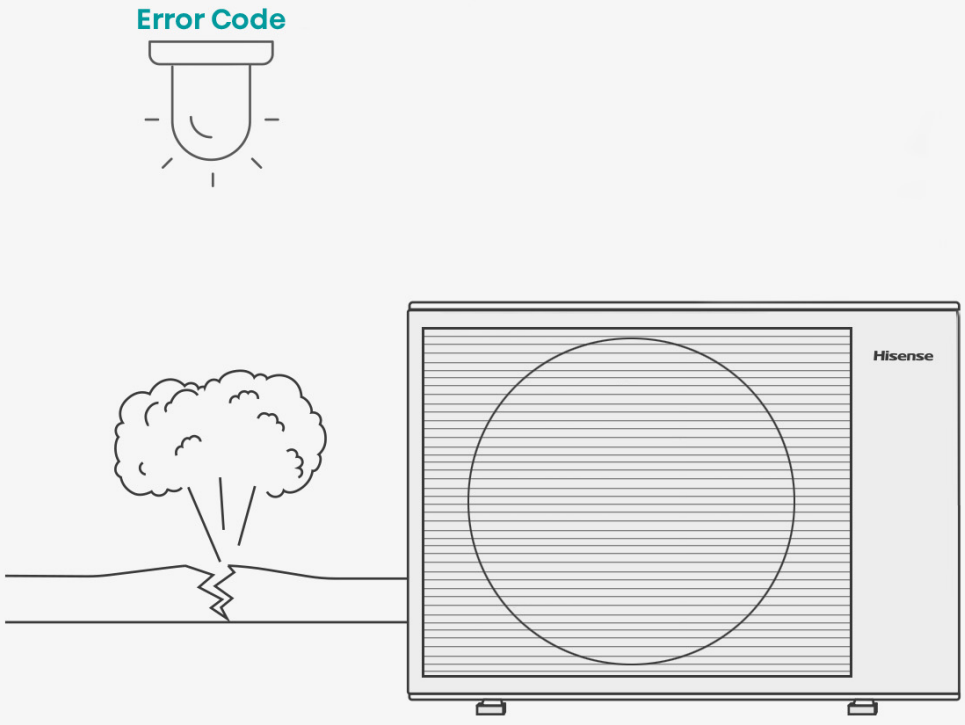
STORINGSLIJST HI-HYBRID R290



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1 Common Problem Troubleshooting

1.1 Warning

- All electrical work must be carried out by competent and suitably qualified, certified and accredited professionals and in accordance with all applicable legislation (all national, local and other laws, standards, codes, rules, regulations and other legislation that apply in each situation).
- Power-off the outdoor units before connecting or disconnecting any connections or wiring, otherwise electric shock (which can cause physical injury or death) may occur or damage to components may occur.

1.2 Error Code(E03/EC0)

E03- Water Flow Protection
EC0-Water Flow Rate Too Low

1.2.1 Description

- Lack of water flow through.
- After 3 times of E03/EC0, manual restart of the unit is required to resume operation.
- Heat pump stop running.
- An error message appears on the display, click on it to view the error message.

1.2.2 Reason

Water system side

- Water flow is insufficient.
- Air in Water Pipes
- Clogged pipes
- Water pipes too long

