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# LG Room Air Conditioner

## ***SERVICE MANUAL***

***MODEL: HBLG8003R, LB8000ER, LW8000ER, HBLG1003R, LWHD1006R, L1006R***

### **CAUTION**

- BEFORE SERVICING THE UNIT, READ THE SAFETY PRECAUTIONS IN THIS MANUAL.
- ONLY FOR AUTHORIZED SERVICE PERSONNEL.



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**Safety  
Precautions**



**Precautions**















To prevent injury and property damage, follow these instructions. Incorrect operation due to ignoring instructions might cause harm or damage, the seriousness of which is indicated by the following symbols.

	<b>WARNING</b> This symbol shows the possibility of death or serious injury.
	<b>CAUTION</b> This symbol indicates the possibility of injury or damage to property.

	<b>Never Do This</b>
	<b>Always Do This</b>

■ The following items are classified by these symbols.

 **WARNING** 

<p> <b>Plug in the power plug properly.</b></p> <ul style="list-style-type: none"> <li>• Doing so may cause electric shock or fire due to heat generation.</li> </ul>	<p> <b>Do not operate or stop the unit by inserting or pulling out the power plug.</b></p> <ul style="list-style-type: none"> <li>• Doing so may cause electric shock or fire due to heat generation.</li> </ul>	<p> <b>Do not damage or use an unspecified power cord.</b></p> <ul style="list-style-type: none"> <li>• Doing so may cause electric shock or fire.</li> <li>• If the supply cord is damaged, it must be replaced by the manufacturer, the manufacturer's service agent, or a similarly qualified person in order to avoid a hazard. (Y attachment)</li> </ul>
<p> <b>Do not modify power cord length or share the outlet with other appliances.</b></p> <ul style="list-style-type: none"> <li>• Doing so may cause electric shock or fire due to heat generation.</li> </ul>	<p> <b>Do not operate with wet hands or in damp environment.</b></p> <ul style="list-style-type: none"> <li>• Doing so may cause electric shock.</li> </ul>	<p> <b>Always plug into a grounded outlet.</b></p> <ul style="list-style-type: none"> <li>• No grounding may cause electric shock (See Installation Manual).</li> </ul>
<p> <b>Do not allow water to run into electric parts.</b></p> <ul style="list-style-type: none"> <li>• Doing so may cause failure of machine or electric shock.</li> </ul>	<p> <b>Always install air leakage breaker and a dedicated switching board.</b></p> <ul style="list-style-type: none"> <li>• Failure to install these may cause fire or electric shock accident.</li> </ul>	<p> <b>Unplug the unit if strange sounds, odors, or smoke comes from it.</b></p> <ul style="list-style-type: none"> <li>• Such a unit may pose a risk of fire or electric shock accident.</li> </ul>
<p> <b>Do not use the socket if it is loose or damaged.</b></p> <ul style="list-style-type: none"> <li>• Doing so may cause fire or electric shock.</li> </ul>	<p> <b>Do not open the entrance during operation.</b></p> <ul style="list-style-type: none"> <li>• It may cause electric shock.</li> </ul>	<p> <b>Keep firearms away.</b></p>
<p> <b>Do not use the power cord close to heating tools.</b></p> <ul style="list-style-type: none"> <li>• Doing so may cause fire or electric shock.</li> </ul>	<p> <b>Do not use the power cord near flammable gas or combustibles such as gasoline, benzene, thinner, etc.</b></p> <ul style="list-style-type: none"> <li>• Doing so may lead to an explosion or fire.</li> </ul>	

**WARNING**

**!** Ventilate before operating air conditioner when gas goes out.

**⊘** Do not disassemble or modify products randomly.

- Operating the air conditioner in the presence of gas vapors can lead to explosions and fire.
- Doing so may cause failure or electric shock.

**CAUTION**

**⊘** Never touch the metal parts of the unit when removing the filter.

- They are sharp and may cause injury.

**⊘** Do not clean the air conditioner with water.

- Water may enter the unit and degrade the insulation. It also may cause an electric shock.

**!** Operate only in a well ventilated area when using in the presence of a stove, etc.

- An oxygen shortage may otherwise occur.

**!** When cleaning the unit, first make sure the is off and the cord is unplugged.

- Since the fan rotates at high speed during operation, it may cause injury if activated while cleaning.

**⊘** Do not put a pet or house plant where it will be exposed to direct air flow.

- This could injure the pet or plant.

**⊘** Do not use appliance for special purpose such as climate control for animals or vegetables, precision machine, or conservation of art articles

- It may cause damage of animals or vegetables or loss of property.

**!** Stop operation in storm or hurricanes.

- Operation with windows opened may cause wetting of indoor and soaking of household furniture.

**!** Hold the plug by the head when taking it out.

- Improper handling may cause electric shock or damage.

**!** Turn off the main power switch when not using it for a long time.

- Doing so can prolong the life of the product.

**⊘** Do not place obstacles around the absorption inlet or output.

- Doing so may cause failure of appliance or accident.

**!** Ensure that an installation console of the outdoor appliance is not damaged due to extened use.

- If the previous air conditioner damaged the console, there is a risk of the new unit falling.

**!** Always insert filters securely. Clean them every two weeks.

- Operation without filters will cause failure.

**⊘** Do not use abrasives or strong detergent such as wax or thinner. Always use a soft cloth.

- Otherwise, the products appearance may be damaged due to change of product color or scratching of its surface.

**⊘** Do not place heavy object on the power cord and take care so that the cord is not pinched.

- Treating the power cord carelessly poses a danger of fire or electric shock.

**⊘** Do not drink water drained from air conditioner.

- It contains contaminants that would make you sick.

**!** If water enters the product, turn off the the power switch of the main body of appliance. Contact service center after taking the power-plug out from the socket.

**⊘** Do not direct airflow at room occupants only.

- This could damage your health.

# Dimensions

## Symbols Used in this Manual



This symbol alerts you to the risk of electric shock.



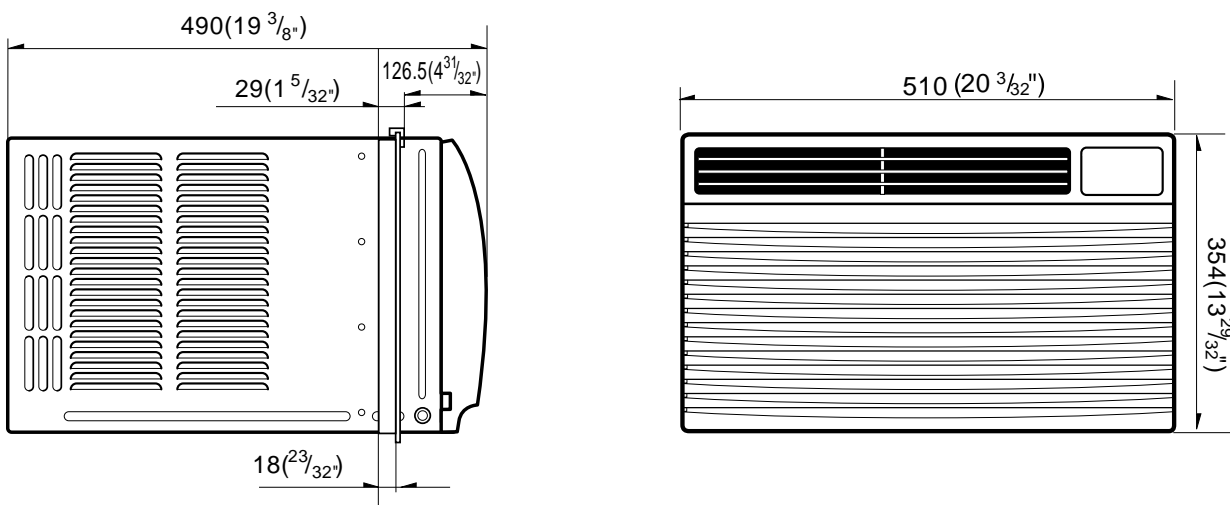
This symbol alerts you to hazards that could cause harm to the air conditioner.

**NOTICE**

This symbol indicates special notes.

## Outside Dimensions

unit: mm(inch)



# Product Specifications

ITEMS		MODELS	HBLG8003R	LB8000ER	LW8000ER	HBLG1003R LWHD1006R L1006R
POWER SUPPLY			1 $\emptyset$ , 115, 60Hz			
COOLING CAPACITY (Btu/h)			8,000	8,200	8,200	10,000
INPUT (W)			820	750	750	1,020
RUNNING CURRENT (A)			7.4	7.0	7.0	9.2
E.E.R (BTU/W·h)			9.8	10.9	10.9	9.8
OPERATING CONDITION	INDOOR (°C)		26.7(DB)*		19.4(WB)**	
	OUTDOOR (°C)		35(DB)*		23.9(WB)**	
REFRIGERANT (R-22) CHARGE			300g(10.6oz)	400g(14.1oz)	400g(14.1oz)	520g(18.3oz)
EVAPORATOR			2 ROW 11STACKS	3 ROW 11STACKS		
CONDENSER			2 ROW 16STACKS			
FAN, INDOOR			TURBO FAN			
FAN, OUTDOOR			PROPELLER TYPE FAN WITH SLINGER RING			
FAN SPEEDS, FAN/COOLING			3/3			
FAN MOTOR			6 POLES			
OPERATION CONTROL			REMOTE CONTROLLER			
ROOM TEMP. CONTROL			THERMISTOR			
AIR DIRECTION CONTROL			VERTICAL LOUVER (RIGHT & LEFT)			
			HORIZONTAL LOUVER (UP & DOWN)			
CONSTRUCTION			SLIDE IN-OUT CHASSIS			
PROTECTOR	COMPRESSOR		OVERLOAD PROTECTOR			
	FAN MOTOR		INTERNAL THERMAL PROTECTOR			
POWER CORD			(3 WIRE WITH GROUding)			
			ATTACHMENT PLUG (CORD-CONNECTED TYPE)			
DRAIN SYSTEM			DRAIN PIPE OR SPLASHED BY FAN SLINGER			
NET WEIGHT (lbs/kg)			62/28			71/32
OUTSIDE DIMENSION (W x H x D)	(inch)		20 <sup>3</sup> / <sub>32</sub> x 13 <sup>7</sup> / <sub>8</sub> x 19 <sup>3</sup> / <sub>8</sub>			
	(mm)		510 x 353 x 490			

\* DB:Dry Bulb

\*\* WB:Wet Bulb

# Installation

## Select the Best Location

1. To prevent vibration and noise, make sure the unit is installed securely and firmly.
2. Install the unit where the sunlight does not shine directly on the unit.
3. The outside of the cabinet must extend outward for at least 12" and there should be no obstacles, such as a fence or wall, within 20" from the back of the cabinet because it will prevent heat radiation of the condenser.  
Restriction of outside air will greatly reduce the cooling efficiency of the air conditioner.

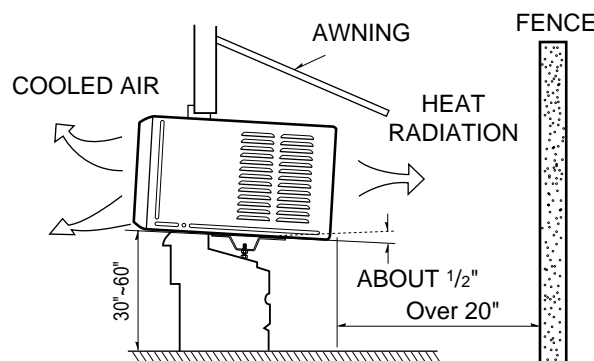


Figure 1

**CAUTION:** All side louvers of the cabinet must remain exposed on the outside of the structure.

4. Install the unit a little slanted so the back is slightly lower than the front (about  $\frac{1}{2}$ "). This will help force condensed water to the outside.
5. Install the unit from the bottom about 30"~60" above the floor level.

## Installation Check

The setting conditions must be checked prior to initial starting.

The undermentioned items are especially important checking points when the installation is finished.

1. Grounding wire (Green or Green and Yellow) is provided in the power cord. The green wire must be grounded.
2. Connect to a single-outlet 15A circuit. (or 20A circuit for Electric Heater Model)
3. To avoid vibration or noise, make sure the air conditioner is installed securely.
4. Avoid placing furniture or draperies in front of the air inlet and outlet.

The air conditioner must be installed horizontally or tilted slightly to the outside for proper water drainage.

On exceptionally hot and humid days the air conditioner may overflow condensed water.

If the air conditioner is used in hot and a high humidity zone, exchange the ① HOLE RUBBER for the ② DRAIN PIPE. (See figure 2, figure 3.)

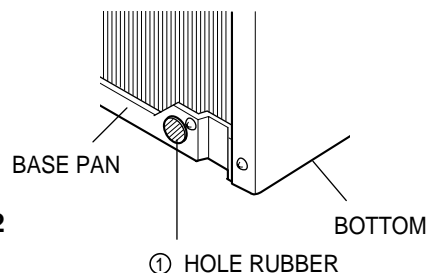


Figure 2

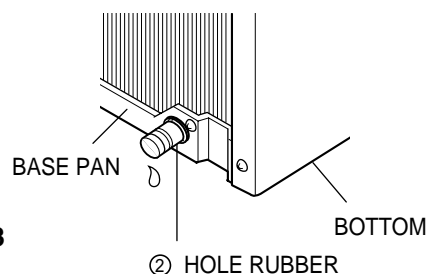
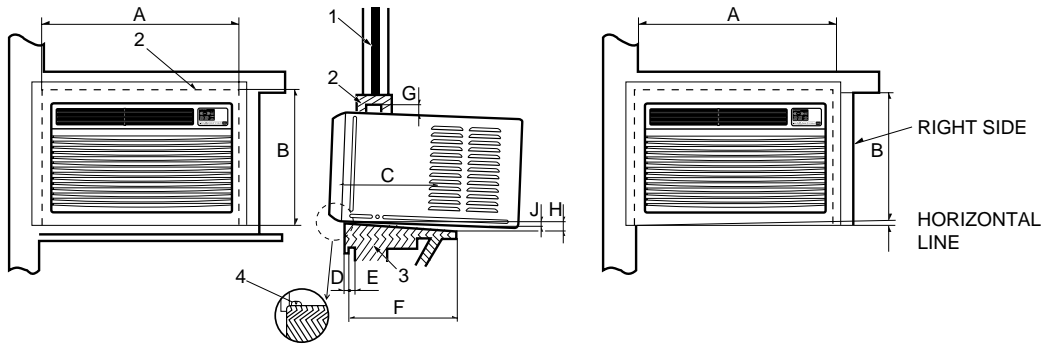


Figure 3

# How to Install

## 1. WHEN USING GASKET



- 1. WINDOW (WIDTH-A, HEIGHT-B)
- 2. GASKET
- 3. WALL

- 4. DETAILS 5.1 x 30 ROUND HEAD WOOD SCREWS

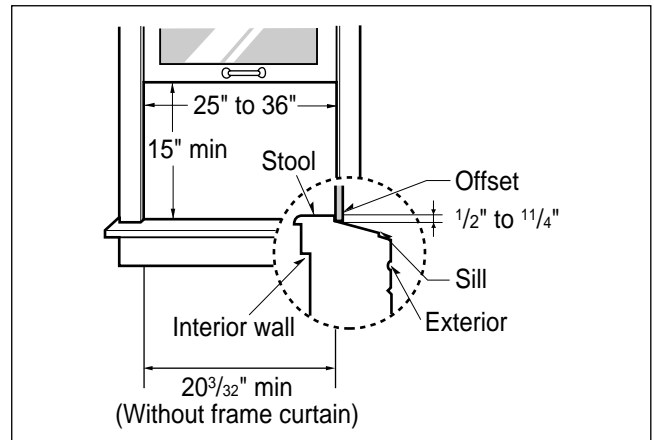
A	B	C	D	E	F	H	J	K
535mm (21½")	366mm (14 <sup>7</sup> / <sub>16</sub> ")	250mm (10")	30mm (1 <sup>1</sup> / <sub>16</sub> ")	0~25mm (0~1")	OVER 420mm (OVER 16 <sup>17</sup> / <sub>32</sub> ")	32 (1 <sup>1</sup> / <sub>4</sub> ")	5~10mm ( <sup>3</sup> / <sub>16</sub> "~ <sup>3</sup> / <sub>8</sub> ")	0~5mm (0~ <sup>3</sup> / <sub>16</sub> ")

## 2. WHEN USING INSTALLATION KITS

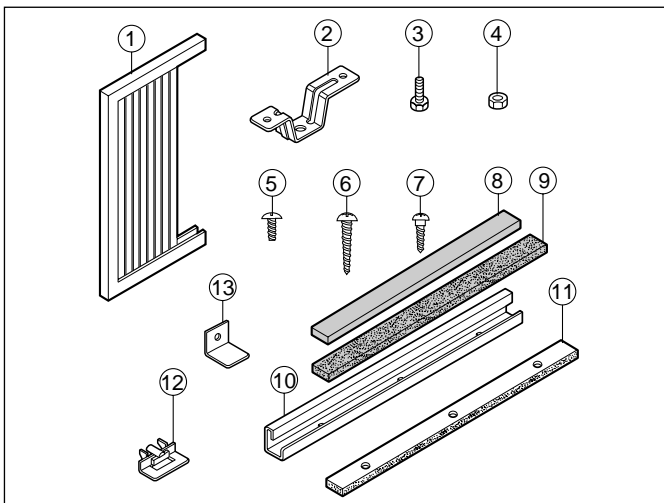
### A. WINDOW REQUIREMENTS

This unit is designed for installation in standard double hung windows with actual opening widths from 25" to 36".

