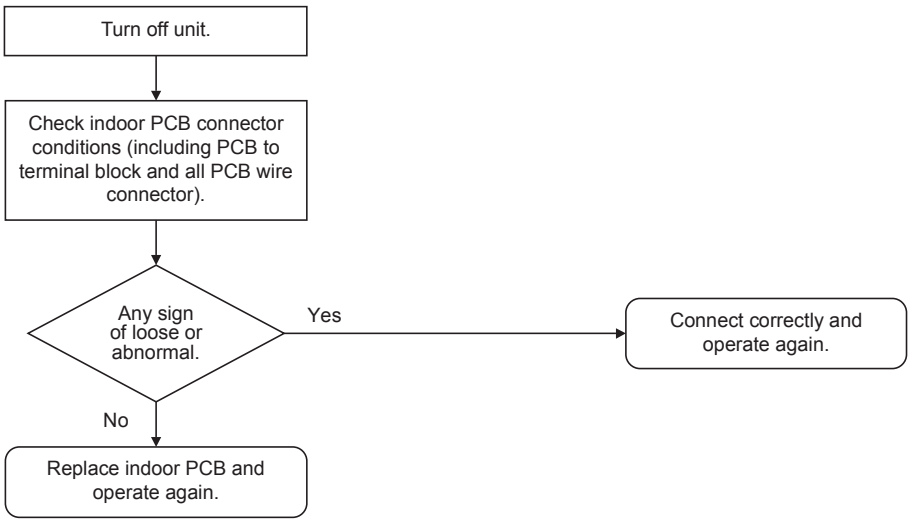
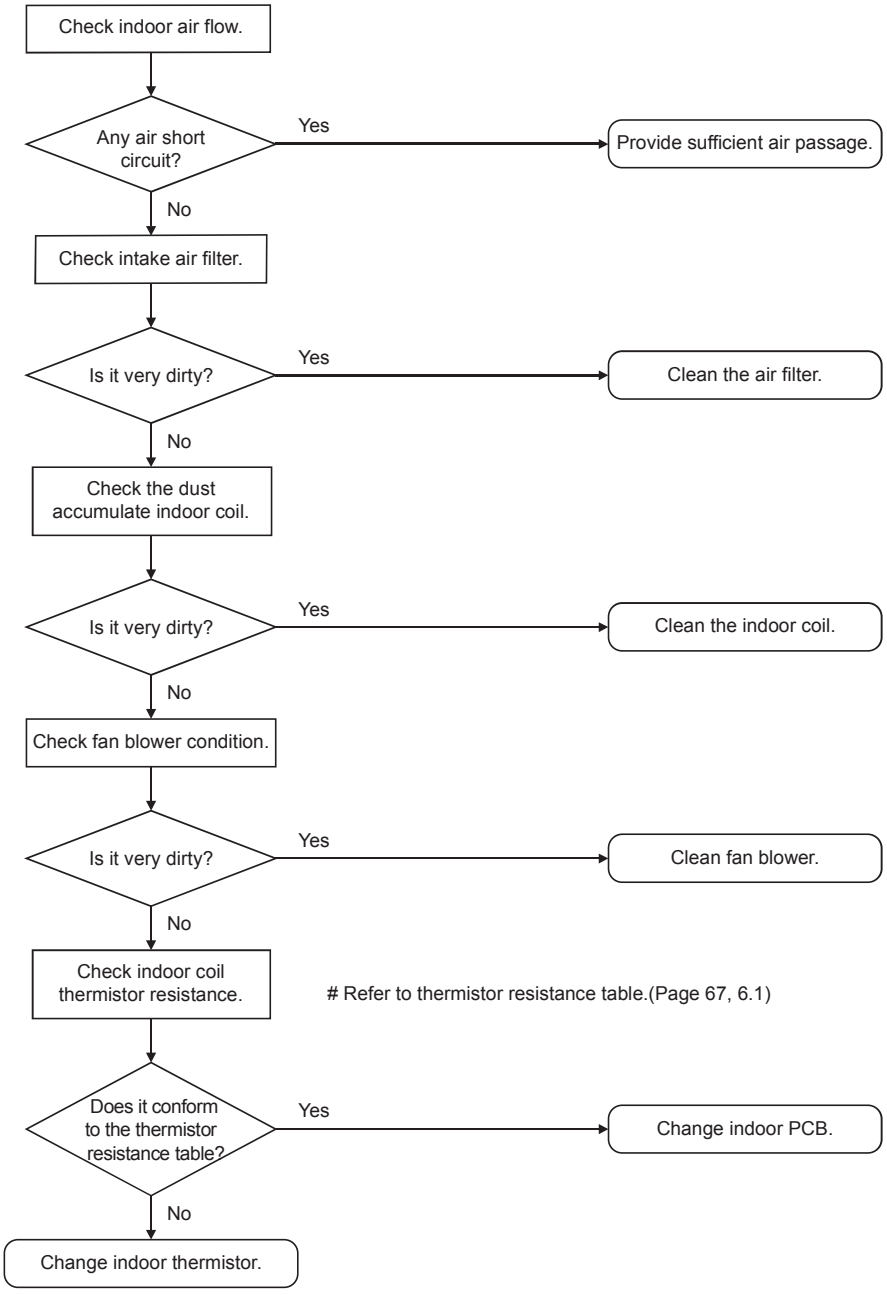
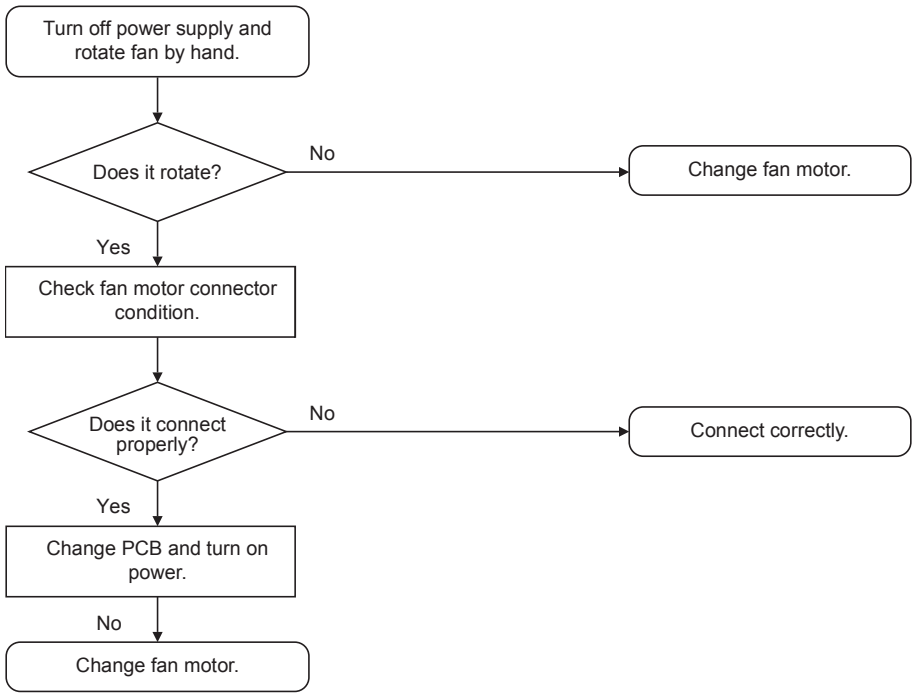
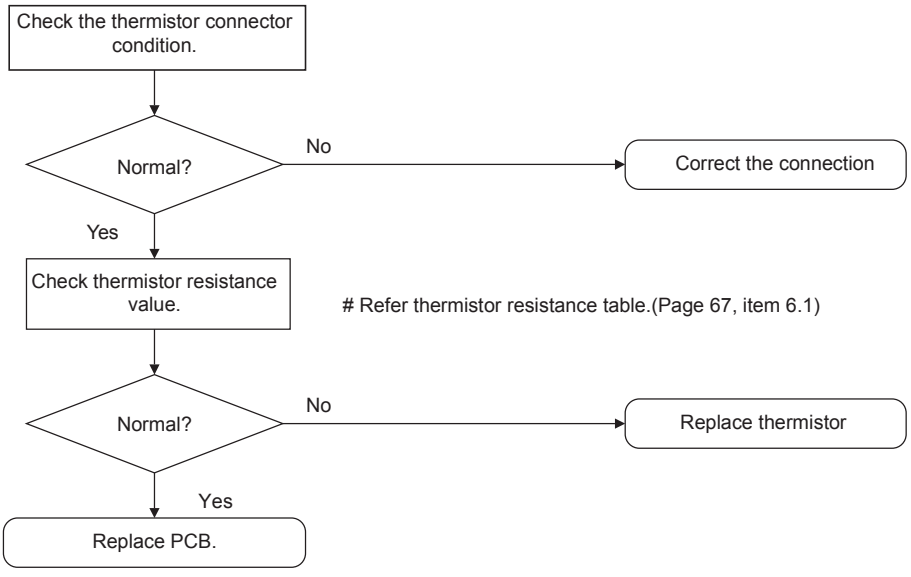
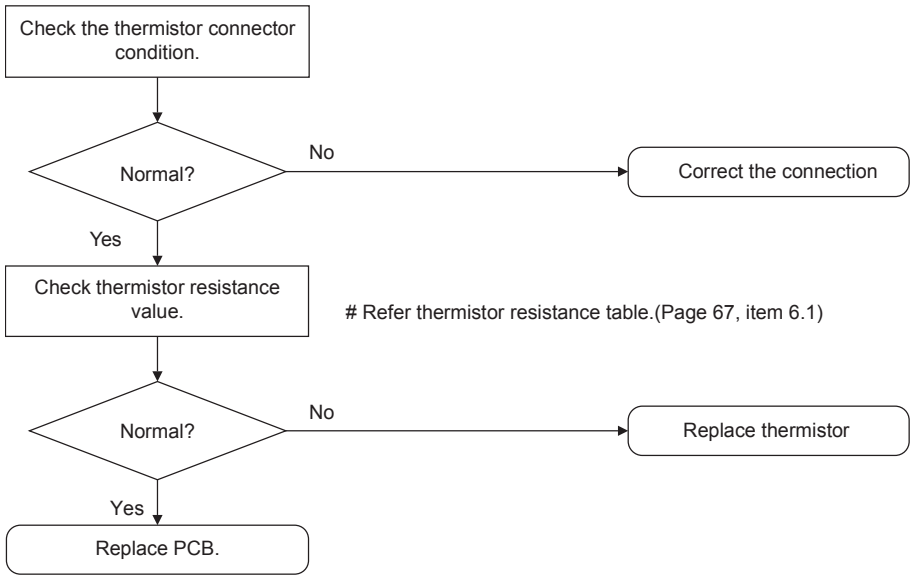
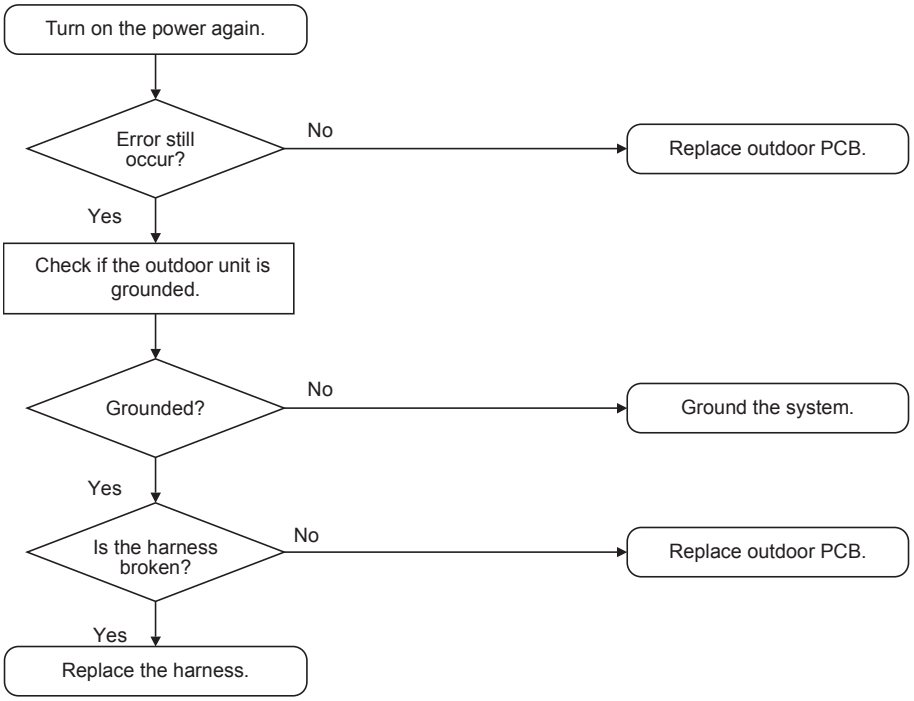
A1	
Description	INDOOR PCB ABNORMALITY
Possible Root cause	1. Faulty indoor PCB. 2. Faulty connector connection at indoor.
Troubleshooting	

