



VTEC48

VTEC SERIES GAS INFRARED CHARBROILER

Customer Maintenance Manual

SPECIFICATION SHEETS

INSTALLATION / OPERATION MANUAL

SERVICE MANUAL

HOBART SERVICE PARTS STORE

CATALOG OF REPLACEMENT PARTS

GRIDDLES & BROILERS

VULCAN**VTEC SERIES
COUNTER MODEL GAS INFRARED CHARBROILER**

Model VTEC36

**SPECIFICATIONS**

High efficiency gas infrared charbroiler, Vulcan Model No. _____. Stainless steel front, sides and top trim. Full width, stainless steel front crumb tray. Heavy duty, steel infrared emitter panels. 11" x 25" stainless steel cooking grids. One 22,000 BTU/hr. patented infrared burner system for each cooking grid. Direct ignition piezo spark igniters. One high range heat control valve for each burner. Chrome burner knobs. 4" adjustable legs. 3/4" NPT rear gas connection and gas pressure regulator.

Exterior Dimensions:

_____ " wide x 35 1/8" deep x 12 1/2" working height.

CSA design certified. NSF listed.

**SPECIFY TYPE OF GAS WHEN ORDERING.
SPECIFY ALTITUDE WHEN ABOVE 2,999 FT.**

- VTEC14** 14 1/2" wide
- VTEC25** 25 1/2" wide
- VTEC36** 36 1/2" wide
- VTEC48** 47 1/2" wide
- VTEC60** 58 1/2" wide

STANDARD FEATURES

- Stainless steel sides, control panel, top trim and backsplash
- Full width, stainless steel front crumb tray
- Heavy duty steel infrared emitter panels
- 11" x 25" stainless steel cooking grids (providing 275 square inches of cooking area in each burner zone)
- Energy efficient 22,000 BTU/hr., patented infrared burner system in each cooking zone
- Direct ignition piezo spark igniters
- One high range heat control valve for each burner
- Chrome burner control knobs
- Removable, stainless steel heat shield and splash guard
- 4" adjustable legs
- 3/4" NPT rear gas connection and gas pressure regulator provided
- 1 replacement emitter panel standard with VTEC14, 2 replacement emitter panels standard for VTEC25 and larger
- One year limited parts and labor warranty

ACCESSORIES

Ordered separately and field installed

- Stainless steel "Fish Grates" with smaller, 1/4" rib spacing.
- Stainless steel stand with undershelf and casters.

VULCAN

a division of ITW Food Equipment Group LLC

P.O. Box 696 ■ Louisville, KY 40201 ■ Toll-free: 1-800-814-2028 ■ Local: 502-778-2791 ■ Quote & Order Fax: 1-800-444-0602



VTEC SERIES
COUNTER MODEL GAS INFRARED CHARBROILER

INSTALLATION REQUIREMENTS:

1. A gas pressure regulator supplied with the unit must be installed:
Natural Gas 4.0" (102 mm) W.C.
Propane Gas 10.0" (254 mm) W.C.
2. An adequate ventilation system is required for commercial cooking equipment. Information may be obtained by writing to the National Fire Protection Association, Batterymarch Park, Quincy, MA 02269. When writing refer to NFPA No. 96.
3. These units are manufactured for installation in accordance with National Fuel Gas Code, ANSI-Z223.1/NFPA #54 (latest edition). Copies may be obtained from The American Gas Association, Accredited Standards Committee Z223 @ 400 N. Capital St. NW,

Washington, DC 20001, or the Secretary Standards Council, NFPA, 1 Batterymarch Park, Quincy, MA 02169-7471.

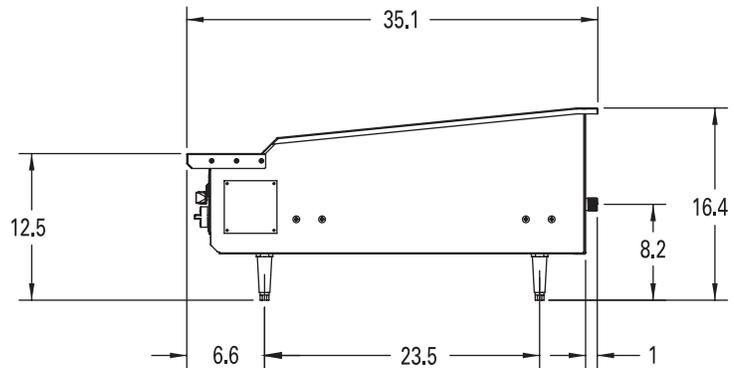
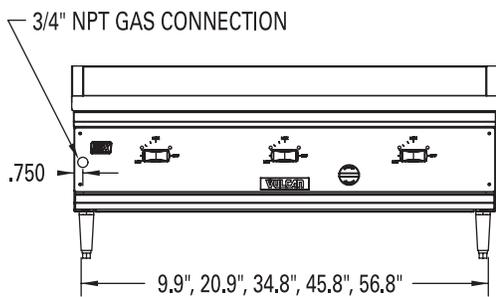
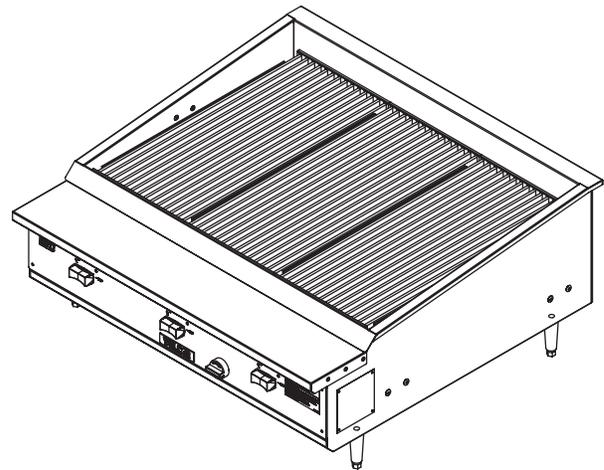
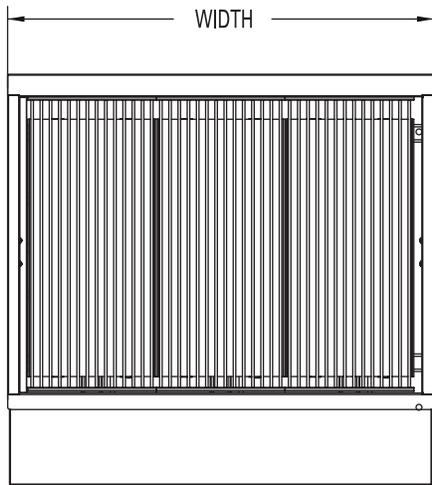
NOTE: In The Commonwealth of Massachusetts

All gas appliances vented through a ventilation hood or exhaust system equipped with a damper or with a power means of exhaust shall comply with 248 CMR.

4. CLEARANCES

	Non-Combustible
Rear	0"
Sides	0"

5. This appliance is manufactured for commercial installation only and is not intended for home use.



MODEL	WIDTH	DEPTH	OVERALL HEIGHT	WORKING HEIGHT*	BROILING AREA	# BURNERS	TOTAL BTU/HR	APPROX SHIP WT (LB/KG)
VTEC14	14.4"	35.1"	16.4"	12.5"	11" x 25.25"	1	22,000	97/44
VTEC25	25.4"				22" x 25.25"	2	44,000	151/68
VTEC36	36.4"				33" x 25.25"	3	66,000	210/95
VTEC48	47.4"				44" x 25.25"	4	88,000	264/120
VTEC60	58.4"				55" x 25.25"	5	110,000	309/140



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NOTE: In line with its policy to continually improve its products, Vulcan reserves the right to change materials and specifications without notice.



INSTALLATION & OPERATION MANUAL GAS INFRARED CHARBROILER



VTEC36

MODELS

VTEC14
VTEC25
VTEC36
VTEC48
VTEC60

For additional information on Vulcan or to locate an authorized parts and service provider in your area, visit our website at www.vulcanequipment.com

IMPORTANT FOR YOUR SAFETY

THIS MANUAL HAS BEEN PREPARED FOR PERSONNEL QUALIFIED TO INSTALL GAS EQUIPMENT, WHO SHOULD PERFORM THE INITIAL FIELD START-UP AND ADJUSTMENTS OF THE EQUIPMENT COVERED BY THIS MANUAL.

POST IN A PROMINENT LOCATION THE INSTRUCTIONS TO BE FOLLOWED IN THE EVENT THE SMELL OF GAS IS DETECTED. THIS INFORMATION CAN BE OBTAINED FROM THE LOCAL GAS SUPPLIER.

IMPORTANT

IN THE EVENT A GAS ODOR IS DETECTED, SHUT DOWN UNITS AT MAIN SHUTOFF VALVE AND CONTACT THE LOCAL GAS COMPANY OR GAS SUPPLIER FOR SERVICE.

FOR YOUR SAFETY

DO NOT STORE OR USE GASOLINE OR OTHER FLAMMABLE VAPORS OR LIQUIDS IN THE VICINITY OF THIS OR ANY OTHER APPLIANCE.

WARNING

Improper installation, adjustment, alteration, service or maintenance can cause property damage, injury, or death. Read the installation, operating and maintenance instructions thoroughly before installing or servicing this equipment.

IN THE EVENT OF A POWER FAILURE, DO NOT ATTEMPT TO OPERATE THIS DEVICE.

INSTALLATION, OPERATION AND CARE OF GAS COUNTERTOP CHARBROILERS

GENERAL

Gas Infrared Charbroilers are designed for commercial use only and feature fast, efficient gas heat. Each burner is controlled by an adjustable gas valve. Emitter panels are located directly above each burner to maintain uniform temperature and provide infrared cooking. The emitter panels will need to be replaced, depending upon your menu and hours of operation. Emitter panels and stainless steel cooking grids are easily removed for cleaning when cool. A crumb tray is provided to collect fat run-off and debris; it opens to the front for inspection or drain-off.

Model	Number of Burners	BTU/hr Input Rating
VTEC14	1	22,000
VTEC25	2	44,000
VTEC36	3	66,000
VTEC48	4	88,000
VTEC60	5	110,000

INSTALLATION

UNPACKING

This charbroiler was inspected before leaving the factory. The carrier assumes full responsibility for the safe delivery upon acceptance of the shipment. Check for possible shipping damage immediately after receipt.

If the charbroiler is found to be damaged, complete the following steps:

1. Carrier must be notified within 5 business days of receipt.
2. Carrier's local terminal must be notified immediately upon discovery (note time, date, and who was spoken to), and follow up and confirm with written or electronic communication.
3. All original packing materials must be kept for inspection purposes.
4. The charbroiler cannot have been moved, installed, or modified.
5. Notify Vulcan Customer Service immediately at 800-814-2028.

Carefully unpack your charbroiler and make sure that no parts are discarded with packaging material. A pressure regulator designed to operate with the broiler has been supplied and must be installed before the charbroiler is placed into service (Refer to GAS PRESSURE REGULATOR INSTALLATION in this manual).

Before installing, verify that the type of gas (natural or propane) and the clearance dimensions agree with the specifications on the rating plate which is located on the upper front corner on the right side.

LOCATION

The installation location must be kept free and clear of combustibles. Do not obstruct the flow of combustion and ventilation air. DO NOT install the charbroiler adjacent to fryers unless following the provisions detailed by local codes and/or the applicable sections of ANSI-Z223.1/NFPA #54 (latest edition) and NFPA #96 (latest edition) in the United States of America or CAN/CSA 149.1 (latest edition) and CAN/CSA149.2 (latest edition) in Canada.

Sufficient air should be allowed to enter the room to compensate for the amount of air removed by any ventilating system and for combustion of the gas burners. Do not obstruct the air flow into and around the appliance. Do not obstruct the flow of flue gases through and above the broiler's cooking grids. Position the broiler in its final location. Check that there are sufficient clearances to service the broiler and to make the required gas supply connection(s). Provide 36" clearance at the front for cleaning, maintenance, service and proper operation.

This broiler is for use in non-combustible locations only. Installation in combustible locations is prohibited unless following the provisions detailed by local codes and/or the applicable sections of ANSI-Z223.1/NFPA #54 (latest edition) and NFPA #96 (latest edition) in the United States of America or CAN/CSA 149.1 (latest edition) and CAN/CSA149.2 (latest edition) in Canada and approved by the authority having jurisdiction.

Minimum clearances to non-combustible walls are 0" to the rear and 0" to the sides.

INSTALLATION CODES AND STANDARDS

The Charbroiler must be installed in accordance with:

In the United States of America:

1. State and local codes.
2. National Fuel Gas Code, ANSI-Z223.1/NFPA #54 (latest edition). This shall include but not be limited to: NFPA #54 Section 10.3.5.2 for Venting. Copies may be obtained from The American Gas Association Accredited Standards Committee Z223, @ 400 N. Capital St. NW, Washington, DC 20001 or the Secretary Standards Council, NFPA, 1 Batterymarch Park Quincy, MA 02169-7471

NOTE: In the Commonwealth of Massachusetts

All gas appliances vented through a ventilation hood or exhaust system equipped with a damper or with a power means of exhaust shall comply with 248 CMR.

3. NFPA Standard # 96 *Vapor Removal from Cooking Equipment*, latest edition, available from the National Fire Protection Association, Batterymarch Park, Quincy, MA 02269.

