



GAS CONVERSION / HIGH-ALTITUDE KITS

SELF-CLEAN GAS RANGES - CGSR / GSCR

MANUAL-CLEAN GAS RANGES - MCOR / MCR

GAS RANGETOPS - CGRT / GRT

INSTALLATION INSTRUCTIONS

*** * FOR SERVICE PERSONNEL ONLY * ***

THE INSTRUCTIONS HEREIN MUST ONLY BE PERFORMED BY A QUALIFIED SERVICE TECHNICIAN. THE APPLIANCE MUST BE COMPLETELY COOL AND THE GAS SOURCE MUST BE SHUT OFF OR REMOVED BEFORE ATTEMPTING GAS CONVERSION. DEPENDING ON THE MODEL, ACCESS TO THE REAR OF THE UNIT MAY BE NEEDED.

READ ALL INSTRUCTIONS BEFORE YOU BEGIN.

⚠️ WARNING

IF THE INFORMATION IN THIS MANUAL IS NOT FOLLOWED EXACTLY, A FIRE OR EXPLOSION MAY RESULT CAUSING PROPERTY DAMAGE, PERSONAL INJURY, OR DEATH.

Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

WHAT TO DO IF YOU SMELL GAS:

1. Do not try and light any appliance.
2. Do not touch any electrical switch.
3. Do not use any phone in your building.
4. Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
5. If you cannot reach your gas supplier, call the fire department.

Installation and service must be performed by a qualified installer, service agency, or the gas supplier.

READ THESE INSTRUCTIONS CAREFULLY AND COMPLETELY BEFORE USING YOUR APPLIANCE TO REDUCE THE RISK OF FIRE, BURN HAZARD, OR OTHER INJURY.

KEEP THIS MANUAL FOR FUTURE REFERENCE.

⚠️ WARNING

FLAMMABLE GAS - Disconnect all Natural or Propane (LP) gas supplies to this unit before servicing.

ELECTRICAL HAZARD - Disconnect all power supplies to this unit before servicing.

⚠️ WARNING

This conversion kit shall be installed by a qualified service agency in accordance with the manufacturer's instructions and all applicable codes and requirements of the authority having jurisdiction. If the information in these instructions is not followed exactly, a fire, explosion or production of carbon monoxide may result causing property damage, personal injury or loss of life. The qualified service agency is responsible for the proper installation of this kit. The installation is not proper and complete until the operation of the converted appliance is checked as specified in the manufacturer's instructions supplied with the kit.

Some parts inside your appliance have sharp edges and care must be taken when handling the various components to avoid personal injury. Wear gloves when handling. Have a fire extinguisher nearby.

TOOLS REQUIRED:

Work gloves

Safety glasses

Phillips screwdriver

Flat-blade screwdriver with 1/16" - 3/32" [1.5-2mm] wide blade

Pipe wrench or large slip-joint pliers

Locking pliers

Socket wrench with 9/32" or 7mm socket, 13/16" socket, 1/2" deep socket

Open end or combination wrenches (1/2", 7/8")

SAFETY DEFINITIONS

⚠️ WARNING

THIS INDICATES THAT DEATH OR SERIOUS INJURY MAY OCCUR AS A RESULT OF NOT OBSERVING THIS WARNING.

⚠️ CAUTION

THIS INDICATES THAT MINOR OR MODERATE INJURY MAY OCCUR AS A RESULT OF NOT OBSERVING THIS WARNING.

NOTICE

THIS INDICATES THAT DAMAGE TO THE APPLIANCE OR PROPERTY MAY OCCUR AS A RESULT OF NOT OBSERVING THIS WARNING.

INSTALLER: LEAVE THIS MANUAL WITH THE OWNER OF THE APPLIANCE.
HOMEOWNER: RETAIN THIS MANUAL FOR FUTURE REFERENCE.

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SAFETY PRECAUTIONS - BEFORE YOU BEGIN

⚠️ WARNING

BURN HAZARD

All parts of the appliance can get very hot during operation. Allow the unit to cool down completely before servicing.

ELECTRICAL SHOCK HAZARD

Disconnect power before installing or servicing appliance. Before turning power ON, be sure all controls are in the "OFF" position. Failure to do so can result in electrical shock or death.

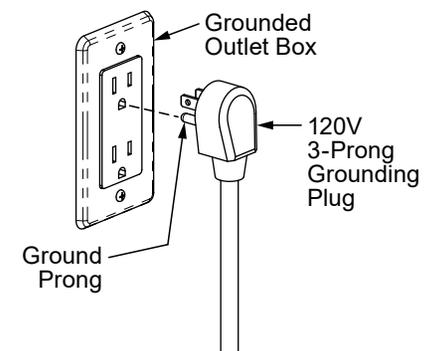
ELECTRICAL GROUNDING

This appliance must be grounded. Grounding reduces the risk of electric shock in the event of a short circuit. Read the ELECTRICAL CONNECTIONS section of the INSTALLATION INSTRUCTIONS section for complete instructions.

This appliance is equipped with a 3-prong grounding plug for your protection against shock hazard and should be plugged directly into a properly grounded receptacle. Do not cut or remove the grounding prong from this plug.

BASIC SAFETY

Move the range away from the wall to gain access to certain components. Get assistance from another person to move the range. Protect the flooring in front of the range. Shut off the gas at the valve on the wall behind the appliance.



KIT MODEL NUMBERS

ORIFICE KITS

APPLIANCE TYPE	APPLIANCE MODEL #	NG to LP CONVERSION KIT	LP to NG CONVERSION KIT	NG HIGH ALTITUDE KIT 2000 - 6000 ft. [600 - 1800 m]	LP HIGH ALTITUDE KIT 2000 - 6000 ft. [600 - 1800 m]
RANGE (SELF CLEAN - OPEN BURNERS)	CGSR 30", 36", 48", 60"	CGSRCKN-L	CGSRCKL-N	CGSRHA-N	CGSRHA-L
RANGE (SELF CLEAN - SEALED BURNERS)	GSCR 30", 36", 48", 60"	GSCRCKN-L	GSCRCKL-N	GSCRHA-N	GSCRHA-L
RANGE (MANUAL CLEAN - OPEN BURNERS)	MCOR 30", 36", 48"	MCORCKN-L	MCORCKL-N	MCORHA-N	MCORHA-L
RANGE (MANUAL CLEAN - SEALED BURNERS)	MCR 30", 36", 48"	MCRCKN-L	MCRCKL-N	MCRHA-N	MCRHA-L
RANGETOP (OPEN BURNERS)	CGRT 30", 36", 48", 60"	CGRT-CKN-L	CGRT-CKL-N	CGRT-HA-N	CGRT-HA-L
RANGETOP (SEALED BURNERS)	GRT 30", 36", 48", 60"	RT-CKN-L	RT-CKL-N	RT-HA-N	RT-HA-L

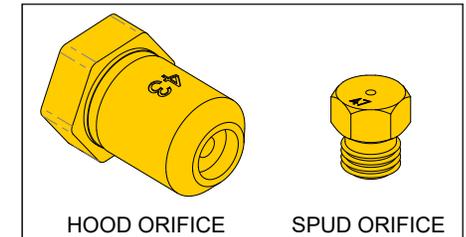
ABOUT YOUR KIT

Due to the many variations of rangetops available (surface burners, griddles, grills, woks), the kit is supplied with orifices to cover all these possible models. In other words, if your range/rangetop does not have a griddle, you will skip over that section of the manual, and you will not use the orifice supplied for the griddle. Please refer to the tables in each section of this manual to choose the correct orifice for each application.

It is very important that each orifice be replaced with the correct size as per these instructions. Incorrect orifices could result in poor cooking performance, too large or small flame, poor combustion, etc. It is recommended that you replace one orifice at a time to avoid mixing up orifices.

All orifices must be fully seated and tight to reduce the chance of a gas leak. DO NOT USE any sealant, pipe dope, Teflon tape, or anything else on the orifice threads.

There are 2 types of orifices. The hood orifices are used everywhere except on Sealed or Wok burners. The orifice size is stamped on each orifice.



ABOUT FLEX HOSES

If you need to disconnect any hoses during this process, use caution to avoid unnecessarily bending, twisting, or kinking the hoses. The hoses used are made of corrugated flexible stainless steel which can become brittle with age and can crack if handled roughly. Disconnect the fitting carefully where necessary. You will also perform a complete gas leakage test at the end of this procedure.

If you feel there is a good chance a hose will crack, do not begin this process unless you have replacement hoses. All parts are available by contacting Capital customer service.

ORIFICE CHANGE - RANGETOP SECTIONS

GAS RANGETOP w/ OPEN BURNERS

These models are equipped with restaurant-style Power-Flame™ open burners made of heavy-duty cast iron bases with aluminum burner caps.

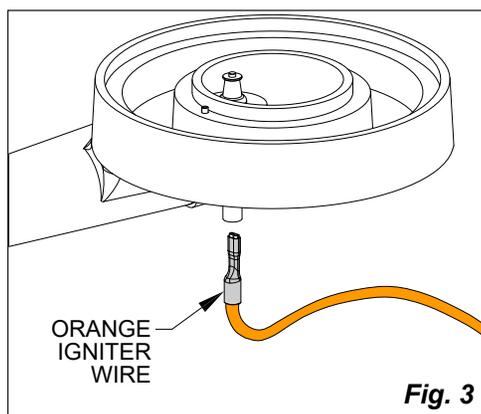
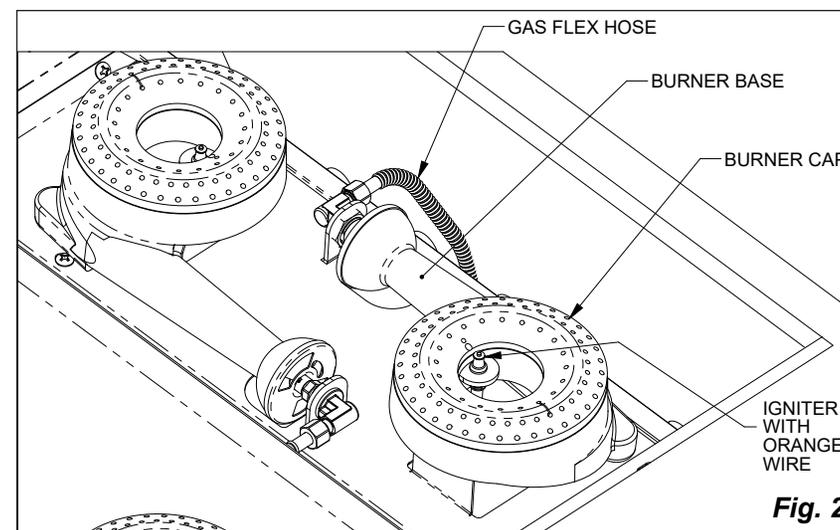
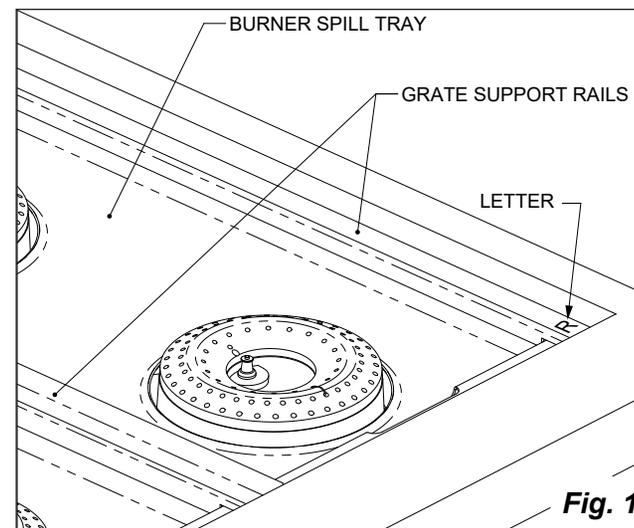
1. Remove the heavy cast iron grates and set aside.
2. Remove the grate support rails and set aside. Please note the letter (L or R) to help you return these rails to the correct location. (Fig. 1)
3. Remove the burner spill tray. (Fig. 1)
4. Remove the aluminum burner cap and set aside.
5. Carefully lift out the burner base a few inches and disconnect the orange igniter wire beneath. Use care so you don't break the ceramic igniter. (Fig. 2 & 3)



