

# INSTALLATION & OPERATION MANUAL

## VULCAN ENDURANCE / WOLF CHALLENGER Modular Series Gas Restaurant Ranges

**ITW Food Equipment Group**



### MODELS:

12	24S	36(S,C)
48(S,C)		48SS
60(S,C)(S,C)		72(S,C)(S,C)

[www.vulcanequipment.com](http://www.vulcanequipment.com)  
[www.wolfequipment.com](http://www.wolfequipment.com)

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10405 Westlake Drive  
Charlotte, NC 28273

**RETAIN THIS MANUAL FOR FUTURE USE**

**FORM F38201 Rev. C (11-11)**

## **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 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 VULCAN ENDURANCE / WOLF CHALLENGER MODULAR SERIES GAS RESTAURANT RANGES

**PLEASE KEEP THIS MANUAL FOR FUTURE USE**

## GENERAL

Vulcan Endurance and Wolf Challenger ranges and ovens are produced with quality workmanship and material. These ranges are designed with efficiency in cooking performance, sanitation and ease of cleaning ability in mind. Proper installation, usage and maintenance of your range will result in many years of satisfactory performance.

The manufacturer suggests that you thoroughly read this entire manual and carefully follow all of the instructions provided.

## OPTIONAL FIELD INSTALLABLE ACCESSORIES

ACCESSORY CODE	DESCRIPTION
RSHELF-XL (24,36,48,60,72)	Reinforced High Shelf - 23" (584 mm) high stainless steel backsplash with broiler mounting brackets for Salamander/Cheesemelter.
STUB10-XL (12,24,36,48,60,72)	10" Stainless steel stub riser. Available for 12", 24", 36", 48", 60", and 72" ranges.
3/4QDH-4FT 1INFLEX-4FT	¾" (18.75 mm) flex hose / quick disconnect 4' (1219 mm long). 1" (25 mm) flex hose / quick disconnect, 4' (1219 mm) long.
CONRACK-XL(20,26) OVNRACK-XL(20,26) RKGUIDE-XL	1 extra oven rack with convection ovens. 1 extra oven rack with standard ovens. 1 pair of rack guides (set of 2).
CASTERS-RR4 CASTERS-RR8 CASTERS-ADJRR4	Set of four (4) standard casters. Set of eight (8) standard casters. Set of four (4) adjustable casters. Two (2) sets required for 48", 60", and 72" ranges.
RCTWLBR- (24,36,48,60,72)	Towel Bar Assembly - Replaces standard bullnose. Available for 24", 36", 48", 60", and 72" ranges.
RCCUTBD- (24,36,48,60,72)	Cutting Board Assembly - Replaces standard bullnose. Available for 24", 36", 48", 60", and 72" ranges. (Includes Sani-TUFF® all-rubber cutting board)
RCCONRL- (24,36,48,60,72)	Condiment Rail Assembly - Replaces standard bullnose. Available for 24", 36", 48", 60", and 72" ranges. (Does not include condiment pans)
SHIELD-FRYRH SHIELD-FRYLH	Fryer Splash Shield - Right hand or left hand side. Protects range top against grease splatter from adjacent fryer.
SPLASH-INNLH SPLASH-INNRH SPLASH-OUTLH SPLASH-OUTRH	Griddle Splash - Removable inner or outer griddle splash, left hand or right hand side.
ALTIKIT-CARN (01,03,05,07,09) ALTIKIT-CARP (02,04,06,08,10)	Altitude Kit - Available in Natural Gas or Propane (LP) for the following altitudes: 0-1999 ft, 2000-3999 ft, 4000-5999, 6000-7999, 8000-9999.

VFLANGED-FEET/4	Set of four (4) flanged feet. Two (2) sets required for 48", 60", and 72" ranges.
CURBMNT-XL4	Curb mounting kit. Two (2) sets required for 48", 60", and 72" ranges.
CONNECT-CHALL	Inter-Plumb kit for connecting for Salamander/Cheesemelter to range.

## **INSTALLATION**

### **UNPACKING**

This range was inspected before leaving the factory. The transportation company assumes full responsibility for safe delivery upon acceptance of the shipment. Immediately after unpacking, check for possible shipping damage. If the range is found to be damaged, save the packaging material and contact the carrier within 15 days of delivery.

Carefully unpack range(s) and place in the approximate installation position. Remove parts packed in a small cardboard box from oven cavity or shipped separately in finishing kit.

If burner has been shipped using any package strapping devices, remove these before installing the range.

Before installing, check the type of gas supply (natural or propane) to make sure they agree with the specifications on the rating plate located on the inside of the kick panel. If the supply and equipment requirements do not agree, do not proceed with the installation. Contact your dealer immediately.