In Canada:

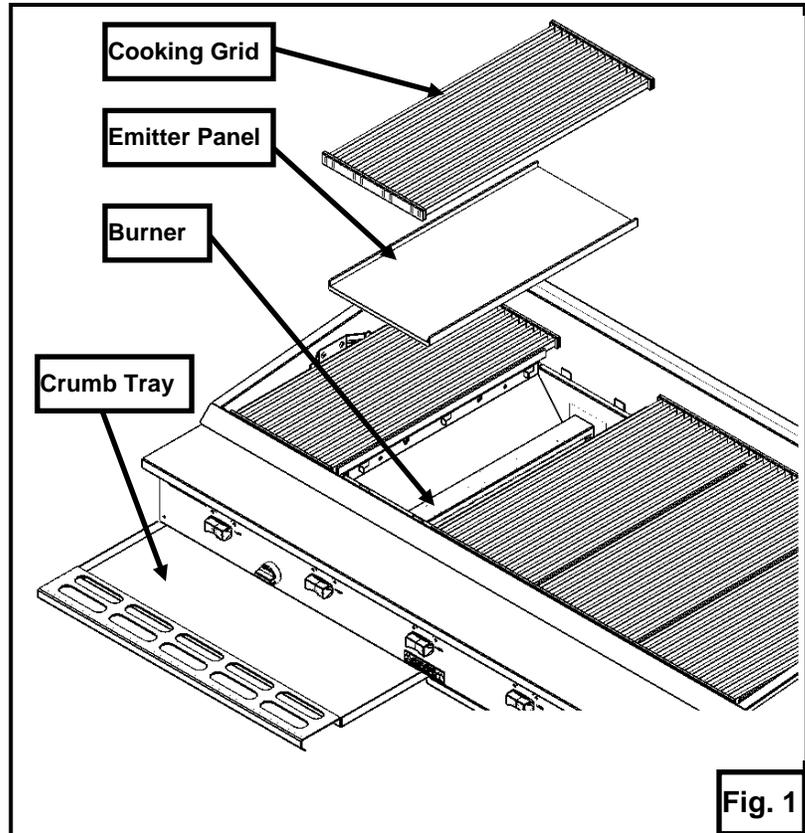
1. Local codes.
2. CAN/CSA-B149.1 Natural Gas Installation (latest edition)
3. CAN/CSA-B149.2 Propane Installation Code (latest edition), available from the Canadian Gas Association, 178 Rexdale Blvd., Etobicoke, Ontario, Canada M9W 1R3

KEY COMPONENTS

⚠ WARNING The charbroiler and its parts are hot. Use care when operating, cleaning or servicing the charbroiler.

Cooking Grids – The cooking grids should always be in place and properly seated on the emitter panels during operation. Wash grids thoroughly with soap and water solution and rinse before first use.

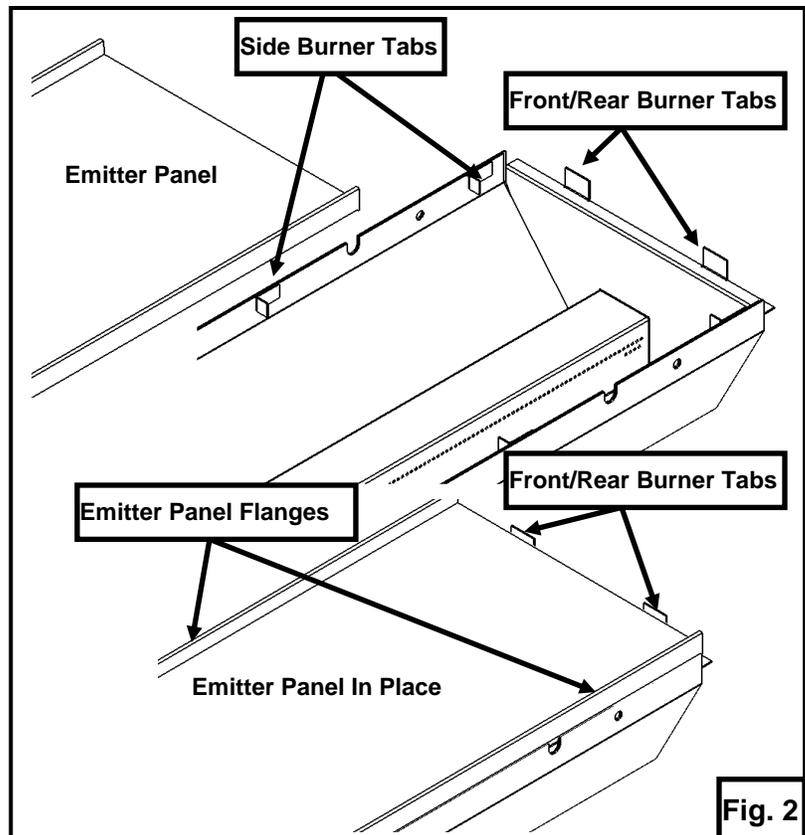
Crumb tray – The crumb tray is the removable pan that catches any debris that falls from the broiling area. The crumb trays should be pushed all the way in while the unit is operation.



Emitter Panel – The charbroiler must never be operated without the emitter panels in place. The emitter panels protect the burner from food drippings and debris. Operating the burner without the emitter panels in place will cause poor performance and clogging of the burner ports. The emitter panels disperse energy and facilitate infrared cooking.

The emitter panels should rest on top of the side burner tabs and inside of the front and rear burner tabs over each burner. The emitter panels should be placed in position with the flanged edges pointing upwards. See Fig. 2.

Emitter panels are consumable. The emitter panels will need to be replaced, depending upon your menu and hours of operation.



LEVELING

It is important that the charbroiler is level front to back and left to right. Areas of uneven heat distribution will occur on an unlevelled unit. The charbroiler is equipped with adjustable legs. Turn the feet at the bottom of the legs to adjust to level. The unit should be rechecked for level anytime it has been moved.

VENTILATION HOOD

The broiler should be installed under a suitable ventilation hood. For safe operation and proper ventilation, keep the space between the charbroiler and vent hood free from any obstructions.

GAS CONNECTION

The data plate on the lower right side of the charbroiler indicates the type of gas your unit is equipped to burn. DO NOT connect to any other gas type.

NOTICE All gas supply connections and any pipe joint compound must be resistant to the action of propane gases.

Purge the supply line to clean out any dust, dirt, or any foreign matter before connecting the line to the unit.

Codes require that a gas shut-off valve be installed in the gas line ahead of the charbroiler. The gas supply line must be at least the equivalent of $\frac{3}{4}$ " iron pipe.

A pressure regulator is supplied and must be installed outside of the broiler when making the gas supply connection. Standard orifices are set for 4"WC (Water Column) for Natural Gas — 10"WC (Water Column) for Propane. Use the $\frac{1}{8}$ " pipe tap on the burner manifold for checking pressure. Make sure the gas piping is clean and free of obstructions, dirt, and piping compound.

An adequate gas supply is necessary. Undersized or low pressure lines will restrict the volume of gas required for satisfactory performance. A minimum supply pressure of 7" W.C. for natural gas and 11" W.C. for propane gas is recommended. With all units operating simultaneously, the manifold pressure on all units should not show any appreciable drop.

When testing the gas supply piping system, if test pressures exceed $\frac{1}{2}$ psig (3.45 kPa), the charbroiler and its individual shutoff valve must be disconnected from the gas supply piping system. When test pressures are $\frac{1}{2}$ psig (3.45 kPa) or less, the charbroiler must be isolated from the gas supply piping system by closing its individual manual shut-off valve during any pressure testing of the system.

⚠ WARNING Prior to lighting, check all joints in the gas supply line for leaks. Use soap and water solution. Do not use an open flame.

GAS PRESSURE REGULATOR INSTALLATION

Gas regulator pressure is preset at 4" Water Column (W.C.) for natural gas, and 10" W.C. for propane gas. Minor adjustments may be required based on site specific gas pressure.

Install the regulator as close to the broiler on the gas supply line as possible. Make sure that the arrow on the underside of the regulator is oriented in the direction of gas flow to the broiler (Fig. 3) and the regulator is positioned with the vent plug and adjustment screw upright (Fig. 4).

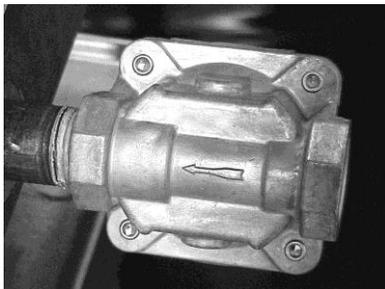


Fig. 3



Fig. 4

The minimum supply pressure (upstream of the regulator) should be 7-9" W.C. for natural gas and 11-12" W.C. for propane gas. At no time should the charbroiler be connected to supply pressure greater than ½ psig (3.45 kPa) or 14" W.C.

CASTER EQUIPPED CHARBROILERS

Charbroilers mounted on stands with casters must use a flexible connector (not supplied) that complies with the Standard for Connectors for Movable Gas Appliances, ANSI Z21.69 • CSA 6.16 and a quick-disconnect device that complies with the Standard for Quick-Disconnect Devices for use With Gas Fuel, ANSI-Z21.41 • CSA 6.9. In addition, adequate means must be provided to limit movement of the broiler without depending on the connector and the quick-disconnect device or its associated piping to limit broiler movement. Attach the restraining device at the rear of the charbroiler. If disconnection of the restraint is necessary, turn off the gas supply before disconnection. Reconnect the restraint prior to turning the gas supply on and return the charbroiler to its installation position.

OPERATION

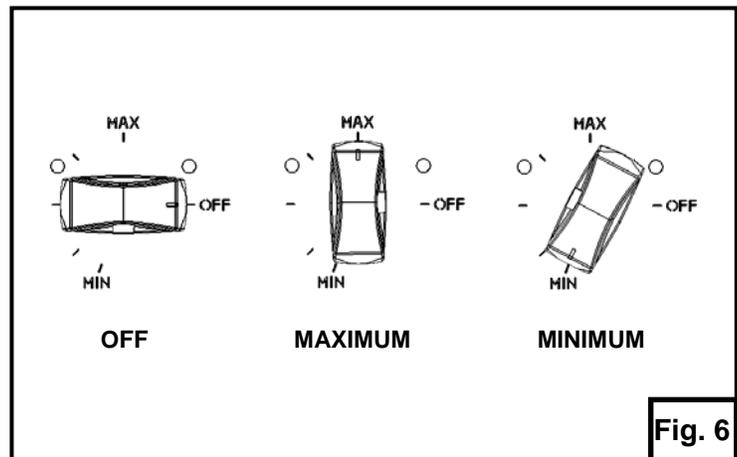
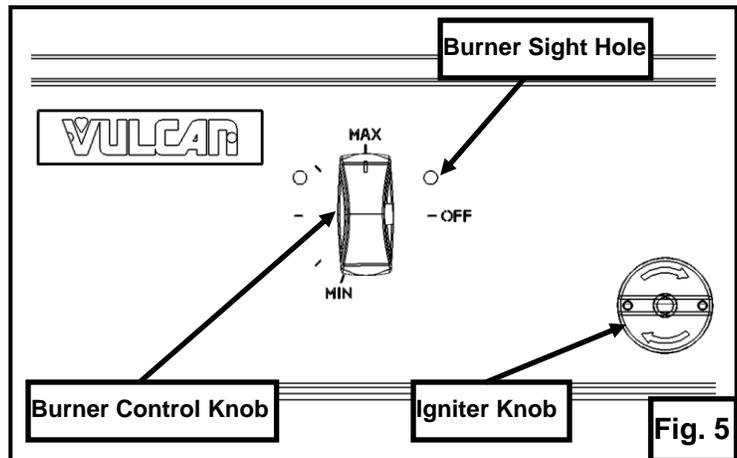
⚠ WARNING The charbroiler and its parts are hot. Use care when operating, cleaning or servicing the charbroiler.

BURNER LIGHTING

The VTEC charbroiler does not have a pilot and each burner lights directly from a spark igniter or from an outside ignition source (such as a lit taper, long handle lighter, etc).

LIGHTING BURNER WITH SPARK IGNITER

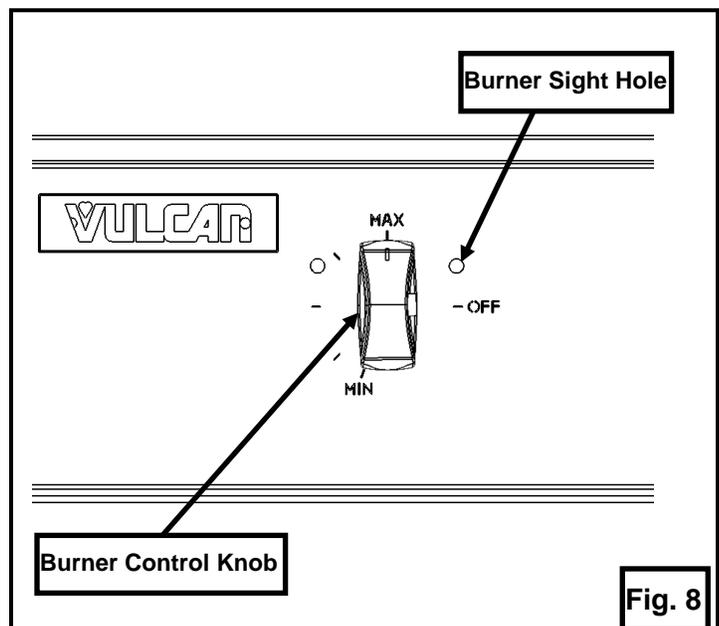
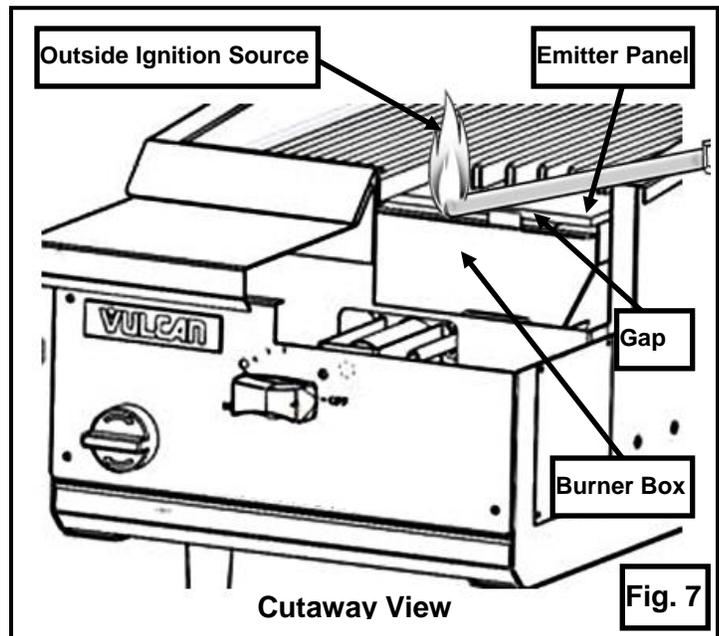
1. Turn the main gas shut-off valve and the individual burner control knobs to the OFF position (clockwise until stops). Wait 5 minutes.
2. Push and turn the burner control knob to the MAX setting (counterclockwise to vertical/90° position) on the burner you intend to light. (Fig. 5)
3. Immediately, while viewing through the burner sight hole, turn the igniter knob clockwise until you hear a click (approx. $\frac{1}{4}$ turn) and see the spark. The burner should ignite immediately and flames should be visible through the burner sight hole.
4. If the burner fails to light immediately, repeat step 3, two more times. If the burner has still not ignited at this point, turn the main gas shut-off valve and all burner valves to the OFF position (clockwise until stops) and proceed with manual burner lighting instructions on following page.
5. Repeat steps 2-4 until all burners are lit. Turn on one burner control knob at a time and ensure burner is lit before proceeding to light the next burner.



