



**CONSUMER SERVICES TECHNICAL
EDUCATION GROUP PRESENTS**

R-96

**2003
5000 & 6000 BTU
AIR CONDITIONERS**

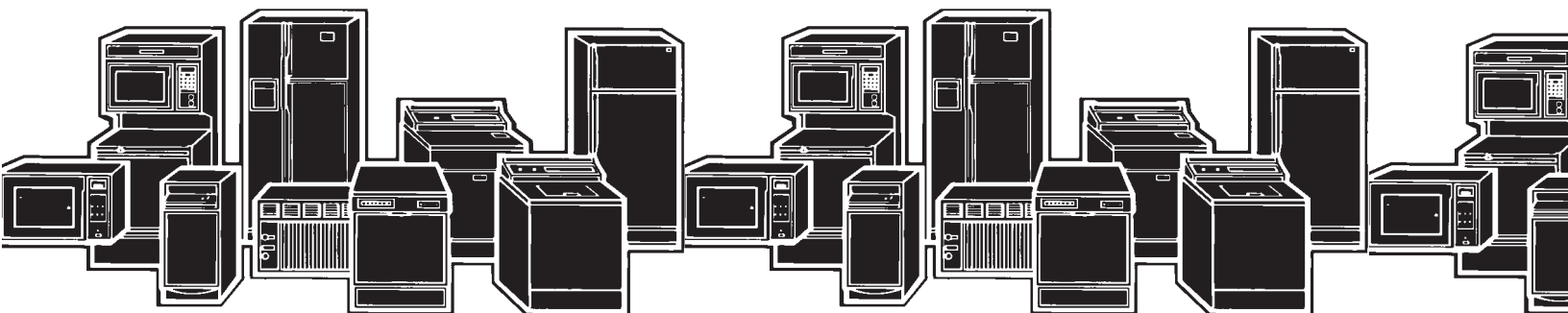
Models: ACM052MM,
ACM062MM, ACD052MM



Models: ACQ058MM &
ACQ062MM



**JOB AID
Part No. 8178279**



FORWARD

This Whirlpool Job Aid, “2003 - 5000 & 6000 BTU Air Conditioners” (Part No. 8178279), provides the technician with information on the installation and service of the 2003 - 5000 & 6000 BTU Air Conditioners. It is to be used as a training Job Aid and Service Manual. For specific information on the model being serviced, refer to the “Use and Care Guide” provided with the air conditioner.

The Wiring Diagrams and Strip Circuits used in this Job Aid are typical and should be used for training purposes only. Always use the Wiring Diagram supplied with the product when servicing the unit.

GOALS AND OBJECTIVES

The goal of this Job Aid is to provide detailed information that will enable the service technician to properly diagnose malfunctions and repair the 2003 - 5000 & 6000 BTU Air Conditioners.

The objectives of this Job Aid are to:

- Understand and follow proper safety precautions.
- Successfully troubleshoot and diagnose malfunctions.
- Successfully perform necessary repairs.
- Successfully return the air conditioner to its proper operational status.

WHIRLPOOL CORPORATION assumes no responsibility for any repairs made on our products by anyone other than Authorized Service Technicians.

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— NOTES —

GENERAL SAFETY FIRST

Your safety and the safety of others is very important.

We have provided many important safety messages in this Job Aid and on the appliance. Always read and obey all safety messages.



This is the safety alert symbol.

This symbol alerts you to hazards that can kill or hurt you and others.

All safety messages will follow the safety alert symbol and either the word "DANGER" or "WARNING." These words mean:

! DANGER

You can be killed or seriously injured if you don't immediately follow instructions.

! WARNING

You can be killed or seriously injured if you don't follow instructions.

All safety messages will tell you what the potential hazard is, tell you how to reduce the chance of injury, and tell you what can happen if the instructions are not followed.

! WARNING



Electrical Shock Hazard

Disconnect power before servicing.
Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

! WARNING



Electrical Shock Hazard

Plug into a grounded 3-prong outlet.
Do not remove ground prong.

Do not use an adapter.

Do not use an extension cord.

Failure to follow these instructions can result in death, fire, or electrical shock.

! WARNING



Electrical Shock Hazard

Connect green ground wire to ground screw.

Failure to do so can result in death or electrical shock.

! WARNING

Excessive Weight Hazard

Use two or more people to move and install air conditioner.

Failure to do so can result in back or other injury.

IMPORTANT

Electrostatic Discharge (ESD) Sensitive Electronics

ESD problems are present everywhere. ESD may damage or weaken the electronic control assembly. The new control assembly may appear to work well after repair is finished, but failure may occur at a later date due to ESD stress.

- Use an antistatic wrist strap. Connect the wrist strap to the green ground connection point, or to an unpainted metal surface in the appliance.

- OR -

- Touch your finger repeatedly to a green ground connection point, or to an unpainted metal surface in the appliance.
- Before removing the part from its package, touch the antistatic bag to a green ground connection point, or to an unpainted metal surface in the appliance.
- Avoid touching electronic parts, or terminal contacts. Handle the electronic control assembly by the edges only.
- When repackaging the failed electronic control assembly in an antistatic bag, observe the previous instructions.

WHIRLPOOL MODEL & SERIAL NUMBER DESIGNATIONS

MODEL NUMBER

MODEL NUMBER	A	C	Q	05	8	M	M	0
PRODUCT GROUP A = AIR CONDITIONER								
PRODUCT IDENTIFICATION C = WARRANTY D = DEHUMIDIFIER O = ROOM A/C CABINETS								
MODEL TYPE D = VALUE E = HEAT & COOL M = VALUE SERIES Q = DESIGNER WITH ELECTRONIC CONTROLS S = SLIDING WINDOW U = THROUGH-THE-WALL								
NOMINAL CAPACITY 05 - 5,000 BTU/HR 07 - 7,000 BTU/HR 08 - 8,000 BTU/HR 10 - 10,000 BTU/HR 12 - 12,000 BTU/HR 15 - 15,000 BTU/HR 18 - 18,000 BTU/HR 21 - 21,000 BTU/HR 24 - 24,000 BTU/HR								
ELECTRICAL CODE 2 = 115 VOLT STANDARD EER 4 = 230 VOLT STANDARD EER 8 = 115 VOLT ENERGY STAR EER 9 = 230 VOLT ENERGY STAR EER								
FEATURE CODE M = "M" MODEL								
YEAR OF INTRODUCTION L = 2002, M = 2003								
ENGINEERING CHANGE 0, 1, 2, ETC.								

SERIAL NUMBER

SERIAL NUMBER	QM	M	01	01527
MANUFACTURING RESPONSIBILITY				
YEAR OF PRODUCTION M = 2002, P = 2003				
WEEK OF PRODUCTION 1ST WEEK				
PRODUCT SEQUENCE NUMBER				

SPECIFICATIONS

Model Number	ACD052MM	ACQ058MM	ACQ062MM	ACM052MM & ACM062MM
Ratings				
BTU - Cool	5000	5000	6000	5000 (052)/6000 (062)
Energy Efficiency Rating #	9.7	10.7	9.7	9.7
Air Features				
Air Flow on Turbo (CFM)	180	190	180	180
Air Flow on Medium (CFM)	N/A	170	160	160
Air Flow on Low (CFM)	140	150	140	140
Features				
Cooling Speed Selections	2	3	3	3
Timer (On/Off)	No	Yes	Yes	No
Power Saver	No	Yes	Yes	No
Remote	No	Yes	Yes	No
Electrical				
Volts	115	115	115	115
Frequency (Hz)	60	60	60	60
Amps (Cooling)	4.8	4.7	5.7	5.7
Fuse Size (Amps)	15	15	15	15
Power Cord Length (ft) - Cabinet to Wall	6 ft.	6 ft.	6 ft.	6 ft.
Power Cord Length (m) - Cabinet to Wall	1.8 m.	1.8 m.	1.8 m.	1.8 m.
Exterior				
Fan Control	Rotary	Electronic	Electronic	Rotary
Thermostat Control	Rotary	Electronic	Electronic	Rotary
Miscellaneous				
Weight (lbs./kg)	52.5/24	54/24.5	54/24.5	54/24.5
Filter	Washable, L/R Access	Washable, L/R Access	Washable, L/R Access	Washable, L/R Access
Window Opening (Inches)	25 - 38 W x 16 H (min)	25 - 38 W x 16 H (min)	25 - 38 W x 16 H (min)	25 - 38 W x 16 H (min)
Warranty				
Full	1 Year	1 Year	1 Year	1 Year
Full Sealed System	1 Year	5 Years	5 Years	5 Years

WHIRLPOOL AIR CONDITIONER WARRANTY

Model ACD052MM

LENGTH OF WARRANTY	MANUFACTURER WILL PAY FOR
FULL ONE-YEAR WARRANTY FROM DATE OF PURCHASE	Replacement parts and repair labor to correct defects in materials or workmanship. Service must be provided by an authorized service company.
WE WILL NOT PAY FOR	
<p>A. Repairs when room air conditioner is used for other than household use.</p> <p>B. Any shipping or handling costs to deliver your room air conditioner to a designated service center.</p> <p>C. Damage to your air conditioner caused by accident, misuse, fire, flood, acts of God, or use of products not mentioned in the Use and Care Guide.</p> <p>D. Repairs to parts or systems resulting from unauthorized modifications made to the appliance.</p> <p>E. Replacement parts or repair labor costs for units operated outside the United States.</p>	

MANUFACTURER SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES. Some states do not allow the exclusion or limitation of incidental or consequential damages, so this exclusion or limitation may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Outside the United States a different warranty may apply. For details, please contact your authorized dealer.

If you need service, first see the “Troubleshooting” section of the Use and Care Guide. After checking “Troubleshooting,” additional help can be found by checking the “Assistance or Service” section, or by calling the manufacturer’s Customer Interaction Center, **1-800-253-1301** (toll-free), from anywhere in the U.S.A.

Room air conditioner, along with proof of purchase, should be delivered to your nearest designated service company.

WHIRLPOOL AIR CONDITIONER WARRANTY

Models ACM052MM, ACM062MM, ACQ058MM, ACQ062MM

LENGTH OF WARRANTY	MANUFACTURER WILL PAY FOR						
FULL ONE-YEAR WARRANTY FROM DATE OF PURCHASE	Replacement parts and repair labor to correct defects in materials or workmanship. Service must be provided by an authorized service company.						
FULL FIVE-YEAR WARRANTY FROM DATE OF PURCHASE	Replacement parts and repair labor to correct defects in materials or workmanship in the sealed refrigeration system. These parts are: <table style="margin-left: 40px; border: none;"> <tr> <td style="padding-right: 20px;">1. Compressor</td> <td>4. Drier-Strainer</td> </tr> <tr> <td>2. Evaporator</td> <td>5. Connecting Tubing</td> </tr> <tr> <td>3. Condenser</td> <td></td> </tr> </table> Service must be provided by an authorized service company.	1. Compressor	4. Drier-Strainer	2. Evaporator	5. Connecting Tubing	3. Condenser	
1. Compressor	4. Drier-Strainer						
2. Evaporator	5. Connecting Tubing						
3. Condenser							
WE WILL NOT PAY FOR							
<p>A. Service calls to:</p> <ol style="list-style-type: none"> 1. Correct the installation of your air conditioner. 2. Instruct you how to use your air conditioner. 3. Replace house fuses or correct house wiring. 4. Clean or replace the air filter. <p>B. Pickup and delivery. Your air conditioner is designed to be repaired in the home.</p> <p>C. Damage to your air conditioner caused by accident, misuse, fire, flood, acts of God, or use of products not mentioned in the Use and Care Guide.</p> <p>D. The removal and reinstallation of your air conditioner if it is installed in an overhead or other inaccessible location or is not installed in accordance with published installation instructions.</p> <p>E. Repairs to parts or systems resulting from unauthorized modifications made to the appliance.</p>							

WHIRLPOOL CORPORATION SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES. Some states do not allow the exclusion or limitation of incidental or consequential damages, so this exclusion or limitation may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Outside the United States a different warranty may apply. For details, please contact your authorized dealer.

If you need service, first see the "Troubleshooting" section of the Use and Care Guide. After checking "Troubleshooting," additional help can be found by checking the "Assistance or Service" section, or by calling the Whirlpool Customer Interaction Center, **1-800-253-1301** (toll-free), from anywhere in the U.S.A.

— NOTES —

INSTALLATION INFORMATION

⚠️ WARNING

Excessive Weight Hazard

Use two or more people to move and install air conditioner.

Failure to do so can result in back or other injury.

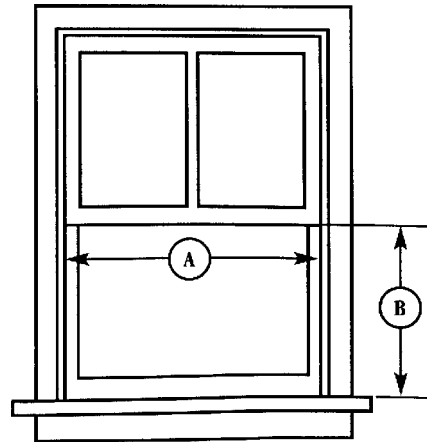
IMPORTANT: Observe all governing codes and ordinances.

Check the location where the air conditioner will be installed. Proper installation is your responsibility. Make sure you have everything necessary for correct installation.

The location should provide:

- A grounded electrical outlet within 4 ft. (122 cm) of the window. Do not use an extension cord.
- Free movement of air to rooms to be cooled.
- A large enough opening for the air conditioner. Installation parts are supplied for double-hung windows (some models) up to 38 in. (96.5 cm) wide.
- Adequate wall support for the weight of the air conditioner. The air conditioner weighs between 56 lbs. (25 kg) and 80 lbs. (36 kg).

Do not install the air conditioner in an area where the front panel will be exposed to heat sources that will raise the panel surface temperature above 120°F (50°C).



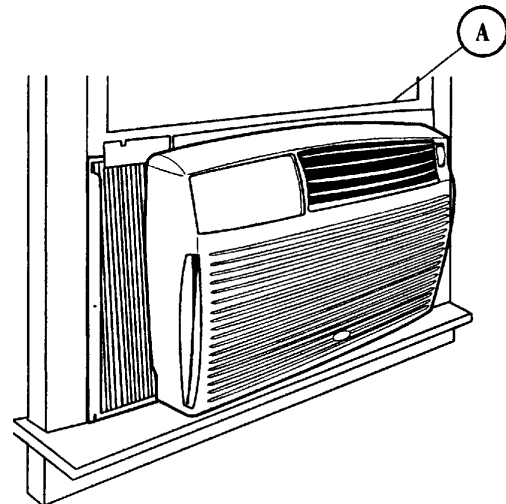
Air Conditioner Size	A	B
5000 to 6000 BTUs	25" to 38" (63.5 cm to 96.5 cm)	16" (40.6 cm)

Handle the air conditioner with care. Watch out for the sharp metal fins on the rear coils.

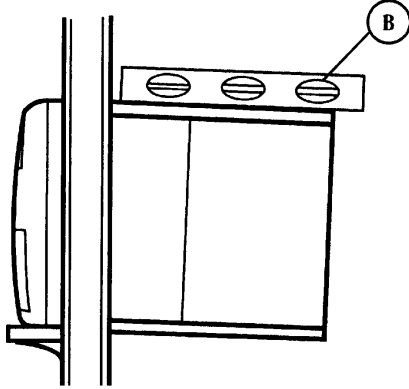
Be sure the air conditioner does not fall out of the opening during installation or removal.

The air conditioner should be placed no more than 4 ft. (122 cm) from a grounded outlet.

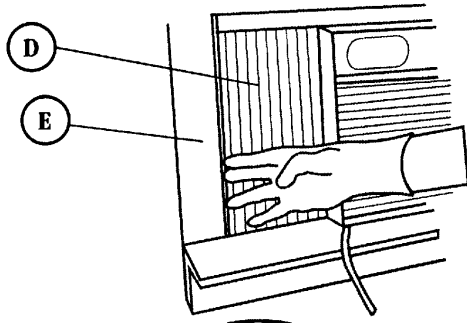
1. Center the air conditioner in the window. Check that the lower rail of the air conditioner is behind and against the back side of the window seal, then lower the window sash (A) to hold the cabinet in place. Do not block the louvers in the front panel, or block the openings on the outside of the air conditioner.



