SERVICE MANUAL

for

BOSCH

800 Series
Built-in Wall Ovens

HBL8442UC
HBL8451UC
HBL8461UC
HBL8642UC
HBL8651UC
HBL8661UC
HBL8752UCC*
HBL87M52UCC*
HBL8742UCC*
HBN8451UC
HBN8651UC

This manual contains information that is necessary for servicing the following Bosch electric built-in wall ovens:

HBL8442UC, HBL8451UC, HBL8461UC, HBL8642UC, HBL8651UC, HBL8661UC, HBL8742UC
HBL8752UCC, HBL87M52UCC, HBL8742UCC
HBN8451UC, HBN8651UC

This manual is designed to be used by qualified service personnel only. Due to the complexity and the risk of high-voltage electrical shock, Bosch does not recommend that customers service their own units.

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*HBL8752UCC is the traditional wall oven component of the HBL8752UC combination oven (set), which also includes the HMC80252UC Speed microwave oven.
**HBL87M52UCC is the traditional wall oven component of the HBL87M52UC combination oven (set), which also includes the HMB50152UC Solo microwave oven.
**HBL8742UCC is the traditional wall oven component of the HBL8742UC combination oven (set), which also includes the HMC80242UC Speed microwave oven.

TABLE OF CONTENTS

1 SYMBOLS USED IN THIS MANUAL

	**WARNING** – this symbol alerts you to dangers that may result in bodily injury or death
	**CAUTION** – this symbol alerts you to actions that may result in damage to the product or property
	**NOTICE** – this symbol alerts you to important information and/or service tips.
	**VIDEO** – related service video available for viewing on *QuickFinder*

2 IMPORTANT SAFETY INFORMATION

Before starting to service an appliance, familiarize yourself with all safety information and precautions included in this manual.

2.1 Safety Before Servicing the Appliance

WARNING

Before disassembly, removal, or installation of any component…

- ✓ Turn off electrical power by removing the power cord from the electrical outlet or putting the circuit breaker in the OFF position.
- ✓ Be sure the entire appliance has cooled to a safe temperature.

WARNING

Use of replacement parts…

Use only authorized replacement parts for this appliance. Use of unauthorized substitutions may cause non-compliance with safety standards set for home appliances, will void the warranty, and may create safety hazards resulting in damage, bodily injury, or death.

WARNING

Electrical hazards…

- ✓ Before servicing the appliance, remove electrical power by either disconnecting the power cord from the wall receptacle or by putting the circuit breaker in the OFF position.
- ✓ If tests must be conducted while the appliance is live, always use a residual-current-operated circuit breaker. The protective conductor connection must not exceed the recommended values.
- ✓ When repairs are complete, perform a function test in accordance with the appropriate regulations.
- ✓ Do not, under any circumstances, cut or remove the separate ground wire or the third (ground) prong from the power cord plug.
- ✓ Improper grounding or reverse polarization will cause malfunction, which can damage the appliance and create an electrical shock hazard. Make sure the circuit is properly grounded and polarized in accordance with applicable local codes and ordinances. Receptacle replacement shall be in accordance with the National Electric Code.

WARNING

Sharp components…

This appliance has sheet metal parts and components which may have sharp edges. Avoid injury by handling parts with care and using adequate protective measures, such as wearing gloves.

WARNING

Clean-up hazards…

Do not allow any cleaning or polishing solutions/compounds, disinfectants, or bleaches to remain in contact with the stainless steel surfaces for long periods, or after clean-up. These may contain chemicals or materials which could release harmful inhalants and may cause damage to the appliance. After cleaning or polishing, always rinse the cleaning/polishing materials with clear water and wipe dry with a clean, soft, non-abrasive cloth.

WARNING

Prior to returning appliance to service, confirm that…

- ✓ All electrical connections are correct and secure
- ✓ All safety grounds (internal and external) are correctly and securely connected
- ✓ All panels and components are properly and securely reassembled.

3 GENERAL

The 800 Series includes five HBL8x (30") and two HBN8x (27") built-in wall ovens. Models have thermal oven cavities and/or Euro-convection (convection with ring element) cavities. The lineup includes two field-assembled combination models with either a 120V Solo Microwave Oven or a 240V Microwave Speed Oven.

Available colors are bright stainless, black stainless, or black porcelain, and all models feature VFD red and white displays with touch controls. The wall ovens are designed to be installed flush with cabinetry.

The control panel and door skins on the stainless models are made of grade 439 stainless steel, which is magnetic.

3.1 Recap of Functional/Technical Changes

- **Cooling fan**: now operates with a variable speed protocol. Hall effect sensor has been eliminated, and thermal limiter (HTC) has been added.
- **Power supply**: now located on the control module (relay board) rather than as a separate component.
- **User interface**: no longer separate user interface software; the control module drives the user interface. VFD-based display with capacitive touch panel managed by a separate touch control module (TCM).
- **Daughter board** (double ovens only): populated with relays to operate the lower oven.
- **Ventilation:** air flows up through each door, then back out over each door as air exits the appliance; some air is pulled into the unit at the lower vent area under the appliance.
- **Lighting:** Soft lighting is standard on all models. Double oven lighting is not independent – lights operate concurrently.
- **Temperature control:** now a two-point control for all modes rather than a PID control for all modes.
- **Hinges:** All models include soft-close doors.

3.2 Models

The model number structure for the 2014 wall ovens appears below.

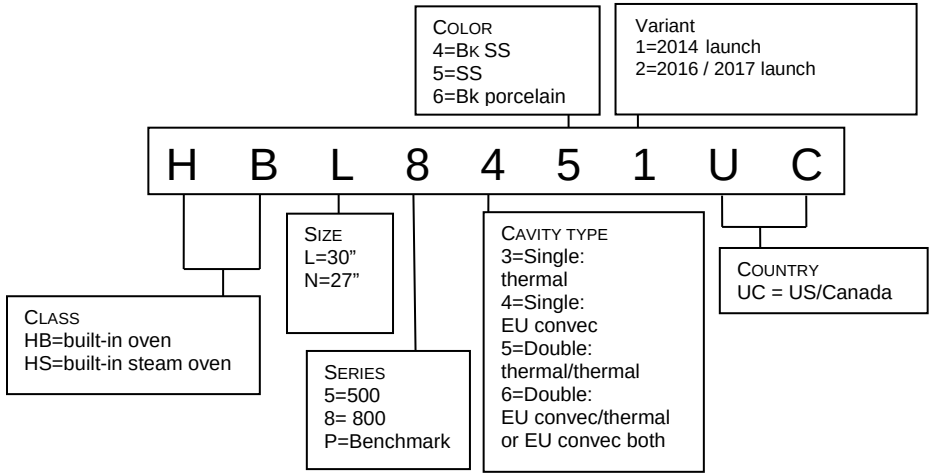


Figure 1 Model number nomenclature

HBN8451UC	27" Single oven with Euro-convection, stainless
HBN8651UC	27" Double oven with Euro-convection/thermal, stainless
HBL8442UC	30" Single oven with Euro-convection, black stainless
HBL8451UC	30" Single oven with Euro-convection, stainless
HBL8461UC	30" Single oven with Euro-convection, black
HBL8642UC	30" Double oven with Euro-convection/thermal, black stainless
HBL8651UC	30" Double oven with Euro-convection/thermal, stainless
HBL8661UC	30" Double oven with Euro-convection/thermal, black
HBL8742UC	30" Combination oven with 240V speed microwave and Euro-convection oven, black stainless (oven component of this model is HBL8742UCC
HBL8752UC	30" Combination oven with 240V speed microwave and Euro-convection oven (oven component of this model is HBL8752UCC)
HBL87M52UC	30" Combination oven with120V solo microwave and Euro-convection oven (oven component of this model is HBL87M52UCC)

3.2.1 Combination Ovens (Sets)

The 2016 combination ovens (sets) are shipped together as individual components, and are assembled at the customer's home during installation.

Figure 2 Combination ovens (sets) ready to be shipped

Although the combination ovens are sold using the combination model SKU, the service documentation for the sets can be found linked to the component models rather than the combination model SKU. For example, the 800 series combination is sold as an HBL8752UC, but the service documentation can be found in *QuickFinder* linked to its components: HBL8752UCC (wall oven) and HMC80252UC (microwave speed oven). There is no service documentation linked to HBL8752UC, but a cross-reference will appear in *QuickFinder* when HBL8752UC is entered.

Model / E-Nr.	Product Name/Type	Description
HBL8752UC/01	Bosch 800 Series Oven + 240V Speed MW	SET: HBL8752UCC + HMC80252UC

Figure 3 *QuickFinder* screen shot

3.3 Rating Label

The rating label reflecting model number and FD number is located on the side trim, as shown in Figure 4.

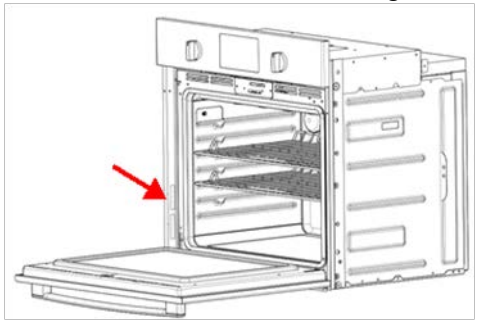


Figure 4 Data plate location

The first 4 positions of the FD number reflect the year/month the product was built. FD numbers that begin with 94 were built in 2014; 95 = 2015; 96 = 2016, etc. FD 9604 = oven built in April 2016.

NOTICE

Be prepared to provide the **complete Model Number and FD number** printed on the rating label of the unit when contacting Bosch Customer Support or Technical Support for assistance.

Note: Some traditional ovens manufactured between April and October 2016 shipped with numeric model numbers on the rating labels. See cross-reference table below.

If model number on Rating Label is…	QuickFinder documents and manuals are found at	Product description
9001227721/01	HBL87M52UCC/01	800 Series traditional oven
9001227722/01	HBL8752UCC/01	

Table 1 Model No Cross Reference

3.4 Warranty

The product is warranted to be free from defects in materials and workmanship for a period of 365 days from date of purchase. Bosch will have no responsibility or liability for repairs or work performed by a non-authorized servicer.

Find the complete Statement of Limited Product Warranty in the product's *Use and Care Manual*.

4 OPERATION

This section includes basic information about how the 800 Series wall ovens operate.

4.1 Allowable Operating Range by Cooking Mode

Table 2 reflects the minimums and maximums by cooking mode for each model in the 800 Series.

Cooking Mode	Models	Min	Max	Default
Bake	All	100°F	550°F	350°F
Broil (Low 450°F / High 550°F)		450°F	550°F	High
Roast		100°F	550°F	325°F
Warm		140°F	225°F	170°F
Sabbath		100°F	425°F	N/A
Self-Cleaning		2 hours	4 hours	3 hours
Proof Dough	HBL8442UC HBL8451UC HBL8461UC HBN8451UC HBL8642UC(u) HBL8651UC(u) HBL8661UC(u) HBN8651UC HBL8742UCC HBL8752UCC HBL87M52UCC	85°F	125°F	100°F
Convection Bake	HBL8442UC	100°F	550°F	325°F
Convection Broil	HBL8451UC	450°F	550°F	High
Convection Roast	HBL8461UC	100°F	550°F	325°F
Pizza	HBN8451UC	100°F	550°F	400°F
Multi-Rack Convection (Eur. Conv.)	HBL8642UC(u) HBL8651UC (u) HBL8661UC (u) HBN8651UC(u)	100°F	550°F	325°F
Fast Preheat	HBL8752UCC HBL87M52UCC HBL8442uc HBL8451UC HBL8461UC	N/A	N/A	Not available for Broil, Conv Broil, Proof Dough or Warm
Probe	HBN8451UC	100°F	200°F	N/A
Convection Conversion	HBL8642UC(u) HBL8651UC (u) HBL8661UC (u) HBN8651UC(u) HBL8742UCC HBL8752UCC HBL87M52UCC	N/A	N/A	Auto Temp Reduction by 25°F
(u) = upper oven only				

Table 2 Allowable range by cooking mode

4.2 Heating Elements

All ovens include an 8-pass 3800W broil element and a 4-pass 2400W bake element. Models with Euro-convection include a 2000W ring element as well.

