

Technical Service Guide

June 2014

Wall Ovens

Single 27": JK1000/JK3000/JK5000/PK7000

Single 30": JT1000/JT3000/JT5000/PT7050/PT9050

Double 27": JK3500/JK5500/PK7500

Double 30": JT3500/JT5500/PT7550/PT9550



Safety Information



Important Safety Notice

The information in this service guide is intended for use by individuals possessing adequate backgrounds of electrical, electronic, and mechanical experience. Any attempt to repair a major appliance may result in personal injury and property damage. The manufacturer or seller cannot be responsible for the interpretation of this information, nor can it assume any liability in connection with its use.

Warning

To avoid personal injury, disconnect power before servicing this product. If electrical power is required for diagnosis or test purposes, disconnect the power immediately after performing the necessary checks.

Reconnect all Grounding Devices

If grounding wires, screws, straps, clips, nuts, or washers used to complete a path to ground are removed for service, they must be returned to their original position and properly fastened.

GE Appliances & Lighting

Technical Service Guide

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Safety Requirements

GE Factory Service Employees are required to use safety glasses with side shields, safety gloves and steel toe shoes for all repairs.



⚠ WARNING

Prior to disassembly of the wall oven to access components, GE Factory Service technicians are REQUIRED to follow the Lockout / Tagout (LOTO) 6 Step Process:

Step 1 Plan and Prepare	Step 4 Apply LOTO device and lock
Step 2 Shut down the appliance	Step 5 Control (discharge) stored energy
Step 3 Isolate the appliance	Step 6 “Try It” verify that the appliance is locked out

Introduction

GE's Most Advanced Wall Oven

GE has introduced the new versions of 27" and 30" wall ovens. Featuring larger oven cavities, smaller height, advanced convection operation, LED notification lighting and even remote enable on some models. Servicing of these products has changed very little. Service modes are available to assist technicians in the repair of these units.

Common features:

- **Panelized cavities:** 4.3 cu. ft. 27" – 5.0 cu. ft. 30". Not a serviceable part.
- **Hinge receivers:** Built into vertical supports.
- **Cavity racks:** Conventional ribs built into cavity panels (on some models).
- **Ladder racks:** Rack supports mounted to side panels (on some models).
- **Latch assembly:** New design, enables door latch pawl to be unlatched if unit fails in LOCKED mode.

Other features (some features not on all models):

- **Dimensions:** Smaller height profile on double ovens to enable units to fit into cabinet openings previously used by competitors' models. The use of rails are necessary for installation in normal GE cabinet dimensions, and are supplied with the units.
- **Notification lighting:** LED light banks between the control panel and the upper oven door. Provides quick easy visual confirmation of the timer and heating stages.
- **Advanced convection:** Variable speed and reversible convection motor provides more consistent cooking and more even heating through the use of the top air flow duct.
- **Remote Enable:** Allows control over some oven functions by other devices (e.g.: turning off all oven functions through a smartphone application).

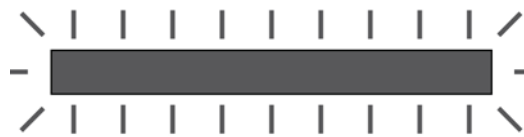
Notification Light Bar (on some models):

This feature uses a light bar between the door and the control panel for easy visual indication of preheat and cook time status. Notification lights can be turned on or off in the Special Features function of the oven. The light bar works with Convection Bake, Convection Bake Multi, Convection Broil, Convection Roast, Traditional Bake, Traditional Broil, Warm, Proof, Self-Clean, Cook Time and Timer. On a double wall oven, the notification lighting indicates the status of the upper oven only. Below is a description of the different light conditions.

- **OFF:** No oven or timer function is running or the feature has been turned off in Special Features.



- **PULSING BAR:** The oven is preheating. The light bar will pulse until the oven set temperature has been reached.



- **PROGRESS BAR:** Will slowly progress to a fully lit bar as the timer counts down.



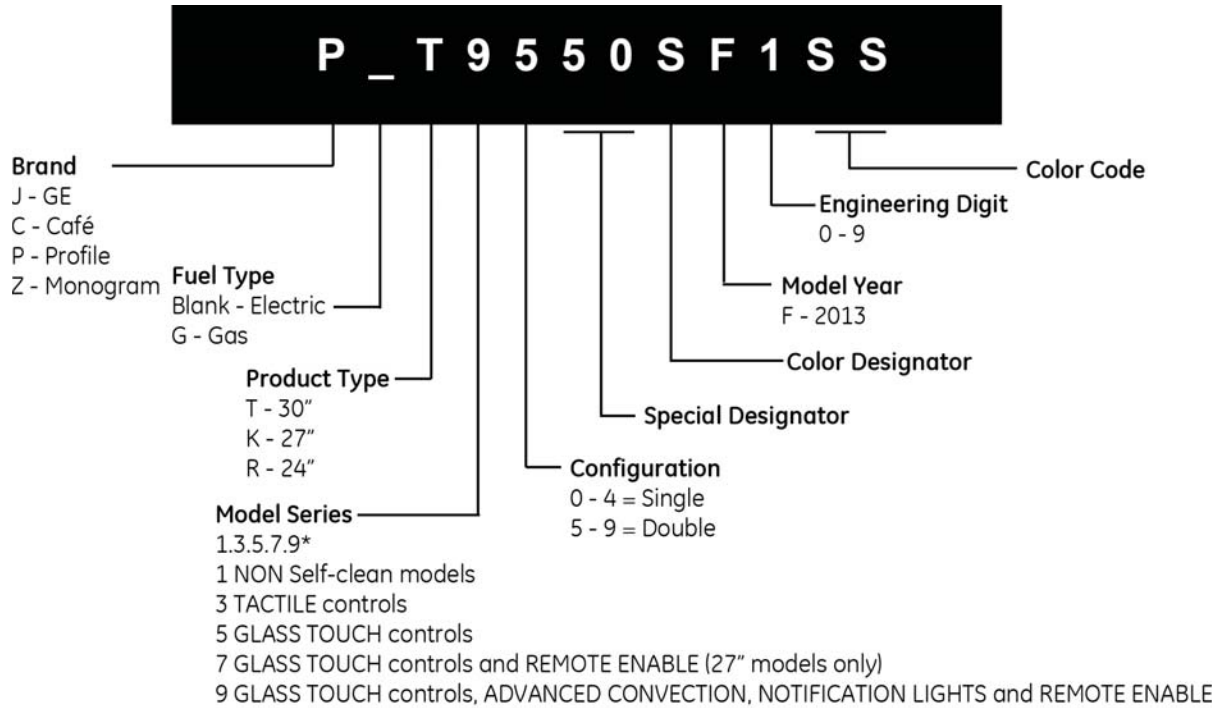
NOTICE
If the Cook Time button is used, the light bar and the oven will turn off when the time reaches zero. If the Timer button is used, the light bar will remain solid when the time reaches zero.

- **SOLID BAR:** The oven is at the set temperature and/or function, or the kitchen timer is complete.



NOTICE
The progress bar for timed functions takes priority over the solid or pulsating functions if both are being used at the same time.

Nomenclature



Serial Number

The nomenclature breaks down and explains what the letters and numbers mean in the model number. The first two characters of the serial number identify the month and year of manufacture.

Example: LA123456S = June, 2013

A – JAN	2024 – Z
D – FEB	2023 – V
F – MAR	2022 – T
G – APR	2021 – S
H – MAY	2020 – R
L – JUN	2019 – M
M – JUL	2018 – L
R – AUG	2017 – H
S – SEP	2016 – G
T – OCT	2015 – F
V – NOV	2014 – D
Z – DEC	2013 – A



The Model Serial ID Tag is located inside the oven, on the left side of the cavity.



The Mini Manual is located next to the key panel behind the control panel.

The letter designating the year repeats every 12 years.

Product Specifications

Installation Electrical Specifications

kW Rating	kW Rating	Circuit Size
240V	208V	(Dedicated)
≤4.8 kW	≤4.1 kW	20 Amps
4.9 kW – 7.2 kW	4.2 kW – 6.2 kW	30 Amps
7.3 kW – 9.6 kW	6.3 kW – 8.3 kW	40 Amps
9.7 kW – 12.0 kW	8.4 kW – 10.4 kW	50 Amps

DO NOT shorten the flexible conduit. The conduit strain relief clamp must be securely attached to the junction box, and the flexible conduit must be securely attached to the clamp. If the flexible conduit will not fit within the clamp, do not install the oven until a clamp of the proper size is obtained.

The three power leads supplied with this appliance are suitable for connection to heavier gauge household wiring. The insulation of these three leads is rated for temperatures much higher than the temperature rating of the household wiring. The current-carrying capacity of the conductor is governed by the wire gauge, and the temperature rating of the insulation around the wire.

Accessories

DWO 72" length — Optional conduit for service **WB18T10580**

SWO 72" length — Optional conduit for service **WB18T10578**

DWO 60" length — Optional conduit for service **WB18T10574**

SWO 60" length — Optional conduit for service **WB18T10581**

Small Broiler Pan (8 3/4" x 1 1/4" x 13 1/2") **WB48X10055** (US) 222D2097G001 (Canada)

Large* Broiler Pan (12 3/4" x 1 1/4" x 16 1/2") **WB48X10056** (US) 222D2097G002 (Canada)

XL** Broiler Pan (17" x 1 1/4" x 19 1/4") **WB48X10057** (US) Not available in Canada

*The large broiler pan does not fit in 20"/24" ranges.

**The XL broiler pan does not fit in 24" wall ovens, 27" drop—ins or 20"/24" ranges

Cleaning/Lubrication Supplies

CitruShine Stainless Steel Wipes **WX10X10007**

CeramaBryte Stainless Steel Appliance Cleaner **PM10X311**

Graphite Lubricant — for rack slides **WB02T10303**

Tools Needed

- 1/4" hex head nut driver or socket
- 3/8" socket wrench or socket
- 7 mm wrench or socket
- T10 Torx bit
- T20 Torx bit

Special Tools

No special tools are required to service these units. Aside from the installation screws, which are normally Phillips head screws, most are 1/4 in. hex head or T20 Torx. The screw mounting the fad board on upper/single oven is a T10 Torx screw. 7 mm nuts hold the fad board onto the lower cooling fan motor, and the LH threaded nut on the convection blade is 3/8 inches.

A tool to assist the unlatching of a locked door could be made up from a wire coat hanger, or a piece of brazing solder (see image below). Be sure to cover with tape to prevent scratching of the door or trim.

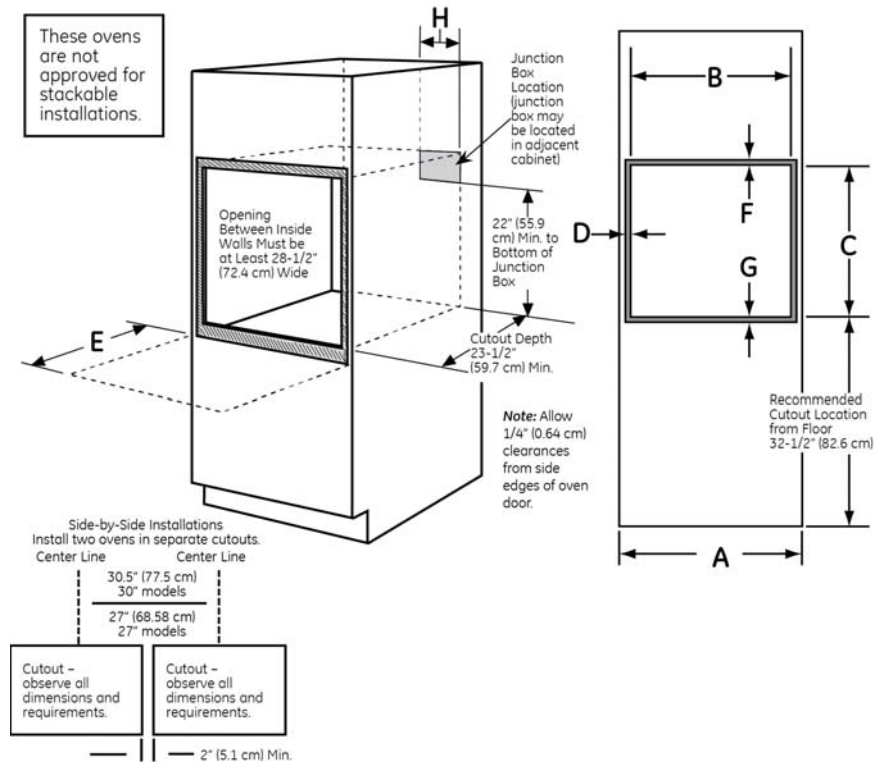


Installation

Instructions from this section are taken from Installation Instruction 31-10856-1 (available on website).

CUTOUT FOR SINGLE OVENS IN WALL CABINET

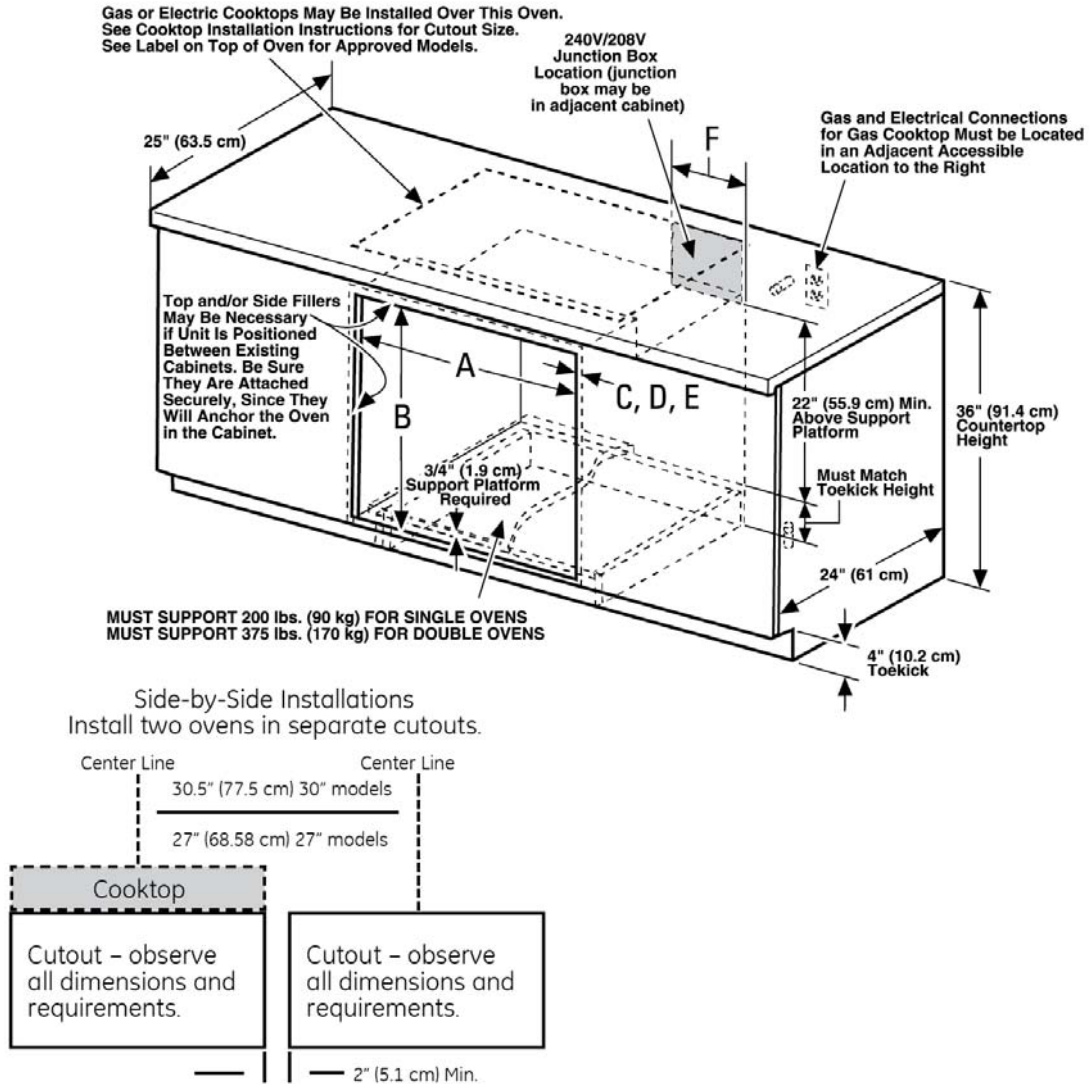
NOTE: If the cabinet does not have a front frame and the sides are less than 3/4 in. (1.9 cm) thick, shim both sides equally to establish the cutout width



Dimension	Dimension Description	27" Single Oven	30" Single Oven
A	Cabinet Width	27" (68.6 cm)	30" (76.2 cm)
B	Cutout Width	25" (63.5 cm) min. 25 1/4" (64.1 cm) max.	28 1/2" (72.4 cm) min. 28 5/8" (72.7 cm) max.
C	Cutout Height	27 5/8" (70.2 cm) min. 28 1/8" (71.4 cm) max.	27 1/4" (69.2 cm) min. 27 5/16" (69.4 cm) max.
D	Overlap of Oven Over Side Edges of Cutout	1" (2.5 cm)	1 1/16" (1.75 cm)
E	Clearance to Adjacent Corners, Drawers, Walls, etc., When Door Is Open	23" (50.8 cm) min.	23" (53.3 cm) min.
F	Overlap of Oven Top of Cutout	1" (2.5 cm) min.	1" (2.5 cm) min. (1 1/4" (3.2 cm) for PT9050)
G	Overlap of Oven Bottom of Cutout	1" (2.5 cm) min.	1 1/4" (3.2 cm)
H	Junction Box Location	8 3/4" (22.2 cm) max. right side only	9 1/2" (24.1 cm) max. right side only

CUTOUT FOR SINGLE OVENS — UNDER COUNTER

NOTE: These ovens are only approved to be installed under the specific models as labeled on the unit.

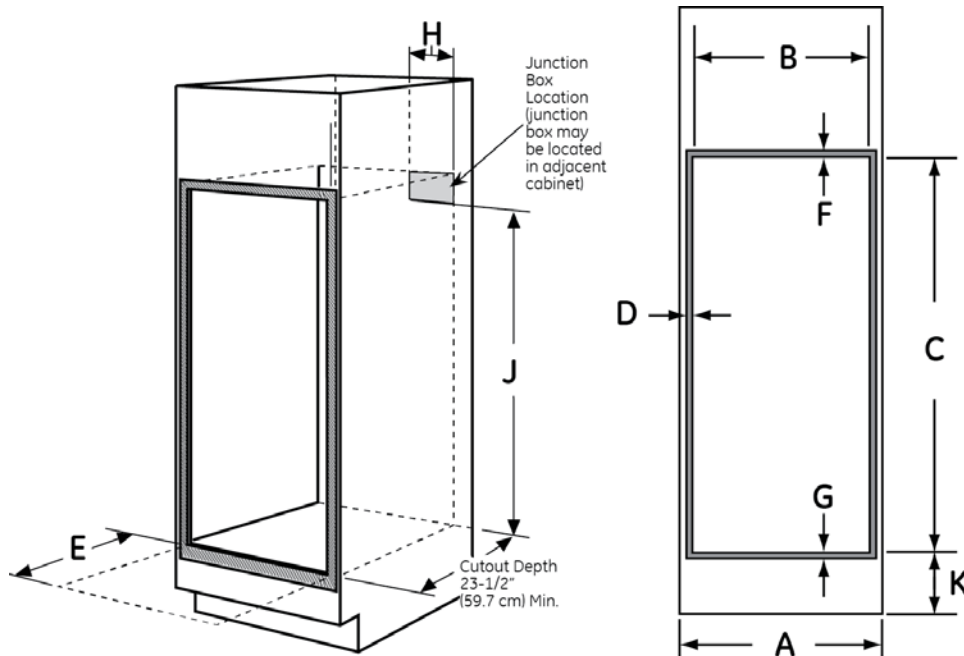


NOTE: One cooktop may be centered over either oven in the side-by-side installation.

Dimension	Dimension Description	27" Single Oven	30" Single Oven
A	Cabinet Width	25" (63.5 cm) min. 25 1/4" (64.1 cm) max.	28 1/2" (72.4 cm) min. 28 5/8" (72.7 cm) max.
B	Cutout Height	27 5/8" (70.2 cm) min. 28 1/8" (71.4 cm) max.	27 1/4" (69.2 cm) min. 27 5/16" (69.4 cm) max.
C	Unit Overlap Top	1" (2.5 cm)	1" (2.5 cm) (1 1/4" (3.2 cm) for PT9050)
D	Unit Overlap Bottom	1" (2.5 cm)	1 1/4" (3.2 cm)
E	Unit Overlap Side Edges	1" (2.5 cm)	1 1/16" (1.75 cm)
F	Junction Box Location	8 3/4" (22.2 cm) max. right side only	9 1/2" (24.1 cm) max. right side only

CUTOUT FOR DOUBLE OVENS (2 THERMAL OVENS)

NOTE: If the cabinet does not have a front frame and the sides are less than 3/4 in. (1.9 cm) thick, shim both sides equally to establish the cutout width.

