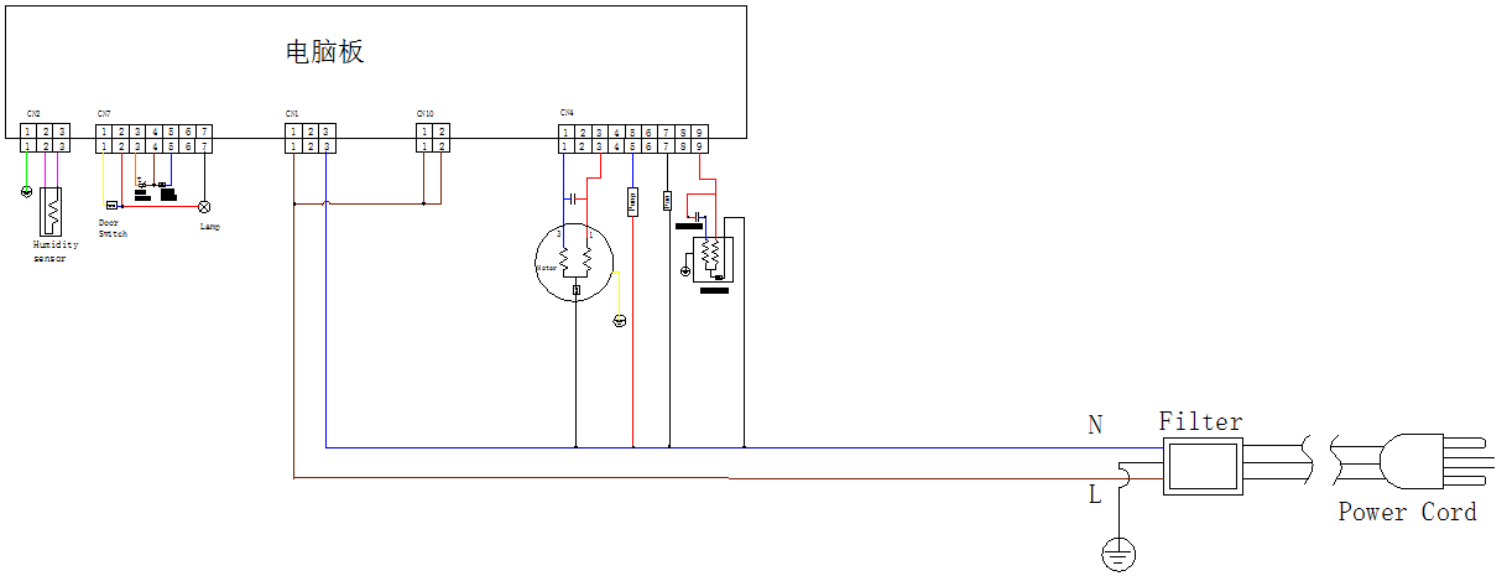
4 MALFUNCTIONS CODES AND EXPLANATIONS

Lamp Display Error code(flashing)	Error description	Error type	Check content
	Container is full; Water pump failure or water level sensor failure	Pause the program; Can restore after restart the machine	Check the water storage container; Check the water pump ; Check the water level sensor (consult **5.6**)
E32	The fault of humidity sensor; Two parts of the sensor metal joint together	Warn when the cycle completed; Restorable	Check the humidity sensor and change control panel (consult **5.7**)
E33	The fault of NTC	Termination of the program ; Not restorable	Check the NTC connecting wire (consult **5.8**)

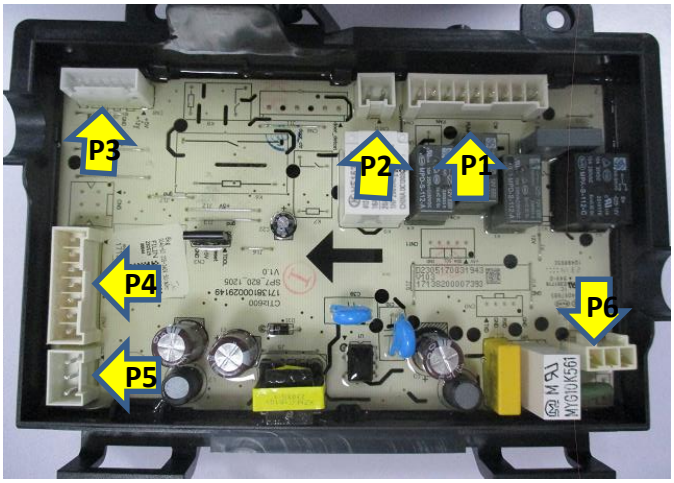
Press the [On/Off] key to start the machine, and then press [Fiber Master] [Signal] [Fiber Master] [Signal] in turn to enter the test mode.