When the door is opened, all heating elements (and the convection fan, if applicable) will be paused. When the door is closed, cycling will continue.

4.2.1 Elements Used by Cooking Mode

The table below reflects the elements which are used for each cooking mode.

Cooking Mode	Elements Used	Description
Bake	Broil, Bake 	Upper and lower elements cycle to maintain oven temperature
Broil	Broil 	Intense heat is radiated from the upper element
Roast	Broil, Bake 	Upper and lower elements cycle to maintain oven temperature; more intense heat from the upper element is used than the lower.
Warm	Broil, Bake 	Upper and lower elements cycle to maintain a low oven temperature
Proof Dough	Bake 	Lower element is used to maintain a low temperature
Self-clean	Broil, Bake 	Upper and lower elements cycle to maintain oven temperature; more intense heat from the upper element is used than the lower.
Convection Bake	Broil, Bake, Conv Fan 	Upper and lower elements cycle to maintain oven temperature, and the heat is circulated by the convection fan
Convection Broil	Broil, Conv Fan 	Intense heat is radiated from the upper element and the convection fan circulates the air
Convection Roast	Broil, Bake, Conv Fan 	Upper and lower elements cycle to maintain oven temperature and air is circulated by the convection fan; more intense heat from the upper element is used than the lower.
Convection Multi-rack	Conv Element, Conv Fan 	Heat is generated by the convection ring element and circulated by the convection fan.
Pizza	Broil, Bake, Conv Fan 	Upper and lower elements cycle to maintain oven temperature, and the heat is circulated by the convection fan

Table 3 Active elements by cooking mode

4.2.2 Element Duty Cycles

A two-point control is used for all cooking modes.

30"		PREHEAT					
		BROIL ELEMENT		BAKE ELEMENT		RING ELEMENT	
		START	DURATION (seconds)	START	DURATION (seconds)	START	DURATION (seconds)
A-Cavity (Thermal)	BAKE	0	25	25	35	-	-
	ROAST	0	24	24	36	-	-
	BROIL	0	60	-	-	-	-
	WARM	0	12	12	36	-	-
	SELF CLEAN	0	33	30	26	-	-
C-Cavity (Euro-conv)	BAKE	0	15	15	30	15	45
	ROAST	0	30	30	30	30	30
	BROIL	0	60	-	-	-	-
	CONVECTION BAKE	0	30	30	30	30	15
	CONVECTION ROAST	0	27	27	27	27	27
	CONVECTION BROIL	0	60	-	-	-	-
	CONVECTION MULTI-RACK	0	15	15	20	15	45
	WARM	0	12	12	36	-	-
	PROOF	0	6	6	12	-	-
	PIZZA	0	30	45	15	30	15
	FROZEN FOODS	0	30	30	30	30	30
	SELF CLEAN	0	33	30	26	-	-

Table 4 Element duty cycles during Preheat

30"		FAST PREHEAT					
		BROIL ELEMENT		BAKE ELEMENT		RING ELEMENT	
		START	DURATION (seconds)	START	DURATION (seconds)	START	DURATION (seconds)
A-Cavity (Thermal)	BAKE	-	-	-	-	-	-
	ROAST	-	-	-	-	-	-
	BROIL	-	-	-	-	-	-
	WARM	-	-	-	-	-	-
	SELF CLEAN	-	-	-	-	-	-
C-Cavity (Euro-conv)	BAKE	-	-	0	60	0	60
	ROAST	0	30	30	30	30	30
	BROIL	-	-	-	-	-	-
	CONVECTION BAKE	-	-	0	60	-	60
	CONVECTION ROAST	0	30	30	30	30	30
	CONVECTION BROIL	-	-	-	-	-	-
	CONVECTION MULTI-RACK	0	30	30	30	30	30
	WARM	-	-	-	-	-	-
	PROOF	-	-	-	-	-	-
	PIZZA	0	30	30	30	30	30
	FROZEN FOODS	-	-	-	-	-	-
	SELF CLEAN	-	-	-	-	-	-

30"		REGULATE					
		BROIL ELEMENT		BAKE ELEMENT		RING ELEMENT	
		START	DURATION (seconds)	START	DURATION (seconds)	START	DURATION (seconds)
A-Cavity (Thermal)	BAKE	0	4	4	50	-	-
	ROAST	0	15	15	45	-	-
	BROIL	0	100	-	-	-	-
	WARM	-	-	0	60	-	-
	SELF CLEAN	0	60	37	15	-	-
C-Cavity (Euro-conv)	BAKE	0	4	4	40	-	-
	ROAST	0	15	15	45	-	-
	BROIL	0	60	-	-	-	-
	CONVECTION BAKE	0	5	5	35	-	-
	CONVECTION ROAST	0	15	15	45	-	-
	CONVECTION BROIL	0	100	-	-	-	-
	CONVECTION MULTI-RACK	-	-	-	-	0	48
	WARM	-	-	0	60	-	-
	PROOF	0	6	6	9	-	-
	PIZZA	0	4	0	0	4	50
	FROZEN FOODS	0	15	15	45	15	45
	SELF CLEAN	0	60	37	15	-	-

Table 6 Element duty cycles during Regulate

4.2.3 Setting Temperature Offsets

In some cases, it may be necessary to adjust the oven temperature if the customer reports that food is consistently under- or over-cooked, even though the oven is operating normally. Temperature Offsets can be entered by the customer from the Customer Settings menu to raise or lower the cavity temperature during operation in modes *other than* Broil, Convection Broil, Warm, Pizza or Self-clean.

The allowable Offset range is from 0°F to 35°F, positive or negative.

1. Press Settings to access the Customer Settings menu (from stand-by mode only)
2. Press 9 for Temperature Offset (single/upper) or 10 (lower).
3. Press Enter to edit the current setting.
4. Press (-) or (+) then enter the offset value using the numeric keys - always enter the value as 2 digits (i.e, 05).
   The new value is saved when the display changes from edit mode back to display mode.
5. Press Oven Clear/Off to exit the Settings menu on single ovens or press Upper Clear/Off or Lower Clear/Off to exit the Settings menu on double ovens.

Example: A +25° offset will result in a cavity temperature of 350° when the cooking temperature is set to 325° for any of the cooking modes affected by the Offset. Similarly, a -25° offset will result in a cavity temperature of 300° when the cooking temperature is set to 325°.

The adjusted temperature cannot be less than the minimum allowable temperature for the cooking mode, nor higher than the maximum for the cooking mode. See *Allowable Operating Range by Cooking Mode* section.

For double ovens, a temperature offset may be set for each oven.

4.3 Self-clean

In a double oven, if Self-clean is running in one cavity, the second cavity will be disabled until the cycle finishes.

4.4 Cooling Fan

The cooling fan will operate during any cooking mode and is used to maintain allowable temperatures on internal components and customer-accessible surfaces.

During Preheat, the fan speed will increase based on cavity temperature until the final speed is reached at the conclusion of Preheat. Throughout the Regulate phase of the cooking cycle, the fan speed will remain constant.

During Self-clean, the cooling fan will run at high speed immediately after the self-clean cycle begins, regardless of temperature. The fan will remain at this speed for the entire self-clean cycle.

When any of the following errors occur, the cooling fan will operate at 100% until the error is cleared: E101/E201, E002/E302, E303, E104/E204. See the *Error Code Table* for more information about these error codes.

The cooling fan will run until the cavity temperature is cooler than 350 °F (175°C) and will continue to operate after any cooking mode is completed and the oven is OFF, for 5 minutes, even if the cavity temperature did not reach 350 °F (175°C).

5 COMPONENT ACCESSIBILITY

5.1 Serviceable from the Front

- Front panel (service assembly includes skin, touch pad, touch control module (TCM))
- Display module
- Switches
- Door
- Door latch/motor assembly
- Resettable High Temperature Cutout (HTC) *
- Convection fan blade
- Convection ring element **
- Temperature sensor
- Smoke eliminator (catalyst)
- Broil reflector and element **

* *If it is not possible to service the resettable HTC through the latch plate opening, see the* ***Resetting and Replacing the HTC*** *section.*

** *If the broil or convection ring element wires are too short to service from the front, access to the rear of the oven will be required.*

5.2 Serviceable from the Side

With the unit pulled completely away from the back wall and the side housing panel(s) and trim removed, the following components are serviceable…

- Hinge receivers
- Meat probe receptacle

5.3 Serviceable from the Rear

With the unit pulled completely out of the cutout and the back housing panel(s) removed, the following components can be serviced from the rear…

- Convection fan motor
- Convection ring element *
- Broil element *
- Bake element
- Cooling fan
- Cavity lamp receptacle(s)

* *If the broil or convection ring element wires are too short to service from the front, access to the rear of the oven will be required.*

5.4 Serviceable from the Top

There is a service panel located on the top front housing cover. With the service panel open, there is limited access to the top front plenum area. The control module is accessible for troubleshooting purposes.

Figure 5 Service panel with *Service Guide (wire diagram)* attached to the inside of the panel.

The HBL8752UCC, HBL8742UCC, and HBLHBL87M52UCC combination oven component includes a pair of service slides mounted to the top of the oven, which enable the upper microwave speed oven to slide toward the rear ~7” if it becomes necessary to access the lower oven service panel. See *Top Access: Combination Models* for additional information.
The following components are located in the front area of the top plenum, and it may be possible to service them through the service panel without removing the top front and/or rear housing cover(s)…

- Control module (relay board)
- Daughter board (double ovens only)
- Terminal block

5.4.1 Top Access: Non-combination Models

To reach the service panel, remove the screws securing the side trim to the cabinetry, and slide the oven out of the cutout ~8-9 inches. For unrestricted access to the top front plenum area, remove the screws securing the side trim pieces to the cabinetry, then slide the oven out of the cutout approximately ~16 inches, and remove the top front housing cover completely.

5.4.2 Top Access: Combination Models

To reach the service panel on an HBL8742UCC, HBL8752UCC or HBL87M52UCC oven, follow the steps below...

1. Remove the screws securing the right and left side trim pieces to the cabinetry.
2. Carefully slide the combination oven out of the cutout ~8-9 inches.
3. Remove the locking screw from the right and left service slides (see Figure 6).
4. Carefully slide the microwave or steam oven to the rear ~7 inches; the service access panel will be accessible.

