

# **Sterling® FR**

# **Sterling® FR G-Series**

## **OWNER'S MANUAL**

**THERMAL ENGINEERING CORPORATION**

P.O. Box 868, Columbia, South Carolina 29202-0868

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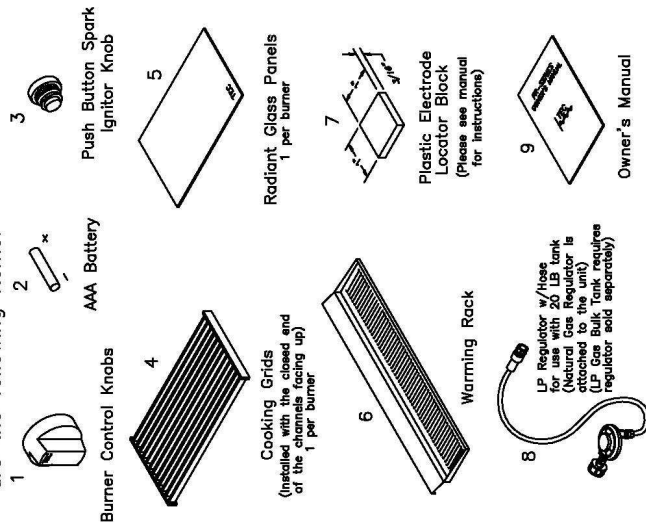
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Website: [www.tecinfrared.com](http://www.tecinfrared.com)

## Unpacking the

STERLING® or G-SERIES® FR  
Included with the Sterling® or G-SERIES® FR  
are the following items.



Regulator Hose Assembly

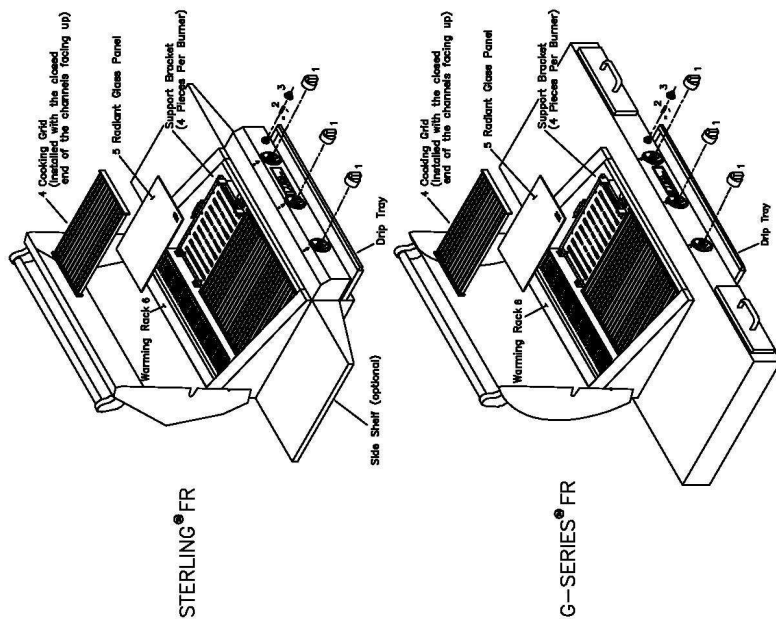
## Pre-Assembly

For shipping, the FR Series Grills are attached to support braces which are bolted to a pallet. Open the box and unbolt the support braces from the pallet. Carefully remove the grill from the box. After the grill has been removed from the box, unbolt the support braces attached to the bottom of the grill. These braces are no longer needed. Remove all packaging and protective covering on all grill parts including the drip tray, as well as the tape holding the trim pieces in place.

Please note that instructions for proper gas hook up are found in the manual. If the unit is rated for natural gas the regulator is attached to the grill. If the grill is rated for LP (20 lb tank) the LP Regulator will need to be attached following the directions found in the manual. If the grill is being used with Bulk Tank LP Gas a separate regulator is required and not included with the grill. It is an optional accessory and sold separately.

## STOP! Read Before Installation!

STERLING® FR or G-SERIES® FR



3 Burner Units are Illustrated Above. (2-4 Burner Units are Available)

PLEASE READ THE OWNER'S MANUAL  
BEFORE OPERATING THIS GRILL!



DETAILED INSTRUCTIONS IN THE MANUAL

Aug. 2009

## Installation & Assembly

1. For the Sterling FR Grills, with the "OFF" indicator at the top slide each knob fully onto the valve stem ensuring each knob is centered in the surrounding bezel. Remove the knob and adjust the bezel as necessary.
2. For the G-Series FR Grills: Using a 5/64" Allen Wrench (included), loosen the set screw in the bottom of the knob, enough to allow mounting onto the valve stem. Do not remove the insert. With the "OFF" indicator at the top, slide each knob fully onto the valve stem ensuring each knob is centered in the surrounding bezel. Remove and adjust the bezel as necessary. Turn the knob counterclockwise to LOW and while continuously pushing the knob firmly onto the valve stem, tighten the set screw using the Allen Wrench. THEN TURN THE KNOB CLOCKWISE TO OFF.
3. Install the AAA battery as shown. (+ and first) Screw on the Push Button Spark Ignitor Knob(s) onto the Spark Ignitor Bezel as shown.
4. Carefully unwrap the radiant glass panels. With the smooth side up place each panel on the four support brackets mounted on each burner. If the glass is not level it will be necessary to make a slight adjustment to the brackets with a pair of pliers so that the glass sits level on all four brackets.
5. Remove the cooking grids located in the drip tray of the unit. Wash in warm soapy water and dry thoroughly then with the closed end of the channels facing up place each grid on top of each radiant glass panel. (see center diagram)
6. Remove any protective coating from the warming rack and drip tray. Set the warming rack on top of the hood body rear trim panel. (see center diagram)
7. Follow the directions in the manual for proper gas hookup of the unit.

## Warnings



### DANGER

#### IF YOU SMELL GAS:

1. SHUT OFF GAS TO THE APPLIANCE.
2. EXTINGUISH ANY OPEN FLAME.
3. OPEN LID.
4. IF ODOR CONTINUES, KEEP AWAY FROM THE APPLIANCE AND IMMEDIATELY CALL YOUR GAS SUPPLIER OR YOUR FIRE DEPARTMENT.



### WARNING

1. DO NOT STORE OR USE GASOLINE OR OTHER FLAMMABLE VAPORS OR LIQUIDS IN THE VICINITY OF THIS OR ANY OTHER APPLIANCE.
2. AN LP CYLINDER NOT CONNECTED FOR USE SHALL NOT BE STORED IN THE VICINITY OF THIS OR ANY OTHER APPLIANCE.

## Warnings to Customer

DO NOT INSTALL OR OPERATE THIS APPLIANCE WITHOUT HAVING CAREFULLY READ THIS MANUAL. FOR FUTURE REFERENCE, HAVE THIS MANUAL AVAILABLE WHILE USING THIS APPLIANCE AND ALWAYS FOLLOW THE INSTRUCTIONS PROVIDED.

NEVER ATTEMPT TO MAKE CONVERSIONS OR MODIFICATIONS TO YOUR GRILL WITHOUT FIRST OBTAINING WRITTEN INSTRUCTIONS FROM THERMAL ENGINEERING CORPORATION.

DO NOT STORE A SPARE GAS CYLINDER UNDER OR WITHIN 15 FEET OF THIS GRILL, OR ANY OTHER OPEN FLAME, HEAT PRODUCING APPLIANCE OR HEAT SOURCE.

DO NOT ALLOW YOUR LP GAS CYLINDER TO BE FILLED BEYOND 80 % FULL.

**WARNING:** FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN A FIRE CAUSING DEATH OR SERIOUS INJURY OR PROPERTY DAMAGE.

## Notices

### Notice to Customer

PRIOR TO INSTALLING AND USING THIS APPLIANCE, READ THIS MANUAL FULLY AND CAREFULLY. RETAIN THIS MANUAL FOR FUTURE REFERENCE AND HAVE AVAILABLE AT ALL TIMES. ENSURE THAT ALL PERSONS OPERATING THIS EQUIPMENT CAREFULLY READ AND BECOME FAMILIAR WITH THE INFORMATION IN THIS MANUAL.

THIS UNIT HAS BEEN CAREFULLY INSPECTED AND PACKAGED AT THE FACTORY PRIOR TO SHIPMENT. UPON ARRIVAL, INSPECT THE APPLIANCE CAREFULLY FOR ANY CONCEALED DAMAGE. IMMEDIATELY REPORT ANY DAMAGE TO YOUR AUTHORIZED DEALER.

SHOULD YOU HAVE ANY QUESTIONS REGARDING OPERATION OR USE OF THIS APPLIANCE, CONTACT THERMAL ENGINEERING CORPORATION AT (803) 783-0750 OR 1-800-331-0097.

### Notice to Installer

INSTALLATION MUST CONFORM TO LOCAL CODES OR THE NATIONAL FUEL GAS CODE, ANSI Z223.1/NFPA 54. IN CANADA, INSTALLATION OF THIS PRODUCT SHOULD BE IN ACCORDANCE WITH THE CAN/CGA-B149.1 NATURAL GAS AND PROPANE INSTALLATION CODE. FOLLOWING INSTALLATION, LEAVE THIS OWNER'S MANUAL WITH THE CONSUMER FOR FUTURE REFERENCE. THIS APPLIANCE IS NOT INTENDED FOR USE ON RECREATIONAL VEHICLES AND/OR BOATS.

ALL GRILLS REQUIRE A TEC SPECIFIED REGULATOR TO BE INSTALLED.



NATIONALLY REGISTERED TESTING LABORATORY

U.S. Patents, 6114666, 7726967B2, 7853129; Canadian Patents 2571545, 2571395, 2336036; European Patent (Austria, Germany, Denmark, France, Great Britain, Netherlands, Sweden) 99932203.5; and Patents Pending

©Thermal Engineering Corporation, Issued 02/06  
082010, 110210, 121610, 030711, 111611

# Residential Outdoor Grill Warranty

## EXPRESS WARRANTIES

Thermal Engineering Corporation (TEC®) warrants this product and all component parts to the original owner to be free of defects in material and workmanship when subjected to normal household use for a period of one year from the date of purchase except as detailed below.

### LIFETIME LIMITED WARRANTY

The structural integrity of all exterior stainless steel structural components is warranted to the original owner for the lifetime of the product. This warranty does not apply if the product is subject to other than normal household use nor does it include changes in finish appearance.

### FIVE YEAR WARRANTY

Burner Assemblies are warranted to the original owner against rust-through or other operational failure for five years from the date of the original purchase. Burner surface rust and oxidation, which is normal, is not covered under this warranty.

**UNDER THIS WARRANTY** To support the repair or replacement of the product or any component part under this warranty, the owner must first: (1) Provide TEC or the dealer with proof of purchase of grill or component part, including the original purchase date and the serial number of the product and (2) Obtain Return Authorization from the dealer or TEC and return the product or component part to TEC or the dealer within the warranty period. TEC reserves the right to determine the warranty status of a part and shall have the option to repair or replace the product or any component part deemed by TEC to be defective. Parts returned to the factory for warranty determination will not be returned to the customer. **IMPORTANT: RETAIN PROOF OF ORIGINAL PURCHASE TO ESTABLISH WARRANTY PERIOD.** The repair or replacement of the product or any of its component parts under this warranty shall be made by TEC free of charge for the part itself, with the owner paying all other costs, including labor and shipping. This warranty extends only to the original purchaser of the product and does not apply to commercial usage. This warranty shall not apply to problems or damage resulting from abuse, negligence, accident, natural disaster, alteration of the product, improper operation, installation, set-up or service or for failure to follow the instructions in the Owner's Manual. Discoloration, oxidation and surface rust of grill components which in the normal course of grill operation are exposed to high levels of heat are not covered by this warranty. Some objects and substances that come in contact with the grill may cause changes to its outward appearance, including discoloration, oxidation, and surface rust to the outer stainless steel structure. These changes in appearance are not covered under the warranty.

**DISCLAIMER OF IMPLIED WARRANTIES** The warrantor is not responsible for incidental and consequential damages whether arising out of breach of warranty, breach of contract or otherwise. Some jurisdictions do not allow the exclusions or limitations of incidental or consequential damages so the above limitation or exclusion may not apply to you. Any implied warranty of merchantability and fitness applicable to the product and its component parts are limited in duration to the period of coverage of the applicable expressed written limited warranties set forth above. Some jurisdictions do not allow limitations on how long an implied warranty lasts so the above limitations may not apply to you.

This warranty is in lieu of all other warranties, expressed or implied, and all other obligations or liabilities in connection with the sale, use and ownership of this product.

### THERMAL ENGINEERING CORPORATION

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Facsimile: Toll-free (888)581-0286  
Website: [www.tecinfrared.com](http://www.tecinfrared.com)

MODEL: \_\_\_\_\_

DATE OF PURCHASE: \_\_\_\_\_

SERIAL #: \_\_\_\_\_

The rating plate is located on the side of the front left corner of the grill.

DEALER NAME: \_\_\_\_\_

DEALER TELEPHONE #: \_\_\_\_\_

(Complete the above information for future reference.)