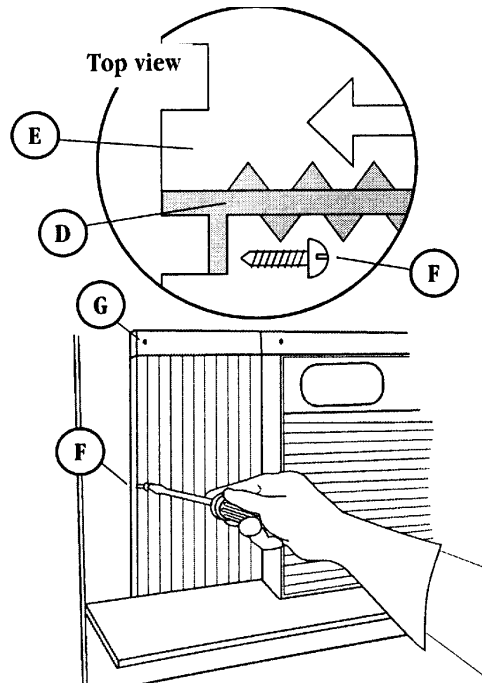
2. Make sure that the back of the air conditioner cabinet is tilted down so that water will run to the outside. The tilt should be about 1/2 bubble (B) on a spirit level. If the cabinet is not properly positioned, reposition or shim it to provide the proper tilt.



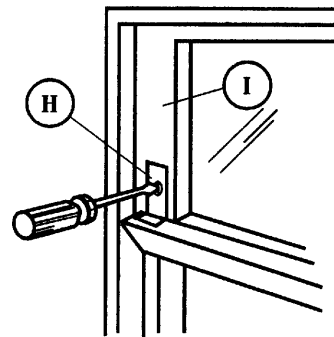
3. Pull the left curtain (D) out and fit it into the window channel (E).
4. Install the right curtain in the same manner as the left curtain. NOTE: If the air conditioner does not have side curtains, fill spaces with a suitable material.



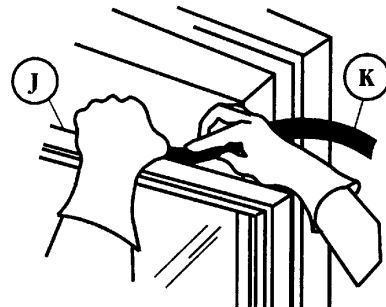
5. Secure the left curtain with one of the round-head screws (F) to the window channel. If desired, use alternate hole (G) at the top of the curtain to secure it to the window channel (see the illustration at the top of the next column).
6. Fasten the right curtain to the window channel in the same manner as the left curtain.



7. Mount the window-lock bracket (H) on top of lower window and against upper window sash (I). Use a 3/32" drill bit to drill a starter hole through the hole in the bracket.



8. Insert foam seal (K) behind the top of the lower window sash (J), and against the glass of the upper window.

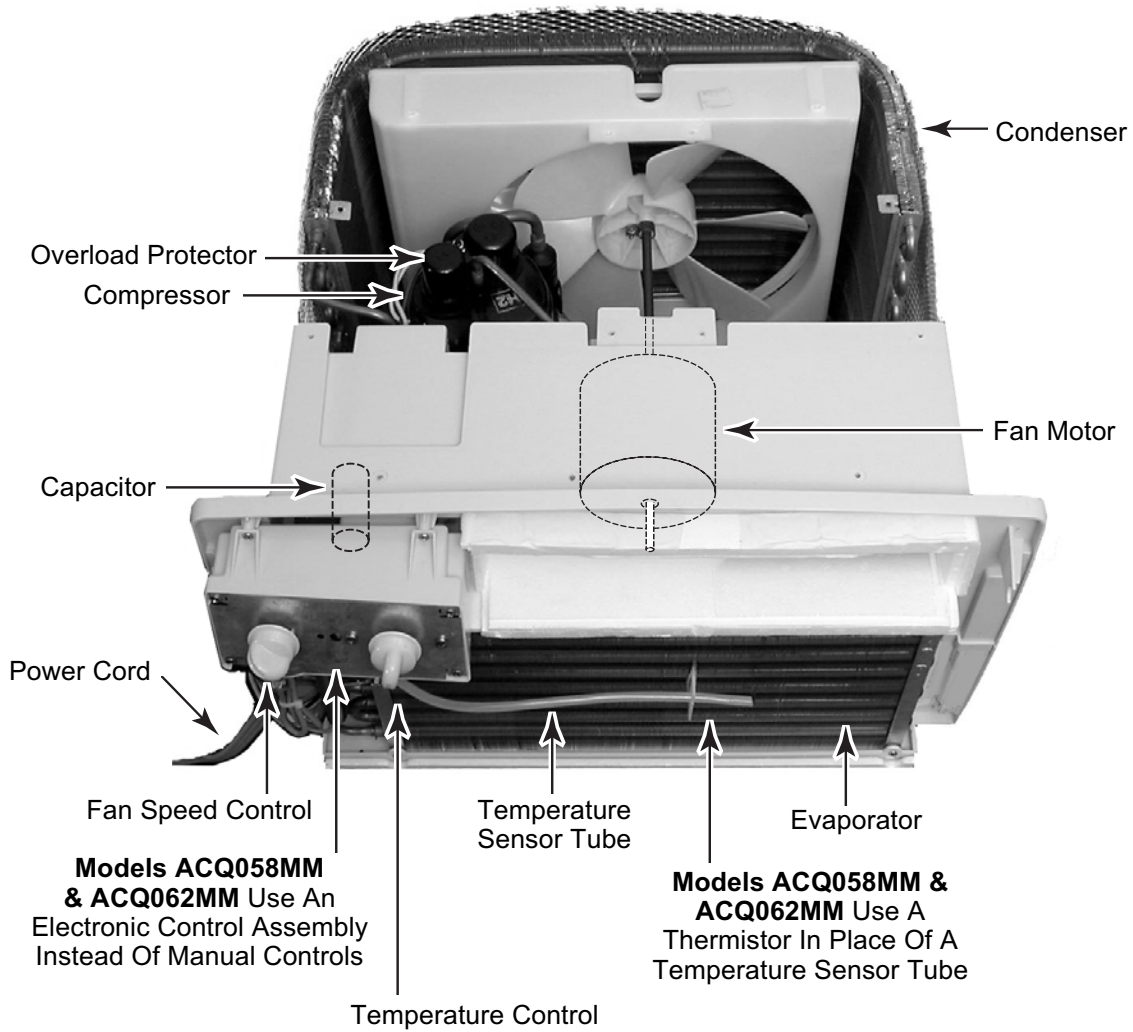


9. Plug the power cord into an appropriate AC outlet.

COMPONENT ACCESS

This section instructs you on how to service each component inside the air conditioner. The components and their locations are shown below.

COMPONENT LOCATIONS



REMOVING THE SIDE CURTAINS, FRONT GRILLE, TOP COVER, & SCREEN

⚠ WARNING



Electrical Shock Hazard
Disconnect power before servicing.
Replace all parts and panels before operating.
Failure to do so can result in death or electrical shock.

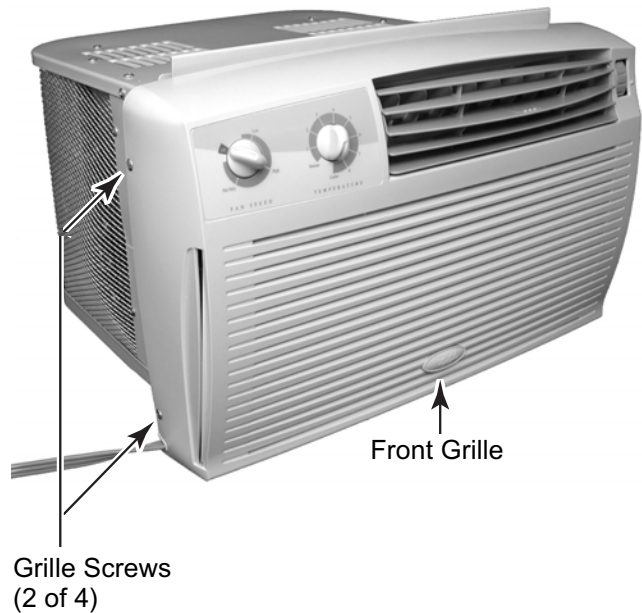
1. Unplug air conditioner or disconnect power.
2. Remove the air conditioner from the window.

NOTE: Model ACD052MM is shown.

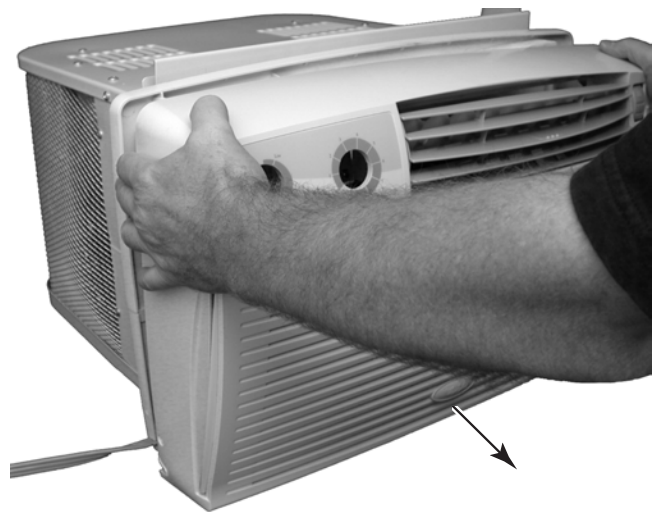
3. **To remove the left and right side curtains:**
 - a) Remove the three screws from each of the side curtains.
 - b) Slide the curtains out of the top and bottom guides and remove them.



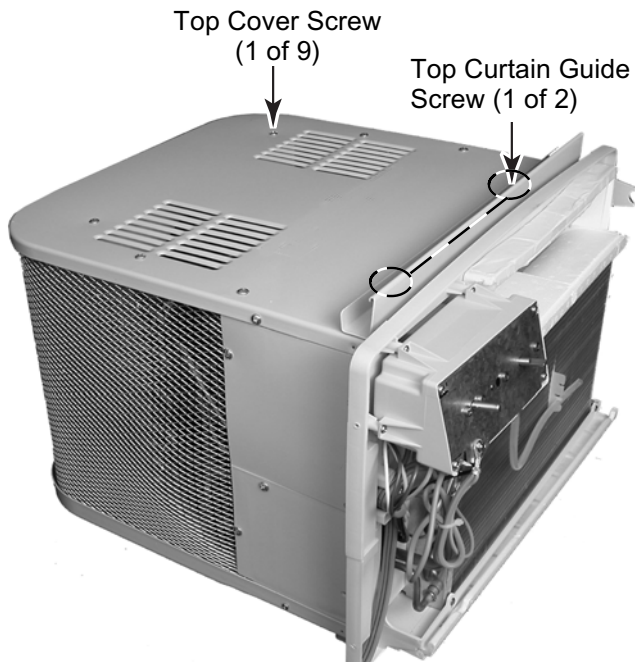
4. **To remove the front grille:**
 - a) Remove the four screws (two on each side) from the grille.



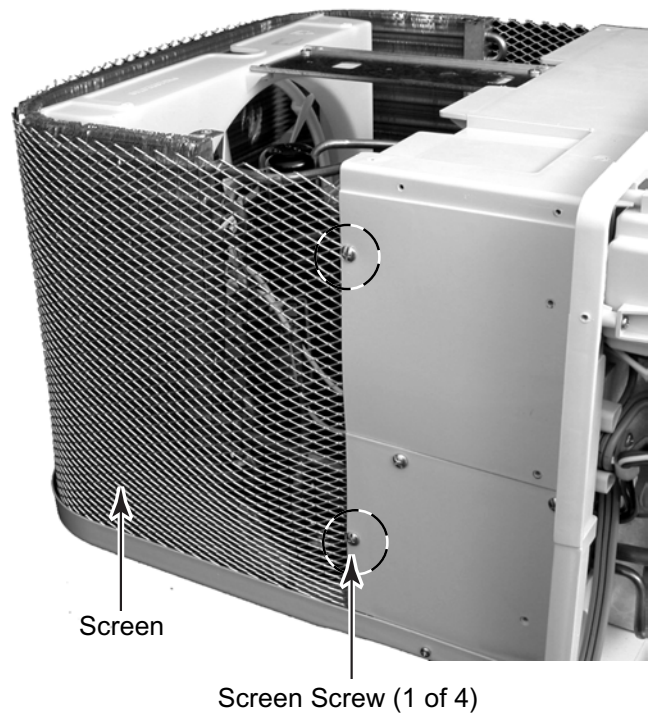
- b) Pull the grille forward and remove it.



5. **To remove the top cover**, remove the nine screws from the cover, and the two screws from the top curtain guide, and remove the cover and the guide.




6. **To remove the screen:**
- a) Remove the two screws from each side of the screen.
 - b) Pull the ends of the screen from the slots in the side holders.
 - c) Lift the screen from the unit.



REMOVING THE FAN SPEED & TEMPERATURE CONTROLS MODELS ACD052MM, ACM052MM, & ACM062MM

⚠️ WARNING



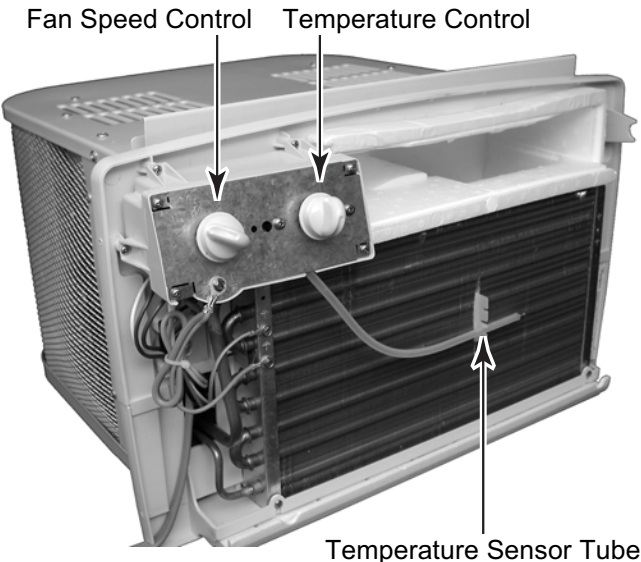
Electrical Shock Hazard

Disconnect power before servicing.

Replace all parts and panels before operating.

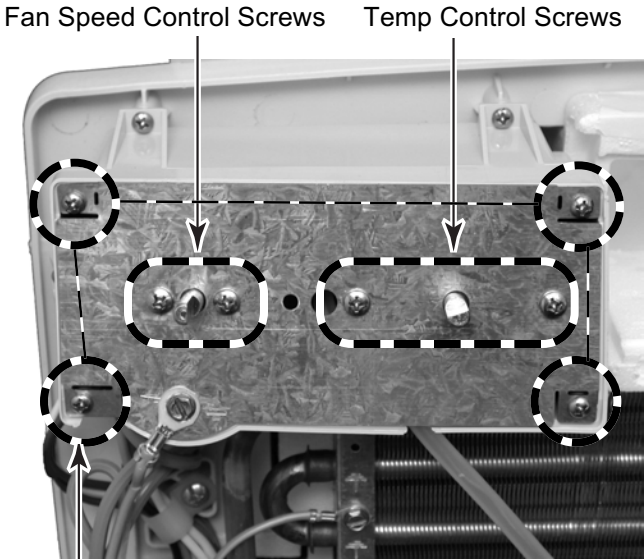
Failure to do so can result in death or electrical shock.

1. Unplug air conditioner or disconnect power.
2. Remove the air conditioner from the window.
3. Remove the side curtains and the front grille (see page 3-2 for the procedures).
4. Pull the knobs off the fan speed control and temperature control shafts.

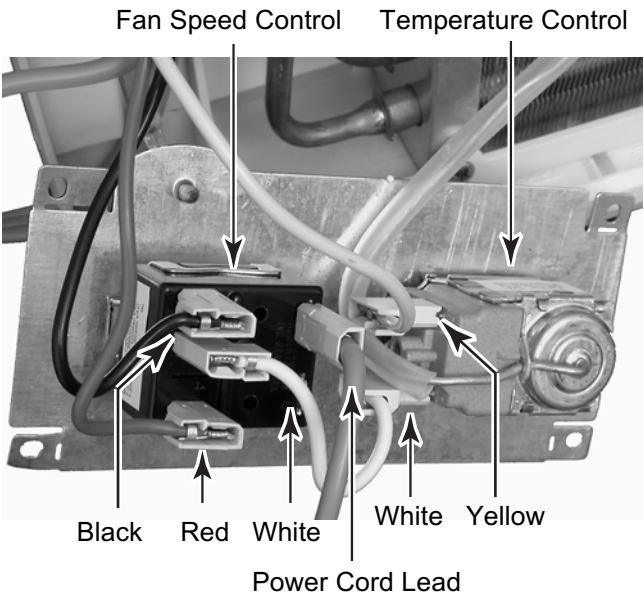


5. Remove the four screws from the control mounting plate and position it so that you can access the controls and wiring (see the photo at the top of the next column).