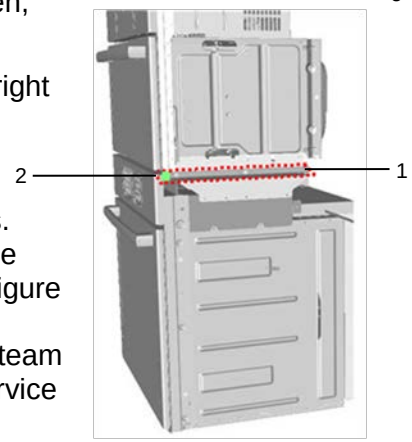


Figure 6 Location of RH rail locking screw on combo oven

⚠ CAUTION

When servicing the standard wall oven component of an HBL8742UCC, HBL8752UC, or HBL87M52UC combination oven, only the top front service access panel will be accessible without removing the microwave oven.

If additional access to the top area of the oven is required, the microwave oven component must be removed. **To safely remove and reinstall the microwave oven, two people are required.**

Note that the length of the conduit/feeder wires which connect the microwave to the oven beneath it are ~5' long. If there is a work table nearby, it may not be necessary to disconnect the feeder wires from the terminal block located in the oven-mounted junction box on the top of the oven housing.

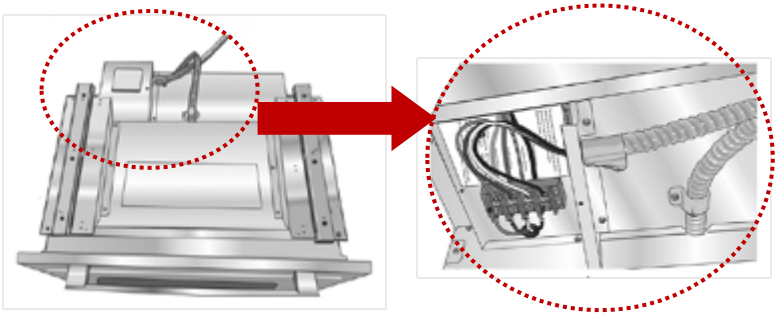


Figure 7 Top view of wall oven and microwave conduit/feeder wire connection in junction box. (HBL8742UCC and HBL8752UCC)

To remove the Solo microwave or Speed microwave oven…

1. Remove power to the oven.
2. Remove the screws securing the right and left side trim pieces to the cabinetry.
3. Carefully slide the combination unit completely out of the cabinet cutout.
4. Proceed to step 6 if servicing a Speed microwave oven
5. Unplug the power cord from the receptacle if servicing a Solo microwave then proceed to step 7.

NOTICE

The 120VAC receptacle snaps into the rear housing cover.
Gain access to the receptacle's electrical fuse and wiring termination by removing the top front cover.

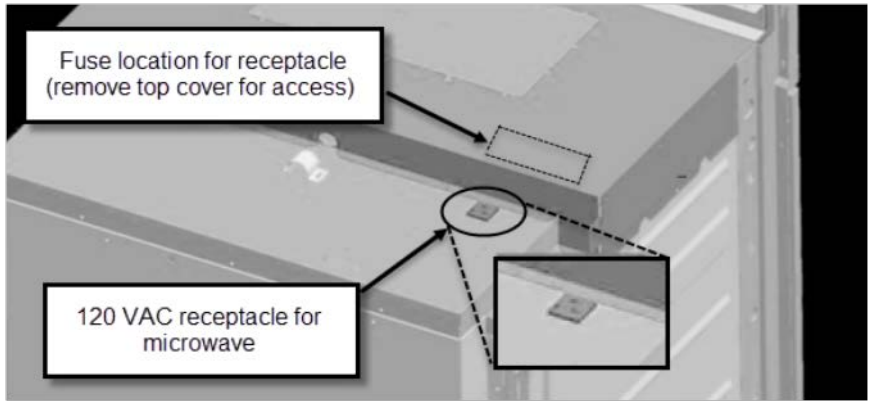


Figure 8 120VAC receptacle and harness (HBL87M52UCC only)

6. Disconnect the feeder wires from the terminal block (see *Figure 7*): only necessary if a work table is not nearby, and the 5' length of conduit/wire will not be sufficient.
7. Remove the front decorative trim that is secured to the universal brackets with two screws.
8. Remove the six screws which secure the microwave to the right and left universal brackets

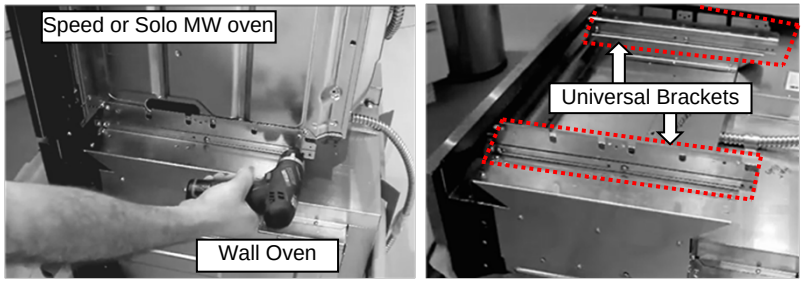


Figure 9 Removing screws securing microwave to universal brackets on top of wall oven.

9. Carefully lift the microwave off the universal brackets, and set aside.

6 SERVICE AND REPAIR

⚠ CAUTION

- ✓ Sheet metal parts often have sharp edges. Avoid injury by handling these parts with care.
- ✓ Turn off the electrical power circuit to the oven at the main junction box before servicing this unit.
- ✓ For those checks requiring the use of electrical power, exercise extreme care.

NOTICE

Clean black stainless steel components by gently wiping with soap & water and a soft microfiber cloth.

6.1 Doors

The serviceable parts of the soft-close door include the handle, endcaps, outer door glass/skin (service assembly), hinges (service kit with one dampen hinge and one spring hinge), 2-pane glass pack, porcelain-coated door liner, and the various fasteners.

On double ovens, the Bosch logo is located on the upper oven door skin.

6.1.1 Removing and Reinstalling the Door

⚠ CAUTION

Avoid injury when removing and replacing oven doors.

- ✓ Be sure oven is cool enough for handling.
- ✓ Position hinges properly (see Figure 11).
- ✓ Grasp only by sides, not by the handle.
- ✓ Do not force door open or closed.
- ✓ Handle with care–the door weighs approximately 40 lb.

To remove the door…

1. Open door completely.
2. Flip right and left hinge levers back to open, as shown below; be sure the levers are in the fully open position. (The RH and LH hinges differ slightly, but operate in the same manner.)

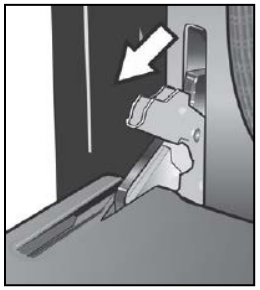


Figure 10 Opening the hinge lever

NOTICE

It may be necessary to use a tool, such as a screwdriver, to gently pry the upper part of the lever away from the housing. Take care to avoid scratching the porcelain.

3. Partially close the oven door until it is open about 7” and catches on the hinge-stop levers.
4. Using both hands, lift door upward and outward to disengage the hinges from the hinge receiver slots.
5. Set the door aside on a protected flat surface.

To reinstall the door…

1. Hold the door firmly in both hands and position the hinges in the hinge receivers, so that the slot in the base of the hinge (A) engages with the hinge receiver (B).

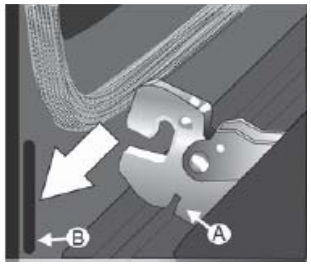


Figure 11 Position the hinge in the hinge slot

2. Tilt the door inward and slide the hinges into place; the hinges should catch and the door should remain in place.
3. Open door fully to expose the hinge levers and hinge receiver slots.
4. Flip the right and left hinge levers forward until they are fully closed.

Figure 12 Closing hinge lever

5. Open and close the door carefully to confirm that the door is installed correctly and securely, and does not appear to be askew when closed.
6. Carefully close and open door to check operation.

6.1.2 Replacing Hinges

The doors on Bosch 800 series ovens are soft-close, and operate using one dampen hinge and one spring hinge. The hinges are offered in service kits which include both the RH and LH hinges; **always replace hinges in pairs.**

NOTICE

The dampen hinge has a cylinder inside which holds oil that acts as the dampening fluid and causes the soft-close effect. The oil must be in the bottom of the cylinder. If the door does not close softly, allow the hinge time to recover in the vertical position (door closed) for 15-30 minutes, then re-test door operation. See bulletin packed with hinge kits for more information.

To access the hinges…

1. Remove the door as described in the *Removing and Reinstalling the Door* section.
2. With the porcelain-coated door liner up, remove the two screws on each side of the door liner.
3. Remove the screws along the bottom of the door assembly.

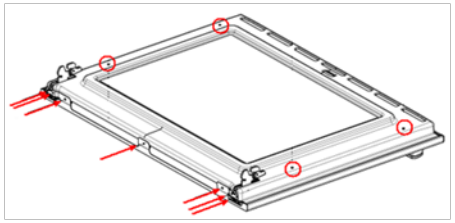


Figure 12 Removing door liner screws

4. Lift the liner away from the rest of the door assembly and set aside.
5. Remove the screws at the top left and top right which secure the handle to the door assembly.
6. Carefully lift the inner support frame with glass pack and hinges away from the outer door glass/skin assembly and lay flat on the work surface.

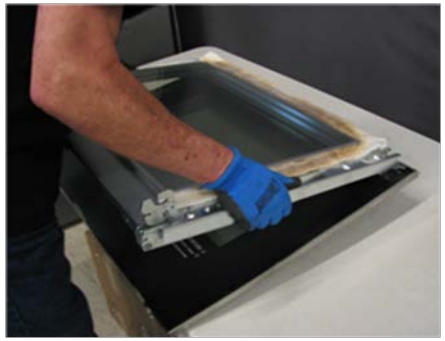


Figure 13 Removing inner support frame assembly

7. Lift the two pieces of insulation off the inner support frame assembly and set aside.
8. Remove the screws on the upper right and lower left which secure the hinges to the inner support frame.

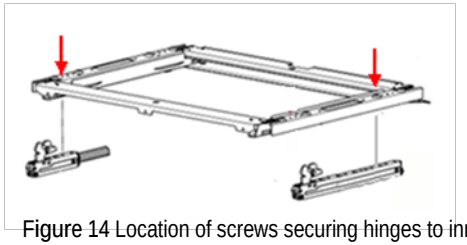


Figure 14 Location of screws securing hinges to inner support frame assembly

9. Lift the inner support frame upwards to access the hinges.
10. Install new right and left hinges and reassemble the door.
11. Test operation of the door by fully opening and closing it several times.

6.1.3 Replacing the 2-Pane Glass Pack

> **⚠ CAUTION**
>
> Wear protective gloves when disassembling the door. When replacing the glass pack due to broken glass, exercise extra care to avoid injury from broken glass.

To access the glass pack…

1. Remove the door as described in the *Removing and Reinstalling the Door* section.
2. With the porcelain-coated door liner up, remove the two screws on each side of the door liner.
3. Remove the screws along the bottom of the door assembly.

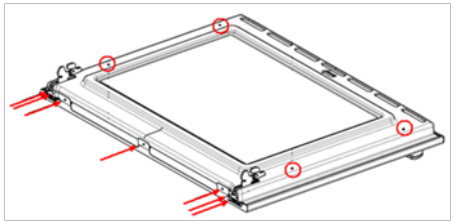


Figure 15 Removing door liner screws

4. Lift the liner away from the rest of the door assembly and set aside.
5. Remove the screws at the top left and top right which secure the handle to the door assembly.