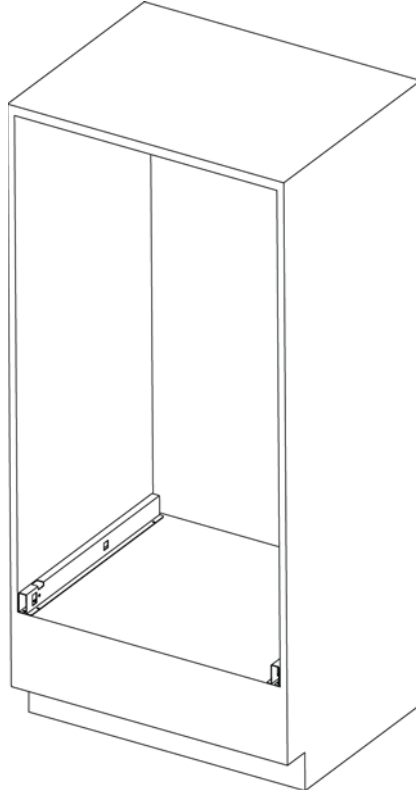


Dim.	Description	27" Double Oven	30" Double Oven with Pedestal	30" Double Oven without Pedestal
A	Cabinet Width	27" (68.6 cm)	30" (76.2 cm)	30" (76.2 cm)
B	Cutout Width	25" (63.5 cm) min. 25 ¹ / ₄ " (64.1 cm) max.	28 ¹ / ₂ " (72.4 cm) min. 28 ⁵ / ₈ " (72.7 cm) max.	28 ¹ / ₂ " (72.4 cm) min. 28 ⁵ / ₈ " (72.7 cm) max.
C	Cutout Height	49 ¹ / ₁₆ " (126.2 cm) min. 50 ¹ / ₈ " (127.3 cm) max.	51 ¹ / ₁₆ " (131.6 cm) min. 51 ¹⁵ / ₁₆ " (131.9 cm) max.	50 1/4" (127.64cm)
D	Overlap of Oven Over Side Edges of Cutout	1" (2.5 cm)	1 ¹ / ₁₆ " (1.75 cm)	1 ¹ / ₁₆ " (1.75 cm)
E	Clearance to Adjacent Corners, Drawers, Walls, etc., When Door Is Open	23" (50.8 cm) min.	23" (53.3 cm) min.	23" (53.3 cm) min.
F	Overlap of Oven Top of Cutout	1" (2.5 cm) min.	1" (2.5 cm) min. (1 ¹ / ₄ " (3.2 cm) for PT9550)	1" (2.5 cm) min. (1 ¹ / ₄ " (3.2 cm) for PT9550)
G	Overlap of Oven Bottom of Cutout	1" (2.5 cm) min.	1 ¹ / ₄ " (3.2 cm)	1 ¹ / ₄ " (3.2 cm)
H	Junction Box Location	8 ³ / ₄ " (22.2 cm) max. right side only	9 ¹ / ₂ " (24.1 cm) max. right side only	9 ¹ / ₂ " (24.1 cm) max. right side only
J	Height to Bottom of Junction Box	44" (111.8 cm)	47" (119.4 cm)	47" (119.4 cm)
K	Recommended Cutout Location from Floor	13 ¹ / ₄ " (33.7 cm)	12" (30.5 cm)	12" (30.5 cm)

PEDESTAL RAIL INSTALLATION (30" DOUBLE OVENS ONLY)

A. Place one pedestal rail on each cabinet runner, or centered on the opposite side of the solid cabinet bottom, flush with the side of the cabinet opening. Locate each rail so that front of the rail is behind the front cabinet opening.

B. Drill pilot holes and attach the rails to the runner or the bottom of the cabinet with provided hardware.



Definitions

T09 Control: Main oven control that is self-contained. All relays and inputs connect to this ERC. Basic – Bake and Broil functions only, NO self-clean.

T012 Control: Main oven control that is self-contained. All relays and inputs connect to this ERC. More functions than T09, like convection and self-clean.

Machine Control: A separate control board that contains all relays and communicates with user interface to control all outputs. The Machine Control is located behind the control panel housing.

ERC: Electronic Range Control. Example: The T09, T012 controls.

User Interface: A logic board that interprets customer input from the key panel.

Daughter Board: This is an auxiliary relay board used to control the lower oven functions on units with T012 ERC.

Tactile: Defines the type of input to control. Tactile controls are switches mounted to the front part of the ERC and are covered with an overlay.

Glass Touch: A capacitive glass panel that transfers key pad touches to the ERC or user interface board. It is connected by a harness to the T012. (On Machine Control units, the user interface plugs directly into the Glass Touch assembly.)

Thermal Limit Switch: These temperature operated switches provide a safety back-up in case of a thermal “run-away”. All are “one-shot” and will need replacement if they open. Check for cause of over temperature!

FAD: Fan Apparency Device. In previous models, these were temperature operated devices that would open a circuit if the area got over temperature. Current production models use FAD boards that monitor cooling fan speeds. The control will shut down operation if the fan speed is not within a valid range. The boards will also log a F96, F97, F98 or F99 fault code. Operates like a miniature tachometer.

SWO: Single Wall Oven

DWO: Double Wall Oven

DLB: A relay to isolate elements from L2; must close for all heating cycles.

Operation

Use & Care Owner's Manuals (available on website)

Only on Remote Enable (PK7000 / PK7500 / PT9050 / PT9550)

- **49-80678-1: Wi-Fi** insert

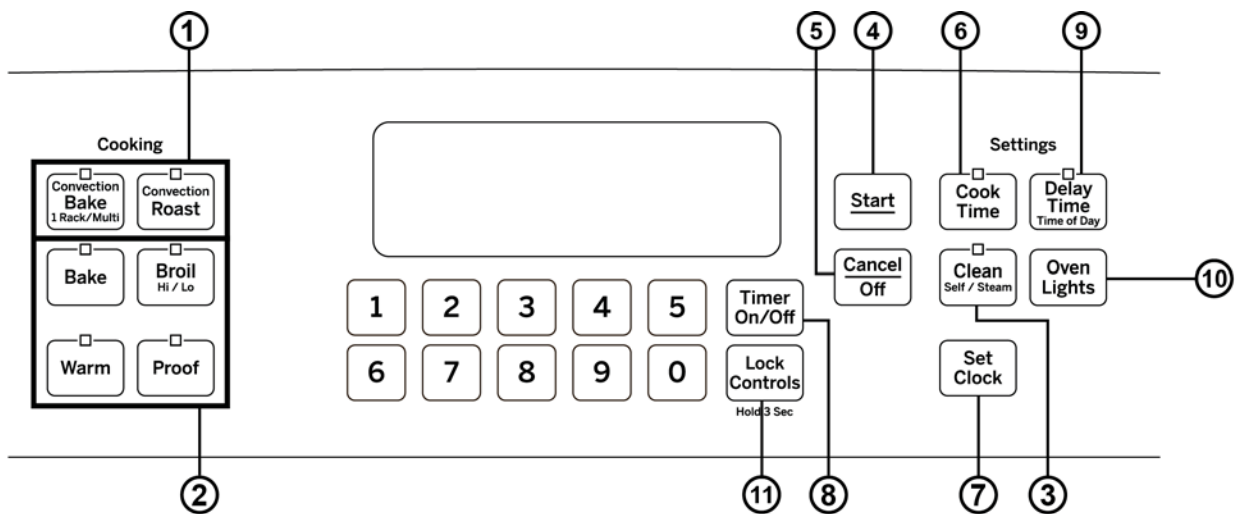
Single

- **49-80677-1: JK/JT1000**

Single or Double

- **49-80679-1: PK7000 / PK7500**
- **49-80656-1: JK/JT3000 / JK/JT3500**
- **49-80669-1: JK/JT5000 / JK/JT5500**
- **49-80668-1: PT7050 / PT9050 / PT7550 / PT9550**

Single Wall Oven — T012



1 Convection Cooking Modes

Convection cooking modes use increased air circulation to improve performance. The type of benefit depends on the mode. The oven has the following convection cooking modes: Convection Bake (1 Rack/Multi) and Convection Roast. See the Cooking Modes section in the Owner's Manual for more information.

2 Traditional Cooking Modes

The oven has the following traditional cooking modes: Bake, Broil Hi/Lo, Proof and Warm. See the Cooking Modes section in the Owner's Manual for more information.

3 Clean

The oven has two cleaning modes: Self Clean and Steam Clean. See the Cleaning the Oven section in the Owner's Manual for important information about using these modes.

4 Start

Must be pressed to start any cooking, cleaning, or timed function.

5 Cancel/Off

Cancels ALL oven operations except the clock and timer.

6 Cook Time

Counts down cooking time and turns off the oven when the cooking time is complete. Press the Cook Time pad; use the number pads to program a cooking time in hours and minutes, then press Start. This can only be used with Traditional Bake, Convection Bake, Convection Bake Multi, and Convection Roast.

7 Clock

Sets the oven clock time. Press the Set Clock pad and the number pads to program the clock. Press Start to save the time.

8 **Timer**

Works as a countdown timer. Press the Timer pad and the number pads to program the time in hours and minutes. Press the Start pad. The oven will continue to operate when the timer countdown is complete. To turn the timer off, press the Timer pad.

9 **Delay Time**

Delays when the oven will turn on. Use this to set a time for the oven to start. Press the Delay Time pad and use the number pads to program the time of day for the oven to turn on, then press Start. Press the desired cooking mode and temperature, then press Start. A cook time may also be programmed if desired. Follow the directions under Cook Time for setting this feature. This can only be used with Bake, Convection Bake (1 Rack/Multi), Convection Roast and Self-Clean.

NOTICE

When using the delay time feature, foods that spoil easily — such as milk, eggs, fish, stuffing, poultry and pork — should not be allowed to sit for more than 1 hour before or after cooking. Room temperature promotes the growth of harmful bacteria. Be sure that the oven light is off because heat from the bulb will speed harmful bacteria growth.

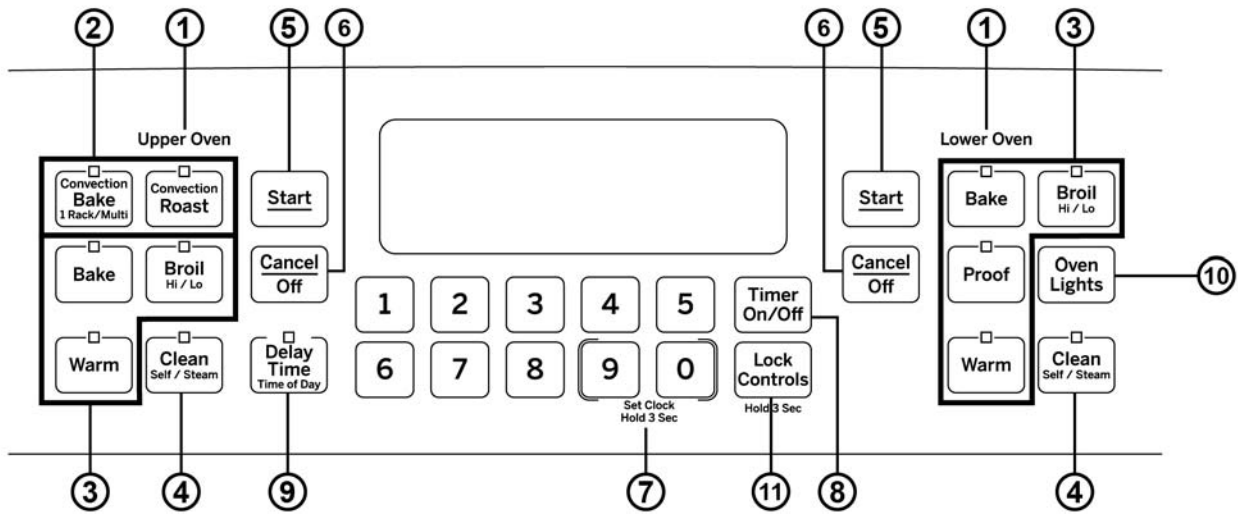
10 **Oven Light(s)**

Turns the oven light(s) on or off.

11 **Lock Controls**

Locks out the control so that pressing the pads does not activate the controls. Press and hold the Lock Controls pad for three seconds to lock or unlock the control. Cancel/Off is always active, even when the control is locked.

Double Wall Oven — T012



1 Upper Oven and Lower Oven

Designates which oven the controls will operate.

2 Convection Cooking Modes

Convection cook modes use increased air circulation to improve performance. The type of benefit depends on the mode. Your oven has the following convection cooking modes: Convection Bake (1 Rack/Multi) and Convection Roast. See the Cooking Modes section in the Owner's Manual for more information.

3 Traditional Cooking Modes

The oven has the following traditional cooking modes: Bake, Broil Hi/Lo, Warm and Proof (lower oven only). See the Cooking Modes section in the Owner's Manual for more information.

4 Clean

The oven has two cleaning modes: Self Clean and Steam Clean. See the Cleaning the Oven section in the Owner's Manual for important information about using these modes.

5 Start

Must be pressed to start any cooking, cleaning, or timed function.

6 Cancel/Off

Cancels ALL oven operations except the clock and timer.

7 Clock

Sets the oven clock time. Press the 9 and 0 pads and hold for 3 seconds. Use the number pads to program the clock. Press Start to save the time.

8 Timer

Works as a countdown timer. Press the Timer pad and the number pads to program the time in hours and minutes. Press the Start pad. The oven will continue to operate when the timer countdown is complete. To turn the timer off, press the Timer pad.

9 Delay Time

Delays when the oven will turn on. Use this to set a time for the oven to start. Press the Delay Time pad and use the number pads to program the time of day for the oven to turn on, then press Start. Press the desired cooking mode and temperature, then press Start. This can only be used with Bake, Convection Bake (1 Rack/Multi), Convection Roast and Self Clean.

NOTICE

When using the delay time feature, foods that spoil easily — such as milk, eggs, fish, stuffing, poultry and pork — should not be allowed to sit for more than 1 hour before or after cooking. Room temperature promotes the growth of harmful bacteria. Be sure that the oven light is off because heat from the bulb will speed harmful bacteria growth.

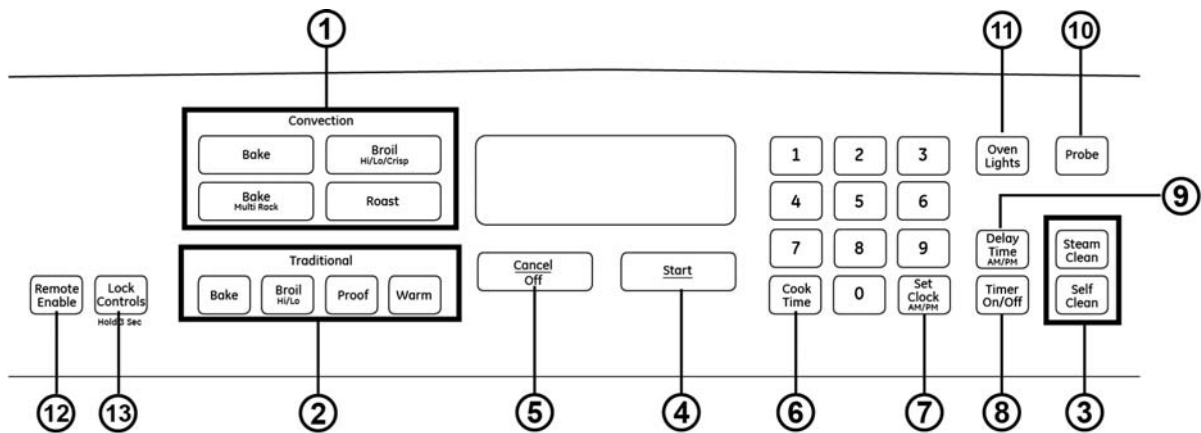
10 Oven Light(s)

Turns the oven light(s) on or off in both ovens.

11 Lock Controls

Locks out the control so that pressing the pads does not activate the controls. Press and hold the Lock Controls pad for three seconds to lock or unlock the control. Cancel/Off is always active, even when the control is locked.

Single Wall Oven — Machine Control



1 Convection Cooking Modes

Convection cooking modes use increased air circulation to improve performance. The type of benefit depends on the mode. The oven has the following convection cooking modes: Bake, Bake Multi Rack, Roast, Broil Hi, Broil Lo, and Broil Crisp. See the Cooking Modes section in the Owner's Manual for more information.

2 Traditional Cooking Modes

The oven has the following traditional cooking modes: Bake, Broil Hi, Broil Lo, Proof and Warm. See the Cooking Modes section in the Owner's Manual for more information.

3 Clean

The oven has two cleaning modes: Self Clean and Steam Clean. See the Cleaning the Oven section in the Owner's Manual for important information about using these modes.

4 Start

Must be pressed to start any cooking, cleaning, or timed function.

5 Cancel/Off

Cancels ALL oven operations except the clock and timer.

6 Cook Time

Counts down cooking time and turns off the oven when the cooking time is complete. Press the Cook Time pad; use the number pads to program a cooking time in hours and minutes, then press Start. This can only be used with Traditional Bake, Convection Bake, Convection Bake Multi, and Convection Roast.

7 Clock

Sets the oven clock time. Press the Clock pad and the number pads to program the clock. Make sure to select AM or PM. Press Start to save the time.

8 Timer

Works as a countdown timer. Press the Timer pad and the number pads to program the time in hours and minutes. Press the Start pad. The oven will continue to operate when the timer countdown is complete. To turn the timer off, press the Timer pad.

9 Delay Time

Delays when the oven will turn on. Use this to set a time for the oven to start. Press the Delay Time pad and use the number pads to program the time of day for the oven to turn on. Press the desired cooking mode and temperature, then press Start. A cook time may also be programmed if desired. This can only be used with Traditional Bake, Convection Bake, Convection Bake Multi Rack, Convection Roast and Self Clean.

NOTICE

When using the delay time feature, foods that spoil easily — such as milk, eggs, fish, stuffing, poultry and pork — should not be allowed to sit for more than 1 hour before or after cooking. Room temperature promotes the growth of harmful bacteria. Be sure that the oven light is off, because heat from the bulb will speed harmful bacteria growth.

10 Probe

Monitors internal food temperature and turns the oven off when the food reaches the programmed temperature. Insert the probe, program the cooking mode, and program the probe temperature. See the Cooking Modes section in the Owner's Manual for more information. The probe can only be used with Traditional Bake, Convection Bake, and Convection Roast.

11 Oven Light(s)

Turns the oven light(s) on or off.

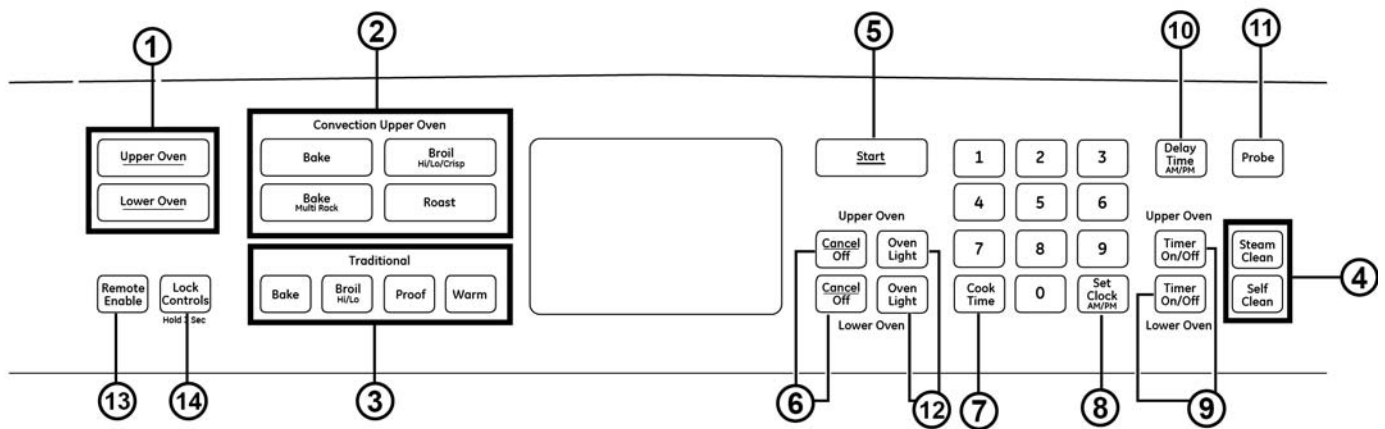
12 Remote Enable (on some models)

Allows the oven to be operated remotely. Once connectivity is established, pressing the Remote Enable pad allows the oven to be operated from a mobile device. Opening the oven door while the oven is idle, or ending a cook cycle ends this capability and requires the button to be pressed again to enable remote operation. Both the icon and the remote enable light in the display must be solid and lit to allow remote operation. If either the icon or the remote enable light are not lit or are blinking, the remote enable feature will not work. Additional guidance is provided in the publication #49–80678–1 included insert and through the mobile app.

13 Lock Controls

Locks out the control so that pressing the pads does not activate the controls. Press and hold the Lock Controls pad for three seconds to lock or unlock the control. Cancel/Off is always active, even when the control is locked.

Double Wall Oven — Machine Control



1 Upper Oven and Lower Oven

Designates which oven to use. Press the Upper Oven or Lower Oven pad to select an oven, then press the desired cooking mode pad. The oven control will default to the upper oven.

2 Convection Cooking Modes

Convection cooking modes use increased air circulation to improve performance. The type of benefit depends on the mode. The oven has the following convection cooking modes: Bake, Bake Multi Rack, Roast, Broil Hi, Broil Lo, and Broil Crisp. See the Cooking Modes section in the Owner's Manual for more information.

3 Traditional Cooking Modes

The oven has the following traditional cooking modes: Bake, Broil Hi, Broil Lo, Proof and Warm. See the Cooking Modes section in the Owner's Manual for more information.

4 Clean

The oven has two cleaning modes: Self Clean and Steam Clean. See the Cleaning the Oven section in the Owner's Manual for important information about using these modes.

5 Start

Must be pressed to start any cooking, cleaning, or timed function.

6 Cancel/Off

Cancels ALL oven operations except the clock and timer.

7 Cook Time

Counts down cooking time and turns off the oven when the cooking time is complete. Press the Cook Time pad; use the number pads to program a cooking time in hours and minutes, then press Start. This can only be used with Traditional Bake, Convection Bake, Convection Bake Multi, and Convection Roast.

8 Clock

Sets the oven clock time. Press the Clock pad and the number pads to program the clock. Make sure to select AM or PM. Press Start to save the time.

9 Timer

Works as a countdown timer. Press the Timer pad and the number pads to program the time in hours and minutes. Press the Start pad. The oven will continue to operate when the timer countdown is complete. To turn the timer off, press the Timer pad.

