

Service

This manual is to be used by qualified appliance technicians only. Maytag does not assume any responsibility for property damage or personal injury for improper service procedures done by an unqualified person.

This Base Manual covers general information

Refer to individual Technical Sheet for information on specific models

This manual includes, but is not limited to the following:

Amana
AAC081SRA
AAC101SRA
AAC121SRA
AAC141SRA
AAC182SRA
AAC202SRA
AAC242SRA

Slide Out Chassis Room Air Conditioners

Important Information

Important Notices for Servicers and Consumers

Maytag will not be responsible for personal injury or property damage from improper service procedures. Pride and workmanship go into every product to provide our customers with quality products. It is possible, however, that during its lifetime a product may require service. Products should be serviced only by a qualified service technician who is familiar with the safety procedures required in the repair and who is equipped with the proper tools, parts, testing instruments and the appropriate service information. **IT IS THE TECHNICIANS RESPONSIBILITY TO REVIEW ALL APPROPRIATE SERVICE INFORMATION BEFORE BEGINNING REPAIRS.**



WARNING

To avoid risk of severe personal injury or death, disconnect power before working/servicing on appliance to avoid electrical shock.

To locate an authorized servicer, please consult your telephone book or the dealer from whom you purchased this product. For further assistance, please contact:

Customer Service Support Center

CAIR Center

<u>Web Site</u>	<u>Telephone Number</u>
WWW.AMANA.COM	1-800-843-0304
WWW.JENNAIR.COM	1-800-536-6247
WWW.MAYTAG.COM	1-800-688-9900
CAIR Center in Canada	1-800-688-2002
Amana Canada Product	1-866-587-2002

Recognize Safety Symbols, Words, and Labels



DANGER

DANGER—Immediate hazards which **WILL** result in severe personal injury or death.



WARNING

WARNING—Hazards or unsafe practices which **COULD** result in severe personal injury or death.



CAUTION

CAUTION—Hazards or unsafe practices which **COULD** result in minor personal injury, product or property damage.

Important Safety Information

General Information

This Service Manual describes the operation, disassembly, troubleshooting, and repair of Amana Room Air Conditioners. It is intended for use by authorized servicers who troubleshoot and repair these units.

NOTE: It is assumed that users of this manual are familiar with the use of tools and equipment used to troubleshoot and repair electrical, mechanical, and refrigeration systems; and understand the terminology used to describe and discuss them.

Maytag urges you read and follow all safety precautions and warnings contained in this manual. Failure to comply with safety information may result in severe personal injury or death.

Related Publications

This is a base service manual, covering a range of similar models. It is intended to be used in conjunction with the Parts Manual and Technical Sheet covering specific model being serviced.

General Precautions and Warnings

WARNING

To avoid risk of personal injury or death due to electrical shock, disconnect electrical power to unit before attempting to service the unit.

WARNING

To avoid risk of personal injury or death due to electrical shock, DO NOT, under any circumstances, alter the grounding plug. Air conditioner must be grounded at all times. Do not remove warning tag from power cord. If a two-prong (non-grounding) wall receptacle is encountered, contact a qualified electrician and have the receptacle replaced with a properly grounded wall receptacle in accordance with the National Electrical Code.

WARNING

To avoid risk of personal injury or death due to electrical shock, grounding wires and wires colored like grounding wires are **NOT** to be used as current carrying conductors. The standard accepted color coding for ground wires is **green** or **green with a yellow stripe**. Electrical components such as the compressor and fan motor are grounded through an individual wire attached to the electrical component and to another part of the air conditioner. Grounding wires should not be removed from individual components while servicing, unless the component is to be removed and replaced. It is extremely important to replace all removed grounding wires before completing service.

WARNING

To avoid risk of heat exposure, which may cause death or severe illness, air conditioner must be monitored when malfunctions or shuts down.

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Product Identification

Every Amana® Room Air Conditioner has an identification plate showing the model number, P (manufacturing part) number, serial number of unit. Identification plate is located on side of unit. Use plate to positively identify specific model of unit being serviced.

Design Information

Many design features are incorporated into all Amana® model Room Air Conditioners. Basic concepts of balance in refrigeration and air handling components are used in all models.

The outer case of unit, regardless of style, is designed to help circulate air across evaporator, condenser, compressor and fan motor. It must be in place to ensure maximum efficiency of unit, to prevent overheating of components, and to maintain system balance and capacity.

Structural components of room air conditioners are heavy, zinc-coated steel that is further treated with zinc phosphate. Exterior parts are hot-dipped galvanized steel that is chemically pretreated, then primed with electro-coated primer, and finished with a baked-on polyester top coat.

Modular design allows easier and faster disassembly and assembly.

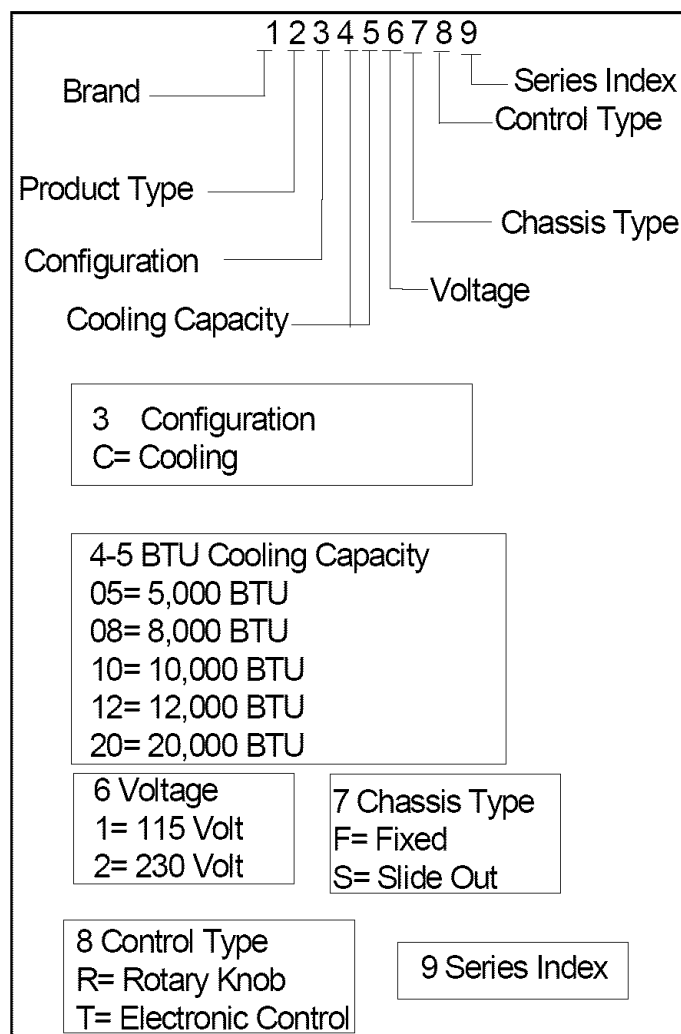
Acoustical and thermal insulation, used on partition panel and in side air discharge plenum, reduce noise and increase efficiency.

Large evaporator and condenser coils are designed to provide maximum heat transfer. Coils are manufactured from rifled copper tubing and embossed aluminum fins to achieve maximum heat transfer. Thermal mastic is placed on refrigeration tubes to dampen and isolate system vibrations.

Fan motors are sealed to prevent moisture and dirt contamination of motor windings. Motor bearings are permanently lubricated. Large blower wheels and condenser fans reduce noise levels.

Condenser fans contain a slinger ring for condensate removal. The slinger ring picks-up condensate and sprays it against the condenser, increasing condenser evaporative cooling. In extreme humidity conditions, excess condensate drains from base pan.

The following diagram explains how to interpret Amana Room Air model numbers. Model numbers contain information about cooling capacity, configuration, chassis type, power requirements and series index for unit.



Troubleshooting Information



WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect electrical power source to unit and discharge capacitor through a 10,000 ohm resistor before attempting to service, unless test procedures require power to be connected. Ensure all ground wires are connected before certifying unit as repaired and/or operational.



CAUTION

Units covered in this manual are polarized. Reversing polarity of a unit or any of its components will cause damage. To avoid reversing polarity, any wires disconnected or removed during service *must* be reconnected to the same location. To ensure wires are reconnected to the proper location, tag or otherwise mark the wires before disconnecting or removing.

Tools and Equipment

Accurate diagnosis and repair of malfunctioning air conditioners requires proper tools and equipment. In addition to standard hand tools (screw drivers, pliers, sockets, etc.), the following equipment is required:

- Multimeter (combination voltmeter, ammeter, and ohmmeter) for reading current loads during start-up and normal operation, verifying voltage levels, and testing various components for continuity.
- Accurate leak detector, to check for refrigerant leaks.
- Vacuum pump capable of removing all non-condensables in sealed system.
- Charging manifold and related equipment to determine and replenish exact refrigerant charges.
- Recovery cylinder and related equipment to recover and store refrigerant charge in sealed system.

Additional tools and equipment may be required.

Troubleshooting Table

Troubleshooting table on the following pages contains symptoms that may be seen in a malfunctioning air conditioner. Each group of symptoms is accompanied by one or more possible causes. Each possible cause is accompanied by a remedy, or a test to determine if suspect component(s) are working properly.

Troubleshooting Information



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Symptom	Possible Causes	Corrective Action
Fan motor will not operate.	<p>No power supplied to unit.</p> <p>Wire(s) disconnected or loose.</p> <p>Fan motor capacitor faulty.</p> <p>Fan motor faulty.</p>	<p>Check fuse box/circuit breaker for blown fuse or tripped breaker. Replace/reset.</p> <p>Check power cord for opens. Replace cord if faulty.</p> <p>Ensure all connections are tight and secure.</p> <p>Check capacitor for open/short. Replace if faulty. NOTE: Discharge capacitor before testing.</p> <p>Check fan motor windings for shorts/opens. Replace if faulty.</p>
Fan blade will not rotate.	Fan hitting shroud or blower wheel hitting scroll.	<p>Check fan blade/blower wheel for proper alignment on motor shaft. Reposition if necessary.</p> <p>Check fan motor for proper position, ensure mounting nuts/bracket tight and secure.</p>
Fan motor operates intermittently.	<p>Wire(s) disconnected or loose.</p> <p>Cycling on motor protector.</p>	<p>Ensure all connections are tight and secure.</p> <p>Replace motor.</p>

Troubleshooting Information



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Symptom	Possible Causes	Corrective Action
Fan motor noisy.	<p>Outside coil fan blade or inside coil blower wheel loose or improperly aligned.</p> <p>Worn fan motor bearings.</p> <p>Fan motor mounting hardware/bracket loose .</p>	<p>Check fan blade/blower wheel for proper position. Reposition if necessary.</p> <p>Ensure hardware attaching fan blade/blower wheel to motor shaft is tight. Tighten if loose, replace if stripped.</p> <p>Replace motor.</p> <p>Check mounting bolts/bracket for tightness. Tighten if necessary.</p>
Compressor does not run, fan motor operates normally.	<p>Wire(s) disconnected or loose.</p> <p>Compressor capacitor faulty.</p> <p>Compressor faulty.</p>	<p>Ensure all connections are tight and secure. Correct as required.</p> <p>Check capacitor for short. Replace if faulty.</p> <p>NOTE: Discharge capacitor before testing.</p> <p>Check compressor motor windings for open / shorts.</p> <p>Replace compressor if faulty.</p>

Troubleshooting Information



WARNING

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Symptom	Possible Causes	Corrective Action
Compressor does not run, fan motor operates normally.	Overload protector open.	Check protector for continuity. If open, replace.
	Rotary control faulty.	Ensure all control connections are tight and secure. Check control for proper operation and installation. Replace if faulty.
Compressor cycles on and off.	Wire(s) disconnected or loose.	Ensure all connections are tight and secure.
	Supply voltage out of specification.	Check input voltage for proper levels. Take appropriate action if voltage levels out of specification.
	Overload protector open.	Check protector for continuity. If open, replace.
	Fan motor faulty.	Check fan motor for proper operation. Replace if faulty.
	Restricted air flow.	Inspect air filter, indoor/ outdoor coil for dirt. Clean as required. Check fins on coils for damage. Straighten fins if bent, attempt other repairs as necessary. Replace coil if repairs cannot be made.
	Compressor capacitor faulty.	Check capacitor for short. Replace if faulty. NOTE: Discharge capacitor before testing.
Sealed refrigerant system fault.	Test sealed system for proper charge, leaks, and restrictions.	

Troubleshooting Information



WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect electrical power source to unit and discharge capacitor through a 10,000 ohm resistor before attempting to service, unless test procedures require power to be connected. Ensure all ground wires are connected before certifying unit as repaired and/or operational.

Symptom	Possible Causes	Corrective Action
Insufficient cooling.	<p>Low refrigerant charge.</p> <p>Restricted air flow.</p> <p>Unit undersized for area/room.</p>	<p>Test sealed system for proper charge. Ensure system is free of leaks.</p> <p>Inspect air filter, indoor/ outdoor coil for dirt. Clean as required. Check fins on coils for damage. Straighten fins if bent, attempt other repairs as necessary. Replace coil if repairs cannot be made.</p> <p>Reduce area being cooled or replace unit with larger capacity model.</p>
Excessive noise.	<p>Outside coil fan blade or inside coil blower wheel loose or improperly aligned.</p> <p>Compressor mounting hardware loose or grommets worn.</p> <p>Free parts, loose screws causing or allowing excessive vibration.</p> <p>Worn fan motor bearings.</p>	<p>Check fan blade/blower wheel for proper position. Reposition blade or bower wheel. Ensure hardware attaching fan blade/blower wheel to motor shaft is tight.</p> <p>Check mounting bolts for tightness. Tighten if necessary. Don't overtighten. Inspect grommets for wear.</p> <p>Inspect unit for parts that may have worked free, loose/ missing screws, other problems that may cause excessive vibration.</p> <p>Replace motor</p>

Troubleshooting Information



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Symptom	Possible Causes	Corrective Action
Excessive noise.	<p>Fan motor mounting hardware/ bracket loose.</p> <p>Copper tubing improperly routed.</p> <p>Compressor internal noise.</p>	<p>Check mounting bolts/bracket for tightness. Tighten if necessary.</p> <p>Inspect copper tubing for excessive vibration. Secure tubing.</p> <p>Inspect compressor for proper operation. Replace.</p>
No cooling.	<p>No refrigerant charge in sealed system.</p> <p>Restriction in sealed system.</p> <p>Compressor faulty.</p> <p>Rotary Control faulty.</p>	<p>Test sealed system for leak. Recharge unit.</p> <p>Evacuate sealed system. Remove restriction, recharge unit.</p> <p>Check compressor motor windings for open / shorts. Replace compressor.</p> <p>Ensure all control connections are tight and secure. Check control for proper operation and installation. Replace if faulty.</p>
Wattage slowly decreases below minimum specification.	Undercharged, restricted strainer or plugged capillary tube.	Test sealed system for proper charge. Ensure system is free of leaks/restriction. Repair Evacuate & recharge sealed system.

