

Operator Manual

CS500G2

CS500 ROTATING RACK OVEN WITH ADVANCED ELECTRONIC OVEN CONTROL

Model Number: _____ *CS500G1* *GAS*

Serial Number: _____ *CS500G2* *GAS*

Date of Installation: _____

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FORM 36825 (May 2024)

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.

DO NOT SPRAY AEROSOLS IN THE VICINITY OF THIS APPLIANCE WHILE IT IS IN OPERATION.

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OPERATION AND CARE OF MODEL CS500 RACK OVEN

RETAIN THIS MANUAL FOR FUTURE REFERENCE

GENERAL

The Baxter CS500 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 CS500G1 is rated at 180,000 Btu/hr, natural or propane gas.

Model CS500G2 is rated at 275,000 Btu/hr, natural or propane gas.

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

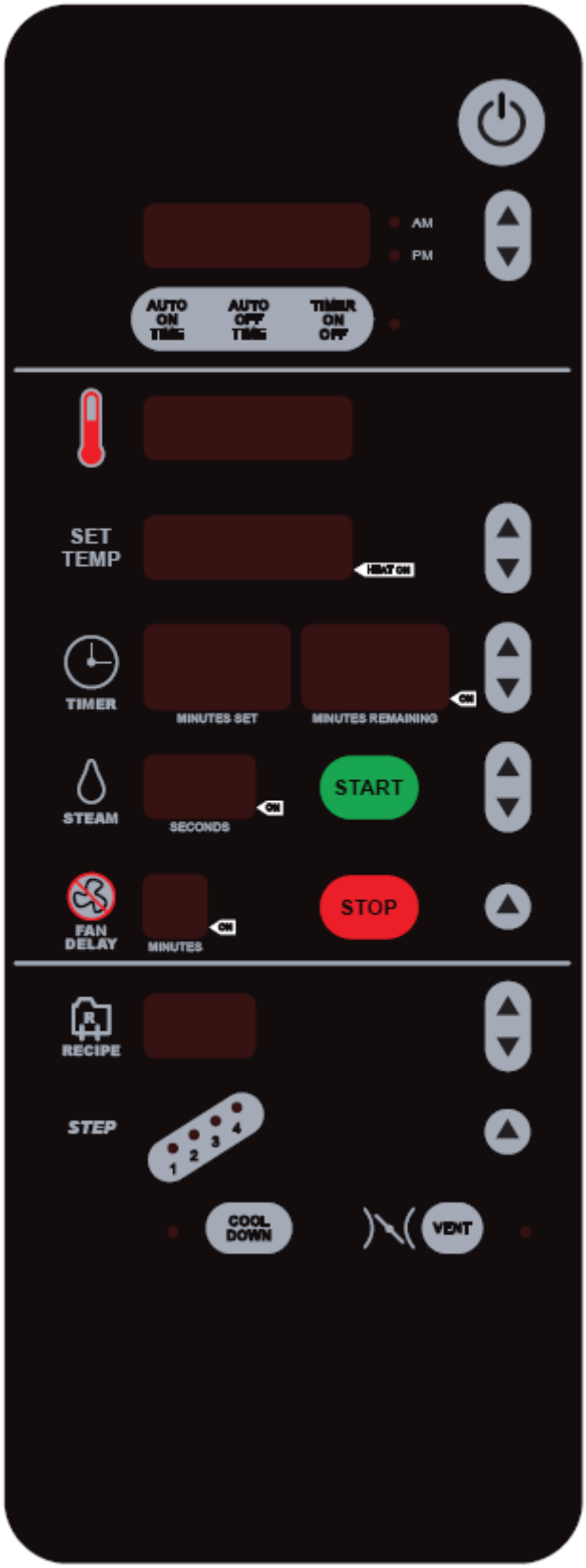
See separate CS500 Installation Manual.

WARRANTY

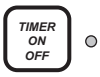
To activate warranty, the Baxter CS500 series Rack Oven must have a start-up performed by an authorized Baxter servicer.