The top and bottom window sash must open sufficiently to allow a clear vertical opening of 16" from the bottom of the upper sash to the window stool.



### B. INSTALLATION KITS CONTENTS

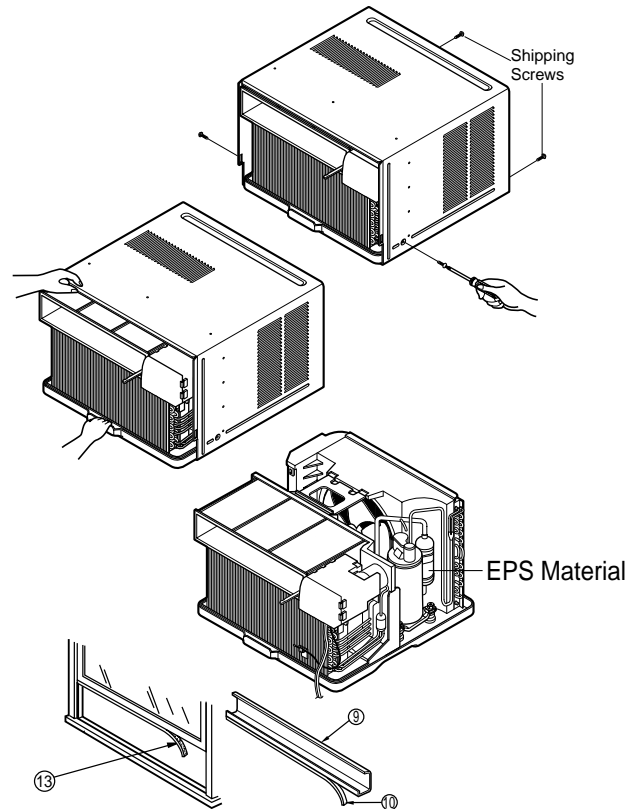


NO.	NAME OF PARTS	Q'TY
1	FRAME CURTAIN	2
2	SILL SUPPORT	2
3	BOLT	2
4	NUT	2
5	SCREW(TYPE A)	16
6	SCREW(TYPE B)	3
7	SCREW(TYPE C)	5
8	FOAM-STRIP	1
9	FOAM-PE	1
10	UPPER GUIDE	1
11	FOAM-PE	1
12	FRAME GUIDE	2
13	WINDOW LOCKING BRACKET	1



## BEFORE INSTALLATION

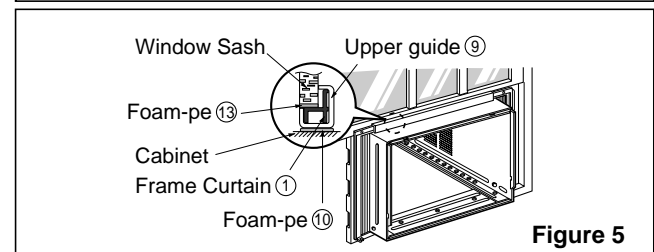
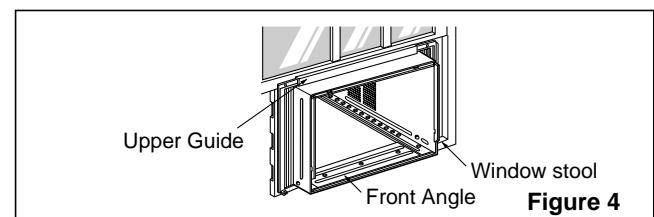
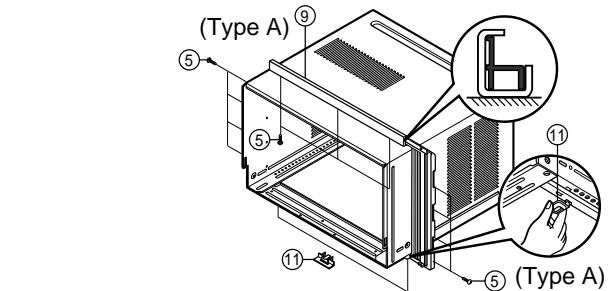
1. Remove the screws which fasten the cabinet at both sides and at the back.
2. Slide the unit out from the cabinet by gripping the base pan handle and pulling forward while bracing the cabinet.
3. Cut the window sash seal to the proper length. Peel off the backing and attach the Foam-Pe ⑨ to the underside of the window sash.
4. Remove the backing from the top upper guide Foam PE ⑪ and attach it to the bottom of the Upper Guide ⑩.
5. Attach the upper guide onto the top of the cabinet with 3 type A screws.
6. Insert the Frame Guides ⑫ into the bottom of the cabinet.
7. Insert the Frame Curtain ① into the upper guide ⑩ and Frame Guides ⑫.
8. Fasten the curtains to the unit with 4 Type A screws at the both sides.



## NOW START INSTALLATION

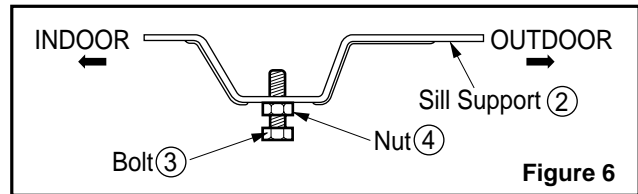
1. Open the window. Mark a line on center of the window stool (or desired air conditioner location). Carefully place the cabinet on the window stool and align the center mark on the front angle with the center line marked in the window stool.
2. Pull the bottom window sash down behind the upper guide until it meets.

**NOTICE** Do not pull the window sash down so tightly that the movement of Frame Curtain ① is restricted.



## Installation

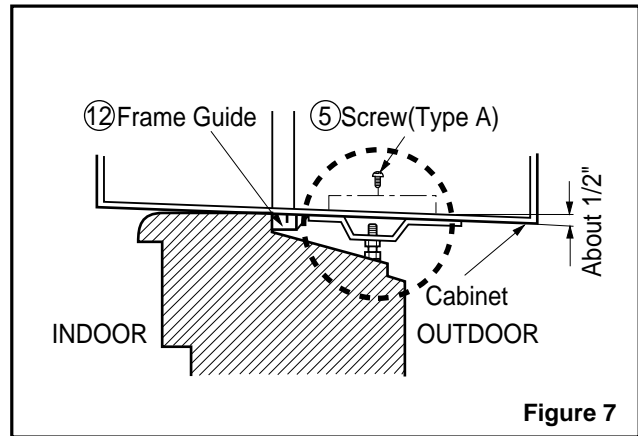
- Loosely assemble the sill support using the parts in Figure 6.



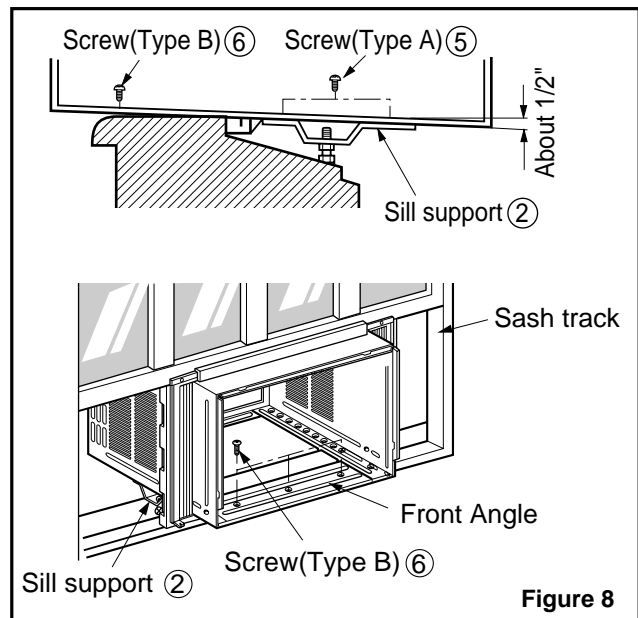
- Select the position that will place the sill support near the outer most point on sill (See Figure 6)

**NOTICE** Be careful when you install the cabinet (frame guides 12 are broken so easily).

- Attach the sill support to the cabinet track hole in relation to the selected position using 2 Type A screws in each support (See Figure 7).



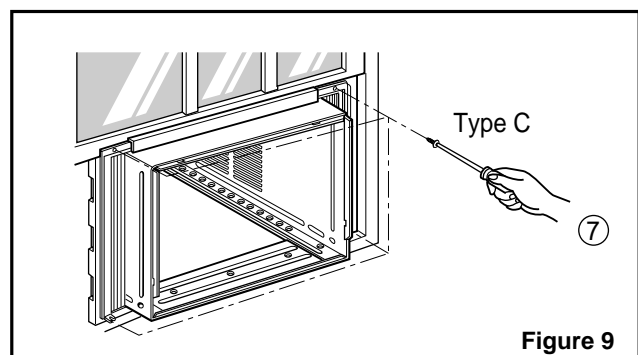
- The cabinet should be installed with a very **slight tilt (about 1/2") downward** toward the outside (See Figure 8).  
Adjust the bolt and the nut of Sill Support (2) for balancing the cabinet.



- Attach the cabinet to the window stool by driving the screws (6) (Type B: Length sixteen millimeters and below.) through the front angle into window stool (5/8").

- Pull each Frame Curtain (1) properly to each window sash track, and repeat step 2.

- Attach each Frame Curtain (1) to the window sash by using screws (7) (Type C). (See Figure 9)



10. Slide the unit into the cabinet.(See Fig. 10)

**⚠ CAUTION:** For security purpose, reinstall screws (Type A) at cabinet's sides.

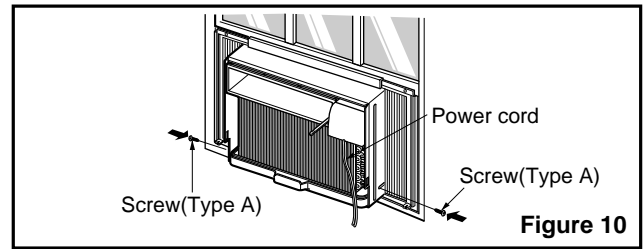


Figure 10

11. Cut the Foam-Strip ⑧ to the proper length and insert between the upper and lower window sash. (See Fig. 11)

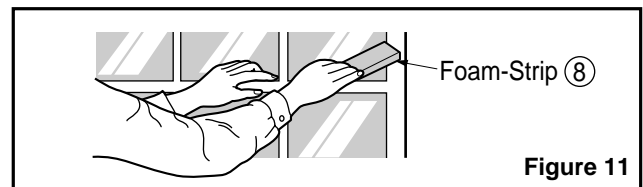


Figure 11

12. Attach the window Locking Bracket ⑬ with a type C screw. (See Fig. 12)

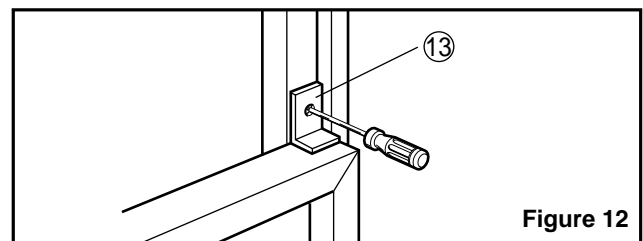


Figure 12

13. Attach the front grille to the cabinet by inserting the tabs on the grille into the tabs on the front of the cabinet. Push the grille in until it snaps into place.(See Fig. 13)

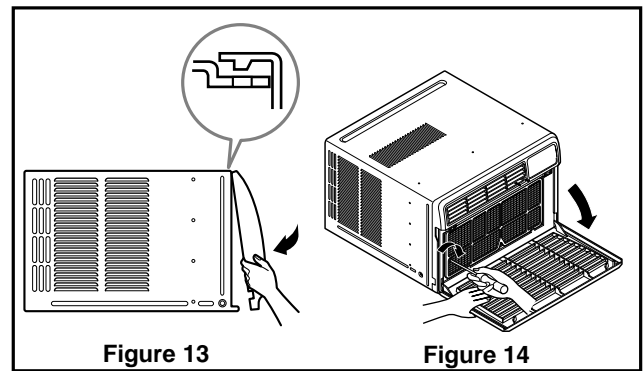


Figure 13

Figure 14

14. Lift the inlet grille and secure it with a type A screw through the front grille.(See Fig. 14)

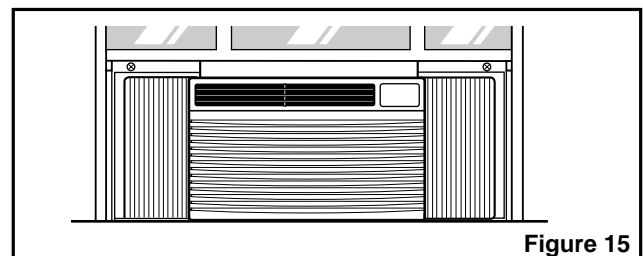


Figure 15

# Operation

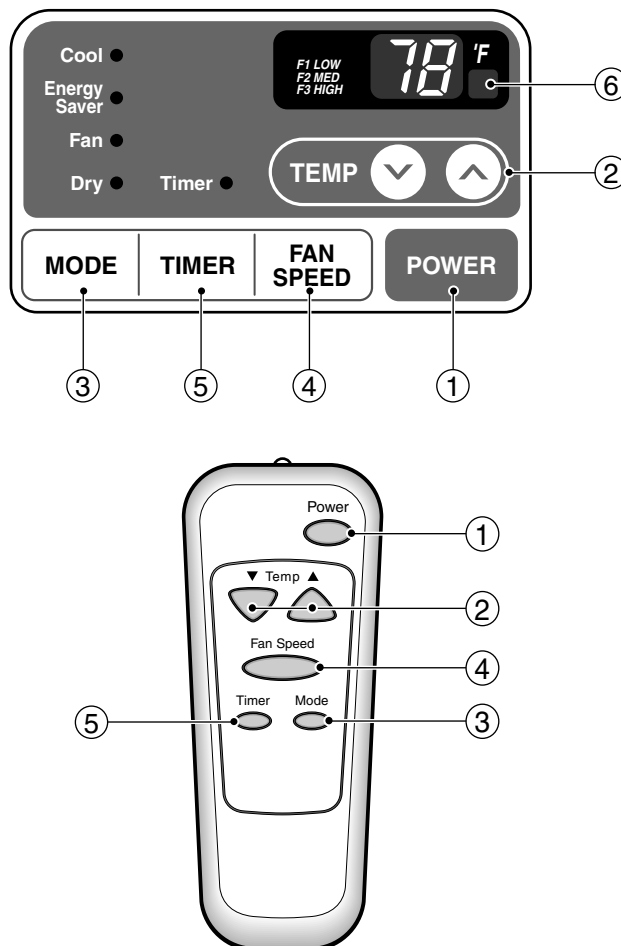
- Designed for COOLING ONLY.
- Powerful and quiet cooling.
- Slide-in and slide-out chassis for the simple installation and service.
- Low air-intake, top cooled-air discharge.
- Built-in adjustable Thermistor
- Washable one-touch filter
- Compact size
- Reliable and efficient rotary compressor is equipped.