6. Carefully lift the inner support frame with glass pack and hinges away from the outer door glass/skin assembly and lay flat on the work surface.

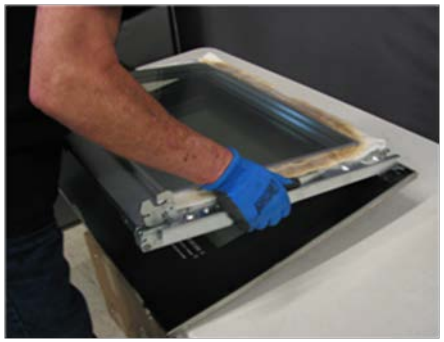
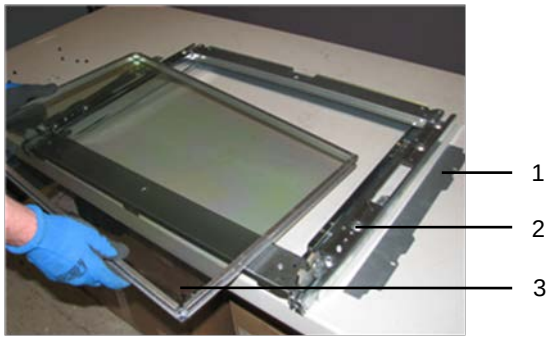


Figure 16 Removing inner support frame assembly

7. Lift the two pieces of insulation off the inner support frame assembly and set aside.
8. Remove the screws securing the right and left side door shields and set shields aside.
9. Carefully lift the glass pack out of the inner support frame.



1 Door side shield
2 Inner support frame
3 Two-pane glass pack

Figure 17 Removing 2-pane glass pack

10. After removing and discarding all remnants of broken glass, install the new glass pack assembly and reassemble the door.
11. Test operation of the door by fully opening and closing it several times.

6.2 Door Latch/Motor Assembly

The motorized door latch (MDL) mechanism (120VAC 60Hz 4.3W) has 2 switches - the door switch and the lock/unlock switch. The latch will automatically lock when mode and temperature selectors are set to Self Clean, and unlock when the oven cools to ~490°F. The latch and motor are serviced as an assembly.

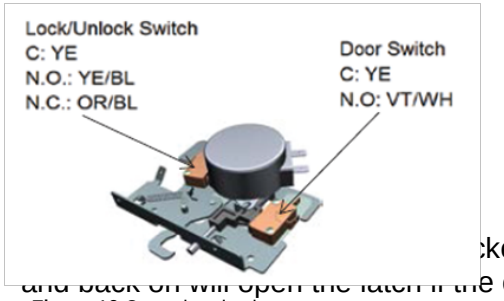


Figure 18 Oven door latch

cked position, turning the unit off and back on will open the latch if the cavity temperature <491°F. If latch is stuck in a partially locked position, turn the mode and temperature selectors to Self Clean, then turn them to Off.

If these measures fail, run a thin wire or wire coat hanger in between the door and the front face of the oven. Figure18 shows where to position the wire between the latch hook (1) and the plunger (2). Slide the wire to the left, pushing the latch hook left and releasing the latch.

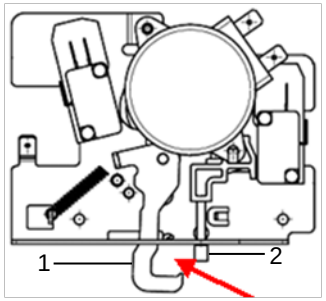


Figure 19 Latch in locked position

There is a Door Lock Relay Test available in Service mode. See the *Service Mode* section for details.

6.2.1 Replacing the Latch/Motor Assembly

1. Remove power to the oven.
2. Remove the inner screws securing the latch to the latch plate, then remove the outer screws securing the latch plate to the oven.

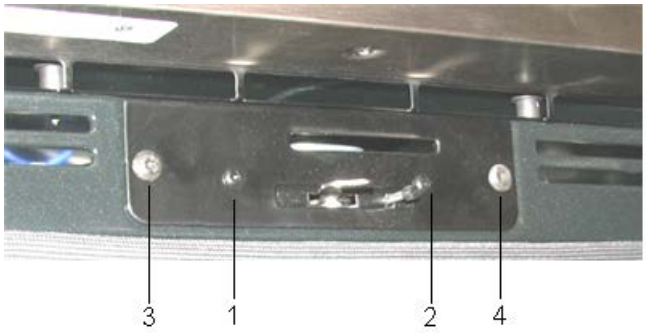


Figure 20 Front latch plate; remove/replace screws in order shown

3. Hold the latch hook and slide the latch assembly a little to the left to disengage it from the small support bracket that sits directly behind it, then pull the latch forward.

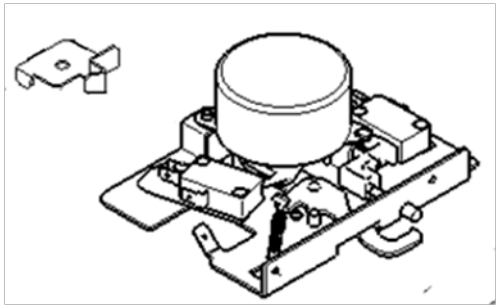


Figure 21 Door latch/motor assembly and rear support bracket

4. Disconnect the wires.
5. Install the new latch/motor assembly, reconnecting the wires and engaging the latch correctly with the latch support bracket.
6. Position the latch plate with the curved corners at the bottom, and reinsert screws.
7. Restore power and test operation.

6.3 Oven High Temperature Cutout (HTC)

The resettable HTC is a normally closed 12VDC thermal switch that is used to detect over-temperature conditions within the oven. It has a connector that will interrupt the double line break (DLB) relay coil voltage supply if the temperature reaches 185°C/365°F. When the HTC switch opens, it breaks the line to the double line break (DLB) relays, cutting off power to the elements.

With the latch plate removed, the HTC and the bracket it's mounted on are visible to the left of the door latch/motor assembly. The photo below shows the HTC and bracket, but note that this view is looking from the rear of the oven towards the front, beneath the top plenum.

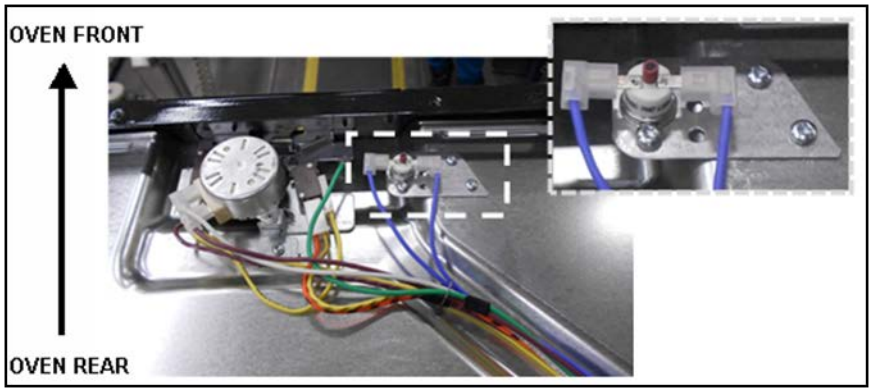


Figure 22 HTC and mounting bracket

6.3.1 Resetting and Replacing the HTC

Always troubleshoot a tripped HTC to determine the underlying cause of the interruption.

To reset the HTC…

1. Remove power to the oven.
2. Insert a flat blade screwdriver through one of the vent slots, and depress the red reset button.
3. Restore power and test operation.

NOTICE

The HTC switch should only be reset once or twice before being replaced. The switch weakens each time it trips, so it will become easier and easier for the switch to trip during high-temperature cycles (i.e., Self-clean) if it has weakened over time.

To remove the HTC from the front, a right-angled screwdriver will be needed….

1. Remove power to the oven.
2. First remove the latch plate and remove or slide the latch/motor assembly aside as described in the *Replacing the Latch/Motor Assembly* section.
3. Using a right-angled screwdriver, remove the two screws securing the HTC to its mounting bracket.
   - If it is not possible to complete step 3 from the front, continue with step 4.
   - If the screws were successfully removed, skip to step 9.
4. Remove the screws securing the right and left side trim pieces to the cabinetry, and set screws aside.
5. Carefully slide the oven out of the cutout to gain access to the front and rear top housing covers.
6. Remove the top housing covers.
7. Remove the control panel.
8. Remove all of parts identified with a ✓ in Figure 22, labeling wires prior to disconnecting, as necessary, until the top insulation retainer is reached and the HTC is accessible.

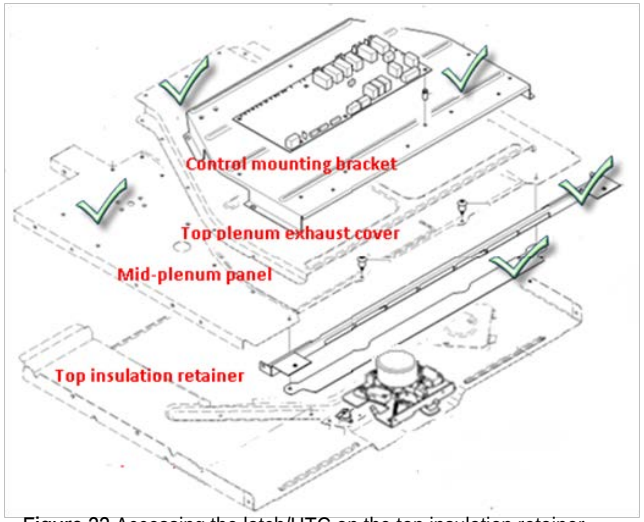


Figure 23 Accessing the latch/HTC on the top insulation retainer

9. Disconnect the wires and remove the HTC.
10. Install the new HTC.
11. Reinstall or reposition the latch motor assembly.
12. Reinstall all parts, reconnecting wires, as necessary (refer to the *Service Guide* (wire diagram) attached to the inside of the access panel on the top front housing cover for reference.
13. Restore power and test operation.
14. Slide the oven back into the cutout and resecure the oven to the cabinetry with the original trim screws.

6.4 Control Panel

The control panel includes…

- Front panel assembly: stainless steel skin, white LED touch panel assembly, and touch control module (TCM)
- Sheet metal carrier
- Display module, which is mounted to the carrier

The complete front panel assembly is offered as the service replacement for the stainless skin, touch panel, and/or TCM. These components are not available separately.

The TCM is an electronic module which monitors, qualifies, and transmits the inputs from the touch panel to the control module. After start-up, the control module polls the TCM every 100ms to determine which, if any, keys are activated. The response to each key press is controlled by the control module.

A Front Panel Test is available in Service mode. See the *Service Mode* section for details.

Figure 24 Control panel for 800 series single oven

Figure 25 Control panel for 800 series double oven

6.4.1 Replacing the Front Panel Assembly

1. Remove power to the oven.
2. Protect the top of the oven door to prevent damage to the stainless front panel or door.
3. Remove two screws on the underside of the panel assembly – one on the right and one on the left – which secure the panel to the vent trim; it is not necessary to remove the center screw at this time.

NOTICE

Use care when detaching the front panel. There may be little slack in the wires connecting the control module to the display board and the control module to the touch pad, so it may not be possible to fully rotate the front panel 90°.

4. Carefully swing the bottom of the control panel outward, then lift to disengage the side flanges of the front panel carrier from the slots in the side trim.