8000 BTU/Hr Small Pan Burner



25000 BTU/Hr Open Burner



ORIFICE CHANGE - RANGETOP SECTIONS (CONTINUED)

6. With the burner removed, you can now replace the orifice. Make a note of how many threads you can see at the base of the orifice. Install the new orifice to roughly this same distance. (Fig. 4)
7. Use a 1/2" wrench or locking pliers to prevent the brass elbow from rotating and a 1/2" socket wrench to remove the orifice. Try not to disturb the gas flex hose. There is a large locknut just below the orifice which must remain tight against the bracket. (Fig. 5)
8. Installation is the reverse of this procedure. Do not use any pipe dope or sealant on the threads. Install the new orifice slowly to avoid cross-threading and damaging the threads. Consult the table below for identification of orifice sizes. The orifice will become noticeably harder to turn as you proceed. Use the same technique as shown in step 7 to prevent the elbow from rotating. Check to make sure the locknut is tight against the bracket, and the orifice must be roughly in the same position as mentioned in step 6. Reattach the flex hose (if removed).
9. Reconnect the igniter wire and reinstall the burner base and cap. Use the alignment notches and/or pins on the burner base to help with proper alignment. Incorrect alignment will produce a potentially dangerous flame and poor burner performance.
10. The air shutter will require adjustment. This will be explained in the AIR SHUTTER ADJUSTMENT section. Do not reinstall any other components until the shutter adjustment and leak tests are completed.
11. Repeat this procedure for the remaining Open Burner orifices.

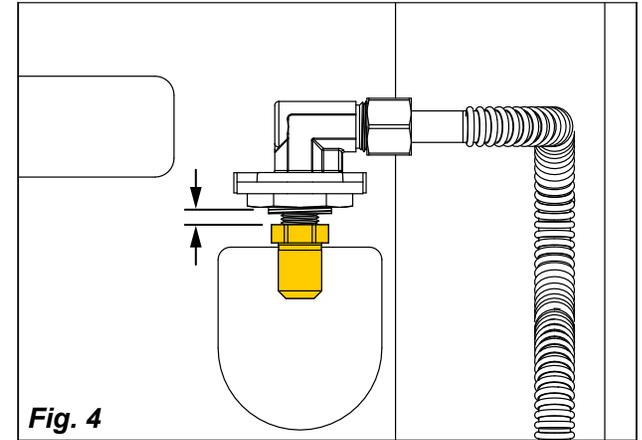


Fig. 4

RANGETOP ORIFICES			BURNER OUTPUT (BTU/hr.)		ALTITUDE	ORIFICE INFO	
RANGE/RANGETOP MODEL FAMILY	BURNER LOCATION	BURNER TYPE	NG	LP		NG ORIFICE SIZE	LP ORIFICE SIZE
MCOR, CGSR, CGRT	FRONT	OPEN	25000	25000	Sea Level - 1999 ft. [600 m]	43	1.45mm
	REAR	OPEN	25000	25000		43	1.45mm
	REAR LEFT	OPEN - SMALL PAN	8000	8000		56	70
	FRONT	OPEN	25000	25000	2000 - 6000 ft. [600 - 1800 m]	45	54
	REAR	OPEN	25000	25000		45	54
	REAR LEFT	OPEN - SMALL PAN	8000	8000		57	71

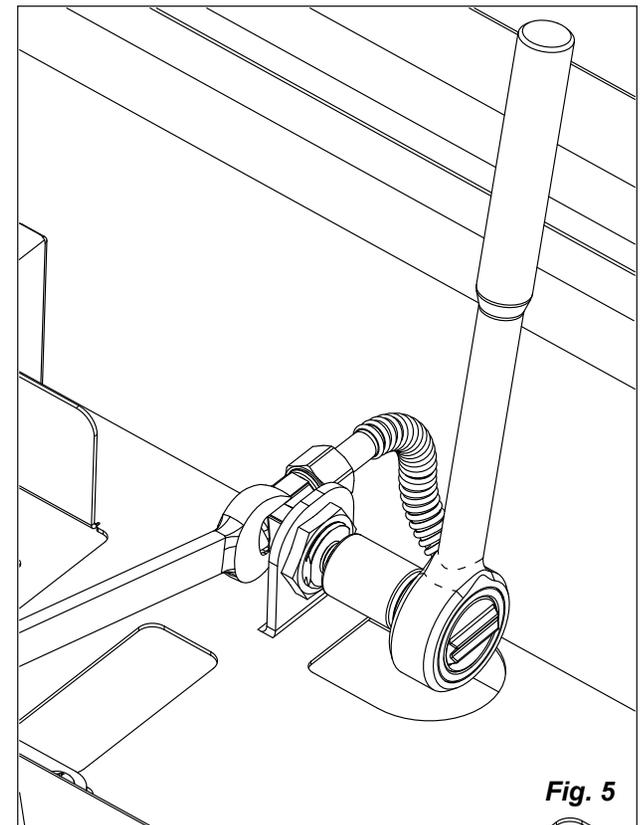
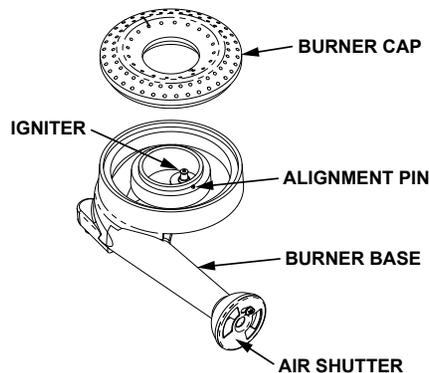


Fig. 5

ORIFICE CHANGE - RANGETOP SECTIONS (CONTINUED)

GAS RANGETOP w/ SEALED BURNERS

These models are equipped with modern Accu-Heat™ sealed burners made of aluminum alloy with solid brass burner caps.

1. Remove the cast iron grates and set aside.
2. Remove the burner cap and simmer retention ring and set aside. (Fig. 1)
3. Using a 13/16" socket wrench, remove the brass venturi tube and set aside. (Fig. 2)



19000 BTU/Hr Sealed Burner

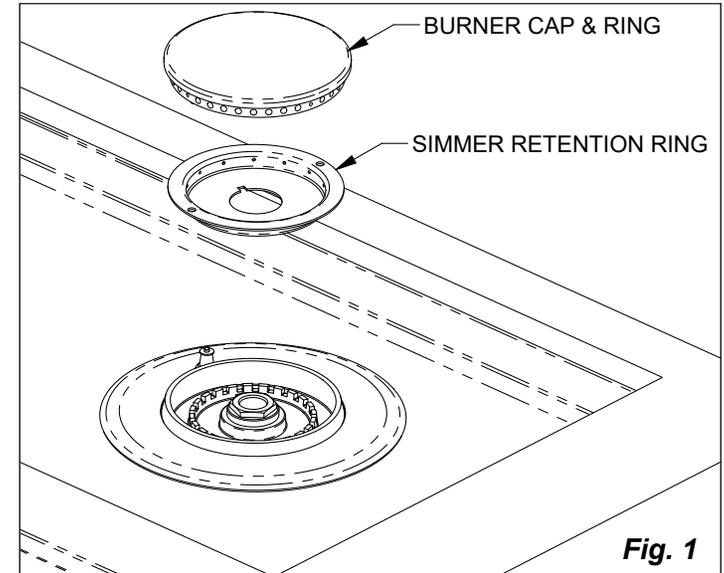


Fig. 1

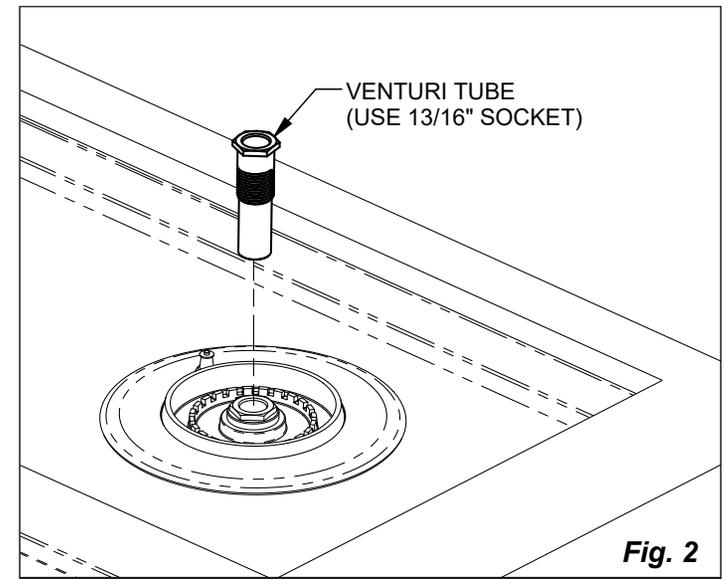


Fig. 2

ORIFICE CHANGE - RANGETOP SECTIONS (CONTINUED)

- Using a 9/32" or 7mm socket or a nut-driver, insert something sticky like a piece of tape into the socket to help prevent the orifice from falling out as you extract it. CAREFULLY unscrew and remove the orifice. If the orifice should fall through, you may have a very difficult time getting it out again. (Fig. 3)
- Installation is the reverse of this procedure. Do not use any pipe dope or sealant on the threads. Install the new orifice slowly to avoid cross-threading and damaging the threads. Consult the table below for identification of orifice sizes.
- Reinstall the venturi tube, simmer retention ring, and burner cap. Use the alignment notches and/or pins on the burner base to help with proper alignment. Incorrect alignment will produce a potentially dangerous flame and poor burner performance.
- Repeat this procedure for the remaining Sealed Burner orifices.