## Remote Control Operations

**CAUTION:** The Remote Controller will not function properly if strong light strikes the sensor window of the air conditioner or if there are obstacles between the Remote Controller and the air conditioner.

The controls look like this:

### Controls



**1 POWER**

Operation starts when this button is pressed and stops when you press the button again.

**2 TEMPERATURE CONTROL**

The thermostat monitors room temperature to maintain the desired temperature.

The thermostat can be set between 60°F~86°F (16°C~30°C).

The unit takes an average of 30 minutes to adjust the room temperature by 1°F.

**3 OPERATION MODE SELECTOR**

Select cooling mode to cool the room.

Select energy saver mode for energy saving operation.

Select fan mode for basic ventilating fan operation.

Select dry mode for dry operation.

**4 FAN SPEED SELECTOR**

For increased power while cooling, select a higher fan speed.

3 steps: High → Low → Med

**5 ON/OFF TIMER**

The timer can be set to start and stop the unit in hourly increments (up to 12 hours).

**6 REMOTE CONTROL SENSOR****How to Insert Batteries**

**1** Push out the cover on the back of the remote control with your thumb

**2** Pay attention to polarity and insert two new AAA 1.5V batteries.

**3** Reattach the cover.



**NOTICE** : Do not use rechargeable batteries. Make sure that both batteries are new.

- In order to prevent discharge, remove the batteries from the remote control if the air conditioner is not going to be used for an extended period of time

Keep the remote control away from extremely hot or humid places.

To maintain optimal operation of the remote control, the remote sensor should not be exposed to direct sunlight.

# Disassembly

— Before the following disassembly, POWER SWITCH set to OFF and disconnect the power cord.

## Mechanical Parts

### 1. FRONT GRILLE

1. Open the Inlet grille downward and remove the air filter.
2. Remove the screw which fastens the front grille.(See Figure 16)
3. Pull the front grille from the right side.
4. Remove the front grille.(There are 4 hooks.)
5. Re-install the components by referring to the removal procedure, above.

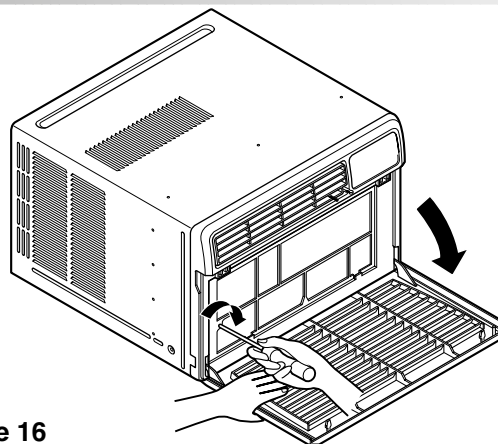


Figure 16

### 2. CABINET

1. After disassembling the FRONT GRILLE, remove the 2 screws which fasten the cabinet at both sides.
2. Remove the 2 screws which fasten the cabinet at back.
3. Pull the base pan forward. (See Figure 17)
4. Remove the cabinet.
5. Re-install the components by referring to the removal procedure, above.

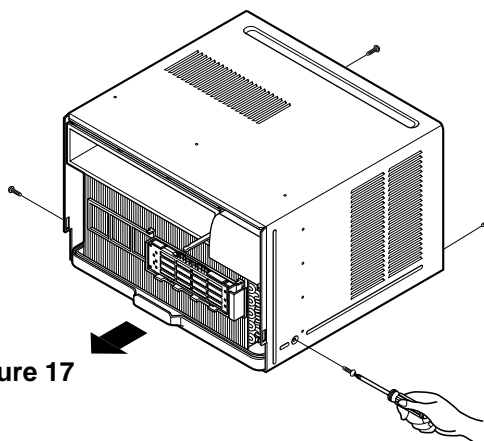


Figure 17

### 3. CONTROL BOX

1. Remove the front grille.
2. Remove the cabinet.
3. Remove the 2 screws which fasten the power cord.
4. Disconnect the grounding screw from the evaporator channel.
5. Remove the 1 screw which fasten the control box cover.
6. Remove the housing which connects PCB and motor wire in the control box.
7. Disconnect the housing which connects Plasma Air Purifier.(Optional)
8. Remove the screw at left cover of filter case and open the cover to remove inner screw. (Optional)
9. Remove the nut which fastens the terminal cover.
10. Remove the terminal cover.
11. Remove all the leads from the overload protector.
12. Discharge the capacitor by placing a 20,000 ohm resistor across the capacitor terminals.
13. Raise the control box upward completely. (See Figure 18)
14. Re-install the components by referring to the removal procedure, above.  
(Refer to the circuit diagram found on page 22 in this manual and on the control box.)

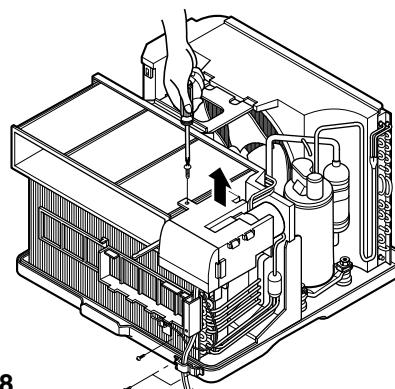


Figure 18

## Air Handling Parts

### 4. AIR GUIDE AND TURBO FAN

1. Remove the front grille.
2. Remove the cabinet.
3. Remove the control box.
4. Remove the 4 screws which fasten the brace.
5. Remove the brace.
6. Remove the 2 screws which fasten the air guide upper.
7. Remove the air guide upper.(See figure 19)
8. Remove the 2 screws which fasten the evaporator.
9. Move the evaporator forward and pulling it upward slightly. (See Figure 20)
10. Pull out the hook of orifice by pushing the tabs and remove it. (See Figure 21)
11. Remove the clamp with a hand plier which secures the turbo fan.
12. Remove the turbo fan.
13. Remove the 2 screws which fasten the air guide from the base pan.
14. Move the air guide backward, and pull out from the base pan.(Move the air guide lower carefully.)
15. Re-install the components by referring to the removal procedure, above.

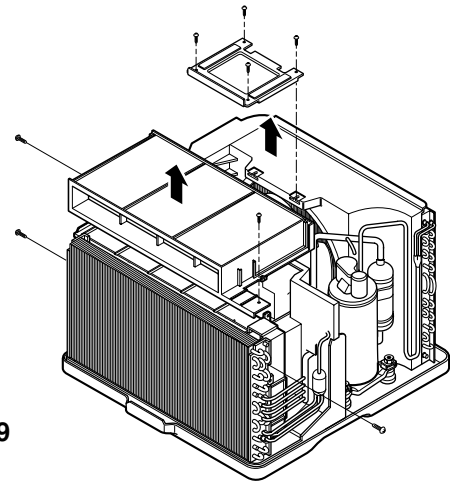


Figure 19

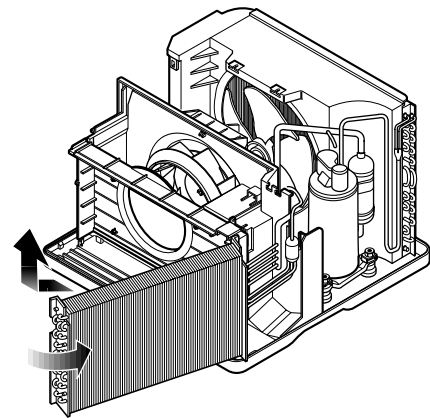


Figure 20

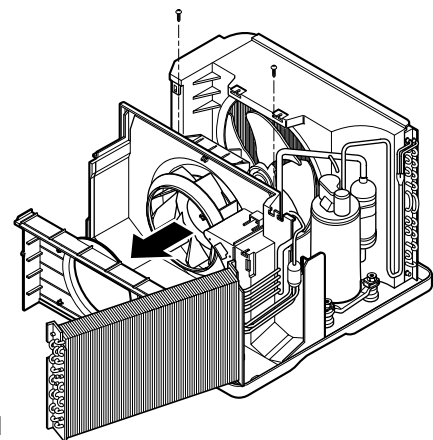


Figure 21

### 5. FAN

1. Remove the cabinet.
2. Remove the brace.
3. Remove the 5 screws which fasten the condenser.
4. Move the condenser to the left carefully.
5. Remove the clamp which secures the fan.
6. Remove the fan. (See Figure 22)
7. Re-install by referring to the removal procedure.

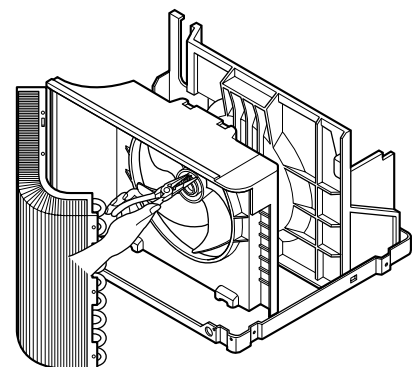


Figure 22

## 6. SHROUD

1. Remove the fan.
2. Remove the shroud. (See Figure 23)
3. Re-install the components by referring to the removal procedure, above.

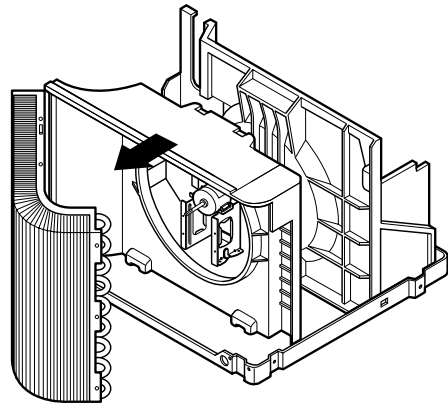


Figure 23

## Electrical Parts

### 1. OVERLOAD PROTECTOR

1. Remove the cabinet.
2. Remove the nut which fastens the terminal cover.
3. Remove the terminal cover. (See Figure 24)
4. Remove all the leads from the overload protector.
5. Remove the overload protector.
6. Re-install the components by referring to the removal procedure, above.

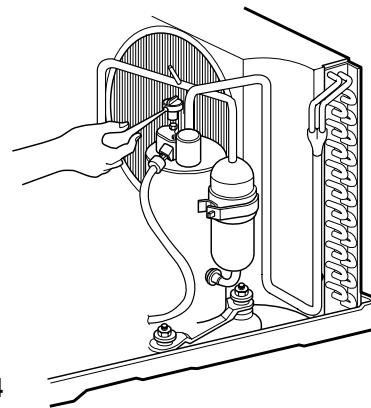


Figure 24

### 2. COMPRESSOR

1. Remove the cabinet.
2. Discharge the refrigerant system using a Freon™ Recovery System.  
If there is no valve to attach the recovery system, install one (such as a WATCO A-1) before venting the Freon™. Leave the valve in place after servicing the system.
3. Remove the overload protector.
4. After purging the unit completely, unbrazed the suction and discharge tubes at the compressor connections.
5. Remove the 3 nuts and the 3 washers which fasten the compressor.
6. Remove the compressor. (See Figure 25)
7. Re-install the components by referring to the removal procedure, above.

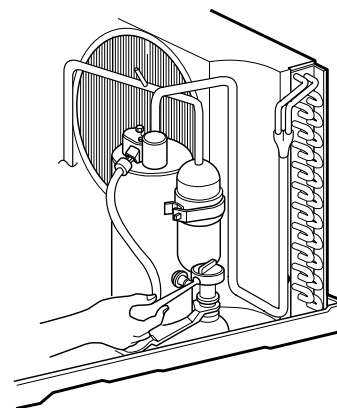


Figure 25



### 3. CAPACITOR

1. Remove the control box.
2. Open the top cover from the control box.  
(See Figure 26)
3. Pull out the capacitor from the control box.
4. Disconnect all the leads of capacitor terminals.
5. Re-install the components by referring to the removal procedure, above.

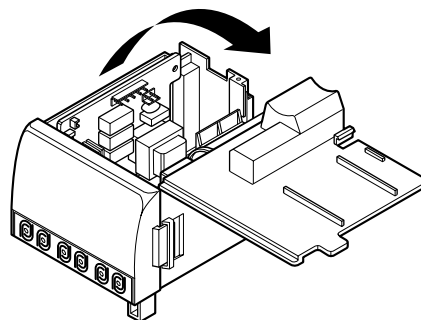


Figure 26

### 4. POWER CORD

1. Remove the control box.
2. Open the top cover from the control box.
3. Disconnect the front panel from the control box.  
(See Figure 27)
4. Disconnect two leads from the capacitor and relay.
5. Pull out the power cord.
6. Re-install the component by referring to the above removal procedure, above.  
(Use only one ground-marked hole for ground connection.)
7. If the supply cord of this appliance is damaged, it must be replaced by the special cord.  
(The special cord means the cord which has the same specification marked on the supply cord attached at the unit.)

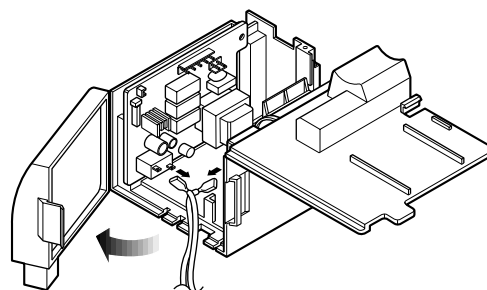
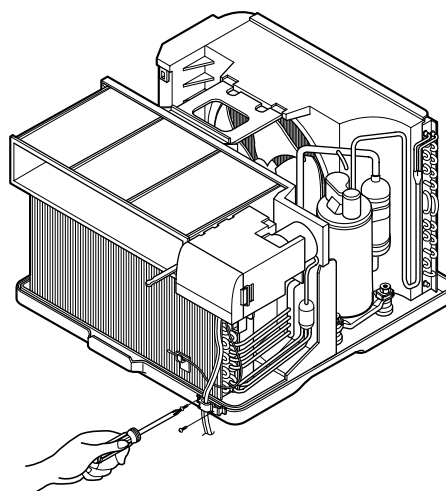


Figure 27

## 5. MOTOR

1. Remove the cabinet.
2. Remove the turbo fan.
3. Remove the fan.
4. Remove the 4 screws which fasten the motor from the air guide. (See Figure 28)
5. Remove the motor.
6. Re-install the components by referring to the removal procedure, above. (See Figure 28)

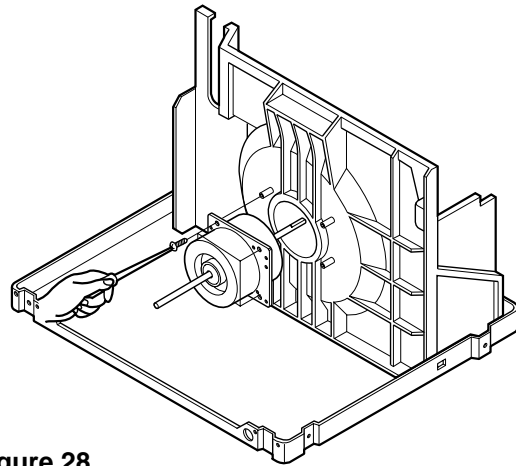


Figure 28

## Refrigerating Cycle

### 1. CONDENSER



**CAUTION:** Discharge the refrigerant system using a Freon™ Recovery System. If there is no valve to attach the recovery system, install one (such as a WATCO A-1) before venting the Freon™. Leave the valve in place after servicing the system.