The burners should be left on the maximum (MAX) setting for most efficiency when cooking. The burners may be turned to the minimum (MIN) setting during slow periods to save energy. See Fig. 6.

LIGHTING BURNER MANUALLY

1. Turn the main gas shut-off valve and the individual burner control knobs to the OFF position (clockwise until stops). Wait 5 minutes.
2. Apply a flame from an outside ignition source (such as a lit taper, long handle lighter, etc) directly to the gap between the bottom of the emitter panel and the top of the intended burner box at the front of the unit. See Fig. 7.
3. Push and turn the burner control knob to the MAX setting (counterclockwise to vertical/90° position) on the burner you intend to light. (Fig. 8)
4. View through the burner sight hole (Fig.8) to ensure the burner has lit.
5. If the burner fails to light within 4 seconds of applying flame to the directed area, turn the main gas shut-off valve and all burner valves to the OFF position (clockwise until stops). Contact an authorized service contractor.
6. Repeat steps 2-4 until all burners are lit. Turn on one burner control knob at a time and ensure burner is lit before proceeding to light the next burner.



TO COMPLETELY SHUTDOWN THE BURNERS

For complete shutdown: Turn the main gas supply valve OFF. Make sure all individual burner valves are OFF (turned completely clockwise until stops).

PREHEATING THE CHARBROILER

Allow the charbroiler to preheat for 20 minutes on the maximum (MAX) setting. Rub grates with cooking oil before using to help reduce sticking.

CLEANING

⚠ WARNING The charbroiler and its parts are hot. Use care when operating, cleaning or servicing the charbroiler.

Scrape cooking grids during broiling with a stainless steel scraper or stainless steel wire brush to keep the grates clean. Do not allow debris to accumulate on the grates. (Fig. 9) Top grates may be immersed in cleaning compound overnight. In the morning, rinse with hot water to remove any residues of cleaning compound.

Stainless steel surfaces may be cleaned using damp cloth with mild detergent and water solution. Clean heavy, baked on grease and splatter that do not respond to normal cleaning by using cleaning solution with a Scotch-Brite™ pad. Rub with the grain of the surface – do not rub in a circular motion.

DAILY

After cooking, allow unit to run on MAX setting for 10 minutes before shutting OFF. This will make cleaning debris from the emitter panels easier when they cool down.

When cool, remove cooking grids and emitter panels, clean places where fat, grease, or food can accumulate. Brush or use scraper to remove any accumulated debris from emitter panel surfaces. Be careful to keep inside burner boxes clear of debris. Remove crumb tray when cool and empty. (Fig. 10)

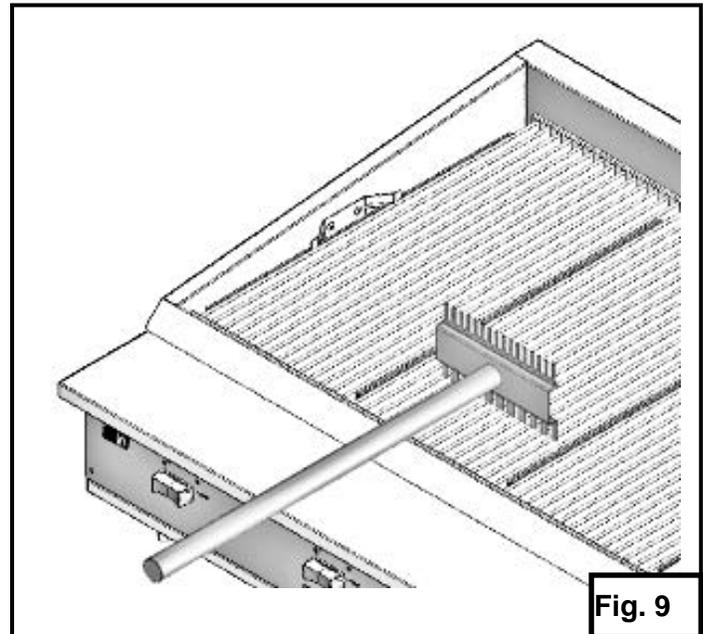


Fig. 9

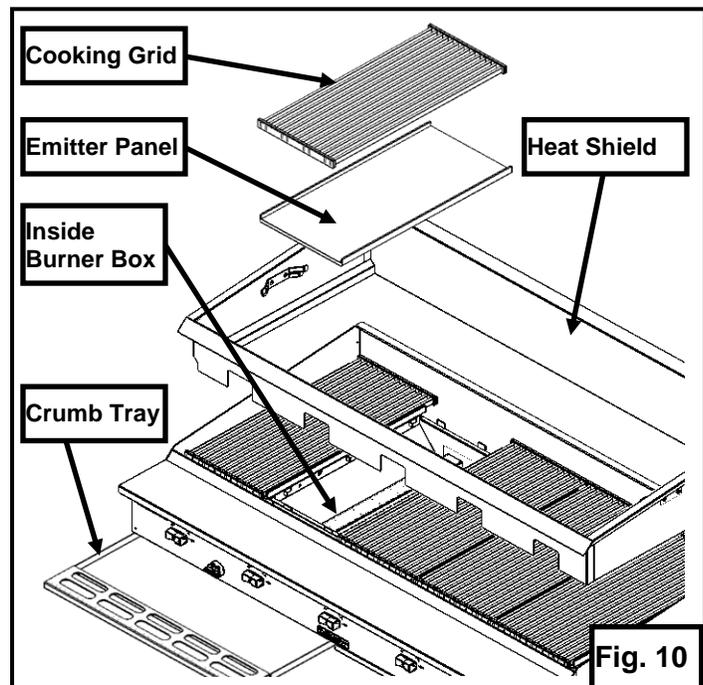


Fig. 10

NOTICE Never leave emitter panels wet after cleaning. Leaving panels wet after cooking or cleaning may accelerate corrosion process and result in premature failure.

WEEKLY

When cool, remove cooking grids, emitter panels and heat shield. Clean and vacuum any accumulated debris from inside burner boxes. Clean inside chassis area anywhere fat, grease, or food can accumulate. Clean heat shield while removed (Fig. 10). Repeat weekly process more often as needed.

NOTICE Never cover surface of unit with pans or other objects in attempt to “burn off” or clean debris from unit. This will cause a buildup of heat that can potentially damage and warp components of the charbroiler. Do not cover surfaces with aluminum foil as this may block or disrupt the designed air flow pattern and affect performance.

MAINTENANCE

⚠ WARNING The charbroiler and its parts are hot. Use care when operating, cleaning or servicing the charbroiler.

VENT SYSTEM

At least twice a year the exhaust hood (venting system) should be examined and cleaned.

LUBRICATION

All valves, at the first sign of sticking, should be lubricated by a trained technician using high temperature grease.

EMITTER PANELS

Emitter panels are consumable.

The emitter panels will need to be replaced, depending upon your menu and hours of operation. Replace emitter panels if warped or holes appear.

SERVICE

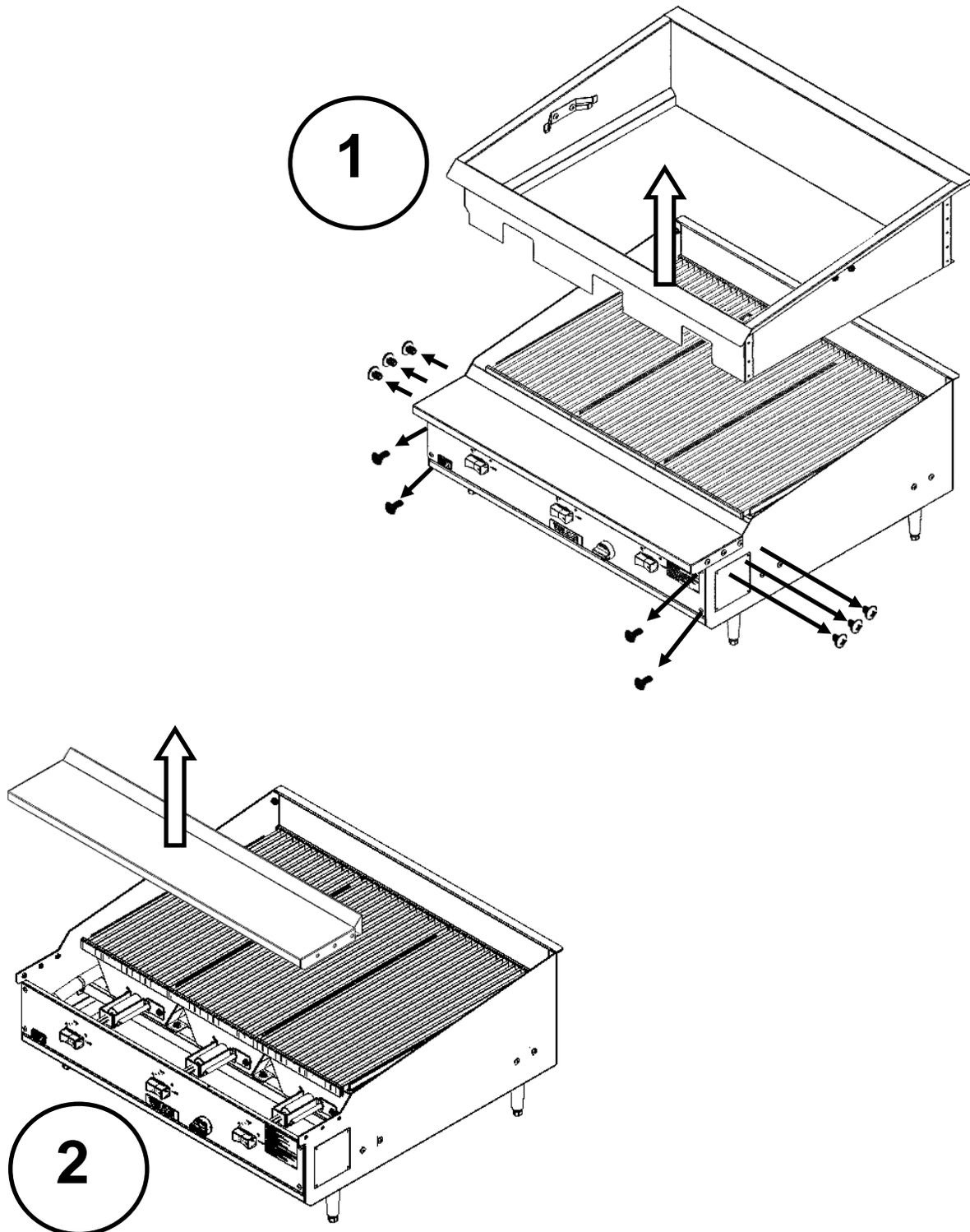
Contact your local Service Contractor for any repairs or adjustments needed on this equipment. For a complete listing of service and parts depots refer to www.vulcanequipment.com. When calling for service, the following information should be available from the appliance identification plate: Model Number and Serial Number.