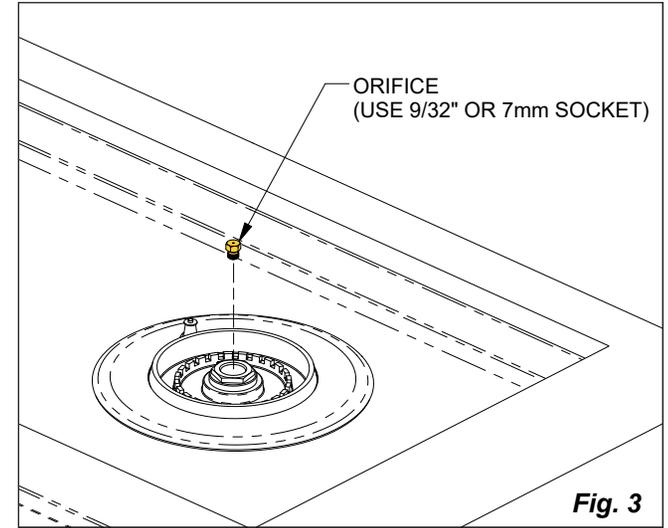
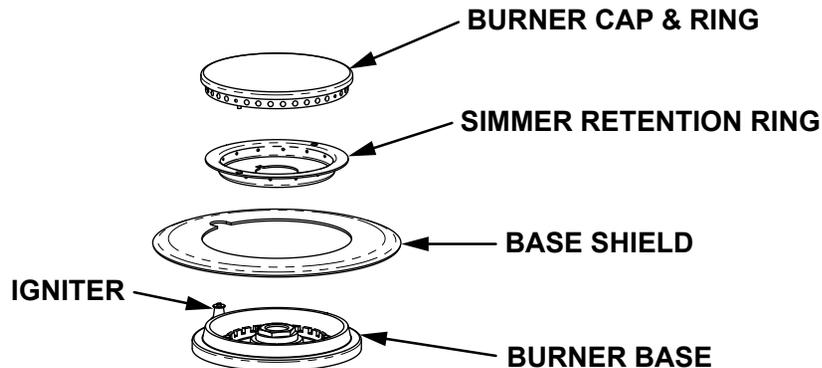


Fig. 3

RANGETOP ORIFICES

RANGE/RANGETOP MODEL FAMILY	BURNER LOCATION	BURNER TYPE	BURNER OUTPUT (BTU/hr.)		ALTITUDE	ORIFICE INFO	
			NG	LP		NG ORIFICE SIZE	LP ORIFICE SIZE
MCR, GSCR, GRT	FRONT	SEALED - Med.	19000	19000	Sea Level - 1999 ft. [600 m]	47	55
	REAR	SEALED - Med.	19000	19000		47	55
	FRONT	SEALED - Med.	19000	19000	2000 - 6000 ft. [600 - 1800 m]	49	56
	REAR	SEALED - Med.	19000	19000		49	56

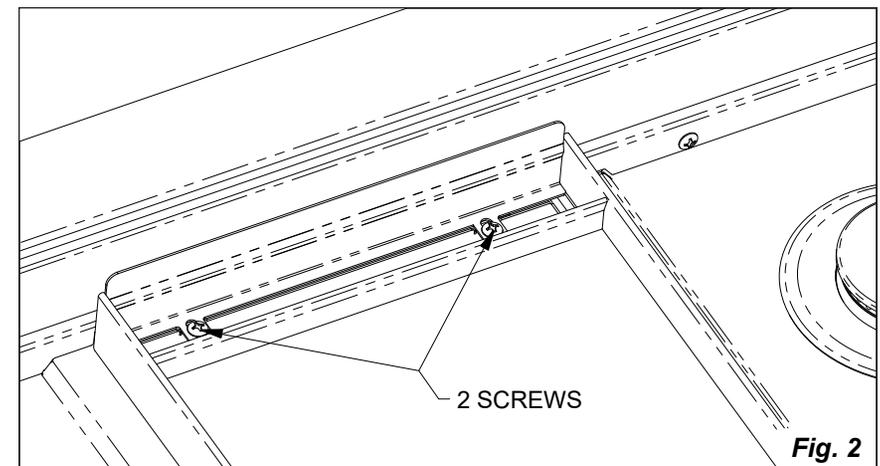
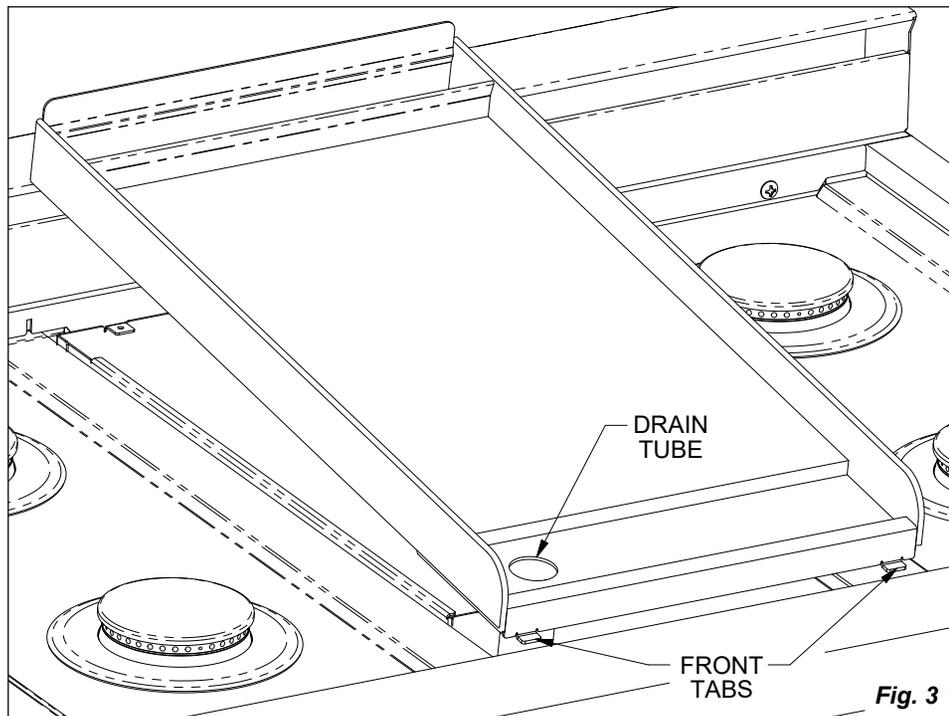
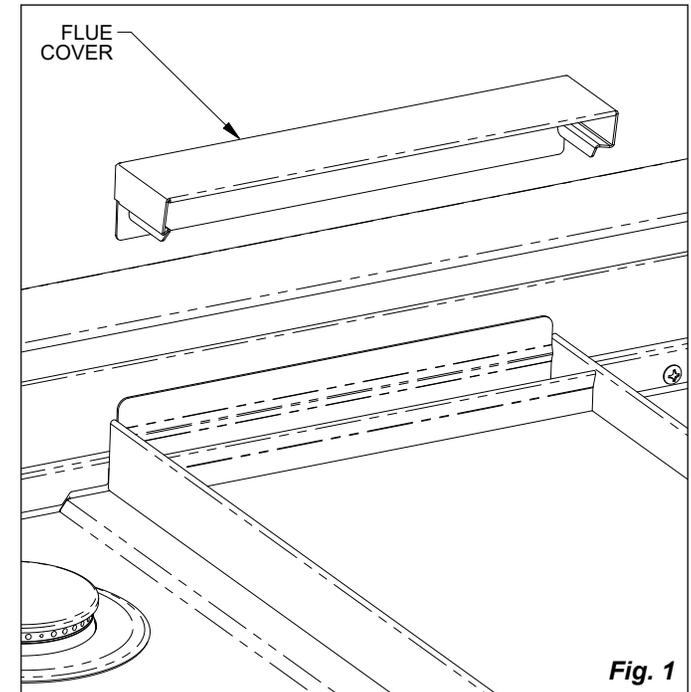


ORIFICE CHANGE - RANGETOP SECTIONS (CONTINUED)

GRIDDLE BURNER

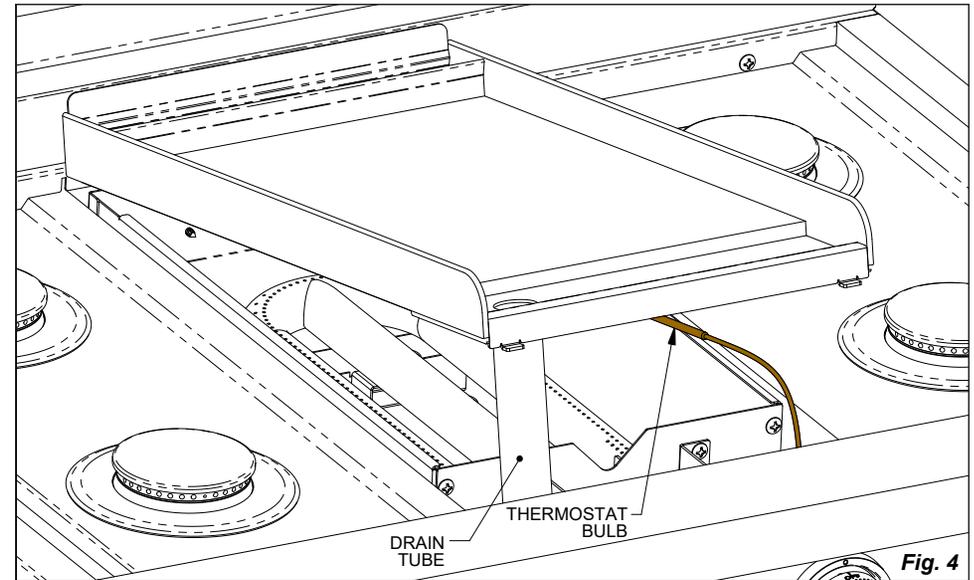
Some models are equipped with a 12" or 24" Thermo-Griddle™ section.

1. Remove the adjacent cast iron grates and set aside.
2. Remove the flue cover by pulling straight up and set aside. (Fig. 1)
3. Looking from above, remove two screws at the rear. (Fig. 2)
4. Grasp the back of the griddle plate assembly and tilt up the rear a few inches, then push the assembly toward the rear to disengage the two front tabs. (Fig. 3)



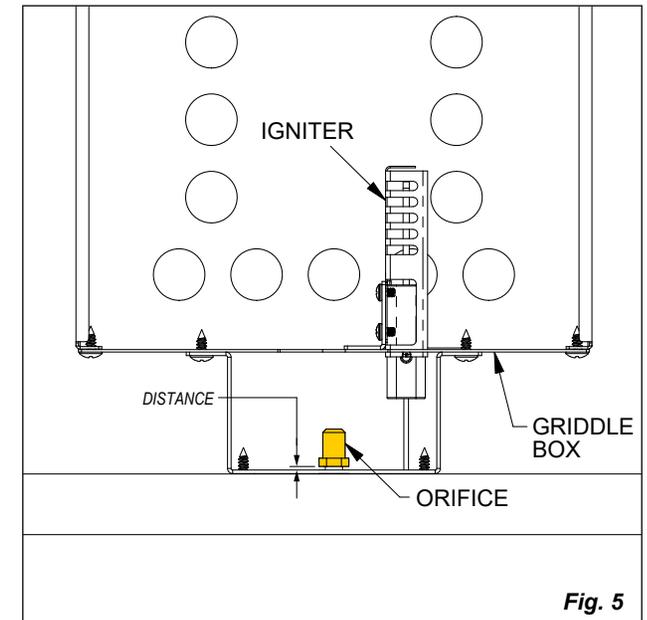
ORIFICE CHANGE - RANGETOP SECTIONS (CONTINUED)

5. Tilt up the front of the unit enough to rest the bottom of the drain tube on a flat structure inside the rangetop, then carefully slide out the thermostat bulb. Use caution to avoid putting any kinks or sharp bends in the soft copper tubing. (Fig. 4)
The griddle plate assembly can now be removed and set aside.
6. Looking down inside the griddle box, remove the two screws holding the center of the U-Burner in place. Remove the burner using care to avoid damaging the ceramic igniter.
7. The orifice is now accessible for removal with a 1/2" socket wrench. (Fig. 5) Make a note of how many threads you can see at the base of the orifice. Install the new orifice to roughly this same distance. Do not use any pipe dope or sealant on the threads. Install the new orifice slowly to avoid cross-threading and damaging the threads. The orifice will become noticeably harder to turn as you proceed. Consult the table below for identification of orifice sizes.
8. The air shutter on the U-burner will require adjustment. This will be explained in the AIR SHUTTER ADJUSTMENT section. Do not reinstall any components until the shutter adjustment and leak tests are completed.
9. Repeat this procedure if you have a 24" griddle.



RANGETOP ORIFICES

RANGE/RANGETOP MODEL FAMILY	BURNER LOCATION	BURNER TYPE	BURNER OUTPUT (BTU/hr.)		ALTITUDE	ORIFICE INFO	
			NG	LP		NG ORIFICE SIZE	LP ORIFICE SIZE
MCOR, CGSR, CGRT	12" GRIDDLE	U-Burner	18000	18000	Sea Level - 1999 ft. [600 m]	48	56
	24" GRIDDLE	U-Burner	2 X 15000	2 X 15000		51	58
MCR, GSCR, GRT	12" GRIDDLE	U-Burner	18000	18000	2000 - 6000 ft. [600 - 1800 m]	50	57
	24" GRIDDLE	U-Burner	2 X 15000	2 X 15000		52	62



ORIFICE CHANGE - RANGETOP SECTIONS (CONTINUED)

GRILL BURNER

Some models are equipped with a 12" or 24" BBQ Grill section.

