

ASK THE EXPERT: Burner Troubleshooting Information & Maintenance

The burner is the heart of your BBQ. It is subject to a number of conditions that can cause damage, and lead to potential safety issues. Due to the extreme temperatures and conditions that your BBQ is exposed to including harsh climates, salts, fats, and basting solutions used during cooking, **FREQUENT MAINTENANCE AND SAFETY CHECKS ARE NECESSARY.**

All BBQ Burner issues can be classified as follows:

1. **Performance Issues**
 - a. Irregular flame pattern – The flame height is high or low
 - b. Flame color – It is blue with orange tips, large yellow etc.
 - c. Burners not lighting – It is only half lighting
 - d. High or low temperatures
 - e. Natural Gas: supply line installation
 - f. Natural Gas: Water Column Pressure
 - g. Natural Gas: using a longer hose than supplied with BBQ
2. **Deterioration/ Maintenance Issues**
 - a. Rusting
 - b. Burners are cracked, splitting, or has holes
 - c. Port holes are damaged
 - d. Venturi tube are damaged
3. **Fire/ Safety Issues**
 - a. Flash fire – There are flames burning outside of the Venturi tube
 - b. Grease fires

How do I avoid Performance issues, deterioration and maintenance issues, as well as fire and safety hazards?

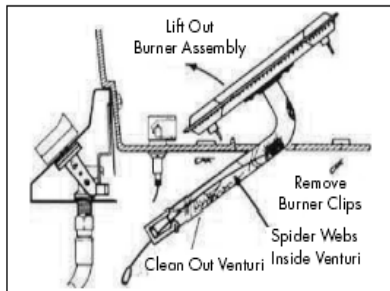
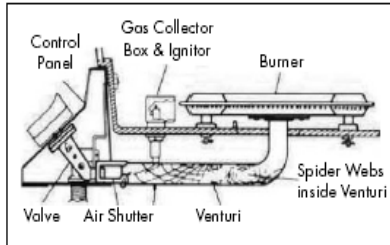
The only way to avoid all of the issues listed above is to remove your BBQ’s burners one to three times a season and perform regular maintenance and safety checks. Your BBQ will provide you with many years of reliable grilling as long as regular maintenance is performed. Keeping your BBQ’s burners free and clear of debris, checking for obstructions including spider webs, will ensure that your family is protected from serious safety hazards such as FLASH and GREASE Fires. For more information regarding these issues please request the appropriate Centro Ask the Expert pages.

Resolving Performance Issues:

Problem:	Identifying the cause
Burner will not light (with igniter or match)	<ol style="list-style-type: none"> 1. Low or out of propane 2. Cylinder or the gas supply valve is turned off 3. Positive connection has not been made between the tank and the regulator. Regulator will not allow fuel in the line 4. Burner port holes are blocked 5. There are blocked Venturi tubes 6. Venturi tubes are not properly seated over valve orifices 7. The Flow Limiting Device in the regulator has been activated 8. Blocked or damaged valve gas jet 9. Damaged valve orifice (possibly from a flash fire)

Problem:	Identifying the cause
Fire at control knob and control panel = Flash Fire	<ol style="list-style-type: none"> 1. Burner port holes and/or Venturi tubes are blocked 2. Burner is improperly seated on valve orifice
Yellow smoky flames	<ol style="list-style-type: none"> 1. Blocked burner port holes and venture causing poor combustion 2. Excess cooking salts on burner 3. Models with air shutter clip on the burners end may need to be adjusted properly
Flame blows out on LOW	<ol style="list-style-type: none"> 1. High Wind condition – Adjust the placement of BBQ to shield from wind 2. Propane is running low 3. Flow Limiting device in regulator has been activated 4. Leak in system 5. Burner improperly seated on valve orifice 6. Flame Tamers (heat plates) are not in position 7. NATURAL GAS MODELS: Installation issues related to incorrect size supply line installed and /or Water Column supply is not adequate for a BBQ BTU rating of this grill. Do not use a longer Natural Gas hose than is supplied with your grill.
Burner does not get hot enough	<ol style="list-style-type: none"> 1. BBQ needs to be preheated for 5 to 10 minutes with a closed lid. Outside temperatures will affect the amount of preheat time required 2. Temperature Gauge may be malfunctioning 3. Blockage in burning system- maintenance required 4. Flow limiting device in regulator has been activated and requires resetting 5. NATURAL GAS MODELS: Installation issues related to incorrect size supply line installed and /or Water Column supply is not adequate for a BBQ BTU rating of this grill. Do not use a longer Natural Gas hose than is supplied with your grill.
Low or incomplete flame (assuming burners and Venturi tubes are free and clear of blockages)	<ol style="list-style-type: none"> 1. Proper start up and shut down procedure not followed 2. Flow limiting device in regulator has been activated and requires resetting 3. Flame Tamers (heat plates) are missing or not in position 4. Leak in system 5. NATURAL GAS MODELS: Installation issues related to incorrect size supply line installed and /or Water Column supply is not adequate for a BBQ BTU rating of this grill. Do not use a longer Natural Gas hose than is supplied with your grill.