6. Depending on which control you are servicing, remove the two screws from the fan speed control or the temperature control.



7. Disconnect the wire connectors from the control terminals and remove the control from the mounting plate.
8. If you are removing the temperature control, unclip the temperature sensor tube from the holder on the evaporator.



Model ACD052MM Shown Above

REMOVING THE ELECTRONIC CONTROL ASSEMBLY & THERMISTOR—MODELS ACQ058MM & ACQ062MM

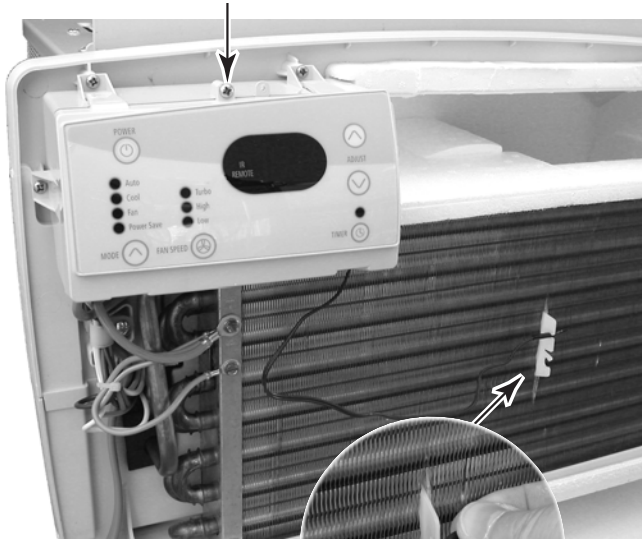
⚠️ WARNING



Electrical Shock Hazard
Disconnect power before servicing.
Replace all parts and panels before operating.
Failure to do so can result in death or electrical shock.

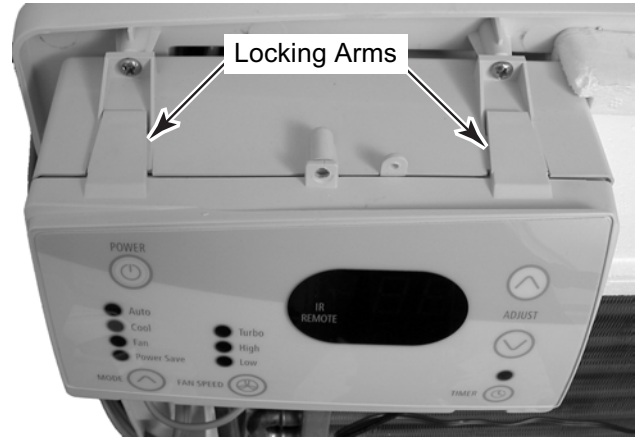
1. Unplug air conditioner or disconnect power.
2. Remove the air conditioner from the window.
3. Remove the side curtains and the front grille (see page 3-2 for the procedures).
4. **Remove the thermistor** by unclipping it from the holder and disconnecting it from the control board (see step 7).
5. Remove the screw from the electronic control box assembly.

Electronic Control Box Assembly Screw



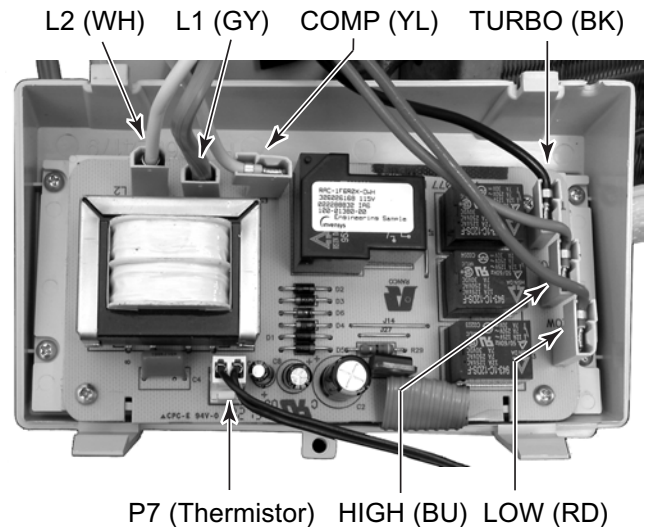
Unclip Thermistor

6. Lift the two locking arms, and pull the assembly forward.



7. Disconnect the wires from the electronic control board terminals as follows:

- White from L2
- Gray from L1
- Yellow from COMP
- Black from TURBO
- Blue from HIGH
- Red from LOW
- To Thermistor connector from P7



REMOVING THE POWER CORD AND CAPACITOR MODELS ACM052MM, ACM062MM, & ACD052MM

!WARNING



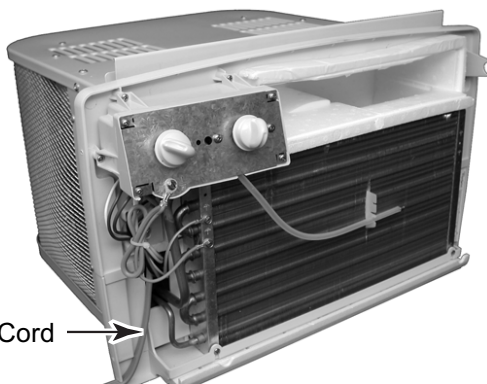
Electrical Shock Hazard

Disconnect power before servicing.

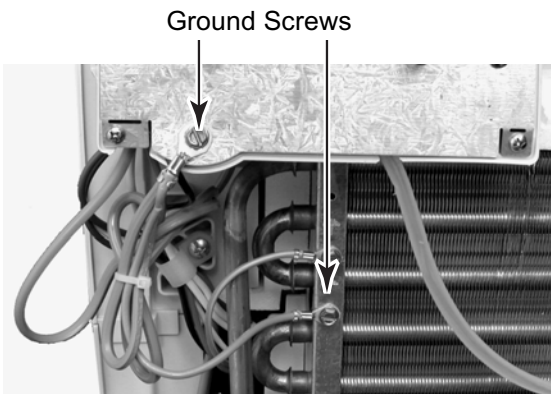
Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

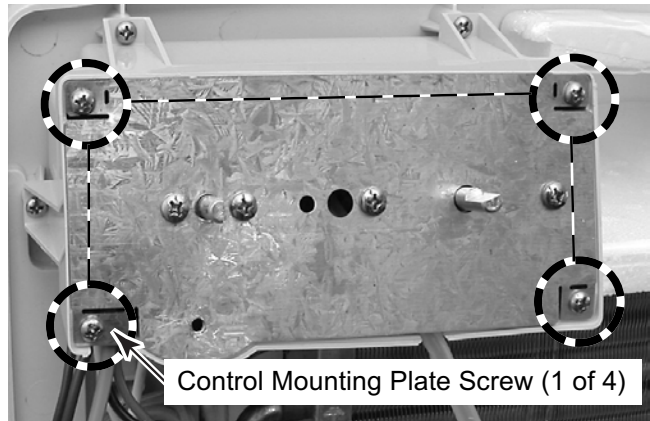
1. Unplug air conditioner or disconnect power.
2. Remove the air conditioner from the window.
3. Remove the side curtains and the front grille (see page 3-2 for the procedures).



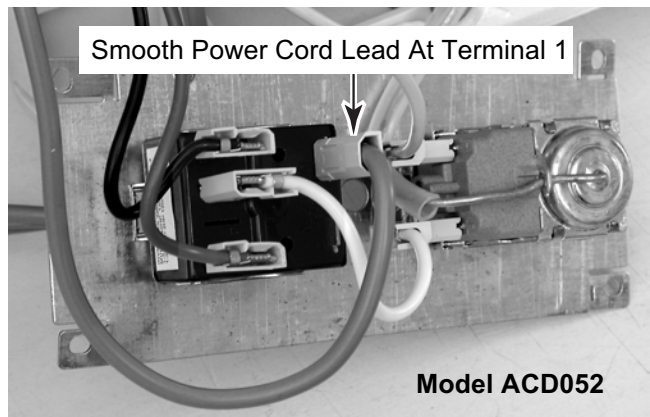
4. Remove the power cord green ground wire screws from the control mounting plate and the evaporator frame.



5. Remove the four screws from the control mounting plate and position it so that you can access the wiring.

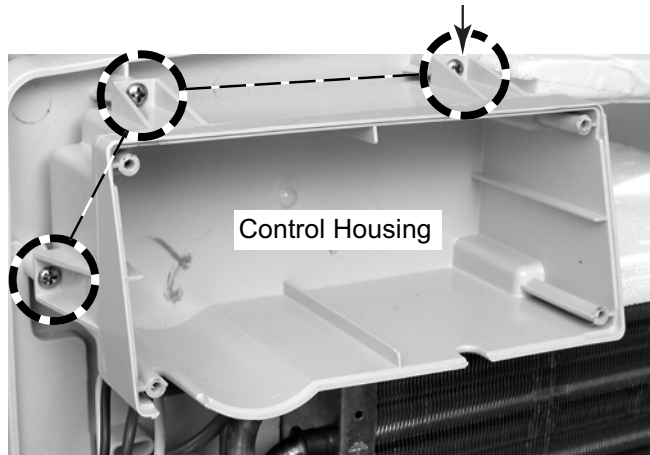


6. Disconnect the smooth power cord lead connector from fan speed control terminal 1.

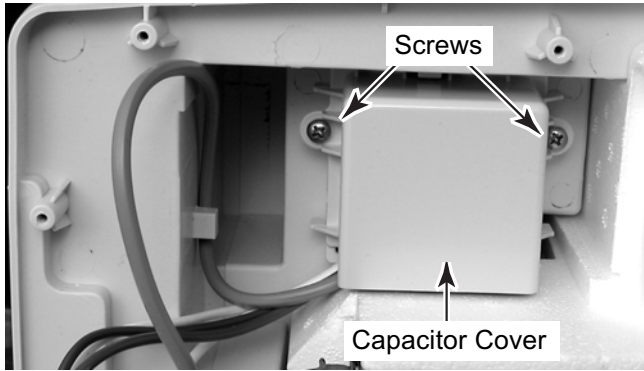


7. Remove the three screws from the control housing and remove the housing.

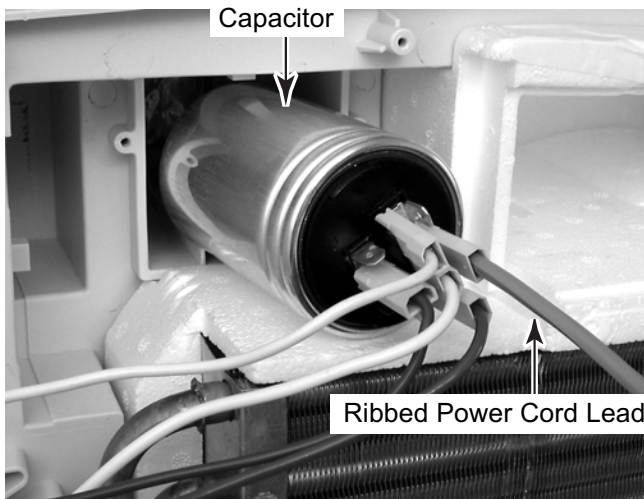
Screw 1 of 3)



8. Remove the two screws from the capacitor cover, pull the cover forward, and remove it.



9. To remove the power cord, disconnect the ribbed lead from the capacitor terminal.
10. To remove the capacitor:
 - a) Use a 20,000 Ω , 2-watt resistor and discharge the capacitor. Touch the resistor leads to terminals C & H and C & F.
 - b) Disconnect the wires from the terminals, and remove the capacitor.



⚠ WARNING

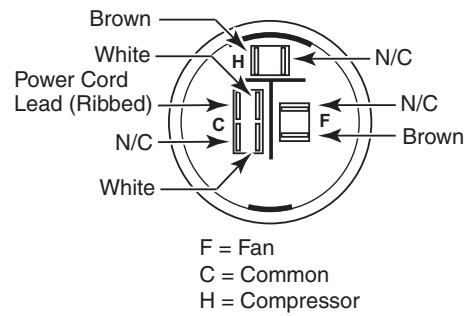
Electrical Shock Hazard

Connect green ground wires to ground screws.

Failure to do so can result in death or electrical shock.

Perform the following steps to reinstall the capacitor and power cord:

1. Reconnect the wires to the capacitor terminals (see below) and reinstall the capacitor.



2. Reinstall the capacitor cover with its two screws.
3. Mount the control housing with its three screws.
4. Connect the smooth power cord lead to fan speed control terminal 1.
5. Mount the control mounting plate to the control housing with its four screws.
6. Connect the green ground wires to the control mounting plate and the evaporator frame with the two hex-head screws.

REMOVING THE POWER CORD AND CAPACITOR MODELS ACQ058MM & ACQ062MM

⚠️ WARNING



Electrical Shock Hazard
Disconnect power before servicing.
Replace all parts and panels before operating.
Failure to do so can result in death or electrical shock.

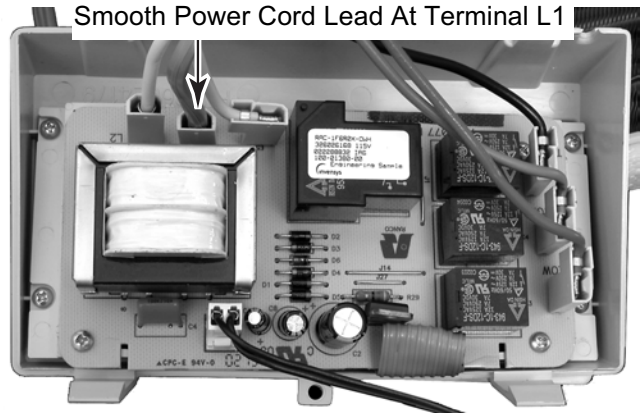
1. Unplug air conditioner or disconnect power.
2. Remove the air conditioner from the window.
3. Remove the side curtains and the front grille (see page 3-2 for the procedures).
4. Remove the two power cord green ground wire screws from the evaporator frame.



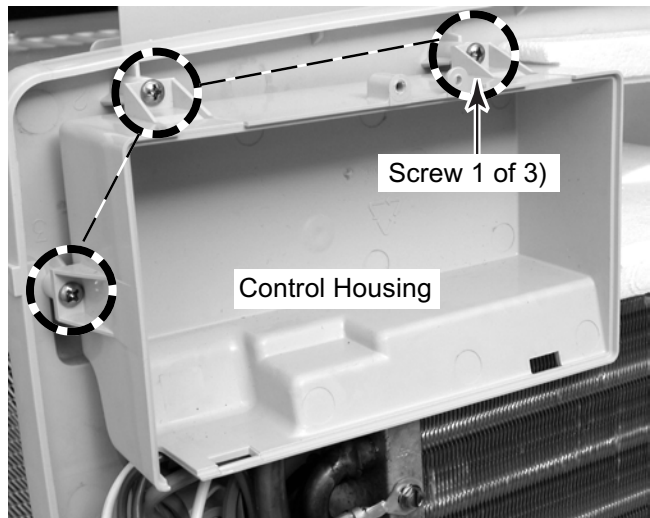
Power Cord Ground Wire Screws

5. Remove the electronic control assembly from the housing (see steps 5 and 6 on page 3-5 for the procedure).

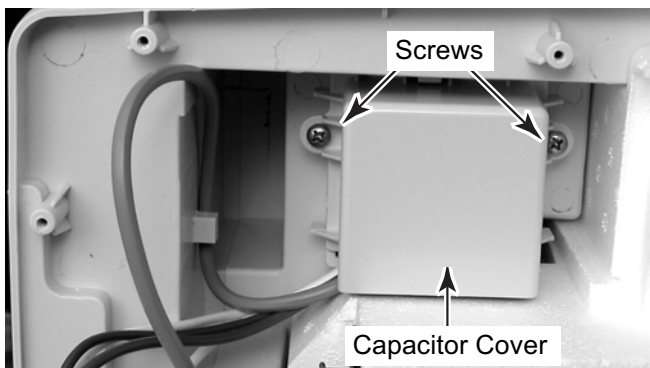
6. Disconnect the smooth power cord lead connector from electronic control board terminal L1.



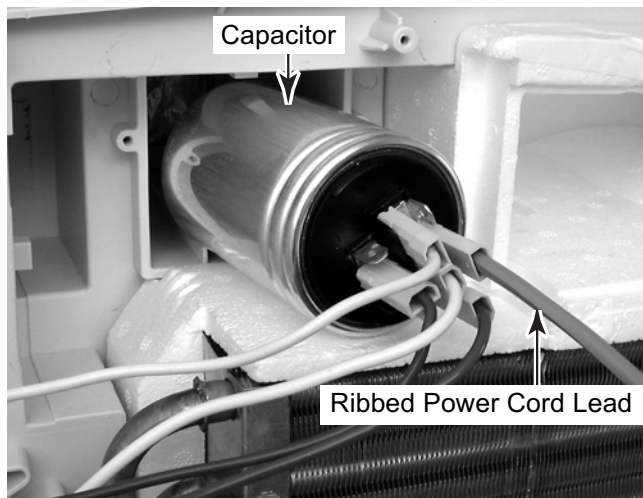
7. Remove the three screws from the control housing and remove the housing.