1. Remove the cast iron BBQ grates and the radiant trays and set aside.
2. Looking down inside the BBQ grill box, remove the 4 screws shown (Fig. 1). Slide out the U-burner using care to avoid damaging the ceramic igniter.
3. The orifice is now accessible for removal with a 1/2" socket wrench and a short extension. (Fig. 2) Before removal, measure the distance from the tip of the orifice to a sheetmetal feature easily visible to you. Install the new orifice to roughly this same distance. Do not use any pipe dope or sealant on the threads. Install the new orifice slowly to avoid cross-threading and damaging the threads. The orifice will become noticeably harder to turn as you proceed. Consult the table below for identification of orifice sizes.
4. The air shutter on the U-burner will require adjustment. This will be explained in the AIR SHUTTER ADJUSTMENT section. Do not reinstall any components until the shutter adjustment and leak tests are completed.
5. Repeat this procedure if you have a 24" grill.

RANGETOP ORIFICES

RANGE/RANGETOP MODEL FAMILY	BURNER LOCATION	BURNER TYPE	BURNER OUTPUT (BTU/hr.)		ALTITUDE	ORIFICE INFO	
			NG	LP		NG ORIFICE SIZE	LP ORIFICE SIZE
MCOR, CGSR, CGRT	12" GRILL	U-Burner	18000	18000	Sea Level - 1999 ft. [600 m]	48	56
	24" GRILL	U-Burner	2 X 15000	2 X 15000		51	58
MCR, GSCR, GRT	12" GRILL	U-Burner	18000	18000	2000 - 6000 ft. [600 - 1800 m]	50	57
	24" GRILL	U-Burner	2 X 15000	2 X 15000		52	62

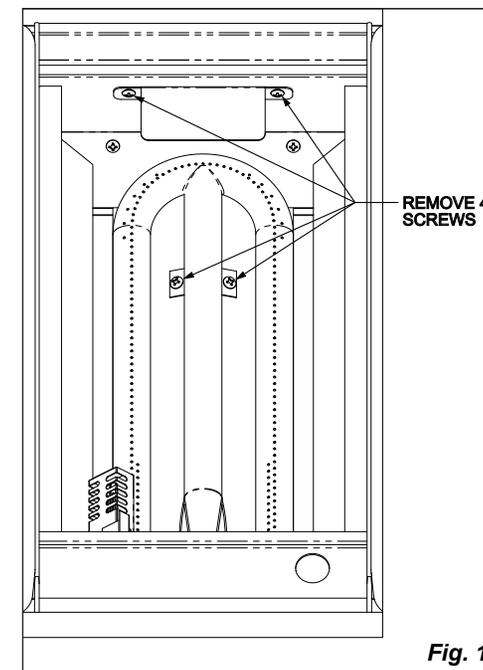


Fig. 1

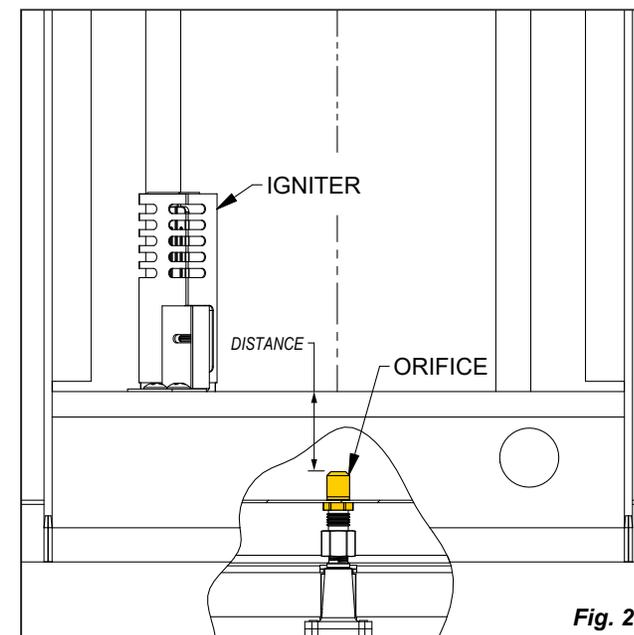


Fig. 2

ORIFICE CHANGE - RANGETOP SECTIONS (CONTINUED)

POWER WOK BURNER

These models are equipped with a large dedicated cast iron wok ring permanently attached to the rangetop.

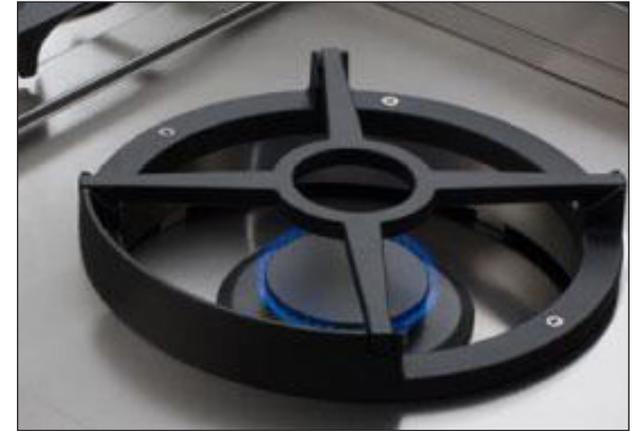
'W' versions (such as MCR362W) feature a larger version of the Sealed Burner seen on page 5.

'CW' versions (such as MCR362CW) use the same Open Burner as seen on page 4.

Follow the same orifice changing process as those burners.

There is no need to remove the wok ring.

1. Remove the cast iron cross insert (if installed) and set aside.
2. Follow the same procedure as seen on page 3-4 (Open) or 5-6 (Sealed). Do not use any pipe dope or sealant on the threads. Install the new orifice slowly to avoid cross-threading and damaging the threads. Consult the table below for identification of orifice sizes.



30000 BTU/Hr Sealed Wok Burner

RANGETOP ORIFICES

RANGE/RANGETOP MODEL FAMILY	BURNER LOCATION	BURNER TYPE	BURNER OUTPUT (BTU/hr.)		ALTITUDE	ORIFICE INFO	
			NG	LP		NG ORIFICE SIZE	LP ORIFICE SIZE
MCOR, CGSR, CGRT MCR, GSCR, GRT 'W' VERSIONS	POWER WOK	SEALED - Large	30000	25000	Sea Level - 1999 ft. [600 m]	40 *	53
					2000 - 6000 ft. [600 - 1800 m]	43 *	54

* Use #43 orifice on 30" wide appliances at sea level - 1999 ft. [600 m].

* Use #45 orifice on 30" wide appliances at high altitude 2000 - 6000 ft. [600 - 1800m].

RANGE/RANGETOP MODEL FAMILY	BURNER LOCATION	BURNER TYPE	BURNER OUTPUT (BTU/hr.)		ALTITUDE	ORIFICE INFO	
			NG	LP		NG ORIFICE SIZE	LP ORIFICE SIZE
MCR, GSCR, GRT 'CW' VERSIONS	POWER WOK	OPEN	25000	25000	Sea Level - 1999 ft. [600 m]	43	1.45mm
					2000 - 6000 ft. [600 - 1800 m]	45	54

ORIFICE CHANGE - GAS OVENS (MANUAL CLEAN)

GAS OVEN BURNERS (MCOR / MCR MODELS)

These models are equipped with an L-shaped tubular bake burner located under the floor of the oven cavity, and a stainless-steel mesh infrared broiler located in the ceiling of the oven cavity. For 48" models, there is only a tubular bake burner, no broiler.

BAKE BURNER ORIFICE

1. Remove 4 screws holding the kick plate below the oven door and set aside.
2. Open the door and remove all the racks. Remove one of the side ladder racks.
3. Remove 2 screws at the rear of the oven holding down the oven bottom liner. Insert a thin-bladed flat screwdriver at the front edge of the liner and pry up carefully. Remove this liner and set aside. (Fig. 1)
4. Remove 4 screws holding the flame spreader in place and set aside. (Fig. 2)
5. The burner is now visible. You do not have to remove the burner, but it will be necessary to view the flame in a later step. (Fig. 3)

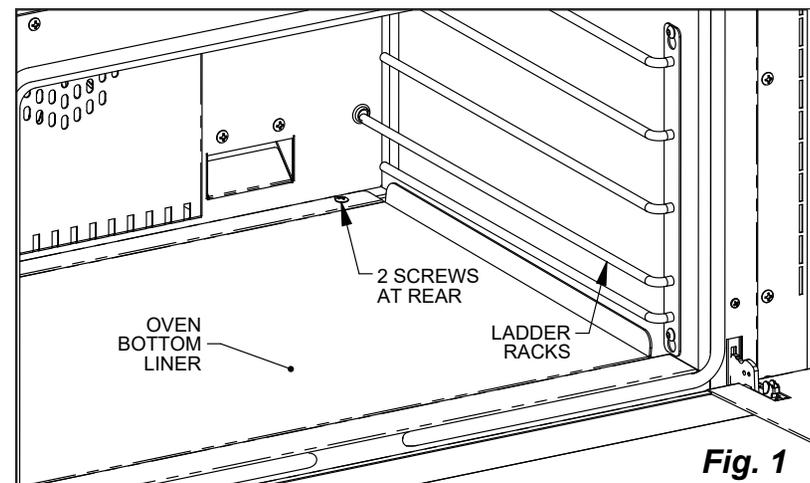


Fig. 1

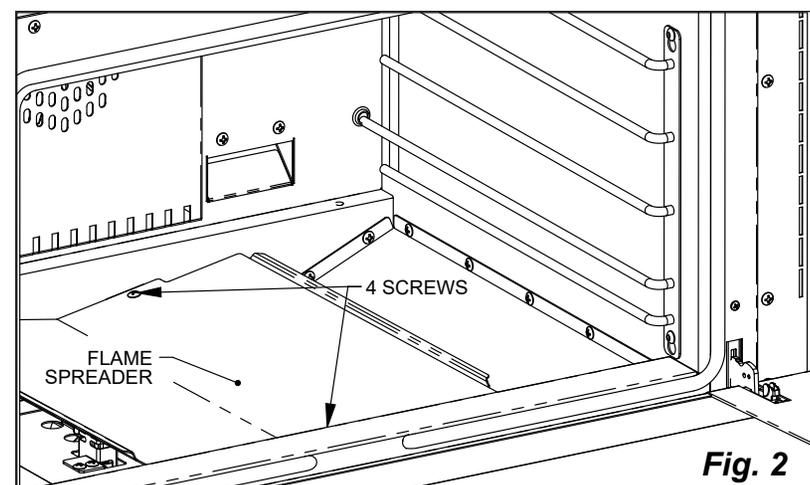


Fig. 2

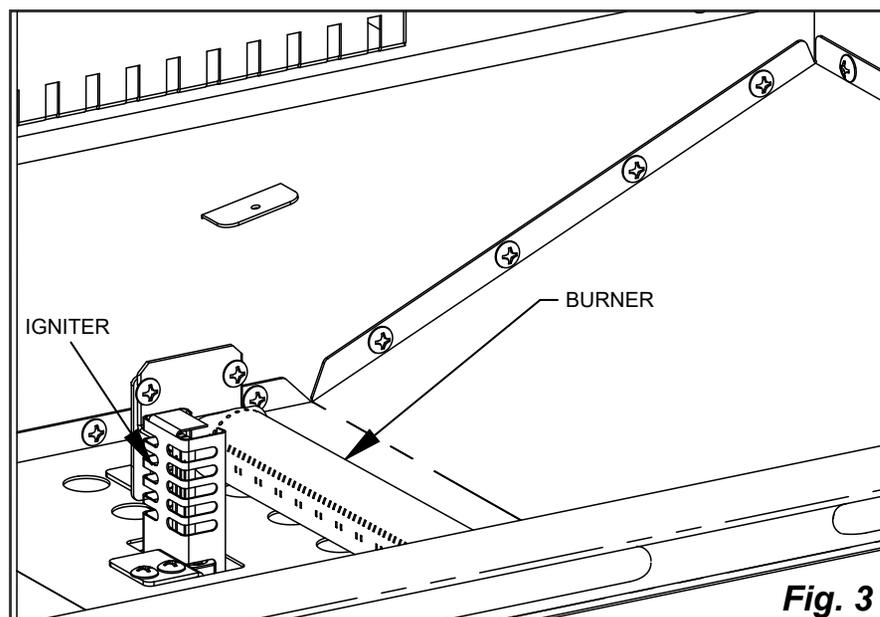


Fig. 3

ORIFICE CHANGE - GAS OVENS (MANUAL CLEAN) (CONTINUED)