Circuit diagram of dryer

The circuit program



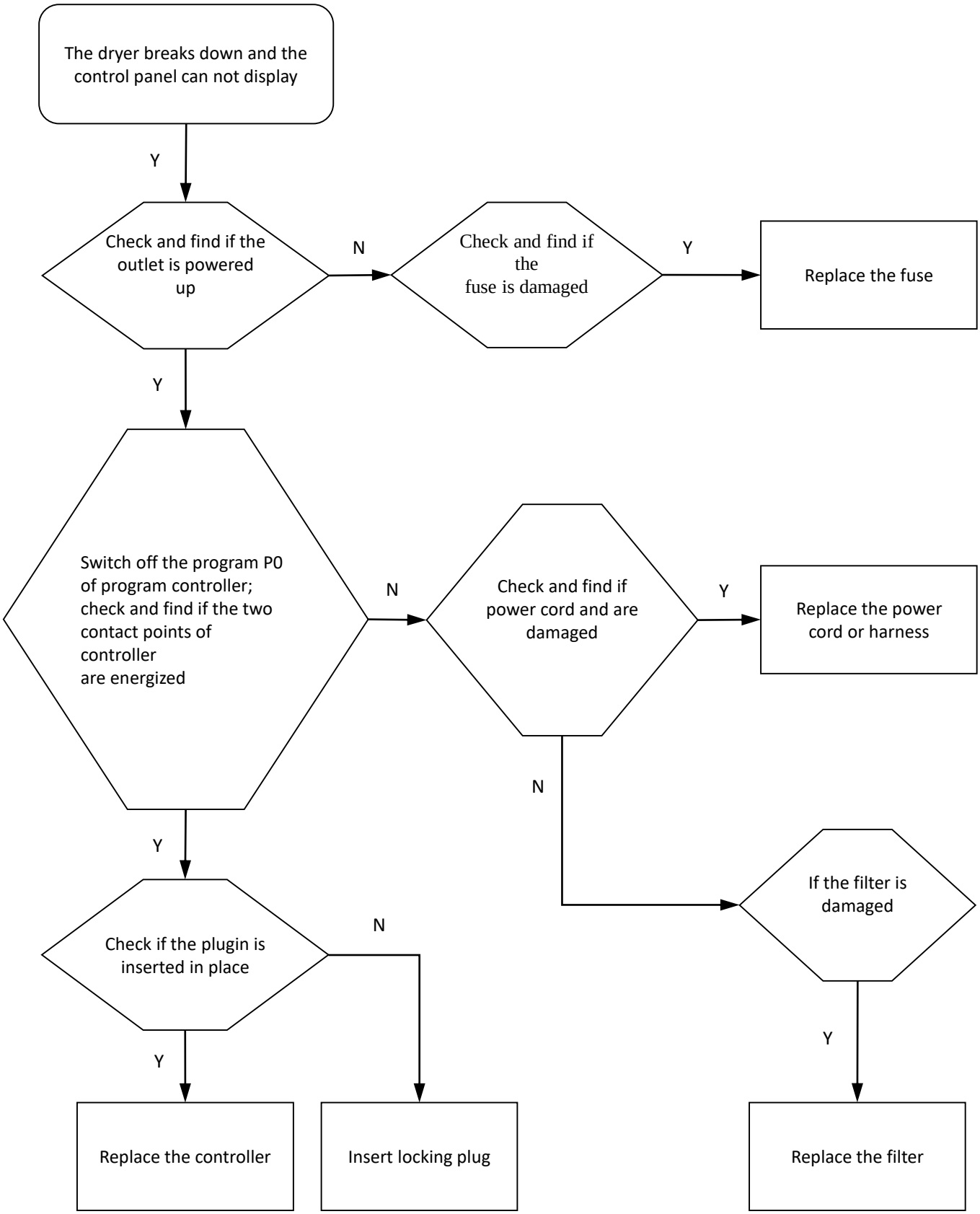
Wiring connection figure



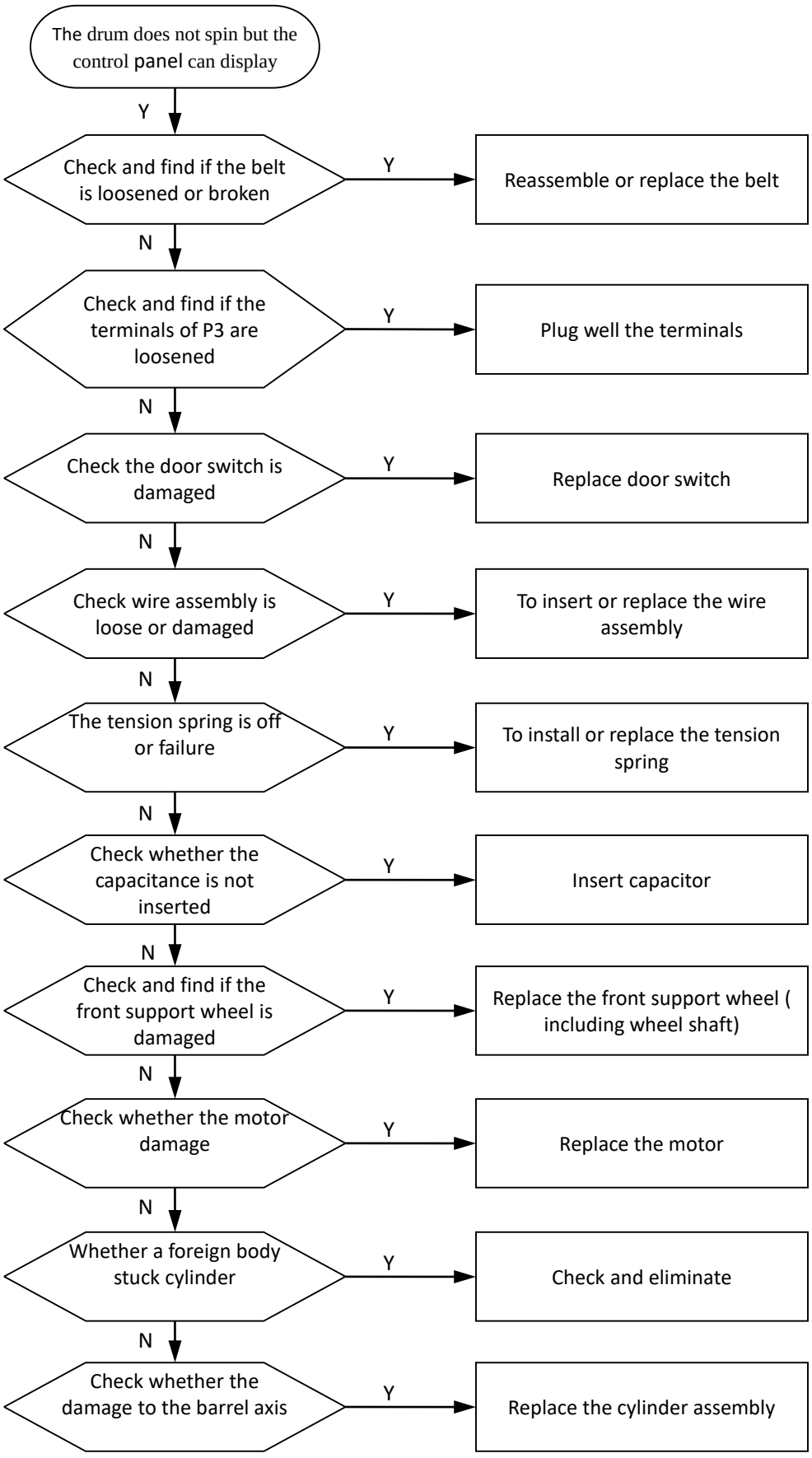
P1	Motor+ Drain pump + Cooling fan+Compressor
P2	Live wire
P3	Communication between Displayed panel and Control panel
P4	Water level sensor + NTC1+Door switch + Lamp
P5	Humidity sensor
P6	Live wire + Neutral wire