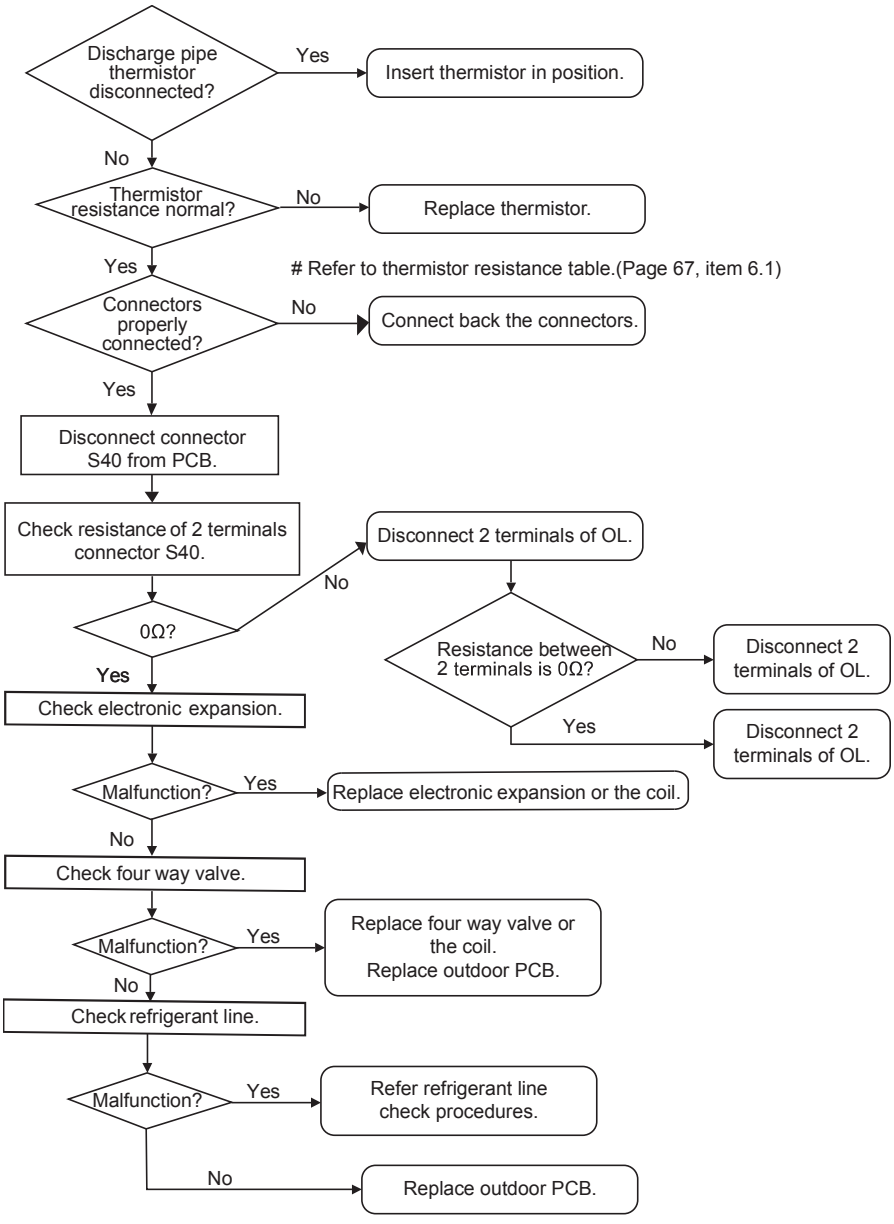
A5	
Description	ANTIFREEZE PROTECTION OR HIGH PRESSURE CONTROL
Possible Root cause	1. Indoor air filter, heat exchanger block due to dust accumulation. 2. Indoor air short circuit. 3. Indoor coil thermistor faulty. 4. Indoor PCB faulty. 5. Fan blower dirty.
Troubleshooting	

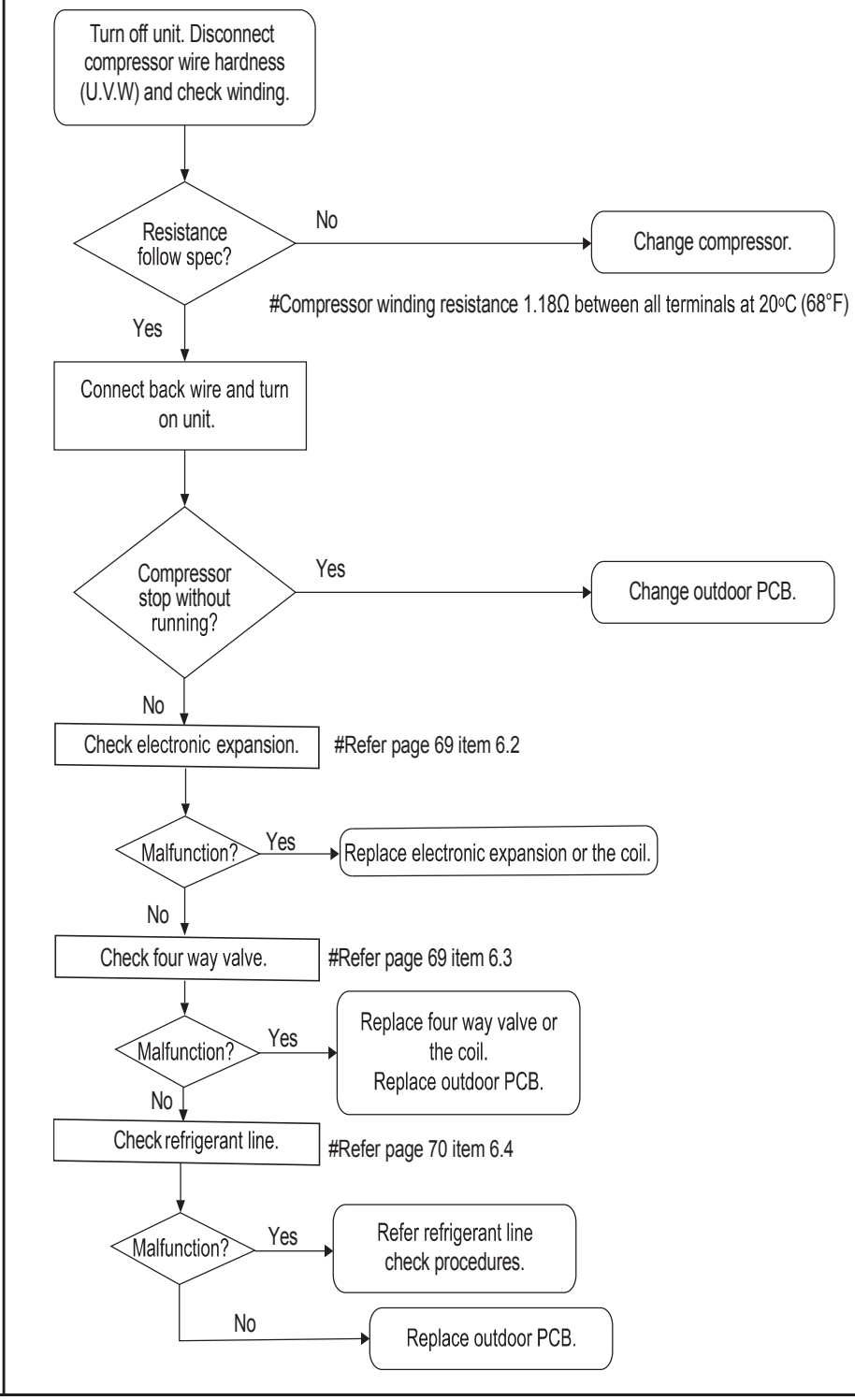
A6	
Description	INDOOR FAN MOTOR ABNORMALITY
Possible Root cause	1. Indoor fan motor winding short, or the motor lead wire broken. 2. Indoor PCB faulty.
Troubleshooting	