OPERATION

CS500 DIGITAL CONTROLS



Control Guide - Advanced

BUTTON	ACTION	DISPLAY
	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 	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 	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 	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.
	Press to start the BAKE TIMER.	The ON light blinks when the BAKE TIMER is active.
	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
	Press to open or close the vent.	The indicator light next to the VENT button is lit when the vent cycle is enabled.
	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.



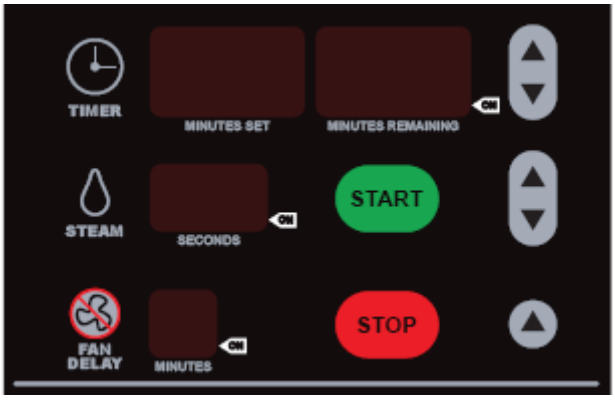
5. The oven is now ready for baking operations.

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 Baxter service office.

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 Baxter 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

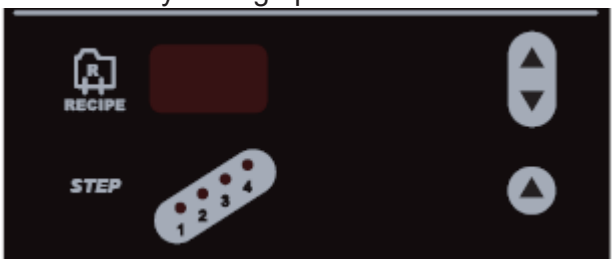
= steam is turned on for 3 seconds every 990 seconds (17 min.)

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.

PROGRAMMING THE OVEN

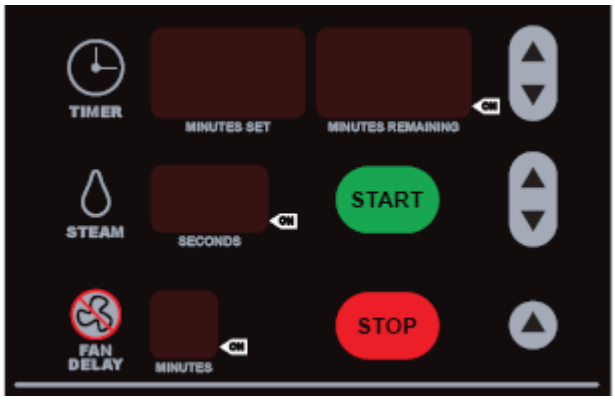
Single Step Recipes

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

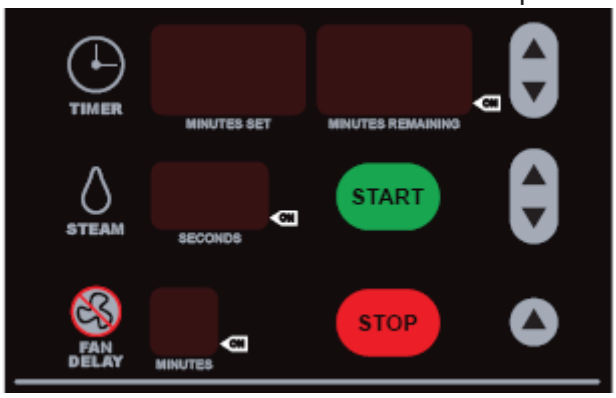
Additional steps can be entered within the original recipe number. Up to four individual steps can be added by the operator, each with different bake settings.

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.