1. Remove the cabinet.
2. Remove the 5 screws which fasten the brace.
3. Remove the 5 screws which fasten the condenser and shroud.
4. After discharging the refrigerant completely, unbraid the interconnecting tube at the condenser connections.
5. Remove the condenser.
6. Re-install the components by referring to notes. (See Figure 29)

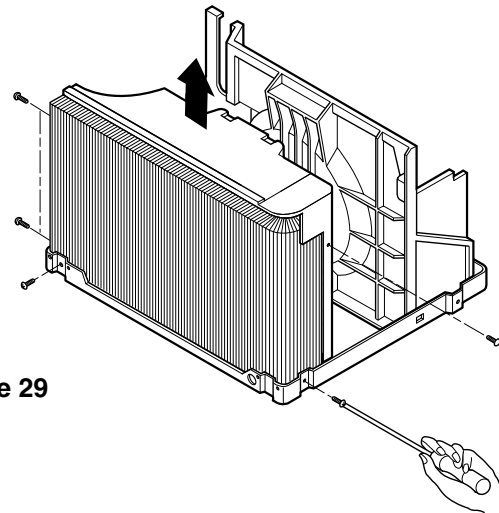


Figure 29

### 2. EVAPORATOR

1. Remove the control box.
2. Remove the air guide upper.
3. Remove the 2 screws which fasten the evaporator.
4. Move the evaporator sideways carefully.
5. After discharging the refrigerant completely, unbraid the interconnecting tube at the evaporator connections.
6. Remove the evaporator.
7. Re-install the components by referring to notes. (See Figure 30)

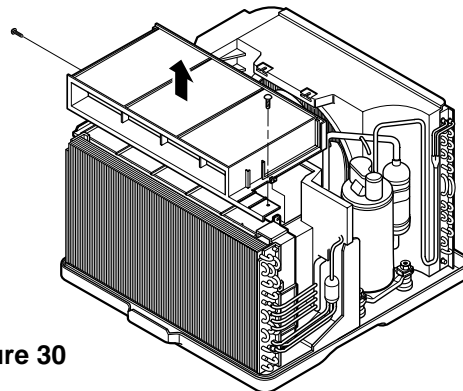


Figure 30


### 3. CAPILLARY TUBE

1. Remove the cabinet.
2. After discharging the refrigerant completely, unbraid the interconnecting tube at the capillary tube. (See caution above)
3. Remove the capillary tube.
4. Re-install the components by referring to notes.

#### NOTES

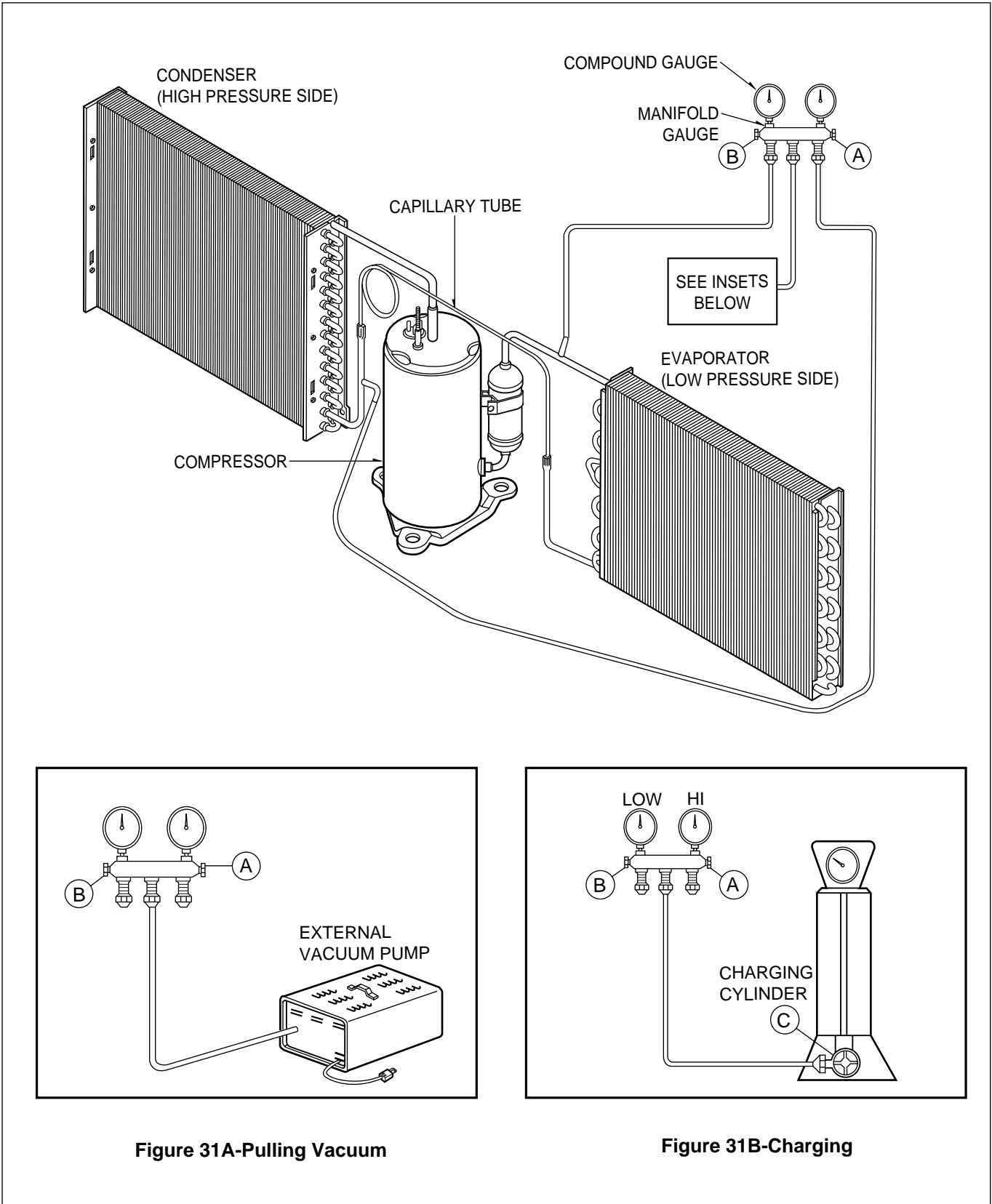
— Replacement of the refrigeration cycle.

1. When replacing the refrigeration cycle, be sure to Discharge the refrigerant system using a Freon™ recovery System.  
If there is no valve to attach the recovery system, install one (such as a WATCO A-1) before venting the Freon™. Leave the valve in place after servicing the system.
2. After discharging the unit completely, remove the desired component, and unbraid the pinch-off tubes.
3. Solder service valves into the pinch-off tube ports, leaving the valves open.
4. Solder the pinch-off tubes with Service valves.
5. Evacuate as follows.
  - 1) Connect the vacuum pump, as illustrated figure 31A.
  - 2) Start the vacuum pump, slowly open manifold valves A and B with two full turns counterclockwise and leave the valves open. The vacuum pump is now pulling through valves A and B up to valve C by means of the manifold and entire system.
6. Recharge as follows :
  - 1) Refrigeration cycle systems are charged from the High-side. If the total charge cannot be put in the High-side, the balance will be put in the suction line through the access valve which you installed as the system was opened.
  - 2) Connect the charging cylinder as shown in figure 31B.  
With valve C open, discharge the hose at the manifold connection.
  - 3) Open valve A and allow the proper charge to enter the system. Valve B is still closed.
  - 4) If more charge is required, the high-side will not take it. Close valve A.
  - 5) With the unit running, open valve B and add the balance of the charge.
    - a. Do not add the liquid refrigerant to the Low-side.
    - b. Watch the Low-side gauge; allow pressure to rise to 30 lbs.
    - c. Turn off valve B and allow pressure to drop.
    - d. Repeat steps b. and c. until the balance of the charge is in the system.
  - 6) When satisfied the unit is operating correctly, use the pinch-off tool with the unit still running and clamp on to the pinch-off tube. Using a tube cutter, cut the pinch-off tube about 2 inches from the pinch-off tool. Use sil-fos solder and solder pinch-off tube closed. Turn off the unit, allow it to set for a while, and then test the leakage of the pinch-off connection.

 **CAUTION: If high vacuum equipment is used, just crack valves A and B for a few minutes, then open slowly with the two full turns counterclockwise. This will keep oil from foaming and being drawn into the vacuum pump.**

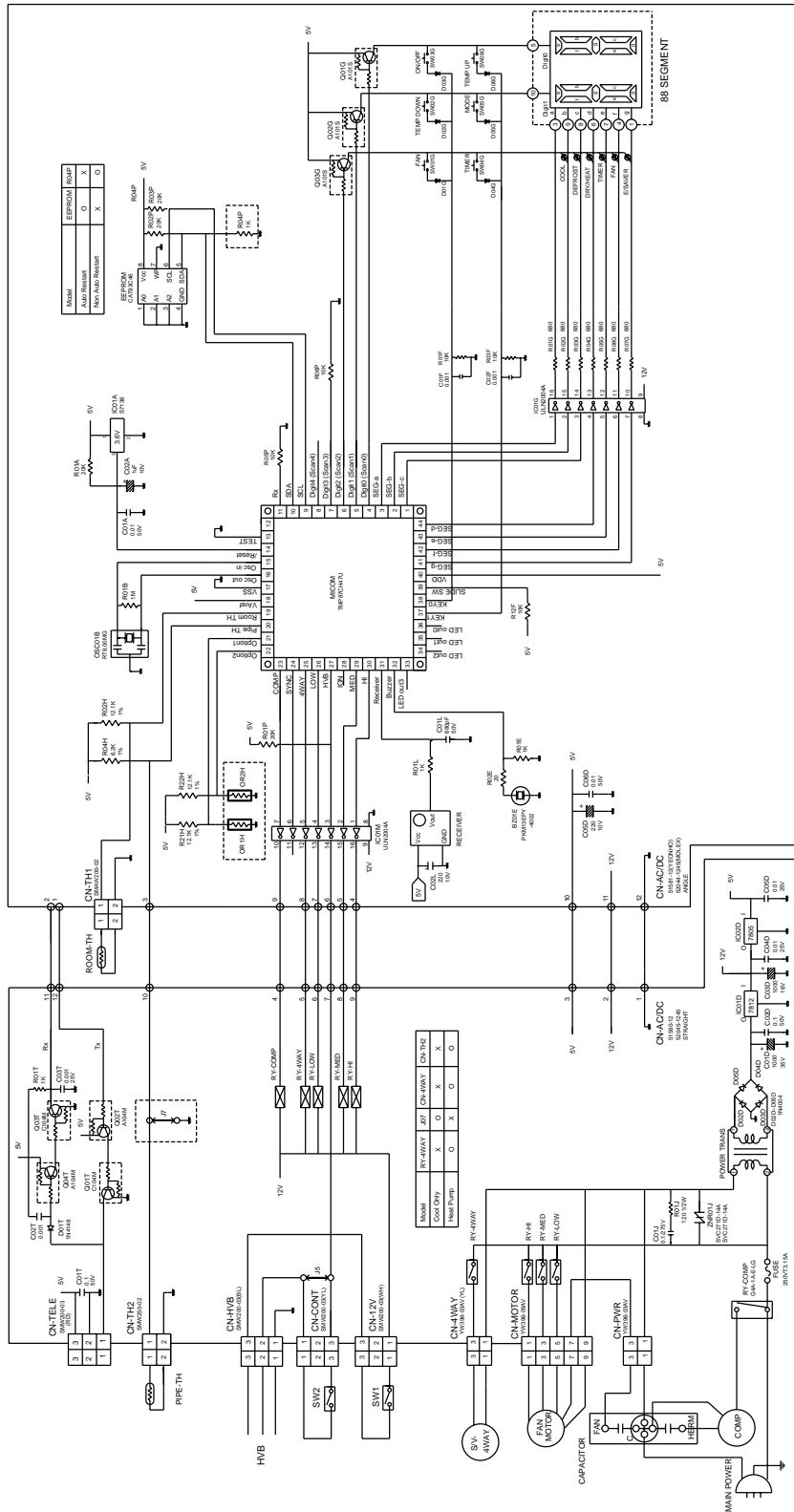
- 3) Operate the vacuum pump for 20 to 30 minutes, until 600 microns of vacuum is obtained. Close valves A and B, and observe vacuum gauge for a few minutes. A rise in pressure would indicate a possible leak or moisture remaining in the system. With valves A and B closed, stop the vacuum pump.
- 4) Remove the hose from the vacuum pump and place it on the charging cylinder. See figure 31B.  
Open valve C.  
Discharge the line at the manifold connection.
- 5) The system is now ready for final charging.

**Equipment needed:** Vacuum pump, Charging cylinder, Manifold gauge, Brazing equipment. Pin-off tool capable of making a vapor-proof seal, Leak detector, Tubing cutter, Hand Tools to remove components, Service valve.

