



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 manual replaces RS2520001 Revision 0.

Electric Wall Ovens

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:

AOES3030*

AOCS3040*



16021875
Revision 0
November 2003

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Important Information

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 manual. **REVIEW ALL SERVICE INFORMATION IN THE APPROPRIATE SERVICE MANUAL BEFORE BEGINNING REPAIRS.**

Important Notices for Consumers and Servicers



WARNING

To avoid risk of serious injury or death, repairs should not be attempted by an unauthorized person, dangerous conditions (such as exposure to electrical shock) may result.



CAUTION

Amana will not be responsible for any injury or property damage from improper service procedures. If performing service on your own product, assume responsibility for any personal injury or property damage which may result.

To locate an authorized servicer, consult your telephone book or the dealer from whom you purchased this product. For further assistance, contact: 1 (800) 628-5782 first, if no answer call number listed below.

CONSUMER AFFAIRS DEPT.
AMANA REFRIGERATION, INC.
AMANA, IOWA 52204

OR
CALL

1 (800) 843-0304

If outside the United States contact:

AMANA
ATTN: CONSUMER AFFAIRS DEPT
AMANA, IOWA 52204, USA
Telephone: (319) 622-5511
Facsimile: (319) 622-2180
TELEX: 4330076 AMANA
CABLE: "AMANA", AMANA, IOWA, USA

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 or product or property damage.

Important Safety Information



Recognize this symbol as a safety precaution

WARNING

This appliance contains or produces a chemical or chemicals which can cause death or serious illness and which are known to the state of California to cause cancer, birth defects or other reproductive harm. To reduce the risk from substances in the fuel or from fuel combustion make sure this appliance is installed, operated, and maintained according to the instructions in this booklet.

To avoid personal injury, do not sit, stand or lean on oven door.

To avoid risk of electrical shock, personal injury, or death, make sure your oven has been properly grounded and always disconnect it from main power supply before any servicing.

To avoid risk of fire, do not store combustible materials, gasoline or other flammable vapors and liquids near or in the oven.

To avoid burns caused by steam, do not use a wet sponge or cloth to wipe up spills on a hot cooking area.

All Appliances

Proper installation

Be sure your appliance is properly installed and grounded by a qualified technician.

Never use your appliance for warming or heating the room.

Do not leave children alone

Children should not be alone or unattended in the area where the appliance is in use. They should never be allowed to sit or stand on any part of the appliance.

Wear proper apparel

Loose fitting or hanging garments should never be worn while using appliance.

User servicing

Do not repair or replace any part of the appliance unless specifically recommended in this manual. All other servicing should be referred to a qualified technician.

Storage in or on appliance

Flammable materials should not be stored in an oven or near surface units.

Do not use water on grease fires

Smother fire or flame, or use dry chemical or foam-type extinguisher.

Use only dry potholders

Moist or damp potholders on hot surfaces may result in burns from steam. Do not let potholder touch elements. Do not use a towel or other bulky cloth.

Do not leave oven unattended

Boilovers can cause smoke and may ignite.

Oven

Use care when opening door

Let hot air or steam escape before removing or replacing food.

Do not heat unopened food containers

Build-up of pressure may cause container to burst and result in injury.

Keep oven vent ducts unobstructed.

Placement of oven racks

Always place oven racks in desired location while oven is cool. If rack is removed while oven is hot, do not let potholder contact hot heating element in oven.

Do not use aluminum foil to line the oven bottom

Aluminum foil can cause fire, damage oven interior, and will seriously affect baking results.

Do not touch interior surfaces of oven during or immediately after use

Do not let clothing or other flammable materials contact elements. Although these surfaces may be dark in color they can still be hot enough to burn.

Use caution when touching oven while in use

Other areas of the oven can become hot enough to cause burns, such as vent openings, window, oven door and oven racks.

Self-Cleaning

Do not clean door gasket

The door gasket is essential for a good seal. Care should be taken not to rub, move, or damage the gasket.

Do not use oven cleaners

No commercial oven cleaner or oven liner protective coating of any kind should be used in or around any part of the liner.

Clean only parts listed in manual.

Before self-cleaning the oven

Remove broiler pan, oven racks, and other utensils.

In Case of Fire

Fires can occur as a result of over cooking or excessive grease. Though a fire is unlikely, if one occurs, proceed as follows.

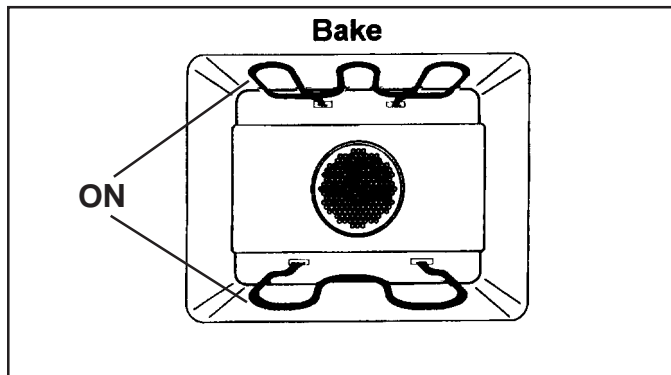
1. If you see smoke from oven, do not open oven door.
2. Turn oven control to *OFF*.
3. As an added precaution, turn off power at main circuit breaker or fuse box.
4. Turn on vent to remove smoke.
5. Allow food or grease to burn itself out in oven.
6. If smoke and fire persist, call fire department.
7. If there is any damage to components, call an authorized servicer before using oven.

General Information

Oven Operation

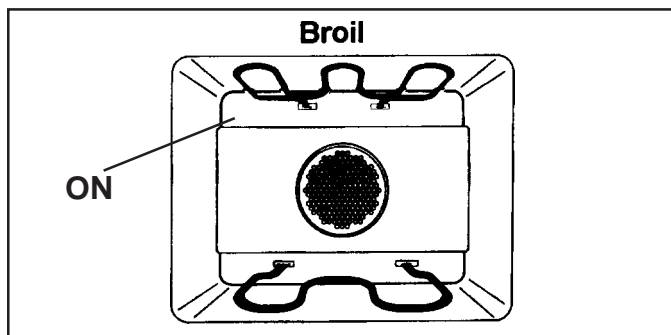
Bake

Top and bottom elements operate during bake. Bake can be used to cook foods which are normally baked. Oven must be preheated.



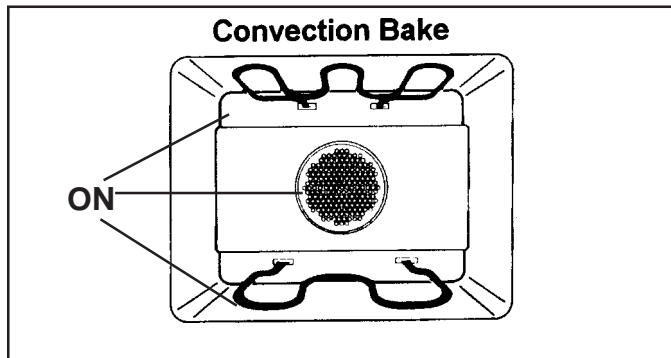
Broil

Top element operates during broil. Broil can be used to cook foods which are normally broiled. Preheating is not required when using broil. All foods should be turned at least once except fish, which does not need to be turned.



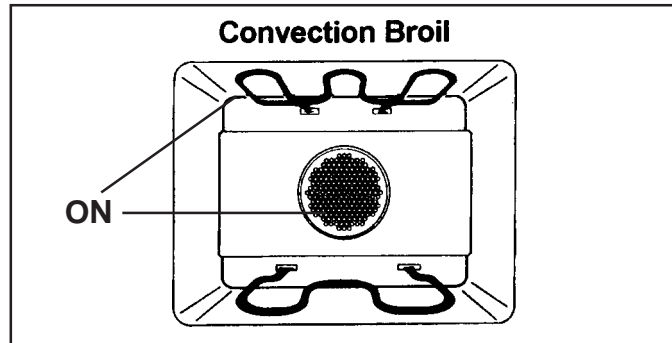
Convection Bake

Upper element, lower element, and fan operate during convection bake. Convection bake should be used for cooking casseroles and roasting meats. Oven should be preheated for best results when using convection bake. Pans do not need to be staggered. Cooks approximately 25% quicker than bake.



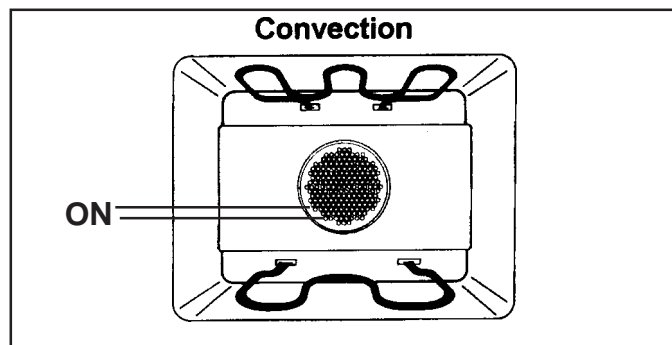
Convection Broil

Top element and fan operate when using convection broil. Convection broil can be used to cook foods that are normally broiled. Oven does not require preheating when using convection broil. Food does not need to be turned during cooking. Cooks approximately 25% quicker than broil.



Convection

Rear element and fan operate during convection. Convection should be used for cooking pastries, souffles, yeast bread, cakes and cookies. Oven should be preheated for best results when using convection. Pans do not need to be staggered. Cooks approximately 25% quicker than bake. Broil is on during preheat conditions.



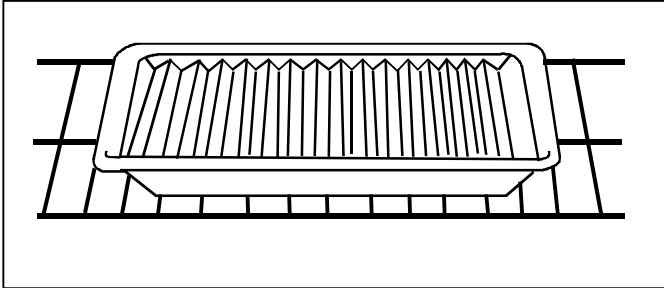
Cooking Guide

Refer to owners manual, for following recommendations only as a guide for times and temperature. Times, rack position, and temperatures may vary depending on conditions and food type. For best results, always check food at minimum time. When roasting, choose rack position based on size of food item.

General Information

Convection Broiling Rack

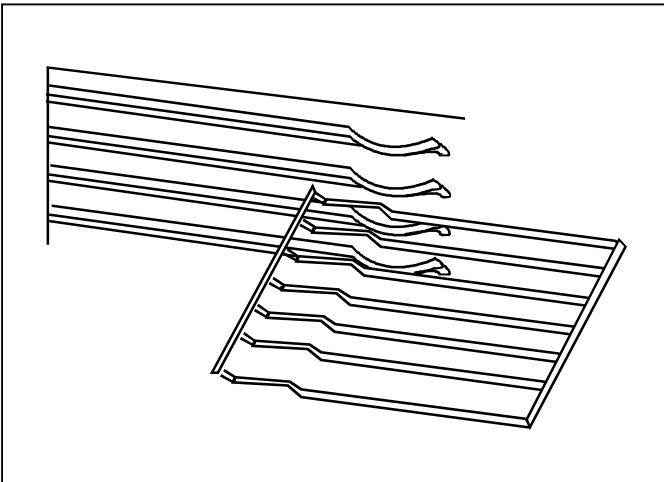
Oven includes a special broiling rack. This rack should be placed on top of broiler pan and grid. This allows air to circulate around food and cook evenly without turning. If convection broiling rack is not used, foods must be turned at least once during cooking.



Oven Rack Placement

Position oven rack before turning oven on.

1. Pull rack forward to stop position.
2. Raise front edge of rack and pull until rack is out of oven.
3. Place rack in new rack position.
 - Curved edge of rack must be toward rear of oven.



Spacesaver™ Convection Rack

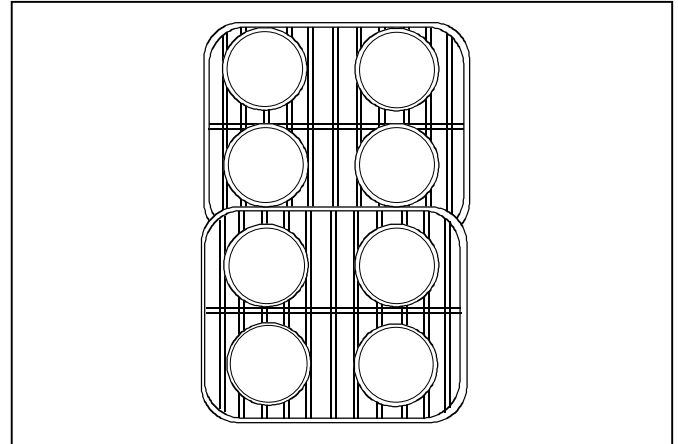
Spacesaver™ convection rack sets 1/2" off the oven floor when in lowest rack position to allow air to circulate around food and cook evenly. This rack provides more usable oven space for cooking large items or several food items at once.

Position oven rack before turning oven on. To remove rack:

1. Pull rack forward to stop position.
2. Raise front edge of rack and pull until rack is out of oven.
3. Place rack in new rack position.
 - Curved edge of rack must be toward rear of oven.

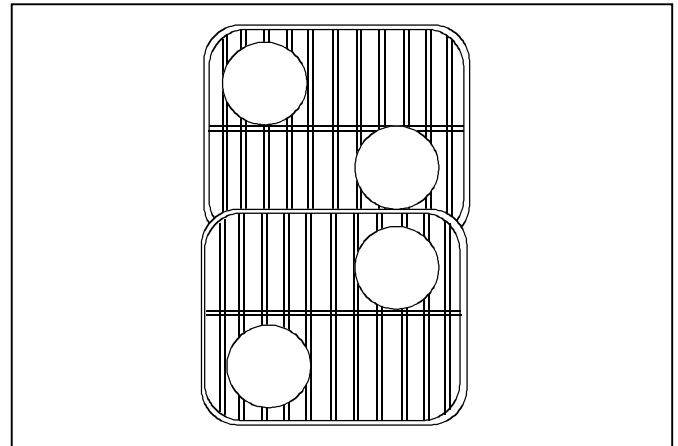
Convection Pan Placement

Baking pans and cookie sheets should not touch side or rear walls of oven. If pans are placed on different racks, they can be placed directly over each other. Convection cooking circulates air around oven providing even browning on all rack positions. When using convection, oven can be loaded on all racks with excellent cooking results.



Pan Placement

- Keep pans and cookie sheets 2 inches from oven walls.
- Stagger pans placed on different racks so one is not directly over the other.



Slo-Cook™ Roasting Rack

Oven includes a Slo-Cook™ roasting rack. This rack should be placed in pan or roaster. Slo-Cook™ roasting rack elevates food keeping it out of grease and fat.

General Information

Removing Oven Door

The oven door can be removed for ease in cleaning large spills.



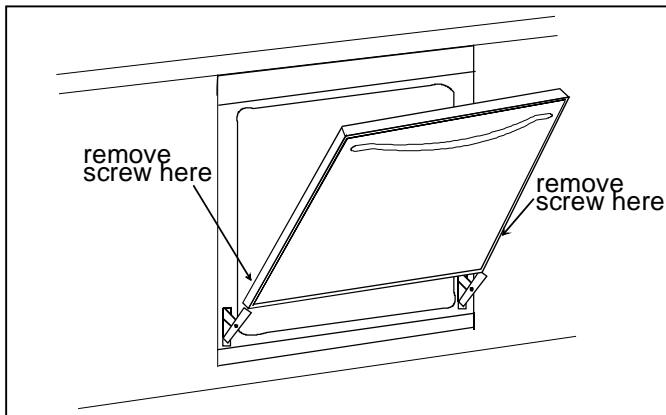
CAUTION

To avoid personal injury or property damage, handle oven door with care. Door is heavy and can be damaged if dropped.