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# Installation

## General Overview

**WARNING:** THIS GRILL IS DESIGN CERTIFIED FOR USE OUTDOORS ONLY. THIS GRILL SHOULD NOT BE USED IN A BUILDING, GARAGE OR OTHER ENCLOSED AREA AND IS NOT INTENDED FOR USE ON RECREATIONAL VEHICLES OR BOATS.

**WARNING:** THIS OUTDOOR COOKING GAS APPLIANCE SHALL NOT BE USED UNDER OVERHEAD COMBUSTIBLE CONSTRUCTION.

Sterling FR and Sterling G-Series FR grills are designed to be built-in using a permanent masonry or other suitable patio fixture, or for mounting onto a mobile cabinet base. See Appendix A and B for complete build-in specifications. Figure 1, page 4, shows the minimum required clearance of a mobile grill to any adjacent combustible construction.

## Permanent Installation

If you are installing your grill as a build-in, it should be located so the ventilation openings remain clear of all obstructions. THE OPENINGS ARE LOCATED IN THE FRONT AT THE SURFACE AND IN THE UNDERSIDE OF THE GRILL HOUSING, AS WELL AS AT THE REAR OF THE HOOD. Any accumulation of debris will restrict the flow of combustion and /or ventilation air, and may result in improper burner operation or overheating. Installation procedures relating to gas connections for permanent installations can be found in the Gas Connection section, starting at page 7 of this manual. A TEC specified regulator is required for operation of this grill. Build-in opening specifications can be found in Appendix A and B of this manual.

The installation of your grill must conform to local codes or, in absence of local codes, the National Fuel Gas Code ANSI Z223.1/NFPA 54. In Canada, the installation must conform to local codes and/or the Natural Gas and Propane Installation Code CAN/CGA-B149.1.

## Hazardous Locations and Conditions

- When cooking, keep your grill at least twenty-four (24) inches away from combustible or distortable surfaces (wood, vinyl wall or wooden railing, etc.) Do not place grill under combustible material (i.e. wood, canvas, thatch, plastic, etc.).
- Do not block the flow of combustion and ventilation air.
- Only use your grill outside in a well-ventilated area. Do not cook in a building, garage, or other enclosed area.
- Keep flammable substances away from the grill, including aerosols and aerosol containers, gasoline and similar liquids, paper and paper products, containers of grease, paint, etc.

# Installation continued

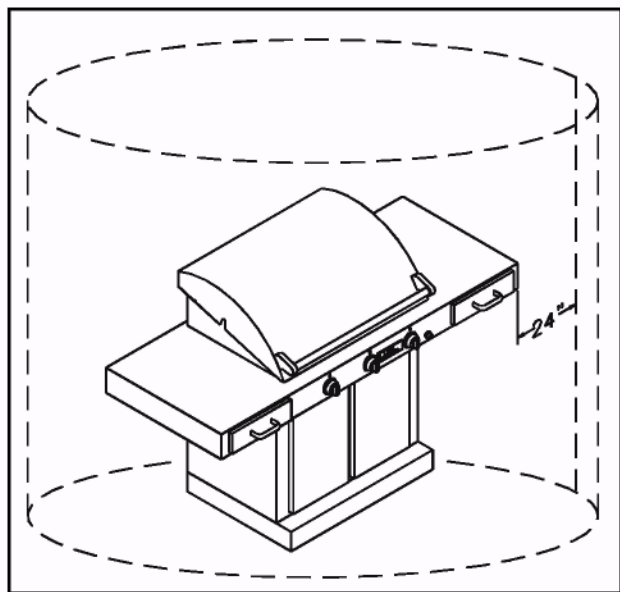
## Hazardous Locations and Conditions Continued

- Never leave your grill unattended while it is in operation.
- Do not wear flammable and/or loose clothing, such as long sleeves, neckties, scarves, etc., while using the grill.

## Cabinet Base Mounting Instructions

The Sterling FR and the Sterling G-Series FR grills are designed for cabinet mounting. The Grill is packaged separately from the Cabinet Base. Follow the procedures below to mount the Grill Housing onto the Cabinet Base. An open-end 7/16" wrench is required to install the hardware which includes 1/4-20 hex head screws, flat washers, and lock washers.

1. Set the Cabinet Base upright on a level surface and set the Base Brake mechanism as shown on page 12. This will keep the Cabinet Base stationary. Place the Grill Housing onto the Cabinet Base and align the mounting holes of both.
2. Place a lock washer followed by a flat washer on to the hex head screw and from the inside of the cabinet base, thread each screw upward into the threaded hole of the grill body.
3. Before completely tightening any of the screws, hand-tighten ALL of them into the threaded holes and ensure the sides of the Grill Housing and Cabinet Base are still aligned.



**Figure 1. Clearance to Combustible Construction (Sterling G-3000 FR Shown)**

## Pedestal Base Mounting Instructions (Two Burner Sterling FR Units only)

Assemble the Pedestal Base and mount the Grill Housing as follows. The required hardware is tied to the top back corner of the Pedestal Base in a plastic bag. An open-end 7/16" wrench and a #2 Phillips screwdriver are required to install the included hardware. (See Figure 2, page 5)

1. Remove the Pedestal Base from the packaging materials and set it on a level surface.
2. Remove the Gusset from the tank storage cavity and remove the packaging from it. Place Gusset across front top of Pedestal Base with top flange facing away from the front of the Pedestal Base towards the front of the grill. Align the four (4) holes and insert four (4) 1/4"-20 truss head screws through the holes with the threads pointed into the tank storage cavity. Then, place a flat washer on the screw followed by a lock washer, followed by a 1/4" nut. Using the Phillips screwdriver and the 7/16" open-end wrench tighten each screw. See accompanying diagram with Gusset.
3. Place the Grill Housing on the Pedestal Base and align the holes in the bottom of the Grill Housing with the holes in the top of the Base.
4. Fasten the Housing to the Base with the supplied hardware: four (4) 1/4"-20 x 1/2" hex head bolts, four (4) 1/4" flat washers, and four (4) 1/4" lock washers. Place a lock washer followed by a flat washer on to each bolt then insert each bolt with the threads pointed upward into the aligned holes. Using the 7/16" open-end wrench tighten each bolt.

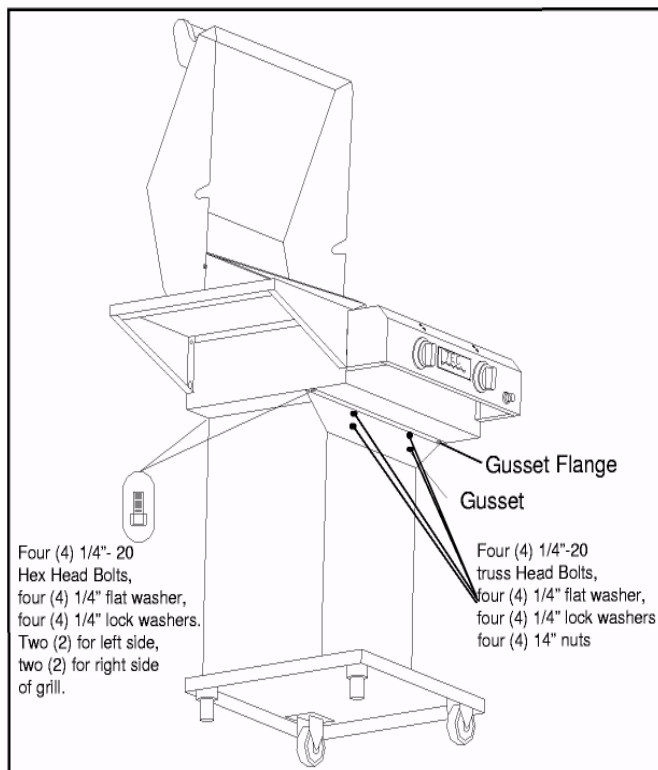
## In-Ground & Bolt-Down Post Base (Two Burner Sterling FR Models Only)

1. Install the In-Ground or Bolt-Down Post Base in accordance with the instructions accompanying the Post Base. (See Figures 3 & 4, page 5)

# Installation continued

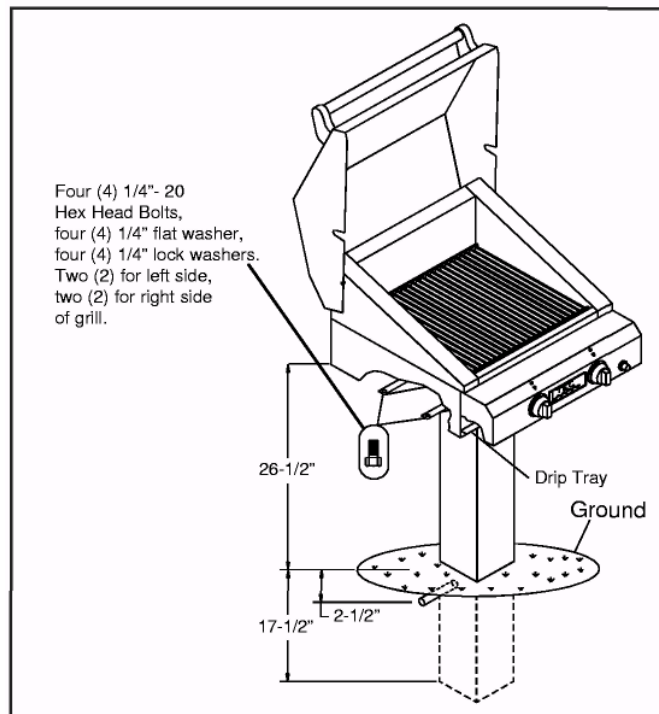
## In-Ground & Bolt-Down Post Base (Two Burner Sterling FR Models Only) continued

- Place the Grill Housing on the Base and align the holes in the bottom of the Grill Housing with the holes in the top of the Base.
- Fasten the Housing to the Base with the supplied hardware: four (4) 1/4"-20 x 1/2" hex head bolts, four (4) 1/4" flat washers, and four (4) 1/4" lock washers. Place a lock washer followed by a flat washer on to each bolt then insert each bolt with the threads pointed upward into the aligned holes. Using the 7/16" open-end wrench tighten each bolt.

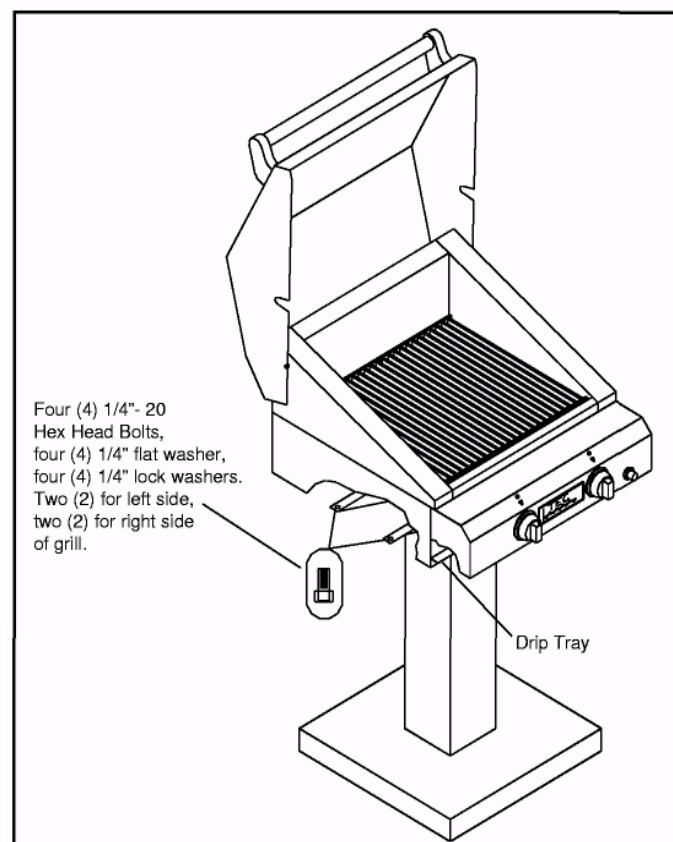


**Figure 2. Pedestal Base shown with Gusset Assembly (Sterling II FR shown)**

**In-Ground Posts should be protected against corrosion as warranted by soil conditions. Corrosion protection should be provided as needed with a suitable coating to retard the effects of corrosion existing in local areas.**



**Figure 3. In-ground Post Base (Sterling II FR shown)**



**Figure 4. Bolt-down Post Base (Sterling II FR shown)**



## Installation continued

### Side Shelf Installation (Sterling FR only)

**Note:** Our one (1) Side Shelf Vinyl Grill Cover is designed for grills with the Side Shelf Mounted on the left.

1. Remove the Side Shelf from the box.
2. Remove the protective coating from the Side Shelf.
3. Using a #2 Phillips-head Screwdriver loosen and remove the upper two (2) Phillips-head Screws from the left or right side of the Grill Housing.  
(See Figure 5)
4. Loosen the lower two (2) Phillips-head Screws of the left or right side of the Grill Housing.  
Do not remove the screws.
5. Mount the Side Shelf on the loosened lower screws.
6. Insert two (2) Phillips-head screws into the upper holes and tighten.
7. Tighten the lower screws.

