Tumble Heat Pump Dryer

Model:

MDG90-CH09/B05E-EU(A2)-C6

# 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

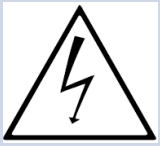
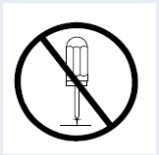
Pull out the plug from the power receptacle, pour water into the spin tub, and then set the timer. Check to see
that the resistance insulation between the terminals of the plug and the externally exposed metal is greater than 1M• .

**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

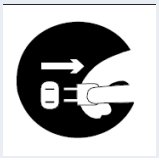
- Please observe the following notes for safety.
- The symbols indicate as follows.

| 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. |

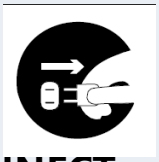
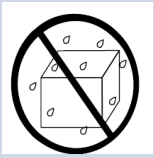
| Graphic Symbol | Meaning |
|---|---|
|  **ELECTRIC SHOCK** | • indicates a caution (including a warning).<br>Specific instruction is followed by a graphic or characters in or near Symbol left warns an electric shock. |
|  **DO NOT DISASSEMBLE** | • indicates prohibition (act must not be conducted).<br>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).<br>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.

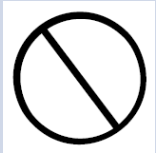
| WARNING | |
|---|---|
|  **OUT OF CHILD** | • Advise the customer to keep children out of the work place. Children may be injured with a tool or a disassembled part. |
|  **UNPLUG POWER** | • Unplug power cord for the work such as disassembling which is not unnecessary to power on . Do not hold the plug by a wet hand.<br>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.<br>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.<br>Failing to check the insulation resistance may cause a short circuit, electric<br>shock or other diseases to the customer. |
|  **DO NOT MODIFY** | • Do not modify the product.<br>An electric shock or ignition may occur. |
|  **DO NOT DISASSEMBLE AND REPAIR** | • Only a repair technician can disassemble and repair.<br>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.<br>Otherwise, an electric shock or ignition may cause. Sharing the same socket<br>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.<br>Failing to unplug may cause an electric shock. |
|  **CONNECT GROUNDING WIRE** | • Connect the grounding wire.<br>Failing to do so may cause an electric shock when a short circuit occurs.<br>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.<br>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.<br>An electric shock or ignition may occur. |
|  **REMOVE DUST** | • Wipe off dust adhered to the plug of power cord.<br>Dust may cause a fire. |

## §1.3 CAUTIONS FOR SAFETY

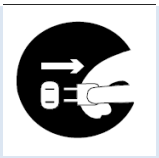
| WARNING | |
|---|---|
|  **AVOID INFLAMMABLE** | • Do not put inflammable into the washing tub.<br>Do not put cloths stained with kerosene, gasoline, benzene, thinner, alcohol,<br>etc. It may cause a fire or explosion. |
|  **CONNECT GROUNDING WIRE** | • Do not touch the laundry before the spin basket stops completely.<br>The laundry entangles your hand causing an injury even if the basket rotates<br>slowly. Pay special attention to children. |

| CAUTION | |
|---|---|
|  **INSTALL CAREFULLY** | • Ask an electric work shop to install the product.<br>Install the product securely and safely according to the electrical equipment<br>technical standard and the wiring standard.<br>Incorrect work causes an electric shock and a fire. |
|  **DO NOT PULL** | • Do not pull the power cord when unplugging.<br>Hold the power plug to unplug.<br>An electric shock or short circuit may cause a fire. |
|  **DANGER HAND** | • Do not insert your hand under the washing machine during operation.<br>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<br>which shall not be loosened for no water leaks.<br>The loose screw or hose joint may cause water leakage resulting in an<br>unexpected damage. |

# 2 Factory Pattern Detection

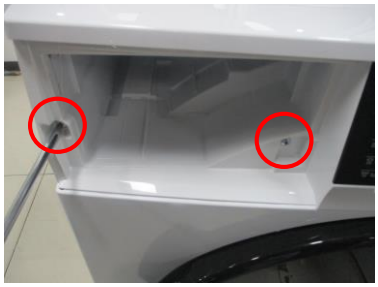
When the repairing work is done, select the "Time" programme to operate the dryer for at least 10 minutes. During this time, check if the dryer the tumble turnning right and there is no undesired noise. After the programme is done, open the door, use your hand to check the tumble. If the tumble is warm,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

# WARNING

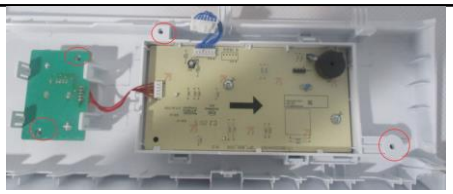
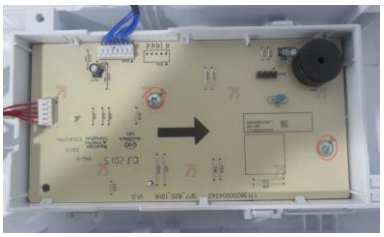


**UNPLUG POWER**

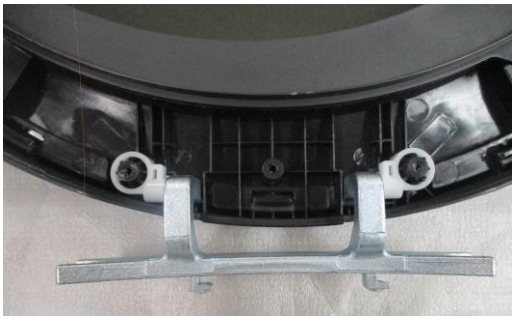
• Unplug power cord for the work such as disassembling which is not unnecessary to power on . Do not hold the plug by a wet hand.
Failing to unplug may cause an electric shock.

| 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. |  |

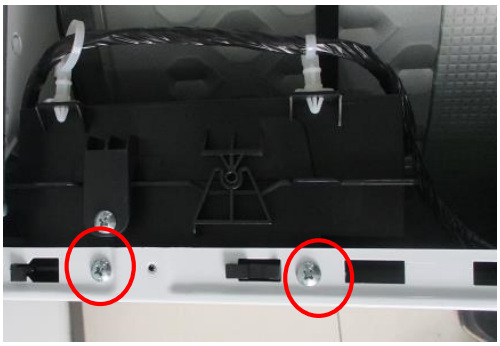
# 3 UNPACKING WAYS OF MAIN PARTS

| ITEM | PICTURE |
| --- | --- |
| Pull out the knob cover |  |
| Pull out all connection pin behind the Control panel sub |  |
| Remove 2 pcs of screws, then take off the control box |  <br>  |
| The control box |  |
| The central panel |  |

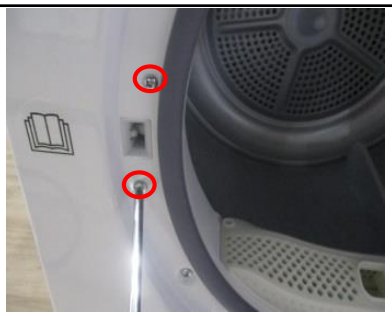
# 3 UNPACKING WAYS OF MAIN PARTS

| 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 |  |

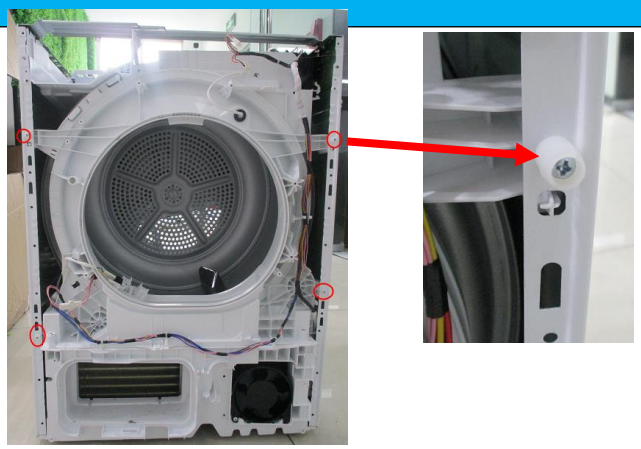
# 3 UNPACKING WAYS OF MAIN PARTS

| 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) |  |

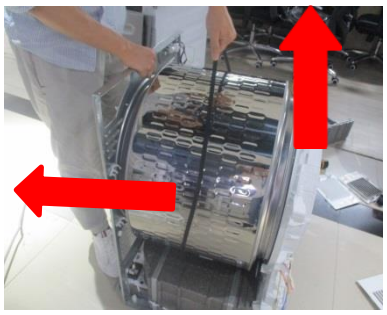
# 3 UNPACKING WAYS OF MAIN PARTS

| 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). |   |

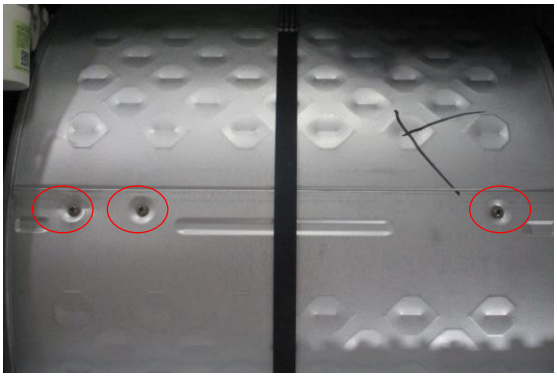
# 3 UNPACKING WAYS OF MAIN PARTS

| 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 |  |

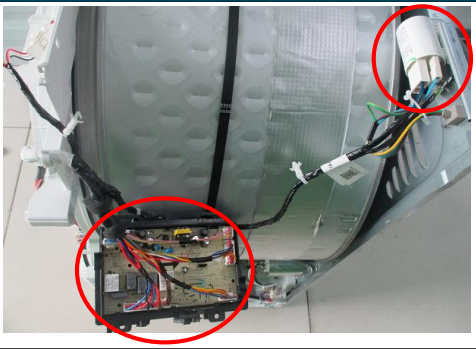
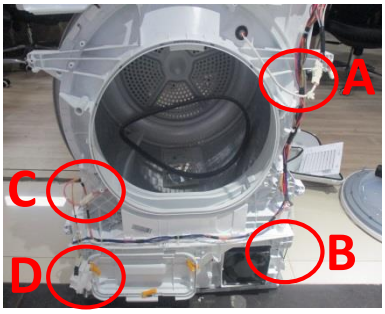
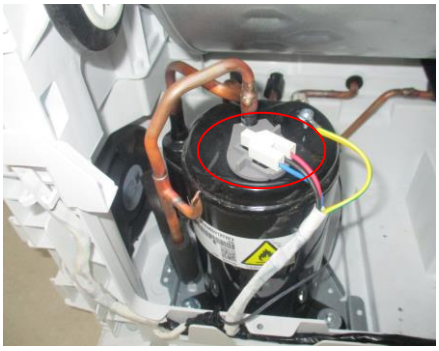
# 3 Disassembling Ways of Main Parts

| 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. |  |

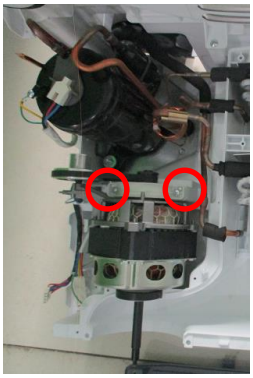
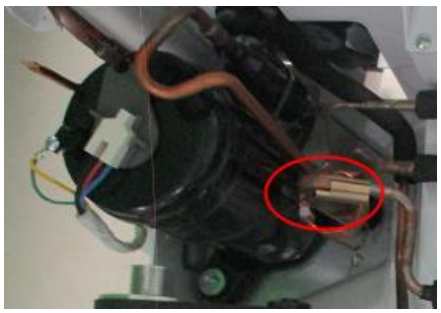
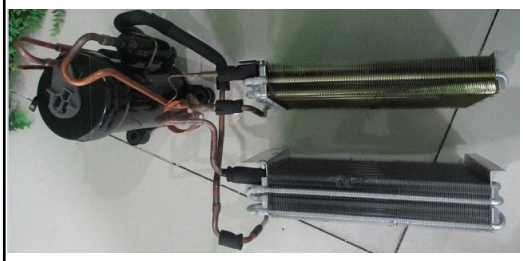
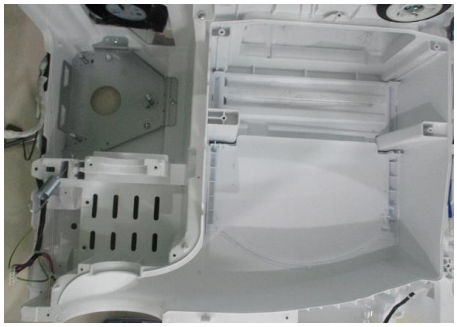
# 3 Disassembling Ways of Main Parts

| ITEM | PICTURE |
| --- | --- |
| Unscrew 6 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. |  |

