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Range Appliances Service Manual

Thor Kitchen Customer Service Team 2017.9

Catalogue

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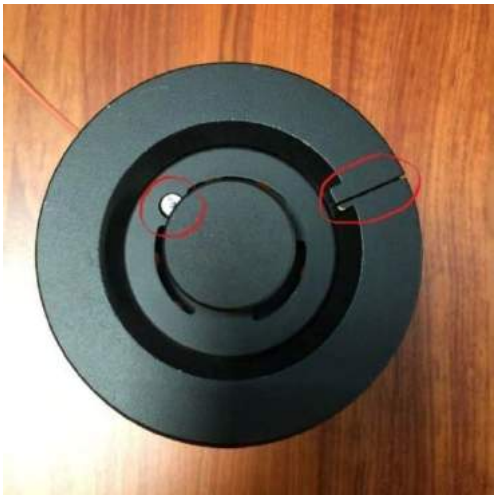
12. Surface Cleaning Method;

13. Frequently Asked Questions.

Procedure Checking the Dual Burner Clicking Problem

Here's the procedure to have Customer/Servicer check the condition for our current burner design. The procedure helps the electrode to sense the flame correctly and make sure the electronic circuit for spark is in a loop.

1. Make sure the Burner Design is correct. Our current design for the burner is having the electrode on the left side (10 o'clock) and cross-over on the right side (2 o'clock). There are four parts for the dual burners. They are burner cap, flame ring base, flame ring and burner base.



2. Make sure the electrode is going through the hole on the flame ring and it is vertical to the surface of flame ring base.

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3. For the flame ring base part. make sure that the electrode will go through the hole on the 10 o'clock position. Make sure the electrode is not going through the hole next to the cross-over.

4. Make sure the electrode is vertical to the surface of the burner base. Please be notified that there's a slot at the 8 o'clock position of the burner base. This slot helps to locate the burner base.

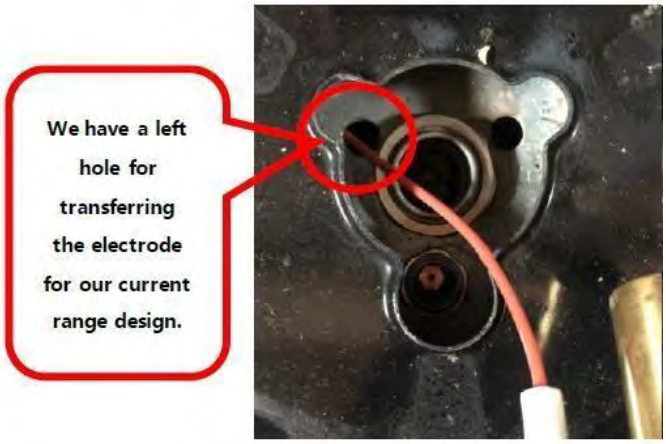
5. Make sure that there's a slot on the burner flame ring. This lug is located at 8 o'clock as well. Make sure that the holes on the burner base and flame ring are totally line-up.

6. For our previous design, we don't have a hole on the left side underneath the burner, please drill a hole if necessary so that we could have our electrode go through.

For detailed changing procedures, please check
https://vimeo.com/212810277/246f21fffd

For the electrode re-routing, please take out the back panel and discard the old electrode from the spark model, please have the new electrode go through the left

hole underneath the burner and re-connect it to the spark module. Make sure the electrode is not bent or twisted or it will have clicking problem!!!



7. To make the electrode vertical to the burner base surface, you need to make sure that you are having the flat side of the porcelain connected to the main pipe on the burner pipe.

8. Make sure the electrode is stick to the burner base with the fixed plate and screws. We are currently using longer porcelain design for the electrode. For the main jet holder part, make sure the conducting plate part must be in touch with the brass supporting pipe!!!

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9.How to check the conducting plate design: Please take out the dual burner and check the main orifice and simmer burner orifice design.**

<u>For simmer orifice (the orifice in circle)</u>, make sure it's 0.38mm with the Gas Supply of NG, and 0.34mm with Gas Supply of LP (Range is originally installed with 0.38mm orifice).

<u>For main burner orifice</u>, please check the screw and conducting plate design on the main jet holder. Please make sure new conducting/ grounding clip is installed **picture below

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Left: Old Design for Conducting Plate (possible gap could cause clicking)

Right: New Design for Conducting Plate

Q & A for Top burners

1. All electrodes click at the same time	**– It's normal. We are using 6-point/4-point Spark Module. All the electrode will be ignited when you are rotating one of the burner knob. When you are pushing the knob as well, the gas will come out and burner will be ignited.**

2. Checked everything but the burner is not having a stable flame (unstable flame from simmer burner) ** Frequently Asked Question in Service	**– Please clean and adjust the position of the burner cap/flame ring/flame ring base to fix the problem. Please follow the procedures and make sure there's not dust or food residue inside the burner.** 
3. Checked everything and the burner is having a correct flame, still there's a clicking problem ** Frequently Asked Question in Service	**– Please change the whole burner kit and double check the function. (There might be dust and uneven surface for old burner parts)** **– Please also check the conducting plate design on the main jet holder so that it will touch the supporting pipe.**
4. The Single burner's flame is too big	**– Our range design is regulating the gas into a proper pressure for cooking, and the power of the flame is determined by gas pressure in your local gas supply. Please adjust the gas pressure for your local gas company.**
5. The burner is having gas leakage	**– The maximum time that we could accept the electrode to ignite the burner is 4 seconds, there might be little gas coming out, which is accepted for Standards;** **– Check the position for all burners to make sure it's located correctly.**
6. One burner's electrode is not having clicking sound but having gas smell coming out	**– Please check the electrode's needle part, use sand paper to clean it and replace the replace the electrode if necessary (take out the back panel – find out the spark module – discard the old electrode and install the new one – Check the function).**
7. Two or more than two electrodes are not having clicking sound	**- Check the electrode and the Spark Module. Check if a replacement for spark module could fix the problem (Take out the back panel - disconnect the electrodes from the old spark module and connect them to the new spark module one by one – check the function).**
8. There's clicking sound and gas smell, but the burner couldn't be ignited	**- Check if burning torch could help to ignite the burner; - Check if the orifice is getting stuck or obstructed.**

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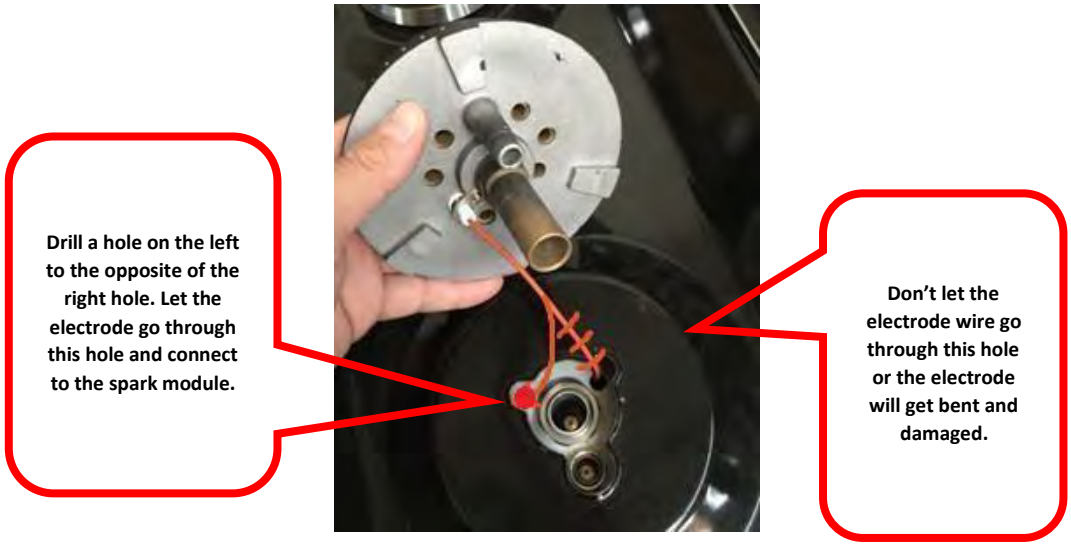
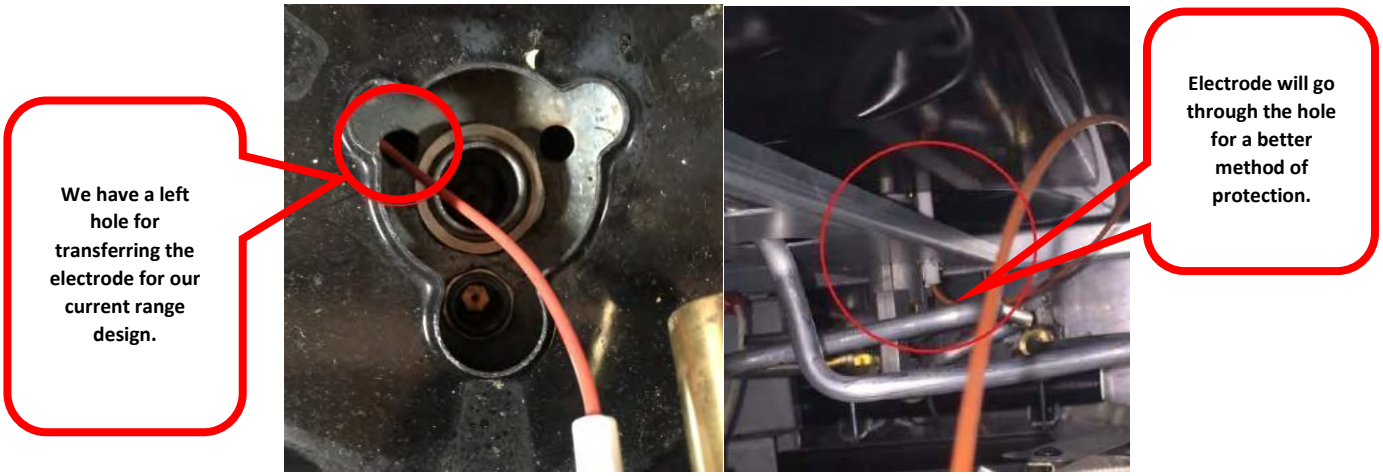
IMPORTANT

For the dual burner, the new version electrode (mounted to the lift-off lower burner ring) is located on 10:00 position. Please drill one hole *(if there isn't any on the left)* which is opposite to the right hole underneath the burner, and have the electrode go through this hole. If the electrode still goes through the hole at 2:00 position, the electrode will be bent and become damaged.





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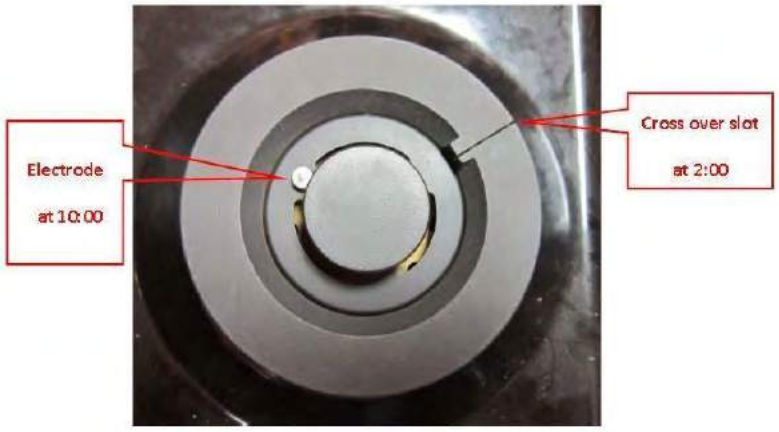
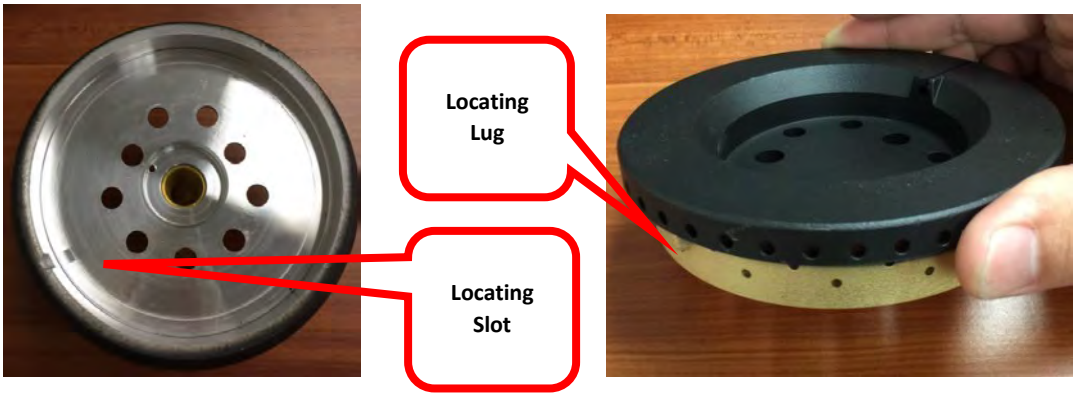
IMPORTANT

Please follow all steps of the attached instructions. Be sure to use all new burner components and ensure they are properly seated as per the instructions; failure to do so may result in damage to the appliance.

When completed, the new burner kits should look like the photo below from the top.





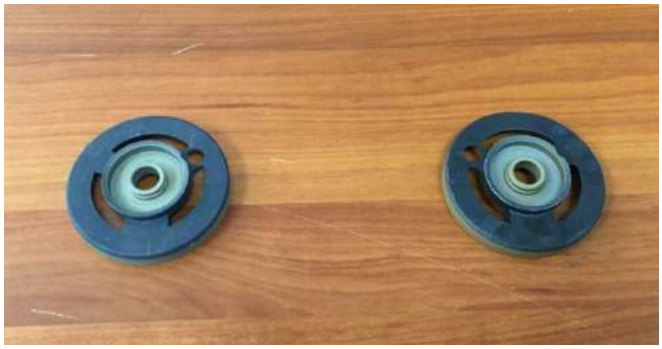
Steps for Installing the New Burner

1. It is very important to use all of the burner components supplied with this kit. Do not mix old and new components. Please note the differences between old dual burner components (on the left) and new dual burner components (on the right):

Burner Cap (Inner Burner Cap):

The inner new burner cap (on the right) has more holes with larger diameter in the lower ring, and the holes in the upper ring are slightly enlarged. The diameter of the top flat surface is also slightly smaller. This change in design immproves fuel flow and air/gas mixture.

