

TRAINING MANUAL

LWHD1006R Air Conditioner

Spring 2007



LG Service

Digital Appliance

LWHD1006R (Air Conditioner)

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IMPORTANT SAFETY NOTICE

The information in this training manual is intended for use by persons possessing an adequate background in electrical equipment, electronic devices, and mechanical systems. In any attempt to repair a major appliance, personal injury and property damage can result. The manufacturer or seller maintains no liability for the interpretation of this information, nor can it assume any liability in conjunction with its use. When servicing this product, under no circumstances should the original design be modified or altered without permission from LG Electronics. Unauthorized modifications will not only void the warranty, but may lead to property damage or user injury. If wires, screws, clips, straps, nuts, or washers used to complete a ground path are removed for service, they must be returned to their original positions and properly fastened.

CAUTION

To avoid personal injury, disconnect the power before servicing this product. If electrical power is required for diagnosis or test purposes, disconnect the power immediately after performing the necessary checks. Also be aware that many household appliances present a weight hazard. At least two people should be involved in the installation or servicing of such devices. Failure to consider the weight of an appliance could result in physical injury.

ESD NOTICE

Some of the electronics in appliances are electrostatic discharge (ESD) sensitive. ESD can weaken or damage the electronics in these appliances in a manner that renders them inoperative or reduces the time until their next failure. Connect an ESD wrist strap to a ground connection point or unpainted metal in the appliance. Alternatively, you can touch your finger repeatedly to a ground connection point or unpainted metal in the appliance. Before removing a replacement part from its package, touch the anti-static bag to a ground connection point or unpainted metal in the appliance. Handle the electronic control assembly by its edges only. When repackaging a failed electronic control assembly in an anti-static bag, observe these same precautions.

REGULATORY INFORMATION

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential installation. This equipment generates, uses, and can radiate radio frequency energy, and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: Reorient or relocate the receiving antenna; Increase the separation between the equipment and the receiver; Connect the equipment to an outlet on a different circuit than that to which the receiver is connected; or consult the dealer or an experienced radio/TV technician for help.

DISCLAIMER

The information in this training manual was accurate at the time of publication. Every effort has been made to ensure accuracy. Updates, changes, etc. are available online via GCSC and LGCSacademy.

COMPLIANCE

The responsible party for this device's compliance is LG Electronics Alabama, Inc.; 201 James Record Road, Huntsville, AL, 35813.

WARRANTY

LG ROOM AIR CONDITIONER LIMITED WARRANTY – USA

LG Electronics Inc. will repair or at its option replace, without charge, your product if it proves to be defective in material or workmanship under normal use during the warranty period set forth below, effective from the date of original consumer purchase of the product. This limited warranty is good only to the original purchaser of the product and effective only when used in the United States including Alaska, Hawaii, and U.S. Territories.

<p><u>WARRANTY PERIOD:</u></p> <p>Labor: 5 Year from the Date of Purchase.</p> <p>Parts: 5 Year from the Date of Purchase.</p> <p>Compressor: 5 Years from the Date of Purchase.</p>	<p><u>HOW SERVICE IS HANDLED:</u></p> <p>Call 1-800-243-0000 and choose the appropriate prompt. Please have product type (Room Air Conditioner), model number, serial number, and ZIP code ready.</p> <p>The warranted labor covers the cost of In-Home Service on all parts including the compressor.</p>
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THIS WARRANTY IS IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. TO THE EXTENT ANY IMPLIED WARRANTY IS REQUIRED BY LAW, IT IS LIMITED IN DURATION TO THE EXPRESS WARRANTY PERIOD ABOVE. LG WILL NOT BE LIABLE FOR ANY CONSEQUENTIAL, INDIRECT, OR INCIDENTAL DAMAGES OF ANY KIND, INCLUDING LOST REVENUES OR PROFITS, IN CONNECTION WITH THE PRODUCT. SOME STATES DO NOT ALLOW LIMITATION ON HOW LONG AN IMPLIED WARRANTY LASTS OR THE EXCLUSION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY TO YOU.

THIS LIMITED WARRANTY DOES NOT APPLY TO:

1. Service trips to your home to deliver, pick up, and/or install the product, instruct, or replace house fuses or correct wiring, or correction of unauthorized repairs; and
2. Damages or operating problems that result from misuse, abuse, operation outside environmental specifications or contrary to the requirements or precautions in the Operating Guide, accident, vermin, fire, flood, improper installation, acts of God, unauthorized modification or alteration, incorrect electrical current or voltage, or commercial use, or use for other than intended purpose.
3. **Therefore, the cost of repair or replacement of such a defective product shall be borne by the consumer.**

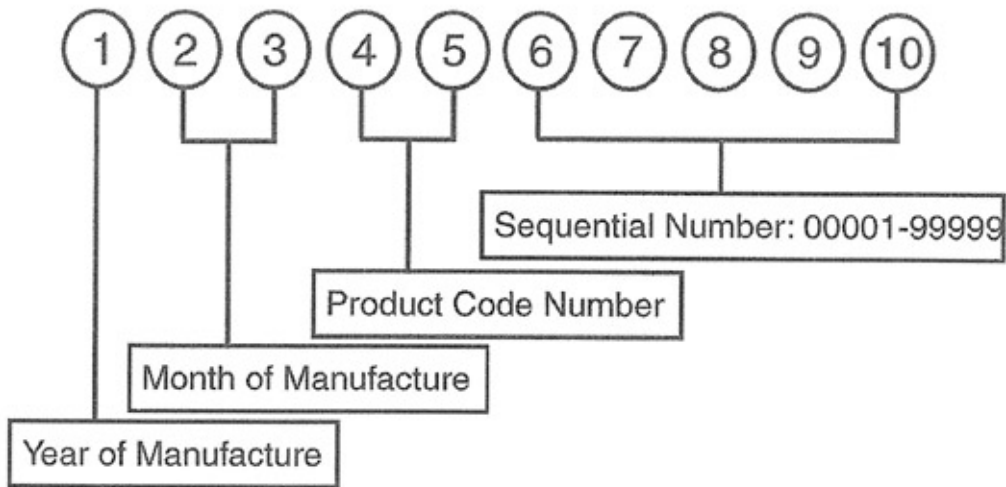
CUSTOMER INTER-ACTIVE CENTER NUMBERS:

<p>To Prove Warranty Coverage</p>	<p>Retain your Sales Receipt to prove date of purchase. A copy of your Sales Receipt must be submitted at the time warranty service is provided.</p>
<p>To Obtain Nearest Authorized Service Center or Sales Dealer, or to Obtain Product, Customer, or Service Assistance</p>	<p>Call 1-800-243-0000, 24 hrs a day, 7 days per week. Choose the appropriate prompt from the menu, and have your product type (Room Air Conditioner), model number, serial number, and ZIP Code; or visit our website at http://www.lgappliances.com.</p>

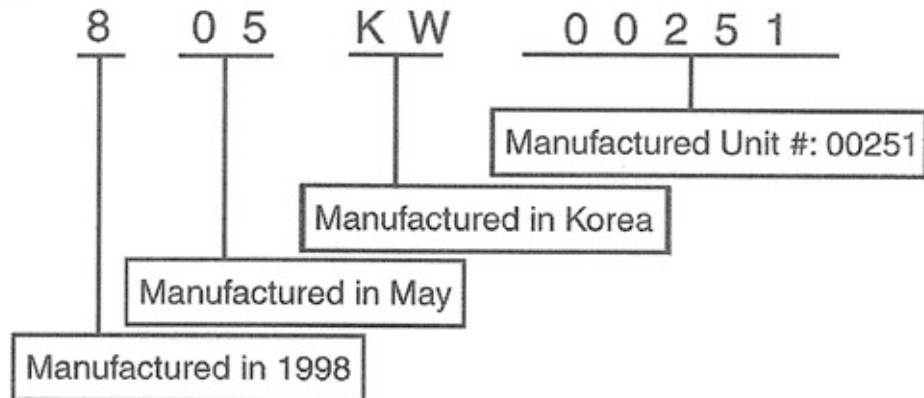
SERIAL NUMBER

The serial number is unique to each product. It is required to be paid for warranty service and to get the correct part in the event a running production change was made.

Some models may have four (4) letters instead of two (2) for the product code number. The third and fourth letters are significant only to the manufacturing facility.



Example



SPECIFICATIONS

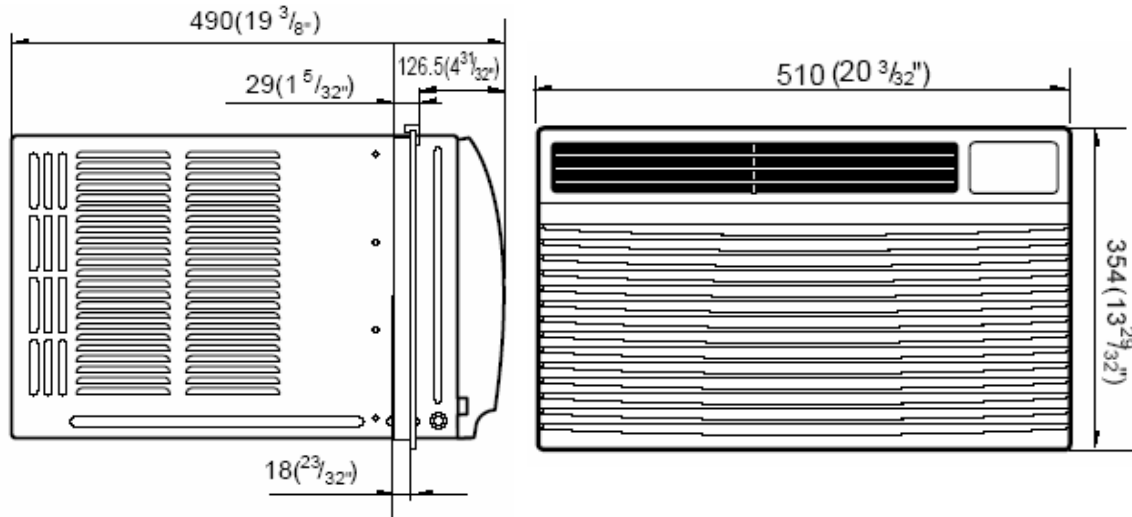
MODEL		LWHD1006R	
ITEMS			
POWER SUPPLY		120 VAC 60Hz	
COOLING CAPACITY	(Btu/h)	10,000	
INPUT	(W)	1,020	
RUNNING CURRENT	(A)	9.2	
E.E.R	(BTU/W-h)	9.8	
OPERATING CONDITION	INDOOR (°C)	26.7° C (80° F) [DB*]	19.4° C (67° F) [WB**]
	OUTDOOR (°C)	35° C (95° F) [DB*]	23.9° C (75° F) [WB**]
REFRIGERANT (R-22) CHARGE		250 g (8.8 oz.)	
EVAPORATOR		3 ROWS / 11 STACKS	
CONDENSER		2 ROWS / 16 STACKS	
FAN, INDOOR		TURBO FAN	
FAN, OUTDOOR		PROPELLER TYPE FAN WITH SLINGER RING	
FAN SPEEDS, FAN/COOLING		3 FAN / 3 COOLING	
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 GROUNDING	
		ATTACHMENT PLUG (CORD-CONNECTED TYPE)	
DRAIN SYSTEM		DRAIN PIPE OR SPLASHED BY FAN SLINGER	
NET WEIGHT		32 kg (71 lbs.)	
OUTSIDE DIMENSION (W x H x D)	(inch)	20 ³ / ₃₂ x 13 ⁷ / ₈ x 19 ³ / ₈	
	(mm)	510 x 353 x 490	

*DB = Dry Bulb

**WB = Wet Bulb

INTRODUCTION

The LWHD1006R is a 115-volt window air conditioner. This product is a consumer comfort appliance, not a precision climate control system.