Unit side

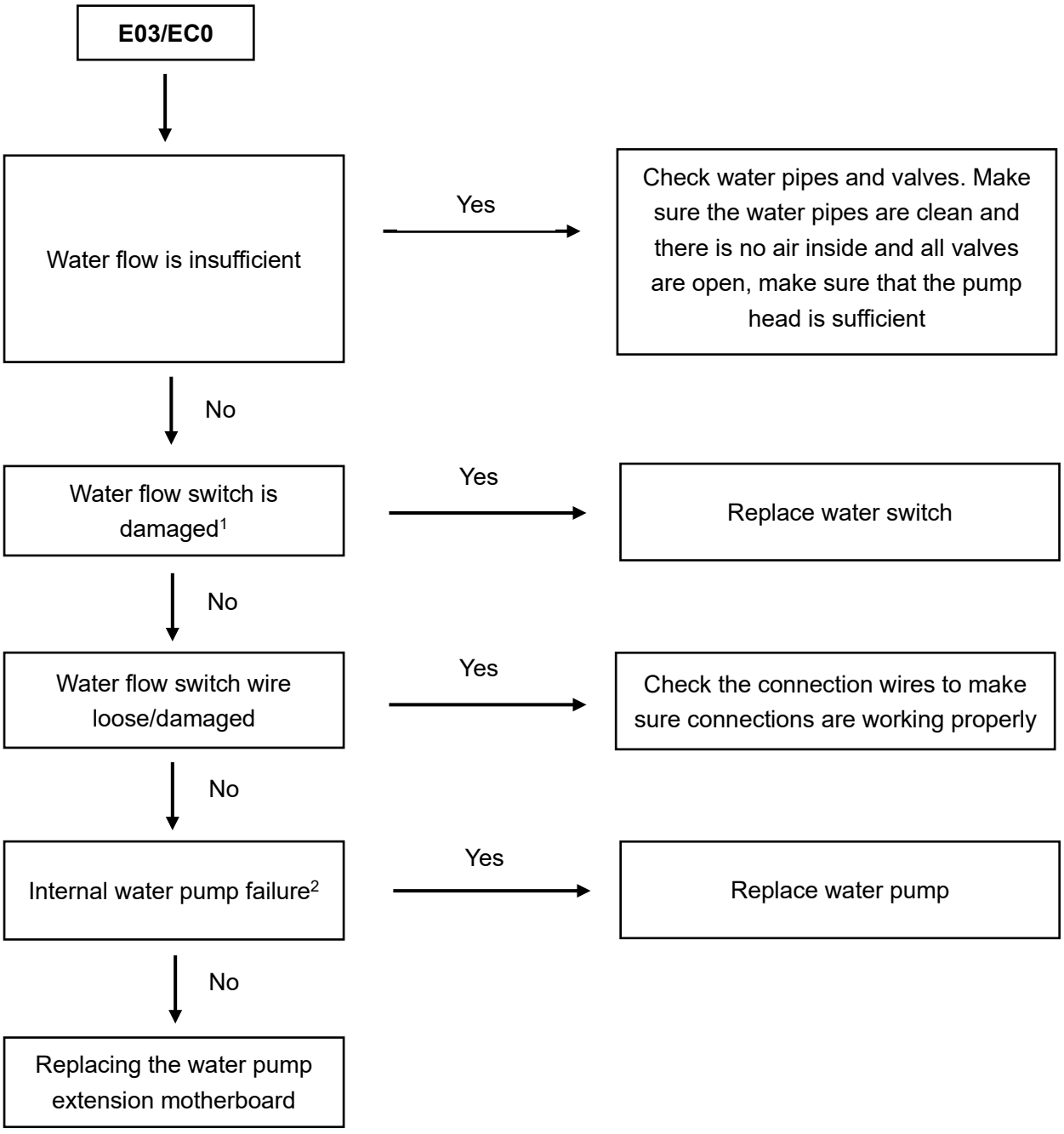
- Water pump signal wire is loose
- Internal water pump failure
- Water Flow Switch Failure[1]
- Water flow switch wire loose[2]
- Motherboard failure

Note:

*1.**When the unit is running in heating mode, water flow switch status is not detected, and there is no need to be checked these two items in the event of a malfunction.***

2. When the unit is running in cooling mode, water flow switch status is detected, and these two items need to be checked in the event of a malfunction.

1.2.3 Checking Procedure



Note:

1.This procedure can be skipped when running the heating mode.

2. Water pump failure usually displays E94.

1.3 Error Code(E37)

E37- Excessive temperature difference between inlet and outlet water

1.3.1 Description

- Lack of water flow through.
- E37 occurs when the temperature difference between inlet and outlet water ⩾ 12℃.
- After 3 times of E37, manual restart of the unit is required to resume operation.
- Heat pump stop running.
- An error message appears on the display, click on it to view the error message.