8. Remove the two screws from the capacitor cover, pull the cover forward, and remove it.



9. **To remove the power cord**, disconnect the ribbed lead from the capacitor terminal.
10. **To remove the capacitor:**
 - a) **Use a 20,000 Ω , 2-watt resistor and discharge the capacitor. Touch the resistor leads to terminals C & H and C & F.**
 - b) Disconnect the wires from the terminals, and remove the capacitor.



⚠ WARNING

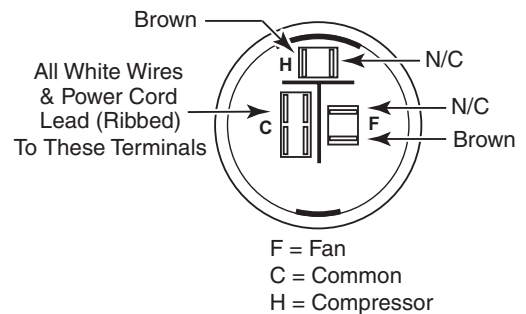
Electrical Shock Hazard

Connect green ground wires to ground screws.

Failure to do so can result in death or electrical shock.

Perform the following steps to reinstall the capacitor and power cord:

1. Reconnect the wires to the capacitor terminals (see below) and reinstall the capacitor.



2. Reinstall the capacitor cover with its two screws.
3. Mount the control housing with its three screws.
4. Connect the smooth power cord lead to terminal L1 on the electronic control board.
5. Mount the electronic control assembly to the control housing with its mounting screw.
6. Connect the two green ground wires to the evaporator frame with the hex-head screws.

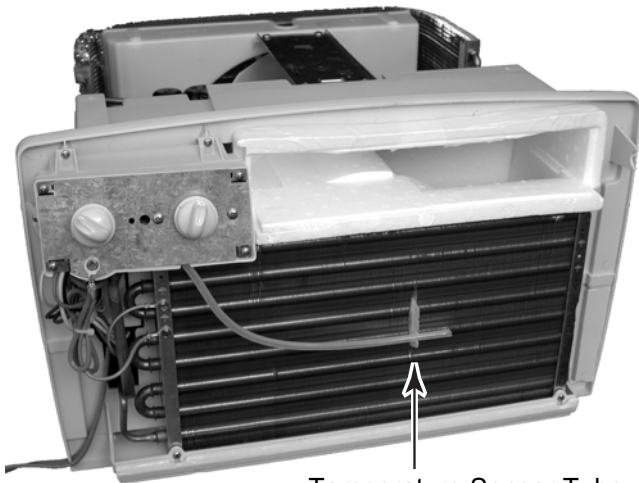
REMOVING THE FAN MOTOR

! WARNING



Electrical Shock Hazard
Disconnect power before servicing.
Replace all parts and panels before operating.
Failure to do so can result in death or electrical shock.

1. Unplug air conditioner or disconnect power.
2. Remove the air conditioner from the window.
3. Remove the side curtains and the front grille (see page 3-2 for the procedures).
4. **Models ACD052MM, ACM052MM, & ACM062MM:**
 - a) Unclip the temperature sensor tube from the sensor holder.



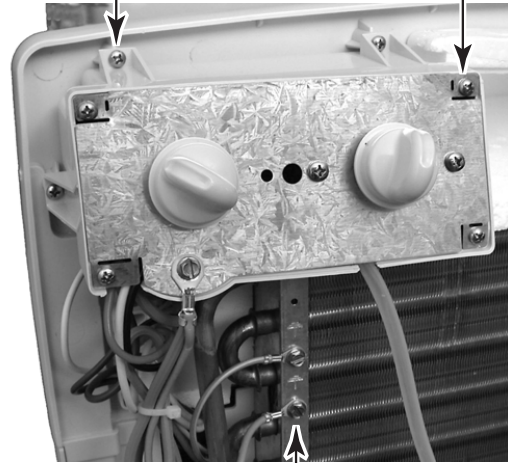
Temperature Sensor Tube

- b) Remove the lower screw from the two green ground wires that are mounted to the evaporator (see the photo at the top of the next column).
- c) Remove the four screws from the control mounting plate and allow the assembly to hang off to the side.

- d) Remove the three screws from the control housing and remove the housing.

Control Housing Screw (1 of 3)

Control Mtg. Plate Screw (1 of 4)



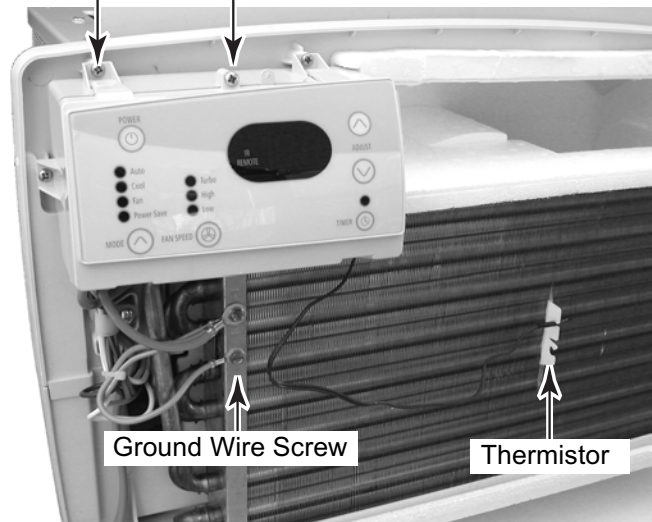
Ground Wire Screw

5. **Models ACQ058MM & ACQ062MM:**

- a) Unclip the thermistor from its holder.
- b) Remove the lower screw from the two green ground wires that are mounted to the evaporator.
- c) Remove the electronic control box assembly mounting screw and allow the assembly to hang off to the side.
- d) Remove the three screws from the control housing and remove the housing.

Control Housing Screw (1 of 3)

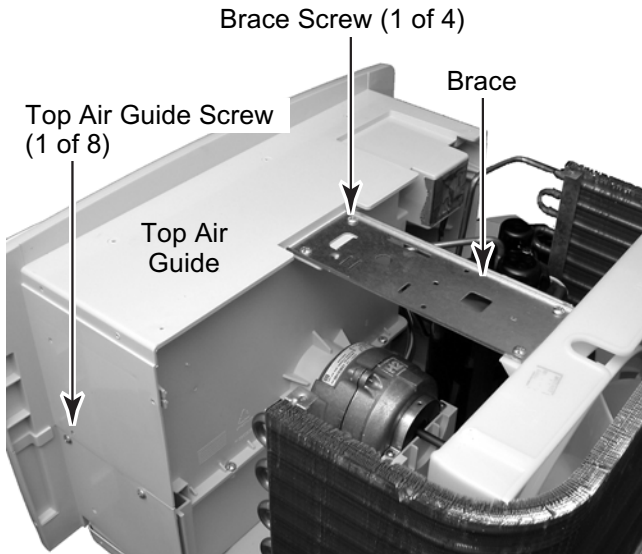
Electronic Control Box Assembly Screw



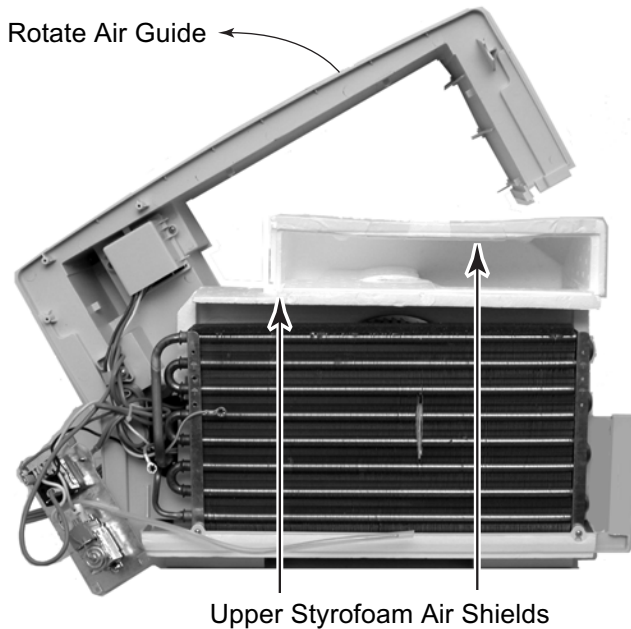
Ground Wire Screw

Thermistor

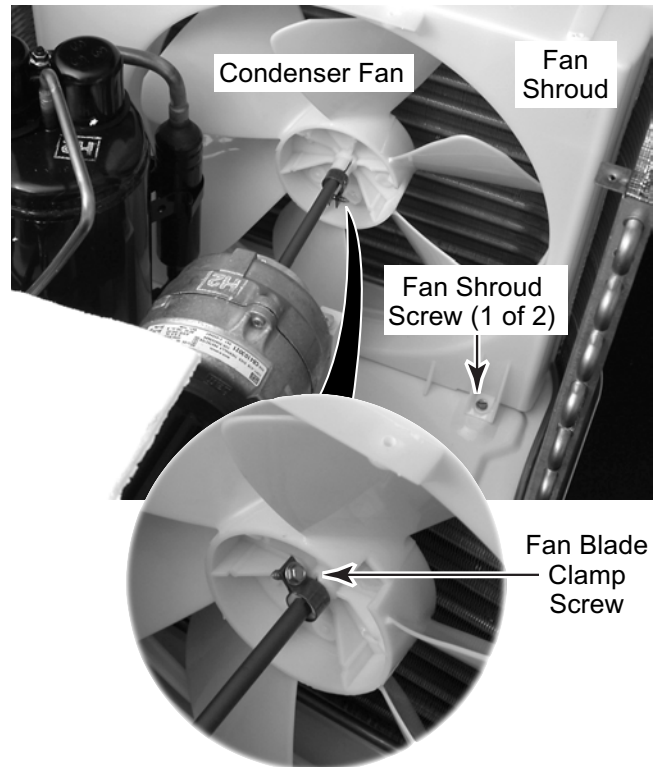
6. Remove the four screws from the brace and remove the brace.
7. Remove the eight screws from the top air guide.



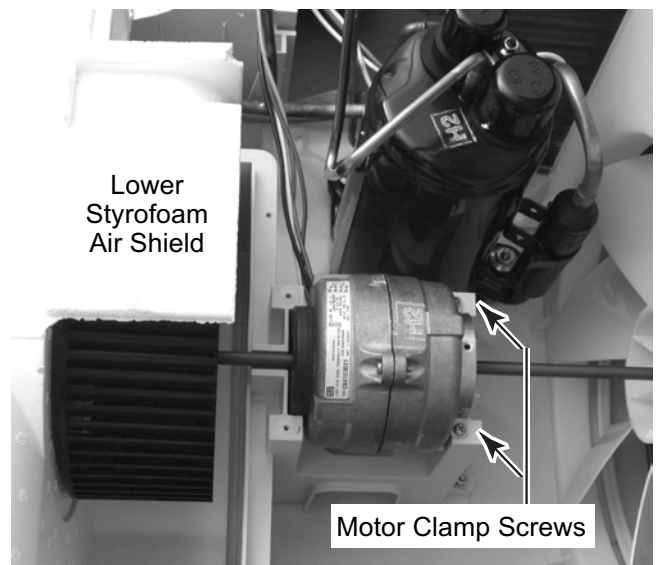
8. Lift the top air guide off the upper styrofoam air shields and rotate the guide to the left, (facing front). Lay the guide on the work surface out of the way.
9. Carefully lift the two upper styrofoam air shields off the unit.



10. Loosen the clamp screw on the condenser fan blade and slide the clamp off the fan.
11. Remove the two screws from the condenser fan shroud.

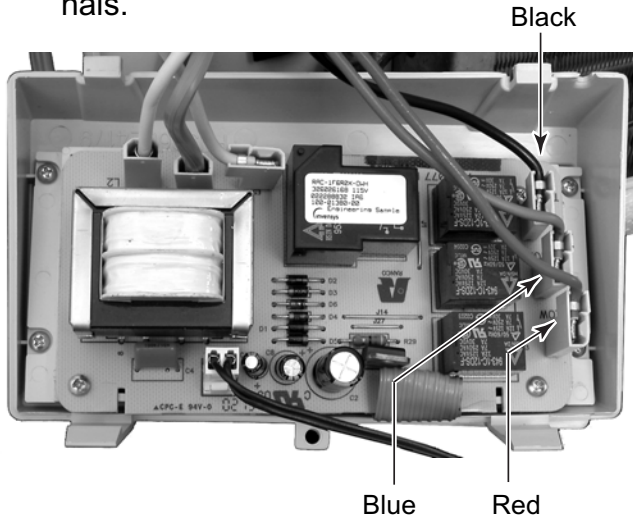


12. Remove the two fan motor clamp screws and remove the clamp.
13. Carefully lift the fan motor assembly, the condenser fan shroud, and the lower styrofoam air shield, and remove them from the unit.

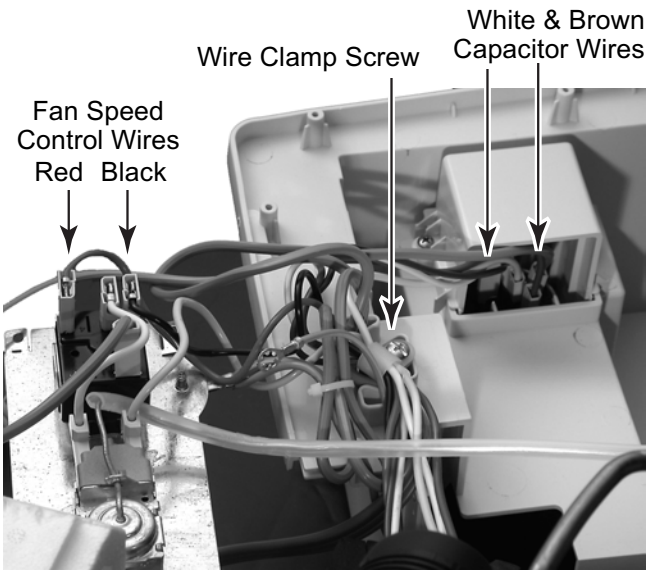


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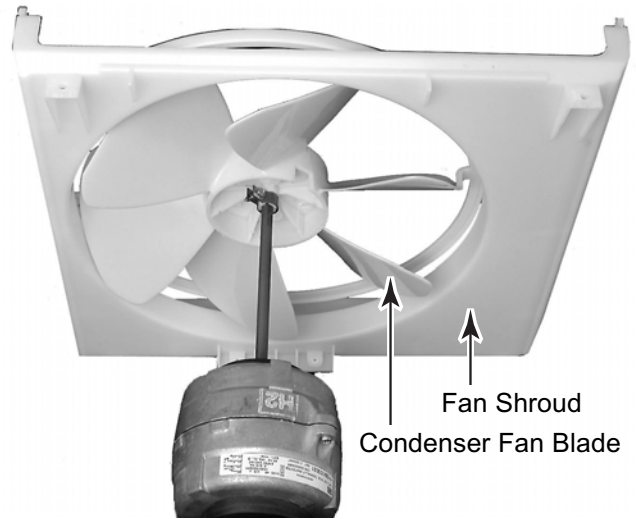
14. **Models ACQ058MM & ACQ062MM:** Disconnect the black, red, and blue wires from the electronic control board terminals.



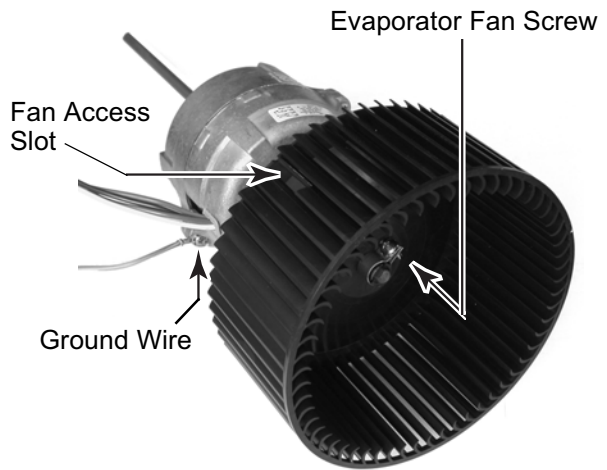
15. **Models ACD052MM, ACM052MM, & ACM062MM:** Disconnect the black, red, and blue wires from the fan speed control terminals. **NOTE:** The model ACD052MM does not use the blue wire.
16. Disconnect the white and brown wire connectors from the capacitor terminals.
17. Remove the screw from the wire clamp and remove the motor wires from the clamp.