GROUNDING

The power cord is equipped with a 3-prong grounding plug. It also incorporates an AFCI (Arc Fault Current Interrupter) as an integral part of the power cord.



Press the TEST button to test the device. Then press the RESET button to reset it. If the TEST button does not trip or the RESET button does not restore power, unplug the air conditioner and call an Authorized Service Technician.

Be sure the wall outlet connection is secure. Poor contact can trip the device.

DO NOT tamper with or attempt to defeat or repair this device.

PACKING

Front view of air conditioner, showing accessories, manual, and cord packed inside the air guide.



Remove the package containing the owner's manual, product registration card, remote controller, and batteries.

The customer should complete and return the product registration card immediately after purchase in order to be notified in the event there is ever a safety issue concerning the product.



The model and serial numbers are on a sticker on the right side of the cabinet as you face the air conditioner inside the house.



These are always visible if the air conditioner is installed correctly.

There is another sticker on the left side showing other important information about the air conditioner, including refrigerant type and charge.



- Cut the straps and open the packing carton from the top.
- Remove the staples to avoid being cut or tearing your clothing.
- Remove the front grille assembly and the upper guide bar.
- Remove the foam packing materials.
- Save the packing materials and box in case you need to store the air conditioner during the cool season or if you move or need to ship it someplace.
- Remove the accessory box. It contains all the parts you need for installation. (See page 11.) Check the parts list to ensure nothing is missing.
- Part # **3127A10015B**.
- Be **very careful** when lifting the air conditioner out of the box. Both front and back have exposed **SHARP** fins! Look before you stick your hands into the box or try to hold the product.
- Use two people to lift this air conditioner.



SAFETY

- Use a dedicated circuit and no extension cord.
- Be careful of sharp edges on the cabinet and the fins on the condenser and evaporator.
- Use the air conditioner for its intended purpose, cooling and/or dehumidifying a room. It is not designed to preserve books, artwork, etc. or to maintain a strict climate control chamber such as a museum or humidior.
- Do not use water to clean the air conditioner.
- Unplug the air conditioner to clean it. You don't want it to switch on by itself and cause an injury while you are cleaning.

OPERATION

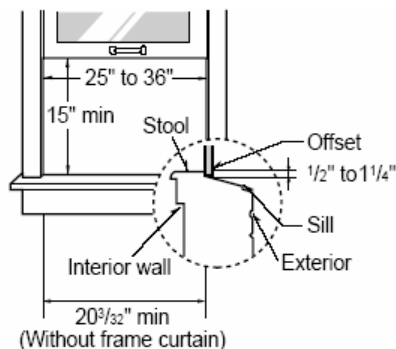
Install the air conditioner in a window and plug it in. Adjust the controls using either the control panel on the air conditioner or the remote control. Do not use the power cord to turn the air conditioner on and off.

MAINTENANCE

This air conditioner is designed to operate with approximately $\frac{1}{2}$ " of water in the base pan. The condenser (outdoor) fan is made with a ring around the edge of the blades. This slinger fan runs in the condensate collected in the pan and expels it through the condenser, which causes a slight increase in efficiency. There is no need to add water if the pan is dry.

INSTALLATION

The air conditioner is designed to be installed in a double- or single-hung window with an actual opening width of 25 ~ 36 inches (not through a hole in a wall or other structural modification) and plugged into a single-outlet, dedicated 15-amp circuit without using an extension cord. All applicable clearances should be maintained. All side louvers on the cabinet must remain exposed on the outside of the structure. (See drawing, below, and on page 8 of this manual.)

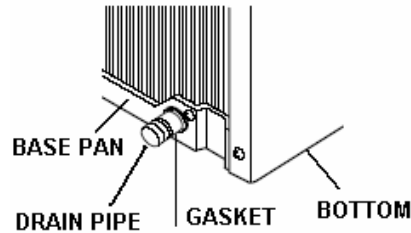
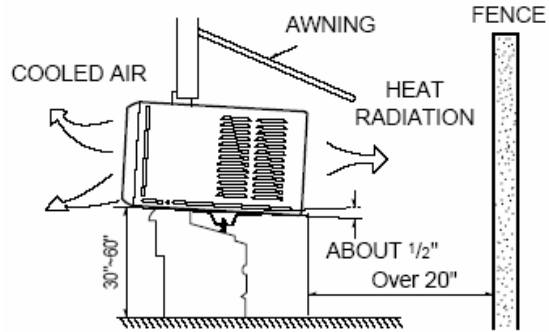


All installations should be in accordance with the current NEC (National Electric Code) regulations and all local codes. Abbreviated installation instructions are included on page 8 of this manual to assist the servicer in the event of having to remove/reinstall the air conditioner.

INSTALLATION INSTRUCTIONS

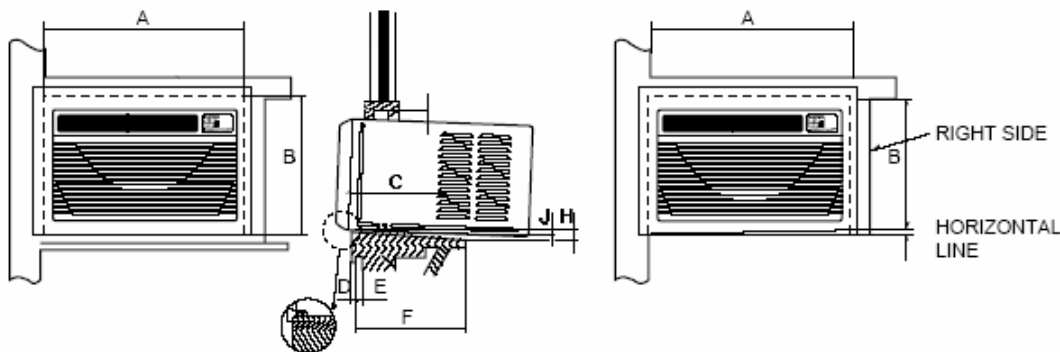
Abbreviated installation instructions are included in the event the installer must remove the air conditioner or replace it in the window.

- Be sure the air conditioner is installed securely and firmly.
- Install the air conditioner so the back (outside) is slightly lower than the front. This will force water to the drain at the back of the base pan.
- Install the air conditioner so it is between 30 and 60 inches above the floor.
- If excess water collects in the base pan or the fan makes undesirable noise running in the water, remove the rubber plug and install the drain pipe. You can connect a hose to the pipe and route the overflow to a convenient drain place.
- Plug the air conditioner into a single-outlet 15-amp circuit.
- Be sure furniture and draperies do not block the air inlet and outlet.



Drain plug (removed).

DIMENSIONS



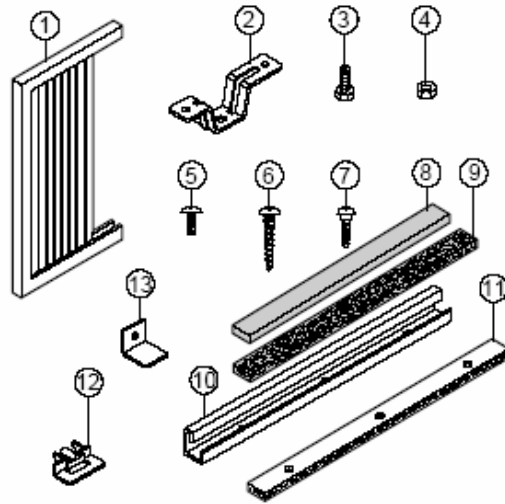
A	B	C	D	E	F	H	J	K
535mm (21½")	366mm (14 ⁷ / ₁₆ ")	250mm (10")	30mm (1 ¹ / ₁₆ ")	0~25mm (0~1")	OVER 420mm (OVER 16 ¹⁷ / ₃₂ ")	32 (1¼")	5~10mm (³ / ₁₆ "~ ³ / ₈ ")	0~5mm (0~ ³ / ₁₆ ")

INSTALLATION KIT

The installation kit (**3127A10015B**) includes all the parts necessary to install the air conditioner. The panels (1) are different for the left and right sides. Refer to the chart to identify parts.



- Refer to the parts list to ensure all parts are included.
- Sort the screws by size, shape, and quantity to determine which is which.
- The foam strip (PE = polyethylene) with adhesive is to be applied under the upper guide before it is attached to the cabinet.



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

PREPARATION FOR INSTALLATION

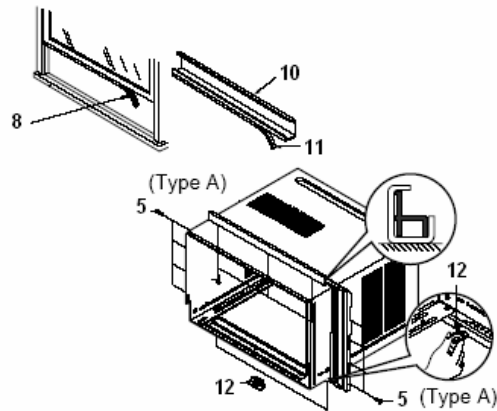
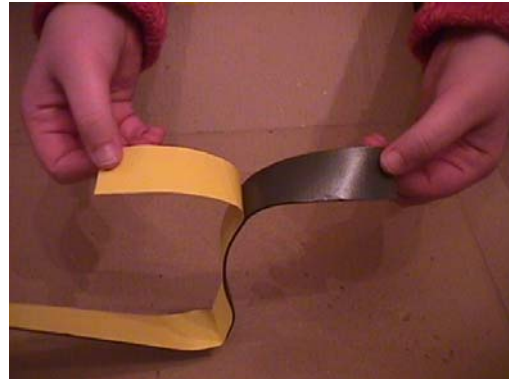
- Remove the screws at the back and the sides of the cabinet.
- Grip the base pan handle at the front and pull the chassis out while holding the cabinet.
- Remove the packing material taped to the dryer inside the air conditioner and discard it.



PREPARATION FOR INSTALLATION, continued

- Attach the adhesive foam strip (11) to the bottom of the upper guide (10).
(See chart, page 11 and right.)
- Attach the upper guide (10) to the cabinet using three screws (Type A).

Note that the screws are inserted into the guide from inside the cabinet into the upper guide, not through the guide into the cabinet on the top.