Flame Ring Base (Upper Burner Disc):



The new upper burner disc (on the right) has a hole to accommodate the electrode at the 10:00 position; this hole was previously at the 2:00 position. The electrode will be relocated to the 10:00 position as part of this upgrade.

Flame Ring (Main Upper Flame Ring):

The new upper flame ring has more holes in the lower surface.

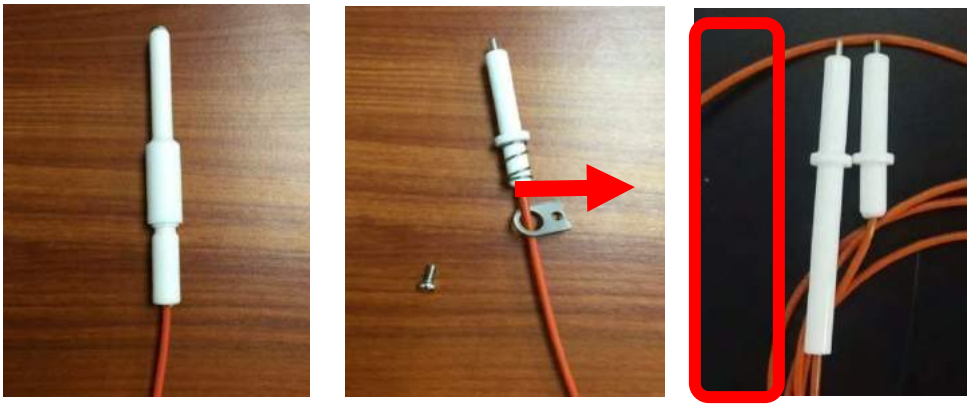
Burner Base (Main Lower Burner Ring):

The new lower burner ring has an additional hole at 10:00 for relocating the electrode.

IMPORTANT NOTE: The main burner venturi tube pictured below must be transferred from the old lower burner ring to the new one:

2. **Confirm whether the existing burners use the original version electrode (below on the left) or the current version (below on the right).**

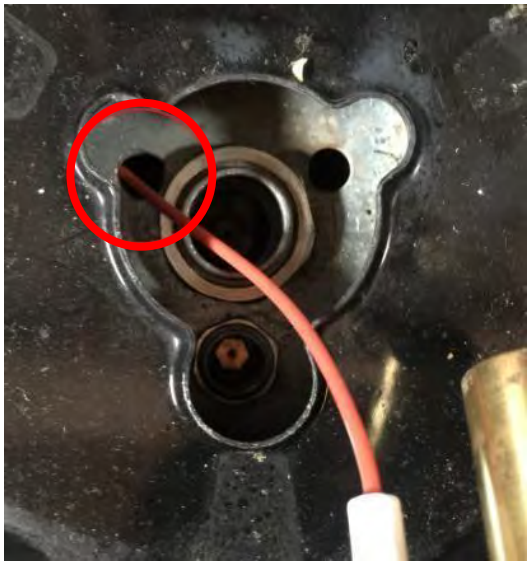
   - **The original version electrode (left) is mounted to the stationary burner base.**
   - **The new version electrode (right) is mounted to the lift-off lower burner ring.**



3. **The new version will need to be installed as part of the burner upgrade. These will be supplied, along with the spring, clip, and screw you see pictured above in the middle. If the range is already equipped with a new version electrode, just replace it with the new one in the shipment. We are currently providing new version electrode with <u>longer porcelain part</u> (on the right picture) for a better performance for the electrode.**

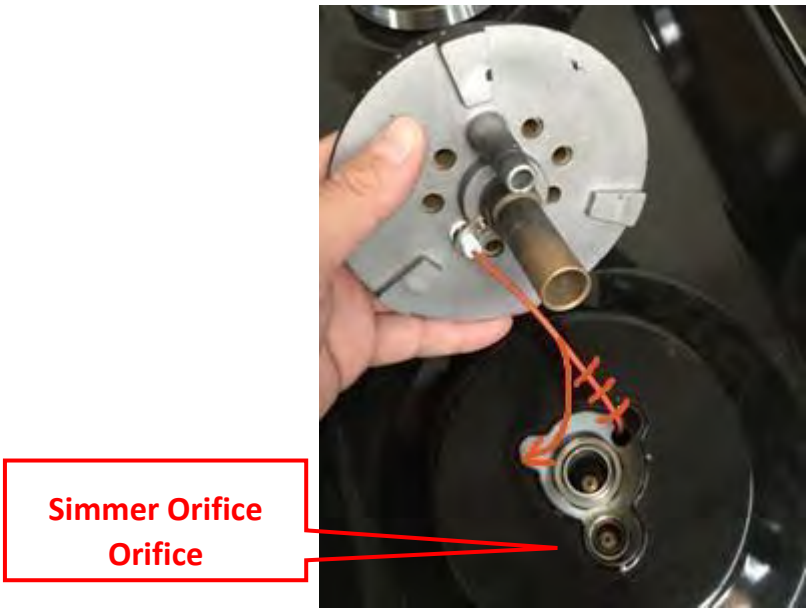
4. **Remove all existing lift off burner components. Use a wrench to remove the main burner venturi tube from the existing lower burner ring and transfer it to the new lower burner ring.**

- **Take away and discard the dual burner electrodes (regardless the original style or the new version). You will need to gain access to the spark module in order to remove (and discard) of the original electrode and replace it with the new version electrode supplied. The spark module is located behind the lower galvanized metal cover on the rear of the range. <u>It is critical to</u> <u>connect the new electrode to the corresponding terminal on the spark module based on the</u> <u>burner location so be sure to make note of which terminal each old electrode was connected</u> <u>to.</u>**
- **Connect the new version electrode to the new burner base with the fixed plate, screw and spring, <u>drill one hole on the left side underneath the burner which is opposite to the right</u> <u>hole (same size as the right hole). If the design is already with a left hole shown in red circle,</u> <u>no additional drilling is needed.</u> Let the electrode go through the left hole underneath the burner and connect to the spark module. If the electrode still goes through the hole at 2:00 position, the electrode will be bent and become damaged.**



5. **The new style electrode must be secured to the new lower burner ring at the 10:00 position. If the range had the original style electrodes, use the new style supplied with the kit. If the range has the new style already installed, they must be removed from the old lower burner ring at the 2:00 position and installed on the new lower burner ring at the 10:00 position.**

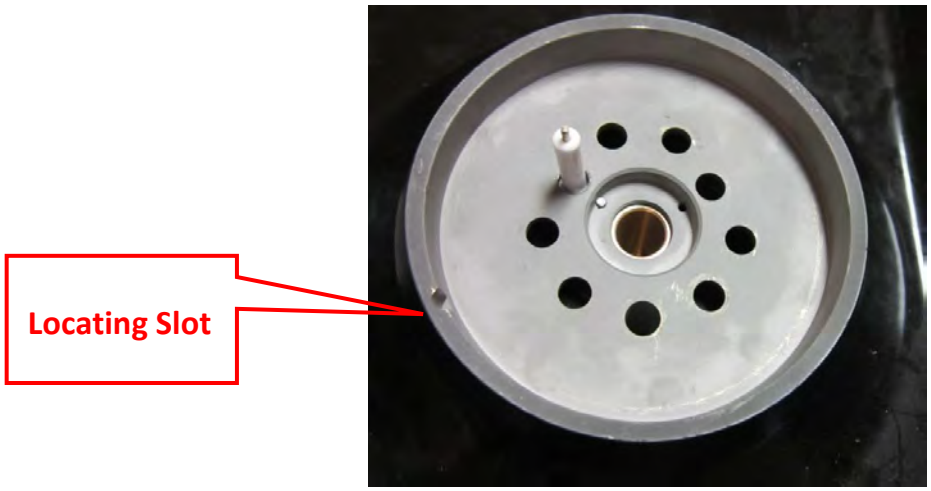
Example of new style electrode mounted at the 2:00 position:



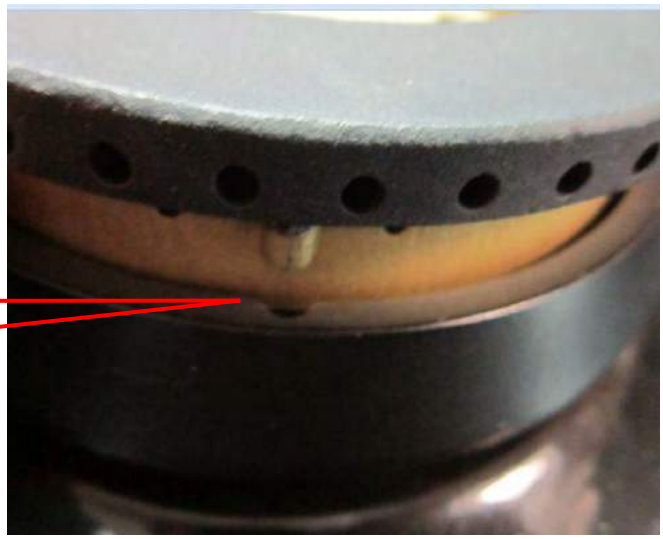
In cases like the one pictured above, the electrode will need to be transferred to the new lower burner ring at the 10:00 position. The lead wire can then be fed through the existing hole at 2:00.

6. **With the burner components removed, the simmer orifice must now be upgraded. As you face the range, each dual ring burner has a simmer orifice in the 6:00 position of the burner base (see above). Please use the supplied thin walled 6mm socket to remove the existing simmer orifice(s) and install the new one(s) supplied (NG size 0.38mm; LP size 0.34mm). **A small folded piece of scotch tape (sticky side out) inserted into the socket will help hold the orifice in place. ****

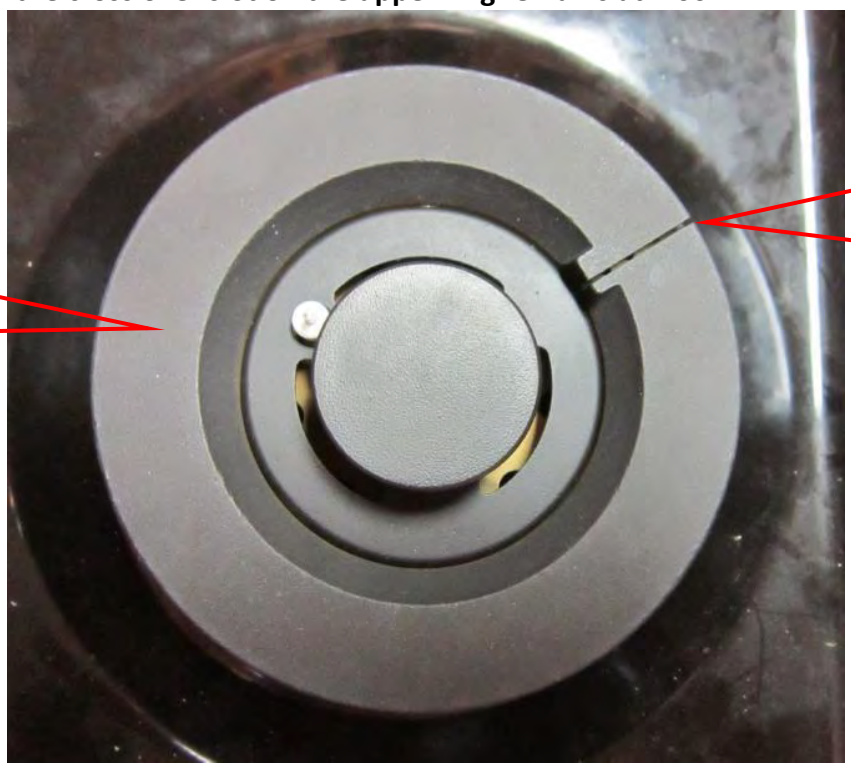
7. **Install the lower burner ring with the electrode now mounted to its 10:00 position. Be sure the ring fits fully into place. It should be level, tight, and have not play when rotated manually.**



Please note the locating slot at the 8:00 position above. The upper ring has a lug that must fully seat into this slot as you see below.



Once fully assembled, the burner should look like the photo below. Note that the electrode is now at 10:00 and the cross over slot on the upper ring remains at 2:00:



The holes on the Main Lower Burner Ring (burner base) and the Main Upper Flame Ring (flame ring base) should be totally line-up.

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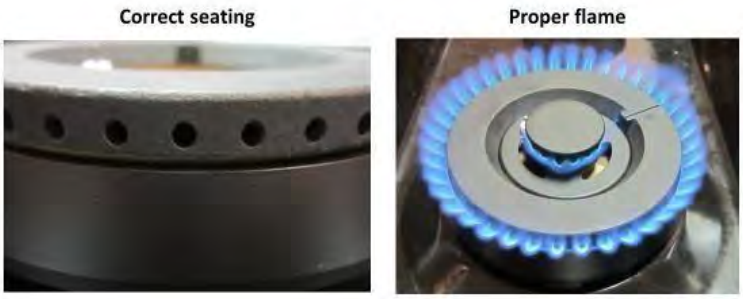
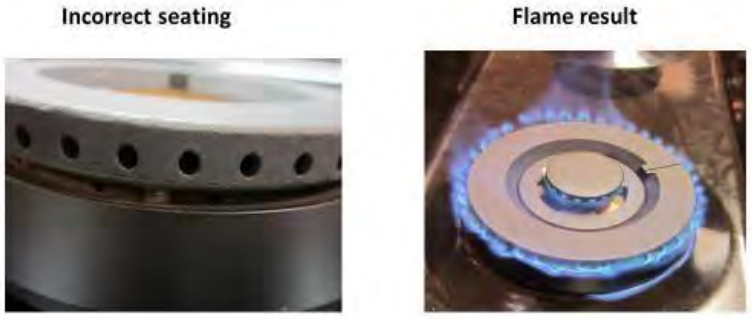
Correct seating leads to a perfect flame.



Incorrect seating leads to poor flame.



Once the burner has been properly assembled for a good quality flame, be sure to test its performance with a large cooking vessel in place such as a 12” skillet.