18. Pull the condenser fan blade and fan shroud off the fan motor (see the photo at the top of the next column).



19. Loosen the evaporator fan screw. **NOTE:** Use the slot in the fan blade to access the screw.
20. Pull the evaporator fan off the motor shaft.



⚠️ WARNING



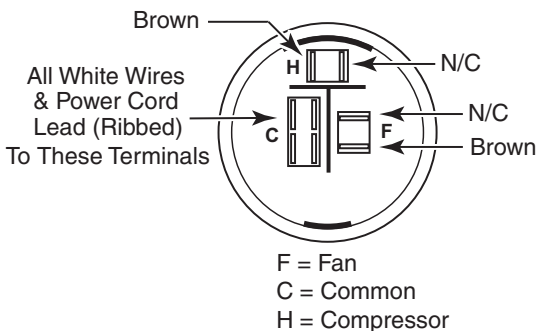
Electrical Shock Hazard

Connect green ground wires to ground screws.

Failure to do so can result in death or electrical shock.

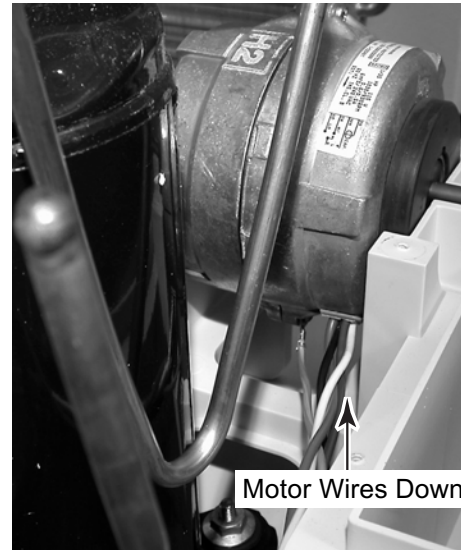
Perform the following steps to reinstall the fan motor.

1. Mount the evaporator fan to the fan motor. Keep the end of the fan approximately 1/4" from the end of the motor shaft.
2. Slide the fan shroud and the condenser fan blade and its clamp over the fan motor shaft. Mount the clamp over the fan, but do not tighten it at this time.
3. Depending on the model, reconnect the fan motor wires as follows:
 - a) **Model ACD052:** Black and red wires to the fan speed control.
 - b) **Models ACM052 & ACM062:** Red, black, and blue wires to the fan speed control.
 - c) **Models ACQ058 & ACQ062:** Red, black, and blue wires to the electronic control board.
4. Reconnect the brown and white wires to the capacitor terminals.



5. Slide the lower styrofoam shield over the evaporator fan.

6. Carefully lift the fan motor assembly, the condenser fan shroud, and the lower styrofoam air shield, and install them in the unit.
7. Rotate the fan motor so that the wires face down toward the bottom of the unit.



8. Mount the fan motor clamp over the end of the motor with its two screws.
9. Mount the condenser fan shroud with its two hex-head screws.
10. Install the two upper styrofoam air shields over the evaporator.
11. Make sure that the rubber wire block is positioned in its cutout so that there are no air leaks around it (see the photo in step 4 on page 3-16).
12. Mount the top air guide to the unit with its eight screws.
13. Mount the brace to the top air guide and the condenser fan shroud with its four screws.
14. Rotate the fans and make sure that the condenser fan blade is not rubbing on the shroud. If it does, push it back until it is clear, and then tighten the clamp screw.
15. Mount the control housing with its three screws.
16. Mount the control mounting plate/electronic control box to the housing.
17. Mount the green ground wires to the evaporator with the hex-head screw.

REMOVING THE EVAPORATOR

⚠ WARNING



Electrical Shock Hazard

Disconnect power before servicing.

Replace all parts and panels before operating.

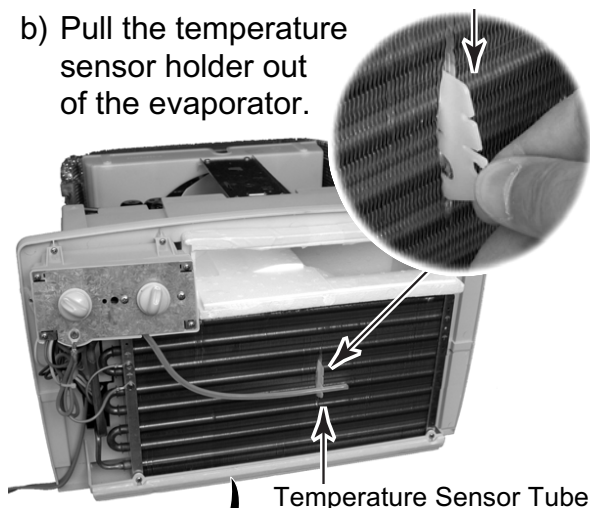
Failure to do so can result in death or electrical shock.

1. Unplug air conditioner or disconnect power.
2. Remove the air conditioner from the window.
3. Remove the side curtains and the front grille (see page 3-2 for the procedures).
4. Pull the styrofoam shield out from under the evaporator and remove it (see the photo below).
5. **Models ACM052MM, ACM062MM, & ACD052MM:**

a) Unclip the temperature sensor tube from the sensor holder.

b) Pull the temperature sensor holder out of the evaporator.

Sensor Holder

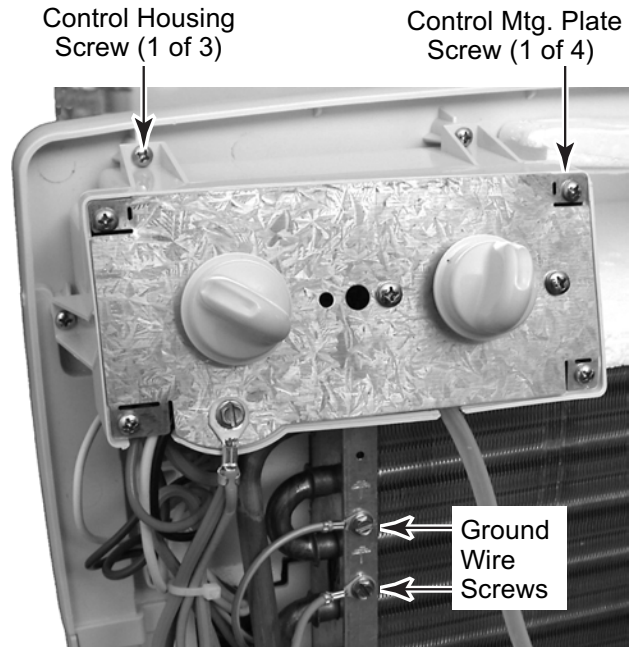


Temperature Sensor Tube



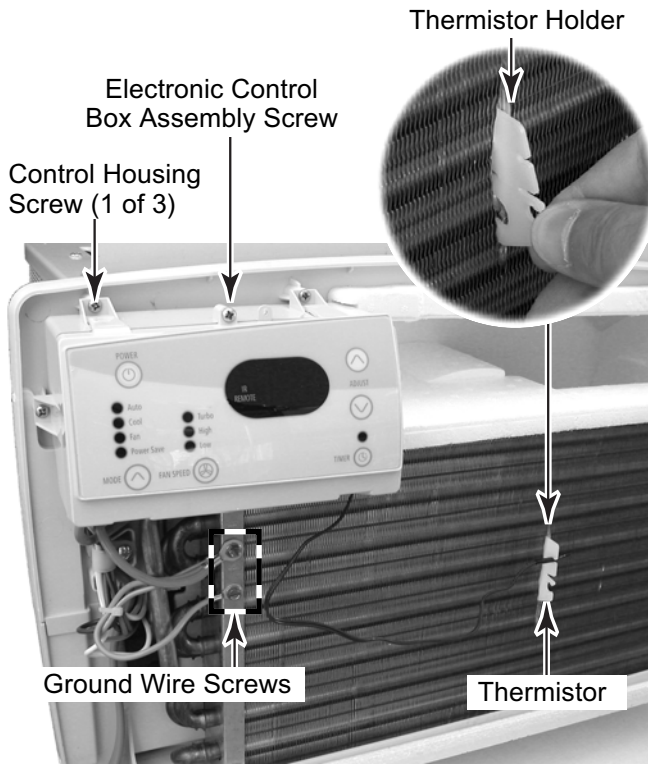
Styrofoam Shield

- c) Remove the screws from each of the two green ground wires that are mounted to the evaporator.
- d) Remove the four screws from the control mounting plate and allow the assembly to hang off to the side.
- e) Remove the three screws from the control housing and remove the housing.

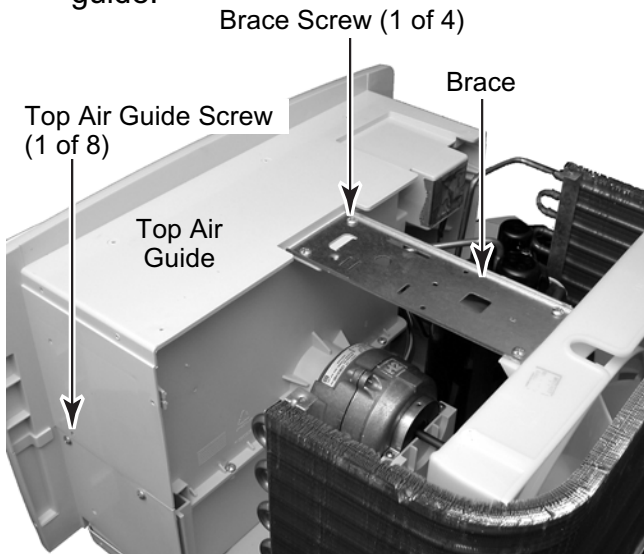


6. **Models ACQ058MM & ACQ062MM (see the photos at the top of the next page):**

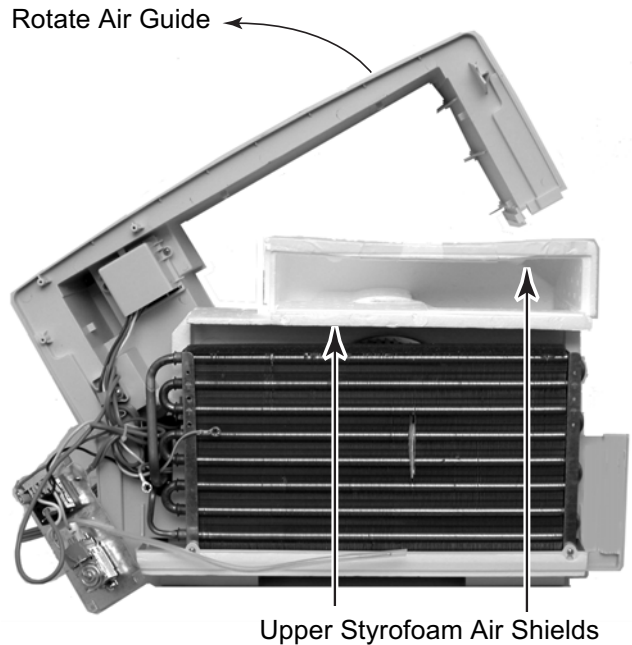
- a) Unclip the thermistor from its holder.
- b) Pull the thermistor holder out of the evaporator.
- c) Remove the screws from each of the two green ground wires that are mounted to the evaporator.
- d) Remove the electronic control box assembly mounting screw and allow the assembly to hang off to the side.
- e) Remove the three screws from the control housing and remove the housing.



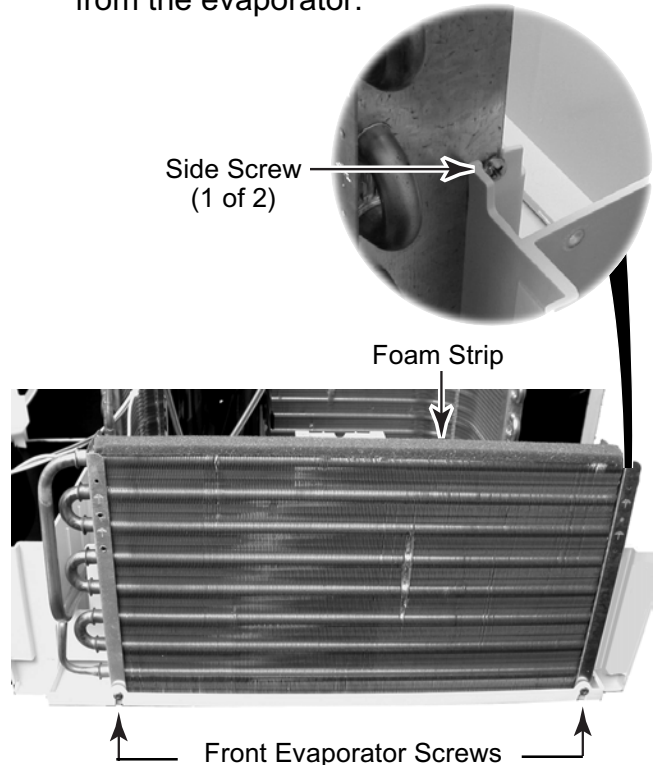
7. Remove the four screws from the brace and remove the brace.
8. Remove the eight screws from the top air guide.



9. Lift the top air guide off the upper styrofoam air shields, and rotate the guide to the left, (facing front). Lay the guide on the work surface out of the way.
10. Carefully lift the two upper styrofoam air shields off the unit.

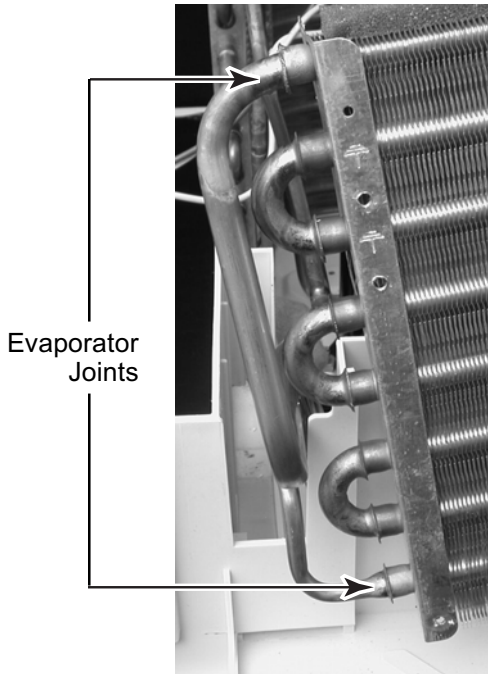


11. Remove the two front and two side screws from the evaporator.

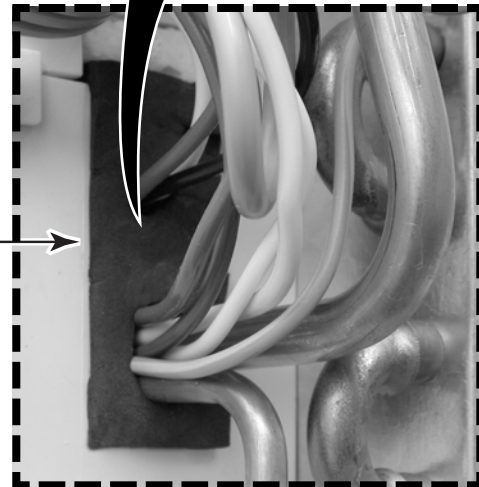
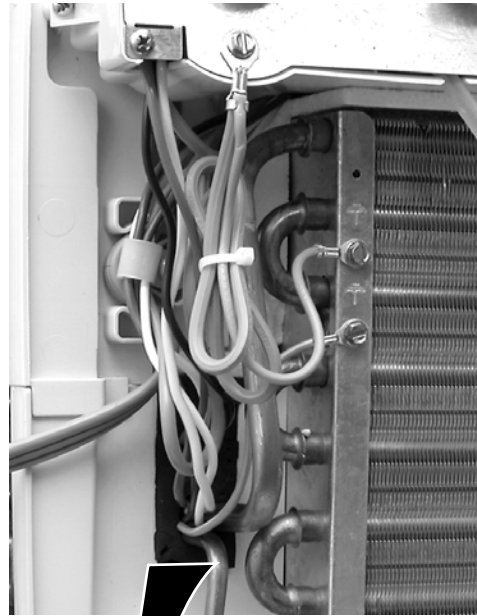


Continued on the next page.

12. Braze on an access valve and discharge the refrigerant into an approved recovery system.
13. Unbrazed the two joints from the evaporator and remove the evaporator.