Troubleshooting Information



WARNING

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Symptom	Possible Causes	Corrective Action
Wattage decreases immediately.	No refrigerant. Compressor faulty.	Test sealed system for proper charge. Ensure system is free of leaks. Repair as required. Check compressor motor windings for open/shorts. Replace compressor if faulty.
Wattage continuously high.	Refrigerant overcharge. Insufficient air flow.	Test sealed system for proper charge. Inspect air filter, indoor/outdoor coil for dirt. Clean as required. Check fins on coils for damage. Straighten fins if bent, attempt other repairs as necessary. Replace coil if repairs cannot be made.
Evaporator coil partially frosted.	System low on refrigerant. Restricted capillary tube. Insufficient air flow.	Test sealed system for proper charge. Ensure system is free of leaks. Repair as required. Replace capillary tube. Inspect air filter, indoor/outdoor coil for dirt. Clean as required. Check fins on coils for damage. Straighten fins if bent, attempt other repairs as necessary. Replace coil if repairs cannot be made.
Evaporator completely iced.	Low outside temperature. Restricted capillary tube. Insufficient air flow.	Turn unit off. (Consumer education) Replace capillary tube. Inspect air filter, indoor/outdoor coil for dirt. Clean as required. Check fins on coils for damage. Straighten fins if bent, attempt other repairs as necessary. Replace coil if repairs cannot be made.

Testing Procedures



WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect electrical power source to unit and discharge capacitor through a 10,000 ohm resistor before attempting to service, unless test procedures require power to be connected. Ensure all ground wires are connected before certifying unit as repaired and/or operational.

Low Voltage

Low voltage can result in one or more of the following problems:

- Unit will not operate.
- Compressor motor cycling.
- Premature failure of overload protector.
- Frequent blown fuses or tripped circuit breakers.
- Premature failure of compressor or fan motor.
- Noticeable dimming of lights when unit is operating.

Common causes for low voltage include inadequate supply circuit wiring; use of extension cords; and loose fuses or connections in fuse box, circuit breaker, or distribution panel.

NOTE: A good indication of voltage problems caused by inadequate or faulty wiring is voltage levels that do not remain constant under load (supply voltage fluctuates).

A less common cause for low voltage is voltage from local electric utility is low (sometimes called “brown outs”). If this is the case, have consumer contact local electric utility for assistance.

All units should operate normally if power stays within specifications (refer to Technical Sheet for unit under test). Test for low voltage using voltmeter. Verify voltage level at circuit breaker/distribution panel for unit under test, and at electrical outlet serving unit. Take initial voltage readings with air conditioner turned off. Take additional readings during start-up of unit, and again while unit is operating. All readings should be within specifications and remain constant.

NOTE: Supply voltage may drop momentarily during initial start-up and when compressor first starts, but should always remain within specifications.

High Voltage

High voltage causes motors to overheat, cycle on their protectors, or break down electrically. This problem can only be solved by local electric utility.

Testing Capacitors

Compressors in these units use permanent split capacitor type motors, eliminating need for start capacitors and relays. A low capacitance “compressor run capacitor” assists during start, and remains in system during operation. See directions on capacitor, and wiring diagram (on Technical Sheet) for unit under test.

Capacitors are also used on permanent split capacitor (PSC) fan motors.

To test capacitors:

1. Disconnect power to unit.
2. Discharge capacitor by shorting capacitor terminals through a 10,000 ohm resistor. Disconnect leads attached to capacitor terminals.
3. Set ohmmeter on highest scale. Attach ohmmeter leads to capacitor and observe ohmmeter display:
 - Good condition—indicator swings to zero and slowly returns toward infinity.
 - Shorted—indicator swings to zero and remains.
 - Open—indicator does not move.
4. Reverse ohmmeter leads on capacitor and repeat step 3.

Checking Overload Protectors

Overload protectors protect compressor from current and temperature overloads by removing power from compressor before it is damaged.

To check overload protector:

1. Disconnect power to unit.
2. Remove overload lead from compressor terminal.
3. Use ohmmeter to test continuity between overload terminals. If open, replace overload.

Checking Compressor Windings

Resistance Test

1. Disconnect power to unit.
2. Remove leads from compressor terminals.
3. Set ohmmeter to lowest scale.
4. Attach ohmmeter to compressor terminals C and S. Note reading.
5. Attach ohmmeter to compressor terminals C and R. Note reading. If either compressor winding reads open (infinite or very high resistance) or dead short (0 ohms), replace compressor.

Testing Procedures



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NOTE: Motor windings typically have very little resistance. When checking windings for shorts, ensure ohmmeter is set on lowest scale. Good windings may indicate as little as 2 ohms of resistance.

Ground Test

1. Disconnect power to unit.
2. Remove leads from compressor terminals.
3. Set ohmmeter to highest scale.
4. Attach one lead of ohmmeter to body of compressor. Ensure connection point is clean, and makes good contact with compressor.
5. Attach remaining lead on ohmmeter to C, then S, then R terminals on compressor. If ohmmeter indicates continuity between compressor case and any terminal, replace compressor.

Compressor Burnout

To avoid personal injury, do not allow sludge or oil from compressor to contact skin. Severe burns may result.

NOTE: Before opening any refrigeration system, EPA regulations require refrigerant in system to be captured for safe disposal.

NOTE: Do not use captured or recycled refrigerant in Amana units. Captured or recycled refrigerant voids all Amana and/or compressor manufacturer's warranties.

When a compressor burns out, high temperature causes the refrigerant, oil, and motor insulation to decompose, forming acids and sludge.

If a compressor is suspected of burning out:

1. Replace Compressor.

Fan Motor

1. Disconnect power to unit.
2. Discharge capacitor by shorting capacitor terminals through a 10,000 ohm resistor.
3. Disconnect fan motor leads from selector switch and respective capacitor.

4. Check for continuity between each motor lead with ohmmeter.
5. Check for ground by attaching one lead of ohmmeter to motor frame (ground). Attach remaining ohmmeter lead to each fan motor lead, one at a time.

NOTE: Ensure contact point between ohmmeter lead and motor frame is clean.

Replace fan motor if windings test open (very high or infinite resistance), or if any continuity is indicated between motor frame and windings.

Leak Testing



DANGER

To prevent serious injury or death from violent explosions, NEVER use oxygen or acetylene for pressure testing or cleanout of refrigeration systems. Free oxygen will explode on contact with oil. Acetylene will explode spontaneously when put under pressure.

It is important to check sealed system for refrigerant leaks. Undetected leaks can lead to repeated service calls and eventually result in system contamination, restrictions, and premature compressor failure.

Refrigerant leaks are best detected with electronic leak detectors.

Testing Systems Containing a Refrigerant Charge

1. Stop the operation (turn air conditioner off).
2. Holding leak detector exploring tube as close to system tubing as possible, check all piping, joints, and fittings.

NOTE: Use soap suds on areas leak detector cannot reach or reliably test.

Testing Systems Containing No Refrigerant Charge

1. Connect cylinder of nitrogen, through gauge manifold, to process tube of compressor and liquid line strainer.
2. Open valves on nitrogen cylinder and gage manifold. Allow pressure to build within sealed system.

Testing Procedures



WARNING

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3. Check for leaks using soap suds.

If a leak is detected in a joint, do not attempt to repair by applying additional brazing material. Joint must be disassembled, cleaned and rebrazed. Capture refrigerant charge (if system is charged), unbrazed joint, clean all parts, then rebraze. If leak is detected in tubing, replace tubing. If leak is detected in either coil, replace coil.

Brazing



CAUTION

To reduce risk of personal injury or property damage, take necessary precautions against high temperatures required for brazing.

Satisfactory results require cleanliness, experience, and use of proper materials and equipment.

Connections to be brazed must be properly sized and cleaned.

Generally accepted brazing materials are:

- **Copper to copper joints:** SIL-FOS (alloy of 15 percent silver, 80 percent copper, and 5 percent phosphorous). Use without flux. Recommended brazing temperature is approximately 1400°F.

DO NOT USE FOR COPPER TO STEEL CONNECTION.

- **Copper to steel joints:** SILVER SOLDER (alloy of 30 percent silver, 38 percent copper, 32 percent zinc). Use with fluoride based flux. Recommended brazing temperature is approximately 1200°F.

Restriction Testing

Restrictions in sealed system generally occur in capillary tube, but can exist anywhere in the system. To determine if a restriction exists:

1. Attach gauge and manifold between suction and discharge sides of sealed system.
2. Turn unit on, and allow pressure on each side to stabilize. Inspect condenser side of system. Tubing on condenser should be warm and temperature should be equal throughout (no sudden drops at any point along tubing):

- If temperature of condenser tubing is consistent throughout, go to step 3.

- If temperature of condenser tubing drops at any point, tubing is restricted at point of temperature drop (if restriction is severe, frost may form at point of restriction and extend down in direction of refrigerant flow in system). Go to step 4.

3. Turn unit off and time how long it takes high and low pressure gauges to equalize:

- If pressure equalization takes longer than 7 minutes, a restriction exists in the capillary tube/strainer. Go to step 4.

- If pressure equalization takes less than 7 minutes, system is not restricted. Check for other possible causes of malfunction.

4. Recover refrigerant in sealed system.

NOTE: Before opening any refrigeration system, capture refrigerant in system for safe disposal.

5. Remove power from unit.



CAUTION

To reduce risk of personal injury or property damage, take necessary precautions against high temperatures required for brazing.

6. Remove and replace restricted device.

7. Evacuate sealed system.

8. Charge system to specification.

NOTE: Do not use captured or recycled refrigerant in units. Captured or recycled refrigerant voids all and/or compressor manufacturer's warranties.

Evacuation



CAUTION

To avoid risk of fire, sealed refrigeration system must be air free. To reduce risk of air contamination follow evacuation procedures exactly.

Testing Procedures



WARNING

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NOTE: Before opening any refrigeration system, EPA regulations require refrigerant in system to be captured for safe disposal.

Proper evacuation of sealed refrigeration system is an important service procedure. Usable life and operational efficiency of air conditioner greatly depends upon how completely air, moisture and other non-condensables are evacuated from sealed system.

Air in sealed system causes high condensing temperature and pressure, resulting in increased power requirements and reduced performance. Moisture in sealed system chemically reacts with refrigerant and oil to form corrosive hydrofluoric and hydrochloric acids. These acids attack motor windings and parts, causing Restriction / Burnout condition.

Equipment required to evacuate sealed system includes:

- High vacuum pump, capable of producing a vacuum equivalent to 25 microns.
- Thermocouple vacuum gauge capable of providing true readings of vacuum in system.



CAUTION

To avoid damage to compressor motor, never use air conditioner compressor as a vacuum pump or run compressor when system is under high vacuum.

To evacuate sealed refrigeration system:

1. Connect vacuum pump, vacuum tight manifold set with high vacuum hoses, thermocouple vacuum gauge and charging cylinder as shown in illustration.
2. Connect low side line to compressor process tube.
3. Connect high side line to process tube of liquid line strainer.

NOTE: If a compression or flare fitting cannot be attached to process tube(s) and still leave room for a pinch-off, swage tube(s) and braze on an additional length of tubing.

4. Start vacuum pump and open shut off valve to high vacuum gauge manifold only.
5. After compound gauge (low side) drops to approximately 29 inches gauge, open valve to vacuum thermocouple gauge.
6. Ensure vacuum pump will blank-off to a maximum of 25 microns.

NOTE: A high vacuum pump can only produce a good vacuum if oil in pump is not contaminated.

7. If vacuum pump is working properly, close valve to vacuum thermocouple gauge.
8. Open high and low side valves of high vacuum manifold set. With valve on charging cylinder closed, open manifold valve to cylinder.
9. Evacuate system to at least 29 inches gauge. Open valve to thermocouple vacuum gauge.
10. Continue to evacuate to a maximum of 250 microns. Close valve to vacuum pump and watch rate of rise:

•If vacuum does not rise above 1500 microns in three minutes, system can be considered properly evacuated.

•If thermocouple vacuum gauge continues to rise, then levels off above 5000 microns, moisture and non-condensables are still present. Re-evacuate.

•If gauge continues to rise above 5000 microns, a leak is present. Locate, repair, and re-evacuate.

11. When system is properly evacuated, close valve to thermocouple vacuum gauge and vacuum pump. Shut off pump and prepare to charge system.

Charging

NOTE: Do not use captured or recycled refrigerant in units. Captured or recycled refrigerant voids all and/or compressor manufacturer's warranties.

NOTE: Charge system with exact amount of refrigerant. See Technical Sheet or refer to unit nameplate for correct refrigerant charge. Inaccurately charged system will cause future problems.

Testing Procedures



WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect electrical power source to unit and discharge capacitor through a 10,000 ohm resistor before attempting to service, unless test procedures require power to be connected. Ensure all ground wires are connected before certifying unit as repaired and/or operational.

To charge system:

NOTE: When using ambient compensated calibrated charging cylinder, allow liquid refrigerant to enter high side only.

1. With no power applied to unit, allow liquid refrigerant to flow into system until no more refrigerant can be added.
2. Close valve on high side of manifold.
3. Start (apply power to) system and charge to specification through low side. Do not charge through low side in a liquid form.
4. Close low side valve on manifold and pinch-off both process tubes. Remove manifold set, crimp shut open ends of process tubes and braze.
5. Recheck for refrigerant leaks.

Refrigerant Precautions

To avoid personal injury, do not allow refrigerant to contact eyes or skin.

To avoid risk of property damage, do not use refrigerant other than that shown on unit serial number identification plate.

NOTE: All precautionary measures recommended by refrigerant manufacturers and suppliers apply and must be observed.

Using Line Piercing Valves

Line piercing valves can be used for diagnosis, but are not suitable for evacuating or charging due to holes pierced in tubing by valves.

NOTE: Do not leave line piercing valves on system. Connection between valve and tubing is not hermetically sealed. Leaks will occur.

Open Lines

During any processing of refrigeration system, never leave lines open to atmosphere. Open lines allow water vapor to enter system, making proper evacuation more difficult.

Disassembly Procedures



WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect electrical power source to unit and discharge capacitor through a 10,000 ohm resistor before attempting to service, unless test procedures require power to be connected. Ensure all ground wires are connected before certifying unit as repaired and/or operational.

The following paragraphs describe how to disassemble the unit. Disassembly to some extent is required to install unit, to perform troubleshooting procedures, and to remove and replace faulty components.