1.3.2 Reason

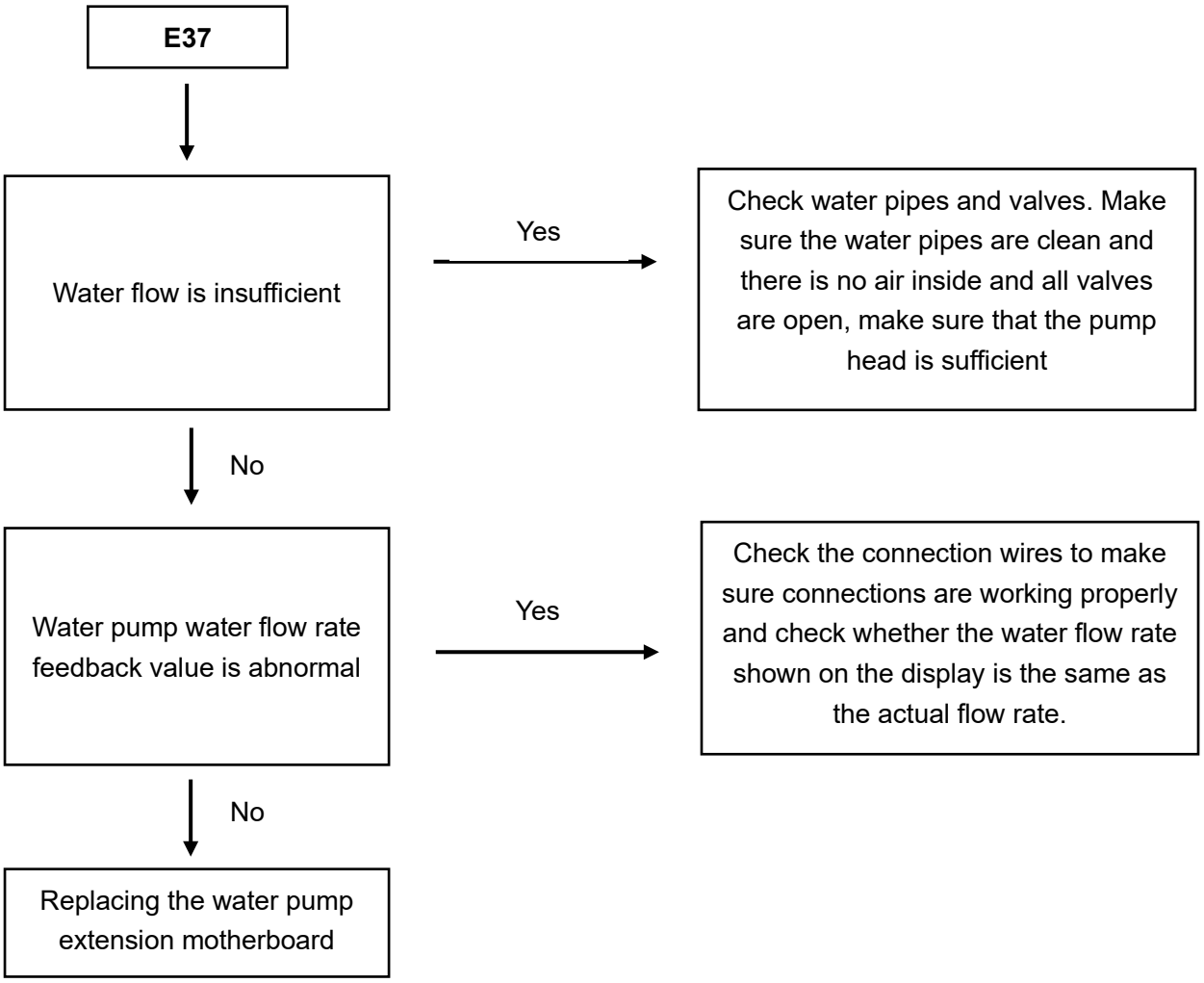
Water system side

- Water flow is insufficient.
- Air in Water Pipes
- Clogged pipes
- Water pipes too long

Unit side

- Temperature sensors damaged
- Water pump water flow rate feedback error
- Motherboard damaged

1.3.3 Checking Procedure



1.4 Error Code(E05/E51)

E05- High pressure switch protection
E51- High pressure side temperature is too high

1.4.1 Description

- Insufficient heat transfer on the water side
- E05 occurs when the high pressure is ⩾ 3.0Mpa.
- E51 occurs when the high pressure saturation temperature is ⩾ 80℃。
- After 3 times of E05/E51, manual restart of the unit is required to resume operation.
- Heat pump stop running.
- An error message appears on the display, click on it to view the error message.