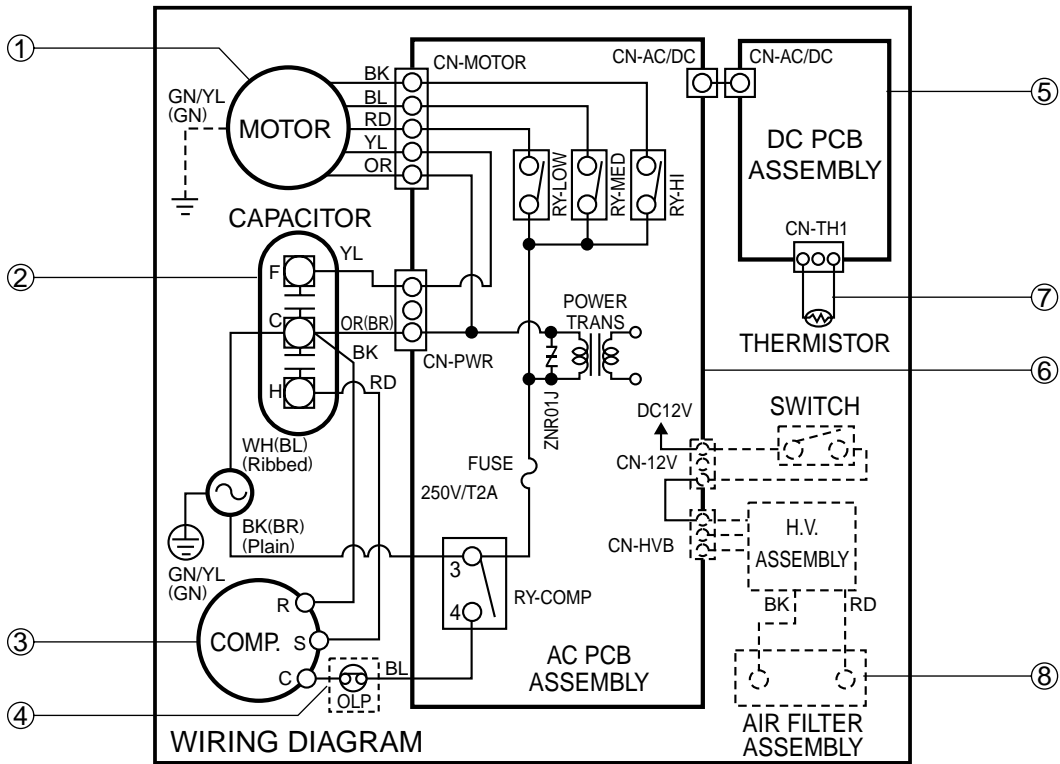


# Schematic Diagram

## Electronic Control Device



**Wiring Diagram**

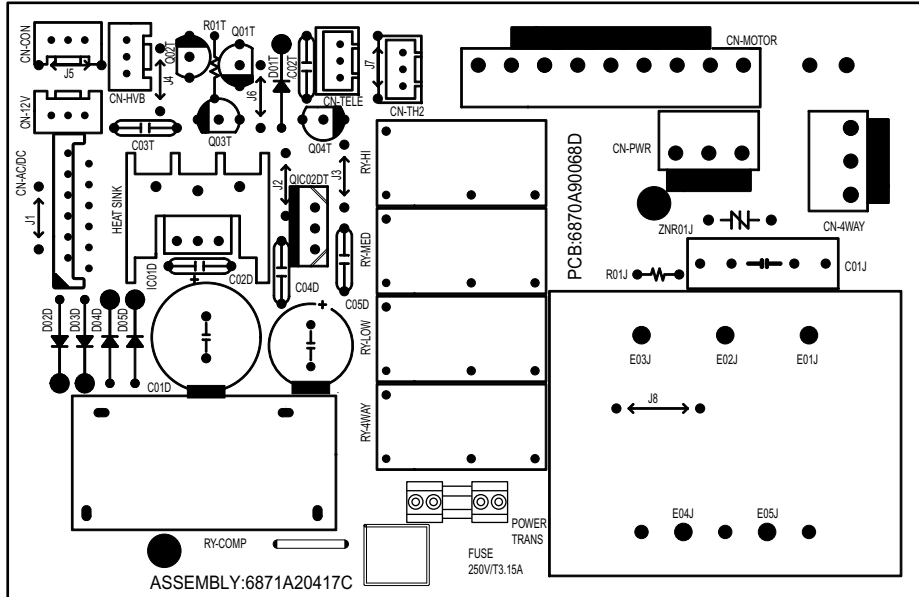


S: Service Parts  
N: Non Service Parts

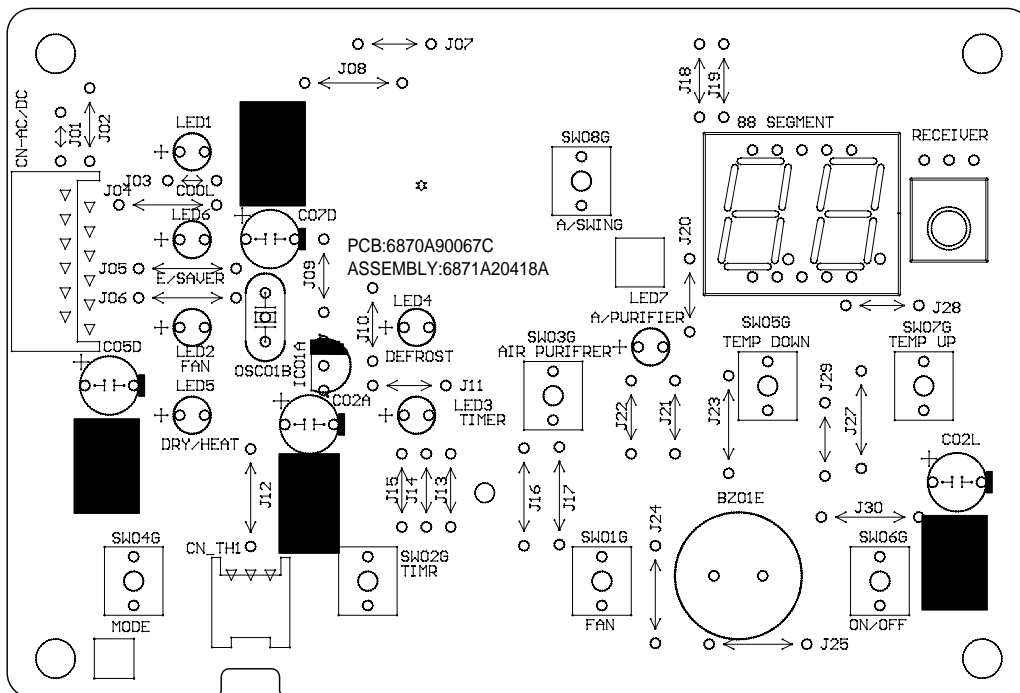
LOCATION NO.	DESCRIPTION	Q'TY PER SET	REMARKS
1	MOTOR ASSY	1	S
2	CAPACITOR	1	S
3	COMPRESSOR	1	S
4	OVERLOAD PROTECTOR	1	S
5	DC PCB ASSEMBLY	1	S
6	AC PCB ASSEMBLY	1	S
7	THERMISTOR	1	S
8	PLASMA FILTER ASSY	1	S

# Components Location

## 1. MAIN P.C.B ASSEMBLY



## 2. DISPLAY P.C.B. ASSEMBLY



# Troubleshooting Guide

## Piping System

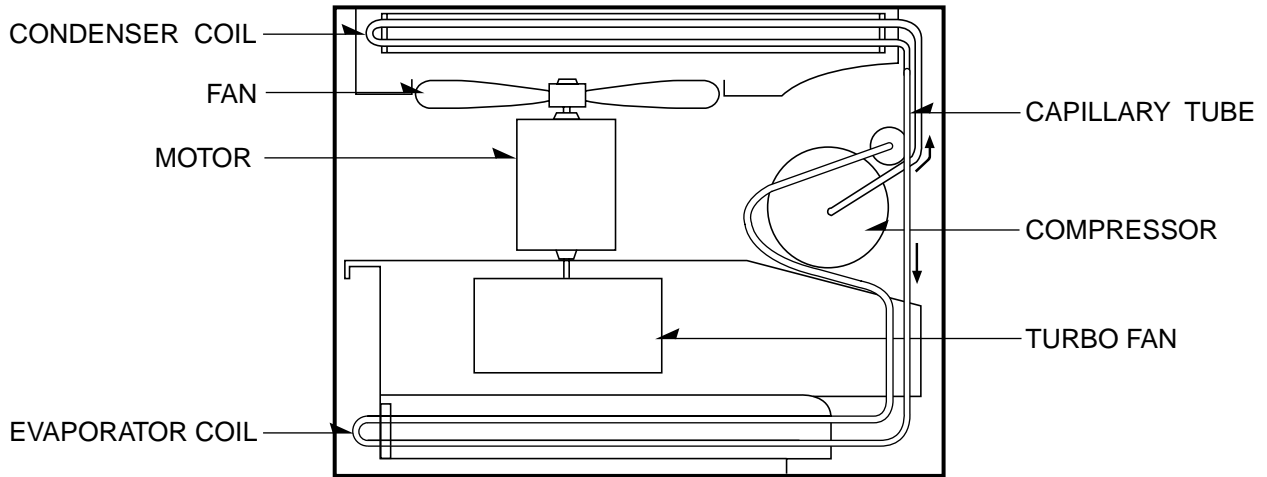
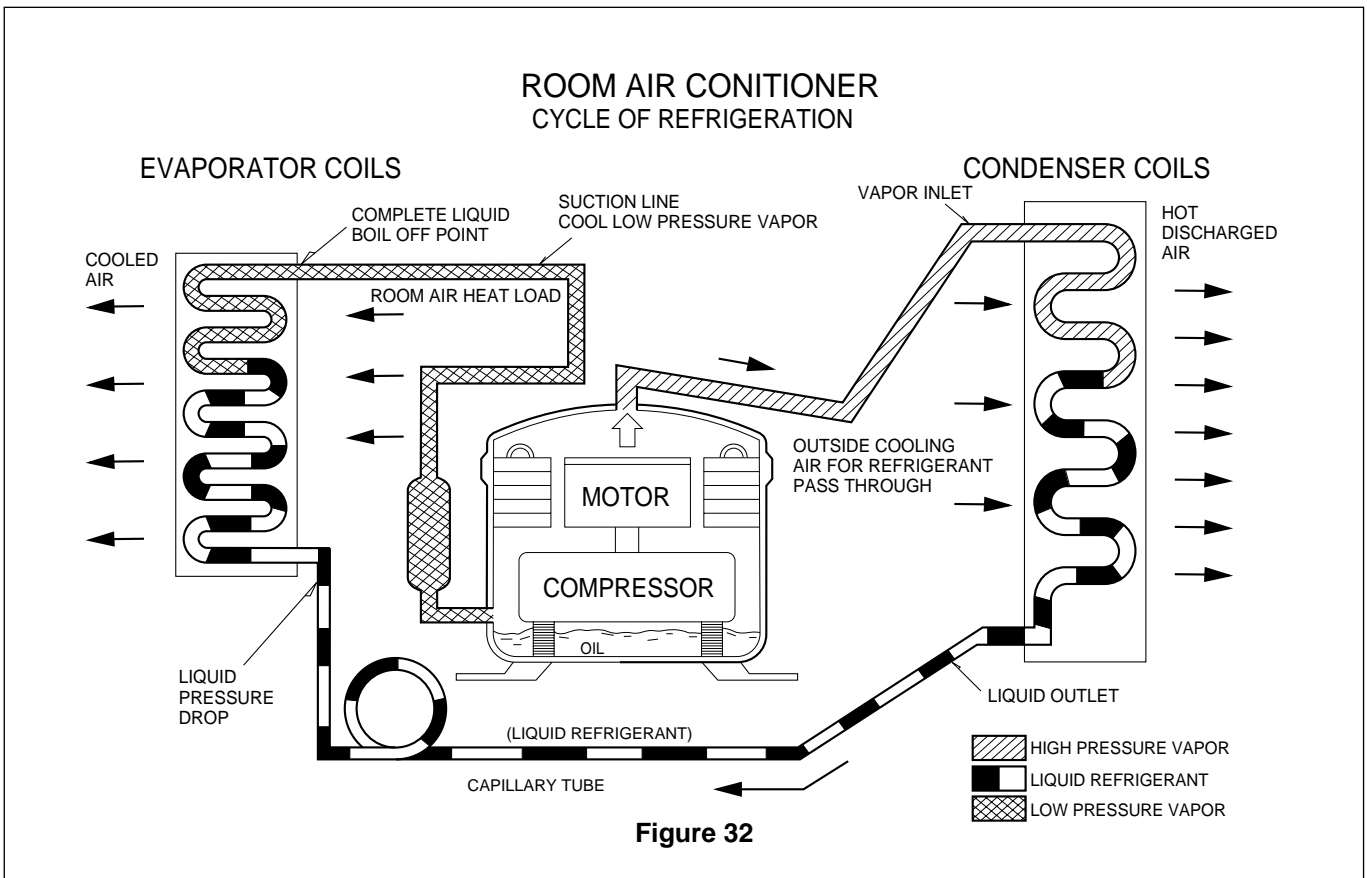


Figure 32 is a brief description of the important components and their function in what is called the refrigeration system. This will help you to understand the refrigeration cycle and the flow of the refrigerant in the cooling cycle.



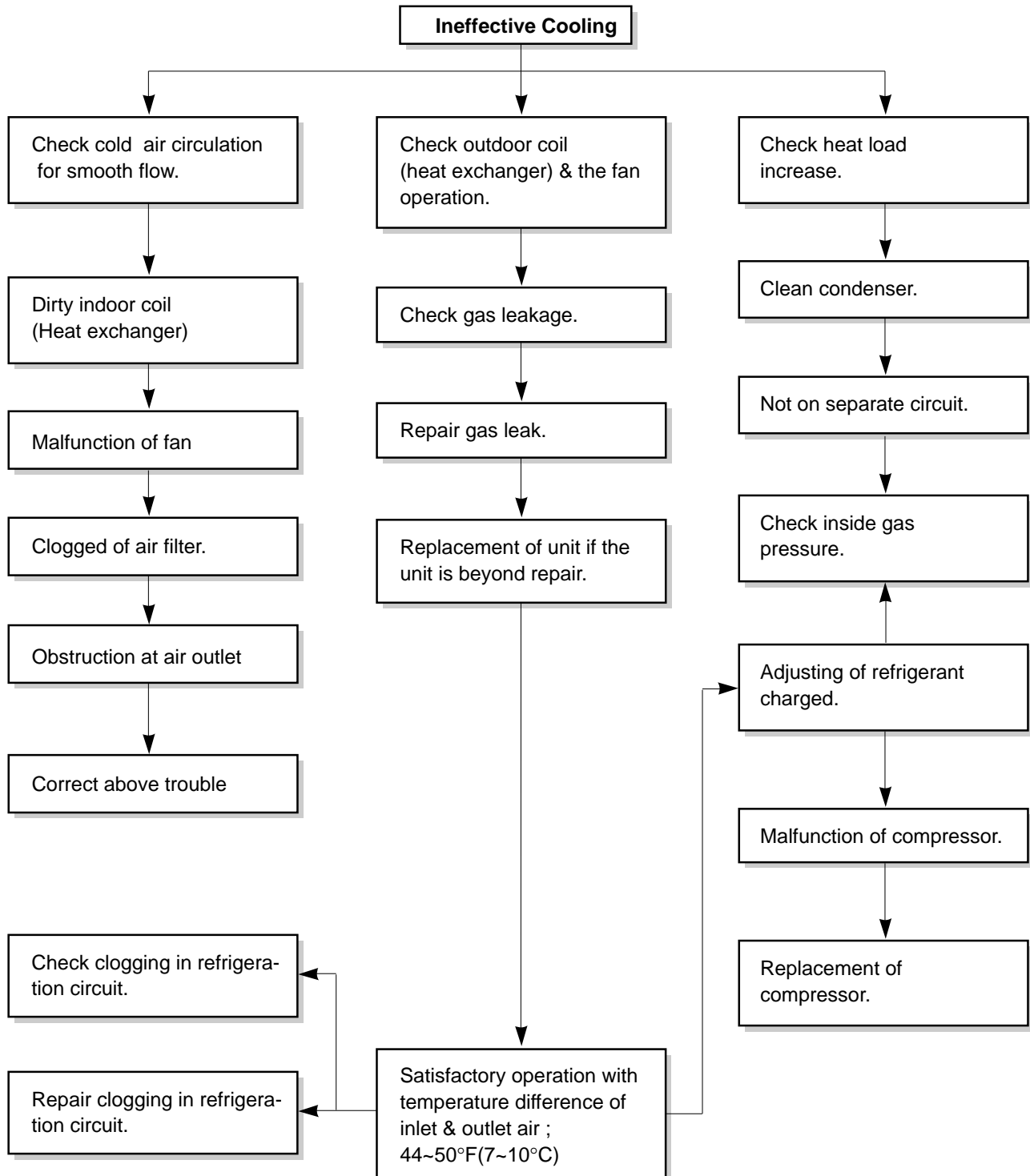


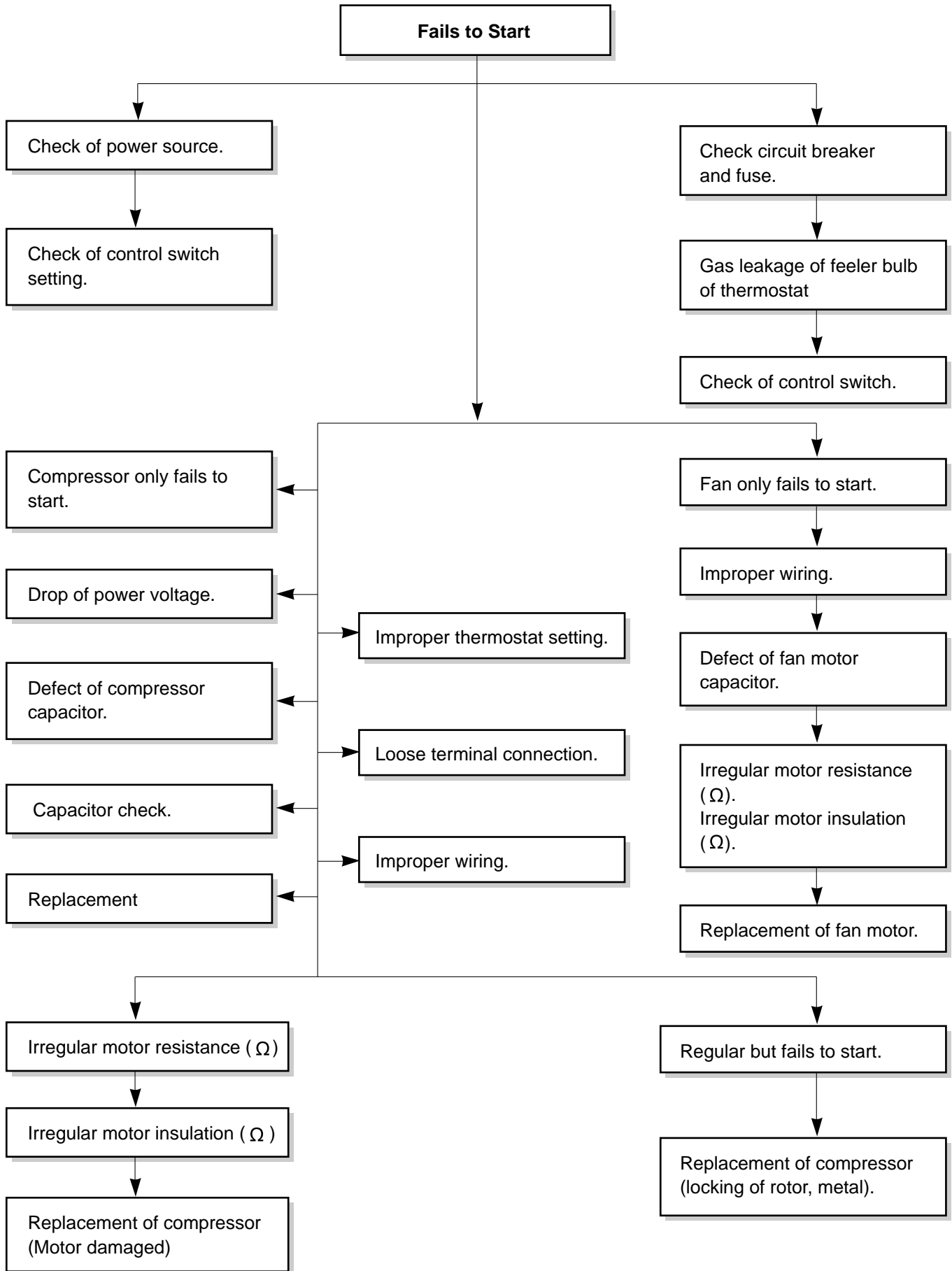
## Troubleshooting Guide

In general, possible trouble is classified in two kinds.