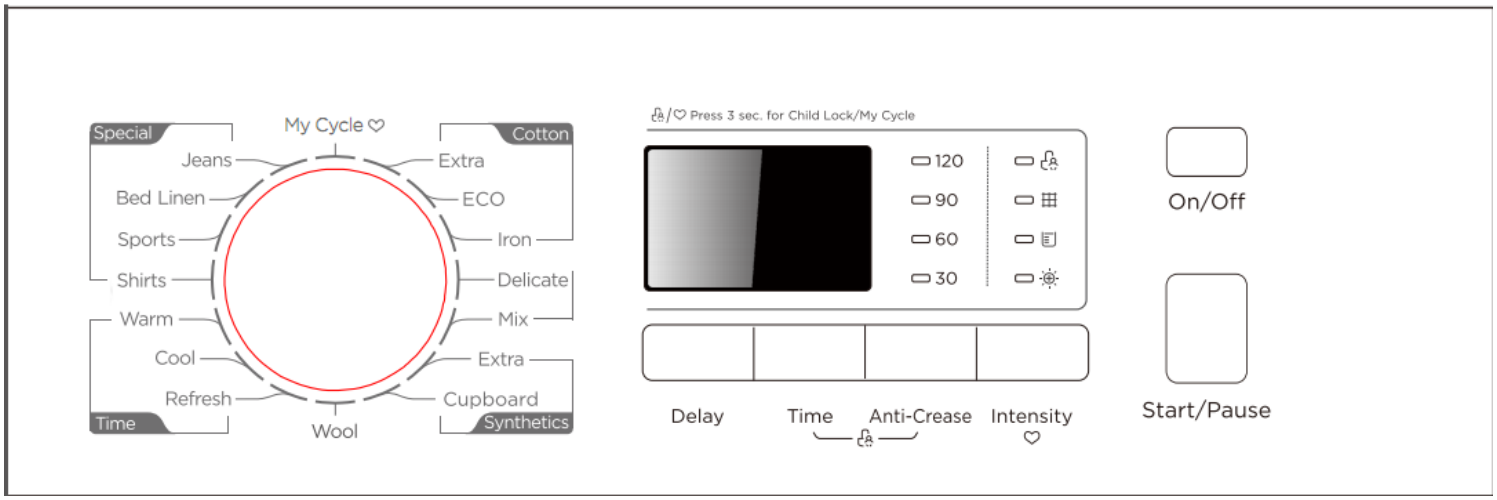
# 3 Disassembling Ways of Main Parts

| ITEM | PICTURE |
|---|---|
| Pull out all the connections of the filter and control box. |   |
| A: connection of the tub lamp<br>B: connection of the cooling fan<br>C: connection of the humidity sensor<br>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 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 |  |
| 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. |   |

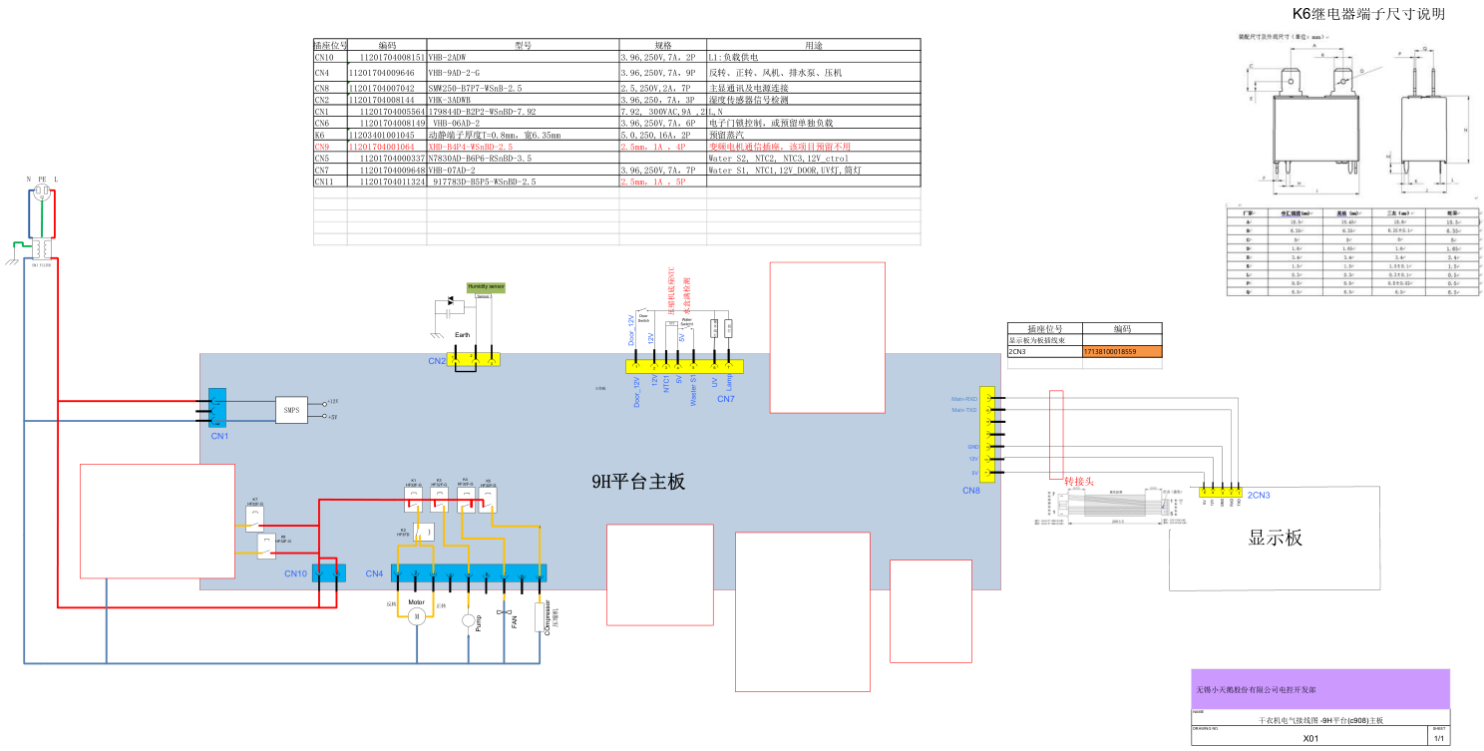
# 4 MALFUNCTIONS CODES AND EXPLANATIONS



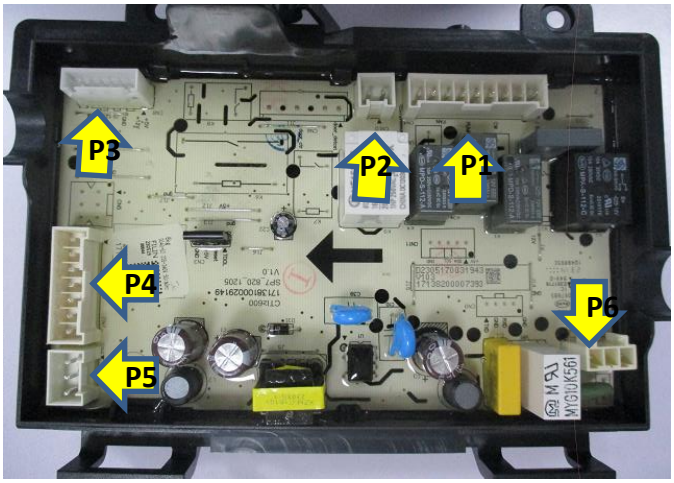

| Display | Reason | Solutions |
|---|---|---|
| "E33" | Temperature sensor error | Please contact your local service center if the problem occurs. |
| "E82" | PCB communication error | |

## 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 |

# Contents

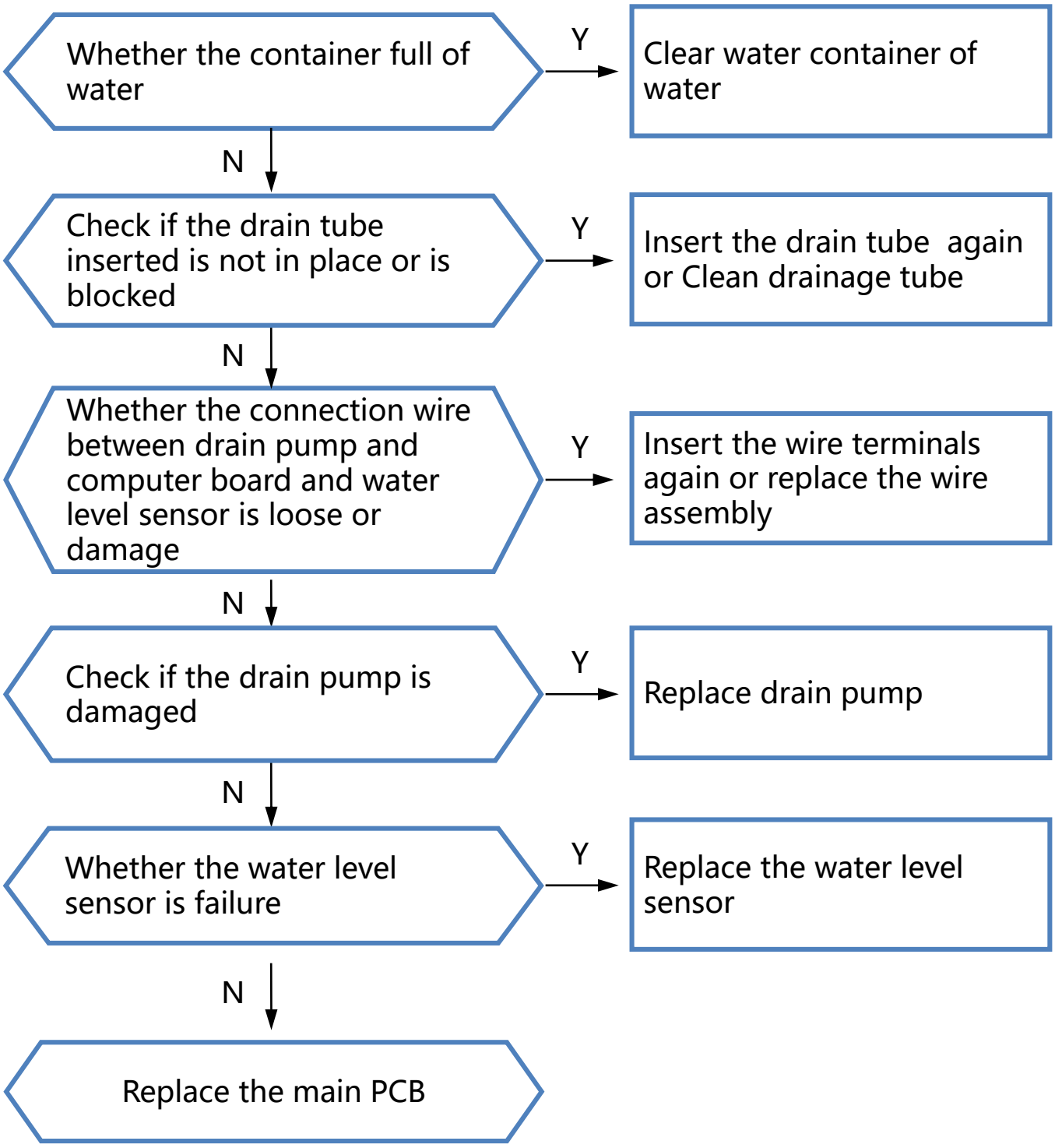
# E20

- Define: Container full problem during working.
- Reasons: The root reason is that the container remains full within 2 minutes.

| Malfunction code | Root Reason | Possible cause |
|---|---|---|
| E20 | The container remains full within 2 minutes. | Container is full |
| | | The drain tube inserted is not in place or is blocked |
| | | Drain pump failure |
| | | Water level sensor failure |
| | | Main PCB failure |

# E20

➢ Check Procedure:



# E20

➢ Check Procedure:

**Step 1** Check the water container

① Check the water container and clean out it. (Fig.1) & (Fig.2)

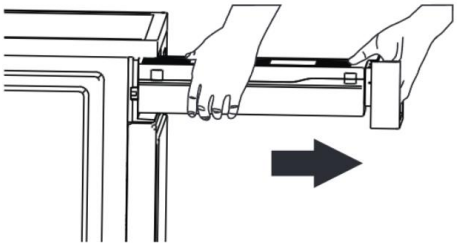


Fig.1

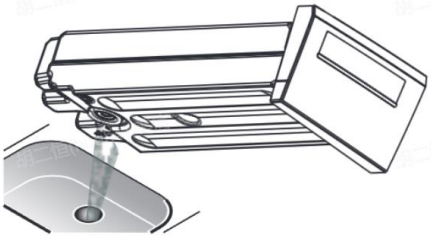


Fig.2

**Step 2** Check the drainage tube

① Remove the screws on the protective cover and take off the protective cover. (Fig.3)
② Check if the drainage tube is in place. (Fig.4)
③ If the drainage tube is in the correct position, please remove the drainage tube to check if it is blocked, and clean it (Fig.5)

Fig.3

Fig.4

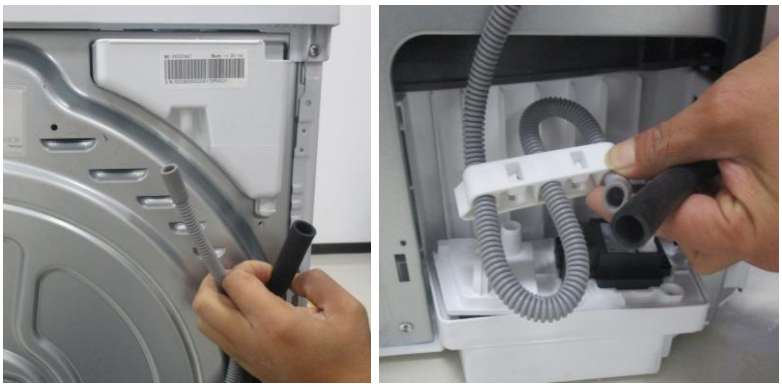


Fig.5

# E20

➢ Check Procedure:

**Step 3** Check the connection drain pump and computer board and water level sensor wire

① Disassemble the 2 screws of the top cover plate. (Fig.6)
② Push back the top cover plate 15mm until it leave away from the control panel and then take it down. (Fig.7)
③ Remove and insert the wire terminals for the PCB and drain pump and water level sensor connections (Fig.8) (Fig.9)
④ If the problem can' t be solved, please check if the wire terminals are damaged.
⑤ If the wire terminals not well, please replace the wire terminals .