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Conducting Plate Replacement for Clicking Problem

For any clicking problem, please follow the steps checking the problem.

1. **Check if the burner kit is the old design or the new design, if it's the old design, replace it with the new burner kit;**

2. **Check if the burner is located correctly, if the flame is not stable and there's flame underneath the burner base, please inform customer to adjust the position of each burner part, making sure the holes in the middle totally line-up;**

3. **Check if the electrode is in good condition, if the wire is melt or there's defect at the connection part between electrode wire and electrode porcelain part, we could replace the electrode (we prefer using new electrode with longer porcelain);**

4. **Check if the simmer burner orifice is correct. NG is using 0.38mm Orifice and LP is using 0.34mm Orifice;**

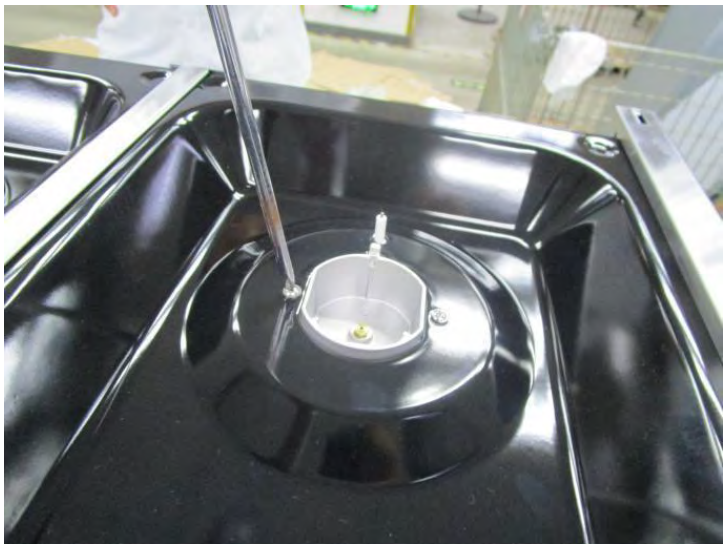
5. **If the burner/electrode/orifice are all in good condition, Please follow the steps to replace the conducting plate part (you could also replace the whole burner kit part);**

1，Take off the Backsplash;

2，Take off the Back Panel;

3，Take away all the burner assemblies on the top of the drip pans;

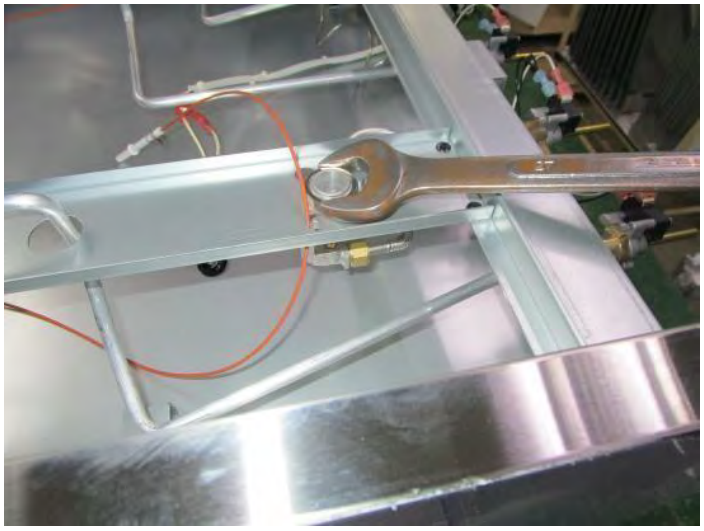
4，Screw out the screws connecting the single burner base and drip pan;



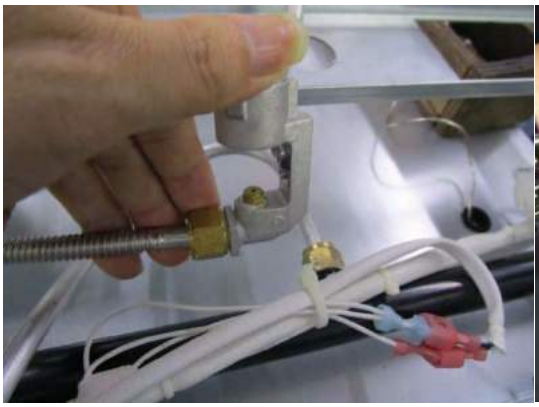
5，Take out the drip pan part;

6，Wrap the electrodes and protect them;

7，Use wrench to screw out the hexagonal nut on the metal tray;

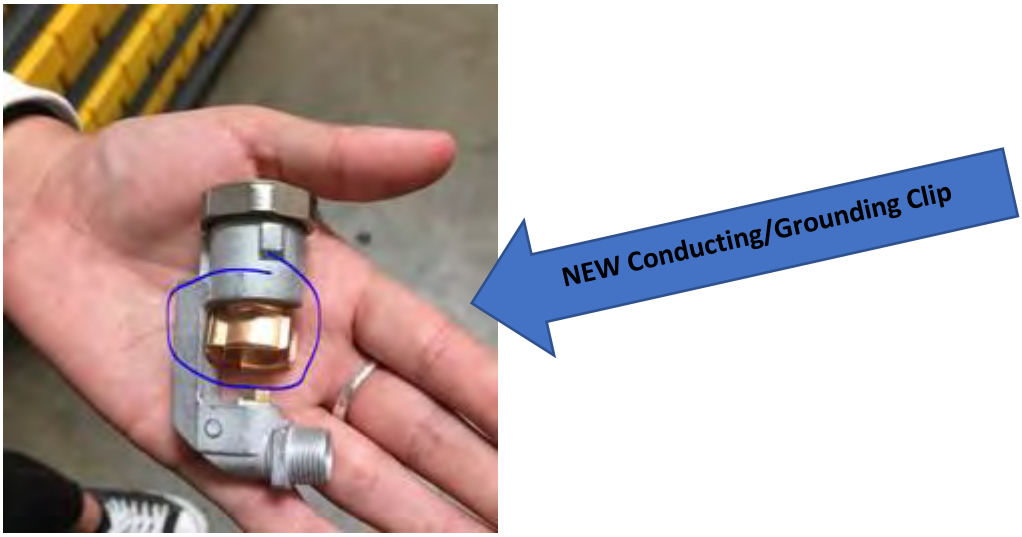


8，Locate the main jet holder, screw out the screw connecting the conducting plate;



9. Screw in the new conducting plate. Make sure the conducting plate touch the burner pipe part (the pipe in Yellow Brass);

For the original conducting plate design, there's a possibility of non-contacting with potential clicking problem. The new design could avoid this problem.



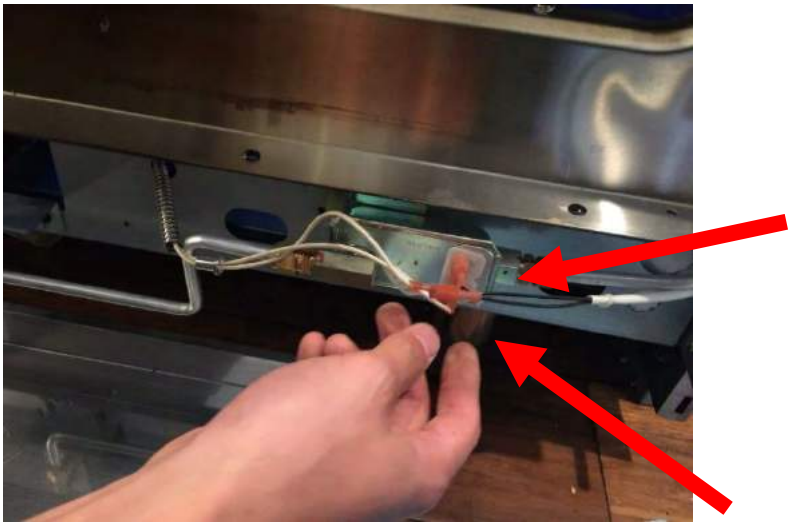
10. Follow the Steps back from 8 to 1. Check burner's working condition. The connection between the conducting plate and brass burner base will help to form an electronic circuit for the ignition system. Without this connection, there's a possibility for constant clicking.

How to replace the Bake Burner Igniter on Thor Kitchen Range

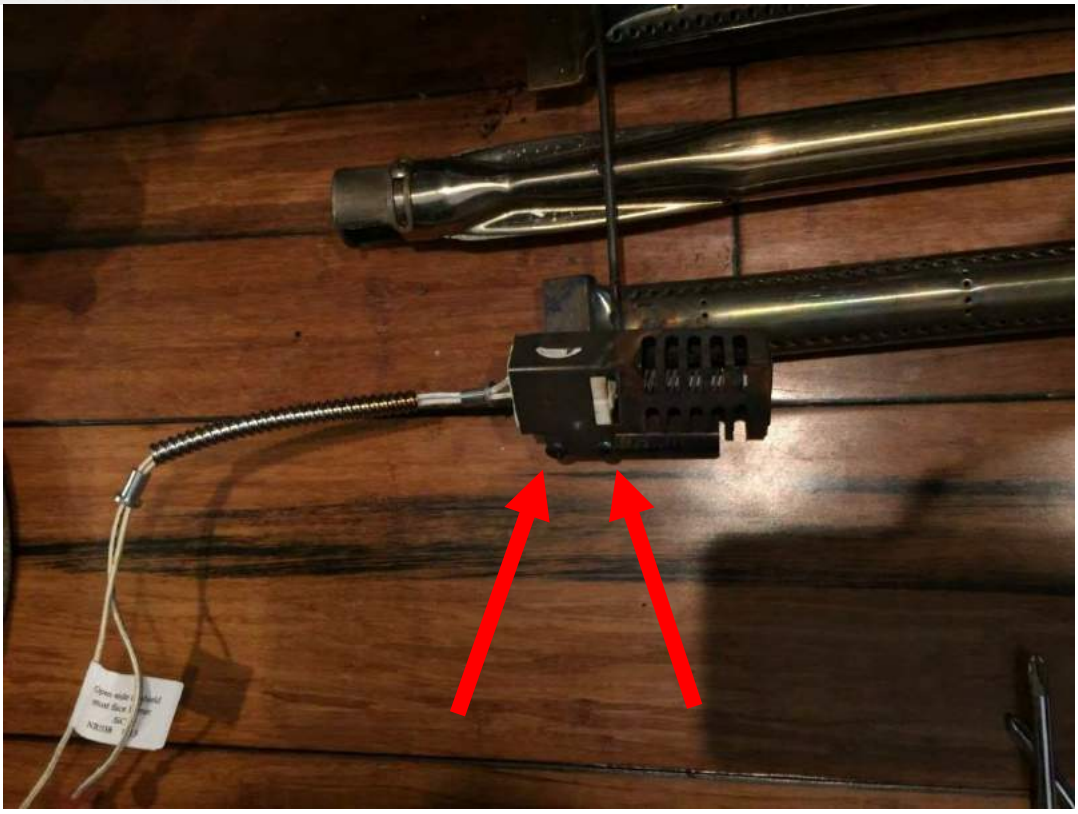
1. Remove the oven door.

2. Remove the screws on the kick panel and take it out;

3. **Unplug the igniter from safety valve, remember the connecting methods for the two connectors;**



4. **Unscrew two screws on U shape burner base, and then remove the U shape burner. You could find out that the hot surface ignitor for bake burner (UShaped Burner) is connected to U-shape burner;**



5. **When you replace the igniter, you can put every part back From Step 4 to Step 1, and test the oven bake function.**

How to change the Broiler Ignitor for the Gas Range (Not for HRG3080U/LRG3001U)

Making sure to cut off the power supply and gas supply for the unit.

1. Screw out the screws on the back panel and backsplash, take out both parts;

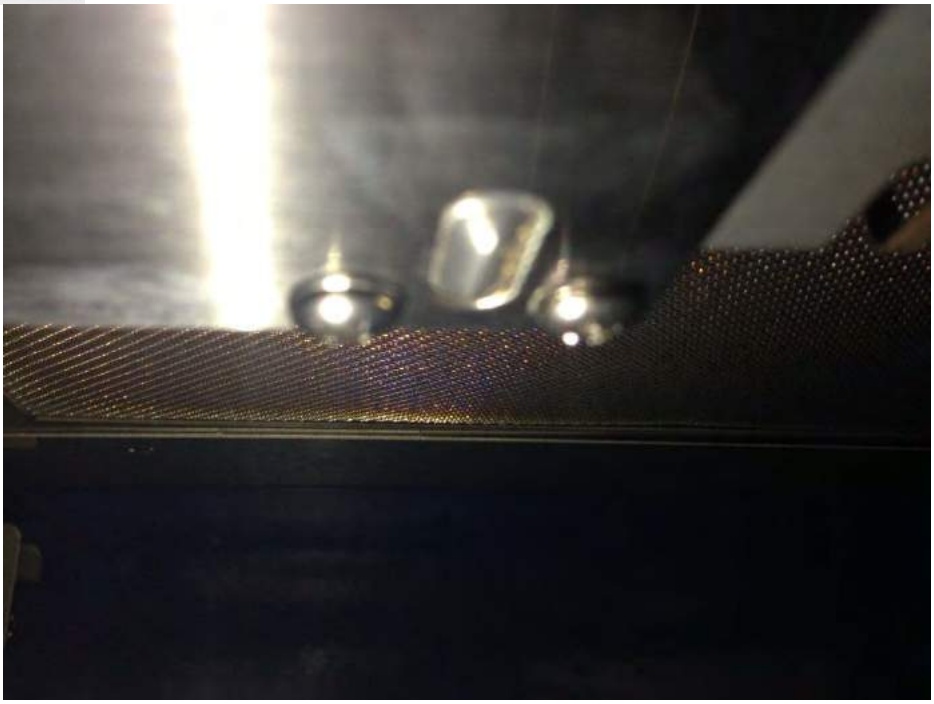
2. Screw out the screws on the drip pan so that you could take out the drip pan (For 48-inch gas range with Griddle design, you need to take out the griddle from the back of the range as well);

3. Check the condition for the safety valve (located underneath the back panel) and the broiler ignitor's wire (located underneath the drip pan) connected to safety valve; 4. Disconnect the wire for the broiler ignitor connecting to safety valve;

5. Screw out the screws holding the ignitor.

The wire for the ignitor is connected with holding plate on the top of the oven floor. There are screws holding the ignitor's position.

