Operator Manual

ENERGY STAR

OV500G1-EE
OV500G2-EE

OV500 ROTATING RACK OVEN WITH ADVANCED ELECTRONIC OVEN CONTROL

Model Number: _____
Serial Number: _____
Date of Installation: _____

OV500G1	*GAS*
OV500G2	*GAS*
OV500E1	*ELECTRIC*
OV500E2	*ELECTRIC*
OV500G1-EE	*GAS*
OV500G2-EE	*GAS*

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FORM 36715 Rev. B (February 2016)

IMPORTANT FOR YOUR SAFETY

POST IN A PROMINENT LOCATION THE INSTRUCTIONS TO BE FOLLOWED IN THE EVENT THE SMELL OF GAS IS DETECTED. THIS INFORMATION CAN BE OBTAINED FROM THE LOCAL GAS SUPPLIER.

IMPORTANT

IN THE EVENT A GAS ODOR IS DETECTED, SHUT DOWN UNITS AT MAIN SHUTOFF VALVE AND CONTACT THE LOCAL GAS COMPANY OR GAS SUPPLIER FOR SERVICE.

FOR YOUR SAFETY

DO NOT STORE OR USE GASOLINE OR OTHER FLAMMABLE VAPORS OR LIQUIDS IN THE VICINITY OF THIS OR ANY OTHER APPLIANCE.

⚠ WARNING IMPROPER INSTALLATION, ADJUSTMENT, ALTERATION, SERVICE OR MAINTENANCE CAN CAUSE PROPERTY DAMAGE, INJURY OR DEATH. READ THE INSTALLATION, OPERATING AND MAINTENANCE INSTRUCTIONS THOROUGHLY BEFORE INSTALLING OR SERVICING THIS EQUIPMENT.

IN THE EVENT OF A POWER FAILURE, DO NOT ATTEMPT TO OPERATE THIS DEVICE.

KEEP AREA AROUND OVEN CLEAR OF COMBUSTIBLES. DO NOT OBSTRUCT COMBUSTION AND VENTILATION OPENINGS ON THE OVEN.

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MODEL OV500 SINGLE RACK OVEN

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OPERATION AND CARE OF MODEL OV500 RACK OVEN

RETAIN THIS MANUAL FOR FUTURE REFERENCE

GENERAL

The Baxter OV500 Rack Oven accommodates a roll-in rack. It is equipped with an electronic oven control for baking, roasting and/or steaming applications. A mechanism in the oven ceiling picks up and rotates the rack during the baking or cook cycle.

Model OV500G1 is rated at 180,000 Btu/hr, natural or propane gas.

Model OV500G2 is rated at 300,000 Btu/hr, natural or propane gas.

Model OV500G1-EE is rated at 180,000 Btu/hr, natural or propane gas.

Model OV500G2-EE is rated at 275,000 Btu/hr, natural or propane gas.

Model OV500E1 is rated at 25.7 - 34.2 kW.

Model OV500E2 is rated at 38.5 - 51.3 kW.

Baxter Rack Ovens are produced with quality workmanship and material. Proper installation, usage, and maintenance of your oven will result in many years of satisfactory performance.

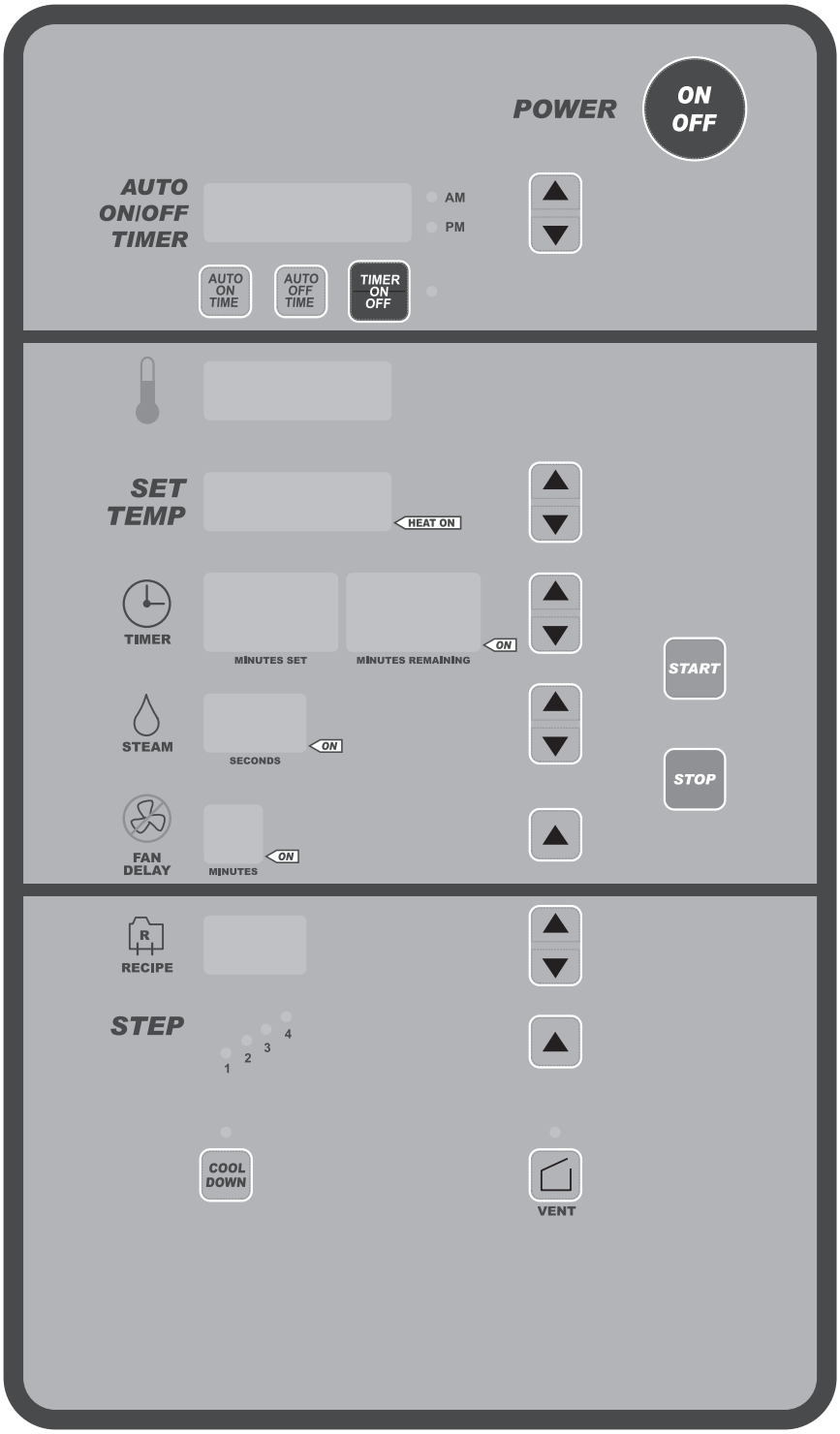
It is suggested that you thoroughly read this manual and carefully follow the instructions provided.

INSTALLATION

The Baxter OV500 Series Rack Oven must be installed or moved only by authorized Bakery Systems trained service technicians.

OPERATION

OV500 DIGITAL CONTROLS



Control Guide - Advanced

BUTTON	ACTION	DISPLAY
ON OFF	Press to turn the oven ON or OFF.	Control panel displays are lit when the oven is on. Oven defaults to Program 0. If oven is turned OFF and back ON within 2 minutes, the oven will come up in the last mode and oven setting.
AUTO ON/OFF TIMER	Press to enter current time or time for oven to automatically turn ON or OFF, when corresponding Auto On Time or Auto Off Time button is pressed.	The AUTO ON/OFF TIMER window displays the current time or the time the oven will automatically turn ON or OFF.
AUTO ON TIME AUTO ON TIME	Press arrow keys to set the desired time of oven to automatically turn ON.	The AUTO ON/OFF TIMER window displays the time the oven will automatically turn ON.
AUTO OFF TIME AUTO OFF TIME	Press arrow keys to set the desired time of oven to automatically turn OFF.	The AUTO ON/OFF TIMER window displays the time the oven will automatically turn OFF.
TIMER ON/OFF TIMER ON OFF	Press to turn the automatic timer ON or OFF.	The indicator light beside the timer ON/OFF button is lit when the function is enabled.
SET TEMP	Press to set the desired temperature (5-degree increments).	The SET TEMP window displays the set temperature. The HEAT ON light is lit while the oven is heating. The actual temperature in the oven cavity is displayed in the OVEN TEMP window.
BAKE TIMER	Press arrow keys to enter the BAKE time (1 minute increments). Press the up arrow key to enter additional time at the end of the bake program.	The BAKE TIMER window displays the amount of time for the current baking cycle. The minutes set are the left two digits and minutes remaining are the right two digits. The windows can be set to display hours and minutes remaining. The ON light is lit when bake time is active. See Customized Operation to configure this setting.
STEAM TIMER	Press to enter the STEAM time (5-second increments in Burst steam or Bakery mode; 1-second increments in Pulse steam or Food Service mode).	The STEAM TIMER window displays the amount of time set for the steam cycle. The ON light is lit when the steam system is active.
FAN DELAY	Press to enter the FAN DELAY time (1-minute increments).	The FAN DELAY TIMER window displays the amount of time set for the circulation blower delay cycle 0-9 minutes.
START	Press to start the BAKE TIMER.	The ON light blinks when the BAKE TIMER is active.
STOP	Press to stop the BAKE TIMER or silence the beeper after the BAKE TIMER has timed out.	The ON light is off when the BAKE TIMER is inactive.
RECIPE	Press the arrow keys to select a bake program.	The RECIPE window displays the number of the current program.
STEP	Press to select one of four baking steps.	The corresponding indicator light will be lit (1 to 4), depending on which step is selected.