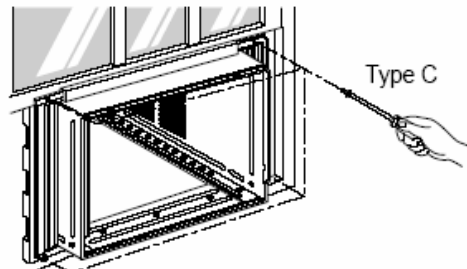
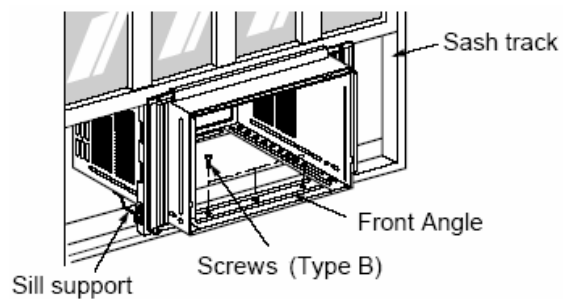
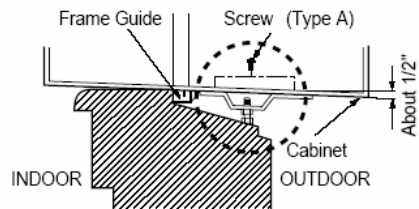
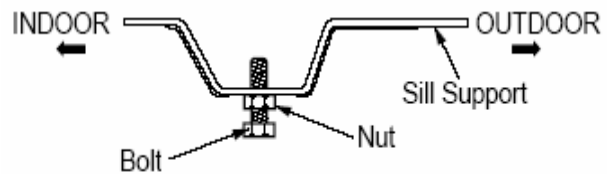
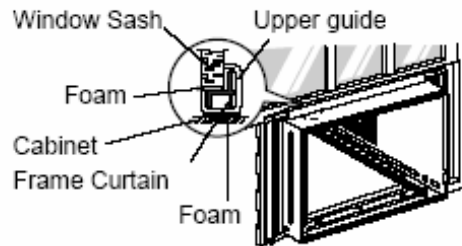
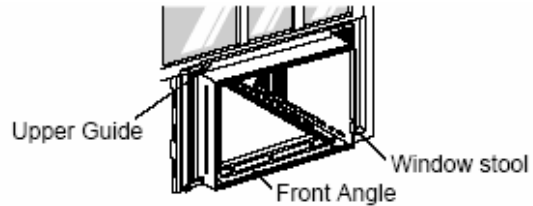


- Insert the frame guides (12) in the bottom of the cabinet. Place the rounded part in the center track and the tabs into the rectangular slots. Press the clip down toward the front of the cabinet until the tabs click into place.
- Insert the frame curtains into upper and lower guides, then attach them with 4 screws (Type A) on each side. A long driver works best.

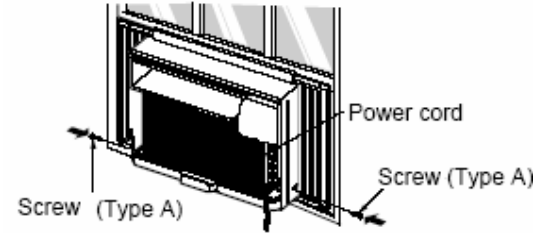


INSTALL THE CABINET

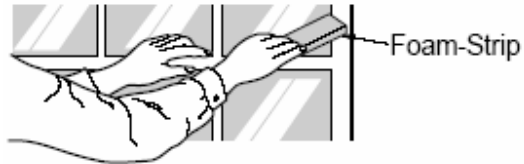
- Open the window.
- Mark the centerline on the sill. Place the cabinet in the window and align it with the centerline.
- Attach the cabinet to the sill with wood screws (Type B).
- Lower the window to allow the sash to fall behind the upper guide so the cabinet can rest against it.
- Thread the nut onto the bolt and thread the bolt into the sill support. (Do this for both sides.) Use this bolt to adjust the cabinet height so it hangs out of the window with the back (outside) slightly lower than the front (inside).
- Use 2 screws to attach the sill support to the bottom of the cabinet from the inside. You may have to slide it forward or back to get it in the correct place.
- Attach the cabinet to the window sill by driving 3 Type B screws through the front angle of the cabinet into the window sill.
- Attach the frame curtains to the window sash (top) and track (bottom) using Type C screws.



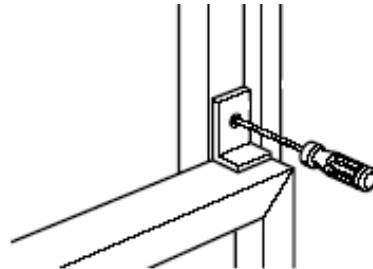
- Slide the chassis into the cabinet.
- Reinstall the Type A screws in the sides and back of the cabinet.



- Place the foam strip in the gap between the inner and outer windows to keep drafts and vermin out.



- Attach the window locking bracket using a Type C screw. This secures the window to keep the air conditioner from falling out and burglars from getting in.



- Attach the front grille by placing the top on the cabinet and engaging the tabs on the grille in the slots on the cabinet.
- Push the grille down until it snaps into place.



- Open the front panel and attach the grille to the chassis using a Type A screw.



FEATURES

- Dehumidifier function
- Powerful and quiet
- Slide-in chassis
- Top cool air discharge
- Low air intake
- Built-in adjustable thermistor
- Washable, reusable filter
- Compact size
- Rotary Compressor
- Remote Control

CONTROLS

This air conditioner is designed for window installation and cooling and/or dehumidifying. There is no heat function.

1. POWER BUTTON

Turns the air conditioner **ON** and **OFF**

2. TEMPERATURE CONTROL

Adjusts the set temperature between 60° F and 86° F. It takes approximately 30 minutes to adjust the temperature by 5° F under normal load conditions.

3. OPERATION MODE

Cycles between these settings:
COOL to cool the room
ENERGY SAVER so the fan turns off with the compressor
FAN to ventilate without cooling
DRY to dehumidify the room

4. FAN SPEED SELECTOR

Cycles between **LOW**, **MEDIUM**, and **HIGH** fan speeds (**F1**, **F2**, and **F3**). **DRY** cycle uses **F1 (LOW)**.

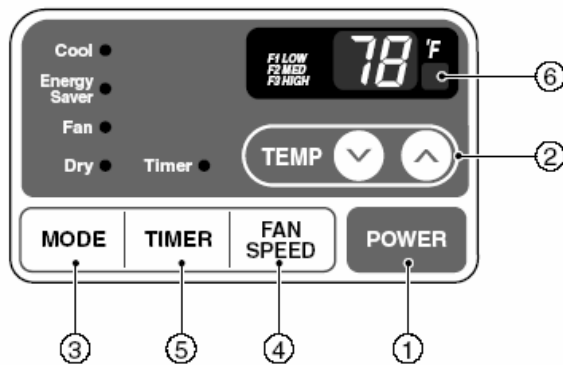
5. TIMER

Allows the air conditioner to be turned **ON** or **OFF** up to 12 hours later.

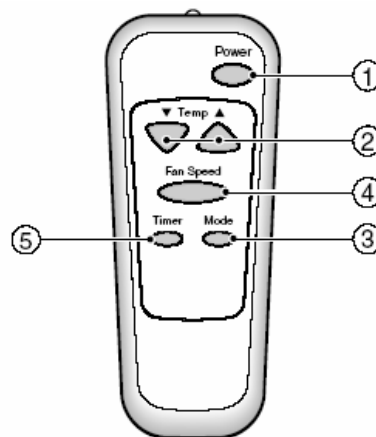
6. REMOTE CONTROL SENSOR

Receives signals from the remote.

CONTROL PANEL



REMOTE CONTROL

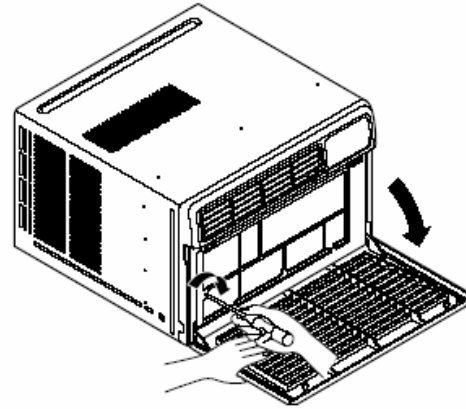


DISASSEMBLY AND REPAIR

MECHANICAL PARTS

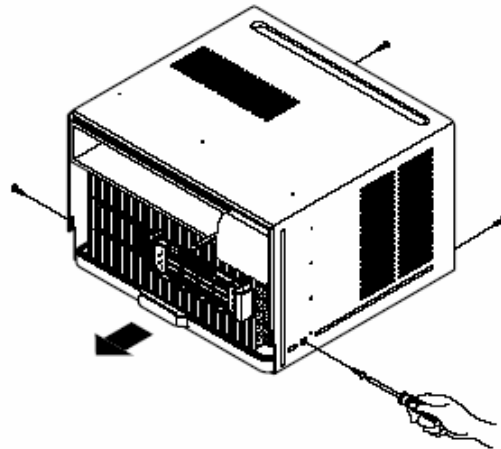
FRONT GRILLE

1. Open the grille downward and remove the air filter. Clean it if necessary.
2. Remove the screw that fastens the grille (bottom center).
3. Pull out on the right side and lift the grille upward off the 4 hooks along the top of the cabinet.
4. Replacement is the reverse of these steps.



CABINET

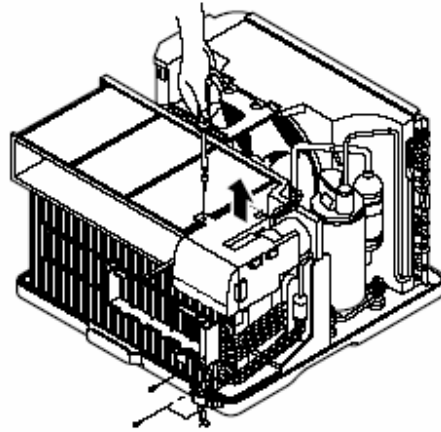
1. After removing the front grille (above), remove four screws, one on each side of the cabinet and two in the back.
2. Pull the chassis forward out of the cabinet.
3. Replacement is the reverse of these steps.
4. The chassis may be removed from the cabinet for servicing and the cabinet left in the window if desired. This may pose a security issue, as a burglar may be able to enter the house through the open cabinet. Bugs, birds, and other vermin may come in, as well. If the service takes more than a couple of hours, it is a good idea to uninstall the cabinet.



CONTROL BOX

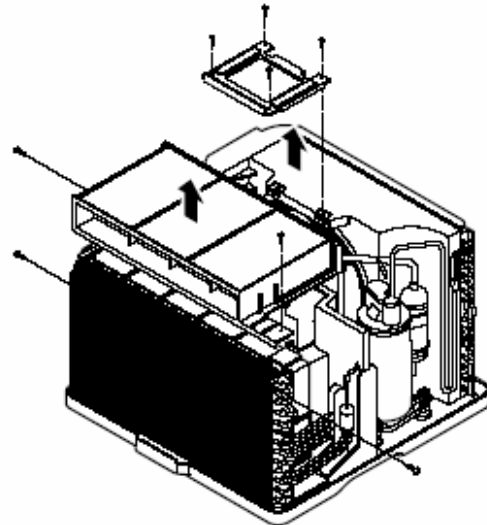
1. Remove the front grille.
2. Remove the cabinet.
3. Remove the 2 screws that fasten the power cord.
4. Disconnect the ground screw from the base pan.
5. Remove the screw that secures the control box cover.
6. Remove the connector between the PCB and the motor lead.
7. Remove the nut and the terminal cover from the compressor.
8. Remove the leads from the OLP. (Overload Protector)
(See page 20.)
9. Discharge the capacitor by shorting it with a 20k Ω resistor.
10. Lift the control box out of the way.
11. Reinstallation is the reverse of these steps.

Refer to the wiring diagram on page 27 of this manual.