Do not place hands in hinge area when door is removed. Hinge can snap closed and pinch your hands.

Door contains tempered glass. If glass is scratched, chipped, impacted or twisted it may break suddenly. If door glass appears damaged it should be replaced immediately.

1. Open door to first stop.
2. Remove screws in door liner.
3. Grasp door firmly on each side and lift it upward off hinges. Do not push hinges closed once oven door is removed.
 - Do not lift door using door handle.



Replacing Oven Door

1. Make sure the hinges are open to the first stop position. If hinges have been accidentally closed, carefully pull them open to first stop. Align door with hinge arms.
2. Slide door down and into place. Be sure door is completely down on hinges.
3. Replace screws in door liner.

Replacing Oven Light

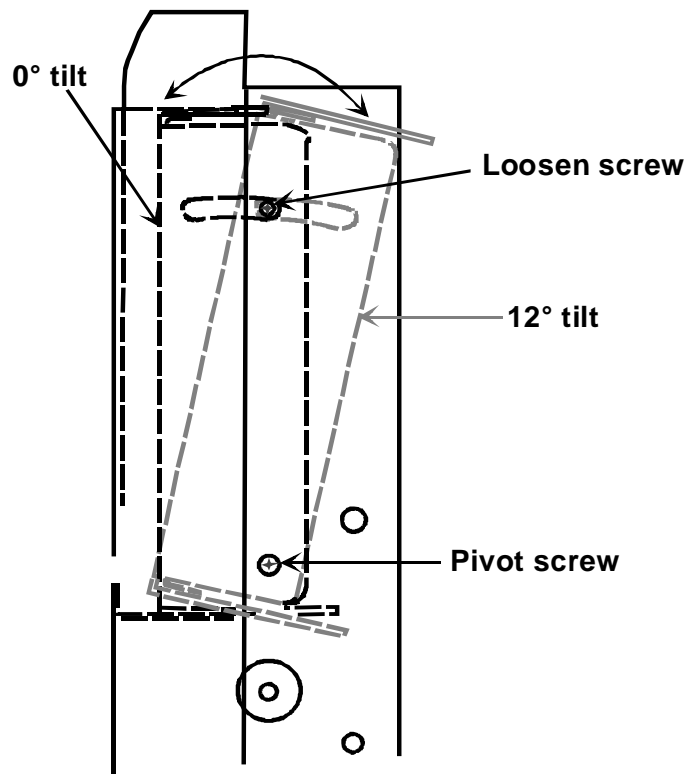
Protective gloves must be worn when changing light bulb.

1. Disconnect electrical supply by turning off power at fuse box.
2. Remove oven door.
3. Remove light cover by inserting a screwdriver, blade end covered in masking tape, into slot at front of lens cover and prying lens cover downward.
4. Unscrew bulb from receptacle.
 - Replacement bulbs are available through your local Amana service or parts center.

Tilting Control Panel

Control panel can be adjusted to tilt from 0° to 12° to make more visible.

1. Loosen screws on top, and sides of control panel and pivot screw on bottom, sides of control panel before installing oven, or while oven partially pulled from opening.
2. Adjust control panel to desired angle and retighten screws.



Care and Cleaning

Cleaning Oven Parts

| Oven Part | Cleaning Materials | General Directions |
|---|--|--|
| Broil element | | Do not clean broil element. Any soil will burn off during cooking. |
| Broiler pan and grid | Soap, a nonabrasive plastic scouring pad and water | Drain fat. Cool pan and grid slightly. (Do not let soiled pan and grid stand in oven to cool.) Sprinkle with soap. Fill pan with warm water. Let pan and grid stand for a few minutes. Wash and scour if necessary. Rinse and dry. Broiler pan and grid may also be cleaned in the dishwasher. |
| Interior oven door, outside door gasket | Soap and water | Cool before cleaning. Frequent wiping with mild soap and water will prolong the time between major cleanings. Be sure to rinse thoroughly. For extra dried on soil a mild abrasive can be used. Never use strong abrasives, gritty cleaners, commercial oven cleaners or steel wool. |
| Oven door gasket | Do not clean | Gaskets should not be cleaned. Care should be taken not to wet or rub the gasket. |
| Oven racks | Soap and water | For heavy soil, clean by hand and rinse thoroughly. Remove oven racks for ease in cleaning. |
| Outside of oven | Soap and water | Wash all glass with cloth dampened in soapy water. Rinse and polish with a dry cloth. Do not use cleaning products containing ammonia. |

Component Testing Information



WARNING

To avoid risk of electrical shock, personal injury or death: disconnect power to oven before servicing, unless testing requires it.

| Illustration | Component | Test Procedure | Results |
|--------------|----------------------|---|---|
| | Oven light socket | Test continuity of receptacle terminals. Measure voltage at oven light. | Indicates continuity with bulb screwed in. 120 VAC, see wiring diagram for terminal identification. If no voltage is present at oven light check wiring. |
| | Bake element | Test continuity of terminals. Test voltage to terminals. | Indicates continuity. 240 VAC |
| | Broil element | Test continuity of terminals. Test voltage to terminals. | Indicates continuity. 240 VAC |
| | Convection element | Test continuity of terminals. Test voltage to terminals. | Indicates continuity. 240 VAC |
| | Convection motor fan | Verify supply voltage. Check continuity of terminals, and verify terminals are not shorted to chassis. | 120 VAC Continuity Convection fan will stay ON, when oven door is opened. |
| | Blower motor | Verify supply voltage. Check continuity of terminals, and verify terminals are not shorted to chassis. | 120 VAC Continuity |
| | Heraeus sensor | Measure resistance. | Approximately 1100 Ω at room temperature 75° F. |
| | Hinge | Carefully open the hinge fully, and insert a wooden dowel or screwdriver bit into opening. Remove top and bottom screws securing hinge. Slide hinge top towards rear of unit and guide hinge out through frame opening or storage drawer. | <div style="border: 1px solid black; padding: 5px;"> CAUTION Do not place hands in hinge area when oven door is removed. Hinge can snap closed and pinch hands or fingers.</div> |
| | Door lock switch | Switch connection in following positions: Unlocked Locked | COM-NO=Open, COM-NC=Closed COM-NO=Closed, COM-NC=Open |
| | Controls | Verify proper operation. 31-308417-02-0 Fan control 31-31751801-0 Control limit | Open at 115°F, Closes at 155°F Open at 260°F, Closes at 220°F |
| | Door plunger switch | Remove switch from unit and measure the following points: C-NC C NO | Plunger in infinite, Plunger out continuity. Plunger in continuity, Plunger out infinite. |

Component Testing Information

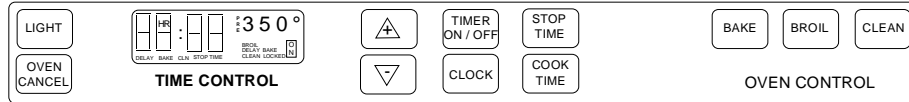


WARNING

To avoid risk of electrical shock, personal injury or death: disconnect power to oven before servicing, unless testing requires it.

ERC mylar touch system

AOES3030



AOCS3040



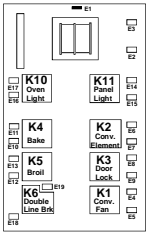
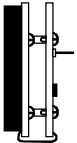
| Illustration | Component | Test Procedure | Results |
|--------------------------|-------------------------------|--|--|
| See illustrations above. | Mylar touch system ERC4800 | <p>F1 - Control malfunction.</p> <p>F2 - Oven over temperature.</p> <p>F3 - Open sensor or sensor circuit.</p> <p>F4 - Shorted sensor or sensor circuit.</p> <p>F7 - Shorted input key.</p> <p>F9 - Door lock or door lock circuitry malfunction.</p> <p>FF - door lock circuitry malfunction at clean temperature.</p> <p>DOOR - Lock status is not sensed within 90 seconds of energizing door lock relay.</p> | <p>Replace ERC.</p> <p>Check sensor wiring, sensor , and temperature limiter.</p> <p>Check sensor resistance and wiring.</p> <p>Check sensor resistance and wiring.</p> <p>Verify glass to adaptor board connection, replace glass panel.</p> <p>Check latch switch.</p> <p>Check latch switch and door motor.</p> <p>Verify operation of door latch switches.</p> |
| ERC4800 Controlled | Oven temperature adjustment | <p>Press BAKE.</p> <p>Press + slew pad until an oven temperature greater than 500° shows on display.</p> <p>Immediately press and hold BAKE until "00" appears in display, approximately 5 seconds.</p> <p>To decrease oven temperature (for a cooler oven), press - slew pad until negative numbers appear. Oven can be adjusted from -5 to -35 degrees lower. To avoid overadjusting oven move temperature -5 degrees each time.</p> <p>To increase oven temperature (for warmer oven), press + slew pad until positive numbers appear. Oven can be adjusted 5 to 35 degrees higher. To avoid overadjusting oven move temperature 5 degrees each time.</p> <p>Press OVEN CANCEL. Temperature adjustment will be retained even though power failure.</p> | While increasing or decreasing oven temperature, this does not affect self-cleaning temperature. |
| ERC4800 Controlled | Twelve hour off | Control will automatically cancel any cooking operation and remove all relay drives 12 hours after the last pad touch. | |

Component Testing Information



WARNING

To avoid risk of electrical shock, personal injury or death: disconnect power to oven before servicing, unless testing requires it.

| Illustration | Component | Test Procedure | Results |
|--|----------------------------|---|---|
| ERC4800 Controlled | Child lock out | This is a safety feature that can be used to prevent children from accidentally programming the oven. It disables the electronic oven control. Press and hold Bake and Cook Time for 10 seconds. "OFF" will display where the temperature normally appears. To reactivate the control, press and hold Bake and Cook Time for 10 seconds. Child lockout features must be reset after a power failure. | |
|  | Relay board | Listen for relay to actuate. Verify input and output power. | If relay does not actuate, verify power to relay. |
|  | ERC/Adapter board assembly | F1 - Control malfunction. | Replace ERC. |

Field Selectable Options

Standard: The standard setup is 8. This is a 12 hour type of clock, 60 Hz line frequency and an oven with a convection fan.

Clock Time Format 12 or 24 hour format

The time of day and the stop time can be displayed in either a 12 or 24 hour format. The control will come in a 12 hour format and can be changed to a 24 hour format from the front control panel.

Clock Time Base 60 or 50 Hz input line frequency

This is a time reference for the clock, timer, and internal timing of the control. The control will select the frequency automatically when the control is powered up.

Selecting Options

In order to select the field selectable options, Press and hold the **CLOCK** pad on power up of the control. To change the options press one of the slew pads until the desired option appears and in approximately 9 seconds the control will change to the normal operation or once selected press the **CANCEL** pad. The right time digit will indicate the current options selected as listed in the table below. (Standard setting is 8.)

| Code Number | 24 Hour Clock | 50 Hz | No Convection Fan |
|-------------|---------------|-------|-------------------|
| 8 | — | — | — |
| 9 | X | — | — |
| H | — | X | — |
| r | X | X | — |
| o | — | — | X |
| d | X | — | X |
| - | — | X | X |
| Blank | X | X | X |

X = indicates Selected — = indicates Not Selected

Component Testing Information



WARNING

To avoid risk of electrical shock, personal injury or death: disconnect power to oven before servicing, unless testing requires it.

Element Conditions

Relay drive requirements are defined as a percentage of on time based on a 60 second cycle.

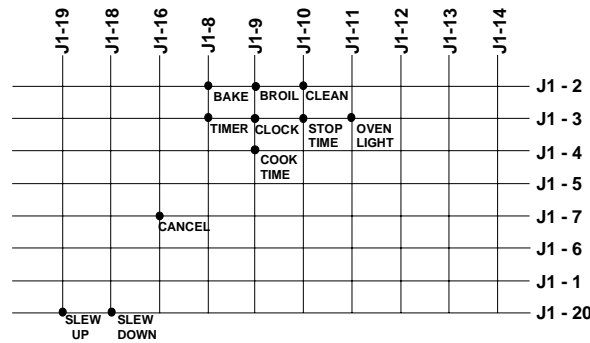
BakeFirst rise to temperature = 100% bake, 50% broil, then 100% bake, 25% broil

Broil.....100% broil, 0% bake

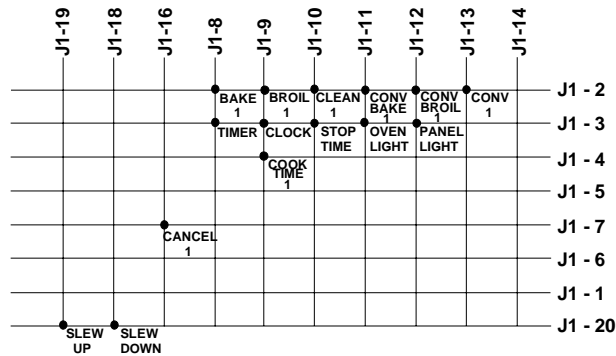
Clean100% broil, 25% bake

ConvectionFirst rise to temperature = 100% bake, 50% broil, then 100% Convection element
For convection bake or convection broil refer to bake and broil specifications

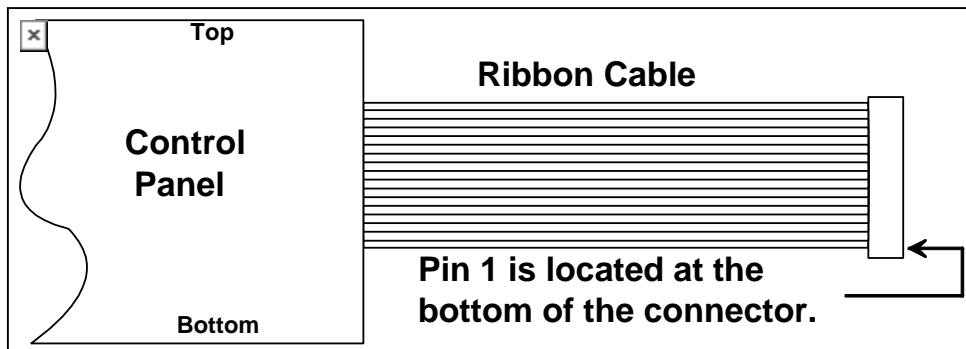
Continuity is indicated as 100Ω and below. Each pad must be pressed to perform the following test.



Switch Matrix for AOES3030



Switch Matrix for AOCS3040



Testing Procedures

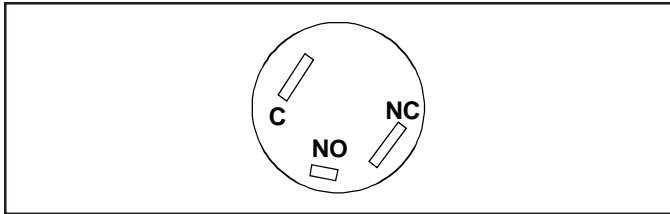


To avoid risk of electrical shock, personal injury or death; disconnect power to unit before servicing.

Oven Door Switch

Clean Safety/Light Switch (Power Off)

1. The switch has NO (normally open), NC (normally closed), and C (common) contacts.
2. Check the switch with an ohmmeter between C and NC with the plunger out. Continuity should exist. With the plunger in, no continuity.
3. Check the switch with an ohmmeter between C and NO with the plunger in. Continuity should exist. With the plunger out, no continuity.

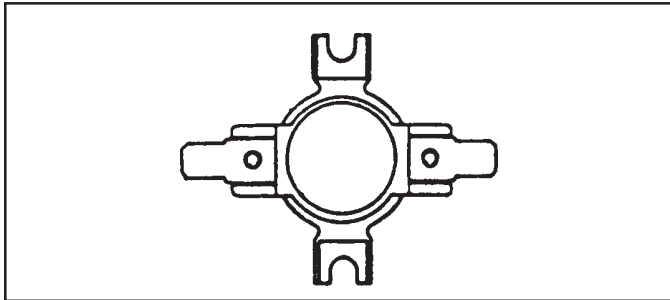


NOTE: When facing the range, the switch is on the left.