The top of the ignitor is connected to the infrared broiler part with screws.



6. After taking out the ignitor, put the new broiler ignitor back and re-do the procedure from Step 5 to Step 1.

How to make Oven Temperature Adjustment on Thermostat

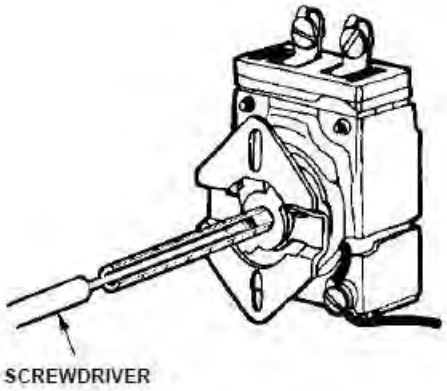
Thor Kitchen range has the temperature calibration screw down the center of the shaft. Take out the knob and take out the white glue part down to the center of the shaft. Use small screwdriver to access and adjust it.

When you turn the screwdriver to the LEFT oven temperature goes UP and to the RIGHT oven temperature goes DOWN. Please make small changes and use a thermometer to adjust the temperature. The blue oven light will help you to make the adjustments.

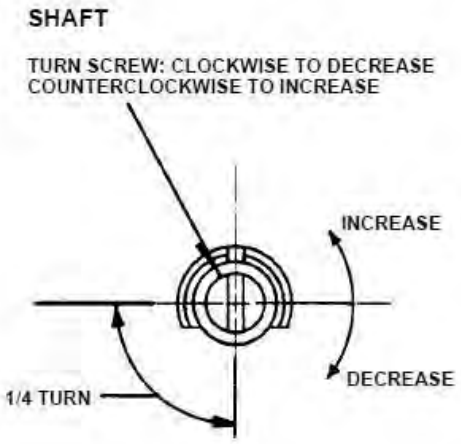
These controls are precision instruments that have been carefully calibrated at the factory and seldom need to be recalibrated.

However, if calibration is necessary, the following procedures are recommended:

1. Place the sensing element of your Robertshaw Test Instrument (or a reliable mercury thermometer) in the center of the area being controlled.
2. Turn the dial to the midpoint of its adjustable range and allow the equipment to come to a stable temperature. Allow the unit to cycle two or more times. Then compare temperature setting on the dial with the reading of the test instrument.
3. Holding the dial stem stationary, turn the small adjusting screw (see figure to the right) clockwise if the temperature in the device is above the dial setting and counterclockwise if the temperature is below the dial setting. One quarter turn of the screw will change the setting approximately the degrees shown in the chart below.
4. Recheck calibration and repeat steps if closer calibration is required.



	TEMPERATURE RANGE ON CONTROL DIAL (F°)					
	60 - 95°	60 - 250°	100 - 220°	130 - 180°	140 - 550°	200 - 400°
APPROXIMATE TEMPERATURE CHANGE PER 1/4 TURN (F°)	6°	17°	12°	14°	35°	18°



Our Temperature Range on control dial is changing from 140 to 550 degrees Fahrenheit.

There's an estimated 35 Degrees Fahrenheit temperature change per ¼ Turn.

For example, if the center oven temperature is higher than the bulb temperature, please counterclockwise the screw to decrease the temperature.

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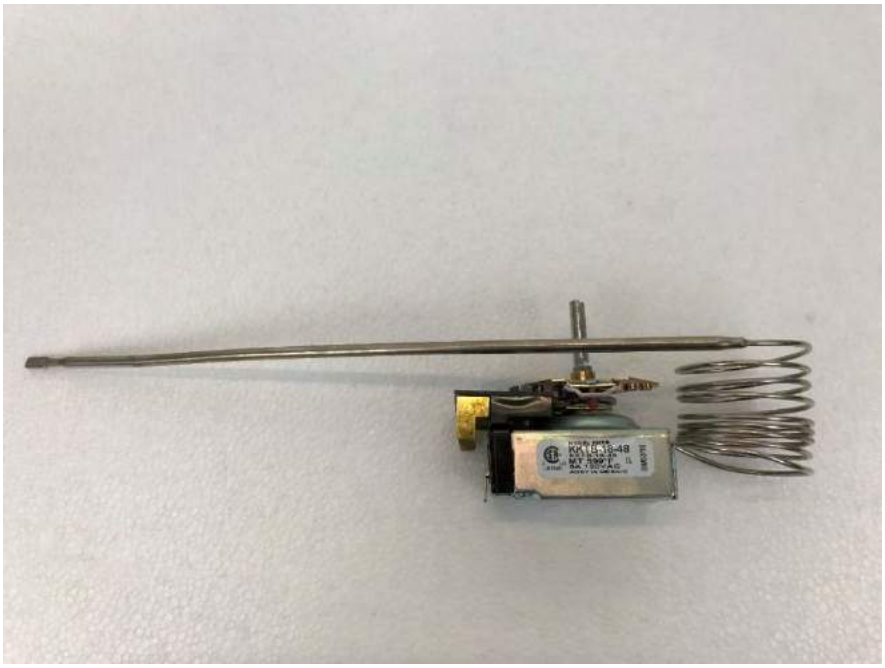
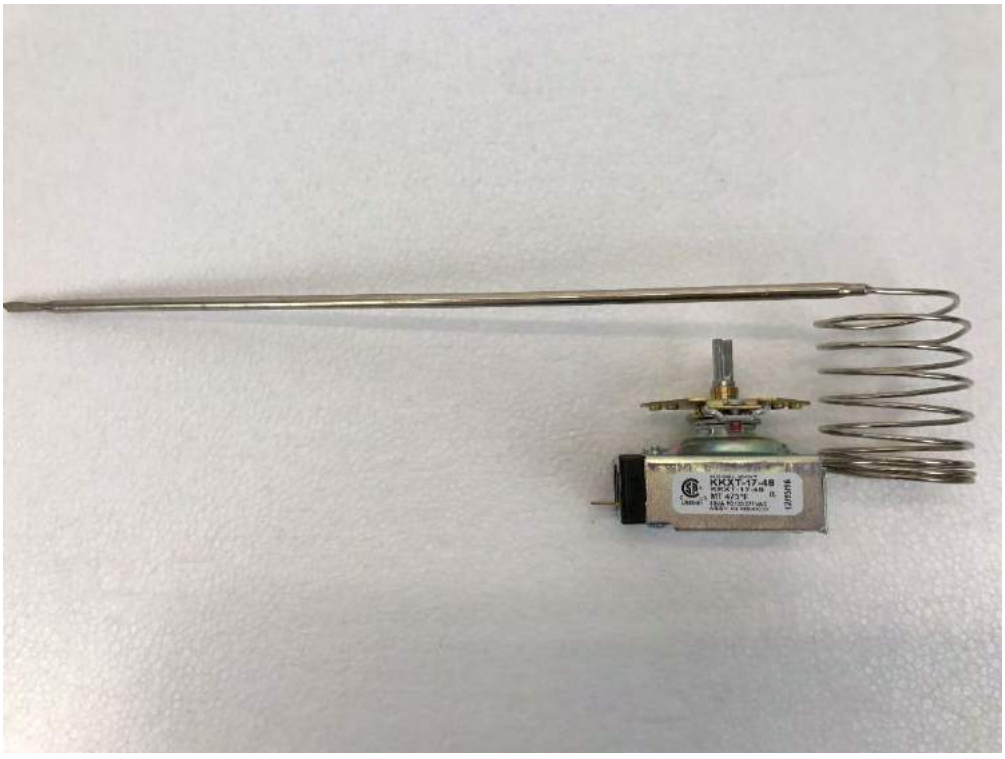
Thor Kitchen Thermostat Design

Oven Thermostat (max Temperature 599 F, used on 30-inch/36-inch oven), part number 07.12.0005-A0, KKTB-18-48.



Griddle Thermostat (max Temperature 475 F, used on Griddle/18-inch oven) part number 07.12.0017-A0, KKXT-17-48



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How to Replace Oven Thermostat Part for Thor Kitchen HRG/HRD Models

For both HRD Dual Fuel Range and HRG Gas Range models, same width dimension shares the same oven thermostat structure.

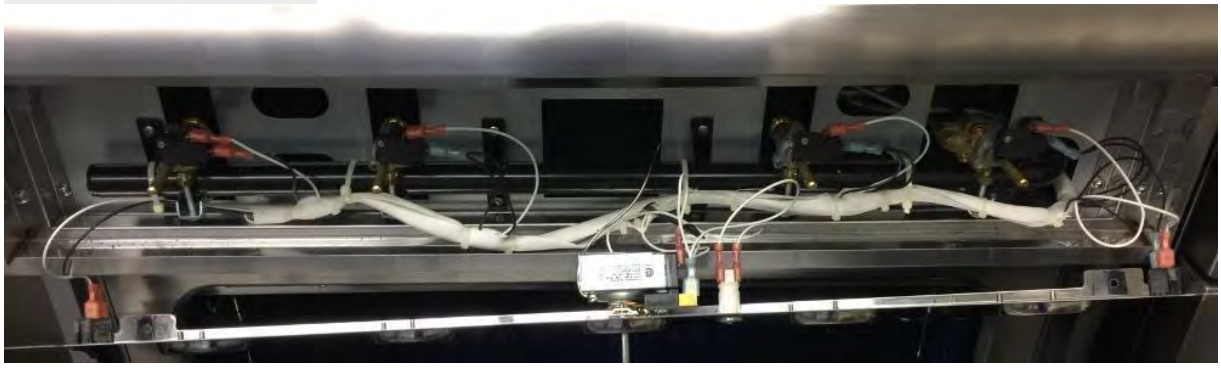
For 48-inch and 36-inch gas range/dual fuel range (Model Number starting with HRG36, HRG48, HRD36 and HRD48):

The hole that let the oven thermostat's probe go through is located on the ceiling of the oven. There's no need to take out the side panel for the thermostat replacement.

Detailed Procedures:

1. Take out the oven knob from the rod of the thermostat;

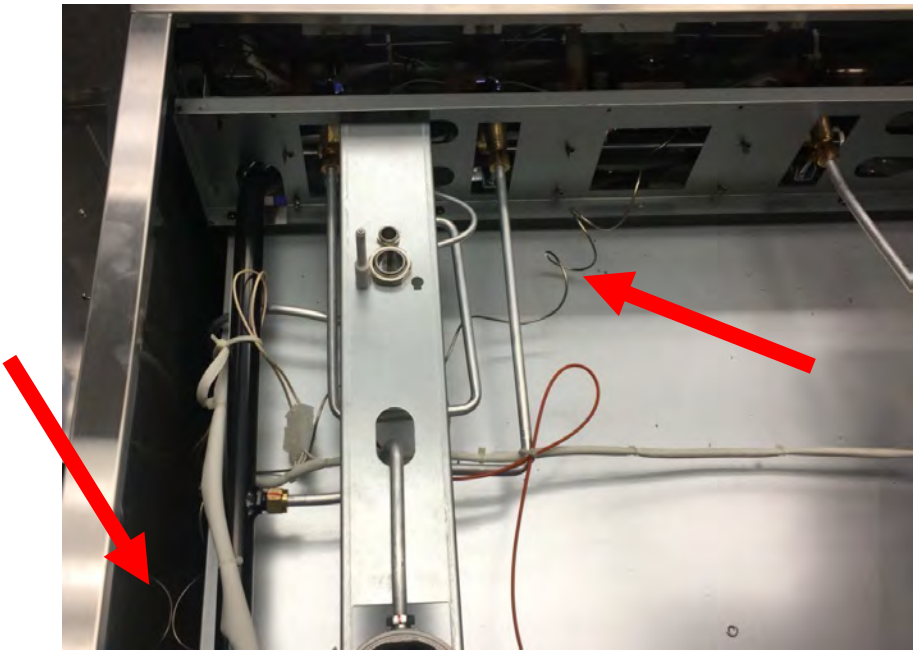
2. Remove the screws connecting control panel and thermostat;



3. Remove the screws from the backsplash/island trim, then take out the backsplash/island trim;

4. Remove the screws connecting drip pan (each single burner has two screws), then take out the drip pan to get access to the top of the oven;

5. Check the thermostat's condition, and you will see the thermostat probe line going through underneath the drip pan from the control panel to the oven inside;

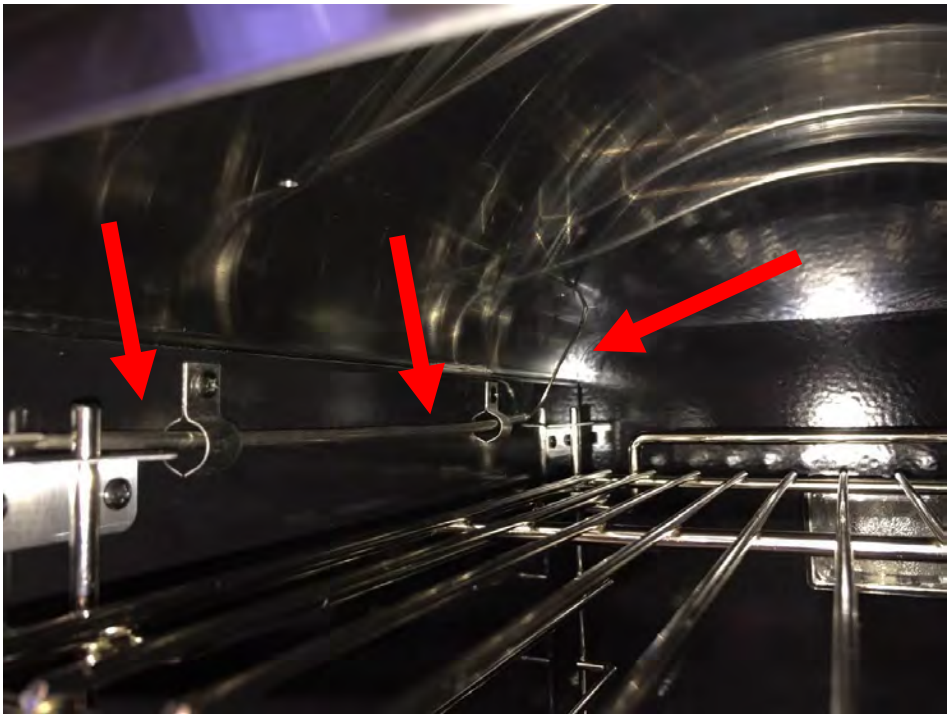


5. Remove the screws holding the thermostat's probe inside the oven;

6. Take out the probe from the hole on the oven ceiling;

7. Follow the Step 1-6 to replace the new oven thermostat.

The thermostat transferring hole for the 18-inch small oven part of 48-inch gas range/ dual fuel range (model number HRG4808U/HRG4804U/HRD4803U) :



The thermostat transferring hole for the 18-inch small oven part of 48-inch gas range/ dual fuel range (model number HRG4808U/HRG4804U/HRD4803U):

The thermostat transferring hole for the 36-inch gas range/ dual fuel range (model number HRG3618U/HRG3617U/HRG3609U/HRD3606U):

For 30-inch gas range/dual fuel range (Model Number Starting with HRG30… and HRD30…) :

The hole that let the oven thermostat's probe go through is located on the side panel of the oven. So the side panel of the range needs to be taken out.