10 Delay Time

Delays when the oven will turn on. Use this to set a time for the oven to start. Press the Delay Time pad and use the number pads to program the time of day for the oven to turn on. Press the desired cooking mode and temperature, then press Start. A cook time may also be programmed if desired. This can only be used with Traditional Bake, Convection Bake, Convection Bake Multi Rack, Convection Roast and Self Clean

NOTICE

When using the delay time feature, foods that spoil easily — such as milk, eggs, fish, stuffing, poultry and pork — should not be allowed to sit for more than 1 hour before or after cooking. Room temperature promotes the growth of harmful bacteria. Be sure that the oven light is off because heat from the bulb will speed harmful bacteria growth.

11 Probe

Monitors internal food temperature and turns the oven off when the food reaches the programmed temperature. Select upper or lower, insert the probe, program the cooking mode, and program the probe temperature. See the Cooking Modes section in the Owner's Manual for more information. The probe can only be used with Traditional Bake, Convection Bake, and Convection Roast.

12 Oven Light(s)

Turns the oven light(s) on or off.

13 Remote Enable (on some models)

Allows the oven to be operated remotely. Once connectivity is established, pressing the Remote Enable pad allows the oven to be operated from a mobile device. Opening the oven door while the oven is idle, or ending a cook cycle ends this capability and requires the button to be pressed again to enable remote operation. Both the icon and the remote enable light in the display must be solid and lit to allow remote operation. If either the icon or the remote enable light are not lit or are blinking, the remote enable feature will not work. Additional guidance is provided in the publication #49-80678-1 included insert and through the mobile app.

14 Lock Controls

Locks out the control so that pressing the pads does not activate the controls. Press and hold the Lock Controls pad for three seconds to lock or unlock the control. Cancel/Off is always active, even when the control is locked.

Cycles

These are the product operation cycles for the 2013 Wall Ovens.

Broiling Modes

Always broil with the door closed. The broil element in this oven is very powerful. Monitor food closely while broiling. Use caution when broiling on upper rack positions as placing food closer to the broil element increases smoking, spattering, and the possibility of fats igniting. **Broiling on rack position 6 is not recommended.** Broil foods that would normally be grilled. Adjust rack positions to adjust the intensity of the heat to the food. Place foods closer to the broil element when a seared surface and rare interior is desired. Thicker foods and foods that need to be cooked through should be broiled on a rack position farther from the broiler or by using the **Traditional Broil Lo** or **Convection Broil Lo** mode.

Traditional Broil Hi — 550°F (cycling temperature)

The **Traditional Broil Hi** mode uses intense heat from the upper element to sear foods. Use **Broil Hi** for thinner cuts of meat and/or foods preferred to be less done on the interior. To use this mode, press the **Broil** pad once under **Traditional** and then press **Start**. It is not necessary to preheat when using this mode.

Traditional Broil Lo — 450°F (cycling temperature)

The **Traditional Broil Lo** mode uses less intense heat from the upper element to cook food thoroughly while also producing surface browning. Use **Broil Lo** for thicker cuts of meat and/or foods that may need to be cooked all the way through. To use this mode press the **Broil** pad twice under **Traditional** and then press **Start**. It is not necessary to preheat when using this mode.

Convection Broil Hi with Direct Air *

The **Convection Broil Hi** mode uses intense heat from the upper element along with air movement directly down from the top of the oven for improved searing and browning. To use this mode, press the **Broil** pad once under **Convection** and then press **Start**. For best results, preheat 5 minutes when using this mode.

Convection Broil Lo with Direct Air *

The **Convection Broil Lo** mode uses less intense heat from the upper element along with air movement directly down from the top of the oven. To use this mode press the **Broil** pad **twice** under **Convection** and then press **Start**. For best results preheat 5 minutes when using this mode.

Convection Broil Crisp with Direct Air *

The Convection Broil Crisp mode is intended as a finishing mode at the end of a cooking cycle to add surface browning to a dish such as a casserole or a roast. To use this mode, press the **Broil** pad **three times** under **Convection** and then press **Start**. Monitor food closely to prevent over browning.

(* Feature only found on some models)

Proof

Proof mode is designed for rising (fermenting and proofing) bread dough. Press the **Proof** pad and then press **Start**. Cover dough well to prevent drying out. Bread will rise more rapidly than at room temperature. Using a combination of cavity lights and intermittent convection fan operation to provide proper temperature for proofing. If oven sensor reading is above 100°F, Proof Function will not operate and **Hot** will be displayed in temperature window.

Warm

Warm mode is designed to keep hot foods hot for up to 3 hours. To use this mode, press the **Warm** pad then press **Start**. Cover foods that need to remain moist and do not cover foods that should be crisp. Preheating is not required. Do not use warm to heat cold food other than crisping crackers, chips or dry cereal. It is also recommended that food not be kept warm for more than 2 hours.

Probe (*)

Internal food temperature is frequently used as an indicator of “done-ness”, especially for roasts and poultry. The Probe mode monitors the internal food temperature and turns the oven off when the internal food temperature reaches the programmed temperature. The temperature probe can only be used with Traditional Bake, Convection Bake, and Convection Roast modes.

(*) Feature only found on some models

Steam Clean Mode

Steam Clean is intended to clean small spills using water and a lower cleaning temperature than Self Clean. To use the **Steam Clean** feature, wipe grease and soils from the oven. Pour one cup of water into the bottom of the oven. Close the door. Press the **Steam Clean** pad and then press **Start**. The oven door will lock. Do not open the door during the 30 minute steam clean as this will decrease the steam clean performance. At the end of the steam clean cycle the door will unlock. Wipe out any excess water and any remaining dirt.

On standard clean models: Close the door. Press the **Steam Clean** pad and then press **Start**. Do not open the door during the steam clean as this will decrease the steam clean performance.

If the unit does not have a separate **Steam Clean** pad, then press the **Clean** pad twice, then press **Start**. The oven door will lock. Do not open the door during the 30 minute steam clean, as this will decrease the steam clean performance.

Self Clean Mode

Self Clean uses very high temperatures to clean the oven interior. The oven door will lock when using this feature. Before operating the **Self Clean** cycle, wipe up the grease and soils from the oven. Remove all items from the oven other than enameled (dark color) racks. Shiny or silver racks, the meat probe, and any cookware or other items should all be removed from the oven before initiating a **Self Clean** cycle.

Close the door. Press the **Self Clean** pad and a default self clean time is displayed. The clean time can be changed to any time between 3:00 and 5:00 hours by using the number pads to enter a different time and pressing **Start**. To use the default time, press the **Start** pad immediately after pressing the **Self Clean** pad. The oven will turn off automatically when the self clean cycle is complete. The door will stay locked until the oven has cooled down. After the oven has cooled down, wipe any ash out of the oven.

Convection Fan Cycle Description

Regular Convection Operation

For all series with T012 controls, the convection fan:

- Is a single speed convection fan that always runs CW.
- Will operate in Normal Bake until the preheat temperature is reached.

Advanced Convection Operation

For series PT7000 and PT9000 convection units, the convection fan runs:

- CW in Preheat cycle for Traditional Bake, Convection Bake, Multi-rack Bake, and Roast.
- Once preheated, it shuts off in Traditional Bake.
- It runs CCW the rest of the cycle in Convection Bake, and Convection Roast.
- And CW is the steady-state in Multi-rack Convection Bake.
- The fan motor runs in a CCW direction and is the steady-state of operation in Convection Broil modes (Hi, Low and Crisp).

Element Cycling

NOTICE

Times are approximate.

30" Wall Ovens T012 Controls

Preheat

- With convection system: 26 seconds Bake ON, 15 seconds Conv. ON, 30 seconds Broil ON; convection fan on 100%
- Without convection system: 40 seconds Bake ON, 18 seconds Broil ON

Bake

- **Low band:** Set temperature less than 390° F. 26 seconds Bake ON, 15 seconds OFF, 6 seconds Broil ON, 15 seconds OFF
- **High band:** Set temperature greater than 390°F. 23 seconds Bake ON, 5 seconds OFF, 7 seconds Broil ON, 5 seconds OFF

27" Wall Ovens

Preheat

- With convection system: 26 seconds Bake ON, 15 seconds Conv. ON, 36 seconds Broil ON; convection fan on 100%
- Without convection: 40 seconds Bake ON, 20 seconds Broil ON

Bake

- TO12 low band: 26 seconds Bake ON, 0 seconds OFF, 7 seconds Broil ON, 30 seconds OFF
- TO12 high band: 23 seconds Bake ON, 5 seconds OFF, 9 seconds Broil ON, 5 seconds OFF

Convection

One Rack Convection Bake

- Preheat
- Bake 30 seconds ON, Convection 10 seconds ON, Broil 30 second ON
- Convection Fan on 100% during preheat
- After preheat
- Bake 20 seconds ON, Broil 7 seconds ON
- Convection Fan 10 seconds ON, 45 seconds OFF

Multi Rack Bake

- Preheat
- Convection 25 seconds ON, Bake 10 seconds ON
- Convection Fan on 100% during preheat
- After preheat
- Convection 25 seconds ON, Bake 10 seconds ON
- Convection Fan 45 seconds ON, 10 seconds OFF

Convection Roast

- Preheat
- Bake 30 seconds ON, Convection 10 seconds ON, Broil 30 second ON
- Convection Fan on 100% during preheat
- After preheat
- Convection 25 seconds ON, Bake 10 seconds ON
- Convection Fan 45 seconds ON, 10 seconds OFF

30" Wall Ovens Machine Controls

Bake

- 22 seconds bake plus outer broil ON, 30 seconds convection plus outer broil ON, 22 seconds inner broil plus outer broil ON
- Convection fan ON 100% of the time clockwise at 76%. Once preheated, it shuts off in Traditional Bake

Convection Bake Single

- 40 seconds bake plus outer broil, 20 seconds inner broil plus outer broil

Convection Bake Multi

- 45 seconds convection plus outer broil, 15 seconds bake plus outer broil, 45 seconds convection, 15 seconds bake, 45 seconds convection plus outer broil, 15 seconds bake plus outer broil

Convection Roast

- 40 seconds bake plus outer broil, 20 seconds inner broil plus outer broil
- For post preheat, because of the algorithm used, the values can change. It is not a set amount of on and off time. In every mode there will be a 1 minute duty cycle where the control will give an amount of time for elements to be on and off. This will likely change somewhat every minute.

The Convection Fan Operation

The convection fan will cycle on and off and changes direction depending on the cycle.

Clockwise in the preheat cycle for:

- Traditional Bake
- Convection Bake
- Multi-rack Bake
- Convection Roast

Clockwise after preheat:

- Multi-rack Bake

Counter-Clockwise after preheat cycle in:

- Convection Bake at 20% speed
- Convection Roast at 20% speed

Counter Clockwise:

- In ALL Convection Broil modes (Hi, Lo, or Crisp) No preheat required.

Special Features for JK/JT Models

There are several different special features on the wall oven. To change the settings of these special features, press the **BAKE** and **BROIL** pads at the same time and hold for three seconds. **SF** will appear in the display. Select the feature to change. When the change has been made, press the **START** key to save the change and return to the time of day.

The JK/JT 1000 series only offers the **Adjust the Oven Temperature and 12 Hour Auto Shut-off and Sabbath options.*

Adjust the Oven Temperature*

This feature allows the oven baking and convection baking temperature to be adjusted up to 35°F hotter or down to 35°F cooler. Use this feature if the oven temperature is too hot or too cold. For double oven models, the upper and lower ovens are adjusted separately. This adjustment affects Bake and Convection Bake (1 Rack/Multi) modes. No other cooking modes are affected.

Press the **Bake** pad to enter the temperature adjustment mode. A number between 35 and -35 will display. Use the number pads to set the desired temperature adjustment and use the **Bake** pad to change between negative and positive.

Press the **Start** pad to save the temperature adjustment.

End of Timer Signals

This is the tone that signals the end of a timer. The tone can be continuous (Con bEEP) or one repeating beep (bEEP). A continuous setting will continue to sound a tone until a button on the control is pressed. Press the **Broil** pad to view the current setting, press again to change the setting.

Fahrenheit or Celsius Temperature Display

The oven control is set to use Fahrenheit temperatures (F), but it can be changed to use Celsius temperatures (C). Press the number **6** and **8** pads at the same time to view the current setting, press again to change the setting.

Clock Display

This feature specifies how the time of day will be displayed, or if no time of day will be displayed. Select a standard 12 hour clock (12 H), 24 hour military time display (24 H), or no clock displayed (oFF). Press the **Clock** pad to view the current setting, press again to change the setting.

Auto Recipe Conversion

When using Convection Bake 1 Rack or Convection Bake Multi Rack cooking options, Auto Recipe Conversion will automatically convert the regular baking temperatures entered to convection bake cooking temperatures when turned on. Note that this option does not convert convection bake cooking times, it only converts temperatures. Press the **Convection Bake (1 Rack/Multi)** pad to view the conversion settings, press again to toggle between On (Con On) and Off (Con oFF).

Sound Volume

This feature allows the oven tone volume to be adjusted between high (HI bEEP HI), medium (Std bEEP Std), low (Lo bEEP Lo) and off (oFF bEEP oFF). Press the number **1** and **5** pads at the same time to view the current setting or to change the setting. The control will sound the oven tone at the new volume level each time the sound level is changed.

12 Hour Auto Shut-off and Sabbath*

Options for this feature are:

- *12 Shdn*
- *no Shdn*
- *SAbbAtH*

12 hour auto shut-off turns the oven off after 12 continuous hours of operation.

Sabbath mode disables the oven lights (the oven light will not turn on when the door is opened), all sounds (the control will not beep when a button is pressed), Convection, Broil, Warm, Proof, Cook Time, Timer, Clock, and Delay Time functions. Sabbath mode can only be used with Bake. This feature conforms to the Star-K Jewish Sabbath requirements.

Press and hold the **Bake** and **Broil** pads for 3 seconds to enter Special Features.

Press the **Delay Time** pad to view the current setting and then to change the setting.

To use Sabbath mode, select **SAbbAtH** and press **Start**. A] symbol will appear in the display and the clock will not display. Note that if using a double wall oven, when the control is placed into Sabbath mode, *both* ovens are now in Sabbath mode and available for cooking.

Once in Sabbath mode, at any time **Bake** can be pressed. Use the number pads to enter a temperature between 170°F and 550°F, then press **Start**. No sound will be given when the keys are pressed. At a random time between 30 seconds and 1 minute, a]] symbol will appear in the display, indicating the oven is running.

Note that both ovens of a double wall oven can be used in Sabbath mode. Each oven can be programmed to a different temperature, and each oven must be programmed separately.

To adjust the temperature, press **Bake** and use the number pads to enter a new temperature between 170°F and 550°F, then press **Start**.

To turn the oven off, press **Cancel/Off** at any time. The oven will immediately turn off and the]] symbol will change to a] symbol, indicating that the oven has turned off.

Note that each oven of a double wall oven must be turned off separately.

To exit Sabbath mode, make sure that the oven is turned off. Press and hold the **Bake** and **Broil** pads for 3 seconds to enter Special Features then press **Delay Time** until either **12 Shdn** or **no Shdn** is in the display, then press **Start**.

NOTICE

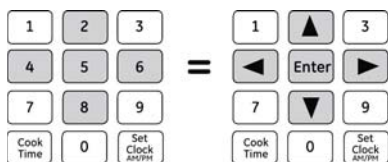
If a power outage occurs during Sabbath mode, the unit will remain in Sabbath mode but off when power is restored.

If using the Cook Time feature (if available) to bake in the oven, and then have the oven automatically turn off; press the **Cook Time** button, enter a cooking time duration, then press **Start**. Enter Special Features to start Sabbath mode as detailed above.

Special Features for PT/PK Models

There are numerous special features that are controlled using the number key pad.

- **Degree:** Fahrenheit or Celsius temperature display
- **End tone:** Cycle End Tone
- **Sound:** Tone Volume
- **Setting:** Clock Setting
- **Auto Recipe:** Auto Recipe Conversion (for Convection Baking)
- **12hr shutoff:** 12 Hour Shutoff
- **Sabbath:** Sabbath Mode
- **Temp Offset:** Adjust the oven temperature (Double ovens have upper and lower options)
- **Notification Light Bar:** Turns the light indicator on or off
- **Default:** Reset control to factory settings



To change the Special Features settings, follow these guidelines:

1. Press and hold the **Traditional Bake** and **Traditional Broil** pads for 3 seconds simultaneously.
2. Once in the Special Features mode:
 - The numbers **2** and **8** act as up and down to scroll through the features and their settings.
 - The numbers **4** and **6** act as right and left to change back and forth; from scrolling through the features to changing the feature settings.
 - The number **5** acts as an enter pad.
3. Press and hold the **Traditional Bake** and **Traditional Broil** pads for 3 seconds simultaneously to exit the Special Features mode.

Example: Adjusting the Oven Temperature

1. Press and hold the Traditional Bake and Traditional Broil pads for 3 seconds simultaneously to enter Special Features mode.
2. Press the number **2** pad until the display reads **Temp Offset** (double wall ovens will have a selection for both the upper and lower ovens).
3. Press the number **6** pad to change the Special Features setting.
4. Press the number **2** or **8** pads to either increase or decrease the temperature in one degree Fahrenheit increments up to + 35°F or down to -35°F.
5. Press the number **5** pad to save the desired change.
6. Press the number **4** pad to return to the other features.
7. Press and hold the **Traditional Bake** and **Traditional Broil** pads for 3 seconds simultaneously to exit the Special Features mode.

Remote Enable (on some models)

Wirelessly control oven functions from a smartphone. Once connectivity is established, pressing the **Remote Enable** pad allows the oven to be operated from a mobile device. Opening the oven door while the oven is idle, or ending a cook cycle ends this capability and requires the button to be pressed again to enable remote operation. Both the Wi-Fi icon and the remote enable light in the display must be solid and lit to allow remote operation. If either the icon or the remote enable light are not lit or are blinking, the remote enable feature will not work. Additional guidance is provided in the included insert and through the mobile app.

Sabbath Mode

Sabbath mode disables the oven lights, (the oven light will not turn on when the door is opened and the notification light bar will be disabled), all sounds (the control will not beep when a button is pressed), Convection modes, Broil modes, Warm, Proof, Cook Time, Timer, Clock, and Delay Time functions are disabled. Sabbath mode can only be used with Bake. This feature conforms to the Star-K Jewish Sabbath requirements.

Airflow

Cabinet Airflow

To maintain proper external temperatures, cooling fan(s) are used to circulate the air and vent it out the bottom of ovens.

On a SWO, one cooling fan with two cage blowers draws the room air through the upper trim and up from the bottom of door assembly, cooling the inner door.

Viewed from the front of the oven, the left side of cage blower draws the oven vent exhaust and pushes it down the back and out the bottom left side of oven.

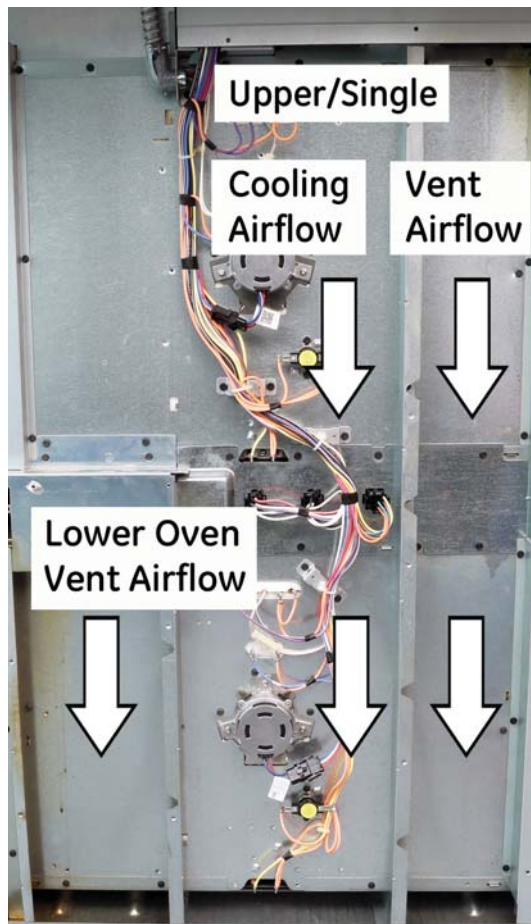
The right side of cage blower draws the room air from the front and pushes it down the middle back and out the bottom middle of the oven.

The purpose of this is to cool the rear assemblies, like the L2 High Limit Switch and wiring.

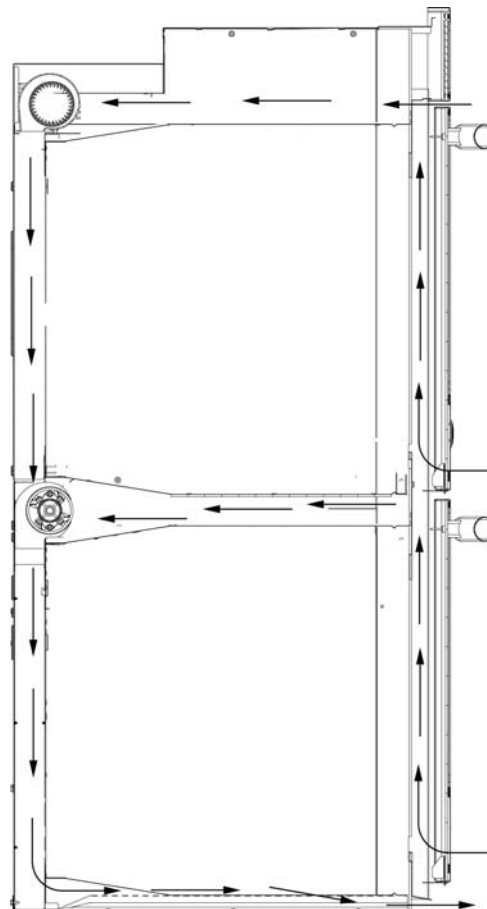
On a DWO, the left side cooling fan operation is identical to the SWO airflow paths.

The lower cooling fan uses one cage blower, and is used to exhaust the oven vent down the back and out the right side bottom of the oven.