Oven High Limit/Fan Switch

Oven high limit is located on the rear of insulation retainer and connecting to the L2 side of electric supply, this switch is normally closed but will open if external temperature exceeds 260°F or 115°F, see chart below. Fan limit switch is located on the right side of insulation retainer.

| Part Number | Open | Close |
|-------------|-------|-------|
| 31751801 | 260°F | 220°F |
| 308417 | 115°F | 155°F |



1. Turn off power to range.
2. Remove oven from wall cutout.
3. Remove screws securing outer cabinet top shield to outer cabinet wrapper shield.
4. Disconnect wires from switch terminal connections.
5. Attach ohmmeter leads to switch terminals. At ambient room temperature (70°F.) continuity should be indicated.

Oven Temperature Sensor

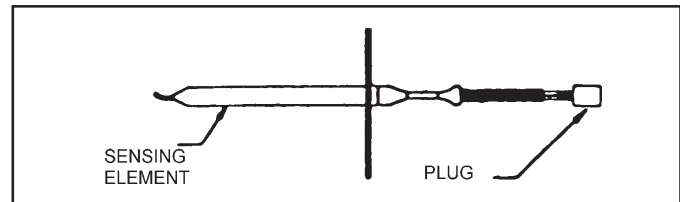
The oven temperature sensor can be checked by using the "Quick Test Mode" covered in this section of manual or detail testing can be accomplished as follows.

The oven temperature sensor is mounted in the oven cavity and electrically connected to the ERC. Following is approximate resistance.

- 75°F—1082 ohms
- 350°F—1656 ohms
- 550°F—2056 ohms
- 880°F—2686 ohms

Sensor resistance can be checked by removing the sensor interconnect harness plug from the ERC and inserting ohmmeter leads into the harness connector plug. A resistance reading of approximately 1100 ohms should be indicated at ambient room temperature (75°F.). If a higher resistance is indicated then remove sensor from oven, disconnect sensor from harness at plug, and recheck sensor resistance to assure that the problem is in the sensor and not in the interconnect harness or due to a bad connection.

NOTE: Sensor resistance will increase if held in your hand.



Blower Motor

Fan may come on at any time to cool components down.

1. Turn off power to oven.
2. Remove oven from wall cutout.
3. Remove screws securing outer cabinet top shield to outer cabinet wrapper shield.
4. Disconnect wires from motor terminal connectors.
5. Attach ohmmeter leads to terminal tabs on motor.
6. A resistance of ohms should be indicated but may vary with each motor tested. This test is to check the motor winding for an open or shorted winding. If zero or infinite ohms is indicated, the motor winding has failed and the motor must be replaced.

Testing Procedures



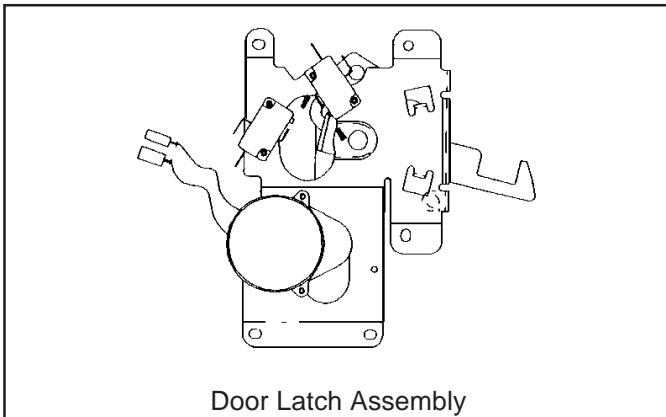
WARNING

To avoid risk of electrical shock, personal injury or death; disconnect power to unit before servicing.

Auto Latch Motor

Do not remove latch motor from latch assembly. If latch motor is defective, replace latch assembly.

1. Disconnect power.
2. Slide oven out from wall cutout approximately 6 inches to gain access to control panel screws.
3. Remove screws securing control panel to unit, and pull control panel out of unit to gain access to latch assembly.
4. Disconnect lead wires from latch motor.
5. Connect jumper cord leads to latch motor.
6. Connect jumper cord to 110 AC power source.
7. Replace if latch motor fails to operate.
8. Reverse procedure to reconnect.

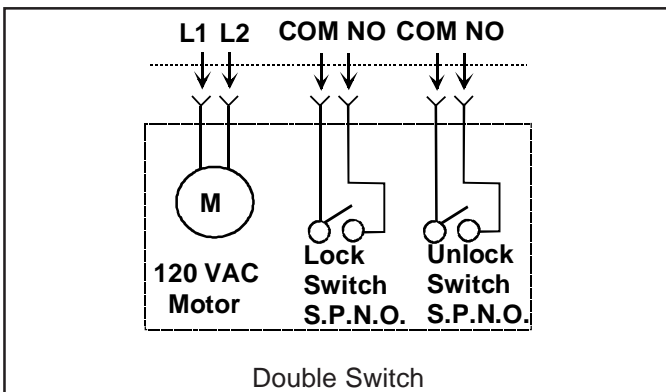


Door Latch Assembly

Auto Latch Switches

Both unlock and lock door latch switches may be replaced.

1. Perform steps 1 through 3, from "Auto Latch Motor".
2. Disconnect lead wires from door latch switch (unlock).
3. Set ohmmeter to the RX1 scale.
4. Attach meter leads to door latch switch (unlock).
5. Depress actuator arm. The meter should read continuity.
6. Reverse procedure to reconnect.
7. Use the same procedure to test the door latch switch (lock).



Double Switch

Convection Fan Motor

1. Turn off power to oven.
2. Remove oven from wall cutout.
3. Remove access fan plate to gain access to convection fan motor.
4. Disconnect wires from motor terminal connectors.
5. Attach ohmmeter leads to terminal tabs on motor.
6. A resistance reading of 15-30 ohms should be indicated but may vary with each motor tested. This test is to check the motor winding for an open or shorted winding. If zero or infinite ohms is indicated, the motor winding has failed and the motor must be replaced.

Convection Element Testing

1. Disconnect power to oven.
2. Remove screws securing oven door to hinges and remove door.
3. Remove screws securing fan cover to gain access to convection element.
4. Remove screws securing convection element, and pull gently outward to gain access to wire terminals.
5. Remove wire connector from element.
6. Attach ohmmeter leads to each of the element terminals. Set ohmmeter to RX1 or RX10 scale.
7. Low ohms or continuity should be indicated.

Broil Element Testing

1. Disconnect power to oven.
2. Remove screws securing oven door to hinges and remove door.
3. Remove screws securing broil element reflector.
4. Gently pull downward and out to gain access to wire terminals.
5. Remove wire connector from element.
6. Attach ohmmeter leads to each of the element terminals. Set ohmmeter to RX1 or RX10 scale.
7. Low ohms or continuity should be indicated.

Bake Element Testing

1. Disconnect power.
2. Remove oven from wall cutout.
3. Remove screws securing element panel.
4. Remove screws securing element access plate.
5. Remove wire connector from element.
6. Attach ohmmeter leads to each of the element terminals. Set ohmmeter to RX1 or RX10 scale.
7. Low ohms or continuity should be indicated.

Disassembly Procedures

WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect power to unit before servicing.

WARNING

To avoid risk of personal injury or property damage this unit requires a two man lift when lifting unit in or out of cutout.

WARNING

While unplugging electrical connections, pins may be damaged, use extreme care when disconnecting.

Removing and Replacing Oven

1. Turn off power to the oven at the circuit breaker.
2. Open oven door and remove screws securing unit to the wall.
3. Pull the oven forward out of the cabinet opening.
4. Disconnect or unplug the power cord leading from unit to fuse box or junction box depending on unit.
5. Replace the oven using the installation instructions.

3. Disconnect all electrical connection from E.R.C. unit.
4. Remove screws securing E.R.C. to control glass panel.
5. Reverse procedure to reinstall E.R.C..

Control Panel

1. Turn off power to unit.
2. Open oven door and remove screws securing unit to the wall.
3. Slide unit approximately 6 inches out of wall cutout.
4. Remove screws securing control panel to unit, located on the outer portion of trim.
5. Gently pull control panel forward to gain access to wire terminals.

Transformer/Relay Board

1. Turn power off to unit.
2. See "Control Panel" for removal.
3. Disconnect and label wire terminals.
4. Release plastic tabs securing circuit board to control glass panel.
5. Reverse procedure to reinstall.

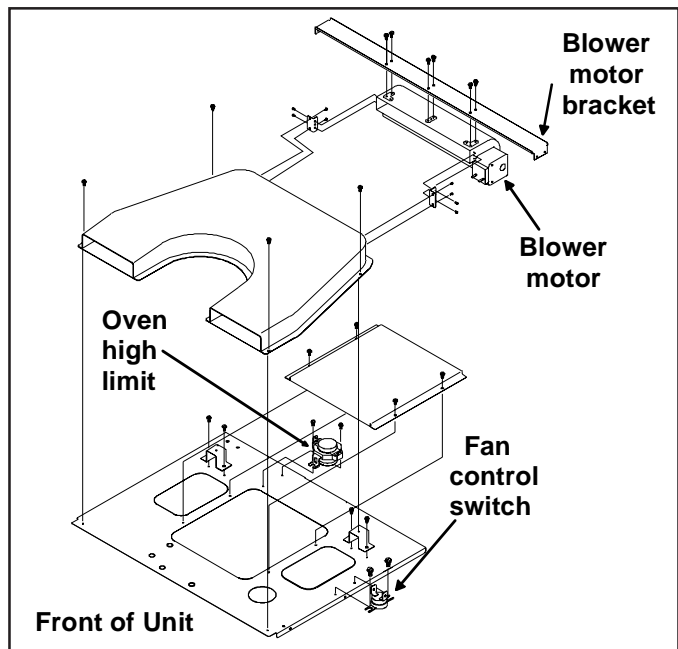
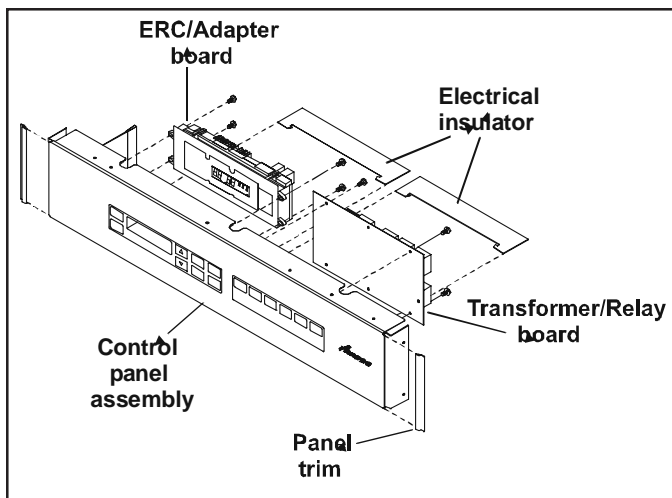
Oven High Limit/Fan Control Switch

1. Turn power off to unit.
2. Open oven door and remove screws securing unit to the wall.
3. Remove oven from cutout opening.
4. Disconnect or unplug the power cord leading from unit to fuse box or junction box depending on unit.
5. Remove screws securing outer wrapper top cover to outer wrapper cover.
6. Disconnect and label wire terminals connected to limit switch.

WARNING

While unplugging electrical connections, pins may be damaged, use extreme care when disconnecting.

6. Disconnect and label wire terminals.
7. Reverse procedure to reinstall control panel.



ERC/P.C. Board

1. Turn off power to unit.
2. See "Control Panel" for removal.

7. Remove screws securing high limit switch.
8. Reverse procedure to reinstall switches.

Disassembly Procedures



To avoid risk of electrical shock, personal injury, or death, disconnect power to unit before servicing.

Oven Sensor

1. Turn off power to unit
2. Open oven door or remove oven door, see "Door Removal".
3. Remove screws securing sensor to top right rear corner of oven cavity.
4. Pull sensor forward, maneuver wires through insulation to disconnect wire plug connector.
5. Reverse procedure to reinstall sensor.

Bake Element

1. Turn off power to unit.
2. Open oven door and remove screws securing unit to the wall.
3. Remove oven from cutout opening.
4. Disconnect or unplug the power cord leading from unit to fuse box or junction box depending on unit.
5. Remove screws securing access element panel.
6. Remove screws securing element panel.
7. Disconnect wire terminals from bake element.
8. Remove screws securing element support bracket.
9. Gently pull element support bracket out.
10. Remove screws securing bake element to support element bracket.
11. Reverse procedure to reinstall bake element.

Broil Element/Broil Element Reflector

1. Turn off power to unit.
2. Open oven door or remove oven door, see "Door Removal".
3. Remove screws securing broil element reflector to top of oven cavity.
4. Pull front of broil element reflector down and forward to allow disconnection of terminals on each element leg.
5. Remove rivets securing broil element brackets to broil element reflector.
6. Reverse procedure to reinstall broil element.

NOTE: Use rivets to fasten broil element brackets to broil element reflector.

Convection Heating Element

1. Turn off power to unit.
2. Open oven door or remove oven door, see "Door Removal".
3. Remove screws securing fan cover to rear of oven cavity.
4. Remove screws securing convection heating element to rear wall of oven cavity.
5. Pull element forward to expose wire connections for disconnection.
6. Reverse procedure to reinstall convection heating element.

Convection Fan Blade

1. Turn off power to unit.
2. Open oven door or remove oven door, see "Door Removal".
3. Remove screws securing fan cover to rear of oven cavity.
4. Using an adjustable wrench, and **turning clockwise**, remove the nut in center of convection fan blade. (Nut is Left Hand Thread).
5. Remove fan blade from D stem motor shaft.

NOTE: Behind fan blade is a washer and C clip on motor shaft which must be in position for correct reassembly. (To prevent Fan Blade hitting cavity).

Convection Fan Motor

1. Turn off power to unit.
2. Open oven door and remove screws securing unit to the wall.
3. Remove oven from cutout opening.
4. Disconnect or unplug the power cord leading from unit to fuse box or junction box depending on unit.
5. Remove convection fan blade and spacer washer, see "Convection Fan Blade" procedure.
6. Remove access fan panel from outer wrapper cover.
7. Disconnect and label wires from convection fan motor.
8. Remove screws securing convection fan motor assembly to convection motor mounting bracket.
9. Reverse procedure to reinstall.

Automatic Oven Door Latch Assembly

1. Turn off power to unit.
2. See "Control Panel" for removal.
3. Disconnect and label wire terminals.
4. Remove screws securing latch assembly to chassis.
5. Reverse procedure to reinstall door latch assembly.

Door Plunger Light Switch

1. Turn off power to unit.
2. Remove control glass panel, see "Control Panel".
3. Squeeze metal tab and push switch outward to gain access to wire terminals.
4. Label and disconnect wire terminals from switch.
5. Reverse procedure to reinstall.

Disassembly Procedures



To avoid risk of electrical shock, personal injury, or death, disconnect power to unit before servicing.

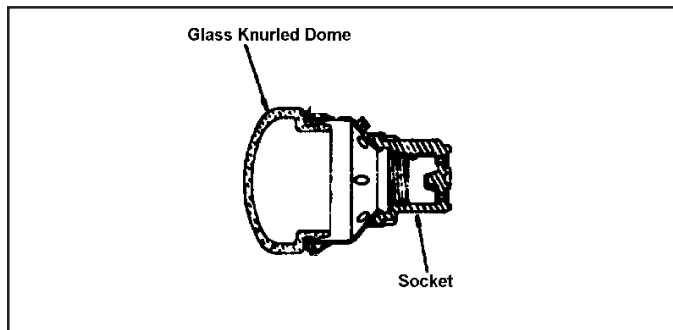
Oven Light Bulb/Oven Light Socket

1. Turn off power to unit.
2. Open oven door to gain access to oven light.
3. Unscrew (counterclockwise) glass knurled dome.
4. Using a glove, unscrew (counterclockwise) oven light bulb.

NOTE: Proceed with the following steps for oven light socket removal.