BUTTON	ACTION	DISPLAY
VENT	Press to open or close the vent.	The indicator light next to the VENT button is lit when the vent cycle is enabled.
COOL DOWN	Use to cool down the oven.	To enable this feature, set a temperature at least 25°F (14°C) cooler than the oven temperature. Press the COOL DOWN button. The COOL DOWN mode is exited when the oven reaches the new set temperature, or if door is opened when temperature is 25°F (14°C) below set temperature, or by pressing any button.

Auto On/Off Timer and Clock

The Auto ON/OFF Timer display shows the current time of day. To set the clock, the control must be turned on. Press and hold either arrow button to initiate clock setting, then adjust time using arrow buttons. A few seconds after the time is adjusted, the colon in the time display will resume flashing.

Timer Settings

The oven can be set to turn itself on and off. After the AUTO ON/OFF TIMER is set, the POWER ON OFF button can be pressed to turn the oven off. This will not disrupt the AUTO ON/OFF setting. Electrical power to the oven must remain on.

NOTE: Auto On/Off has restricted access when P21 (Advanced Energy Savings Mode) is set to 1.

1. To set the oven to turn on, press and *hold* the AUTO ON TIME button. The previously entered start time will appear in the display. Use the UP and DOWN arrows to adjust the start time. Then release the AUTO ON TIME button.
2. To set the oven to turn off, press and *hold* the AUTO OFF TIME button. The previously entered end time will appear in the display. Use the UP and DOWN arrows to adjust the end time. Then release the AUTO ON TIME button.
3. To enable the automatic start, press and *hold* the TIMER ON/OFF button until the indicator LED to the right of the TIMER ON/OFF button is illuminated.

NOTE: When using AUTO ON/OFF to preheat the oven, if the oven is not disturbed for the time set in parameter P17 (Temperature setback time), it will revert to the Setback temperature stored in parameter P18 (Setback temperature) setup.

Backup Battery

The clock is backed up by a lithium battery which keeps the clock circuitry operating when all external power is off. If the battery becomes low or dead while the external power is off, the display will read 12:00 (12 hr mode) or 0:00 (24 hr mode) and will not increment until a new time is set. The clock will operate with a dead or missing battery, but must be set each time external power is turned on. Batteries must be replaced when low or dead to avoid corrosive damage to the circuitry. Contact your local authorized service office.

Oven Preheat

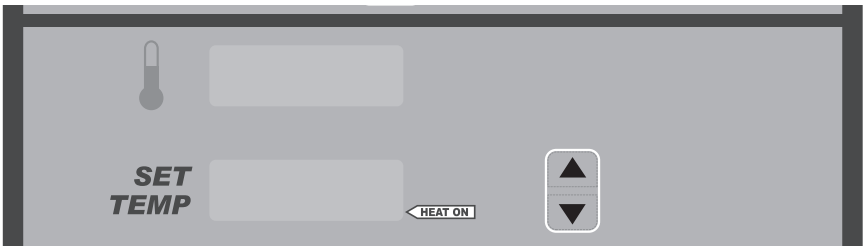
For best results, the oven must be preheated to bake temperature before baking begins.

1. The door must be closed for oven to heat. The rack carrier will lift and rotate only during timed bake.

NOTE: The rack carrier will be in the unload position from the last bake. If the rack carrier was moved out of the home position, the rack carrier will lift and turn to the unload position when the door is opened.

2. Press the POWER ON OFF button to turn the oven on.

3. Press the UP or DOWN arrows next to the SET temp window to enter the desired baking temperature. Actual temperature of the oven will appear in the OVEN TEMP window.
4. For optimum steaming capability, allow 30 minutes after the oven has reached the set temperature for the steam system to charge.

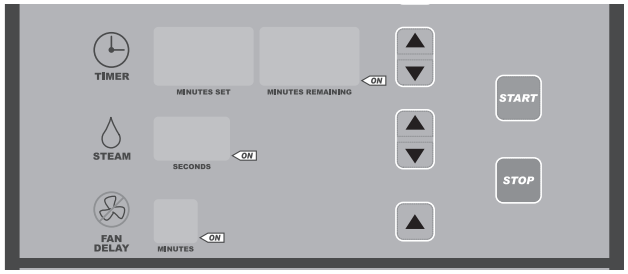


5. The oven is now ready for baking operations.

Basic Operation

⚠ WARNING The oven and its parts are hot. To prevent burns, use hot pads or protective mitts when loading or unloading the oven.

⚠ WARNING Hot air and steam are released from the oven interior when the loading door is opened. To avoid burns, open the door slowly and keep clear of the opening.



1. Preheat the oven (See Oven Preheat).
2. Manually select baking settings:
   - Press the UP or DOWN arrows next to TIMER to enter the desired value.
   - Press the UP or DOWN arrows next to STEAM TIMER to enter the desired value.
   - Press the UP arrow next to FAN DELAY to enter the desired value.
   - The steam and airflow delay settings are optional and can be left at 0 if desired.
3. Slowly open the door and load product.
4. Press the start button and close the door. The on light in the Timer window blinks as the timer counts down.
5. Rack lifts from floor and rotates from right to left.
6. The oven beeps after the TIMER times out. Press STOP to silence the beeper.
7. Open door. Allow rack carrier to stop and lower. Remove product.

Loading Procedure

1. Type B and C rack carriers are equipped with stops on both ends. For B lifts, ensure stop flap is in the up position to load the rack on the rack carrier. For C lifts, push rack stop to the left after rack is loaded.
2. Roll the rack into the oven so the end brackets channel onto the rack carrier. When using racks equipped with pan stops, load racks so stops will prevent movement of trays toward user when racks are unloaded. Position pans so they do not extend beyond the rack. If the pans extend beyond the rack it may cause the rack to get jammed when rotating.
3. Close the loading door. The rack carrier will lift and rotate only during timed bake.

Unloading Procedure

⚠ WARNING The oven and its parts are hot. To prevent burns, use hot pads or protective mitts when loading or unloading the oven.

⚠ WARNING Hot air and steam are released from the oven interior when the loading door is opened. To avoid burns, open the door slowly and keep clear of the opening.

1. Press STOP and/or open the loading door to silence the beeper.
2. Wait for the rack carrier to stop and lower.
3. For B lifts, push the rack stop down to unload the rack from the rack carrier. For C lifts, push rack stop to the right to open.
4. Roll the rack from the rack carrier.
5. Close the loading door.

Cooling Oven

- To cool the oven more than 20 degrees below its current temperature; change SET TEMP to the desired new temperature, open the oven door, and press COOL DOWN. The SET TEMP display will alternate between 'COOL' and the SET TEMP until the oven has cooled. When the oven has reached the set temperature, the alarm will beep and the control will return to normal operation. Closing the oven door or pressing any control button during Cool-Down mode will also return the control to normal operation.
- The VENT control can provide a means of cooling down the oven. When the oven is in the off mode and the door is open, press the VENT button once to start or stop the circulation fan. Vent light will be lit. The fan will also stop when the door is closed or the oven is put into the on mode.
- If the oven temperature is more than 20 degrees higher than the set temperature, and the bake timer is not activated, the oven will automatically open the vent. The vent will remain open until the oven temperature is within 20 degrees of the set temperature.