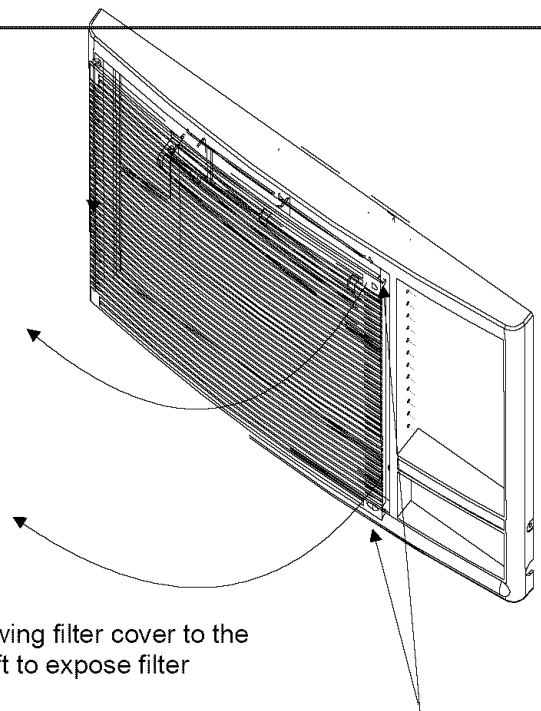
Component names used throughout disassembly procedures are the same as those used in Parts Manuals.

For quicker reassembly, disassemble unit under test only to extent necessary to troubleshoot and repair. Unless noted, reassembly is opposite of disassembly.



WARNING

To avoid risk of personal injury or death due to electrical shock, ground wires and wires colored like ground wires are **NOT** to be used as current carrying conductors. The standard accepted color coding for ground wires is **green** or **green with a yellow stripe**. Electrical components such as the compressor and fan motor are grounded through an individual wire attached to the electrical component and to another part of the air conditioner. Ground wires should not be removed from individual components while servicing, unless the component is to be removed and replaced. It is extremely important to replace all removed ground wires before completing service.



Swing filter cover to the left to expose filter

Press two buttons to release cover.

Air Filter Removal

To remove air filter:

1. Press two buttons on front air filter cover to release tabs.
2. Swing air filter cover open to expose filter, then pull filter out and away from front frame.

NOTE: If air filter is dirty, clean with vacuum, or hand wash. Ensure filter is completely dry before reinstalling in unit

Grill Front (Insert) Removal

1. Remove Front Frame (see Front Frame Removal).
2. Press two buttons on front air filter cover to release tabs.
3. On back side of the hinged insert press bottom hinge out to release top hinge from Front Frame.

Disassembly Procedures



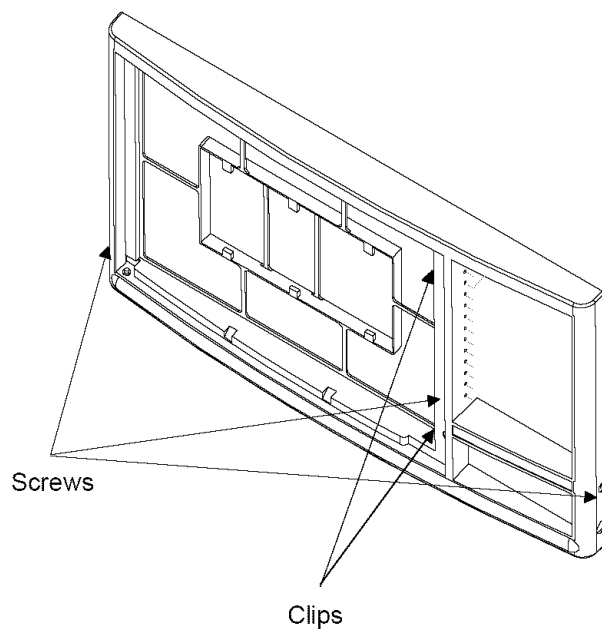
WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect electrical power source to unit and discharge capacitor through a 10,000 ohm resistor before attempting to service, unless test procedures require power to be connected. Ensure all ground wires are connected before certifying unit as repaired and/or operational.

Front Frame Removal

To remove front frame:

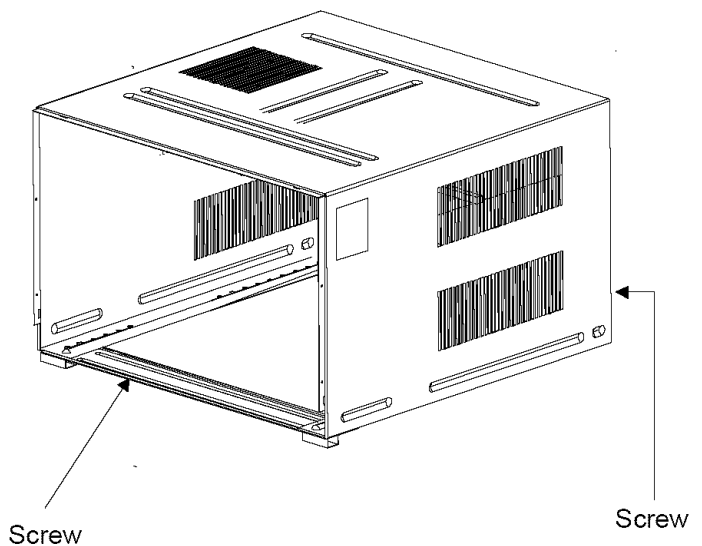
1. Remove 2 screws securing front frame to air conditioner chassis.
2. Remove screw from behind air filter cover.
3. Pull front frame out and away from air conditioner.



Chassis Removal

To remove Chassis:

1. Remove Front Frame (See Front Frame Removal)
2. Remove one screw securing clip to case from chassis. Remove one screw in back of unit holding case to chassis.
3. Remove chassis by sliding out of outer case.



Front Frame Clips Removal

1. Remove Front Frame (see Front Frame Removal).
2. Press two buttons on front air filter cover to release tabs.
3. Swing Air Filter Cover open to expose back side of Air Filter Cover.
4. On back side of Front Frame push Insert Grill Front Clips through Front Frame.
5. To reinstall Air Filter Clips push clips into openings in the front side of the Front Frame.

Disassembly Procedures



WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect electrical power source to unit and discharge capacitor through a 10,000 ohm resistor before attempting to service, unless test procedures require power to be connected. Ensure all ground wires are connected before certifying unit as repaired and/or operational.

Rotary Control Assembly Removal

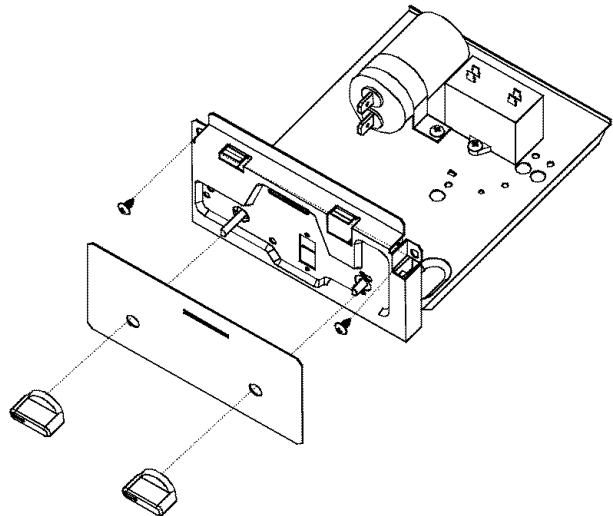
To remove Rotary Control Assembly:

1. Remove Front Frame (see Front Frame Removal)
2. Remove control knobs.
3. Remove cover plate
4. Remove 2 screws holding Rotary Control Assembly to chassis.
5. Remove temperature sensing bulb from bulb retainer in evaporator.
6. Slide Rotary Control Assembly out to expose switches and wiring.
7. Discharge capacitor through 10,000 ohm resistor.
8. Disconnect fan motor and compressor wires attached to capacitor.
9. Disconnect fan motor and compressor wires attached to selector switch.

NOTE: Before disconnecting or removing wires, always note position or location of wires. Ensure all disconnected wires are reconnected to proper location.

10. Reverse procedure to reinstall Rotary Control Assembly.

Rotary Control Assembly Removal



Disassembly Procedures



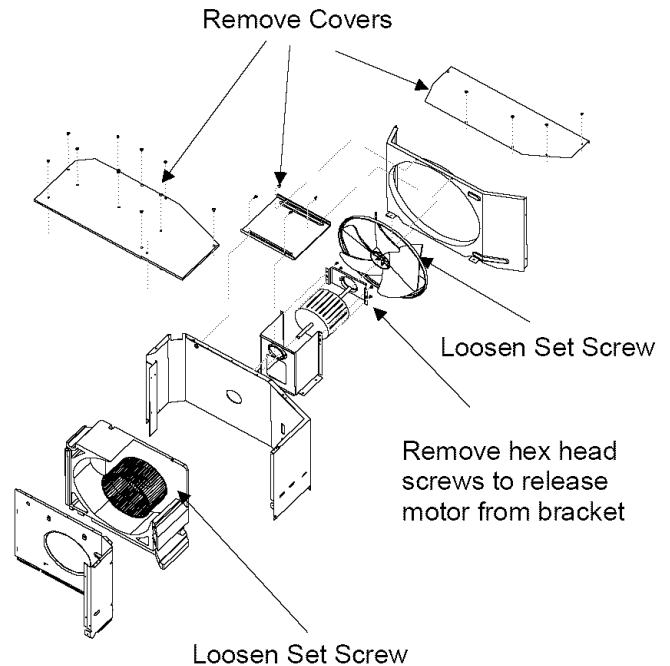
WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect electrical power source to unit and discharge capacitor through a 10,000 ohm resistor before attempting to service, unless test procedures require power to be connected. Ensure all ground wires are connected before certifying unit as repaired and/or operational.

Fan Motor Assembly Removal and Disassembly

To remove Fan Motor Assembly (including Fan Motor, (indoor) Blower Wheel, and (outdoor) Fan Blade):

1. Remove Front Frame Assembly (see Front Frame Removal).
2. Remove Chassis (see Chassis Removal).
3. Remove screws securing covers over blower wheel and condenser fan.
4. Remove screws holding condenser coil to shroud and chassis.
5. Carefully rotate condenser coil up and to the left to expose condenser fan blade.
6. Loosen condenser fan blade with screwdriver and remove fan blade.
7. Loosen set screw on blower wheel so it will slide off shaft.
8. Disconnect motor wiring from Rotary switch control compartment (See Rotary Control Assembly Removal)
9. Remove 4 hex head screws holding motor in bracket.
10. Slide motor out of blower wheel and remove from bracket.
11. Reverse procedure to reinstall Fan Motor.



Condenser Removal

To remove condenser:

1. Remove chassis (see Chassis Removal).
2. Remove screws securing condenser shroud to condenser (screws located on each side of shroud). Shroud remains in place.
3. Evacuate sealed system (see paragraph Evacuation, in Trouble shooting Information section).

Note: Before opening any refrigeration system, capture refrigerant in system for safe disposal.



CAUTION

To reduce risk of personal injury or property damage take necessary precautions against high temperatures required for brazing

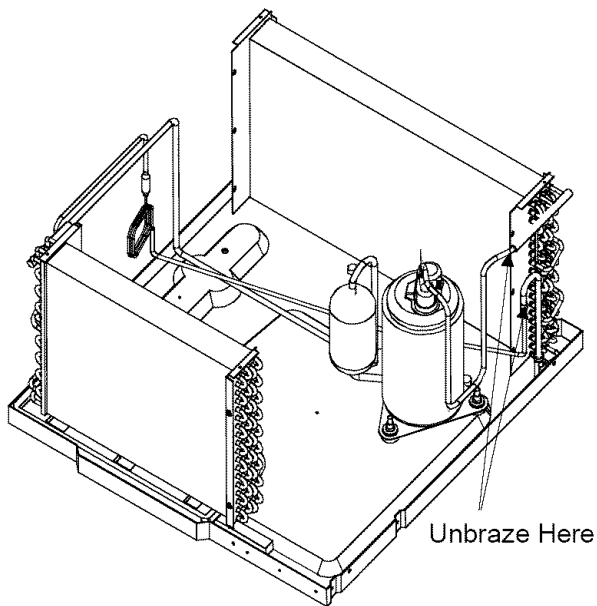
Disassembly Procedures



WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect electrical power source to unit and discharge capacitor through a 10,000 ohm resistor before attempting to service, unless test procedures require power to be connected. Ensure all ground wires are connected before certifying unit as repaired and/or operational.

4. Unbraid condenser discharge connection to compressor.
5. Unbraid condenser connection shown below.
6. Lift condenser up and away from chassis.

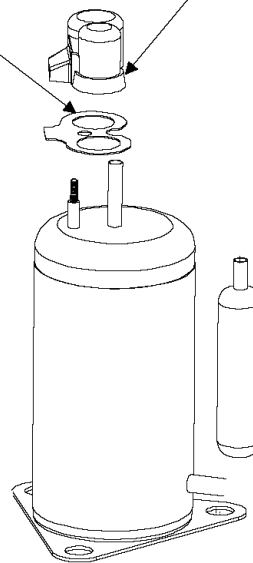


Condenser Removal

Compressor Overload Protector Removal

- To remove compressor overload protector:
1. Remove chassis (see Chassis Removal).
 2. Remove nut securing terminal cover to compressor, then lift terminal cover up and away from compressor.
 3. Disconnect overload protector leads.
 4. Lift overload protector up and away from compressor.

Overload Protector Terminal Cover



Compressor Overload Protector Removal

Compressor Removal

- To remove compressor:
1. Remove chassis (see Chassis Removal).
 2. Remove compressor overload protector (see Compressor Overload Protector Removal).
 3. Disconnect leads on compressor.

Note: Before opening any refrigeration system, capture refrigerant in system for safe disposal.

4. Evacuate sealed system (see Evacuation in Troubleshooting Information section).



CAUTION

To reduce risk of personal injury or property damage, take necessary precautions against high temperatures required for brazing

Disassembly Procedures



WARNING

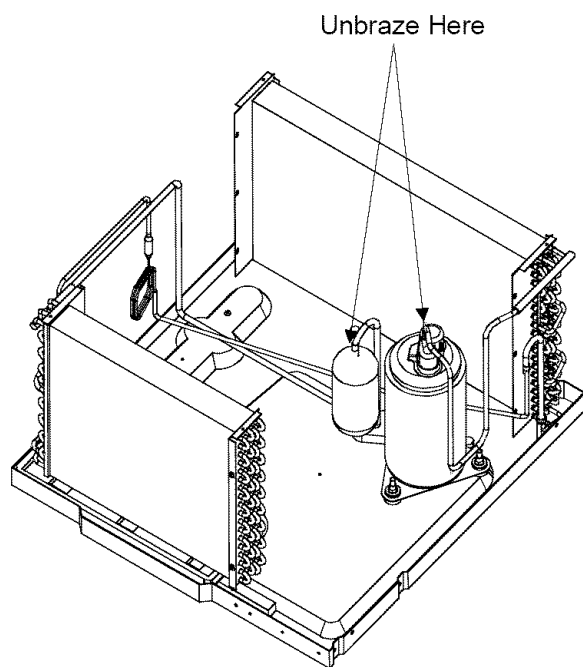
To avoid risk of electrical shock, personal injury, or death, disconnect electrical power source to unit and discharge capacitor through a 10,000 ohm resistor before attempting to service, unless test procedures require power to be connected. Ensure all ground wires are connected before certifying unit as repaired and/or operational.