5. Remove screws securing unit to the wall.
6. Remove oven from cutout opening.
7. Disconnect or unplug the power cord leading from unit to fuse box or junction box depending on unit.
8. Remove screws securing outer wrapper top cover and remove.
9. Carefully displace fiberglass insulation away from rear of light socket.
10. Push inner assembly of light socket towards rear of range.
11. Disconnect wires from light socket.
12. Reverse procedure to reinstall light socket.
Reposition insulation around lamp socket. Do not overtighten.

NOTE: Reposition fiberglass insulation around oven light socket to eliminate possibility of heat related problems.



Oven Tank Removal

1. Turn off power to unit.
2. Open oven door and remove screws securing unit to the wall.
3. Remove oven from cutout opening.
4. Disconnect or unplug the power cord leading from unit to fuse box or junction box depending on unit.

5. Remove broil reflector/element, convection fan cover, convection element, convection fan blade, oven light cover, light bulb, oven light socket, heat sensing element, smoke eliminator screws, and disconnect ground wire from oven light bracket.
6. Remove screws securing outer wrapper top cover, and outer wrapper cover.
7. Remove screws securing chip cover and remove chip cover.
8. Remove screws securing tank hooks, located on the outside rear of the unit.
9. Using both hands, press upward in the back of oven cavity to release tank hooks.
10. Grasp either the right or left corners of oven cavity to maneuver cavity outward. If problems arise getting cavity started outward, use a small thin plastic or wood prying device in the corners of the cavity to start cavity moving outward.
11. Transfer oven light bracket to replacement tank.
12. Reverse procedure to assemble.

NOTE: Unit should be run through at least one clean cycle to set insulation.

Oven Door Removal

1. Open oven door and remove screws securing door to hinge assembly.
2. Place oven door in first stop position, then grasp both sides and lift up off the hinges.
3. Reverse procedure to assemble.

Frameless Door Disassembly

1. Remove oven door, see "Door Removal".
2. Remove screws on right and left sides of oven door.
3. Remove screws securing door liner to door face assembly.
4. Remove screws securing bottom shield and door bottom insulation.
5. Remove screws securing inner glass support securing top glass mounting brackets and bottom glass mounting brackets.
6. Remove glass mounting bracket and glass window.
7. Remove screws securing heat door liner shield and remove.
8. Remove screws securing door handle.
9. Reverse procedure to reassemble.

NOTE: When reassembling door, verify HB II marking on the glass is facing towards the heat (in side of the oven).

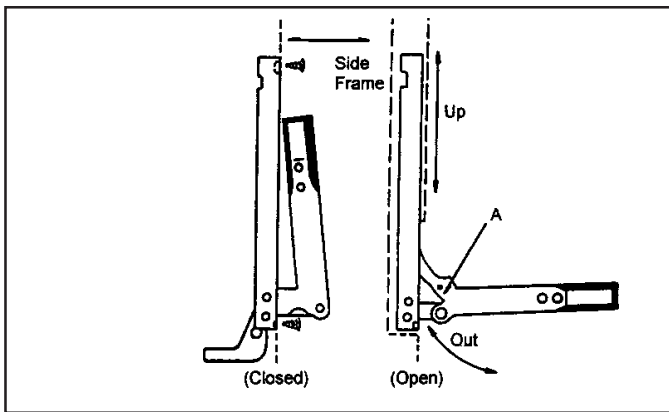
Disassembly Procedures



To avoid risk of electrical shock, personal injury, or death, disconnect power to unit before servicing.

Oven Door Hinge

1. Turn off power to unit.
2. Remove oven door, see "Door Removal".
3. Carefully open the hinge fully, and insert a wooden dowel or screwdriver bit into opening marked A on the following diagram.
4. Remove the top and bottom screws securing hinge assembly to the front frame.
5. Slide the hinge assembly up and move top of hinge towards rear of the range. Withdraw hinge assembly through the frame opening.
6. Reverse procedure to reinstall oven door hinge assembly.



Vent Assembly/Smoke Eliminator

1. Perform steps 1 through 8 of "Blower Motor".
2. Remove screws securing vent assembly to outer cabinet top wrapper.
3. Raise back of vent assembly and slowly maneuver vent assembly away from unit.
4. Remove screws securing smoke eliminator, located inside oven on top of oven cavity.
5. Reverse procedure to reinstall.

Outer Trim Assembly

1. Turn off power to unit.
2. Open oven door and remove screws securing unit to the wall.
3. Slide unit approximately 6 inches out of wall cutout being careful to not damage control panel.
4. Remove screws securing outer trim assembly to unit.
5. Reverse procedure to reinstall.

Blower Motor

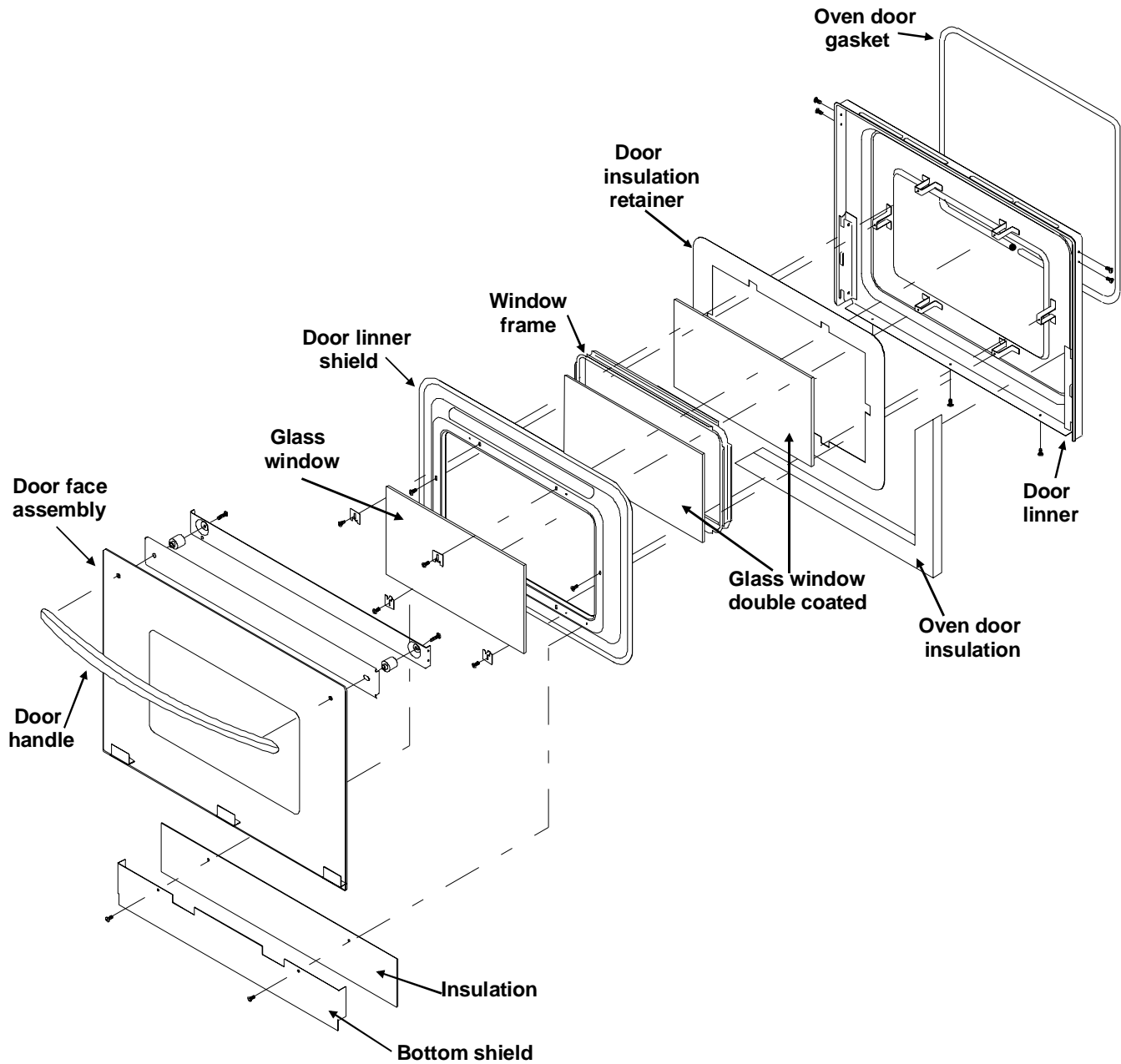
1. Turn power off to unit.
2. Open oven door and remove screws securing unit to the wall.
3. Remove oven from cutout opening.
4. Disconnect or unplug the power cord leading from unit to fuse box or junction box depending on unit.
5. Remove screws securing outer wrapper top cover to outer wrapper cover.
6. Remove screws securing blower vent bracket to outer wrapper cover and blower motor assembly.
7. Disconnect and label wire terminals connected to blower motor.
8. Remove screws securing blower motor assembly to vent assembly.
9. Reverse procedure to reinstall.

Disassembly Procedures



WARNING

To avoid risk of electrical shock, personal injury, or death, disconnect power to unit before servicing.



Door Assembly

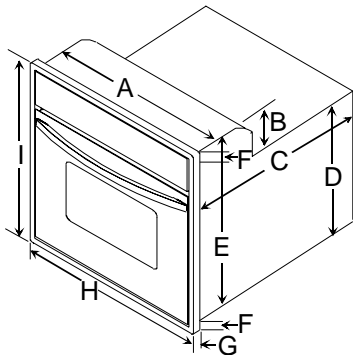
Appendix A

Installation Instructions

Packaging Material

Remove protective packing materials from oven. Tape residue can be removed with a soft cloth and alcohol.

Oven Dimensions

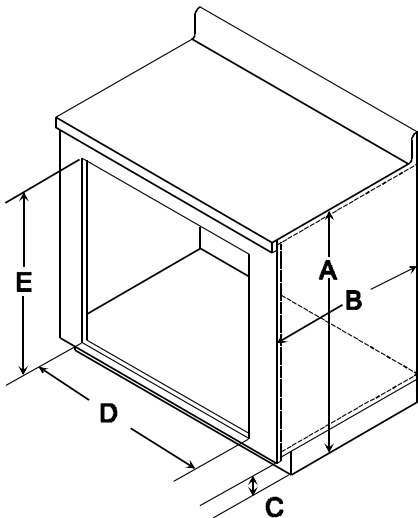


- | | | |
|------------|------------|------------|
| A. 28 1/4" | B. 3 1/2" | C. 23 1/4" |
| D. 23 1/8" | E. 26 5/8" | F. 1 1/16" |
| G. 1 1/4" | H. 29 3/4" | I. 28 3/8" |
- Depth of oven with handle 26 1/2"
Depth without handle 24 1/2"

Oven Location

Oven can be installed in wall or in an undercounter kitchen cabinet. For installation below cooktops see source from whom cooktop was purchased, or refer to cooktops owner's manual.

Cutout measures 28 1/2" wide x 27 1/4" high. Provide flat bottom for oven to rest on. Bottom must be level and flush with bottom edge of opening, and square to front of cabinet for proper installation.

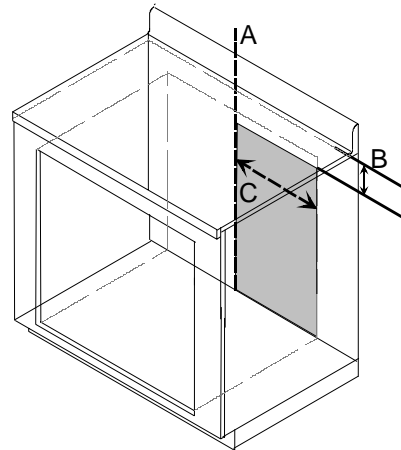


- | | |
|----------------------|--------------------|
| A. 36" | B. 23 1/2" minimum |
| C. 3 1/2" from floor | D. 28 1/2" |
| E. 27 1/4" | |

Line Voltage Requirements

Line voltage must not exceed rated voltage. Line voltage less than rated voltage will result in slow heating. Wiring system must conform to U.L. Standards and National Electrical Code. Installation must conform to all local, municipal and state building codes, and local utility regulations. Oven must be connected only to a supplied circuit as specified on rating plate.

This oven requires 3 wires, 115/230-120/240 volts, 60 Hertz A.C. Unit is equipped with a No. 10 ground wire in conduit. Oven should be fused separately from other appliances. Verify electric power is off from fuse box to junction box until oven is installed and ready to operate. Junction box should be installed in shaded area as shown and connected to a suitable ground.



- A. Center of wall oven cutout
- B. 2 1/2" from bottom of countertop
- C. 14 1/4" from center of cutout

House wiring and fusing must comply with local wiring codes. If no local codes are applicable, wire in accordance with the National Electrical Codes.

Installation Instructions

Connecting Wiring

WARNING

To avoid risk of personal injury or electrical shock, do not ground through neutral wire if installation is in a mobile home or if local codes do not permit grounding through a neutral.

Improper connections of aluminum house wiring to copper lead can result in property damage, personal injury or fire. Use only connectors designed for joining copper to aluminum and follow manufacturers' recommended procedure closely.

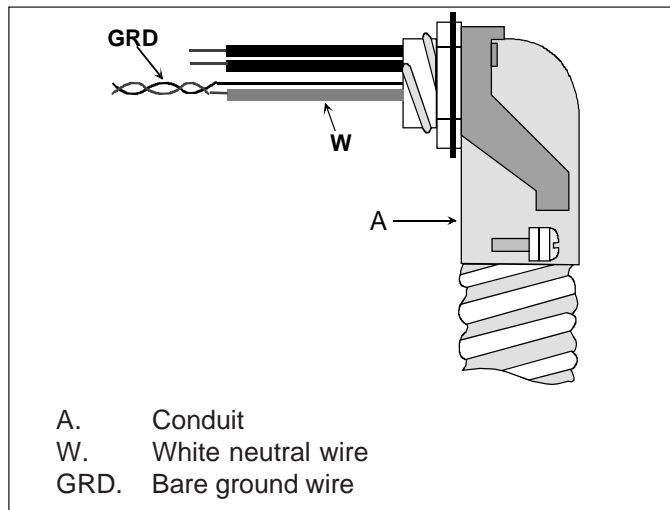
1. With oven positioned in front of cabinet opening, connect wire leads extending from conduit to junction box. Verify neutral (white) wire is connected to appropriate terminal. Check local code to see which option should be used in grounding unit.

Option 1

Attach oven ground wire (green or bare) to junction box (if grounded) or a suitable ground.

Option 2

Connect oven ground wire (green or bare) to house ground feed wire (green, bare, or white). If grounding through white wire, observe above warning.



If oven is used in a mobile home or if local codes do not permit grounding through neutral, open connection and use grounding lead to ground unit in accordance with local codes. Connect neutral lead to branch circuit neutral conductor in usual manner.

2. Connect red and black wires to appropriate house electrical wiring.
3. Verify wiring by connecting electrical power at fuse box and checking for proper operation of unit.
 - Some interior parts are finished with a protective coating of oil. When heated for first time oil will burn off and there will be some odor and smoke.
 - Do not block air openings in bottom front of oven when making installation.
4. Insert oven into cabinet and check for flush fit to face of cabinet. If necessary screw unit to cabinet using holes in top and bottom of trim and screws provided.

Installation Instructions

Wall Oven and Cooktop Combination Installation Specifications

Installer

NOTE: Save these instructions for local electrical inspectors use.

Leave these instructions and other literature with consumer for future reference.

Installations specified in these instructions are approved for the AKT3000, AK2T30, AK2T36, AK2H30, AK2H36, AKR3000 cooktops, and AKED3060, AKES3060 downdraft cooktops, above AOCS3040 and AOES3030 Amana wall ovens. Stacked and side-by-side wall oven installation applies to Amana AOCS3040 and AOES3030 wall ovens only.