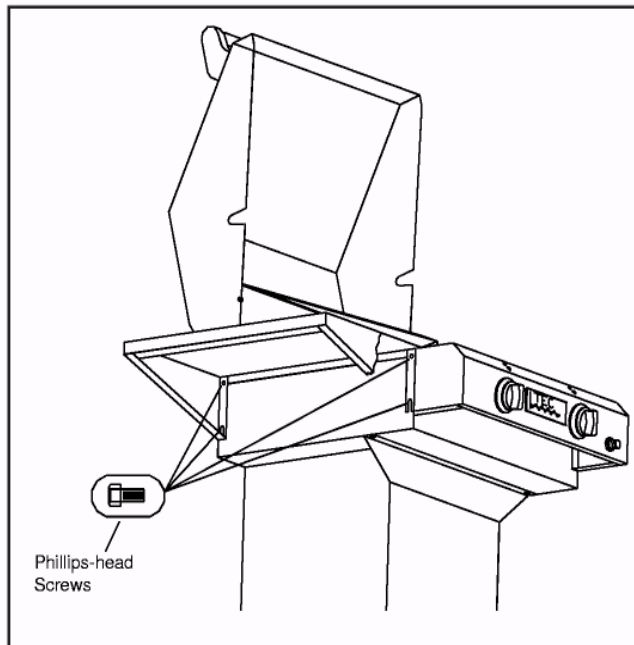


Figure 5. **Side Shelf Assembly (Sterling II FR shown)**

## Assembly

Once the grill has been mounted on the appropriate base, unpack the Radiant Glass Panels, the Cooking Grids, the Burner Output Knobs and the Warming Rack and place in their proper locations following the instructions.

## Assembly continued

### Radiant Glass Panels

1. Remove the Radiant Glass Panels from the packaging material. The Panels are located in the Prepack Box.
2. Place a Radiant Glass Panel with the smooth side up onto the four support brackets directly above each burner assembly. (See Figure 16, Page 16 or set up sheet included with grill) If the glass is not level it will be necessary to make a slight adjustment to the brackets with a pair of pliers so that the glass sits level on all four brackets.

### Cooking Grids and Warming Rack

1. Remove the Cooking Grids and Warming Rack from the packaging material. Peel off any protective adhesive coating from the Warming Rack. Wash the Cooking Grids and Warming Rack in warm soapy water.
2. Set the Cooking Grids in place with the closed side of the channels facing up, on top of the Radiant Glass Panels. Set the Warming Rack in place on top of the Hood Body Rear Trim Panel. (See Figures 16 & 18, Page 16 or set up sheet included with grill)

### Burner Output Knobs (Sterling FR)

1. Remove the Burner Output Knobs from the packaging material. (see Figure 10 & 11, Page 10 or set up sheet included with grill)
2. With the "OFF" indicator at the top, slide the Knob fully onto the valve stem ensuring each knob is centered in the surrounding bezel. Remove knob and adjust bezel as necessary.

### Burner Output Knobs (Sterling G-Series FR)

1. Remove the Burner Output Knobs from the packaging material. (see Figure 10 & 11, Page 10 )
2. Using a 5/64" Allen wrench (supplied), loosen the set screw in the bottom of each knob, enough to allow mounting onto the valve stems. Do not remove the knob insert.
3. With the "OFF" indicator at the top, slide the Knob fully onto the valve stem ensuring each knob is centered in the surrounding bezel. Remove knob and adjust bezel as necessary.
4. Turn the Knob counterclockwise to LOW and, while continuously pushing the Knob firmly onto the valve stem, tighten the set screw using the 5/64" Allen wrench. THEN TURN THE KNOB CLOCKWISE TO "OFF"



# Gas Connection

## General Overview

**WARNING:** THE GAS SUPPLY HOSE SHOULD BE INSPECTED PRIOR TO EACH USE. DO NOT USE A GAS HOSE THAT HAS ABRASIONS, CUTS, DRY ROT OR EXCESSIVE WEAR. IF DAMAGE IS PRESENT, THE HOSE MUST BE REPLACED WITH A TEC-SPECIFIED HOSE PRIOR TO USING THE GRILL. LISTS OF REPLACEMENT PARTS ARE FOUND IN APPENDIX C AND D.

**WARNING:** WHEN YOUR GRILL IS STORED INDOORS, REMOVE AND STORE THE LP GAS CYLINDER OUTDOORS IN A PROTECTED, COOL AND DRY LOCATION OUT OF REACH OF CHILDREN. THE CYLINDER SHOULD NOT BE STORED IN A BUILDING, GARAGE OR ANY OTHER ENCLOSED AREA.

Follow the procedures outlined in this section closely to ensure safe and proper grill operation. The Sterling FR and the Sterling G-Series grills are offered in one of two gas configurations: LP (Liquid Propane) or Natural gas. Reference Table A.1 below for regulator specifications. Grills that do not use LP gas with a standard 20 lb. LP cylinder must be installed by qualified personnel. This includes all Natural gas and permanently installed units as well as LP Bulk Tank installations. Gas regulators specified by TEC must be installed and used at all times. Refer to Table A.1 below for gas supply specifications, or see rating plate located on the grill.

## LP Gas Cylinder Safety

**WARNING:** WHEN PURCHASED FOR USE WITH LP GAS, THE STERLING AND STERLING G-SERIES GRILLS COME WITH A REGULATOR ASSEMBLY THAT USES A TYPE 1 CYLINDER CONNECTION DEVICE. THIS DEVICE MUST BE USED WITH A TYPE 1 VALVE CYLINDER CONNECTION.

**NOTICE:** AN LP GAS CYLINDER IS NOT PROVIDED FROM THE FACTORY WITH THIS GRILL. HOWEVER, ONLY APPROVED 20 LB. LP GAS CYLINDERS CONSTRUCTED AND MARKED IN ACCORDANCE WITH THE SPECIFICATIONS FOR LP GAS CYLINDERS OF

THE U.S. DEPARTMENT OF TRANSPORTATION (D.O.T) OR NATIONAL STANDARD OF CANADA, CAN/CGA-B339, CYLINDERS, SPHERES AND TUBES FOR THE TRANSPORTATION OF DANGEROUS GOODS; AND COMMISSION, AS APPLICABLE SHOULD BE USED. ALL APPROVED CYLINDERS MUST BE EQUIPPED WITH AN INTEGRAL COLLAR DESIGNED TO PROTECT THE CYLINDER VALVE FROM DAMAGE, AS WELL AS A LISTED OVERFILL PROTECTION DEVICE. DO NOT USE OR TRY TO REPAIR A DAMAGED LP GAS CYLINDER AT ANY TIME. CONTACT YOUR LOCAL LP GAS SUPPLIER FOR REPLACEMENT. ALSO, YOU SHOULD ALWAYS OBSERVE THE FOLLOWING PRECAUTIONS:

- Do not store a spare gas cylinder under or within 15 feet of this grill or any other open flame, heat producing appliance or heat source.
- Do not fill your gas cylinder beyond 80% full.
- Gas cylinders come with a pressure relief valve. If a cylinder is subjected to excessive heat, the relief valve will open and let highly flammable gas vapor and/or liquid escape. Therefore, do not store gas cylinders near or under an open flame or source of heat. Store cylinders only in outside well ventilated areas.
- Place a dust cap on the cylinder valve outlet whenever the cylinder is not in use. Only install the type of dust cap on the cylinder that is provided with the cylinder valve. Other types of caps or plugs may result in leakage of propane.

**WARNING:** FAILURE TO FOLLOW THE ABOVE PRECAUTIONS COULD RESULT IN A FIRE CAUSING DEATH OR SERIOUS INJURY OR PROPERTY DAMAGE.

## Installing Your LP Gas Cylinder

**NOTICE:** FOR YOUR SAFETY, ONLY USE THE REGULATOR AND HOSE ASSEMBLY PROVIDED AS ORIGINAL EQUIPMENT WITH YOUR GRILL OR, IF REPLACEMENT PARTS ARE NECESSARY, USE ONLY TEC-SPECIFIED REPLACEMENT PARTS.

GAS, REGULATOR AND BASE TYPE	SUPPLY PRESSURE (IN. WC (kPa), MAX/MIN)	OPERATING PRESSURE (IN. WC (kPa)	MAIN BURNER ORIFICE SIZE (DMS/DIA.)	BURNER INPUT (BTU/HR. (W)/EA.)
Natural model RV-47L (NG) stationary	14.0 (3.4)/5.0 (1.2)	4.0 (1.0)	49 (0.0730")	17,000 (4,983)
LP model RV-47L (LP) stationary (LP Bulk Tank)	14.0 (3.4)/12.0 (3.0)	10.0 (2.7)	56 (0.0465")	16,000 (4,983)
LP (20 lb Tank)	125 psi (861), max	10.0 (2.7)	56 (0.0465")	16,000 (4,983)

**Table A.1.** Gas Supply Specifications

# Gas Connection continued

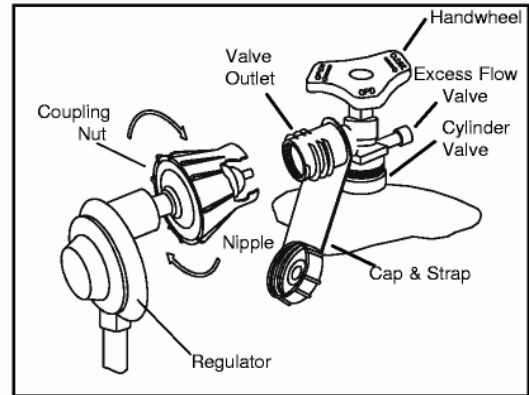
**NOTICE:** A FIRE EXTINGUISHER FOR CLASS A, B, C & D FIRES SHOULD BE READILY AVAILABLE AT ALL TIMES.

**WARNING:** THE VENTILATION/ACCESS OPENINGS FOR THE TANK, IN THE REAR AND LOWER FRONT OF THE CABINET, MUST BE FREE AND CLEAR FROM DEBRIS. THE GAS MUST BE TURNED OFF AT THE SUPPLY CYLINDER WHEN THE GRILL IS NOT IN USE.

Be sure to set the gas cylinder upright so the Cylinder Valve is at the top. This will ensure proper vapor withdrawal.

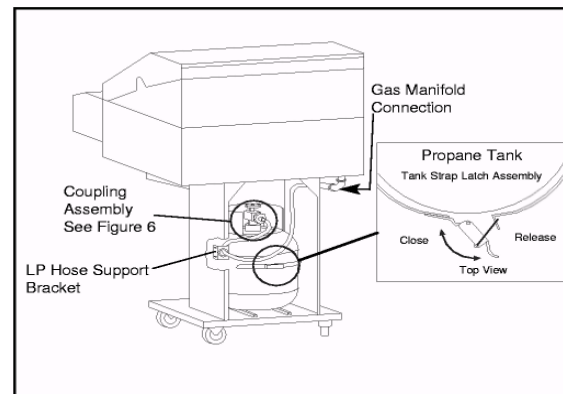
**Procedure for 20 lb Tank Connection:** (See Figures 6, 7, 8)

1. In order to make sure the Cylinder Valve is fully closed, turn the Handwheel clockwise until it stops.
2. Turn all Burner Output Knobs to OFF.
3. Move the grill to a level, open area and engage the Base Brake to limit rolling. (See Figure 15, Page 13)
4. Place the gas cylinder in the space provided in the base and secure the tank with the tank strap latch assembly. (See Figure 7 or 8 ) Remove the protective caps from Cylinder Valve Outlet and Nipple, as necessary.
5. Inspect the Coupling Nut, Nipple, Cylinder Valve Outlet and Cylinder Valve for any damage, dirt or debris. Remove dirt or debris. Replace any damaged parts with TEC-specified replacement parts or parts approved by your Gas Cylinder Supplier.
6. Inspect Regulator and Hose Assembly for any damage, dirt or debris. Remove dirt or debris. Replace any damaged parts prior to use.
7. With the Regulator in your hand, insert the Nipple into the Cylinder Valve. Make sure the Nipple is centered in the Cylinder Valve Outlet. Tighten the Coupling Nut by hand, making sure not to cross-thread the connection. Please note that when you connect your cylinder to the grill, you will feel the nipple seal when there is slight resistance. (See Figure 6) Turn until the Coupling Nut will turn no further (about one-half to three-quarters of a turn) to complete the connection. Tighten only by hand; do not use tools. If you cannot complete the final connection, disconnect the Coupling Nut and repeat step 7, above. If you are still unable to complete the connection, replace the appropriate parts.
8. (CABINET MODELS) With the Regulator Hose in your hand, place the hose through the hole in the front of the LP Hose Support Bracket, avoiding all contact with the drip tray. Then attach Quick Disconnect Fitting to the Gas Manifold Connection using the Quick Disconnect Instructions on page 10.

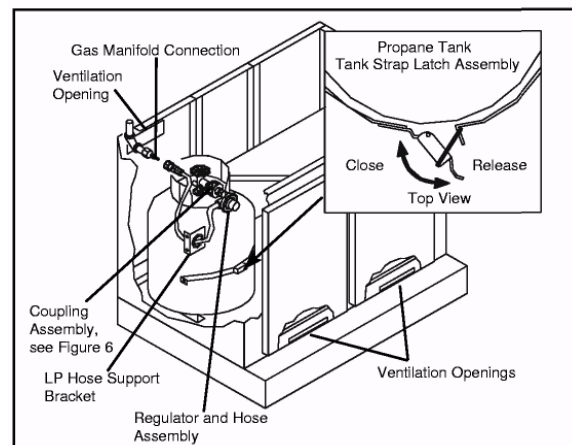


**Figure 6. REGULATOR AND HOSE / COUPLING ASSEMBLY**

9. (PEDESTAL MODELS) With the Regulator Hose in your hand, place the hose through the back-side of the LP Hose Support Bracket avoiding all contact with the drip tray. Then place the hose through the hole in the right side of the Pedestal Body and attach the Quick Disconnect Fitting to the Gas Manifold Connection using Quick Disconnect instructions on page 10.