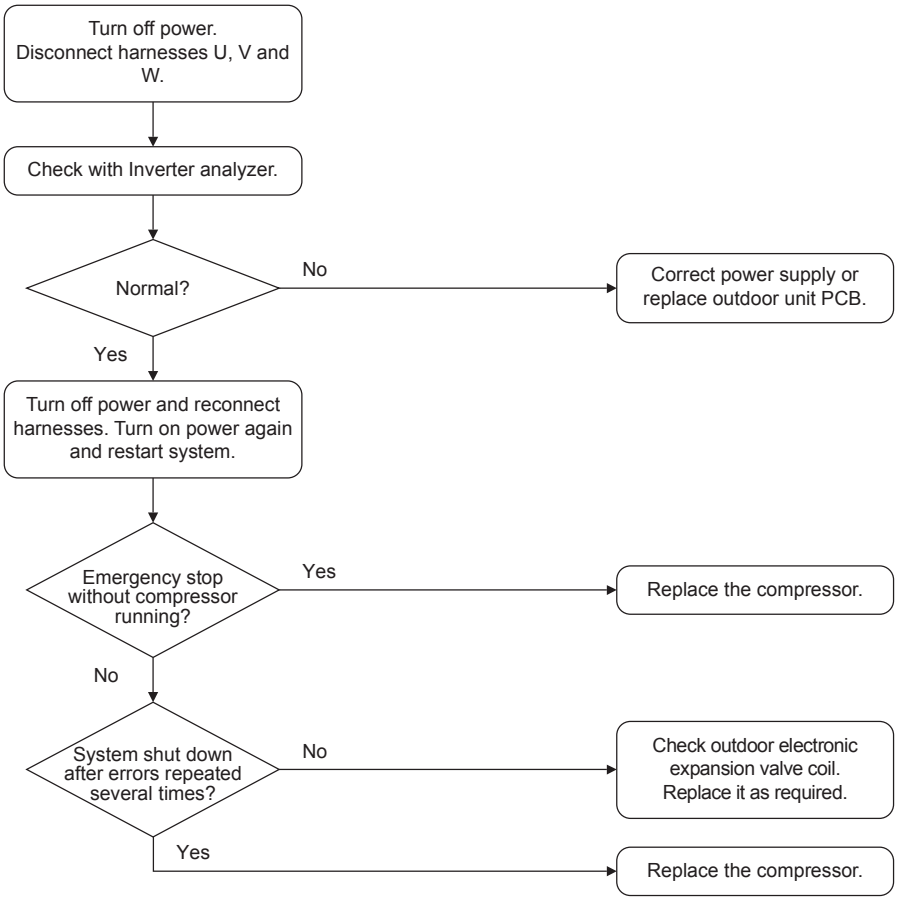
C4	
Description	INDOOR HEAT EXCHANGER THERMISTOR ABNORMALITY
Possible Root cause	1. Thermistor, connector faulty. 2. Indoor PCB faulty.
Troubleshooting	 ***Remark:*** *Refer Thermistor resistance check procedure in Appendix A.(Page 67, item 6.1)*

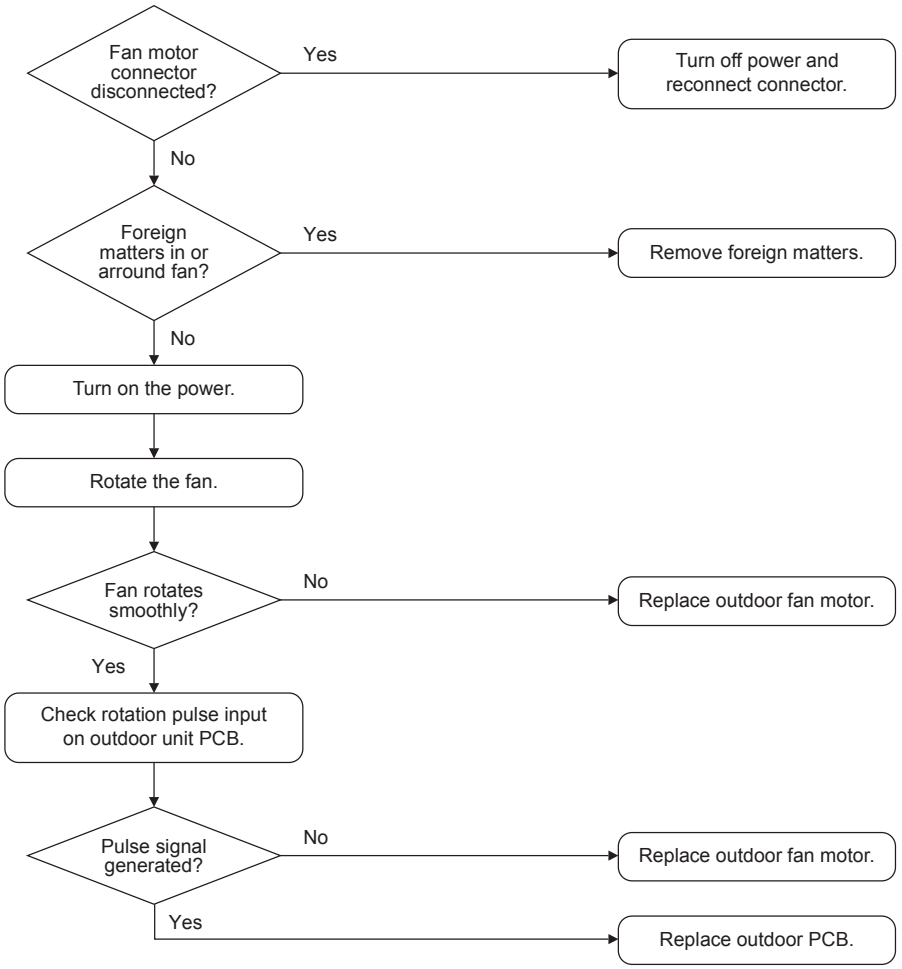
C9	
Description	INDOOR ROOM THERMISTOR ABNORMALITY
Possible Root cause	1. Thermistor, connector faulty. 2. Indoor PCB faulty.
Troubleshooting	

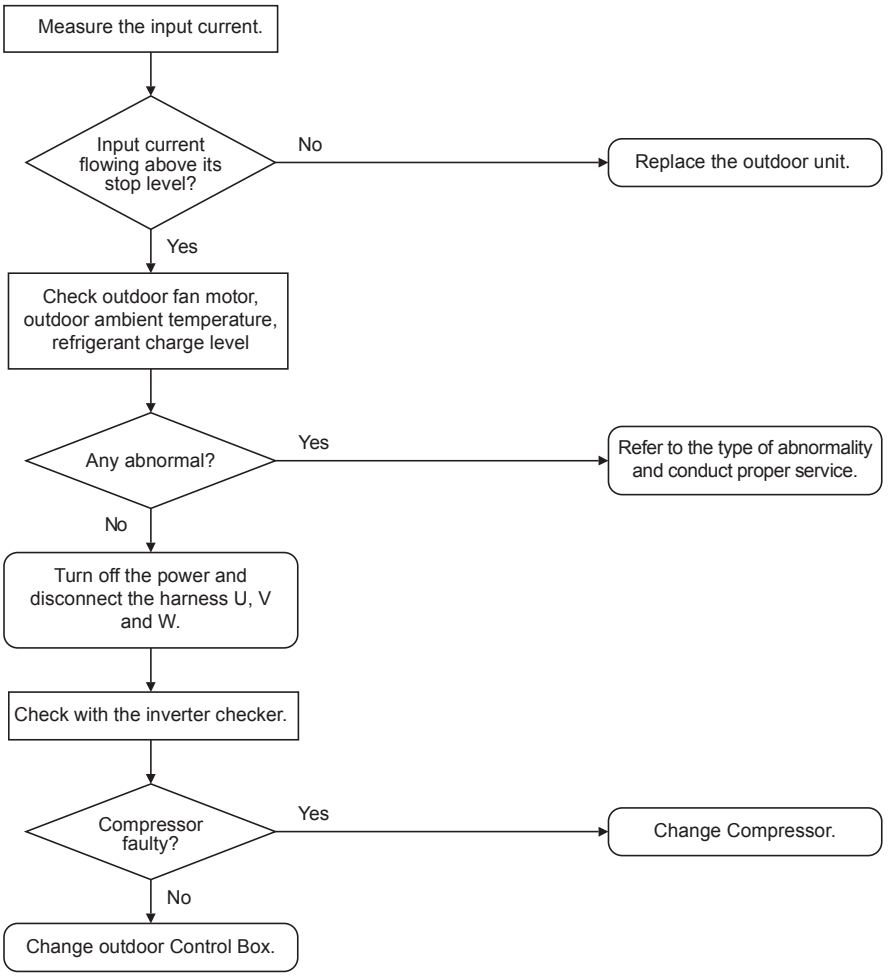
E1	
Description	OUTDOOR PCB ABNORMALITY
Possible Root cause	1. Micro Controller program run-away due to external factor such as Noise, Momentary voltage drop, Momentary power failure. 2. Damage of EEPROM. 3. Faulty outdoor unit PCB. 4. Broken hardness between PCB.
Troubleshooting	