1.4.2 Reason

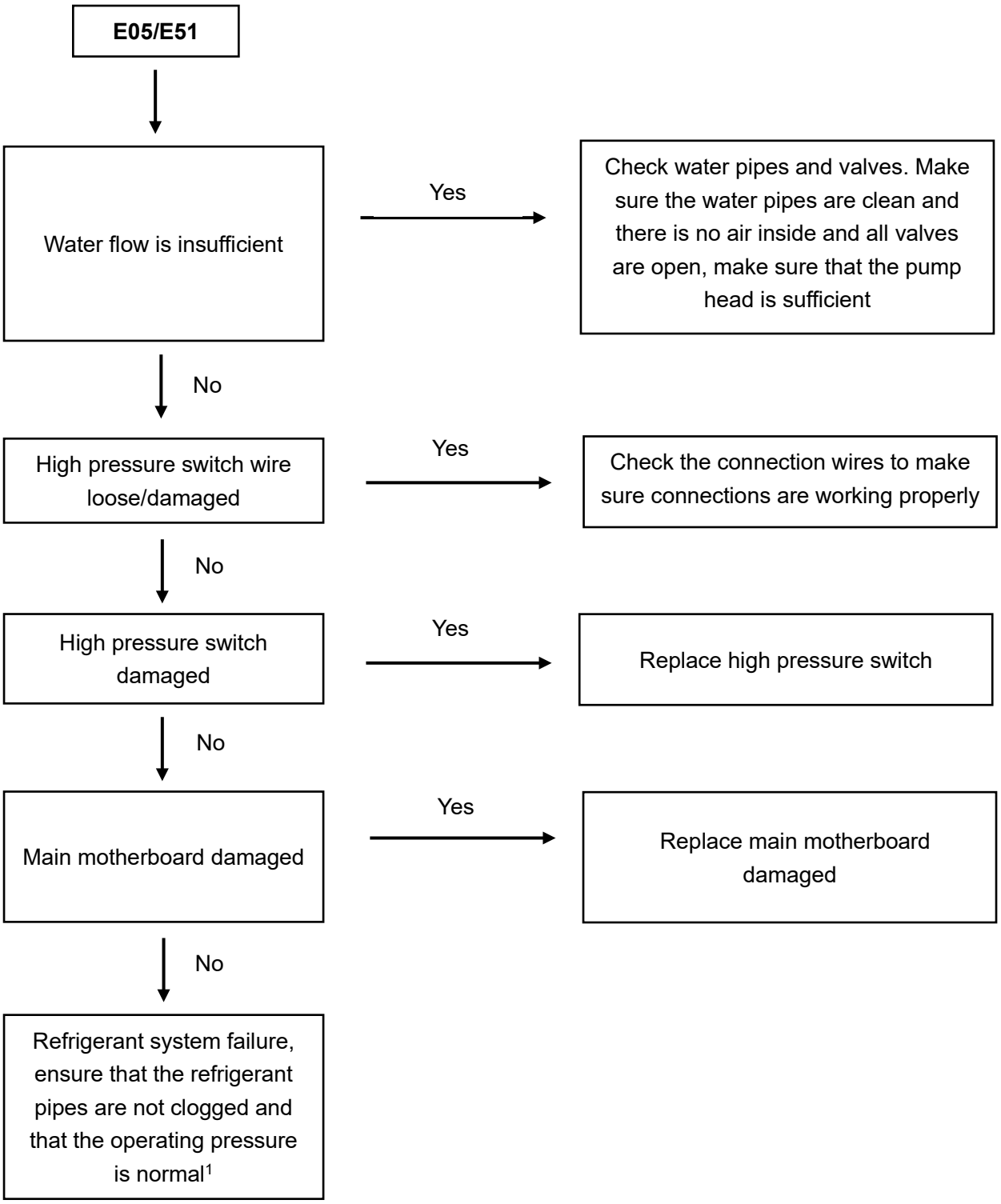
Water system side

- Water flow is insufficient.
- Air in Water Pipes
- Clogged pipes
- Water pipes too long

Unit side

- Setting water temperature out of operating range
- High pressure switch wire loose/damaged
- Motherboard damaged
- Refrigerant system clogged
- Too much refrigerant charging

1.4.3 Checking Procedure



***Note**:*

1.Need to be checked by a professional.

1.5 Error Code(E06/E52)

E05- Low pressure switch protection
E51- Low pressure side temperature is too high

1.5.1 Description

- Insufficient heat transfer on the air side
- E06 occurs when the high pressure is ≤ 0.8Mpa.
- E52 occurs when the high pressure saturation temperature is ≤ -36℃.
- After 3 times of E06/E52, manual restart of the unit is required to resume operation.
- Heat pump stop running.
- An error message appears on the display, click on it to view the error message.