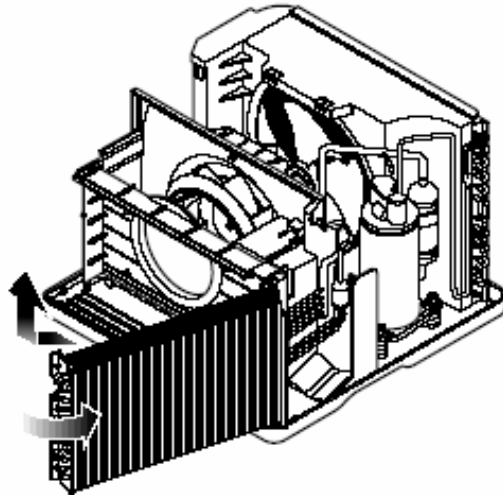


AIR GUIDE and TURBO FAN (Indoor Fan)

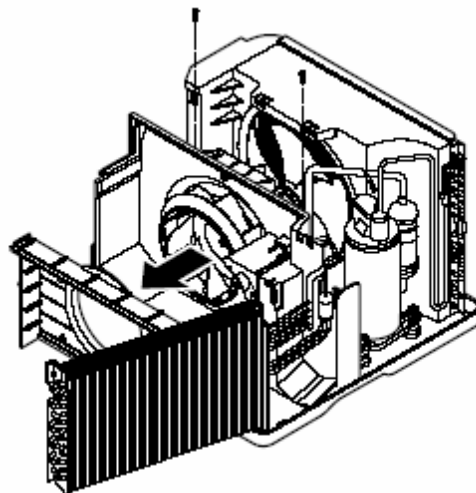
1. Remove the front grille.
2. Remove the cabinet.
3. Remove the control box.
4. Remove the 4 screws that secure the brace and lift it away.
5. Remove the 2 screws to remove the upper air guide.



6. Remove 2 screws that secure the evaporator.
7. Lift the evaporator slightly and fold it forward, as shown.
8. Press the plastic tabs to remove the plastic orifice (fan guide).

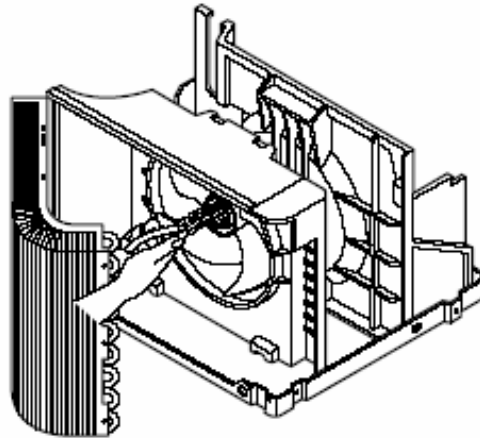


9. Use pliers to remove the clamp on the fan shaft. Slide the fan off the shaft.
10. Remove 2 screws that secure the lower air guide to the base pan.
11. Carefully push the lower air guide backward and pull it out of the base pan.
12. Replacement is the reverse of these steps.



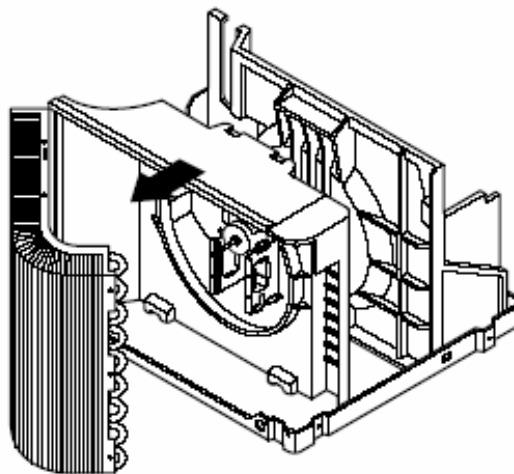
CONDENSER FAN (Outdoor Fan)

1. Remove the cabinet.
2. Remove the brace.
3. Remove 5 screws that secure the condenser.
4. Lift the condenser slightly and fold it to the left.
5. Use pliers to remove the clamp on the fan shaft.
6. Slide the fan off the shaft.
7. Replacement is the reverse of these steps.



SHROUD (Condenser)

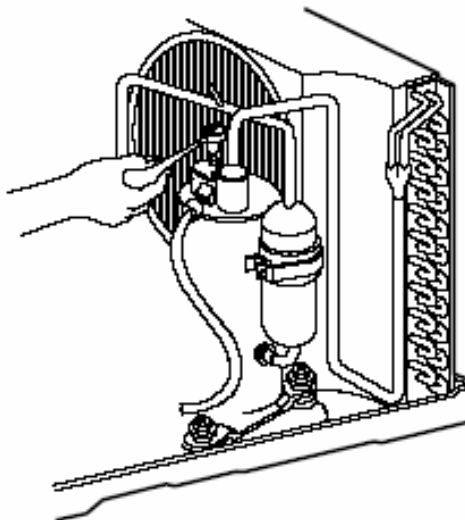
1. Remove the fan, as described in the previous section.
2. Lift the shroud out of the base pan.
3. Replacement is the reverse of these steps.



ELECTRICAL PARTS

OVERLOAD PROTECTOR (OLP)

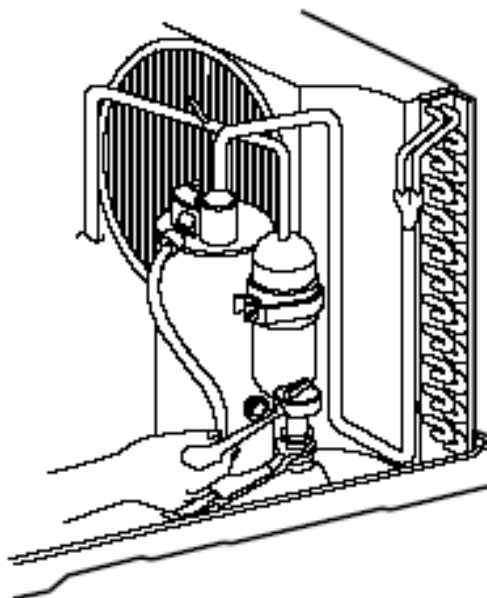
1. Remove the cabinet.
2. Remove the nut and terminal cover.
3. Remove all leads from the overload protector (OLP).
4. Remove the overload protector.
5. Replacement is the reverse of these steps.



COMPRESSOR

See the refrigeration section on pages 23~25 for complete instructions. Use all the usual safety practices when working with the sealed system. Refrigerant poses an additional safety hazard in that it can cause frostbite on the skin or freeze the surface of the eye, causing irreparable blindness. Refrigerant must be recovered when the system is discharged. If there is no service valve, install one before servicing the system and leave it in place after the work is done.

1. Remove the grille and cabinet.
2. Discharge the system and recover the refrigerant.
3. Remove the overload protector.
4. After recovering the refrigerant and purging the system, un-braze the suction and discharge tubes at the compressor.
5. Remove the 3 nuts and washers that secure the compressor.
6. Replacement is the reverse of these steps.



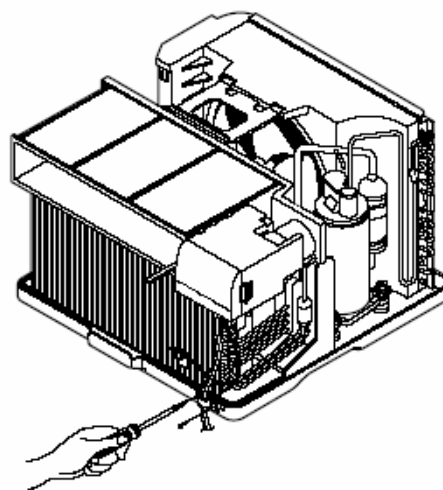
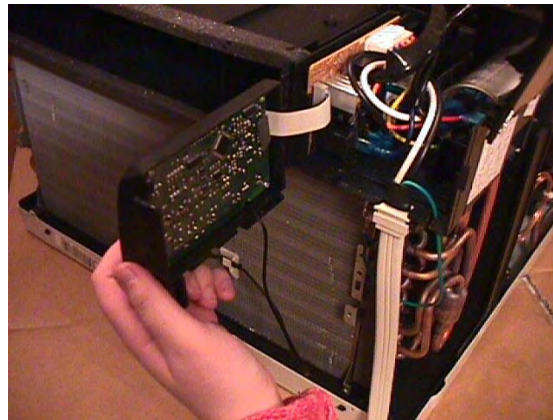
CAPACITOR

1. Remove the screw and open the top cover of the control box.
2. Discharge the capacitor by shorting it with a 20K Ω resistor.
3. Disconnect the leads.
4. Replacement is the reverse of these steps.



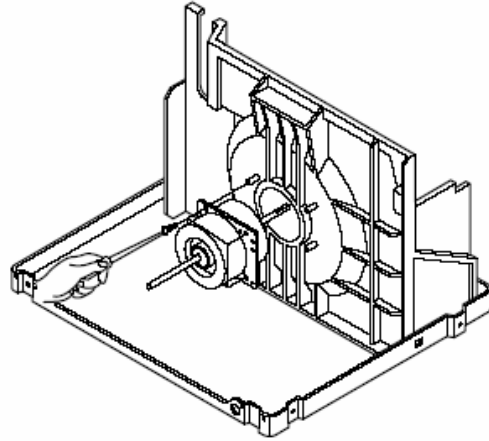
POWER CORD

1. Remove the screw and open the top cover of the control box.
2. Disconnect the front panel from the control box by prying the tab open and folding it to the left.
3. Discharge the capacitor (above).
4. Disconnect the leads from the capacitor and relay.
5. Pull the power cord free.
6. Replacement is the reverse of these steps.
7. If the cord is damaged or compromised in any way, it must be replaced with an exact replacement part, including any protective devices, rather than by a generic cord.
8. Use only a single point ground connection for all ground wires at this location.



MOTOR (Fan)

1. Remove the cabinet.
2. Remove the turbo (indoor) fan.
(See page 18.)
3. Remove the slinger (outdoor)
fan. (See page 19.)
4. Remove 4 screws that secure
the fan motor to the air guide.
5. Lift the motor out.
6. Replacement is the reverse of
these steps.



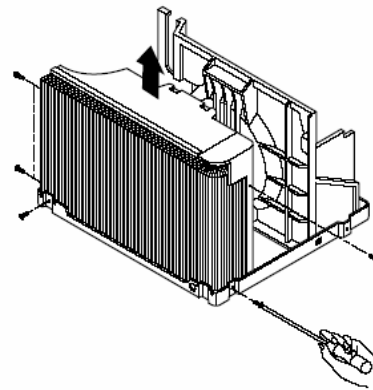
REFRIGERATION CYCLE

GENERAL INFORMATION

Use special precautions when working on the sealed refrigeration system. See page 24 for more information. Refrigerant (R-22) boils at -41°F at atmospheric pressure. If it escapes and contacts the body, it can cause frostbite or it can freeze the surface of the eye, causing irreparable blindness. If there is no service valve on the system, one must be installed before work can continue. Discharge the system by recovering the refrigerant. ALWAYS wear eye protection.

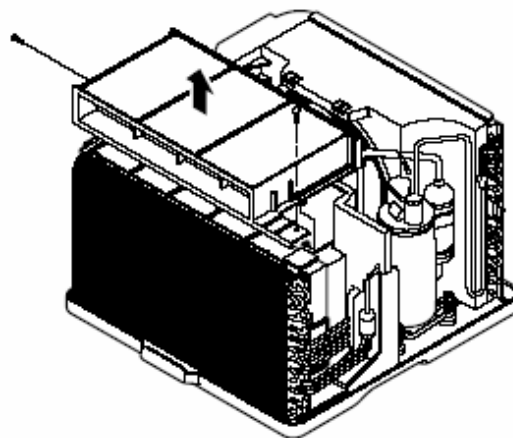
CONDENSER

1. Remove 5 screws that secure the secure the brace.
2. Remove the 5 screws that secure the condenser shroud.
3. Discharge and recover the refrigerant completely.
4. Unbraid the condenser at the connecting points.
5. Replacement is the reverse of these steps.