Detailed Procedures:

1. Take out the oven knob from the rod of the thermostat;
2. Remove the screws connecting control panel and thermostat;
3. Remove the screws from the backsplash/island trim, then take out the backsplash/island trim;
4. Remove the screws connecting drip pan (each single burner has two screws), then take out the drip pan to get access to the top of the oven;
5. Check the thermostat's condition, and you will see the thermostat probe line going through underneath the drip pan from the control panel to the oven inside;
6. Take out the side panel of the range to get the access to the hole;
7. Remove the screws holding the thermostat's probe inside the oven;
8. Take out the probe from the hole on the oven side panel;
9. Follow the steps above and replace the new oven thermostat.

The thermostat transferring hole for the 30-inch gas range/ dual fuel range (model number HRG3080U/HRG3031U/HRG3026U/HRG3078U/HRD3088U) :

How to Change the Regulator Part

1) The regulator is designed and tested before shipping out from manufacturer. It's at "ON" position. Please check if there's anything blocking inside the regulator. Once checking it out, make sure the direction of the gas inlet and gas outlet. Use wrench to install the regulator part;

2) Use wrench to install the regulator, screw in the regulator clockwise to make it tight. For taking of the original regulator please screw out the regulator counterclockwise.

3) Regulator is originally with NG use. Wrong Inlet installation will cause damage to Regular which is <u>not under warranty</u>.

LP Position: Plastic Ring is away from the Cap

NG Position: Plastic Ring is next to the Cap

Thor Kitchen Range Griddle Access Info

1. How to take out the Griddle part;

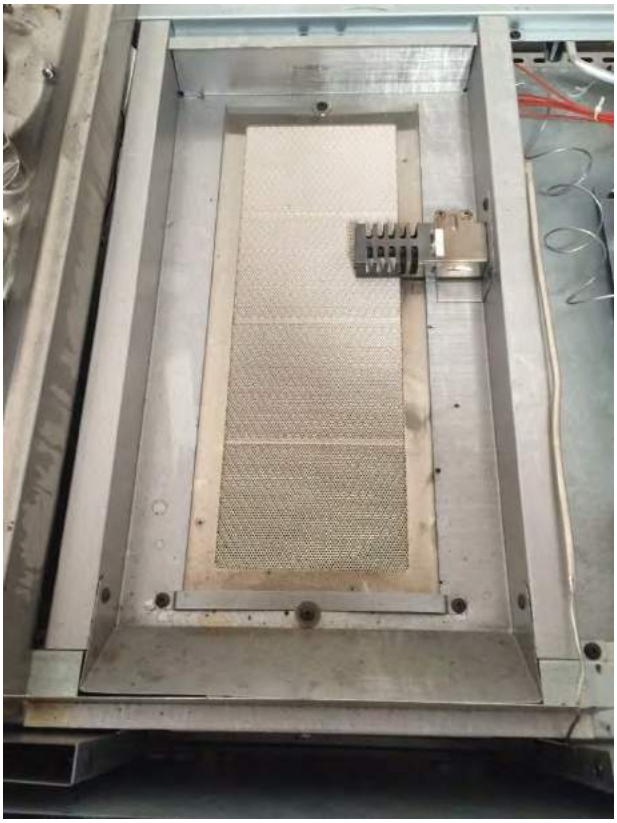
1.1 We have the Griddle part on our HRG3617U (Original Model HRG3609U), HRG4808U (Original Model HRG4804U) and HRD4803U Model.

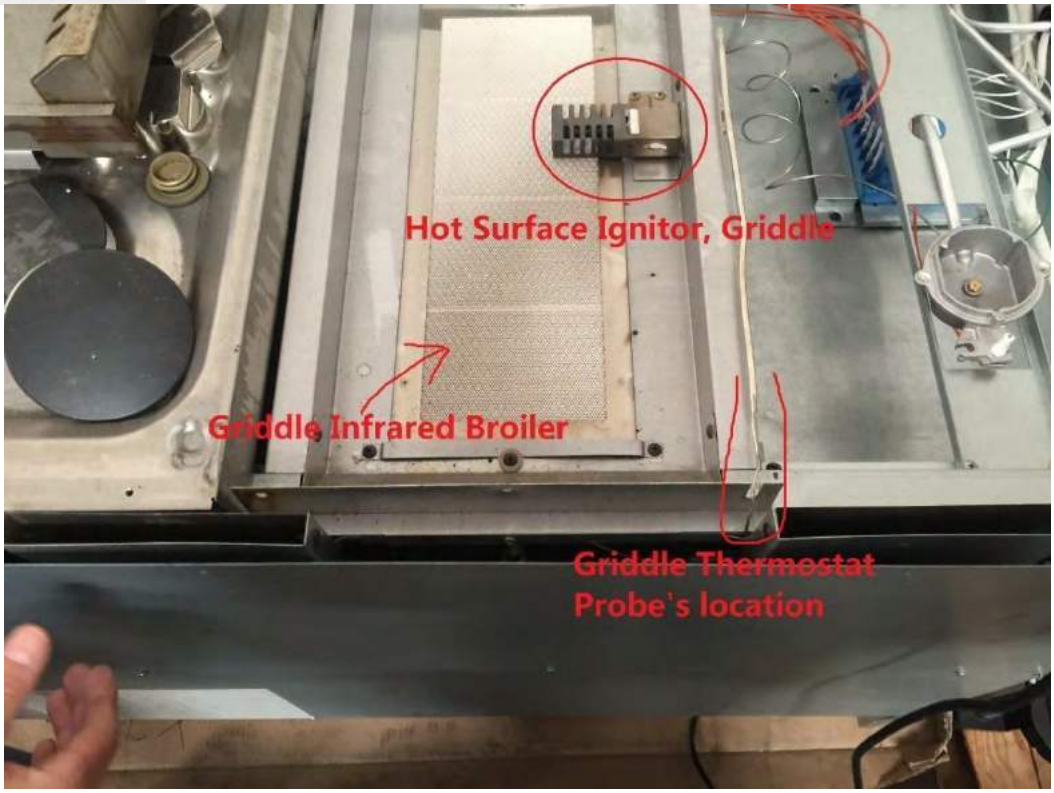
1.2 Please take out the back splash and the back panel for the range and screw out the screws on the back of the griddle part;

1.3 For the convenience, take out the control panel support on the front and the drip pans near the griddle part if the griddle is hard to be taken out (not necessary);

1.4 Be attention that the Probe for Griddle Thermostat, it goes from the back right of the griddle part, and go through the side of the Griddle.

2.What's underneath the Griddle part;





3. Where's griddle thermostat probe located;

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Burner Flame Adjustment for Thor Kitchen HRG Gas Range

****First or all, please check the orifice size for each burner, wrong orifice will cause incorrect flame condition.**

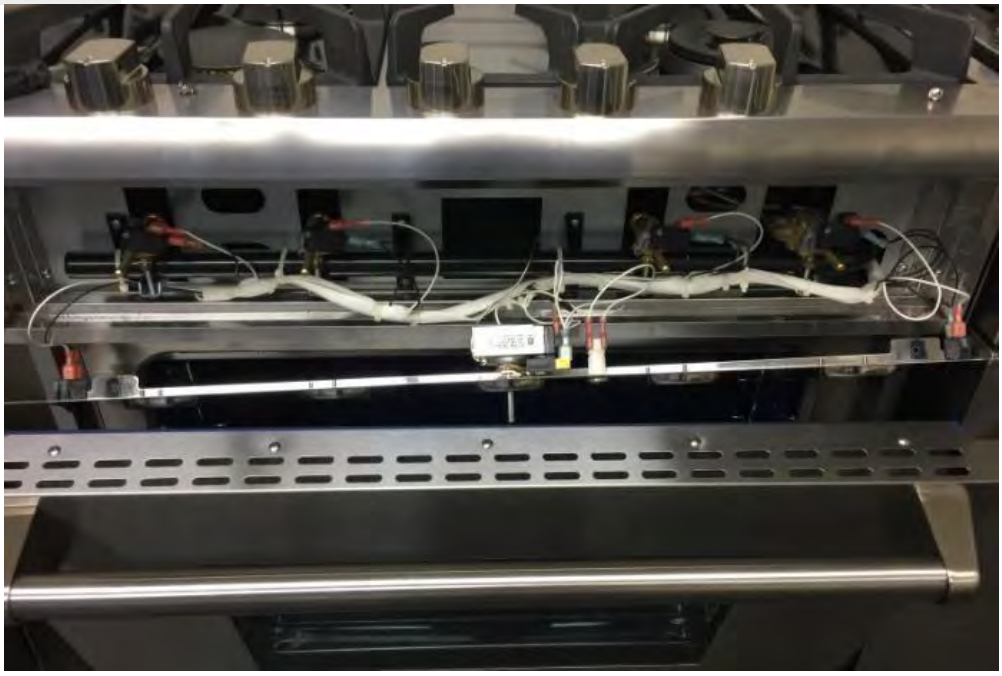
Burner Type	NG orifice diameter (mm)	LP orifice diameter (mm)
18000 BTU Single	1.88mm	1.22mm/1.24mm
12000 BTU Single	1.5mm	1.00mm
15000 BTU Dual Burner Main Orifice	1.65mm	1.1mm/1.07mm
15000 BTU Dual Burner Simmer Orifice	0.38mm	0.34mm

1. Check the condition for the range model;

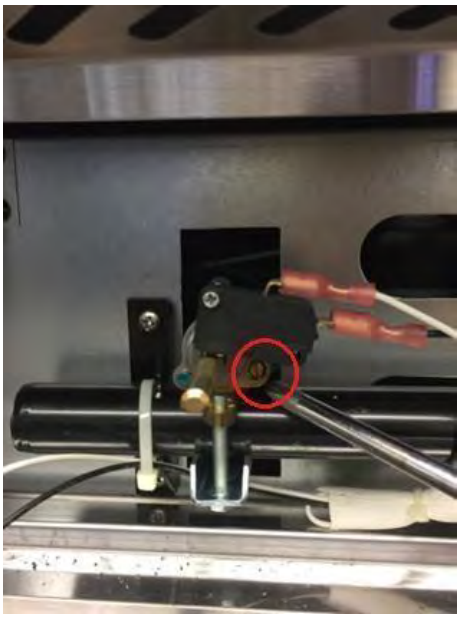
2. Take out all the knobs from the control panel;

3. Screw out the screws at the bottom of the control panel (both left side and right side);

4. Slightly take out the control panel, and be careful to the wire connection;

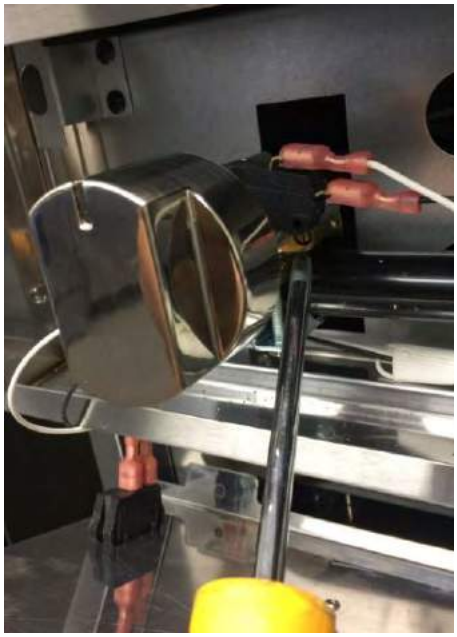


5. **For Single Burner Valve, there's one bypass orifice (shown in red circle) helping with the adjustment for the flame. Please use flat screwdriver for this adjustment;**
6. **For Dual Burner Valve, there's two bypass orifices helping with the adjustment for the flame. The bypass orifice in blue circle is for adjustment of simmer flame, while bypass orifice in red circle is for adjustment for main flame;**



Left one: Single Burner Valve; **Right one: Dual Burner Valve**

7. Detailed procedures for the flame adjustment: Please put back the knob and rotate the burner into high/middle/low/simmer position, check if the flame needs to be adjusted. If needed, take out the knob and use flat screw driver to adjust the flame.