5. Unbraid compressor discharge tube connection to condenser coil.
6. Unbraid compressor suction tube connection to evaporator.
7. Remove nuts securing compressor to base pan.
8. Lift compressor up and away from chassis.

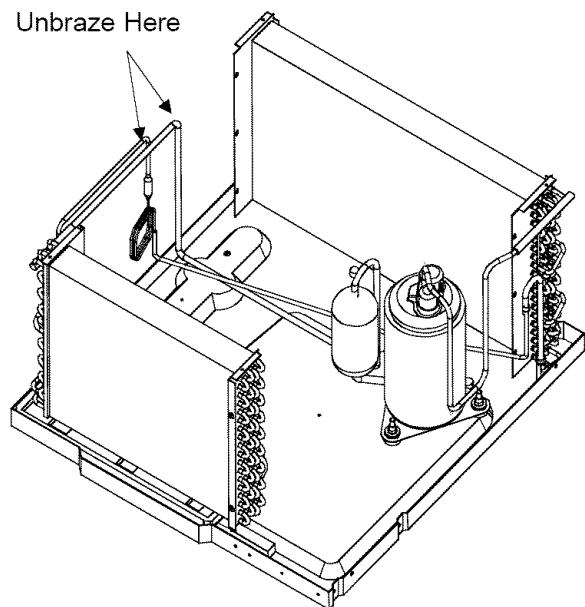


CAUTION

To reduce risk of personal injury or property damage, take necessary precautions against high temperatures required for brazing.



4. Unbraid Evaporator Suction connection to compressor.
5. Unbraid Evaporator connection to capillary tube.
6. Remove 4 screws holding Evaporator to housing.
7. Lift Evaporator out and away at top from chassis.



Evaporator Removal

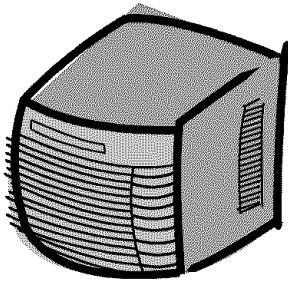
To remove Evaporator:

1. Remove Front Frame assembly (see Front Frame assembly removal).
2. Remove Chassis (see Chassis Removal).

NOTE: Before opening any refrigeration system, capture refrigerant in system for safe disposal.

3. Evacuate sealed system (see paragraph Evacuation, in Troubleshooting Information section).

Appendix A



Owner's Manual

Room Air Conditioner

Keep manual for future reference. Be sure manual stays with air conditioner.

Contents	
I. Description	A-2
II. Unpacking	A-3
III. Electrical Requirements	A-3
IV. Installation	A-4
V. Normal Care and Maintenance	A-15
VI. General Operating Instructions	A-16
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I. Description

This room air conditioner cools, dehumidifies and filters the air inside your home.

Sections I through VI of this manual provide general operating instructions, installation instructions, and maintenance instructions for your room air conditioner. These general instructions apply to all models. Section VII provides control operation information for each model. After reading Sections I through VI, turn to Section VII and find the control layout that matches your specific room air conditioner model. Read the information on this page carefully.

Important: It is important, both for your personal safety and to avoid possible damage to your appliance or your home, that you observe the safety instructions that are given following this symbol.



**RECOGNIZE THIS SYMBOL
AS A SAFETY PRECAUTION**



WARNING

HIGH TEMPERATURE STRESS HAZARD

This room air conditioner is not meant to provide unattended cooling or life support for persons or animals that are unable to react to failure of the product.

The failure of an unattended air conditioner may result in extreme heat in the conditioned space causing overheating or death of persons or animals.

Precautions must be taken to ward off or guard against such an occurrence.

II. Unpacking

When unpacking visually inspect the unit. Report any damage to the delivering carrier immediately. Remove and discard all packing material. On some models the air conditioner front and/or mounting kit hardware may be packed separately.

Record the model, serial and manufacturing numbers of your unit in the space provided below. This information is found on a nameplate visible on the right hand side of the air conditioner outer case. The rated voltage, amperage and capacity for your specific model can also be found on this nameplate. Read the warranty provided on the last page of this manual. Keep this manual and a copy of your sales receipt for future reference. You may also want to record in the space provided the date purchased and the selling dealer.

OWNER'S PRODUCT IDENTIFICATION

MODEL NUMBER

SERIAL NUMBER

MANUFACTURING NUMBER

Owner's Name

Address

City State Zip

Date of Purchase

Authorized Dealer

Address

City State Zip

()

Phone Number

III. Electrical Requirements

ELECTRICAL GROUNDING INSTRUCTIONS

This appliance is equipped with a three-prong grounding plug for protection against possible shock hazards. If a two-prong wall receptacle is encountered, the customer is required to contact a qualified electrician and have the two-prong wall receptacle replaced with a properly grounded three-prong wall receptacle in accordance with the National Electrical Code.

Room air conditioners are designed to operate according to requirements on the nameplate and as shown in Table 1. Fuse or circuit breaker ratings must be according to the fuse instruction label and as shown in Table 1 and the label on the electrical cord. Do not plug models marked

“Use on Single Outlet Circuit Only”
into a circuit with another appliance or light fixture.



WARNING

To avoid death, personal injury or property damage due to electrical shock, this unit must be grounded. Do not under any circumstances cut or remove the round grounding prong from the plug. Do not use a two-prong adapter.



WARNING

To avoid death, personal injury or property damage due to electrical shock, do not use an extension cord. Do not pinch the power cord. Do not remove the warning tag from the power cord.









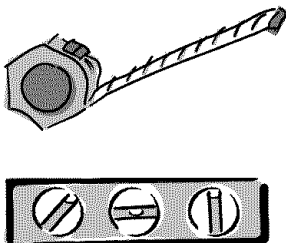
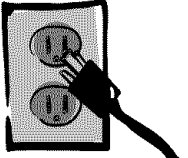
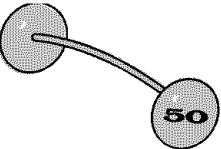
Unit Plug Type	Receptacle required	Circuit Rating Breaker or Time Delay Fuse	Voltage Rating On Unit Nameplate
 NEMA No. 5-15P	 NEMA No. 5-15R	125V-15AMP	115V
 NEMA No. 6-15P	 NEMA No. 6-15R	250V-15AMP	230/208V rated at 12 amperes or less
 NEMA No. 6-20P	 NEMA No. 6-20R	250V-20AMP	230/208V rated over 12 amperes but not more than 16 amperes
 NEMA No. 6-30P	 NEMA No. 6-30R	250V-30AMP	230/208V rated at 24 amperes or less

Table 1

Installation Requirements

Before You Install 

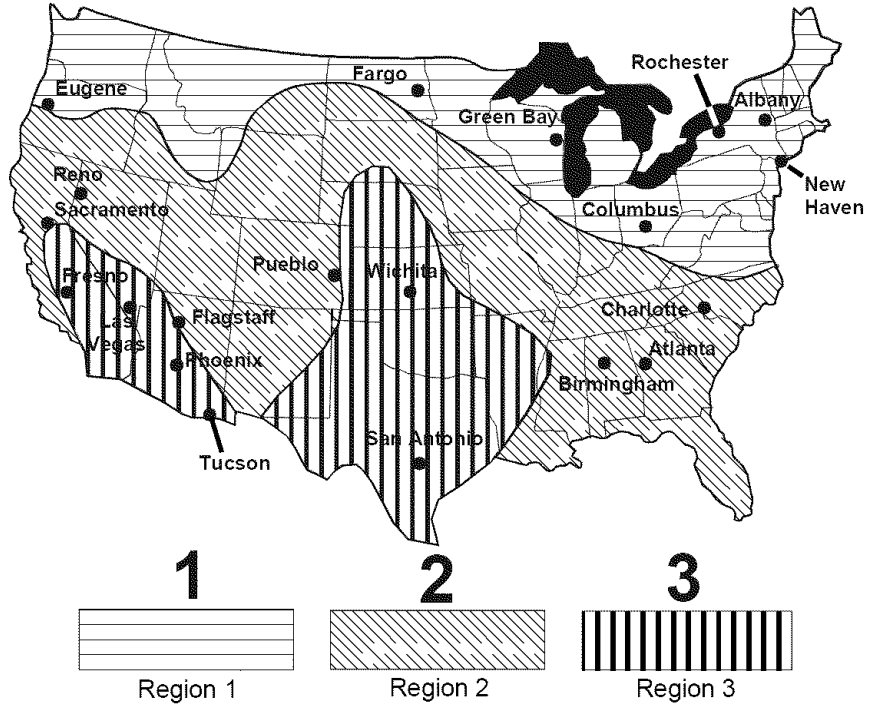
Consider	Description
<p data-bbox="170 361 284 388">Location</p> 	<p data-bbox="552 357 1453 409">For proper air conditioner operation all vents, indoor and out, must be free of obstructions.</p> <p data-bbox="552 430 1477 556">Carefully survey installation location. Indoor obstructions could include, but are not limited to, furniture, curtains, or plants. Outdoor obstructions could include, but are not limited to, landscaping plants and materials, structural design, or pathways.</p> <p data-bbox="552 577 1404 609">Use window frame dimensions shown in this manual for easy installation.</p> <p data-bbox="552 630 1461 682">Instant Mount Kit, supplied with unit, is designed for mounting in most double-hung windows without storm windows.</p> <p data-bbox="552 703 1485 798">To accommodate unit in window frame with storm window, modify sill by adding wood strips to inner and outer sills. This raises the unit and eliminates interference of storm window frame.</p>
<p data-bbox="170 829 479 861">Electrical Requirements</p> 	<p data-bbox="552 840 1380 924">A separate (dedicated) circuit is required for units labeled "Use on Single Outlet Circuit Only."</p> <p data-bbox="552 945 1461 1039">DO NOT use an extension cord. If air conditioner power supply cord does not reach intended wall outlet, have a qualified electrician install (or move) an appropriate receptacle closer to unit.</p> <p data-bbox="552 1060 1494 1123">DO NOT use an adapter plug. If plug on air conditioner does not match intended outlet, have a qualified electrician replace outlet with correct type.</p> <p data-bbox="552 1144 1502 1207">For more specific electrical information, see the power cord requirements section in this manual.</p>
<p data-bbox="170 1239 462 1270">Special Considerations</p> 	<p data-bbox="552 1228 1502 1291">Air conditioner weighs between 80 and 150 pounds (depending on model). Have additional help for lifting and carrying.</p>

Do you have the right size air conditioner for the room you want to cool?

Check the guide below and see.

Instructions

1. Measure the room to be cooled in square feet.
2. Select the region (1, 2, or 3) that best fits your location from the map.
3. Using the chart corresponding to your region, find the column marked (Size of Area to be Cooled in square feet).
4. Reading down the column, select a number that most closely matches your room size.
5. Follow this row across to the column that describes the air conditioner exposure direction, and room characteristics.
6. The number you select will be the approximate btu size needed to cool your room.



Additional conditions:

- If average occupancy of area is more than two people, add 600 Btu/hour per person. If average is one person, subtract 600 Btu/hour.
- Add 1200 Btu/hour if area includes a kitchen.
- If room is heavily shaded, subtract 10 percent from capacity. Increase capacity by 10 percent if area is very sunny.

Note: For best results, select a room air conditioner with cooling capacity (Btu/hour rating) closest to, but not exceeding, estimated size.

REGION 1

Size of Area to be Cooled (in square feet)	NORTH OR SHADED			EAST OR SOUTH			WEST		
	Room Above	Insulated Ceiling	Non Insulated ceiling	Room Above	Insulated Ceiling	Non Insulated ceiling	Room Above	Insulated Ceiling	Non Insulated Ceiling
	Required Air Conditioner Cooling Capacity Btu/hour			Required Air Conditioner Cooling Capacity Btu/hour			Required Air Conditioner Cooling Capacity Btu/hour		
150	3,200	3,500	4,400	5,100	5,400	6,200	6,200	6,500	7,300
200	3,600	4,000	5,200	5,500	5,900	7,000	6,600	7,000	8,100
250	4,000	4,400	5,900	6,000	6,400	7,800	7,100	7,500	8,900
300	4,300	4,900	6,600	6,400	6,900	8,600	7,500	8,000	9,800
350	4,700	5,300	7,400	6,800	7,400	9,400	7,900	8,500	10,600
400	5,100	5,800	8,200	7,200	7,900	10,300	8,300	9,000	11,400
450	5,500	6,200	8,900	7,600	8,400	11,100	8,700	9,500	12,200
500	5,800	6,600	9,600	8,000	8,900	11,900	9,100	10,000	13,000
550	6,200	7,100	10,400	8,400	9,400	12,700	9,500	10,500	13,800
600	6,600	7,600	11,100	8,900	9,900	13,500	10,000	11,000	14,600
650	6,900	8,000	11,800	9,300	10,400	14,300	10,400	11,500	15,400
700	7,300	8,400	12,600	9,700	10,900	15,100	10,800	12,000	16,200
750	7,700	8,900	13,400	10,100	11,400	15,900	11,200	12,500	17,000
800	8,000	9,400	14,100	10,600	11,900	16,700	11,700	13,000	17,800
850	8,300	9,800	14,900	11,000	12,400	17,500	12,100	13,500	18,600
900	8,700	10,200	15,600	11,400	12,900	18,300	12,500	14,000	19,400
950	9,100	10,700	16,300	11,800	13,400	19,100	12,900	14,500	20,200
1000	9,400	11,100	17,100	12,300	14,000	19,900	13,400	15,100	21,000
1100	10,100	12,000	18,500	13,100	14,900	21,400	14,200	16,000	22,600
1200	10,900	12,900	20,000	13,900	15,900	23,000	15,000	17,000	24,200
1300	11,600	13,800	21,500	14,700	16,900	24,700	15,800	18,000	25,800
1400	12,300	14,700	23,000	15,600	17,900	26,300	16,700	19,100	27,400