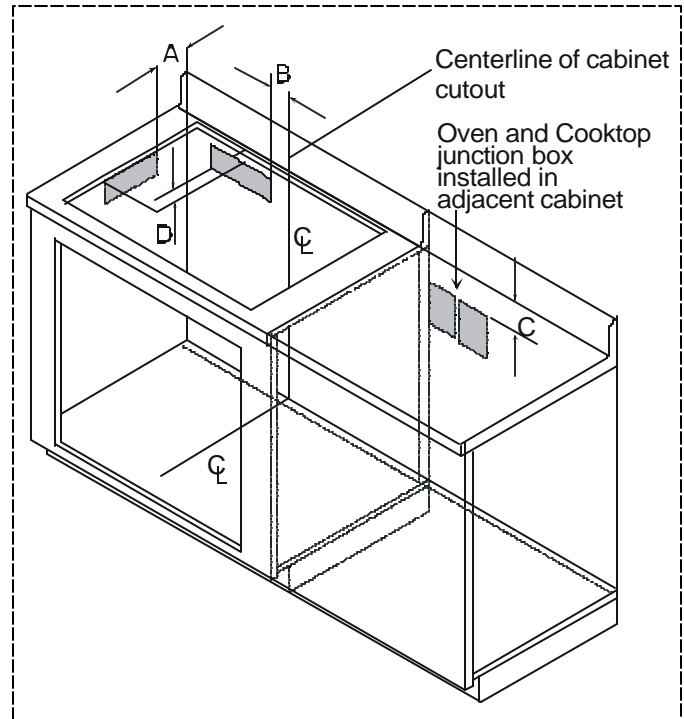
For additional individual unit requirements and clearances refer to the installation instructions packaged with the wall oven and cooktop.

All installations specified are for a 36" cabinet height, 23 1/2" minimum depth, and 3 1/4 x 10" venting.



WARNING

To avoid property damage or personal injury, information in these installation specifications must be followed exactly.

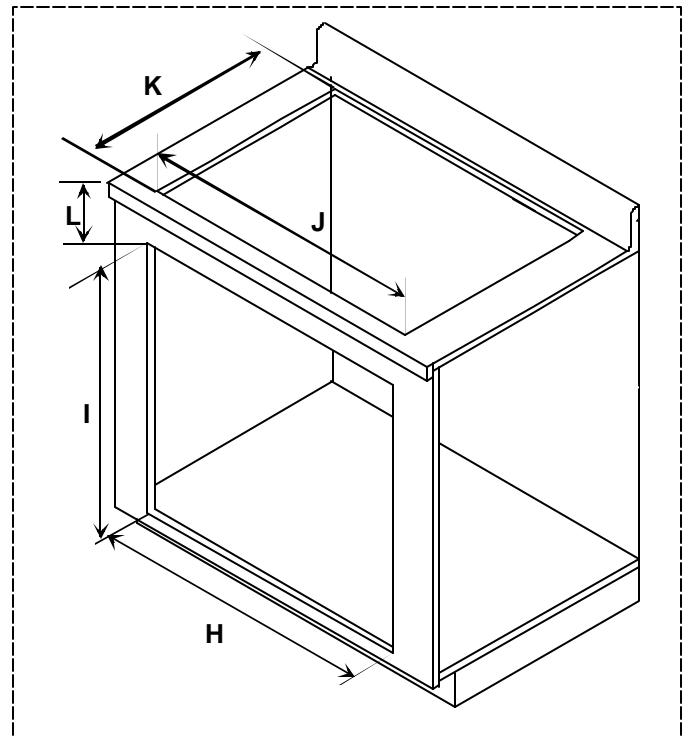


Listed by Underwriter's Laboratories

AKED3060 or AKES3060 Downdraft Cooktop above AOES3030 or AOCS3040 Wall Oven

Junction box location and 10 1/8 x 3 3/8 inch vent location indicated in black.

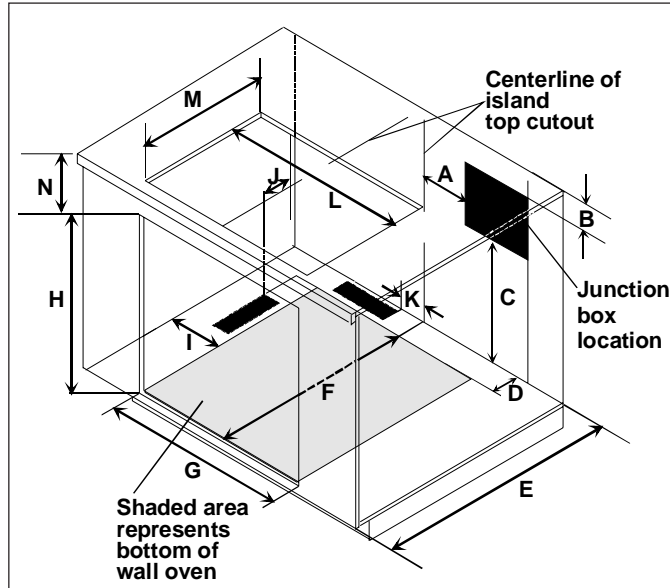
- A — 6 inches
- B — 4 1/2 inches (from top of countertop)
- C — 24 inches
- D — 4 3/8 inches from top of countertop to top of vent cutout
- H — 28 1/2 inch wall oven cutout width
- I — 27 1/4 inch wall oven cutout height
- J — 28 7/8 inch cooktop cutout width
- K — 20 5/8 inch cooktop cutout depth
- L — 4 1/2 inches from top of countertop to top of wall oven cutout



Installation Instructions

AKED3060 or AKES3060 Downdraft Cooktop above AOES3030 or AOCS3040 Wall Oven in an Island Application

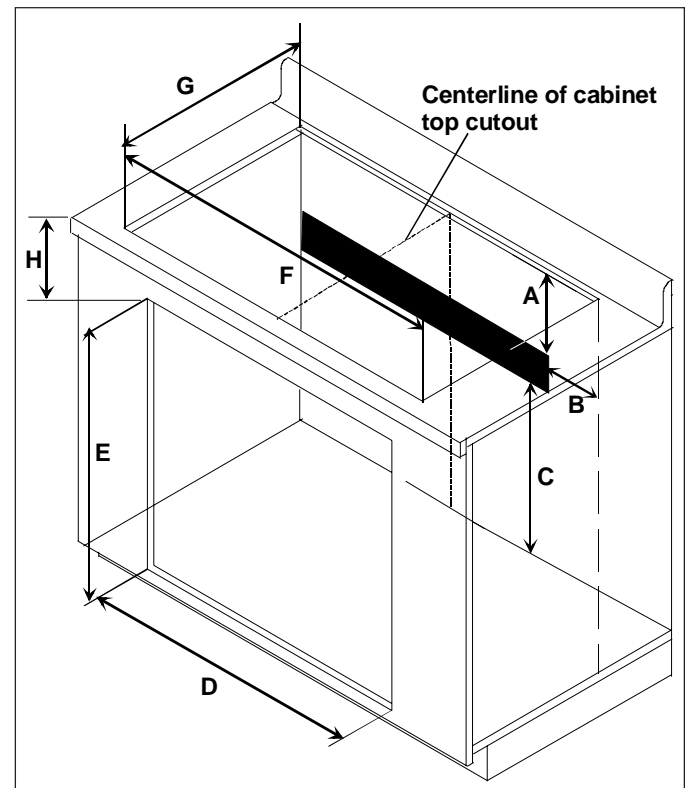
Illustration shows dimensions for venting behind, and to the left side of the wall oven. Left side venting for wider island applications only. Junction box and vent locations indicated in black. Grey shaded area indicates wall oven floor.



- A — 6 inches
- B — 4 1/2 inches (From top of countertop)
- C — 24 inches
- D — 3 1/2 inches minimum from back wall of island cabinet and back of wall oven
- E — 28 inch minimum island depth
- F — 23 1/2 inch minimum
- G — 28 1/2 inches
- H — 27 1/4 inches
- I — 3 1/2 inch minimum from side wall of island to side wall of oven
- J — 6 inches from back of cooktop cutout to back of vent cutout
- K — 4 7/32 inches from centerline to vent cutout
- L — 28 7/8 inches
- M — 20 5/8 inches
- N — 4 1/2 inches from top of countertop to top of wall oven cutout

AK2H36, AK2T36, 36" Electric Cooktop Installed above AOES3030 or AOCS3040 Wall Oven

Cooktop and wall oven junction box location indicated in black.

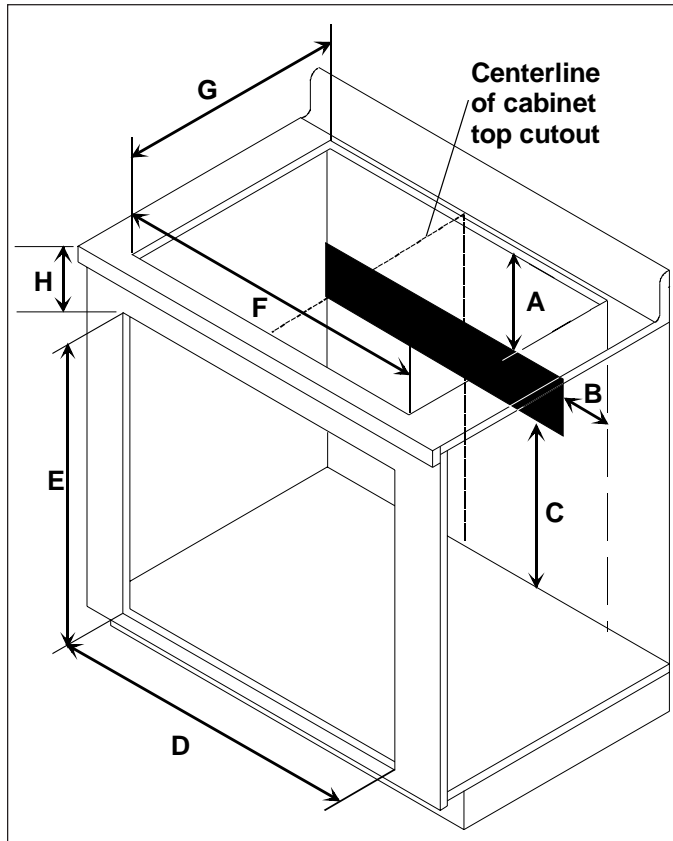


- A — 4 1/2 inches minimum from top of countertop
- B — 8 inches maximum
- C — 24 inches minimum
- D — 28 1/2 inches wall oven cutout width
- E — 27 1/4 inches wall oven cutout height
- F — 34 1/8 inches cooktop cutout width
- G — 20 3/4 inches cooktop cutout depth
- H — 3 3/16 inches from top of counter top to top of wall oven cutout

Installation Instructions

30" Electric Cooktop AK2H30, AK2T30, AKR3000, AKT3000, CAK2H30, CAK2T30 Installed above AOES3030 or AOCS3040 Wall Oven

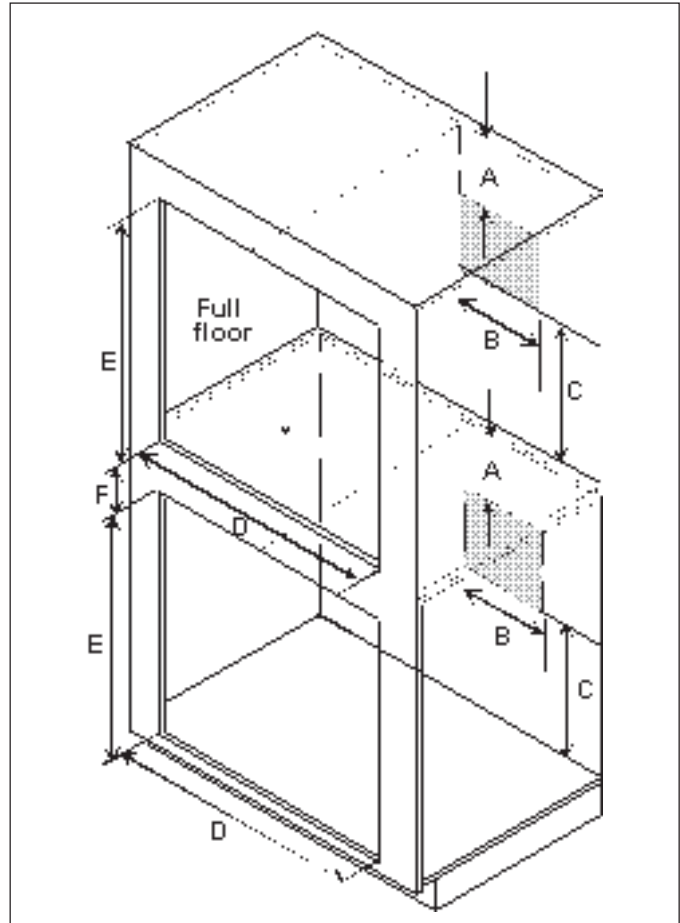
Cooktop and wall oven junction box location indicated in black.



- A — 4 1/2 inches minimum from top of countertop
- B — 8 inches maximum
- C — 24 inches minimum
- D — 28 1/2 inch wall oven cutout width
- E — 27 1/4 inch wall oven cutout height
- F — 28 7/8 inch cooktop cutout width
- G — 20 3/4 inch cooktop cutout depth
- H — 3 3/16 inches from top of countertop to top of wall oven cutout

AOES3030 or AOCS3040 Wall Oven Stacked Installation

Wall oven junction box location indicated in grey.

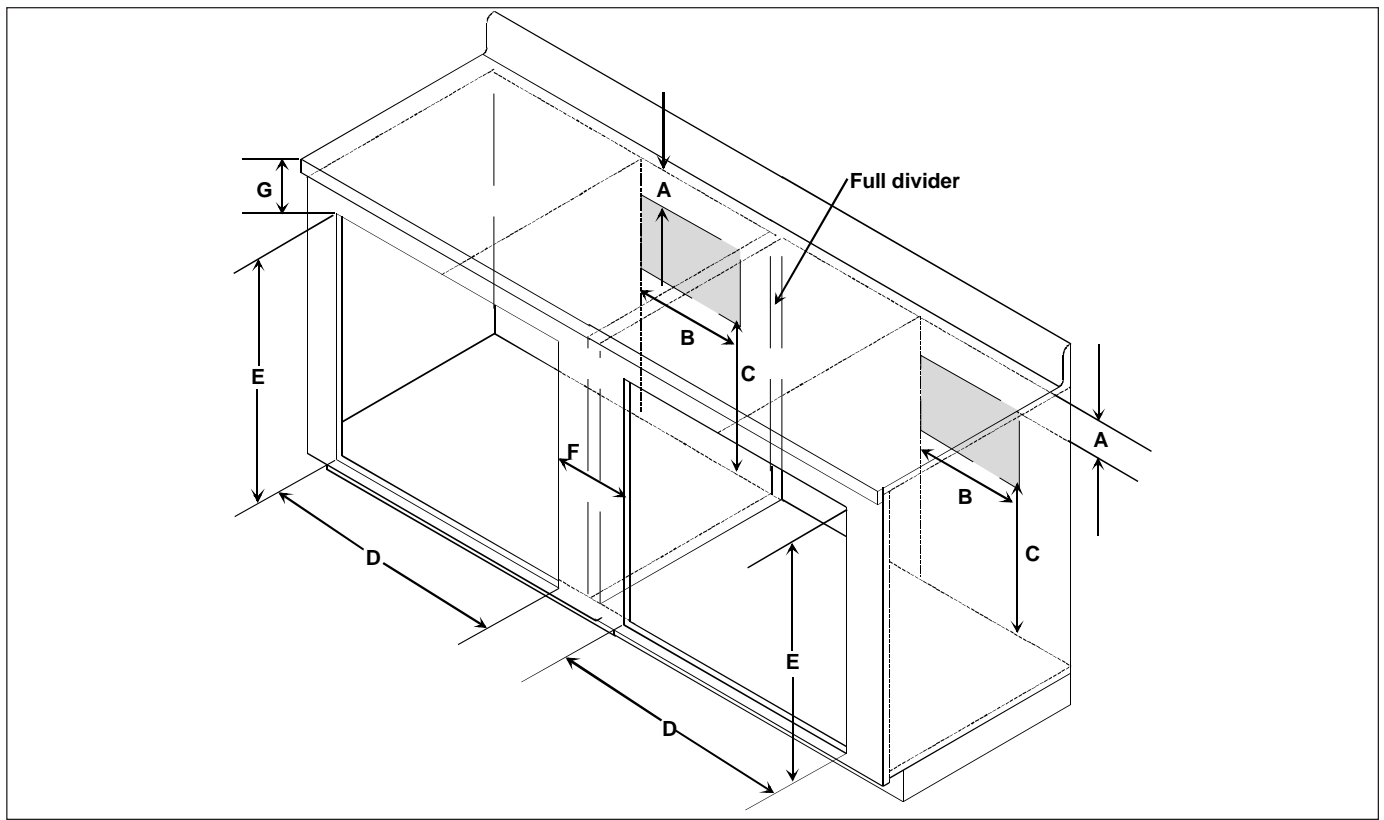


- A — 2 1/2 inches minimum from top of inside cabinet
 - B — 14 1/4 inches from center of cutout
 - C — 24 inches minimum
 - D — 28 1/2 inch wall oven cutout width
 - E — 27 1/4 inch wall oven cutout height
 - F — 3 inch minimum space between wall ovens
- For a single wall oven installation recommended height from floor to bottom of cutout is 32 inches.