Rear View



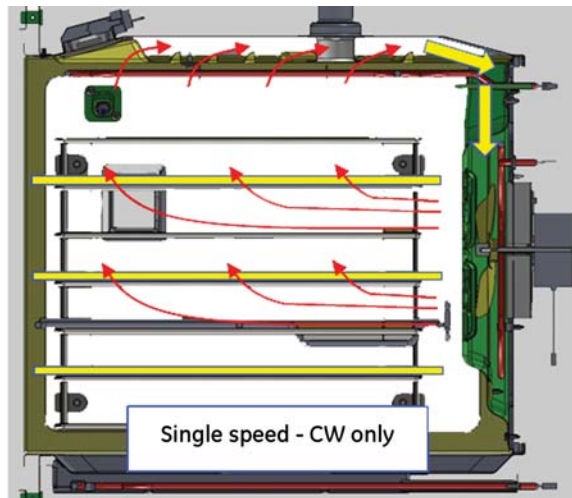
Side View



Convection Cavity Airflow — Single Speed T012 Units

On any cycle that the convection motor is running, heated oven cavity air is drawn down from the top rear and forced through the middle vents of the convection cover. The motor turns clockwise only.

Airflow T012

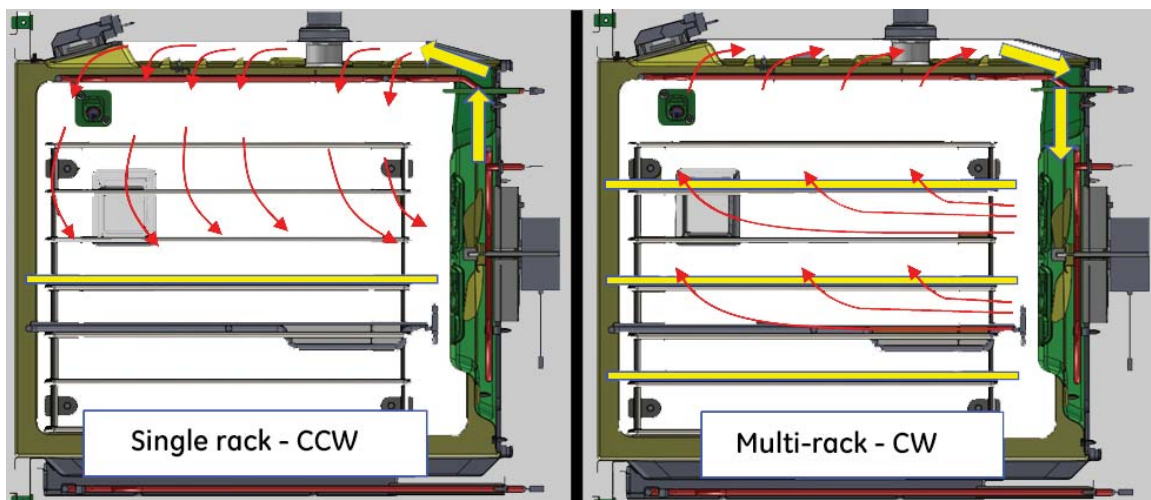


Convection Cavity Airflow — Variable Speed Reversible Motor MC Units

When the oven is in convection Bake SINGLE- RACK mode, the heated air is drawn through the middle vents of the convection cover and forced up through top oven vents. The motor is in a counter-clockwise rotation when this occurs.

When the oven is in convection Bake MULTI –RACK mode, the heated air is drawn down from top rear and forced out through the middle vents of the convection cover. The motor is in a clockwise rotation when this occurs

Airflow MC



Structural Components

Oven Removal

For component servicing, ovens will have to be removed from the installation to gain access. The cooling fan motors, wiring, high limit thermostats, convection motors and bake element mounting screw are only accessible with the oven removed.

Oven Door Removal

1. To remove doors on later production models of wall ovens, remove the two T20 Torx screws and the bracket from the left and right vertical braces.



2. Move the hinge lock down, and raise the door up and lift off of the braces.



3. For single ovens, remove the four mounting screws from the side trim.



4. On double ovens, two screws will be located in each oven trim.



Use ergonomically correct procedures to slide the oven out onto a stable oven dolly or a protected floor. The use of hooks with handles makes it easier to pull the oven out of the installation.



The hooks may be placed between the vertical brace and the outer trim at the screw emboss as shown.



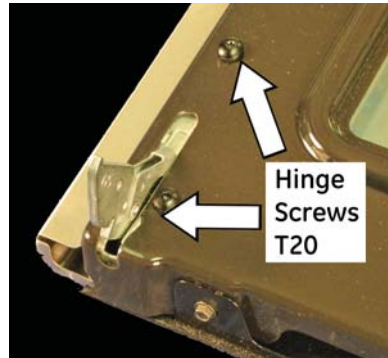
Door Assembly

The Door Assembly consists of the outer door glass, two inner heat reflective glass sheets, inner door liner and hinge assemblies.

Door Assembly Removal

1. Remove the door from the oven.
2. Place the door on a blanket or similar protective item.
3. Remove the four 1/4 in. screws from the bottom, and the two T20 Torx screws at the top of the door to separate the inner panel.
4. **Handle:** After separating the door panels, remove the two 1/4 in. screws that hold the handle onto the outer door assembly.
5. **Hinges:** After separating the door panels, the hinges can be removed by removing the two T20 Torx screws.

Location of Hinge Screws



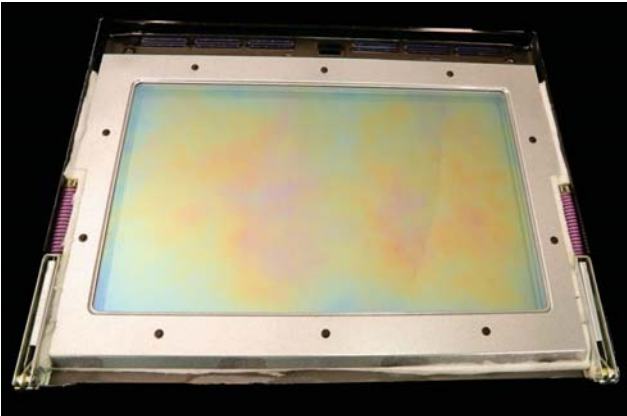
Hinge Assembly



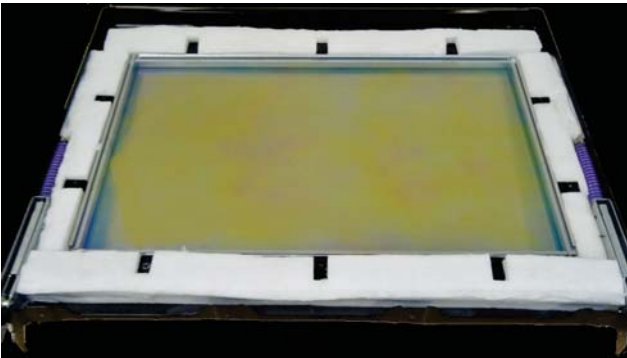
- Remove the inner door liner.



- Glass pack:** With the door panels separated, remove the ten 1/4 in. screws holding the insulation retainer and glass pack in place.



- Remove the insulation retainer.



Door Assembly Reassembly

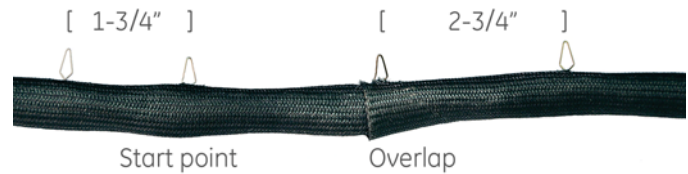
- Make sure that the insulation is pressed back under the retainer when reassembling.
- Reinstall the ten 1/4 in. screws of the insulation retainer.
- Reassemble the door and reinstall the four 1/4 in. screws on the bottom and the two T20 Torx screws at the top.

Gaskets

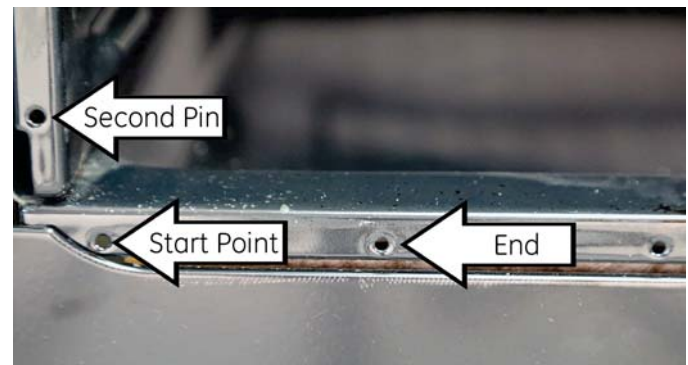
All gaskets attach to oven front frames and are held in place with pins.

To replace the oven gasket, start with the lower left corner. Locate the two pins close to the overlap that are about 1 3/4 in. apart. One pin will start on the farthest left bottom hole. The next pin will be the lowest left vertical hole. Continue up and around, finishing with the pin at the overlap.

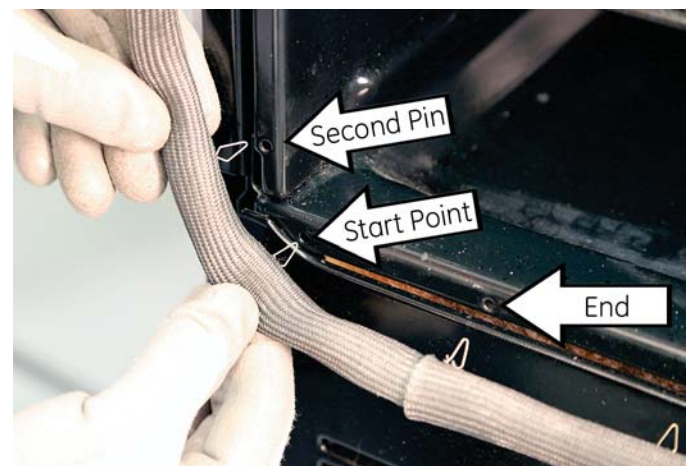
Gasket Spacing



Front Frame



Gasket Reinstallation



Vertical Brace

The vertical braces support the frame and contain the hinge receivers.

Vertical Brace Removal

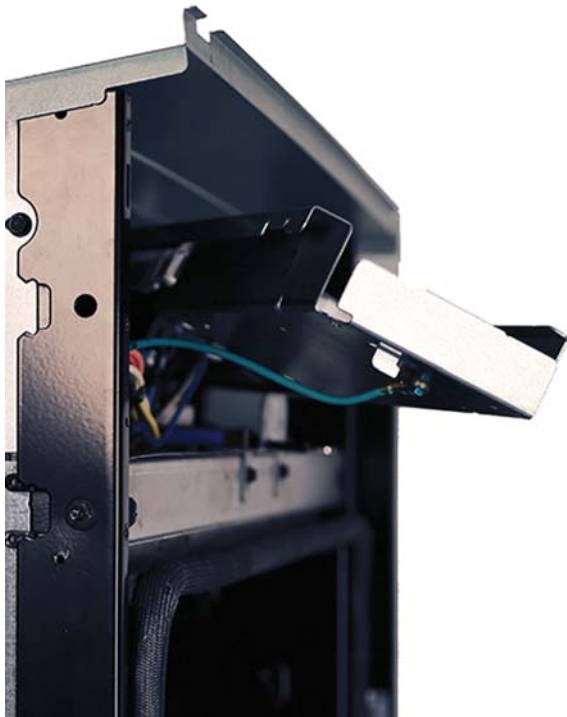
Replacement of vertical brace (SWO left side shown).

1. Remove power to the oven.
2. Remove the door assembly (See **Door Assembly Removal** for instructions).
3. Safely remove the oven from the installation.

NOTICE

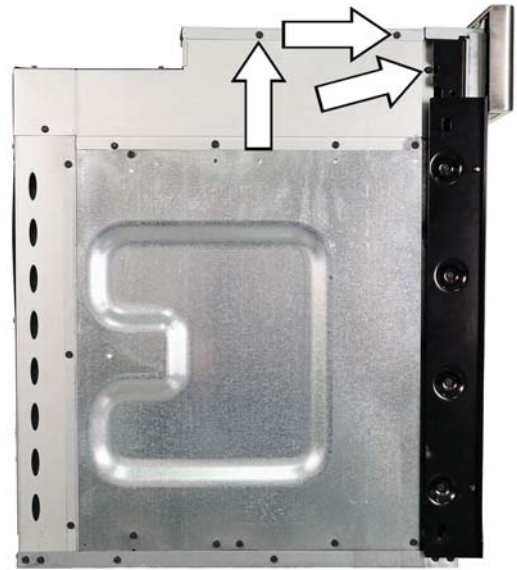
Except where noted, all screws are 1/4 in. hex head.

4. Remove two T20 Torx screws from the control panel, and four 1/4 in. screws from the control panel housing. Rest the control panel inside the unit (as shown).

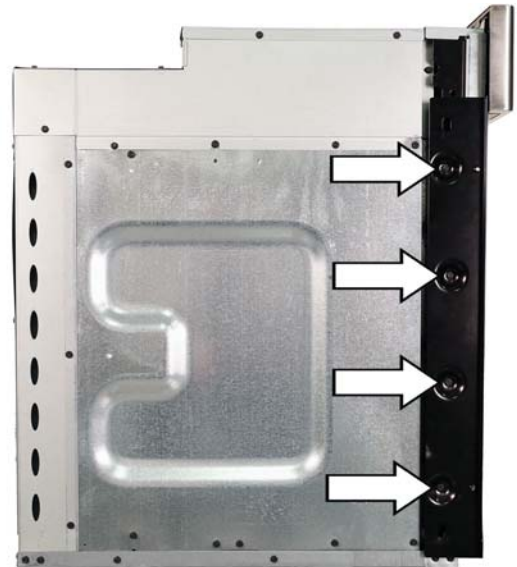


5. Remove four T20 Torx screws from the top front trim.
6. Remove four T20 Torx screws from the lower front trim.

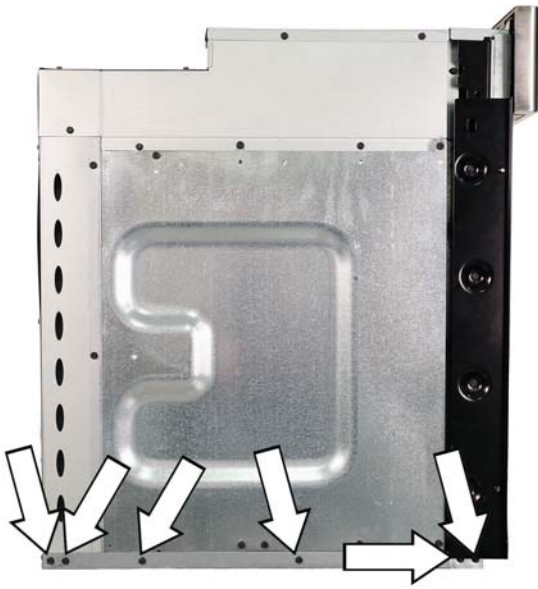
7. Remove three screws from the top cover.



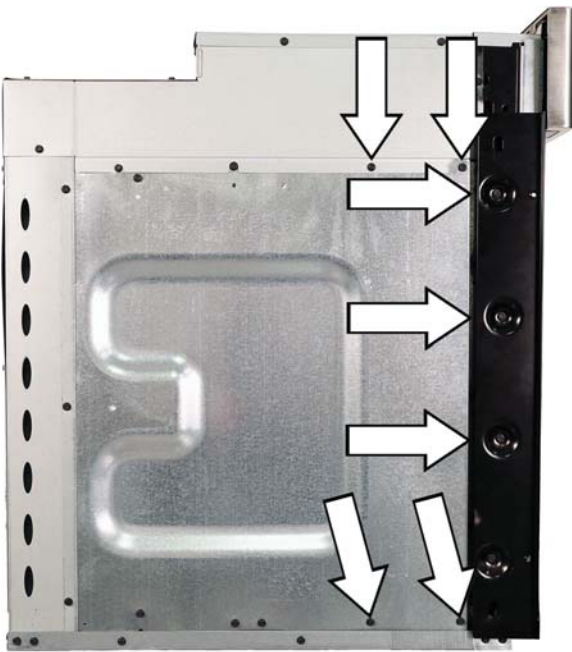
8. Remove four screws from the side trim.



9. Remove the bottom six screws from the base.

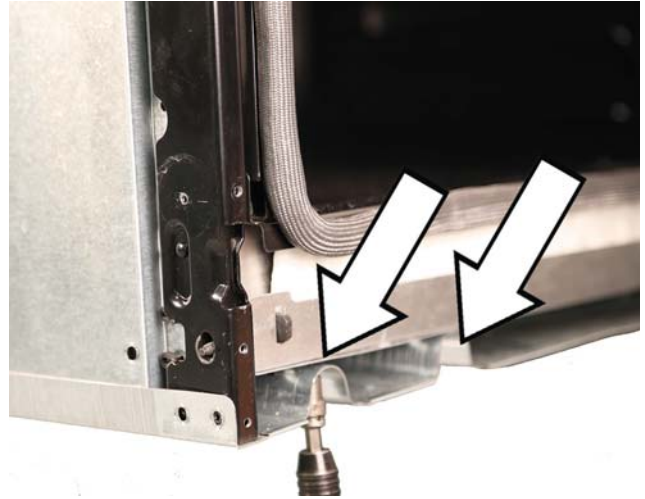


10. Remove seven screws from the front of the insulation retainer.

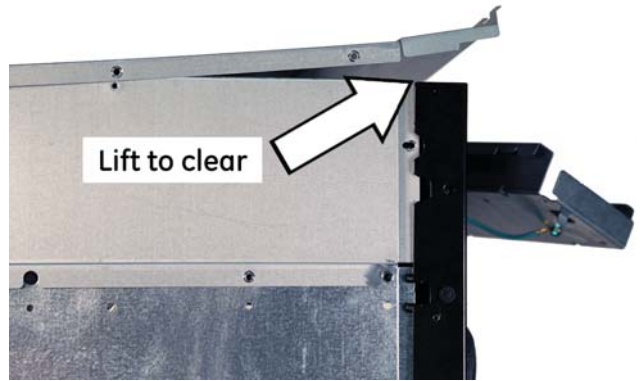


11. Remove two 3/8 in. nuts from the vertical brace.

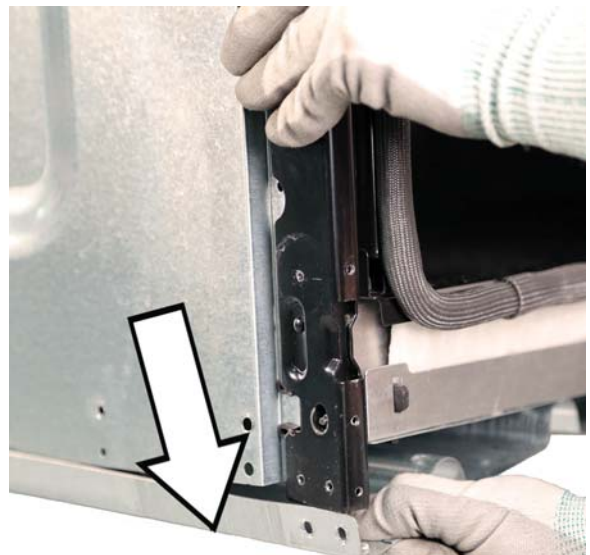
12. Remove two screws from the bottom of the base pan.



13. Lift the top of the panel to clear the vertical brace.



14. The vertical brace can be removed by slightly pulling the base pan down to allow the brace to clear the lower base assembly.



15. Rotate the brace outwards from under the insulation retainer.



Vertical Brace Reinstallation

1. Reinstall the 3/8 in. nuts on the vertical brace.
2. Reinstall all of the screws, starting with the lower two screws on the base pan.
3. Reinstall the upper and lower trim panels and T20 Torx screws.
4. Reinstall the control panel T20 Torx screws.
5. Reinstall all remaining screws.
6. Safely reinstall the oven back into the enclosure.
7. Reapply power and check operation.

Electrical Components

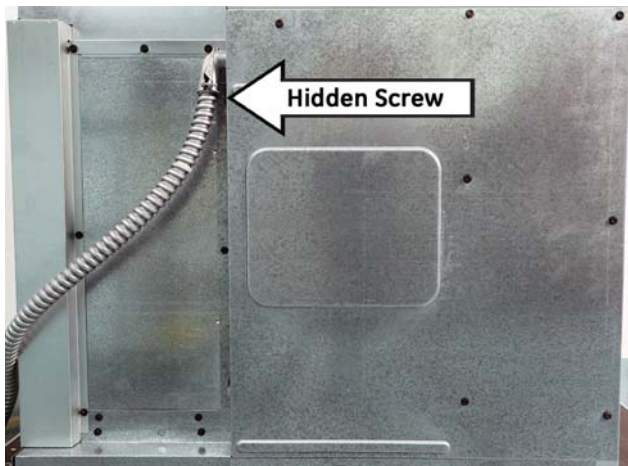
Rear Component Access SWO

Safely remove the oven from the wall to gain access to the following components:

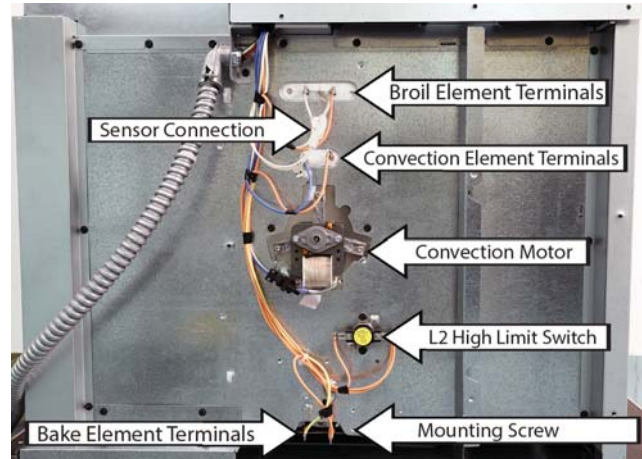
- Cooling Fan Motor
- Wiring
- High Limit Thermostat
- Convection Motor
- Bake Element mounting screw

Rear Component Access SWO Removal

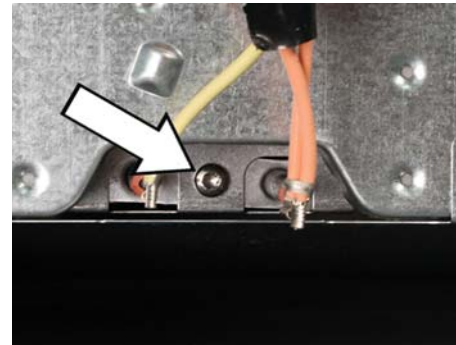
1. Remove the ten screws on the rear wire cover, which includes a hidden screw located near the conduit connection point.