Fig.6

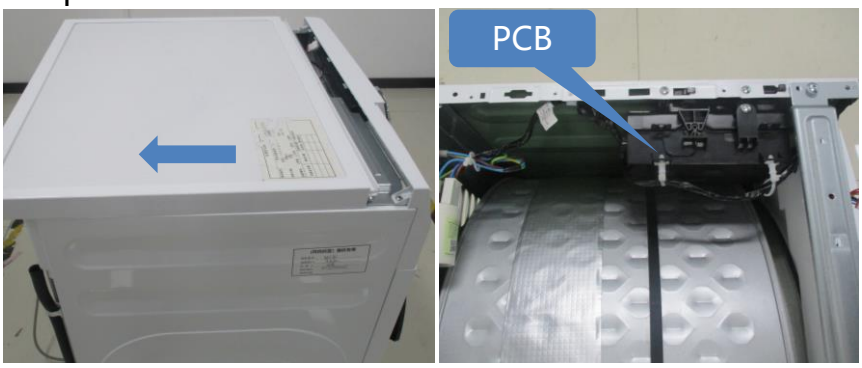



Fig.7

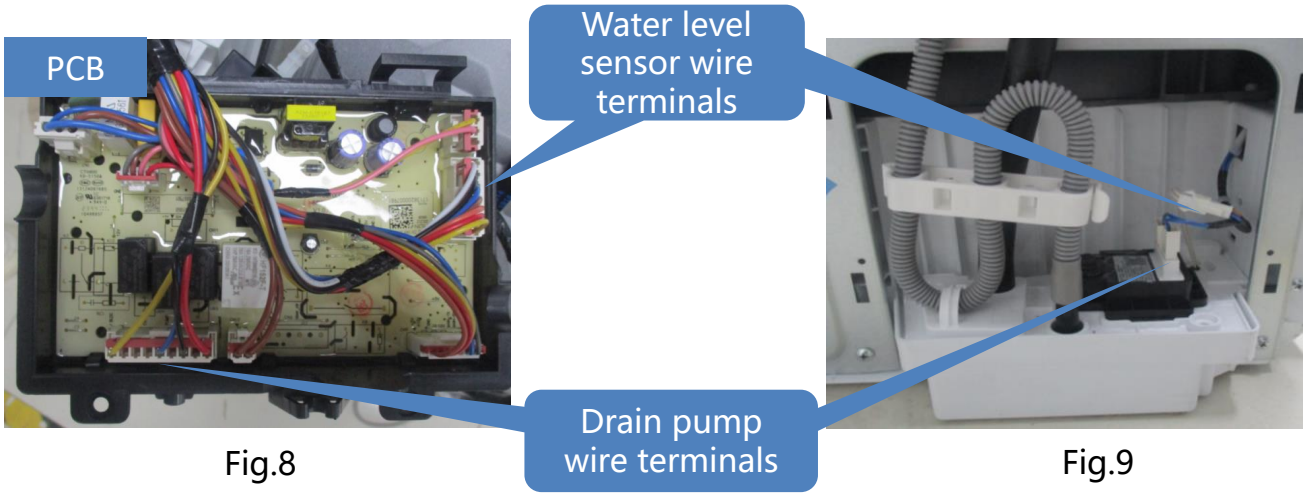



Fig.8 Fig.9

**Step 4** Check the drain pump

① Use a multimeter for testing, when the measurement values of Haoli Company is 1028× (1 ± 10%) Ω (20 ℃)and the measurement values of Yinqiu Company is 297× (1 ± 10%) Ω (20 ℃), it is considered qualified. (Fig.10)
② If the drain pump not well, replace it .

Fig.10

# E20

➢ Check Procedure:

**Step 5** Check the water level sensor

① Check if all components of the water level sensor are functioning properly.
② Use a multimeter for testing. When the float is at the bottom, it shows an open circuit. When you push the float upwards with your hand and it shows a closed circuit, it is considered qualified.
③ If the water level sensor not well , please replace the water level sensor. (Fig.11)

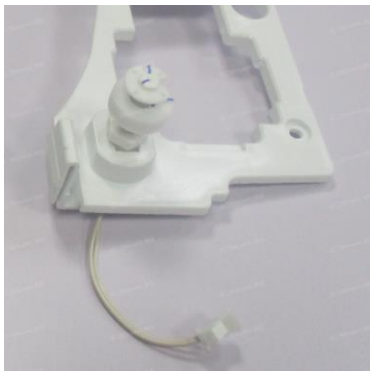


Fig.11

**Step 6** Replace the main PCB

① If all the above checks are normal, please replace the PCB. (Fig.12)

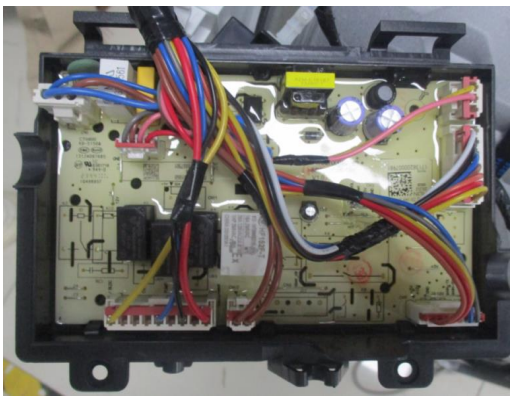


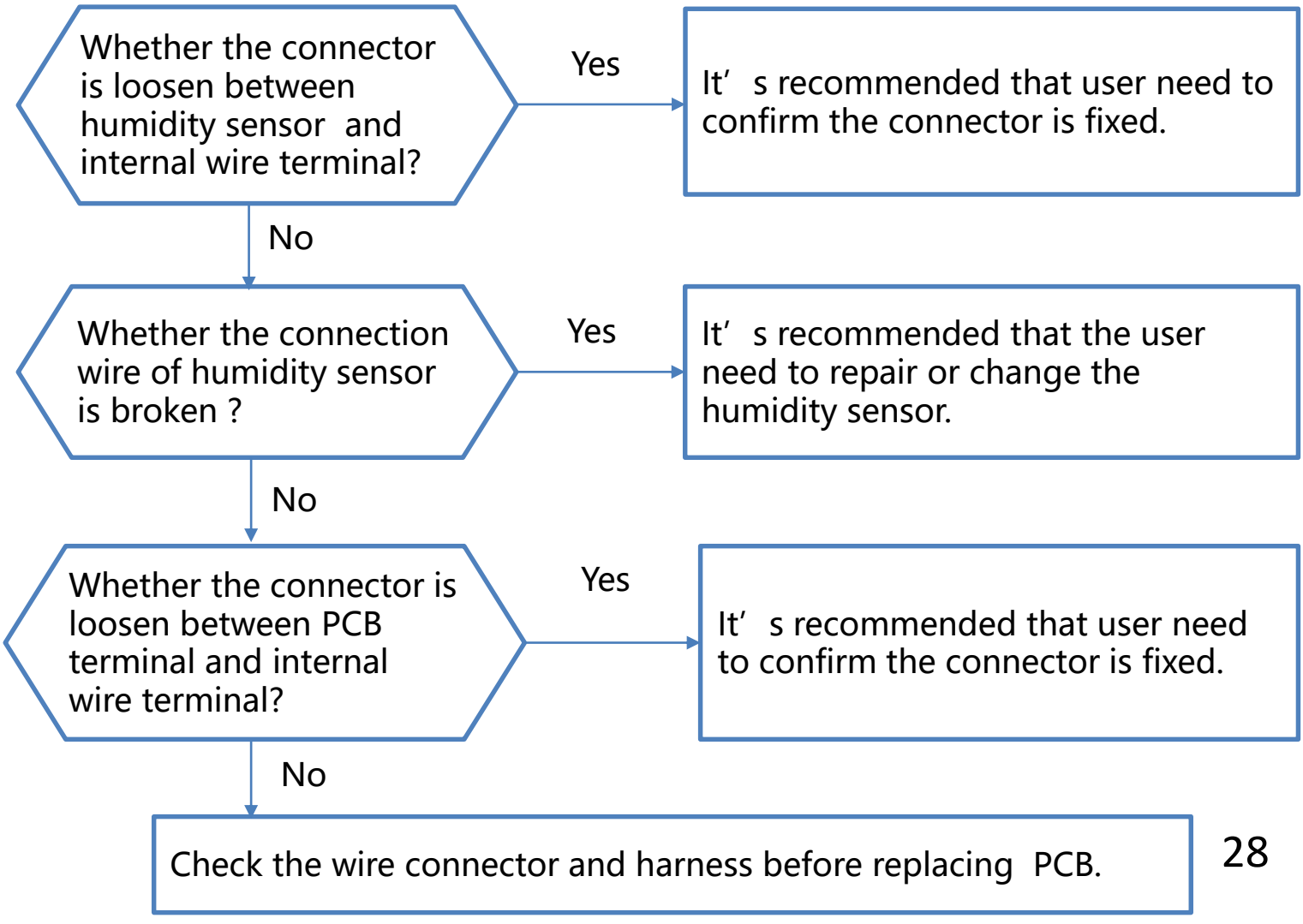
Fig.12

# E32

- Define: Humidity sensor problem during drying.
- Reason: If the dryer machine detects that the frequency of the humidity sensor is not within the normal range for 1minute continuously, it will record an alert. When the drying program is complete, it will give an alarm.

| Malfunction code | Root Reason | Possible cause |
|---|---|---|
| E32 | If the dryer machine detects that the frequency of the humidity sensor is not within the normal range for 1minute continuously, it will record an alert. When the drying program is complete, it will give an alarm. | The wire connector loose between humidity sensor and internal wire terminal |
| | | The humidity sensor connection wire broken |
| | | The wire connector loose between PCB terminal and internal wire terminal |

- Check Procedure:



# E32

➢ Check Procedure:

**Step 1** Check the wire connector of humidity sensor

① If the connector is loosen between humidity sensor and internal wire terminal the E32 warning will occur on the power. It' s recommended that user need to confirm the connector is fixed. (Fig.1)

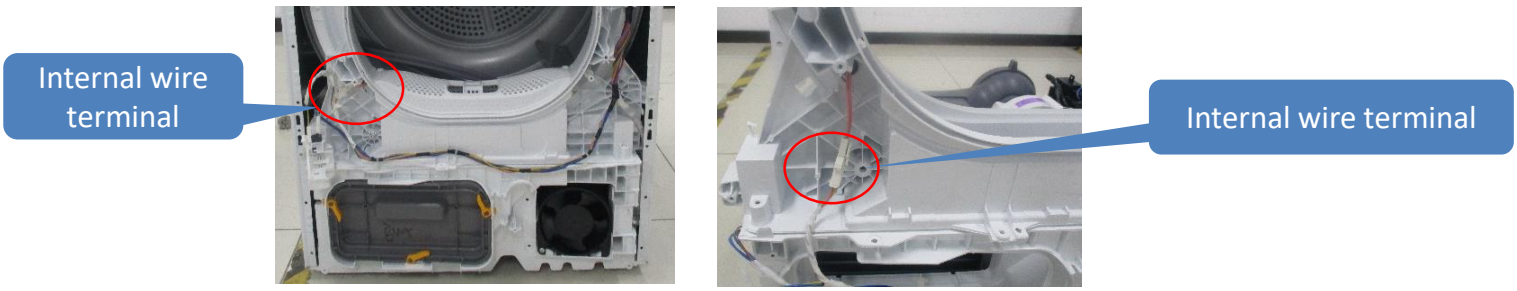



Fig.1

**Step 2** Check the connection wire of humidity sensor

① If the connection wire of humidity sensor is broken, the E32 warning will occur on the power. It' s recommended that user need to repair or change the NTC. (Fig.2)

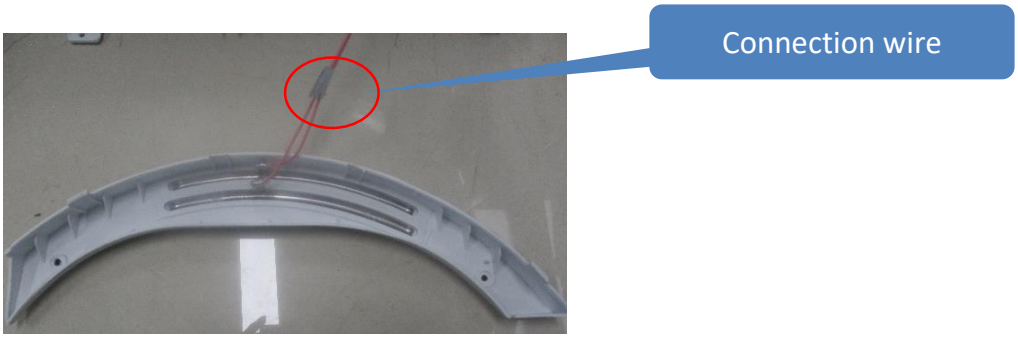



Fig.2

**Step 3** The wire connector loose between PCB terminal and internal wire terminal

① If the connector is loosen between PCB terminal and internal wire terminal the E32 warning will occur on the power. It' s recommended that user need to confirm the connector is fixed.(Fig.3)

② If all inspections are completed, it is suspected that the computer board is damaged. It' s recommended that the user need to repair or change the humidity sensor .

