

Oven Maintenance

If properly cared for, your Beech Oven will give you many years of trouble free operation. We recommend you consider adopting the following **Preventative Maintenance Service Schedule**, which will ensure your oven operates at optimum efficiency, saving you money on operating and repair costs, ensuring your business is trading to its full potential.

It is critical to maintain the Beech Oven and associated equipment on a regular basis, to avoid the possibility of a serious fire or malfunction.

Regular **Preventative Maintenance Service** will also save you money on loss of profits from any down time.

Beech Ovens strongly recommends a three (3) monthly inspection of the Flue system as to ascertain the levels of soot, grease and creosote build up during this period. Through these regular inspections you can develop a program for regular cleaning of your exhaust system. (*Refer to **General Information on Flues***)

A minimum of 25mm Air Circulation Gap is recommended between the outer oven insulation and any other material. It is of utmost importance that these spaces remain free to circulate air. Checks should be made on a regular basis as to confirm these spaces are maintained. These items are critical to the safe and reliable operation of the oven.

Where additional options are fitted, such as the Interlock system (Australia Only) and the Water Flow Sensor (UK Only), maintenance to these items will need to be included into the following maintenance schedule.

The following maintenance Schedule is a summation of information contained within this Installation and Operation Manual.

Item	Task to be performed	Performed by	Frequency				
			Daily	Weekly	Monthly	3 Months	6 Months
1	Each morning before the oven is fired up, remove fire ashes from the floor centre, using an ash pan and a shovel or brush. A damp cloth may be used to remove any remaining dust.	Oven Operator	◆ ◆				
2	Clean the oven floor prior to cooking. Do NOT use water!	Oven Operator	◆ ◆				
3	Cleanliness around the oven is essential. Ensure no debris or rubbish is left around, under or in the oven area.	Oven Operator	◆ ◆				
4	Ensure that a draft at spigot exhaust above the oven mouth is detected when the exhaust fan is operating.	Oven Operator	◆ ◆				
5	For ovens equipped with a char grill, regular cleaning of the oven spigot is required, depending on usage. After a suitable cooling down time, stainless steel grill plates, drip tray and cast iron radiants should be removed for cleaning and the remainder of the char grill should be wiped out. Take care not to damage the gas pilot assembly. Ribbon burners should be removed for cleaning and blown out with compressed air.	Oven Operator Oven Operator Technician	◆ ◆	◆ ◆	◆ ◆	◆ ◆	
6	For ovens equipped with a spray filter, the tundish drain should be checked that water is flowing at a trickle rate.	Oven Operator	◆ ◆				
7	Visually inspect the oven interior roof for blackness. Should blackness become evident, the oven may need some attention. If the blackness is from cooking foodstuffs, the oven may need a period of high firing in excess of 450°C, to burn clean the oven cavity. If the blackness appears to be from the gas flame, a qualified technician should be called to service and adjust the system.	Oven Operator		◆ ◆			

Item	Task to be performed	Performed by	Frequency				
			Daily	Weekly	Monthly	3 Months	6 Months
8	Visually check and clean any foodstuff, dirt or deposits from burner with a suitable small brush. Take care not to damage the tri-electrode over burner.	Oven Operator		◆◆			
9	Carry out a comprehensive check of the oven, gas system and exhaust, including spray filter (or flue transition) and ductwork. Check that approved and inspected fire extinguishing equipment is in close proximity to the oven.	Oven Operator Technician				◆◆ ◆◆	
10	Check correct exhaust airflow calibration and temperature at the exhaust spigot over the oven mouth, using the A4 paper test method. Adjustment of damper should not be necessary, unless restaurant / kitchen conditions have changed. Having the correct draw at oven mouth is critical to performance.	Technician				◆◆	
11	Inspect and clean out oven extraction flue and ductwork, to remove any accumulation of creosote, soot and grease which may have occurred. If accumulation is present, it should be removed to reduce the risk of fire. Ensuring extraction ductwork is kept clean, will reduce the risk of fire.	Technician				◆◆	
12	Check and verify correct operation of gas interlock system. When exhaust fan is switched off, the thermocouple probe in exhaust duct should register a rise in temperature and shut off the gas supply to oven burners.	Technician				◆◆	
13	Inspect high temperature cables from control box to burner head and tri-electrode device. Ensure insulation is in good order especially where cables may cross over metal framework. Check cables at burner and end for any sign of burning.	Technician				◆◆	