TROUBLE SHOOTING

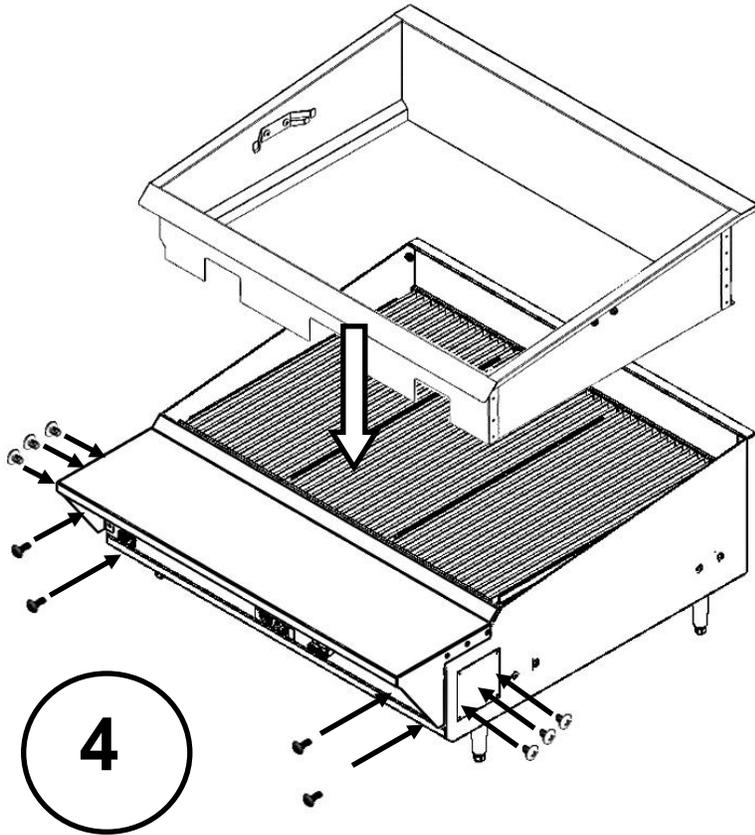
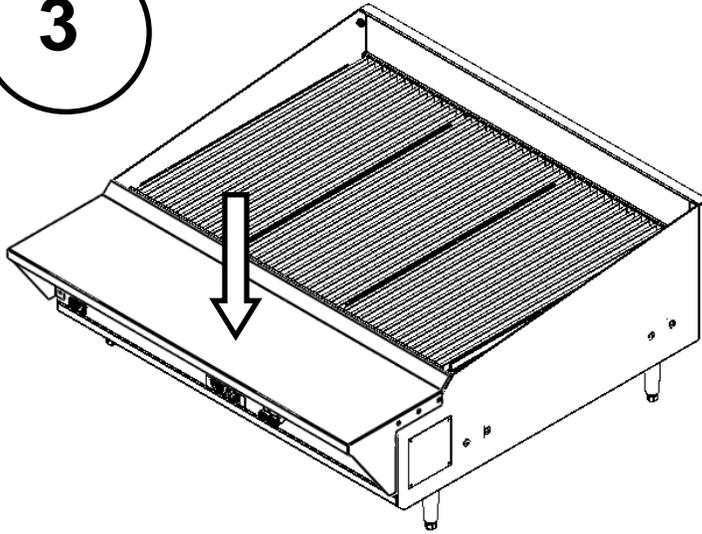
Uneven heating	<ul style="list-style-type: none"> A. Burner valves improperly adjusted B. Fluctuating gas pressure C. Appliance is not level D. Emitter panels are not properly seated or damaged E. Emitter panels are excessively dirty
Too much top heat	<ul style="list-style-type: none"> A. Faulty hood ventilation C. Overrated gas pressure D. Unit is excessively dirty E. Emitter panels are not properly seated or damaged
Uneven heat side to side	<ul style="list-style-type: none"> A. Burner valves improperly adjusted B. Appliance is not level side to side C. Crumb tray is not pushed all the way in D. Emitter panels are not properly seated or damaged E. Emitter panels are excessively dirty
Uneven heat front to back	<ul style="list-style-type: none"> A. Appliance is not level front to back B. Faulty hood ventilation C. Crumb tray is not pushed all the way in D. Emitter panels are not properly seated or damaged E. Emitter panels are excessively dirty F. Designed air flow pattern obstructed
Burner not lighting	<ul style="list-style-type: none"> A. Check that igniter electrode is sparking when igniter knob is turned clockwise B. Check for damaged, loose or dirty igniter wires, igniter and electrode C. Burner valve not on MAX setting D. Gas pressure too low E. Inside burner box or burner venturi excessively dirty
Burner flames too low	<ul style="list-style-type: none"> A. Burner valves improperly adjusted B. Gas pressure too low C. Inside burner box or burner venturi excessively dirty D. Clogged burner orifice
Burner flames too high	<ul style="list-style-type: none"> A. Emitter panels are not properly seated or damaged B. Gas pressure too high
Fluctuating gas pressure	<ul style="list-style-type: none"> A. Checked for clogged vent on regulator

ACCESSORY INSTALLATION

⚠ WARNING The charbroiler and its parts are hot. Use care when operating, cleaning or servicing the charbroiler.



3



4

PARTS AND SERVICE MANUAL GAS INFRARED CHARBROILER

***ITW* Food Equipment Group**

VULCAN

MODELS

VTEC14
VTEC25
VTEC36
VTEC48
VTEC60



VTEC48

VTEC GAS INFRARED CHARBROILER PARTS AND SERVICE

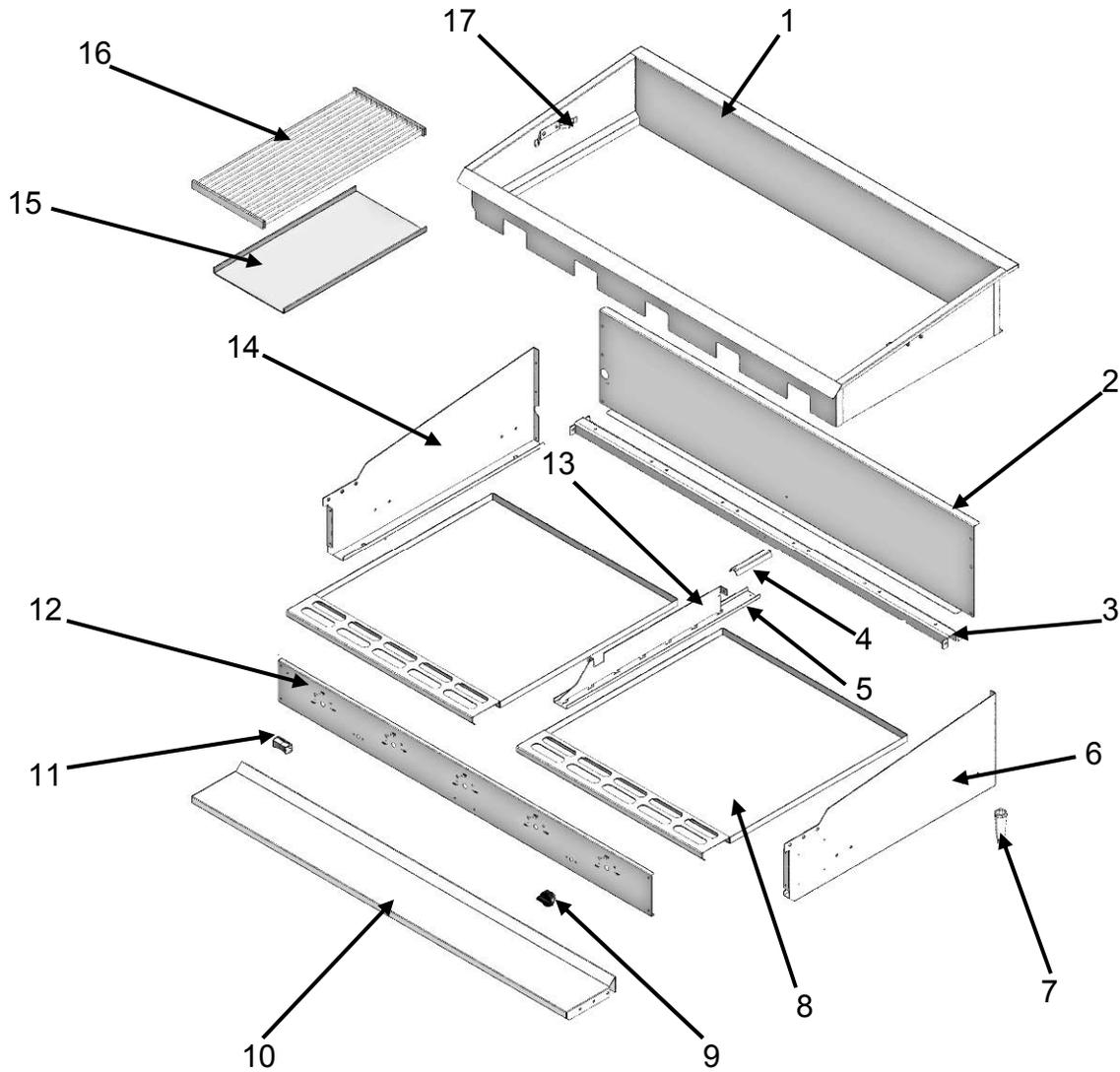


ILLUSTRATION NO.	PART NO.	NAME OF PART	AMOUNT
1.....	00-944240-0014A....	VTEC14 inner shield assembly..	.....1
	00-944240-0025A....	VTEC25 inner shield assembly..	.....1
	00-944240-0036A....	VTEC36 inner shield assembly..	.....1
	00-944240-0048A....	VTEC48 inner shield assembly..	.....1
	00-944240-0060A....	VTEC60 inner shield assembly..	.....1
2.....	00-944236-00014....	VTEC14 back panel.....	.....1
	00-944236-00025....	VTEC25 back panel.....	.....1
	00-944236-00036....	VTEC36 back panel.....	.....1
	00-944236-00048....	VTEC48 back panel.....	.....1
	00-944236-00060....	VTEC60 back panel.....	.....1

VTEC GAS INFRARED CHARBROILER PARTS AND SERVICE

ILLUSTRATION NO.	PART NO.	NAME OF PART	AMOUNT
3.....	00-944241-00014.....	VTEC14 burner support bracket.....	2
	00-944241-00025.....	VTEC25 burner support bracket.....	2
	00-944241-00036.....	VTEC36 burner support bracket.....	2
	00-944241-00048.....	VTEC48 burner support bracket.....	2
	00-944241-00060.....	VTEC60 burner support bracket.....	2
4.....	00-944253-00000.....	Crumb tray bracket deflector.....	AR
5.....	00-944252-00000.....	Crumb tray bracket base.....	AR
6.....	00-944238-R000A....	Right side panel assembly.....	1
7.....	00-719260-00000.....	Leg.....	4
8.....	00-944247-0014A....	VTEC14 crumb tray.....	1
	00-944247-0025A....	VTEC25 crumb tray.....	1
	00-944247-0036A....	VTEC36 crumb tray.....	1
	00-944247-0024A....	VTEC48 crumb tray.....	2
	00-944247-0030A....	VTEC60 crumb tray.....	2
9.....	00-944254-00000.....	Igniter knob.....	AR
10.....	00-944233-0014A....	VTEC14 shelf.....	1
	00-944233-0025A....	VTEC25 shelf.....	1
	00-944233-0036A....	VTEC36 shelf.....	1
	00-944233-0048A....	VTEC48 shelf.....	1
	00-944233-0060A....	VTEC60 shelf.....	1
11.....	00-413157-00001.....	Knob – chrome plated.....	AR
12.....	00-944237-00014.....	VTEC14 front panel.....	1
	00-944237-00025.....	VTEC25 front panel.....	1
	00-944237-00036.....	VTEC36 front panel.....	1
	00-944237-00048.....	VTEC48 front panel.....	1
	00-944237-00060.....	VTEC60 front panel.....	1
13.....	00-944251-00000.....	Crumb tray bracket.....	1
14.....	00-944238-L000A....	Left side panel assembly.....	1
15.....	00-944244-00000.....	Emitter panel.....	AR
16.....	00-944245-0000A	Standard grate.....	AR
	00-944245-000FA	Fish grate.....	AR
17.....	00-944239-00000.....	Grate bracket.....	2

VTEC GAS INFRARED CHARBROILER PARTS AND SERVICE

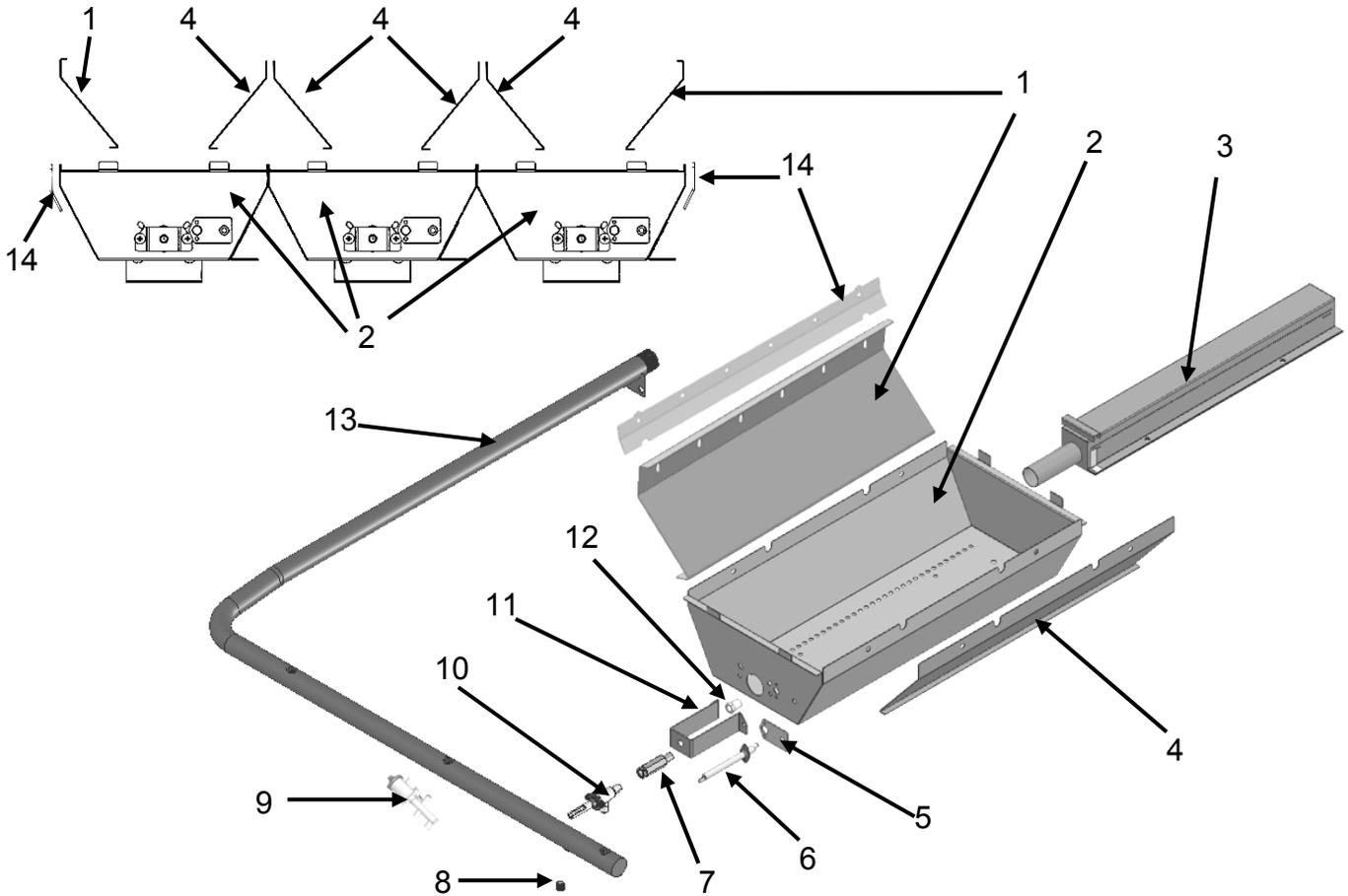


ILLUSTRATION NO.	PART NO.	NAME OF PART	AMOUNT
1.....	00-944246-0002S....	Outside burner-outside reflector.....	.....2
2.....	00-944246-0000A....	Burner box (with orifice bracket) .....	.....AR
3.....	00-944250-0000A....	VTEC burner.....	.....AR
4.....	00-944246-00002....	Inside burner-inside reflector.....	.....AR
5.....	00-944249-00001....	Igniter electrode bracket.....	.....AR
6.....	00-944249-00000....	Igniter electrode.....	.....AR
7.....	00-926523-00000....	2.125" orifice extension.....	.....AR
8.....	00-719363-00000....	1/8 NPT countersink plug.....	.....1
9.....	00-944255-00000....	Rotary igniter.....	.....AR
10.....	00-944243-00000....	Burner valve.....	.....AR
11.....	00-944246-00006....	Orifice bracket.....	.....AR
12.....	00-719951-00043	Natural gas burner orifice.....	.....AR
	00-719951-00054	LP gas burner orifice.....	.....AR