REGI ON 2

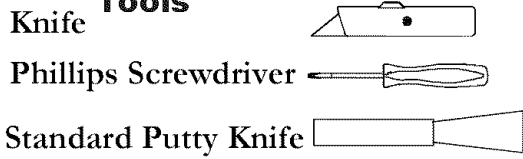
Size of Area to be Cooled (in square feet)	NORTH OR SHADED			EAST OR SOUTH			WEST		
	Room Above	Insulated Ceiling	Non Insulated ceiling	Room Above	Insulated Ceiling	Non Insulated ceiling	Room Above	Insulated Ceiling	Non Insulated Ceiling
	Required Air Conditioner Cooling Capacity Btu/hour			Required Air Conditioner Cooling Capacity Btu/hour			Required Air Conditioner Cooling Capacity Btu/hour		
150	3,600	3,900	5,000	5,800	6,100	7,100	7,100	7,400	8,400
200	4,100	4,500	5,900	6,300	6,700	8,100	7,600	8,000	9,400
250	4,500	5,000	6,700	6,800	7,300	9,000	8,100	8,600	10,300
300	4,900	5,500	7,600	7,300	7,900	10,000	8,600	9,200	11,300
350	5,300	6,000	8,500	7,800	8,500	10,900	9,100	9,800	12,200
400	5,800	6,600	9,400	8,300	9,100	11,900	9,600	10,400	13,200
450	6,200	7,100	10,200	8,700	9,600	12,800	10,000	10,900	14,100
500	6,600	7,600	11,100	9,200	10,200	13,700	10,500	11,500	15,000
550	7,000	8,100	12,000	9,700	10,800	14,700	11,000	12,100	16,000
600	7,500	8,700	12,900	10,200	11,400	15,600	11,500	12,700	16,900
650	7,900	9,200	13,700	10,700	12,000	16,600	12,000	13,300	17,900
700	8,300	9,700	14,600	11,200	12,600	17,500	12,500	13,900	18,800
750	8,800	10,300	15,500	11,700	13,200	18,500	13,000	14,500	19,800
800	9,200	10,800	16,400	12,200	13,800	19,400	13,500	15,100	20,700
850	9,600	11,300	17,300	12,700	14,400	20,300	14,000	15,700	21,600
900	10,000	11,800	18,100	13,200	15,000	21,300	14,500	16,300	22,600
950	10,500	12,400	19,000	13,700	15,600	22,200	15,000	16,900	23,500
1000	10,900	12,900	19,900	14,200	16,200	23,200	15,500	17,500	24,500
1100	11,700	13,900	21,600	15,100	17,300	25,000	16,400	18,600	26,300
1200	12,600	15,000	23,400	16,100	18,500	26,900	17,400	19,800	28,200
1300	13,400	16,000	25,100	17,100	19,700	28,800	18,400	21,000	30,100
1400	14,300	17,100	26,900	18,100	20,900	30,700	19,400	22,200	32,000

REGI ON 3

Size of Area to be Cooled (in square feet)	NORTH OR SHADED			EAST OR SOUTH			WEST		
	Room Above	Insulated Ceiling	Non Insulated ceiling	Room Above	Insulated Ceiling	Non Insulated ceiling	Room Above	Insulated Ceiling	Non Insulated Ceiling
	Required Air Conditioner Cooling Capacity Btu/hour			Required Air Conditioner Cooling Capacity Btu/hour			Required Air Conditioner Cooling Capacity Btu/hour		
150	4,000	4,300	5,600	6,500	6,800	8,000	8,000	8,300	9,500
200	4,500	5,000	6,600	7,100	7,500	9,100	8,600	9,000	10,600
250	5,000	5,600	7,600	7,600	8,200	10,200	9,100	9,700	11,700
300	5,500	6,200	8,600	8,200	8,900	11,300	9,700	10,400	12,800
350	6,000	6,800	9,600	8,800	9,600	12,400	10,300	11,100	13,800
400	6,500	7,400	10,600	9,400	10,300	13,500	10,900	11,800	14,900
450	6,900	8,000	11,600	9,900	10,900	14,500	11,400	12,400	16,000
500	7,400	8,600	12,600	10,400	11,500	15,600	11,900	13,000	17,100
550	7,900	9,200	13,600	11,000	12,200	16,700	12,500	13,700	18,200
600	8,400	9,800	14,600	11,500	12,900	17,800	13,000	14,400	19,300
650	8,900	10,400	15,600	12,100	13,600	18,900	13,600	15,100	20,400
700	9,400	11,000	16,600	12,700	14,300	19,900	14,200	15,800	21,500
750	9,900	11,600	17,600	13,300	15,000	21,000	14,800	16,500	22,600
800	10,400	12,200	18,700	13,800	15,700	22,100	15,300	17,200	23,600
850	10,900	12,800	19,700	14,400	16,400	23,200	15,900	17,900	24,700
900	11,400	13,400	20,700	15,000	17,100	24,300	16,500	18,600	25,800
950	11,900	14,100	21,700	15,600	17,800	25,400	17,100	19,300	26,900
1000	12,400	14,700	22,700	16,200	18,500	26,500	17,600	19,900	28,000
1100	13,300	15,900	24,700	17,300	19,700	28,600	18,700	21,200	30,100
1200	14,300	17,100	26,700	18,400	21,100	30,800	19,800	22,600	32,300
1300	15,300	18,300	28,700	19,500	22,500	32,900	21,000	24,000	34,400
1400	16,300	19,500	30,800	20,600	23,900	35,100	22,100	25,300	36,600

You'll Need a Few Things Before You Begin

Tools



Gloves



Level



Tape Measure



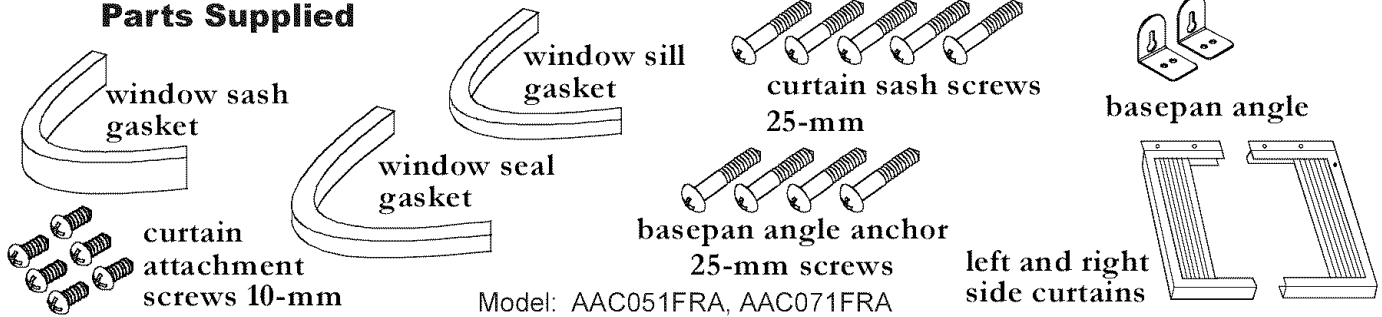
Drill and
1/16" Drill Bit



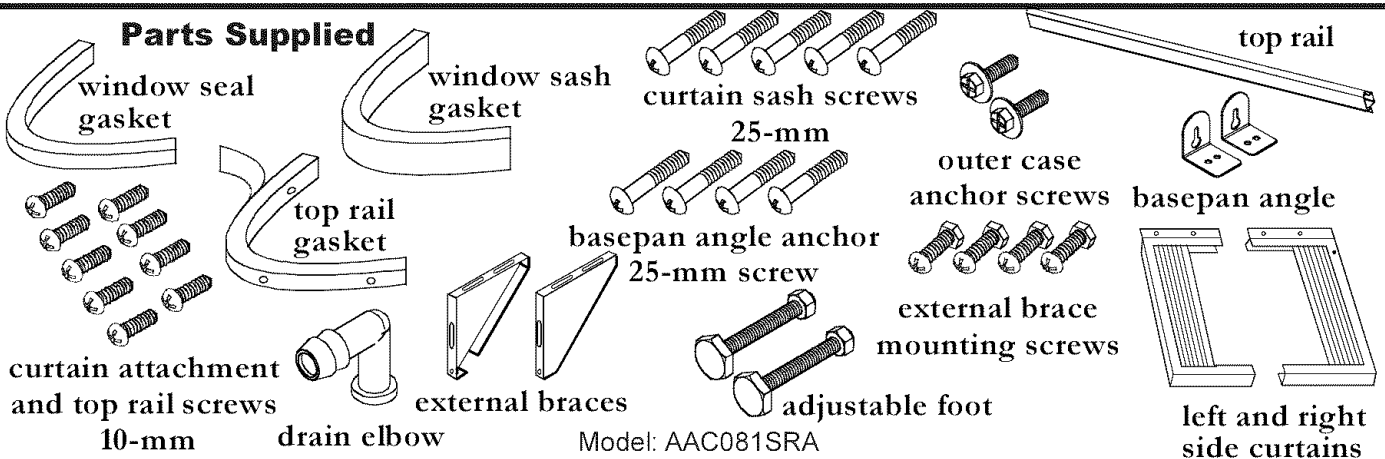
1/4" Nut Driver
or Socket



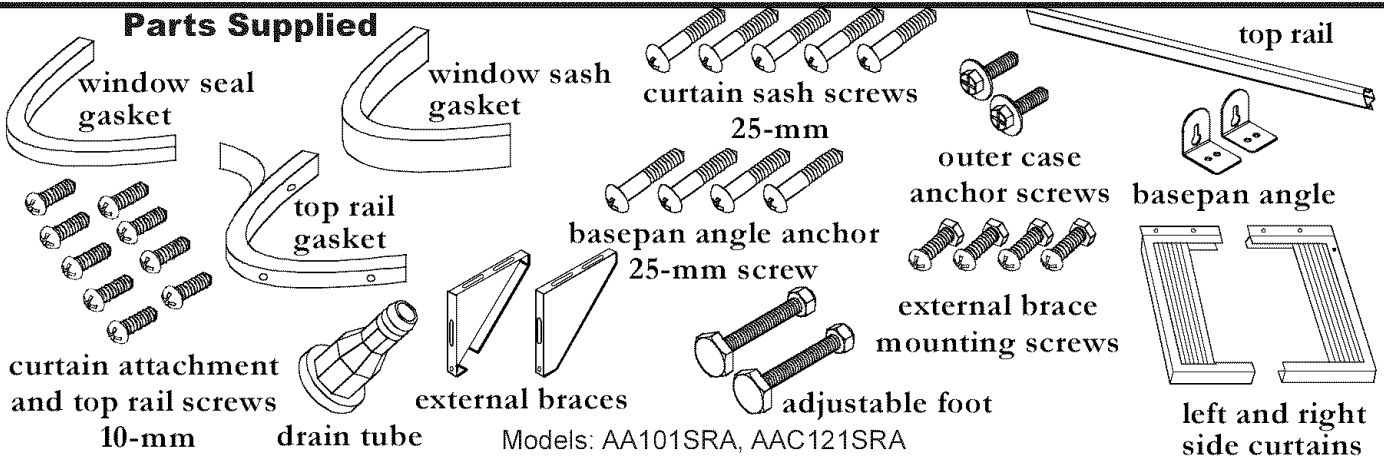
Parts Supplied



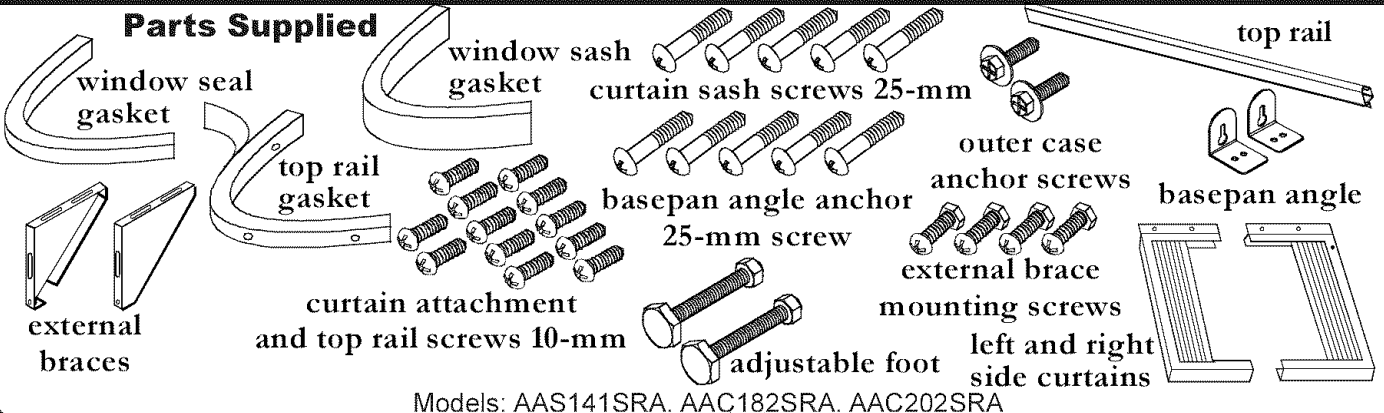
Parts Supplied



Parts Supplied



Parts Supplied



Important Safety Information

About Ground Wires

In the event of an electrical short circuit, a ground wire reduces the risk of electric shock by providing an escape wire for the electric current.

Standard accepted color coding for ground wires is **green** or **green with a yellow stripe**.

Grounding wires and wires colored like grounding wires are **NOT** to be used as current carrying conductors.

Grounding Instructions

For safety, air conditioner must be grounded. All air conditioner power supply cords are equipped with 3-prong grounding plug. Plug on cord must be plugged into appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances. Do not modify plug on air conditioner cord. If plug will not fit outlet, have qualified electrician install proper outlet.

About Personal Protection

Always wear safety glasses and snug fitting work gloves when handling air conditioner, or its parts.

WARNING

To avoid risk of personal injury or death due to electrical shock:

- **Observe all local codes and ordinances.**
- Disconnect electrical power to unit before servicing.
- Ground appliance properly.
- Check with a qualified electrician if you are not sure this appliance is properly grounded.
- DO NOT ground to gas line.
- DO NOT ground to cold water pipe if pipe is interrupted by plastic, nonmetallic gaskets, or other insulating (nonconducting) materials.
- DO NOT modify plug on power cord. If plug does not fit electrical outlet, have proper outlet installed by qualified electrician.
- DO NOT have a fuse in the neutral or ground circuit. A fuse in the neutral or ground circuit could result in an electrical shock.
- DO NOT use an extension cord with this appliance.
- DO NOT use an adapter plug with this appliance.
- DO NOT pinch power cord.