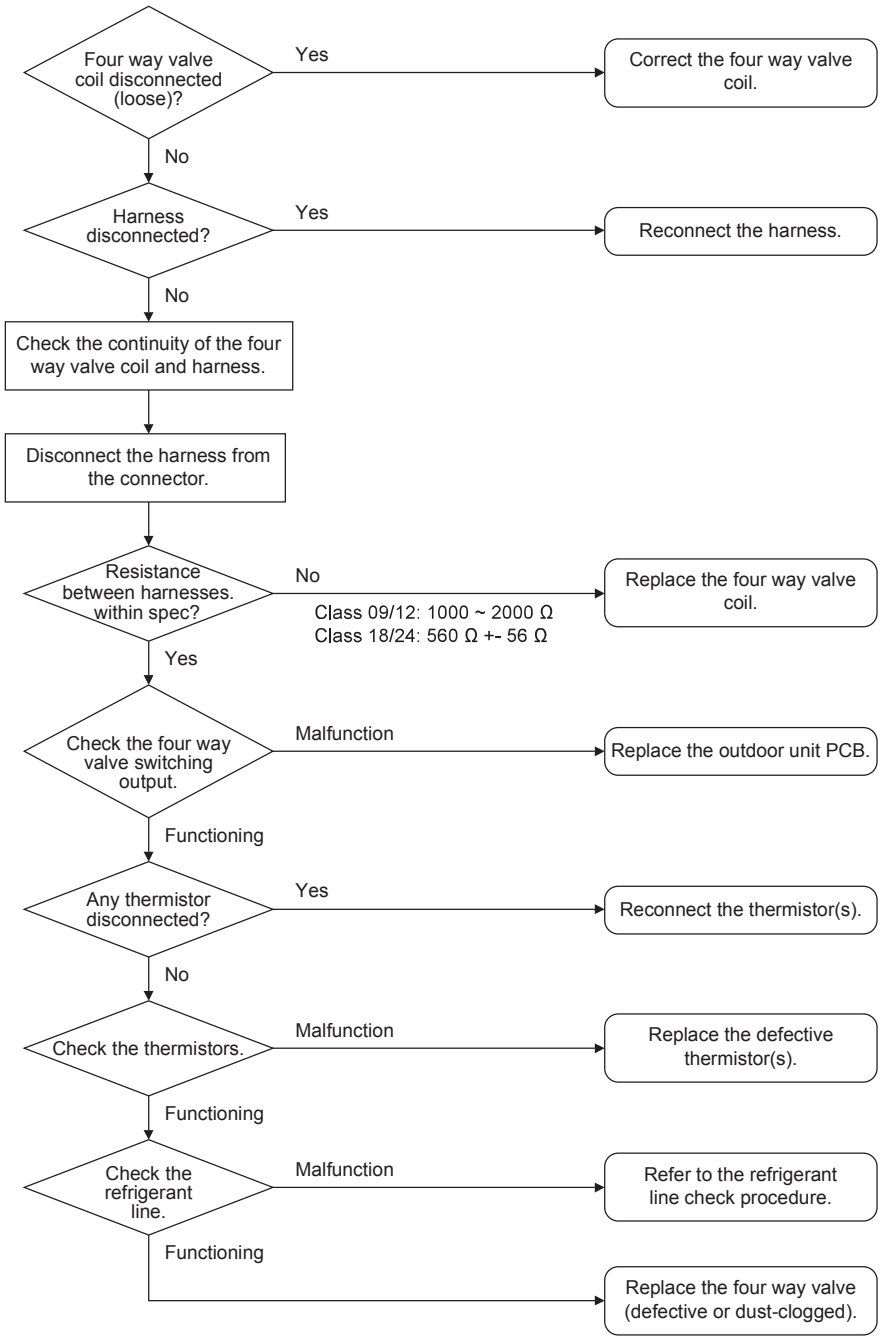
E5	
Description	COMPRESSOR OVERLOAD
Possible Root cause	1. Refrigerant Shortage. 2. 4 way valve malfunction. 3. Stop valve malfunction. 4. Outdoor unit PCB defective. 5. Water mixed in refrigerant. 6. Electronic expansion valve defective. 7. Disconnection of discharge pipe thermistor. 8. Faulty discharge pipe thermistor. 9. Disconnection of connector S40. 10. Electronic expansion valve or coil malfunction. 11. Disconnection of 2 terminals of OL.
Troubleshooting	 ***Remark:*** *Please refer to Appendix A for Electronic expansion valve (page 69,item 6.2), four way valve (page 69,item 6.3) and refrigerant line checking procedures (page 70,item 6.4).*

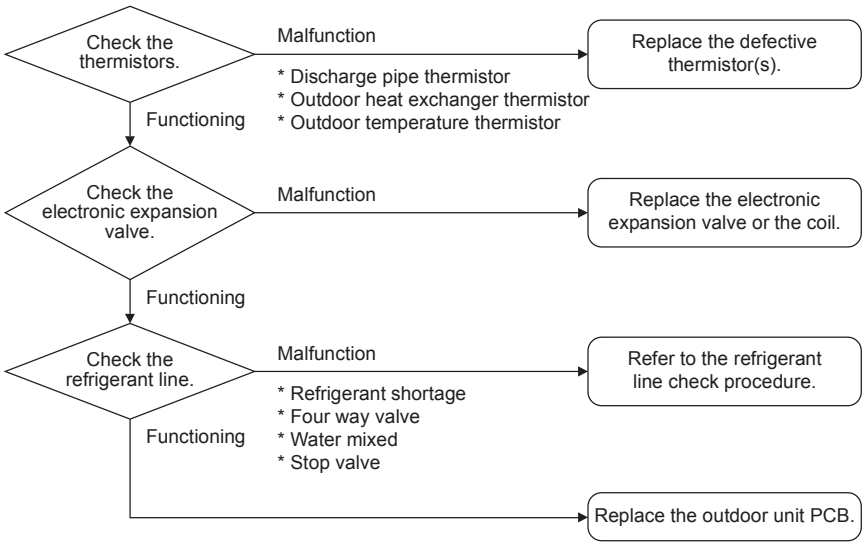
E5	
Description	COMPRESSOR OVERLOAD
Possible Root cause	1. Refrigerant Shortage. 2. 4 way valve malfunction. 3. Electronic expansion valve defective. 4. Outdoor unit PCB defective. 5. Water mixed in refrigerant.
Troubleshooting	

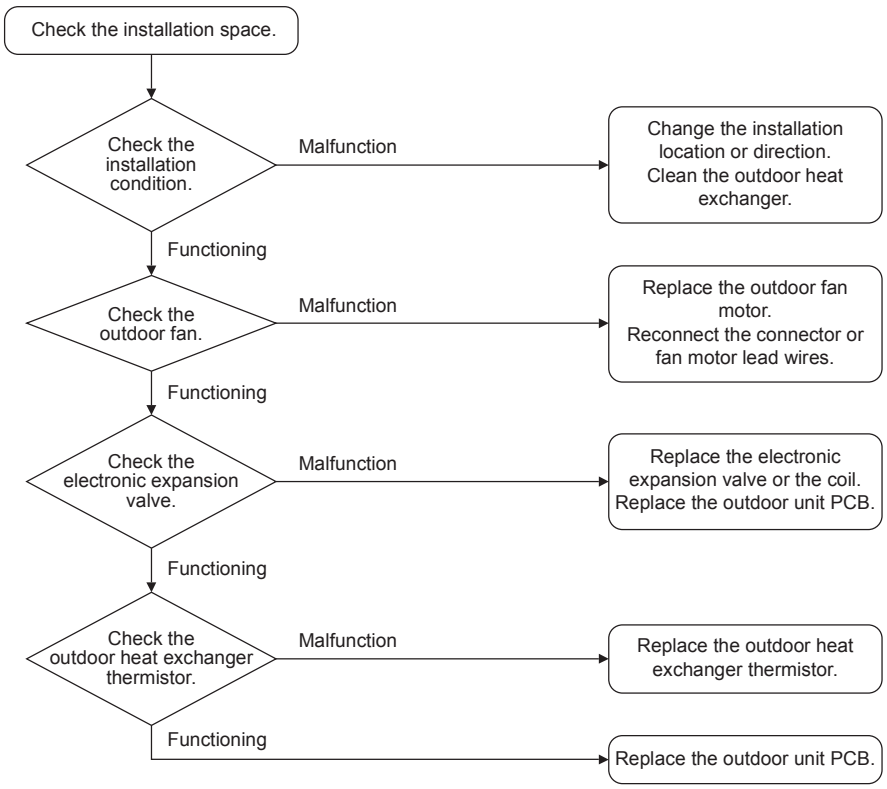
E6	
Description	COMPRESSOR LOCK/START-UP ABNORMALITY
Possible Root cause	1. Compressor locked. 2. Compressor harness disconnect.
Troubleshooting	

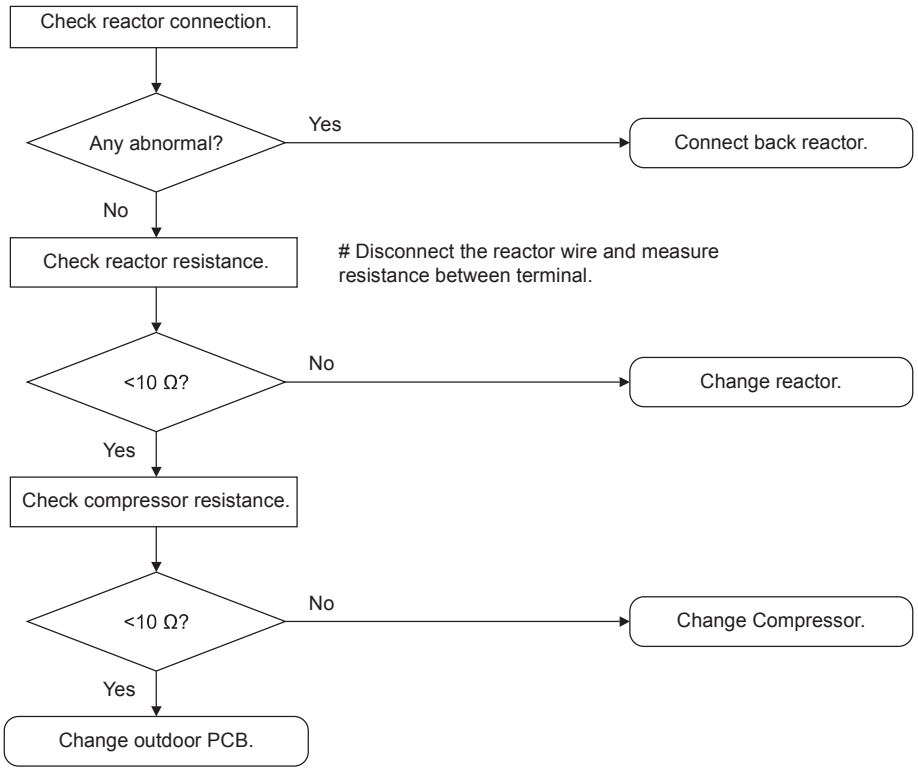
E7	
Description	OUTDOOR FAN MOTOR LOCK
Possible Root cause	1. Fan motor breakdown. 2. Harness or connector disconnected between fan motor and PCB or in poor contact. 3. Foreign matter stuck in fan. 4. Defective outdoor unit PCB.
Troubleshooting	 ***Remark:*** *Refer Appendix A for rotation pulse check.(Page 71, item 6.5)*