Item	Task to be performed	Performed by	Frequency				
			Daily	Weekly	Monthly	3 Months	6 Months
14	Check correct burner flame / air mixture adjustment. Check for correct operation, ensure flame is not luminous and the burner is free from debris.	Technician				◆◆	
15	Visually inspect condition of tri-electrode and carefully clean any ash or food which may be present. Check tri-electrodes have correct clearance from burner.	Beech Technician				◆◆	
16	Check for correct operation of balanced cool air make-up device, fitted to flue transition, when the fan is switched on and off.	Beech Technician				◆◆	
17	Check that temperature indicated at oven thermostat control is calibrated to provide accurate oven temperature.	Beech Technician				◆◆	
18	For ovens equipped with spray filter, check water is flowing to tundish at a trickle rate (15-35lts/hr). Check for water leakage at spray filter and clean tundish drain. Ensure water return flow and that tundish is clear.	Beech Technician				◆◆	
19	For ovens equipped with spray filter, remove and clean the spray filter nozzle and supply tube. Check for correct spray pattern. The inline water filter should be cleaned / replaced at this time. Remove and clean the cyclonic filter at this time.	Beech Technician				◆◆	
20	Check the area under oven is free of obstruction for correct ventilation to burners. Ensure no debris or rubbish is left around, under or in the oven area.	Beech Technician				◆◆	
21	Check / adjust gas pressure at the outlet side of gas regulator. Natural Gas is set to 1.0 kpa. LPG is set to 2.75 kpa	Beech Technician					◆◆
22	Check exhaust fan for correct operation.	Beech Technician					◆◆

Tri-Electrode and Burner Maintenance

The most common cause of erratic operation of the Gas system is that the Tri-electrode and/or burner becomes contaminated by debris. This may be in the form of foodstuffs or ash deposited in the area in which the Tri-electrode and/or burner operates.

The following instruction shows the procedure for checking the position of the Tri-electrode and removal of any debris which may become present around the Tri-electrode and/or burner. Adjustment should generally not be necessary, though cleaning is common as part of regular maintenance.



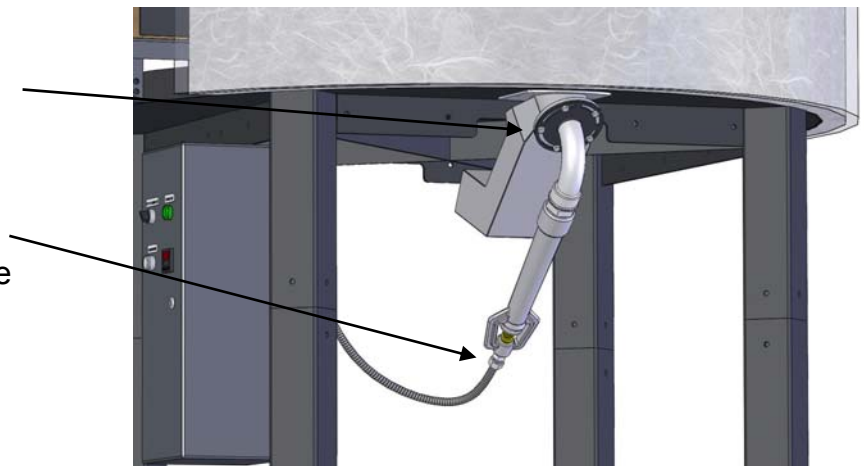
Note: Be sure to **turn off the power and Gas** before any maintenance takes place on the oven. Maintenance should be carried out when the oven is cold.

Tube Burner

To remove the Tube burner, loosen and remove the burner flange bolts (3-5 bolts).

Should the burner require cleaning, remove the gas line into the burner. This is a flared connection and does not require sealant.

Note: Be sure not to kink or damage the Gas line whilst handling the burner.



Clean, if required, by turning upside down and blowing out any debris that may have built up in the burner nozzle.