5 Troubleshooting

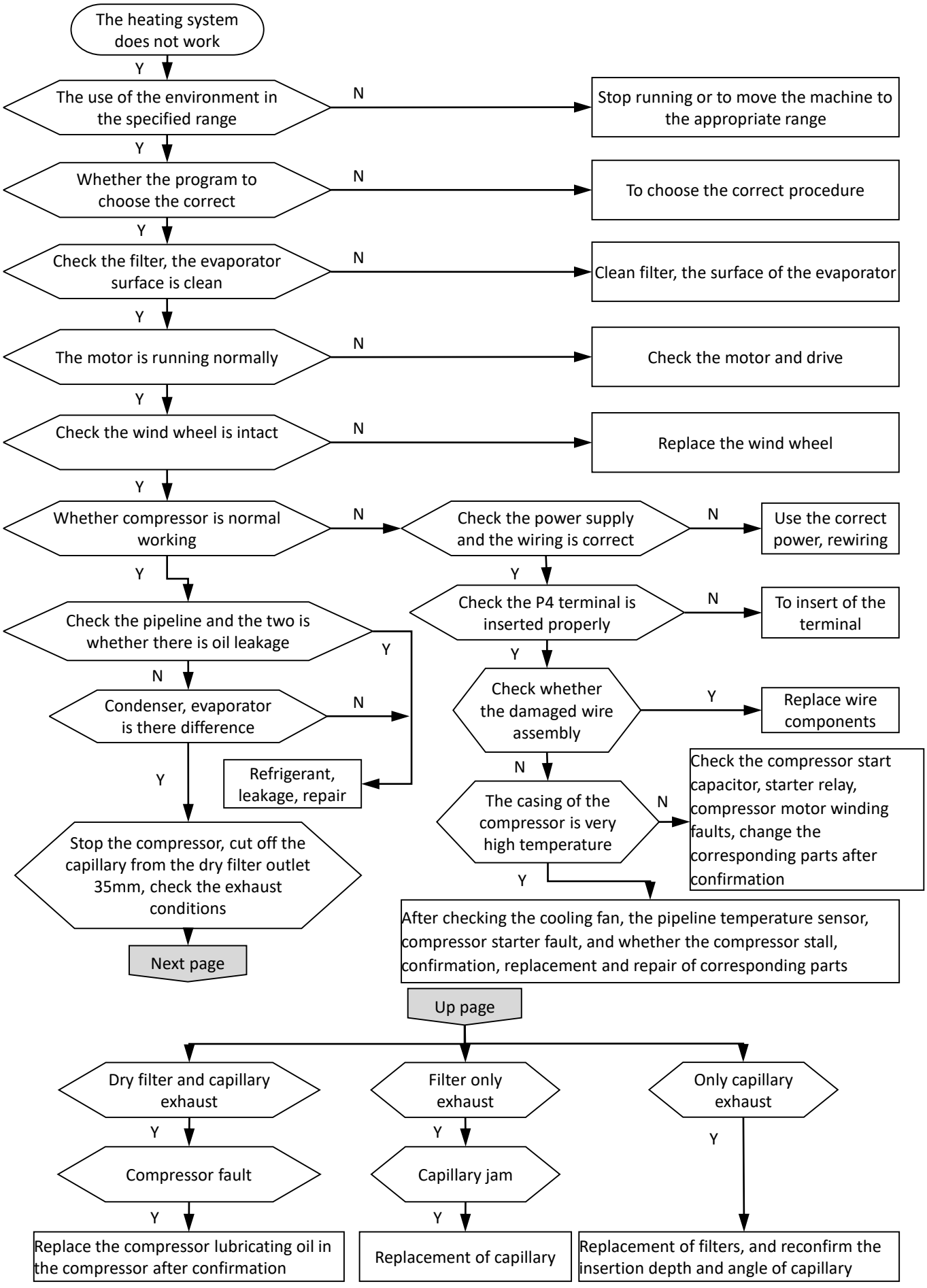
5.1 The dryer breaks down and the control panel can not display



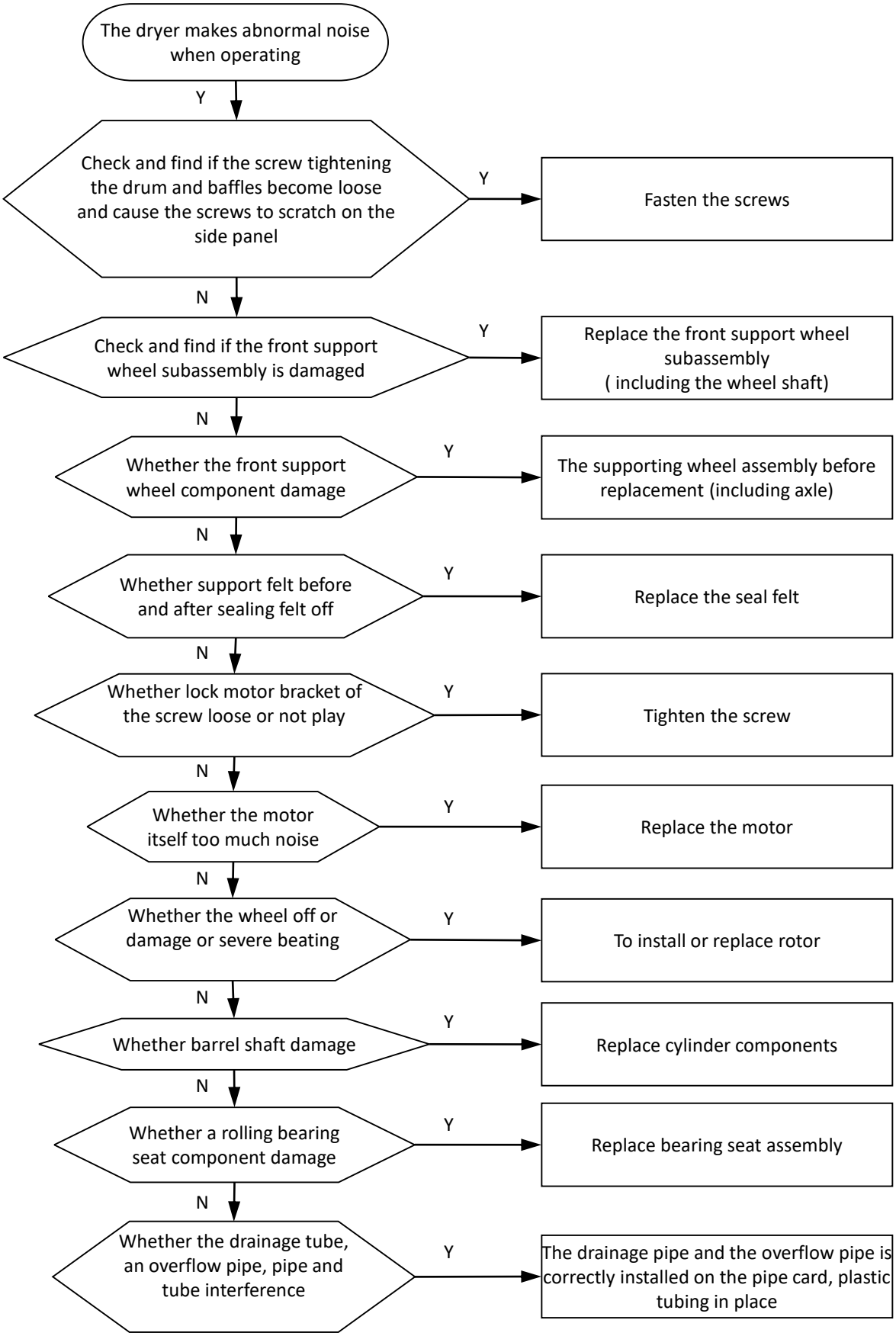
5.2 The drum does not spin but the control panel can display