EVAPORATOR

1. Remove the upper air guide.
2. Remove 2 screws that secure the evaporator.
3. Lift the evaporator slightly and push it sideways.
4. Discharge and recover the refrigerant.
5. Unbraid the evaporator at the connecting points.
6. Replacement is the reverse of these steps.



CAPILLARY TUBE

1. Discharge and recover the refrigerant completely.
2. Unbrazed the capillary tube on both ends.
3. Replacement is the reverse of these steps.



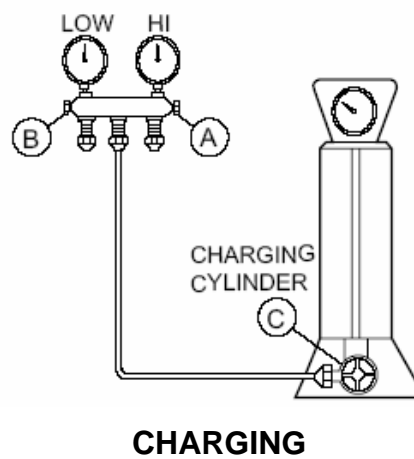
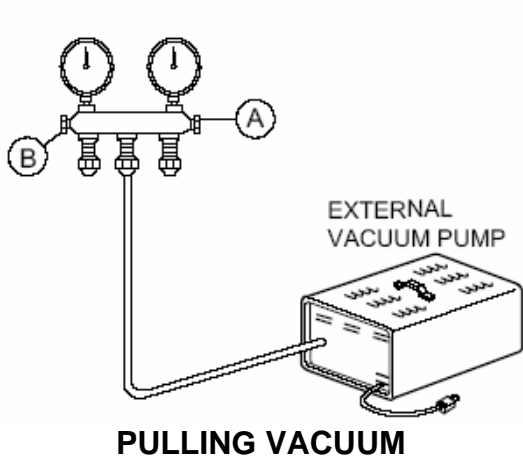
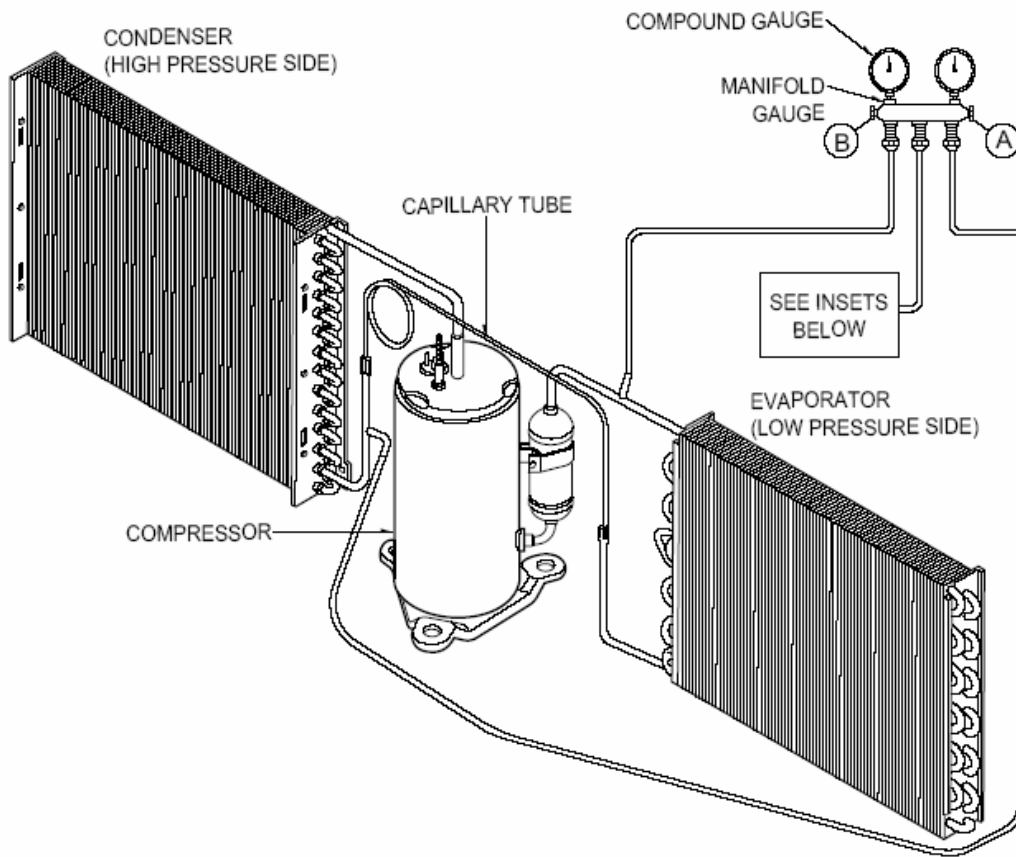
SEALED SYSTEM REPAIR NOTES

1. Use caution when working with the sealed system. Refrigerant must be discharged and recovered; it may not be vented into the atmosphere.
2. Wear eye protection. If refrigerant is released and it contacts the eye, the surface of the eye will freeze instantly and the damage cannot be repaired. **The result is permanent blindness.**
3. If there is no service valve, one must be installed before work is performed. Use a piercing type valve to recover the refrigerant. Then unbraid and remove the pinch-off tube. Replace the tube with a service valve and leave the valve in the system when the work is completed.
4. Be very careful when moving parts of the sealed system (condenser, evaporator, and piping) to avoid crimping the tubing or damaging the soldered joints.
5. If you are using high vacuum equipment, simply crack valves A and B for a few minutes at the beginning, then open the valves two full turns. This keeps the compressor oil from foaming and being drawn into the vacuum pump. (See next page.)

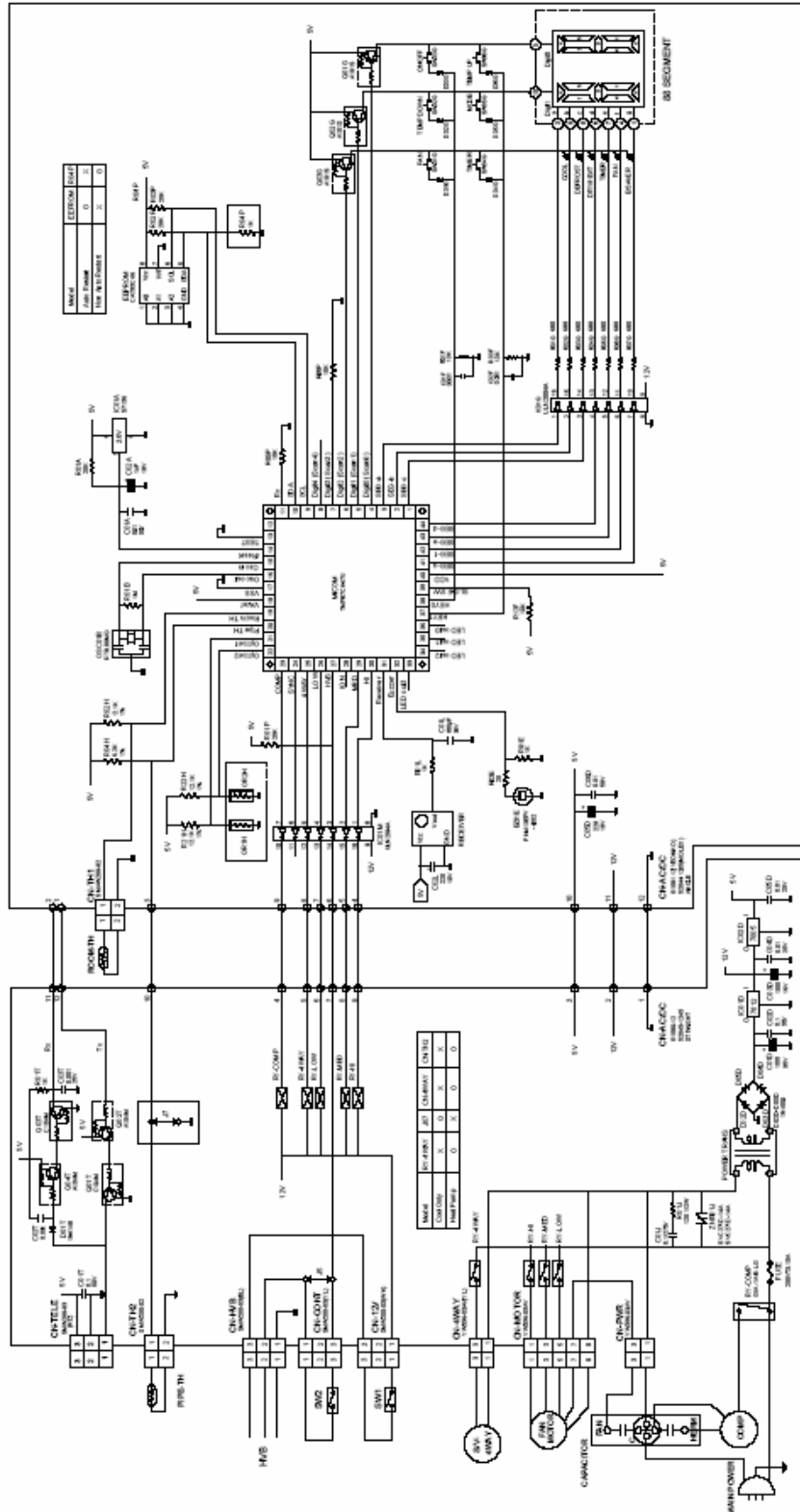
TOOLS REQUIRED FOR SERVICE

- Vacuum pump
- Brazing equipment
- Leak detector
- Tubing cutter
- Service valve (remains in place)
- Charging cylinder
- Manifold gauge set
- Pinch-off tool capable of making a vapor-proof seal
- Various hand tools