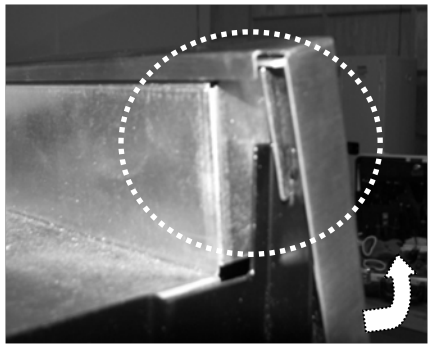


Figure 26 Detaching the control panel from the side trims

5. Disconnect the ground wire and the communication harness connectors at the display board and touch pad; set the front panel on a flat work surface.

6. Remove the screw in the bottom center of the panel, which secures the panel to the carrier directly behind it.
7. Separate the carrier from the front panel assembly.

Figure 27 Front panel assembly (top) separated from carrier (bottom) with display module attached

8. Reassemble the control panel using the new front panel service assembly.
9. Reattach the control panel, restore power, and test operation.

6.4.2 Replacing the Display Module

The display module is secured to the control panel carrier with four nylon spacers (standoffs).

Figure 28 Display board secured to carrier with the carrier's 4 metal tabs

1. Remove the front panel as described in *Replacing the Front Panel Service Assembly* section.
2. Using pliers, gently straighten each metal tab so that they align with the slots in the display board, then lift the board off the tabs.
3. Position the new display board so that the slots in the board align with the four metal tabs, and firmly push the board downward until it is securely in place.
4. Slightly re-twist each of the four metal tabs.
5. Reassemble the control panel.
6. Reattach the control panel to the side trim and vent trim.
7. Restore power and test operation.

6.5 Cavity Lights

Each 30" oven cavity uses one incandescent 40W appliance bulb with a standard Edison base. Each 27" oven cavity uses two 25W incandescent bulbs (25WPRE14), with a European base. Replacement bulbs may be purchased locally.

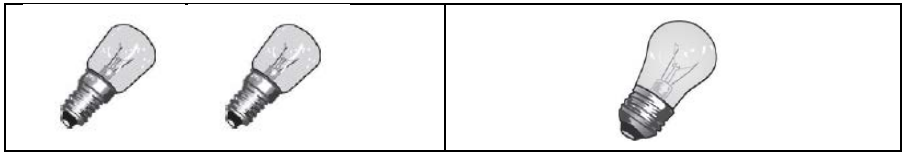


Figure 29 Left: 25W bulbs used in 27" ovens | Right: 40W bulb used in 30" ovens.

On double ovens, lights are either on or off in both cavities; it is not possible to operate cavity lights independently.

The cavity light(s) can be turned on in two ways: by pressing Oven Light or opening the oven door. If Oven Light had not been pressed to turn light(s) on prior to opening the oven door, the light(s) will turn off when the door is closed. If Oven Light had been pressed to turn light(s) on prior to opening the oven door, the light(s) will remain on after the door is closed.
In other words, the Oven Light switch overrides the door.

6.5.1 Replacing the Lamp

m CAUTION

- ✓ Turn off power to the oven at the fuse or breaker box–light socket is live with door open.
- ✓ Be sure oven and lights are cool to the touch.
- ✓ Handle glass lenses and glass bulbs carefully.

Sometimes, after running a self-clean cycle at high heat, it may become difficult to remove the glass lens. If it cannot be done by hand, an adjustable strap-wrench may be used.

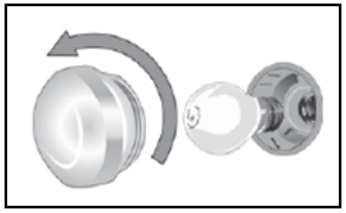


Figure 30 Removing the glass lens

2. Unscrew the appliance bulb by turning it counter-clockwise.
3. Insert the new bulb.
4. Replace the glass cover.
5. Restore power to the unit and test the operation of the light.

6.6 Convection Fan, Ring Element and Motor

All 800 series models have a Euro-convection cavity with a fan and ring element on the rear cavity wall. In double ovens, the upper cavity has the convection feature.

Depending on the cooking mode selected, the fan may be used, with or without the ring element, to circulate heat evenly throughout the cavity. The 240V 2000W ring element, however, will never run without the fan.

The fan blade is easily accessed on the rear wall of the oven cavity behind the convection baffle. It is likely that the wires to the ring element terminals are a little too short to enable element replacement from inside the cavity, so rear access to the oven may be needed. Replacing the convection fan motor will also require access to the rear of the unit.

A Ring Element Ring Relay Test and a Convection Fan Relay Test are available in Service mode. See the *Service Mode* section for additional information. Refer to the *Element Strip Diagram* section to test the ring element at the control module.

If the wires are disconnected from the element terminals, an ohmmeter can be used to check for resistance of ~29 ohms.

6.6.1 Replacing the Convection Fan Blade

1. Remove power to the oven.
2. Remove the screws securing the convection baffle to the rear wall of the oven cavity.
3. While holding the fan blade, loosen the nut by turning it **clockwise**; set the nut and washer aside.
4. Remove the fan blade from the shaft of the motor, noting that there is a second washer behind the fan blade.
5. Install the new blade.
6. Reassemble the convection fan and replace the baffle.
7. Restore power and test operation.

6.6.2 Replacing the Ring Element

It is likely that the wires are too short to service the convection ring element from the front of the oven. However, to attempt service from the front…

1. Remove power to the oven.
2. Remove the screws securing the convection baffle to the rear wall of the oven cavity.

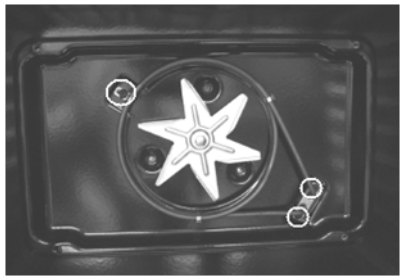


Figure 31 Screws securing the ring element to the rear wall of the cavity

3. Remove the screws securing the ring element to the cavity wall, then carefully pull the element forward.
4. Disconnect the wires from the ring element terminals, **being careful not to drop the wires behind the oven.**
   - If the wires are too short to disconnect from the front, continue with step 5.
   - If the wires were successfully disconnected, skip to step 8.
5. Remove the screws securing the right and left side trim pieces to the cabinetry.
6. Carefully slide the oven out of the cutout to gain access to the ring element terminals from the rear of the unit.
7. Disconnect the wire leads from the terminals.
8. Install the new element and reinstall the baffle.
9. Restore power and test operation.
10. If necessary, slide the oven back into the cutout and reinstall trim.

6.6.3 Replacing the Convection Fan Motor

1. Follow steps 1-3 in the *Replacing the Convection Fan Blade* section.
2. Remove the washer located behind the blade and set aside.
3. Remove the screws securing the right and left side trim pieces to the cabinetry.
4. Carefully slide the oven out of the cutout to gain access to the motor from the rear of the unit.
5. Remove the rear housing panel.
6. Disconnect the wires from the motor terminals.
7. Remove the screws securing the fan motor.
8. Three sheet metal tabs hold the motor in position after the screws are removed; bend the tabs outward, using a flat blade screwdriver or pliers, then remove the motor.

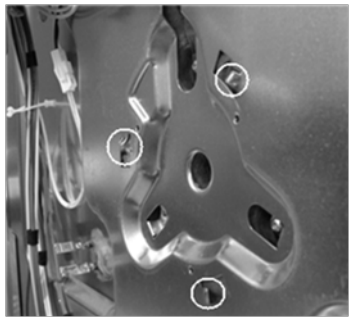


Figure 32 Sheet metal tabs for securing convection fan motor to rear of oven

9. Install the new motor, being sure to bend the three sheet metal tabs back in.
10. Reinstall the fan blade and baffle.
11. Restore power and test operation.

6.7 Broil Element

The 240V 3800W broil (upper) element is attached to a reflector, which helps to direct the heat evenly toward the food.

Refer to the *Element Strip Diagram* section to test the broil element at the control module. A Broil Element Relay Test is also available in Service mode. See the *Service Mode* section for details.

If the wires are disconnected from the element terminals, an ohmmeter can be used to check for resistance of ~15 ohms.

6.7.1 Replacing the Broil Element

1. Remove power to the oven.
2. Detach the element from the reflector.
3. Remove the two screws from the terminal area on the rear cavity wall.
4. Pull the element forward carefully (there is not much excess wire) so that the terminal connections move inside the cavity.
5. Disconnect the wires from the terminals, **being careful not to let the harness wires drop back out of reach**.
   - If the wires are too short to disconnect from the front, continue with step 5.
   - If the wires were successfully disconnected, skip to step 8.
5. Remove the screws securing the right and left side trim pieces to the cabinetry.
6. Carefully slide the oven out of the cutout to gain access to the element terminals from the rear of the unit.
7. Disconnect the wire leads from the terminals.
8. Install the new element.
9. Restore power and test operation.
10. If necessary, slide the oven back into the cutout and reinstall trim.

6.8 Bake Element

The 240V 2400W bake element is concealed in the base of the oven. Access to the rear of the unit is necessary when replacing the element.

Refer to the *Element Strip Diagram* section to test the bake element at the control module. A Bake Element Relay Test is also available in Service mode. See the *Service Mode* section for additional information.

If the wires are disconnected from the element terminals, an ohmmeter can be used to check for resistance of ~24 ohms.

6.8.1 Replacing the Bake Element

2. Remove the screws securing the right and left side trim pieces to the cabinetry.
3. Carefully slide the oven out of the cutout to gain access to the bake element from the rear of the unit.
4. Disconnect the wires from the element terminals.
5. Remove the screws securing the bake element access panel.
6. Bend the access panel downward to expose the element.
7. Holding the terminal plate, pull the bake element outward, leaving the insulation in place; a putty knife or similar tool may be useful.

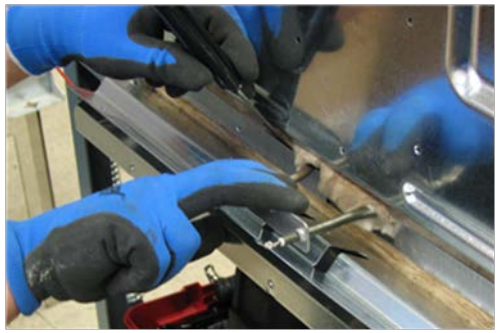


Figure 33 Removing the bake element

6.9 Temperature Sensor

The PT1000 temperature sensor is in the upper left corner of the cavity, with two screws securing it. An ohmmeter can be used to check the resistance of the sensor. Normal ranges (based on cavity temperature) are shown in Table 7.

TEMP. (°F)	RESISTANCE
32 ± 1.9	1000 ± 4.0
75 ± 2.5	1091 ± 5.3
200 ± 3.8	1350 ± 7.8
250 ± 4.4	1453 ± 8.9
350 ± 5.4	1654 ± 10.8
450 ± 6.9	1852 ± 13.5
550 ± 8.2	2047 ± 15.8
650 ± 9.6	2237 ± 18.5
865 ± 13.0	2634 ± 23.5
900 ± 13.6	2697 ± 24.4

Table7 Normal resistance readings for temperature sensor

6.10 Control Module (Relay Board) and Daughter Board

NOTICE

More than 75% of the control modules returned to the factory are fully functional. Before diagnosing a bad control module, be sure to disconnect and reconnect each wire/wire harness.