VTEC GAS INFRARED CHARBROILER PARTS AND SERVICE

ILLUSTRATION NO.	PART NO.	NAME OF PART	AMOUNT
13.....	00-944235-0014A....	VTEC14 Manifold.....	.....1
	00-944235-0025A....	VTEC25 Manifold.....	.....1
	00-944235-0036A....	VTEC36 Manifold.....	.....1
	00-944235-0048A....	VTEC48 Manifold.....	.....1
	00-944235-0060A....	VTEC60 Manifold.....	.....1
14.....	00-944263-00000....	Burner reinforcement bracket....	.....2
Not Shown.....	00-944256-00010....	10" igniter wire.....	.....AR
Not Shown.....	00-944256-00018....	18" igniter wire.....	.....AR
Not Shown.....	00-408279-00026.....	Natural gas pressure regulator...	.....1
Not Shown.....	00-408279-00021.....	LP gas pressure regulator.....	.....1
Not Shown.....	00-944257-00000....	Stainless steel grate scraper.....	.....1
Not Shown.....	00-944276-00000....	Igniter grounding wire.....	.....AR

RECOMMENDED SPARE PARTS

PART NO.	NAME OF PART	AMOUNT
00-408279-00026.....	Natural gas pressure regulator.....	.....1
00-408279-00021.....	LP gas pressure regulator.....	.....1
00-413157-00001.....	Knob – chrome plated.....	.....2
00-944254-00000.....	Igniter knob.....	.....1
00-944255-00000.....	Rotary igniter.....	.....1
00-944256-00010....	10" igniter wire.....	.....1
00-944256-00018....	18" igniter wire.....	.....1
00-944249-00000.....	Igniter electrode.....	.....2
00-944244-00000.....	Emitter panel.....	.....2
00-926523-00000.....	2.125" orifice extension.....	.....2
00-944243-00000.....	Burner valve.....2
00-719951-00043	Natural gas burner orifice.....2
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SERVICE

INTRODUCTION

This manual is prepared for the use of trained service technicians and should only be used by those who are properly qualified. This manual is not intended to be all encompassing. You should read, in its entirety, the repair procedure you wish to perform to determine if you have the necessary tools, instruments and skills required to perform the procedure. Procedures for which you do not have the necessary tools, instruments and skills should not be attempted.

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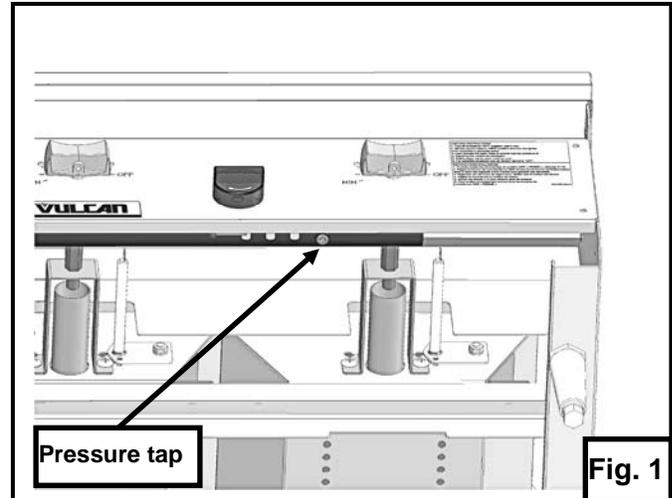
VTEC GAS INFRARED CHARBROILER PARTS AND SERVICE

⚠ WARNING The charbroiler and its parts are hot. Use care when operating, cleaning or servicing the charbroiler.

⚠ WARNING Shut off the gas supply before servicing the unit.

GAS PRESSURE MEASUREMENT

1. Turn the main gas shut-off valve and the individual burner control knobs to the OFF position.
2. Remove crumb tray. Remove pressure tap plug underneath manifold pipe at right. Fig. 1.
3. Attach manometer at pressure tap point.
4. Turn main gas shut-off ON, ignite all burners and leave on MAX setting while checking gas pressure. See I&O Manual F-38330.
5. Turn all the equipment on the same supply line on.
6. Gas pressure should be 4" W.C for natural gas units and 10" W.C. for LP gas units.
7. Turn the main gas shut-off valve and the individual burner control knobs to the OFF position (clockwise until stops).
8. Disconnect manometer and reinstall pressure tap plug and crumb tray.



NOTICE All gas supply connections and any pipe joint compound must be resistant to the action of propane gases.

⚠ WARNING Prior to lighting, check all joints in the gas supply line for leaks. Use soap and water solution. Do not use an open flame.

GAS PRESSURE REGULATOR

A gas pressure regulator is supplied with the charbroiler and should be set at 4" Water Column (W.C.) for natural gas, and 10" W.C. for propane gas. Minor adjustments may be required based on site specific gas pressure.

The regulator should be installed as close to the charbroiler on the gas supply line as possible. Make sure that the arrow on the underside of the regulator is oriented in the

VTEC GAS INFRARED CHARBROILER PARTS AND SERVICE

direction of gas flow to the broiler (Fig. 3) and the regulator is positioned with the vent limiter and adjustment screw cover upright (Fig. 4). The vent limiter should be kept free of grease and debris to prevent clogging and poor performance.

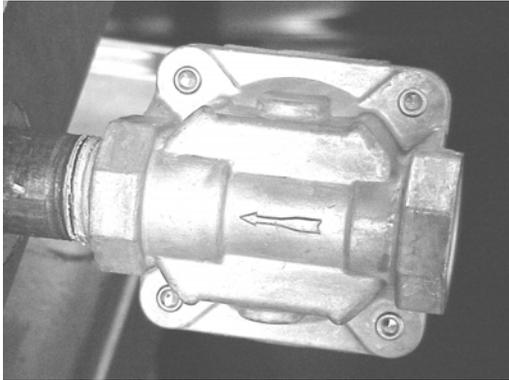


Fig. 3

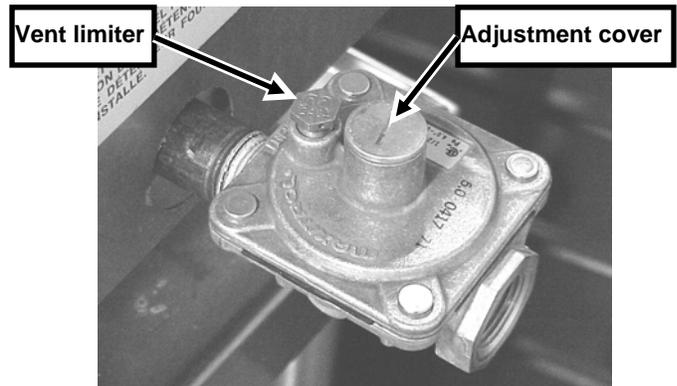


Fig. 4

The minimum supply pressure (upstream of the regulator) should be 7-9" W.C. for natural gas and 11-12" W.C. for propane gas. At no time should the charbroiler be connected to supply pressure greater than ½ psig (3.45 kPa) or 14" W.C.

GAS PRESSURE REGULATOR ADJUSTMENT

1. Remove adjustment cover. See Fig. 4.
2. Turn the adjustment screw clockwise to increase pressure and counterclockwise to decrease pressure.
3. Reinstall adjustment cover.

BURNER VALVE REPLACEMENT

⚠ WARNING Shut off the gas supply before servicing the unit.

1. Turn the main gas shut-off valve and the individual burner control knobs to the OFF position.
2. Remove inner shield assembly, knobs, shelf and front panel.
3. Disconnect all igniter wires at the igniter electrodes.
4. Remove all burner orifices. Fig 5.

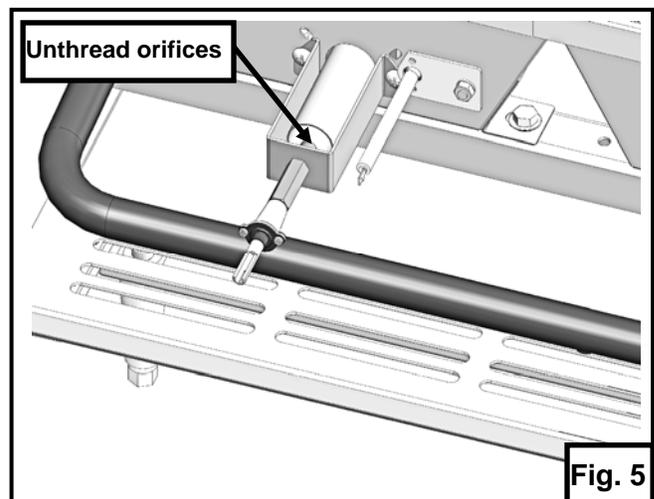


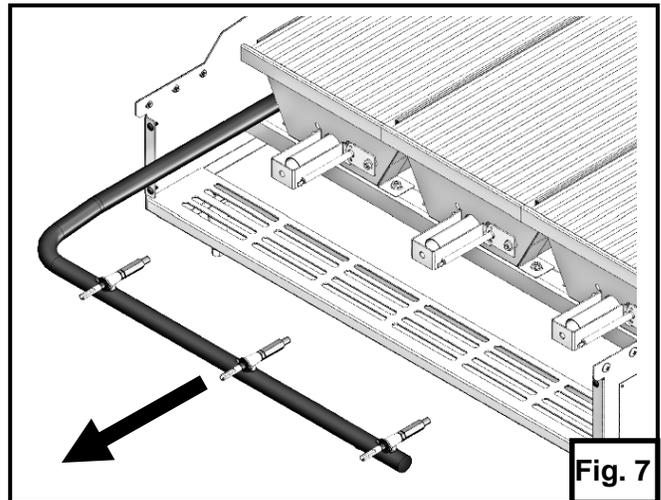
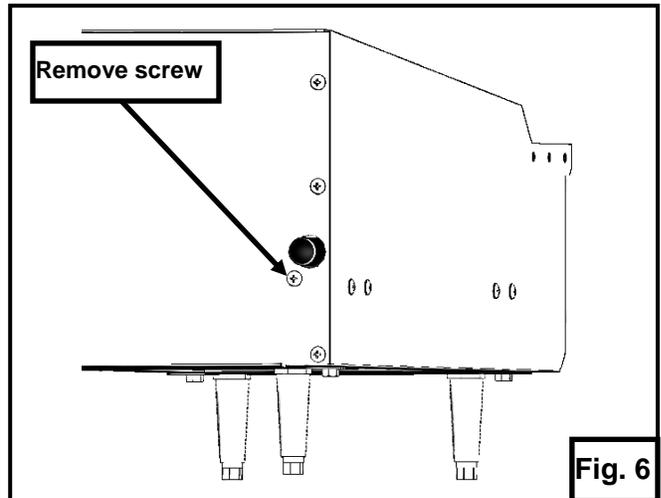
Fig. 5

VTEC GAS INFRARED CHARBROILER PARTS AND SERVICE

5. Remove manifold retaining screw at back of unit. Fig. 6.
6. Remove manifold assembly from unit. Fig 7.
7. Measure distance between manifold pipe and valve to reference for reassembly later.
8. Unthread orifice extension and burner valve from manifold.
9. Reverse steps to reinstall burner valve. The distance between the burner valve and manifold should match previous dimensions so that the burner valve outlet is centered in the burner venturi. The gap between the orifice and the end of the burner venturi should be no more than $\frac{1}{4}$ ". Refer to Fig. 8 for correct burner valve and orifice positioning.

NOTICE All gas supply connections and any pipe joint compound must be resistant to the action of propane gases.

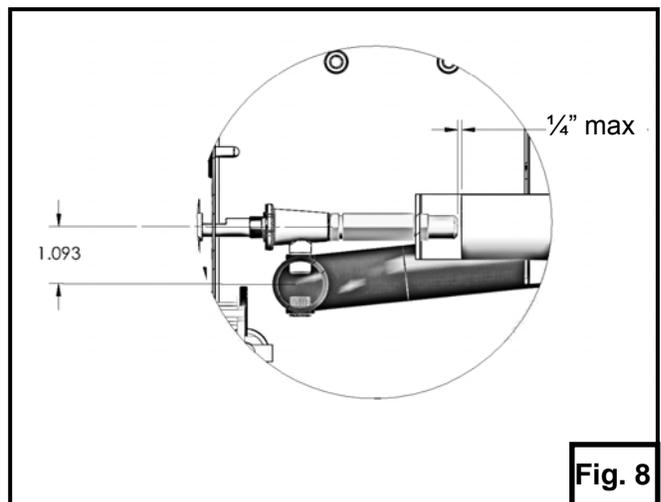
WARNING Prior to lighting, check all joints in the gas supply line for leaks. Use soap and water solution. Do not use an open flame.