1.5.2 Reason

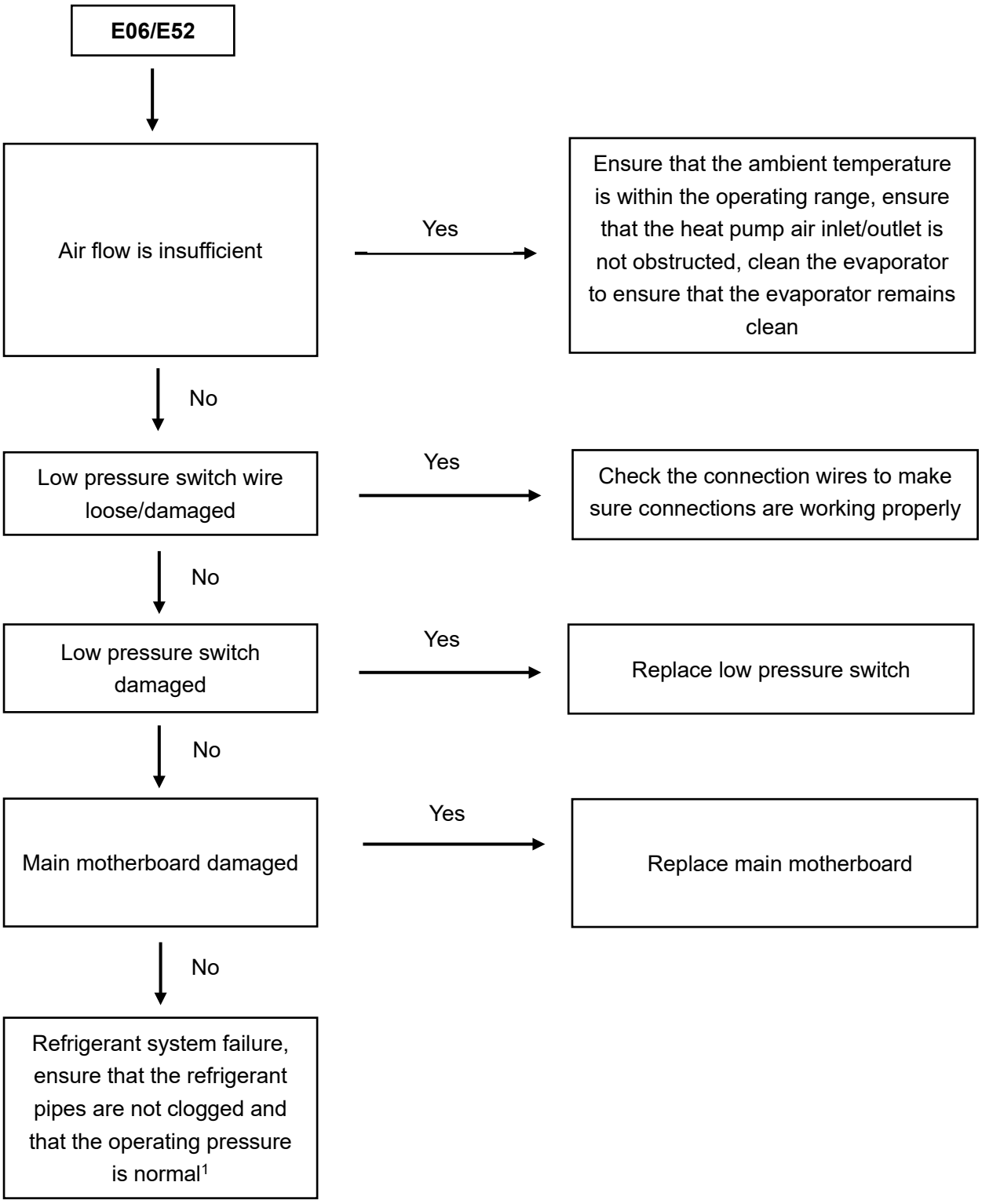
Air side

- Ambient temperature too low

Unit side

- Air outlet/inlet is blocked
- Evaporator dirty
- Fan damaged
- Low pressure switch wire loose/damaged
- Motherboard damaged
- Refrigerant system clogged
- Lack of refrigerant charging

1.5.3 Checking Procedure



***Note**:*

1.Need to be checked by a professional.

1.6 Error Code(E88)

E88- Driver Failure

1.6.1 Description

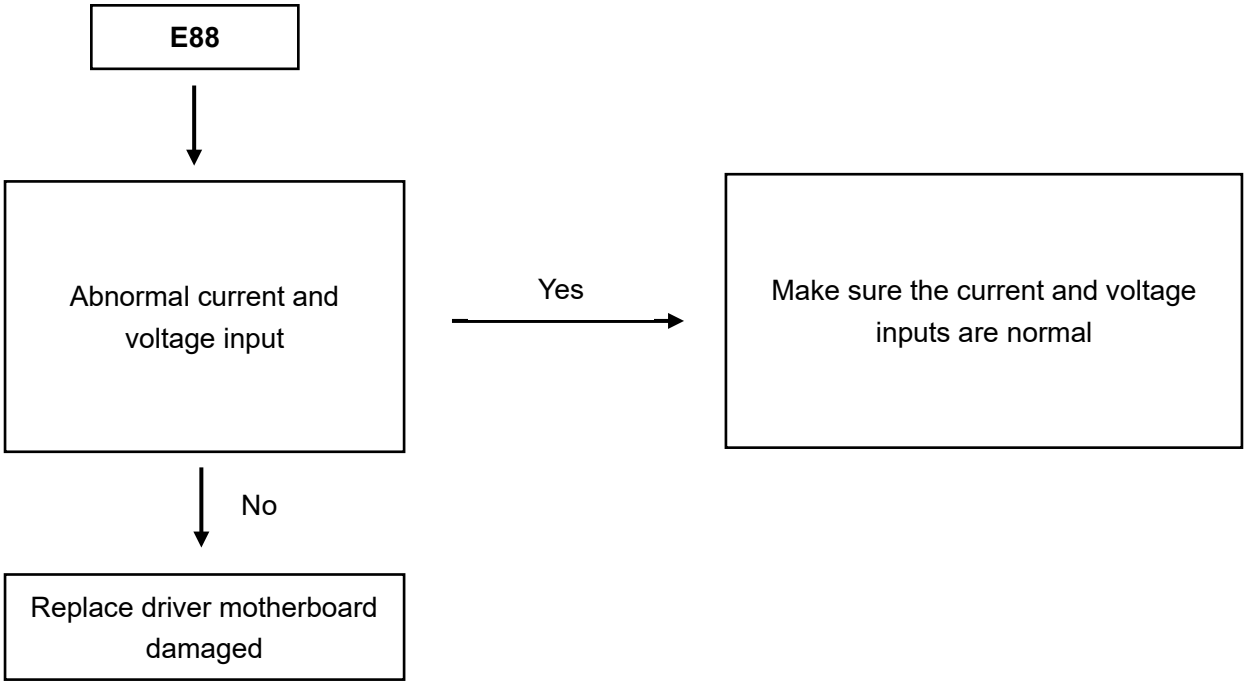
- Usually caused by the driver motherboard failure
- The error code is followed by the specific error message
- After 3 times of E88, manual restart of the unit is required to resume operation.
- Heat pump stop running.
- An error message appears on the display, click on it to view the error message.