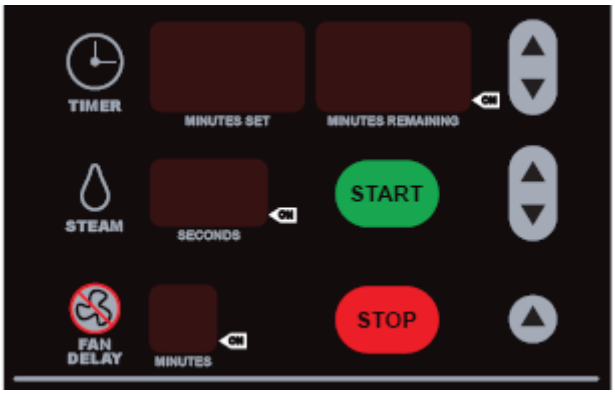


5. Press the UP arrow in the STEPS section to advance to the next step within the recipe. The selected step light is lit. Repeat steps 3 and 4 above to set each step, if needed, in the program.
6. To store all the steps in the program, press the RECIPE UP or DOWN arrows to move to the next recipe number,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

Clear All Recipes

1. Switch the oven into the off mode.
2. Press and hold the RECIPE DOWN button then press and hold the POWER ON OFF button until you hear a single short beep, followed by a longer beep. This long beep indicates that the recipes have been cleared.

Load Recipes Via USB Flash Drive (For Use on Ovens Supplied with USB Connection Package)

1. Switch the oven into the off mode.
2. Insert the flash drive that contains the recipe binary file [RECIPE.BIN] into the USB socket.
3. Press and hold the STOP button then press and hold the POWER ON OFF button, keep holding both buttons until the word ‘UPdt’ [Update] is displayed in the clock field.

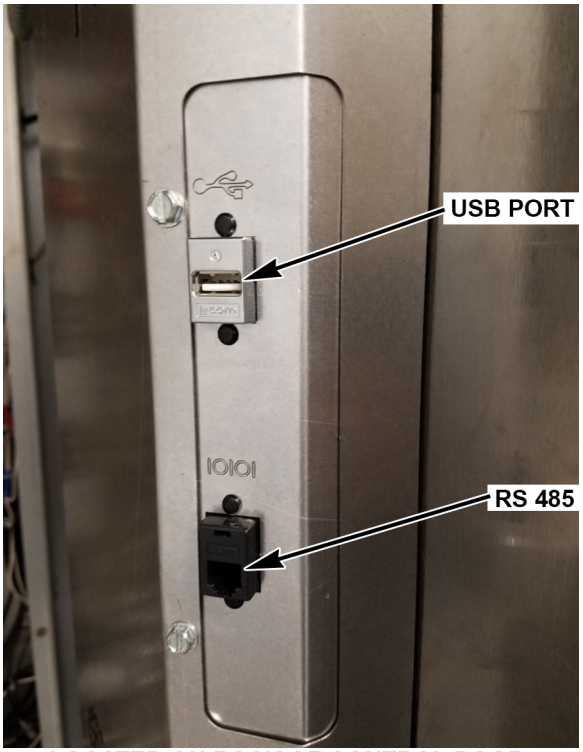
Once the recipe file has been imported into the oven successfully, the display shall show ‘rebooting’ for a few seconds and the oven controller shall reboot.

If there are any errors reading or programming the recipe file into the oven, the error shall be displayed and the oven shall not reboot. You need to power off the oven, wait 10 seconds, and then power on the oven to make it operable again.

If no binary file, Firmware or Recipe, is found the display will show:

UPdt-FAIL-USb-Err [Update fail USB error]

To correct this error, insert the correct USB drive and power off and then power on the oven.



LOCATED ON BACK OF CONTROL DOOR

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.

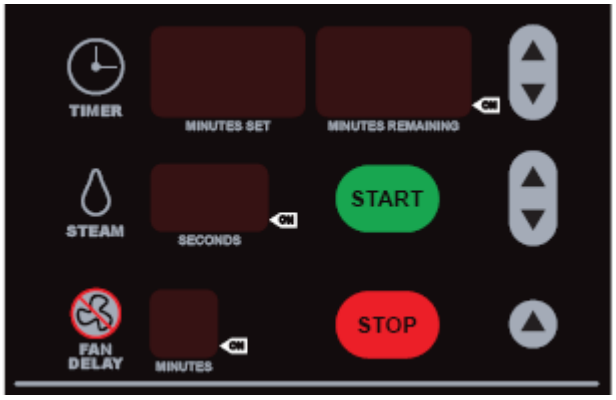
CUSTOMIZED OPERATION

The CS500 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. A code will briefly appear in the SET TEMP window. This code is related to the software version. The oven will then switch to Setup mode and P1 is displayed in the SET TEMP window.