BURNER BOX ASSEMBLY REPLACEMENT

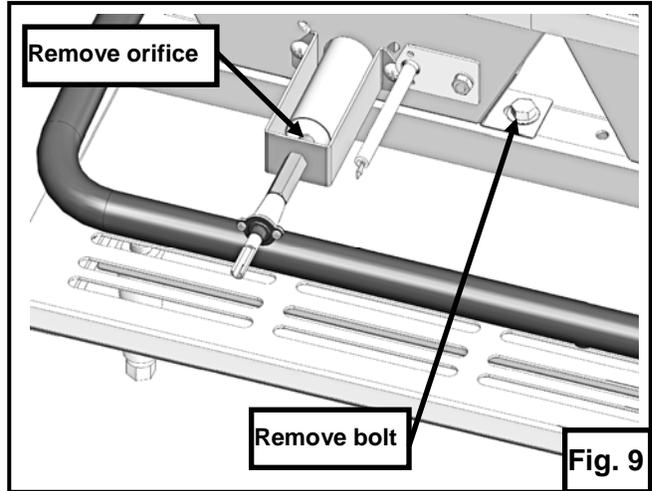
WARNING Shut off the gas supply before servicing the unit.

1. Turn the main gas shut-off valve and the individual burner control knobs to the OFF position.
2. Remove inner shield assembly, emitter panel, grate and shelf.

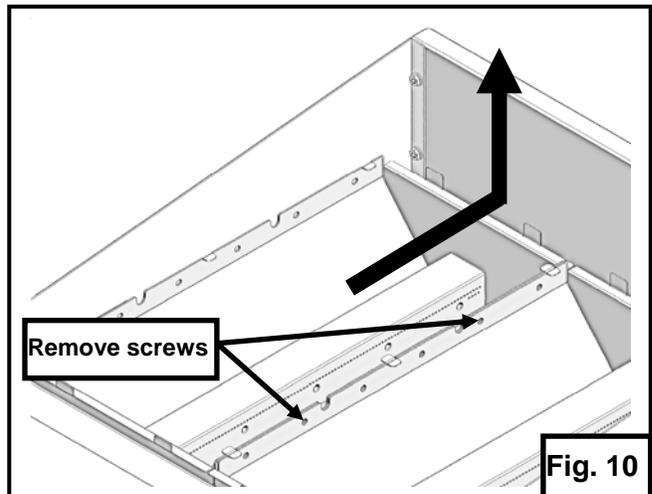


VTEC GAS INFRARED CHARBROILER PARTS AND SERVICE

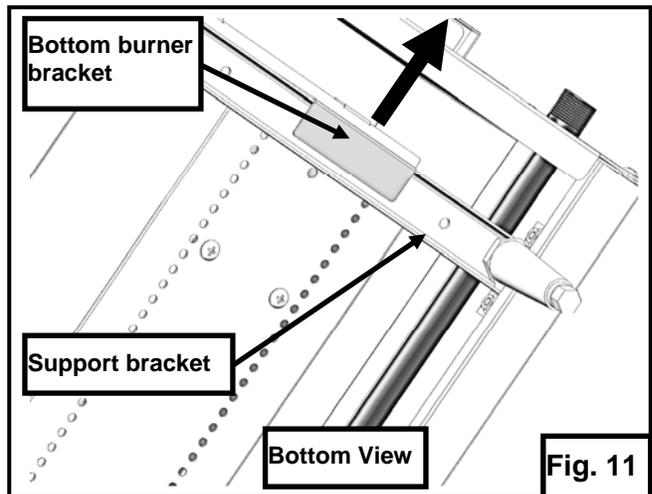
3. Remove burner orifice and bolt securing the front burner bracket. Fig. 9.



4. Remove screws that are securing burner to the adjacent burner at top of the reflectors. Fig. 10.



5. Slide burner box assembly to the rear of unit until the bottom burner bracket clears the rear support bracket, then lift up and out. See Fig. 10 and Fig. 11.

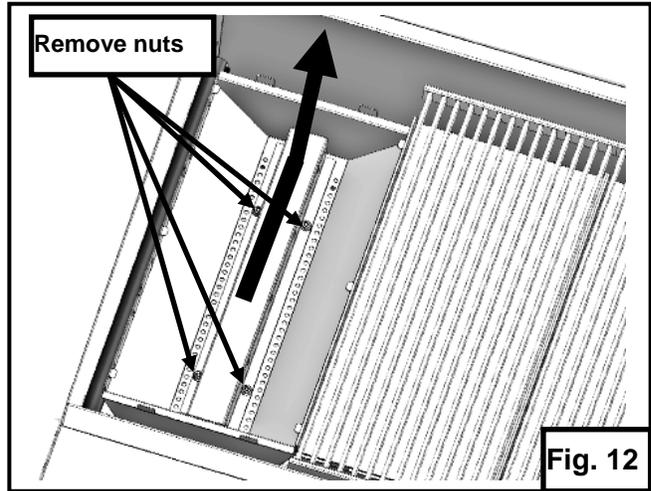


6. Reverse steps to reinstall burner box assembly. Refer to Fig. 8 on page 9 for correct burner valve and orifice positioning.

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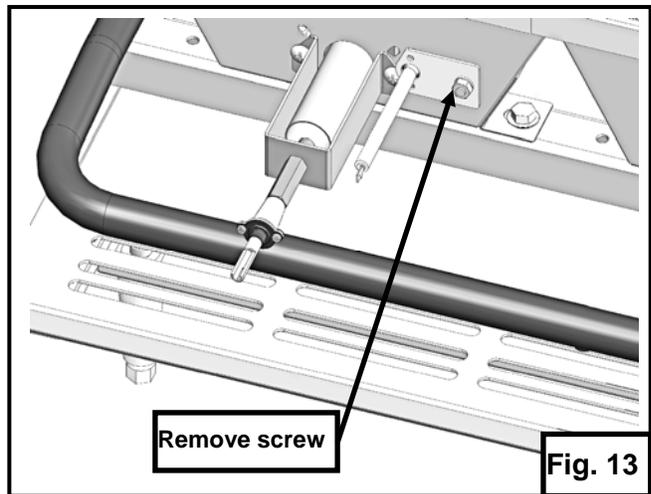
BURNER REPLACEMENT

1. Turn the main gas shut-off valve and the individual burner control knobs to the OFF position.
2. Remove inner shield assembly, emitter panel, grate and shelf.
3. Remove the four nuts that are securing the burner to the burner box assembly. Fig. 12.
4. Lift the burner slightly, then slide to the rear of the unit and lift out. Fig. 12.



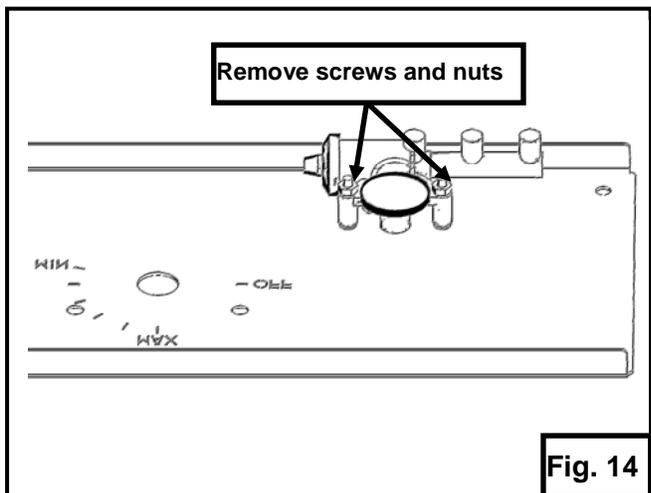
IGNITER ELECTRODE REPLACEMENT

1. Turn the main gas shut-off valve and the individual burner control knobs to the OFF position.
2. Remove inner shield assembly and shelf
3. Disconnect electrode wire.
4. Remove screw and nut from electrode bracket. Fig. 13.
5. Pull electrode assembly from burner and separate bracket from electrode.
6. Reverse steps to reinstall electrode.



ROTARY IGNITER REPLACEMENT

1. Turn the main gas shut-off valve and the individual burner control knobs to the OFF position.
2. Remove shelf and igniter knob.
3. Disconnect electrode wires and grounding wire.
4. Remove screws and nuts securing igniter to front panel. Fig. 14
5. Reverse steps to reinstall igniter. It is important to note that any igniter terminal not connected to an electrode wire, should be connected to a grounding wire.



TROUBLE SHOOTING

Uneven heating	<ul style="list-style-type: none"> A. Burner valves improperly adjusted B. Fluctuating gas pressure C. Appliance is not level D. Emitter panels are not properly seated or damaged E. Emitter panels are excessively dirty
Too much top heat	<ul style="list-style-type: none"> A. Faulty hood ventilation C. Overrated gas pressure D. Unit is excessively dirty E. Emitter panels are not properly seated or damaged
Uneven heat side to side	<ul style="list-style-type: none"> A. Burner valves improperly adjusted B. Appliance is not level side to side C. Crumb tray is not pushed all the way in D. Emitter panels are not properly seated or damaged E. Emitter panels are excessively dirty
Uneven heat front to back	<ul style="list-style-type: none"> A. Appliance is not level front to back B. Faulty hood ventilation C. Crumb tray is not pushed all the way in D. Emitter panels are not properly seated or damaged E. Emitter panels are excessively dirty F. Designed air flow pattern obstructed
Burner not lighting	<ul style="list-style-type: none"> A. Check that igniter electrode is sparking when igniter knob is turned clockwise B. Check for damaged, loose or dirty igniter wires, igniter and electrode C. Check that at igniter terminal connections are connected to an electrode wire or grounding wire. Should be no empty terminals. D. Burner valve not on MAX setting E. Gas pressure too low F. Inside burner box or burner venturi excessively dirty
Burner flames too low	<ul style="list-style-type: none"> A. Burner valves improperly adjusted B. Gas pressure too low C. Inside burner box or burner venturi excessively dirty D. Clogged burner orifice
Burner flames to high	<ul style="list-style-type: none"> A. Emitter panels are not properly seated or damaged B. Gas pressure too high
Fluctuating gas pressure	<ul style="list-style-type: none"> A. Checked for clogged vent on regulator
Flames in burner venturi	<ul style="list-style-type: none"> A. Appliance is not level B. Gas pressure not set properly C. Waiting too long before igniting burner D. Not following lighting instructions - See I&O Manual F-38330.

NOTES

VTEC GAS INFRARED CHARBROILER PARTS AND SERVICE

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PARTS AND SERVICE MANUAL GAS INFRARED CHARBROILER

***ITW* Food Equipment Group**

VULCAN

MODELS

VTEC14
VTEC25
VTEC36
VTEC48
VTEC60



VTEC48

VTEC GAS INFRARED CHARBROILER PARTS AND SERVICE

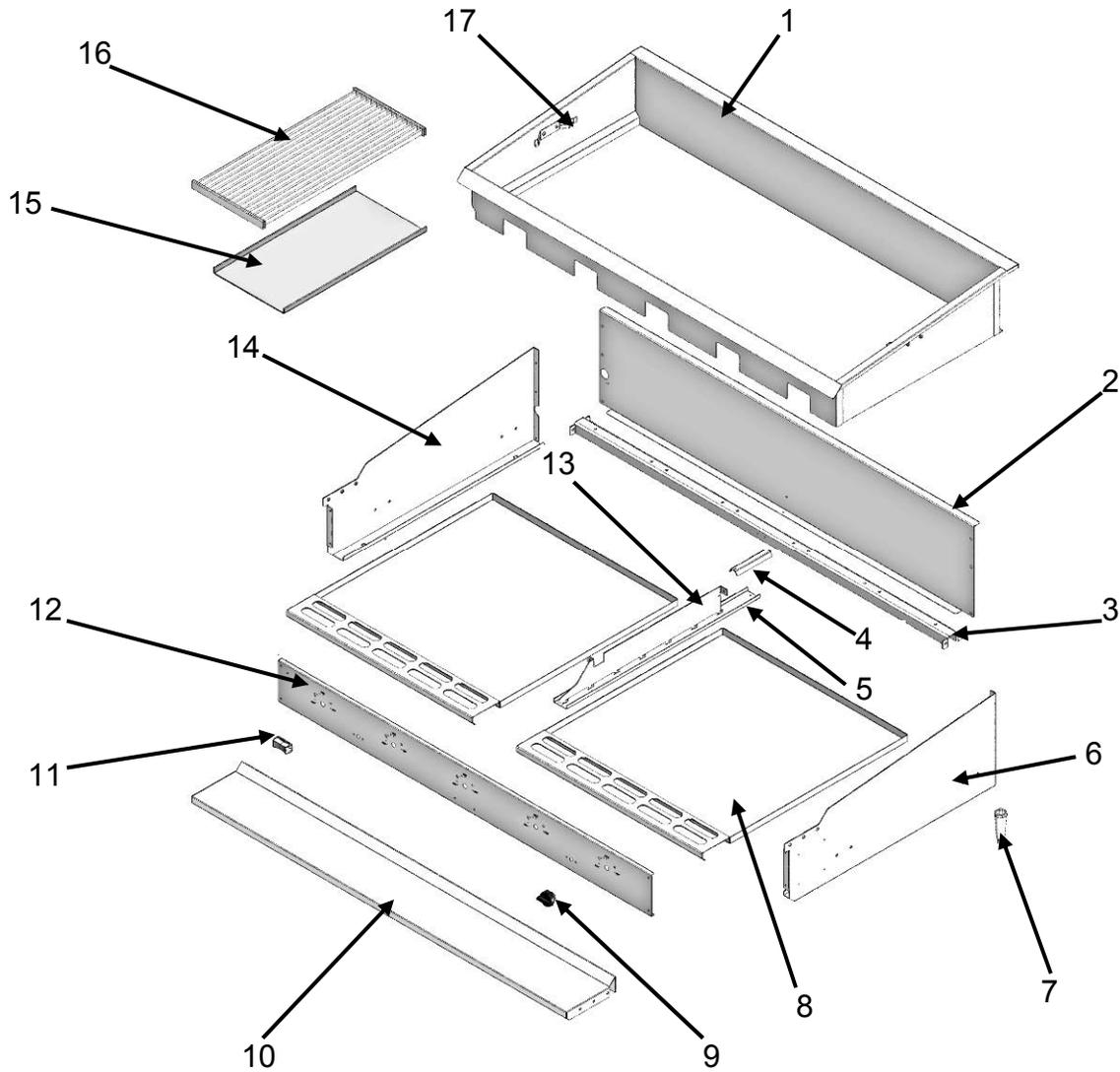


ILLUSTRATION NO.	PART NO.	NAME OF PART	AMOUNT
1.....	00-944240-0014A....	VTEC14 inner shield assembly..	.....1
	00-944240-0025A....	VTEC25 inner shield assembly..	.....1
	00-944240-0036A....	VTEC36 inner shield assembly..	.....1
	00-944240-0048A....	VTEC48 inner shield assembly..	.....1
	00-944240-0060A....	VTEC60 inner shield assembly..	.....1
2.....	00-944236-00014....	VTEC14 back panel.....	.....1
	00-944236-00025....	VTEC25 back panel.....	.....1
	00-944236-00036....	VTEC36 back panel.....	.....1
	00-944236-00048....	VTEC48 back panel.....	.....1
	00-944236-00060....	VTEC60 back panel.....	.....1