In extreme cases, the burner can be washed and scrubbed with a brush. Use compressed air for final clean.

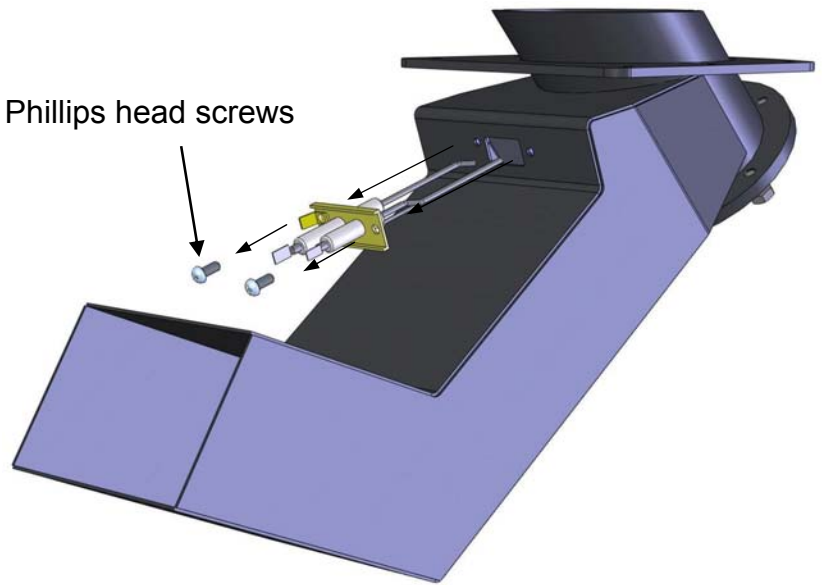


To remove the Tri-electrode assembly, loosen and remove the two (2) Phillips head screws holding the Tri-electrode.



Note: *The Tri-electrode is mounted in a ceramic base and is easily cracked if not handled correctly. Always check for cracks when servicing this component.*

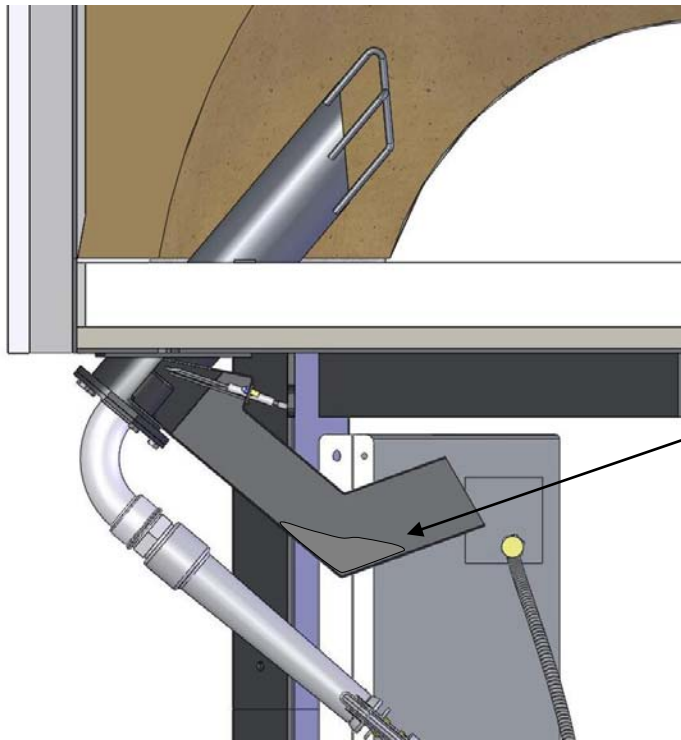
Phillips head screws



Carefully remove the Tri-electrode and **gently** remove any debris which may have built up around the Tri-electrode using a soft brush or rag.



Note: Be sure not to adjust the positioning of the Tri-electrode probes. Positioning of these probes is critical for the correct function of the gas system. See next page for correct positioning details.