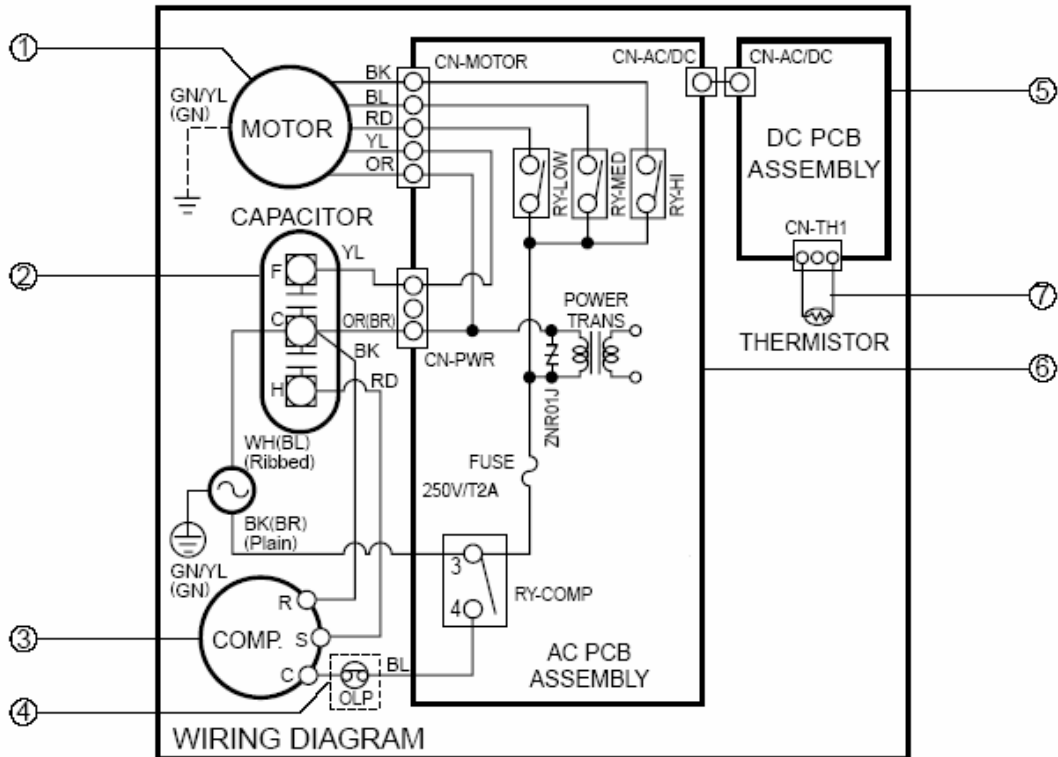
SERVICE EQUIPMENT SETUP and CONNECTION



SCHEMATIC



WIRING DIAGRAM

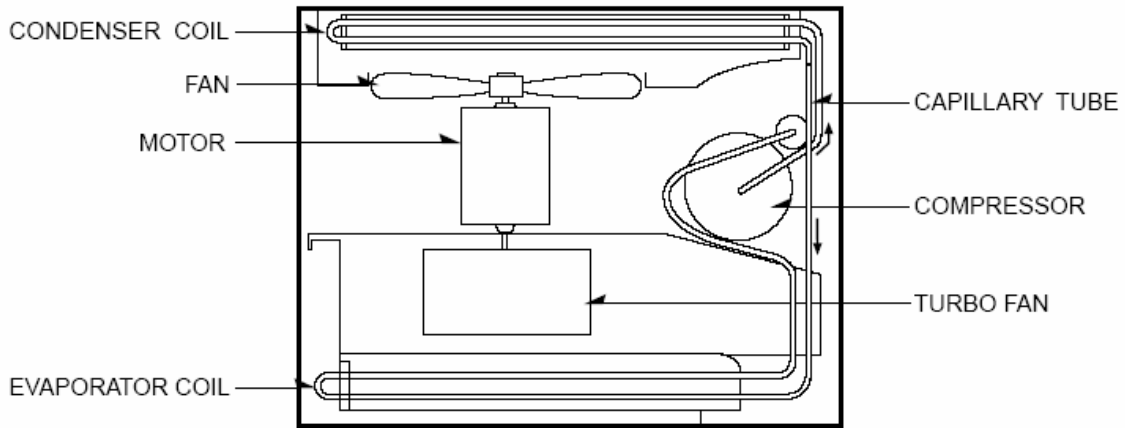


PARTS LOCATION and DESCRIPTION

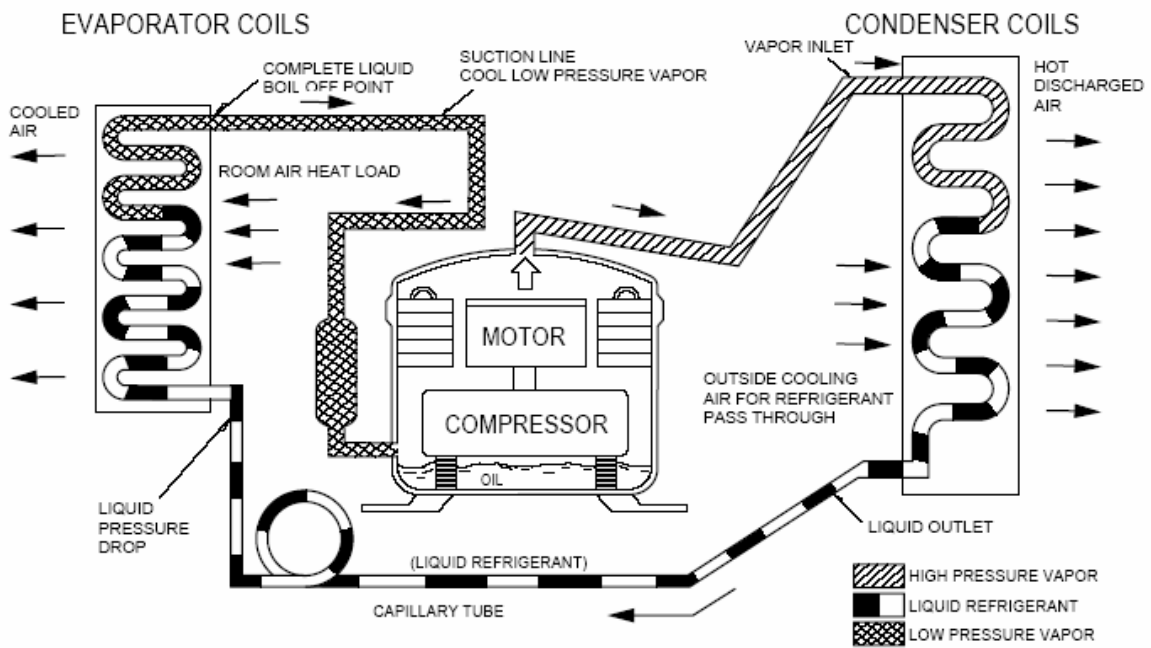
LOCATION NO.	DESCRIPTION
1	MOTOR ASSEMBLY
2	CAPACITOR 50μF/6μF
3	COMPRESSOR
4	OVERLOAD PROTECTOR
5	DC PCB ASSEMBLY
6	AC PCB ASSEMBLY
7	THERMISTOR

COMPONENT LOCATION (continued)