Operational Hints

- On the initial startup, the oven temperature will default to the factory setting of 375°F (190°C) unless changed.
- During a baking cycle, the START and STOP buttons control the TIMER, STEAM, and FAN DELAY settings only. They have no effect on the oven heat. When the TIMER times out, the oven heat will cycle on and off to maintain the set temperature. Care should be taken not to overbake products.
- To adjust the temperature during a baking cycle, press the UP or DOWN arrows in the Oven Temp section to enter the new temperature. If P20 (Restricted operator mode) is set for 1 then oven temperature cannot be changed during the bake cycle.

- To adjust steam settings, press the corresponding arrows to enter the new values. The steam timer cannot be adjusted during bake operation.
- You can adjust the time remaining with the arrows. The set time remains unchanged unless you “0” out the remaining time. If P20 (Restricted operator mode) is set for 1 the bake time cannot be changed during the bake cycle.
- If the door is opened at any time during the baking cycle, the TEMP, TIME, STEAM, and FAN DELAY settings will pause. Close the door to resume all functions.
- The FAN DELAY option turns off the airflow at the beginning of the baking cycle for the total time entered in this window. The heat is off while the FAN DELAY is activated.
- The oven monitors the heating system by comparing the current oven temperature to the set temperature. If a problem arises in the heating system or there is a heating system failure, both temperature displays will flash after 15 minutes. If the problem continues, contact your authorized Bakery Systems service agency.

BACK-UP CONTROL OPERATION (OPTIONAL)

If the main control panel ceases to function properly, baking can continue with the use of the Back-up Controls, if equipped. The Back-up Controls are located behind the control door on rear wall of the component panel.

To activate the Back-up Controls, flip the toggle switch to BACK-UP position. Temperature and steam are now controlled by the thermostat dial and steam rocker switch, located on the back-up control panel. Set the thermostat dial to the desired temperature. Once the oven has reached temperature, steam can be injected by pressing and holding the steam rocker switch up to a maximum of 20 seconds. More than this will cool down the oven and steamer excessively. Venting the oven must be done manually by opening the door. The rack carrier will stop and lower when door is open. Close door after venting is complete for rack carrier to lift and resume rotating. While in the backup mode the timer feature will not function.

SAFETY ALARM (STANDARD FEATURE, NO PARAMETER SETUP REQUIRED)

If the temperature at the probe is in the range of 570 - 600 degrees Fahrenheit for 10 seconds, the unit will do the following:

1. Shut off all features.
2. Sound an alarm.
3. Flash the OVEN TEMP display (actual temperature is displayed).
4. Display the letters ‘SHdn’ in the TIMER display.

The oven will remain in the shutdown mode until the 120VAC power is shut off. Turning on and off the circuit breakers will restore the oven to normal operation if the temperature is below 570 degrees.

⚠ WARNING Disconnect the electrical power to the machine and follow lockout / tagout procedures. There may be multiple circuits. Be sure all circuits are disconnected.

⚠ WARNING Shut off gas. Contact your authorized bakery systems service office.

PULSE OR FOOD SERVICE STEAM MODE

This mode can be used to provide steam on a periodic basis throughout operation. When this mode is enabled, the STEAM TIMER controls how many seconds of steam are provided to the oven, while a value entered in the Parameter 14 (Steam timer mode) setup controls how frequently the steam is operated.

To enable the Pulse Steam mode:

1. Enter the parameter set up mode by pressing and holding the START button and POWER ON OFF button.
2. Select Parameter 14 (Steam timer mode).
3. If the TIMER window displays ‘0’, it is set up for Burst Steam or Bakery Mode (factory default). Press the UP or DOWN arrow buttons to enter FSS mode (display will change to a 3-digit number).
4. Set the desired time between steam cycles using the UP or DOWN arrow buttons. The range is from 300 seconds (5 min.) to 990 seconds (approximately 17 min.), and increments by 10 seconds at a time.
5. After setting the desired cycle, press the POWER ON OFF button to save the settings.
6. The STEAM TIMER will now operate in 1-second increments, up to 10 seconds, to set the duration of steaming.

Examples: ‘300’ is selected for P14 (Steam timer mode)

‘3’ is entered in STEAM TIMER

= steam is turned on for 3 seconds every 300 seconds (5 min.)

‘990’ is selected for P14

‘3’ is entered in STEAM TIMER

= steam is turned on for 3 seconds every 990 seconds (17 min.)

To return the oven to Burst Steam Mode, repeat the above process to access P14 and set the value in the TIMER window to ‘0’. The STEAM TIMER will now operate in 5-second increments.

KOSHER OPERATION MODE (OVENS EQUIPPED WITH KOSHER PACKAGE)

NOTE: The oven will be put into Kosher operation mode by authorized personnel at the time of start-up.

NOTE: Setting up the parameters and adding programs to the controller should be done before the initial start-up since the oven controller has to be shut off to do this.

For Kosher operations, the oven must maintain a minimum temperature in order to retain Kosher approval. The oven control will make the minimum set temperature 200°F in order to maintain minimum temperature requirements. The oven controller can not be set below 200° F.

If the oven temperature is at risk of falling below the approved range, a rapid beep alarm will sound (faster than the normal TIMER alarm). If you hear this alarm, do the following:

- Check that the oven door is closed.
- If the Vent mode is active, turn the Vent off.

If the oven temperature falls below 150°F, the control will lock out. The display will read ‘LOC OUT’ and the unit will not operate. Authorized personnel must be contacted to restart the oven.

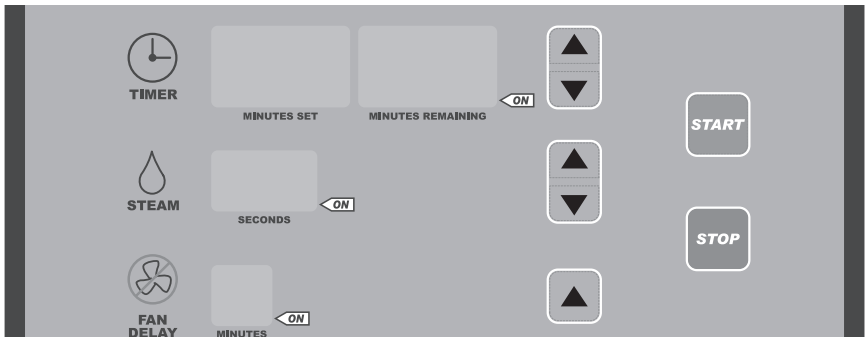
If the control is inadvertently turned OFF while in kosher mode, when powered ON, the control will re-start in kosher mode as long as the temperature has not dropped below the minimum requirements.

PROGRAMMING THE OVEN

Single Step Recipes

The recipe menu stores up to 99 recipes that can be recalled by number when needed. A recipe is a set of baking instructions (temperature, time & steam time, vent and fan delay settings) that the operator defines for any baking operation.

1. With the oven in the OFF mode, press and hold the UP arrow in the STEP section. While pressing and holding the UP arrow, press and hold the POWER ON OFF button for 3 seconds. When all the displays light, the oven is in the recipe mode.
2. Press the RECIPE UP or DOWN arrows until the recipe number that is desired is displayed.
3. Press the TEMP UP or DOWN arrows to enter the desired temperature.



4. Set the Time, Steam, Fan Delay, and Vent settings:
   - Press the UP or DOWN arrows next to TIMER to enter the desired time.
   - Press the UP or DOWN arrows next to STEAM TIMER to enter the desired time.
   - Press the UP arrow next to FAN DELAY to enter the desired time.

NOTE: Steam and fan delay settings are optional and can be left at 0 if desired.

- Press the VENT button to vent the cavity for the entire time of the step. When step is complete, vent will close.

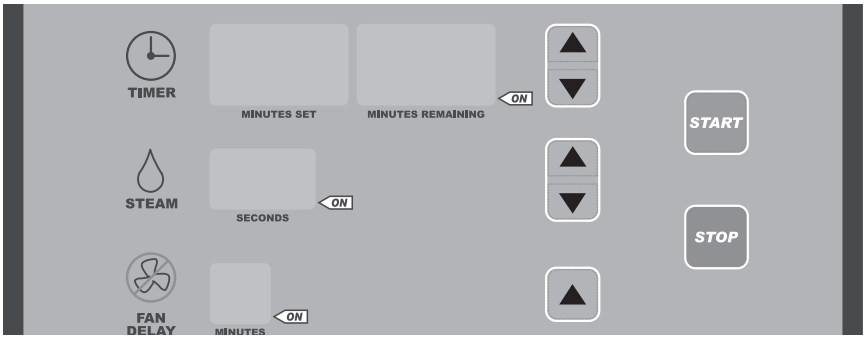
5. To store the recipe, press the RECIPE UP or DOWN arrows to move to the next recipe number or press the POWER ON OFF button to exit the recipe mode. To store additional recipe settings, repeat steps 2 to 4.