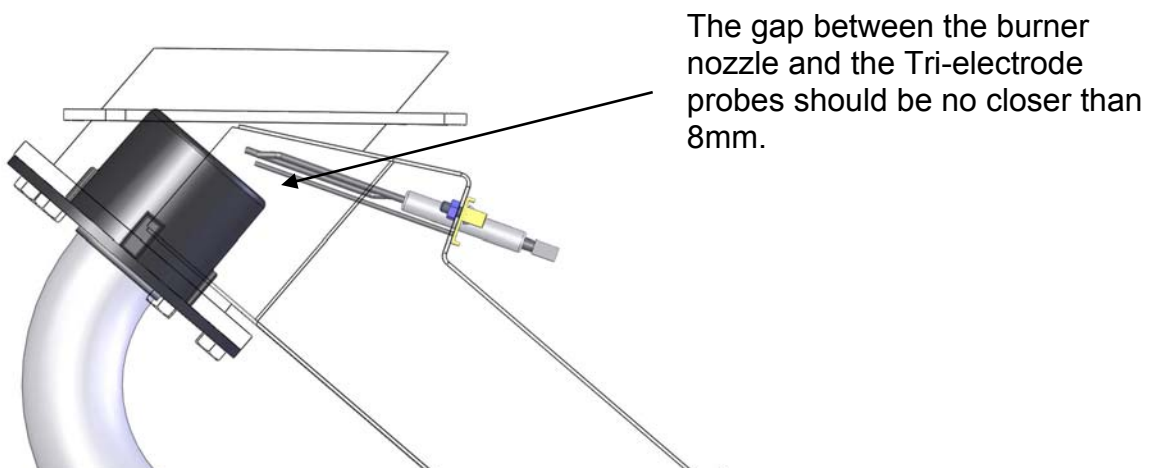
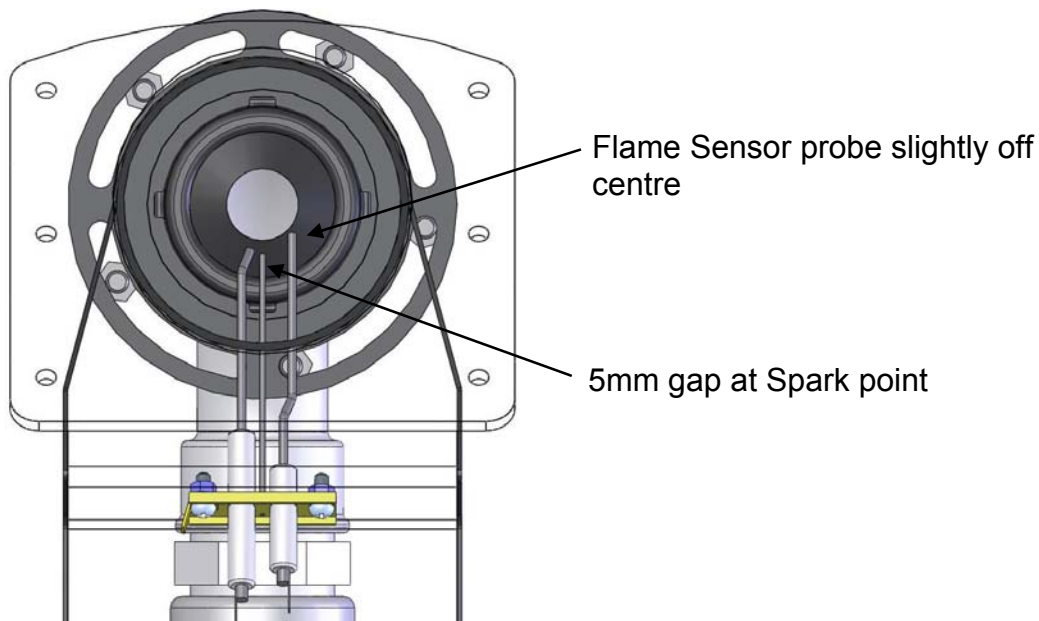


As general maintenance, clear any debris that may have accumulated in the base of blow back chute.

If the position of the probes has been altered, be sure that the Flame Ignition probe and Earth probe have an approximately 5mm gap between them at the Spark point.

These two (2) probes should **NOT** be close to any other metallic surface or close to each other, other than at the Spark point as shown below.