PIPING SYSTEM

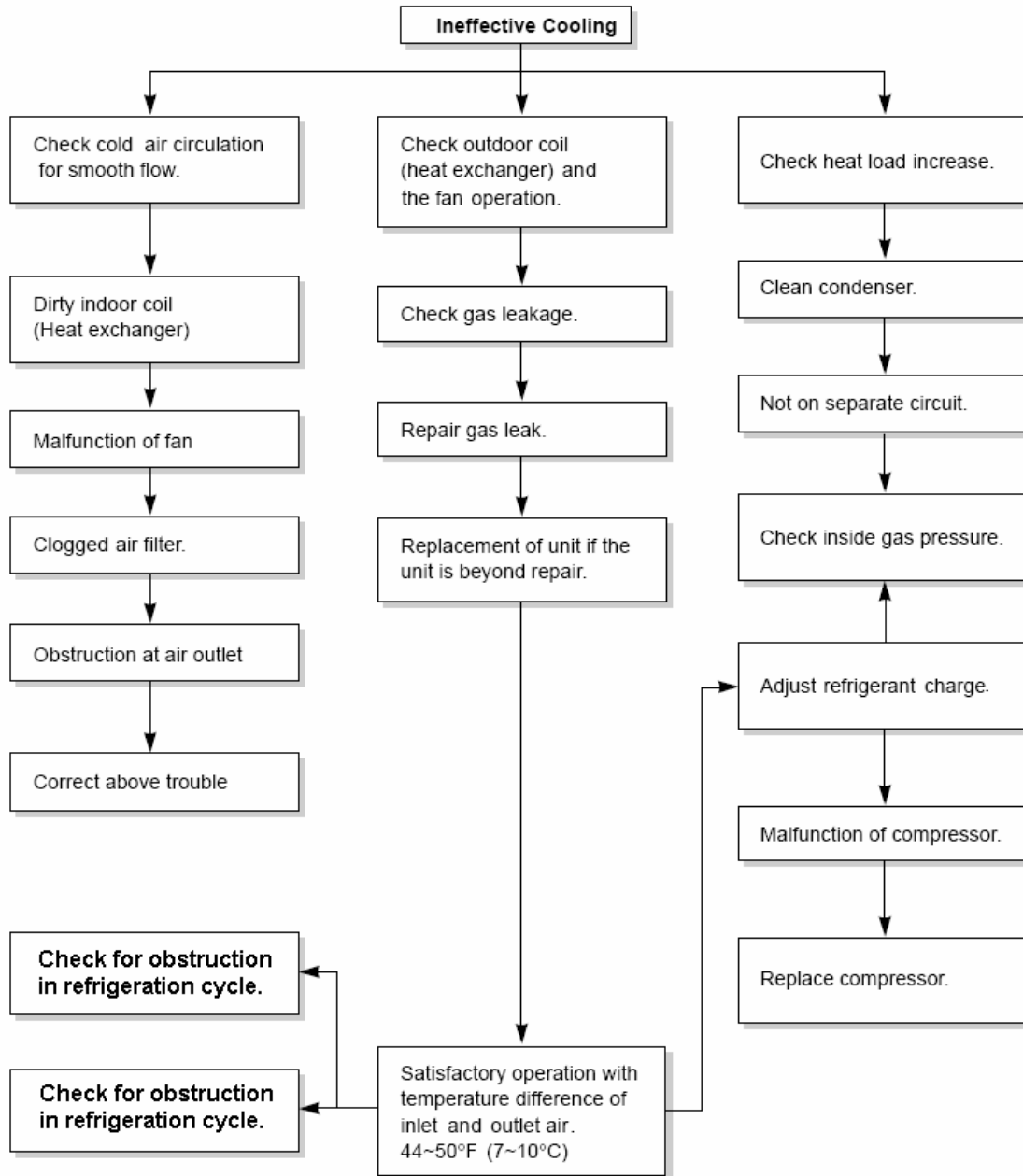


SEALED (REFRIGERATION) CYCLE

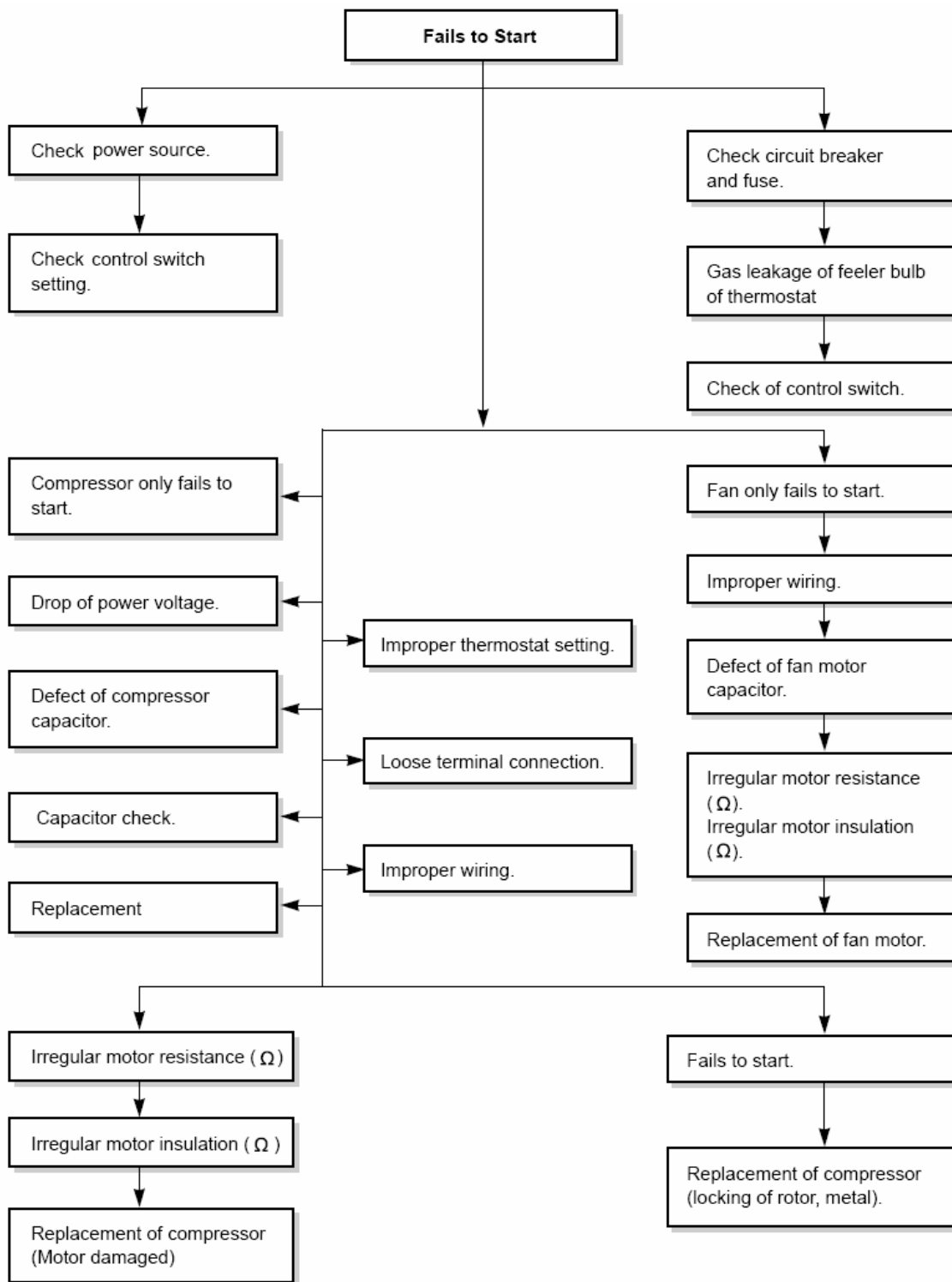


TROUBLESHOOTING

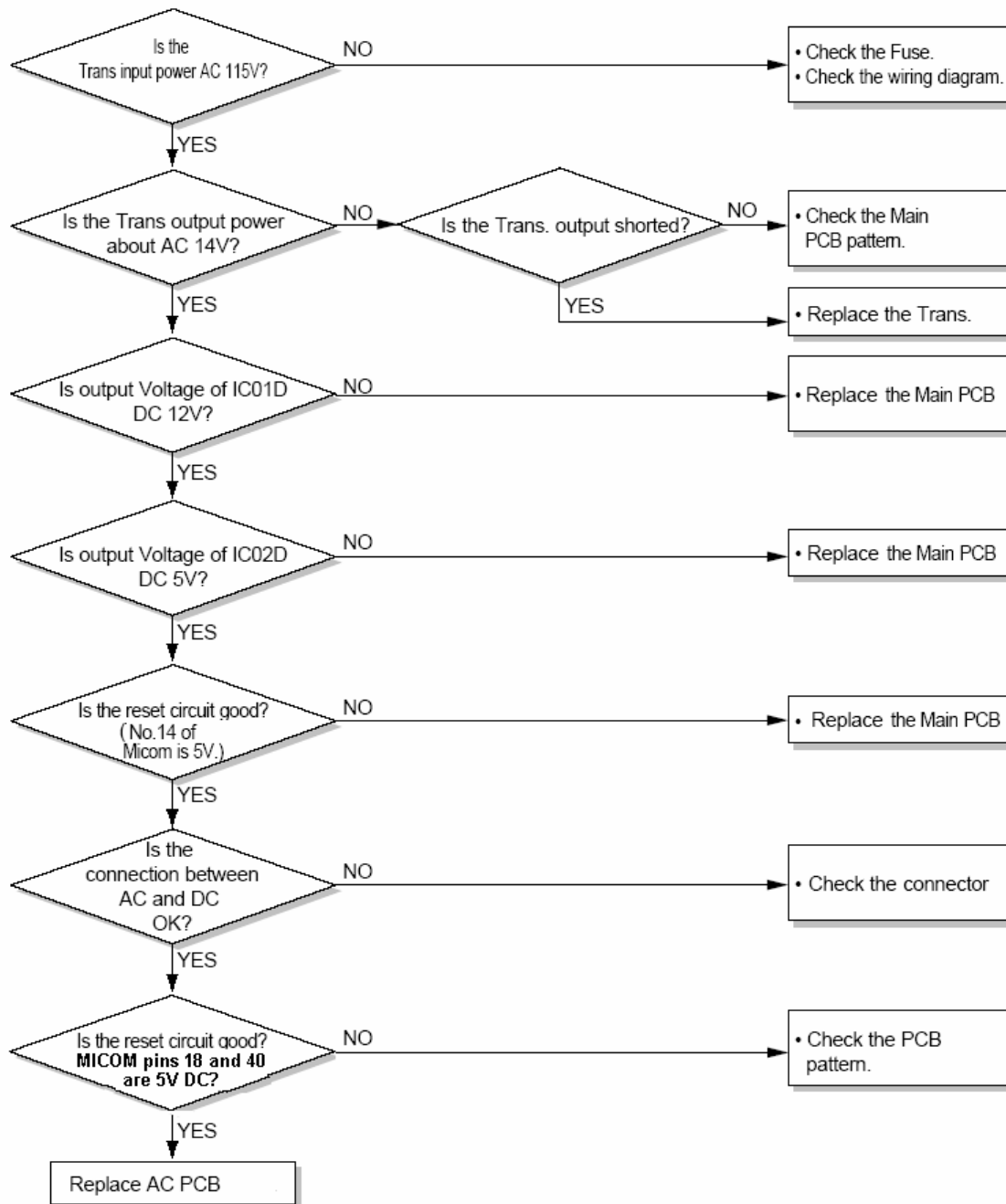
Air conditioner runs, but poor cooling.



Air conditioner fails to start

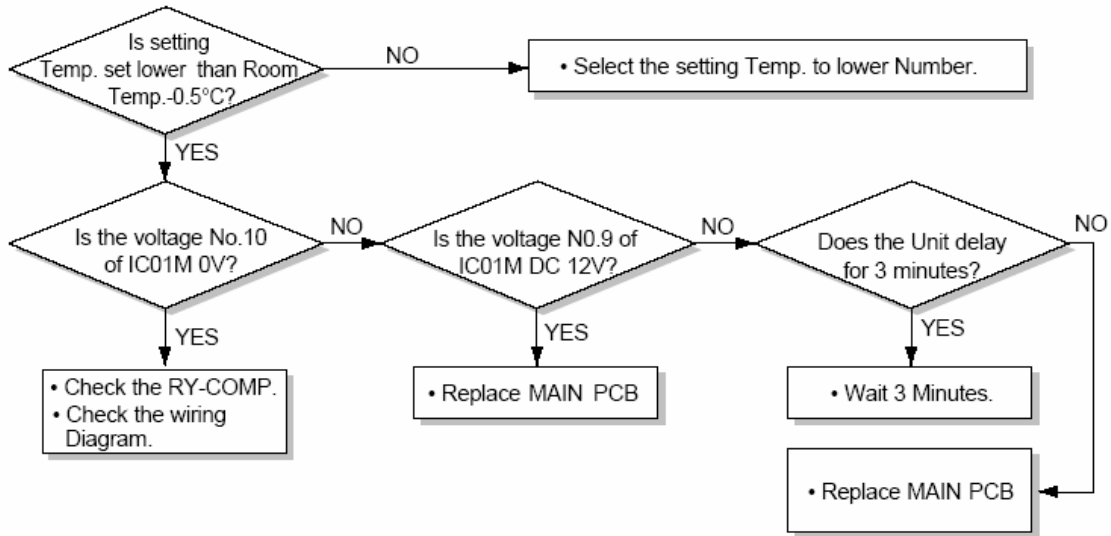


Air conditioner does not operate



* Measure voltage on MICOM pins 18 to ground and 40 to ground in this test.