1.6.2 Reason

Unit side

- Abnormal input current and voltage
- Unstable input current and voltage
- Driver motherboard damaged

1.6.3 Checking Procedure



1.7 Error Code(E94)

E94- Unit internal pump voltage input too high/too low

1.7.1 Description

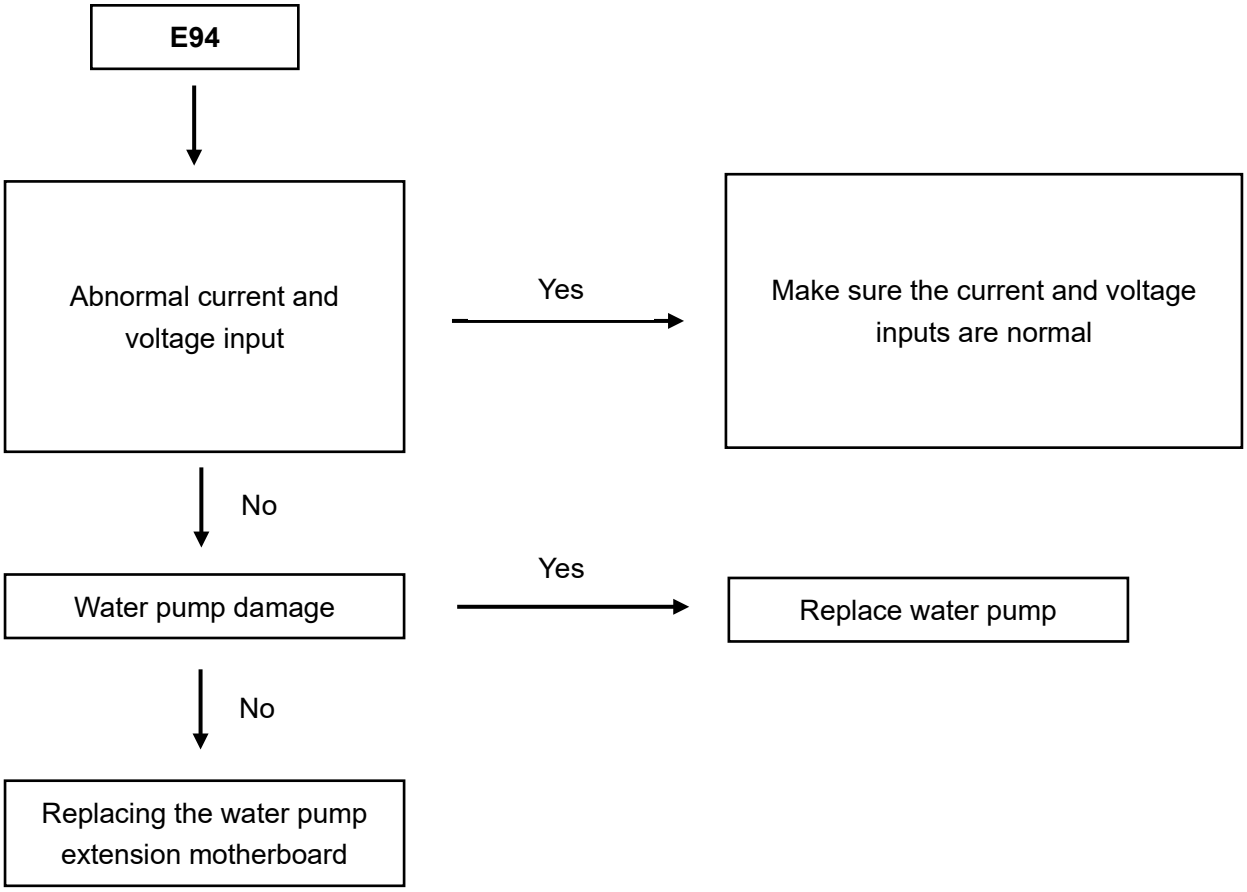
- Internal water pump voltage input ＞265V
- Internal water pump voltage input ＜165V
- Heat pump keeping running.
- An error message appears on the display, click on it to view the error message.