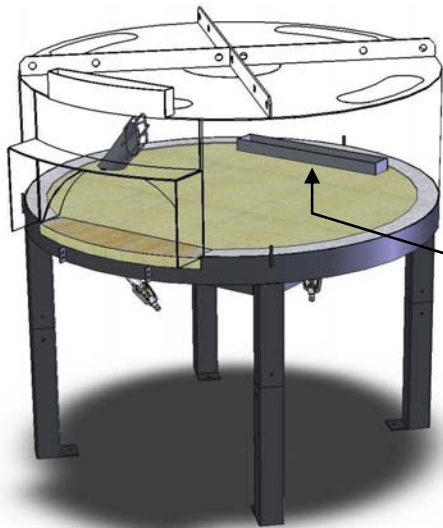
The Flame Sensor probe should be slightly off centre.



Note: Be sure to check that all Gas lines, cabling and bolts are correctly assembled and secured before turning on power and gas for re-start.

Display Burner

When using a Display burner, wood fuel should **NOT** be used. However, foodstuffs and other debris can disrupt the correct operating function of the Tri-electrode on a Display burner.



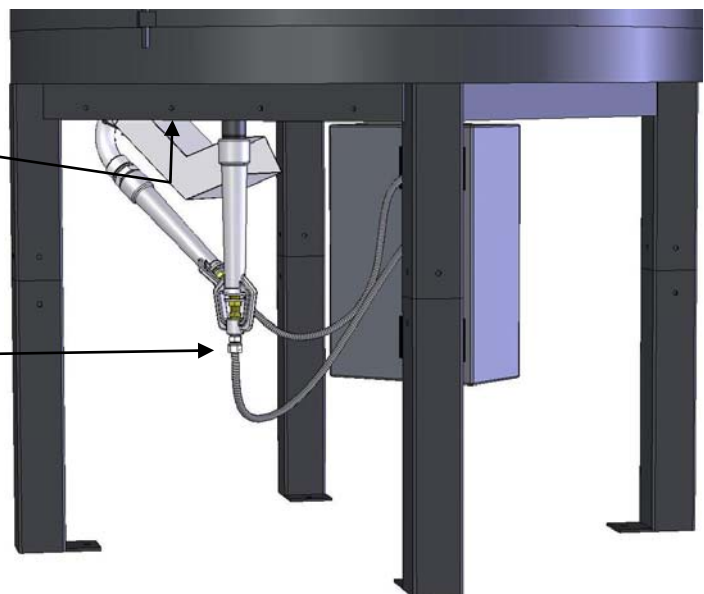
If the oven is cold and access is possible, in some cases the Display burner can be accessed through the door of the oven. The Tri-electrode is directly behind the burner shroud.

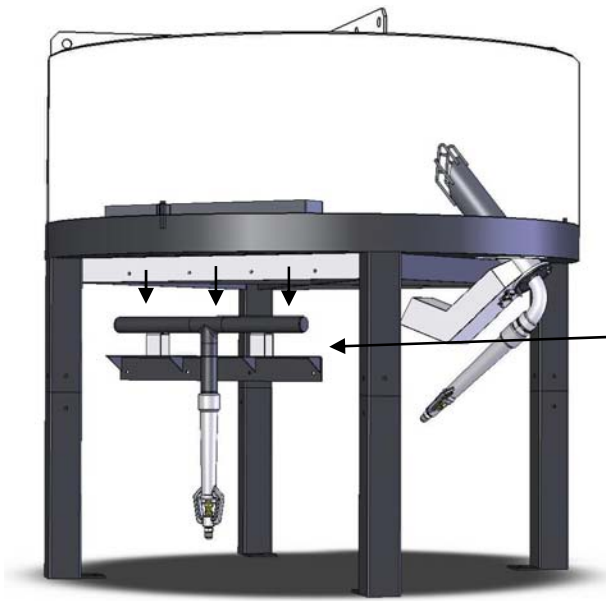
If access is not possible through the door, the entire Display burner assembly can be removed through the base of the oven.

To remove the Display burner, loosen and remove the four (4) bolts in the rear support of the oven base.

Should the burner require cleaning, remove the gas line into the burner. This is a flared connection and does not require sealant.

Check the condition of the blue high tension/temperature leads and insulating sleeve to the Tri-electrode. Replace if necessary.





