Part12 Trouble Shooting

1. Failure code display

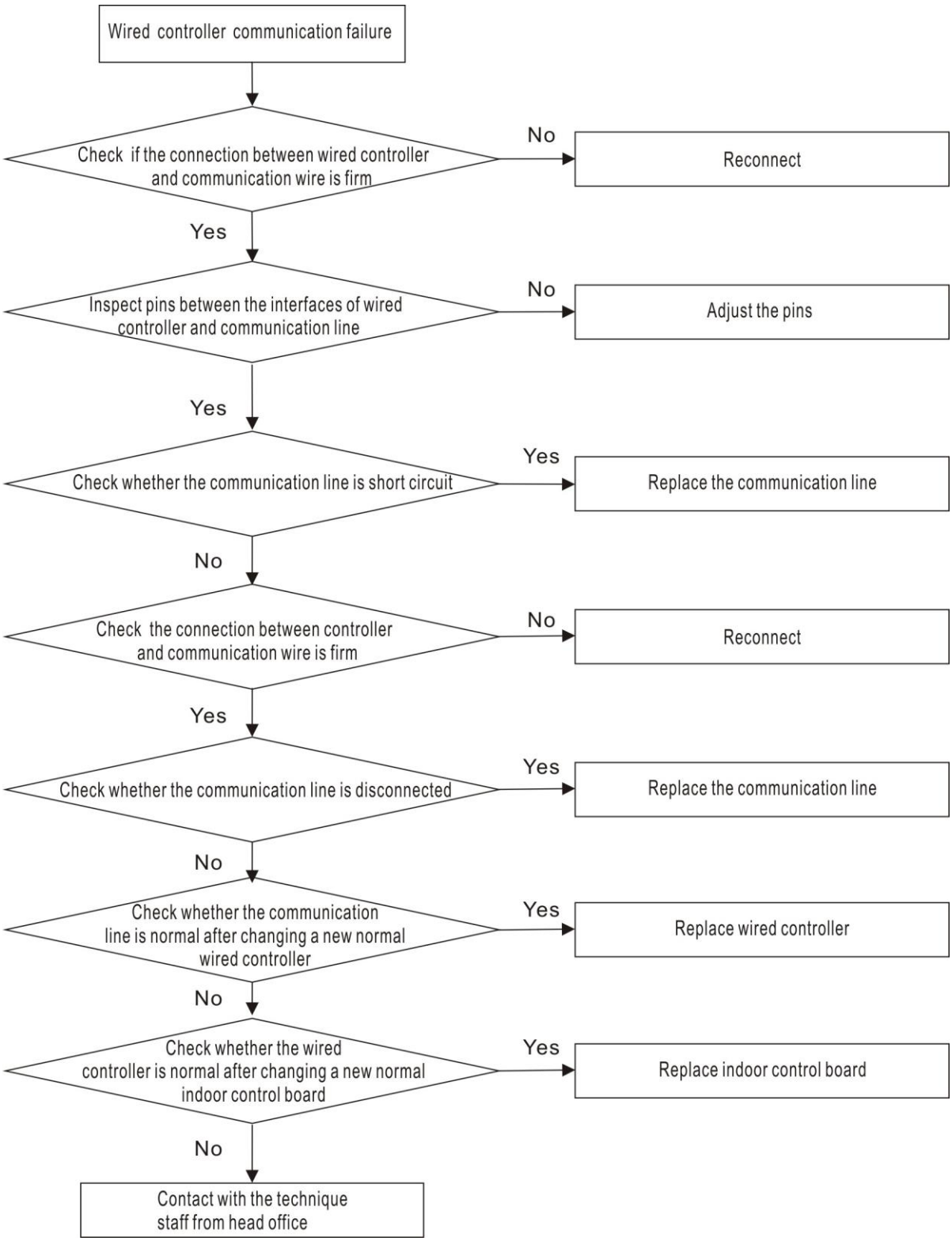
When AC has failure, indoor display board and wire controller will show error codes

Error code	Error code definition	Recovery or not	Problem possible reasons
E0	Lack of refrigerant	No	Compressor internal protection
			System is short of refrigerant
			Reversing failure of 4 way valve
E1	TA (Indoor temperature sensor) is abnormal	Yes	Sensor damage
			Poor contact of sensor
E2	TW(Defrosting temperature sensor) is abnormal	Yes	Sensor damage
			Poor contact of sensor
E3	TE(Indoor coil sensor) is abnormal	Yes	Sensor damage
			Poor contact of sensor
E4	Drainage system failure	Yes	Damage of water pump
			Damage of water level switch
			Water level switch is locked
E5	Communication failure of wired controller	Yes	Communication wire sequence error
			Poor contact of communication wire
E6	Outdoor unit protection(phase sequence)	No	The power cable phase is missing
			Power cable phase sequence error
E7	TL(Outdoor condensing temperature sensor) is abnormal	Yes	Sensor damage
			Poor contact of sensor
E8	TP(Discharge temperature sensor) is	Yes	Sensor damage

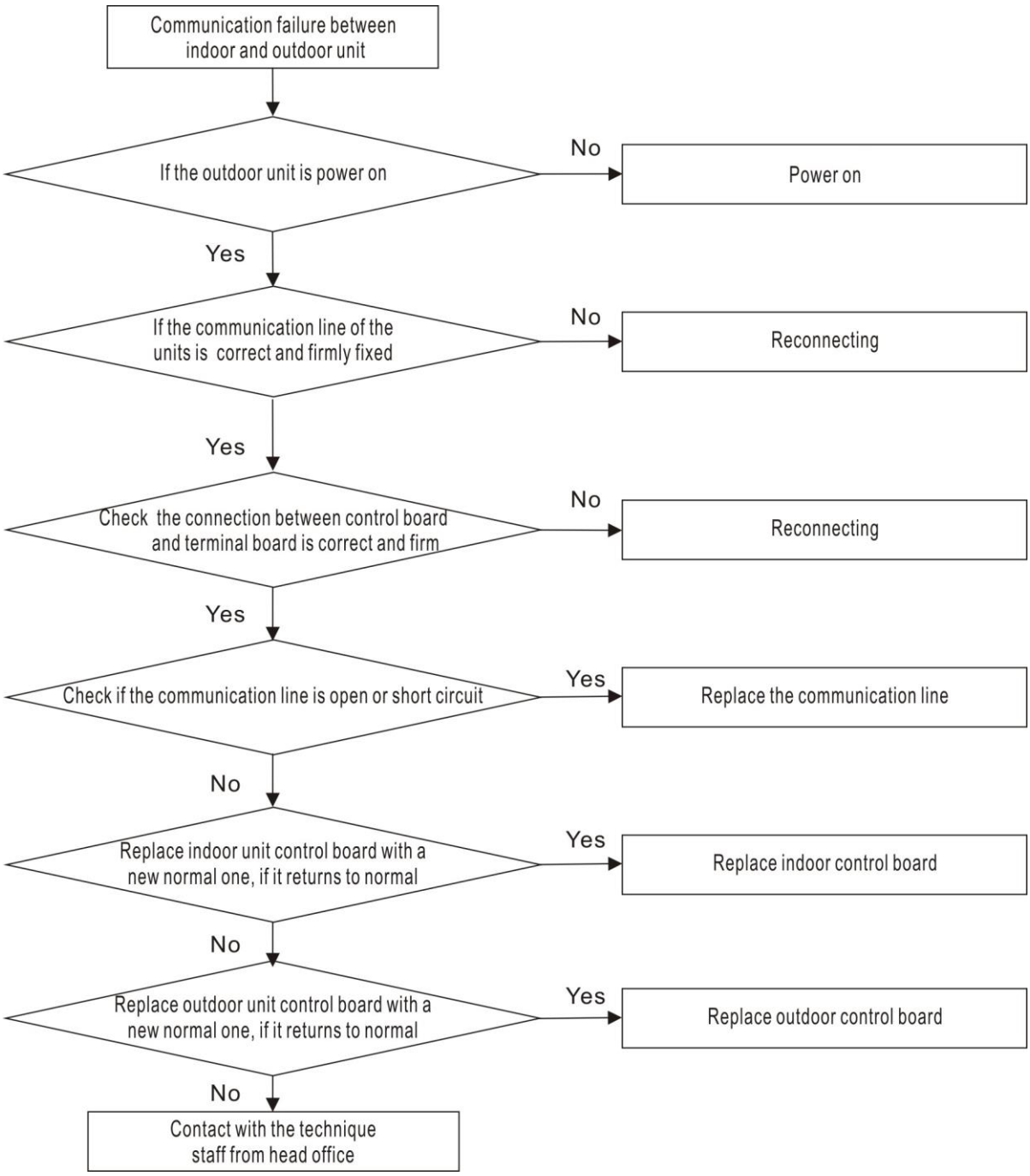
	abnormal		Poor contact of sensor
E9	Low pressure protection	Yes	System is short of refrigerant
EA	Outdoor unit protection (Discharge temperature is too high)	No	External protection device action
F1	Communication failure between indoor unit and outdoor unit	Yes	Communication wire sequence error
			Poor contact of communication wire
F2	Exhaust overtemperature protection	Yes	System is blocked or fault of the outdoor fan
F3	Outdoor fan is abnormal	Yes	Poor contact of outdoor motor
			Motor is broken
F4	Indoor fan is abnormal	Yes	Poor contact of indoor motor
			Motor is broken
F5	Outdoor temperature sensor is abnormal	Yes	Sensor damage
			Poor contact of sensor
F6	Compressor overcurrent protection	No	Compressor is blocked
			Low voltage
F7	Dial switch is abnormal	Yes	Wrong position of dial switch
FB	Indoor power protection	Yes	Wrong wiring
F9	High pressure protection	Yes	Condenser is blocked
			Abnormal operation of the outdoor fan
			System pipe is blocked