VTEC GAS INFRARED CHARBROILER PARTS AND SERVICE

ILLUSTRATION NO.	PART NO.	NAME OF PART	AMOUNT
3.....	00-944241-00014.....	VTEC14 burner support bracket.....	2
	00-944241-00025.....	VTEC25 burner support bracket.....	2
	00-944241-00036.....	VTEC36 burner support bracket.....	2
	00-944241-00048.....	VTEC48 burner support bracket.....	2
	00-944241-00060.....	VTEC60 burner support bracket.....	2
4.....	00-944253-00000.....	Crumb tray bracket deflector.....	AR
5.....	00-944252-00000.....	Crumb tray bracket base.....	AR
6.....	00-944238-R000A....	Right side panel assembly.....	1
7.....	00-719260-00000.....	Leg.....	4
8.....	00-944247-0014A....	VTEC14 crumb tray.....	1
	00-944247-0025A....	VTEC25 crumb tray.....	1
	00-944247-0036A....	VTEC36 crumb tray.....	1
	00-944247-0024A....	VTEC48 crumb tray.....	2
	00-944247-0030A....	VTEC60 crumb tray.....	2
9.....	00-944254-00000.....	Igniter knob.....	AR
10.....	00-944233-0014A....	VTEC14 shelf.....	1
	00-944233-0025A....	VTEC25 shelf.....	1
	00-944233-0036A....	VTEC36 shelf.....	1
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11.....	00-413157-00001.....	Knob – chrome plated.....	AR
12.....	00-944237-00014.....	VTEC14 front panel.....	1
	00-944237-00025.....	VTEC25 front panel.....	1
	00-944237-00036.....	VTEC36 front panel.....	1
	00-944237-00048.....	VTEC48 front panel.....	1
	00-944237-00060.....	VTEC60 front panel.....	1
13.....	00-944251-00000.....	Crumb tray bracket.....	1
14.....	00-944238-L000A....	Left side panel assembly.....	1
15.....	00-944244-00000.....	Emitter panel.....	AR
16.....	00-944245-0000A	Standard grate.....	AR
	00-944245-000FA	Fish grate.....	AR
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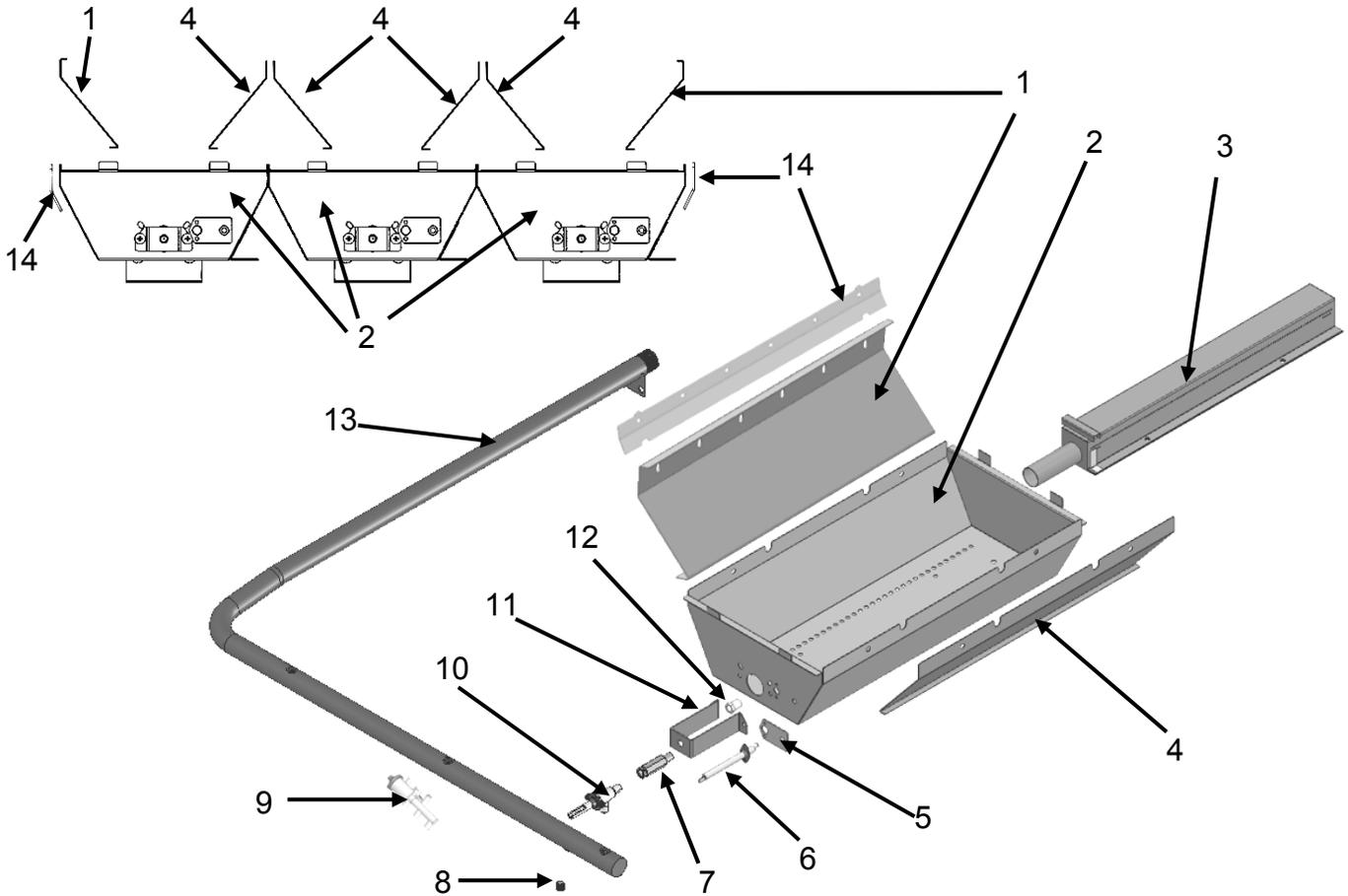


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00-944244-00000.....	Emitter panel.....2
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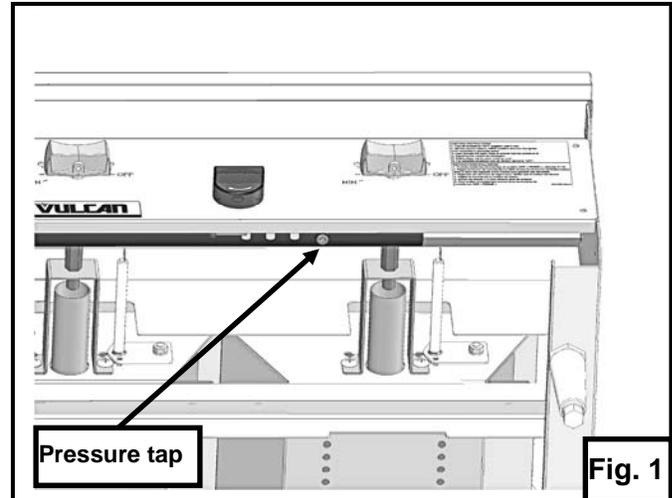
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5. Turn all the equipment on the same supply line on.
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7. Turn the main gas shut-off valve and the individual burner control knobs to the OFF position (clockwise until stops).
8. Disconnect manometer and reinstall pressure tap plug and crumb tray.



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⚠ WARNING Prior to lighting, check all joints in the gas supply line for leaks. Use soap and water solution. Do not use an open flame.

GAS PRESSURE REGULATOR

A gas pressure regulator is supplied with the charbroiler and should be set at 4" Water Column (W.C.) for natural gas, and 10" W.C. for propane gas. Minor adjustments may be required based on site specific gas pressure.

The regulator should be installed as close to the charbroiler on the gas supply line as possible. Make sure that the arrow on the underside of the regulator is oriented in the

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direction of gas flow to the broiler (Fig. 3) and the regulator is positioned with the vent limiter and adjustment screw cover upright (Fig. 4). The vent limiter should be kept free of grease and debris to prevent clogging and poor performance.

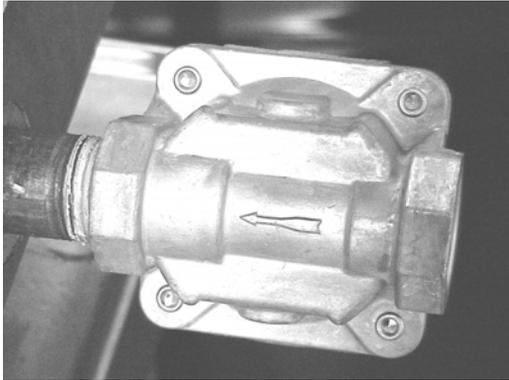


Fig. 3

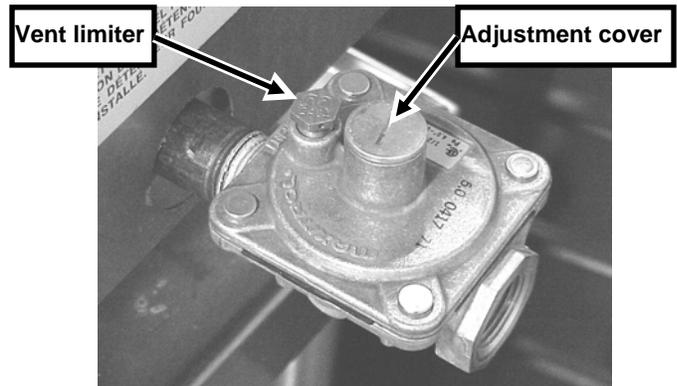


Fig. 4

The minimum supply pressure (upstream of the regulator) should be 7-9" W.C. for natural gas and 11-12" W.C. for propane gas. At no time should the charbroiler be connected to supply pressure greater than ½ psig (3.45 kPa) or 14" W.C.

GAS PRESSURE REGULATOR ADJUSTMENT

1. Remove adjustment cover. See Fig. 4.
2. Turn the adjustment screw clockwise to increase pressure and counterclockwise to decrease pressure.
3. Reinstall adjustment cover.

BURNER VALVE REPLACEMENT

⚠ WARNING Shut off the gas supply before servicing the unit.

1. Turn the main gas shut-off valve and the individual burner control knobs to the OFF position.
2. Remove inner shield assembly, knobs, shelf and front panel.
3. Disconnect all igniter wires at the igniter electrodes.
4. Remove all burner orifices. Fig 5.

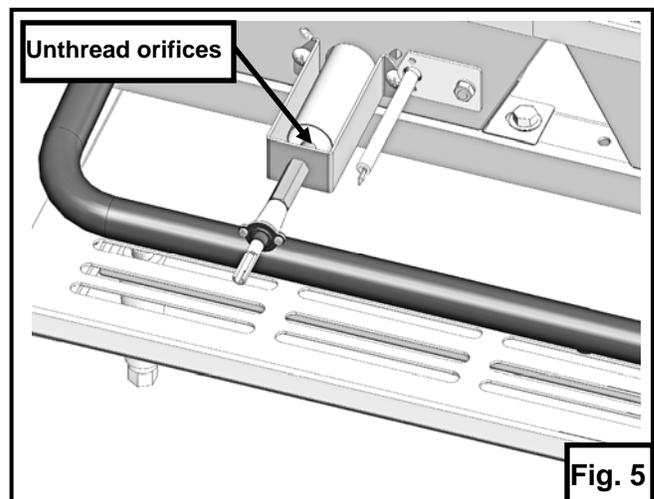


Fig. 5

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5. Remove manifold retaining screw at back of unit. Fig. 6.
6. Remove manifold assembly from unit. Fig 7.
7. Measure distance between manifold pipe and valve to reference for reassembly later.
8. Unthread orifice extension and burner valve from manifold.
9. Reverse steps to reinstall burner valve. The distance between the burner valve and manifold should match previous dimensions so that the burner valve outlet is centered in the burner venturi. The gap between the orifice and the end of the burner venturi should be no more than $\frac{1}{4}$ ". Refer to Fig. 8 for correct burner valve and orifice positioning.