**Figure 7. Gas Tank Placement-Sterling II FR Pedestal**



**Figure 8. Gas Tank Placement-Sterling and Sterling G-Series Cabinet**

## Gas Connection continued

### Removing Your LP Gas Cylinder

(See Figure 6, Page 9)

#### Procedure:

1. Close the Cylinder Valve by turning the Handwheel clockwise until it stops.
2. Remove the Coupling Nut by turning it counter-clockwise.
3. Release the Tank Strap Latch and remove the cylinder from the grill.

### Quick Disconnect Instructions

(See Figure 9, page 10)

#### Procedure:

1. To connect, push back Sleeve of Socket. (See Figure A)
2. Insert Plug (See Figure B), release Sleeve.
3. Push Plug until Sleeve snaps forward locking Plug in Socket. (See Figure C) (THIS AUTOMATICALLY OPENS THE SOCKET TO PERMIT GAS FLOW).
4. To disconnect, push sleeve back and pull out plug. (THIS AUTOMATICALLY CLOSES THE SOCKET TO PREVENT GAS FLOW.)

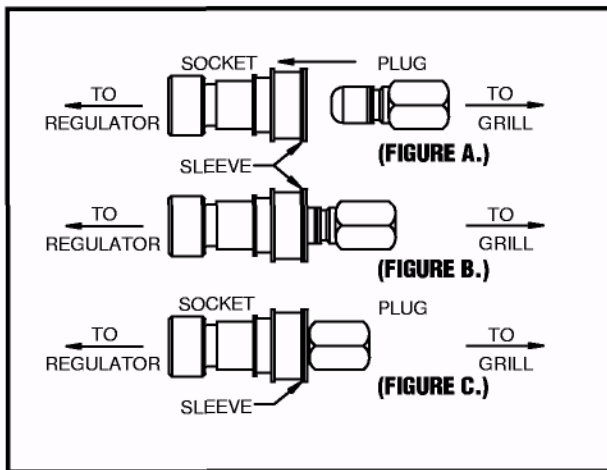


Figure 9. Quick Disconnect Fittings

### LP Bulk Tanks

LP bulk tanks require a special regulator and fittings not included with your grill and must be installed by a qualified technician (see Table A.1 on page 7 for specifications).

### Permanent Installation

**CAUTION:** GAS PIPING TO YOUR GRILL MUST BE IN ACCORDANCE WITH LOCAL CODES. IN THE ABSENCE OF LOCAL CODES, USE THE NATIONAL FUEL GAS CODE ANSI Z223.1/NFPA 54 (LATEST EDITION) OR CAN/CGA B-149.1, NATURAL GAS AND PROPANE INSTALLATION CODE.

**CAUTION:** THE GAS SUPPLY MUST BE TURNED OFF AT THE GRILL WHEN THIS APPLIANCE IS NOT IN USE.

When ordered for use with Natural gas, the Sterling and Sterling G-Series grills come adjusted to operate with Natural gas. Qualified personnel should install the gas line. A Shut-off Valve at the grill is required. This Valve must be design certified by CSA International.

The grill and shut-off valve must be disconnected from the gas supply piping system during any pressure testing of the system at test pressures in excess of 1/2 PSIG (3.5 kPa).

The grill must be isolated from the gas supply piping system by closing its individual manual shut-off valve during any pressure testing of the system at test pressures equal to or less than 1/2 PSIG (3.5 kPa).

### Gas Leak Test

**WARNING:** DO NOT USE OPEN FLAME TO PERFORM LEAK TEST!

**WARNING:** DO NOT ATTEMPT TO USE THE GRILL WHEN YOU SMELL GAS OR FAIL A GAS LEAK TEST.

Make sure there is no open flame near the grill during the test. Test for leaks every time the gas is re-connected.

#### Procedure:

1. Turn all Burner Output Knobs to OFF.
2. Open the Gas Cylinder Valve or the gas shut-off valve (permanent installation) slowly. Apply soapy water solution to all connections including factory connections.
3. Look for bubbles around the connections. If bubbles can be seen, close the Gas Cylinder Valve or the gas shut-off valve and tighten the connection where the bubbles are. (Replace damaged or defective connections and gas supply components as necessary) Then, repeat steps 1 and 2 until no bubbles appear. Make sure not to over-tighten the connections.
4. Proceed with grill use.

# Operation

## General Overview

**NOTICE:** THE BURNER VENTURI TUBES (SEE FIGURE 13, PAGE 11) SHOULD BE INSPECTED FOR SPIDER WEBS AND OTHER OBSTRUCTIONS PRIOR TO EACH USE. IF ANYTHING IS FOUND, CLEAN THE TUBES COMPLETELY. A CLOGGED TUBE CAN LEAD TO A FIRE BENEATH THE GRILL.

**NOTICE:** NEVER OPERATE THE GRILL WITHOUT THE RADIANT GLASS PANELS PROPERLY INSTALLED AS DESCRIBED ON PAGE 6. TO AVOID BREAKAGE, CAREFULLY REMOVE THESE RADIANT PANELS WHEN MOVING THE GRILL (EVEN WHEN SIMPLY ROLLING IT A SHORT DISTANCE).

## Burner Ignition and Operation

### Procedure:

**WARNING:** Turn Burner Output Knobs and other gas supply openings to the "OFF" position immediately if you smell gas at any time during performance of this procedure.

1. Open the grill hood. Ensure all Burner Output Knobs are in the "OFF" position and that there is nothing on top of the Cooking Grids.
2. For LP gas, open the Gas Cylinder Valve by turning the Handwheel counter-clockwise.  
(See Figure 6, Page 8)  
For Natural gas, open the gas valve in the main line.
3. Depress and rotate the Burner Output Knob to HIGH. (See Figure 10, Page 10)
4. Push the Spark Igniter Button while checking for flame. Flame may be visually seen by looking into the Flame Observation Holes in the front of the grill. (See Figure 11, Page 10) Also one can generally hear the burners ignite and then feel warmth rising to the cooking surface at the front and back of the Radiant Glass Panels when ignition occurs. If flame is not present and ignition does not occur in 10 seconds, turn Burner Output Knob to "OFF" and wait 5 minutes before attempting to relight the grill. After waiting 5 minutes repeat steps 3 and 4.
5. FOR MAXIMUM COOKING SPEED AND SEARING INTENSITY, preheat the grill by maintaining the Burner Output Knob at HIGH for 1 to 2 minutes with the hood open, then close the hood and continue operation at HIGH for an additional 12 to 13 minutes to accomplish a total preheat time of 13 to 15 minutes on HIGH.

FOR SLOW COOKING, preheat by maintaining the Burner Output Knob at HIGH for 3 to 5 minutes with the hood open. Then, rotate Burner Output Knob to desired cooking level.

6. To extinguish the flame, depress and rotate the Burner Output Knobs to OFF.

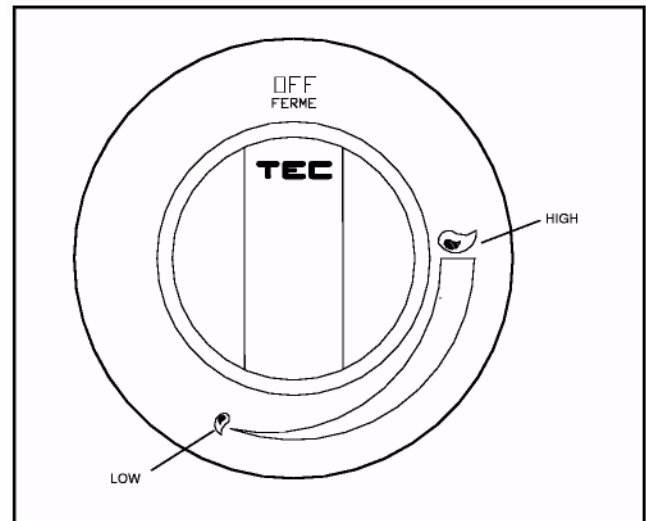


Figure 10. Burner Output Knob

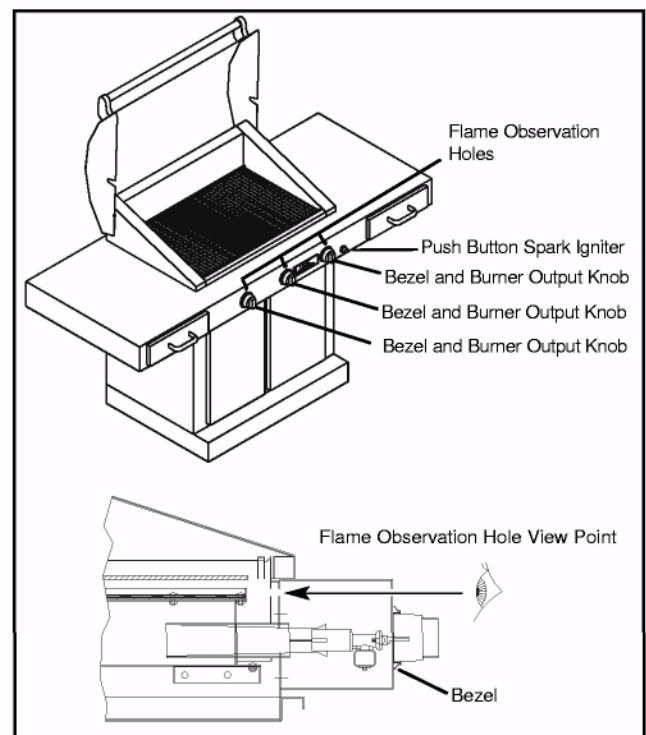


Figure 11. Grill Front Components (Sterling G-3000 FR shown)

## Operation continued

### Burner Ignition With Match

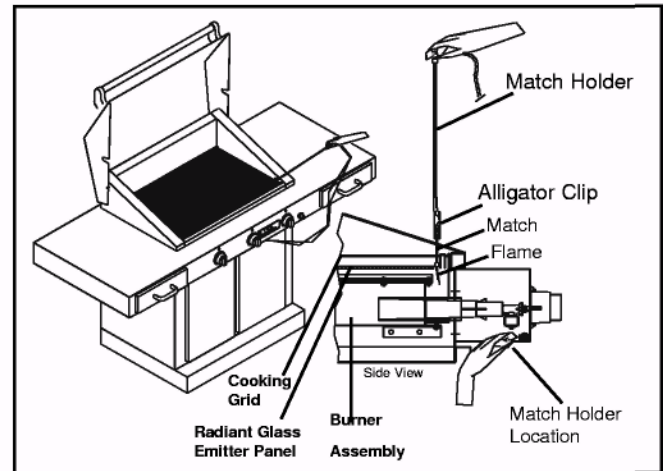
If your spark ignition system is not working properly, the burners may be ignited manually, using a match.

**CAUTION:** DO NOT HOLD A MATCH IN YOUR HAND ABOVE A BURNER WHEN LIGHTING THE BURNER MANUALLY. PLACE A MATCH IN THE ALLIGATOR CLIP AT THE END OF THE MATCH HOLDER. LIGHT THE MATCH, THEN PLACE THE LIT MATCH NEAR THE BURNER TO BE LIT AS DESCRIBED BELOW.

#### Procedure:

1. If ignition does not occur in 10 seconds, turn the Burner Output Knob to OFF, wait 5 minutes, and repeat the lighting procedure.
2. Open the grill hood and ensure all Burner Output Knobs are in the "OFF" position and that there is nothing on top of the Cooking Grids.
3. For LP gas, open the Gas Cylinder Valve by turning the handwheel counter-clockwise.  
(see Figure 6, Page 8)  
For Natural gas, open the Gas Valve in the main line.
4. Remove the match holder from the lower ledge of the grill front backside. (See Figure 12, Page 11).
5. See Figure 12, Page 11 for match lighting approach. To prepare, place a match in the alligator clip at the end of the match holder. Then, place the alligator clip end of the match holder close to the cooking surface and light the match. While observing that the match remains lit, insert the burning match between the Radiant Glass Panel and the front inner wall of the grill downward to the level of the burner top. Turn the Burner Output Knob to HIGH for burner ignition.
6. Repeat this procedure for each burner to be lit.
7. Operate and adjust the burner as described in Step 5 of the Burner Ignition and Operation Procedures on Page 10.
8. To extinguish the flame, depress and rotate the Burner Output Knobs to OFF.