Problem:	Identifying the cause
Too much heat/ Excessive flare up	<ol style="list-style-type: none"> 1. Excessive fat in meat 2. Grease drain plugged 3. Cooking system including flame tamers and cooking grates have a build up of grease that must be removed 4. Lower casting of the BBQ is clogged with grease 5. Cooking on lower temperature setting. Reduce temperatures according to type of foods being cooked.
Burners will not cross-light each other	<ol style="list-style-type: none"> 1. Plugged ports along the back of burner - Clean burner ports. 2. Flow limiting Device Activated limiting gas pressure 3. Control knob not in the open position
Sear Zone – Infrared burner flashes back (during operation the burner abruptly makes a loud “whoosh” sound, followed by a continuous blow-torch type sound and then grows dim)	<ol style="list-style-type: none"> 1. Ceramic tiles overloaded with grease drippings and/ or the ports are clogged – turn burner off and allow to cool for at least two minutes. Re-light burner and burn on HIGH for at least five minutes or until the ceramic tiles are evenly glowing red. 2. Burner is overheated due to inadequate ventilation (too much grill surface is covered by griddle or pan) - Ensure that no more than 75% of the grill surface is covered by objects or accessories. Turn the burner off and allow to cool for at least two minutes, then re-light. 3. Cracked ceramic tile - Allow the burner to cool and inspect very closely for cracks. If any cracks are found, order a new part. 4. The gasket surrounding the ceramic tile is leaking and/ or there is a failure weld in the burner housing - Contact your authorized Centro dealer for instructions on ordering a replacement burner assembly.

CAUTION
SPIDER ALERT

If you notice that your grill is getting hard to light or that the flame is not as strong as it should be, take the time to check and clean the venturis.

In some areas of the country, spiders or small insects have been known to create “flashback” problems. The spiders spin webs, build nests and lay eggs in the grill is Venturi tube(s) obstructing the flow of gas to the burner. The backed-up gas can ignite in the Venturi behind the control panel. This is known as a flashback and it can damage your grill and even cause injury.

To prevent flashbacks and ensure good performance the burner and Venturi assembly should be removed from the grill and cleaned before use whenever the grill has been idle for an extended period.

General Burner Maintenance

1. Remove your Centro cooking grates and heat distribution plates (flame tamers) to reveal the burners.
2. To remove burner you must first remove the hardware used to assemble the burner into the burner box. Cotter Pin for Cast Iron burner; one screw for U burner and tube burners; two screws for H-burner and Bar burner.
3. Remove your Burner.
4. Brush the outer parts of the burner using a wire or brass bristled brush, paying particular attention to the burner port holes.
5. Using a flexible wire, open paper clip, or a drill bit, probe each port hole to clear it of grime and rust.

CAUTION: Do not use anything larger in diameter than the port hole itself as this may cause damage to the burner port holes.

6. Using a Venturi tube brush, or bottle cleaning brush, clean the interior of the Burner. Special care should be taken to make sure the brush passes through the entire burner interior.
For H and Bar Burners – pay particular attention must be paid to ensure that all blockages are removed from the internal carryover.
7. Lightly tap the Burner to remove any residue that has been dislodged from the ports and tubes. A garden hose can be used to flush out any debris from within the burner, but NO WATER must be allowed to remain on the interior of the burner, as this may cause corrosion or lighting issues.
8. **For Cast Iron Burners only** – the cross lighting tube located on the underside of the burner, identified as a 2 ½ inch line, must be freed of any debris to ensure the burner performs at its best. Using a knife, blade or other tool, remove any corrosion and/or blockages from this line to ensure proper flame carryover from one side of the burner, to the other.
9. Visually check the gas jets at the end of each of the valves for dirt, dust and spider webs. Clean them if necessary.