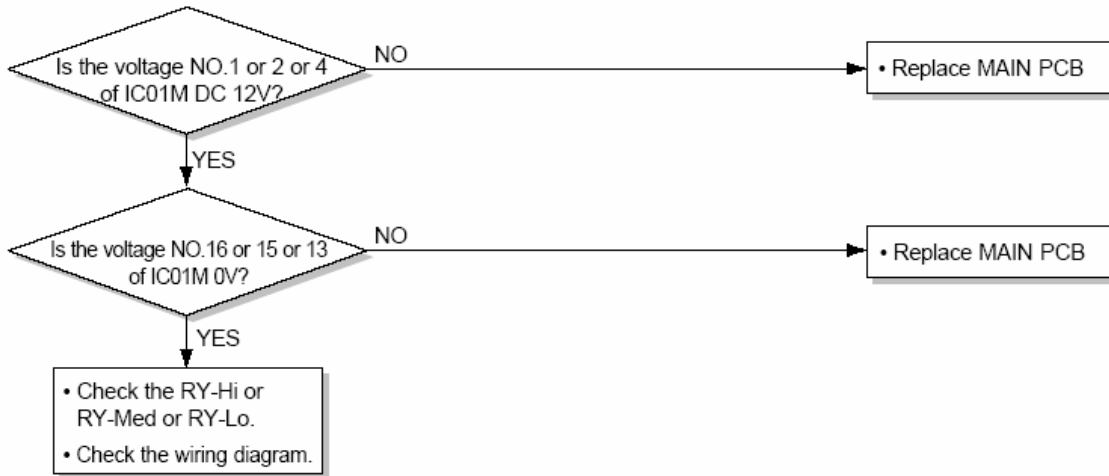
Compressor does not operate



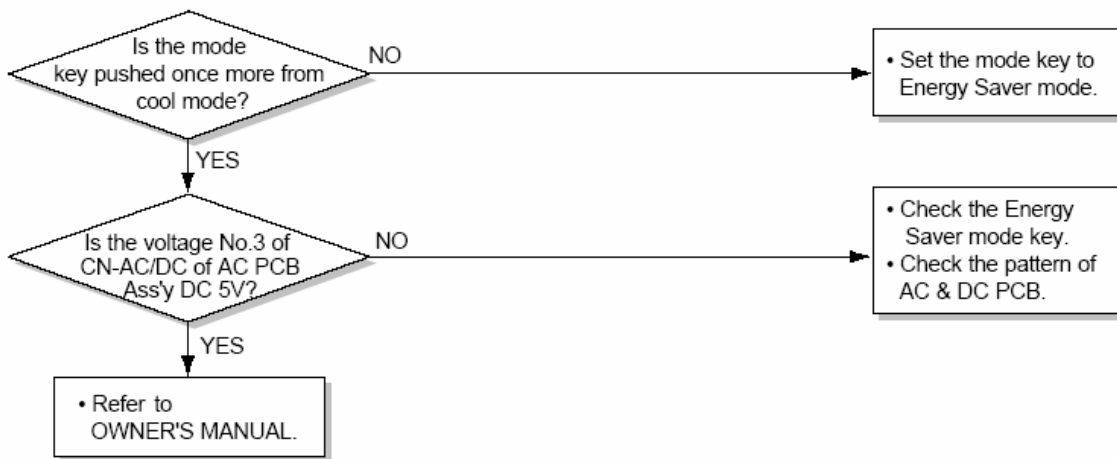
Compressor runs all the time



Fan runs all the time or not at all

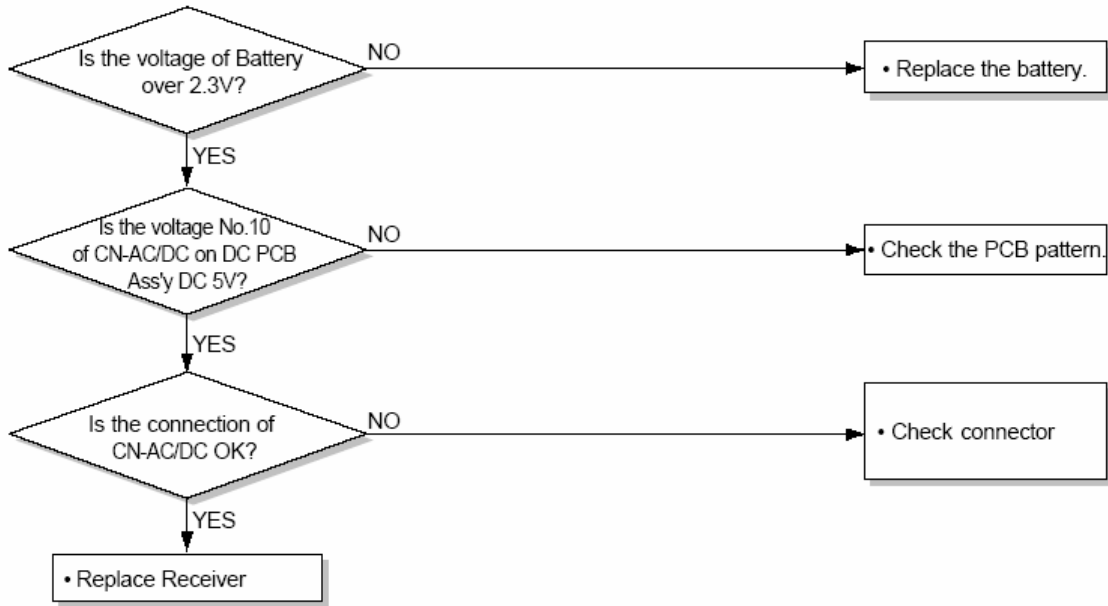


ENERGY SAVER does not operate

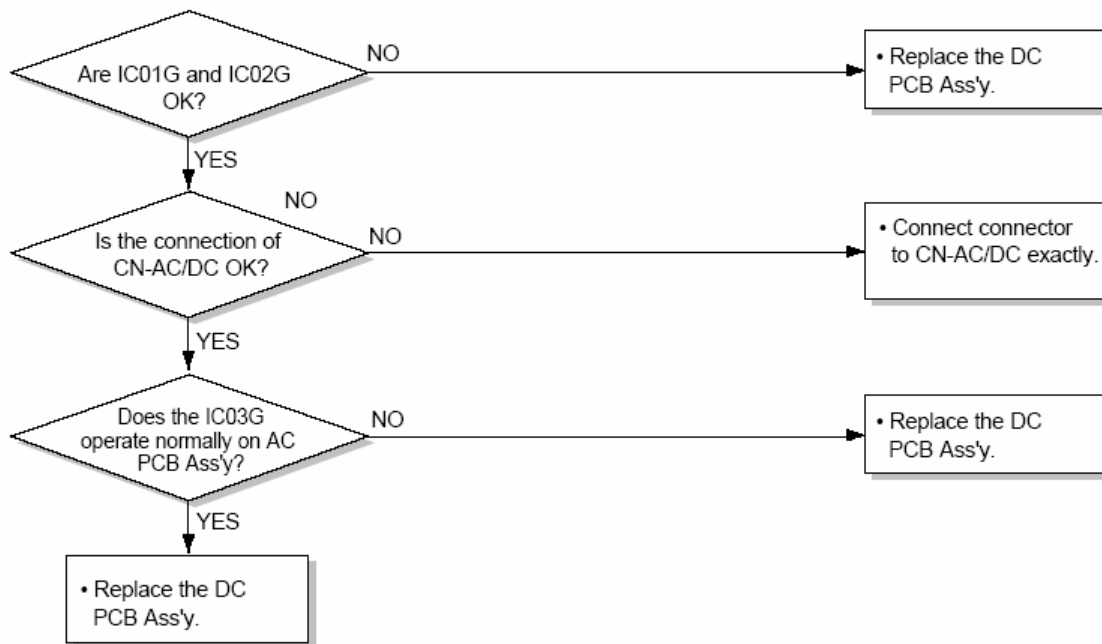


Remote Controller does not operate

Before testing the remote controller and receiver, make sure the receiver is not in bright light (next to a lamp or in bright sunlight) because bright light may sometimes affect the reception of the infrared signal.



Abnormal Display



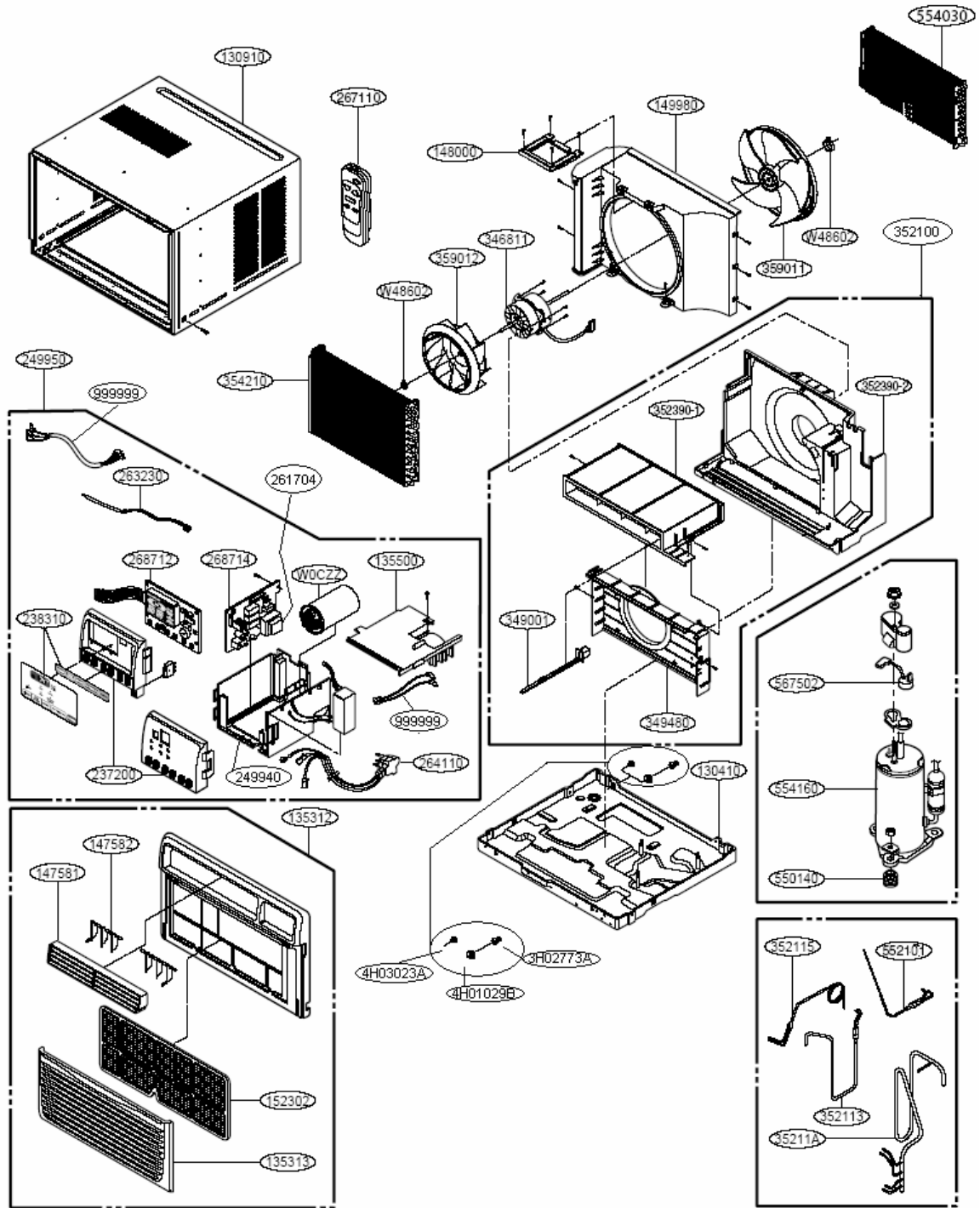
TROUBLESHOOTING GUIDE

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	Cycles 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.

TROUBLESHOOTING GUIDE, continued

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	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



PARTS LIST

Loc #	Part No	Description
130410	3041A20021V	Base Assembly, Single
130910	3091AR2317M	Cabinet Assembly
135312	3531A20160A	Grille Assembly, Front
135313	3530A20075A	Grille, Inlet
135500	3550A30226A	Cover
147581	4758A20019A	Louver, Horizontal
147582-1	4758A20040A	Louver, Vertical, Left
147582-2	4758A20040B	Louver, Vertical, Right
148000	4800A30002C	Brace
149980	4998A10012A	Shroud
152302	5231A20006A	Filter Assembly, Air Cleaner
237200	3720A10111C	Panel, Control
238310	3831A10021E	Escutcheon
249300	3H02856A	Holder, Sensor
249940	4994A10029A	Base
249950	4994A10029A	Case, Control
261704	6170A30003C	Linear Transformer
263230	6323A20004P	Thermistor, NTC
264110	6411A20056E	Power Cord Assembly
267110	6711A20034G	Remote Controller Assembly
268712	6871A20417C	PWB Assembly, Main (AC)
268714	6871A20418A	PWB Assembly, Main (DC)
346811	4681A20069H	Motor Assembly, AC
349001	4900A20003A	Damper, Vent
349480	4948A10014A	Orifice (Air Guide)
352113	5211A10074J	Tube Assembly, Discharge Single
352115	5211A20470L	Tube Assembly, Evaporator Intake
352100	5069A20008V	Duct Assembly, Set
352390-1	5239A20005B	Duct (Part of 352100)
352390-2	5239A20012A	Orifice (Part of 352100)
354210	5421A10026P	Evaporator Assembly
359010	5900AR1167B	Fan Assembly, Axial
359012	5900A20020A	Fan Assembly, Turbo

Loc #	Part No	Description
435313	3530A20009M	Grille Assembly, Rear
550140	5040AR4195A	Anti-vibration Bushing (3 req'd)
552102	5211A30275M	Tube Assembly, Capillary
554030	5403A20043M	Condenser Assembly
554160	2520UCDK004	Compressor (Order 3 bushings, above)
567502	6750UL031A	OLP (OverLoad Protector)
749740	4974AR3328B	Guide, Upper (Not shown)
35211A	5211A21786A	Tube Assembly, Suction Single
W0CZZ	2H01451M	Capacitor, Film, Box
W4810	4810AR4155B	Bracket
W48602	3H02932B	Clamp, Spring (2 req'd)
4H02023A	4H02023A	Drain Plug
3H02773A	3H02773A	Drain Pipe
4H01029B	4H01029B	Washer for Drain Pipe
999999	999999	Part not available separately
	3127A10015B	Installation Kit