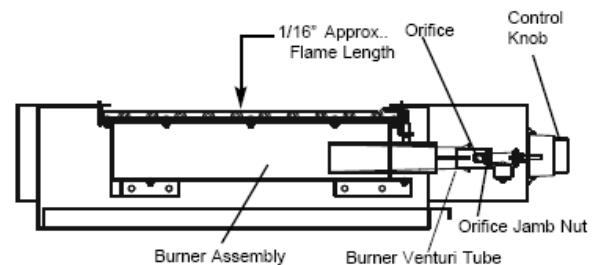
**Figure 12. Match Lighting (Sterling G-3000 FR Shown)**



#### Burner Flame

The burner flame should be approximately 1/16" tall and present a blue or orange glow when the burner is in operation. (See Figure 13, Page 11)

**WARNING:** EACH GAS ORIFICE MUST BE PROPERLY LOCATED ON THE ORIFICE BRACKET, ATTACHED TO THE VENTURI ON THE BURNER ASSEMBLY. AN IMPROPERLY LOCATED ORIFICE CAN LEAD TO BODILY INJURY AND PROPERTY DAMAGE. THE PROPER LOCATION IS SHOWN IN FIGURE 13.



**Figure 13. Burner Flame and Orifice Location, Shown without Cooking Grid and Radiant Glass Panel (side view)**

### Low Heat Adjustment

The burner's low heat output is preset at the factory. To adjust this setting, follow the instructions below.

**WARNING:** NEVER ADJUST A BURNER SO LOW THAT IT MAY GO OUT DURING USE. DO NOT OPERATE GRILL WITH DISENGAGED LOW HEAT ADJUSTMENT SCREW.

The Low Heat Adjustment Screw only applies to the burner operation at the LOW setting. Any efforts to make adjustments at another setting will go unnoticed until the burner is turned to LOW, where it may

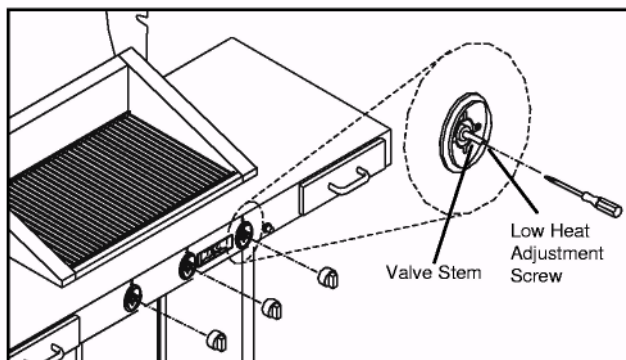
## Operation continued

involuntarily extinguish while gas is still flowing. This condition is unsafe; therefore, adjustments should only be made with the Burner Output Knob positioned at the LOW setting while keeping a close eye on changes.

**Please note that this procedure is best performed at night or low light to maximize visibility of the burner flame and that the grill must be allowed to cool between attempts to adjust multiple burners.**

### Procedure:

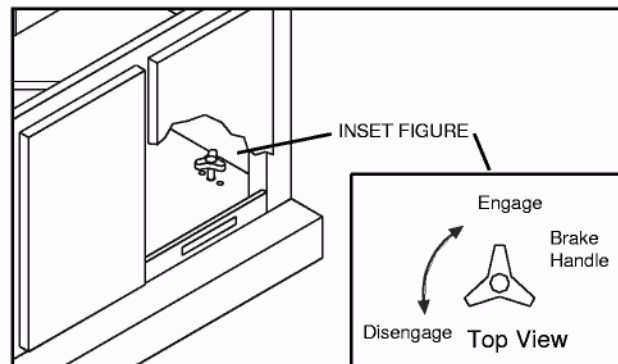
1. Follow the Burner Ignition Procedures and operate the grill on HIGH for 3 to 5 minutes or until the burners glow bright orange.
2. Turn the Burner Output Knob to the LOW position and wait one minute to permit the temperature to stabilize.
3. Remove the Burner Output Knob from the valve stem. (See Figure 14 below)
4. Insert a small blade screwdriver into the Valve Stem.
5. Turn the Low Heat Adjustment Screw clockwise to reduce the heat intensity or counter-clockwise to increase the heat intensity. At its optimal low heat adjustment, the burner input will be just high enough to produce a stable blue flame. To accomplish this, look under the glass at the burner, through the Flame Observation Viewpoint, while turning the adjustment screw.



**Figure 14. Low Heat Adjustment (Sterling G-3000 FR shown)**

## Cabinet Base Brake

Your grill cabinet comes equipped with a Base Brake mechanism for use while the grill is stationary. The Brake is located at the right front inside corner of the Base. Engage the Base Brake by turning the Brake Handle clockwise until you feel resistance. (Figure 15, Page 12.) Turn the Brake Handle one half turn past this point for full engagement. Disengage the Brake by turning the Brake Handle counter-clockwise.



**Figure 15. Cabinet Base Brake**



# Infrared Cooking

## General Overview

Now that you are ready to begin cooking you can enjoy steaks, hamburgers, poultry, pork chops, roasts, fish and other foods in just minutes if you wish. But you can also cook more slowly. TEC's optional accessories are designed to enhance your grill's versatility.

## Infrared Searing Method

Searing is a process that seals juices in food by cooking with intense heat for a short period of time. The juices stay in the food where they belong while the outside takes on a grilled flavor. For best results, follow these procedures when cooking.

The infrared energy generated by your TEC grill has many advantages. For example, food is evenly cooked throughout. Also, grease and food particles vaporize on contact with the Radiant Glass Panels adding great outdoor taste to your food. Follow the procedures below:

1. Follow the Burner Ignition Procedures on pages 10 and 11. In particular, follow the instructions for "maximum cooking speed and searing intensity" in Step 5 on page 10 under Burner Ignition and Operation.
2. With the Burner Output Knob set on HIGH, place the food on the Cooking Grid for 2-3 minutes, or until food lifts without sticking.
3. Turn the food and repeat Step 2.
4. Depending upon your taste, continue cooking on HIGH, turning the food frequently, or adjust the Burner Output Knob to lower settings and continue cooking until the food is cooked to your satisfaction. Turn as necessary (generally every two to three minutes).

Please refer to the Sample Cooking Methods Chart on pages 14 and 15. This chart provides useful general guidelines for cooking times and settings. Actual cooking times may be affected by variations in gas connections, altitude, ambient temperatures at the time of cooking, the fat content of the food, or other factors. Use this chart to develop your own cooking approaches.

## Smoking Method

The grill can be used very effectively as a smoker. Use dry wood pellets or wet woodchips (small chips, not chunks), placing them directly on the Radiant Glass Panels below or adjacent to the intended location of the food. Follow the procedures below:

1. Soak woodchips in hot water for at least 30 minutes prior to use.
2. Follow the Burner Ignition Procedures for slow cooking in Step 5 on page 10. Then, turn the Burner Output Knobs to LOW or slightly above LOW.
3. Add woodchips by placing them between the channels of the Cooking Grids onto the Radiant Glass Panels.
4. For best results, close the hood.
5. After the grill has been turned off and allowed to cool remove the Cooking Grids and scrap the remaining ashes from the Radiant Glass Panels toward the back of the grill and in to the drip tray. Then, wipe the Radiant Glass Panels with a damp paper towel or cloth and empty the drip tray of any residue.

## Helpful Hints in Cooking

1. Use the proper tools. Use long handled tongs, spatulas, oven mitts or a hot pad for handling hot items. When turning or moving foods, use tongs or a spatula, instead of a fork. Piercing the food with a fork lets the natural juices and flavor escape.
2. **INFRA-RED GRILLING IS UNLIKE OTHER OUTDOOR COOKING METHODS.** Start slowly, it may take you time to get used to the fast cooking process. As a benchmark, foods which generally cook in 20 minutes or less on conventional grills cook in about one-half to two-thirds the conventional time on a TEC Infra-red grill. Please refer to the chart entitled **SAMPLE COOKING METHODS** on pages 14 and 15.



# TEC<sup>®</sup> INFRARED GRILLS

Infrared energy has the capability of cooking food without drying it out and that's why most chefs agree that it is the best choice for grilling. Traditional convection style gas grills dry out food because they cook with 100% hot air. Infrared grills that use ceramic burners cook with about 35% infrared energy and 65% hot air. But TEC's patented grilling system cooks with 100% infrared energy, totally eliminating the hot air associated with gas grilling so moisture loss in food is reduced by 30-35%. And because food retains more of its own natural juices, even the leanest of meats remain tender and juicy.

## Sample Cooking Methods and Times

As a benchmark, foods which generally cook in 20 minutes or less on conventional grills cook in about one-half to two-thirds the conventional time on a TEC Infrared grill.

<b>MEAT, POULTRY, SEAFOOD</b>	<b>CONTROL SETTING</b>	<b>TOTAL COOKING TIME</b>
<b>Steak or Lamb Chops</b>	High fire 3 minutes each side	6 minutes - Rare
<b>1" Thick (Hood Open)</b>	High fire 3½ minutes each side	7 minutes - Medium Rare
	High fire 4 minutes each side	8 minutes - Medium
	High fire 4½ minutes each side	9 minutes - Medium Well
	High fire 4 minutes each side, then turn meat 90° to create cross-hatch scoring and cook for 1 minute more on each side	10 minutes - Well Done
<b>Pork Tenderloin</b>	Low fire turning every 15 minutes	30 minutes
<b>Beef Tenderloin (Hood Closed)</b>	Low fire turning every 15 minutes (Let stand 15-30 minutes before serving)	30-60 minutes depending on wt.(130°-135°F for rare to med rare)
<b>Hamburger ½" Thick (Hood Open)</b>	High fire 4 minutes each side	8 minutes (160°F core temperature)
<b>Hamburger ¾" Thick (Hood Open)</b>	High fire 5 minutes each side	10 minutes (160°F core temperature)
<b>Hot Dogs (Hood Open)</b>	Medium	4 minutes
<b>Chicken Breast</b>		
<b>1/2" thick (Hood Open)</b>	High fire, 3 minutes each side	6 minutes (160°F core temperature)
<b>3/4" thick (Hood Open)</b>	High fire, 4 minutes each side	8 minutes (160°F core temperature)
<b>1" or more thick (Hood Closed)</b>	Low fire, turning every 5 to 6 minutes	15-20 minutes (160°F core temperature)
<b>Chicken-Bone in parts (Hood Closed)</b>	Low fire, turning every 5 to 6 minutes (Times will vary for different parts)	15 to 20 minutes (160°F core temperature)
<b>Pork Chops</b>		
<b>1/2" inch (Hood Open)</b>	High fire, 3 to 4 minutes each side	6 to 8 minutes
<b>1" or more thick (Hood Closed)</b>	Med-Low fire, 4 minutes each side, then turn meat 90° to create cross-hatch scoring and cook for 2 minutes more on each side	12 minutes
<b>Baby Back Ribs (Hood Closed)</b>	Low fire, turning every 10 minutes	30 minutes
<b>Meaty Spare Ribs (Hood Closed)</b>	Low fire, turning every 10 minutes Add sauce, finish on low, 3 minutes each side	40 minutes

<b>Fish Fillet (Hood Open)</b>		
<b>1/2" thick</b>	High fire, 2 to 3 minutes each side	4 to 6 minutes
<b>1" inch or more thick (Hood Closed)</b>	Medium-Low fire, 4 to 5 minutes each side	8 to 10 minutes
<b>Shrimp, Shelled (Hood Open)</b>	Medium fire, 3 minutes each side	6 minutes
<b>Kabobs (Hood Open)</b>	Medium fire, 5 minutes each side	10 minutes

## VEGETABLES AND FRUITS

<b>Potatoes and Whole Onions (Hood Closed)</b>	Medium fire, turning every 15 minutes	60 minutes
<b>Corn on the Cob, husk on (Hood Open)</b>	Medium fire, turning every 2-3 minutes	10 to 15 minutes
<b>Asparagus, Squash, Zucchini (Hood Open)</b>	Medium fire, 2 to 3 minutes each side	4 to 6 minutes
<b>Apples, Pineapple</b>		
<b>3/8" inch thick (Hood Open)</b>	High Fire, 2 minutes each side	4 minutes

## ROTISSERIE

<b>Chicken - Whole</b>	High fire 10 minutes, balance medium fire (Can use low fire with hood closed for longer cooking time)	1 hour, 20 minutes (160°F core temperature)
<b>Rib-Eye Roast</b>	High fire 10 minutes, balance medium fire (Can use low fire with hood closed for longer cooking time)	15 minutes per lb-Rare 20 minutes per lb-Medium 25 minutes per lb-Well
<b>Pork Roast</b>	High fire 10 minutes, balance medium fire (Can use low fire with hood closed for longer cooking time)	25 minutes per lb (160°F core temperature)
<b>Turkey 10-12 lbs.</b>	Low fire with hood closed	3 hours 30 minutes (160°F core temperature)

## Smoking Method

This grill can also be used very effectively as a smoker without the need of a smoker box. The radiant glass panels, located below the cooking grids, prevent any food, drippings, or wood chips from falling through to the interior of the grill. Try adding wood chips or pellets to flavor chicken, ribs and even tenderloin by using the following procedure:

1. Soak woodchips for at least 20-30 minutes prior to use.
2. Place the woodchips or pellets directly on the cooking grids around the food being grilled. Some wood pellets are small enough to drop between the cooking grids so they can be placed directly below the food being grilled.
3. For best results meat should be smoked on low with the hood closed.

# Maintenance and Cleaning

## General Overview

Proper care, maintenance and cleaning will help ensure long life of your grill. Periodic cleaning will help avoid accumulations of flammable grease, fats, and other debris.