The control module (and daughter board on double ovens) control the elements, fans, door locks, lights, etc., regulate temperatures, and monitor safety functions. The module(s) are also responsible for communication with other modules, analyzing sensor data, regulating line voltage, and managing user interface activities.

The control module and daughter board are accessible from the top of the unit. Proceed to the *Replacing the Control Module or Daughter Board* section if an HBL8742UCC, HBL8752UCC or HBL87M52UCC is not being serviced.

⚠ CAUTION

When servicing the lower HBL8742UCC, HBL8752UCC and HBL87M52UCC wall oven component of a combination oven, only the top front service access panel will be accessible without removing the microwave oven.

If additional access to the top area of the oven is required, the upper oven component must be removed. **To safely remove and reinstall the microwave oven, two people are required.**

If an HBL8742UCC, HBL8752UCC or HBL87M52UCC combination oven component is being serviced, refer to ***Top Access: Combination Models*** in the *Component Accessibility* section of this manual for important instructions, then proceed to Step 4 in the following section.

6.10.1 Replacing the Control Module or Daughter Board

1. Remove power to the oven.
2. Remove the screws securing the right and left side trim pieces to the cabinetry.
3. Carefully slide the oven out of the cutout ~16”.
4. Locate the *Service Guide* (wire diagram) attached to the inside of the access panel.

Figure 34 Control module access panel and *Service Guide*.

5. Remove the top front housing cover.
6. Disconnect the harnesses, labeling them as necessary.
7. Remove the control module or daughter board, dependent on the attaching hardware, either screws or tab-locked, snap-in standoffs. Release the tab-lock by squeezing the projecting tabs and lifting the module.
8. Install the new control module or daughter board and reattach all harnesses securely.
9. Restore power to the unit and test operation.
10. Replace the top front housing cover and the *Service Guide*.
11. Slide the unit back into the cutout and reinstall the side trim pieces.

Whenever possible, conduct troubleshooting tests at the control module, using the *Service Guide* as a reference.

6.11 Cooling Fan

The cooling fan is offered as a service assembly with noise-reducing foam tape attached. Each cavity uses a 120VAC 50W max variable speed fan with a normally closed HTC in series with it. If the fan stalls or shorts out and the air in the fan area reaches 175°F/80°C, the HTC will open and shut down the cooling fan. This action will cause the control module to overheat, shut down, and return error code E302 or E303. When the HTC detects a temperature of 150°F/65°C, it will close and allow the fan to run.

To test the upper fan at the control module, check voltage across X105 / Pin 3 and neutral. There is also a Cooling Fan Relay Test available in Service mode. See the *Service Mode* section for details.

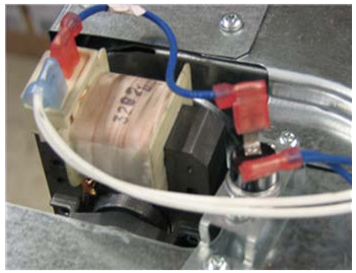
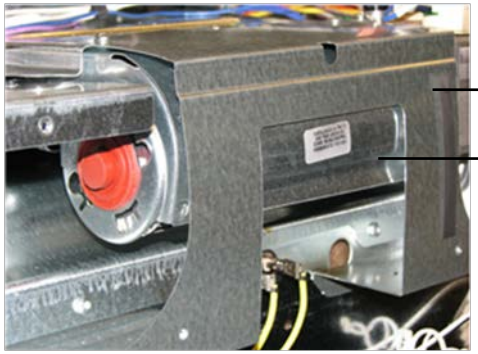


Figure 35 Cooling fan motor and HTC

6.11.1 Replacing the Cooling Fan

1. Remove power to the oven.
2. Remove the screws securing the right and left side trim pieces to the cabinetry.
3. Carefully slide the oven out of the cutout to gain access to the cooling fan from the rear of the unit.
4. Remove the rear oven housing.
5. Remove the top rear oven housing.
6. Remove the screws securing the outer fan housing cover, and set aside.



1 Cooling fan outer housing

2 Cooling fan

Figure 36 Cooling fan and outer housing

7. Remove the screw securing the fan to the plenum.
8. Disconnect the wires and remove the fan.
9. Install the new cooling fan and reattach the wires securely.
10. Restore power to the unit and test operation.
11. Reinstall housing cover(s).
12. Slide the unit back into the cutout and reinstall the side trim pieces.

6.12 Hinge Receivers

To replace the hinge receivers, the oven must be pulled completely out of the cutout to provide access to the side panel(s).

6.12.1 Replacing the Hinge Receivers

1. Remove power to the oven.
2. Remove the screws securing the right and left side trim pieces to the cabinetry.
3. Carefully slide the oven out of the cutout to gain access to the side housing panel(s).
4. On double ovens, remove the corner brackets between the upper and lower oven.

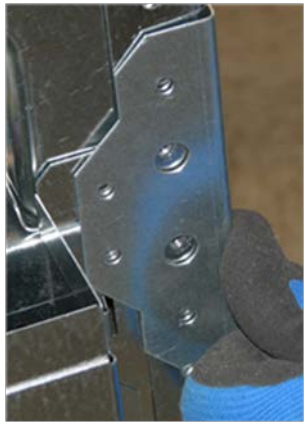


Figure 37 Double oven corner bracket

5. Remove the side panel(s).
6. From the front of the oven, remove the two screws securing the hinge receiver to the oven.
7. Pull back the side insulation to reveal the hinge receiver and remove the part.

Figure 38 Removing the RH hinge receiver

8. Install the new hinge receiver.
9. Reinstall the oven door and test door operation.
10. Reinstall the side housing cover.
11. Restore power to the unit and test operation.
12. Slide the oven back into the cutout and reinstall the side trim pieces.

7 TROUBLESHOOTING

The information in this section will be helpful when troubleshooting, diagnosing, and resolving faults and other issues affecting the normal operation of the oven.

7.1 Error Codes

A *Service Guide/Wire Diagram* that includes error code information is available in *QuickFinder* and is also packed with every oven. Find it on the underside of the upper plenum access panel as shown in Figure 39.

Additional error code information and suggested repair actions can be found in the following table. Note that error codes which begin with *E1* apply specifically to the single/upper oven cavity, and those which begin with *E2* apply specifically to the lower oven cavity of double ovens.

Figure 39 Location of Service Guide on the control module access panel

Error Code	Description	Cause/Notes	Suggested Action(s)
			Enter correct option code in Service mode.
E000	Wrong module code (E100/E400 internal errors reported as E000)	Control module and user interface are mismatched. No operation is possible.	
E302	Control module too hot	Temperature sensor on the control module detects temperature higher than limit value. Control turns off heating elements and fan defaults to high speed. When cavity temperature lowers to 212°F/100°C, heating will resume and error will be cleared. (If self-clean was running, it will be disabled until a control reset is performed.)	If cooling fan is **not** operating… ■ Check connections to the fan and the control module (see Small Load Schematic). If cooling fan **is** operating… ■ Check element operation ■ Check for air obstruction or damaged upper/lower ventilation trims ■ Check for stuck relays.

Error Code	Description	Cause/Notes	Suggested Action(s)
E005 **E305**	Communication error	E005: Loss of communication between user interface and control module. E305: Loss of communication between TCM and control module or TCM and user interface.	■ Check for damaged (cut or pinched) wires or loose connectors. ■ Confirm that voltage is getting to the correct pins on the board.
E009 **E309**	ROM-check error in user interface	ROM-check performed at reset fails. All heating elements disabled. Error will be cancelled at start-up if next ROM-check succeeds.	■ E009: Replace user interface ■ E309: Replace control module
E010 **E310**	Data memory error in user interface	Cyclic check of memory content or a write to memory failed. All heating elements will be disabled. Error will be cancelled at start-up.	■ E010: Replace user interface ■ E310: Replace control module
E011	Continuous pushing of a single key (E411 internal error reported as E011)	Key pressed continually for 10 seconds, or touchpad assembly has a bad key. Heating will be stopped and will resume when key is no longer pressed.	■ Confirm touch panel is clean and free of moisture, oils or other contaminants. ■ Inspect user interface PCB. ■ Check door seal to verify vapor/moisture is not causing key activation; replace seal if necessary. Run Key Test in Service mode; if it fails, replace front panel assembly.
E312	Defective control module temperature sensor	All oven operations suspended until control reset	Replace control module
E314 **E414**	**Cancel** / **Off** key error	Oven operation will be stopped. Error cancelled only by a system reset.	■ Check touch pad assembly. ■ Inspect user interface PCB.
E032	Continuous pushing of multiple keys (E432 internal error reported as E032.)	Two or more keys continuously pressed for 10 seconds or touch pad assembly has more than one bad key. Key actions are suspended and heating is paused. Error will clear and normal operation will resume when no touch pads are depressed.	■ Confirm touch panel is clean and free of moisture, oils or other contaminants. ■ Inspect user interface PCB. ■ Check door seal to verify vapor/moisture is not causing key activation; replace seal if necessary. Run Key Test in Service mode; if it fails, replace front panel assembly.

Error Code	Description	Cause/Notes	Suggested Action(s)
E044	Touch control module (TCM) option code error	TCM board or connections to TCM are bad. During start-up, the control module is unable to set TCM option code. Reset is required to clear error.	■ Enter Service mode to set correct option code. ■ Check connection to control module. ■ Check connection to TCM. ■ If unable to set option code and connections are good, replace front panel assembly.
E050	Rotary encoder switch short to Vcc (500 series only)	A short to Vcc is detected in an encoder switch for more than 10 seconds.	Replace rotary encoder switch
E101 **E201**	Cavity 1 / Cavity 2 temperature sensor open	Temperature sensor disconnected or has a faulty connection. Cooling fan will operate at high speed and heating will stop. After two consecutive temperature readings are made successfully, heating will resume and error will be cleared. See Communication Schematic.	■ Check all connections and wires to temperature sensor. ■ Check resistance of temperature sensor: if sensor tests OK, could be control module problem; if sensor fails, replace sensor.
E104 **E204**	Cavity 1 / Cavity 2 temperature sensor shorted	Temperature sensor shorted to ground. Cooling fan will operate at high speed and heating will stop. After two consecutive temperature readings are made successfully, heating will resume and error will be cleared. See Communication Schematic	■ Check wires and connections for pinch or short circuit to ground. ■ Check resistance of temperature sensor: if sensor tests OK, could be control module problem; if sensor fails, replace sensor.
E106 **E206**	Cavity 1 / Cavity 2 door latch does not lock	Latch operation not determined by control module. Door latch does not lock after 1 minute and further attempts will stop. Error will be cancelled and normal operation resumed if a locked door is no longer required. See Cavity 1 (upper) Small Load Schematic	■ Check latch motor and switch connections/wires. ■ Check connections to control board. ■ Check wires between control board and latch. Check operation of door switch. ■ Check latch for binding/mechanical latch failure.