Installation Instructions

AOES3030 or AOCS3040 Wall Oven Installed Side-by-Side

Wall oven junction box location indicated in grey.

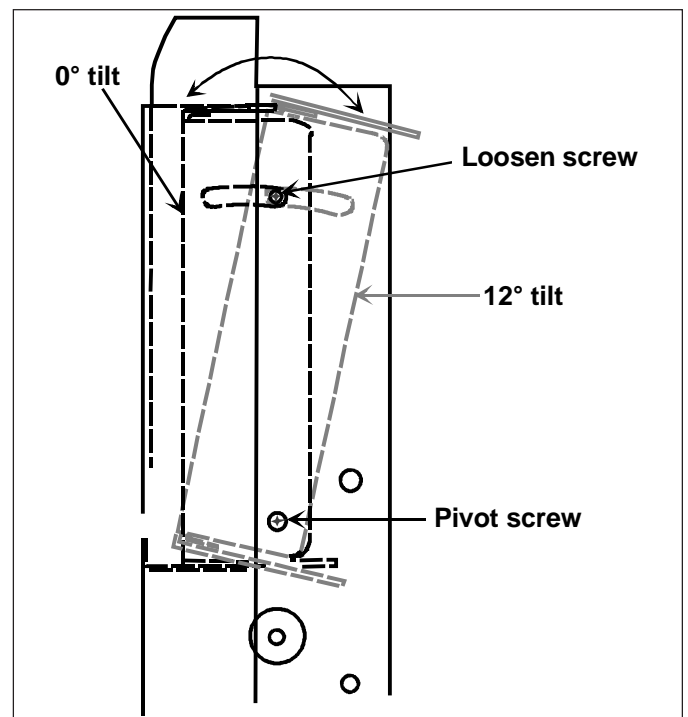


- A — 1 inch minimum from bottom of countertop
- B — 14 $\frac{1}{8}$ inches maximum from center of cutout
- C — 24 inches minimum
- D — 28 $\frac{1}{2}$ inch wall oven cutout width
- E — 27 $\frac{1}{4}$ inch wall oven cutout height
- F — 1 $\frac{3}{4}$ inches minimum
- G — $\frac{7}{8}$ inches minimum from bottom of countertop to top of cabinet

Tilting Control Panel

Control panel can be adjusted to tilt from 0° to 12° to make more visible.

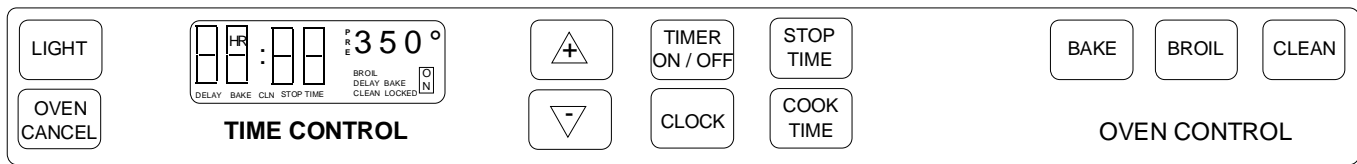
1. Loosen screws on top, and sides of control panel and pivot screw on bottom, sides of control panel before installing oven, or while oven partially pulled from opening.
2. Adjust control panel to desired angle and retighten screws.



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Appendix B

Programming Instructions—ERC for AOES3030



Electronic Oven Control Options

LIGHT— Use to turn light on and off inside oven. Light will automatically turn on when oven door is opened.

TIMER ON/OFF— Use to time any kitchen function or cancel timer.

STOP TIME— Use to set delayed bake and delayed self clean.

CLOCK— Use to set time of day.

OVEN CANCEL— Cancels any cooking or cleaning function.

COOK TIME— Use to set timed or delayed baking.

BAKE— Use to set bake.

BROIL— Use to set broil

CLEAN— Use to set self-clean.

▲ or ▼— Use to select temperature or time.

Special Oven Control Functions

Preheat Signal

After setting the oven to cook and selecting a temperature, oven will preheat. When oven reaches set temperature, a 1-second signal will sound.

End-of-Cycle Signal

When a timed cycle is complete, three long signals will sound. End of cycle signal will continue to sound until **CANCEL** is touched. If **TIMER ON/OFF** end-of-cycle signal is sounding, touch **TIMER ON/OFF**.

Child Lockout

This is a safety feature used to prevent children from accidentally programming oven. It disables electronic oven control. Touch and hold **BAKE** and **COOK TIME** for 5 seconds. "OFF" will display where the temperature normally appears. To reactivate control, press and hold **BAKE** and **COOK TIME** pads for 5 seconds. Child lockout feature must be reset after a power failure.

12-hour Automatic Cancel

This is a safety feature that prevents oven from continuing to operate if it has been left on for over 12 hours. If a cooking function continues longer than 12 hours without any oven control options being touched, this feature turns oven off. Any time an option is touched 12-hour automatic cancel is reset.

Timer Signal

When time elapses, timer beeps 3 times then once every 10 seconds until cancelled.

Increasing ▲ or ▼ Pad Speed

When setting time and temperature, hold pad to accelerate rate at which numbers increase or decrease.

Self-diagnostic System

Electronic range control has a self-diagnostic system. Self-diagnostic system sounds a series of short, rapid beeps and shows an "F-code" in display when there is a problem.

Programming Instructions—ERC for AOES3030

Quick Reference Instructions

Read "Important Safety Information" before using "Quick Reference Instructions". If there are unanswered questions, refer to detailed sections of this manual.

- Oven cooling fan will come on every time an oven function is selected and may come on during extended oven operation.
- Oven display will blink once per second after disconnection of power or initial start up until clock is reprogrammed.

Setting Clock

1. Press *CLOCK* pad.
2. Press Δ or ∇ pad until correct time of day "AM", or "PM" appears in display.

Setting Minute Timer

1. Press *TIMER ON/OFF* pad.
2. Press Δ pad until desired amount of time is displayed.
 - Timer can be set from 5 seconds to 9 hours and 55 minutes.
3. When time elapses timer beeps 3 times then approximately once every 7 seconds.
 - Press *TIMER ON/OFF* to cancel beep for up to 5 minutes, or press *TIMER ON/OFF* and Δ or ∇ to return to 0:00 .

Canceling Minute Timer

- Press *TIMER ON/OFF* pad for approximately 5 seconds.
- When canceling minute timer do not press *OVEN CANCEL* pad. Pressing *OVEN CANCEL* pad cancels cooking function.

Baking or Broiling

1. Press *BAKE* or *BROIL* pad.
2. Press Δ or ∇ pad until desired temperature or broiler setting is displayed.
3. Oven begins baking or broiling automatically.

Canceling Bake or Broil

Press *OVEN CANCEL* pad.

Self Cleaning

1. Remove oven racks and all utensils from oven. Clean excess spills from oven.
2. Press *CLEAN* pad.
3. Press Δ or ∇ pad to adjust clean time. Clean can be set from 2 to 4 hours. Minimum recommended cleaning time is 3 hours.
4. Oven begins cleaning automatically.

Canceling Self-Cleaning Cycle

1. Press *OVEN CANCEL* pad.
2. When oven has cooled to a safe temperature, door will unlock.
 - When "LOCKED" no longer displays, oven temperature is safe. Do not force door while "LOCKED" displays.

Programming Instructions—ERC for AOES3030

Bake

Open oven door to confirm nothing is stored in oven cavity and set racks to proper height before baking. Preheat before placing food inside oven. Bake element is concealed under the Spillsaver™ oven bottom.

1. Press **BAKE** pad.
2. Press Δ or ∇ pad until desired temperature is displayed.
 - Temperature begins at 350°F and can be set from 170° to 550°F in 5° increments.
 - Time of day, temperature, "BAKE", and "ON" display.
 - Temperature starts at 100°F and increases in 5° increments until reaching set temperature. Some minor smoking is normal when using oven for first time. When cook temperature is reached, oven signal sounds for approximately 1 second.
3. Press **OVEN CANCEL** pad when finished.
 - Remove food from oven when cooking time has elapsed. Food left in oven can overcook.

Timed Bake

1. Place food in oven, or preheat oven depending on food item.
2. Press **COOK TIME** pad.
3. Press Δ or ∇ pad until desired cook time is displayed. Time can be set up to 11 hours and 50 minutes.
4. Press **BAKE** pad.
5. Press Δ or ∇ pad until desired temperature is displayed. Temperature can be set from 170° to 550°F.
 - "TIMED", "BAKE", will light in display. Oven will begin to bake at preset time and "ON" will light in display. When cooking time has elapsed, end-of-cycle signals 3 times and oven will automatically turn off. End-of-cycle signals every 7 seconds until cancel is pressed.
 - To cancel remaining cooking time press **OVEN CANCEL** pad.
 - Food should be removed from oven when cooking time has elapsed. Food left in oven may overcook.

Delayed Bake

1. Place food in oven.

CAUTION

To reduce risk of food poisoning due to bacterial growth and production of toxins, never hold meat, milk, fish or eggs for more than 2 hours before cooking.

2. Press **COOK TIME** pad.
3. Press Δ or ∇ pad until desired cooking time appears in display. Time can be set up to 11 hours and 50 minutes.
4. Press **STOP TIME** pad.
5. Press Δ or ∇ pad until desired stop time appears in display. Electronic control will calculate start time.
6. Press **BAKE** pad. 350° will appear in display.
7. Press Δ or ∇ pad until desired temperature appears in display. Temperature can be set from 170° to 550° F.
 - "DELAY", "TIMED", "BAKE", will light in display. Oven will begin to bake at preset time and "ON" will light in display. When cooking time has elapsed, end-of-cycle signals 3 times and oven will automatically turn off. End-of-cycle signals every 7 seconds until **OVEN CANCEL** pad is pressed.
8. When finished press **OVEN CANCEL** pad.
 - To cancel remaining cooking time press **OVEN CANCEL** pad.
 - Food should be removed from oven when cooking time has elapsed. Food left in oven may overcook.

Broiling

- Oven door must be closed while broiling.
- Remove excess fat from meat before broiling. Cut edges of meat to prevent curling.
- Place food on a cold ungreased broiling pan. If pan is hot, food sticks.
- All food should be turned at least one time, except fish. Begin broiling with skin side down.
- Season meat after it has browned.
- Broiling does not require preheating.
- Begin cooking using suggested rack levels. See "Broiling Guide" section to test broiler results. If food is not brown enough, cook on a higher rack position. If food is too brown, cook on a lower rack position.

WARNING

- To avoid risk of fire, do not line broiler grid with foil. Foil may trap grease on top of grid, close to element, causing a fire.
- Never leave oven unattended while broiling. Overcooking may result in a fire.

Programming Instructions—ERC for AOES3030

1. Center food on broiling grid and pan, place in oven.
 - Oven door must be closed while broiling.
2. Press *BROIL* pad.
 - "BROIL", and "---" displays.
3. Press Δ or ∇ until desired setting is displayed. Broil can be set from 170°F to HI.
 - Oven will begin to broil automatically. "ON", "BROIL", and the selected setting will be displayed.
4. When finished press *OVEN CANCEL* pad.

Self-Cleaning



WARNING

To avoid risk of fire, clean excess spills from oven interior.

- A small amount of smoke is normal when cleaning. Excessive smoke may indicate too much food residue has been left in oven or a faulty gasket.
 - Clean oven before it gets too dirty. Wipe up large spills before self-cleaning.
 - Do not use cleaning cycle if oven light cover is not properly in place.
 - Oven light will not work during clean cycle.
1. Remove oven racks and all cooking utensils from oven. Clean excess spills from oven interior.
 2. Press *CLEAN* pad.
 3. Press Δ or ∇ pad until desired cleaning time is displayed. Clean can be set from 2 to 4 hours. Recommended clean time is 3 hours.
 - Oven will begin to clean automatically. "CLEAN", "LOCK", and "ON" will light in display. As oven door locks and unlocks "LOCK" will flash in display. When door is locked, "LOCK" will remain in display. When cleaning cycle has elapsed, oven will automatically turn off. End-of-cycle signal will not sound.



CAUTION

To avoid risk of personal injury, do not touch oven vents or areas around vents during self-cleaning. These areas can become hot enough to cause burns.

To avoid risk of damage to automatic locking system, do not try to force oven door open when "LOCK" is flashing in display.

- When oven has cooled to a safe temperature, "LOCK" will disappear from display and door can be opened. "LOCK" will flash in display while unlocking.

Interrupt Self-Cleaning Cycle

1. Press *OVEN CANCEL* pad.
2. When oven has cooled to a safe temperature, door will unlock and can be opened.

Delayed Self-Cleaning

1. Remove oven racks and all cooking utensils from oven. Clean excess spills from oven interior.
2. Press *CLEAN* pad.
3. Press Δ or ∇ until desired cleaning time is displayed.
4. Press *STOP TIME* pad.
5. Press Δ or ∇ until desired stopping time is displayed. A starting time will automatically be calculated based on amount of cleaning time and stop time.
 - "DELAY", "CLEAN", and "LOCK" will light in display. As oven door locks and unlocks "LOCK" will flash in display. Oven will begin to clean at preset time and "ON" will light in display. When cycle is complete oven will automatically turn off.



CAUTION

To avoid risk of personal injury, do not touch oven vents or areas around vents during self-cleaning. These areas can become hot enough to cause burns.

To avoid risk of damage to automatic locking system, do not try to force oven door open when "LOCK" is flashing in display.

- When oven has cooled to safe temperature, "LOCK" will disappear from display and door can be opened.

Interrupt Self-Cleaning Cycle

1. Press *OVEN CANCEL* pad.
2. When oven has cooled to a safe temperature, "LOCK" will disappear from display and door can be opened.

Programming Instructions—ERC for AOES3030

Adjusting Oven Temperature

Oven temperature has been factory calibrated and tested. In unlikely event that oven consistently overcooks or undercooks food, oven temperature can be adjusted.

1. Press *BAKE* pad.
2. Press Δ until an oven temperature greater than 500°F shows in display.
3. Immediately press and hold *BAKE* pad until "00" appears in display, approximately 5 seconds.
4. To decrease oven temperature (for cooler oven), press ∇ until negative numbers appear. Oven can be adjusted from 05° to 35° lower. To avoid over-adjusting oven move temperature -5° each time.
5. To increase oven temperature (for a warmer oven) press Δ until positive number's appear. Oven can be set from 05° to 35° higher. To avoid overadjusting oven, move temperature 5° each time.
6. Press *OVEN CANCEL* pad. Temperature adjustment will be retained even through a power failure.

Service Tones and Codes

Electronic range control has a self-diagnostic system. Self-diagnostic system sounds a series of short, rapid beeps and shows an "F-code" in display when there is a problem. When electronic range control signals a problem, follow steps listed below.