6. Make a note of how many threads you can see at the base of the orifice. Remove 2 screws on the bracket shown and pull away the bracket/elbow/orifice assembly including the hose. Avoid bending the hose unnecessarily to avoid cracking it. (Fig. 4)
7. Use a 1/2" wrench or locking pliers to prevent the brass elbow from rotating, and a 1/2" socket wrench to remove the orifice. There is a large locknut just below the orifice which must remain tight against the bracket. (Fig. 5)
8. Install the new orifice to roughly the same distance. Do not use any pipe dope or sealant on the threads. Install the new orifice slowly to avoid cross-threading and damaging the threads. The orifice will become noticeably harder to turn as you proceed. Consult the table below for identification of orifice sizes.
9. The air shutter on the burner will require adjustment. This will be explained in the AIR SHUTTER ADJUSTMENT section. Do not reinstall any components until the shutter adjustment and leak tests are completed.
10. Repeat this procedure if you have another oven cavity.

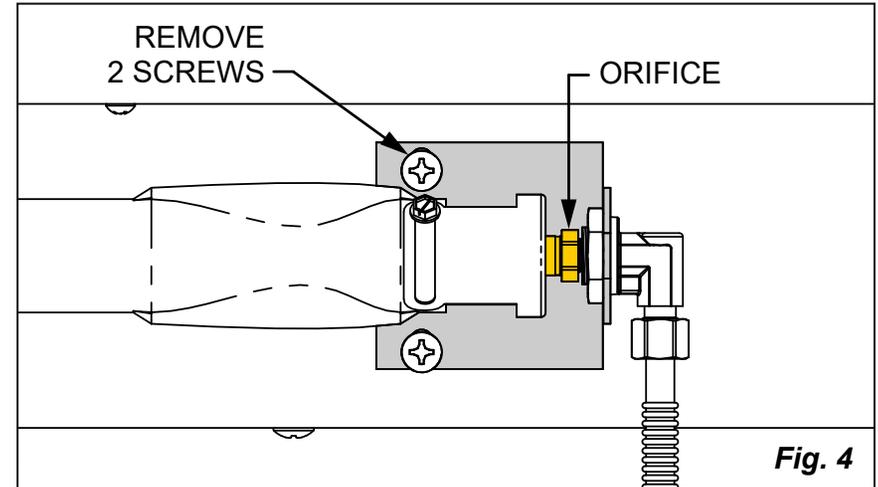


Fig. 4

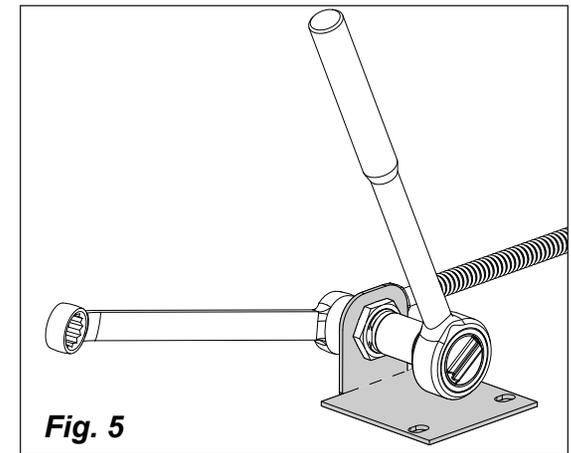


Fig. 5

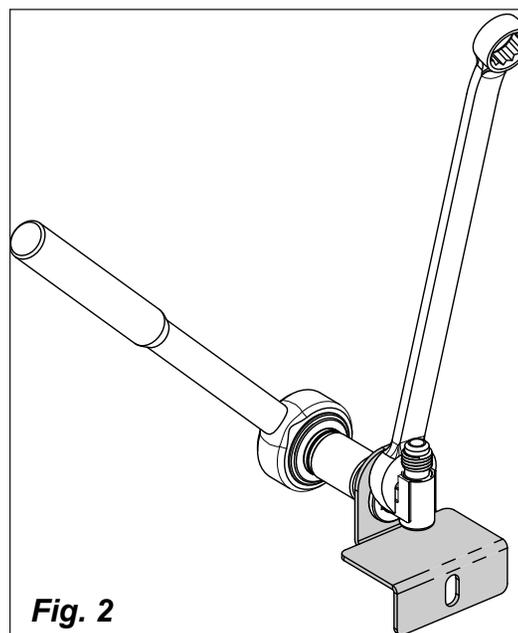
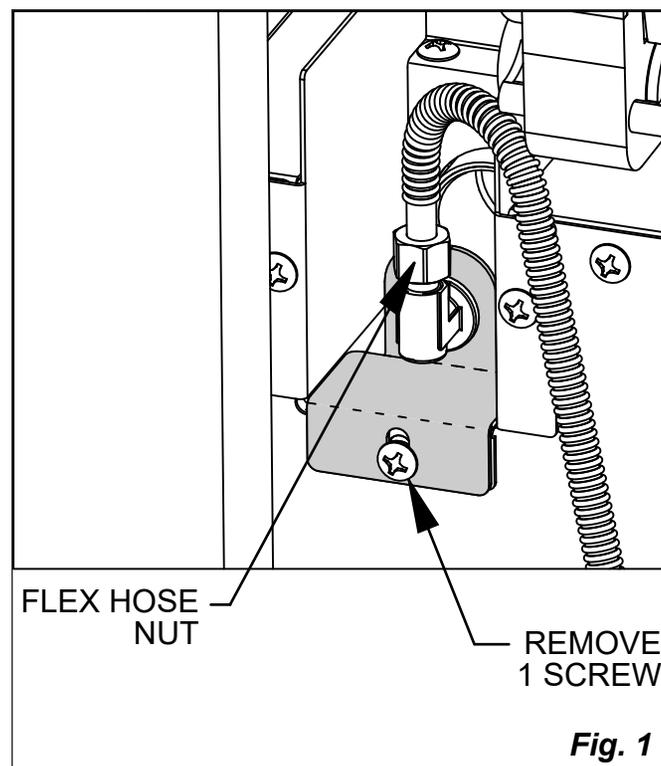
OVEN ORIFICES			BURNER OUTPUT (BTU/hr.)		ALTITUDE	ORIFICE INFO	
			NG	LP		NG ORIFICE SIZE	LP ORIFICE SIZE
MCOR, MCR (manual-clean)	Main Oven Upper	Infrared w/ SS Mesh	18000	15000	Sea Level - 1999 ft. [600 m]	49	57
	Main Oven Lower	L-shape Tube	30000	30000		40	52
	Small Oven Lower	L-shape Tube	18000	18000		49	56
	Main Oven Upper	Infrared w/ SS Mesh	18000	15000	2000 - 6000 ft. [600 - 1800 m]	51	60
	Main Oven Lower	L-shape Tube	30000	30000		43	53
	Small Oven Lower	L-shape Tube	18000	18000		51	57

ORIFICE CHANGE - GAS OVENS (MANUAL CLEAN) (CONTINUED)

INFRARED BROILER ORIFICE

1. Remove all the screws on the back cover of the range. Remove the cover and set aside.
2. Adjacent to the cooling fan, you will see the flex hose which supplies the upper broiler. Disconnect this hose while avoiding bending the hose unnecessarily. Remove 1 screw and pull away the bracket. (Fig. 1)
3. With the bracket removed, you can now replace the orifice. Make a note of how many threads you can see at the base of the orifice. Install the new orifice to roughly this same distance. Use a 1/2" wrench or locking pliers to prevent the brass elbow from rotating, and a 1/2" socket wrench to remove the orifice. There is a large locknut just below the orifice which must remain tight against the bracket. (Fig. 2)
4. Install the new orifice slowly to avoid cross-threading and damaging the threads. Do not use any pipe dope or sealant on the threads. The orifice will become noticeably harder to turn as you proceed. Consult the table on the previous page for identification of orifice sizes.
5. Reinstall the bracket/elbow/orifice assembly and tighten the screw. Reinstall the hose and tighten. Do not reinstall the back cover until leak tests are completed.

NOTE: It is possible to leave the hose connected, but the space is confined and you must use caution to avoid kinking or damaging the hose.



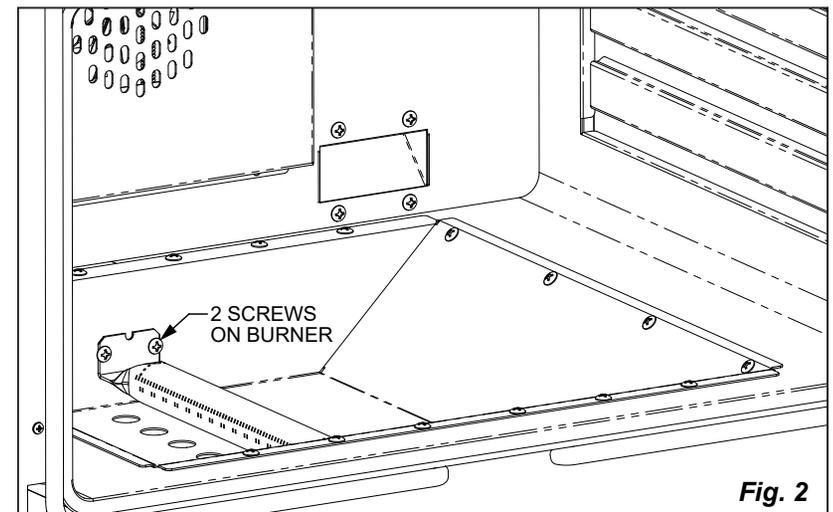
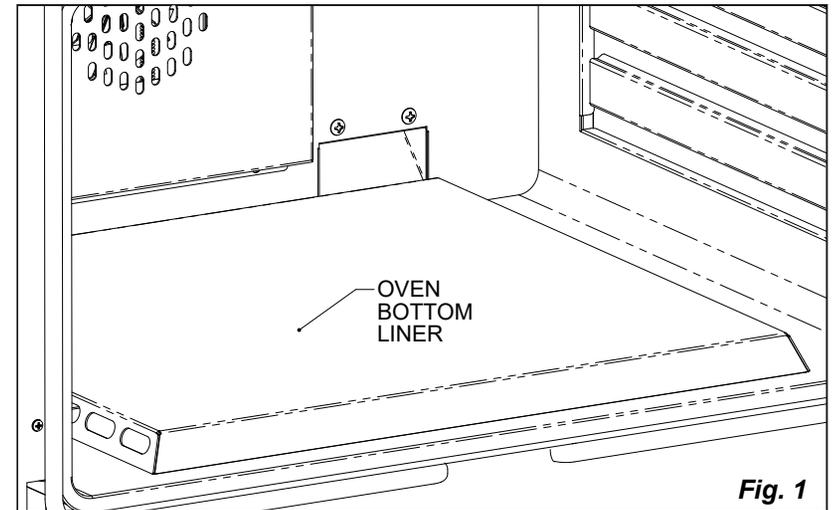
ORIFICE CHANGE - GAS OVENS (SELF CLEAN)

GAS OVEN BURNERS (CGSR / GSCR MODELS)

These models are equipped with a straight tubular bake burner located under the floor of the oven cavity, and a stainless-steel mesh infrared broiler located inside a glass panel in the ceiling of the oven cavity. For 48" models, there is only a tubular bake burner, no broiler.