The one is called Starting Failure which is caused from an electrical defect, and the other is ineffective Air Conditioning caused by a defect in the refrigeration circuit and improper application.

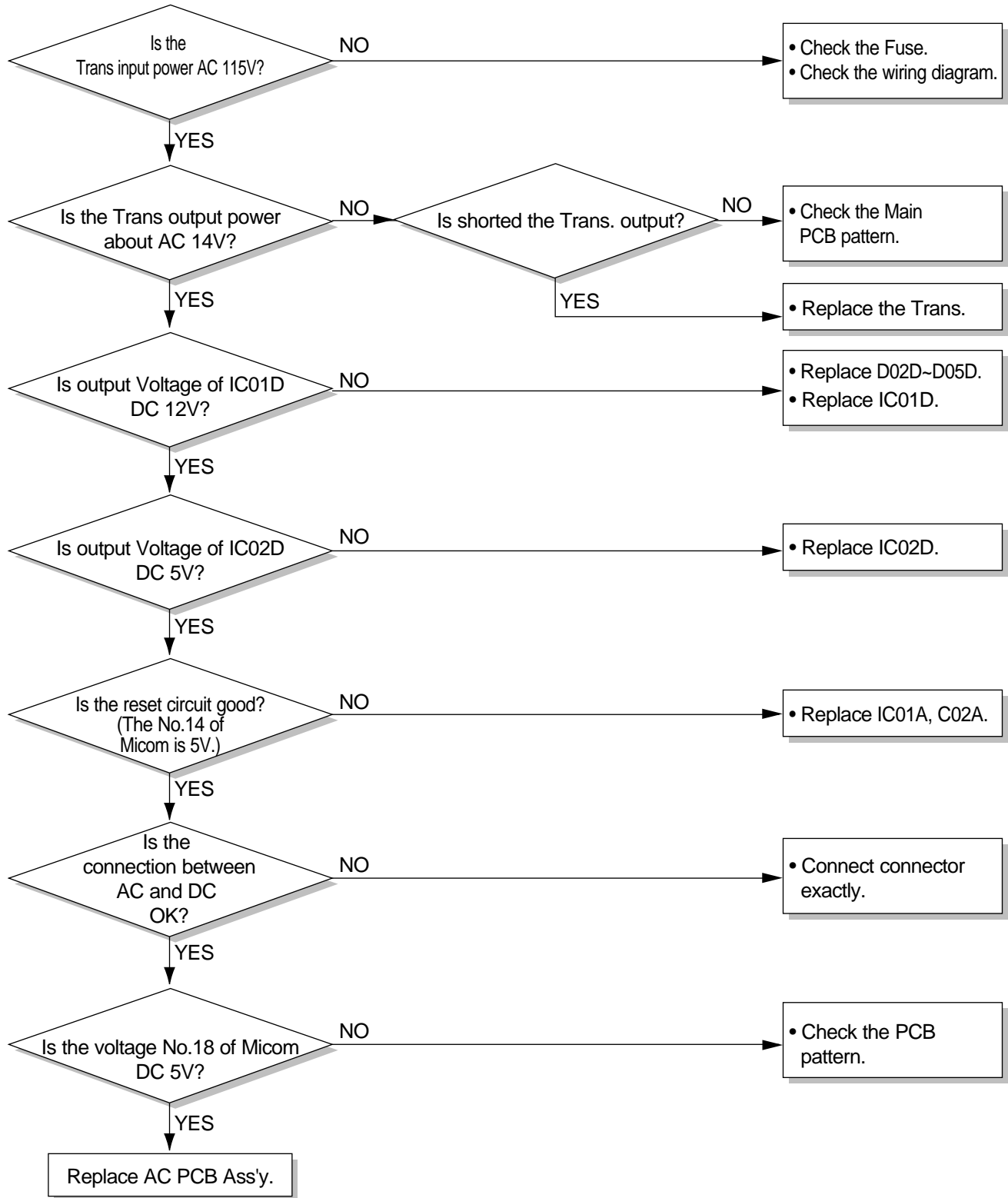
### Unit runs but poor cooling.





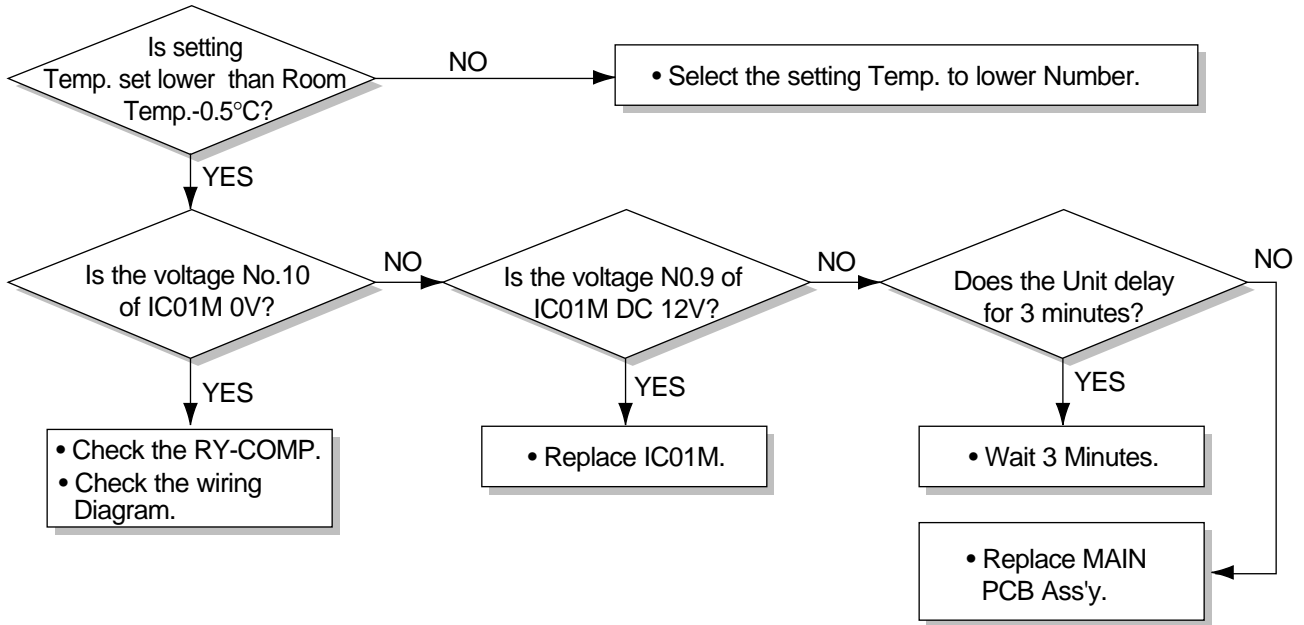
# Electrical Parts Troubleshooting Guide

**Possible Trouble 1** The unit does not operate.



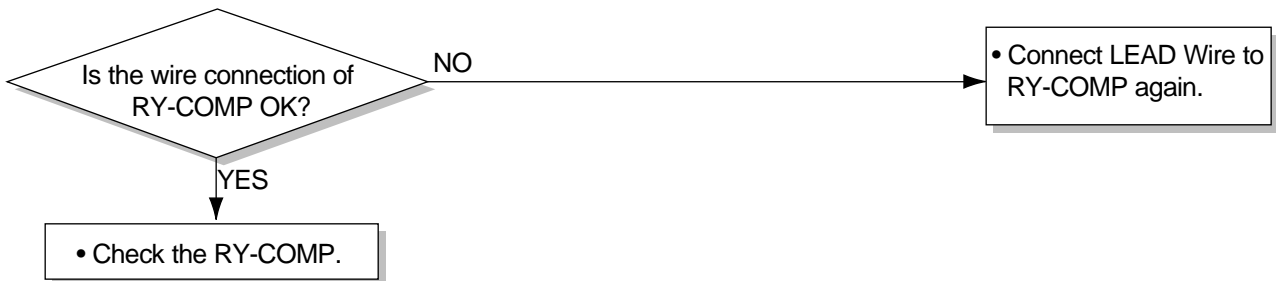
**Possible Trouble 2**

The compressor does not operate.



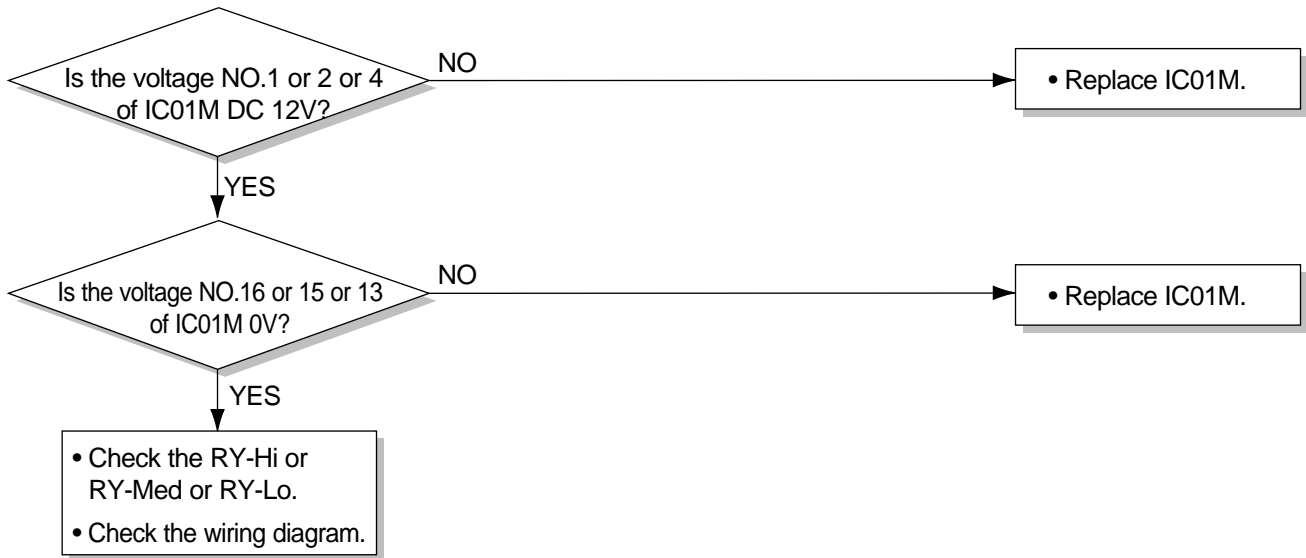
**Possible Trouble 3**

The compressor always operate.



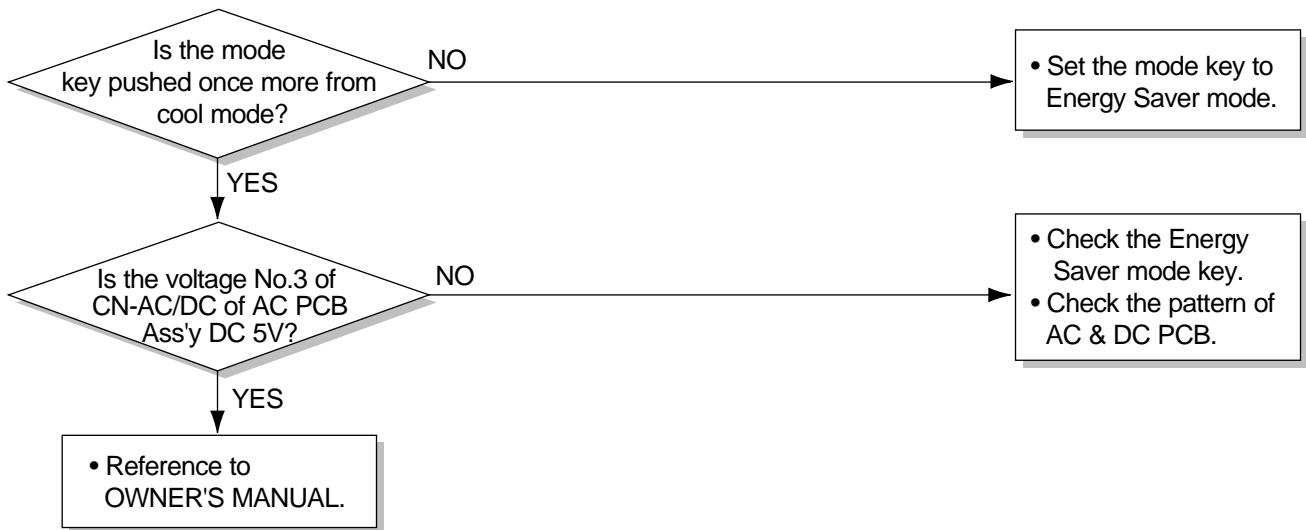
**Possible Trouble 4**

FAN does not operate.



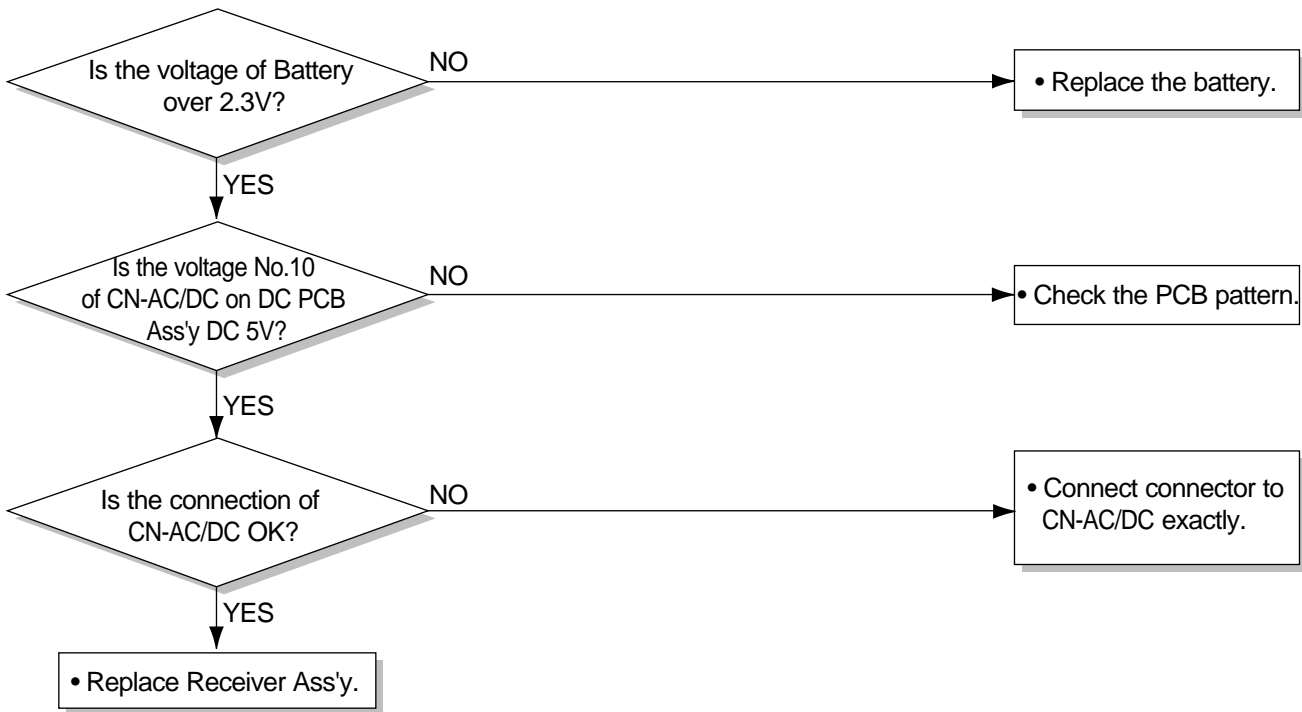
**Possible Trouble 5**

The function of Energy Saver does not operate.