2. With the rear wire cover removed, access to the components in the following image can be accomplished.



Enlargement of the bake element wires and screw securing element from rear:



Rear Component Access SWO Reassembly

1. Replace the rear wire cover.
2. Replace the ten screws the on rear wire cover.
3. Return the oven to the wall enclosure.

Rear Component Access DWO

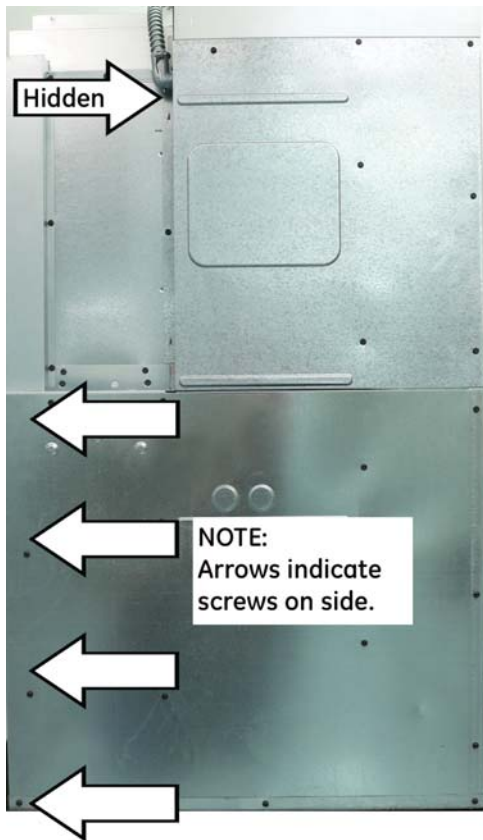
Safely remove the oven from the wall to gain access to the following components:

- Cooling Fan Motors
- Wiring
- L2 High Limit Switch
- Convection Motor
- Bake Element mounting screw
- Neutral High Limit Switch

Rear Component Access

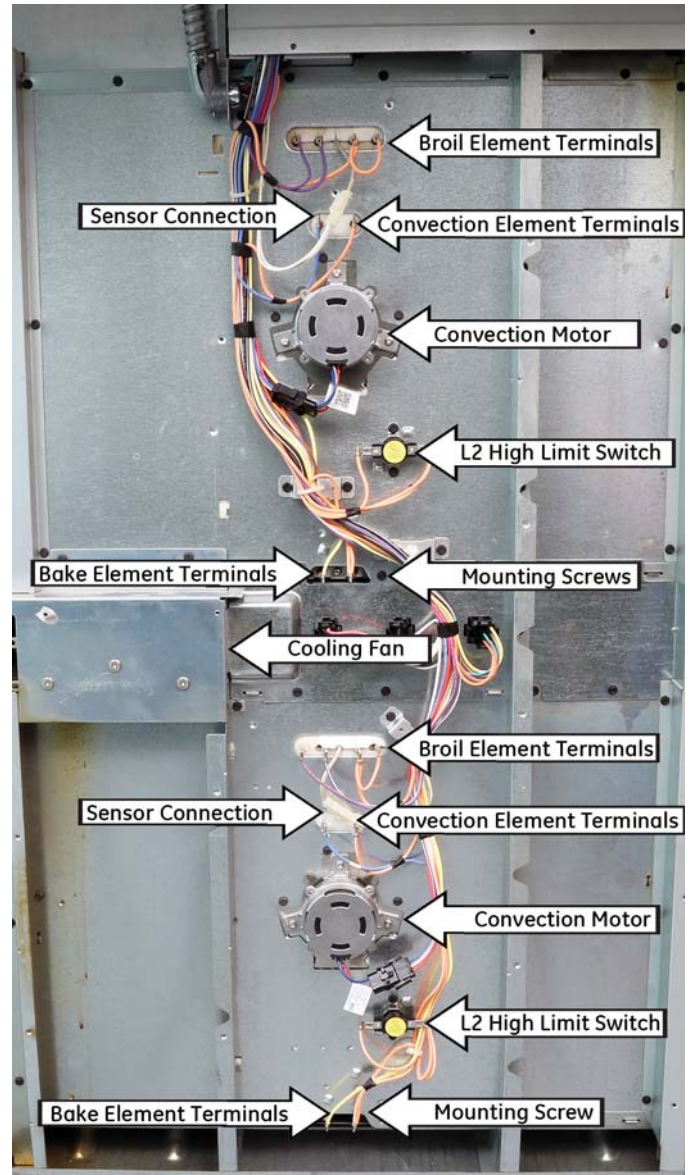
1. After safely removing the oven from the wall, remove nine 1/4 in. screws from the rear wire cover for access to the upper oven components. For access to the lower oven components, also remove the eighteen screws on the lower wire cover.

Double Oven Rear Panel Removed



2. With the rear wire cover removed, access to following components can be accomplished:
 - Bake element wires and screw securing element from rear
 - L2 High Limit Switches
 - Convection motors
 - Wiring harness to all elements
 - Cooling Fan Motors
 - Neutral High Limit Switch

Double Oven Rear Panel Removed



Convection Fan Motors

The Convection Fan Motor moves heated air throughout the oven cavity. To replace the Convection Fan Motor, begin from inside the oven cavity with the following steps.

Convection Fan Motor Removal

1. From inside the oven cavity, remove the four or six T20 Torx screws from the convection cover, and remove the blade by using a 3/8 in. wrench. The threads on the motor shaft are left hand, so turn clockwise to remove.

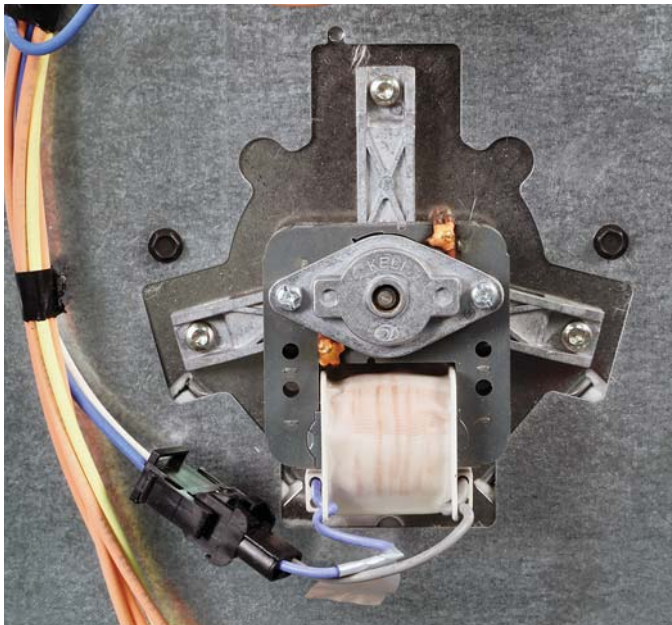
NOTICE

If any damage occurs to the blade upon removal, REPLACE the blade as it is critical to proper operation.

2. From the rear of the unit, remove the three screws securing the motor to the rear frame.

Convection Fan Motor JK/JT Models

120 VAC Single Speed Motor

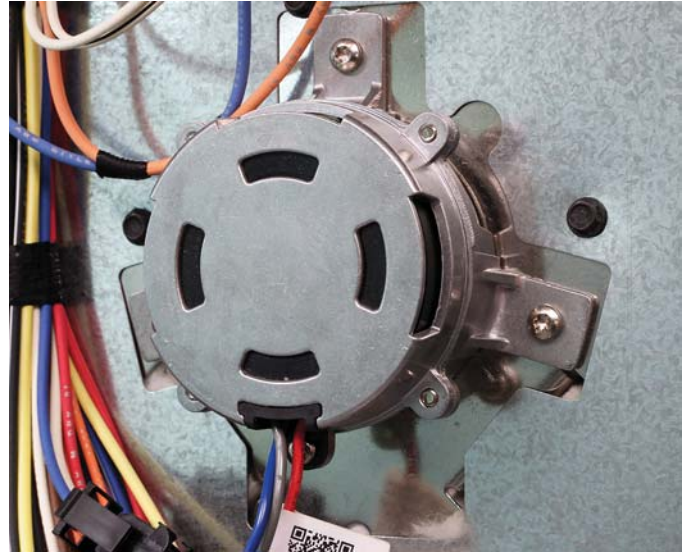


Resistance:

- 30 Ω blue to white

Convection Fan Motor PK/PT Models

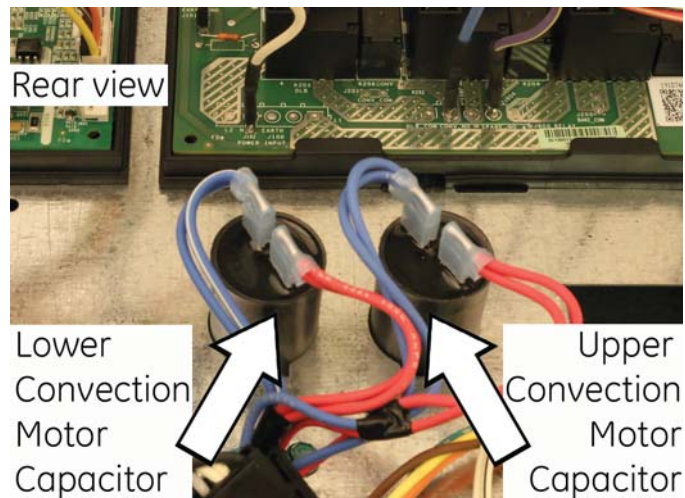
120 VAC Reversible Motor



Resistance:

- 300 Ω red to white
- 300 Ω blue/white to white
- 600 Ω red to blue/white

A capacitor for this motor is located in the control housing behind the Machine Control boards.



Rear view

Lower
Convection
Motor
Capacitor

Upper
Convection
Motor
Capacitor

Convection Fan Motor Reassembly


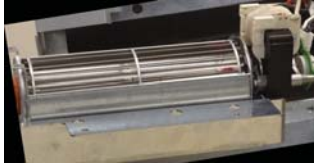
1. Replace the three screws securing the motor to the rear frame.
2. Ensure that all insulation pieces are returned to their original location.
3. Replace the blade by using a 3/8 in. wrench. The threads on the motor shaft are left hand, so turn counter-clockwise to tighten.
4. Replace the four or six T20 Torx screws to the convection cover.

Cooling Fan Motors

Cooling fans are used to maintain standard guidelines for external temperature, and preventing components from getting to critical temperatures that may cause premature failure.

These fans will operate during any function, and will remain running after the cycle is complete until the oven sensor temperature drops below 170°F.

In Self Clean cycles, the motors will run on the high speed windings.

Upper/Single Cooling Fan	Lower Cooling Fan
	
Resistance: <ul style="list-style-type: none">• HIGH 18Ω black to white• LOW 25Ω red to white	Resistance: <ul style="list-style-type: none">• HIGH 25Ω black to white• LOW 46Ω orange to white

Units must be removed from the installation for any fan motor replacement.

Upper Cooling Fan/Single Oven Cooling Fan Motor Removal

1. Remove the ten screws on the back panel.
2. Remove the eight screws securing the top cover, and the five remaining screws on the right side fan motor cover.



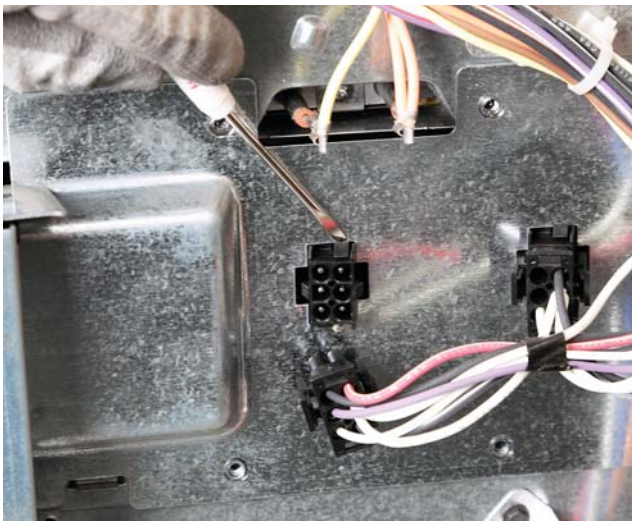
3. The FAD board mounted to the fan motor assembly must be transferred to a new motor assembly. It is held in place with a single T10 Torx screw.

Upper Cooling Fan/Single Oven Cooling Fan Motor Reinstallation

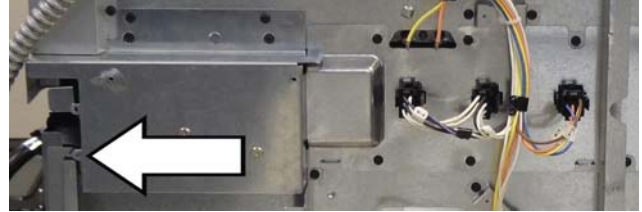
1. Reinstall the four screws to secure the blower motor assembly to the frame.
2. Reinstall the eight screws securing the top cover and the five remaining screws on the right side fan motor cover.
3. Reinstall ten screws on the back panel.

Lower Cooling Fan Removal

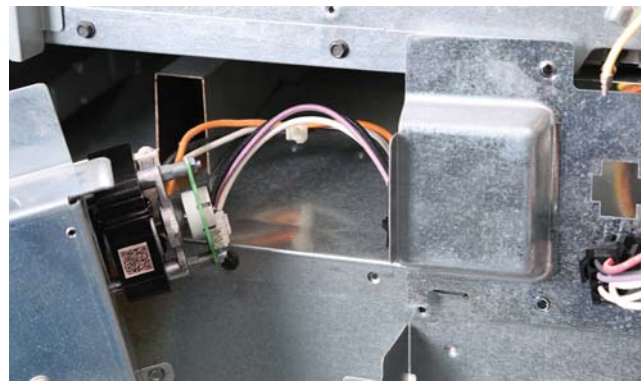
1. Remove both the upper and lower rear wiring covers.
2. Disconnect the left side fan plug, (3 **white**, 2 **black**, 1 **purple**). Press the tabs on the plug, and push the plug through the opening.



3. Remove the four 1/4 in. screws on the bracket; and loosen the two 1/4 in. screws on the left side rear plug cover. It may be necessary to remove the lower air channel screws to access the hidden lower left screw.
4. Remove the four 1/4 in. screws at the top rear air channel duct, and from the middle and lower left side.



5. The motor assembly can now be pulled out to access the FAD or the motor.



NOTICE

When reassembling, make sure that the plug is seated into the wire cover before reinstalling the motor.

Lower Cooling Fan Reinstallation

1. Make sure the plug is seated into the wire cover before reinstalling the motor.
2. Place the motor assembly back into the opening.
3. Replace the four 1/4 in. screws to the top rear air channel duct, from the middle and lower left side.
4. Replace the four 1/4 in. screws on the bracket. Tighten the two 1/4 in. screws on the left side rear plug cover.
5. Reconnect the left side fan plug, (3 **white**, 2 **black**, 1 **purple**).
6. Replace both the upper and lower rear wiring covers.

FAD Boards

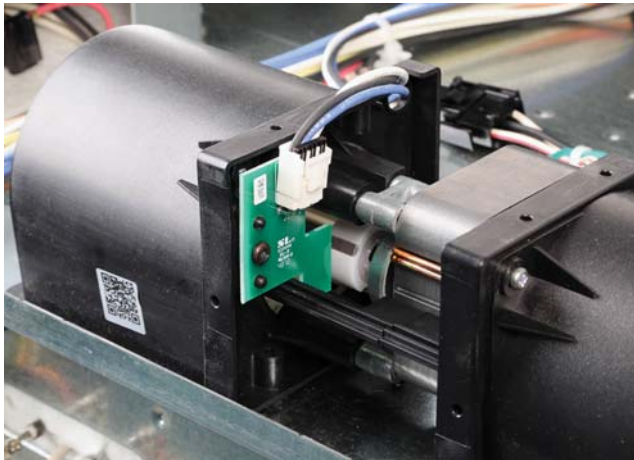
The FAD board replaces the older version of the monitoring cooling fan operation, which was thermally operated. The FAD board is a small sensor that provides speed feedback to the ERC. There are no resistance checks available for this board, only DC voltage checks.

- Check for DC supply voltage at the upper FAD board.
- 5 VDC **black to white**.
- **Blue to white** is signal to control

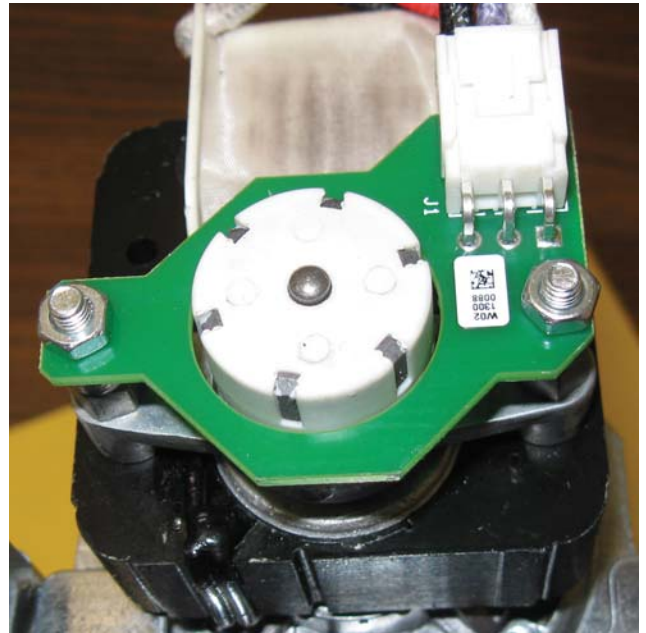
FAD Board Removal

1. Unplug the connector and remove one T10 Torx screw that secures the board to the motor assembly.

Upper/Single Cooling Fan Motor FAD



Lower Cooling Fan Motor FAD



The lower cooling fan motor FAD board is mounted over the end of the motor shaft. It is secured with two 7 mm nuts.

- Check for DC Supply Voltage for Lower FAD Board.
- 5 VDC **black to white**.
- **Purple to white** is signal to control.

FAD Board Reinstallation

1. Remount the board using two 7 mm nuts.
2. Plug the harness into the board.

High Limit Neutral Switch (Double Ovens Only)

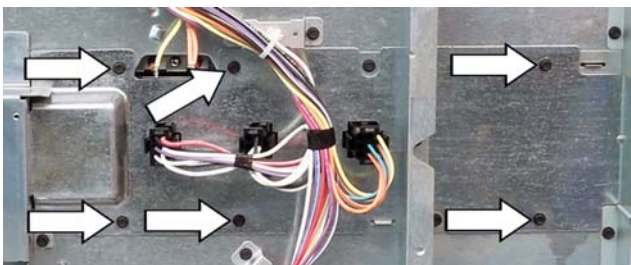
A limit switch in series with the NEUTRAL line to the control board is located on top of the lower oven, in the right rear corner (when viewed from the rear). This limit switch opens the neutral line to control if the temperature of limit exceeds 300°F. The switch is NON RESETTABLE. The control will go blank and the element relays will open. If open, check for proper air flow/cooling fan operation.

Located between the oven cavities, the High Limit Neutral Switch can only be replaced from the rear of the unit.

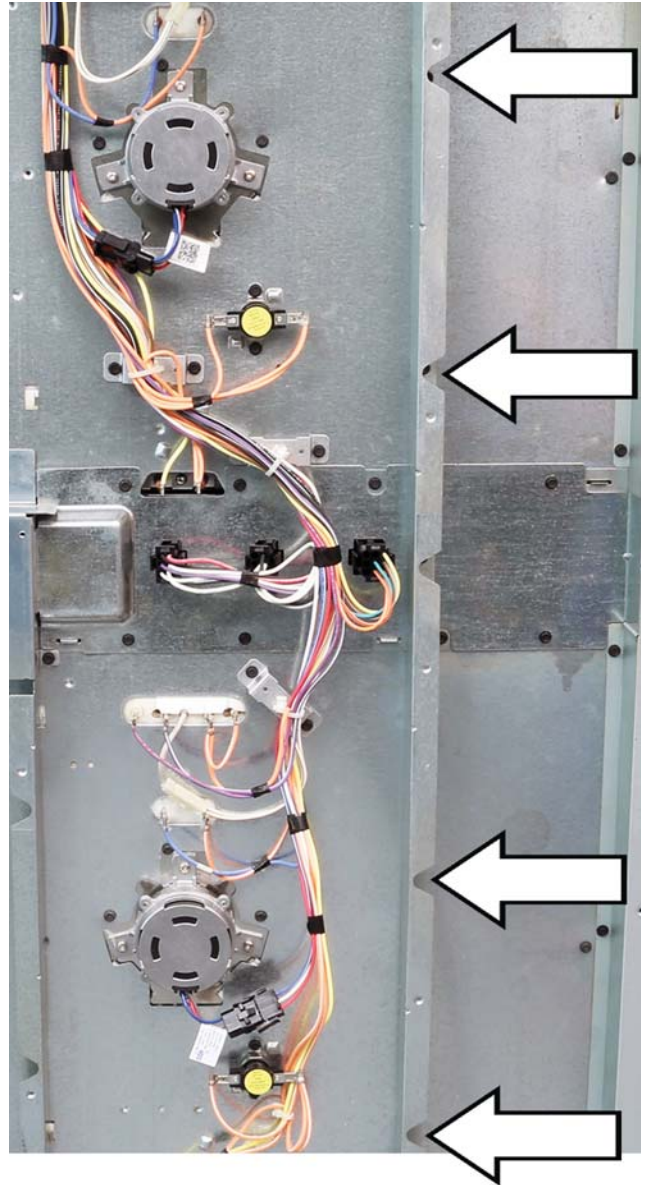


High Limit Neutral Switch Removal

1. With the rear covers removed (see **Rear Component Access** in this guide), remove the screws from the wire harness plug cover.