BAKE BURNER ORIFICE

1. Remove 4 screws holding the kick plate below the oven door and set aside.
2. Open the door and remove all the racks. Lift up and remove the oven bottom liner and set aside. (Fig. 1)
3. Remove the 2 screws holding the tubular burner in place on a bracket at the rear. Tilt up the burner slightly to clear the bracket such that you can disengage the entrance of the burner from the orifice. You do not need to remove the burner completely. Use care to not damage the ceramic igniter adjacent to the burner. (Fig. 2)



ORIFICE CHANGE - GAS OVENS (SELF CLEAN) (CONTINUED)

4. The orifice is now accessible for removal. It should not be necessary to remove the elbow from the bracket or to disturb the flex hose. Make a note of how many threads you can see at the base of the orifice. Install the new orifice to roughly this same distance. Use a 1/2" wrench or locking pliers to prevent the brass elbow from rotating, and another 1/2" wrench to remove the orifice. There is a large locknut just below the orifice which must remain tight against the bracket. (Fig. 3)
5. Do not use any pipe dope or sealant on the threads. Install the new orifice slowly to avoid cross-threading and damaging the threads. The orifice will become noticeably harder to turn as you proceed. Consult the table below for identification of orifice sizes.
6. The air shutter on the burner will require adjustment. This will be explained in the AIR SHUTTER ADJUSTMENT section. Do not reinstall any components until the shutter adjustment and leak tests are completed.
7. Repeat this procedure if you have another oven cavity.

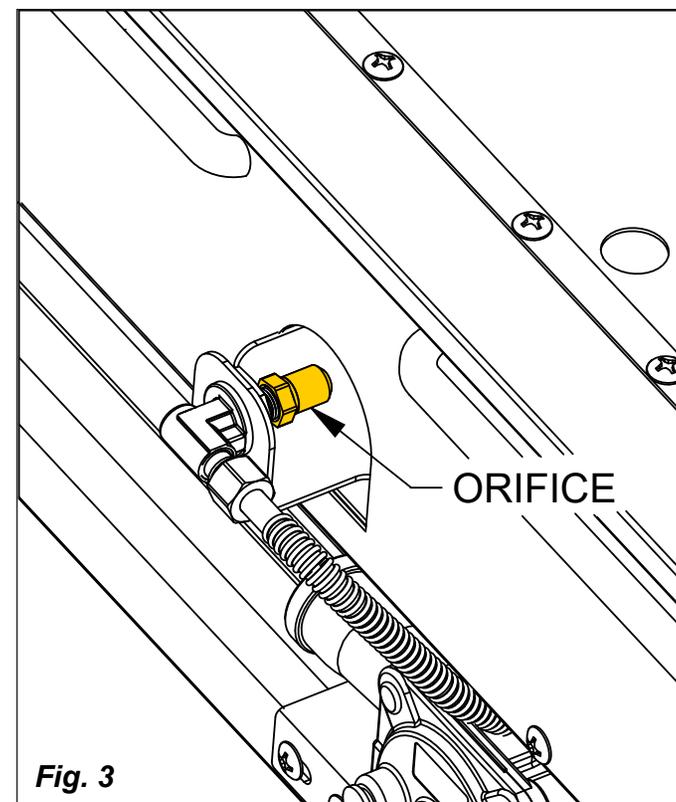


Fig. 3

OVEN ORIFICES			BURNER OUTPUT (BTU/hr.)		ALTITUDE	ORIFICE INFO	
			NG	LP		NG ORIFICE SIZE	LP ORIFICE SIZE
RANGE MODEL FAMILY	BURNER LOCATION	BURNER TYPE					
CGSR, GSCR (self-clean)	Main Oven Upper	Infrared w/ SS Mesh	18000	15000	Sea Level - 1999 ft. [600 m]	48	57
	Main Oven Lower	Straight Tube	30000	30000		40	52
	48" - Small Oven	Straight Tube	15000	15000		50	56
	60" - Small Oven	Straight Tube	22000	22000		44	54
	Main Oven Upper	Infrared w/ SS Mesh	18000	15000	2000 - 6000 ft. [600 - 1800 m]	50	60
	Main Oven Lower	Straight Tube	30000	30000		43	53
	48" - Small Oven	Straight Tube	15000	15000		52	57
	60" - Small Oven	Straight Tube	22000	22000		47	55

ORIFICE CHANGE - GAS OVENS (SELF CLEAN) (CONTINUED)

INFRARED BROILER ORIFICE

Note: The conversion kits are supplied with a pre-assembled bracket, brass elbow, and orifice. The NG and LP brackets are slightly different to properly position the orifice relative to the burner entrance. (Fig. 1)

If you are only changing the orifice for high-altitude and keeping the same gas type (NG or LP), then you will replace the orifice only.

1. Remove all the screws on the back cover of the range. Remove the cover and set aside.
2. Adjacent to the cooling fan, you will see the flex hose which supplies the upper broiler. Disconnect this hose while avoiding bending the hose unnecessarily. Remove the 2 screws and remove the entire bracket with brass elbow and orifice attached. (Fig. 2)
3. **FOR CONVERSION KIT:** Install the new pre-assembled bracket/elbow/orifice provided in the kit.

FOR HIGH-ALTITUDE KIT: You are changing the orifice only. Make a note of how many threads you can see at the base of the orifice. Install the new orifice to roughly this same distance. Use a 1/2" wrench or locking pliers to prevent the brass elbow from rotating and a 1/2" wrench to remove the orifice. There is a large locknut just below the orifice which must remain tight against the bracket. (Fig. 3)

Install the new orifice slowly to avoid cross-threading and damaging the threads. Do not use any pipe dope or sealant on the threads. The orifice will become noticeably harder to turn as you proceed. Consult the table on the previous page for identification of orifice sizes. Reinstall the bracket/elbow/orifice assembly and tighten the screws.

4. Reinstall the hose and tighten. Do not reinstall the back cover until leak tests are completed.

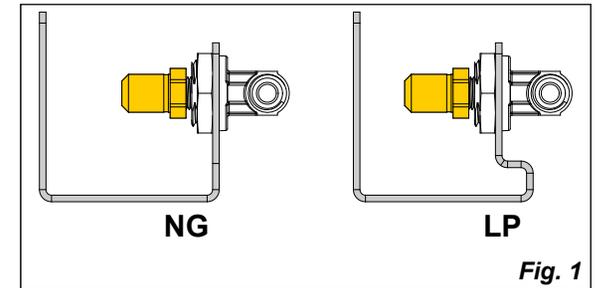


Fig. 1

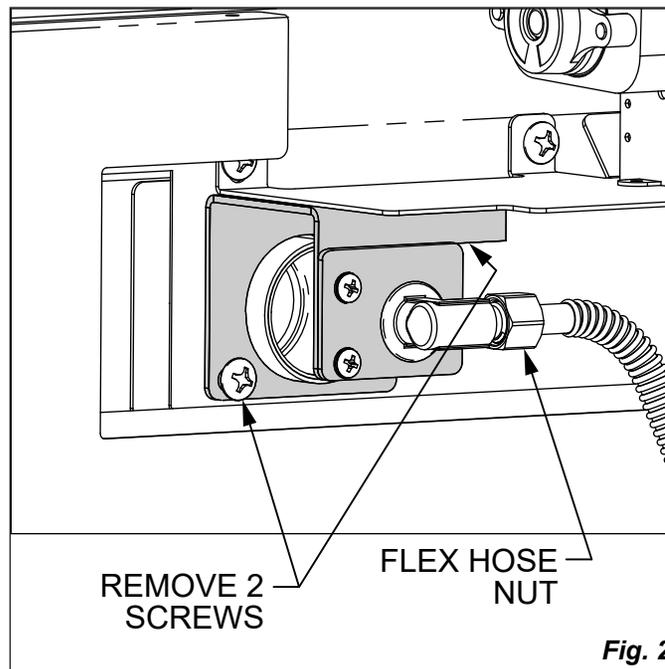


Fig. 2

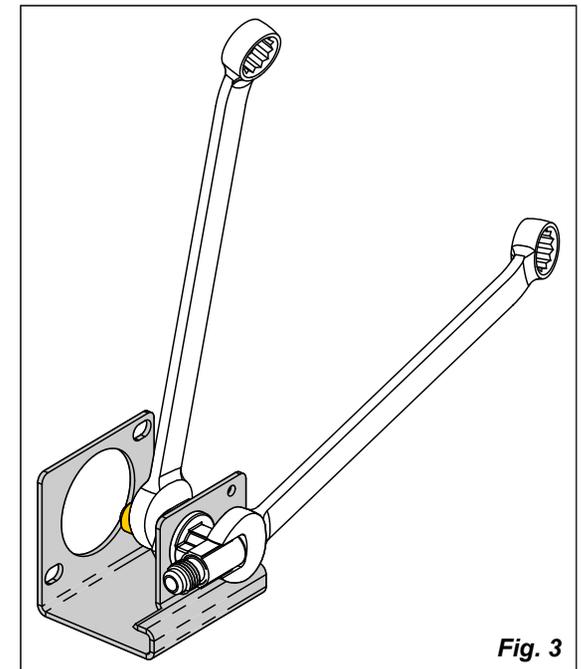


Fig. 3

CONVERTING THE GAS REGULATOR

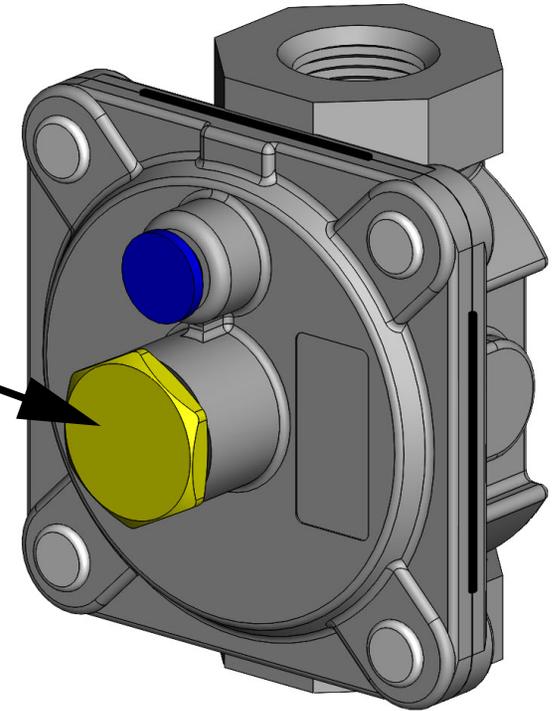
SKIP THIS STEP IF YOU ARE INSTALLING A HIGH-ALTITUDE KIT.

The gas regulator is located in the following locations depending on the model:

- MANUAL-CLEAN RANGES (MCOR / MCR) - Regulator located at rear behind large metal cover.
- SELF-CLEAN RANGES (CGSR / GSCR) - Regulator located at front behind kick plate.
- RANGETOPS (CGRT / GRT) - Regulator located below the appliance.

You can convert the gas type of the regulator by following the instructions below (conversion from NG to LP gas is shown). This can be done without removing the regulator.

REMOVE THIS CAP WITH
A 7/8" WRENCH.
BE CAREFUL, THERE IS A
SPRING INSIDE.