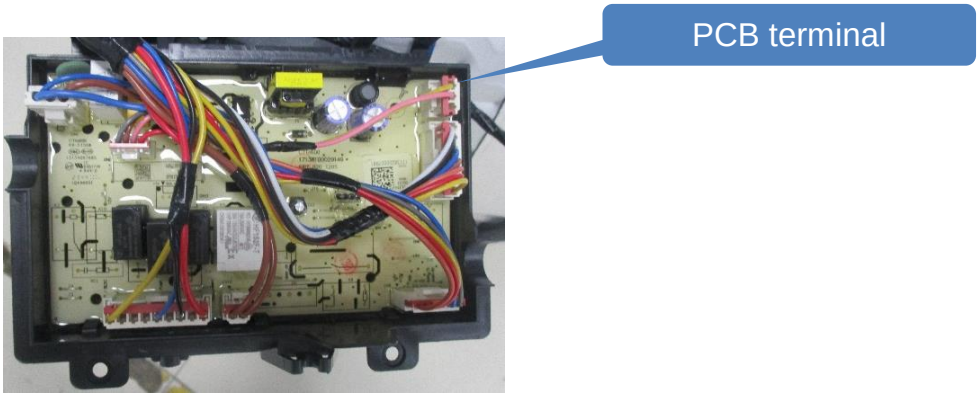


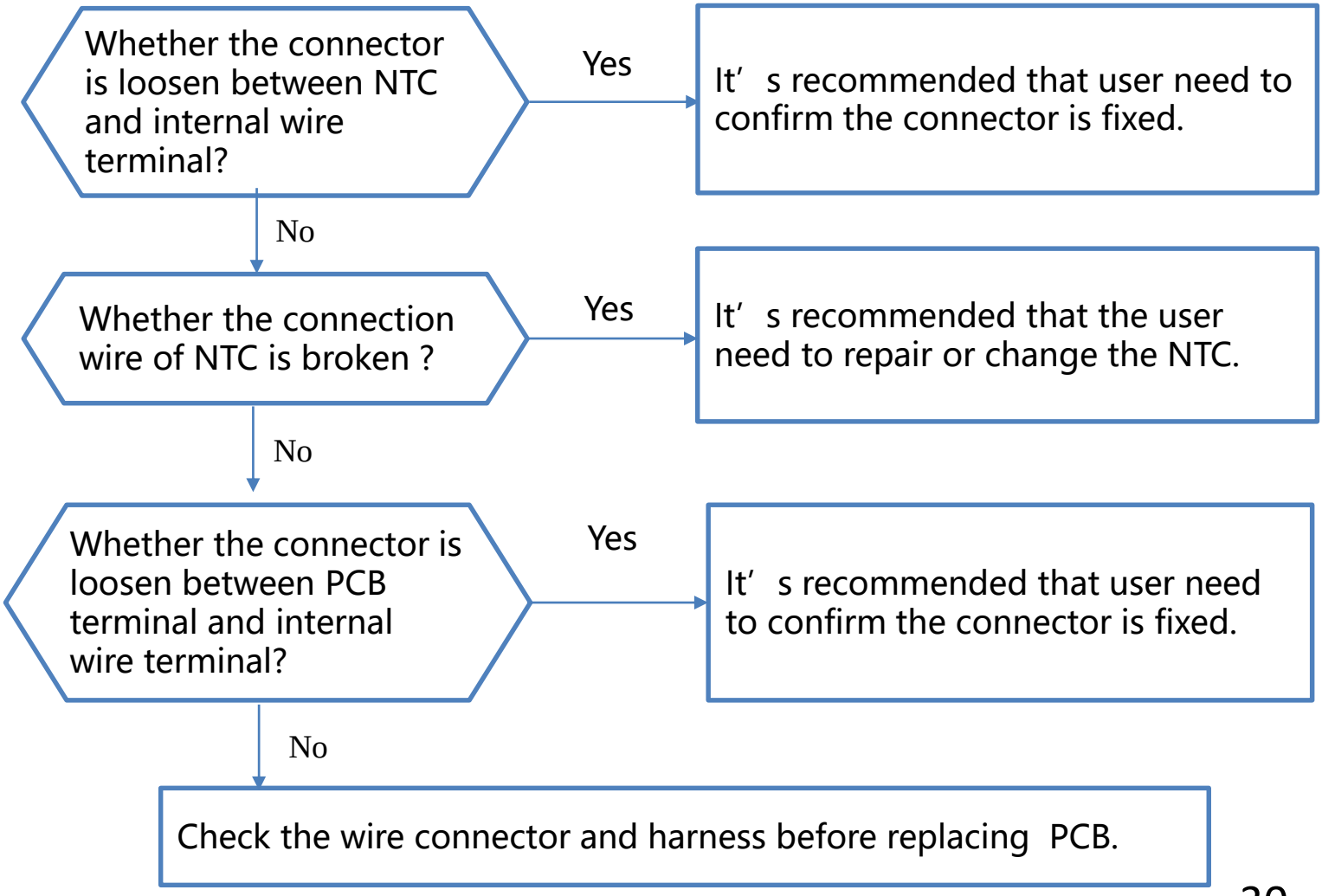

Fig.3

# E33

- Define: NTC (Negative Temperature Coefficient) problem during drying.
- Reasons: If the dryer machine detects that the AD value of NTC is not within the normal range for 2 seconds, it will give an alarm.

| Malfunction code | Root Reason | Possible cause |
|---|---|---|
| E33 | If the dryer machine detects that the AD value of NTC is not within the normal range for 2 seconds, it will give an alarm. | The wire connector loose between NTC and internal wire terminal |
| | | The NTC connection wire broken |
| | | The wire connector loose between PCB terminal and internal wire terminal |

- Check Procedure:



# E33

## ➢ Check Procedure:

**Step 1** Check the wire connector of NTC

① If the connector is loosen between NTC and internal wire terminal the E33 warning will occur on the power. It' s recommended that user need to confirm the connector is fixed. (Fig.1)


Fig.1

**Step 2** Check the connection wire of NTC

① If the connection wire of NTC is broken the E33 warning will occur on the power. It' s recommended that user need to repair or change the NTC. (Fig.2)

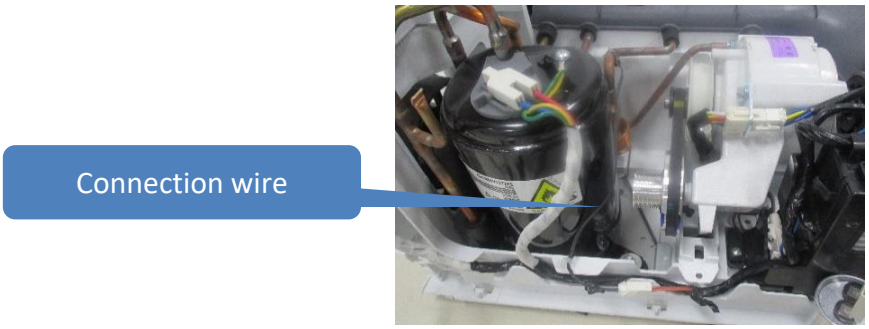



Fig.2

**Step 3** The wire connector loose between PCB terminal and internal wire terminal

① If the connector is loosen between PCB terminal and internal wire terminal the E33 warning will occur on the power. It' s recommended that user need to confirm the connector is fixed.(Fig.3)

② If all inspections are completed, it is suspected that the computer board is damaged. It' s recommended that the user need to repair or change the water level sensor.

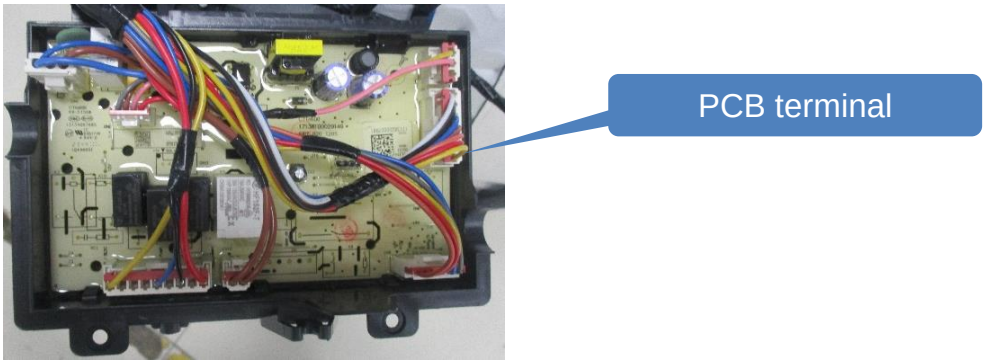



Fig.3

# E50

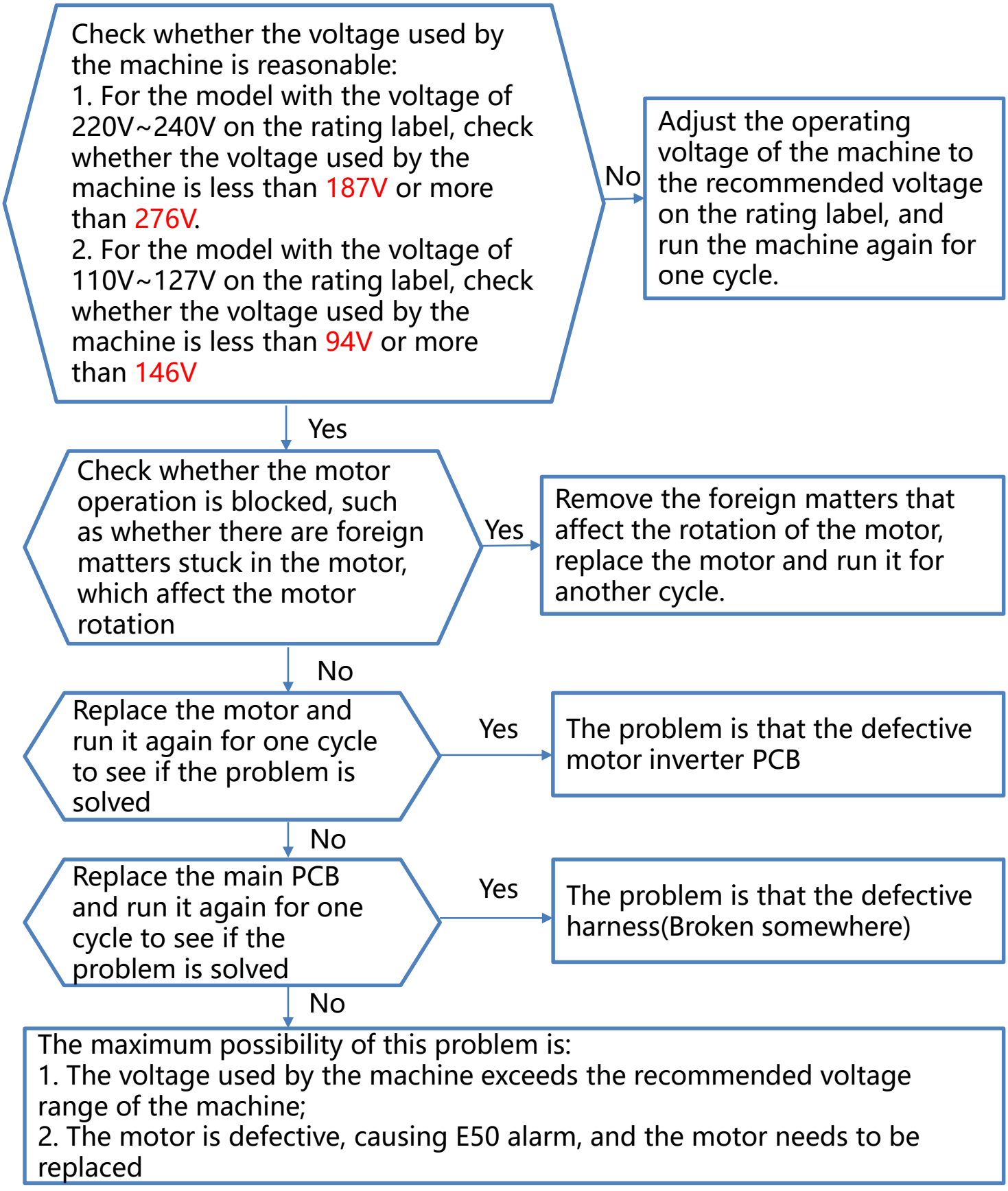
- Define: Motor inverter PCB detects abnormal signals and show the error
- Reasons: Motor inverter PCB detects abnormal signals and show the error. It is mainly divided into the following four categories, each of which has detailed adverse causes.

(a) : The external voltage is abnormal, which causes the motor inverter PCB to judge that the voltage is too high or too low
(b) : The motor inverter PCB is overloaded ->It may be that the motor rotation is blocked, causing the motor inverter PCB to overload
(c) : The motor inverter PCB is damaged, causing the motor inverter PCB to detect excessive current or abnormal IPM temperature sampling.
(d) : The motor inverter PCB is abnormal due to the main PCB issue. There are the following situations: 1) The motor speed signal cannot be detected; 2) Due to the abnormality of the main PCB, the temperature of the motor inverter PCB is abnormal, and the motor temperature is misjudged to be too high; 3) The motor inverter read the information (Flash) incorrectly due to the defective motor inverter PCB.

| Malfunction code | Root Reason | Possible cause |
|---|---|---|
| E50 | Motor inverter PCB detects abnormal signals and show the error | The external voltage is abnormal, which causes the motor inverter PCB to judge that the voltage is too high or too low |
| | | The motor inverter PCB is overloaded ->It may be that the motor rotation is blocked, causing the motor inverter PCB to overload |
| | | The motor inverter PCB is damaged, causing the motor inverter PCB to detect excessive current or abnormal IPM temperature sampling. |
| | | The motor inverter PCB is abnormal due to the main PCB issue. There are the following situations: 1) The motor speed signal cannot be detected; 2) Due to the abnormality of the main PCB, the temperature of the motor inverter PCB is abnormal, and the motor temperature is misjudged to be too high; 3) The motor inverter read the information (Flash) incorrectly due to the defective motor inverter PCB. |

# E50

➢ Check Procedure:



# E50

➢ Check Procedure:

**Step 1** Check whether the voltage used by the machine is reasonable:

1. For the model with the voltage of 220V~240V on the rating label, check whether the voltage used by the machine is less than 187V or more than 276V.
2. For the model with the voltage of 110V~127V on the rating label, check whether the voltage used by the machine is less than 94V or more than 146V

① Use a multimeter to measure the voltage of the socket (Fig.1)

② 1) For the model with the voltage of 220V~240V on the rating label, check whether the voltage used by the machine is less than 187V or more than 276V.