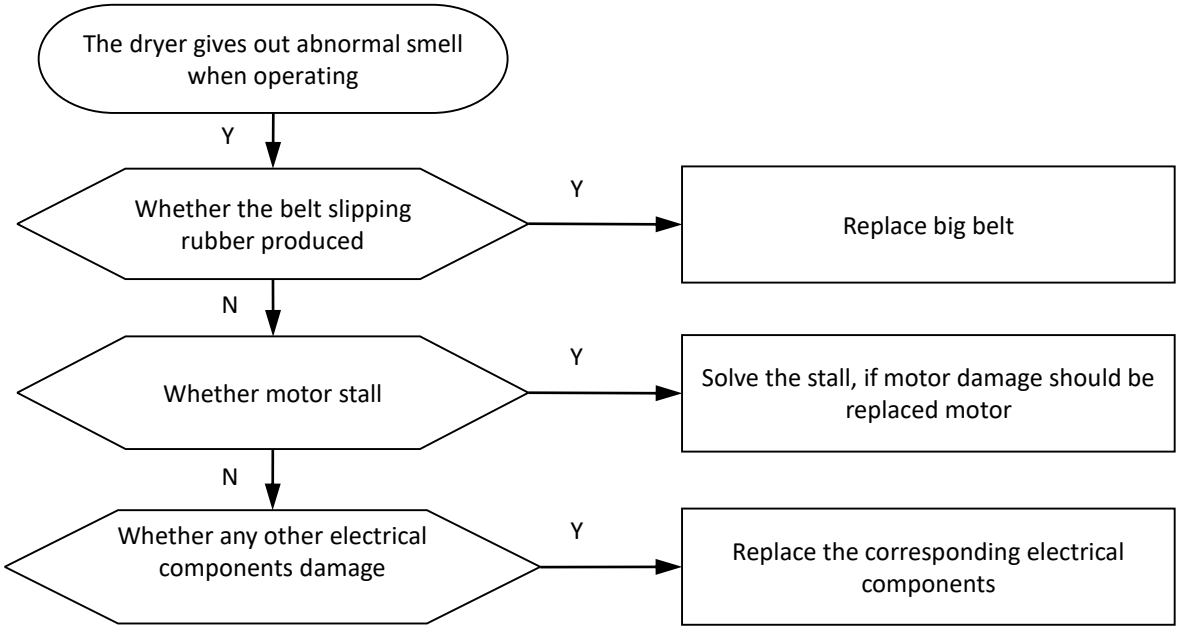
5.3 The heating system does not work



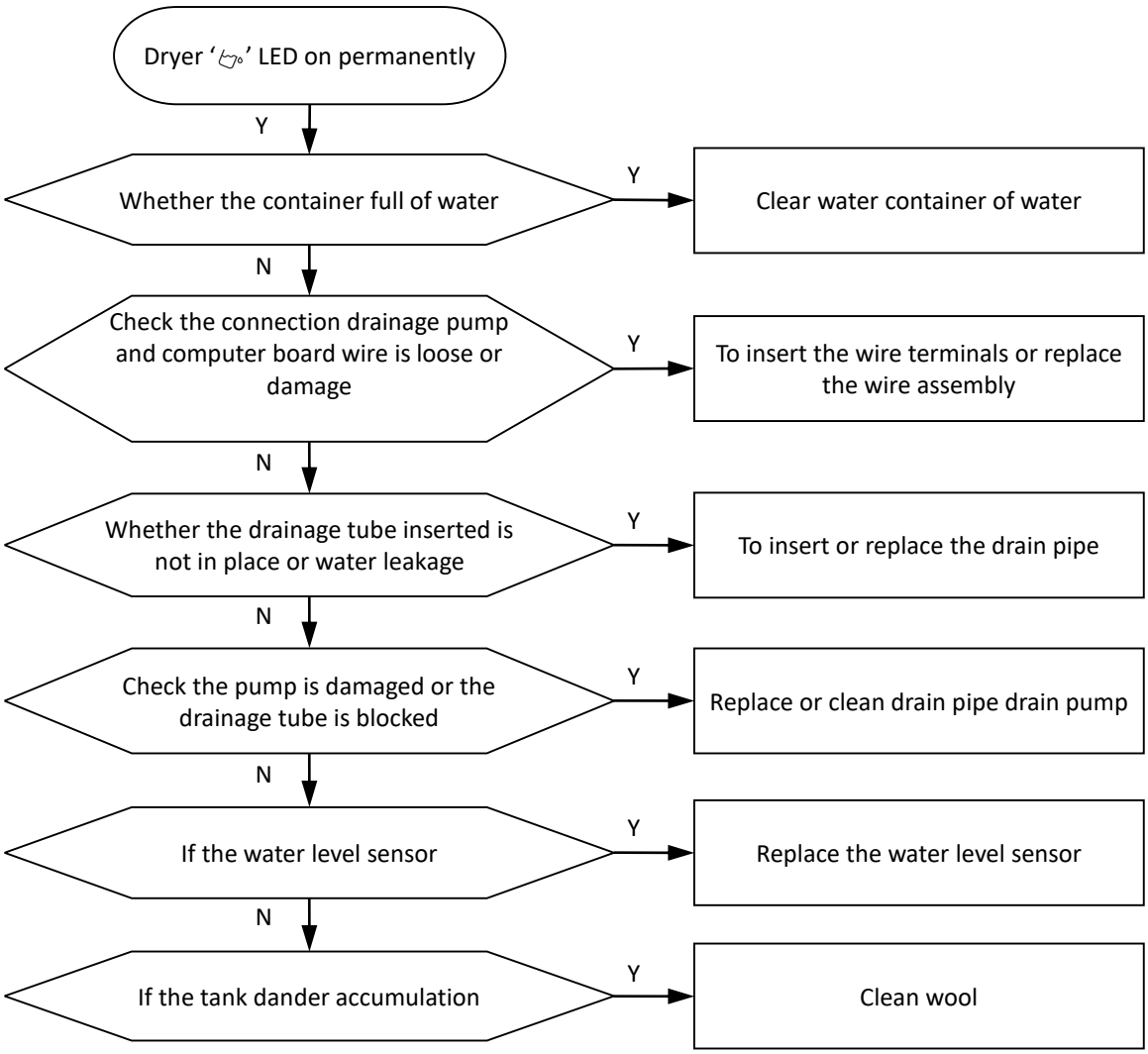