Multi-Step Recipes

Additional steps can be entered within the original recipe number. Up to four individual steps can be added by the operator, each with different bake settings.

For example, Recipe 1 has temperature, time, steam, and fan delay time settings set by the operator. This is known as Step 1. After the timer times out in Step 1, the oven automatically starts the programmed bake settings in Step 2. The system continues with each step until all steps have been timed out.

1. With the oven in the OFF mode, press and hold the UP arrow in the STEPS section. While pressing and holding the UP arrow, press the POWER ON OFF button for 3 seconds. When all the displays light, the oven is in the recipe mode.
2. Press the RECIPE UP or DOWN arrows until the recipe number that is desired is displayed. The Step 1 light is lit.
3. Press the TEMP UP or DOWN arrows to enter the desired temperature.



4. Set the Time, Steam, Fan Delay, and Vent settings:
   - Press the UP or DOWN arrows next to TIMER to enter the desired time.
   - Press the UP or DOWN arrows next to STEAM TIMER to enter the desired time.
   - Press the UP arrow next to FAN DELAY to enter the desired time.

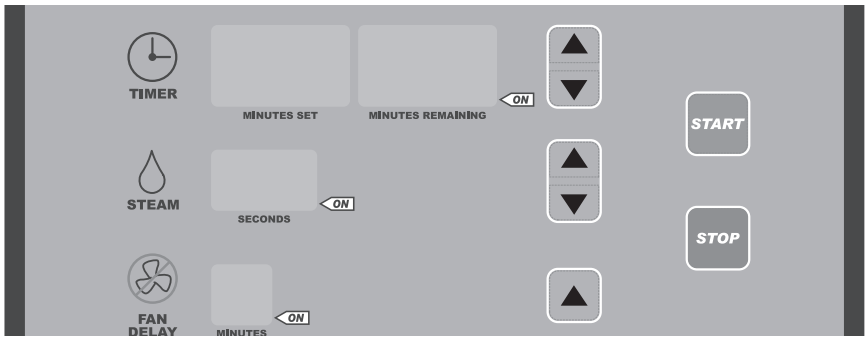
NOTE: The steam and fan delay settings are optional and can be left at 0 if desired.

- Press the VENT button to vent the cavity for the entire time of the step. When step is complete, vent will close.

5. Press the UP arrow in the STEPS section to advance to the next step within the recipe. The selected step light is lit. Repeat steps 3 and 4 above to set each step, if needed, in the program.
6. To store all the steps in the program, press the RECIPE UP or DOWN arrows to move to the next recipe number, or press the POWER ON OFF button to exit the recipe mode.

Editing the Recipes

1. With the oven in the OFF mode, press and hold the UP arrow in the STEPS section. While pressing and holding the UP arrow, press the POWER ON button for 3 seconds. When all the displays light, the oven is in the recipe mode.
2. Press the RECIPE UP or DOWN arrows until the recipe number that is desired is displayed.



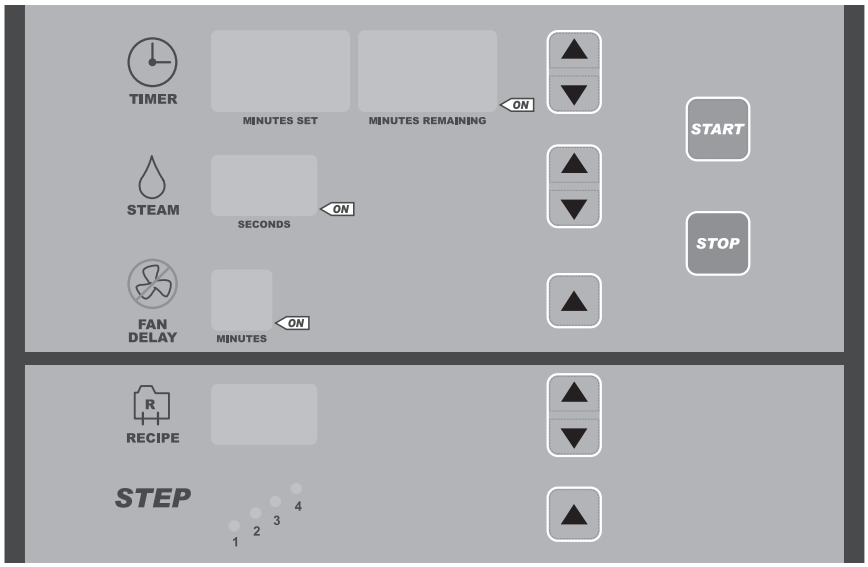
3. Enter the new Time, Steam, and Fan Delay settings:
   - Press the UP or DOWN arrows next to TIMER to enter the desired time.
   - Press the UP or DOWN arrows next to STEAM TIMER to enter the desired time.
   - Press the UP arrow next to FAN DELAY to enter the desired time.

NOTE: The steam and fan delay settings are optional and can be left at 0 if desired.

4. To change the settings in a Step, press the UP arrow in the STEPS section and make changes in each step accordingly.
5. To store the recipe, press the RECIPE UP or DOWN arrows to move to the next recipe number or press the POWER ON OFF button to exit the recipe mode.

Using the Recipes

1. With the oven on, press the RECIPE UP or DOWN arrows to select the desired recipe number (1-99). The TEMP, TIMER, STEAM, and FAN DELAY settings are displayed.



2. Confirm that the oven is at the set temperature.
3. Slowly open the doors.
4. Roll the rack into the oven so the end brackets channel onto the rack lifting carrier. (See Loading Procedure.)
5. Press START, and then close and latch the door.
6. A beeper will sound after the TIMER times out. Press STOP to silence the beeper.

Recipe Hints

- The oven defaults to the Recipe 0 settings when first turned on. Recipe 0 settings are as follows: Temp = 375°F, Timer = 0, Steam Timer = 0, Delay Timer = 0, Recipe = 0.
- Any combination of bake settings can be manually entered for one-time custom baking operations. These settings are not saved to the recipe memory.
- If any of the parameters are changed in a recipe before or during a bake cycle, the oven reverts to a manual program (Recipe 0). If P20 (Restricted Mode) is set for 1 the settings can not be changed during a bake cycle.
- The RECIPE UP and DOWN arrows have no effect while the bake cycle is in progress. However, if the TIMER has been stopped, either by pressing the STOP button or by opening the door, then pressing the RECIPE UP and DOWN arrows will select a new recipe and cancel the baking cycle that was in progress.
- When selecting recipes, the system will skip over unprogrammed numbers. For example, if Recipe 1 is displayed in the RECIPE window and no recipes are stored in 2, 3, and 4, then the system will skip over 2, 3, and 4. Recipe 5 will be the next recipe displayed.

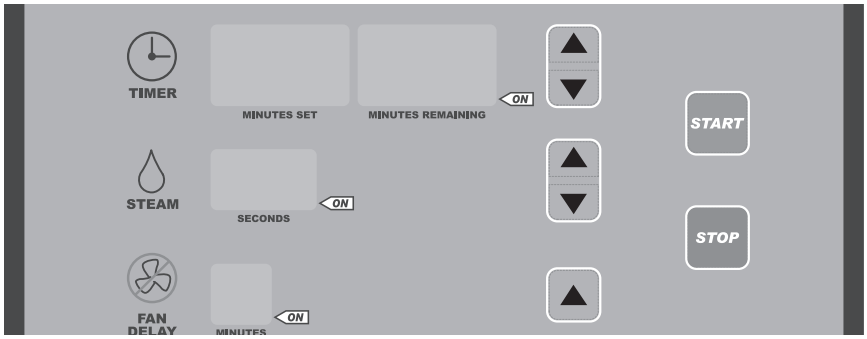
CUSTOMIZED OPERATION

The OV500 oven controls have the capability of being customized to fit your own personal needs using the setup mode.

Before entering the setup mode, read all the instructions to make sure you are completely clear on what to do. If you need assistance, please call your authorized Baxter service office.