2. Failure analysis

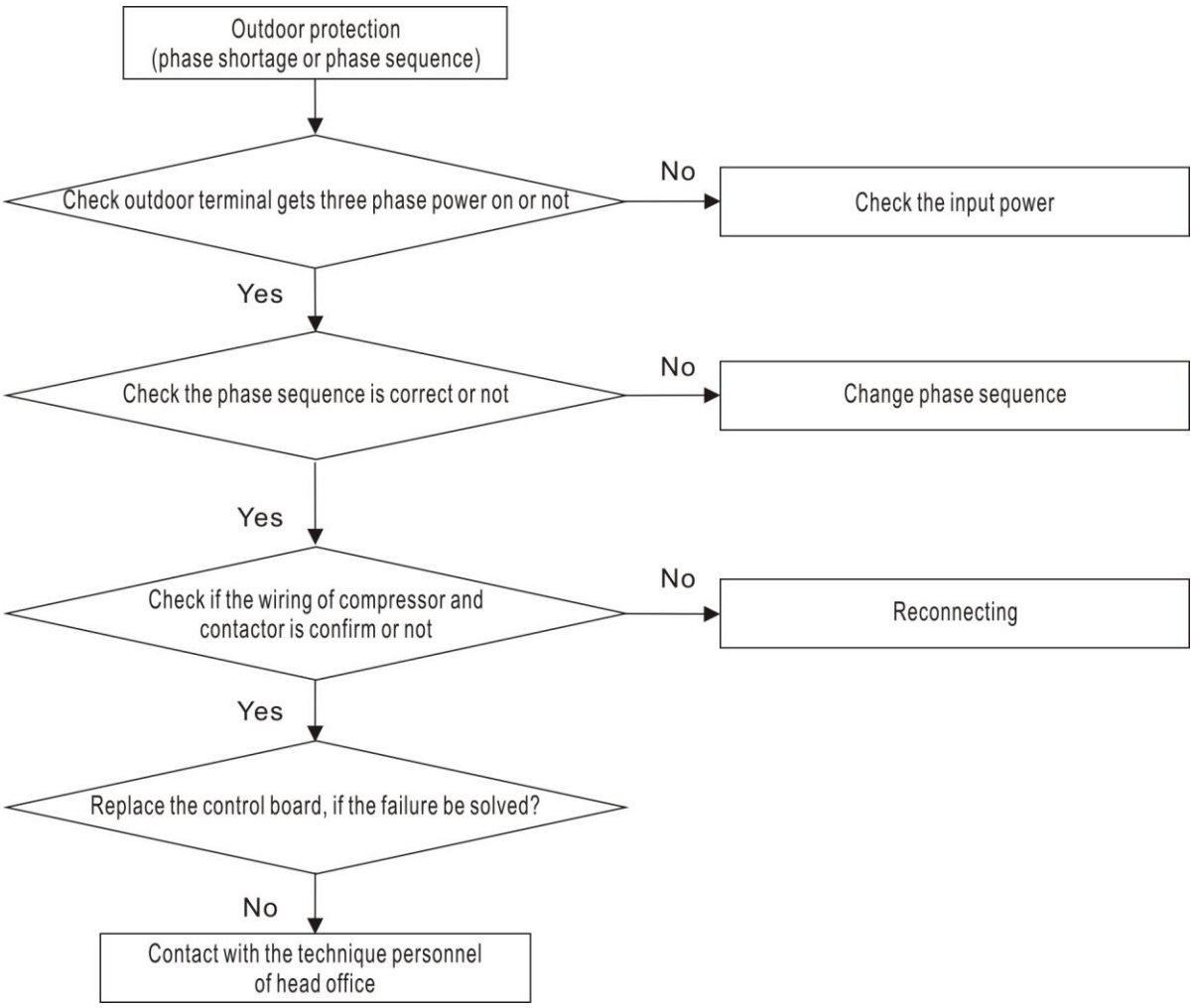
2.1【H2】Wired controller communication failure



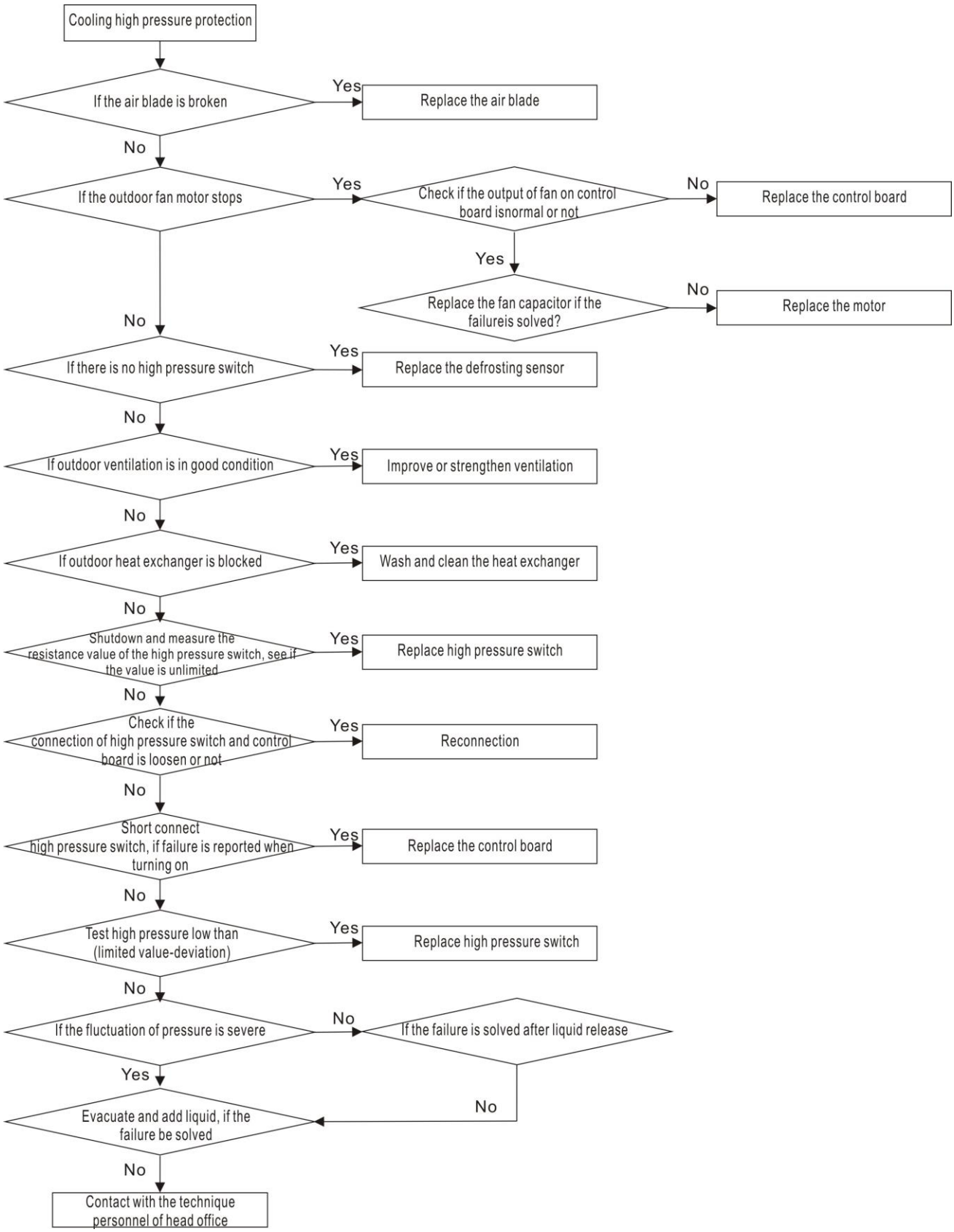
2.2【E5/5E】Communication failure between indoor and outdoor unit