5.4 The dryer makes abnormal noise when operating



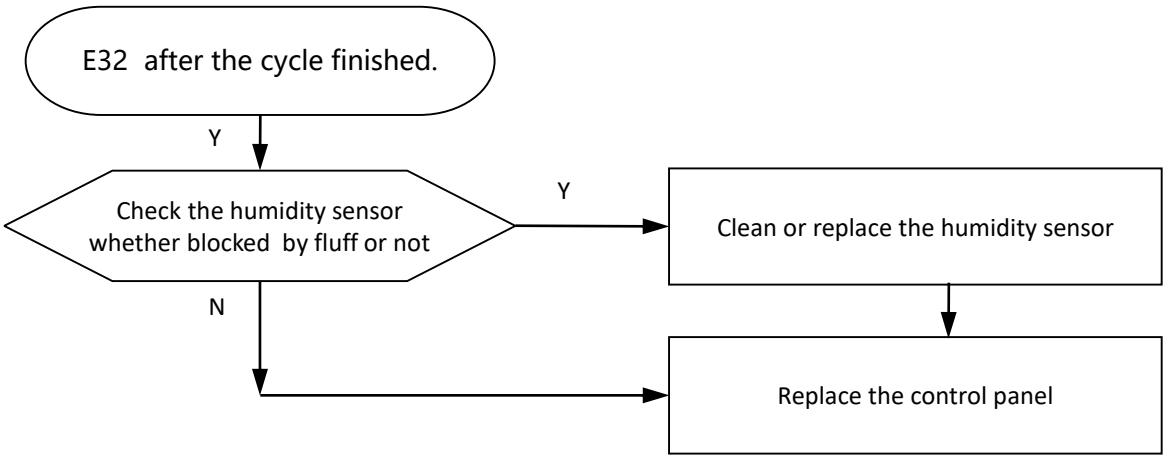
5.5 The dryer gives out abnormal smell when operating