Entering Setup Mode

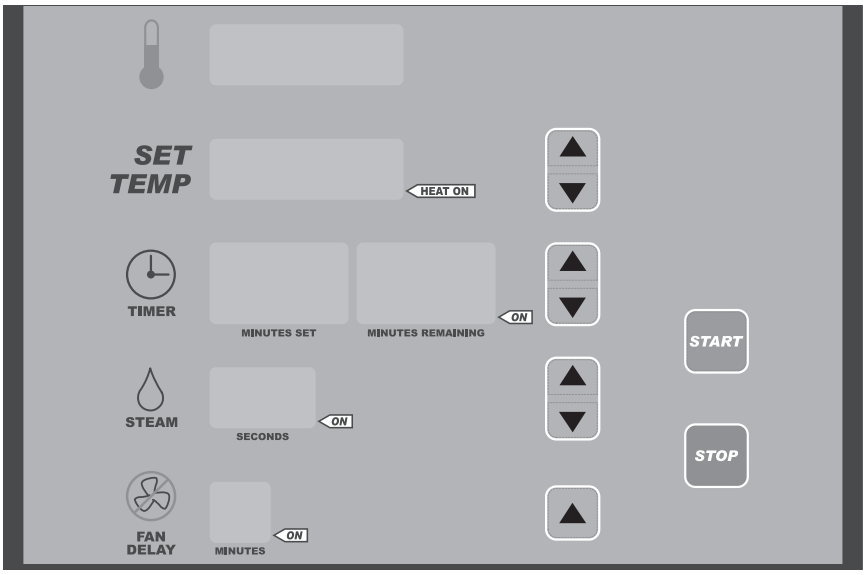
With the oven in the OFF mode, press and hold the START button. While pressing and holding the Start button, press the POWER ON OFF button for 3 seconds. The oven is now in Setup mode and P1 is displayed in the SET TEMP window.



Changing Items in Setup Mode

The number in the SET TEMP window is the setup number. The TIMER window displays the setup item (the settings that can be changed).

1. To change the setup number, press the SET TEMP UP or DOWN arrows. The setup item will be displayed in the TIMER window.



2. To make a change in the setup item being displayed, press the TIMER UP or DOWN arrows. To adjust the setting, see Setup Guide. Do not attempt to change item numbers P4, P5, P6, and P8. Consult your authorized Baxter service office for help with these features.
3. To exit the setup mode, press the POWER ON OFF button.

Setup Guide

SETUP NUMBER	SETUP ITEM	DISPLAY
P1	Maximum Temperature Setpoint	This is the maximum temperature at which the oven can be set. Range is 50°F to 525°F (10°C to 275°C).
P2	Preheat Temperature	This is the default temperature setpoint when the oven is first turned on (Program 0). The preheat temperature cannot be set higher than the value in P1 or lower than the value in P3. Range is 10°F to 525°F (10°C to 275°C).
P3	Minimum Temperature Setpoint	This is the minimum temperature at which the oven can be set. Range is 10°F to 200°F (10°C to 200°C).
P4	Temperature Offset	This value permits an offset of correction between the oven temperature display and the real baking chamber temperature. Call your authorized service agency for help with this feature.
P5	Heat OFF Offset	This value adjusts the temperature difference between the set point and stopping of the heating system. Call your authorized service agency for help with this feature.
P6	Heat Difference Hysteresis	This value adjusts the temperature difference between the on temperature and off temperature of the heating system. Call your authorized service agency for help with this feature.
P7	Maximum Steam Time	Time set is the maximum time (in seconds) that water is supplied during the STEAM TIMER operation.
P8	Temperature Units	The oven can be set to display temperature in Fahrenheit or Celsius. To ensure accurate temperature parameters, call your authorized Bakery Systems service agency for help with this feature.
P9	Timer Mode	The TIMER can be set up to display minutes set/minutes remaining or hours and minutes. Select 0 for minutes set/minutes remaining or 1 for hours and minutes. (If this parameter is changed to hours and minutes, a label has been provided to place on the control panel to indicate the change.)
P10	Vent Evacuate Time	Time set is the time (in seconds) that the vent is 100% open at the beginning of the venting cycle. Range is 0 to 180 seconds.
P11	Vent Open Percentage	This value is the percentage the bake chamber vent is open after the vent evacuate time has expired. Range is 5 to 100%.
P12	End of Bake Automatic Vent - Enable	This feature enables the Automatic Vent Cycle. Select 0 to disable or 1 to enable this feature (see P13 for entering time).
P13	End of Bake Automatic Vent Time	This is the number of minutes before the end of the bake cycle that the vent is open.

SETUP NUMBER	SETUP ITEM	DISPLAY
P14	Steam Timer Mode	The steam timer can be set up to display in seconds or operate in food service mode. Select 0 for seconds or 300 to 990 for food service mode.
P15	Interior Light Brightness	This value is the brightness of the interior lights. The higher the number, the brighter the lights. Range is 50 to 100.
P16	Clock Operation	This selects either 12 hours (AM/PM) or 24 hours real time display. Press the Bake Time Up button to switch between the two types of display.
P17	Temperature Setback Time	This selects the elapsed time from the last timed bake to when the oven will lower the oven set temperature to the value set in P18. Range is 10 to 180 minutes.
P18	Setback Temperature	This selects the oven set temperature that the oven will change to when the temperature setback time has been exceeded in P17. Range is 50°F to 300°F (50°C to 300°C).
P19	Lights Mode	Select 1 for lights on continuously (when oven is on) or select 0 for automatic operation. Lights will turn off automatically after 30 minutes of no user activity (door opened or closed, no buttons pushed).
P20	Restricted Operator Mode	Select 1 for Restricted Operator Mode. When a recipe is selected by the operator, the Bake Timer Minutes Set window will display the total bake time of all steps in the recipe. Standard operation only displays the minutes in the selected step. When a recipe is selected and the start button is pressed the operator cannot make changes to the bake time remaining or the oven set temp. If set for steam, steam is produced in 5-seconds on, 5-seconds off intervals for the time set in P7. The maximum solenoid on time range that can be set in P7 increases to 60 seconds. Change P7 to 60 when P20 is set for 1. When P20 is changed from 1 = restricted operator mode to 0 = standard mode, P7 must be changed below 30 (range 0 to 30 max) or solenoid will energize continuously for up to 60 seconds.
P21	Advanced Energy Savings Mode	Select 1 for Advanced Energy Saving. Forcing the oven into an advanced Auto On - Auto Off mode to conserve energy. Several steps are necessary to enable this mode. Set the Auto On time to allow the oven to preheat before the first bake time. Set the Auto Off time. Press the Auto On/Auto Off button to illuminate the Timer On/Off indicator. Set P17 & P18 to customer settings. Auto ON/OFF time is restricted when this feature is set to 1. Auto ON/OFF times can only be changed while in P21.
P22	OV210 Operation Mode	Select 1 for installation of an HBA control panel and control door on an OV210. When enabled, the OV210 will emulate all the functions of an HBA.
P23	Unused	
P24	Unused	
P25	Communication Mode	Select 1 for NAFEM protocol compliant communication.

ENERGY SAVING MODE

Set back

Set back mode provides the ability to dial down the set temperature of the oven automatically when it is not being used, but needs to be in a standby mode for baking. When the oven is switched to set back temperature, the heating system remains in standby mode until it reaches that temperature. This leads to a reduction in the amount of energy used.

Parameter 17 (Temperature Setback Time) allows the user to set the desired time for the oven to sit idle before dropping the temperature to the value entered in Parameter 18 (Setback Temperature). Adjust P18 to the desired setback temperature. A setting of 250°F is recommended to keep the steam system above the water flash point.

Advanced

Advanced energy savings (Parameter 21) mode allows the user to use the features of “Setback” as well as locking the time that the oven can be turned on or off. This will prevent the oven from being turned on to early or left on overnight. Follow the instructions for P21 (Advance energy savings mode) to set the oven for advanced energy savings mode.

The oven will automatically shut down at the pre-determined time, unless there is a bake in process.

If you need to operate the oven after the pre-determined shutoff time, turn the oven back on by pressing the ON/OFF button and immediately set the Bake Timer to at least 30 minutes and press start. If the bake timer has not been set to at least 30 minutes the oven will shut down.

NOTE: If you do not use the oven within 30 minutes, after timer counts down to 00:00, the oven will shut down.

SHUTDOWN

NOTE: Before restarting a gas oven, the power switch and the gas burner valve must be off for a minimum of 5 minutes.

1. Remove all remaining product.

NOTE: Vent can be used to evacuate steam from oven.

2. Allow the oven to cool, then press the POWER ON/OFF button. If desired, quicker cool down time can be accomplished through the use of the COOL DOWN button.
3. Clean the baking chamber. See Cleaning page 22.
4. For lengthy shutdowns, disconnect the main power and shut off the gas and water supply.

RESTARTING OVEN

NOTE: Before restarting a gas oven, power switch and gas burner valve must be off for a minimum of 5 minutes.

1. Press the POWER ON OFF button to turn the oven on.
2. Press the UP or DOWN arrows next to the SET TEMP window to enter the desired temperature.