Because of the high intensity of the Infrared burners when cooking on high, any drippings and food particles that fall onto the Radiant Glass Panels are incinerated. However, some ash and residue may remain. While cooking on LOW, grease and debris burn off much more slowly, and some grease may even reach the drip tray. Inspect the drip tray and remove any flammable grease before performing the following burn off procedure.

To remove any residue on the Cooking Grids and Radiant Glass Panels after cooking operate the grill on HIGH for 5-10 minutes with the Hood open. The most important way to maintain the performance of the your grill is to do this after each use.

## Maintenance

The grill requires very little maintenance. However, inspecting orifice openings and venturi inlets to clear obstructions of gas flow is recommended prior to each use.

### Outer Stainless Steel Structure

Some objects and substances that come in contact with the grill may cause changes to its outward appearance. This may include discoloration, oxidation, and surface rust. **THIS IS NOT COVERED UNDER THE WARRANTY.**

Do not leave objects on the grill that may cause this problem, such as iron and non-stainless steels. It is important to clean all foreign substances off the grill immediately especially acids, solvents, and chlorides.

### Care of Radiant Glass Panels

Large amounts of charred residue allow the glass to retain heat beyond its specified tolerance, which may cause it to break. Removal of this residue prior to each use is therefore imperative. This is easy to accomplish with a large paint scraping razor when the glass is cool. Simply remove the cooking grids and scrape the charred residue off the glass into the drip tray. Then wipe off any remaining dust particles with a damp paper towel or cloth. No other cleaning of the glass is necessary to ensure its proper function. However, to improve its cosmetic appearance, additional cleaning may be done following the instructions

under Cleaning on page 16 and in Appendix G.

Care should be taken to avoid harsh impact of the Radiant Glass with hard objects. This is particularly true of the beveled sides of the glass. Chips in the beveled sides greatly reduce the strength of the glass and render it more prone to breakage. Although scratches on the glass surface do not impair its function, avoid the use of cookware that may promote scratching, such as ceramic, glass ceramic, or pots and pans with ridges on the bottom. In addition, pots and pans with copper or aluminum bases should be avoided because they may leave small, hard-to-remove deposits on the glass.

**IT IS IMPORTANT TO HANDLE THE RADIANT PANELS AS LITTLE AS POSSIBLE TO AVOID BREAKAGE.**

### Care of Metal Infrared Burner Assembly

The burners of your grill are designed to provide a long life of satisfactory performance with virtually no maintenance. Remove the Cooking Grids and Radiant Glass Panels periodically and ensure burner tops are free of debris. If debris is present gently vacuum off burner tops.

**IMPAIRED VENTILATION OF HOT AIR FROM GRILL** - In order for the burners to function properly, hot air created by the burners must have a way to escape the grill. This is the reason your grill was designed with openings, and the accessories were designed to leave open space at the grill surface. These design features give the hot air an escape route. Accordingly, never operate your grill with very little or no open space at the cooking surface (the Radiant Glass Panels and Cooking Grids provide sufficient open space).

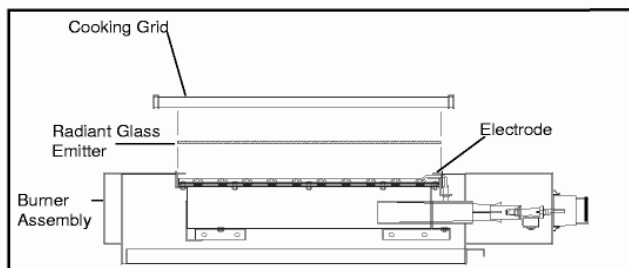
Also, never cover the ventilation openings with foil or other materials that prevent air flow. Specifically:

- Do not use accessories in combinations that cover the entire cooking surface with solid metal. Instructions included with our optional accessories contain further instructions as to proper use of accessories and warnings about improper use.
- Do not cover the entire surface with foil, a large pan, etc.

### Push-Button Spark Ignition System

Periodically inspect the burner ignition electrode for residue build-up and proper height. The electrode should be 3/16" above the surface of burner. (See Figure 16, page 17) See Appendix F for proper electrode location.

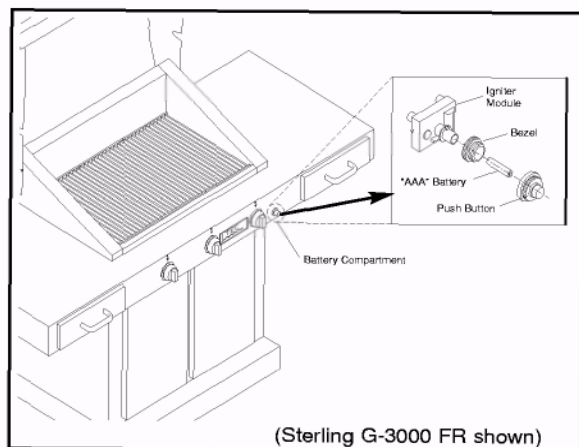
# Maintenance and Cleaning continued



**Figure 16. Burner Ignition Electrode Location**  
**Spark Module Battery Replacement**

The Push Button Spark Igniter contains a "AAA" battery which requires periodic replacement. This is evidenced by a decline in the spark frequency and intensity. Follow these procedures to replace battery.

1. Turn the silver-colored ribbed collar surrounding the push button, counter-clockwise one-half turn and pull out to remove. (See Figure 17, Page 17)
2. Remove old battery and replace. Insert the positive (+) end of the battery in the Spark Module first.
3. Replace push button assembly, pushing in and turning clockwise to tighten.



**Figure 17. Spark Module Battery Replacement**

## Cleaning

**CAUTION:** ALWAYS ALLOW THE GRILL TO COOL BEFORE CLEANING.

**Radiant Glass Panels (See Appendix G for more information)**

Cleaning required to maintain proper function of the Radiant Glass Panels is discussed under Care of Radiant Glass Panels on page 16. The cosmetic appearance of the glass may be improved through additional cleaning with ceramic glass cleaning creams. The following are the cleaning creams approved by the glass manufacturer:

- ELCO/Weimann CookTop Cleaning Creme
- Golden Ventures Cerama Bryte
- Hope's Cooktop Cleaning Cream
- Whirlpool Cooktop Cleaner

**WARNING:** DO NOT USE ABRASIVE SPONGES OR SCOURING PADS OF ANY TYPE. DO NOT USE CORROSIVE CLEANERS SUCH AS OVEN SPRAYS, STAIN REMOVERS, OR CLEANERS CONTAINING CHLORINE OR AMMONIA.

Prior to using an approved cream, scrape off any charred residue and the wipe glass with a damp paper towel or cloth as described under Care of Radiant Glass Panels. When the surface is cool, apply a few dabs (the size of a dime) of an approved cleaner and work the cleaner over the glass with a damp paper towel or cloth as if you were cleaning a window. Wipe the glass with a clean, damp cloth then wipe dry.

## Drip Tray

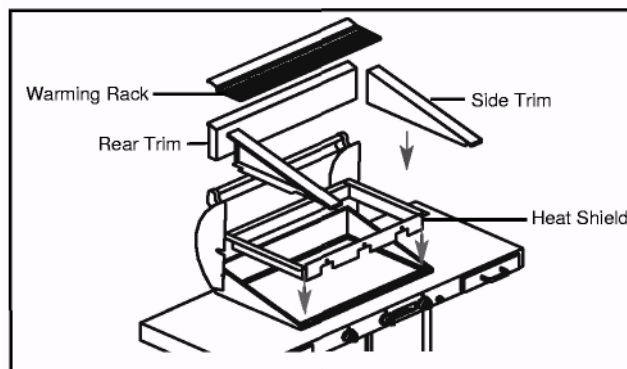
Remove debris and rinse with warm soapy water.

## Warming Rack, Hood Body Trim Panels, and Heat Shield

If necessary, these parts may be removed for cleaning. (See Figure 18, page 17)

## Cooking Grids

Wash the Cooking Grids thoroughly with dish detergent and warm water before using. After cooking, refer to the general overview on page 16. The grill should be operated for 5-10 minutes on HIGH after each use. This will turn most of the residue on the Cooking Grids to ash. Additional deposits can be removed using a spatula. Damp paper towels can be used to remove dust from the top of the grid channels. The Cooking Grids may also be removed and cleaned with a brass or stainless steel bristle brush and soapy solution. Standard oven cleaners may be used for further cleaning. Discoloration, oxidation and surface rust on Cooking Grids which in the normal course of grill operation are exposed to high levels of heat are not warranted.

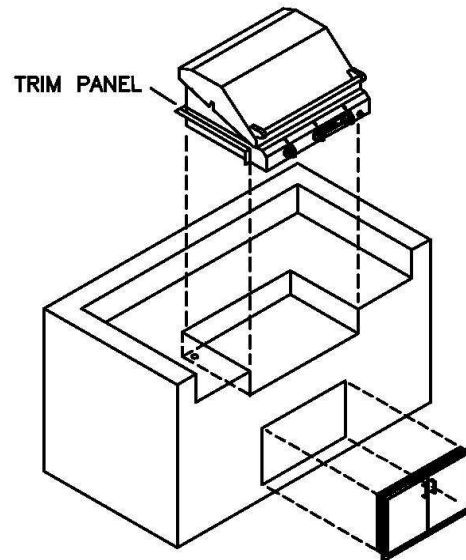
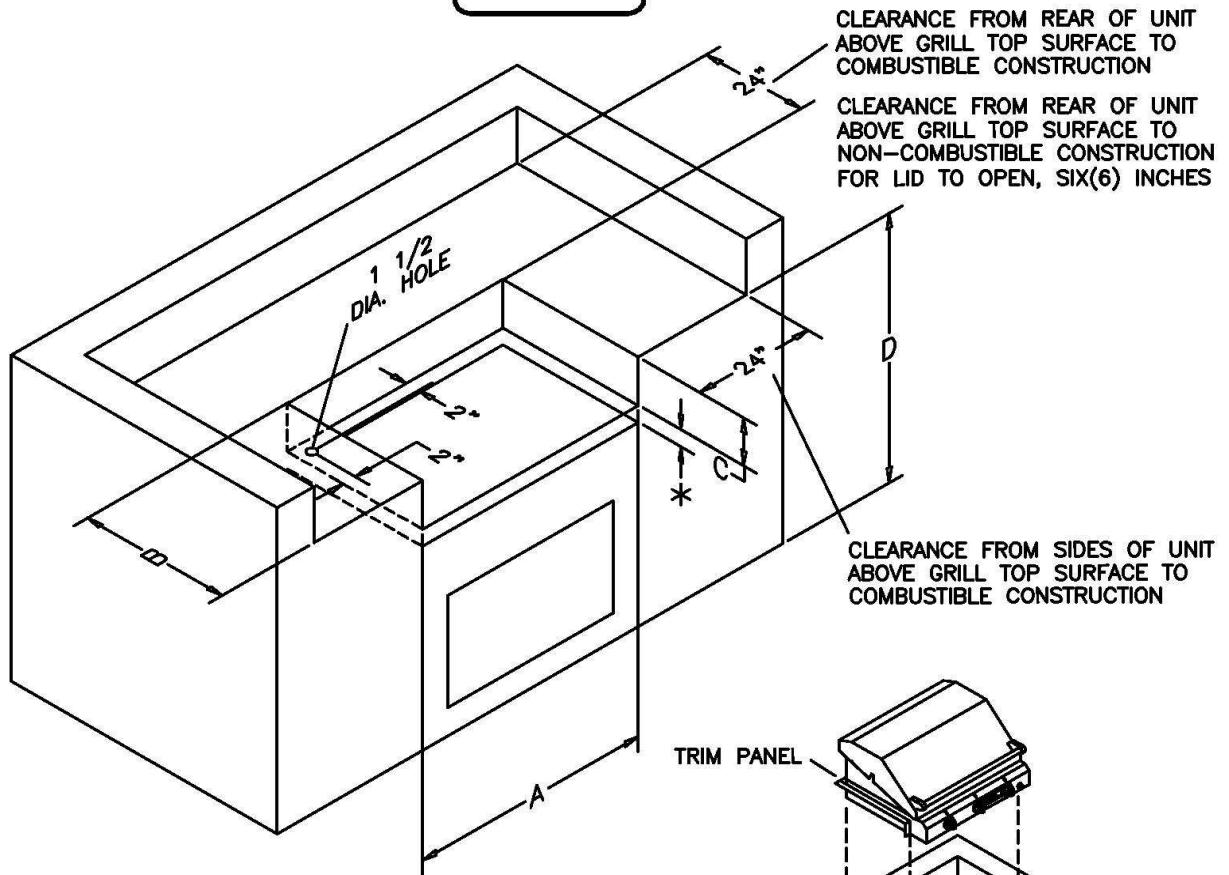


**Figure 18. Heat Shield Removal (Sterling G-3000 FR shown)**

# STERLING II, STERLING III & STERLING IV FR BUILD-IN SPECIFICATIONS

## Appendix A: Build-in Specifications (For Sterling FR)

(Sterling III FR shown)



DESCRIPTION OF MEASUREMENT	STERLING II-FR	STERLING III-FR	STERLING IV-FR
A HORIZONTAL WIDTH OF OPENING	25 3/4"(65.5 CM)	35 1/4"(89.5 CM)	44 3/4"(113.7 CM)
B HORIZONTAL DEPTH OF OPENING	22 1/16"(56.1 CM)	22 1/16"(56.1 CM)	22 1/16"(56.1 CM)
C* VERTICAL DEPTH OF OPENING	6"(15.2 CM)	6"(15.2 CM)	6"(15.2 CM)
D SUGGESTED HEIGHT OF COUNTERTOP	34 1/4"(87.0 CM)	34 1/4"(87.0 CM)	34 1/4"(87.0 CM)

\* ADD 2" IF INSTALLED WITH COMBUSTABLE MATERIAL UNDER GRILL

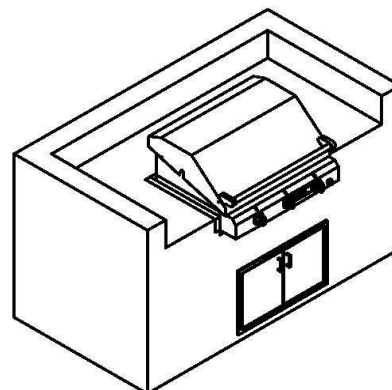
Combustible or distortable surfaces: wood, wood composites, vinyl, canvas, thatch, plastic, paint, drywall, etc.  
Noncombustible surfaces: concrete, cement board, tile, stone, mortar, brick, stucco, and metal.