2. Remove the additional screws from the rear vent channels.



3. Remove the wire plug cover. This will allow access to the High Limit Switch.

High Limit Neutral Switch Reinstallation

1. Reinstall the wire plug cover.
2. Reinstall the screws on the rear vent channels.
3. Reinstall the screws on the wire harness plug cover.
4. Reinstall the back wire covers.

L2 High Limit Switch

There are safety thermostats in the event of a thermal runaway (example: welded relay contacts). They will open the L2 circuit to all the elements.



Oven Sensor

The Oven Sensor is located on the broil unit mounting plate, and secured with one T20 Torx screw and tab. The connector will fit through opening in the back wall. This will allow for testing of resistance.



For sensor related fault codes, use the chart below to verify sensor resistance.

Sensor resistance @ F°	
100°F = approx. 1143Ω	140°F = approx. 1226Ω
180°F = approx. 1309Ω	220°F = approx. 1391Ω
260°F = approx. 1473Ω	300°F = approx. 1554Ω
350°F = approx. 1654Ω	370°F = approx. 1694Ω
400°F = approx. 1754Ω	430°F = approx. 1813Ω
450°F = approx. 1852Ω	470°F = approx. 1892Ω
500°F = approx. 1950Ω	550°F = approx. 2047Ω
600°F = approx. 2142Ω	650°F = approx. 2237Ω
700°F = approx. 2331Ω	800°F = approx. 2516Ω

Control Panels

The Control Panel is designed to take the User's input from a Glass touch or Tactile key panel and communicate the associated command.

All oven controls can be accessed by removing the two T20 Torx screws from the bottom of the panel.

With the control panel removed, access to the RJ45 plug and mini-manual are available.

On a Machine Control oven, the User Interface has the RJ45 plug attached.

Removing the four 1/4 in. screws will provide access to the back of T012 ERC, lower oven relay board and lock assembly.

After removing the four 1/4 in. screws on Machine Control ovens, the lock assembly, Machine Control boards and convection motor capacitors are able to be serviced. On double wall ovens the left board is the upper oven control with power supply; and the right board is for the lower oven. The right board will have fewer components mounted to it.

There are no diagnostics for the control panel. Associated fault codes are F7_ for tactile and glass touch failures. If a tactile T012 ERC is being replaced, an overlay must be replaced with it as the adhesive is likely to distort the cosmetic appearance when removing.

Control Panel Removal

1. All control panels are accessed by removing the two T20 Torx screws from the bottom of the panel.
2. After removing the four 1/4 in. screws on the machine control ovens, main boards and convection fan motor capacitors will be accessible.

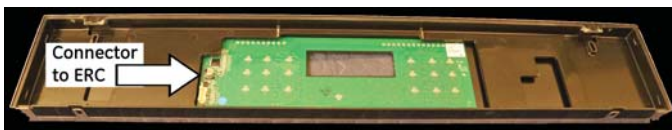
Tactile Front View



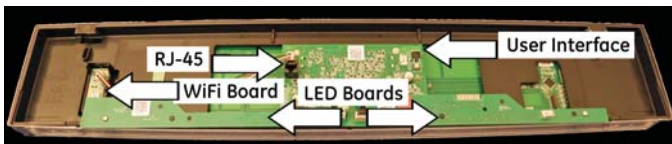
Tactile



Glass Touch



Machine Control



Control Panel Reassembly

1. Reinstall the four 1/4 in. screws.
2. Reinstall the two T20 Torx screws at the bottom of the panel.

Lock Assemblies

The motorized lock assembly consists of a lock motor cam, switches, lock hook, mounting plate, and a door plunger switch. On some T012 models there is a door jam switch which needs to be closed to complete the neutral circuit to the lock motor. An additional switch mounted on top of the feedback switch will energize the high cooling fan speeds on models with T012 controls.

On Machine Control latch mechanisms, the feedback from the switch to control signals the board to run the cooling fan on high. The words **LOCK DOOR** will flash in the display while the lock motor is in motion. When the door is locked, **LOCKED DOOR** will remain illuminated in the display.

The CAM on the assembly performs two functions:

- Positions the lock hook into the door to prevent opening during the Clean operation.
- Operates the lock switches which tell the control if the door is in the locked or unlocked position.

NOTICE

When the door is being locked or unlocked, both lock switches will be in the open position.

If the lock fails in a locked position, the door can be opened by sliding the latch hook to the left. A 7 in. piece of brazing solder, bent into an "L" shape works very well to access latch pawl (See the **Tools Needed** section in this guide). Be sure to put tape on this "tool" to prevent scratching the trim.

Lock Assembly Diagnostics

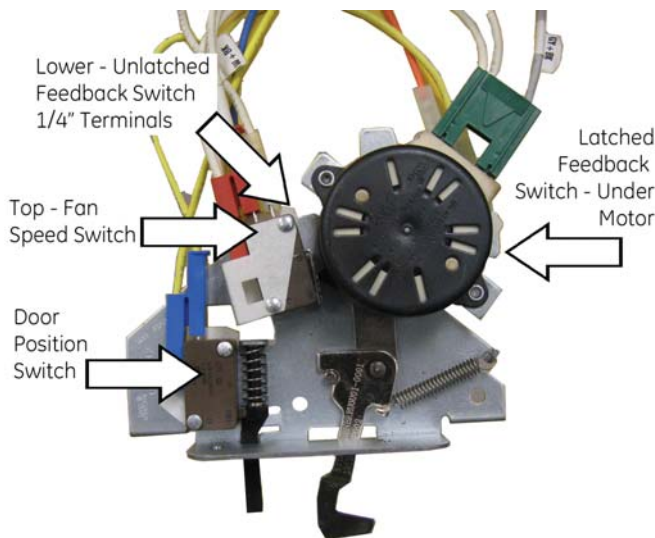
T012: If the lock mechanism fails to activate, check for 120 VAC at the **grey/black** wire to **white** on the lock assembly, with the self-clean cycle selected.

NOTICE

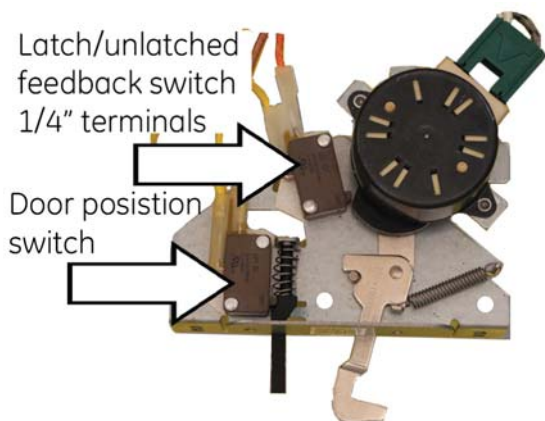
On T012 units there is an additional plunger switch mounted on trim. This switch supplies Neutral to the lock assembly and must be depressed when checking.

MC: If the lock mechanism fails to activate, check for 120 VAC at the **grey/black** wire to **white** on the lock assembly, with the self-clean cycle selected.

T012 Lock Assembly



MC Lock Assembly



Lock Assembly Removal

1. Remove the four T20 Torx screws securing the front trim. Two screws will have a rubber door bumper on them.
2. Remove the two 1/4 in. screws securing the lock assembly, and then pull the lock assembly forward. There is enough wire to access for checks.

Lock Assembly Reinstallation

1. After verifying good wiring connections, slide the lock assembly back into the opening and secure with two 1/4 in. screws.
2. Reattach the front trim with the T20 Torx screws. The two lower screws will have a rubber door bumper on them.

Light Assemblies

The light assemblies provide illumination in the oven cavities.

Light Bulb Replacement

1. Use a small blade screwdriver to carefully remove the glass lens. Be careful to not chip the enamel of the oven liner.
2. If the bulb is halogen, do not handle it with bare hands, as oils from skin will cause premature failure of the bulb.
3. If the fixture has a metal clamp, remove the T10 Torx screw, which will enable the lens to come off for bulb and socket access.

Side light



Top light



NOTICE

If the socket needs to be replaced, remove the lens and housing, then cut and splice the wires using porcelain nuts (part number WB1X371D). Snap the housing into the opening, and reinstall the lens.

Miscellaneous

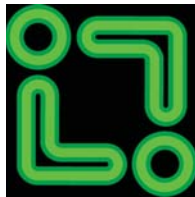
Notification Light Bars and Boards

The notification light bar boards consist of two boards with LED's spread across their length. If one or more LED's fail, the complete board will have to be replaced.

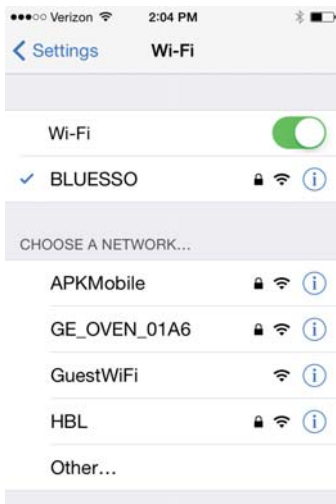


Wi-Fi Icon

Press and hold the Wi-Fi Remote Enable pad. This should result in the Wi-Fi icon flashing.



With the Wi-Fi icon flashing, go to SETTINGS on the smart phone, then select Wi-Fi. Under **Choose a Network**, a selection similar to GE_OVEN_XXXX should be available.

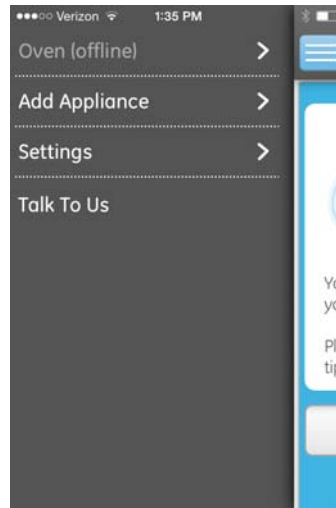


NOTICE

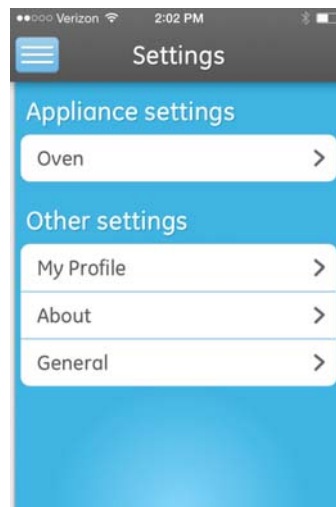
GE_OVEN_XXXX: x represents a letter or number as shown in the example above.

If GE_OVEN_XXXX is shown in SETTINGS, the problem is not with the oven's remote enable board or control board and customer needs to call: 1-800-220-6899 for further assistance.

Remote Enable App Setup Page

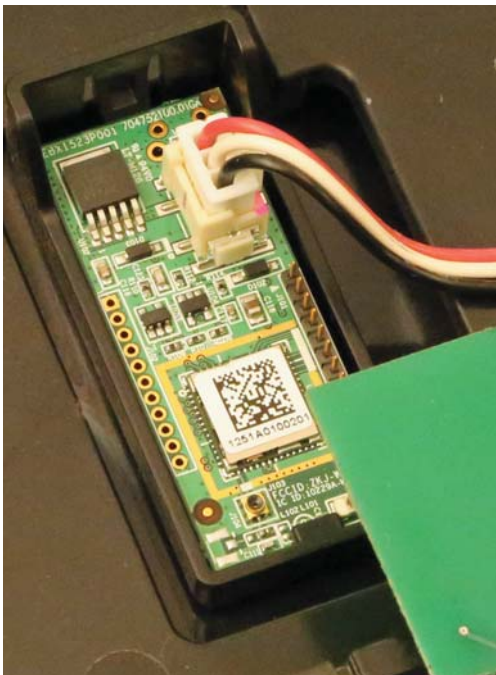


Remote Enable App Settings Page



Remote Enable (Wi-Fi) Board

On power-up, the remote enable board will flash a green LED for the first 5 minutes. This indicates that the board is communicating with the Machine Control and User Interface. To verify Remote Enable is sending a signal out, press and hold the **Remote Enable** pad on the control panel for 5 seconds. The control display should show the Wi-Fi icon and it should be flashing. If the Wi-Fi icon is flashing, the main oven logic board is working correctly. If the Wi-Fi icon is not flashing, the User Interface board needs to be replaced.



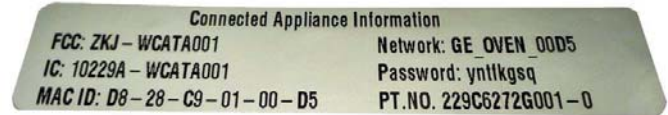
Remote Enable Board Removal

If the Remote Enable board needs replacing, follow these instructions.

1. Turn off the oven breaker.
2. Remove the two T20 Torx screws under the control panel, one on each side.
3. Lift the control panel upward to disengage the top tabs. Make a note of the harness plugs and remove.
4. The Remote Enable board lifts out of a slot, and has one small harness connector.

Remote Enable Board Replacement

After replacing the board, place the Wi-Fi information stickers in the following locations.



1. Place the first sticker on the back side of the control panel next to the Wi-Fi board.
2. Place the second sticker over the present passcode sticker on the front frame of the oven.
3. Place the third sticker in the customer's Use and Care Owner's Manual.
4. Verify the operation by reviewing the steps included with the part instruction sheet that comes with the replacement Wi-Fi board.

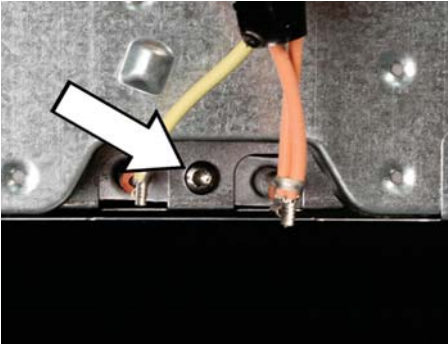
Elements

Hidden Bake

To enhance oven cleanability, and bake element longevity, all wall ovens have hidden bake elements.

Hidden Bake (All Ovens) Removal

1. Disconnect power to the oven.
2. Safely remove the oven from the cabinet installation.
3. Remove the rear wire cover.
4. Remove the wires from the bake terminals and the T20 Torx screw securing the bake element to the frame.



5. Remove the oven door(s) and remove four or six T20 Torx screws (depending on whether the unit is single or double oven, upper or lower).



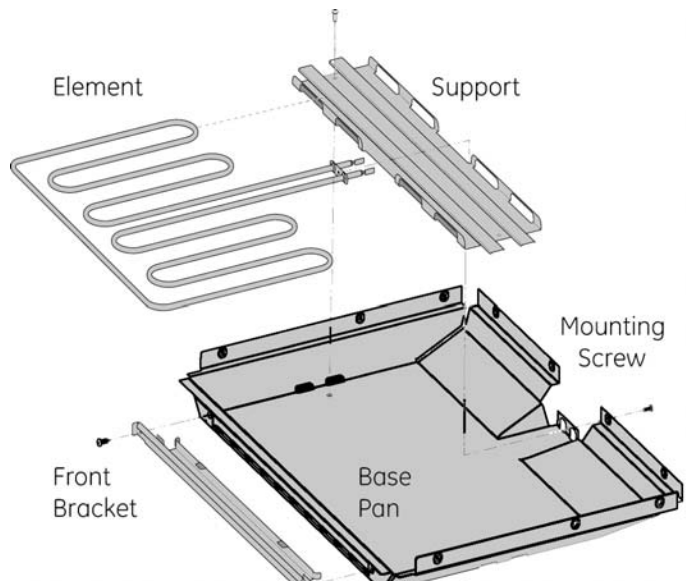
6. Remove the insulation panels; one strip with foil backing, backing towards the oven and one piece of partially cut insulation. Before removing the second piece of hidden bake insulation, carefully cut the two tabs holding the piece together.



7. On newer production models the foil covered strip will not be present, and will be replaced with just one piece of uncut insulation.
8. Remove two T20 Torx screws that secure the hidden bake compartment cover in place.



9. With pliers, grasp the tabs on each side of the screw locations and pull forward. This cover is hooked under the element, so the element will be pulled forward with the cover. The element will have resistance to the pull as it slides through the guides. The second pass of the element may catch on the opening lip, and may need to be lifted with a screwdriver to clear the lip. The wire terminals in the rear may also catch on the frame when pulling through the rear wall.



Hidden Bake (All Ovens) Reinstallation

1. Be careful that the wire terminals do not catch on the rear of the frame when reinstalling the element. Be sure that the insulation is reassembled to prevent excessive heat leakage.
2. Be sure to clear the lip when reinstalling. The element may have resistance when pushing through as it slides through the guides.
3. Reinstall the two T20 Torx screws that secure the hidden bake compartment cover in place.
4. Reinstall the insulation panels.
5. At the front of the unit, replace the oven door(s) and reinstall the four or six T20 Torx screws (depending on whether the unit is single or double oven, upper or lower).
6. Reinstall the wires from the bake terminals and the T20 Torx screw securing the bake element to the frame.
7. Reinstall the rear wire cover.
8. Safely replace the oven into the cabinet installation.
9. Reconnect power to the oven.

Broil

Broil Elements Removal

1. Remove one T20 Torx screw from the oven sensor, pull the wire through and disconnect.
2. Remove two T20 Torx screws on the back wall and the two T20 Torx screws from the front support bracket.
3. Pull forward and remove the wires.



Broil Elements Reinstallation

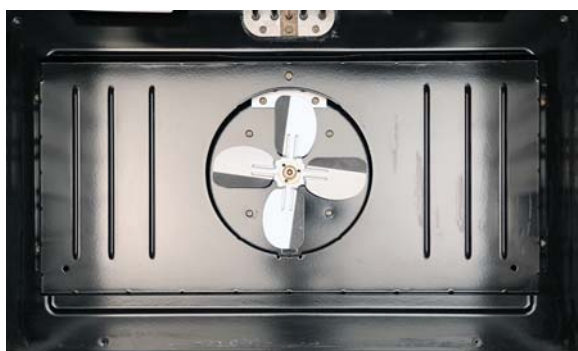
1. Reinstall the wires on the broil element, then insert through the opening and secure.
2. Replace the two T20 Torx screws on the back wall and the two T20 Torx screws to the front support bracket.
3. Reconnect the wire harness plug and push through the broil opening and secure with one T20 screw.

Convection Element

The Convection Element provides an additional heat source for quicker preheat and more effective heated airflow.

Convection Element Removal

1. Remove four or six T20 Torx screws (depending on model) from the convection cover.
2. Remove six T20 Torx screws from the rear baffle.
3. Remove the four T20 Torx screws that are securing the element.
4. Pull the element forward and remove the wires.



Convection Element Reinstallation

1. Reinstall the wires and push the element forward.
2. Reinstall the four T20 Torx screws.
3. Reinstall the six T20 Torx screws on the rear baffle.
4. Reinstall the four or six T20 Torx screws (depending on model) to the convection cover.

Diagnostics

Troubleshooting Fault Codes

T09 Fault Codes

Fault codes are set into control logic from the various **INPUTS** to the control. Only a couple of codes are due to a defect in a control board.

Inputs can include: Oven sensor, latch switches, meat probe, key panel, cooling fan motor feedback and with the Machine Control units, communications between control and User Interface.

T09 units JK/JT1000

Failure Code	Meaning	Correction
F2	Oven over temperature condition <ul style="list-style-type: none"> • Door unlocked and oven exceeded ~620°F • Door locked and oven exceeded ~930°F • Door latch unlocked while oven in excess of ~620°F 	<ol style="list-style-type: none"> 1. If no overtemperature condition occurred — Check all contacts and connections in sensor circuit. Eliminate excessive resistance in sensor circuit due to increased contact/connector resistance. 2. If overtemperature condition occurred — Look for welded relay contacts on bake, broil or double line-break relays. If relay contact welding is confirmed, REPLACE CONTROL. 3. Ensure Door Latch stays locked for duration of CLEAN cycle.
F3	Open oven sensor Sensor resistance > 2900Ω	Disconnect sensor/latch connector from the control. Measure sensor circuit resistance at sensor/lock switch connector (should be ~1100 ohms at room temperature). Ensure each sensor lead to chassis ground resistance is infinitely high.
F4	Shorted oven sensor Sensor resistance < 950Ω	<p>If open or short circuit is detected:</p> <ol style="list-style-type: none"> 1. Look for cut or pinched sensor harness wire. 2. Look for sensor leads shorted to chassis ground. 3. Look for loss of terminal contact in the harness and at the control. 4. Check sensor resistance directly at sensor harness connector (away from the control). If reading is abnormal, REPLACE OVEN SENSOR. <p>IF SENSOR CIRCUIT APPEARS TO BE NORMAL</p> <ol style="list-style-type: none"> 1. Reinstall sensor/lock switch connector on the control and measure sensor resistance at solder joints on the back of the control circuit board. If abnormal resistance reading is observed, RESTORE CONTACT PRESSURE OR SENSOR/LOCK SWITCH CONNECTOR. <p>If corrective actions above do not eliminate the problem, REPLACE CONTROL.</p>
F8	EEPROM error	Power down unit and power up the range. If the fault condition reappears within 5 minutes, REPLACE CONTROL.

T012 Fault Codes

Oven Sensors

F20 — F33	Check the resistance of the oven sensor circuit on ERC (T012) at CN300 pin 1 to 3 white to white/black for upper oven (F20, 21, 30, 31), and pin 1 to 8 white to white/red for lower oven (F22, 23, 32, 33).
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For sensor related fault codes, use the chart below to verify sensor resistance.