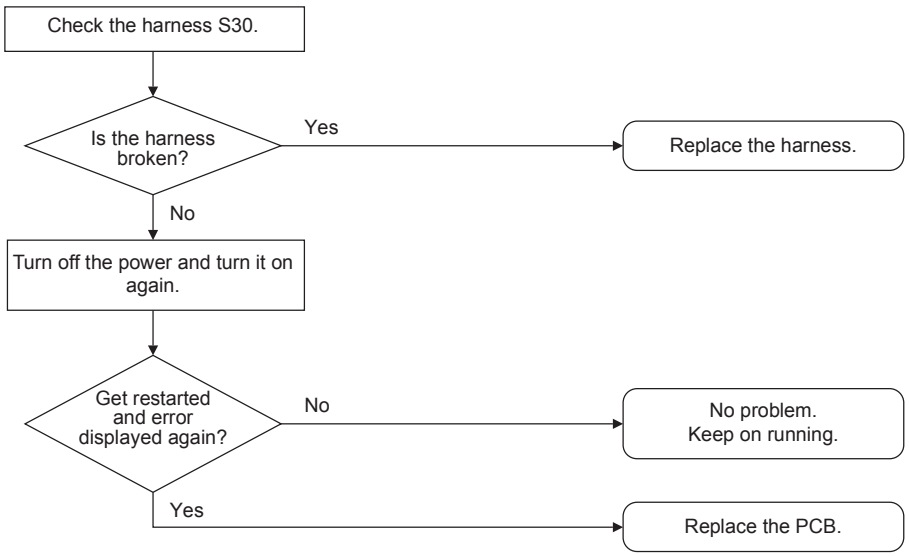
E8	
Description	AC INPUT OVER CURRENT
Possible Root cause	1. Over current due to compressor failure. 2. Over current due to defective outdoor unit PCB. 3. Over current due to defective power transistor. 4. Over current due to short-circuit.
Troubleshooting	

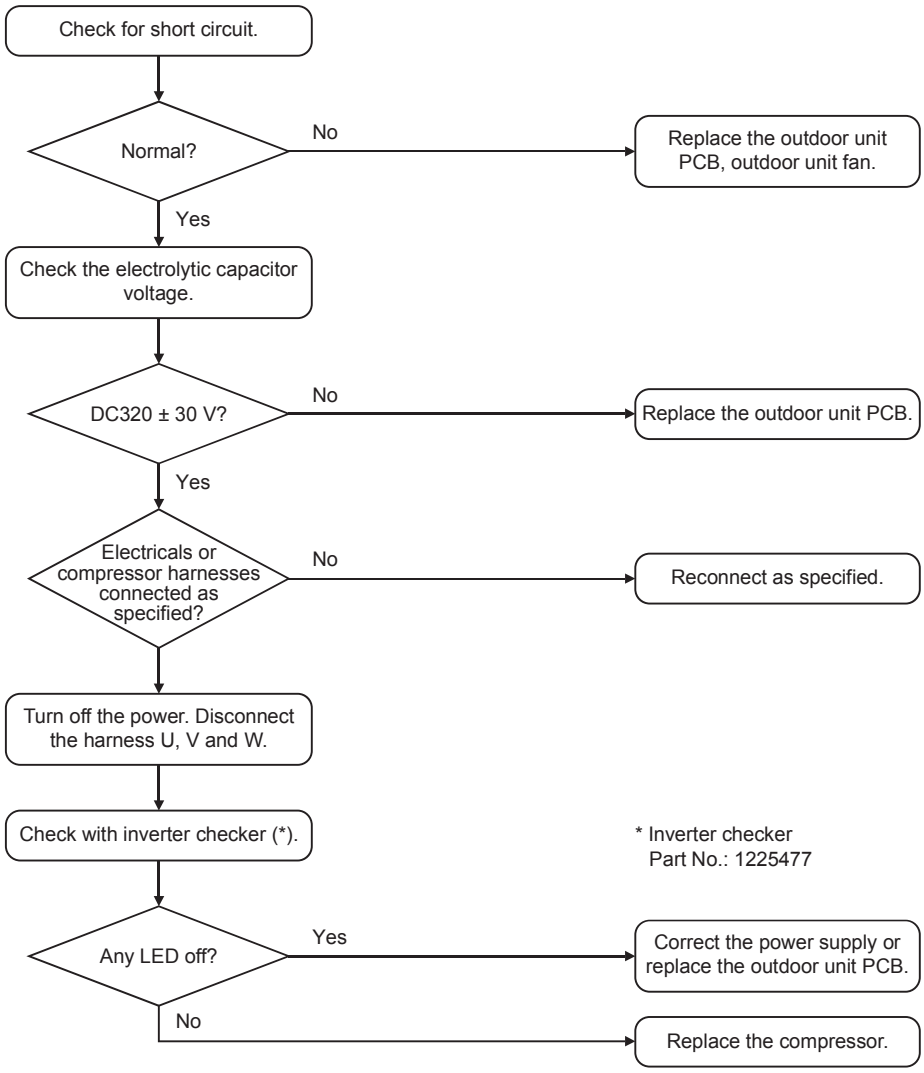
EA	
Description	4 WAY VALVE ABNORMALITY
Possible Root cause	1. Thermistor defective. 2. 4 way valve defective. 3. Outdoor PCB defective. 4. Insufficient gas. 5. Foreign substance mixed in refrigerant. 6. Stop valve defective. 7. Disconnect of 4 way valve coil.
Troubleshooting	 ***Remark:*** *Refer to Appendix A for thermistor resistance checking procedures.(Page 67, item 6.1)* *Refer to Appendix A for Four way valve performance checking procedures.(Page 69, item 6.2)* *Refer to Appendix A for Inverter unit refrigerant check procedures.(Page 70, item 6.4)*

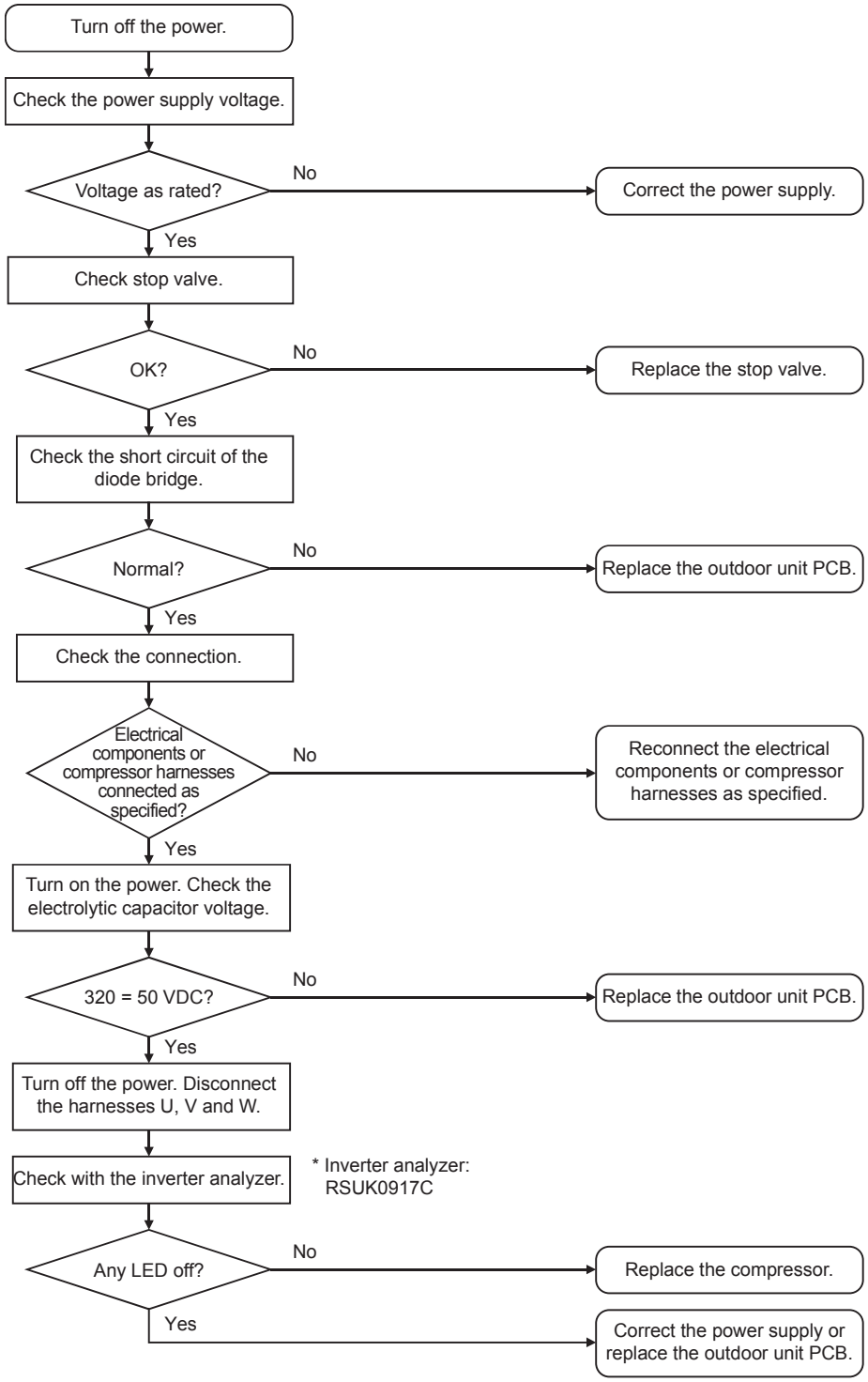
F3	
Description	DISCHARGE PIPE OVERHEAT
Possible Root cause	1. Refrigerant shortage. 2. Four way valve malfunctioning. 3. Discharge pipe thermistor defective. 4. Outdoor PCB defective. 5. Water mixed in the local piping. 6. EXV defective. 7. Stop Valve defective.
Troubleshooting	 ***Remark:*** *Refer to Appendix A for thermistor resistance checking procedures.(Page 67, item 6.1)* *Refer to Appendix A for Electronic Expansion Valve (EXV) checking procedures. (Page 69, item 6.2)* *Refer to Appendix A for Inverter unit refrigerant check procedures. (Page 70, item 6.4)*