1. Record "F-code" shown.
 - See, **DIGIT FAILURE DISPLAY** in "ERC Warnings and Failure Codes" section.
2. Disconnect electrical supply.
 - Pressing *OVEN CANCEL* pad or disconnecting electrical supply may eliminate "F-code". If failure continues, contact an authorized servicer.
3. Contact an authorized servicer to check range.

Testing Procedures



To avoid the risk of electric shock, personal injury or death, disconnect power before servicing, unless testing requires it.

Service Information

The ERC operates in conjunction with a separate relay/power supply circuit board, and oven temperature sensor(s) to control all bake, broil, convection, and self clean functions.

The ERC is connected through to a function panel to control minute timer, clock, stop time, oven light, panel light, cancel, bake, cook time, broil, convection bake, convection, convection broil, and clean. Slew pads are used to set times and temperatures.

The mylar control panel provides direct input to the ERC to control all functions.

The ERC display consists of two digital readouts which displays all timing functions, and all temperature functions.

The relay/power supply circuit board consists of relays for convection fan, oven light, convection element, bake, broil, door lock, and double line break operations controlled by the ERC, and a step down transformer with two secondary windings which convert 120 VAC input to filament voltage to power the ERC display.

The oven temperature sensor is mounted in the oven cavity and connected to the J4 connector on the rear of the ERC. As the oven temperature increases, the sensor resistance also increases. The ERC converts this resistance change to a corresponding temperature readout and to cycle the relay(s) to maintain the desired temperature setting.

The ERC is also capable of sensing certain failure conditions which can occur in the oven temperature sensor(s), the self clean latch switch(es) the adaptor board or the ERC itself. If the ERC senses a failure, power will be removed from the relays, an alarm will sound and a failure code will be displayed.

Each major component of the Electronic Range Control system is serviced as a separate part. However, each component and related wire harness must be tested prior to replacing an individual component.

Quick Test Procedure

“Quick Test” Mode for Electronic Range Control

Follow procedure below to use the quick test mode. Entries must be made within 32 seconds of each other or the control will exit the quick test mode. The quick test mode cannot be reactivated until power is disconnected from oven, and must be accessed within 5 minutes of powering up.

NOTE: To enter quick test mode, this **must** be the first key pad entered after power is applied.

1. Apply power to oven **press and hold COOK TIME** pad for 5 seconds.
2. Display will read the following:

| <u>Pad</u> | <u>Response</u> |
|-------------|--|
| CLEAN | Double Line Break (DLB) on and door lock status code displayed |
| BAKE | DLB and Bake on |
| CONV. BAKE | DLB, Bake and Conv Fan on |
| CONVECTION | DLB, Conv. Element and Fan on |
| BROIL | DLB and Broil on |
| CONV. BROIL | DLB, Broil and Conv. Fan on |
| STOP TIME | Beeper on |
| COOK TIME | Displays manufacturer code and sensor readings “000”=open sensor |
| TIMER | Displays dashes |
| CLOCK | All display segments illuminated |
| OVEN LIGHT | Oven light on |
| CANCEL | Exit Quicktest |
| SLEW | Sequences through display segments |

Testing Procedures



To avoid the risk of electric shock, personal injury or death, disconnect power before servicing, unless testing requires it.

ERC Warnings and Failure Codes

The Electronic Range Control is capable of detecting certain failures within the ERC, along with oven temperature sensor and self clean door latch switch.

The warnings and failure codes which may appear on the display:

If "d o o r" flashes in display, switch positions can only be displayed in Quicktest mode by touching clean pad, as shown below:

- 0 both switches are open
- 1 unlock switch closed, lock switch open
- 2 lock switch closed, unlock switch open
- 3 both switches are closed

DIGIT FAILURE DISPLAY

- F1 control malfunction - **Replace ERC**
- F2 oven over temperature - **Check Sensor Wiring, Sensor, and Temperature Limiter**
- F3 open sensor or sensor circuit (>3000) - **Check Sensor Resistance and Wiring**
- F4 shorted sensor or sensor circuit (<500) - **Check Sensor Resistance and Wiring**
- F7 shorted input key - **Verify control panel to p.c. board connection, test control panel continuity, Replace Control Panel**
- F9 door lock or door lock circuitry malfunction - **Check Latch Switch, check plunger switch**
- FF door lock circuitry malfunction at clean temperatures - **Check Latch Switch and Door Motor, check plunger switch**

Temperature Calibration Offset

The ERC incorporates $\pm 35^{\circ}\text{F}$. calibration offset capabilities for the oven. This adjustment will not effect the cleaning cycle temperature and will remain in memory if power is interrupted. Follow the procedures as listed to calibrate oven.

1. Press **BAKE** pad.
2. Press Δ until an oven temperature greater than 500°F shows in display.
3. Immediately Press and hold **BAKE** pad until "00" appears in display, approximately 5 seconds.
4. To decrease oven temperature (for cooler oven), press ∇ until negative numbers appear. Oven can be adjusted from -05° to -35° lower. To avoid over-adjusting oven move temperature -5° each time.
5. To increase oven temperature (for a warmer oven) press Δ until positive number appear. Oven can be set from 05° to 35° higher. To avoid over adjusting oven, move temperature 5° each time.
6. Press **OVEN CANCEL** pad. Temperature adjustment will be retained even through a power failure.

Function Switch Connection Check Procedure

The Quick-Test mode can be used to verify relay operation on the transformer/relay board. If the relay engages (clicks) during Quick Test mode it is generally operative.

Transformer/Relay Module

The relays for oven light, bake, broil, convection element, convection fan and double line break are controlled by approximately 24 VDC signal from the ERC. Input voltage is 102 - 132 VAC.

Testing of the relays is with voltage applied to oven **after** attaching voltmeter leads to appropriate terminals.

NOTE: If bake or broil do not work the first test would be the relay for double line break.

Double Line Break—K6

Drive voltage indicated at J1 connector Pins 1–3.

1. Turn off power to oven.
2. Attach voltmeter lead to E5 connector on relay board.
3. Attach voltmeter lead to E18 connector on relay module.
4. Turn on power and touch bake, broil, or convection.
5. If 240 VAC is indicated the double line break relay is closing. Otherwise, replace the transformer/relay board.

Bake Relay—K4

Double line break relay okay. Drive voltage at J1 connector Pins 3–5.

1. Turn off power to oven.
2. Attach voltmeter lead to E18 connector on relay board.
3. Attach voltmeter lead to E11 (BK) connector on relay module.
4. Turn on power and touch the bake pad.
5. If 240 VAC is indicated bake relay is operating.

Broil Relay—K5

Double line break relay okay. Drive voltage at J1 connector Pins 3–6.

1. Turn off power to oven.
2. Attach voltmeter lead to E18 connector on relay board.
3. Attach voltmeter lead to E12 (BR) connector on relay module.
4. Turn on power and touch broil pad.
5. If 240 VAC is indicated broil relay is operating.

Testing Procedures



WARNING

To avoid the risk of electric shock, personal injury or death, disconnect power before servicing, unless testing requires it.

Oven Light Relay—K10

Drive voltage at J1 connector Pins 1–4.

1. Turn off power to oven.
2. Attach voltmeter lead to E3 (neutral) connector on relay module.
3. Attach voltmeter lead to E17 connector on relay module.
4. Turn on power and touch oven light pad.
5. If 120 VAC is indicated oven light relay is operating.

Door Lock Relay—K3

Double line break relay okay. Drive voltage at J1 connector Pins 1–9.

1. Turn off power to oven.
2. Attach voltmeter lead to E3 (neutral) connector on relay module.
3. Attach voltmeter lead to E8 connector on relay module.
4. Turn on power and program cleaning cycle operation.
5. Two indications will be present during this test.
 - a. 120 VAC will be present when the lock assembly is being engaged.
 - b. 0 VAC is indicated when the door is locked and cleaning cycle is operational.

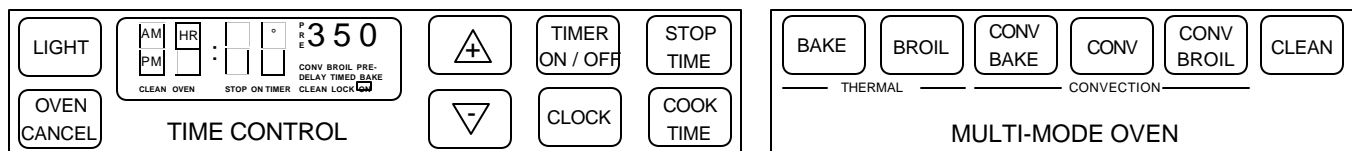
Display (Filament) Voltage

1. Turn power on, turn meter to VAC scale.
2. Touch meter lead to J1-1 terminal.
3. Touch meter to J1-14 terminal
4. Meter should indicate 3.2 VADC.

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Appendix C

Programming Instructions—ERC for AOCS3040



Electronic Oven Control Options

LIGHT — Use to turn light on or off inside oven. Light will automatically turn on when oven door is opened.

TIMER ON/OFF — Use to time any kitchen function or cancel timer.

STOP TIME — Use to set delayed bake and delayed self clean.

CLOCK — Use to set time of day.

OVEN CANCEL — Cancel any cooking or cleaning function.

COOK TIME — Use to set timed or delayed cooking.

BAKE — Use to set bake.

BROIL — Use to set broil.

CONV BAKE — Use to set convection bake.

CONV — Use to set convection.

CONV BROIL — Use to set convection broil.

CLEAN — Use to set self-clean.

▲ or ▼ — Use to select temperature or time.

Special Oven Control Functions

Preheat Signal

After setting oven to cook and selecting a temperature, oven will preheat. When the oven reaches the set temperature, a 1-second signal will sound.

End-of-Cycle Signal

When a timed cycle is complete, three long signals will sound. End of cycle signal will continue to sound until **CANCEL** is touched. If **TIMER ON/OFF** end-of-cycle signal is sounding, touch **TIMER ON/OFF**.

Child Lockout

This is a safety feature used to prevent children from accidentally programming oven. It disables electronic oven control. Touch and hold **BAKE** and **COOK TIME** for 5 seconds. "OFF" will display where the temperature normally appears. To reactivate control, touch and hold **BAKE** and **COOK TIME** for 5 seconds. Child lockout feature must be reset after a power failure.

12 Hour Automatic Cancel

This is a safety feature that prevents oven from continuing to operate if it has been left on for over 12-hours. If a cooking function continues longer than 12-hours without any options on oven control being touched, this feature turns oven off. Any time an option is touched, 12-hour automatic cancel is reset.

Timer Signal

When time elapses, timer beeps 3 times then once every 10 seconds until cancelled.

Increasing ▲ or ▼ Pad Speed

When setting time and temperature, hold pad to accelerate rate at which numbers increase or decrease.

Self-diagnostic System

Electronic range control has a self-diagnostic system. Self-diagnostic system sounds a series of short, rapid beeps and shows a "F-code" in display when there is a problem.

Programming Instructions—ERC for AOCS3040

Quick Reference Instructions

Read “Important Safety Information” before using “Quick Reference Instructions”. If there are unanswered questions, refer to detailed sections of this manual.

- Oven display will blink once per second after disconnection of power or initial start up until clock is programmed.
- Oven cooling fan will come on when an oven function is selected.

Setting Clock

1. Press *CLOCK* pad.
2. Press Δ or ∇ until correct time of day “AM” or “PM” appears in display.

Setting Minute Timer

1. Press *TIMER ON/OFF* pad.
2. Press Δ until desired amount of time appears in display. Timer can be set from 5 second to 9 hours and 50 seconds.

Canceling Minute Timer

- Press and hold *TIMER ON/OFF* pad for approximately 5 seconds.
- When canceling Minute Timer do not touch *OVEN CANCEL*. Pressing *OVEN CANCEL* pad will cancel cooking function.

Bake, Convection Bake, Convection, Broil or Convection Broil

1. Touch desired function. (Example *BAKE*)
2. Touch Δ or ∇ until desired temperature is displayed or “HI” for broil or convection broil.
3. Oven will begin heating within 5 seconds.

Canceling Bake, Convection Bake, Convection, Broil or Convection Broil

Touch *OVEN CANCEL*.

- Smoke and odor are normal when using oven first several times. To eliminate subsequent smoking and odor, set oven to bake at 350° for approximately 2 hours. Any discoloration or residue collected around vent area can be cleaned with a nonabrasive cleaner such as Soft Scrub® without bleach and a dampened cloth.

Self-Cleaning

1. Remove oven rack and all utensils from oven.
2. Press *CLEAN* pad.
3. Press Δ or ∇ until desired cleaning time is displayed. Clean can be set from 2 to 4 hours. Minimum recommended cleaning time is 3 hours.
4. Oven door will automatically lock and cleaning cycle will begin within 5 seconds.

Programming Instructions—ERC for AOCS3040

Bake and Convection Bake

1. Press *BAKE* or *CONVECTION BAKE* pad. 350° will appear in display.
2. Press Δ or ∇ until desired temperature appears in display. Temperature can be set from 170° to 550°F.
 - Oven will begin heating automatically. "PRE-BAKE" or "CONV PRE-BAKE" will light in display. Preheat 10 minutes or until preheat signal is heard and "PRE" disappears from display before placing food inside. Temperature display will increase in 5° increments starting at 170°F until reaching set temperature.
3. When finished press *OVEN CANCEL* pad.

Timed Bake or Convection Bake

Convection bake requires pre-heating. Convection bake is best for cooking casseroles, roasting meats, and timely baking.

1. Place food in oven, or pre-heat oven depending on food item.
2. Press *COOK TIME* pad.
3. Press Δ or ∇ until desired cooking time appears in display. Time can be set up to 11 hours and 50 minutes.
4. Press *BAKE* or *CONVECTION BAKE* pad.
5. Press Δ or ∇ until desired temperature appears in display. Temperature can be set from 170°F to 550°F.
 - "TIMED", "BAKE", or "CONV BAKE", will light in display. Oven will begin to bake at preset time and "ON" will light in display. When cooking time has elapsed, end-of-cycle signal will sound 3 times and oven will automatically turn off. End-of-cycle signal will continue to sound every 7 seconds until cancel is pressed.
 - To cancel remaining cooking time press *OVEN CANCEL* pad.
 - Food should be removed from oven when cooking time has elapsed. Food left in oven may overcook.

Delayed Bake or Convection Bake

1. Place food in oven.



To reduce risk of food poisoning due to bacterial growth and production of toxins, never hold meat, milk, fish or eggs for more than 2 hours before cooking.

2. Press *COOK TIME* pad.
3. Press Δ or ∇ until desired cooking time appears in display. Time can be set up to 11 hours and 50 minutes.

4. Press *STOP TIME* pad.
5. Press Δ or ∇ until desired stop time appears in display. Electronic control will calculate start time.
6. Press *BAKE* or *CONV BAKE* pad. 350° will appear in display.
7. Press Δ or ∇ until desired temperature appears in display. Temperature can be set from 170° to 550°F.
 - "DELAY", "TIMED", "BAKE" or "CONV BAKE" will light in display. Oven will begin to bake at preset time and "ON" will light in display. When cooking time has elapsed, end of cycle signal will sound 3 times and oven will automatically turn off. End of cycle signal will continue to sound every 7 seconds until *OVEN CANCEL* pad is pressed.
8. When finished press *OVEN CANCEL* pad.
 - To cancel remaining cooking time press *OVEN CANCEL* pad.
 - Food should be removed from oven when cooking time has elapsed. Food left in oven may overcook.

Convection

1. Press *CONV* pad. 350° will appear in display.
2. Press Δ or ∇ until desired temperature appears in display. Temperature can be set from 170° to 550°F.
 - Preheat approximately 10 minutes or until preheat signal is heard before placing food inside. Temperature display will increase in 5° increments starting at 170°F until reaching set temperature. Some minor smoking is normal when using oven for first time.
3. When finished press *CANCEL* pad.