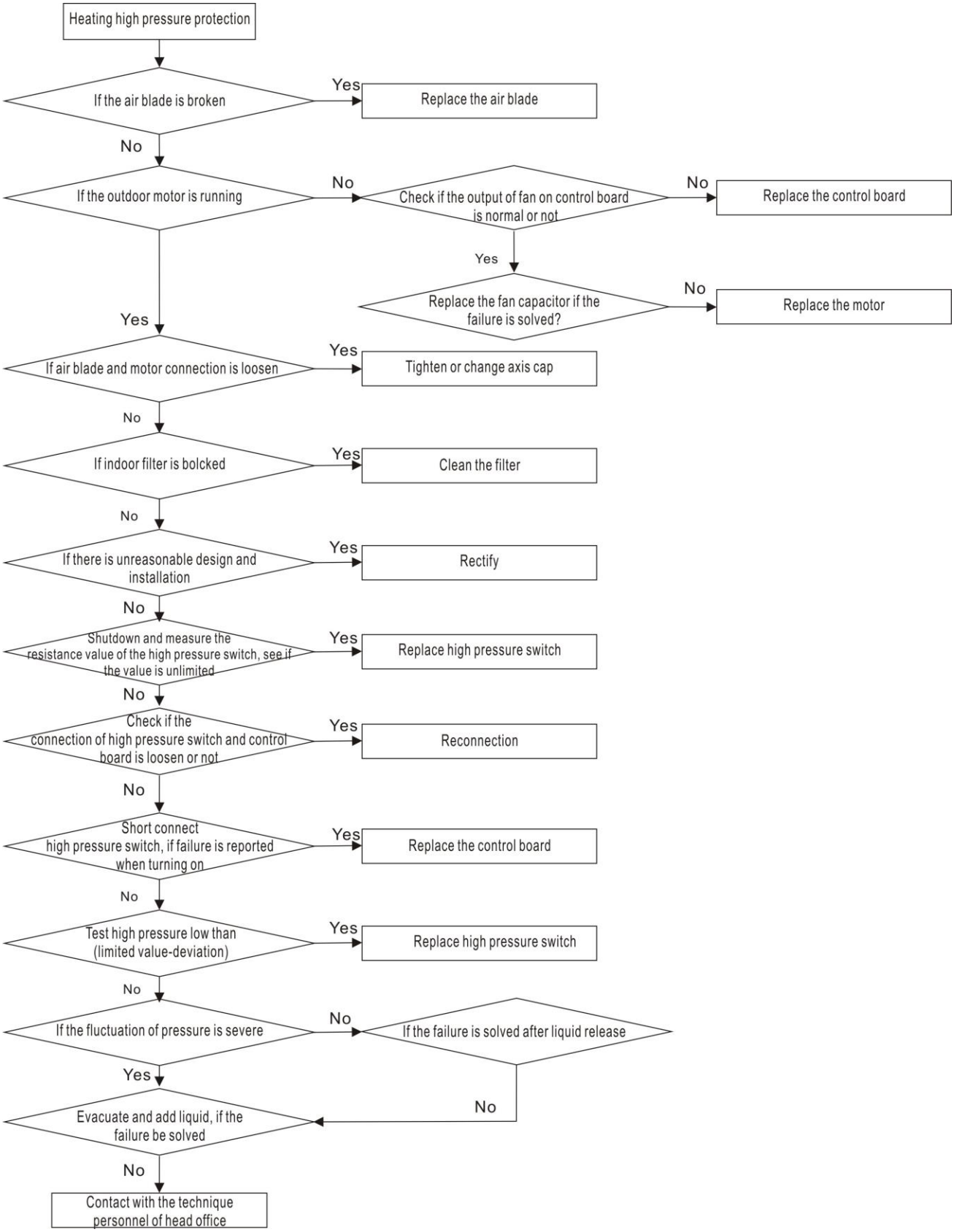
Outdoor protection(phase sequence)