Error Code	Description	Cause/Notes	Suggested Action(s)
E107 **E207**	Cavity 1 / Cavity 2 door latch does not unlock	Temperature in cavity is too high or latch operation not as expected. Door latch does not unlock after 1 minute and further attempts will stop. If the latch is detected in open state for more than 10 seconds, the error will clear and normal operation will resume. See Cavity 1 (upper) Small Load Schematic	■ Check latch motor and switch operation. ■ Check door switch operation. ■ Check latch for binding/mechanical latch failure.
E115 **E215**	Cavity 1 / Cavity 2 temperature in unlocked cavity too high	Temperature in unlocked cavity exceeds the allowable temperature. Oven will stop heating and door will lock. When temperature reaches allowable range, door latch unlocks, error is cleared, and oven will resume heating.	■ Check element operation. ■ Check temperature sensor resistance; replace sensor if necessary. ■ Check for stuck relays. ■ Replace control module, if necessary.
E116 **E216**	Cavity 1 / Cavity 2 meat probe error	"Hot" wire shorted to ground. Connection to the probe changes from connected to disconnected multiple times. Probe is disabled, but oven continues to operate. Error will be cleared and probe enabled after a control reset. Standard probe assembly is part of the control module; see Communication Schematic	■ Check wires and connections; connector may be loose and shorted to cavity or other dead metal. ■ Check for dirty contact within probe receptacle.
E122 **E222**	Cavity 1 / Cavity 2 meat probe sensor temperature too high	Meat probe or receptacle failure. Measured temperature of probe is higher than allowable limit. Oven will stop heating until probe is removed.	■ Check with customer to determine if probe was in receptacle and not in food. ■ Check probe operation and resistance. ■ Check for loose connections and/or pinched wires.
E123 **E223**	Cavity 1 / Cavity 2 meat probe sensor temperature too low	Meat probe or receptacle failure. Measured temperature of probe is lower than allowable limit. Oven will stop heating until probe is removed.	■ Check with customer to determine if probe was used in frozen food. ■ Check probe operation and resistance. ■ Check for loose connections and/or pinched wires.

Error Code	Description	Cause/Notes	Suggested Action(s)
E126 **E226**	Cavity 1 / Cavity 2 door latch error	Switch signals lost by latch position switch. If a locked or unlocked signal error occurs, all heating elements will be disabled. Error may be cleared only by a software reset. See Cavity 1 (upper) Small Load Schematic.	▪ Check switch connections. ▪ Check wires between connector and control module. ▪ Check switch operation.
E303	Electronics Delta temperature too high	Temperature sensor on the control module detects temperature changes that, over time, are higher than limit value. Control turns off heating elements and fan defaults to high speed. When cavity temperature reaches 212°F/100°C, heating will resume and error will be cleared. (If self-clean was running, it will be disabled until a control reset is performed.)	▪ Check connections to cooling fan and to control module (see Small Load Schematic). ▪ Check element operation. ▪ Check for air obstruction or damaged upper/lower ventilation trims. ▪ Check for stuck relays.

Table 8 Error codes

7.2 Service Mode

Service mode provides access to Option Code settings, error memory, relay tests, front panel tests, program version information and EEPROM version information.

7.2.1 Accessing Service Mode

1. Press and hold Enter, (1) and Bake for 5 seconds, or until `Service Mode` appears in the display.
2. Press Enter to navigate through the menu. Additional instructions will appear in the display.
3. Press Oven Clear/Off on single ovens or Upper Clear/Off on double ovens to exit Service Mode.

The table that follows reflects the Service mode menu options available.

Menu Item	Description
PROGRAM REV	Current version of CM software
EEPROM REV	Current version of EEPROM
OPTION CODE	Current option code of unit
ERROR MEMORY	Display error memory
RELAY TESTS	Enter component relay tests
CVT1 DOOR LOCK	Toggles the cavity 1 door lock relay
CVT2 DOOR LOCK	Toggles the cavity 2 door lock relay
COOLING FAN	Toggles the cooling fan relay
ILLUMINATION	Toggles the cavity illumination relay
CVT1 CONV FAN	Toggles the cavity 1 convection fan relay
CVT1 BAKE	Toggles the cavity 1 bake element switching relay and DLB relay
CVT1 BROIL	Toggles the cavity 1 broil element switching relay and DLB relay
CVT1 RING	Toggles the cavity 1 ring element switching relay and DLB relay
CVT2 BAKE	Toggles the cavity 2 bake element switching relay and DLB relay
CVT2 BROIL	Toggles the cavity 2 broil element switching
WARMING ZONE	Toggles the warming zone element
WARMING DRWR	Toggles the warming drawer element
KEY TEST	Performs test for key input

Table 9 Service mode menu options for 800 series wall ovens

7.2.2 Setting the Option Code

Option codes are programmed into the control module and are used to define cavity type and oven configuration. In the event it becomes necessary to manually program an option code in Service mode, the table below can be used as a reference.

Model(s)	Option Code
HBL8442UC HBL8451UC HBL8461UC HBL8742UC HBL8752UCC HBL87M52UCC	3055
HBN8451UC	3045
HBN8651UC	3145
HBL8642UC HBL8651UC HBL8661UC	3155

Table 10 Option codes for 800 series wall ovens

1. Follow the steps in the *Accessing Service Mode* section.
2. Advance through the menu until Option Code: #### is visible (#### = current option code).
3. Press (1) to edit; option code will blink when editable.
4. Use the numeric keypad to enter the new option code.
5. Press Enter when the correct option code is displayed.
6. Press Oven Clear/Off on single ovens or Upper Clear/Off on double ovens to exit Service Mode.

Always confirm that the oven and all components are functioning normally after setting the option code.

7.2.3 Displaying Error Memory

1. Follow the steps in the *Accessing Service Mode* section.
2. Advance through the menu until Error Memory is visible
3. Press (1) to show the error list; if no errors are logged, nonE will be visible in the display.
   Errors are displayed in numeric order; the error code (Exxx) will appear on the left and the error count will appear on the

right of the display. (Example: E206: 003 indicates that error code 0206 has been logged three times.)
4. Press (1) or (0) to cycle through the error memory list.
5. Press Enter to return to the initial Error Memory screen and Enter again to advance to the next menu option.

7.2.4 Testing Relays

Refer to the table in the *Accessing Service Mode* section for a list of relay test menu options.

1. Follow the steps in the *Accessing Service Mode* section.
2. Advance through the menu until Relay Tests appears in the display.
3. Press (1) to begin testing.
4. Press Enter to navigate through the relay options.
   The initial displayed state will reflect the current state of the relay.
5. Press (1) or (2) to change the state of the relay.
6. After navigating through all relay tests, press Enter, then Enter again to advance to the next menu option.
7.

7.2.5 Testing Front Panel

The Front Panel Key Test will confirm that all control inputs are connected and operating. **The tests are based on the Option Code that was set before entering Service Mode**.

1. Follow the steps in the *Accessing Service Mode* section.
2. Advance through the menu until Key Test appears in the display.
3. Press (1) to begin testing..
4. When the test is successfully completed, Key Test appears in the display again. Press Enter, then Enter again to advance to the next menu option

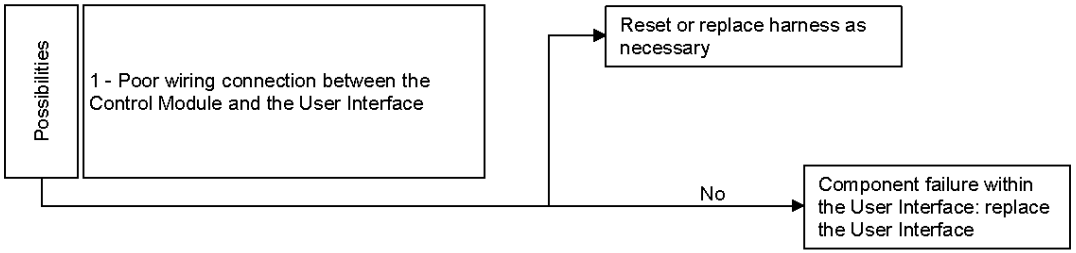
To exit the test, it must either be successfully completed or the power must be reset.

7.3 Fault Trees

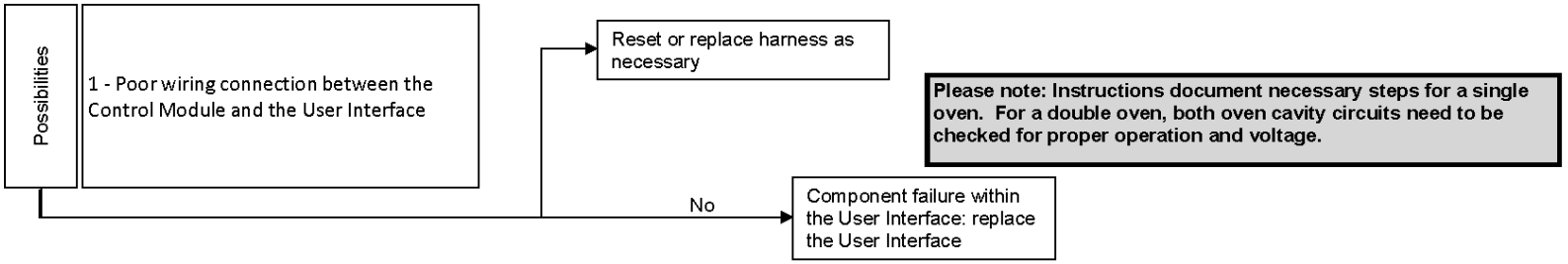
The *Fault Trees* on the following pages can be used to guide troubleshooting efforts

OVEN DISPLAY DEAD: No activity within the visual display of the oven; when keys are touched or knobs actuated (rotated), the User Interface offers audible response.

Failure at unit power up: No display lighting or characters (Pro - no lights/display/clock operation) / buttons and knobs offer proper response