Timed Convection

1. Place food in oven.
2. Press *COOK TIME* pad.
3. Press Δ or ∇ until desired cooking time appears in display. Time can be set up to 11 hours and 50 minutes.
4. Press *CONV* pad. 350° will appear in display.
5. Press Δ or ∇ until desired temperature appears in display. Temperature can be set from 170° to 550°F.
 - "CONV", and "TIMED" will light in display. Oven will begin to bake and "ON" will light in display. When cooking time has elapsed, and end of cycle signal will sound 3 times and oven will automatically turn off. End of cycle signal will continue to sound every 7 seconds until *OVEN CANCEL* pad is pressed.
6. When finished press *OVEN CANCEL* pad.
 - Food should be removed from oven when cooking time has elapsed. Food left in oven may overcook.
 - To cancel remaining cooking time press *OVEN CANCEL* pad.







Programming Instructions—ERC for AOCS3040

Delayed Convection

1. Place food in oven.

WARNING

To reduce risk of food poisoning due to bacterial growth and production of toxins, never hold meat, milk, fish or eggs for more than 2 hours before cooking.

2. Press *COOK TIME* pad.
3. Press  or  until desired cooking time appears in display. Time can be set up to 11 hours and 50 minutes.
4. Press *STOP TIME* pad.
5. Press  or  until desired stop time appears in display. Electronic control will calculate start time.
6. Press *CONV* pad. 350° will appear in display.
7. Press  or  until desired temperature appears in display. Temperature can be set from 170° to 550°F.
 - "DELAY", "TIMED", and "CONV" will light in display. Oven will begin to bake at preset time and "ON" will light in display. When cooking time has elapsed, end of cycle signal will sound 3 times and oven will automatically turn off. End of cycle signal will continue to sound every 7 seconds until *OVEN CANCEL* pad is pressed.
8. When finished press *OVEN CANCEL* pad.
 - Food should be removed from oven when cooking time has elapsed. Food left in oven may overcook.
 - To cancel remaining cooking time press *OVEN CANCEL* pad.



Broil and Convection Broil

- Remove excess fat from meat before broiling. Cut edges of meat to prevent curling.
 - Place food on a cold ungreased broiling pan. If pan is hot food will stick.
 - Fish should be broiled with skin side down. When using *BROIL*, all food except fish should be turned at least one time. It is not necessary to turn foods when using *CONV BROIL*.
 - Season meat after it has browned.
 - Broiling does not require preheating.
 - Begin cooking using suggested rack levels on broiling chart to test broiler results. If food is not brown enough, cook on a higher position. If food is too brown, cook on a lower position.
1. Center food on broiling grid and pan, place food in oven. When using convection broil, place food on convection broil rack.

WARNING


To avoid risk of fire, do not line broiler grid with foil. Foil may trap grease on top of grid close to burner causing a fire.

Never leave oven unattended while broiling. Overcooking could result in a fire.

2. Oven door should be closed.
3. Press *BROIL* or *CONV. BROIL* pad. "HI" will appear in display.
4. Press  or  until desired setting is displayed. Broil can be set from 170°F to HI.
 - Oven will begin to broil automatically. "ON", "BROIL", or "CONV BROIL" and the selected setting will be displayed.
5. When finished press *OVEN CANCEL* pad.

Convection Dehydration

Convection dehydration is an excellent way to preserve fresh foods. The best way to become familiar with dehydration is using fruits, vegetables, herbs and spices.

1. Place food on dehydration rack or cookie sheet in middle of oven.
2. Open door to first stop position.
3. Press *CONV. BAKE* pad.
4. Press  until 170° appears in display. Oven is equipped with a 12 hour automatic cancel feature. If dehydration time is longer than 12 hours, control will need to be reset.
5. When finished press *OVEN CANCEL* pad.

Dehydration Tips

Fruits

- Always start with fresh fruit.
- Cut fruit in equal pieces approximately 1/8" thick. Thinner pieces will dry quicker.
- Fruits need to be dipped into an antioxidant, a color-keeping preservative, or two parts water and one part lemon juice. Treating fruit with an antioxidant will help it retain vitamins, color and flavor.

Vegetables

Most vegetables require blanching to inactivate enzymes.

Herbs and Spices

- Herbs and spices dry quickly.
- Check every 30 minutes to avoid over-drying.
- When drying herbs, leaf clusters should be separated from stems.

Programming Instructions—ERC for AOCS3040

Self-Cleaning

- A small amount of smoke is normal when cleaning. Excessive smoke may indicate too much food residue has been left in oven or a faulty gasket.
 - Oven should be cleaned before it gets too dirty. Wipe up large spills before self-cleaning.
 - Do not use self-cleaning cycle if oven light cover is not properly in place.
 - Oven light will not work during clean cycle.
1. Remove oven racks and all cooking utensils from oven. Clean excess spills from oven interior.
 2. Press *CLEAN* pad.
 3. Press Δ or ∇ until desired cleaning time is displayed. Clean can be set from 2 to 4 hours. Recommended clean time is 3 hours.
 - Oven will begin to clean automatically. "CLEAN", "LOCK", and "ON" will light in display. As oven door locks and unlocks "LOCK" will flash in display. When door is locked, "LOCK" will remain in display. When cleaning cycle has elapsed, oven will automatically turn off. End-of-cycle signal will not sound.

CAUTION

To avoid risk of personal injury do not touch oven vents or areas around vents during self-cleaning. These areas can become hot enough to cause burns.

To avoid risk of damage to automatic locking system, do not try to force oven door open when "LOCK" is flashing in display.

- When oven has cooled to a safe temperature, "LOCK" will disappear from display and door can be opened. "LOCK" will flash in display while unlocking.

Interrupt Self-Cleaning Cycle

1. Press *OVEN CANCEL* pad.
2. When oven has cooled to a safe temperature, lock will disappear from display and door can be opened.

Delayed Self-Cleaning

1. Remove oven racks and all cooking utensils from oven. Clean excess spills from oven interior.
2. Press *CLEAN* pad.
3. Press Δ or ∇ until desired cleaning time is displayed.
4. Press *STOP TIME* pad.
5. Press Δ or ∇ until desired stopping time is displayed. A starting time will automatically be calculated based on amount of cleaning time and stop time.
 - "DELAY", "CLEAN", and "LOCK" will light in display. As oven door locks and unlocks "LOCK" will flash in display. Oven will begin to clean at preset time and "ON" will light in display. When cycle is complete oven will automatically turn off.

CAUTION

To avoid risk of personal injury do not touch oven vents or areas around vents during self-cleaning. These areas can become hot enough to cause burns.

To avoid risk of damage to automatic locking system, do not try to force oven door open when "LOCK" is flashing in display.

- When oven has cooled to safe temperature, "LOCK" will disappear from display and door can be opened.

Canceling Self-Cleaning Cycle

1. Press *OVEN CANCEL* pad.
2. When oven has cooled to a safe temperature, "LOCK" will disappear from display and door can be opened.

Adjusting Oven Temperature

Oven temperature has been factory calibrated and tested. In unlikely event that oven consistently overcooks or undercooks food, oven temperature can be adjusted.

1. Press *BAKE* pad.
2. Press Δ until an oven temperature greater than 500°F shows in display.
3. Immediately Press and hold *BAKE* pad until "00" appears in display, approximately 5 seconds.
4. To decrease oven temperature (for cooler oven), press ∇ until negative numbers appear. Oven can be adjusted from -05° to -35° lower. To avoid over-adjusting oven move temperature -5° each time.
5. To increase oven temperature (for a warmer oven) press Δ until positive number's appear. Oven can be set from 05° to 35° higher. To avoid over adjusting oven, move temperature 5° each time.
6. Press *OVEN CANCEL* pad. Temperature adjustment will be retained even through a power failure.

Testing Procedures



To avoid the risk of electric shock, personal injury or death, disconnect power before servicing, unless testing requires it.

Service Information

The ERC operates in conjunction with a separate relay/power supply circuit board, and oven temperature sensor(s) to control all bake, broil, convection, and self clean functions.

The ERC is connected through to a function panel to control minute timer, clock, stop time, oven light, panel light, cancel, bake, cook time, broil, convection bake, convection, convection broil, and clean. Slew pads are used to set times and temperatures.

The mylar control panel provides direct input to the ERC to control all functions.

The ERC display consists of two digital readouts which displays all timing functions, and all temperature functions.

The relay/power supply circuit board consists of relays for convection fan, oven light, convection element, bake, broil, door lock, and double line break operations controlled by the ERC, and a step down transformer with two secondary windings which convert 120 VAC input to filament voltage to power the ERC display.

The oven temperature sensor is mounted in the oven cavity and connected to the J4 connector on the rear of the ERC. As the oven temperature increases, the sensor resistance also increases. The ERC converts this resistance change to a corresponding temperature readout and to cycle the relay(s) to maintain the desired temperature setting.

The ERC is also capable of sensing certain failure conditions which can occur in the oven temperature sensor(s), the self clean latch switch(es) the adaptor board or the ERC itself. If the ERC senses a failure, power will be removed from the relays, an alarm will sound and a failure code will be displayed.

Each major component of the Electronic Range Control system is serviced as a separate part. However, each component and related wire harness must be tested prior to replacing an individual component.

Quick Test Procedure

“Quick Test” Mode for Electronic Range Control

Follow procedure below to use the quick test mode. Entries must be made within 32 seconds of each other or the control will exit the quick test mode. The quick test mode cannot be reactivated until power is disconnected from oven, and must be accessed within 5 minutes of powering up.

NOTE: To enter Quick Test mode, this **must** be the first key pad entered after power is applied.

1. Apply power to oven **press and hold COOK TIME** pad for 5 seconds.
2. Display will read the following:

| <u>Pad</u> | <u>Response</u> |
|-------------|--|
| CLEAN | Double Line Break (DLB) on and door lock status code displayed |
| BAKE | DLB and Bake on |
| CONV. BAKE | DLB, Bake and Conv Fan on |
| CONVECTION | DLB, Conv. Element and Fan on |
| BROIL | DLB and Broil on |
| CONV. BROIL | DLB, Broil and Conv. Fan on |
| STOP TIME | Beeper on |
| COOK TIME | Displays manufacturer code and sensor readings “000”=open sensor |
| TIMER | Displays dashes |
| CLOCK | All display segments illuminated |
| OVEN LIGHT | Oven light on |
| CANCEL | Exit Quicktest |
| SLEW | Sequences through display segments |

Testing Procedures



To avoid the risk of electric shock, personal injury or death, disconnect power before servicing, unless testing requires it.

ERC Warnings and Failure Codes

The Electronic Range Control is capable of detecting certain failures within the ERC, along with oven temperature sensor and self clean door latch switch.

The warnings and failure codes which may appear on the display:

If "d o o r" flashes in display, switch positions can only be displayed in Quicktest mode by touching clean pad, as shown below:

- 0 both switches are open
- 1 unlock switch closed, lock switch open
- 2 lock switch closed, unlock switch open
- 3 both switches are closed

DIGIT FAILURE DISPLAY

- F1 control malfunction - **Replace ERC**
- F2 oven over temperature - **Check Sensor Wiring, Sensor, and Temperature Limiter**
- F3 open sensor or sensor circuit (>3000) - **Check Sensor Resistance and Wiring**
- F4 shorted sensor or sensor circuit (<500) - **Check Sensor Resistance and Wiring**
- F7 shorted input key - **Verify control panel to p.c. board connection, test control panel continuity, Replace Control Panel**
- F9 door lock or door lock circuitry malfunction - **Check Latch Switch, check plunger switch**
- FF door lock circuitry malfunction at clean temperatures - **Check Latch Switch and Door Motor, check plunger switch**

Temperature Calibration Offset

The ERC incorporates $\pm 35^{\circ}\text{F}$. calibration offset capabilities for the oven. This adjustment will not effect the cleaning cycle temperature and will remain in memory if power is interrupted. Follow the procedures as listed to calibrate oven.

1. Press **BAKE** pad.
2. Press Δ until an oven temperature greater than 500°F shows in display.
3. Immediately Press and hold **BAKE** pad until "00" appears in display, approximately 5 seconds.
4. To decrease oven temperature (for cooler oven), press ∇ until negative numbers appear. Oven can be adjusted from -05° to -35° lower. To avoid over-adjusting oven move temperature -5° each time.
5. To increase oven temperature (for a warmer oven) press Δ until positive number appear. Oven can be set from 05° to 35° higher. To avoid over adjusting oven, move temperature 5° each time.
6. Press **OVEN CANCEL** pad. Temperature adjustment will be retained even through a power failure.

Function Switch Connection Check Procedure

The Quick-Test mode can be used to verify relay operation on the transformer/relay board. If the relay engages (clicks) during Quick Test mode it is generally operative.

Transformer/Relay Module

The relays for oven light, bake, broil, convection element, convection fan and double line break are controlled by approximately 24 VDC signal from the ERC. Input voltage is 102 - 132 VAC.

Testing of the relays is with voltage applied to oven **after** attaching voltmeter leads to appropriate terminals.

NOTE: If bake, broil, or convection do not work the first test would be the relay for double line break.

Double Line Break—K6

Drive voltage indicated at J1 connector Pins 1–3.

1. Turn off power to oven.
2. Attach voltmeter lead to E5 connector on relay board.
3. Attach voltmeter lead to E18 connector on relay module.
4. Turn on power and touch bake, broil, or convection.
5. If 240 VAC is indicated the double line break relay is closing. Otherwise, replace the transformer/relay board.

Bake Relay—K4

Double line break relay okay. Drive voltage at J1 connector Pins 3–5.

1. Turn off power to oven.
2. Attach voltmeter lead to E18 connector on relay board.
3. Attach voltmeter lead to E11 (BK) connector on relay module.
4. Turn on power and touch the bake pad.
5. If 240 VAC is indicated bake relay is operating.

Broil Relay—K5

Double line break relay okay. Drive voltage at J1 connector Pins 3–6.

1. Turn off power to oven.
2. Attach voltmeter lead to E18 connector on relay board.
3. Attach voltmeter lead to E12 (BR) connector on relay module.
4. Turn on power and touch broil pad.
5. If 240 VAC is indicated broil relay is operating.

Testing Procedures



WARNING

To avoid the risk of electric shock, personal injury or death, disconnect power before servicing, unless testing requires it.

Convection Element Relay—K2

Double line break relay okay. Drive voltage at J1 connector Pins 3–11.

1. Turn off power to oven.
2. Attach voltmeter lead to E18 connector on relay board.
3. Attach voltmeter lead to E6 (CV EL) connector on relay module.
4. Turn on power and touch convection pad.
5. If 240 VAC is indicated convection element relay is operating.

Convection Fan Relay—K1

Drive voltage at J1 connector Pins 1–7.

1. Turn off power to oven.
2. Attach volt meter lead to E3 (neutral) connector on relay module.
3. Attach volt meter lead to E4 (CVF) connector on relay module.
4. Turn on power and touch convection pad.
5. If 120VAC is indicated convection fan relay is operating.

Oven Light Relay—K10

Drive voltage at J1 connector Pins 1–4.

1. Turn off power to oven.
2. Attach voltmeter lead to E3 (neutral) connector on relay module.
3. Attach voltmeter lead to E17 connector on relay module.
4. Turn on power and touch oven light pad.
5. If 120 VAC is indicated oven light relay is operating.

Door Lock Relay—K3

Double line break relay okay. Drive voltage at J1 connector Pins 1–9.

1. Turn off power to oven.
2. Attach voltmeter lead to E3 (neutral) connector on relay module.
3. Attach voltmeter lead to E8 connector on relay module.
4. Turn on power and program cleaning cycle operation.
5. Two indications will be present during this test.
 - a. 120 VAC will be present when the lock assembly is being engaged.
 - b. 0 VAC is indicated when the door is locked and cleaning cycle is operational.

Display (Filament) Voltage

1. Turn power on, turn meter to VAC scale.
2. Touch meter lead to J1-1 terminal.
3. Touch meter to J1-14 terminal
4. Meter should indicate 3.2 VADC.