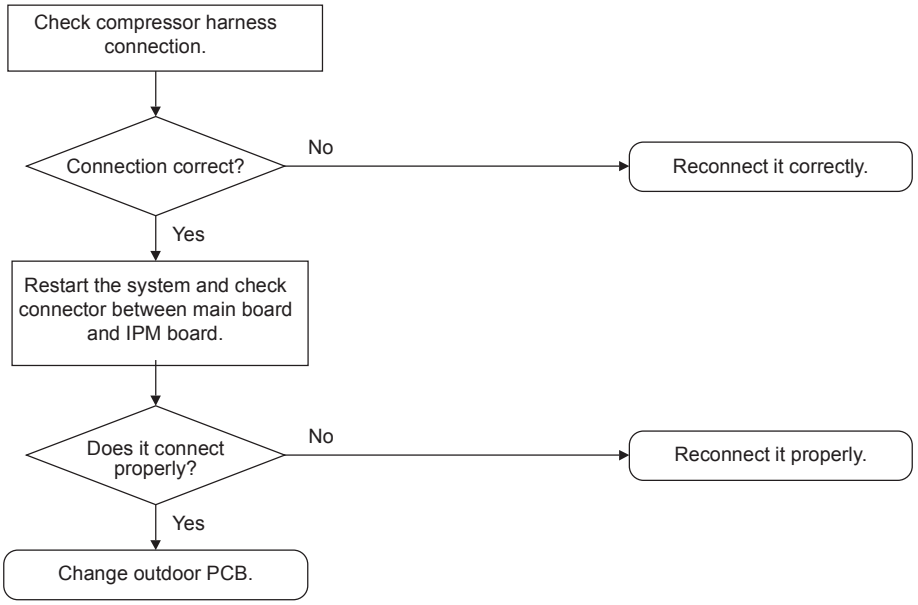
F6	
Description	HEAT EXCHANGER OVERHEAT
Possible Root cause	1. The installation space is not large enough. 2. Faulty outdoor fan motor. 3. Faulty EXV. 4. Faulty outdoor heat exchanger thermistor. 5. Faulty stop valve. 6. Dirty heat exchanger. 7. Unit overcharge. 8. Defective outdoor unit PCB.
Troubleshooting	 ***Remark:*** *Refer to Appendix A for thermistor resistance checking procedures.(Page 67, item 6.1)* *Refer to Appendix A for Electronic Expansion Valve (EXV) checking procedures. (Page 69, item 6.2)* *Refer to Appendix A for Inverter unit refrigerant check procedures. (Page 70, item 6.4)* *Refer to Appendix A for Installation condition check. (Page 71, item 6.6)*

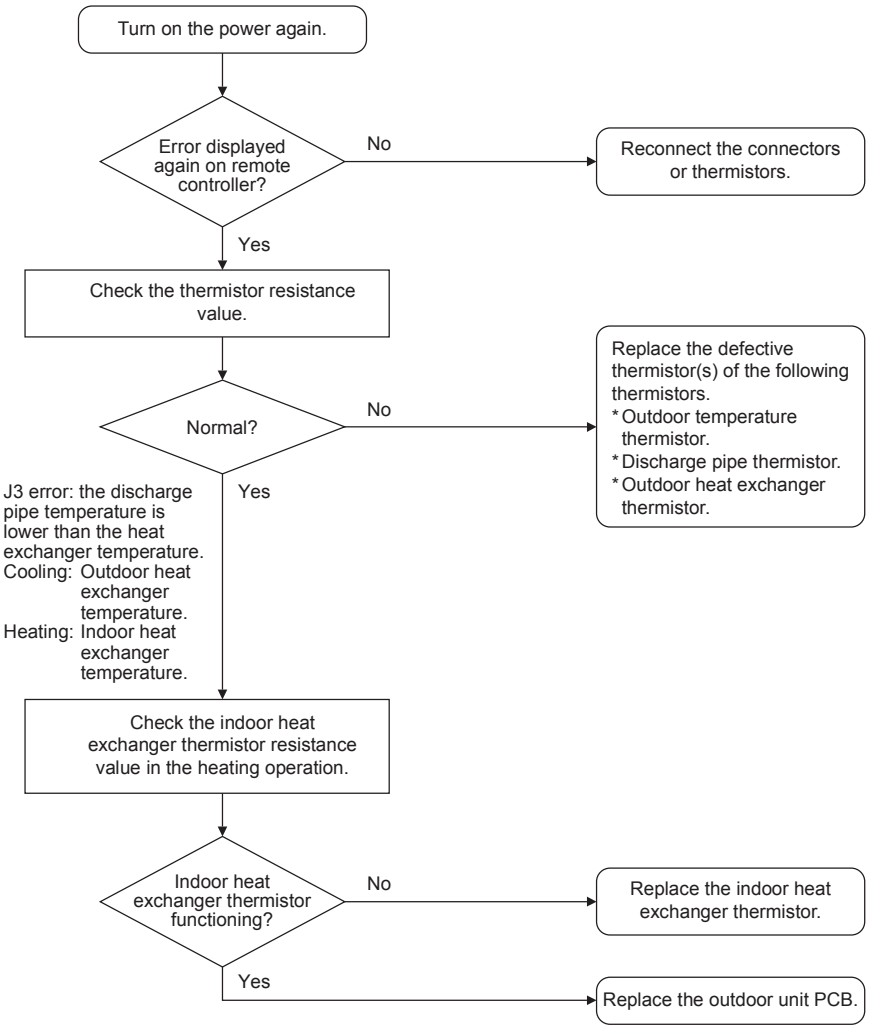
H0 (Class 18/24)	
Description	COMPRESSOR SENSOR SYSTEM ABNORMAL
Possible Root cause	1. Broken and disconnected harness. 2. Outdoor unit PCB defective. 3. Defective compressor.
Troubleshooting	

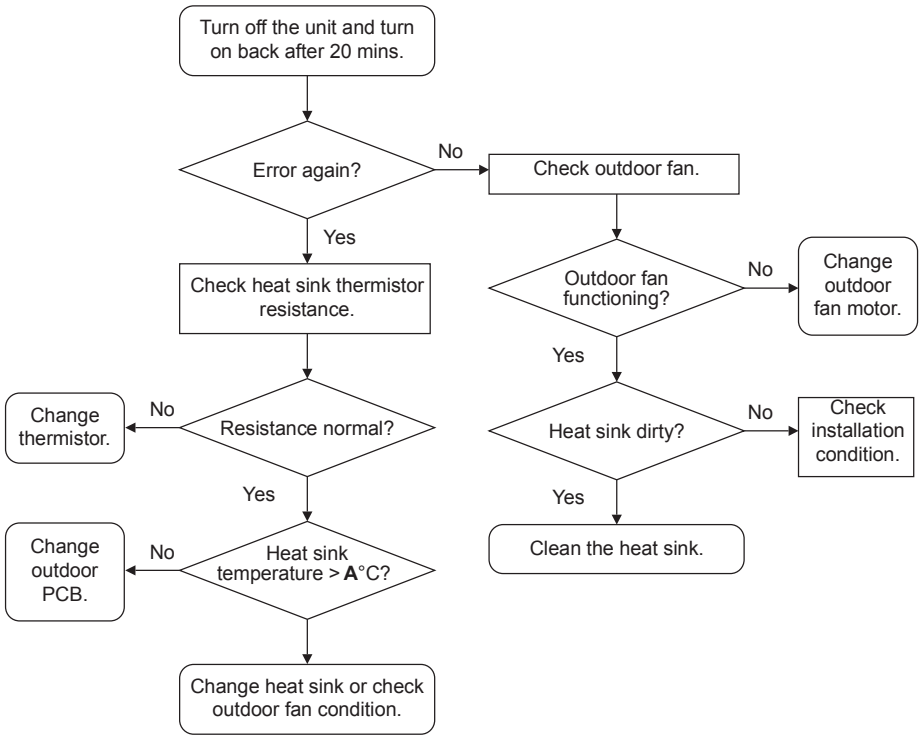
H0 (Class 09/12)	
Description	COMPRESSOR SENSOR SYSTEM ABNORMAL
Possible Root cause	1. Broken and disconnected harness. 2. Outdoor unit PCB defective.
Troubleshooting	

H6 (Class 09/12)	
Description	POSITION SENSOR ABNORMAL (COMPRESSOR)
Possible Root cause	1. Compressor relay cable disconnected. 2. Compressor itself defective. 3. Outdoor PCB defective. 4. Stop valve closed. 5. Input voltage out of specification.
Troubleshooting	

H6 (Class 18/24)	
Description	POSITION SENSOR ABNORMAL (COMPRESSOR)
Possible Root cause	1. Compressor relay cable disconnected. 2. Compressor itself defective. 3. Outdoor PCB defective. 4. Stop valve closed. 5. Input voltage out of specification
Troubleshooting	 ***Remark:*** *Refer to Appendix A for Diode bridge short circuit check procedures.(Page 72, item 6.8)*