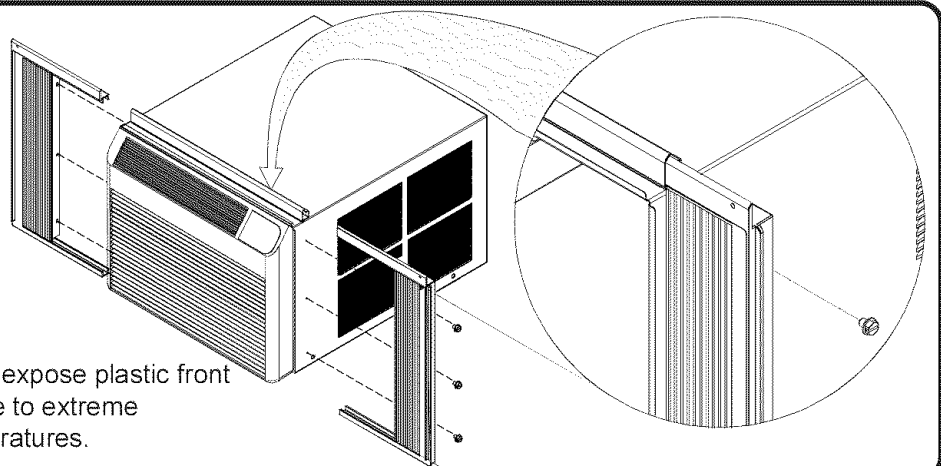
Models AAC051FRA and AAC071FRA

1 ASSEMBLE CURTAINS

Unpack unit on floor next to installation location.

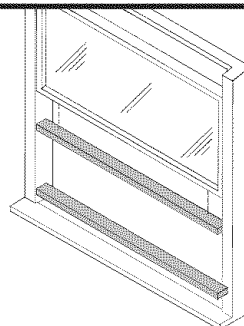
Slide left-hand curtain assembly into left ends of top and bottom rails. Repeat for right-hand curtain assembly. Fasten curtain retainer strips to sides of outer case with six 10-mm screws.

Caution: Never expose plastic front or grille to extreme temperatures.



2 APPLY WINDOW SILL & SASH GASKET

Raise indoor sash. Measure width of window sash. Cut window sash gasket to length and apply to bottom of window sash. Cut window sill gasket and apply.



3 PREPARE WINDOW FOR INSTALLATION

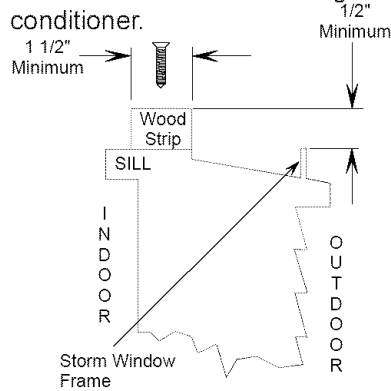
Inspect window track, sash, and sill for its ability to support the weight of air conditioner.

Measure width between window moldings to ensure Instant Mount window mounting kit will fit window frame. Instant Mount models are designed for windows from 24" to 34" wide.

Instant Mount kit supplied with unit is designed for mounting in most double-hung windows **without storm windows**. For installation in window frame with storm window, modify sill by adding wood strips to inner and outer sills. This raises unit and eliminates interference of storm window frame.

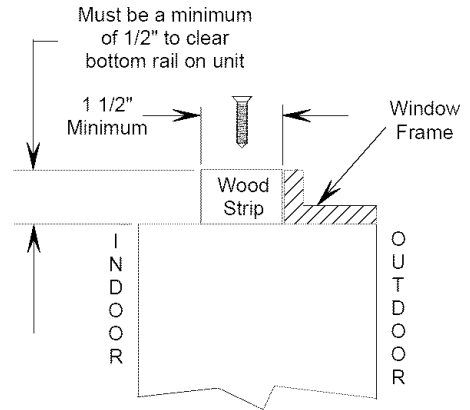
Storm window installation

If storm window frame does not allow adequate clearance below sill (1/2" required), remove storm window frame or create clearance by adding a wood strip (at least 1 1/2" wide) along entire width of sill. Fasten wood strip to sill with at least three countersunk wood screws (not supplied with kit). This provides a smooth surface for mounting air conditioner.



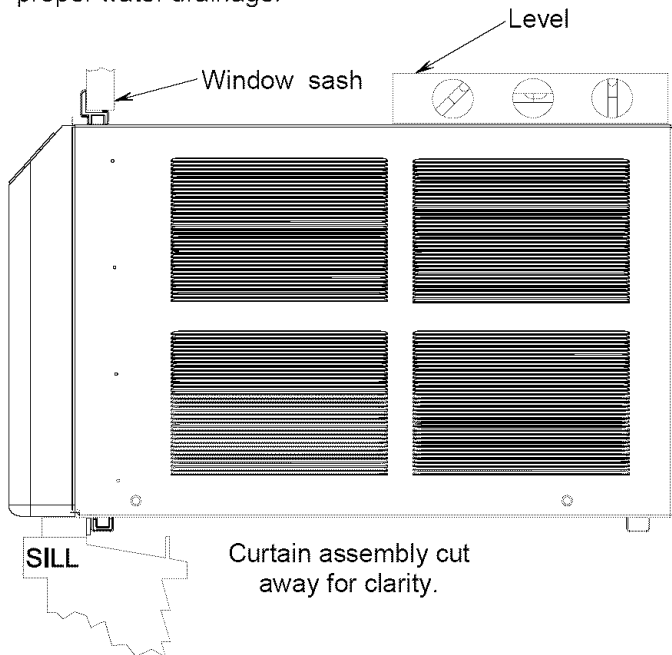
Mobile home window installation

Add wood strip (at least 1 1/2" wide) along entire width of window sill. Thickness of wood strip should match height of front lip on window frame. Fasten wood strip to sill with a minimum of three countersunk wood screws (not supplied with kit). This provides a smooth surface for mounting air conditioner.



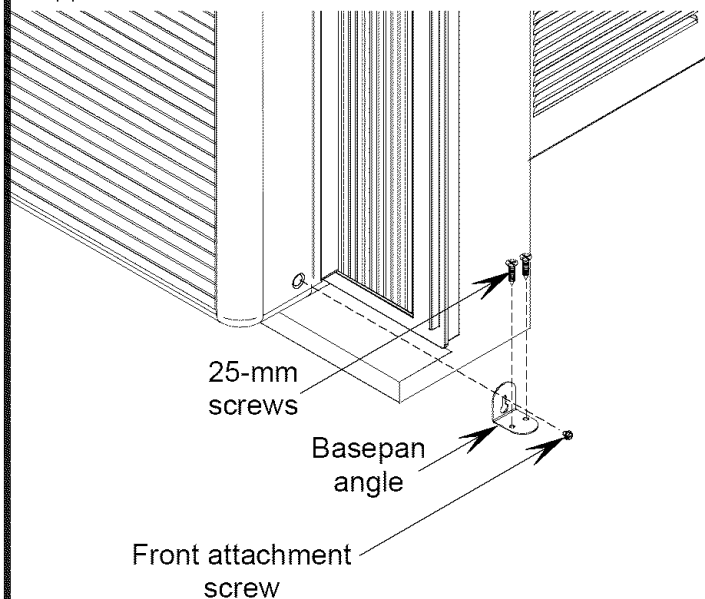
4 INSTALL UNIT IN WINDOW

Place unit in window. Lower sash until it rests behind front flange of top rail. Bottom rail must rest behind window sill. With a level adjust unit to a 1/2 bubble slope to the rear for proper water drainage.



5 INSTALL BASEPAN ANGLE

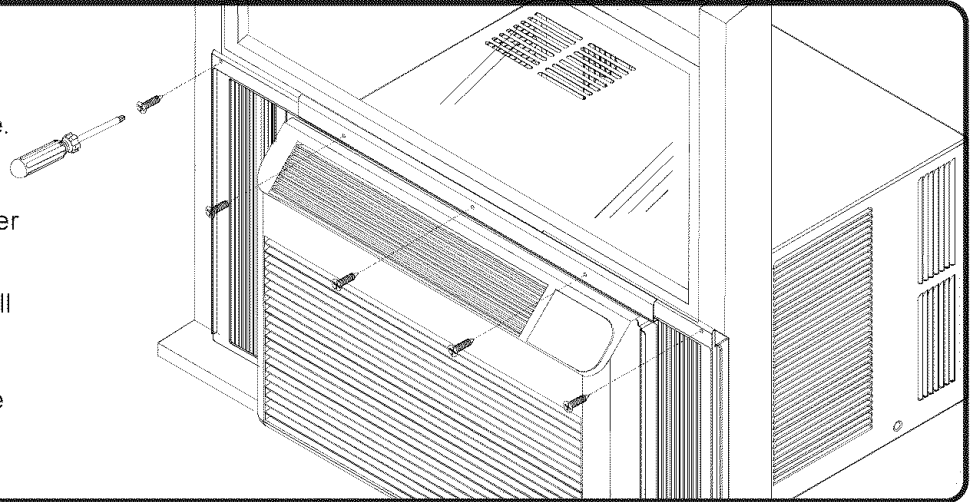
Back front attachment screw out several turns and slip Basepan Angle over screw head. Snug screw with angle resting on window ledge. Install two 25-mm screws through angle into window ledge. Repeat for opposite side.



6 SECURE SIDE CURTAINS

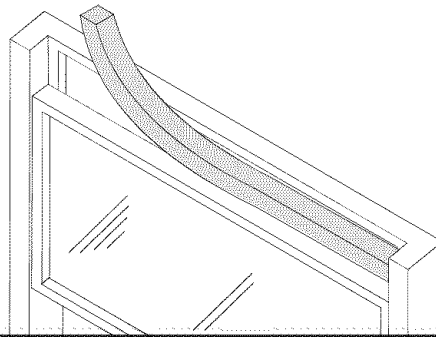
Expand curtains as far as possible. Install (5) 25-mm curtain sash screws. For hard wood or metal window frames, drill a 1/8" diameter pilot hole to start screw.

IMPORTANT: Be careful not to drill pilot hole too deep. Add a piece of tape to the drill bit as a depth gauge. Also stay clear of glass. Be careful not to damage the function of the window.



7 INSTALL SEAL GASKET

Cut window seal gasket to width of window. Stuff window seal gasket between outdoor window glass and top of indoor sash. This will stop air leakage which reduces efficiency.



**Models: AAC051SRA, AAC081SRA, AAC101SRA, AAC121SRA
AAC141SRA, AAC182SRA, and AAC202SRA**

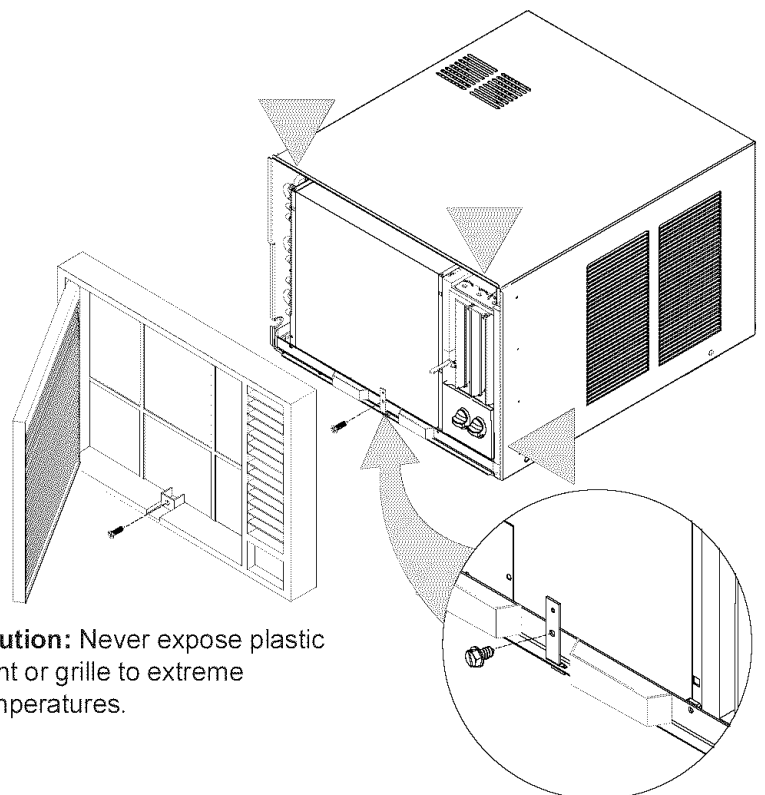
1 PREPARE UNIT FOR INSTALLATION

Unpack unit on floor next to installation location.

Remove front attachment screw. Screw location based on unit style. Separate the outercase from the front with a putty knife at the catch points designated by the arrows.

Remove one screw securing basepan locking bracket. Remove two screws located in the rear of the outercase, securing basepan to outercase (AAC08, AAC10, AAC12). Using the basepan handles, slowly and evenly pull chassis out from outercase.

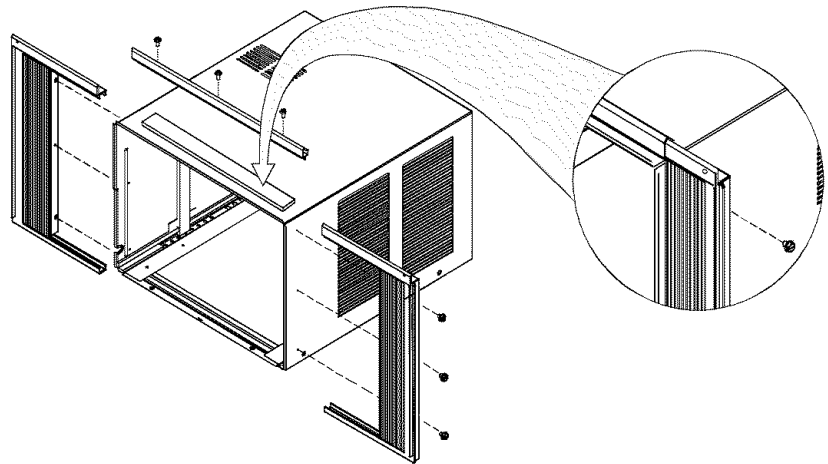
Note: Cover putty knife blade with masking tape to guard against damage of units finish. The filter is removed in this illustration for clarity.



Caution: Never expose plastic front or grille to extreme temperatures.

2 ASSEMBLE CURTAINS/TOP RAIL

Remove paper backing from top rail gasket and adhere to bottom of top rail. Install top rail with three or four 10-mm screws depending on unit style. Slide left-hand curtain assembly into left end of top and bottom rails. Repeat for right-hand curtain assembly. Fasten curtain retainer strips to sides of outer case with six or eight 10-mm screws depending on unit style.



3 PREPARE WINDOW FOR INSTALLATION

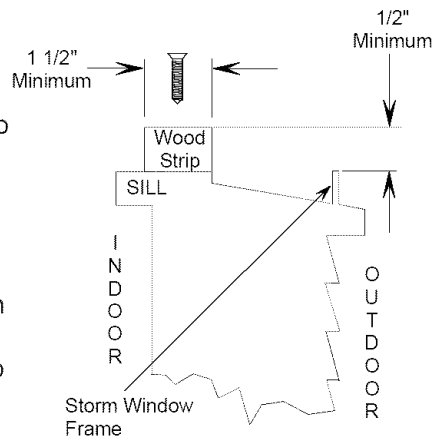
Inspect window track, sash, and sill for its ability to support the weight of air conditioner.