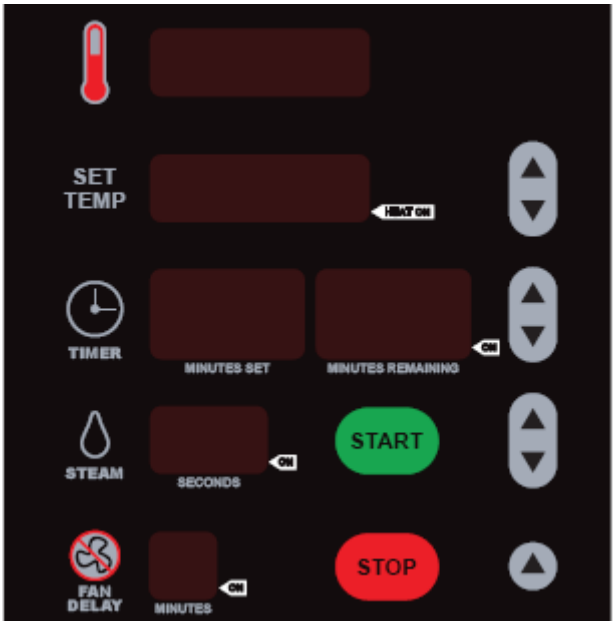




Changing Items in Setup Mode

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
P0	Network Number	RS485 network number, default is 1.
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). Default is 525°F.
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 50°F to 525°F (10°C to 275°C). Default is 375°F.
P3	Minimum Temperature Setpoint	This is the minimum temperature at which the oven can be set. Range is 50°F to 200°F (10°C to 93°C). Default is 50°F.
P4	Temperature Offset - Idle	This value permits an offset of correction between the oven temperature display and the real baking chamber temperature during an idle state. Call your authorized servicer for help with this feature. Default is 0.
P5	Heat OFF Offset - Idle	This value adjusts the temperature difference between the set point and stopping of the heating system during an idle state. Call your authorized servicer for help with this feature. Default is -2.
P6	Heat Difference Hysteresis - Idle	This value adjusts the temperature difference between the on temperature and off temperature of the heating system during an idle state. Call your authorized servicer for help with this feature. Default is 12.
P7	Maximum Steam Time	Time set is the maximum time (in seconds) that water is supplied during the STEAM TIMER operation. Maximum duration time for bake steam mode is 30 seconds of continual steam. Maximum duration time for bake steam pulse mode is 60 seconds of 5 second pulses of steam. Default is 20.
P8	Temperature Units	The oven can be set to display temperature in Fahrenheit or Celsius. To ensure accurate temperature parameters, call your authorized servicer for help with this feature. Default is F.
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. Default is 0.
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. Default is 90.
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%. Default is 50.
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). Default is 0.
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. Default is 1.
P14	Steam Timer Mode	The STEAM TIMER can be set up to function in Bakery mode “0” (single steam function at the beginning of step/cycle) or Food Service mode “300 to 990” seconds interval between steam functions. Default is 0.
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. Default is 90.
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. AP = 12 Hour Clock [Default] 24 = 24 Hour Clock

SETUP NUMBER	SETUP ITEM	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. Default is 60.
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 (10°C to 149°C). Default is 300°F.
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). Default is 0.
P20	Restricted Operator Mode	0 = Standard 1 = Restricted Operator Mode When restricted operator mode is selected, a recipe is selected and when the start button is pressed the operator cannot make changes to the bake time remaining, oven set temp, fan delay time or steam time. Default is 0, Restricted Operator Mode disabled.
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. Default is 0.
P22	Oven Operation Mode	500 = OV500/HBA [default] 210 = OV210 310 = OV310 Select [210] for installation of an OV500/HBA control panel and control door on an OV210. When enabled, the OV210 will emulate all the functions of an HBA. Default is 500 set for OV500 controls.
P23	External Alarm Mode	Used to decide if the external alarm relay will flash on/off or be a steady on. This is the alarm that is activated when a recipe's time has elapsed. FLSH = flashing [default] STDY = steady
P24	Test Mode Password	Test mode password, range 0x0000 to 0xFFFF. This is used by the Baxter Oven Manager application and is required to put the oven into test mode. The default password value is a '0000'. While editing the parameter, pressing the time down key sets the password to the default, pressing the time up key sets the password to a random value. It is highly recommended that this is a non-default value when external communications is in use for protection.
P25	Communication Mode (RS485 serial port)	Requires a power cycle when this is changed. 0 = 1200 baud ASCII, [default] 1 = 9600 baud NAFEM MODBUS RTU, 2 = 9600 baud ASCII 3 = 19200 baud ASCII
P26	Reserved	The default value is 0.