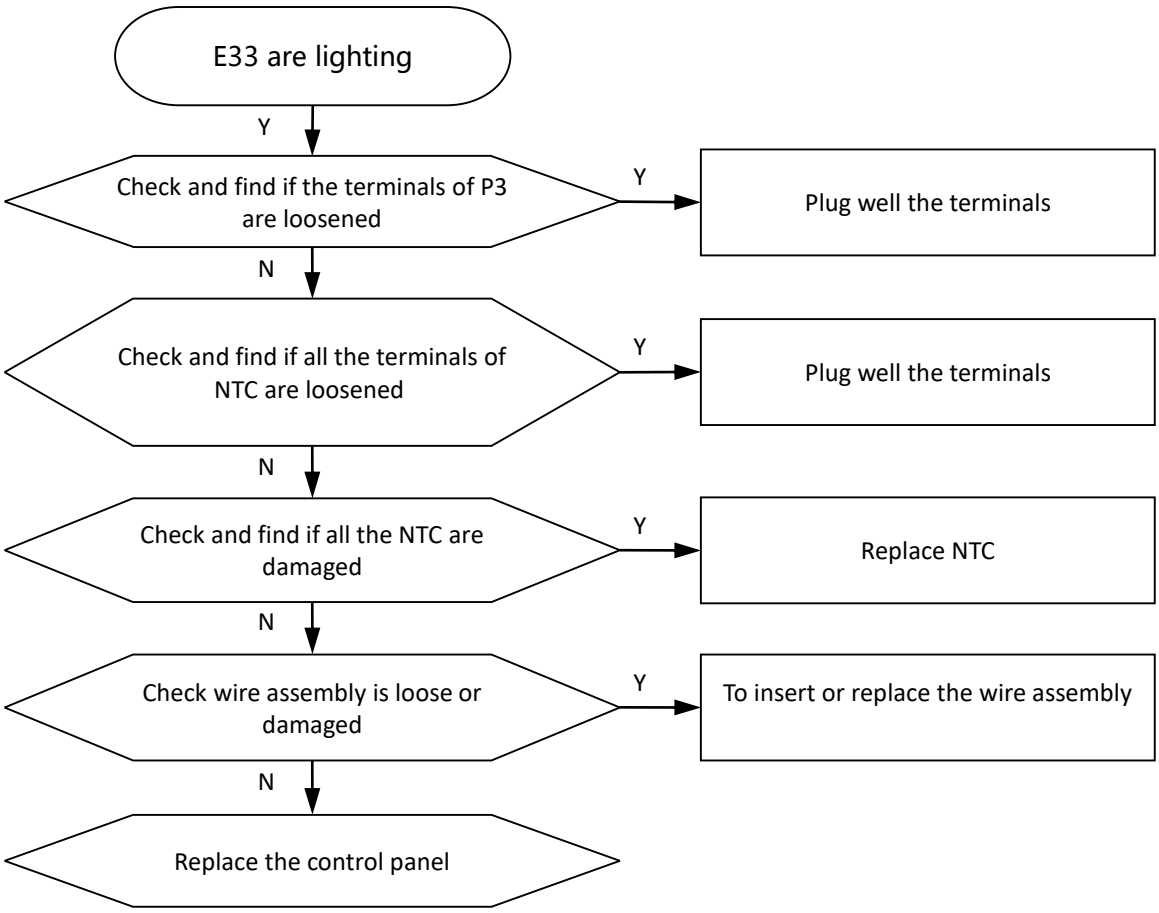
5.6 Dryer's '' LED on permanently



5.7 E32 after the cycle finished.



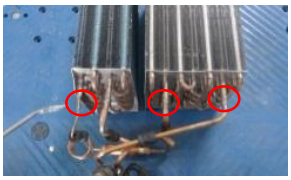
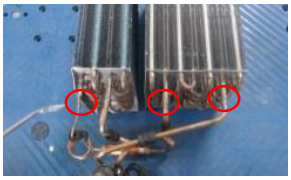
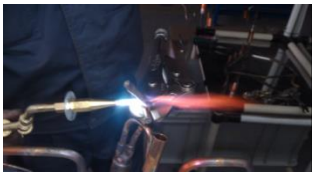
5.8 E33 are lighting



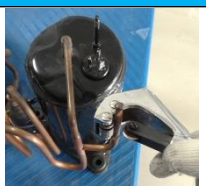
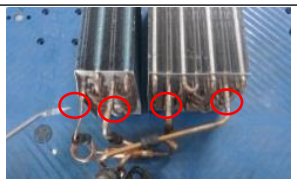
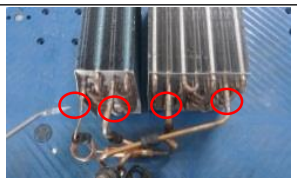
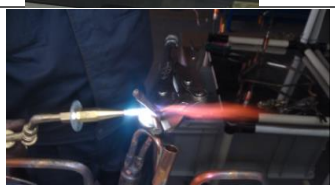
5.7 Heat pump system parts repair：

Warning : If the heat pump system parts need repair , we suggest you buy new machines rather than repair. The heat pump system parts include capillary , dry filter, connect pipe, condenser, evaporator, compressor and etc.