Measure width between window moldings to ensure Instant Mount window mounting kit will fit window frame. Instant Mount models are designed for windows from 24" to 35" wide (AAC05, AAC07), 25" to 35" (AAC08), 26" to 36" (AAC10, AAC12), 30" to 40" (AAC14), 32" to 44" (AAC18, AAC20).

Instant Mount kit supplied with unit is designed for mounting in most double-hung windows **without storm windows**. For installation in window frame with storm window, modify sill by adding wood strips to inner and outer sills. This raises unit and eliminates interference of storm window frame.

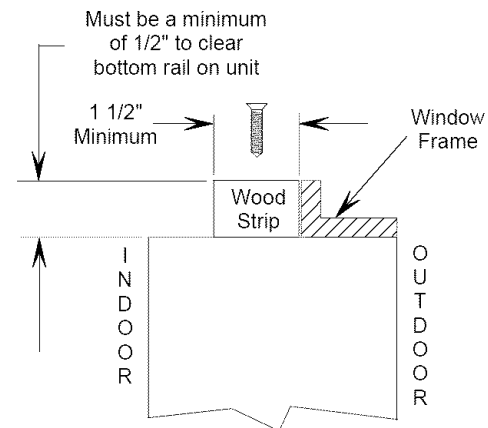
Storm window installation

If storm window frame does not allow adequate clearance below sill ($1/2"$ required), remove storm window frame or create clearance by adding a wood strip (at least $1\ 1/2"$ wide) along entire width of sill. Fasten wood strip to sill with at least three countersunk wood screws (not supplied with kit). This provides a smooth surface for mounting air conditioner.



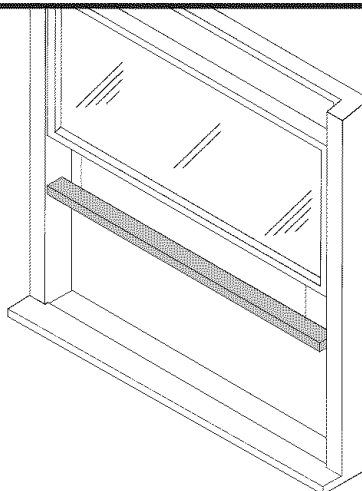
Mobile home window installation

Add wood strip (at least $1\ 1/2"$ wide) along entire width of window sill. Thickness of wood strip should match height of front lip on window frame. Fasten wood strip to sill with a minimum of three countersunk wood screws (not supplied with kit). This provides a smooth surface for mounting air conditioner.



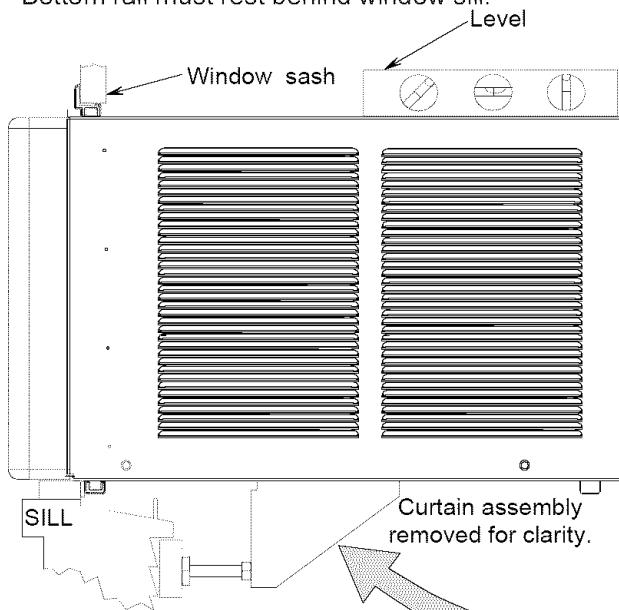
4 APPLY WINDOW SASH GASKET

Raise window sash. Measure width of window sash, including portion inside window track. Cut window sash gasket to length and apply to bottom of window sash. Cut and apply window sill gasket.



5 INSTALL OUTER CASE IN WINDOW

Place outer case in window. Lower sash until it rests behind front flange of top rail. Bottom rail must rest behind window sill.



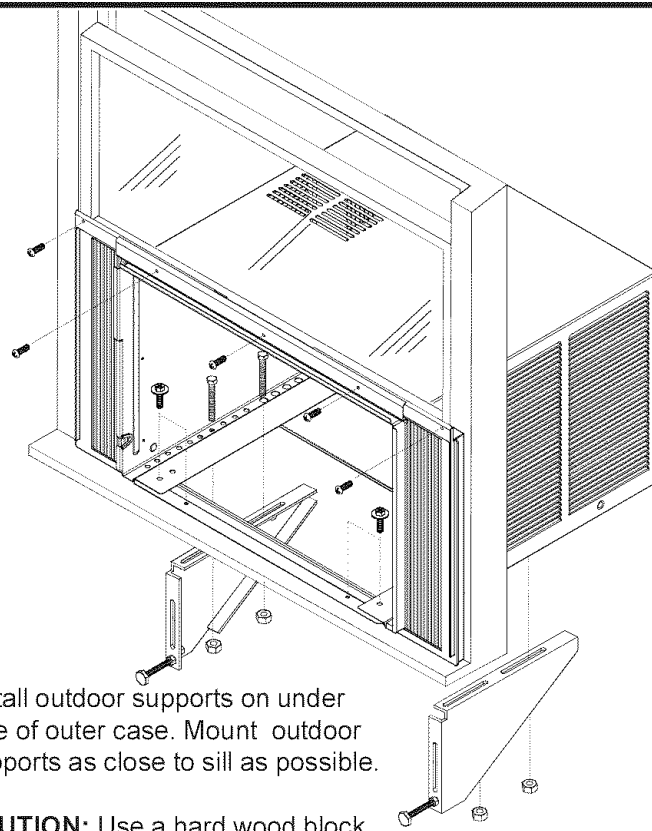
Expand both curtains to contact the window frame. Install five 25-mm screws through curtains and top rail. Install two outer case anchor screws into window sill.

NOTE: To make screws easier to drive, drill a 1/8" diameter pilot hole into sash through clearance hole in curtains and top rail.

Install outdoor supports on under side of outer case. Mount outdoor supports as close to sill as possible.

CAUTION: Use a hard wood block between the adjusting foot and the surface it may contact. This will protect the surface from damage.

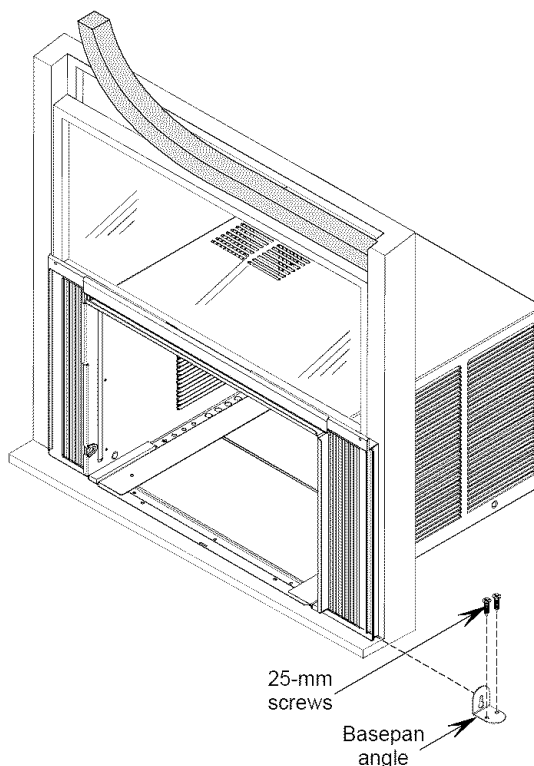
Turn each adjusting foot until it begins to contact wood block. With a level adjust unit to a 1/2 bubble slope to the rear for proper water drainage.



6 INSTALL BASEPAN ANGLE & WINDOW SEAL GASKET

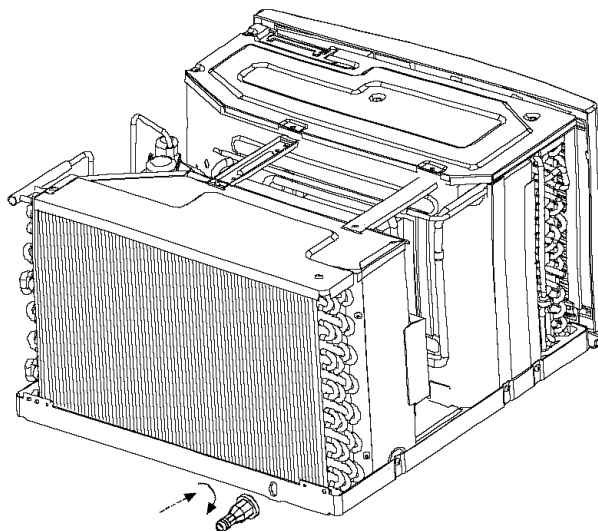
Position baspan angle flush against outercase. Drive 25-mm screws into window ledge to prevent unit from moving.

Cut window seal gasket to width of window. Stuff window seal strip between outdoor window glass and top of indoor sash. This will stop air leakage which reduces efficiency.



7 INSTALL DRAIN TUBE/DRAIN ELBOW

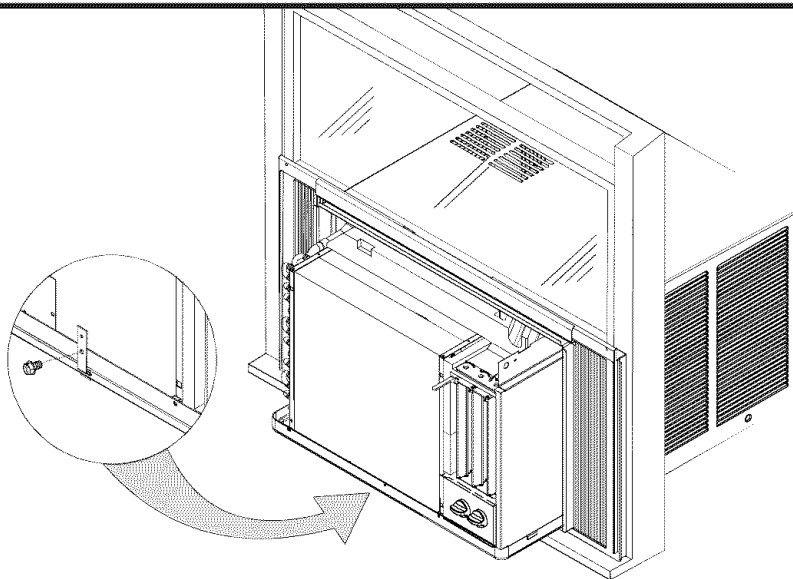
Models: AAC081SRA, AAC101SRA, AAC121SRA. Align tabs on drain tube with keyway in basepan. Insert tube and rotate 90° to lock tube in position. Install elbow by pushing end into hole until it locks into position.



8 RETURN CHASSIS TO OUTER CASE

Find someone to help you replace chassis in outer case. Install basepan clip. Replace front panel and grille. Where possible, install two screws in rear of outercase, removed in step one.

IMPORTANT: Because window sash helps keep unit in window, make certain window sash contacts outer case before reinstalling chassis.

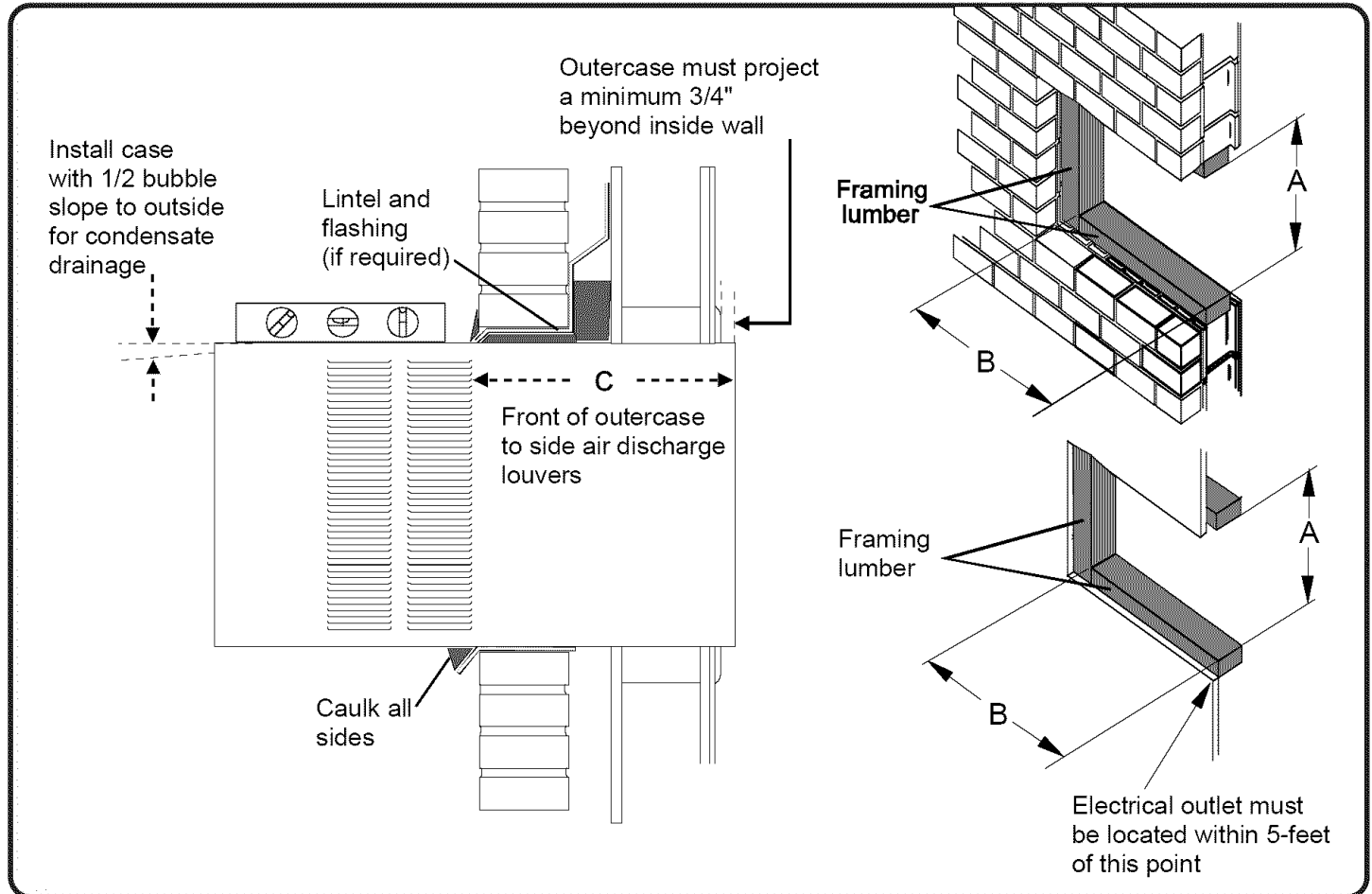


Thru-wall installation instructions

CAUTION

Installing air conditioner through a wall requires extensive carpentry and/or masonry experience. Through wall installations performed by inexperienced or unqualified individuals can result in costly damage to home.