2) For the model with the voltage of 110V~127V on the rating label, check whether the voltage used by the machine is less than 94V or more than 146V


Fig.1

**Step 2** Check whether the motor operation is blocked, such as whether there are foreign matters stuck in the motor, which affect the motor rotation

① Check whether the motor operation is blocked, such as whether there are foreign matters stuck in the motor, which affect the motor rotation. (Fig.2)

Fig.2

## ➢ Check Procedure:

**Step 3** Replace the motor and run it again for one cycle to see if the problem is solved

① Remove the Belt and spring. (Fig.3)
② Disassemble 9 screws on the cover plates and 2 screws on the motor. (Fig.4)
③ Replace the motor.

Fig.3

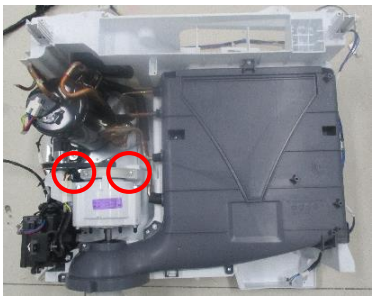


Fig.4

**Step 4** Replace the main PCB and check whether the problem can be solved

① Remove the 3 screws of side plate and replace the main PCB . (Fig.5)

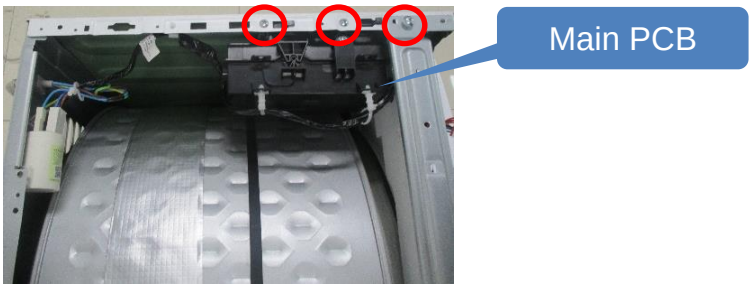



Fig.5

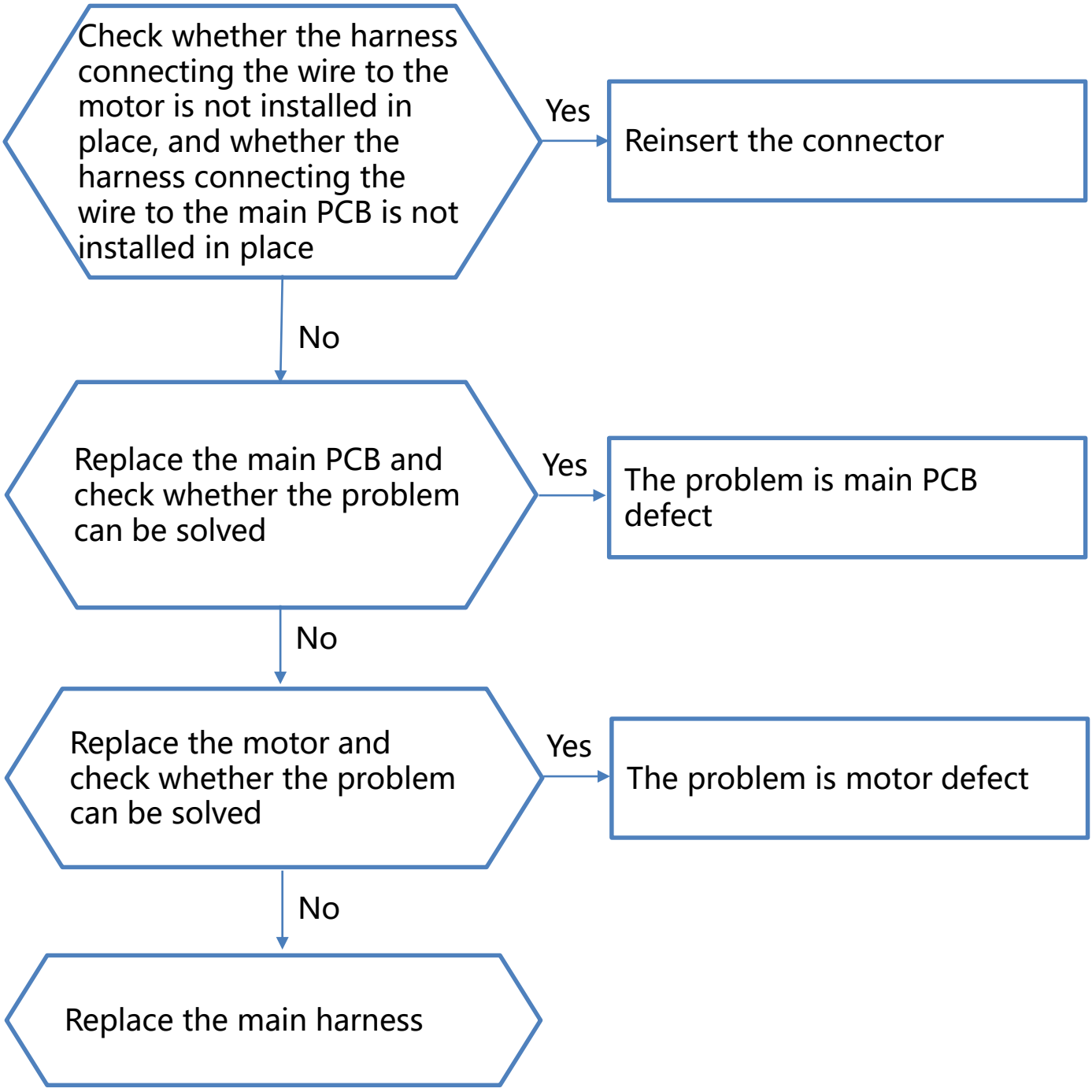
# E64

- Define: Communication error between control board and motor inverter
- Reasons: Poor communication between main PCB board and motor inverter PCB.

| Malfunction code | Root Reason | Possible cause |
|---|---|---|
| E64 | Poor communication between main PCB board and motor inverter PCB | Harness in connecting wire and motor is not installed in place, or harness in connecting wire and main PCB is not installed in place |
| | | The main PCB is damaged |
| | | The motor inverter is damaged |
| | | Broken main harness (wires connecting main PCB and motor inverter) |

# E64

➢ Check Procedure:



# E64

➢ Check Procedure:

**Step 1** Check whether the harness connecting the wire to the motor is installed in place, and whether the harness connecting the wire to the main PCB is installed in place

① Disassemble the 2 screws of the top cover plate. (Fig.1)
② Push back the top cover plate 15mm until it leave away from the control panel and then take it down.(Fig.2)
③ Check whether the harness connecting the wire to the main PCB is installed in place.(Fig.3)
④ Remove the screws and show the motor.
⑤ Check whether the harness connecting the wire to the motor is installed in place.(Fig.4)

Fig.1

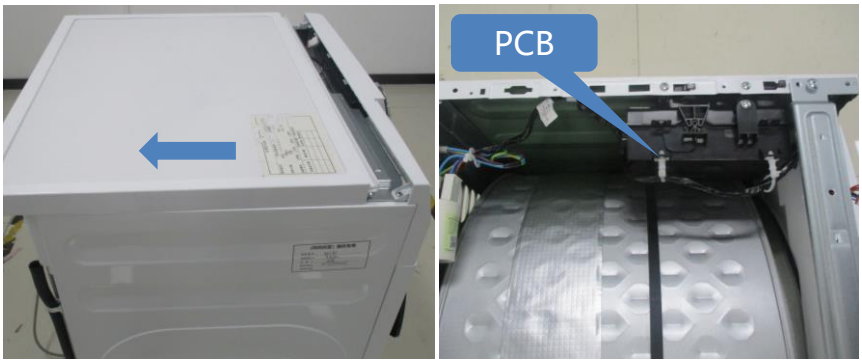



Fig.2

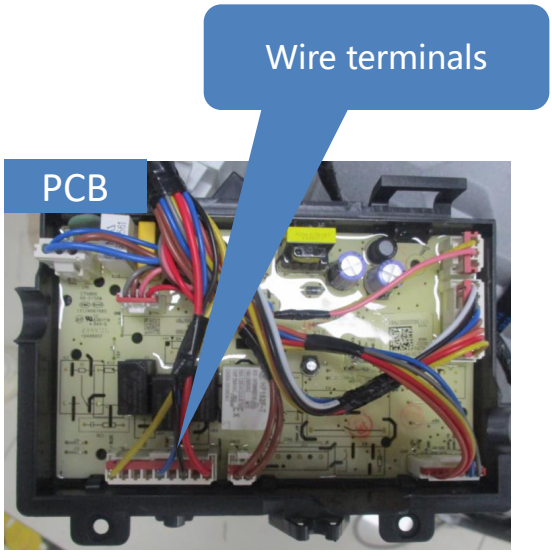



Fig.3

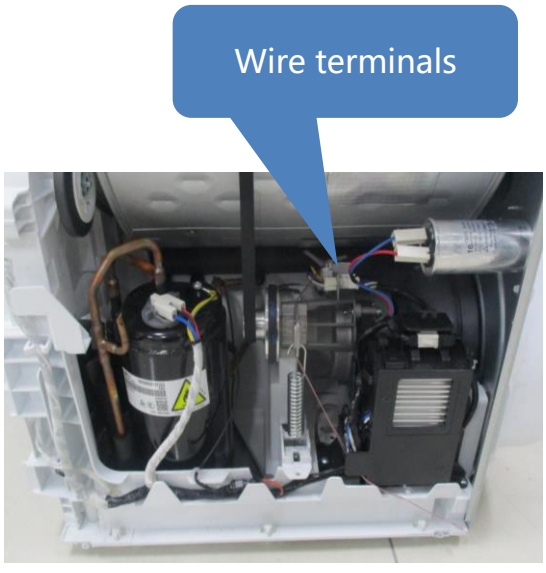



Fig.4

## ➢ Check Procedure:

**Step 2** Replace the main PCB and check whether the problem can be solved

① Replace the main PCB. (Fig.5)

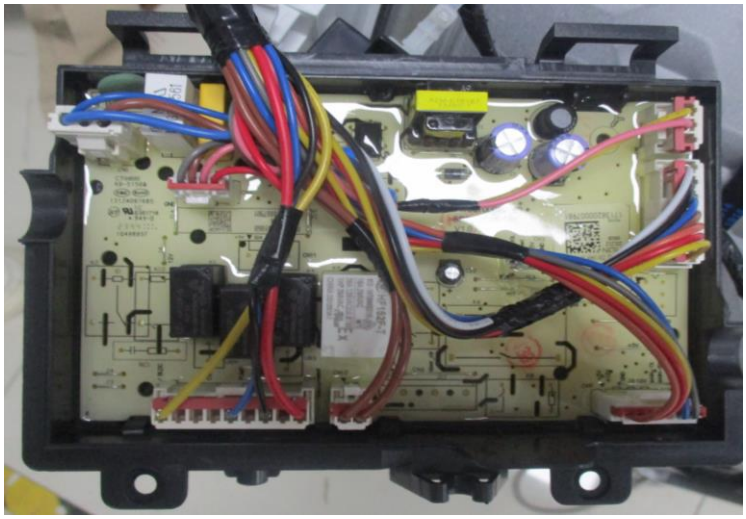


Fig.5

**Step 3** Replace the motor and check whether the problem can be solved

① Remove the Belt and spring. (Fig.6)
② Disassemble 9 screws on the cover plates and 2 screws on the motor.(Fig.7)
③ Replace the motor.