2.3【P2】Cooling high pressure protection



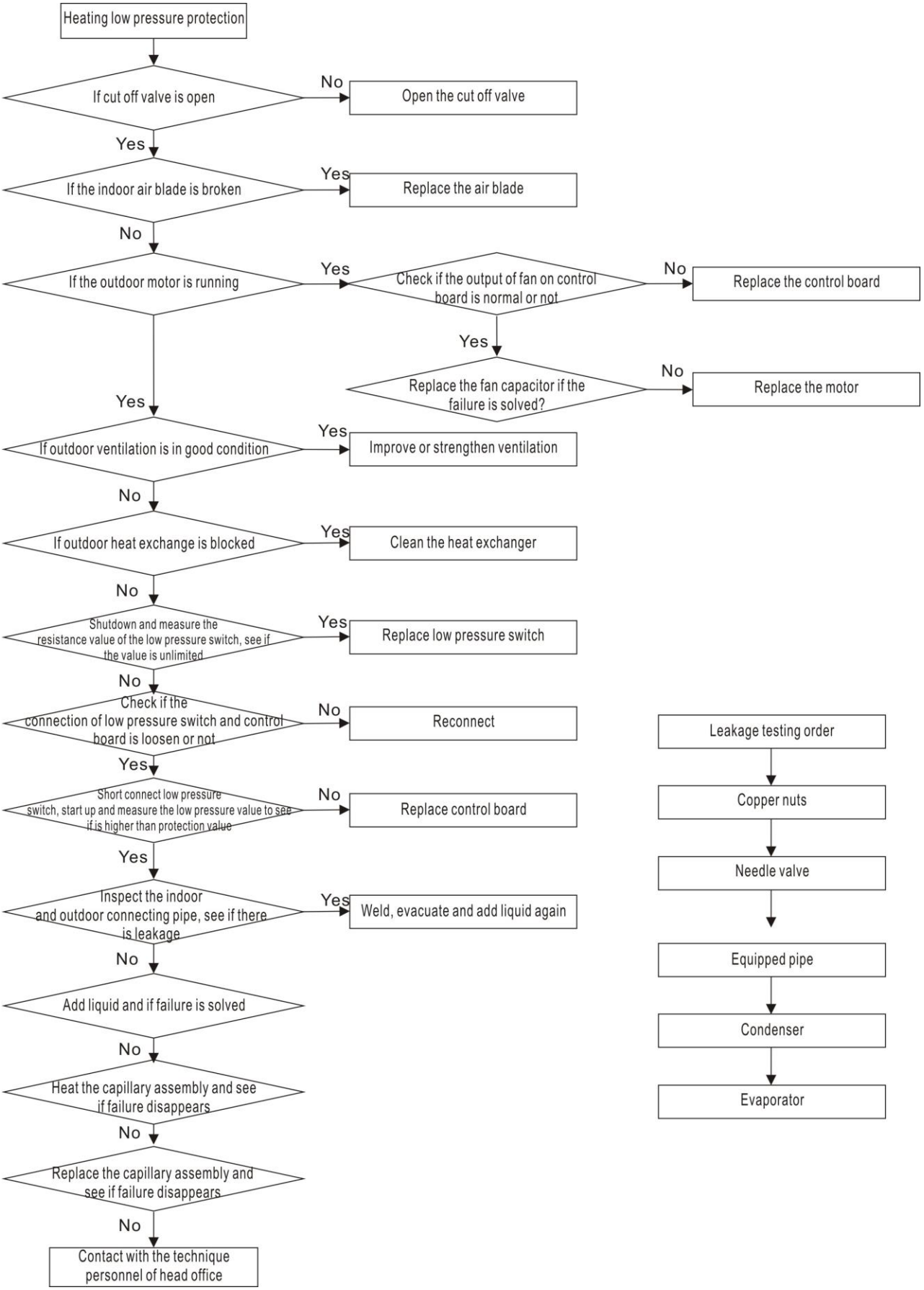
【P2】Heating high pressure protection



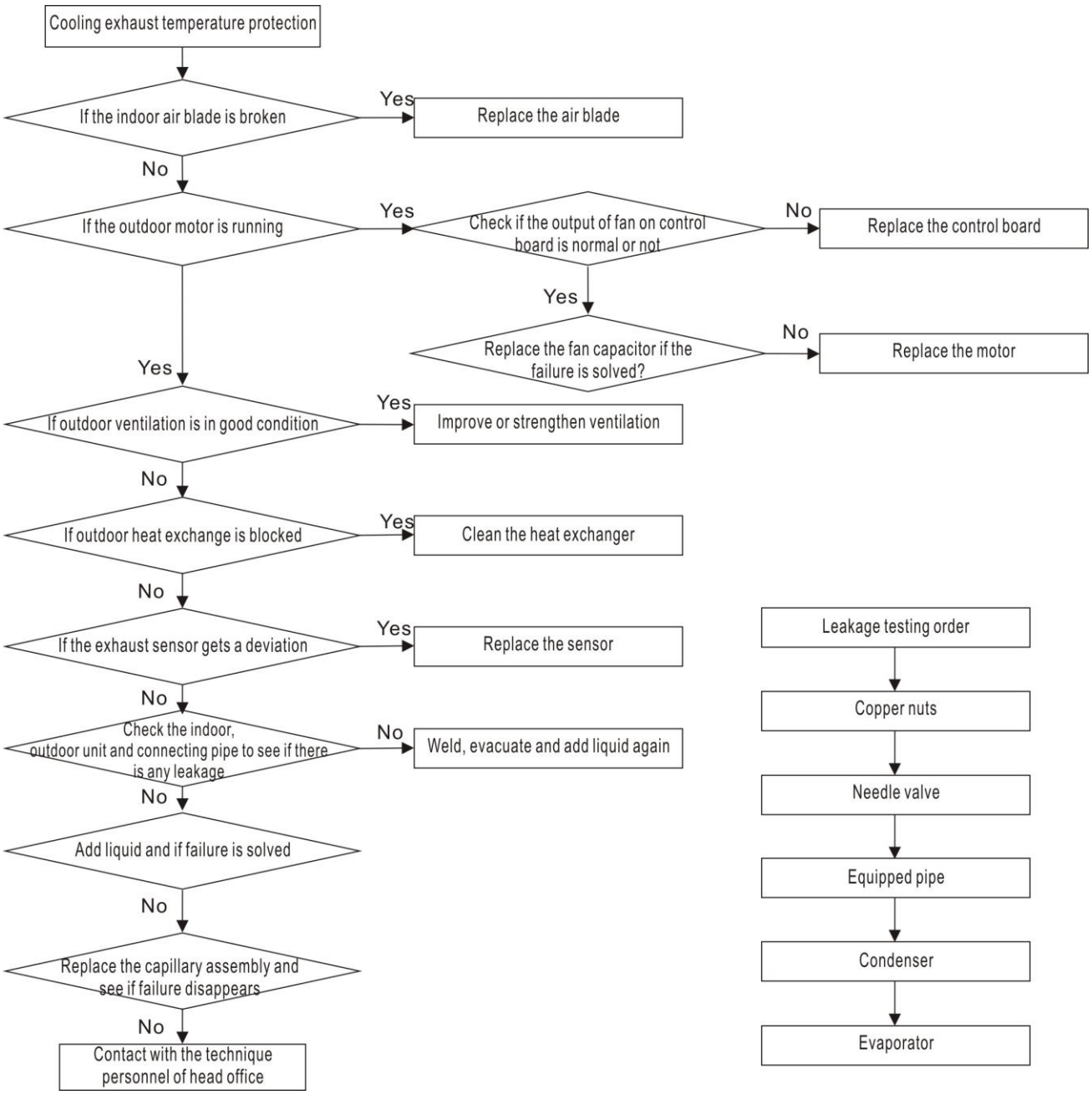
2.4【H6】Cooling low pressure protection



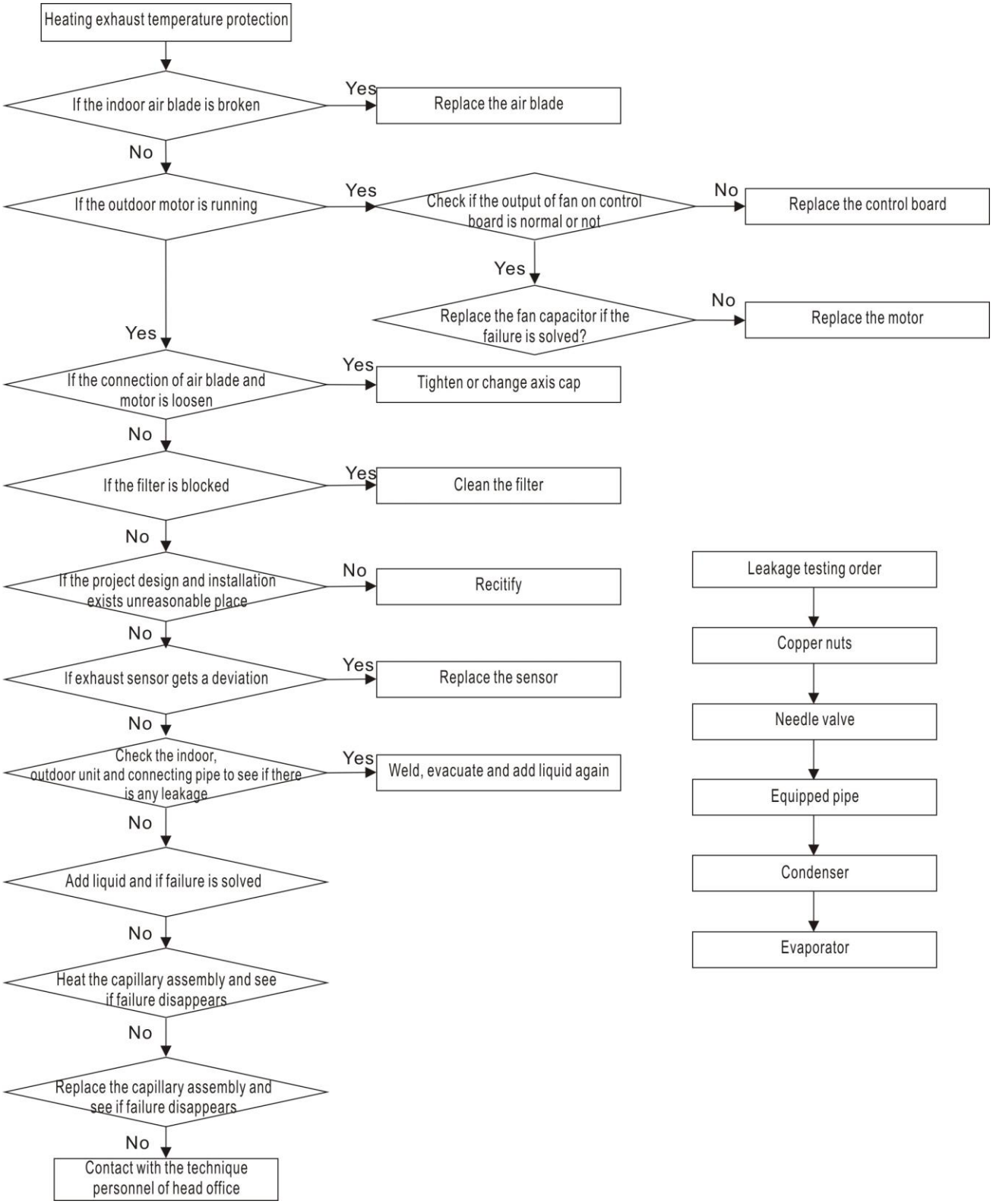