Model	Dimension		
	A	B	C
AAC051SRA			
AAC081SRA	14 1/2	21	7 1/2
AAC101SRA	17	22 1/2	10 5/8
AAC121SRA	17	22 1/2	10 5/8
AAC141SRA	18 1/8	26 1/2	10 5/8
AAC182SRA	19 1/8	28 1/8	11 5/16
AAC202SRA	19 1/8	28 1/8	11 5/16



V. Normal Care and Maintenance



To reduce the risk of electric shock, personal injury, or death, turn the fan control to the off position and remove the unit plug from the wall outlet before doing any inspection or maintenance work.

ANNUAL INSPECTION

It is suggested that your unit be inspected by your dealer or servicer once a year. It is advisable to have the outer case removed and the unit thoroughly cleaned.

Note: The life of your unit may be greatly reduced if you live in a salt air or other corrosive type environment. Under these conditions the unit should be removed from its case and completely cleaned at least once a year. At that time any scratches or blisters on the painted surfaces should be sanded and repainted. Placing an algaecide tablet in the outdoor side of the unit's base pan is suggested in humid areas where algae formation is common. Amana recommends the following algaecide cleaners: **PanGuard®** by Control Released Technologies, Inc. and **CDC Anti-Clog®** by Virginia KMP.

FRONT GRILLE AND FILTER REMOVAL

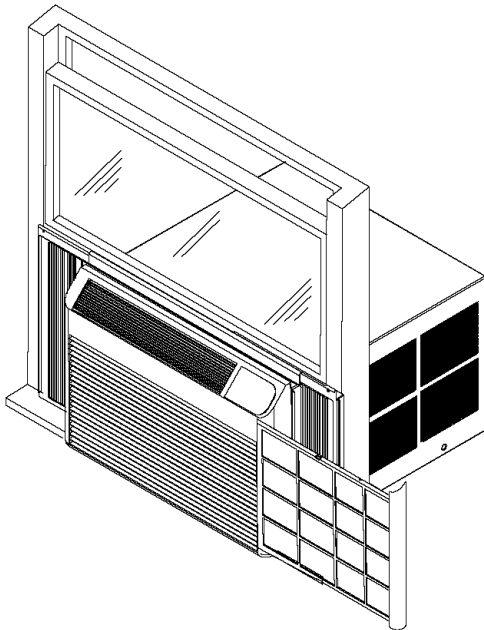
The front contains a removable air filter. To clean the filter use one of the following methods.

Models: AAC051FRA, AAC051SRA, AAC071FRA

METHOD ONE:

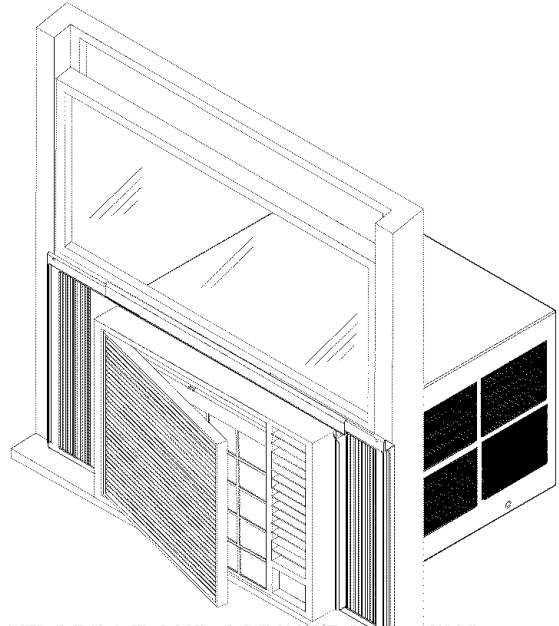
Grasp the filter handle and slide the filter out of unit.

Models: AAC081SRA, AAC101SRA, AAC121SRA, AAC141SRA, AAC182SRA, AAC202SRA



METHOD TWO:

1. Push the front grille on the upper and lower right hand corners.
2. Swing grille open to expose filter.
3. Tip filter out and remove.



FRONT GRILLE AND CABINET CLEANING

The grille and complete cabinet may be cleaned with warm water and mild soap or detergent. Cleaning or polishing compounds are not recommended, as they may damage plastic surfaces.

AIR FILTER CLEANING

A dirty air filter reduces the operating efficiency of your unit. The filter should be inspected at least once every week during operation. It can be cleaned with a vacuum cleaner or washed in warm water and mild detergent. The filter should be thoroughly dried before it is replaced. **Do not operate the unit without a filter.**

FAN MOTOR

The fan motor is permanently lubricated for long life. There is no need to oil the motor.

VI. General Operating Instructions

The operation and control of all units are very similar; however, they do vary slightly from model to model. Section VII shows the control panel of the unit you have purchased and gives detailed information on the operation of the controls.

INITIAL START UP/COOLING

Select the highest fan speed and set temperature control to its coldest position. When the desired temperature is reached, slowly move the temperature control toward a warmer setting until the compressor shuts off. The thermostat will then cycle the compressor on and off to maintain this selected temperature. Adjust the fan speed for desired air circulation.

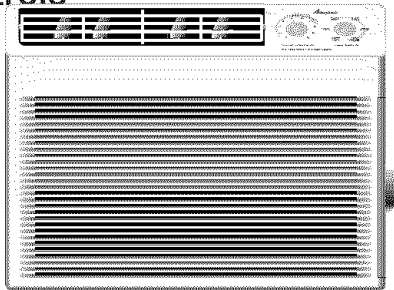
CHANGING AIR FLOW DIRECTION BAFFLES

All units are equipped with airflow baffles that allow you to divert the air from a center flow to the left or right. The units also have tilting louvers that provide upward and downward air discharge. Adjust baffles and tilting louvers for desired air flow pattern.

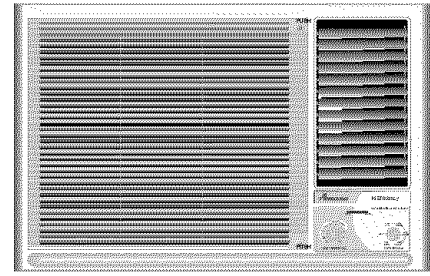
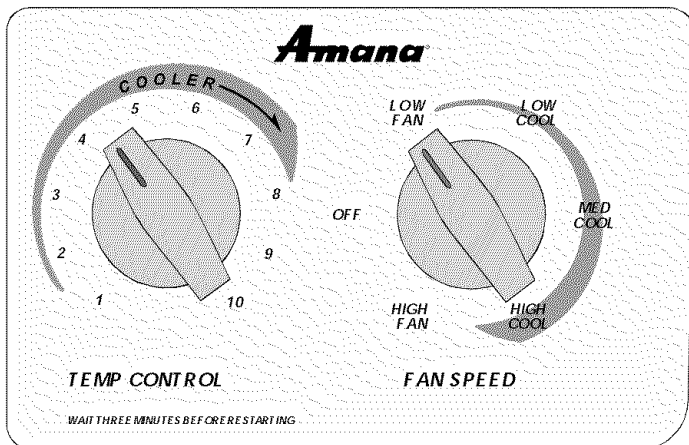
AIR FLOW AROUND THE UNIT

Check the indoor grille and outdoor louvers for obstructions to airflow. Do not block the airflow to and from the unit. If air is obstructed and/or deflected back into the unit, the air conditioner's compressor may cycle on and off rapidly. This could damage your unit.

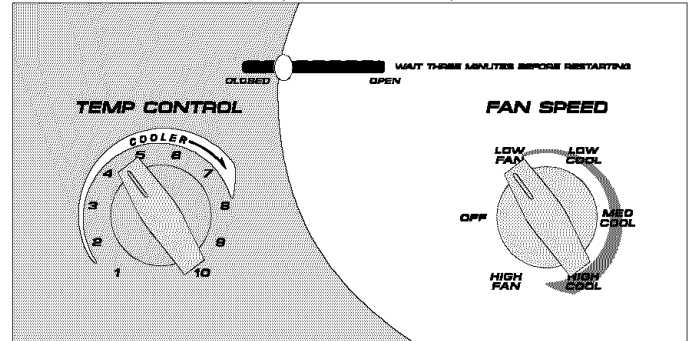
VII. Controls



MODELS: AAC051FRA, AAC051SRA, AAC071FRA,



MODELS: AAC081SRA, AAC101SRA, AAC121SRA



Fan Control

OFF – Completely shuts off the unit. To prevent blowing fuses, wait three minutes after turning the unit off before turning it on again.

LOW FAN – Select this setting for circulating or exhausting room air without cooling.

LOW COOL – Filters and circulates room air with the fan running continuously on low speed. Also cools and dehumidifies while the compressor is running. Select this setting for quiet cooling operation.

MEDIUM COOL – Filters and circulates room air with the fan running continuously on medium speed. Also cools and dehumidifies while the compressor is running.

HIGH COOL – Filters and circulates room air with the fan running continuously on high speed. Also cools and dehumidifies while the compressor is running. Select this setting for maximum air circulation and cooling effect.

HIGH FAN – Select this setting for circulating or exhausting room air without cooling.

Temperature Control

Turn this control to the left for a warmer room temperature, to the right for a cooler room temperature.

Vent Control- (Not available on all models)

Choose one of the following two settings by sliding the vent control under the appropriate marking:

OPEN – Exhausts room air to the outdoors. Also circulates and filters room air. This position can be used to exhaust stale or smoky air.

CLOSED – Exhaust damper is closed. Unit circulates and filters room air. This position should be used for normal cooling operation.

Before Calling For Service



WARNING

To reduce the risk of electric shock, personal injury, or death, turn the fan control to the off position and remove the unit plug from the wall outlet before doing any inspection or maintenance work.

The following is a list of problems that are sometimes encountered when using a room air conditioner. Possible cause and suggested remedies are given for each problem.

If the problem cannot be fixed using the suggested remedies, see *WHEN SERVICE IS REQUIRED* section.

PROBLEM	POSSIBLE CAUSE	SUGGESTED REMEDY
UNIT WILL NOT RUN	No power to the unit.	Set Fan Control to position other than OFF. Make sure plug is firmly held in outlet. Check for blown fuses or tripped circuit breakers. Call for service.
LITTLE OR NO COOLING	Obstructed indoor or outdoor air flow. Dirty air filters. Unit undersized for application. Temperature Control not properly set.	Remove obstruction from indoor grille or outdoor louvers. Clean the air filter. See Section V for details. Check with dealer to determine proper capacity unit for your application. For cooling turn Temperature Control to higher number. Call for service.
NOISY UNIT	Loose front of mounting assembly. Weak building construction. Water hitting the fan blade. Unit oversized for application. (Compressor cycles on and off frequently.)	Tighten any loose parts. Provide additional support for the unit. Normal in high humidity. Stop noise by removing drain plug or adding a condensate drain. Check with dealer to determine proper capacity unit for application.
MOUNTING SUPPORT NOT INSTALLED	Storm window frame has been installed into window.	Some models require the storm window frame to be removed before installation.
FROST ON INDOOR COIL	Dirty air filter. Normal for low outdoor temperatures. Oversized unit.	Clean the air filter. See Section V for details. Turning the Temperature Control to a lower number will reduce occurrence and duration of frosting condition. Check with dealer to determine proper capacity unit for application.
ODORS IN COOLING	Mold, mildew, or algae formation on wet surfaces.	To reduce growth use algacide tablet in the unit base pan or remove drain plug or add a condensate drain. Have your unit thoroughly cleaned. See Section V.

When Service is Required

For answers to questions or to locate an authorized servicer, call **1-800-NAT-LSVC (1-800-628-5782) inside USA or 319-622-5511 outside USA. Warranty service must be performed by an authorized servicer.** Amana Appliances recommends contacting an authorized servicer if service is required after warranty expires.

Any Questions?

If you should have any matters which are not resolved by your local Amana dealer, or if you would like information on other heating and cooling products, kitchen appliances or accessories offered by Amana - please call us:



CONSUMER INFORMATION LINE
Amana Toll-Free

1-800-843-0304

(Not a technical assistance line for dealers.)

Asure™ Extended Service Plan



For more information on this and other Amana products, visit our Web site

www.amana.com

or

call Consumer Affairs Department at

1-800-843-0304

Amana is pleased to offer long-term service protection on this new room air conditioner. Asure™ Extended Service Plan is specially designed to supplement Amana's strong warranty. Asure™ provides budget-protecting coverage on room air conditioner for up to five full years and includes parts, labor, and travel charges.

A participating Amana dealer has details or contact:

Amana Appliances
Amana, IA 52204
1-800-528-2682

Warranty



ROOM AIR CONDITIONER FULL ONE YEAR WARRANTY

FULL FIVE YEAR WARRANTY ON SEALED SYSTEM COMPONENTS

FIRST YEAR

Amana will repair or replace, free of charge, any part which is defective due to workmanship or materials.

SECOND THROUGH FIFTH YEAR

Amana will replace, free of charge, any defective sealed system component (evaporator, capillary lines, compressor, condenser, interconnecting tubing and reversing valve) which is defective due to workmanship or materials.

WARRANTY LIMITATIONS:

- Begins at date of original purchase.
- Applies to product used within the United States.
 - Applies to service performed by authorized Amana servicer.

WARRANTY LIMITATIONS:

- Serial plate is defaced.
- Product is used on commercial, rental or leased basis.
- Product has defect or damage due to product alteration, connection to an improper electrical supply, shipping and handling, installation in a corrosive environment, accident, fire, flood, lighting or other conditions beyond the control of Amana.
- Product is installed in a non-Amana wall sleeve, used with a non-Amana outdoor grille or any other use which causes intake or discharge air flow to be restricted.

OWNER'S RESPONSIBILITIES:

- Provide proof of purchase (sales receipt).
- Provide normal care and maintenance. Replace owner replaceable items where directions appear in use and care manual and installation instructions.
- Make the product reasonably accessible for service.
- Pay for premium service costs for service outside servicer's normal business hours.
- Pay for service calls related to product installation or usage.

IN NO EVENT SHALL AMANA BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES*

*This warranty gives you specific legal rights and you may have others which vary from state to state. For example, some states do not allow the exclusion or limitation of incidental or consequential damages so this exclusion may not apply to you.

For answers to questions regarding the above or to locate an authorized servicer, contact:

Amana Appliances
Amana, Iowa 52204
1-800-843-0304
1-319-622-5511 outside U.S.A.