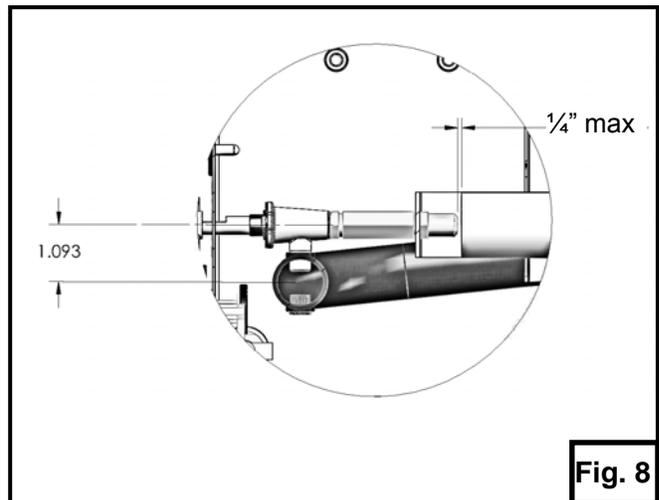
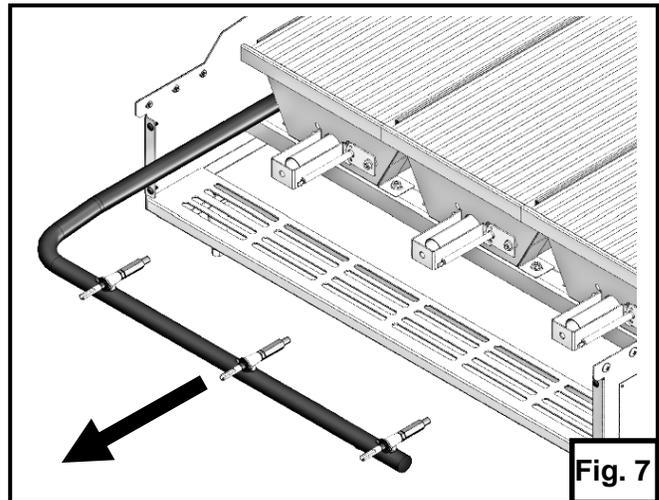
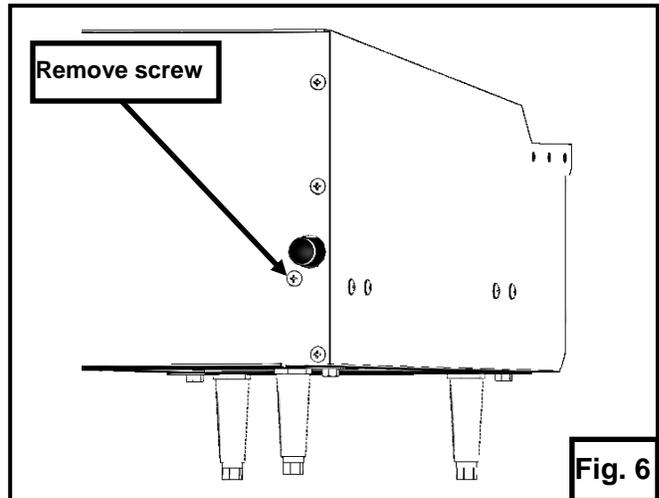
NOTICE All gas supply connections and any pipe joint compound must be resistant to the action of propane gases.

WARNING Prior to lighting, check all joints in the gas supply line for leaks. Use soap and water solution. Do not use an open flame.

BURNER BOX ASSEMBLY REPLACEMENT

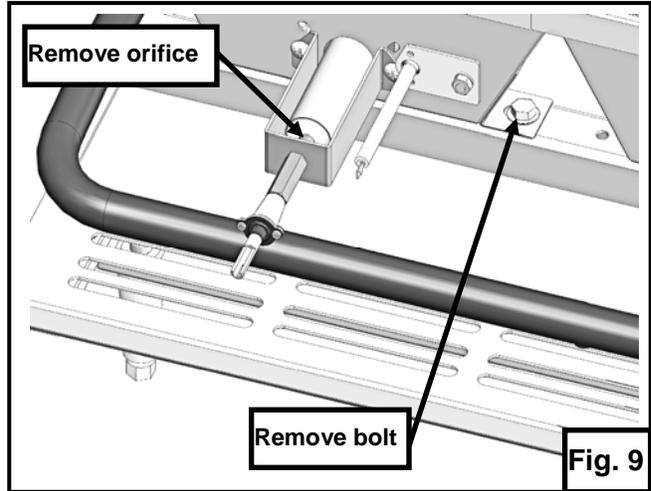
WARNING Shut off the gas supply before servicing the unit.

1. Turn the main gas shut-off valve and the individual burner control knobs to the OFF position.
2. Remove inner shield assembly, emitter panel, grate and shelf.

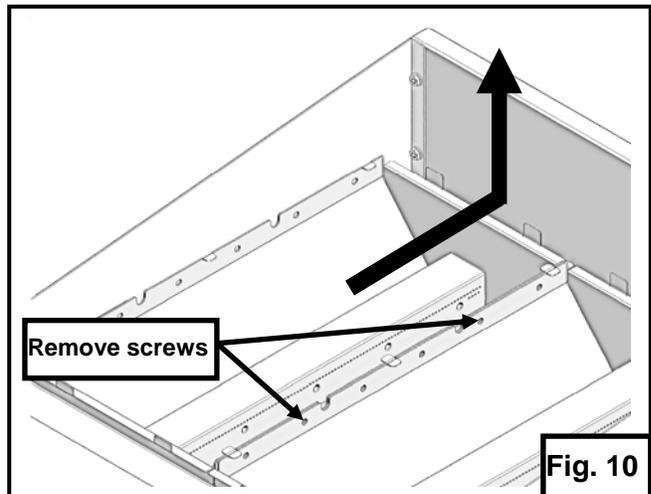


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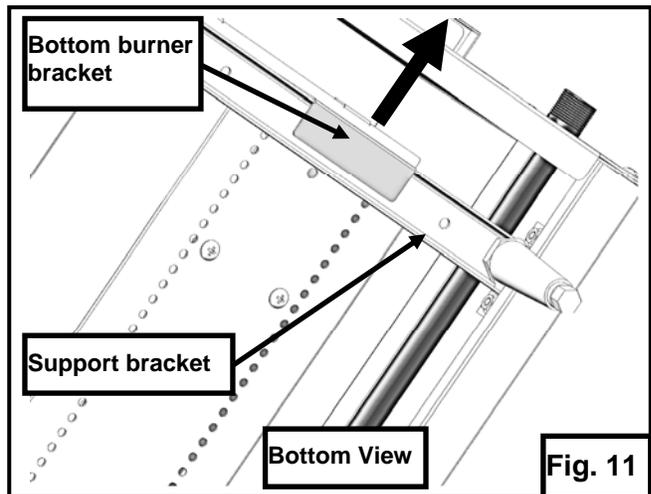
3. Remove burner orifice and bolt securing the front burner bracket. Fig. 9.



4. Remove screws that are securing burner to the adjacent burner at top of the reflectors. Fig. 10.



5. Slide burner box assembly to the rear of unit until the bottom burner bracket clears the rear support bracket, then lift up and out. See Fig. 10 and Fig. 11.

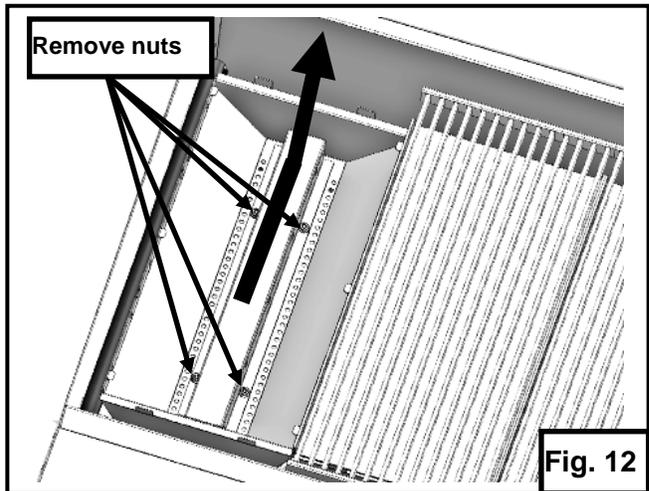


6. Reverse steps to reinstall burner box assembly. Refer to Fig. 8 on page 9 for correct burner valve and orifice positioning.

▲ WARNING The charbroiler and its parts are hot. Use care when operating, cleaning or servicing the charbroiler.

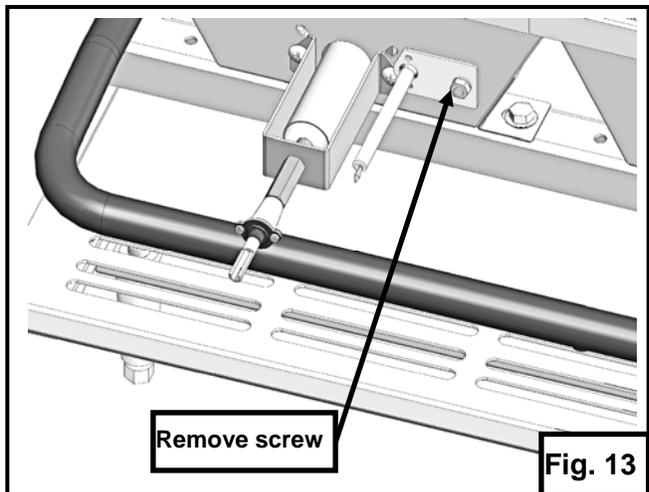
BURNER REPLACEMENT

1. Turn the main gas shut-off valve and the individual burner control knobs to the OFF position.
2. Remove inner shield assembly, emitter panel, grate and shelf.
3. Remove the four nuts that are securing the burner to the burner box assembly. Fig. 12.
4. Lift the burner slightly, then slide to the rear of the unit and lift out. Fig. 12.



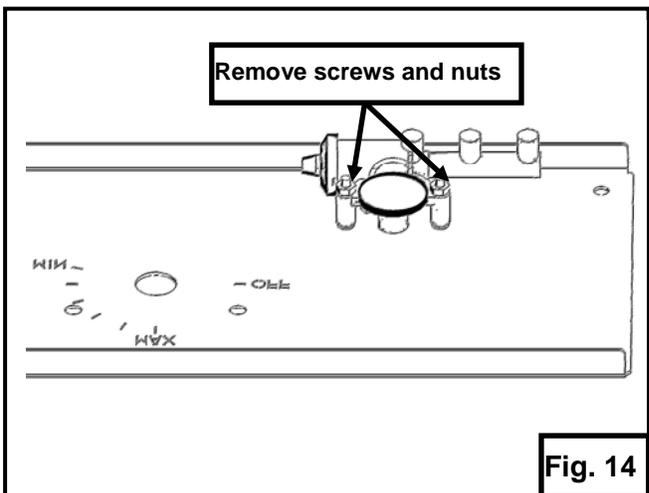
IGNITER ELECTRODE REPLACEMENT

1. Turn the main gas shut-off valve and the individual burner control knobs to the OFF position.
2. Remove inner shield assembly and shelf
3. Disconnect electrode wire.
4. Remove screw and nut from electrode bracket. Fig. 13.
5. Pull electrode assembly from burner and separate bracket from electrode.
6. Reverse steps to reinstall electrode.



ROTARY IGNITER REPLACEMENT

1. Turn the main gas shut-off valve and the individual burner control knobs to the OFF position.
2. Remove shelf and igniter knob.
3. Disconnect electrode wires and grounding wire.
4. Remove screws and nuts securing igniter to front panel. Fig. 14
5. Reverse steps to reinstall igniter. It is important to note that any igniter terminal not connected to an electrode wire, should be connected to a grounding wire.



TROUBLE SHOOTING

Uneven heating	<ul style="list-style-type: none"> A. Burner valves improperly adjusted B. Fluctuating gas pressure C. Appliance is not level D. Emitter panels are not properly seated or damaged E. Emitter panels are excessively dirty
Too much top heat	<ul style="list-style-type: none"> A. Faulty hood ventilation C. Overrated gas pressure D. Unit is excessively dirty E. Emitter panels are not properly seated or damaged
Uneven heat side to side	<ul style="list-style-type: none"> A. Burner valves improperly adjusted B. Appliance is not level side to side C. Crumb tray is not pushed all the way in D. Emitter panels are not properly seated or damaged E. Emitter panels are excessively dirty
Uneven heat front to back	<ul style="list-style-type: none"> A. Appliance is not level front to back B. Faulty hood ventilation C. Crumb tray is not pushed all the way in D. Emitter panels are not properly seated or damaged E. Emitter panels are excessively dirty F. Designed air flow pattern obstructed
Burner not lighting	<ul style="list-style-type: none"> A. Check that igniter electrode is sparking when igniter knob is turned clockwise B. Check for damaged, loose or dirty igniter wires, igniter and electrode C. Check that at igniter terminal connections are connected to an electrode wire or grounding wire. Should be no empty terminals. D. Burner valve not on MAX setting E. Gas pressure too low F. Inside burner box or burner venturi excessively dirty
Burner flames too low	<ul style="list-style-type: none"> A. Burner valves improperly adjusted B. Gas pressure too low C. Inside burner box or burner venturi excessively dirty D. Clogged burner orifice
Burner flames too high	<ul style="list-style-type: none"> A. Emitter panels are not properly seated or damaged B. Gas pressure too high
Fluctuating gas pressure	<ul style="list-style-type: none"> A. Checked for clogged vent on regulator
Flames in burner venturi	<ul style="list-style-type: none"> A. Appliance is not level B. Gas pressure not set properly C. Waiting too long before igniting burner D. Not following lighting instructions - See I&O Manual F-38330.

NOTES

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