Sensor resistance @ F°	
100°F = approx. 1143Ω	140°F = approx. 1226Ω
180°F = approx. 1309Ω	220°F = approx. 1391Ω
260°F = approx. 1473Ω	300°F = approx. 1554Ω
350°F = approx. 1654Ω	370°F = approx. 1694Ω
400°F = approx. 1754Ω	430°F = approx. 1813Ω
450°F = approx. 1852Ω	470°F = approx. 1892Ω
500°F = approx. 1950Ω	550°F = approx. 2047Ω
600°F = approx. 2142Ω	650°F = approx. 2237Ω
700°F = approx. 2331Ω	800°F = approx. 2516Ω

Key Panels

Tactile

F70, F71	Associated with the ERC detecting a continuous key panel press; verify overlay is not creased. If OK, replace ERC and overlay.
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Glass Touch

F70 – F79	Associated with glass touch; verify harness plugs and wires are seated properly. If good, replace glass touch.
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Processor

F80 & F81	These fault codes are not associated with an input to the board; it is an electronic problem internally within the control. Replace ERC.
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Door Latch

Upper/Single	
F90, 91, 92	The door latch switch circuits have changed. In order to check the lock and unlock circuits from ERC, it's important to make sure that the doors are in a closed position. The reading for the upper lock circuit should show continuity on CN300 from pin 6 yellow (common) to pin 4 blue in the UNLOCKED (BAKE) position, and continuity from pin 6 yellow to pin 5 orange in the LOCKED (SELF CLEAN) position.
Lower	
F93, 94, 95	In order to check the lock and unlock circuits from ERC, it's important to make sure that the doors are in a closed position. The reading for the lower lock circuit should show continuity on CN300 from pin 10 yellow/white (common) to pin 4 blue in the UNLOCKED (BAKE) position, and continuity from pin 6 yellow/white to pin 5 orange in the LOCKED (SELF CLEAN) position.

Cooling Fan

F96	Indicates the UPPER fan is running slow.
F97	Indicates the LOWER fan is running slow.
F98	Indicates the UPPER fan is running too fast.
F99	Indicates the LOWER fan is running too fast.

The DC supply voltage to the cooling fan boards can be checked on ERC at CN300 pin 1 **white** to pin 7 **black**. Voltage is +5 VDC.

Feedback will be checked from pin 7 of CN300 **black** to pin 1 of CN700 **blue** for UPPER. LOWER will be checked from pin 7 of CN300 **black** to pin 3 of CN700 **purple**. Voltage should be approximately 3 to 4 VDC.

Machine Control Fault Codes

Oven Sensors

F20, 21, 30, 31	Measure the resistance of the sensor circuit. For the upper oven on the Machine Control board connector, J300 pins 1 to 2 white to white/black .
F22, 23, 32, 33	Measure the resistance of the sensor circuit. For the lower oven on the Machine Control board, connector J300 pins 1 to 2 white to white/red .

Probe

F40 — F41	<p>Verify probe resistance 30k — 50k Ω.</p> <ul style="list-style-type: none"> For the upper oven Machine Control board connector, J300 pins 3 to 4 orange/white to green should be 30k — 50k Ω with probe installed. Open, (∞), circuit without probe installed. If open circuit, with good probe installed, replace receptacle. For the lower oven Machine Control board connector, J300 pins 3 to 4 orange/white to green should be 30k — 50k Ω with probe installed. Open, (∞), circuit without probe installed. If open circuit, with good probe installed, replace receptacle.
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Communications

F60 — F66	<ul style="list-style-type: none"> F60 Indicates a loss of communications to the upper Machine Control, check connections and harness on J700 and J5 on the user interface. F63 Indicates a loss of communications to the lower Machine Control, check connections and harness on J700 and J5 on the user interface. F66 Indicates a loss of communications to the user interface, check connections and harness on J3/J5 of the user interface board and J700 on the upper and lower Machine Control boards. <p>In case of a F6* code, check for status LED on each board. If the wiring is good and NO indicator is lit, replace the board that doesn't have the flashing LED first.</p>
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Key Panel

F7 codes on these units will display number and letter:

F7A	Indicates that the board sees a stuck key other than START and Clear.
F7B	Board sees a stuck START key.
F7C	Upper CLEAR key is in a stuck condition.
F7d	Lower CLEAR key is in a stuck condition.

F7E	Glass touch COMMUNICATION failure.
F7F	Glass touch <u>Cyclic Redundancy Check</u> failure (CRC), electronic component failure.

In most occurrences of a F7*, the failure is within the glass touch and will have to be replaced.

Processor

F80	UPPER Machine Control.
F81	LOWER Machine Control.
F82	Interface data failure (CRC). Replace UI.

F80, F81, and F82 are the result of an electronic problem internally in the control. Replace the Machine Control associated with the code.

Door Latch

Upper/Single	
F90, 91, 92	To check the door latch circuit, measure for resistance from pin 1 yellow to pin 2 orange on J900 on the Machine Control board. It should measure OPEN (∞) in all modes except SELF CLEAN.
Lower	
F93, 94, 95	To check the door latch circuit, measure for resistance from pin 1 yellow/white to pin 2 orange/white on J900 on the lower Machine Control board (right). It should measure OPEN (∞) in all modes except SELF CLEAN.

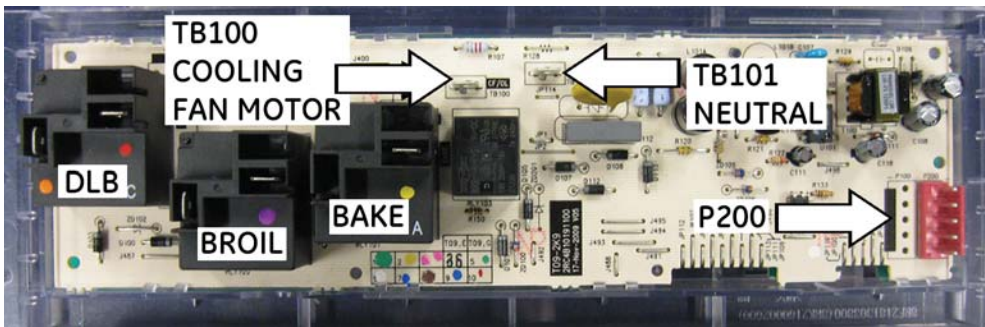
Cooling Fan

F96	Indicates the UPPER fan is running slow.
F97	Indicates the LOWER fan is running slow.
F98	Indicates the UPPER fan is running too fast.
F99	Indicates the LOWER fan is running too fast.

If the cooling fans appear to be running at proper speed, check the wiring connections on the UPPER Machine Control board J900. There should be 5 VDC between pin 4 **white** to pin 6 **black**. The LOWER can be checked on the same connections on the LOWER Machine Control 5 VDC pin 4 **white** to pin 6 **black**. Signal from the cooling fan board will be checked J900 pin 5 **purple** to pin 6 **black** on the UPPER and J900 pin 5 **purple/white** to pin 6 **black** on LOWER machine board. Proper voltage is approximately 3 to 4 VDC.

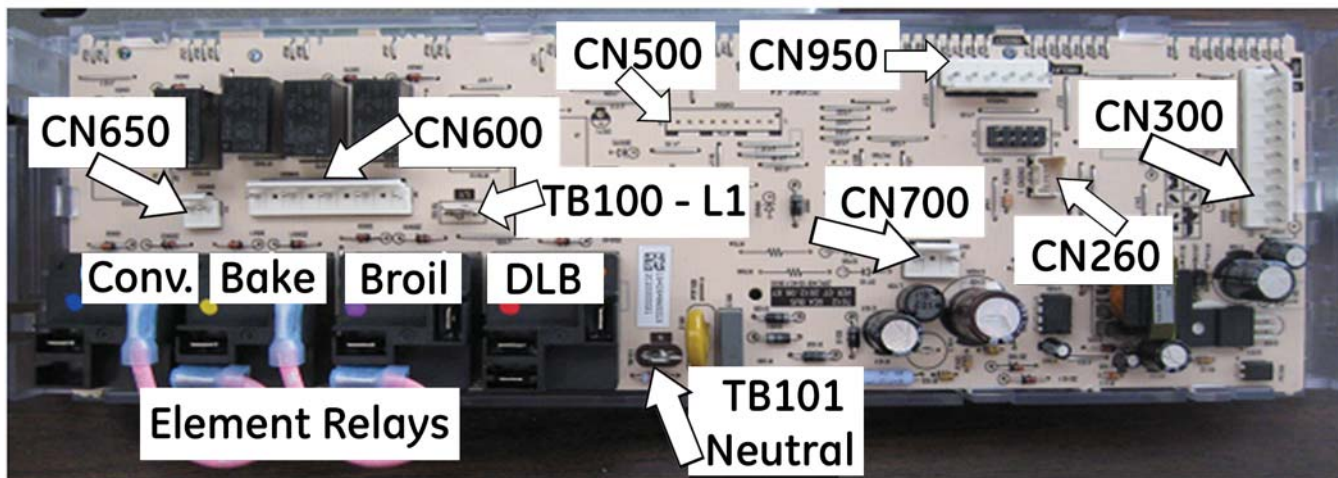
Main Board Layout

T09 Board Layout



- **P200**: Oven sensor and oven light circuit
- **Bake Relay** (Yellow dot): Supplies L1 to bake element
- **Broil Relay** (Purple dot): Supplies L1 to broil element
- **DLB** (Red and Orange dots): Supplies L2 to both elements

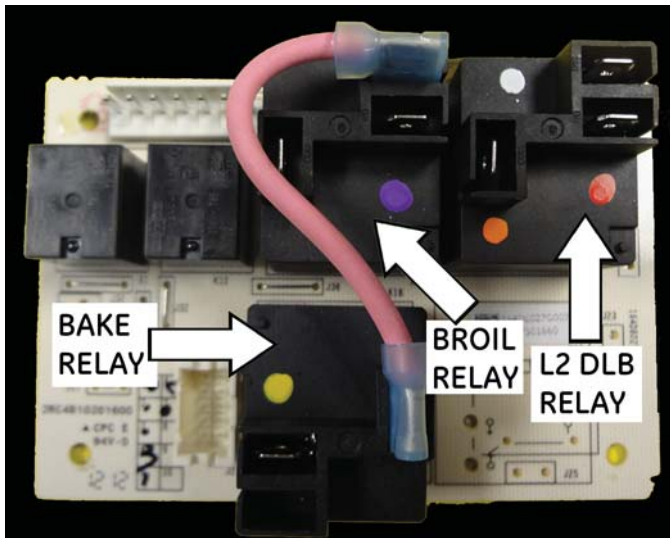
T012 Board Layout



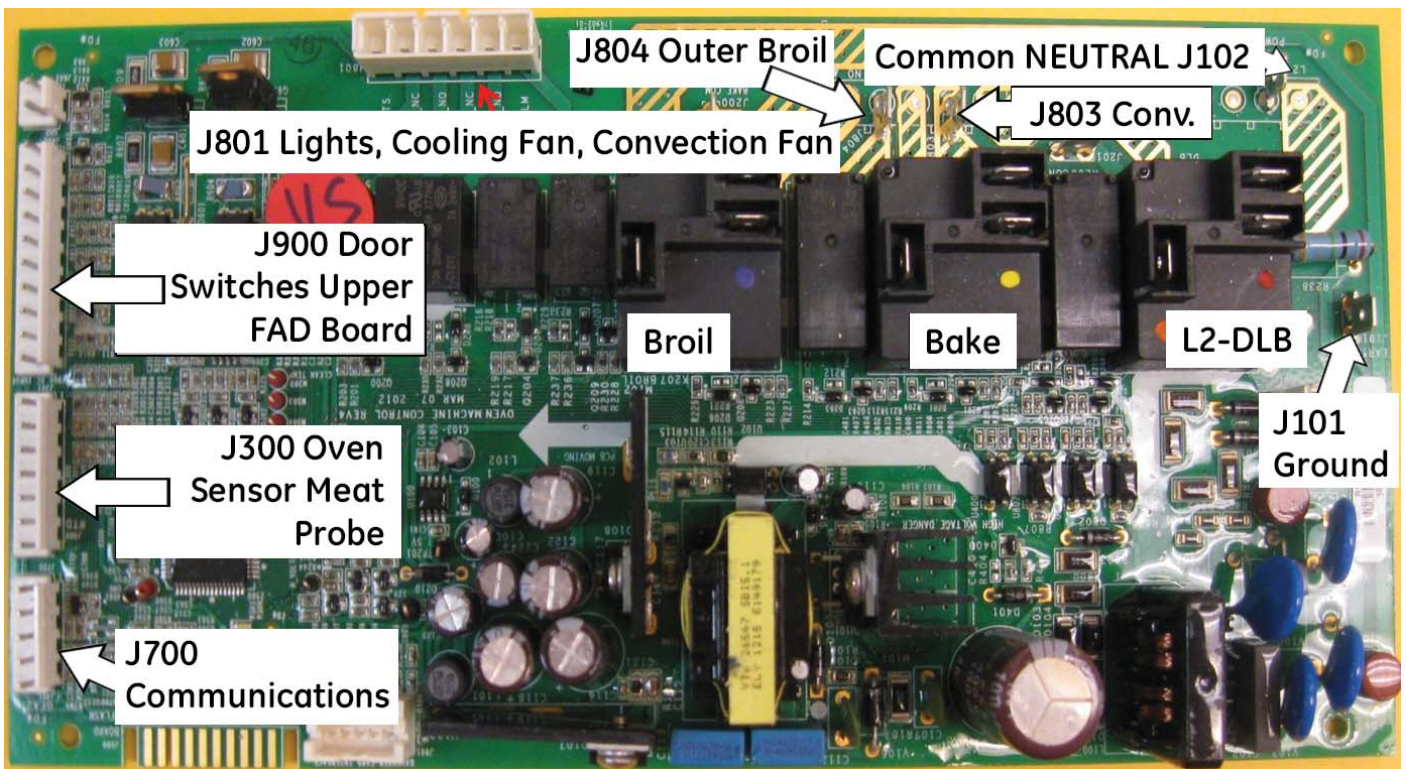
- **CN300**: Oven sensor and door latch switches
- **CN650**: Convection fan motor
- **CN600**: Door lock motor, cavity lights, cooling fan motor(s)
- **CN950**: Glass touch (if equipped)*
- **CN500**: Control signal to lower oven relay board (if equipped)*
- **CN700**: Fan motor FAD board(s)
- **CN260**: RJ45
- **TB100**: L1 input to board
- **TB101**: Neutral input to board
- **Element Relays**
 - **Convection**: Supplies L1 to one side of convection element
 - **Bake**: Supplies L1 to one side of bake element
 - **Broil**: Supplies L1 to one side of broil element
 - **DLB**: Supplies L2 to ALL elements

(*) These connectors will not be present on board if unit is not equipped

Lower Oven Relay Board



Machine Control Upper/Single



Troubleshooting Machine Control

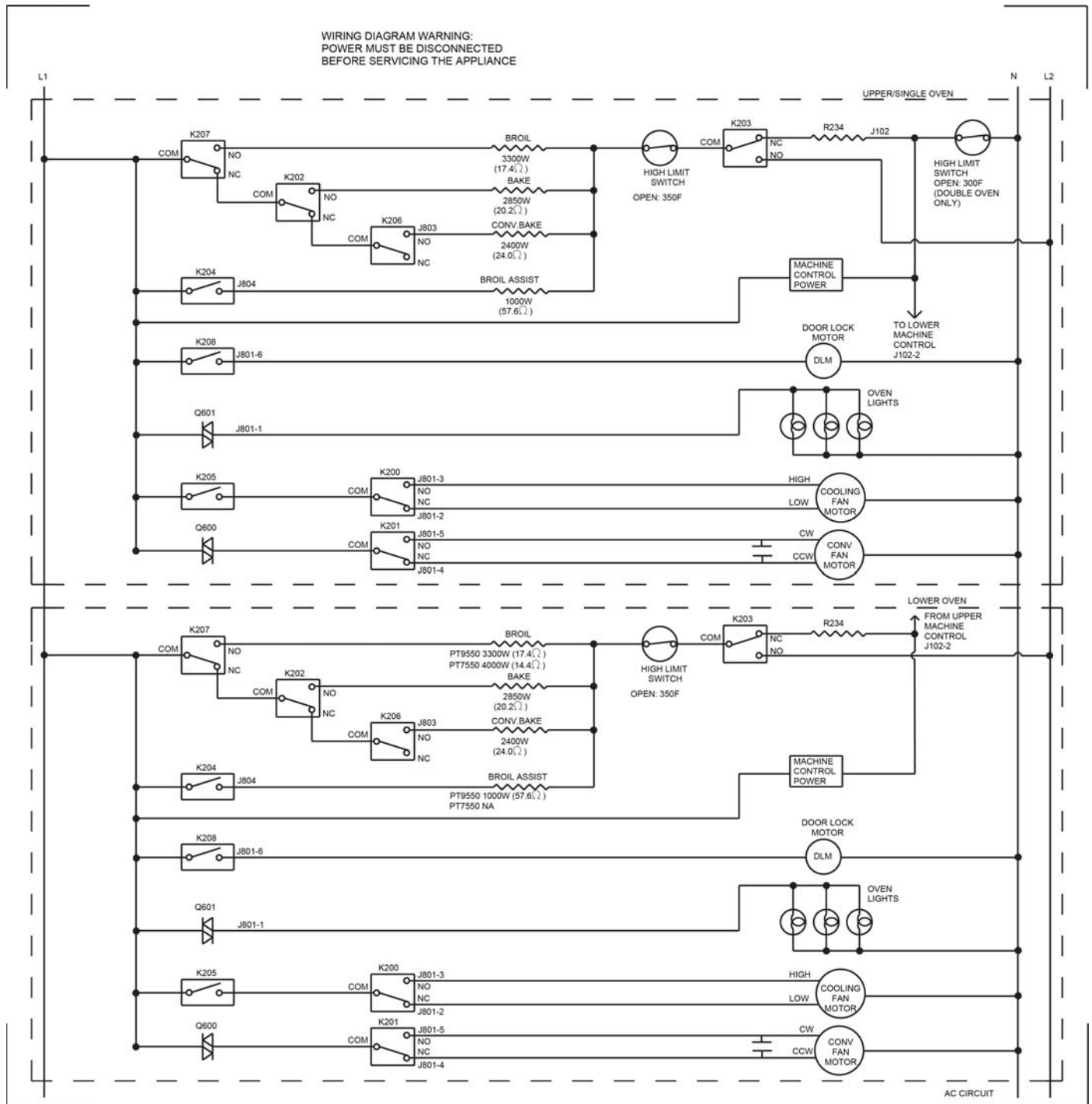
Mini Manual # 31-17016-1 (available on website).

To access the Machine Control board, power must be disconnected. The control panel and control panel housing must be removed. Remove one 1/4 in. screw from the front of the Machine Control board, then slide the board forward. **Ensure safe conditions and proper PPE are used before making powered checks.**

Dead Unit	If Control does not show any display, after verifying the circuit breaker is ON, check for 120 VAC at the black wire on the BROIL relay to the white wire on J102, with wires still connected to board. If 120 VAC is present, Control needs to be replaced. If less than 90 VAC, check voltage from the white wire on J102 to the chassis ground; if 120 VAC, neutral limit switch is open, or house supply voltage is at fault.
ALL TESTS BELOW ARE RESISTANCE CHECKS — DISCONNECT OVEN FROM POWER!	
No Bake	If the Bake element is not energizing, check the resistance on the yellow wire of the bake relay to the orange wire on the DLB relay. Approximately 20Ω.
No Broil Inner	If the Inner Broil element is not energizing, check the resistance on the purple wire of the broil relay to the orange wire on the DLB relay. Approximately 15Ω.
No Broil Outer	If the Outer Broil element is not energizing, check the resistance on the purple/ yellow wire of J804 to the orange wire on the DLB relay. Approximately 58Ω.
No Convection	If the Convection element is not energizing, check the resistance on the blue wire of J803 to the orange wire on the DLB relay. Approximately 24Ω.
No Bake, Broil or Convection	If all elements are not energizing, the L2 High Limit Switch is open.
All 120 volt components	
No Cooling Fan Motor High	If the Cooling Fan High is not energizing, check the resistance on the black/white wire on J801-3 to the white wire on J102. Approximately 18Ω.
No Cooling Fan Motor Low	If the Cooling Fan Low is not energizing, check the resistance on the red/white wire on J801-2 to the white wire on J102. Approximately 25Ω.
No Cavity Lamps	If the Cavity Lamps are not energizing, check the resistance on the black wire on J801-5 to the white wire on J102. Approximately 15Ω.
No Convection Fan Motor CW	If the Convection Fan Motor is not energizing in the clockwise direction, check the resistance on the red wire on J801-5 to the white wire on J102. Approximately 300Ω.
No Convection Fan Motor CCW	If the Convection Fan Motor is not energizing in the counter-clockwise direction, check the resistance on the blue wire on J801-4 to the white wire on J102. Approximately 300Ω.
No Lock Motor	If the Lock Motor is not energizing, check the resistance on the grey wire on J801-6 to the white wire on J102. Approximately 1.8kΩ.

Machine Control Schematic

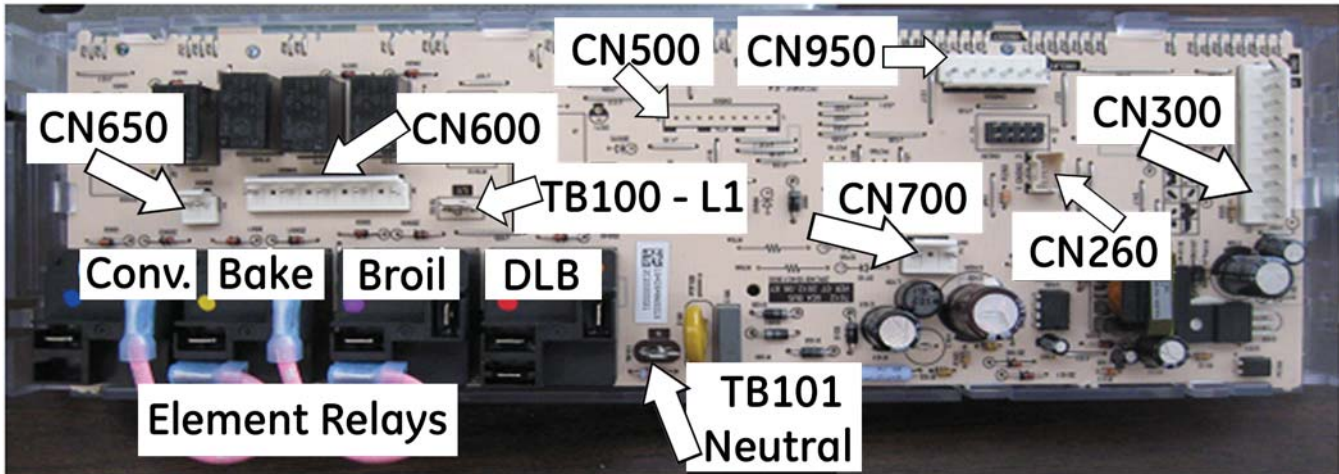
WIRING DIAGRAM WARNING:
POWER MUST BE DISCONNECTED
BEFORE SERVICING THE APPLIANCE



Troubleshooting Single T012

Mini Manual # 31-17016-1 (available on website).