Fig.6

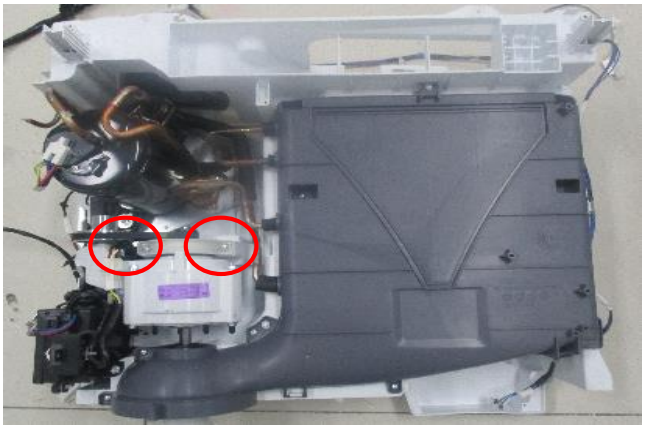


Fig.7

# E64

➢ Check Procedure:

**Step 4** Replace the main harness

① Replace the main harness. (Fig.8)

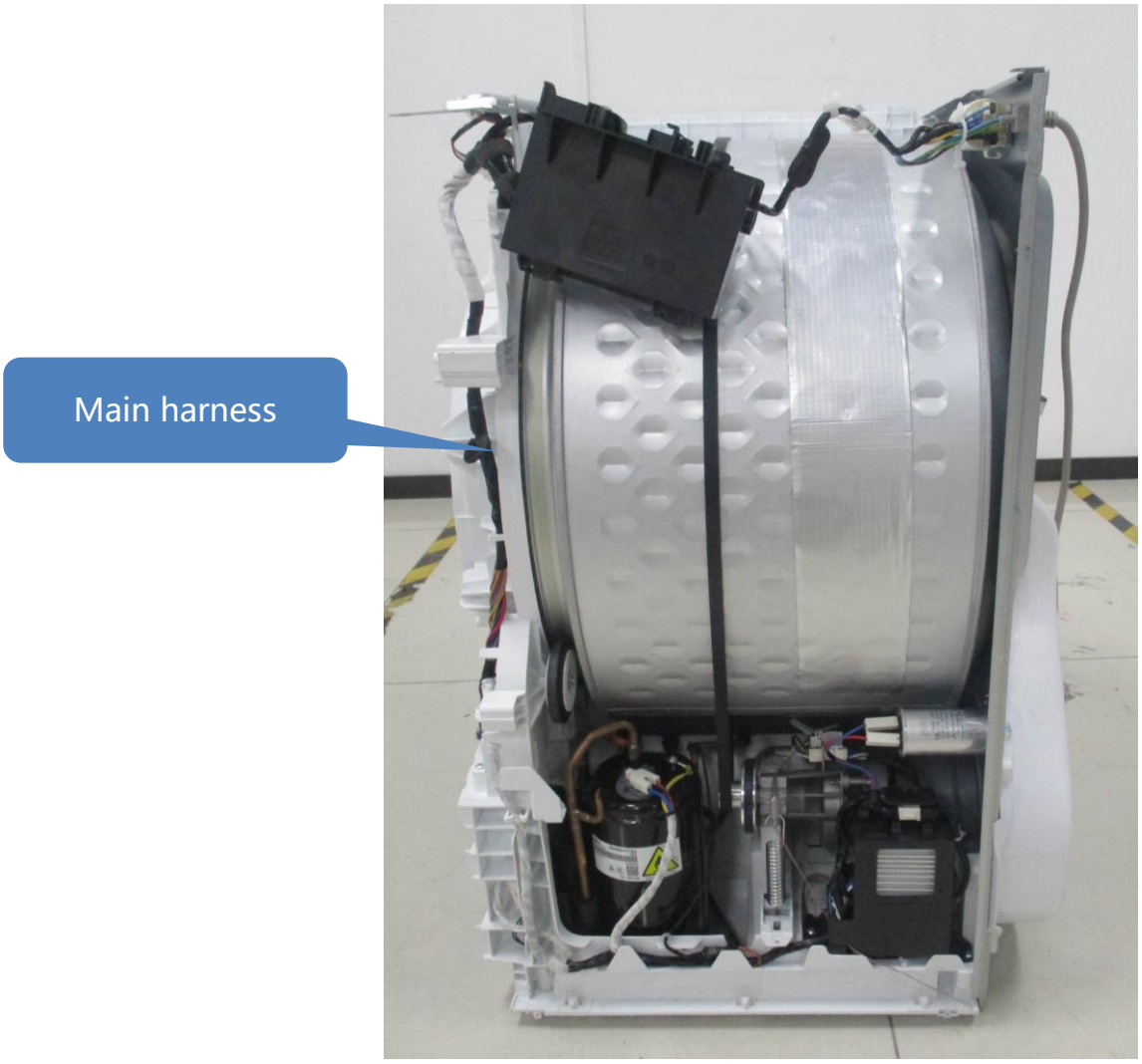


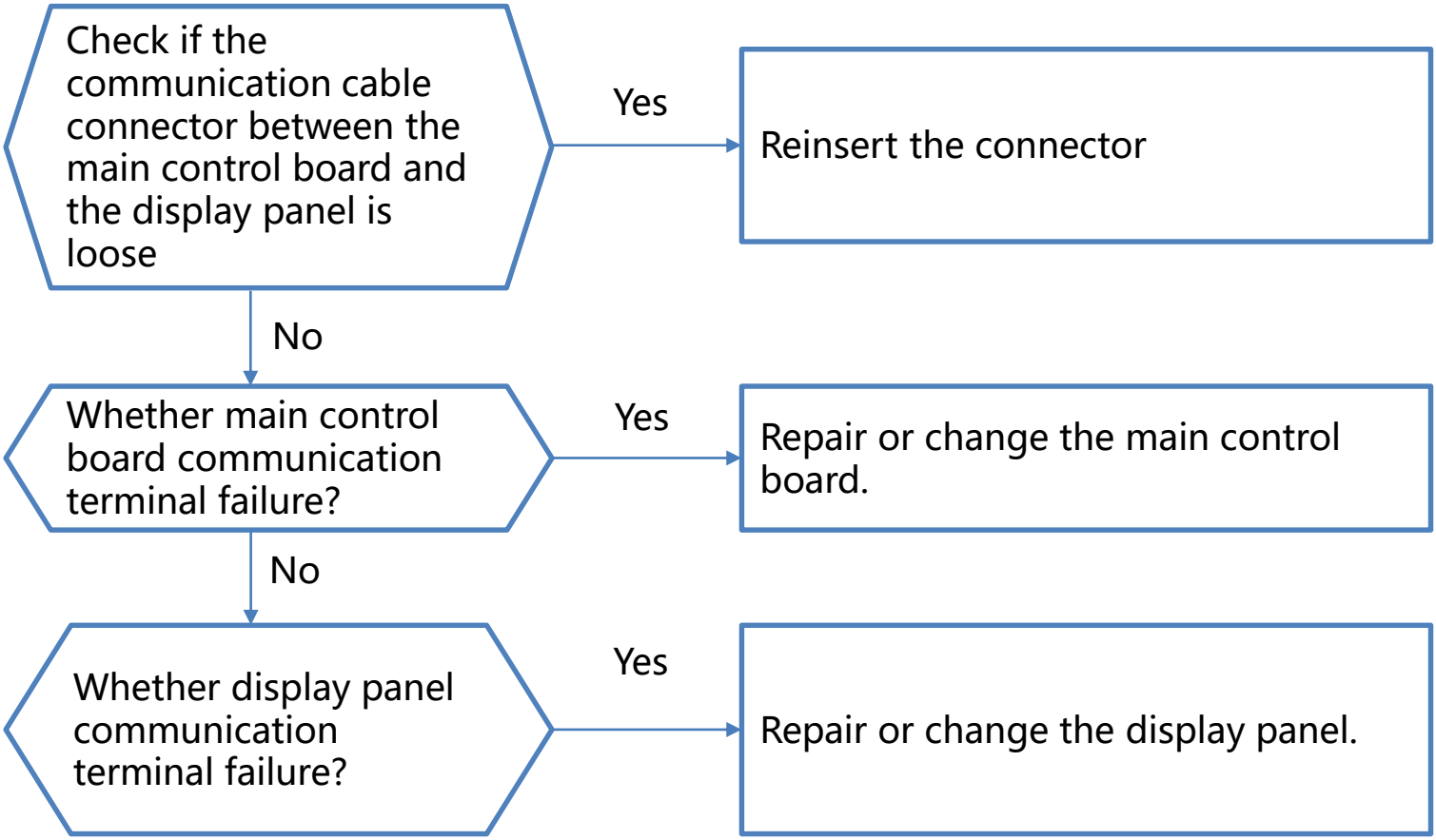

Fig.8

# E82

- Define: Main control board and display panel communication error.
- Reasons: In user mode, if the ping driver remains unresponsive for 3 minutes, an alarm will be displayed.

| Malfunction code | Root Reason | Possible cause |
|---|---|---|
| E82 | There is no communication between main control board and display panel | The communicate cable connector failure between main control board and display panel |
| | | Main control board communication terminal failure |
| | | Display panel communication terminal failure |

- Check Procedure:



# E82

➢ Check Procedure:

**Step 1** Check the connector between main control board and display panel

① If the communication cable connector is loosen the E82 warning will occur when the dryer machine is running. It' s recommended that user need to confirm the communication cable connector is fixed. (Fig.1)

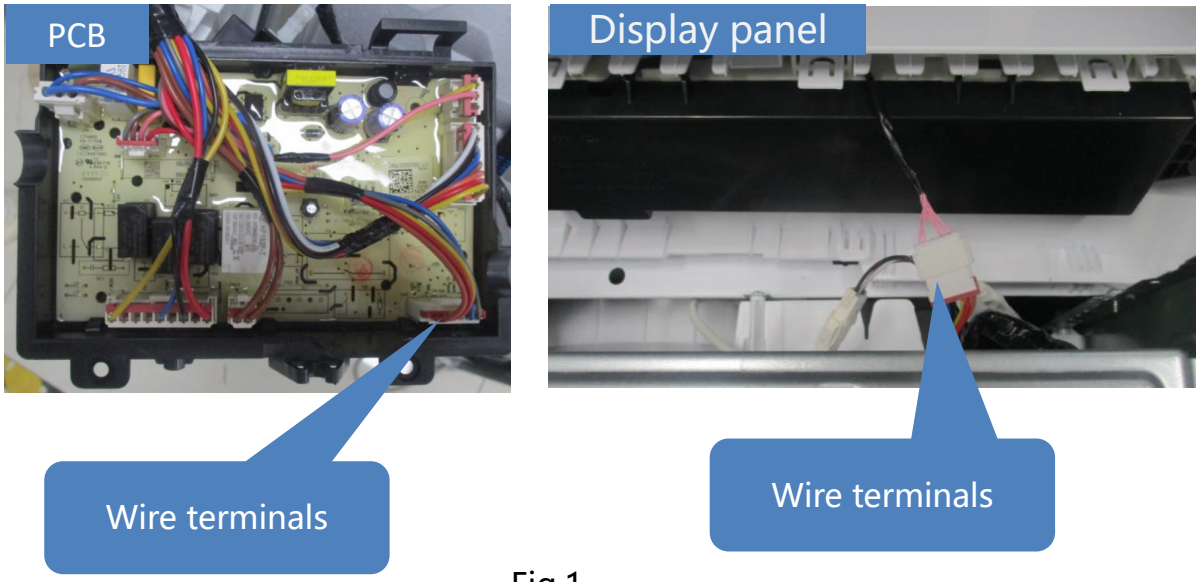



Fig.1

**Step 2** Check the main control board communication terminal

① Check whether the main control board communication terminal is damaged, if it' s damaged the E82 warning will occur . It' s recommended that the user need to repair or change the main control board. (Fig.2)

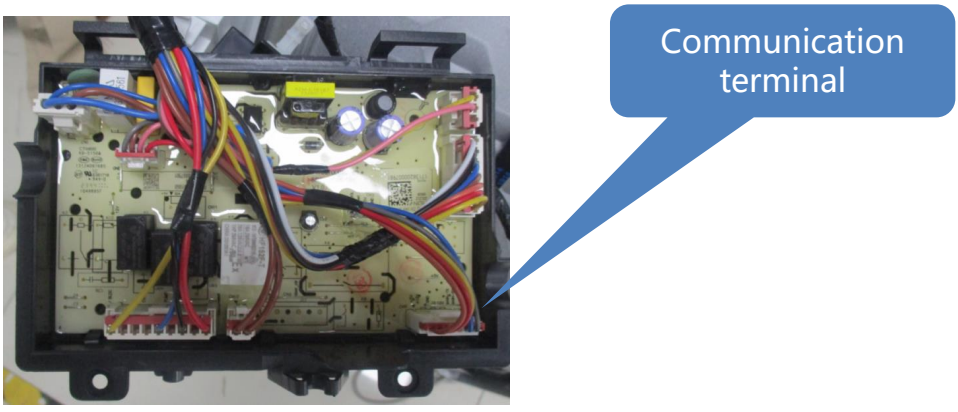



Fig.2

# E82

➢ Check Procedure:

**Step 3** Check the display panel communication terminal

① Check whether the display panel communication terminal is damaged, if it' s damaged the E82 warning will occur . It' s recommended that the user need to repair or change the display panel.(Fig.3)