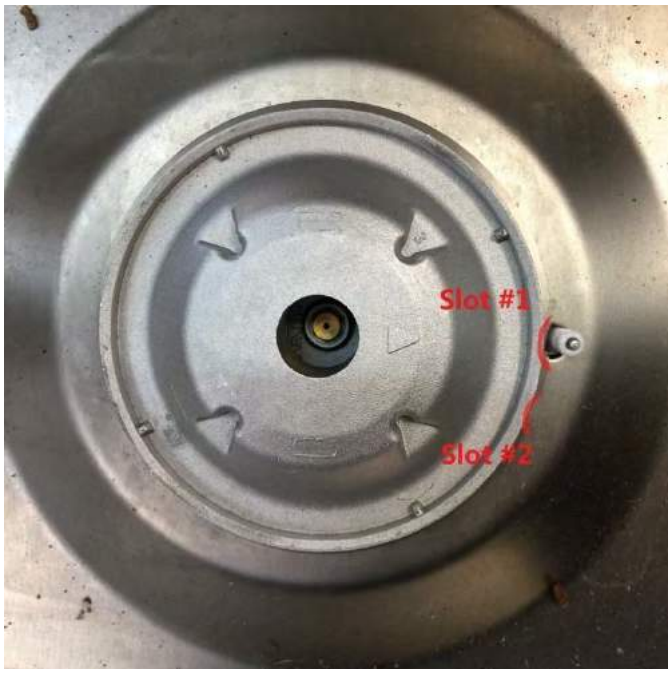


Check the location of Single Burner

1. Please find out the position of the burner supporter and the electrode;

2. There are two slots on the rim of the burner base, the front slot is adhering to the electrode;

3. When you put the burner base on the drip pan correctly, it looks like picture shown above;

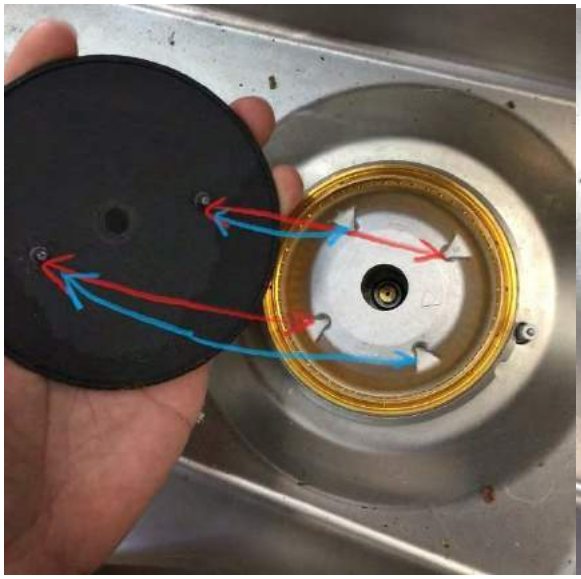


4. Please put the flame ring on the top of the burner base, and make the four slots fit with the four lugs on the burner base;

5. The correct position for flame ring and burner base is shown like this;

6. Please put the burner cap on the top of flame ring correctly, making sure that the two-supporting leg on

the burner cap will fit with the holes on the burner base.



Dual Burner Information

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Burner Cap

Flame Ring Base

Flame Ring

Burner Base

Supporting Pipe
Electrode for Dual Burner

Connection of the electrode to the burner base

How to explain hot temperature in the front part of the

range unit

Table XII
Maximum Surface Temperature, °F (°C)*

	Height Above Floor, Feet (m)			
	3 (0.9) or less		Over 3 (0.9) to 5 (1.52) or less	
Bare or painted metal	152	(66.5)	182	(83.5)
Porcelain Enamel	160	(71)	190	(88)
Glass	172	(78)	202	(94.5)
Plastic**	182	(83.5)	212	(100)

* Temperatures are based on a 77°F (25°C) room temperature. When the room temperature is other than 77°F (25°C), the temperatures are to be increased or decreased 1 degree for each degree of room temperature greater or less then 77°F (25°C).

** Includes plastic with a metal plating not more than 0.005 inch (0.13 mm) thick and metal with a plastic or vinyl covering not less than 0.005 inch (0.13 mm) thick.

1.

Inform customer that our range design is having a temperature testing standard for control panel part.

A. For the top of control panel support part (Bull Nose), we don’ t have a temperature certification on that part;

B. For control panel part, when room temperature is at 77 Degree Fahrenheit (25 Degree Celsius), the maximum temperature for the control panel support is 152 Degree Fahrenheit (66.5 Degree Celsius). If the room temperature is relative higher/lower than the standard temperature, the maximum temperature will adjust accordingly.

C.1 For the knob part on HRG gas range, when room temperature is at 77 Degree Fahrenheit (25

Degree Celsius), the maximum temperature for the control panel support is 160 Degree Fahrenheit (71 Degree Celsius). If the room temperature is relative higher/lower than the standard temperature, the maximum temperature will adjust accordingly.

C.2 For the knob part on HRD gas range, when room temperature is at 77 Degree Fahrenheit (25

Degree Celsius), the maximum temperature for the control panel support is 152 Degree Fahrenheit (66.5 Degree Celsius). If the room temperature is relative higher/lower than the standard temperature, the maximum temperature will adjust accordingly.

D. Temperature required zone: Within a height of 90 cm distance from the back of the kick panel.

2. For all the CSA standards shown below, the oven is working on a stable status of bake function with a 475 F. If customer is using broil function or is using bake function together with the top burners, this kind of situation is not covered in CSA standards.
The CSA Group (formerly the Canadian Standards Association; CSA), is a not-for-profit standards organization which develops standards in 57 areas. CSA publishes standards in print and electronic form and provides training and advisory services. All our Thor ranges are certified with CSA standard.

3. For the melting knobs: Ask customer what kind of cooking habit customer is having. Inform customer that the oven door is not allowed to be slightly open for a degree of 5 to 10 for the gas coming out. If do so, hot air inside the oven might cause damage to the knob part (knob might get melt because of this). The only method to have hot air coming out from the range is by using the backsplash/island trim.

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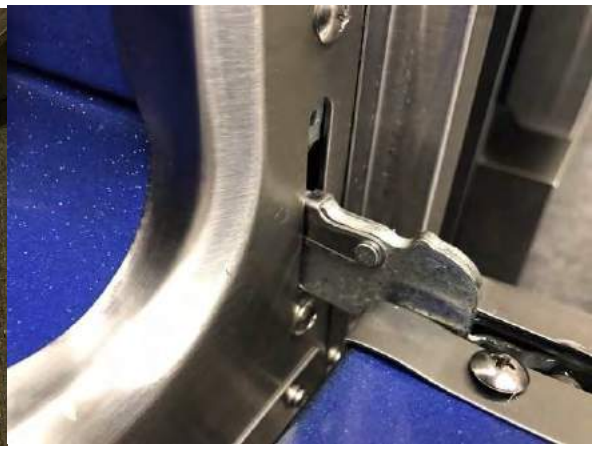
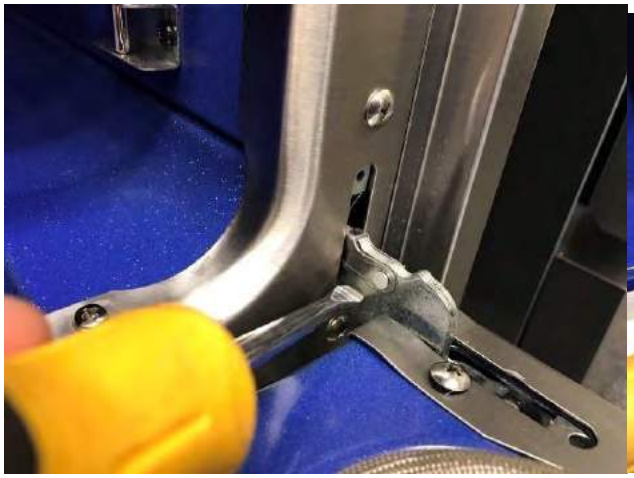
How to replace the Door Hinge / the Whole Door

1. Fully open door until it is flat.

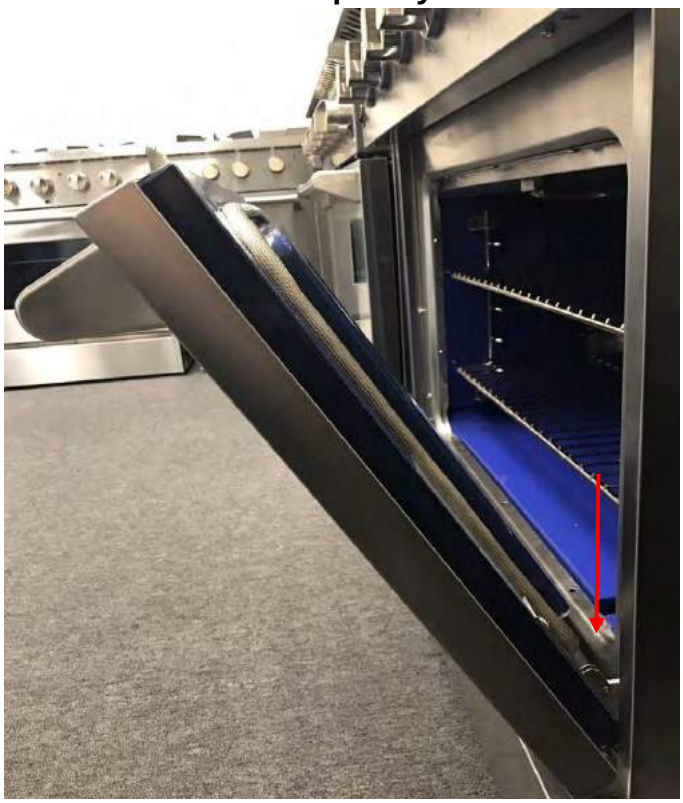



2. Use flat screw driver to lift up the clip.

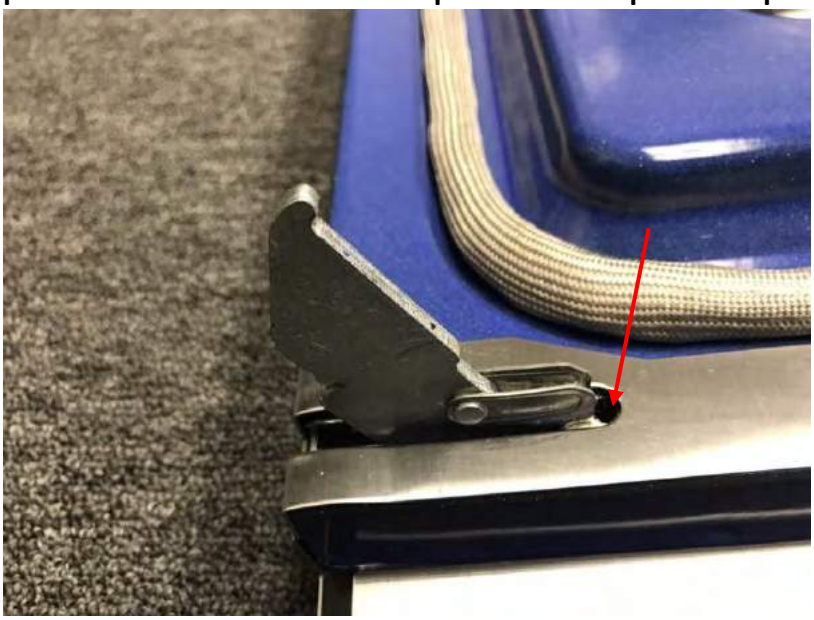


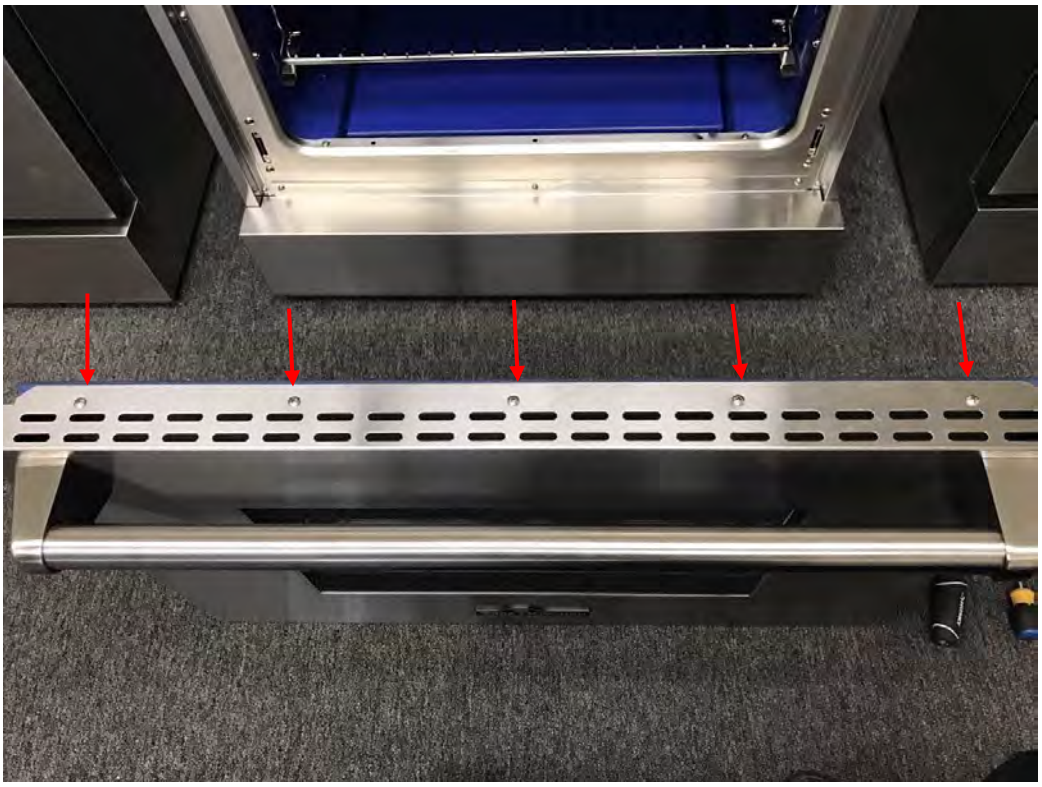
3. **Lift clips for both ends of the oven.**

4. **Lift door to the angle of the picture to hook to the oven. Keep pushing until door is almost close and lift out until door is completely out.**