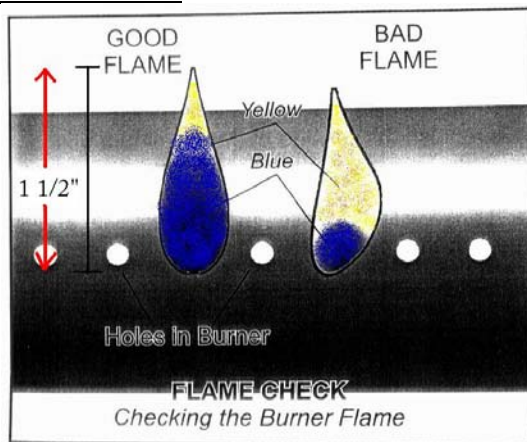
10. While you have the bottom of the Burner Box casting exposed, take the opportunity to clean it the best you can by removing any gunk with a putty knife or garden tool.
11. Re-install burners using hardware removed. Ensure that the Burners are installed correctly with Venturi tubes seated correctly over valve, gas jet, and firmly in place.
12. Re-install flame tamers and cooking grates

STORING YOUR BBQ

When putting the BBQ away for the winter or for long periods without use, you should do the following:

- Remove and clean the burners thoroughly
- Wrap in a towel
- Store indoors with cooking grates, igniter battery and flame tamers.

Flame Characteristics



- Flames should be approximately 1 1/2” tall when the BBQ is set to HIGH.
- Flames should be blue with yellow tips
- All Yellow flames, Mostly yellow flames, Lifting Flames indicate a blockage in the burning system.

Description of Centro and Master Chef Burner Styles

Master Chef Models 2003-2008 – Stainless Steel Bar Burner and H-burner

- Both burners perform the same way
- Both burners come with the igniter electrode preassembled
- Both will require assembly to the BBQ
- Both burners are dual valve – which means they have two Venturi tubes which are seated over individual valves that control the opposing half of the burner’s temperature.
- Both require frequent checks to ensure that the burner is properly seated over the valve. These units are often moved around because of their portability so the likelihood of the burner shifting is very high.
- Burners must be cleaned more often to remove corrosion or debris and improve and maintain the performance of the grill.
- Both the Bar and H burners have an internal carryover – which moves the flame from one side of the burner to the other. Blockages in this system are the cause for burners lighting only on one side.

Centro Models 2005-07 - Stainless Steel U-Burners and only Centro 2000 Model 2005-2007 Stainless Steel Tube Burners

- Unlike the Bar and H-Burner, the electrode is assembled to the burner box, not the burner.
- Burners are all preassembled to the BBQ.
- Each U-Burner and Tube Burner has a completely independent valve/ control knob.
- The burners are assembled to a bar known as a carryover bar which doubles as a burner brace (one screw used to attach burner to burner brace).
- The U-Burner and Tube Burner, burning system utilizes the carryover bar to carry the flame from one lit burner to the adjacent burners.

Centro 2003 and 2004 Models – Cast iron burners

- Cast Iron burners are preassembled to the BBQ
- Cast Iron burners are assembled to a carryover bar otherwise known as a burner brace, using a cotter pin- which is located on the underside of the burner.
- Cast Iron Burners have independent valve/ temperature control knobs.
- Cast Iron burners have a cross lighting feature called the cross lighting tube, which carry's the flame from one side of the burner to the other.
- This cross lighting tube located on the under-side of the burner must be free and clear of debris to eliminate the majority of performance issues with these burners.

Warranty Information

Please review the warranty section of your manual for coverage and limitation information specific to your model and part.

CENTRO AND MASTERCHEF will not be responsible or liable for any failures or operating difficulties caused by anything other than defects in manufacturing workmanship. In relation to burners this would include burner design and assembly issues.

Exclusions to this limited warranty include: normal wear and tear, corrosion due to lack of maintenance, grease fires, flash-fires, hostile environments, accidents, alterations, abuse or neglect, improper installation and failure to read and/or abide by any product warnings. Part failure due to lack of cleaning and maintenance will not be covered under this manufacturers warranty.

Related Topics:

- ASK THE EXPERT: How to Perform a Leak Test on your BBQ
- ASK THE EXPERT: BBQ Safety to Understanding Flash Fires and Grease Fires
- ASK THE EXPERT: Facts about Natural Gas BBQs
- ASK THE EXPERT: Regulator Flow Limiting Device Reset
- ASK THE EXPERT: Your Guide to Heat Distribution Plates/ Flame Tamers
- ASK THE EXPERT: Care and Maintenance Information for your Centro/ Master Chef Cooking Grates

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