TROUBLESHOOTING

BURNERS WILL NOT LIGHT ON GAS OVEN

1. Check that the loading door is shut and the door switch is actuated.
2. Press the OFF button to turn the oven off and wait 5 minutes.
3. Make sure the gas shutoff valve and gas valve are in the ON position.
4. Press the ON button to turn the oven back on.

If the above suggestions do not remedy the problem, contact a Bakery Systems service office.

ALARMS AND DISPLAY MESSAGES

Alarm or Message	Cause	Action
Temperature display changes between a number and 'COOL'.	Cool Down mode is active.	To return to normal mode, close oven door or press any button.
Display is flashing with no beeping, while oven is in a timed bake cycle and is calling for heat.	Temperature recovery alert.	Open oven door and close to reset heat control. If unit does not begin heating, contact your local Bakery service office.
Display shows 'SHdn'.	Safety Alarm has disabled oven.	TURN OFF ALL POWER AND GAS TO THE OVEN. Contact your local Bakery service office.
Control beeps continuously.	Rack Rotation alert.	Check that rack is rotating; check for pans that may be protruding from rack. If problem persists contact your local Bakery service office.
Controls beeps rapidly (faster beep than Baker Timer).	Temperature alert for Kosher Mode.	Turn VENT off, if activated. Gas ovens: check that burner is firing. If not firing, briefly open door and close to reset temperature control.
Display shows 'LOC OUT'.	Oven in Kosher Lock-Out Mode.	Contact your local Bakery service office.

OTHER TROUBLESHOOTING TOPICS

Condition	Cause	Action
Oven circulation fan is running but oven is turned off.	Oven is in Cooling mode.	Close oven door to cancel cooling mode. If door was not open, contact your local Bakery service office.
STEAM TIME cannot be set above 10 seconds, and time increments by 1-second.	Oven is in Food Service or Pulse steam mode.	See Food Service Mode instructions to return oven to Bakery mode.
Rack does not lift and rotate.	Bake time has not been entered in timer and/or timer has not been started.	Enter time in TIMER and press START. If problem persists, contact your local Bakery service office.

CLEANING

⚠ WARNING Disconnect the electrical power to the machine and follow lockout / tagout procedures. There may be multiple circuits. Be sure all circuits are disconnected.

⚠ WARNING The rack oven and its parts are hot. Use care when operating, servicing or cleaning the rack oven.

⚠ WARNING Hot air and steam are released from the oven interior when the loading door is opened. To avoid burns, open the door slowly and keep clear of the opening.

- Allow the oven to cool.
- Clean the outside of the oven daily with a clean, damp cloth.
- Remove rack(s) and clean as you would any cooking utensil. Use warm, soapy water and a brush. Rinse with clear water and dry with a clean cloth.
- Use care when cleaning around sensitive interior parts such as probes, sensors or the rotating mechanism.
- Using a clean cloth and warm, soapy water, wash the stainless steel interior of the oven. Rinse with clear water and dry with a clean cloth.
- Gently scrape heavy buildup off door glass. Residue can be removed with a glass cleaner when oven is cool.
- Clean hood filters (if equipped) with soap and warm water.
- Do not use oven cleaners or steel wool on stainless steel surfaces. Never spray down the oven with water or steam.
- Never use cleaners that contain chlorine. Chlorine corrodes stainless steel.

MAINTENANCE

⚠ WARNING The rack oven and its parts are hot. Use care when operating, servicing or cleaning the rack oven.

⚠ WARNING Hot air and steam are released from the oven interior when the loading door is opened. To avoid burns, open the door slowly and keep clear of the opening.

⚠ WARNING Disconnect the electrical power to the machine and follow lockout / tagout procedures. There may be multiple circuits. Be sure all circuits are disconnected.

On gas ovens, annually check the flue to be sure it is free of obstructions.

GENERAL

As Needed

- Inspect the area around the oven. The area must be free and clear from combustibles. There must be no obstructions to the air flow.

Daily

- Clean Exterior (See Cleaning).

Weekly

- Clean the oven interior and remove loose debris (See Cleaning).
- Clean the windows.
- Empty grease catcher (if equipped).

Monthly

- Clean exhaust hood filters (if equipped) with soap and water.

Bi-Monthly

- Owner Preventive Maintenance Procedure.

PREVENTIVE MAINTENANCE

The OV500 Rack Oven must be kept on a regular preventive maintenance schedule. Ovens require specific preventive maintenance based on usage and environmental factors. The failure to have the oven properly maintained by following recommended preventive maintenance procedures may result in higher repair costs, shortened equipment life, or unsafe operating conditions.

It is the owner's responsibility to make sure preventative maintenance is performed on the rack oven. This will ensure continued safe and reliable operation. Contact an authorized Bakery Service agency to provide this skilled service for you.

SERVICE AND PARTS INFORMATION

Contact your authorized Bakery Systems service office.

OWNER PREVENTIVE MAINTENANCE PROCEDURE

INTRODUCTION

This customer preventive maintenance (PM) section includes procedures to inspect for proper operation and cleaning of components. Owner Preventive Maintenance Procedures are written for gas ovens. They can also be used for electric ovens by omitting the steps that refer to components found only on gas ovens. To maintain the safety and performance of bakery ovens a program of scheduled periodic maintenance must be implemented. It is the sole responsibility of the user to establish, schedule, and enforce such a program. Although the service interval will vary depending on the environment in which the equipment is operating it is recommended that Preventive Maintenance be performed and all safety devices are checked at a minimum of 12 month intervals. Check with the authority having local jurisdiction if there are specific maintenance requirements specified by local, state, or national codes. A convenient PM Checklist is provided at the end of this section.

NOTE: This PM procedure does not discuss repair or replacement of components. Upon completion of the PM procedure you will need to contact a qualified servicer for any needed repairs.

Tools Used For Inspection Procedure

- Standard set of hand tools
- Vacuum cleaner - shop vac

PREVENTIVE MAINTENANCE PROCEDURE

⚠ WARNING Disconnect the electrical power to the machine and follow lockout / tagout procedures. There may be multiple circuits. Be sure all circuits are disconnected.

⚠ WARNING Shut off the gas before servicing the unit.

⚠ WARNING Certain procedures in this section may require electrical test or measurements while power is applied to the machine. Exercise extreme caution at all times. If test points are not easily accessible, disconnect power and follow lockout / tagout procedures, attach test equipment and reapply power to test.

Inspect Oven Lamps

1. Lamps should be on when oven is powered.
2. If not, replace lamps (Fig. 1).
   A. Remove lens cover by turning out of lamp housing.
   B. Remove oven lamp by turning lamp out of lamp socket.
3. Reverse the procedure to install new lamps.

Fig. 1

Clean and Vacuum Components and Control/Burner Compartment Area (Gas Only)

1. Clean the control/burner compartment (Fig. 2) area of dust and/or lint accumulation.
2. Vacuum the control/burner compartment floor of dust and/or lint accumulation.
3. Gain access to the top of oven and clean dust that may have accumulated on top of circulation blower motor (Fig. 3) and motor cooling fan.

Fig. 2

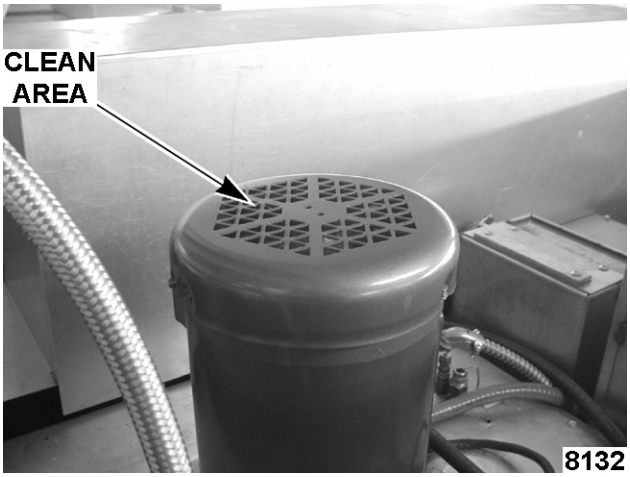


Fig. 3

Rack Lift and Rotation Assemblies

1. Check rack lift assembly for proper operation.
   A. Open door. Rack lift should lower to correct height of rack and be in forward loading position to accept rack entry.
   B. The oven rack should be easily rolled in and out of oven and the wheels completely off the oven floor when raised.
2. Tighten all set screws (4) in carrier (Fig. 4).
   A. Check and tighten all set screws on carrier.