Carefully lower the Display burner from the oven base. Be sure not to bump the position of the Tri-electrode when removing and replacing the burner.

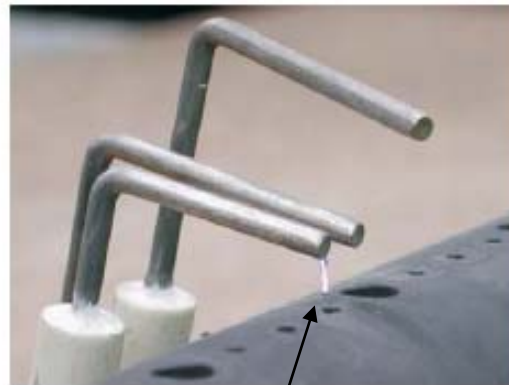
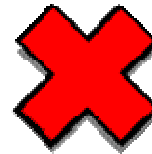
With the Display burner removed the Tri-electrode and/or burner can be cleaned and/or adjusted.

Connect the leads securely to the Tri-electrode correctly and be sure that it is correctly adjusted before re-assembly.

Incorrect positioning of the Tri-electrode is also a common cause of erratic Gas System operation with the Display burner.



Correct positioning: A spark is generated at the Spark point.



Incorrect positioning: A spark is generated between the Flame Ignition probe and the burner body.



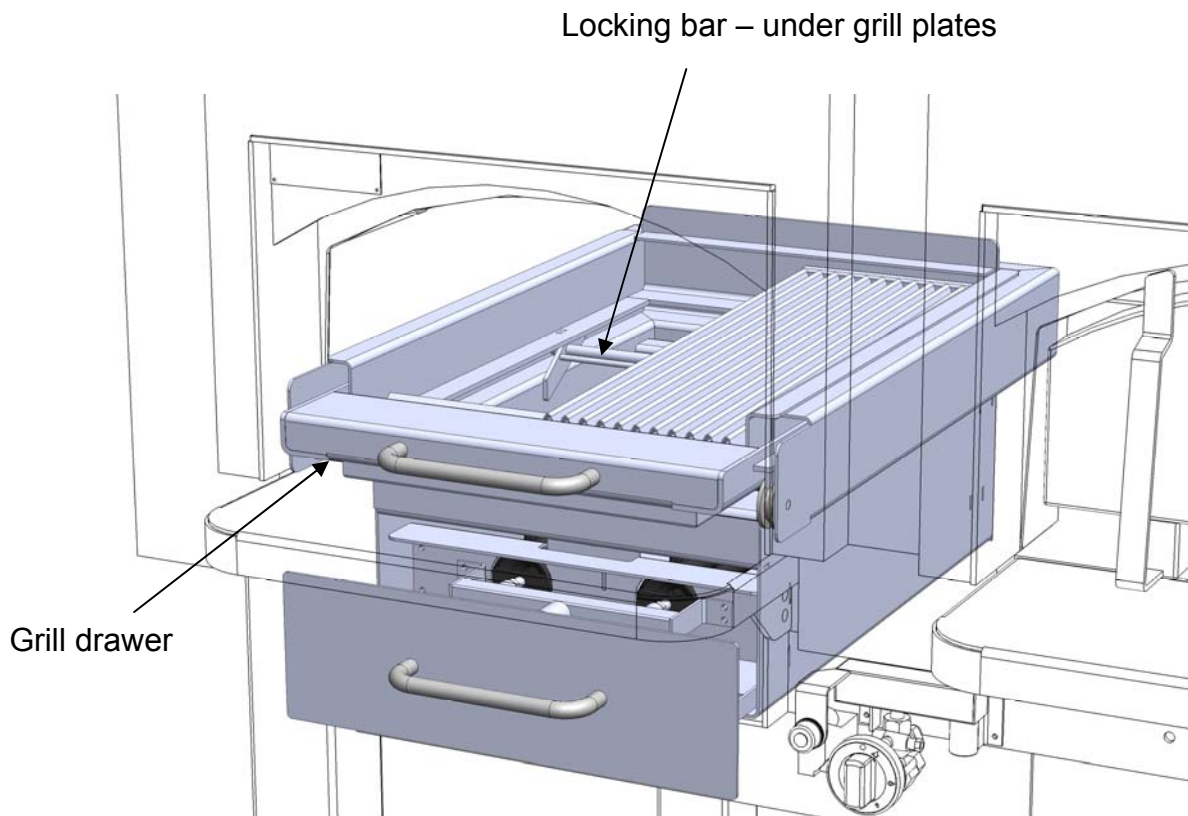
Note: Be sure to check that all Gas lines, cabling and bolts are correctly assembled and secured before turning on power and gas for re-start.