SETUP NUMBER	SETUP ITEM	DISPLAY
P27	Recipe Quick Time Mode	0 = Disabled. Recipes 20 to 39 shall use minutes. [default] 1 = Enabled. Recipes 20-39 shall use minutes and seconds.
P28	Show Total Time Mode	0 = Disabled. Show individual step times. [default] 1 = Enabled. Show total recipe time, the sum of all the steps.
P29	Bake Steam Pulse Mode	0 = Disabled. [default] 1 = Enabled. Steam is pulsed. 5 seconds on, 5 seconds off. Only Applicable when steam timer mode is set to baking (P14 = 0) (not food service steam mode), the maximum solenoid on time range that can be set in P7 increases to 60 seconds. If set for steam, steam is produced in 5 seconds on, 5 seconds off intervals for up to the time set in P7. When bake steam pulse mode is disabled, P7 shall automatically be lowered to 30 seconds.
P30	Reserved	0 = Disabled. [default] 1 = Enabled.
P31	Reserved	0 = Disabled. [default] 1 = Enabled.
P32	Fan ON Time - Idle	This parameter sets the time (seconds) the fan will run after the burner shuts off during idle mode. Fan will run continuously during baking mode or while the heat system is running. Default is 20.
P33	Fan OFF Time - Idle	This parameter sets the time (seconds) the fan is off after the value in P32 has elapsed. To disable this feature, set P33 to 0. Note: By disabling this feature energy usage may increase. Default is 100.
P34	Heat OFF Offset - Baking	This value adjusts the temperature difference between the set point and stopping of the heating system while in a baking mode. Call your authorized servicer for help with this feature. Default is -2.
P35	Heat Difference Hysteresis - Baking	This value adjusts the temperature difference between the on temperature and off temperature of the heating system. Call your authorized servicer for help with this feature. Default is 2.
P36	Temperature Offset - Baking	This value permits an offset of correction between the oven temperature displayed and the real temperature while baking. Call your authorized servicer for help with this feature. Default is zero.

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 24.
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.

PERFORM LED DISPLAY TEST

1. Switch the oven into the off mode.
2. Press and hold the VENT button then press and hold the POWER ON OFF button until you hear a beep and see the first test pattern.

The test will cycle through various LED tests. After the test has completed, it shall go back to showing the regular display along with the clock and it shall beep once.

UPDATE OVEN APPLICATION FIRMWARE VIA USB DRIVE (For Use on Ovens Supplied with USB Connection Package)

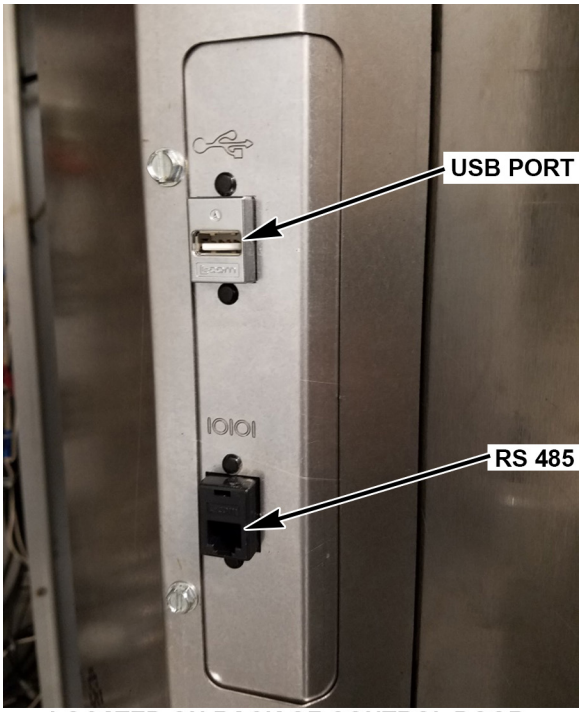
1. Switch the oven into the off mode.
2. Insert the flash drive that contains the firmware binary file [FIRMWARE.BIN] into the USB socket.
3. Press and hold the STOP button then press and hold the POWER ON OFF button, keep holding both buttons until word ‘UPdt’ [Update] is displayed in the clock field.