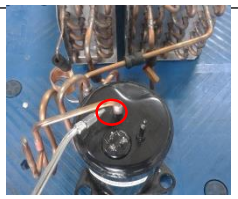
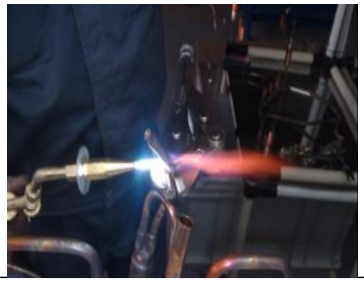
5.7.1Capillary and dry filter repair

Operation step	Picture
Release refrigerant	
Melt capillary and dry filter	 
Prepare new part	
Weld capillary ,dry filter and connect pipe	   
Vacuumize	
Fill refrigerant （R134a &295g）	
Seal	
Face lifting and leak hunting	

5.7.2Condenser and evaporator repair

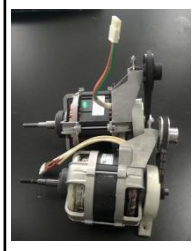
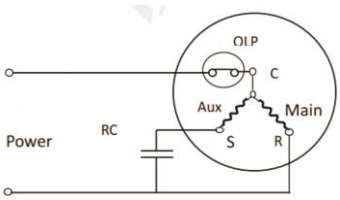
Operation step	Picture
Release refrigerant	
Melt condenser and evaporator	 
Prepare new part	 
Weld condenser , evaporator, capillary, dry filter and connect pipe	 
Vacuumize	
Fill refrigerant （R134a &310g）	
Seal	
Face lifting and leak hunting	

5.7.3 Compressor repair

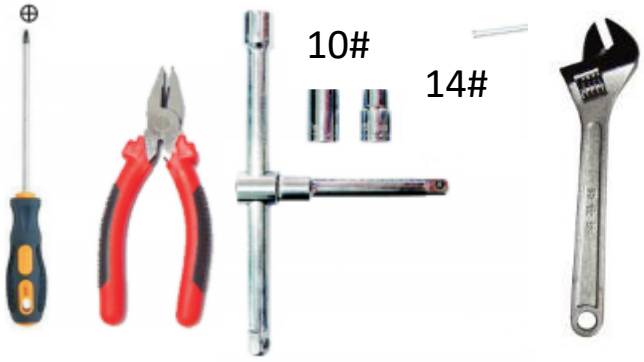
Operation step	Picture
Release refrigerant	
Melt compressor and connect pipe	  
Prepare new part	 
Weld compressor and connect pipe	  
Vacuumize	
Fill refrigerant （R134a &310g）	
Seal	
Face lifting and leak hunting	

6 CHECK POINT OF CIRCUIT

Before repairing, use multimeter to judge circuit stand of fail.

No	Part	Picture	Test Description	parameters
1	Electric Filter		With a multimeter to test the connection at both ends of the N and L are each turned on. Conducting OK, the replacement is not turned on	250V 12A 0.47μF+0,33μF+2*(≥4mH)+2*2.2nF+470kΩ 25/085/21
2	Capacitor		Test capacitance value should be 16 ± 5% uF&9+5%μF	450VAC 50/60Hz, S2, T85 9μF+16μF
3	Drain Pump		Measured with a multimeter ends of the pump. 800× (1 ± 10%) Ω (20 ℃)	220-240V 50Hz class F 13W
4	Water Level Sensor		Conducting both ends with a multimeter test case, disconnect the float at the bottom of the float at the top of turn	10mv-24vAC;10mv-200vDC ,10VA 10W, 10UA-1A(DC)
5	Door Switch		Conducting both ends with a multimeter test case, under normal disconnect, press on.	250V 16A
6	Motor Assembly		Measured with a multimeter primary and secondary windings of the motor. Welling: Main winding(Green Orange) 26.5 × (1 ± 10%) Ω (20 ℃); Secondary winding(red - orange) 26.0 × (1 ± 10%) Ω (20 ℃) Sanjiang : Main winding(Green Orange) 23.1 × (1 ± 12%) Ω (20 ℃); Secondary winding(red - orange) 24.4 × (1 ± 12%) Ω (20 ℃)	220-240V/50HZ,120W,Al ,RoHS
7	Compres-sor		 S: START(Aux Winding) R: RUN(Main Winding) C: COMMON RC: Run Capacitor	Coil Resistance (at 20℃): Main: 11.37±5%Ω Aux: 10.13±5%Ω

7 Service tools



Number	Tools	Suitable kit
1	Sleeve（14#）or spanner	drum tub assembly
2	Sleeve（10#）and pliers	Wheel Assembly
3	Other tools (screwdriver,pliers and so on)	Common service tools
4	Vacuum pump, welding torch, butane and oxygen carrier, pipe cutter and so on.	Weld and cut the pipe Vacuum and charge.

8 Appendix

Machine function description, program description, the whole detailed parameter table, fault codes, etc. Please refer to the instructions.
Note: The schedule for the reference value.

MDM80-CH01_B06E-EU_A2-P3-PM01-0804.zip

The end!