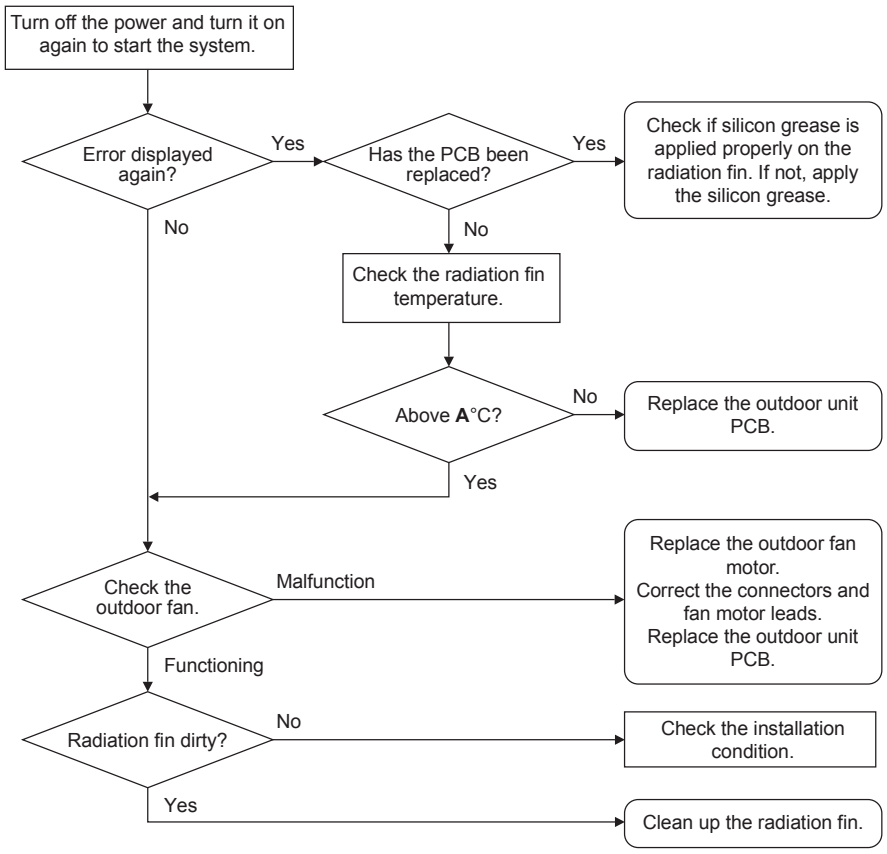
H8	
Description	AC CURRENT SENSOR ABNORMALITY
Possible Root cause	1. Internal wiring broken. 2. Outdoor unit PCB defective.
Troubleshooting	 ***Remark:*** *This error is only applicable for model Class 18/24.*

H9, J3, J6, P4	
Description	Thermistor or related abnormality **H9:** OUTDOOR AIR THERMISTOR ABNORMALITY **J3:** COMPRESSOR DISCHARGE PIPE THERMISTOR ABNORMALITY **J6:** OUTDOOR HEAT EXCHANGER THERMISTOR ABNORMALITY **P4:** HEAT SINK THERMISTOR ABNORMALITY
Possible Root cause	1. Disconnection of the connector for the thermistor. 2. Thermistor corresponding to the error code is defective. 3. Defective heat exchanger thermistor in the case of J3 error (outdoor heat exchanger thermistor in cooling operation, or indoor heat exchanger thermistor in heating operation). 4. Defective outdoor unit PCB.
Troubleshooting	 ***Remark:*** *Refer to Appendix A for thermistor resistance check procedures.(Page 67, item 6.1)*

L3	
Description	ELECTRICAL BOX TEMPERATURE RISE (COMPRESSOR OFF)
Possible Root cause	1. Fin temperature rise due to defective outdoor unit fan. 2. Fin temperature rise due to short circuit. 3. Fin thermistor defective. 4. Connector in poor contact. 5. Outdoor unit PCB defective.
Troubleshooting	

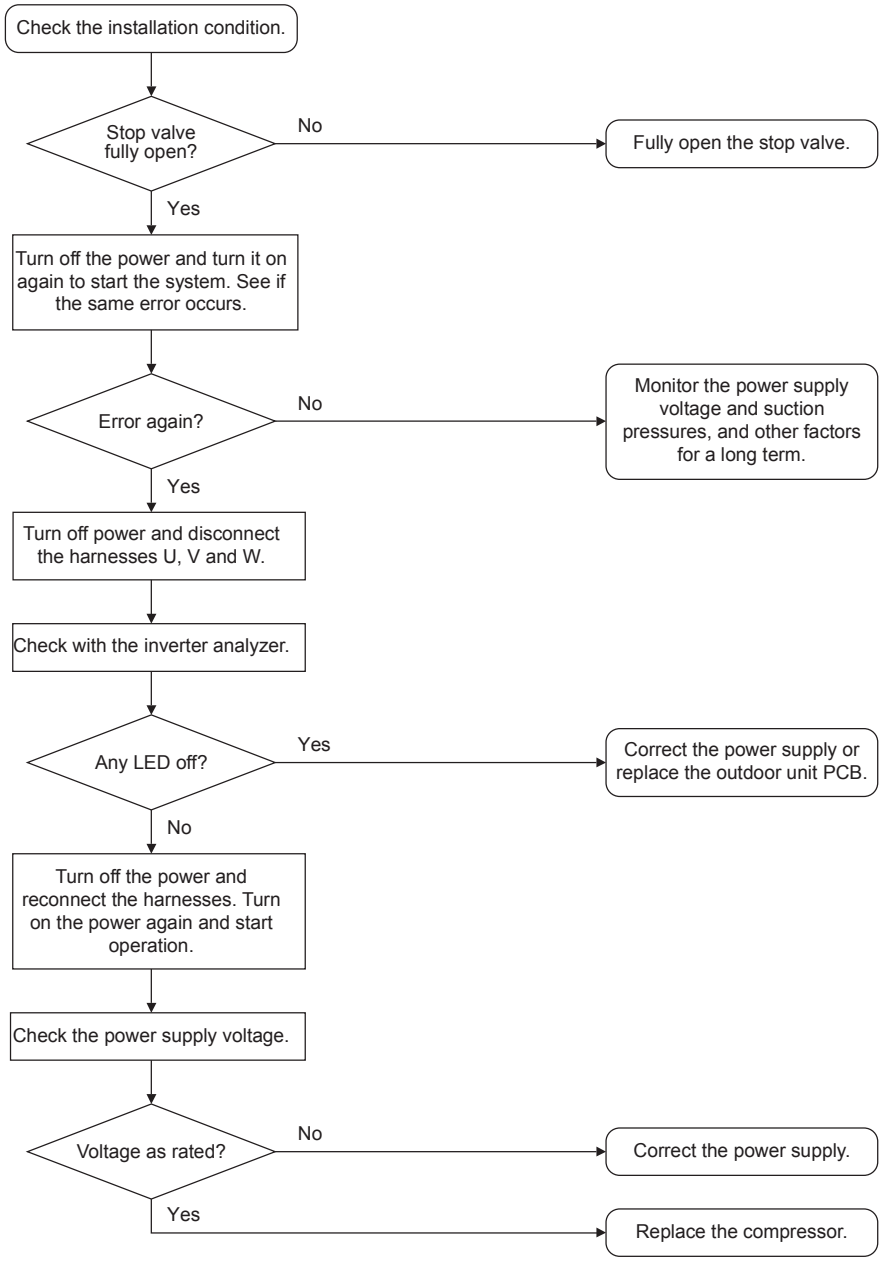
Models	A °C (°F)
Class 09/12	78 (172.4)
class 18/24	122 (251.6)

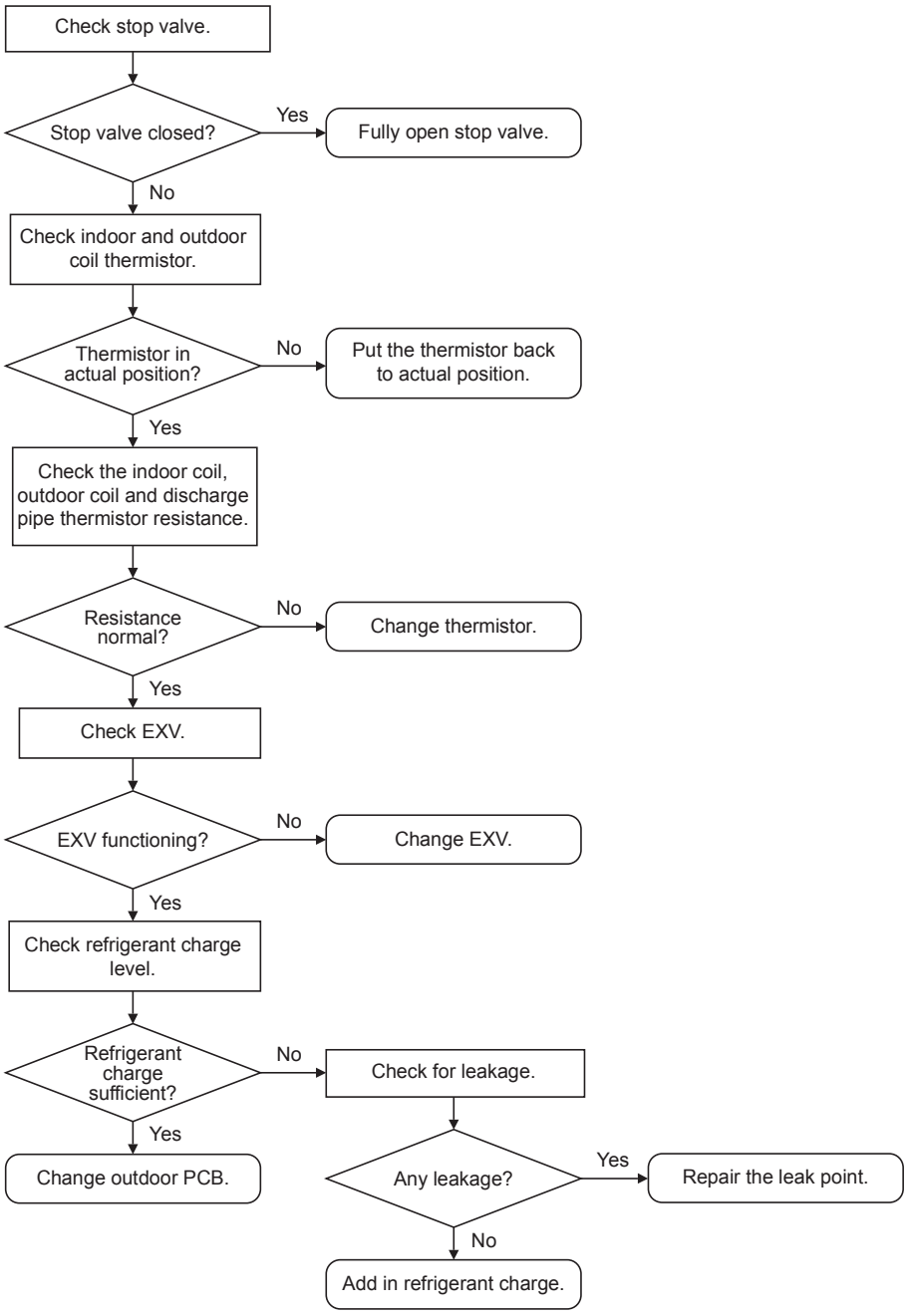
Remark:
Refer to Appendix A for thermistor resistance check procedures.(Page 67, item 6.1)
Refer to Appendix A for outdoor fan system check. (Page 72, item 6.7)
Refer to Appendix A for installation condition check. (Page 71, item 6.6)