【H6】Heating low pressure protection



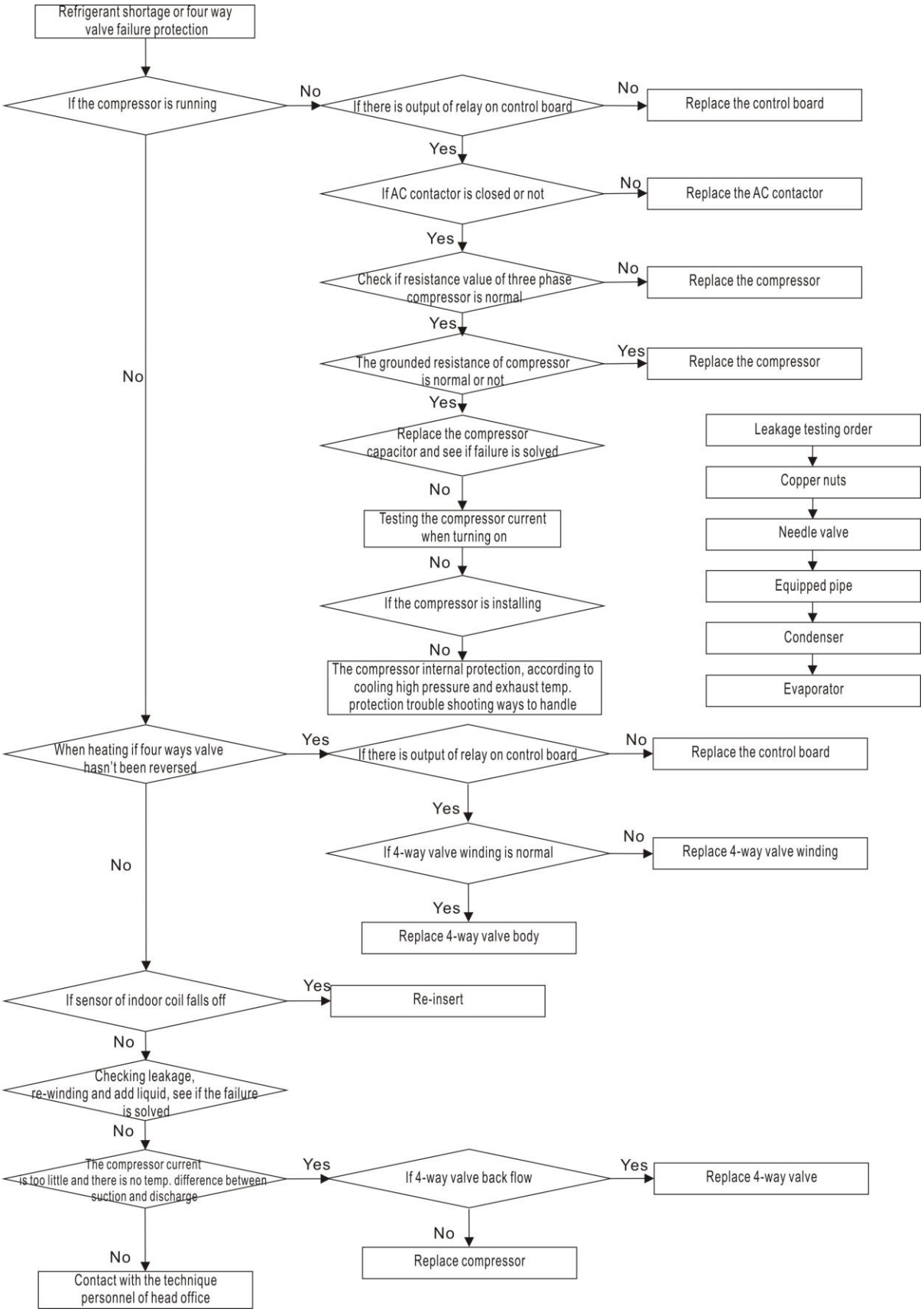
2.5【P5/J5】Cooling exhaust temperature protection



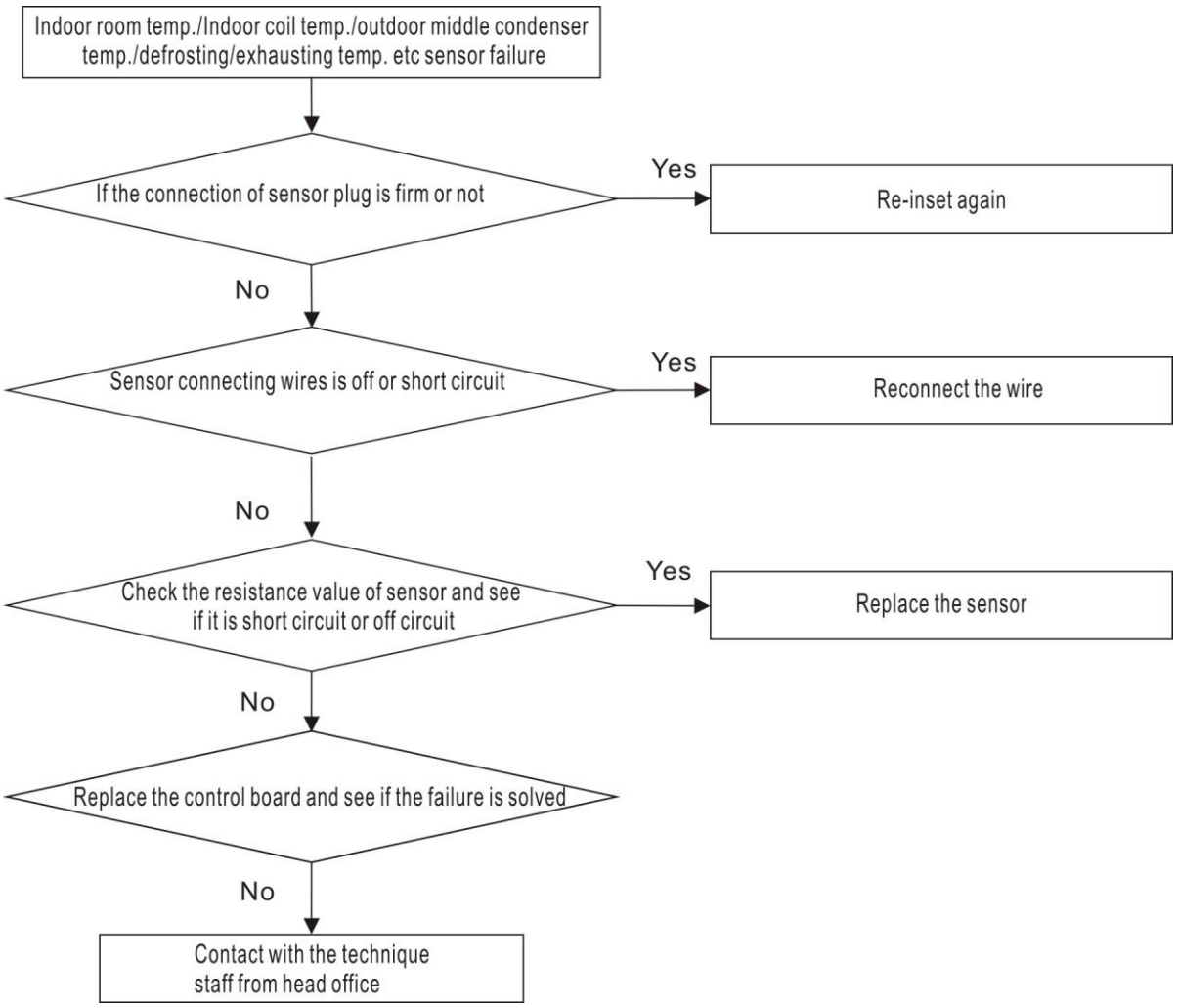
【P5/J5】Heating exhaust temperature protection