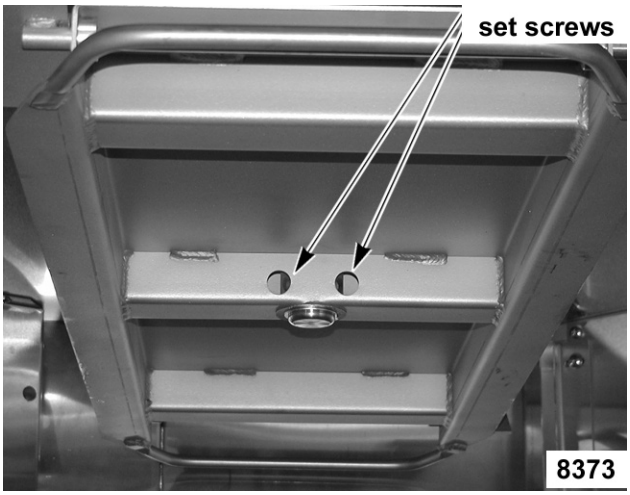


Fig. 4

Inspect Door Components

1. Check loading door latch.
   A. Check door gasket for good condition. If door gasket needs replacement, contact your local Bakery Systems office for service.
   B. Check that the loading door lock ramps are clean (Fig. 5) and rollers on the door move up and down and spin freely (Fig. 6).
   C. Adjust latch ramps in or out by loosening the two screws. DO NOT REMOVE THEM. Slide ramp in or out to loosen or tighten door (Fig. 5).
   D. Tighten screws.
2. Check door sweep.
   A. The door sweep should hit the floor evenly across door width, when door is in the closed position.
   B. Turn oven on.
   C. If air (or steam) blows out from underneath the door, door will need to be adjusted. If door sweep needs replacement or adjustment, contact your local Bakery Systems office for service.
3. Check interior door release (Fig. 7) for proper operation.
4. Check door switch for proper operation.
   A. When door switch actuator rod is in the open position (door open), the door switch rollers should be positioned on the small part of the rod (Fig. 8).

Fig. 5

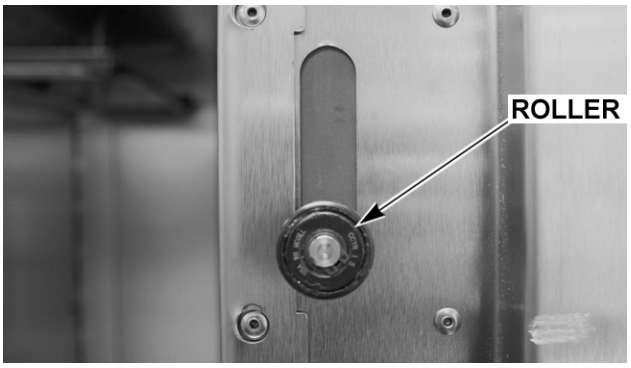


Fig. 6

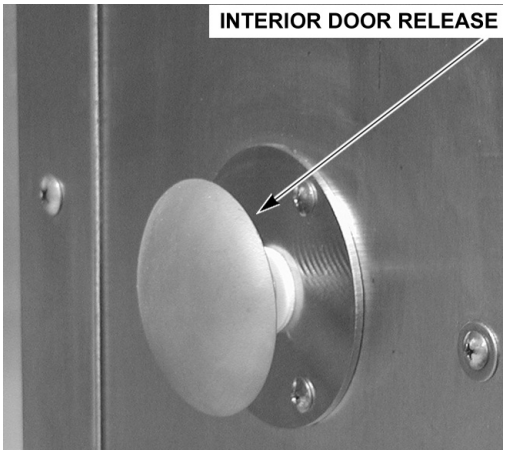


Fig. 7

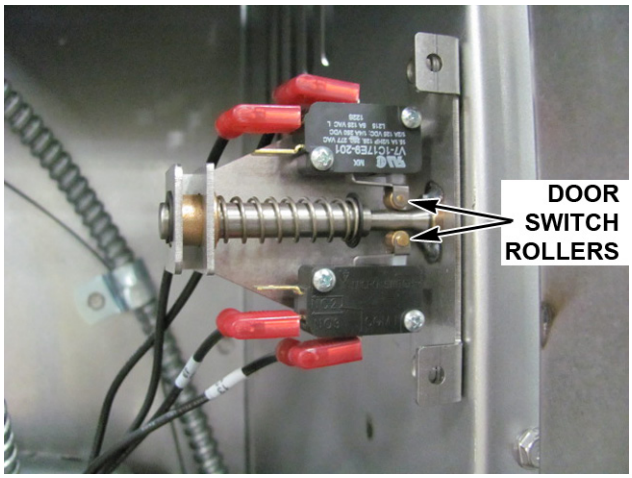


Fig. 8

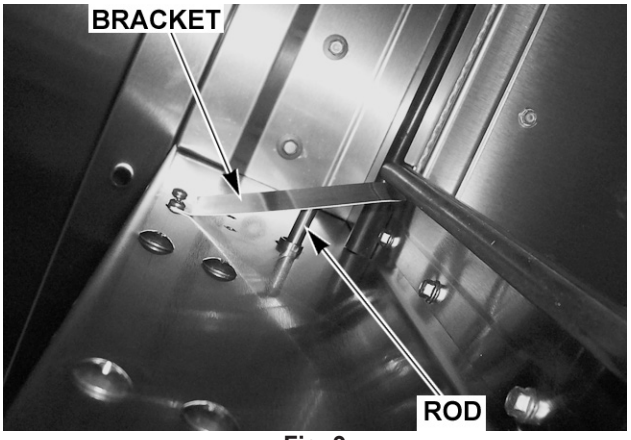


Fig. 9

5. Check door handle operation.

   A. Pull out on door handle (Fig. 10) to open door, then push door shut (Fig. 11). If the door is too hard to open or close, see door ramps adjustment (Fig. 5).

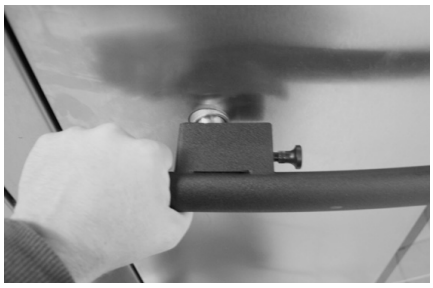


Fig. 10

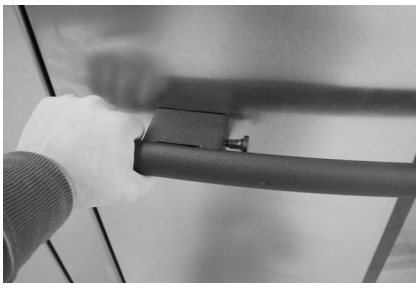


Fig. 11

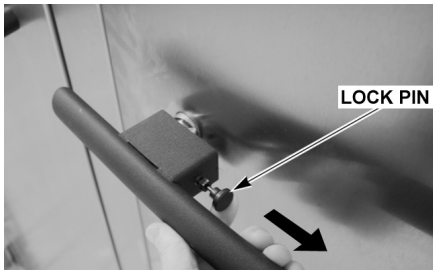


Fig. 12

6. Clean door glass.

   A. With the loading door shut, pull door handle lock pin out (Fig. 12).

   B. Pull door handle out (Fig. 13).

   C. Swing handle open (Fig. 14).

   NOTE: Make sure not to dent door on hinged side.

   D. Check that there is no residue buildup on the handle lock mechanism (Fig. 14).

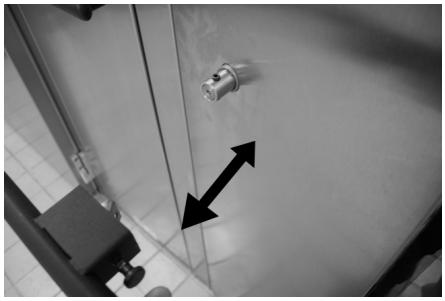


Fig. 13

   NOTE: The handle for the glass is located at the top or bottom of glass.

   E. Pull out on handle (Fig. 14) to open glass door. If glass door needs to be adjusted, contact your local Bakery Systems office for service.

NOTICE Failure to contact service for glass door adjustment may result in the glass breaking.

Fig. 14

F. To close the glass door simply push shut.

G. To close handle, the lock mechanism needs to be in the unlock orientation (Fig. 15).

NOTE: If lock is not in the unlock orientation, pull lock pin out and rotate lock to the unlock orientation.

H. Place lock box over hex bolt and slowly push handle in to door (Fig. 15). Check to see if the handle latch engaged by opening door (Fig. 10). Repeat if necessary.