When the firmware has finished being updated the display shall show UPDt-done [Update done]. You need to power off the oven, wait 10 seconds and then power on the oven to make it operable again.

If no binary file, Firmware or Recipe, is found, the display will show:

UPdt-FAIL-USb-Err [Update fail USB error]

To correct this error, insert the correct USB drive and power off and then power on the oven.



LOCATED ON BACK OF CONTROL DOOR

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 Baxter authorized 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 Baxter authorized service office.
Display shows 'SHdn'.	Safety Alarm has disabled oven.	TURN OFF ALL POWER AND GAS TO THE OVEN. Contact your local Baxter authorized 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 Baxter authorized 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 Baxter authorized 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 Baxter authorized 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 Baxter authorized 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 CS500 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 Baxter service office to provide this skilled service for you.

SERVICE AND PARTS INFORMATION

Contact your Baxter authorized 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

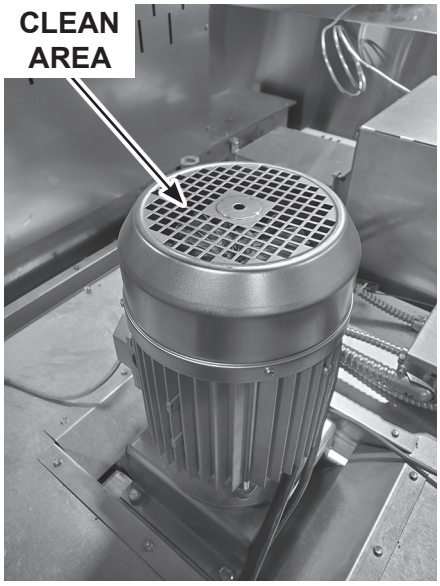


Fig. 3

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 (2) in carrier (Fig. 4).
   A. Check and tighten all set screws on carrier.



Fig. 4

Inspect Door Components

1. Check loading door latch operation.
    A. Check door gasket for good condition. If door gasket needs replacement, contact your local Baxter authorized service office.
    B. Check that the fasteners for the loading door strike are tight (Fig. 5) and latch moves freely (Fig. 6).
    C. Adjust strike by loosening two bolts. DO NOT REMOVE THEM. Slide strike in or out to loosen or tighten door (Fig. 5).
    D. Tighten bolts.
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 Baxter authorized service office.
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