AFTER REMOVING THE CAP, A SMALL PLASTIC SPRING GUIDE (USUALLY COLORED BLACK) IS ATTACHED. PULL THIS PART STRAIGHT DOWN, FLIP IT OVER, AND SNAP IT BACK INTO THE CAP. REINSTALL THE CAP INTO THE REGULATOR.

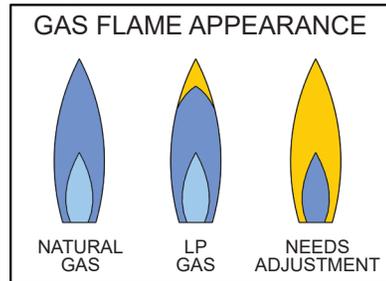
AIR SHUTTER ADJUSTMENTS

FLAME HEIGHT

The air shutter helps regulate the proper air-fuel mixture of the burner in conjunction with the orifices. When changing the orifice size, the flame height will be affected and must be adjusted by opening or closing the air shutter. The flame characteristics are also affected by this adjustment. Too much air will result in a noisy flame and make the flames dance and lift off the burner ports. Too little air will result in a small or lazy flame, or a very yellow flame.

Note: Sealed burners, sealed wok burner, and the upper infrared oven burners do not have an air shutter adjustment.

FLAME CHARACTERISTICS



Light blue flame - Natural gas normal flame

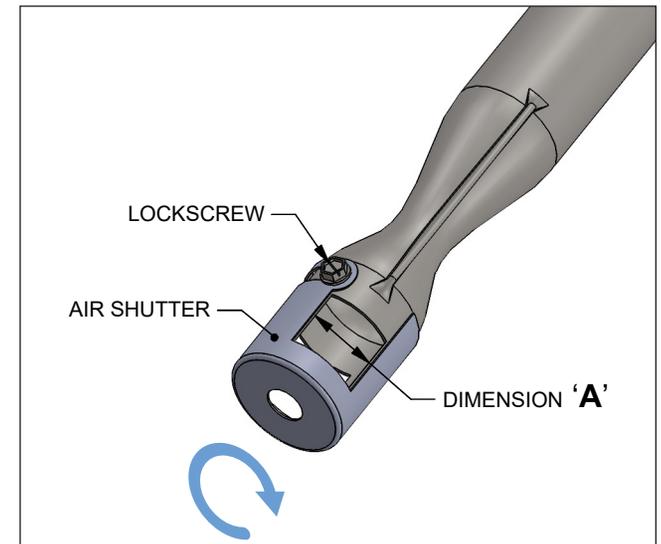
Light blue flame with yellow tips - LP gas normal flame

Yellow flame - Needs adjustment

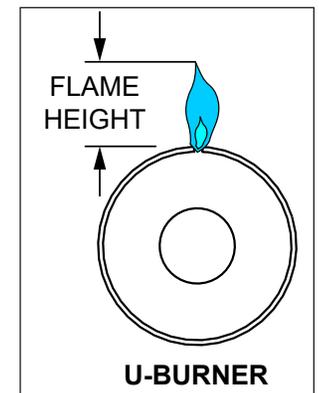
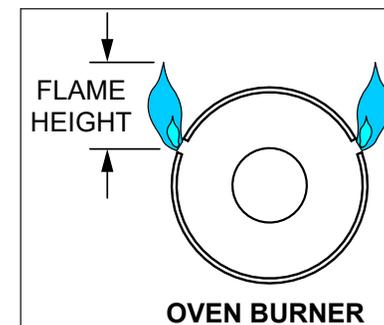
TUBULAR BURNERS

The air shutter opening must be recalibrated when changing orifices. Loosen the lock screw located on the side of the air shutter. Rotate the shutter to adjust the opening according to the dimensions below, and retighten the lock screw. Reinstall the burners, brackets, etc. and reinstall the hoses (if removed).

When you check the flame height after leak testing is complete, this is how it should look. The shutter may need further adjustment after leak testing is completed. You want the flames to be stable and not flutter, or lift off the ports.



BURNER LOCATION	NG - DIM. 'A'	LP - DIM. 'A'	APPROX. FLAME HEIGHT
MCOR/MCR LOWER OVEN BURNER	1/2" [13 mm]	FULL OPEN	3/4" [19 mm]
MCOR/MCR SMALL OVEN BURNER	1/4" [6.5 mm]	1/4" [6.5 mm]	3/4" [19 mm]
CGSR/GSCR LOWER OVEN BURNER	3/8" [9.5 mm]	5/8" [16 mm]	3/4" [19 mm]
CGSR/GSCR SMALL OVEN BURNER	1/4" [6.5 mm]	1/4" [6.5 mm]	3/4" [19 mm]
GRIDDLE U-BURNER	1/4" [6.5 mm]	1/4" [6.5 mm]	1/2" [13 mm]
BBQ GRILL U-BURNER	1/4" [6.5 mm]	1/4" [6.5 mm]	1/2" [13 mm]



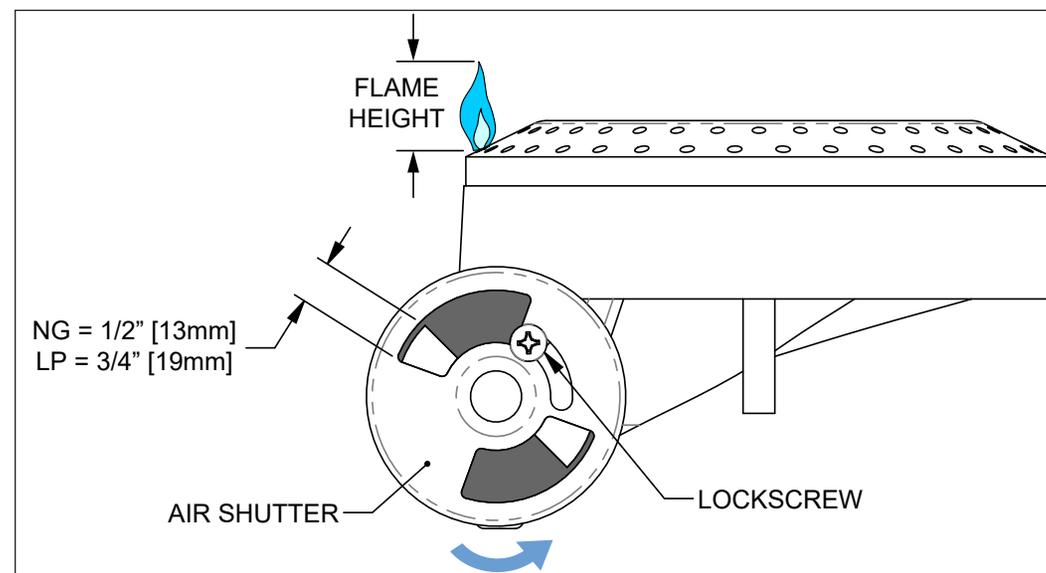
AIR SHUTTER ADJUSTMENTS (CONTINUED)

OPEN BURNERS (CGSR / GSCR MODELS ONLY)

The air shutter opening must be recalibrated when changing orifices. Loosen the lock screw located at the front of the air shutter. Rotate the shutter to adjust the opening according to the dimensions below, and retighten the lock screw. Reinstall the burner, caps, etc. and reinstall the hoses (if removed).

When you check the flame height after leak testing is complete, this is how it should look. The shutter may need further adjustment after leak testing is completed. You want the flames to be stable and not flutter, or lift off the ports.

BURNER SIZE	APPROX. FLAME HEIGHT
25000 BTU OPEN BURNER	3/8" [9.5 mm]
8000 BTU SMALL PAN BURNER	3/8" [9.5 mm]



LEAK TESTING

GAS SUPPLY

The local gas authority or supplier should be consulted at the installation planning stage in order to establish the availability of an adequate supply of gas (NG or LP). If it is a new installation, have the gas authorities or supplier check the meter size and piping to assure that the unit is supplied with the necessary amount of gas supply and pressure to operate the unit(s).

Gas connections should be made **ONLY** by a qualified plumber or your professional appliance service technician.

All fixed (non-mobile) appliances must be fitted with an accessible upstream gas shutoff valve as a means of isolating the appliance for emergency shut off and for servicing. This valve was described in the appliance Installation Manual.

Make certain new piping and connections have been made in a clean manner and have been purged so that piping compound, chips, etc. will not clog regulators, valves, orifices, or burners.

⚠️ WARNING

IF THE INFORMATION BELOW IS NOT FOLLOWED EXACTLY, A FIRE OR EXPLOSION MAY RESULT CAUSING PROPERTY DAMAGE, PERSONAL INJURY, OR DEATH.

GENERAL

At this point, all conversion components should be installed and any brackets and hoses removed previously have been reinstalled and tightened. All burners should be returned to their proper positions (see instructions in previous sections). Before replacing the various sheetmetal covers, griddle plate, etc., a complete leak check must be performed on all gas-carrying components due to possible movement during installation, or excessive pressure unknowingly being applied to other parts of the unit.

LEAK TESTING (CONTINUED)

▲WARNING

IF THE INFORMATION BELOW IS NOT FOLLOWED EXACTLY, A FIRE OR EXPLOSION MAY RESULT CAUSING PROPERTY DAMAGE, PERSONAL INJURY, OR DEATH.

BEFORE TESTING

- DO NOT SMOKE while leak testing.
- Never leak test with an open flame.
- Make a soap solution of one part liquid detergent and one part water, for leak testing purposes.
- Apply the solution to the gas fittings by using a spray bottle, a brush, or small sponge.
- For LP units, always check with a full LP cylinder.
- Check for adequate inlet gas pressure - 7" w.c. [1.74 kPa] for Natural Gas or 11" w.c. [2.73 kPa] for LP gas.
- Gas pressure from the regulator must be 5" w.c. [1.24 kPa] for Natural Gas or 10" w.c. [2.49 kPa] for LP gas.

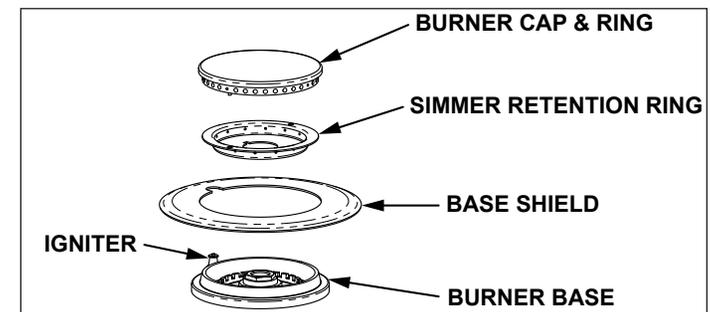
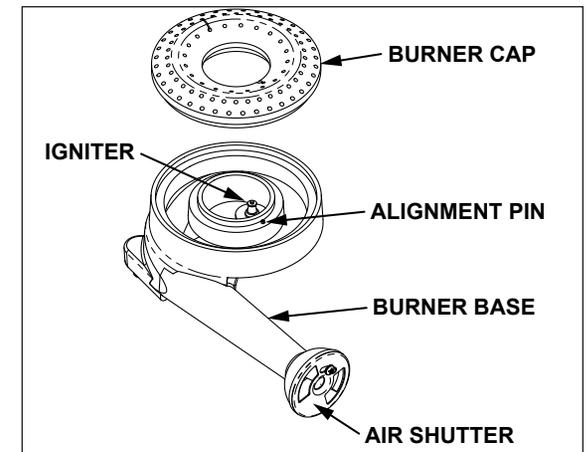
TO TEST SURFACE BURNERS (INCLUDING WOK BURNER)

- Make sure all control valves are in the "OFF" position.
- Apply the soap solution described above to all fittings, flex hoses, etc.
- Turn the gas supply ON at the shut-off valve on the wall behind the appliance.
- CHECK ALL CONNECTIONS WHERE YOU APPLIED THE SOAP SOLUTION! Check from the supply line, up to and including the manifold pipe assembly, regulator, etc. Check ALL the hoses from end to end, and at the nut fittings whether you disconnected them or not. Bending the hoses may have resulted in small cracks which must be found. Apply the soapy solution liberally to detect any leaks. If hoses are cracked, you will need to replace them.
- Soap bubbles will appear where a leak is present. If a leak is present, immediately turn off gas supply, tighten any leaking fittings, turn the gas supply back on, and recheck with more soap solution.
- If you cannot stop a gas leak, turn off the gas supply and call the dealer where you purchased your appliance.
- **DO NOT USE THE APPLIANCE UNTIL ALL CONNECTIONS HAVE BEEN CHECKED AND DO NOT LEAK!**

Once the leak check is performed and there are no leaks, proceed to reinstall all the top burner sheetmetal parts, brackets, etc. that were removed in the previous sections of this manual. Don't forget to reconnect any ignition wires.