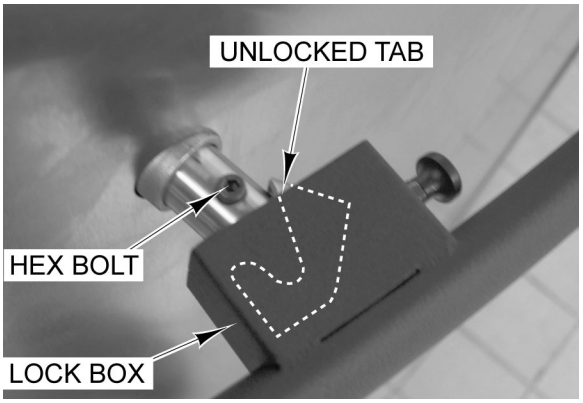


Fig. 15

Inspect Air Louvers

1. Check air louvers (shutters) (Fig. 16) inside oven and tighten any loose screws.
2. Check oven interior, tighten or replace loose or missing panel screws. Also check floor anchors.

Fig. 16

Inspect Cavity Vent

1. Check cavity vent for proper operation.
   A. Push VENT (Fig. 17) button on control panel to open vent and then push again to close vent.
   B. Visually check that vent opens (Fig. 18) and closes (Fig. 19) when button is pressed.
   C. Check that vent gasket is intact.

Fig. 17

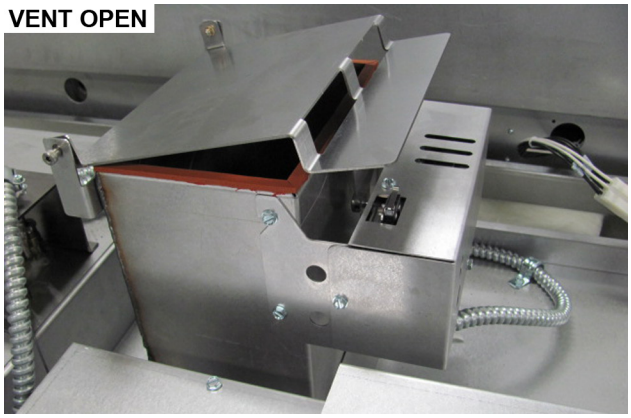


Fig. 18

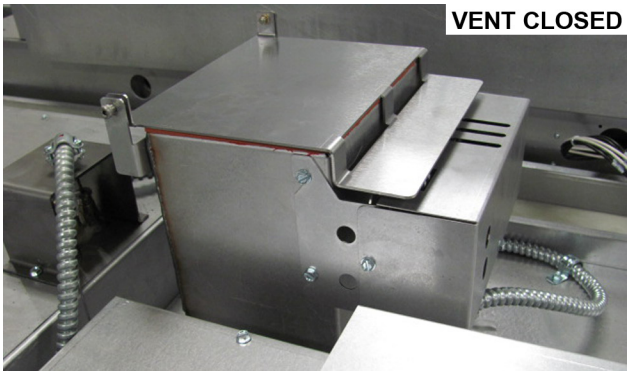


Fig. 19

Visually Inspect Electrical Connections

1. Inspect all wiring connections for discoloration. If discoloration is visible, contact your local Bakery Systems service office.

Verify Ignition Module Safety Lockout Functions (Gas Only)

1. Verify ignition module safety lockout functions.
   A. Turn off main gas supply to the oven.
   B. Open control panel door to gain access to burner compartment area.
   C. Turn the oven on. Check that electrical breakers are turned on.
   D. Set the oven to call for heat and make sure convection fan is running.
   E. Observe LED light through hole in control box cover (Fig. 20). After trying to light the burner three times, the module should lockout. (See chart below.)
   F. Turn off the oven control for a minimum of five seconds and then turn the oven control back on.
   G. Turn main gas supply to the oven back on.
   H. Set the oven to call for heat, making sure convection fan is running and the burner has established a flame.
   I. Turn off main gas supply to the oven.
   J. Observe LED light through hole in control box cover (Fig. 20). The ignition module should go into lockout after three trials for ignition. (See chart below.)

Fig. 20

LED DIAGNOSTIC INDICATOR CODES	
LED	LED
LED off	No Fault
LED Illuminated	Module Fault
‘1’ Flash	Air Flow Fault
‘2’ Flash	Flame Fault No Call for Heat
‘3’ Flash	Ignition Module Lockout

   K. If the proper results have been obtained, proceed to step 2 , if not contact your local Bakery Systems service office.

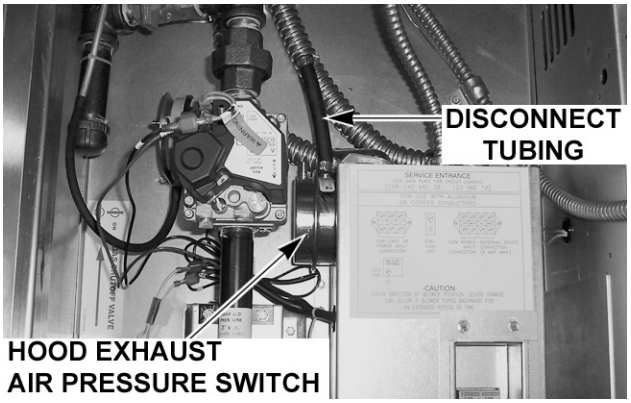


Fig. 21

2. Verify hood exhaust air pressure switch (Fig. 21) operation.
   A. Turn on main gas supply and set oven control to call for heat and make sure convection fan is running.
   B. Once flame is established, disconnect tubing from hood pressure switch hose. Burner flame should go out.
   C. Reconnect tubing. Burner should establish a flame. If not, contact your local Bakery Systems service office.

3. Verify draft inducer pressure switch (Fig. 22) operation.
   A. Set oven control to call for heat and make sure convection fan is running.
   B. Once flame is established, disconnect tubing from draft inducer pressure switch. Burner flame should go out.
   C. Reconnect tubing. Burner should establish a flame. If not, contact your local Bakery Systems service office.

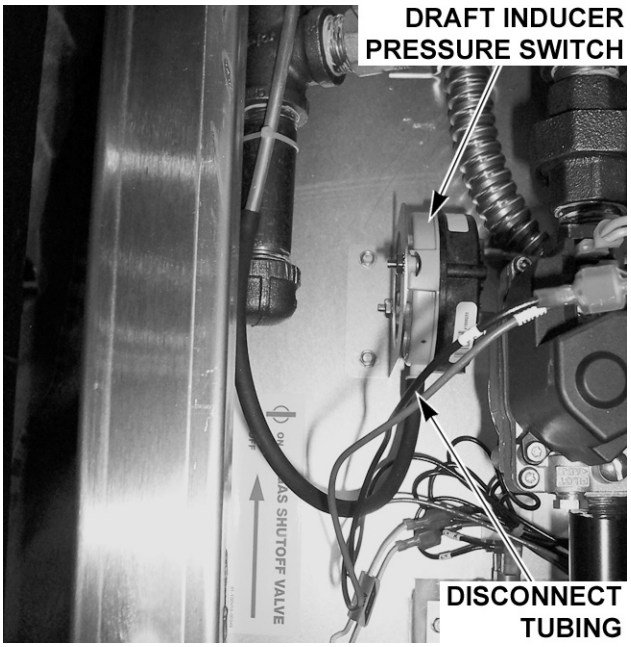


Fig. 22

Verify Operation of Steam

1. Check steam system for proper operation.
   A. Turn the water supply on.
   B. Turn oven on and set to normal bake temperature.
   C. Allow oven to preheat for 30 minutes.
   D. Set control to call for steam.
   E. Observe operation. If steam is not observed, contact your local Bakery Systems service office.

After completion of the owner PM procedure, you will need to contact a qualified servicer for any needed repairs.

Keep a copy of the Owner Preventive Maintenance Checklist for your records.

COPY AS NEEDED

RECOMMENDED OWNER PREVENTIVE MAINTENANCE CHECKLIST

BAKERY RACK OVENS - GAS

MODEL/SERIAL NUMBERS

CHECK FOR PROPER OPERATION OR CLEAN.
CALL FOR SERVICE AS NECESSARY

	Inspect oven lamps													
	Clean and vacuum components and burner areas													
	Inspect rack lift and rotation assemblies													
	Inspect door components													
	Inspect air louvers													
	Inspect cavity vent													
	Visually inspect electrical connections													
	Verify ignition module safety lockout functions													
	Verify operation of steam													

√ =**PROCESS COMPLETED**

PM Frequency: ☐**Bi-monthly**
Type of Gas **Natural Gas** _____ **Propane** _____

Location: _____ **Store No.** _____

Inspector: _____ **Date Completed:** _____

Service Notified for Necessary Repairs: _____
(Date)

Comments: _____

_____

_____

_____

_____

_____
(Inspector Signature)

NOTES