Minimum clearance from sides and back of unit to combustible construction below top of unit: 0" from sides and 0" from back.

Minimum clearance from sides and back of unit to vertical combustible construction extending above top of unit: 24" from sides and 24" from back.

DO NOT USE THIS GAS APPLIANCE UNDER OVERHEAD COMBUSTIBLE CONSTRUCTION.

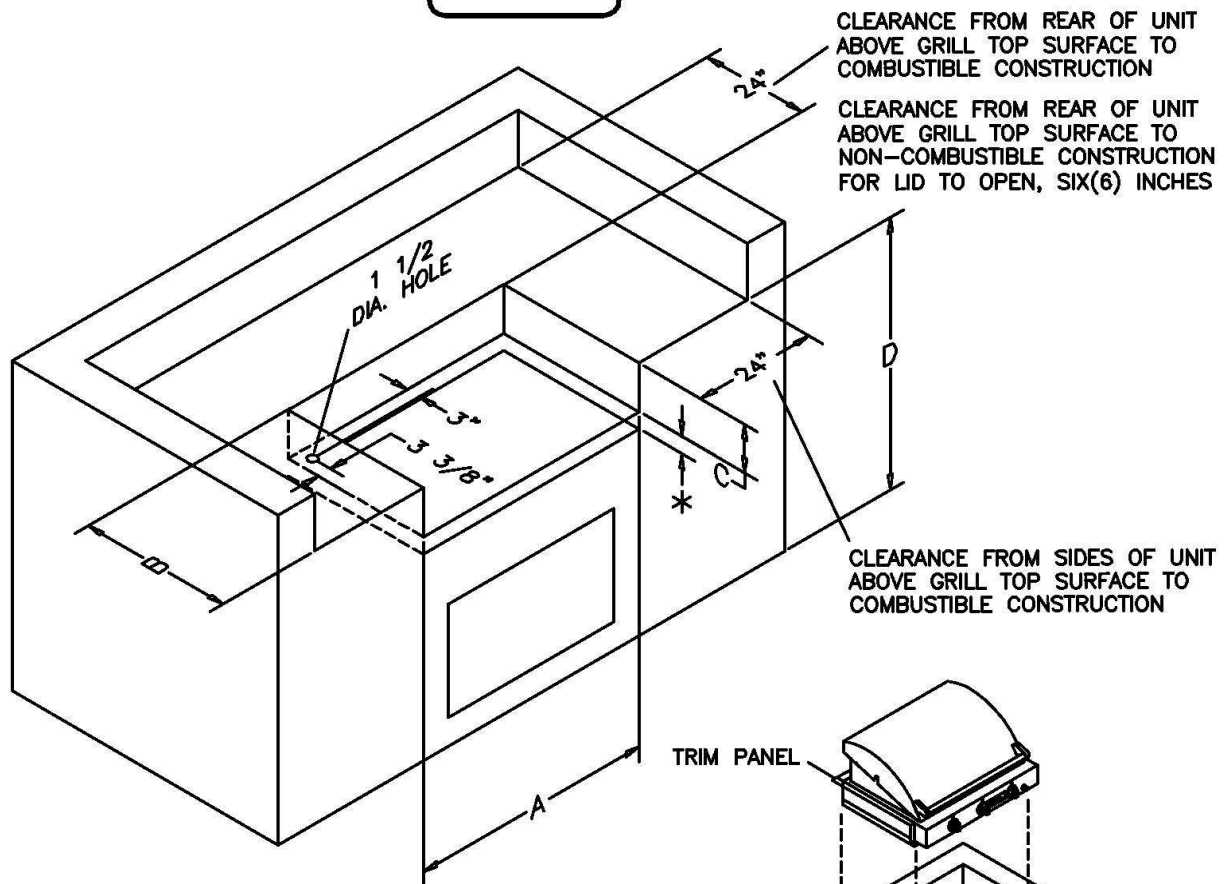
5" WIDE AREA UNDER FACE PANEL MUST REMAIN UNOBSTRUCTED FOR VENTILATION.



# G2000, G3000 & G4000 FR BUILD-IN SPECIFICATIONS

## Appendix B: Build-in Specifications (For G-Series FR)

(G-3000 FR shown)



DESCRIPTION OF MEASUREMENT		G2000-FP	G3000-FP	G4000-FP
A	HORIZONTAL WIDTH OF OPENING	28 1/2"(72.4 CM)	38"(96.5 CM)	47 1/2"(120.7 CM)
B	HORIZONTAL DEPTH OF OPENING	23 1/16"(58.6 CM)	23 1/16"(58.6 CM)	23 1/16"(58.6 CM)
C*	VERTICAL DEPTH OF OPENING	6"(15.2 CM)	6"(15.2 CM)	6"(15.2 CM)
D	SUGGESTED HEIGHT OF COUNTERTOP	34 1/4"(87.0 CM)	34 1/4"(87.0 CM)	34 1/4"(87.0 CM)

\* ADD 2" IF INSTALLED WITH COMBUSTABLE MATERIAL UNDER GRILL

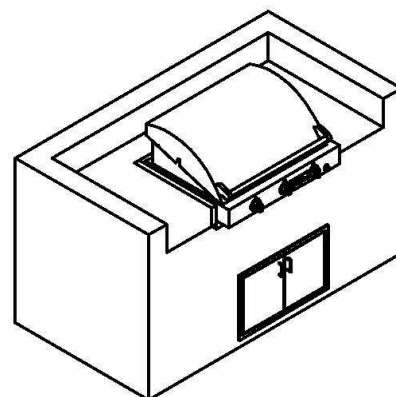
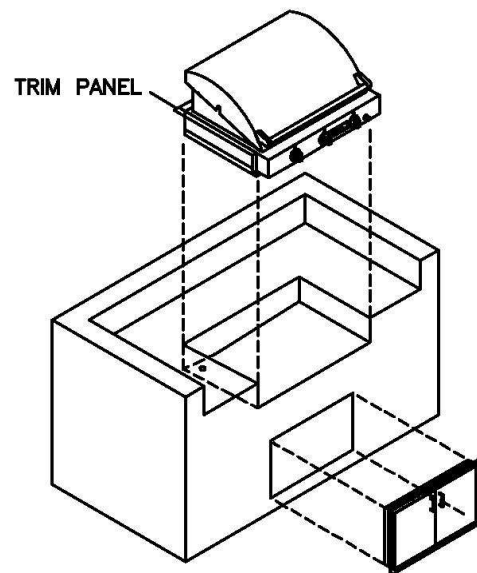
Combustible or distortable surfaces: wood, wood composites, vinyl, canvas, thatch, plastic, paint, drywall, etc.  
Noncombustible surfaces: concrete, cement board, tile, stone, mortar, brick, stucco, and metal.

Minimum clearance from sides and back of unit to combustible construction below top of unit: 0" from sides and 0" from back.

Minimum clearance from sides and back of unit to vertical combustible construction extending above top of unit: 24" from sides and 24" from back.

DO NOT USE THIS GAS APPLIANCE UNDER OVERHEAD COMBUSTIBLE CONSTRUCTION.

5" WIDE AREA UNDER FACE PANEL MUST REMAIN UNOBSTRUCTED FOR VENTILATION.



# Appendix C: Replacement Parts Sterling FR

PART NUMBER	DESCRIPTION
FM3028A.....	Burner Assembly
FM3464.....	Burner Head Kit
HW0806.....	Burner Output Knob
FM3015.....	Cooking Grid (one grid)
FM3058 (for Sterling II FR) .....	Drip Tray
FM3087 (for Sterling III FR) .....	Drip Tray
FM3114 (for Sterling IV FR) .....	Drip Tray
STBCV .....	Gas Valve, Burner Output
FM3059 (for Sterling II FR) .....	Heat Shield
FM3088 (for Sterling III FR) .....	Heat Shield
FM3115 (for Sterling IV FR) .....	Heat Shield
FM3400 .....	Hood Body Trim, Left
FM3401 .....	Hood Body Trim, Right
FM3021 (for Sterling II FR) .....	Hood Body Trim, Rear
FM3073 (for Sterling III FR) .....	Hood Body Trim, Rear
FM3103 (for Sterling IV FR) .....	Hood Body Trim, Rear
FM3056 (for Sterling II FR) .....	Hood Cover Assembly
FM3085 (for Sterling III FR) .....	Hood Cover Assembly
FM3112 (for Sterling IV FR) .....	Hood Cover Assembly
HW0299.....	Hose, 1/2" dia., 12ft. lg. (fixed fuel)
HW0295 .....	Ignition Rod (Electrode)
FM 3041 .....	Ignition Rod Bracket (Electrode Bracket)
HW0296 (for Sterling II FR) .....	Ignitor, Battery Powered
HW0297 (for Sterling III FR) .....	Ignitor, Battery Powered
HW0298 (for Sterling IV FR) .....	Ignitor, Battery Powered
ORI49 .....	Orifice, Natural gas, #49
ORI56 .....	Orifice, LP gas, #56
HW0407.....	Radiant Glass Panel
REG102QDFR .....	Regulator, w/hose, LP gas (20 lb Cylinder)
REG47M.....	Regulator, Fixed Fuel LP gas (post & build-in applications)
FM3461.....	Regulator and fittings for LP Bulk Tank
REG47N .....	Regulator, Natural gas (post & build-in applications)
FM3038 (for Sterling II FR) .....	Warming Rack
FM3074 (for Sterling III FR) .....	Warming Rack
FM3104 (for Sterling IV FR) .....	Warming Rack
HW163801.....	Wire, Ignition, 14 1/2" Lg.
HW163802.....	Wire, Ignition, 24" Lg.
HW163803.....	Wire, Ignition, 33 1/2" Lg.
HW163804.....	Wire, Ignition, 43" Lg.



# Appendix D: Replacement Parts Sterling FR G-Series

PART NUMBER	DESCRIPTION
FM3028A.....	Burner Assembly
FM3464.....	Burner Head Kit
HW0814.....	Burner Output Knob
FM3015.....	Cooking Grid (one grid)
FM3058 (for Sterling G2000 FR) .....	Drip Tray
FM3087 (for Sterling G3000 FR) .....	Drip Tray
FM3114 (for Sterling G4000 FR) .....	Drip Tray
STBCV .....	Gas Valve, Burner Output
FM3059 (for Sterling G2000 FR) .....	Heat Shield
FM3088 (for Sterling G3000 FR) .....	Heat Shield
FM3115 (for Sterling G4000 FR) .....	Heat Shield
FM3400 .....	Hood Body Trim, Left
FM3401 .....	Hood Body Trim, Right
FM3021 (for Sterling G2000 FR) .....	Hood Body Trim, Rear
FM3073 (for Sterling G3000 FR) .....	Hood Body Trim, Rear
FM3103 (for Sterling G4000 FR) .....	Hood Body Trim, Rear
FM3136 (for Sterling G2000 FR) .....	Hood Cover Assembly
FM3146 (for Sterling G3000 FR) .....	Hood Cover Assembly
FM3156 (for Sterling G4000 FR) .....	Hood Cover Assembly
HW0299.....	Hose, 1/2" dia., 12ft. lg. (fixed fuel)
HW0295.....	Ignition Rod (Electrode)
FM3041.....	Ignition Rod Bracket (Electrode Bracket)
HW0296 (for Sterling G2000 FR) .....	Ignitor, Battery Powered
HW0297 (for Sterling G3000 FR) .....	Ignitor, Battery Powered
HW0298 (for Sterling G4000 FR) .....	Ignitor, Battery Powered
ORI49 .....	Orifice, Natural gas, #49
ORI56 .....	Orifice, LP gas, #56
HW0407.....	Radiant Glass Emitter Panel
REG102QD .....	Regulator, w/hose, LP gas (20 lb. Cylinder)
FM3461.....	Regulator and fittings for LP Bulk Tank
REG47M.....	Regulator, LP gas (post & build-in applications)
REG47N .....	Regulator, Natural gas ( post & build-in applications)
FM3038 (for Sterling G2000 FR) .....	Warming Rack
FM3074 (for Sterling G3000 FR) .....	Warming Rack
FM3104 (for Sterling G4000 FR) .....	Warming Rack
HW163801.....	Wire, Ignition, 14 1/2" Lg.
HW163802.....	Wire, Ignition, 24" Lg.
HW163803.....	Wire, Ignition, 33 1/2" Lg.
HW163804.....	Wire, Ignition, 43" Lg.