Char Grill Maintenance

As part of the daily maintenance schedule, the Char Grill should be cleaned thoroughly after each service. The drip trays may need to be emptied during service depending on the type of product being cooked. The upper drip tray is located under the front of the grill drawer and is easily removed out of the right hand side of the grill drawer. The lower drip tray pulls forward and out.

To remove the grill plates, roll the grill drawer forward and lift the grill plates out of the grill drawer, one (1) at a time.

With the grill plates removed, the entire upper grill drawer can be removed for maintenance if required.



Lift the locking bar in the centre of the drawer and carefully pull forward. Try to keep the drawer level when removing as to not damage any of the roller components.



NOTE: Do **NOT** place the entire drawer in a dishwasher or wash with acidic cleaning agents. The drawer rollers contain bearings which can be damaged.

Window Maintenance

Some ovens have a viewing window accessory which enables the internal of the oven to be viewed by the public to enhance the visual experience of stone hearth cooking. In some cases the window may need to be cleaned as soot and smoke can contaminate the inner glass.



Note: *Only open the oven viewing window when the oven is OFF and cool.*

There are a number of different cleaning agents available on the market, though the method below explains a simple, cheap and effective method to cleaning the inner glass.

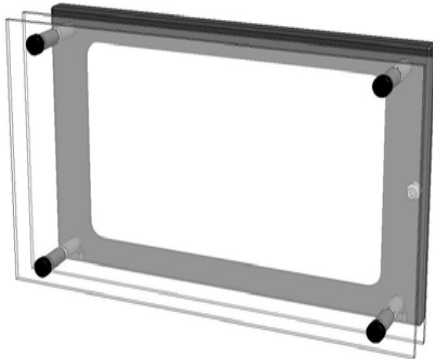
Cleaning the Internal Glass

Using a sheet of regular newspaper, scrunch the sheet and lightly dampen the paper in water. Apply the damp newspaper to some of the cool ash from the wood fire and lightly wipe the glass to loosen the soot from the glass. When the soot is dissolved, use a fresh sheet of damp newspaper to clean the remainder of the soot from the glass.

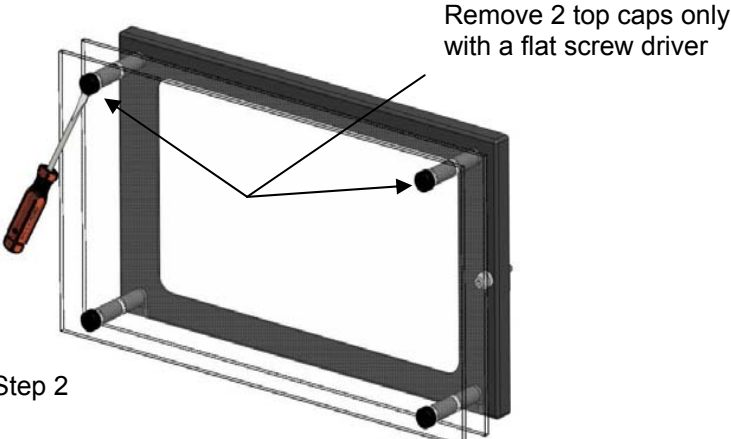
This method also helps to prevent the build up of soot on the glass.

NOTE: Do not use any acidic or harsh cleaning agents to clean the glass, as they could damage the protective coating on the glass.

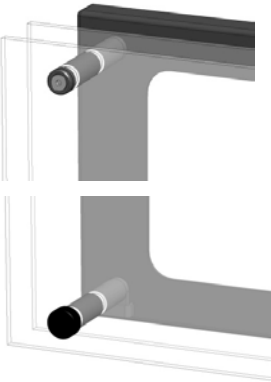
The following page shows the sequence to remove the outer panes of glass to gain access to the handle to open the viewing window.