4. Make sure that the rubber wire block is positioned in its cutout so that there are no air leaks around it.



⚠ WARNING
<p>Electrical Shock Hazard Connect green ground wires to ground screws. Failure to do so can result in death or electrical shock.</p>

5. Mount the top air guide to the unit with its eight screws.
6. Mount the brace with its four screws.
7. Mount the control housing to the unit with its three screws.
8. Mount the control assembly to the housing.
9. Mount the two green ground wires to the evaporator with their hex-head screws.

Perform the following steps to reinstall the evaporator.

1. Mount the new evaporator to the unit with its two front and two side screws, and then braze the joints.
2. Place a strip of foam tape along the top of the evaporator.
3. Install the two upper styrofoam air shields over the evaporator.

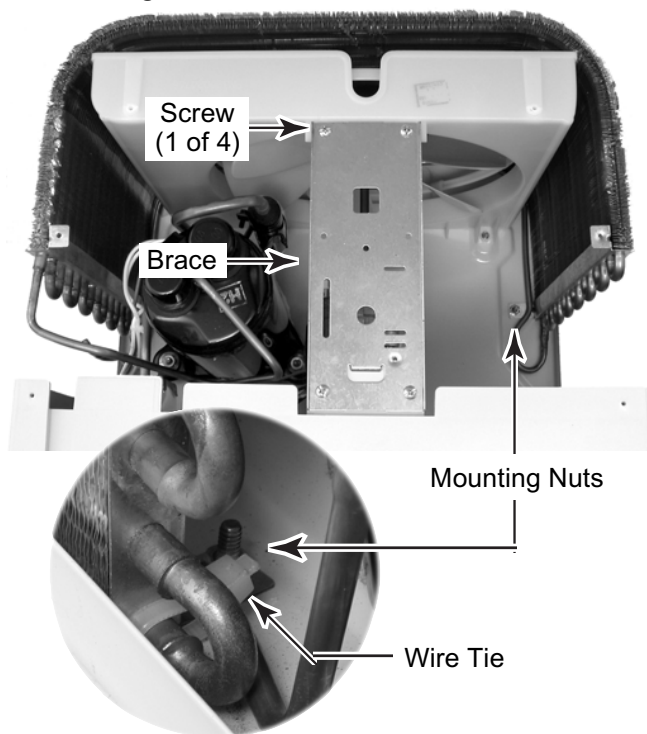
REMOVING THE CONDENSER

⚠ WARNING

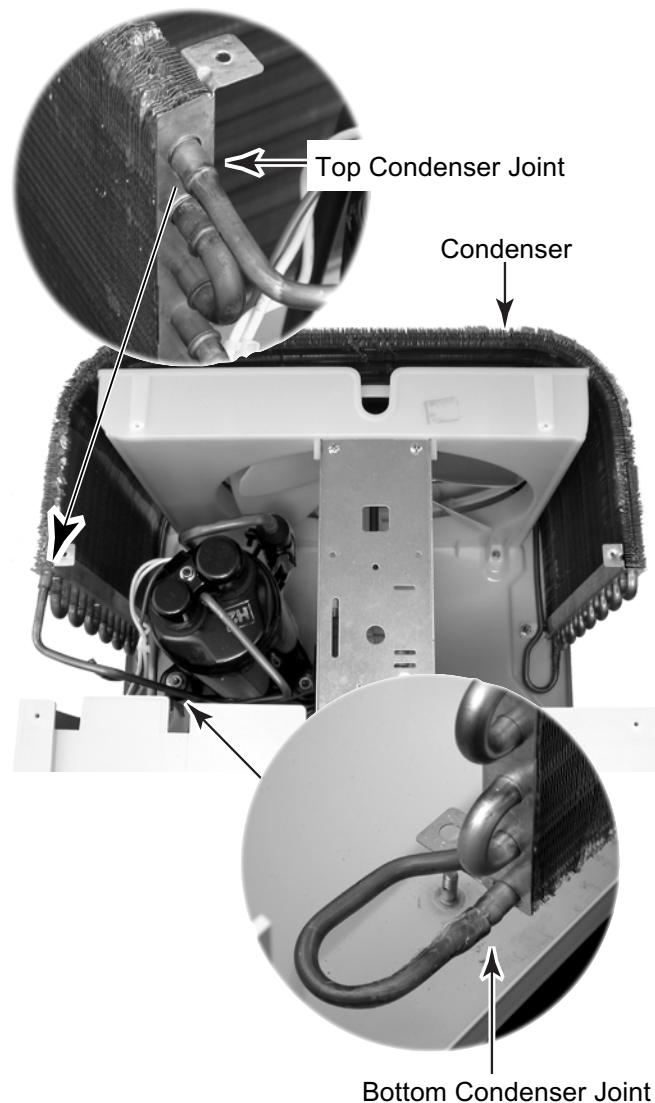


Electrical Shock Hazard
Disconnect power before servicing.
Replace all parts and panels before operating.
Failure to do so can result in death or electrical shock.

1. Unplug air conditioner or disconnect power.
2. Remove the air conditioner from the window.
3. Remove the side curtains and the front grille (see page 3-2 for the procedures).
4. Remove the four screws from the brace and remove the brace.
5. Remove the two 3/8" mounting nuts from the studs of the condenser.
6. Cut the plastic wire tie from around the tubing.



7. Braze on an access valve and discharge the refrigerant into an approved recovery system.
8. Unbraid the top and bottom joints from the condenser and remove the condenser.



REMOVING THE OVERLOAD PROTECTOR & COMPRESSOR

⚠️ WARNING



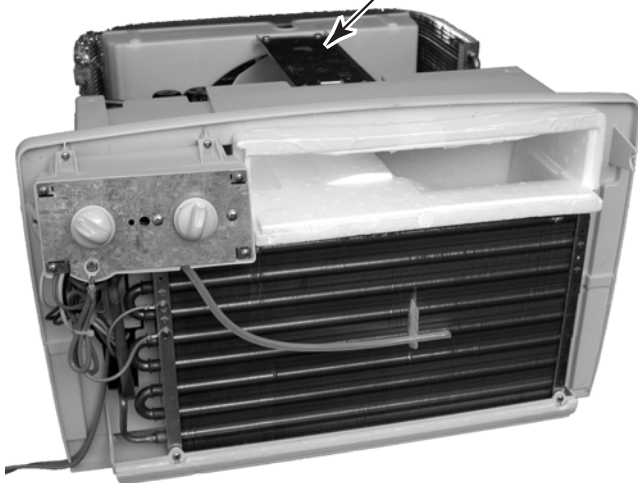
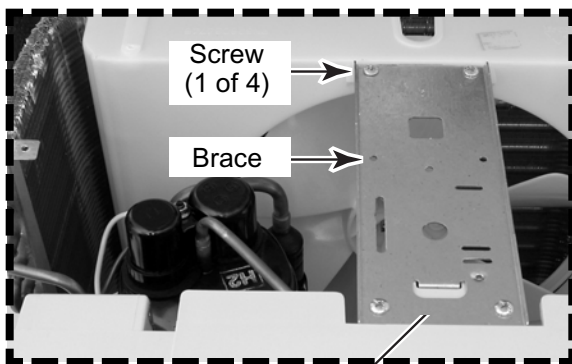
Electrical Shock Hazard

Disconnect power before servicing.

Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

1. Unplug air conditioner or disconnect power.
2. Remove the air conditioner from the window.
3. Remove the side curtains and the front grille (see page 3-2 for the procedures).
4. Remove the four screws from the brace and remove the brace.

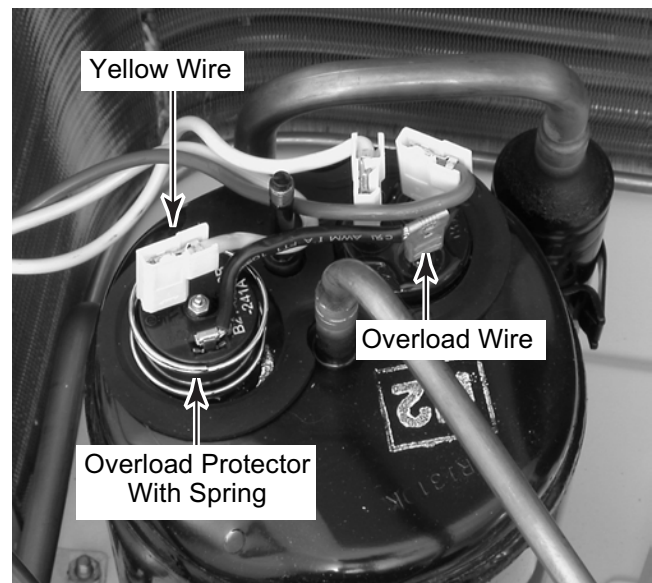


5. Remove the hex cap nut from the terminal cover and remove the cover.

Hex Cap Nut Terminal Cover



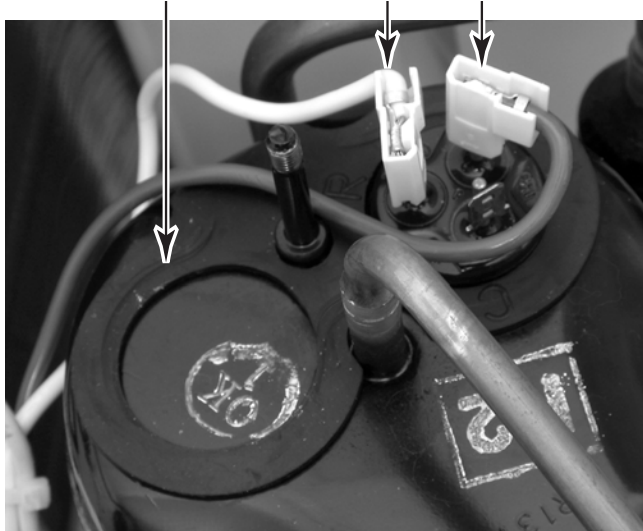
6. **To remove the overload protector:**
 - a) Disconnect the overload protector wire from compressor pin C.
 - b) Disconnect the yellow wire from the overload protector terminal.
 - c) Remove the overload protector and its spring from the compressor.
 - d) Remove the spring from the overload protector.



7. **To remove the compressor:**

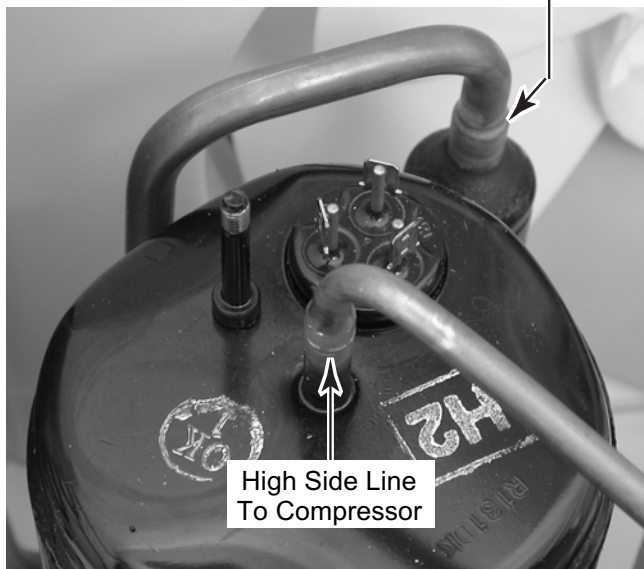
- a) Remove the overload protector (see step 6 on page 3-18 for the procedure).
- b) Disconnect the white wire from compressor terminal pin R, and the brown wire from pin S.
- c) Remove the rubber gasket.

Rubber Gasket White Wire (R) Brown Wire (S)



- d) Braze on an access valve and discharge the refrigerant into an approved recovery system.
- e) Disconnect the high side line from the compressor and the suction line from the accumulator.

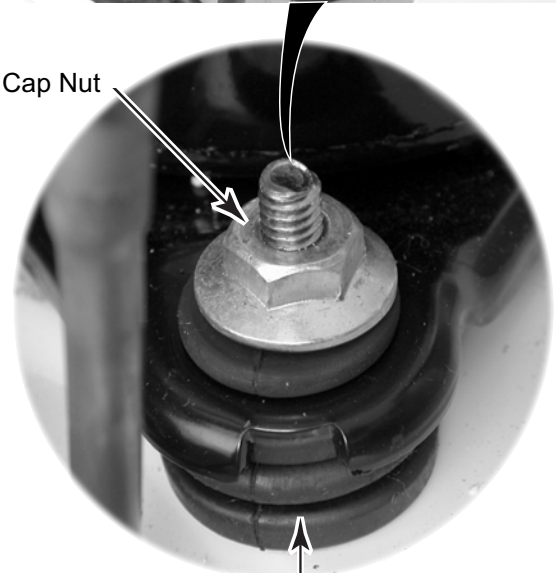
Suction Line To Accumulator



- f) Remove the cap nut from each of the feet and lift the compressor off the studs.
- g) Remove the three rubber isolators from the compressor.



Cap Nut




Rubber Isolator

— NOTES —

COMPONENT TESTING

Before testing any of the components, perform the following checks:

- Control failure can be the result of corrosion on connectors. Therefore, disconnecting and reconnecting wires will be necessary throughout test procedures.
- All tests/checks should be made with a VOM or DVM having a sensitivity of 20,000 ohms-per-volt DC, or greater.
- Check all connections before replacing components, looking for broken or loose wires, failed terminals, or wires not pressed into connectors far enough.
- Resistance checks must be made with power cord unplugged from outlet, and with wiring harness or connectors disconnected.



⚠ WARNING

Electrical Shock Hazard

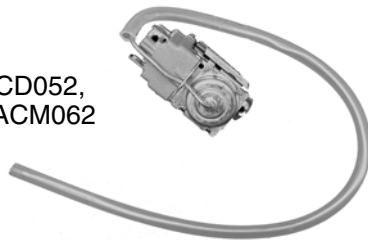
Disconnect power before servicing.

Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

TEMPERATURE CONTROL

Models ACD052,
ACM052, ACM062



Refer to page 3-4 for the procedure for servicing the temperature control.

1. Unplug air conditioner or disconnect power.
2. Disconnect the wires from the temperature control.
3. Set the ohmmeter to the R x 1 scale.
4. Touch the ohmmeter test leads to the temperature control terminals.
5. Turn the control to the fully clockwise (coldest) position. The meter should indicate a closed circuit at approximately 70°F, or higher.

THERMISTOR

Models ACQ058
& ACQ062



Refer to page 3-5 for the procedure for servicing the thermistor.

1. Unplug air conditioner or disconnect power.
2. Disconnect the thermistor connector from the electronic control board.
3. Set the ohmmeter to the R x 10K scale.
4. For the most accurate measurement, immerse the thermistor in ice water for 5 minutes, then use the 32°F/0°C reading in the chart.
5. Touch the ohmmeter test leads to the wire terminals on the connector.
6. The meter should indicate as shown in the following chart ($\pm 10\%$).

Sensor Temperature °F (°C)	Resistance Ohms (Ω)
32 (0)	97,950
40 (4)	78,300
50 (10)	59,700
60 (15)	45,900
70 (21)	35,400
80 (27)	27,660
90 (32)	22,020

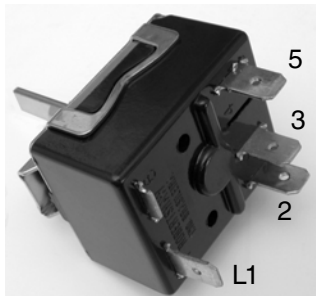


⚠ WARNING

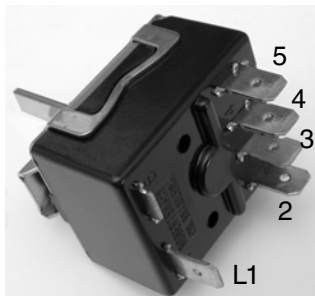
Electrical Shock Hazard

**Disconnect power before servicing.
Replace all parts and panels before operating.
Failure to do so can result in death or electrical shock.**

FAN SPEED CONTROL



Model ACD052



Models ACM052
& ACM062

Refer to page 3-4 for the procedure for servicing the fan speed control.

1. Unplug air conditioner or disconnect power.
2. Disconnect the wires from the fan speed control terminals.
3. Set the ohmmeter to the R x 1 scale.
4. Touch the ohmmeter test leads to the fan speed control terminals indicated in the charts below. The meter should indicate a closed circuit (0 Ω).

ACD052MM	
Switch position	Contacts closed
OFF	NONE
FAN ONLY	L1 to 2
HIGH COOL	L1 to 3 & L1 to 2
LOW COOL	L1 to 3 & L1 to 5

ACM052MM & ACM062MM	
Switch position	Contacts closed
OFF	NONE
FAN ONLY	L1 to 4
HIGH COOL	L1 to 5 & L1 to 4
MED COOL	L1 to 5 & L1 to 3
LOW COOL	L1 to 5 & L1 to 2

CAPACITOR



Refer to page 3-6 or 3-8 for the procedure for servicing the capacitor.