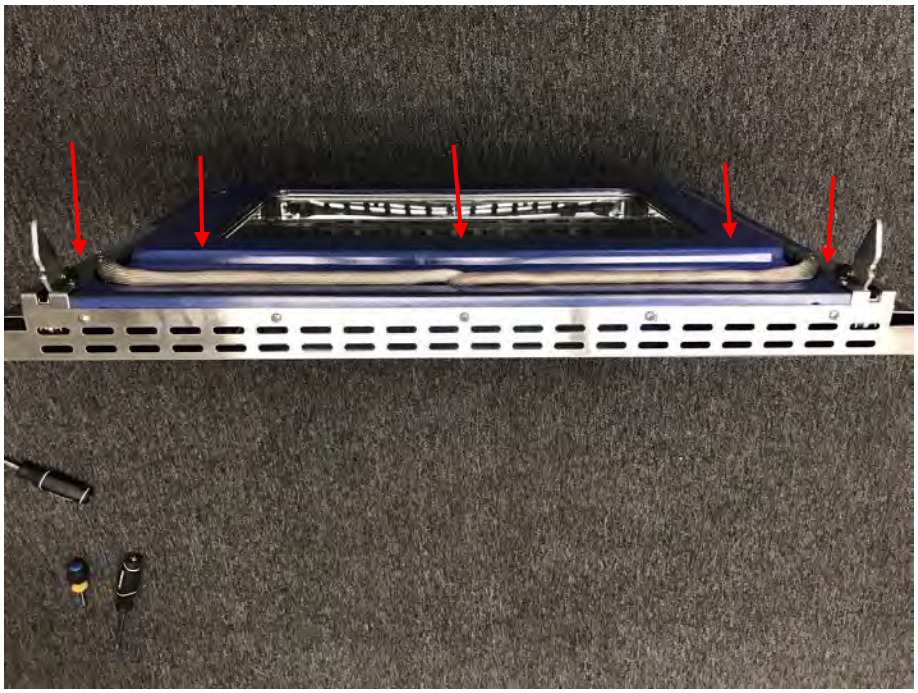


5. **NOTE: This is how the door clip should look when you take out the door. NOTE: When you put the oven door back make sure the clip and hook are all the way down and place door 45 degress to put in the oven, when both hooks are in, place door flat, if door is not flat oven was not placed in correct. When oven is placed correct put the clips back up.**





6. **(For Door Hinge Replacement) Remove all 5 screws from the top and bottom of the door.**



7. **This is the interior of the door. Turn it around and take of both screws like following picture.**

8. **After you take out the screws the hinges should come out from the back. To replace hinges, repeat steps to place everything back**

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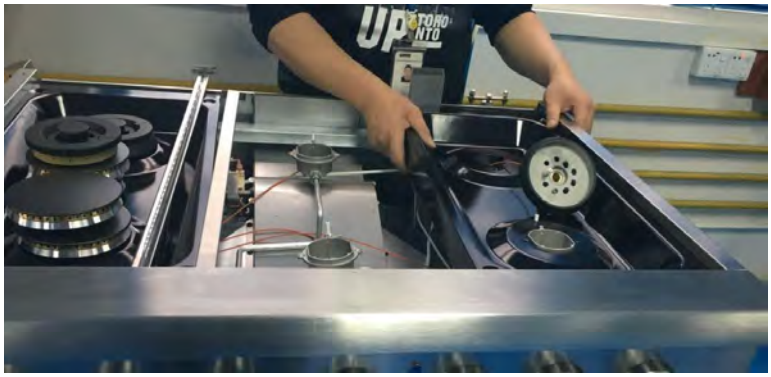
Steps for changing the Hi-Limit Protector for Thor Kitchen Dual Fuel Range

Step 1: Take off the back vent;

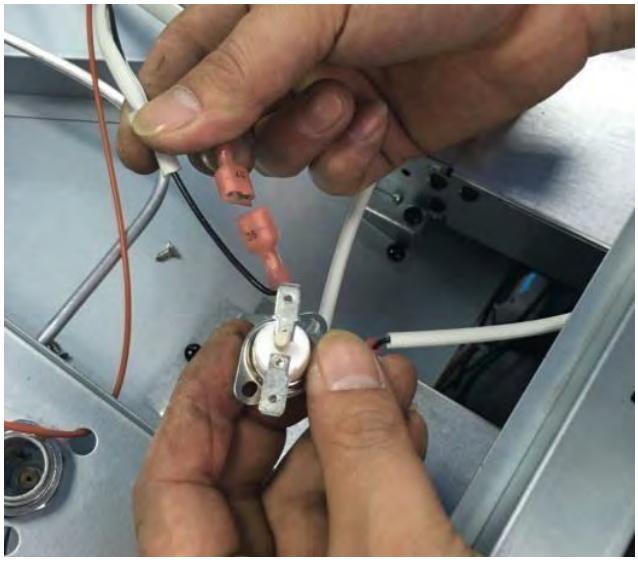
Step 2: Take out the drip pan;



Step 3: Find the old Hi-Limit Protector part;

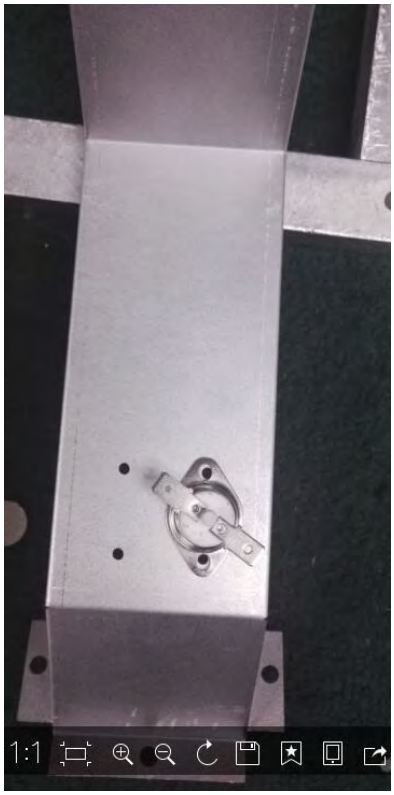
**Please see the difference between Hi-Limit Protector and the Thermistor. The connectors are different. Please see the pictures below. Mica Sheet can not be installed with the Thermistor.

Step 4：Pull out the connection part;



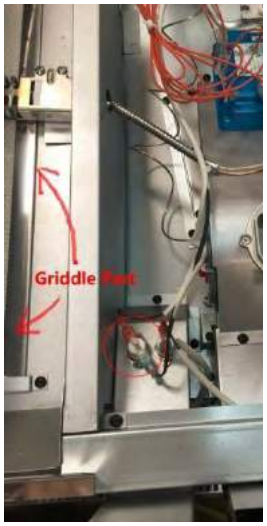
Step 5. Pull out the old Hi-Limit Protector and put the mica sheet on the surface of the flue box.

Step 6 ： Put the new Hi-Limit Protector on the top of mica sheet (For 18-inch oven in 48-inch range /30inch oven/30-inch oven on 48-inch range, use 1 pc Mica Sheet; For 36-inch range, use 2 pcs Mica Sheet). Then use 4 pcs screws to hold the position;



Step 7: Finish the wiring connection for the new Hi-Limit (Thermistor) part.

** For Our **48-inch Dual Fuel Range HRD4803U**, two Hi-Limit (Thermistor) parts need to be replaced as both 18” oven and 30” oven has one Hi-limit for the oven temperature protection. The 18” oven Hilimit is located on the right side of the griddle from the back of the range.



** For 48-inch **dual fuel range (HRD4803U)**, when the hi-limit protector is covered somehow and hard to be dismantled, please take out the flue box and the wiring connection, and then take out the hi-limit protector, then at last add the mica sheet and new hi-limit protector.

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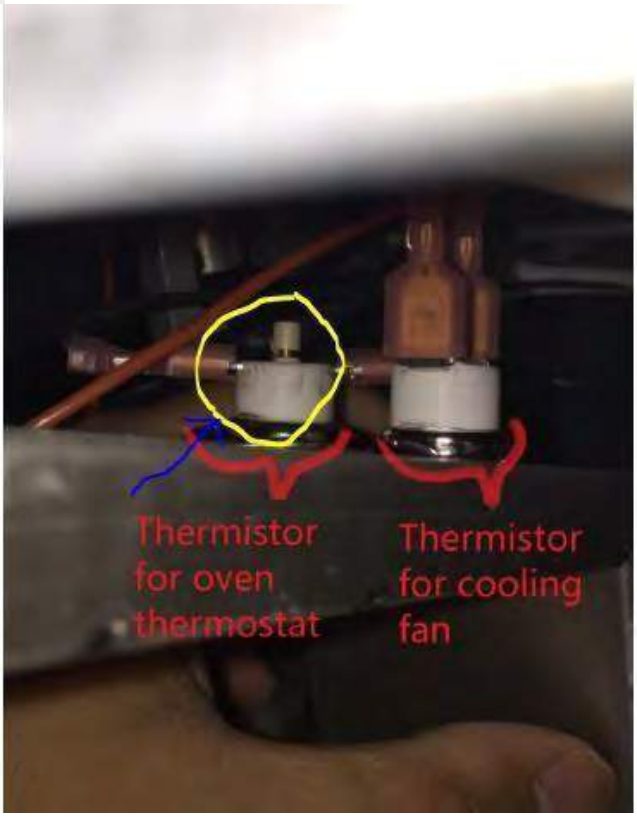
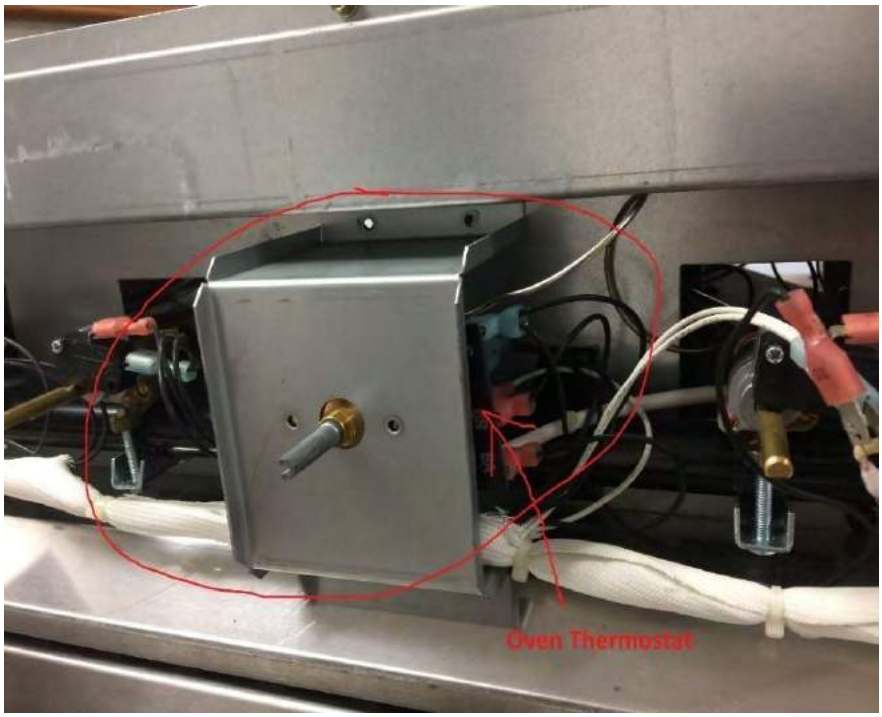
Replacement of the Electrode, Thermostat and Thermistor for HRD3606U

1. **Find out the High Temperature Protector (Thermistor for oven thermostat). It's located on the left oven flue. Please screw out the whole back panel and take out the drip pan on top of the oven flue. For the electrode, they are directly connected to the spark module part. (<u>For the routing of the electrode, please see the other document</u>).**

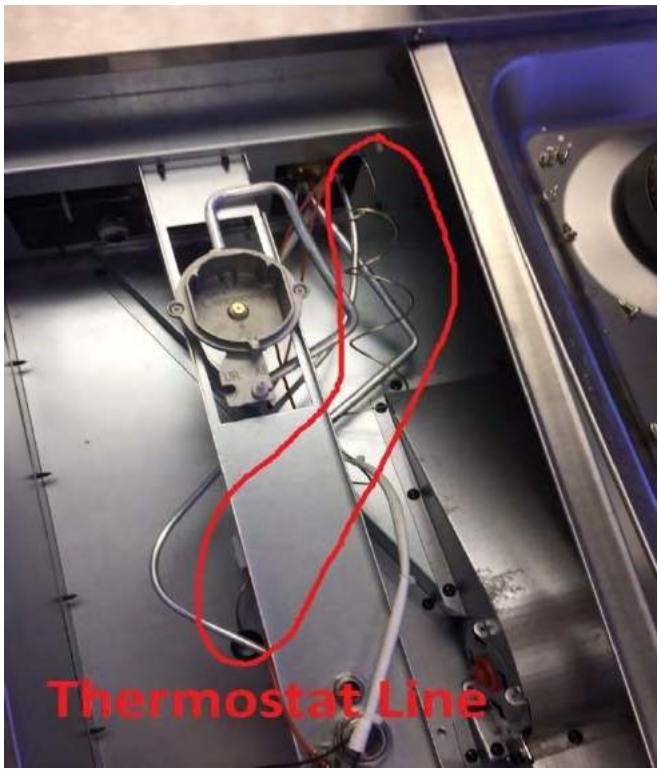
2. **Please find out the thermistor for oven thermostat.**



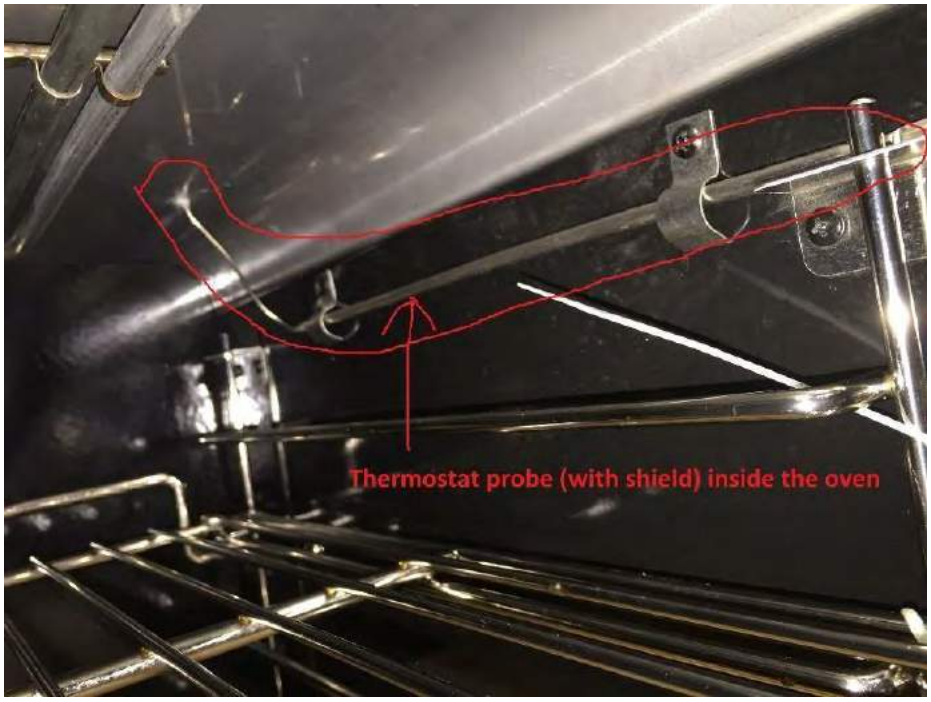
3. **Please open the front control panel and find the thermostat behind the shield.**



4. **For the probe line of the thermostat, it goes through from the ceiling of the oven body.**



5. **The thermostat probe is located on the side panel, with shield to hold it.**



How to clean your Thor Kitchen Appliances

MANUAL STEAM CLEAN INSTRUCTION:

1. Do a basic wipe clean to remove food residues that is easy to come off
2. Using a baking pan and fill with 1-2 cups of water (Do not add vinegar)
3. Place baking pan into the oven (no need pre-heat, suggest placing baking pan at lower oven rack)
4. Turn on oven and heat up to 250 F degree while slow steaming your oven for 30 mins
5. After steaming, turn off the oven and wait until oven cools down a little in order to safely remove baking pan
6. Using warm water and cleaning cloth to wipe clean the oven interior 7. Repeat step 1 through 6 for tough stains

- Frequent wiping with mild soap and water will prolong the time between major cleanings.
- DO NOT spread cold water to cool down the oven or using cold water to clean hot or warm interior porcelain surface.