T012 Board Layout



- **CN300:** Oven sensor and door latch switches
- **CN650:** Convection fan motor
- **CN600:** Door lock motor, cavity lights, cooling fan motor(s)
- **CN950:** Glass touch (if equipped)*
- **CN500:** Control signal to lower oven relay board (if equipped)*
- **CN700:** Fan motor FAD board(s)
- **CN260:** RJ45
- **TB100:** L1 input to board
- **TB101:** Neutral input to board
- **Element Relays**
 - **Convection:** Supplies L1 to one side of convection element
 - **Bake:** Supplies L1 to one side of bake element
 - **Broil:** Supplies L1 to one side of broil element
 - **DLB:** Supplies L2 to ALL elements

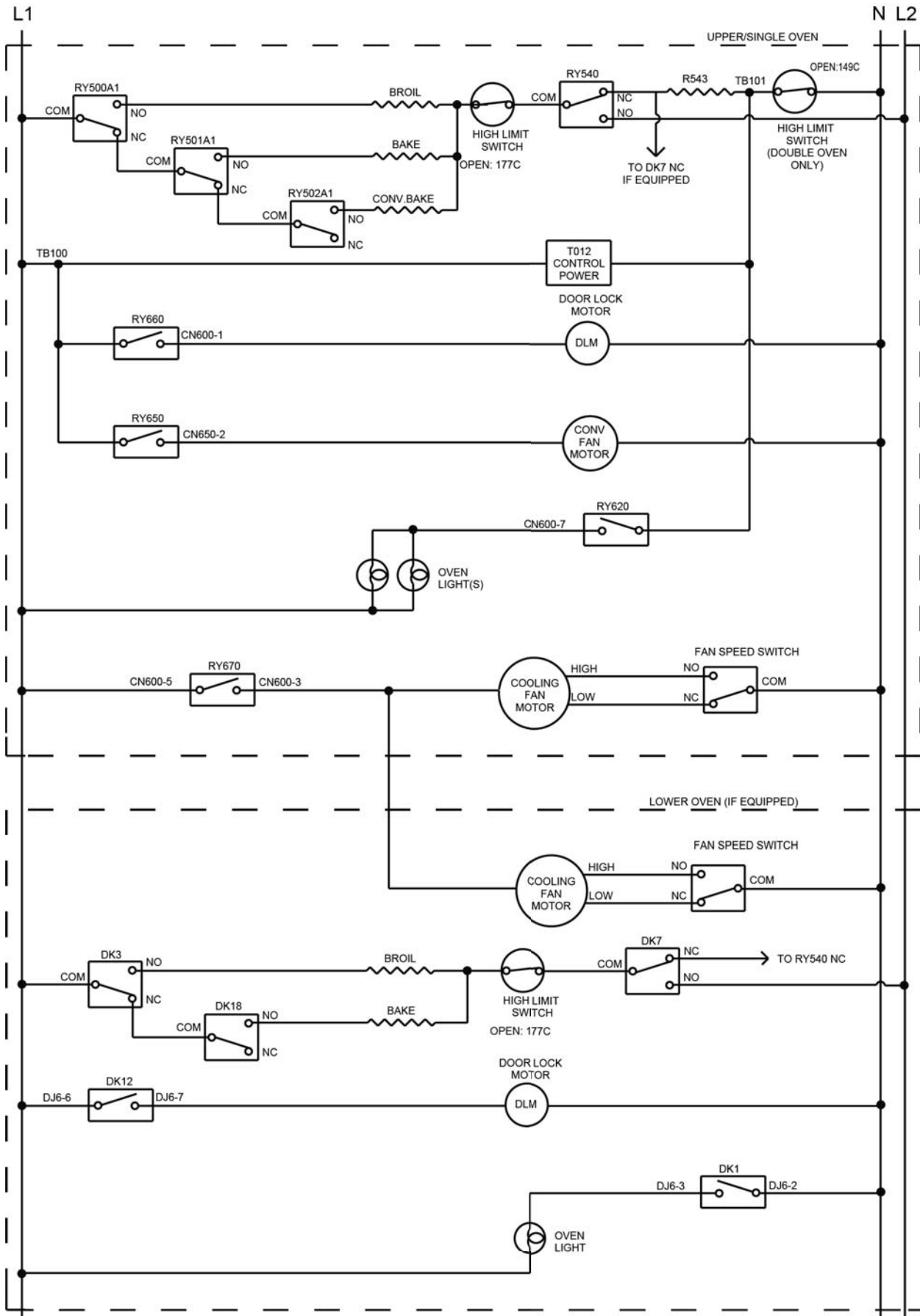
(*) These connectors will not be present on board if unit is not equipped

Troubleshooting T012

Mini manual# 31-17018-1 (available on website)

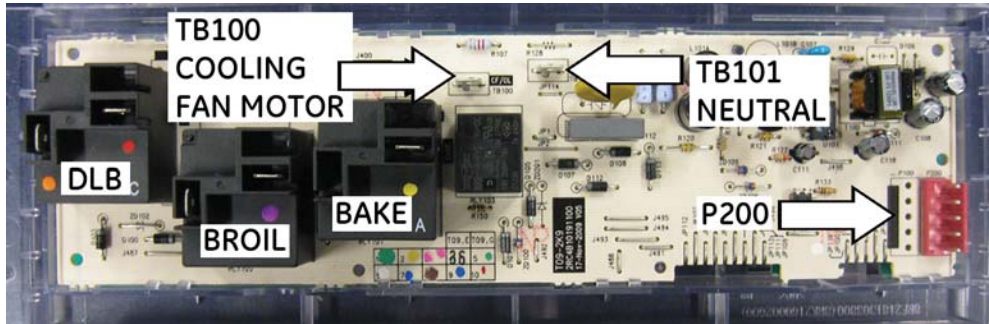
Dead Unit	If the Control does not show any display, after verifying that the circuit breaker is ON, check for 120 VAC at the black wire on TB100 to the white wire on TB101, with wires still connected to board. If 120 VAC is present, the ERC needs to be replaced. If less than 90 VAC, check voltage from the white wire on TB101 to the chassis ground; if 120 VAC, neutral limit switch is open, or house supply voltage is at fault.
ALL TESTS BELOW ARE RESISTANCE CHECKS — DISCONNECT UNIT FROM POWER!	
No Bake	If the Bake element is not energizing, check the resistance on the yellow wire of the bake relay to the orange wire on the DLB relay. Approximately 20Ω.
No Broil	If the Broil element is not energizing, check the resistance on the purple wire of the broil relay to the orange wire on the DLB relay. Approximately 15Ω.
No Convection	If the Convection element is not energizing, check the resistance on the blue wire of the convection relay to the orange wire on the DLB relay. Approximately 24Ω.
No Bake, Broil or Convection	If all elements are not energizing, the L2 High Limit Switch is open.
<u>All 120 Volt Components</u>	
No Cooling Fan Motor	If the Cooling Fan is not energizing, check the resistance on the black/white wire on CN600-3 to the white wire on TB101. Approximately 25Ω. On DWO this reading will show both Cooling Fan Motor circuits and will be approximately 15Ω.
No Cavity Lamps	If the Cavity Lamps are not energizing, check the resistance on the black wire on CN600-5 to the brown wire on CN600-7. Approximately 20Ω.
No Convection Fan Motor	If the Convection Fan Motor is not energizing, check the resistance on the blue wire on CN650-2 to the white wire on TB101. Approximately 30Ω.
No Lock Motor	If the Lock Motor is not energizing, check the resistance on the grey/black wire on CN600-1 to the white wire on TB101. Approximately 1.8kΩ. NOTE: Door must be closed
ERC — Dead Unit	Safely check for 120 VAC on the black wire on the BROIL relay to the white wire on TB101, making sure there is a load on the line and wires are still connected to board. If less than 100 VAC is present, check the black wire to chassis ground. If 120 VAC is present, suspect an open Neutral thermal limit switch.

T012 Schematic

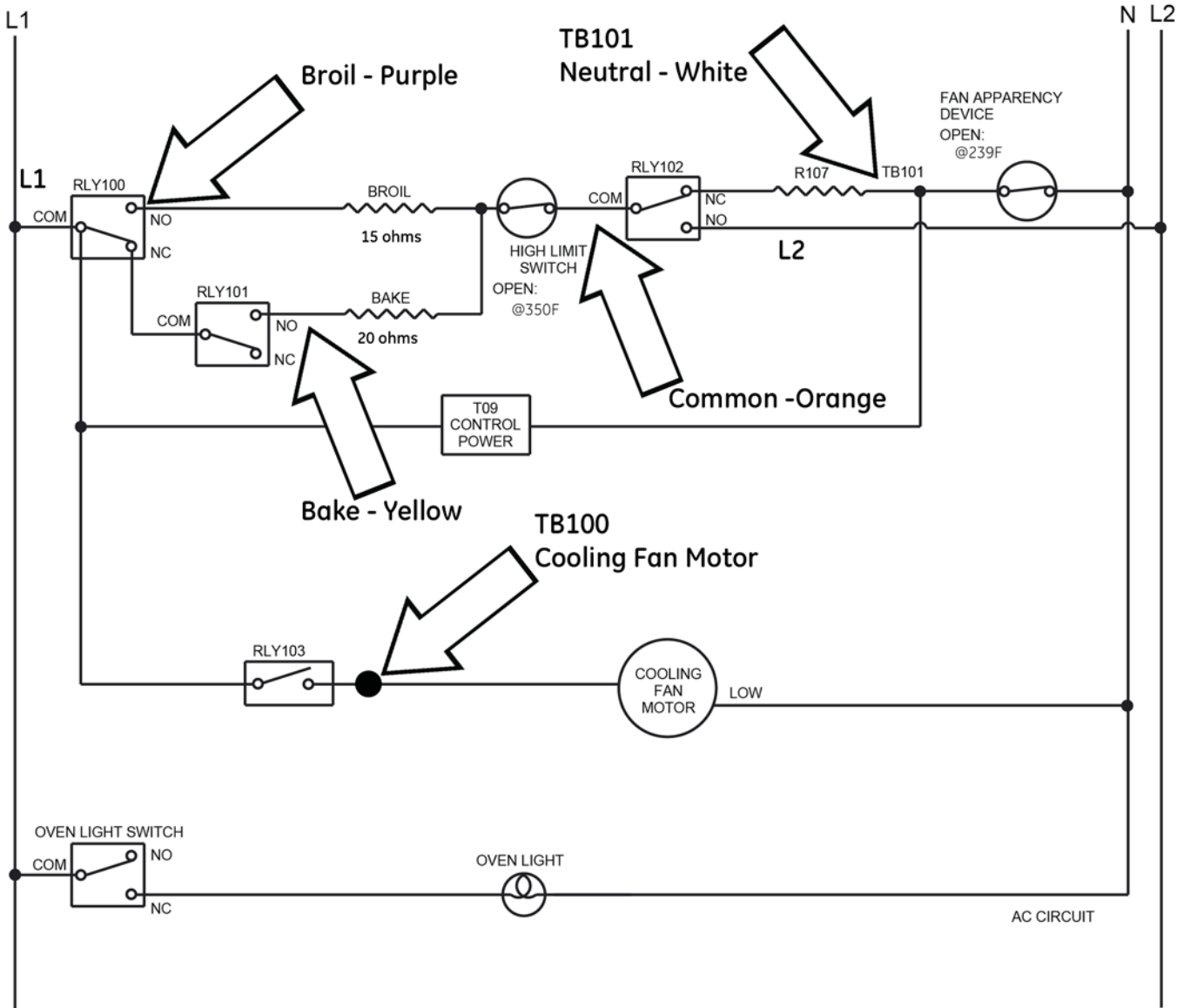


Troubleshooting T09

Mini Manual # 31-17017-1 (available on website).



T09 Schematic



Troubleshooting T09

Dead Unit	If the Control does not show any display, after verifying that the circuit breaker is ON, check for 120 VAC at the black wire on the BROIL relay to the white wire on TB101, with wires attached to board. If 120 VAC is present, the ERC needs to be replaced. If less than 90 VAC, check voltage from the white wire on TB101 to the chassis ground; if 120 VAC, the limit switch is open (shown as fan apparency switch). If the switch is closed, the house supply voltage is at fault.
ALL TESTS BELOW ARE RESISTANCE CHECKS — DISCONNECT UNIT FROM POWER!	
No Bake	If the Bake element is not energizing, check the resistance on the yellow wire of the bake relay to the orange wire on the DLB relay. Approximately 20Ω.
No Broil	If the Broil element is not energizing, check the resistance on the purple wire of the broil relay to the orange wire on the DLB relay. Approximately 15Ω.
No Cooling Fan	If the Cooling Fan is not energizing, check the resistance on the black/white wire on TB100 to the white wire on TB101. Approximately 25Ω.
No Cavity Lamp	If the Cavity Lamp is not energizing, access the switch assembly located where the lock assembly would be. If a self clean model, check the resistance on the black/white wire on the switch to the white wire on TB101. Approximately 100Ω.
NOTE	Mini Manual with unit may have mislabeled OVEN LIGHT SWITCH. The schematic in the service guide is correct.

Service Mode

Service Mode — Machine Control

This mode will be used by field service technicians to root-cause problems in consumers' homes.

A 5 minute timer shall be activated at power-up which is transparent to the user and during this time, the Service Mode is entered by pressing and holding the **1** and **5** keys simultaneously for 3 seconds. When the Service Mode is entered, the word **tESt** shall appear in the time digits until it is superseded by the CRC or software version or until the mode is canceled. If a user presses the CLEAR/OFF key, the mode shall be canceled and the control will reset.

When the Service Mode is entered, the current oven sensor temperature shall appear in the temperature digits of each oven. When the Service Mode is entered, different keys are used to test different relay outputs. The Upper and Lower oven keys on a double oven are used to alternate the oven, which the mode keys activate. If the upper or lower keys have not been pressed, the control assumes that it is the upper oven. Each key press turns on the associated load. Each load turns off when one of the following conditions is met: the same key is pressed again; another key has been pressed; or 10 seconds has passed after the key has been released.

The loads and associated keys are listed below:

- **BAKE:** Energize the Bake and the DLB relays for the corresponding cavity.
- **BROIL:** Energize the Broil and the DLB relays for the corresponding cavity.
- **SELF-CLEAN:** Energize the door lock motor and display the door lock status in normal mode. (**NOTE:** If the door lock is unlocked, this key press locks the door and if the door lock is locked, then the key press will unlock. It is not ruled by the 10 second timer as other keys are.)
- **STEAM CLEAN:** Displays in the temperature digits the most recent fault code. Each subsequent press of the Steam Clean key shall display the next most recent fault code. The Temperature display shall go back to the current RTD temperature after 10 seconds of no key presses. Press and holding the STEAM CLEAN button for 3.5 seconds will clear fault codes.

- **COOK TIME:** Calculate and display the CRC checksum in the time digits.
- **CONVECTION BAKE:** Energize the convection element and the DLB relays.
 1. Energize the convection fan in the CCW direction. **NOTE:** If the **2** key has been pressed and the fan is spinning in the CW direction, the control will wait at least 10 seconds before starting to energize the fan in the CCW direction to prevent welding the relay.
 2. Energize the convection fan in the CW direction. **NOTE:** If the **1** key has been pressed and the fan spinning in the CCW direction, the control will wait at least 10 seconds before starting to energize the fan in the CW direction to prevent welding the relay.
- **OVEN LIGHT:** Energize the oven light for the corresponding cavity.
- **DELAY TIME:** Display the software version in the time digits.
- **PROBE:** Display the probe temperature in the temperature display.
- **SET CLOCK:** Energize the cooling fan relay.
- **START:** No response.
- **TIMER ON/OFF:** Light up all LED segments.
- **Digit keys:** Light up in every available 7-segment display the key being pressed (pressing the **7** key would show **777 77:77**). **NOTE:** The **1** and **2** keys are used for convection fan, and should also display the digits in the display when applicable.
- **CLEAR/OFF:** Resets the control.

If a key is pressed while another load is already on, the control will first turn off the first load and then activate the new load (i.e.: User presses Bake and within 5 seconds the User presses Broil, the control will turn on the Bake and DLB from when the user first presses Bake until the user presses Broil; then the control will turn off the Bake relay and turn on the Broil relay and hold the Broil element on until 10 seconds after the key has been pressed).

Service Mode — T012 Controls

Before placing oven into the Service Mode, access the Fault Codes. After exiting Fault Codes, the control will re-initialize and the power will not have to be reset at the circuit breaker.

Accessing Fault Codes

To access codes, press and hold simultaneously the numbers **1**, **3**, and **0**.

The display will show F-cd in the center. Then press the **2** pad, it will display a 1 to the left of F-cd and F33 to the right if a fault code is logged. If more than one code is stored, pressing the **2** pad will advance to the next fault code. If pressing the **2** pad produces a double beep, it indicates the last fault code.

To clear fault codes, press and hold the **6** and **8** pads together. The display will show **Erase** and exit. Upon exiting, the control will reset, enabling the technician to forgo resetting the power to access the service mode.

Accessing Service Mode

Enter the Service Mode by pressing and holding, the 1 and 5 keys simultaneously for 3 seconds. This must be done within the first 5 minutes of power up or control re-initialization.

When the Service Mode is entered, the word **tEst** will appear in the time digits until it is superseded by the CRC or software version, or until the mode is canceled.

When the Service Mode is entered, the current oven sensor temperature will appear in the temperature digits of each oven. After the Service Mode is entered, different keys shall be used to test different relay outputs. The Upper and Lower oven keys, on a double oven, will be used to alternate the oven which the mode keys activate. Each key press shall turn on the associated load. Each load will turn off when one of the following conditions is met: the same key is pressed again; or another key has been pressed; or 10 seconds has passed after the key has been released.

The loads and associated keys are listed below:

- **BAKE**: Energize the Bake and the DLB relays for the corresponding cavity.
- **BROIL**: Energize the Broil and the DLB relays for the corresponding cavity.

If a key is pressed while another load is already on, the control will first turn off the first load and then activate the new load (i.e.: User presses Bake and within 5 seconds the User presses Broil, the control shall turn on the Bake and DLB from when the user first presses Bake until the user presses Broil, then the control will turn off the Bake relay and turn on the Broil relay and hold the Broil element on until 10 second after the key has been pressed). So, no two element loads can be on at the same time.

SELF-CLEAN: Energize the door lock motor and display the door lock status as in normal mode. (**NOTE**: If the door lock is unlocked, this key press locks the door, and if the door lock is locked, then the key press will unlock. It is not ruled by the 10 second timer as other keys are.

CONVECTION BAKE: Energize the convection element and the DLB relays (if used).

#1 or #2: Energize the convection fan (if used).

OVEN LIGHT: Energize the oven light(s).

SET CLOCK: Energize the cooling fan relay.

DELAY TIME: Display the software version in the time digits.

START: No response.

TIMER ON/OFF: Light up all LED segments.

LOCK CONTROL: Energize the cooling fan motor (low).

DIGIT KEYS: Light up in every available 7-segment display the key being pressed (pressing the **7** key would show **777 77:77**). **NOTE**: The **1** and **2** keys are used for convection fan, and should also display the digits in the display when applicable.

CLEAR/OFF: Shall reset the control.

GE Wall Oven Warranty



All warranty service provided by out Factory Service Centers or an authorized Customer Care® technician. To schedule service, visit us on-line at GEAppliances.com, or call 800.GE.CARES (800.432.2737). Please have serial number and model number available when calling for service.

Staple your receipt here.
Proof of the original purchase date is needed to obtain service under the warranty.

For The Period Of: GE Will Replace:

One Year
From the date of the original purchase

For the period of one year from the date of the original purchase. GE will provide **any** part of the range which fails due to a defect in materials or workmanship. During this **limited one-year warranty**, GE will also provide **free of charge**, all labor and in-home service to replace the defective part.

What GE Will Not Cover

- Service trips to your home to teach you how to use the product
- Improper installation, delivery or maintenance
- Replacement of house fuses or resetting of circuit breakers
- Product not accessible to provide required service
- Damage to the product caused by accident, fire, floods or acts of God.
- Failure of the product if it is abused, misused, modified or used for other than the intended purpose or used commercially
- Incidental or consequential damage caused by possible defects with this appliance.
- Cleaning or servicing of the air gap device in the drain line.
- Damage caused after delivery, including damage from items dropped on the door.

EXCLUSION OF IMPLIED WARRANTIES – Your sole and exclusive remedy is product repair as provided in this Limited Warranty. Any implied warranties, including the implied warranties of merchantability or fitness for a particular purpose, are limited to one year or the shortest period allowed by law.

This warranty is extended to the original purchaser and any succeeding owner for products purchased for home use within the USA. If the product is located in an area where service by a GE Authorized Servicer is not available, you may be responsible for a trip charge or you may be required to bring the product to an Authorized GE Service location for service. Proof of original purchase date is needed to obtain service under the warranty. In Alaska, the warranty excludes the cost of shipping or service calls to your home.

Some states do not allow the exclusion or limitation of incidental or consequential damages. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. To know what your legal rights are, consult your local or state consumer affairs office or your state's Attorney General.

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