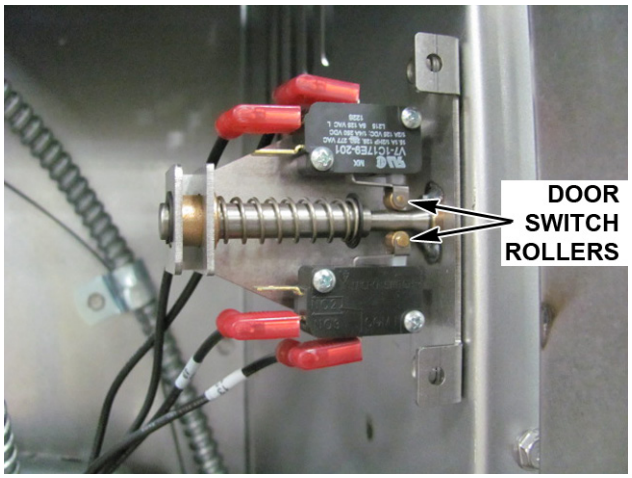


Fig. 8

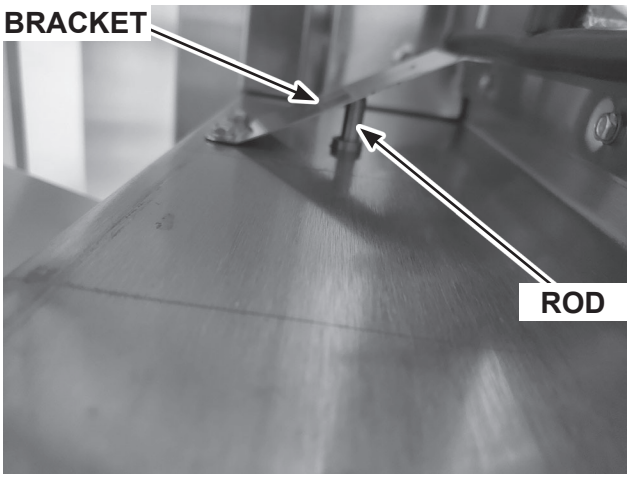


Fig. 9

5. While oven is cool, clean door glass with warm soapy water.

Inspect Air Louvers

1. Check air louvers (shutters) (Fig. 10) inside oven and tighten any loose screws.
2. Check oven interior, tighten or replace loose or missing panel screws. Also check floor anchors.

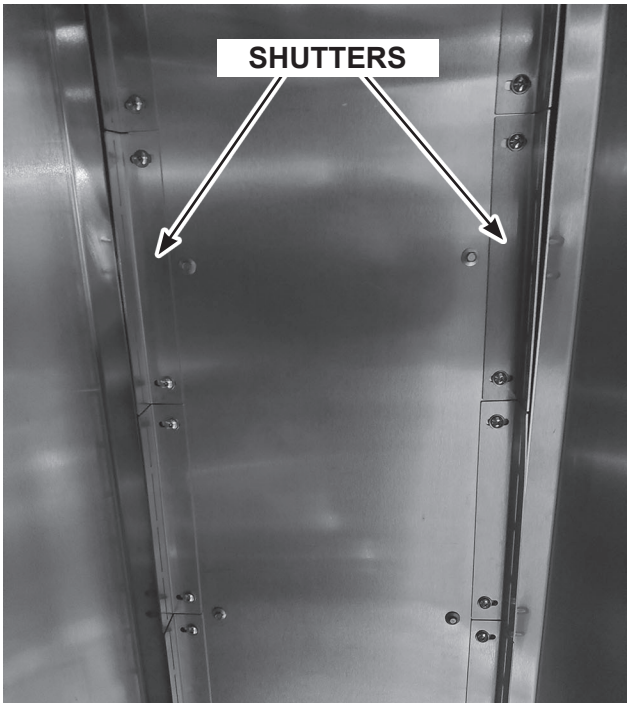


Fig. 10

Inspect Cavity Vent

1. Check cavity vent for proper operation.
   A. Push VENT (Fig. 11) button on control panel to open vent and then push again to close vent.
   B. Visually check that vent opens (Fig. 12) and closes (Fig. 13) when button is pressed.
   C. Check that vent gasket is intact.