1.7.2 Reason

Unit side

- Abnormal input current and voltage
- Unstable input current and voltage
- Water pump damaged
- Water pump expansion board damaged

1.7.3 Checking Procedure



2 Other Problem Troubleshooting

Error Code	Category	Reason	Solution	Remark
E01	Wrong phase failure	1. Three-phase power input wire sequence error	1. Checking the power supply input	
E02	Missing phase failure	1. Three-phase power input is missing one of the phases	1. Checking the power supply input	
E03	Water Flow Protection	Refer to 1.2	Refer to 1.2	
E05	High pressure switch protection	Refer to 1.4	Refer to 1.4	
E06	Low pressure switch protection	Refer to 1.5	Refer to 1.5	
E07	N/A	N/A	N/A	
E08	N/A	N/A	N/A	
E09	Communication failure (motherboard/wire controller)	1. Loose/damaged communication cable 2. Wire controller failure 3. Motherboard failure	1. Replace the communication cable 2.Replace the wire controller 3.Replace the motherboard	
E10	N/A	N/A	N/A	
E11	N/A	N/A	N/A	
E12	Exhaust temperature too high	1. Water flow is insufficient 2.Sensor failure 3. Refrigerant overcharging	1. Check the water flow rate to make sure the water piping system is clear of clogs and air 2. Replace the sensor 3. Check the refrigerant system pressure and recharge the refrigerant.	
E13	N/A	N/A	N/A	
E14	T16 DHW tank temperature sensor failure	1. Loose connecting wire interface 2. Sensor placed in the wrong position 3. Sensor failure 4. Motherboard failure	1. Check the sensor connecting wire 2. Place the sensor in the correct position 3.Replace the sensor 4.Replace the motherboard	
E15	N/A	N/A	N/A	
E16	T1 Outer coil temperature sensor failure	1. Loose connecting wire interface 2.Sensor failure 3. Motherboard failure	1. Check the sensor connecting wire 2.Replace the sensor 3.Replace the motherboard	
E17	N/A	N/A	N/A	
E18	T3 Exhaust Temperature sensor failure	1. Loose connecting wire interface	1. Check the sensor connecting wire 2.Replace the sensor	

		2.Sensor failure 3. Motherboard failure	3.Replace the motherboard	
E19	N/A	N/A	N/A	
E20	Indoor ambient temperature sensor failure	1. Loose connecting wire interface 2.Sensor failure 3. Motherboard failure	1. Check the sensor connecting wire 2.Replace the sensor 3.Replace the motherboard	
E21	T7 Ambient temperature sensor failure	1. Loose connecting wire interface 2.Sensor failure 3. Motherboard failure	1. Check the sensor connecting wire 2.Replace the sensor 3.Replace the motherboard	
E22	T13 Return water temperature sensor failure	1. Loose connecting wire interface 2. Sensor placed in the wrong position 3. Sensor failure 4. Motherboard failure	1. Check the sensor connecting wire 2. Place the sensor in the correct position 3.Replace the sensor 4.Replace the motherboard	
E23	Cooling mode water temperature too cold protection	1. Water flow is insufficient 2.Sensor failure	1. Check the water flow rate to make sure the water piping system is clear of clogs and air 2. Replace the sensor	
E24	N/A	N/A	N/A	
E26	N/A	N/A	N/A	
E27	T15 Water outlet temperature sensor failure	1. Loose connecting wire interface 2.Sensor failure 3. Motherboard failure	1. Check the sensor connecting wire 2.Replace the sensor 3.Replace the motherboard	
E28	N/A	N/A	N/A	
E29	T2 Suction temperature sensor failure	1. Loose connecting wire interface 2.Sensor failure 3. Motherboard failure	1. Check the sensor connecting wire 2.Replace the sensor 3.Replace the motherboard	
E30	N/A	N/A	N/A	
E32	Water outlet temperature too high protection	1. Water flow is insufficient 2.Sensor failure	1. Check the water flow rate to make sure the water piping system is clear of clogs and air 2. Replace the sensor	
E33	P1 High pressure sensor failure	1. Loose connecting wire interface 2.Sensor failure 3. Motherboard failure	1. Check the sensor connecting wire 2.Replace the sensor 3.Replace the motherboard	
E34	P3 Low pressure sensor failure	1. Loose connecting wire interface 2.Sensor failure	1. Check the sensor connecting wire 2.Replace the sensor 3.Replace the motherboard	