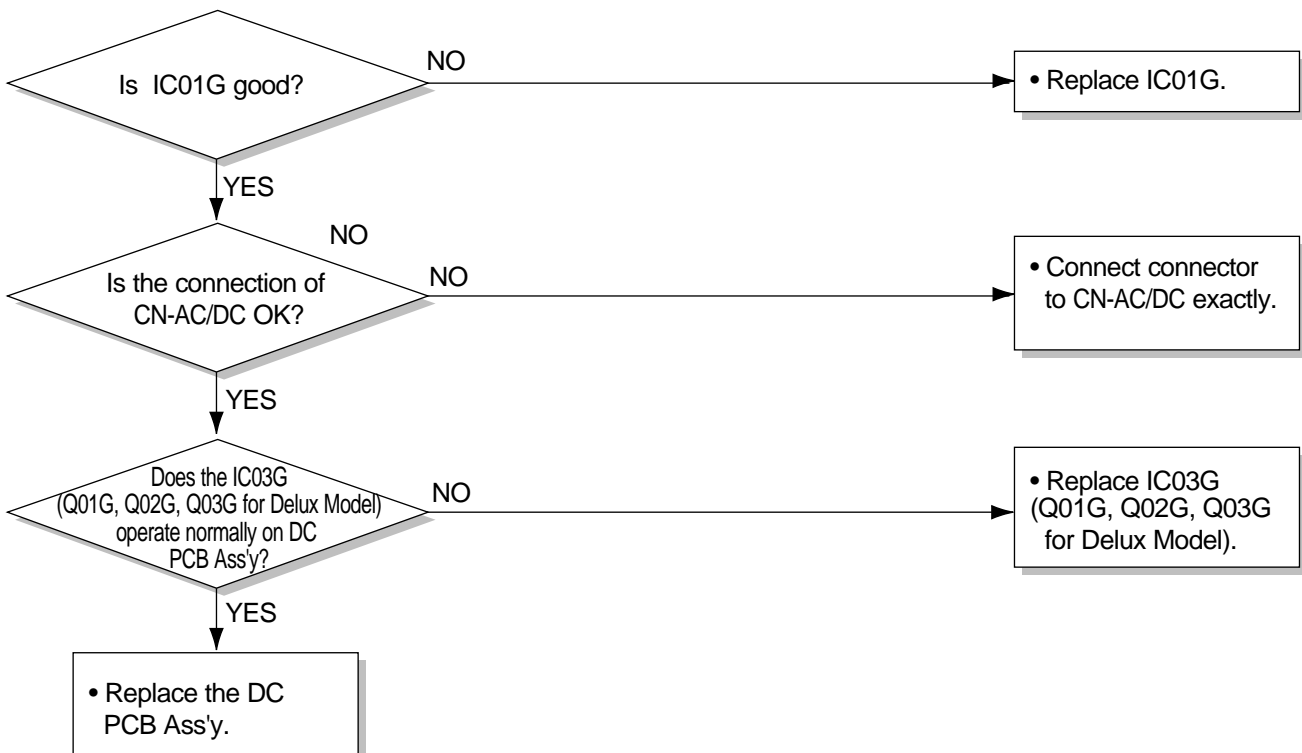
**Possible Trouble 6**

Remote controller does not operate.



**Possible Trouble 7**

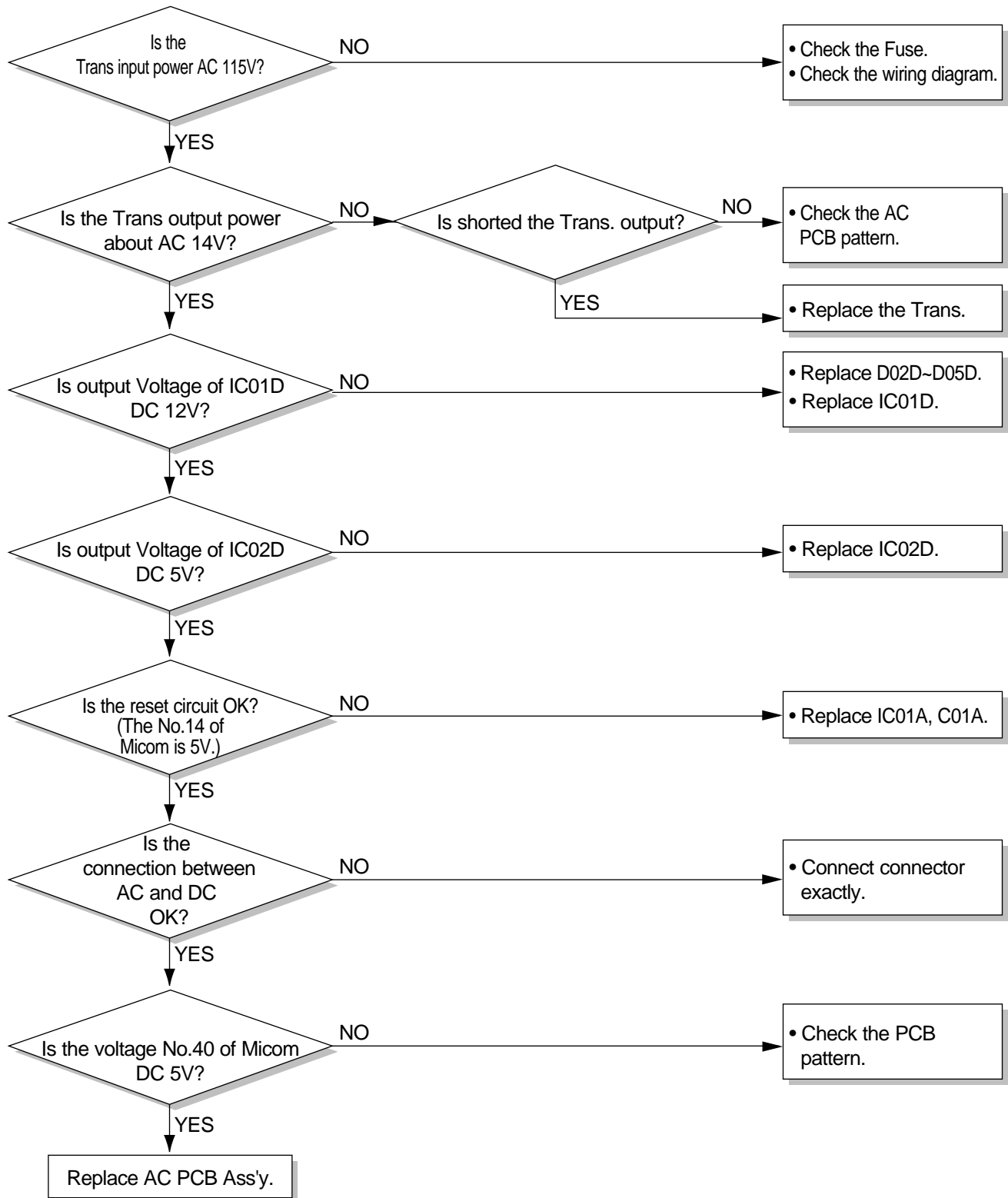
It displays abnormally on DC PCB Ass'y.



## Electrical Parts

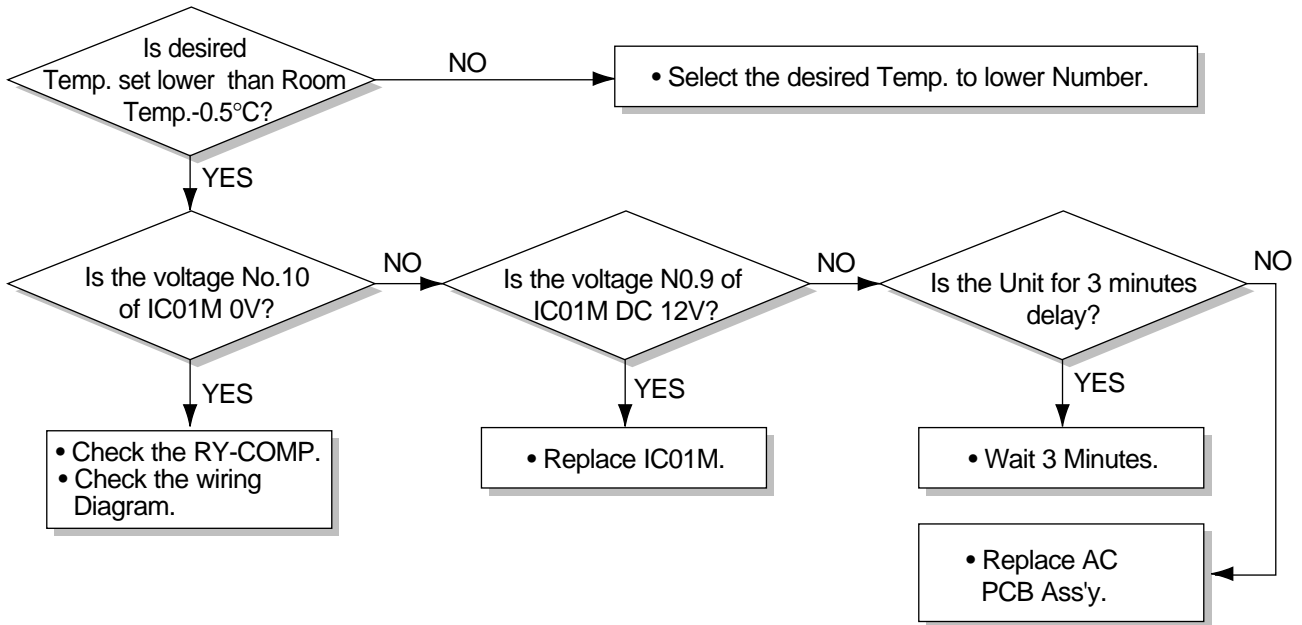
### Possible Trouble 1

The unit does not operate.



**Possible Trouble 2**

The compressor does not operate.



**Possible Trouble 3**

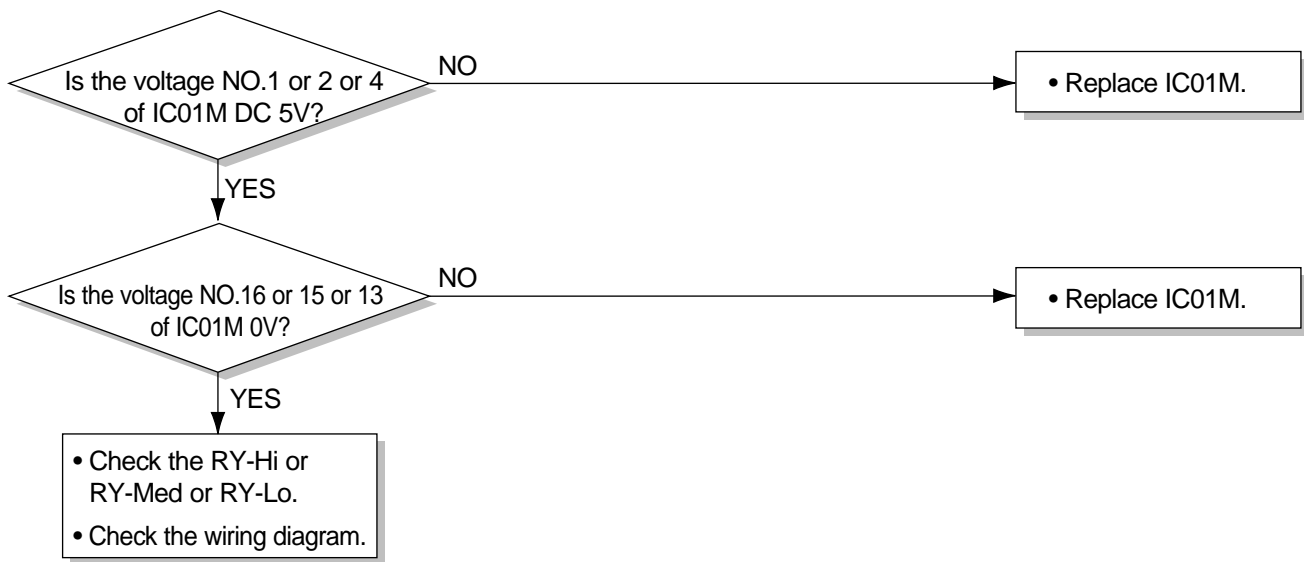
The compressor always operate.





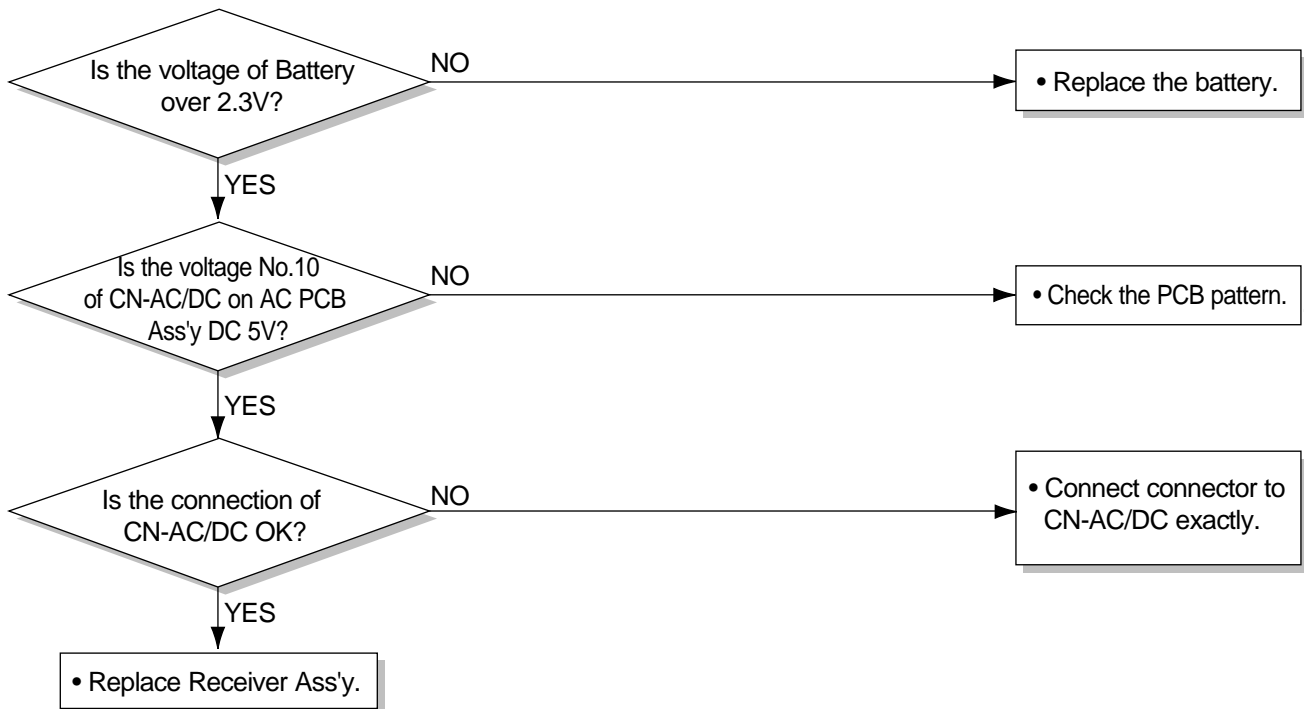
**Possible Trouble 4**

FAN does not operate.