Fig. 11

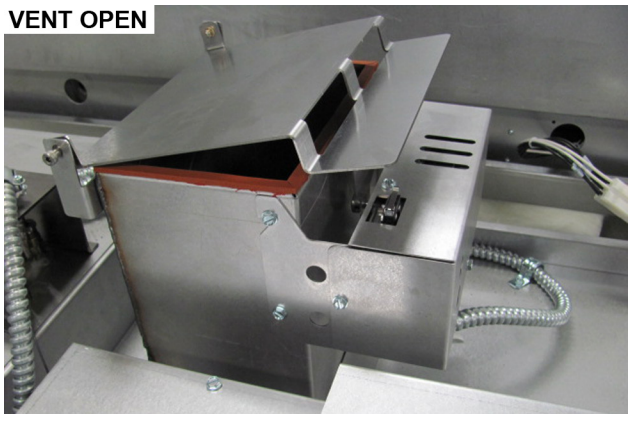


Fig. 12

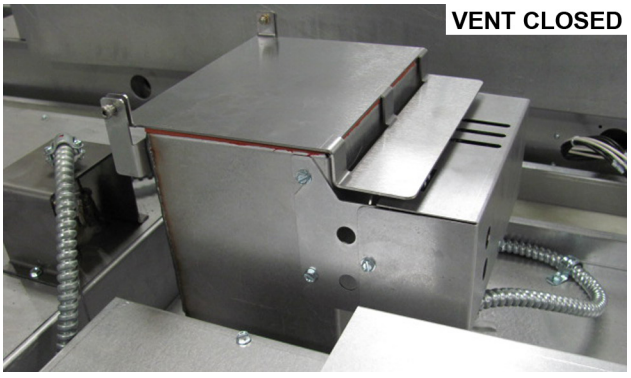


Fig. 13

Visually Inspect Electrical Connections

1. Inspect all wiring connections for discoloration. If discoloration is visible, contact your local Baxter authorized 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. 14). 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. 14). The ignition module should go into lockout after three trials for ignition. (See chart below.)



Fig. 14

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 Baxter authorized service office.

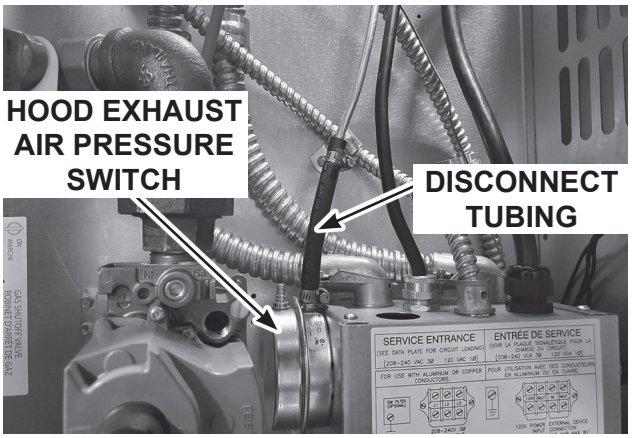


Fig. 15

2. Verify hood exhaust air pressure switch (Fig. 15) 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 Baxter authorized service office.

3. Verify draft inducer pressure switch (Fig. 16) 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 Baxter authorized service office.

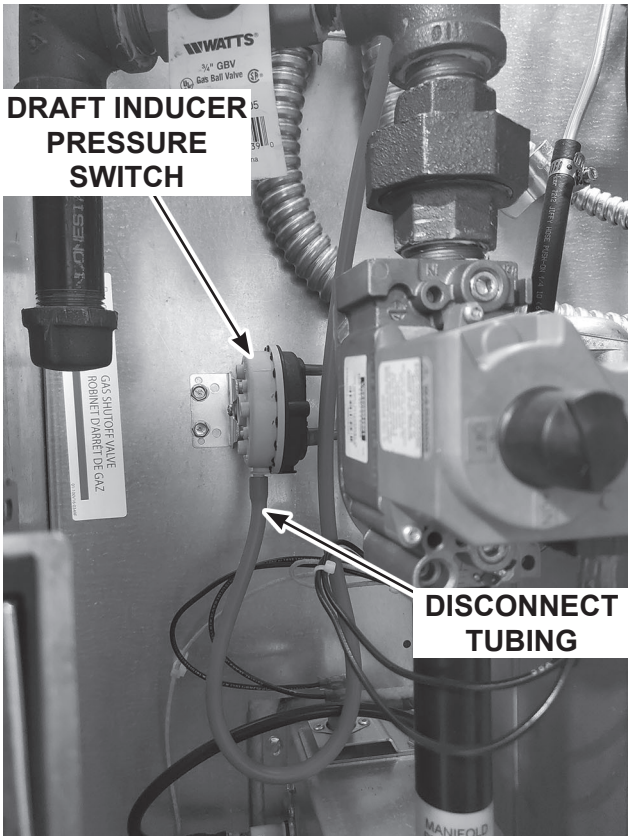


Fig. 16

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 Baxter authorized 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

MODEL/SERIAL NUMBERS

RECOMMENDED OWNER PREVENTIVE MAINTENANCE CHECKLIST

BAKERY RACK OVENS - GAS

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)