STAINLESS STEEL CLEANING

1. Any stainless-steel cleaner you can find in the market is ok to use
2. Use microfiber cloth to clean stainless-steel surface to reduce possibilities of scratches
3. Be sure the follow grind on the stainless-steel surface to avoid swirl marks


REMOVE MINOR SCRATCHES ON STAINLESS STEEL SURFACE

When these is minor scratches, customer may use scotch pad to polish the stainless-steel surface. Customer must follow the direction of grind marks on stainless steel to remove scratches.

HOW TO IDENTIFY IF A STAIN ON STAINLESS STEEL SURFACE COULD BE REMOVE OR NOT

Simply use fingertip to touch the stain and see whether you can feel a raise on the surface

1. If there is a raise on the surface, the stain could be removed
2. If there is no raise on the surface, less chance to remove the stain

COMMON TOOL TO REMOVE TOUGH STAINS

Non-abrasive cleaner such as bar keepers friend is recommended.

Bar Keepers Friend is a superior cleaner that removes rust stains, baked food, discoloration stains, and scuff marks from a variety of surfaces.

Can use on both stainless steel and porcelain surface to remove tough stains.

BURNER PARTS CLEANING

Soak in hot soapy water for 20-30 minutes and use non-abrasive sponge or tooth brush to clean the burner parts

If there are still tough stains, try use magic eraser to clean the stain.

Clean your burner after each use especially when there is food spill on burners. Make sure all the parts are dry completely before your next use.

OVEN RACKS CLEANING

1. Soak your oven racks in bath top with very hot water with 1/2 cup of dishwashing soap for over night
2. Baking soda is also recommended to help remove tough stain
3. Cleaning oven racks the next day with Mr. Clean's magic eraser
4. Never use Steel brush, Steel velvet, steel wool to clean oven racks

COOKING GRATE

Too hard to clean!

Please wipe clean your cooking grate after every use to secure the life time of cooking grate.

1. For minor work, use soft plastic brush with soapy warm water to clean
2. Baking soda is also recommended to help remove tough stain
3. Do not soak your cooking grate in water
4. Bar keepers friend can be use on some tough stain

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Thor Kitchen Product Q&A Part 1

Range overall:

Q: What parts of range is 304, and what part is 430 for gas and dual? Bull nose?

A: Backsplash, Oven Frame Trim, Oven Ceiling are SS 304.

Q: What's the SS gauge on your range and range hood?

SS Gauge is between 0.6 mm to 1.0mm, The SS Gauge for Griddle is 1.5mm.

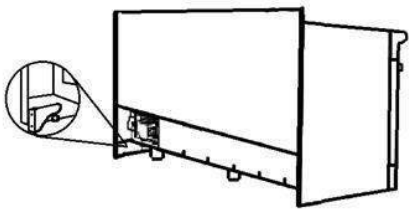
Q: How do you pull out the range from cabinet to do the service?

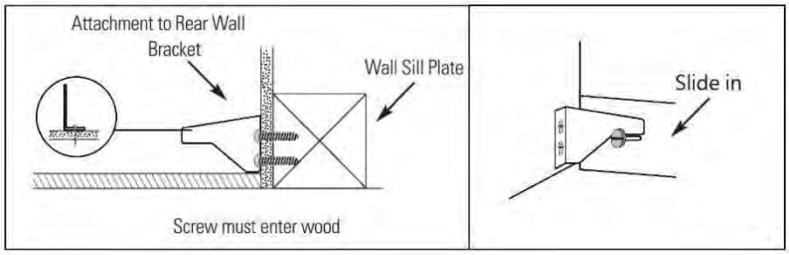
One can not directly pull the oven door, oven handle, or kick plate part. Please open the oven door and pull out the range by holding the oven frame.

Q: How do you install the anti-tip bracket?

Please see pictures shown below:

We are 1 pc anti-tip bracket for gas range models, and 2 pcs anti-tip bracket for dual fuel range models.



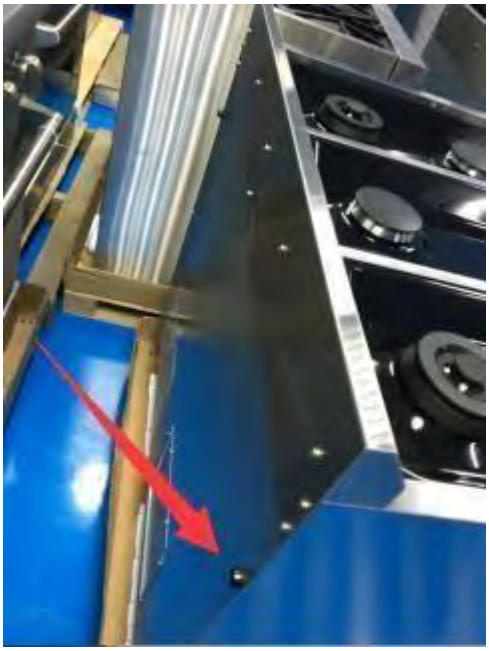


Q: What is the side clearance of range?

A: Half-inch.

Q: What is the back clearance of range with the wall?

A: About 10mm.



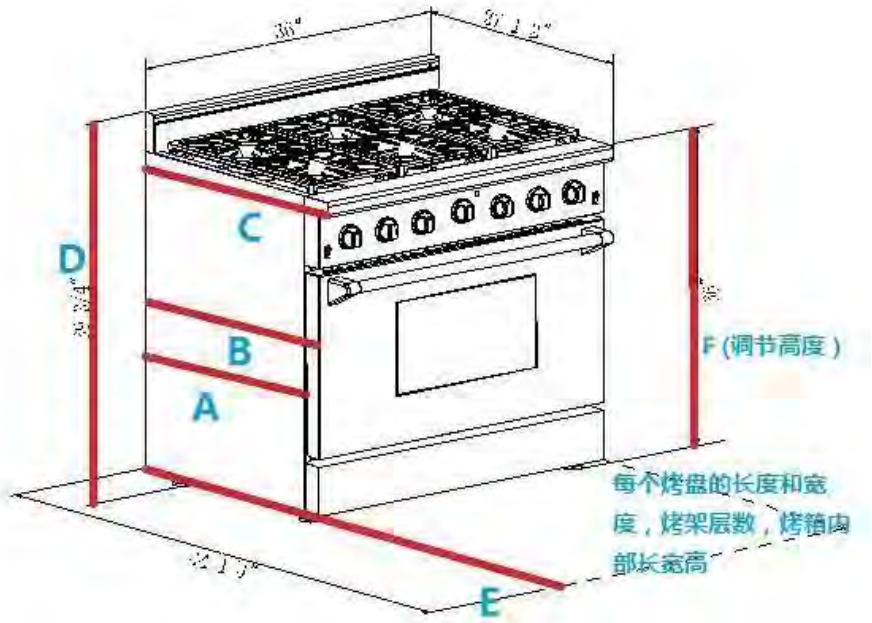
Q: Where are the ranges manufactured?

A: Ranges are assembled in China. The gas valve is sourced from Spain, the thermostat and hot surface ignitor are sourced from America, the single burner is sourced from Italy.

Q: What are the exact dimension of range?

For HRG Gas Range Model

A: 23.75 inches, B: 26 inches, C: 27.5 inches, D: 39 inches, E: 44.25 inches, F: 35.5 inches – 36.5 inches



Cook top:

Q: What's the BTU on high, medium, and low for 18K, 15K, and 12K BTU?

18K BTU Single Burner: High 18K BTU, low 2K BTU;

15K BTU Single Burner: High 15K BTU, Medium 5K BTU, Low 1300 BTU, simmer 650 BTU; 12K BTU

Single Burner: High 12K BTU, Low 2K BTU.

Q: Why is the central area drip cover Stainless Steel?

A: We provide stainless steel drip cover on our HRD/HRG models to provide the professional Stainless Steel outlook and stainless steel is easy to clean.

Q: Why are there only 4 burners on 30" while other manufactures have 5 burners?

A: We are providing great BTU performance so that 4 burners on 30" can already provide the great cooking experiences for your professional home cooking.

Q: What material do you recommend for cabinetry base?

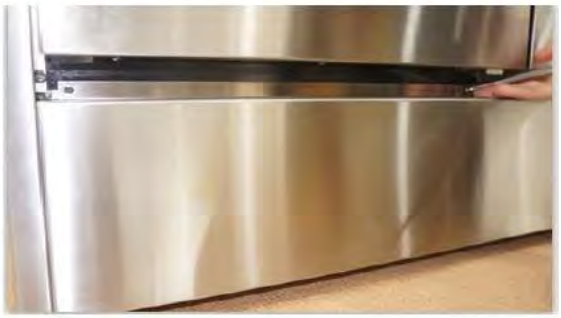
Non-combustible material is suggested. Usually we suggest customer with ceramic base.

Q: Where is the gas line located?

A: Back Bottom left side for gas range, Front bottom right side for dual fuel range

For Gas Range, the regulator is located on the left bottom of the back panel;

For Dual Fuel Range, the regulator is located on the right side inside the kick panel.



For 30-inch gas range and 36-inch gas range, connect the gas line (adaptor) to the gas inlet but not the cap for NG/LP Conversion;

For 48-inch gas range, connect the gas line (adaptor) to the gas inlet but not the cap for NG/LP Conversion

Control Panel:

Q: What's the material of your knobs?

A: Gas is chrome plated ABS knob, and dual fuel is Zinc alloy metal knob.

Q: What's the temperature on control panel and bull nose?

A: There's temperature requirement for the control panel and knob, but not for control panel support (bullnose);

B: Control Panel Part: When Room Temperature is at 77 F (25 C), 150 F (65.56 C) will be the maximum temperature. This standard varies when room Temperature is changing. For example, if room temperature is 79 F, then the maximum temperature should be 150 F + (79-77) F.

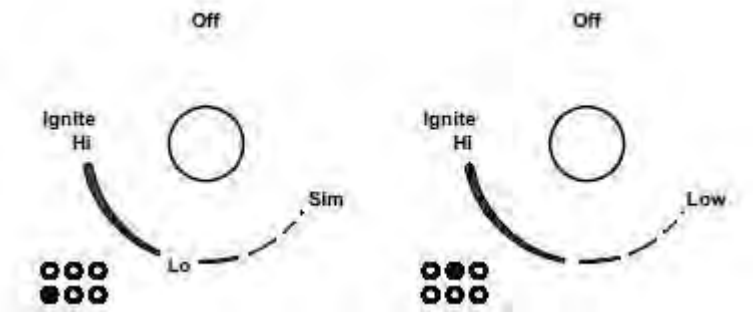
C. Knob Part: When Room Temperature is at 77 F (25 C), 158 F (73.89 C) will be the maximum temperature. This standard varies when room Temperature is changing.

There's a temperature requirement for the front of the range under the height of 914 mm.

Q: Why does it show simmer on the knob when it doesn't have simmer function?

A: We will update it into Low function instead of Simmer function.

Left printing is for dual burner with simmer function, Right printing is for single burner without simmer function (so only low will be shown). This is for the further design.



Q: What's the oven temperature variation when you set a specific temperature. For example 400F?

A: Standard temperature range is between 385 F to 415 F.

Oven:

Q: What's the temperature for broil function?

A: Around 566 F.

Q: Why is oven frame SS for gas and porcelain for dual fuel?

A: Just for the differentiation for different model type.

Q: How many layers of glasses on oven door?

A: 3 layers to keep the heat inside and make sure the temperature does not get too hot on the oven door.

Q: How long does it take for oven to reach 300F, 350F, 400F, and 450F?

A: It depends on your model. Usually 20 mins to reach 350 F.

Q: Will convection fan and bake function shut off automatically when you turn on broil function for dual fuel?

A: For both Gas Range and Dual Fuel Range. Yes it is.

Q: How do you clean the window on the oven door?

Q: Are the ovens self-cleaning?

A: No, but you can place a baking pan, add 2-3 cups of water, turn on oven to 250F from 30-40 min (slowsteam). Let cool down and then wipe interior. Recommend product *magic eraser (target) .

Q: What are the exact dimensions of the interior oven? What's the dimension of the oven rack? What type of material do we use for the oven racks?

A: 1) Oven interior Dimension

30" oven: 610*407.5*475mm

36" oven: 760*407.5*475mm

48" oven: 30" oven 610*407.5*475mm 18"oven 348.5*407.5*475mm

2) 5 levels for the oven rack 3) Oven rack dimension:

30" oven rack 583*401mm

36" oven rack 731*401mm

48"oven: 30" oven rack: 583*401mm ,18" oven rack: 321*401mm 4) Rack

Material: Nickle Plated Rack