# Appendix E: Troubleshooting

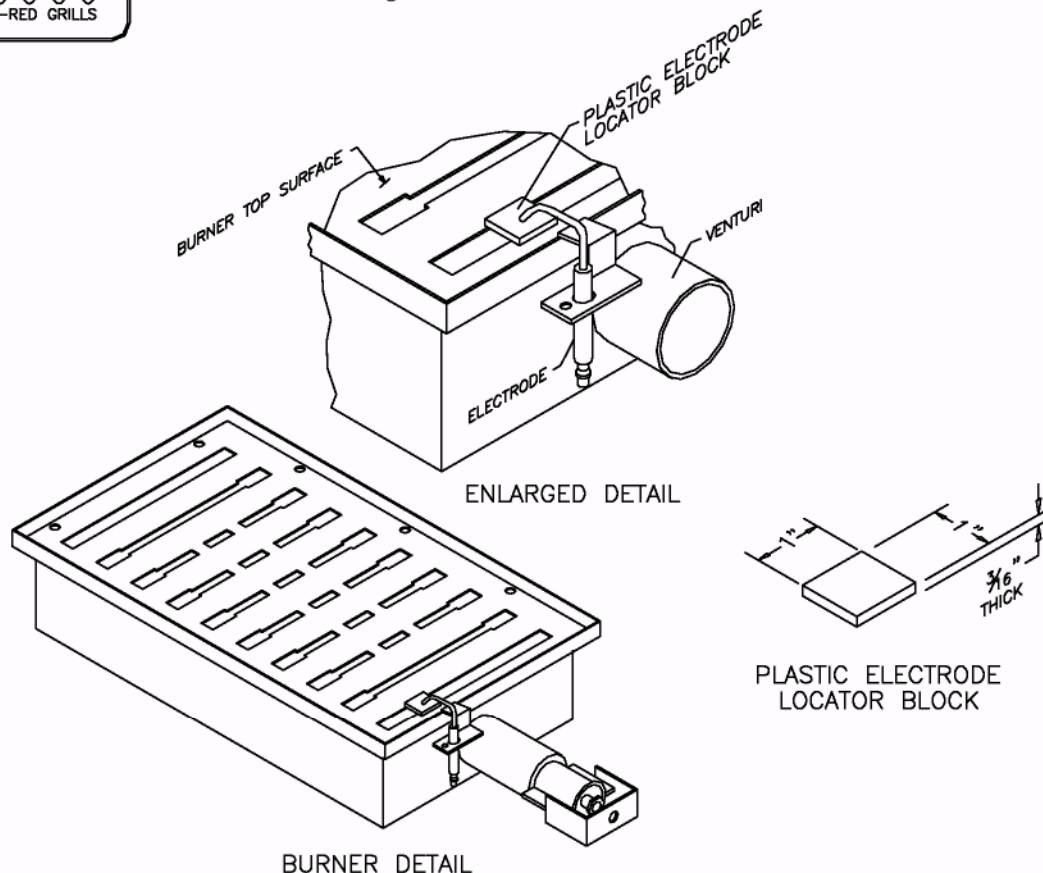
PROBLEM	PROBABLE CAUSE	REMEDY
Burner will not light.	<ul style="list-style-type: none"> <li>a. Lack of gas supply.</li> <li>b. Obstruction in burner orifice.</li> </ul>	<ul style="list-style-type: none"> <li>a. Ensure gas supply valve is in open position or fill LP gas cylinder, if applicable.</li> <li>b. Clean burner orifice (See Figure 13, Page 11)</li> </ul>
Burner will light with a match, but the igniter will not spark.	<ul style="list-style-type: none"> <li>a. Igniter wire has come unplugged from backside of igniter.</li> <li>b. Dirty ignition electrode</li> <li>c. Incorrect spark gap.</li> <li>d. Defective Ignition Spark Module</li> </ul>	<ul style="list-style-type: none"> <li>a. Look under the front panel where the Ignition Spark Module is located and tug on the orange ignition wires to determine if they are securely plugged into the back side of the Spark Module. If not plug ignition wire back in to the module.</li> <li>b. Clean burner electrode (See Fig. 16, Pg 17). If necessary rub probes with fine sandpaper to remove residue.</li> <li>c. Adjust spark gap to 3/16".</li> <li>d. Replace igniter.</li> </ul>
Burner output at HIGH setting is too low. (Cooks more slowly than previously experienced or makes a rumbling noise and has a fluttering blue flame at burner surface.)	<ul style="list-style-type: none"> <li>a. Lack of gas supply.</li> <li>b. Kinked regulator hose.</li> <li>c. Insufficient gas pressure despite ample gas supply. This may result when Burner Output Knob is very quickly turned from OFF to HIGH with the gas supply valve open, or if the gas supply valve is opened AFTER the Burner Output Knob is turned from OFF to HIGH. Both actions may cause the regulator to shut off gas supply as if there is a leak in the line.</li> <li>d. Dirty or clogged orifice.</li> <li>e. Venturi tube obstructed by spider or spider webs, wasp nest, or other foreign matter.</li> <li>f. Regulator is defective or needs adjustment.</li> </ul>	<ul style="list-style-type: none"> <li>a. Ensure that the Burner Output Knob is turned to "HIGH" (large flare) Ensure gas supply valve is in open position or fill LP gas cylinder, if applicable.</li> <li>b. Reposition regulator hose, as necessary.</li> <li>c. Return Burner Output Knob to OFF. Make sure gas supply valve (at LP cylinder or nat. gas line) is open. Then, when turning the gas on as instructed on pg. 7-9, turn Burner Output Knob SLOWLY from OFF to HIGH.</li> <li>d. Clean burner orifice (See Fig. 13, Pg. 11).</li> <li>e. Clean out all obstructions from venturi tube. (See Fig. 13, Pg. 11).</li> <li>f. Adjust or replace regulator, as necessary.</li> </ul>
Burner output at LOW setting is too hot (or too cool).		<ul style="list-style-type: none"> <li>a. Reduce (or increase) low heat setting following procedures on Page 11 and 12.</li> </ul>
Burner backfires (during operation burner abruptly makes a loud "whoosh" sound, followed by a continuous blow-torch type sound, and grows dim).	<ul style="list-style-type: none"> <li>a. Burner overheated due to inadequate ventilation (too much cooking surface covered).</li> </ul>	<p><i>In all cases turn Burner Output Knob to OFF position and let it cool for at least two minutes; then:</i></p> <ul style="list-style-type: none"> <li>a. Remove any object covering the entire cooking surface or any object obstructing the ventilation openings. Allow the burner to cool for approximately two minutes, then re-light the burner.</li> </ul>

# Appendix F: Electrode Location



## ELECTRODE LOCATOR INSTRUCTIONS

Sterling FR and G-Series FR



### INSTRUCTIONS

IT IS IMPORTANT WHEN USING THE ELECTRIC IGNITOR SYSTEM OF THIS GRILL TO FOLLOW THE PROPER PROCEDURES SET OUT IN THE OWNER'S MANUAL. IN THE EVENT THAT YOUR GRILL DOES NOT IGNITE WHEN FOLLOWING THESE PROCEDURES, A SIMPLE ADJUSTMENT OF THE ELECTRODE ROD MAY BE NECESSARY USING THE FOLLOWING INSTRUCTIONS.

1. CAREFULLY REMOVE THE GLASS EMITTER AND SET ASIDE.
2. ATTEMPT TO SLIDE THE PLASTIC ELECTRODE LOCATOR BLOCK BETWEEN THE TOP OF THE BURNER AND UNDER THE TIP OF THE ELECTRODE ROD. IF THE PLASTIC ELECTRODE LOCATOR BLOCK SLIDES BETWEEN THE TOP OF THE BURNER AND UNDER THE TIP OF THE ELECTRODE ROD WITH NO GAP REMAINING THE ELECTRODE IS PROPERLY LOCATED. REMOVE PLASTIC ELECTRODE LOCATOR BLOCK AND REPEAT FOR THE REMAINING BURNERS.
3. IF THE PLASTIC ELECTRODE LOCATOR BLOCK WILL NOT SLIDE BETWEEN THE TOP OF THE BURNER AND UNDER THE TIP OF THE ELECTRODE ROD, CAREFULLY BEND THE ELECTRODE ROD UPWARD UNTIL THE PLASTIC ELECTRODE LOCATOR BLOCK JUST SLIDES IN. THE ELECTRODE IS NOW PROPERLY LOCATED. REMOVE THE PLASTIC ELECTRODE LOCATOR BLOCK AND REPEAT FOR THE REMAINING BURNERS.
4. IF THE PLASTIC ELECTRODE LOCATOR BLOCK SLIDES BETWEEN THE TOP OF THE BURNER AND UNDER THE TIP OF THE ELECTRODE ROD WITH A GAP REMAINING, CAREFULLY BEND THE TIP OF THE ELECTRODE ROD DOWNWARD UNTIL THE GAP IS REMOVED. THE ELECTRODE IS NOW PROPERLY LOCATED. REMOVE THE PLASTIC ELECTRODE LOCATOR BLOCK AND REPEAT FOR THE REMAINING BURNERS.
5. INSURE THAT THE PLASTIC ELECTRODE LOCATOR BLOCKS ARE REMOVED.
6. ELECTRODE RODS ARE NOW PROPERLY LOCATED 3/16" ABOVE THE BURNER.

# Appendix G: Radiant Glass Panel Care, Maintenance and Cleaning

## ABOUT THE RADIANT GLASS PANELS

TEC® grills are easy to clean, primarily because the radiant glass panels, located below the cooking grids, vaporize food drippings during grilling, creating a light residue of ash that settles on the panels. These glass panels are both durable and fragile. Designed to tolerate temperatures of up to 1200° F without breaking, they are nevertheless susceptible to impact breakage and chipping may compromise the integrity of the glass under heat. Also, an accumulation of debris on the panels acts as an insulator and may cause the panels to break during grilling if they reach temperatures beyond their specified tolerance.

## HOW TO AVOID BREAKING THE RADIANT GLASS PANELS

The most common causes of breakage of the Radiant Glass panels are:

- **IMPACT WITH AN OBJECT** – Because of the sensitive nature of glass, special care should be taken to avoid harsh impact or blunt force to the radiant panels.
- **CHIPPING DURING CLEANING** – The beveled edges of the panels are easily chipped when removed from the grill. This most often happens during cleaning. The chipping of the panels compromises the strength of the glass under heat and is likely to cause it to break during grilling. **WE STRONGLY RECOMMEND THAT YOU DO NOT REMOVE THE RADIANT GLASS PANELS FROM THE GRILL.**
- **BUILD-UP OF RESIDUE** – The accumulation of residue on the panels acts as an insulator and may cause the panels to overheat and break if they reach temperatures beyond their specified tolerance. **REMOVAL OF THIS RESIDUE BEFORE EACH USE IS THEREFORE IMPERATIVE.**

## CARE AND MAINTENANCE

- **BURN-OFF** – Residue that accumulates on the panels is most easily removed by simple burn-off. This is accomplished by operating the grill on high fire for 5-10 minutes after cooking. This can be done without removing the cooking grids as they will also benefit from the burn-off procedure. The most important way to maintain the performance of

your grill is to do this after each use. **BUILD UP OF RESIDUE ON THE RADIANT PANELS CAN CAUSE THE GLASS TO OVERHEAT AND BREAK.**

- **SCRAPING** – The small amount of ash remaining after burn-off can be removed when the glass is cool with a spatula. Simply remove the cooking grids and scrape the charred residue to the back of the grill where it will fall through an opening to the drip tray below. Then wipe off any remaining dust particles with a damp paper towel. No other cleaning of the glass panels is necessary to ensure proper function. However, to improve the cosmetic appearance, additional cleaning may be done following the instructions under Cleaning.

## CLEANING

ALWAYS ALLOW THE GRILL TO COOL BEFORE CLEANING.

The cosmetic appearance of the glass may be improved through additional cleaning with ceramic cleaning creams. The following are the cleaning creams approved by the glass manufacturer:

- ELCO/Weimann Cooktop Cleaning Crème
- Golden Ventures Cerama Bryte
- Hope's Cooktop Cleaning Cream
- Whirlpool Cooktop Cleaner

**WARNING: DO NOT USE ABRASIVE SPONGES OR SCOURING PADS OF ANY TYPE.** Do not use corrosive cleaners such as oven sprays, stain removers, or cleaners containing chlorine or ammonia. Prior to using an approved cream, scrape off any charred residue and wipe glass with a damp paper towel as described under Care and Maintenance. With a cool surface, apply a few dabs (the size of a dime) of an approved cleaner and work the cleaner over the glass with a damp paper towel as if you were cleaning a window. Wipe the glass with a clean, damp paper towel, then wipe dry.

Please refer to your owner's manual for more information about the operation of your grill.

**FAILURE TO FOLLOW THESE PROCEDURES WILL INVALIDATE YOUR WARRANTY.**