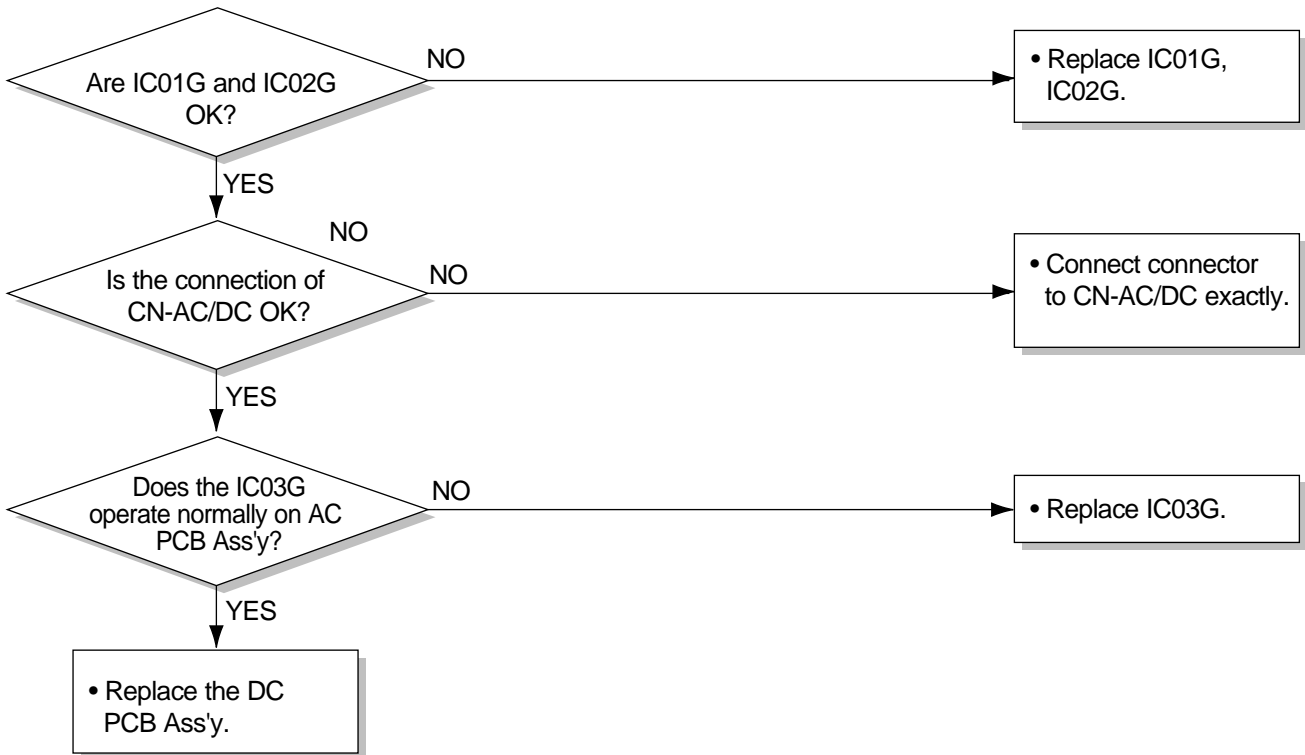
**Possible Trouble 5**

Remote controller does not operate.



**Possible Trouble 6**

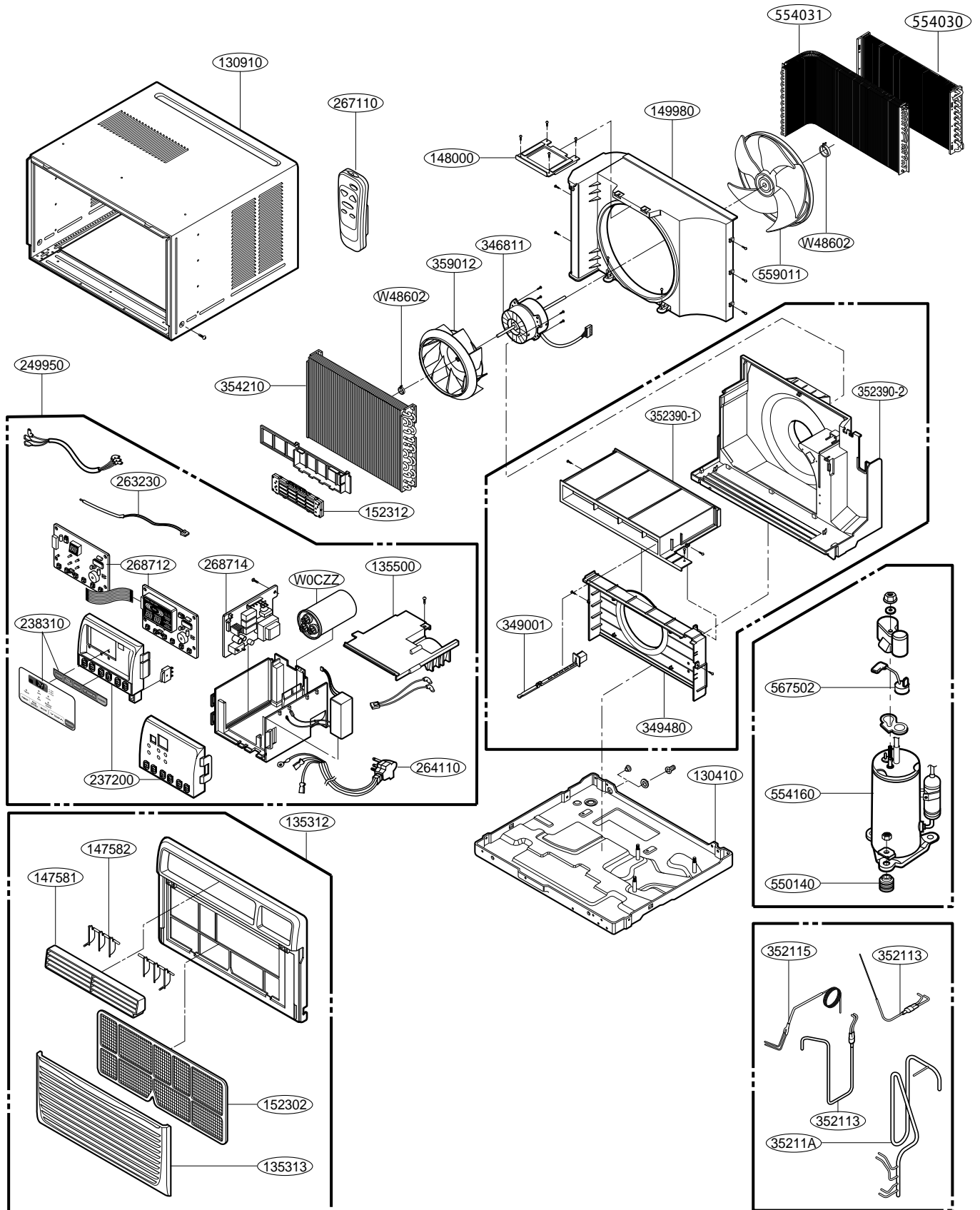
It displays abnormally on DC PCB Ass'y.



COMPLAINT	CAUSE	REMEDY
Fan motor will not run.	No power	Check voltage at outlet. Correct if none.
	Power supply cord	Check voltage to Control Box. If none, check power supply cord. Replace cord if circuit is open.
	Wire disconnected or connection loose	Connect wire. Refer to wiring diagram for terminal identification. Repair or replace loose terminal.
	Capacitor (Discharge capacitor before testing.)	Test capacitor. Replace if not within $\pm 10\%$ of manufacturer's rating. Replace if shorted, open, or damaged.
	Will not rotate	Fan blade hitting shroud or blower wheel hitting scroll. Realign assembly.  Units using slinger ring for condenser fan must have $\frac{1}{4}$ to $\frac{5}{16}$ inch clearance to the base. If it hits the base, shim up the bottom of the fan motor with mounting screw(s).  Check fan motor bearings; if motor shaft will not rotate, replace the motor.
Fan motor runs intermittently	Revolves on overload.	Check voltage. If not within limits, call an electrician.  Test capacitor. Check bearings. Does the fan blade rotate freely? If not, replace fan motor.  Pay attention to any change from high speed to low speed. If the speed does not change, replace the motor.
Fan motor noise.	Fan	If cracked, out of balance, or partially missing, replace it.
	Turbo	If cracked, out of balance, or partially missing, replace it.
	Loose clamper	Tighten it.
	Worn bearings	If knocking sounds continue when running or loose, replace the motor. If the motor hums or noise appears to be internal while running, replace motor.
Compressor will not run, but fan motor runs.	Voltage	Check voltage. If not within limits, call an electrician.
	Wiring	Check the wire connections, if loose, repair or replace the terminal. If wires are off, refer to wiring diagram for identification, and replace. Check wire locations. If not per wiring diagram, correct.

COMPLAINT	CAUSE	REMEDY
Compressor will not run, but fan motor runs.	Thermistor	Check the TEMP control. If not at the lowest number, set TEMP control to this setting and restart the unit. Check the continuity of the thermistor. Replace the thermistor if the circuit is open.
	Capacitor (Discharge capacitor before servicing.)	Check the capacitor. Replace if not within $\pm 10\%$ of manufacturers rating. Replace if shorted, open, or damaged.
	Compressor	Check the compressor for open circuit or ground. If open or grounded, replace the compressor.
	Overload	Check the compressor overload, if externally mounted. Replace if open. (If the compressor temperature is high, remove the overload, cool it, and retest.)
Compressor cycles on overload.	Voltage	Check the voltage. If not within limits, call an electrician.
	Overload	Check overload, if externally mounted. Replace if open. (If the compressor temperature is high, remove the overload, cool, and retest.)
Compressor cycles on overload.	Fan motor	If not running, determine the cause. Replace if required.
	Condenser air flow restriction	Remove the cabinet. inspect the interior surface of the condenser; if restricted, clean carefully with a vacuum cleaner (do not damage fins) or brush. Clean the interior base before reassembling.
	Condenser fins (damaged)	If condenser fins are closed over a large area on the coil surface, head pressures will increase, causing the compressor to overload. Straighten the fins or replace the coil.
Compressor cycles on overload.	Capacitor	Test capacitor.
	Wiring	Check the terminals. If loose, repair or replace.
	Refrigerating system	Check the system for a restriction.
Insufficient cooling or heating	Air filter	If restricted, clean or replace.
	Exhaust damper door	Close if open.
	Unit undersized	Determine if the unit is properly sized for the area to be cooled.
Excessive noise	Turbo or fan	Check the set screw or clamp. If loose or missing, correct. If the turbo or fan is hitting air guide, rearrange the air handling parts.
	Copper tubing	Remove the cabinet carefully and rearrange tubing not to contact cabinet, compressor, shroud, and barrier.

# Exploded View



# Replacement Parts List

LOCATION NO.	DESCRIPTION	PART NO.				REMARK
		HBLG8003R	LB8000ER	LW8000ER	HBLG1003R	
130410	BASE ASSEMBLY,SINGLE	3041A20021V	3041A20021N			R
130910	CABINET ASSEMBLY,SINGLE	3091AR2317M	3091AR2317N	3091AR2317M		R
135312	GRILLE ASSEMBLY,FRONT(SINGLE)	3531A20160A	3531A20097A	3531A20160A		R
135313	GRILLE ASSEMBLY,INLET	3530A20075A	3530A20038A	3530A20075A		R
135500	COVER,CONTROL(INDOOR)	3550A30114A			R	
147581	LOUVER,HORIZONTAL	4758A20019A			R	
147582	LOUVER,VERTICAL	4758A20040A			R	
148000	BRACE	4800A30002C			R	
149980	SHROUD	4998A10023A	4998A10012A			R
152302	FILTER(MECH),A/C	5231A20006A			R	
237200	PANEL,CONTROL	3720A10111C			R	
238310	ESCUTCHEON	3831A10021E	3831A10021L	3831A10021E		R
249950	CONTROL BOX ASSEMBLY,SINGLE	4995A20278R	4995A20278U	4995A20278S		R
261704	TRANSFORMER,POWER	6170A30003C			R	
263230	THERMISTOR ASSEMBLY	6323A20004P			R	
264110	POWER CORD ASSEMBLY	6411A20011F		6411A20011R		R
267110	REMOTE CONTROLLER	6711A20056S	6711A20034G	6711A20056S		R
268712	PWB(PCB) ASSEMBLY,DISPLAY	6871A20418A			R	
268714	PWB(PCB) ASSEMBLY,MAIN	6871A20417C			R	
346811	MOTOR ASSEMBLY,SINGLE	4681A20069G	4681A20027X	4681A20069H		R
349001	DAMPER,VENTILATION	4900A20003A			R	
349480	ORIFICE	4948A10014A			R	
35211A	TUBE ASSEMBLY,SUCTION SINGLE	5211A20708B	5211A10074D	5211A10074J		R
352113	TUBE ASSEMBLY,DISCHARGE SINGLE	5211A20559K	5211A20470B	5211A20470F		R
352115	TUBE ASSEMBLY,EVAPORATOR IN	5211A20228R	5211A20228F	5211A20228S		R
352390-1	AIR GUIDE ASSEMBLY	5239A20005B			R	
352390-2	AIR GUIDE ASSEMBLY	5239A20012A			R	
354210	EVAPORATOR ASSEMBLY,FIRST	5421A10026E	5421A10026J	5421A10026G		R
359012	FAN,TURBO	5900A20020A			R	
550140	ISOLATOR,COMP	4830AR4335A			R	
554030	CONDENSER ASSEMBLY,FIRST	5403A20092B	5403A20043L			R
554031	CONDENSER ASSEMBLY,BENT	---	5403A20043M			R
554160	COMPRESSOR	5416A90007A		2520UCDK004		R
559010	FAN ASSEMBLY,AXIAL	5900AR1167B			R	
567502	O.L.P	6750A30001N		6750U-L031A		R
W0CZZ	CAPACITOR	0CZZA20005B		0CZZA20001N		R
W48602	CLAMP,SPRING	3H02932B			R	

# Replacement Parts List

LOCATION NO.	DESCRIPTION	PART NO.			REMARK
		LWHD1006R	LWHD1006R		
130410	BASE ASSEMBLY,WELD[SINGLE]	3041A20021N	3041A20021N		R
130910	CABINET ASSEMBLY,SINGLE	3091AR2317M	3091AR2317M		R
135312	GRILLE ASSEMBLY,FRONT(SINGLE)	3531A20160A	3531A24016A		R
135313	GRILLE,INLET	3530A20075A	3530A10238A		R
135500	COVER	3550A30226A	3550A30226A		R
147581	LOUVER,HORIZONTAL	4758A20019A	4758A20019A		R
147582-1	LOUVER,VERTICAL	4758A20040A	4758A20040A		R
147582-2	LOUVER,VERTICAL	4758A20040B	4758A20040B		R
148000	BRACE	4800A30002C	4800A30002C		R
159980	SHROUD	4998A10012A	4998A10012A		R
152302	FILTER ASSEMBLY,AIR CLEANER	5231A20006A	5231A20006A		R
237200	PANEL,CONTROL	3720A10111C	3720A10111C		R
249950	CONTROL BOX ASSEMBLY,SINGLE	4995A20278S	4995A10113T		R
268712	PWB(PCB) ASSEMBLY,MAIN(AC)	6871A20417C	6871A20417C		R
238310	ESCUTCHEON	3831A10021E	3831A10021L		R
268714	PWB(PCB) ASSEMBLY,MAIN(DC)	6871A20418A	6871A20418A		R
263230	THERMISTOR ASSEMBLY	6323A20004P	6323A20004P		R
264110	POWER CORD ASSEMBLY	6411A20056F	6411A20056F		R
346811	MOTOR ASSEMBLY,SINGLE	4681A20069H	4681A20069H		R
349001-1	DAMPER,VENTILATION	4900A20003A	4900A20003A		R
349001-2	DAMPER,VENTILATION				R
349480	ORIFICE	4948A10014A	4948A10014A		R
352115	TUBE ASSEMBLY,EVAPORATOR IN	5211A20470L	5211A20470L		R
35211A	TUBE ASSEMBLY,SUCTION SINGLE	5211A21786A	5211A21786A		R
352113	TUBE ASSEMBLY,DISCHARGE SINGLE	5211A10074J	5211A10074J		R
552111	TUBE ASSEMBLY,CONDENSER OUT				R
552102	TUBE ASSEMBLY,CAPILLARY	5211A30275M	5211A30275M		R
352390	AIR GUIDE ASSEMBLY	5239A20012A	5239A20012A		R
354212	EVAPORATOR ASSEMBLY,FIRST	5421A10026P	5421A10026P		R
554030	CONDENSER ASSEMBLY,FIRST	5403A20043M	5403A20043M		R
550140	ANTI-VIBRATION BUSH	5040AR4195A	5040AR4195A		R
554160	COMPRESSOR SET	2520UCDK004	2520UCDK004		R
559010	FAN, AXIAL	5900AR1167B	5900AR1167B		R
359012	FAN, TURBO	5900A20020A	5900A20020A		R
267110	REMOTE CONTROLLER ASSEMBLY	6711A20034G	6711A20034G		R
W48602	CLAMP, SPRING	3H02932B	3H02932B		R
W0CZZ	CAPACITOR, DRAWING	0CZZA20001N	0CZZA20001N		R