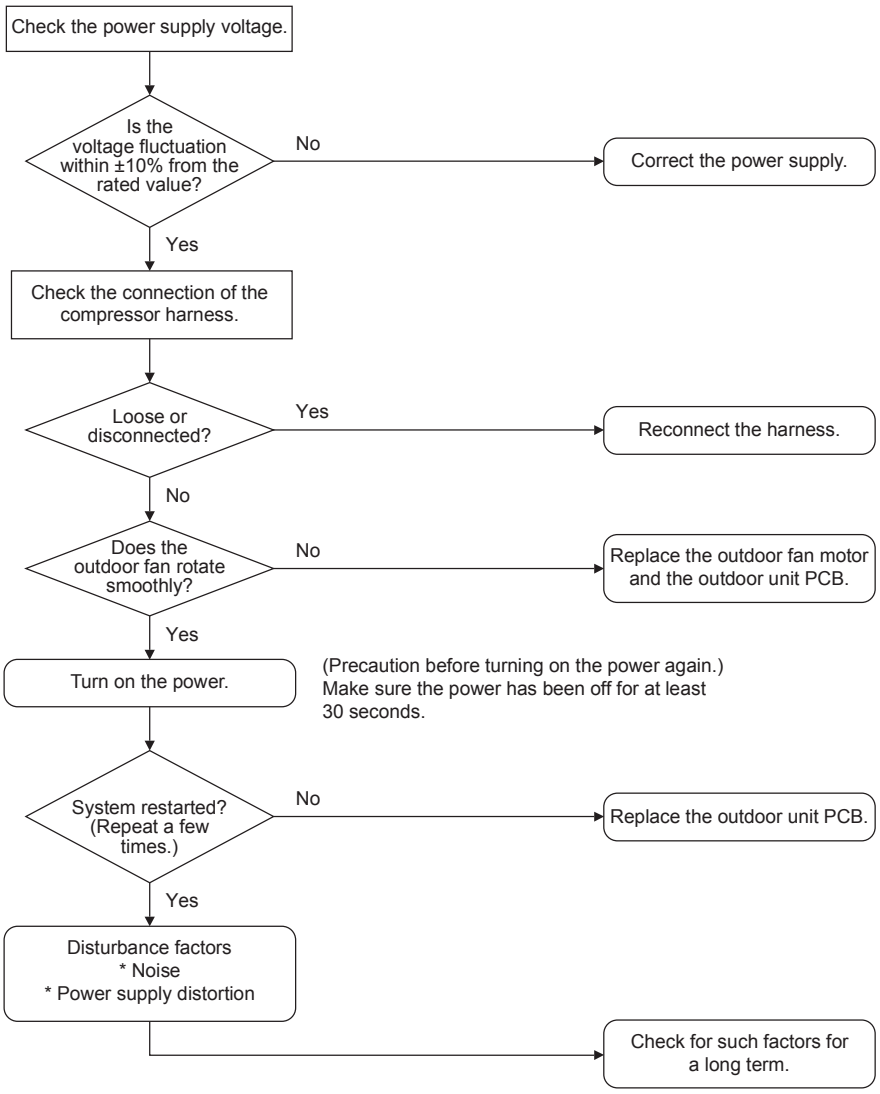
L4	
Description	Heat sink overheat
Possible Root cause	1. Fin temperature rise due to short circuit. 2. Fin temperature rise due to defective outdoor unit fan. 3. Fin thermistor defective. 4. Connector in poor contact. 5. Outdoor unit PCB defective. 6. Silicon grease is not applied properly on the radiation fin after replacing outdoor unit PCB.
Troubleshooting	

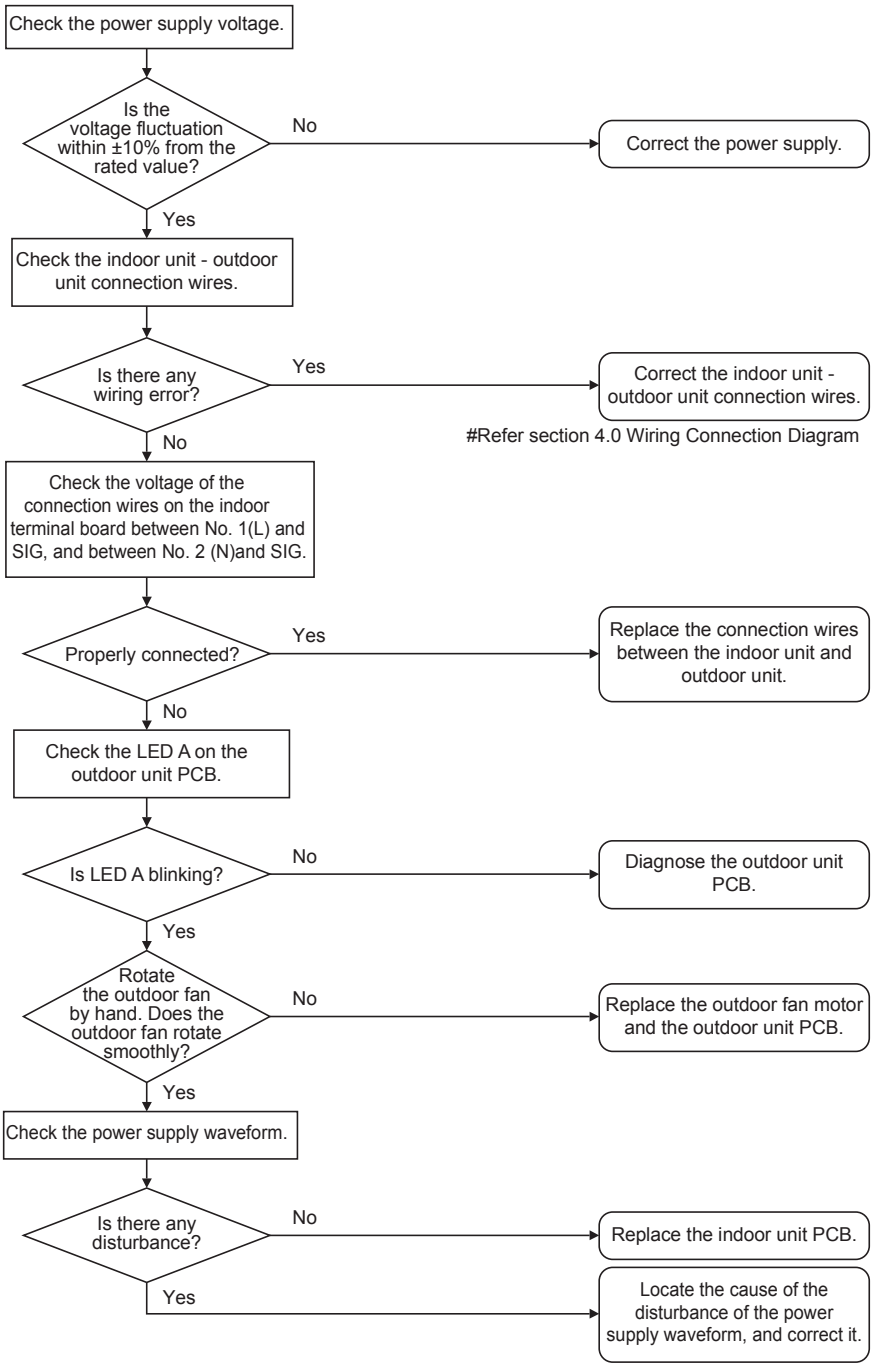
Models	A °C (°F)
Class 09/12	93 (199.4)
class 18/24	85 (185)

Remark:
Refer to Appendix A for outdoor fan system check.(Page 72, item 6.7)
Refer to Appendix A for installation condition check. (Page 71, item 6.6)

L5	
Description	IPM ABNORMALITY
Possible Root cause	1. Over current due to defective power transistor. 2. Over current due to wrong internal wiring. 3. Over current due to abnormal supply voltage. 4. Over current due to defective PCB. 5. Error detection due to defective PCB. 6. Over- current due to closed stop valve. 7. Over current due to compressor failure. 8. Over current due to poor installation condition. 9. Connection between main board and IPM board is not properly connect.
Troubleshooting	 ***Remark:*** *Refer to Appendix A for installation condition check. (Page 71, item 6.6)*

U0	
Description	INSUFFICIENT GAS
Possible Root cause	1. Disconnection of the discharge pipe thermistor, indoor or outdoor heat exchanger,room or outdoor temperature thermistor. 2. Closed stop valve. 3. Refrigerant shortage (refrigerant leakage). 4. Poor compression performance of compressor. 5. Defective electronic expansion valve.
Troubleshooting	 ***Remark:*** *Refer to Appendix A for thermistor resistance checking procedures.(Page 67, item 6.1)* *Refer to Appendix A for electronic expansion device checking procedures.(Page 69, item 6.2)*

U2	
Description	DC VOLTAGE OUT OF RANGE
Possible Root cause	1. Power supply voltage is not as specified. 2. Defective DC voltage detection circuit. 3. Defective over-voltage detection circuit. 4. Defective PAM control part. 5. Disconnection of compressor harness 6. Short circuit inside the fan motor winding. 7. Noise. 8. Momentary drop of voltage. 9. Momentary power failure. 10. Defective outdoor unit PCB.
Troubleshooting	

U4	
Description	COMMUNICATION ABNORMALITY
Possible Root cause	1. Faulty outdoor unit PCB. 2. Faulty indoor unit PCB. 3. Indoor unit – outdoor unit signal transmission error due to wiring error. 4. Indoor unit – outdoor unit signal transmission error due to disturbed power supply waveform. 5. Indoor unit – Outdoor unit signal transmission error due to breaking of wire in the connection wires between the indoor and outdoor units
Troubleshooting	 ***Remark:*** *Refer to Appendix A for power supply waveform check procedures.(Page 73, item 6.9)*

UA	
Description	INSTALLATION ABNORMALITY
Possible Root cause	1. Wrong models interconnected. 2. Wrong indoor unit PCB mounted. 3. Indoor unit PCB defective. 4. Wrong outdoor unit PCB mounted or defective.
Troubleshooting