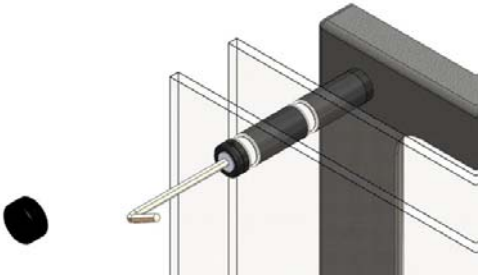
Step 1



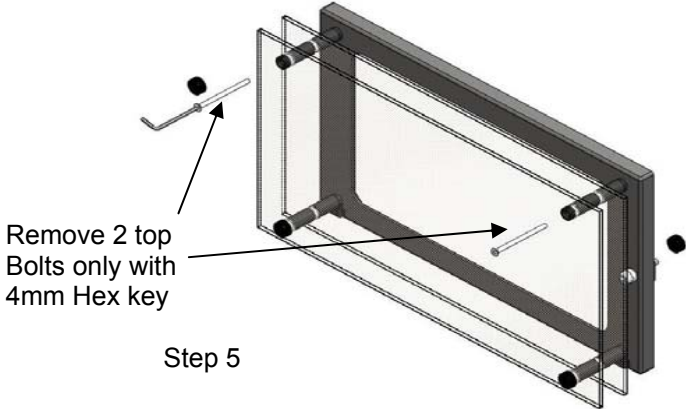
Step 2



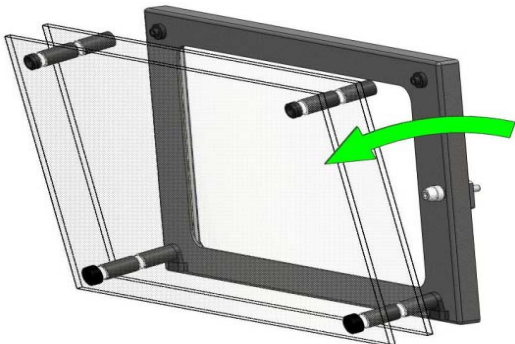
Step 3



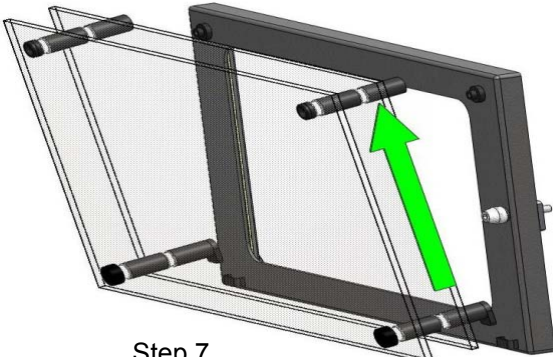
Step 4



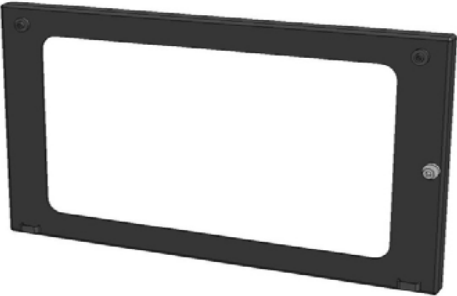
Step 5



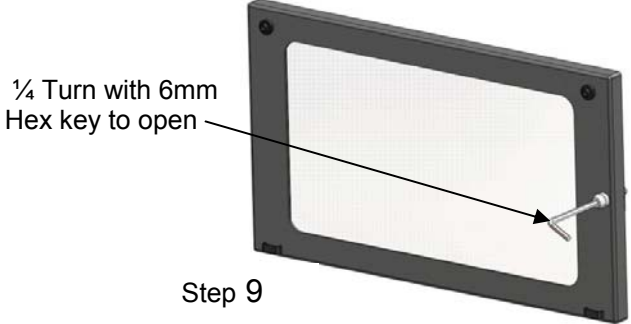
Step 6



Step 7



Step 8



Step 9