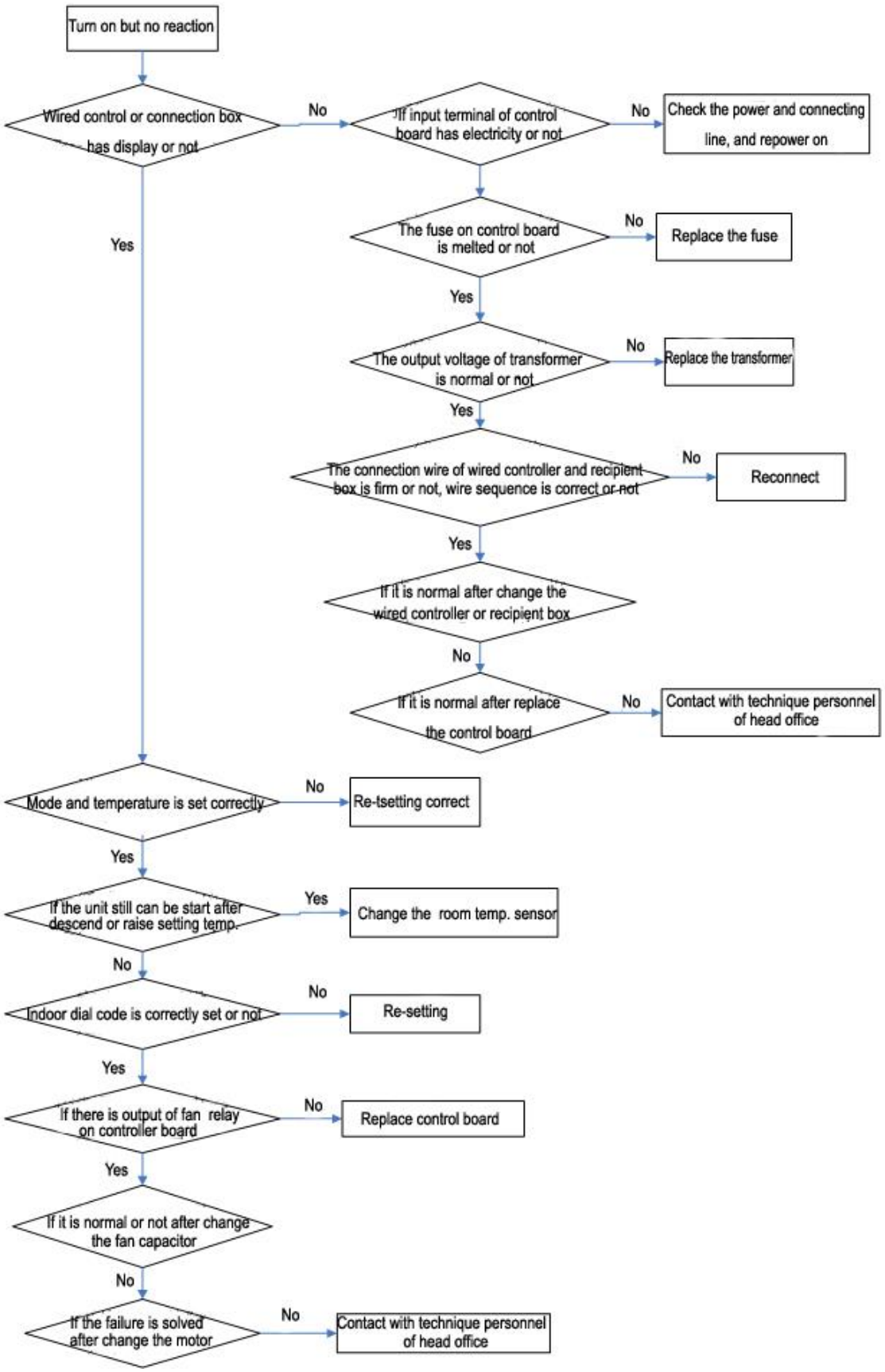
2.6【H8】Refrigerant shortage or four way valve failure protection