1. Unplug air conditioner or disconnect power.
2. **Use a 20,000 Ω, 2-watt resistor and discharge the capacitor. Touch the resistor leads to terminals C & H and C & F.**
3. Disconnect the wires from the capacitor terminals.
4. Set the ohmmeter to the R x 10K scale.
5. Touch the ohmmeter test leads to the common (C) terminal and the F terminals.
6. The meter should indicate several ohms and gradually return to infinity.
7. Touch the ohmmeter test leads to the common (C) terminal and the H terminals.
8. The meter should indicate several ohms and gradually return to infinity.



⚠ WARNING

Electrical Shock Hazard

Disconnect power before servicing.

Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

FAN MOTOR



Refer to page 3-10 for the procedure for servicing the fan motor.

1. Unplug air conditioner or disconnect power.
2. Disconnect the fan motor wires from the fan speed control or the electronic control board.
3. **Model ACD052:** Touch the ohmmeter test leads to the indicated fan motor wire connectors. The meter should indicate as follows:

Black to White (High) = 45 to 55 Ω

Red to White (Low) = 60 to 70 Ω

Brown to Black (Start) = 50 to 60 Ω

4. **Models ACM052, ACM062, ACQ058, & ACQ062:** Touch the ohmmeter test leads to the indicated fan motor wire connectors. The meter should indicate as follows:

Black to Brown (Start) = 45 to 55 Ω

Black to White (Turbo) = 45 to 55 Ω

Blue to White (High) = 60 to 70 Ω

Red to White (Low) = 80 to 90 Ω

OVERLOAD PROTECTOR



Refer to page 3-18 for the procedure for servicing the overload protector.

1. Unplug air conditioner or disconnect power.
2. Disconnect the overload protector wires.
3. Set the ohmmeter to the R x 1 scale.
4. Touch the ohmmeter test leads to the overload protector terminal and the wire connector.
5. The meter should indicate continuity (0 Ω).



⚠ WARNING

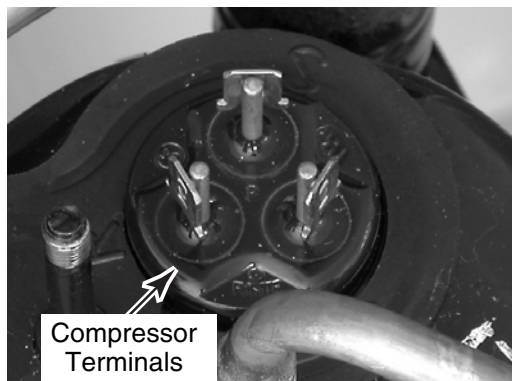
Electrical Shock Hazard

Disconnect power before servicing.

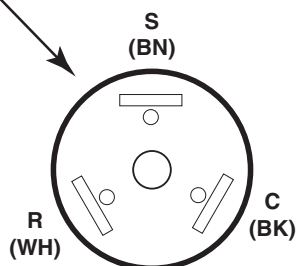
Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

COMPRESSOR



Compressor Terminals



Refer to page 3-18 for the procedure for servicing the compressor.

1. Unplug air conditioner or disconnect power.
2. Disconnect the three wires from the compressor terminals.
3. Set the ohmmeter to the R x 1 scale.
4. Touch the ohmmeter test leads to the following compressor terminals. The meter should indicate (approximately) as shown:

Terminal **R** to **C** = 1.1 Ω

Terminal **S** to **C** = 2.8 Ω

DIAGNOSTICS & TROUBLESHOOTING

DIAGNOSTICS—MODELS ACQ058MM & ACQ062MM

The Diagnostics Mode will test all of the LEDs, the keypads, and the thermistor. To enter the Diagnostics Mode, perform the following steps.

1. Press the following keypads within 7 seconds:

ADJUST ^
 ADJUST v
 TIMER
 FAN SPEED
 MODE
 POWER

All of the LEDs will light indicating that all of the keypads are functional.

2. Press the ADJUST ^ keypad. All of the LEDs will turn off, and the room temperature will be displayed.

FF indicates an open thermistor, or a temperature of over 140°F.

00 indicates a shorted thermistor, or a temperature of below 32°F.

3. Press the ADJUST ^ keypad. The COOL LED will light, and the compressor will operate for 20 seconds, or until advanced to the next step.

88 will show on the display until the end of the Diagnostics Mode.

4. Press the ADJUST ^ keypad. The TURBO LED will light, and the fan will operate on Turbo speed.

5. Press the ADJUST ^ keypad. The HIGH LED will light, and the fan will operate at high speed.

6. Press the ADJUST ^ keypad. The LOW LED will light, and the fan will operate at low speed.

7. Press the ADJUST ^ keypad and exit the Diagnostics Mode.

NOTE: To Advance To The Next Step, Press The ADJUST ^ Keypad.

Step Number	Component Tested	Description
1	LEDs	All LEDs will be lit.
2	Thermistor	All LEDs will turn off and the display will indicate the thermistor temperature reading. Warming the thermistor will change the reading. An open thermistor will read FF indicating a temperature above 140°F. A shorted thermistor will read 00 indicating a temperature below 32°F.
3	Compressor	The COOL LED will light and the compressor will operate for 20 seconds, or until advanced to the next step. The display will read 88 until the end of the Diagnostics Mode.
4	Fan Motor TURBO Speed	The TURBO LED will light and the fan will operate on Turbo speed.
5	Fan Motor HIGH Speed	The HIGH LED will light and the fan will operate on high speed.
6	Fan Motor LOW Speed	The LOW LED will light and the fan will operate on low speed.
7	Exit	Press the ADJUST ^ keypad and exit the Diagnostics Mode.

TROUBLESHOOTING CHART

PROBLEM	PROBABLE CAUSE	CORRECTION
1. Unit does not run.	1a. No power to unit. 1b. Low voltage. 1c. Failed component or incorrect wiring.	1a. Check for power at receptacle, good plug contact, fuses of correct size and time delay types. (Have customer contact electrician if no power is available at receptacle.) 1b. Customer should contact a qualified electrician to correct this problem. 1c. Check all wiring and connections, thermostat, selector switch, or control.
2. Fan motor runs, compressor does not run.	2a. Incorrect power supply voltage. 2b. Failed component or incorrect wiring.	2a. Check for proper voltage. 2b. Check all wiring connections, overload, compressor, capacitor, selector switch, or control.
3. Compressor runs, fan motor does not run.	3a. Blower wheel or fan blade binding. 3b. Incorrect wiring. 3c. Motor windings shorted or motor shaft stuck, open selector switch, defective control.	3a. Check for proper clearance. 3b. Check all wiring. 3c. Check for open or shorted motor windings, open selector switch, or control.
4. No cooling, compressor and fan motor running.	4a. Airflow restriction. 4b. Sealed system problem.	4a. Check for airflow through condenser and evaporator. 4b. Check sealed system for loss of refrigerant or restrictions.
5. Insufficient cooling, compressor and fan motor running.	5a. Improper airflow. 5b. Sealed system problem. 5c. Operating 60 Hz unit on 50 Hz current. 5d. Low voltage. 5e. Improper seals. 5f. Improper use/size for area to be cooled. 5g. Fan speed too slow.	5a. Clean or replace air filter. Check for air passage restriction or obstruction. Check for dirty condenser, or evaporator. 5b. Check sealed system for loss of refrigerant or restrictions. 5c. Advise customer that the unit should be operating on a 60 Hz electrical supply. 5d. Check power supply (see 1b). 5e. Insulating seals out of place or missing on unit. Doors or windows open. 5f. Excessive load. Advise customer if load is excessive, or installation is incorrect, or inadequate. Instruct on proper operation of controls. 5g. Check for wrong motor, blower wheel, or fan blade. Check for binding of fan blade, blower wheel, or motor shaft. Check for low voltage and correct capacitor.

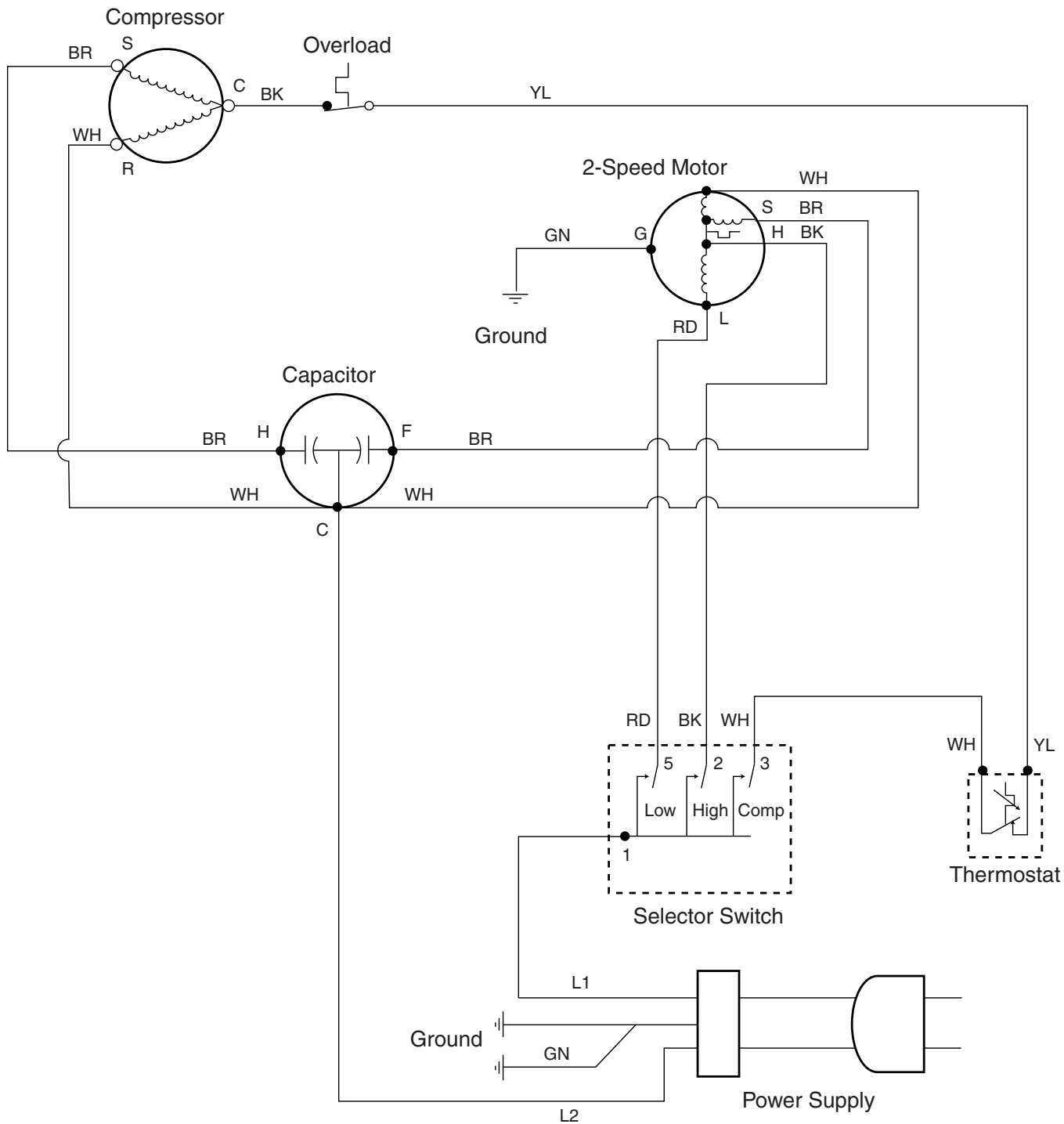
PROBLEM	PROBABLE CAUSE	CORRECTION
6. Compressor stops and starts. Too short running time.	6a. Incorrect voltage. 6b. Temperature control set too warm. 6c. Failed thermistor or thermostat. 6d. Failed compressor, controls for compressor, or incorrect wiring. 6e. Fan motor too slow or condenser airflow blocked. 6f. Condenser blocked.	6a. Check for proper voltage. 6b. Instruct customer. 6c. Check thermistor by placing it in ice water and check resistance (see chart on page 4-1). 6d. Check compressor windings, all wiring, overload and capacitor for shorts. 6e. Check for wrong motor, blower wheel, or fan blade. Check for low voltage, binding of fan blade, blower wheel, or motor bearings. 6f. Clean condenser.
7. House circuit tripping.	7a. Incorrect fuse or breaker. 7b. Failed component or incorrect wiring.	7a. Check for proper fuse or breaker. Check amp draw. 7b. Check wiring and connections. Check operation of all components.
8. Noisy operation.	8a. Loose parts. 8b. "Pinging" sound noticed as drops of water condensate hit fan blade. 8c. Mounting area not firm. 8d. Compressor could be overloaded due to high ambient temperatures, or airflow restriction. 8e. Fan motor. 8f. Compressor mounting nuts loose.	8a. Check fan blades, cabinet, washers, tubing contact or vibration, or loose screws. 8b. Normal operation. 8c. Add support kit or improve installation. 8d. Loose internally, inadequate lubrication, improper voltage, remove airflow blockage. 8e. Fan blades loose or rubbing, bad bearing, or fan out of balance. 8f. Tighten compressor nuts slightly to remove vibration transmission.

PROBLEM	PROBABLE CAUSE	CORRECTION
<p>9. Evaporator frosting up.</p> <p>NOTE: 90% frosting of evaporator is normal under low ambient, high humidity conditions, and 70% ice blockage is to be considered normal.</p> <p>NOTE: Initial startup on rotary compressor-equipped units may cause frosting on the first 2 or 3 evaporator passes (for approximately 20 minutes) until refrigerant is driven out of the oil by heating.</p>	<p>9a. Low outside air temperature (below 65°F).</p> <p>9b. Thermistor failed.</p> <p>9c. Improper airflow.</p> <p>9d. Fan motor slow.</p>	<p>9a. Instruct customer that operation at ambient temperatures below 65°F is not considered a normal requirement of the unit. Adjust the controls to a warmer setting.</p> <p>9b. Check thermistor by placing it in ice water and check resistance (see chart on page 4-1).</p> <p>9c. Clean or replace air filter. Check for obstructed or restricted air passage, dirty evaporator and blower wheel loose, or missing seals.</p> <p>9d. Check for binding of fan blade, blower wheel, or motor bearings. Use low fan speed and instruct the customer.</p>
<p>10. Remote control does not operate unit.</p>	<p>10a. Batteries dead.</p> <p>10b. Remote failed.</p>	<p>10a. Check that unit operates manually at control panel. If it does, replace batteries in remote.</p> <p>10b. Replace remote control.</p>
<p>11. Moisture dripping into room.</p>	<p>11a. Extreme humidity.</p> <p>11b. Inadequate seal.</p> <p>11c. Improper level.</p> <p>11d. Styrofoam shield under evaporator coil broken or missing (see photo, on page 3-14).</p>	<p>11a. Advise customer of possible sweating formations under abnormal conditions. Check and improve all possible seals.</p> <p>11b. Check and improve all sealed areas.</p> <p>11c. Check for proper side-to-side level of unit. Check for 1/2" rear slope (or 1 full bubble) on spirit level.</p> <p>11d. Replace styrofoam shield.</p>
<p>12. Excess condensation running outside.</p>	<p>12a. Extreme humidity.</p>	<p>12a. This condition is normal in areas of extreme humidity.</p>