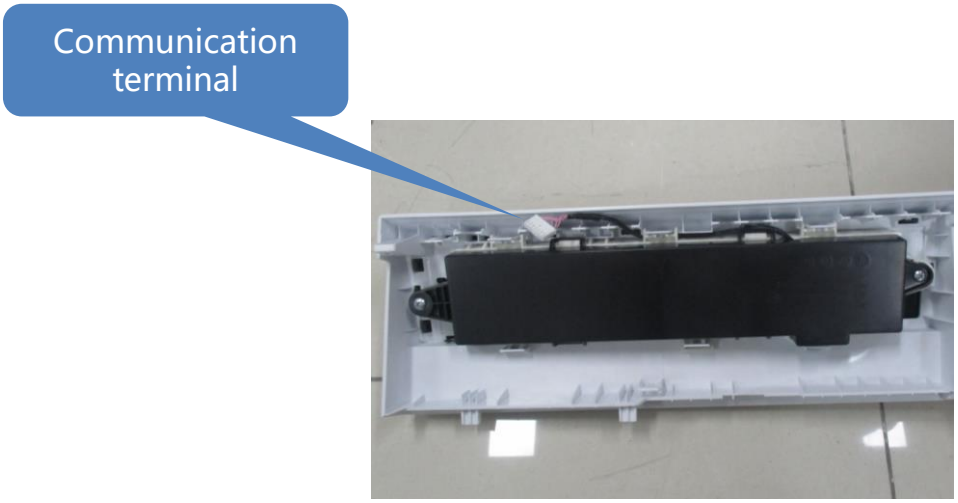



Fig.3

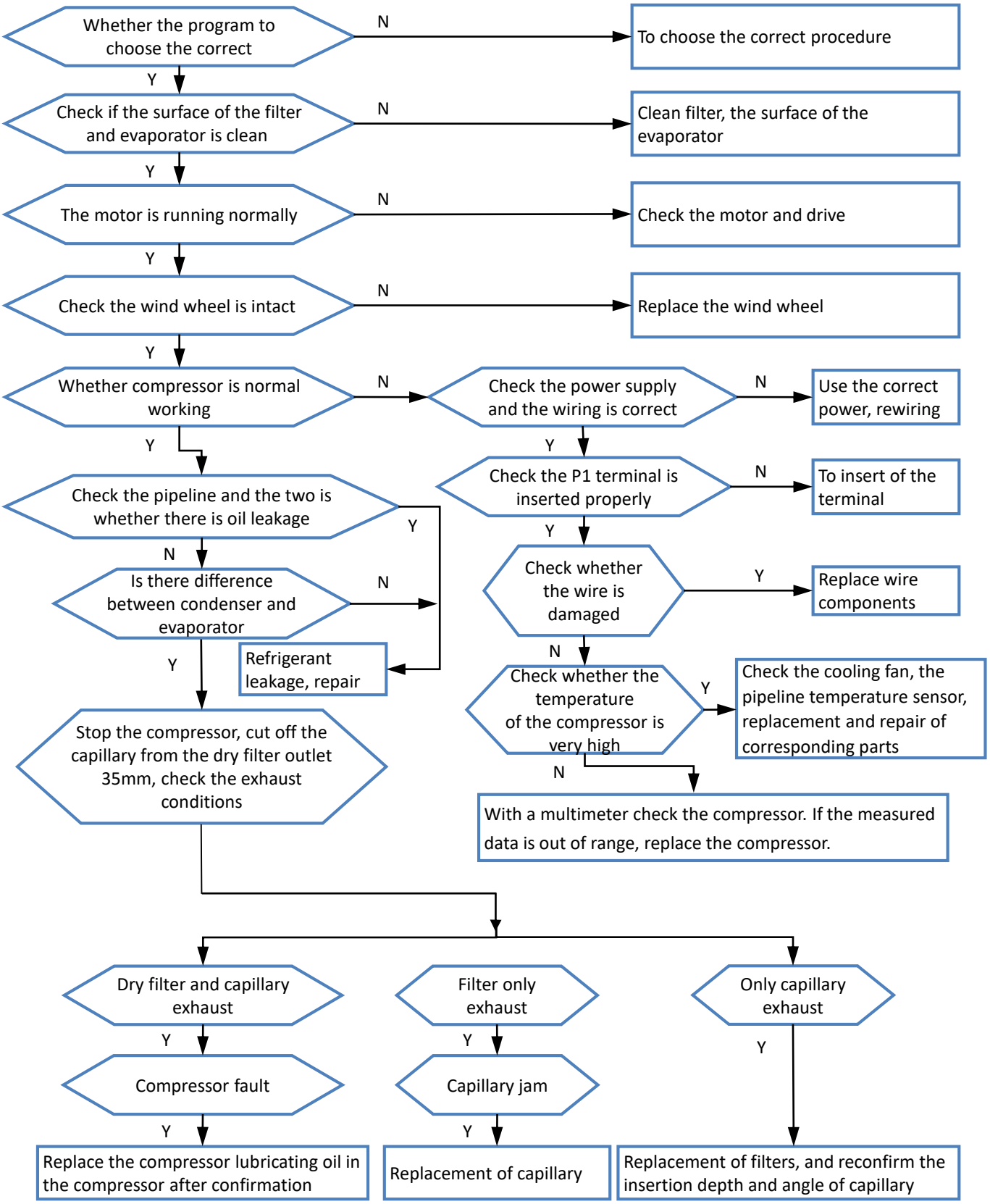
# UNABLE TO DRY

- Define : After the drying program is completed, the clothes are not dry.

| Malfunction code | Possible cause |
|---|---|
| Unable to dry | The drying program selection is wrong |
| | The filter and the evaporator surface is clogged |
| | The motor is running abnormally |
| | The wind wheel is abnormally |
| | Abnormal operation of compressor |
| | The problem of condenser and evaporator |

# UNABLE TO DRY

➢ Check Procedure:



# Unable to dry

➢ Check Procedure:

**Step 1** Check if the program selection is correct

① Choose the appropriate program based on the clothing.

**Step 2** Check the surface of the filter and evaporator

① Open the door and take out the filter. (Fig.1)
② Open the filter and remove the fluff on the filter. (Fig.2)
③ Clean it in water and Dry the filter thoroughly before installing it back. (Fig.3)
④ Open the access panel, rotate the locking latch and remove the filter handle assembly. (Fig.4)
⑤ Use a soft-bristled brush to lightly sweep up and down along the direction of the fins to remove debris.

Fig.1

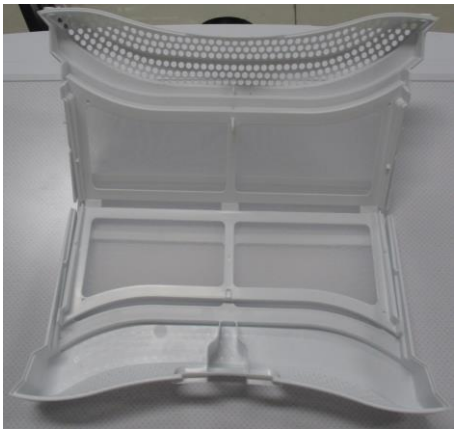


Fig.2

Fig.3

Fig.4

# Unable to dry

➢ Check Procedure:

**Step 3** Check the motor

① Take out the water container. (Fig.5)
② Disassemble the 2 screws of the top cover plate. (Fig.6)
③ Push back the top cover plate 15mm until it leave away from the control panel and then take it down. (Fig.7)
④ Remove the 2 screws that secure the top fixed horizontal rod, the 4 screws that secure the control panel, the 9 screws of the front door, and the 4 screws at the back of the side panel to remove the side panel and the front door. (Fig.8)
⑤ Unplug and reinsert the wiring terminals between the motor and the PCB, and test if the motor is running properly. (Fig.9)
⑥ Use a multimeter to test if the wiring harness connecting the motor and the PCB is functioning properly. (Fig.10)
⑦ Check whether the PCB and motor communication terminal is damaged, if it' s damaged , The motor will not be able to operate normally. It' s recommended to repair or change the PCB or motor.
⑧ If the motor communication terminal is ok, 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 ℃)
Nanyang: U~V： 14.0 × (1 ± 10%) Ω (20 ℃)； U~W： 14.0 × (1 ± 10%) Ω (20 ℃)； W~V：14.0 × (1 ± 10%) Ω (20 ℃);
If the measured data is out of range, replace the motor.

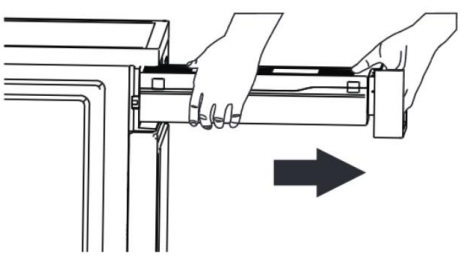


Fig.5

Fig.6

Fig.7

Fig.8

# Unable to dry

➢ Check Procedure:

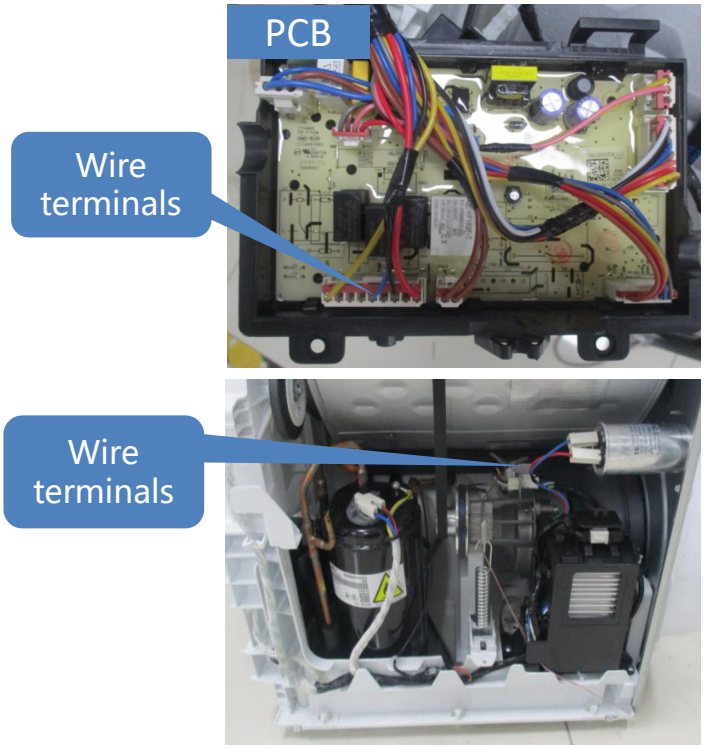



Fig.9

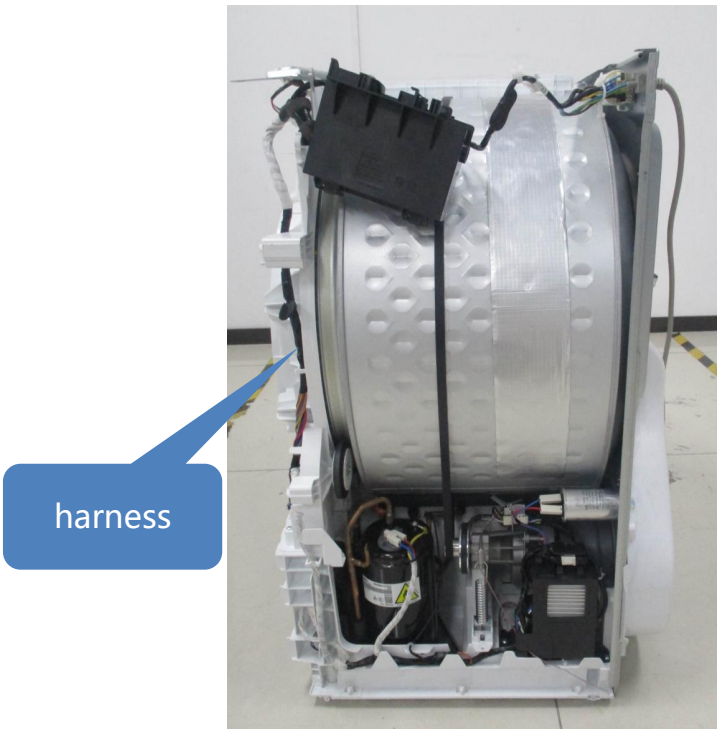



Fig.10

**Step 4** Check the wind turbine

① Check if the wind turbine is intact and functioning properly. if it’ s damaged, It’ s recommended to repair or change the wind turbine. (Fig.11)


Fig.11

# Unable to dry

➢ Check Procedure:

**Step 5** Check the compressor

① Check if the power supply and the wiring is correct. (Fig.12)
② Unplug and reinsert the wiring terminals between the compressor and the PCB, and test if the compressor is normal working. (Fig.13)
③ Check whether the compressor and PCB communication terminal is damaged, if it' s damaged , it' s recommended to repair or change it.
④ Use a multimeter to test if the wiring harness connecting the compressor and the PCB is functioning properly. (Fig.14)
⑤ Check the temperature of the compressor. If the temperature is very high, please Check the cooling fan and NTC, replacement and repair of corresponding parts. (Fig.15)
⑥ With a multimeter check the compressor, Coil Resistance (at 20℃): Main: 7.82±5% Ω , Aux: 8.05±5% Ω. If the measured data is out of range, replace the compressor.