Ensure the burner caps are properly installed and seated on the burner base. There are notches and/or alignment pins on the burner base to help with proper alignment. Incorrect alignment will produce a potentially dangerous flame and poor burner performance. The open burners should also be fully inserted onto the orifice at the air shutter entrance.

If you do not have a griddle, grill, wok, or gas oven burners, restore the electrical power to the unit and skip to the FINAL STEPS section of this manual.



LEAK TESTING (CONTINUED)

NOTICE

All the control knobs must be in the OFF position to prevent unintended operation at power up.

⚠️ WARNING

IF THE INFORMATION BELOW IS NOT FOLLOWED EXACTLY, A FIRE OR EXPLOSION MAY RESULT CAUSING PROPERTY DAMAGE, PERSONAL INJURY, OR DEATH.

TO TEST GRIDDLE / GRILL U-BURNERS

- Make sure all control valves are in the “OFF” position.
- Apply the soap solution described above to all fittings, flex hoses, etc.
- Turn the gas supply ON at the shut-off valve on the wall behind the appliance.
- Turn on the power. Set the griddle control knob to 350°F. The igniter will glow continuously and the solenoid gas valve will open in about 30-40 seconds, igniting the burner.

USE CAUTION - VERY HOT - BURN HAZARD

- CHECK ALL CONNECTIONS WHERE YOU APPLIED THE SOAP SOLUTION! Check ALL the hoses from end to end, and at the nut fittings whether you disconnected them or not. Bending the hoses may have resulted in small cracks which must be found. Apply the soapy solution liberally to detect any leaks. If hoses are cracked, you will need to replace them.
- Soap bubbles will appear where a leak is present. If a leak is present, immediately turn off gas supply, tighten any leaking fittings, turn the gas supply back on, and recheck with more soap solution.
- If you cannot stop a gas leak, turn off the gas supply and call the dealer where you purchased your appliance.
- **DO NOT USE THE APPLIANCE UNTIL ALL CONNECTIONS HAVE BEEN CHECKED AND DO NOT LEAK!**
- If leak testing is done successfully, turn off the griddle and allow everything to cool.

Once the leak check is performed and there are no leaks, proceed to reinstall any sheetmetal parts, brackets, etc. that were removed in the griddle or grill sections of this manual. Don't forget to reconnect any ignition wires. For the griddle, reinstall the thermometer bulb and griddle plate. Use caution to avoid putting any kinks or sharp bends in the soft copper tubing of the thermostat bulb.

If you have a grill model, the operations are exactly the same, but there is no thermostat. When done, reinstall all the radiants and BBQ grill grates.

If you have a gas oven model, proceed to the next section. Otherwise, skip to the FINAL STEPS section.

LEAK TESTING (CONTINUED)

▲WARNING

IF THE INFORMATION BELOW IS NOT FOLLOWED EXACTLY, A FIRE OR EXPLOSION MAY RESULT CAUSING PROPERTY DAMAGE, PERSONAL INJURY, OR DEATH.

TO TEST OVEN LOWER BURNERS

- Make sure all control valves are in the "OFF" position.
- Apply the soap solution described above to all fittings, flex hoses, etc.
- Turn the gas supply ON at the shut-off valve on the wall behind the appliance.
- Turn on the power. Set the oven control knob to 350°F. The igniter next to the burner will glow continuously and the solenoid gas valve will open in about 30-40 seconds, igniting the burner.

USE CAUTION - VERY HOT - BURN HAZARD

- CHECK ALL CONNECTIONS WHERE YOU APPLIED THE SOAP SOLUTION! Check ALL the hoses from end to end, and at the nut fittings whether you disconnected them or not. Bending the hoses may have resulted in small cracks which must be found. Apply the soapy solution liberally to detect any leaks. If hoses are cracked, you will need to replace them.
- Soap bubbles will appear where a leak is present. If a leak is present, immediately turn off gas supply, tighten any leaking fittings, turn the gas supply back on, and recheck with more soap solution.
- If you cannot stop a gas leak, turn off the gas supply and call the dealer where you purchased your appliance.
- **DO NOT USE THE APPLIANCE UNTIL ALL CONNECTIONS HAVE BEEN CHECKED AND DO NOT LEAK!**
- If leak testing is performed successfully, turn off the oven and allow everything to cool. Proceed to the next section.

For 48" and 60" models, repeat this process if you have a second oven.

TO TEST OVEN UPPER BROIL BURNERS

- Make sure all control valves are in the "OFF" position.
- Apply the soap solution described above to all fittings, flex hoses, etc. at the rear of the appliance.
- Turn the gas supply ON at the shut-off valve on the wall behind the appliance.
- Turn on the power. Set the oven control knob to BROIL. The igniter next to the burner will glow continuously and the solenoid gas valve will open in about 30-40 seconds, igniting the upper burner.

USE CAUTION - VERY HOT - BURN HAZARD

- CHECK ALL CONNECTIONS WHERE YOU APPLIED THE SOAP SOLUTION! Check ALL the hoses from end to end, and at the nut fittings whether you disconnected them or not. Bending the hoses may have resulted in small cracks which must be found. Apply the soapy solution liberally to detect any leaks. If hoses are cracked, you will need to replace them.
- Soap bubbles will appear where a leak is present. If a leak is present, immediately turn off gas supply, tighten any leaking fittings, turn the gas supply back on, and recheck with more soap solution.
- If you cannot stop a gas leak, turn off the gas supply and call the dealer where you purchased your appliance.
- **DO NOT USE THE APPLIANCE UNTIL ALL CONNECTIONS HAVE BEEN CHECKED AND DO NOT LEAK!**
- If leak testing is performed successfully, turn off the oven and allow everything to cool. Proceed to the FINAL STEPS section.

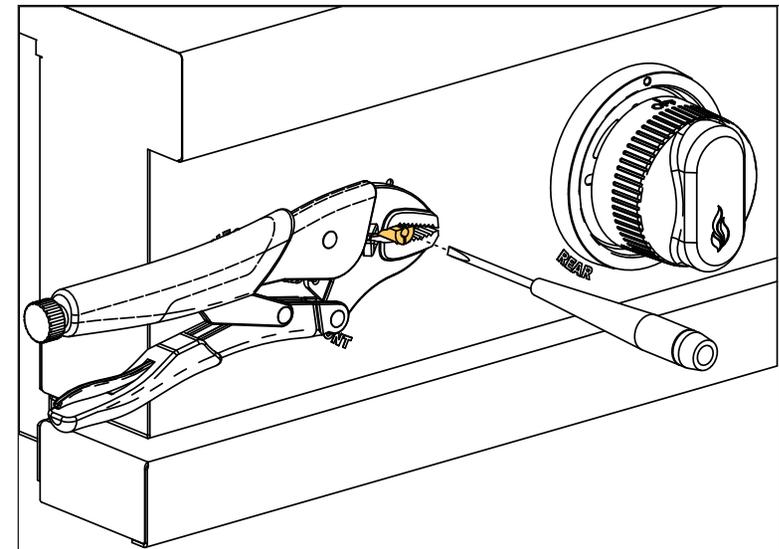
FINAL STEPS

SIMMER ADJUSTMENT

The simmer setting on the surface burners may need adjustment to prevent the flame from fluttering and/or causing the igniter to click incessantly.

NEVER ADJUST THE BURNER SO LOW THAT IT MAY GO OUT DURING USE.

1. Starting left to right, light a burner and turn the control knob to "SIMMER" and wait for the burner temperature to drop and stabilize, about 5-10 minutes. Attempting adjustment at any setting other than SIMMER can create a dangerous condition.
2. Grasp the valve stem with a pair of pliers (DO NOT crush the stem). Insert a small flat-blade screwdriver into the valve stem to begin the adjustment. The internal screw has only 2-3 complete revolutions of adjustment. After this, the screw may continue to turn, but is actually coming out of the valve and could result in a gas leak. DO NOT turn more than 3 revolutions!
3. Turn the screw very slowly in 1/4 turn increments to adjust the flame. Turn counter-clockwise to INCREASE and clockwise to DECREASE the flame. The flame will take a few seconds to respond to the adjustments you are making.
4. Adjust the flame so the burner is still fully lit on all ports, without fluttering or going out, or causing the igniter to spark incessantly.
5. Turn off the burner and relight. Check the new simmer setting once again to assure proper adjustment has been reached. Reattach the control knob.
6. Repeat this process for all surface burners (open, or sealed, or wok).

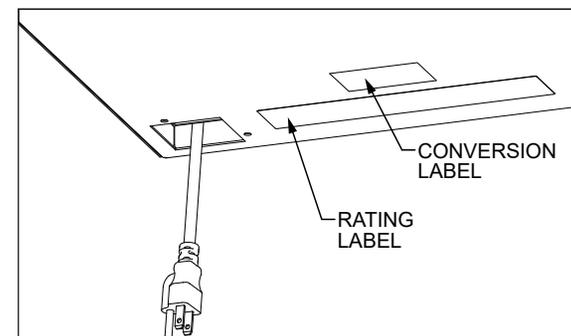
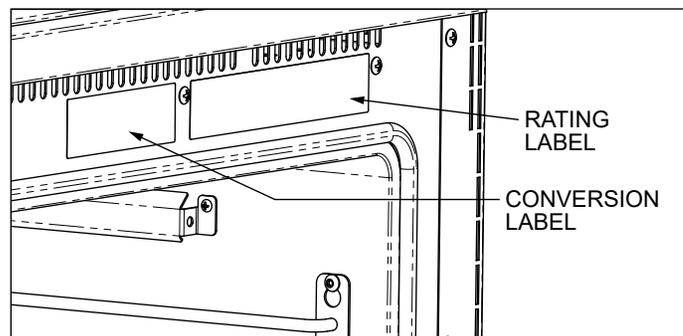


With all leak detection and all flame adjustments complete, you may now reinstall any remaining covers, etc. in the reverse order they were removed. Be sure the power is restored, and the gas shut-off valve behind the unit is open. Carefully move the range back into position without kinking the gas hose or damaging the power cord. Be sure the anti-tip bracket at the rear of the range is fully engaged and the range does not tip.

LABEL

After conversion, the label provided in the kit must be attached to the unit. For the range, affix the label adjacent to the rating label above the oven door as shown. For the rangetop, affix the label underneath the unit next to the existing rating label.

The qualified service technician will fill in the Gas Type, Manifold Pressure, and BTU Rates for each burner type per the charts in each section of this manual. The technician should sign and date the label as well. Keep all the old parts/orifices and these instructions for future use.





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All product details and specifications are subject to change without notice.

All specifications are for planning purposes only.

For the most up to date use and care and installation instructions, contact Capital Cooking indicating the model number.

CERTIFIED FOR USA AND CANADA



RETAIN THIS MANUAL FOR FUTURE REFERENCE.

195-0136-EN Rev A