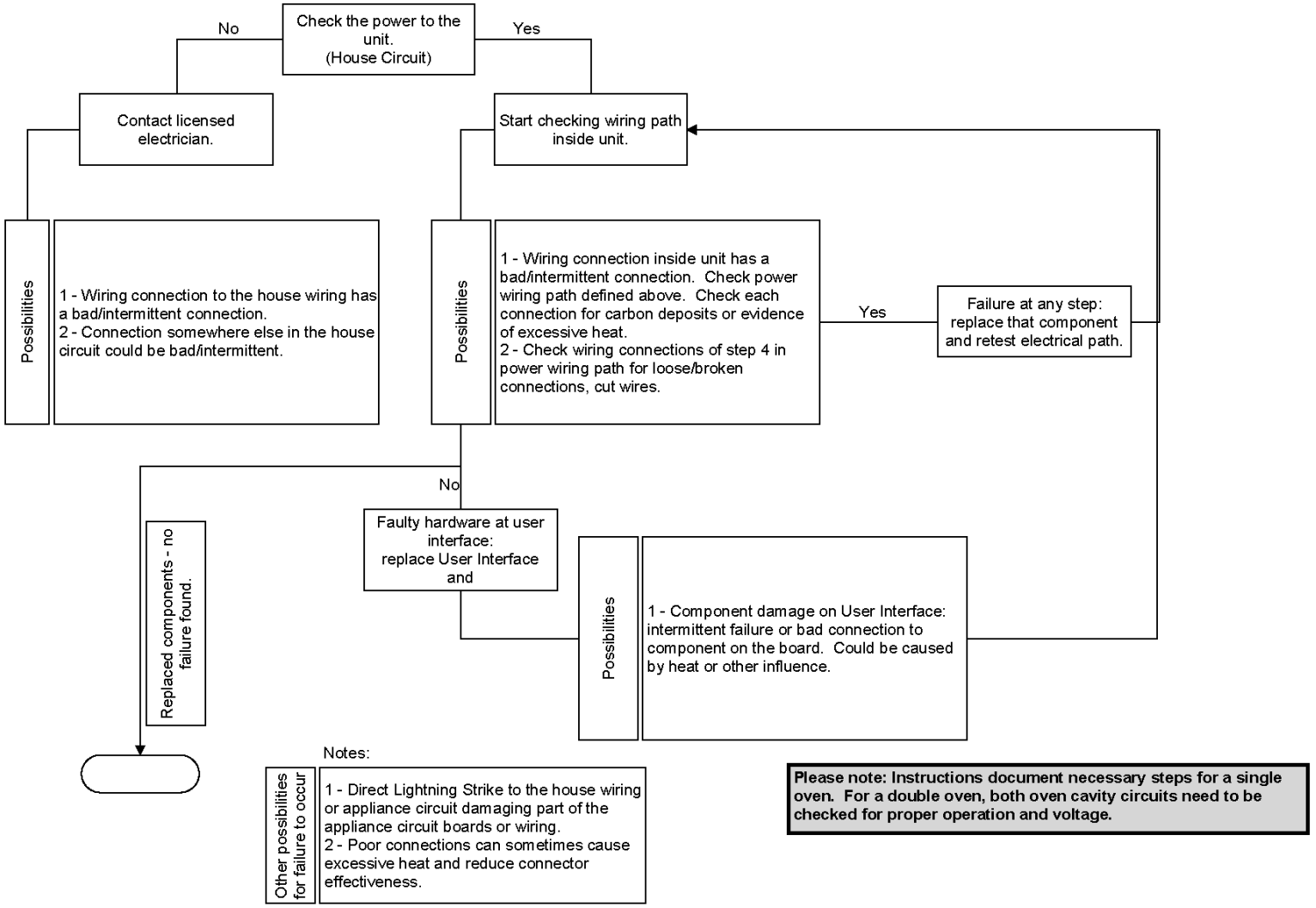


Failure During Operation: Assumes oven has been operating either in a heating mode or at a rest state with the clock displayed/operating as expected prior to the failure being noticed.



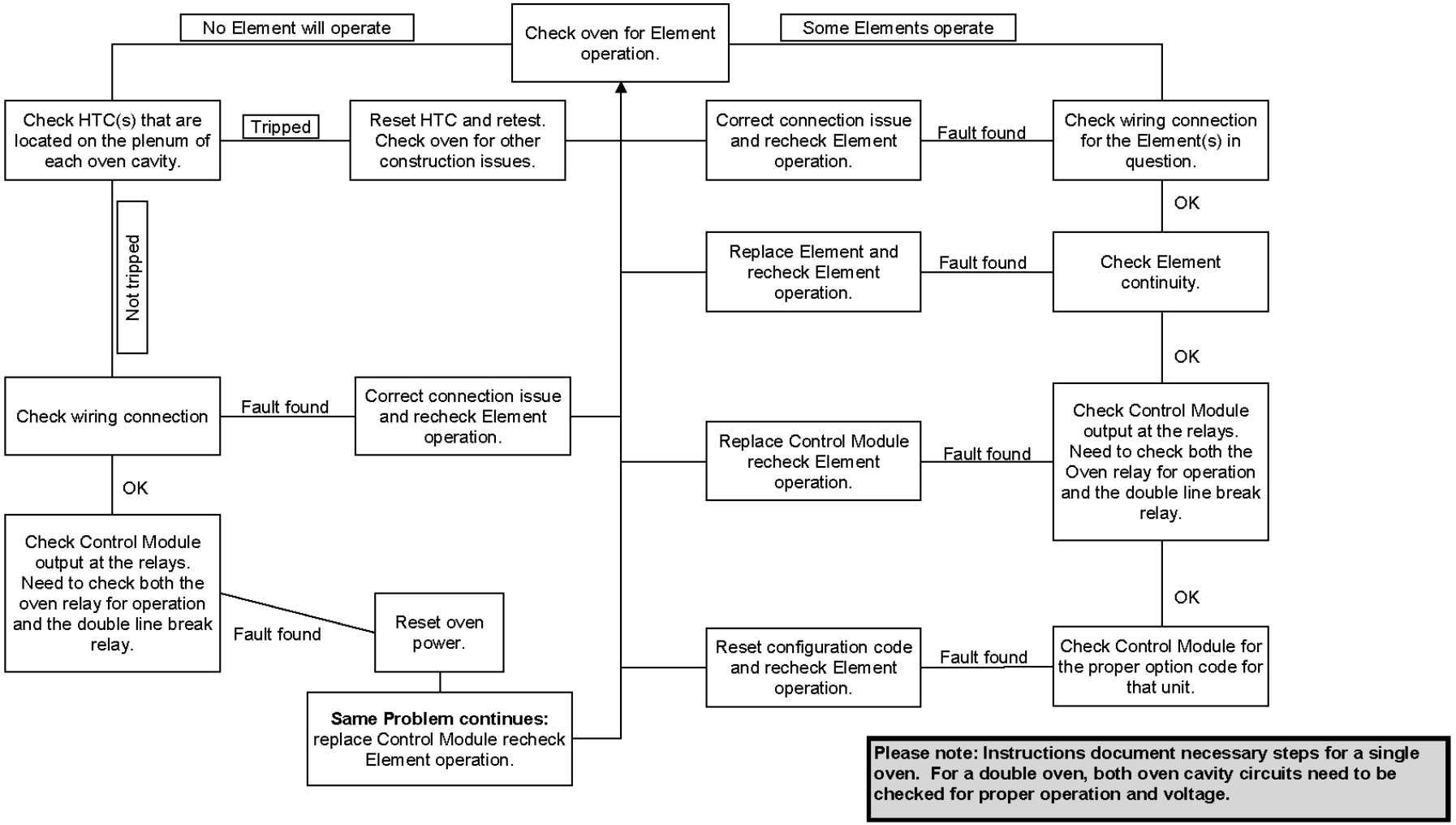
OVEN DEAD

Failure During Operation: Assumes oven has been operating either in a heating mode or at a rest state with the clock displayed/operating as expected prior to the failure being noticed.



OVEN DOES NOT HEAT: All visual and tactile operation of the oven is as expected, but one or more heating elements do not operate.

Failure at unit power-up
Failure During Operation
(Same Fault Tree for both failure modes)



Please note: Instructions document necessary steps for a single oven. For a double oven, both oven cavity circuits need to be checked for proper operation and voltage.

7.4 Wiring Diagrams and Schematics

The wire color key (Table 11) and element strip diagrams are shown below. For schematics, please refer to the *Built-in Oven Service Guide,* which can be found on *QuickFinder* or attached to the control module access cover in the upper oven plenum.

7.4.1 Wire Color Key

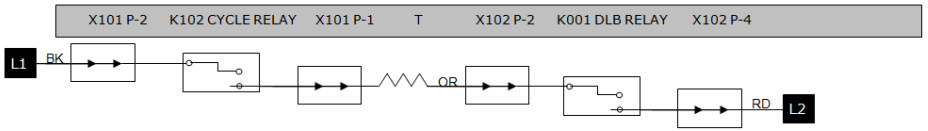
BK	Black	**BN**	Brown	**BU**	Blue
GN	Green	**GR**	Gray	**OR**	Orange
RD	Red	**VT**	Violet	**WH**	White
YE	Yellow	**BN/WH**	Brown/White	**BU/WH**	Blue/White
OR/BK	Orange/Black	**VT/WH**	Violet/White	**YE/BK**	Yellow/Black

Table 11 Wire color key

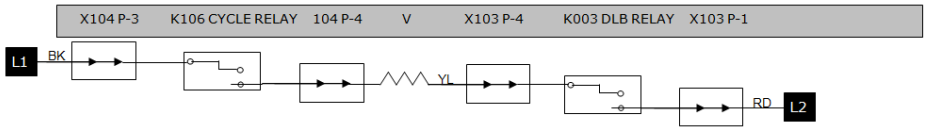
7.4.2 Strip Diagrams

CAVITY 1 (SINGLE/UPPER)

Bake Element (T)



Broil Element (V)



Convection/Ring Element (U) *some models*

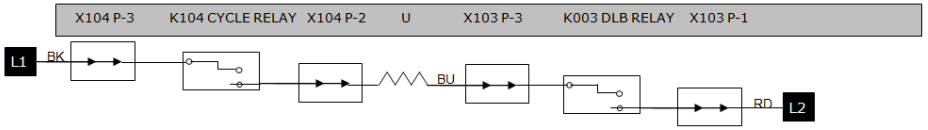
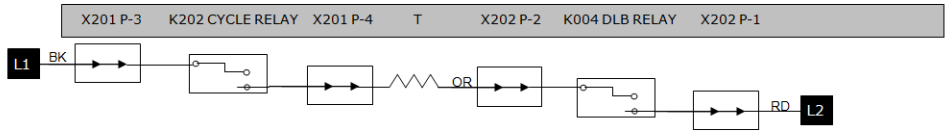


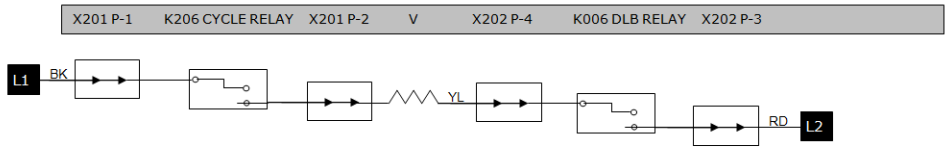
Figure 41 Upper / Single oven element strip diagram

CAVITY 2 (LOWER)

Bake Element (T)



Broil Element (V)



Ring Element (U) *some models*

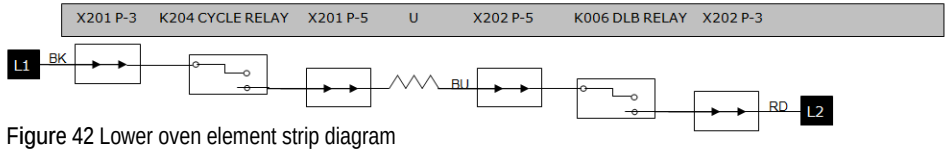


Figure 42 Lower oven element strip diagram

8 ADDITIONAL REFERENCES

8.1 QuickFinder

For further information, please refer to the following documents on *QuickFinder*:

- Wiring Diagram (*Built-in Oven Service Guide*)
- *500/800 Series Built-in Ovens Installation Instructions*
- *800 Series Built-in Ovens Use and Care Manual*
- HMB50152UC *Microwave Use and Care Manual*
- HMB50152UC *Service Manual*
- HMB50152UC Wiring Diagram
- HMB50152UC *Microwave Installation Instructions*
- HMC80252UC *Service Manual*
- HMC80252UC Wiring Diagram
- HMC80252UC *Microwave Installation Instructions*
- HMC80252UC *Microwave Use and Care Manual*
- HMC80242UC *Service Manual*
- HMC80242UC Wiring Diagram
- HMC80242UC *Microwave Installation Instructions*
- HMC80242UC *Microwave Use and Care Manual*

Exploded views, parts lists, and related service and parts notes are also available on QuickFinder. Visit http://portal.mch.bshg.com/portal.

NOTICE

Not all service parts are shown on the *QuickFinder* exploded views; review the parts lists for additional information.

NOTICE

Be prepared to provide the **complete Model Number and FD number** printed on the rating label of the unit when contacting Bosch Customer Support or Technical Support for assistance.

8.2 Technical Support

For authorized servicers, additional assistance is available by contacting the Technical Support Team at (800) 444-9091. Technicians are available to assist you Monday – Friday, between the hours of 5am and 5pm, Pacific Time.