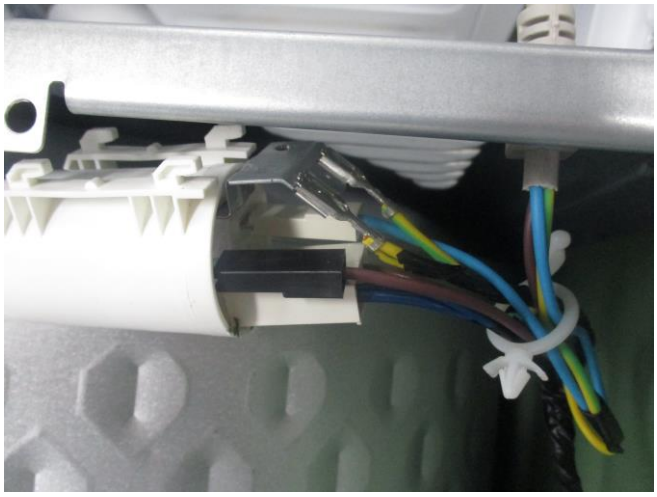


Fig.12

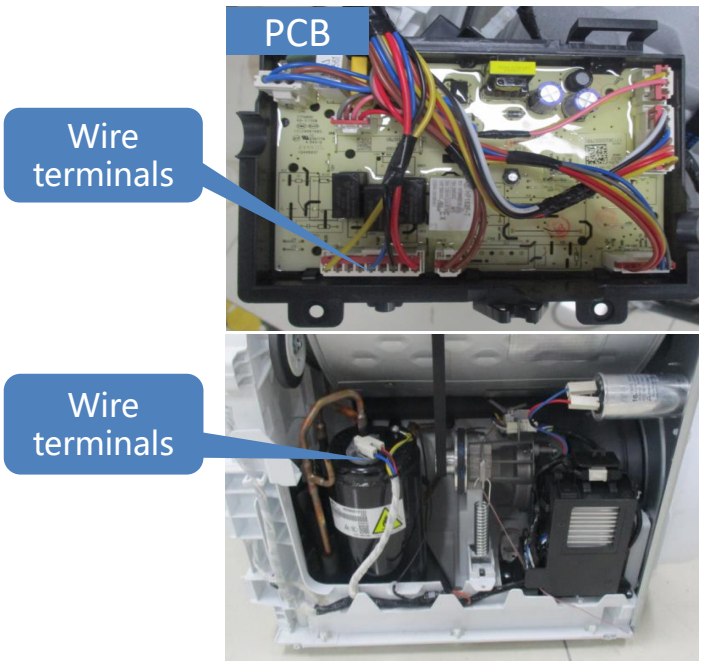



Fig.13

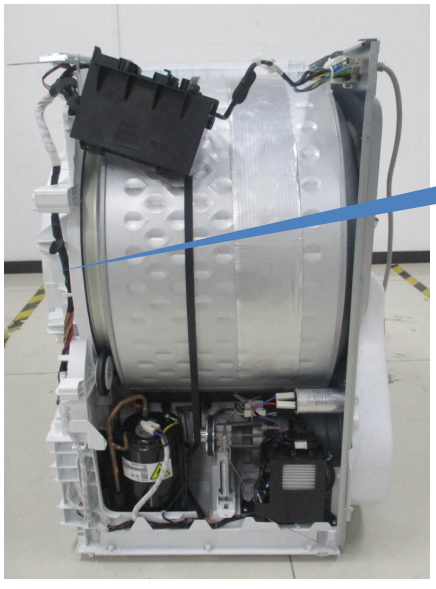



Fig.14

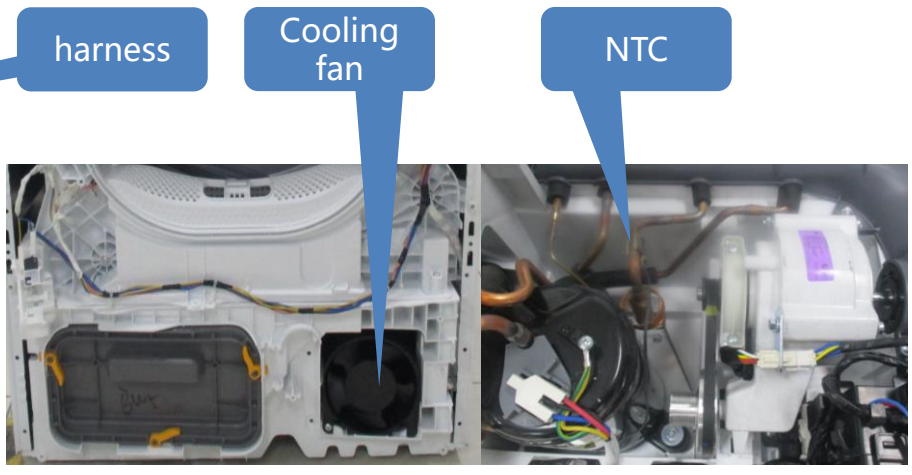



Fig.15

# Unable to dry

➢ Check Procedure:

**Step 6** Check the condenser, evaporator, and pipes.

① Check if there are any oil leaks in the condenser, evaporator, and pipes. If there are, it is a refrigerant leak and needs to be repaired. (Fig.16)
② Check if there are difference between condenser and evaporator, If there are not, it is a refrigerant leak and needs to be repaired. (Fig.16)

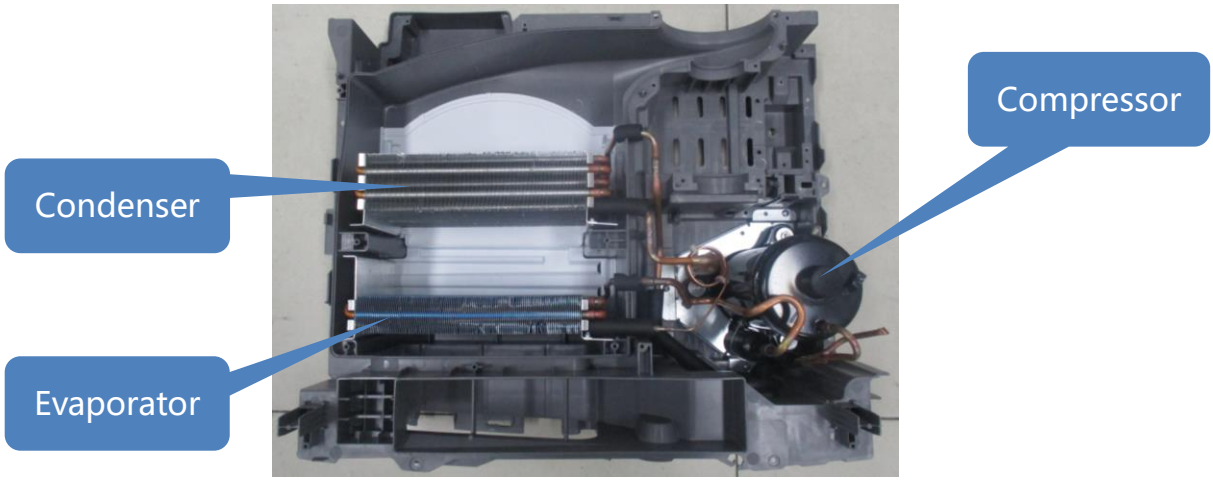



Fig.16

**Step 7** Stop the compressor, cut off the capillary from the dry filter outlet 35mm, check the exhaust conditions

① If both the dry filter and capillary tube are vented, it is a compressor failure and the compressor lubricant oil needs to be replaced. (Fig.17)
② If only the filter exhaust, it belongs to the capillary blockage and the capillary needs to be replaced. (Fig.17)
③ If only capillary exhaust, please replacement of filters, and reconfirm the insertion depth and angle of capillary. (Fig.17)

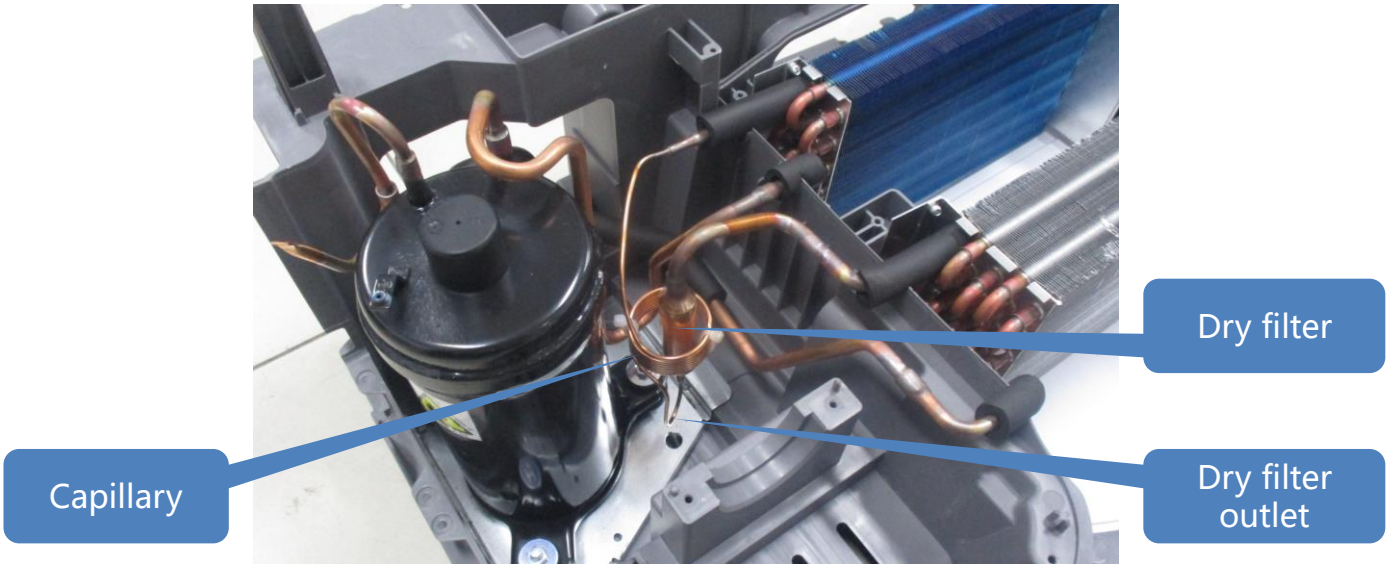
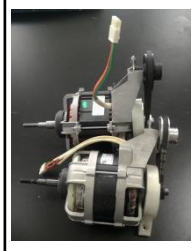
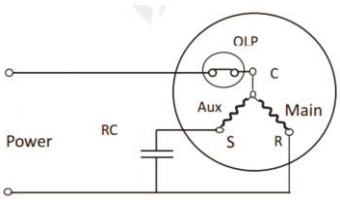


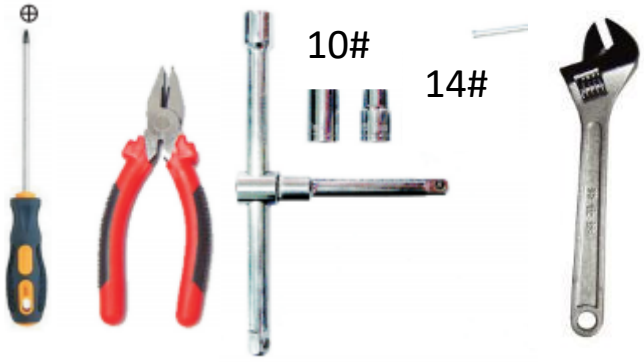

Fig.17

# 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.<br>Welling: Main winding(Green Orange)  26.5 × (1 ± 10%) Ω (20 ℃); Secondary winding(red - orange)  26.0 × (1 ± 10%) Ω (20 ℃)<br>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 |  |  <br>S: START(Aux Winding)<br>R: RUN(Main Winding)<br>C: COMMON<br>RC: Run Capacitor | Coil Resistance (at 20℃):<br>Main: 11.37±5%Ω<br>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<br>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.

MDG100-CH09_B05E-EU_A2-C6-PM01-0403.pdf

# 9 Service Test Mode

The dryer control has a service test mode that can be utilized by the service technician in order to test critical components and to access error codes. This test mode will help the service technician to quickly identify failed or improper operation of washer components.

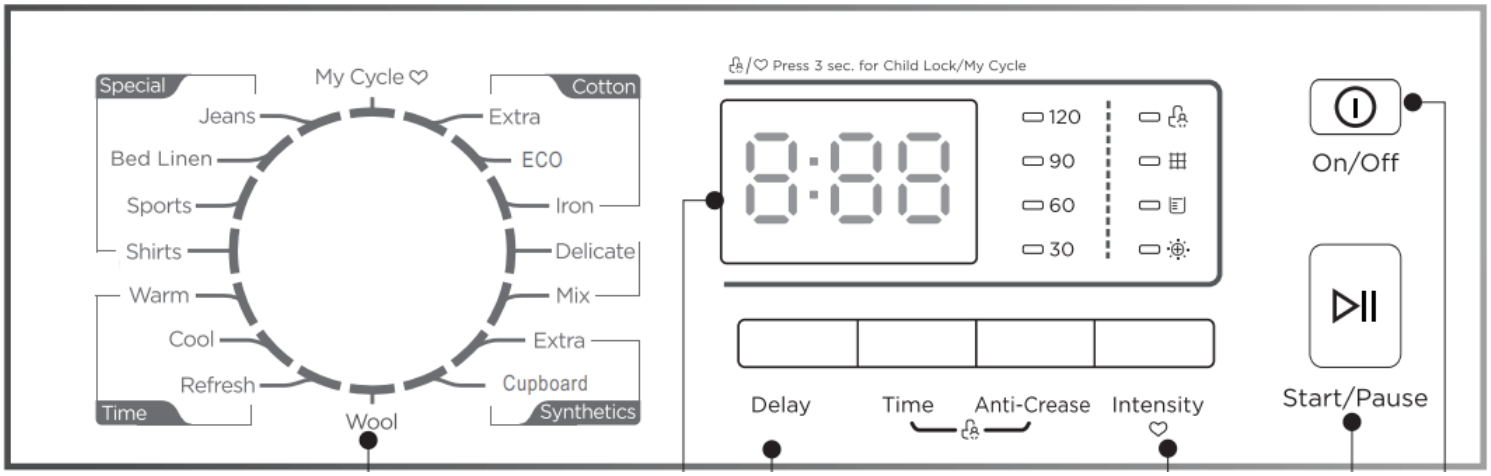
Caution: Testing is accomplished through built-in test procedures. Unplugging components for testing can damage component connections.

Machine must be OFF before entering test mode.

| **To enter the test mode:** | **To exit the test mode:** |
|---|---|
| 1. Press the Power button.<br>2. Press Time button.<br>3. Press Intensity dry button.<br>4. Press Time button.<br>5. Press Intensity dry button.<br>6.After navigating the test mode , press START/PAUSE twice to enter the test mode | 1. Press Power button.<br><br>Note: Attempting to open the door during a test will cancel the test. |
| **To navigate the test mode:** | |
| 1. Rotate the control knob clockwise and counterclockwise to cycle between modes. | |

| **Test Mode** | **Description** |
|---|---|
| t01 PCB Version | Verifies the proper PCB Version |
| t02 Error Codes | Lists up to 10 control-detected problems |
| t03 SW Version | Verifies main control SW Version |
| t04 UI test | Verifies that all displays and buttons work |
| t05 Pump Test | Verifies pump works |
| t06 Water level sensor test | Verifies water level sensor works |
| t07 Inlet Temperature Sensor test | Verifies inlet temperature sensor works |
| t08 Outlet Temperature Sensor test | Verifies outlet temperature sensor works |
| t09 Tumble test | Verifies the motor works |
| t10 Humidity Sensor test | Verifies the humidity sensor works |
| t11 Steam Generator test | N/A |
| t12 PCB Program test | Verifies the PCB Programs installed correctly |

# 9 Service Test Mode



# The end!