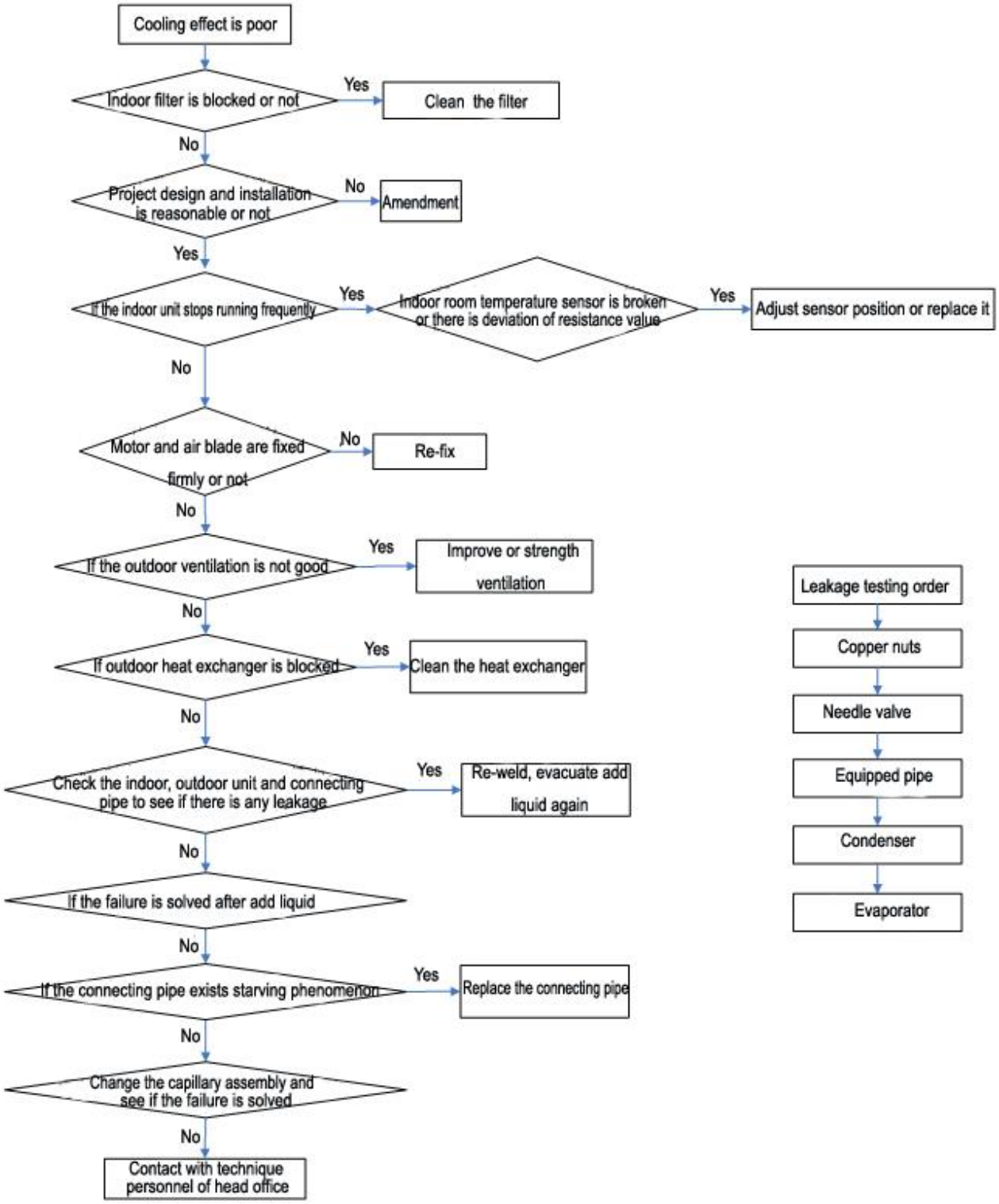
Sensor failure protection

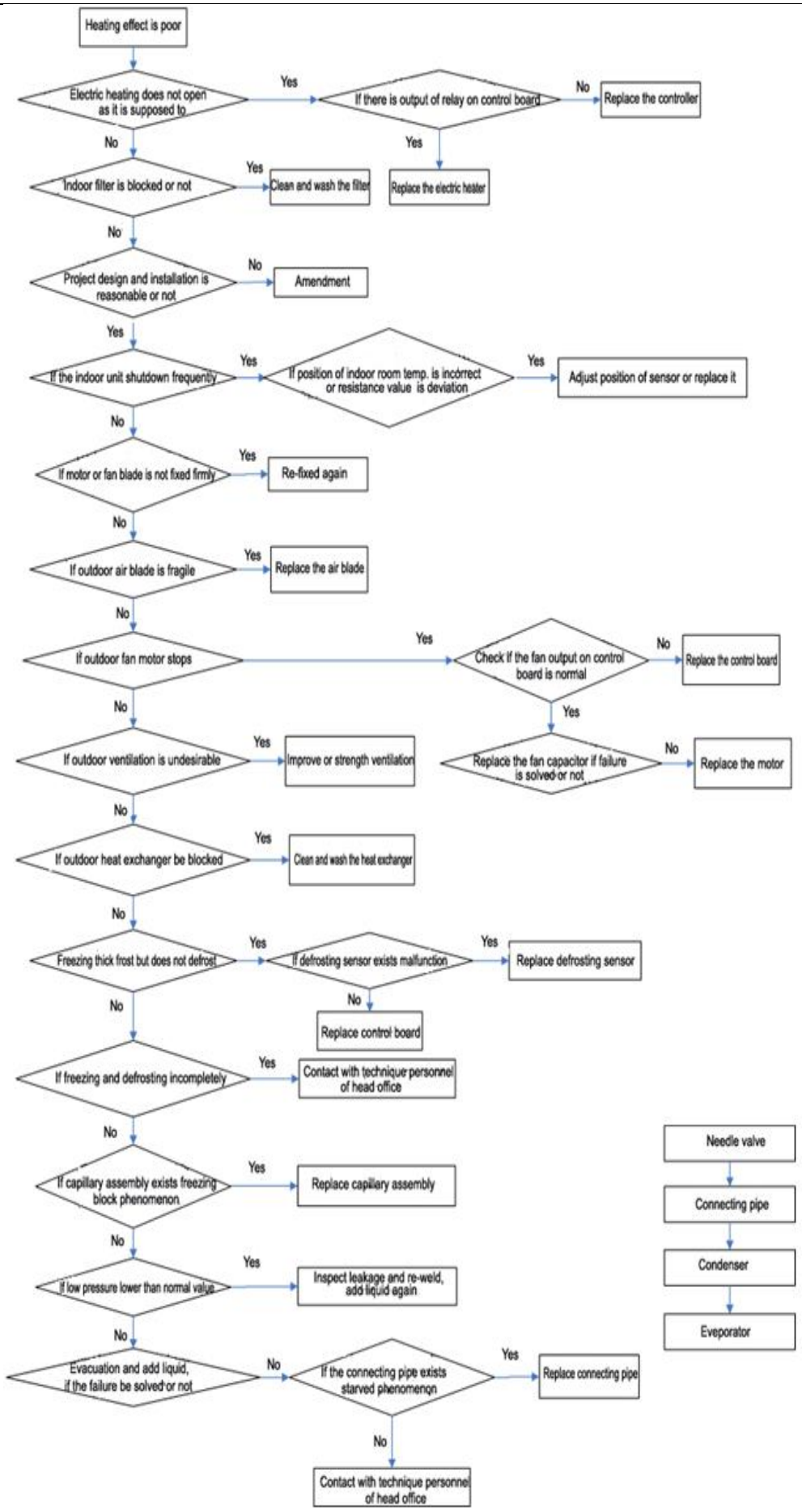

Indoor room temp./Indoor coil temp./outdoor middle condenser temp./defrosting/exhausting temp. etc sensor failure
If the connection of sensor plug is firm or not
Yes
Re-inset again
No
Sensor connecting wires is off or short circuit
Yes
Reconnect the wire
No
Check the resistance value of sensor and see if it is short circuit or off circuit
Yes
Replace the sensor
No
Replace the control board and see if the failure is solved
No
Contact with the technique staff from head office