		3. Motherboard failure		
E35	Compressor overcurrent protection	1. Input current too high 2.Compressor failure 3.Driver board failure	1. Check the power input 2.Replace the compressor 3.Replace the driver board	
E36	N/A	N/A	N/A	
E37	Water inlet and outlet temperature difference too large protection	Refer to 1.3		
E38	1# DC fan failure	1. Fan failure 2.Drive board failure	1. Replace the fan 2.Replace the drive board	
E39	2# DC fan failure	1. Fan failure 2.Drive board failure	1. Replace the fan 2.Replace the drive board	
E42	T4 Inner coil temperature sensor failure	1. Loose connecting wire interface 2.Sensor failure 3. Motherboard failure	1. Check the sensor connecting wire 2.Replace the sensor 3.Replace the motherboard	
E43	N/A	N/A	N/A	
E44	Ambient Temperature Low Protection	1. Unit out of operating range 2. Sensor failure 3. Motherboard failure	1. Ensure that the unit is operating within the operating range 2. Replace the sensor 3. Replace the motherboard	
E45	N/A	N/A	N/A	
E46	N/A	N/A	N/A	
E47	N/A	N/A	N/A	
E48	N/A	N/A	N/A	
E49	N/A	N/A	N/A	
E50	N/A	N/A	N/A	
E51	High pressure side temperature is too high	Refer to 1.4		
E52	Low pressure side temperature is too high	Refer to 1.5		
E53	N/A	N/A	N/A	
E54	N/A	N/A	N/A	
E55	Communication failure (motherboard/expansion board)	1. Loose/damaged communication cable 2. Relevant module failure 3. Motherboard failure	1. Replace the communication cable 2.Replace the wire controller 3.Replace the motherboard	
E88	Driver Failure	Refer to 1.6		
E89	N/A	N/A	N/A	
E96	Communication Failure (Compressor Drive/Main Control Board)	1. Loose/damaged communication cable 2.Driver board failure 3. Motherboard failure	1. Replace the communication cable 2.Replace the driver board 3.Replace the motherboard	

E97	N/A	N/A	N/A	
E98	Communication Failure (1# Fan Drive/Main Control Board)	1. Loose/damaged communication cable 2.Driver board failure 3. Motherboard failure	1. Replace the communication cable 2.Replace the driver board 3.Replace the motherboard	
E99	Communication Failure (2# Fan Drive/Main Control Board)	1. Loose/damaged communication cable 2.Driver board failure 3. Motherboard failure	1. Replace the communication cable 2.Replace the driver board 3.Replace the motherboard	
EA0	N/A	N/A	N/A	
EA1	Cascade model error	1. Cascade model error 2. Loose/damaged communication cable 3.Motherboard damage	1. Make sure the cascade model series is the same 2. Check the connection cable 3.Replace the motherboard	
EA2	T12 Solar water temperature sensor failure	1. Loose connecting wire interface 2. Sensor placed in the wrong position 3. Sensor failure 4. Motherboard failure	1. Check the sensor connecting wire 2. Place the sensor in the correct position 3.Replace the sensor 4.Replace the motherboard	
EA3	T11 Zone 2 temperature sensor failure	1. Loose connecting wire interface 2. Sensor placed in the wrong position 3. Sensor failure 4. Motherboard failure	1. Check the sensor connecting wire 2. Place the sensor in the correct position 3.Replace the sensor 4.Replace the motherboard	
EA4	T10 Buffer tank temperature sensor failure	1. Loose connecting wire interface 2. Sensor placed in the wrong position 3. Sensor failure 4. Motherboard failure	1. Check the sensor connecting wire 2. Place the sensor in the correct position 3.Replace the sensor 4.Replace the motherboard	
EA5	T9 Total water outlet temperature sensor failure	1. Loose connecting wire interface 2. Sensor placed in the wrong position 3. Sensor failure 4. Motherboard failure	1. Check the sensor connecting wire 2. Place the sensor in the correct position 3.Replace the sensor 4.Replace the motherboard	
EB6	Zone 2 temperature sensor failure	1. Loose connecting wire interface 2. Sensor placed in the wrong position 3. Sensor failure 4. Motherboard failure	1. Check the sensor connecting wire 2. Place the sensor in the correct position 3.Replace the sensor 4.Replace the motherboard	

EB7	N/A	N/A	N/A	
EB8	N/A	N/A	N/A	
EB9	N/A	N/A	N/A	
EC0	Water flow rate low protection	Refer to 1.2		
EC1	Refrigerant Detection Sensor Failure	1. Loose connecting wire interface 2.Sensor failure 3. Motherboard failure	1. Replace the communication cable 2.Replace the sensor 3.Replace the motherboard	
EC2	Refrigerant concentration exceeded	1.Refrigerant leakage 2.Sensor failure	1. Check the refrigerant system 2.Replace the sensor	
EC3	Refrigerant Detection Sensor End of Life	1. Sensor life expiration	1. Replace the sensor	

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