WIRING DIAGRAMS & STRIP CIRCUITS

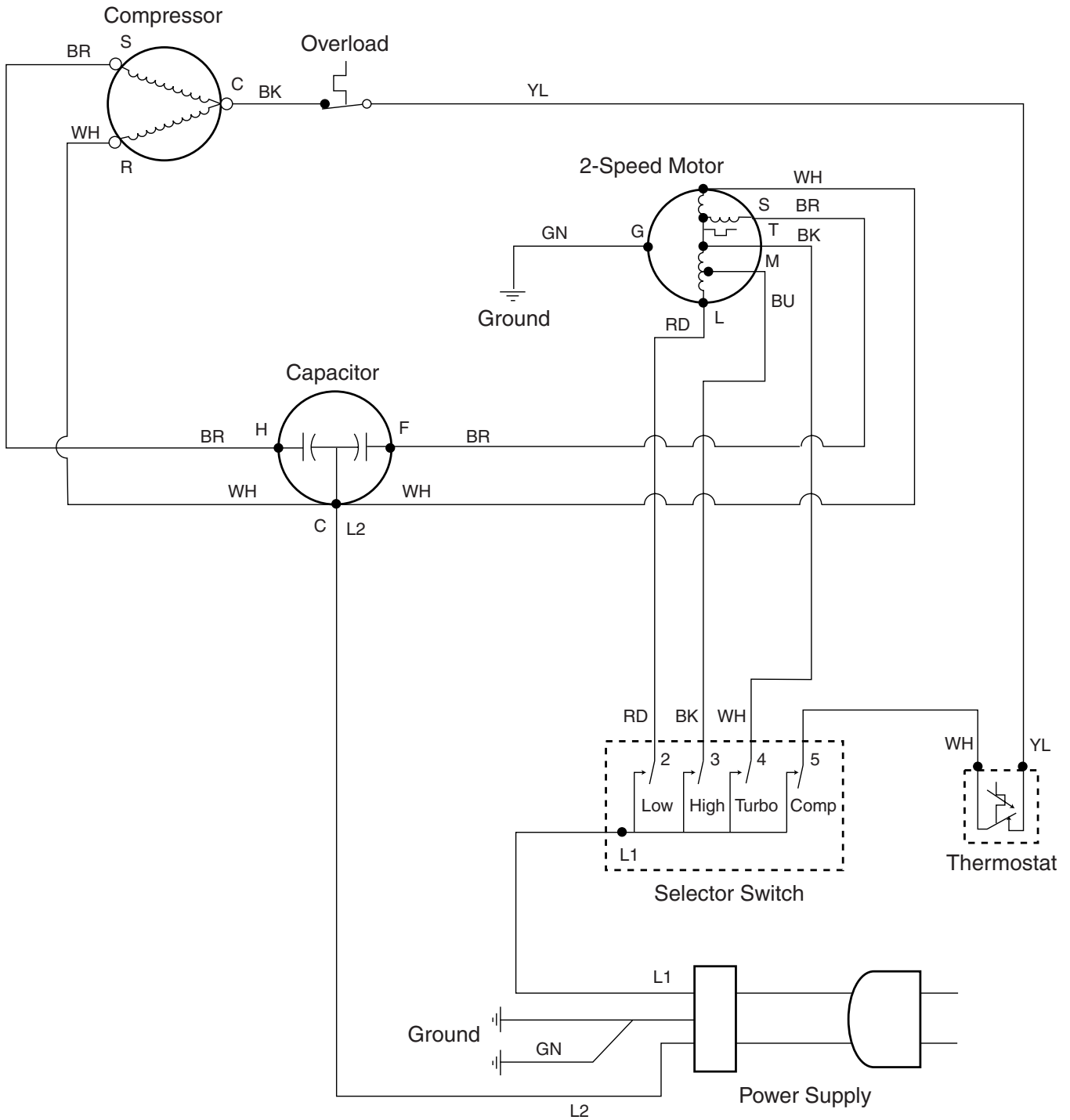
WIRING DIAGRAM 1

Model ACD052MM



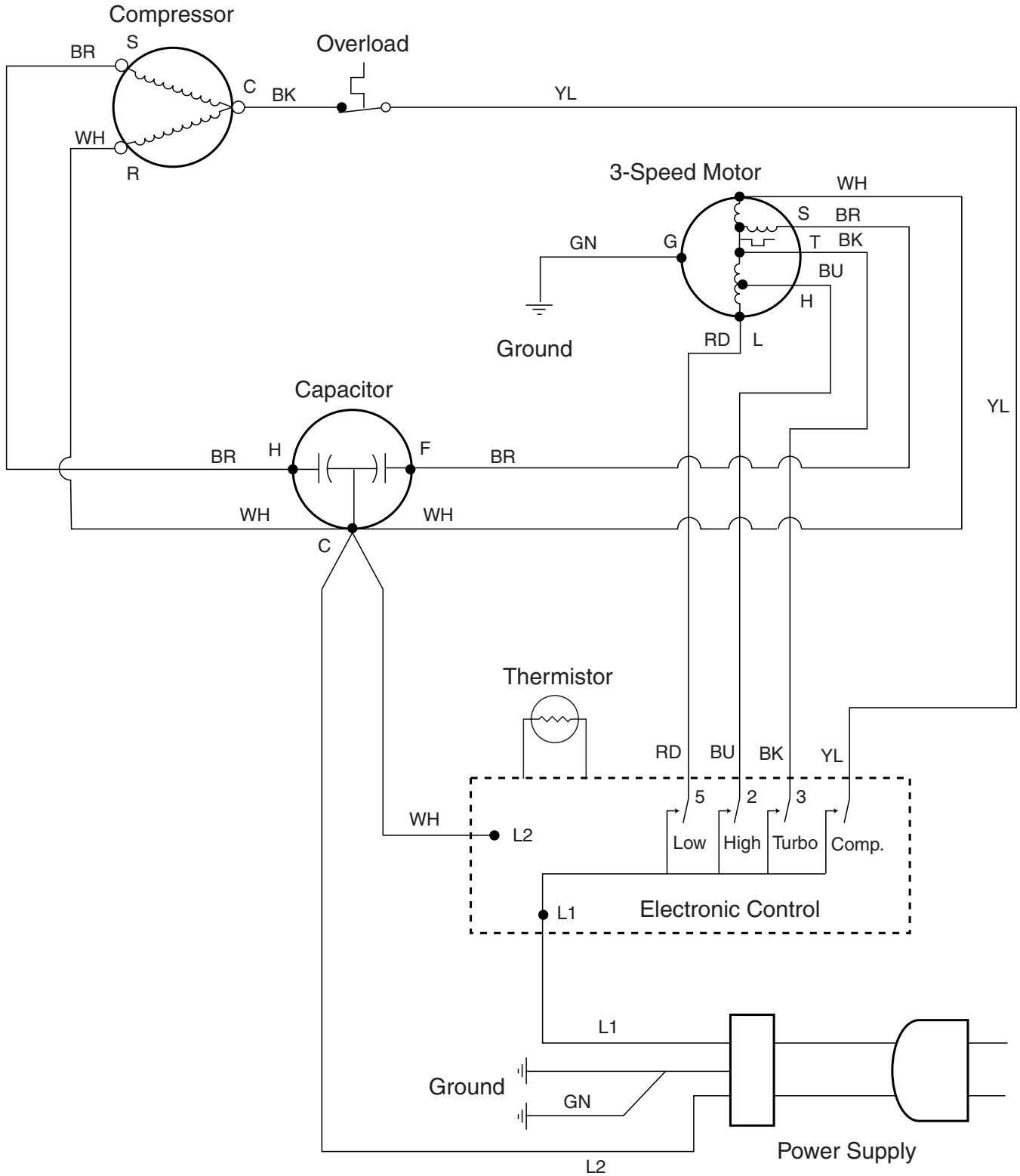
WIRING DIAGRAM 2

Models ACM052MM & ACM062MM



WIRING DIAGRAM 3

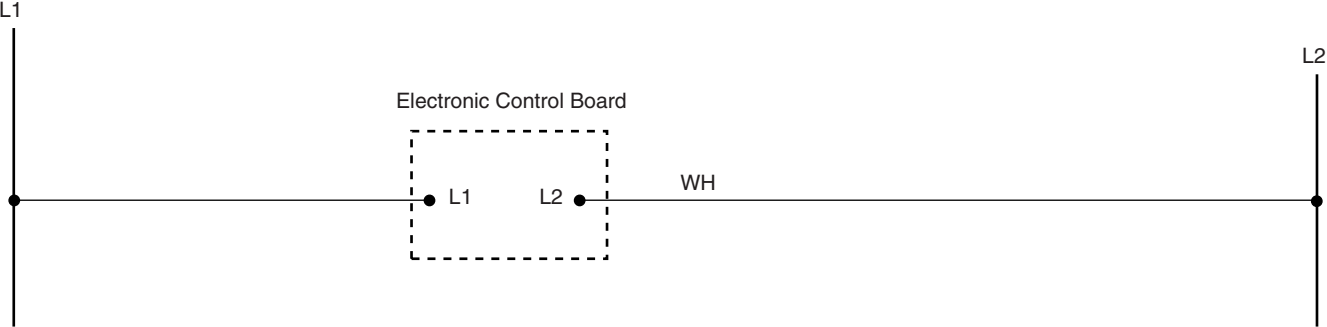
Models ACQ058MM & ACQ062MM



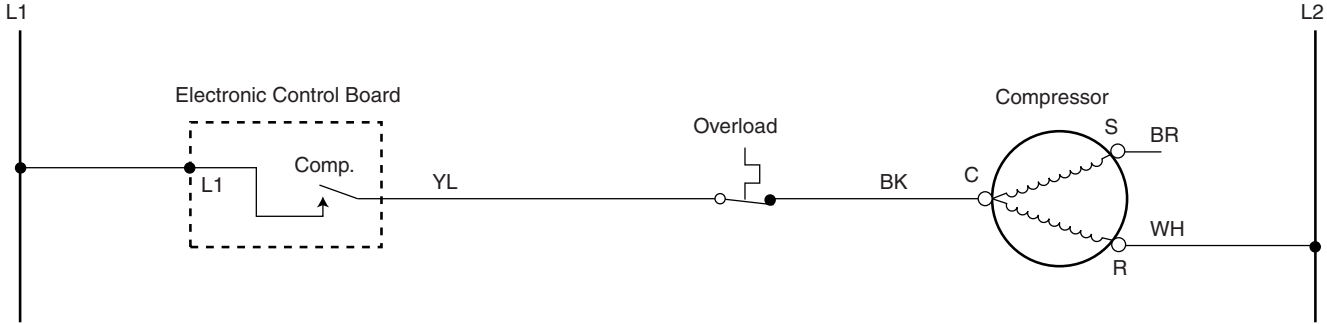
STRIP CIRCUITS

Electronic (ACQ) Models Only

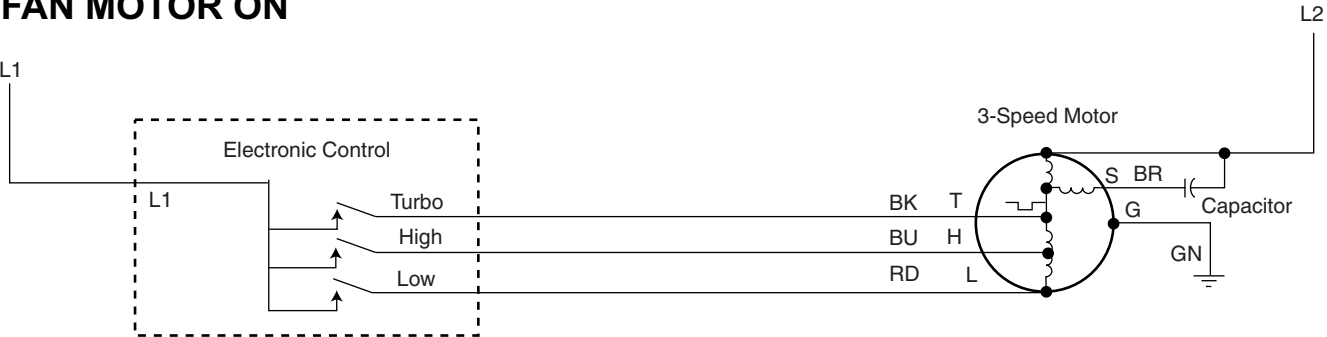
POWER ON



COMPRESSOR ON



FAN MOTOR ON



TECH TIPS

INSTALLING THE CONDENSATE DRAIN ADAPTER

! WARNING



Electrical Shock Hazard

Disconnect power before servicing.

Replace all parts and panels before operating.

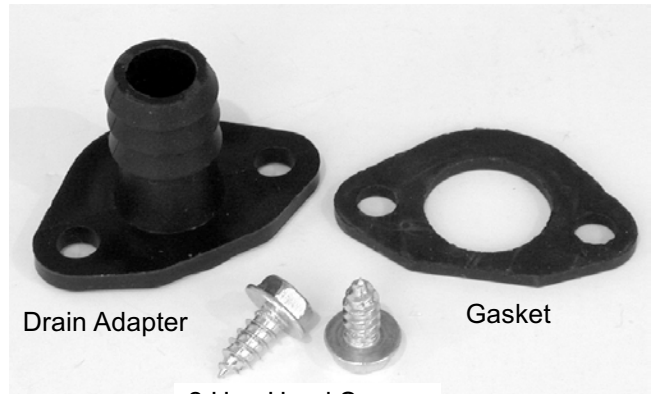
Failure to do so can result in death or electrical shock.

When dripping condensate water at the rear of the air conditioner becomes a problem, a Condensate Drain Adapter (Part #8171429) is available. The adapter easily mounts to the rear of the base plate using predrilled holes. Connect a length of tubing (purchased locally) to the adapter, and route it away from the air conditioner to a convenient drainage area.

IMPORTANT: Never install the adapter on air conditioners that are not designed for its use, otherwise damage to the unit may occur.

The Condensate Drain Adapter consists of the following parts:

- 1 Drain Adapter
- 1 Gasket
- 2 Hex-Head Screws



Drain Adapter

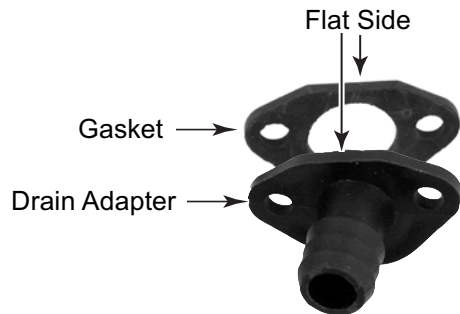
Gasket

2 Hex-Head Screws

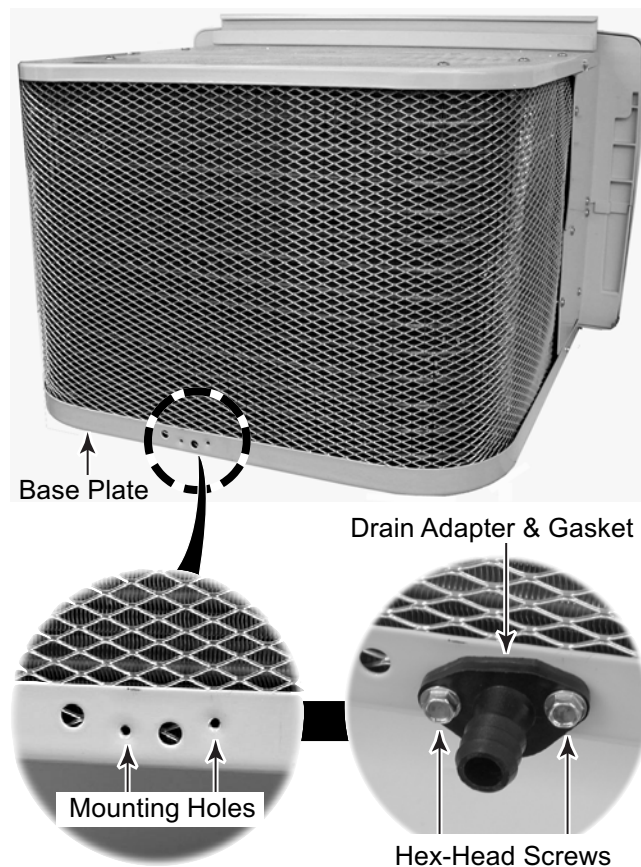
Continued on the next page.

Perform the following steps to install the Condensate Drain Adapter:

1. Position the gasket and adapter so that the flat side faces up.



2. Mount the adapter and gasket to the two predrilled mounting holes in the rear of the base plate with the two hex-head screws provided.
3. Slide the end of a length of tubing over the end of the adapter, and route it to the drainage location.



— NOTES —

— NOTES —

PRODUCT SPECIFICATIONS AND WARRANTY INFORMATION SOURCES

IN THE UNITED STATES:

FOR PRODUCT SPECIFICATIONS AND WARRANTY INFORMATION CALL:

FOR WHIRLPOOL PRODUCTS: 1-800-253-1301
FOR KITCHENAID PRODUCTS: 1-800-422-1230
FOR ROPER PRODUCTS: 1-800-447-6737

FOR TECHNICAL ASSISTANCE WHILE AT THE CUSTOMER'S HOME CALL:

THE TECHNICAL ASSISTANCE LINE: 1-800-253-2870

**HAVE YOUR STORE NUMBER READY TO IDENTIFY YOU AS AN
AUTHORIZED SERVICER**

FOR LITERATURE ORDERS:

PHONE: 1-800-851-4605

IN CANADA:

FOR PRODUCT SPECIFICATIONS AND WARRANTY INFORMATION CALL:

1-800-461-5681

FOR TECHNICAL ASSISTANCE WHILE AT THE CUSTOMER'S HOME CALL:

THE TECHNICAL ASSISTANCE LINE: 1-800-488-4791

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