No action after power-on

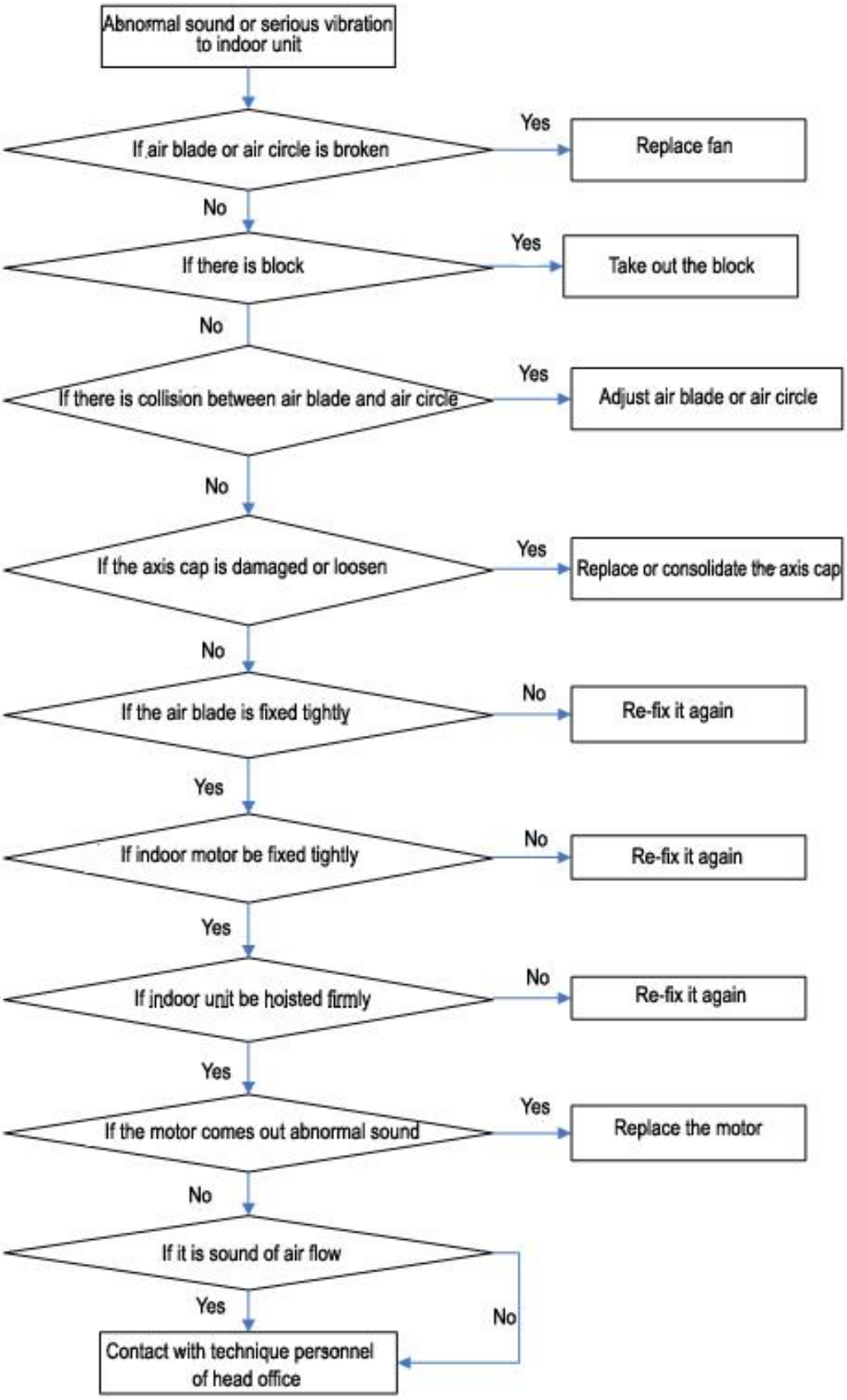


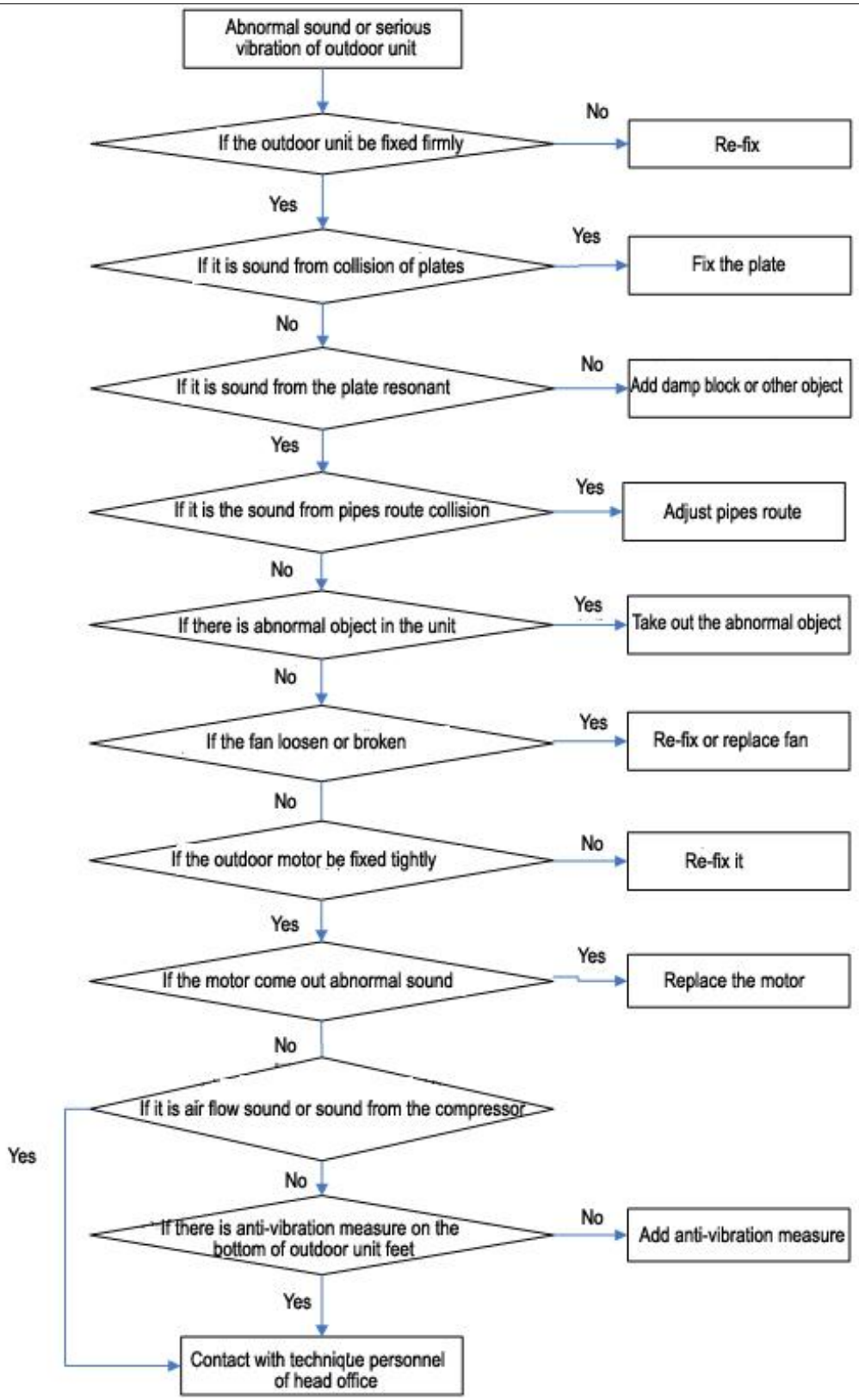
Poor effect


Cooling effect is poor
Indoor filter is blocked or not
Yes
Clean the filter
No
Project design and installation is reasonable or not
No
Amendment
Yes
If the indoor unit stops running frequently
Yes
Indoor room temperature sensor is broken or there is deviation of resistance value
Yes
Adjust sensor position or replace it
No
Motor and air blade are fixed firmly or not
No
Re-fix
No
If the outdoor ventilation is not good
Yes
Improve or strength ventilation
No
If outdoor heat exchanger is blocked
Yes
Clean the heat exchanger
No
Check the indoor, outdoor unit and connecting pipe to see if there is any leakage
Yes
Re-weld, evacuate add liquid again
No
If the failure is solved after add liquid
No
If the connecting pipe exists starving phenomenon
Yes
Replace the connecting pipe
No
Change the capillary assembly and see if the failure is solved
No
Contact with technique personnel of head office
Leakage testing order
Copper nuts
Needle valve
Equipped pipe
Condenser
Evaporator

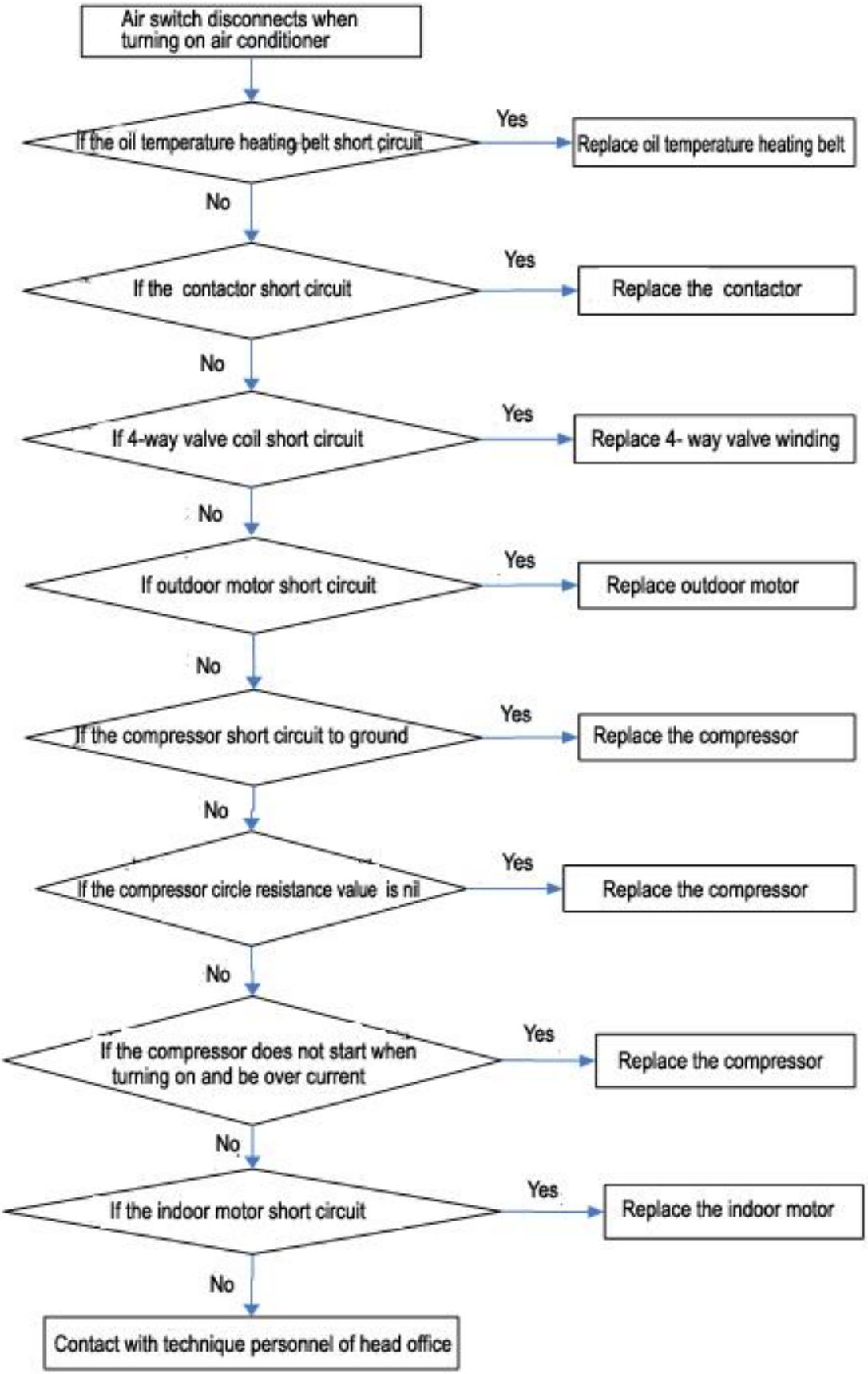

Heating effect is poor
Electric heating does not open as it is supposed to
Yes
If there is output of relay on control board
No
Replace the controller
Yes
Replace the electric heater
No
Indoor filter is blocked or not
Yes
Clean and wash the filter
No
Project design and installation is reasonable or not
No
Amendment
Yes
If the indoor unit shutdown frequently
Yes
If position of indoor room temp. is incorrect or resistance value is deviation
Yes
Adjust position of sensor or replace it
No
If motor or fan blade is not fixed firmly
Yes
Re-fixed again
No
If outdoor air blade is fragile
Yes
Replace the air blade
No
If outdoor fan motor stops
Yes
Check if the fan output on control board is normal
No
Replace the control board
Yes
Replace the fan capacitor if failure is solved or not
No
Replace the motor
No
If outdoor ventilation is undesirable
Yes
Improve or strength ventilation
No
If outdoor heat exchanger be blocked
Yes
Clean and wash the heat exchanger
No
Freezing thick frost but does not defrost
Yes
If defrosting sensor exists malfunction
Yes
Replace defrosting sensor
No
Replace control board
No
If freezing and defrosting incompletely
Yes
Contact with technique personnel of head office
No
If capillary assembly exists freezing block phenomenon
Yes
Replace capillary assembly
No
If low pressure lower than normal value
Yes
Inspect leakage and re-weld, add liquid again
No
Evacuation and add liquid, if the failure be solved or not
No
If the connecting pipe exists starved phenomenon
Yes
Replace connecting pipe
No
Contact with technique personnel of head office
Needle valve
Connecting pipe
Condenser
Eveporator

Abnormal sound or vibration




Abnormal sound or serious vibration of outdoor unit
If the outdoor unit be fixed firmly
No
Re-fix
Yes
If it is sound from collision of plates
Yes
Fix the plate
No
If it is sound from the plate resonant
No
Add damp block or other object
Yes
If it is the sound from pipes route collision
Yes
Adjust pipes route
No
If there is abnormal object in the unit
Yes
Take out the abnormal object
No
If the fan loosen or broken
Yes
Re-fix or replace fan
No
If the outdoor motor be fixed tightly
No
Re-fix it
Yes
If the motor come out abnormal sound
Yes
Replace the motor
No
If it is air flow sound or sound from the compressor
Yes
No
If there is anti-vibration measure on the bottom of outdoor unit feet
No
Add anti-vibration measure
Yes
Contact with technique personnel of head office

Air switch action when air conditioner starting up



Air conditioner water leakage