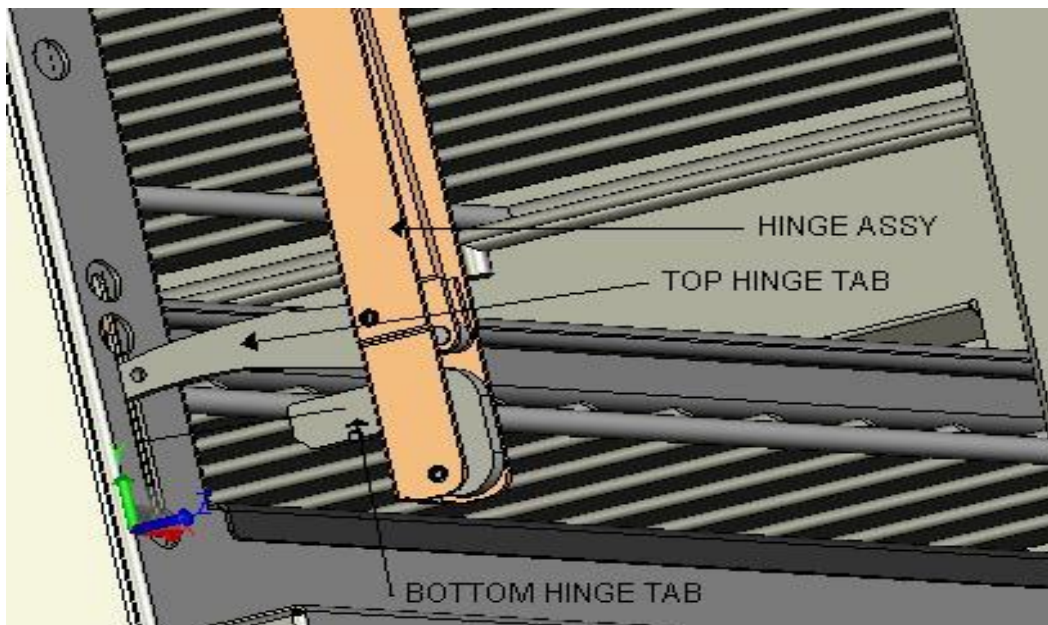
If it is necessary to remove the door for access through a kitchen door, follow the instructions below for removal of the door, and subsequent installation of the door.

### **DOOR REMOVAL**

1. Open door.
2. Grasp door firmly at both sides.
3. Lift door upward and pull it out so bottom hinge tabs disengage.  
\* This may be easier to accomplish one side at a time.
4. Close door almost shut and lower slightly to disengage top hinge tab.
5. Pull door outward.

### **DOOR INSTALLATION**

1. Grasp door firmly at both sides.
2. Starting with either LH or RH top hinge tab, angle door and slide top hinge tab into opening between hinge stop roller and hinge stop pin.
3. Lift door up (compress door hinge as if opening the door) and position bottom tab downward about 30 degrees down from horizontal.
4. Push door inward, inserting downward angled bottom hinge tab into opening just above hinge stop pin.  
\* Bottom hinge tab must enter chassis at downward angle to engage.
5. Bottom hinge tab should engage on hinge stop pin.
6. Open door and pull door outward until bottom hinge tab locks on hinge stop pin.
7. Repeat above steps for opposite side.
8. Open and close door to make sure door hinges are locked in place and operate smoothly.



## LOCATION

The equipment area must be kept free and clear of combustible substances.

Installation clearances:	<u>COMBUSTIBLE CONSTRUCTION</u>	<u>NON-COMBUSTIBLE CONSTRUCTION</u>
Back:	6" (152 mm)	0"
Right Side:	10" (254 mm)	0"
Left Side:	10" (254 mm)	0"

The installation location must allow adequate clearances for servicing and proper operation. A minimum front clearance of 35" (889 mm) is required.

The ranges are suitable for installation on combustible floors when 6" (152 mm) adjustable legs or casters are used. When legs or casters are removed, use only on noncombustible floors, curb, or platform, with front appliance base projecting 3" (76 mm) beyond curb or platform.

The range(s) must be installed so that the flow of combustion and ventilation air will not be obstructed. Adequate clearance for air openings into the combustion chamber(s) must be provided. Make sure there is an adequate supply of air in the room to allow for combustion of the gas at the burners.

## INSTALLATION CODES AND STANDARDS

Your Vulcan Endurance / Wolf Challenger Range 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

The above are available from the Canadian Standard Association, 5060 Spectrum Way, Suite 100, Mississauga, Ontario, Canada L4W 5N6.

**FIELD ASSEMBLY**

Portions of this range may require final assembly in the field. Items requiring assembly are covered by steps 1 thru 9 in the Modular Range Installation Reference (p/n 921897)

**LEG/CASTER ASSEMBLY**

The range is provided with 6"(152 mm) adjustable stainless steel legs (hardware included), packaged in a box located inside of the oven or in a finishing kit. A set of 6"(152 mm) casters (adjustable or non-adjustable) are available as an optional field installable accessory.

RANGE SERIES (width)	LEGS TO INSTALL	CASTERS TO INSTALL
12"	4	4
24"	4	4
36"	4	4
48"	8	8
60"	8	8
72"	8	8

Installation of Legs/Casters:

- 1. Carefully tip range on its side or back. Rear flue assembly can be removed to avoid damage.
- 2. Align holes in leg/caster mounting plate with pre-drilled holes on the bottom of range located in each of the four corners. Four additional legs/casters must be installed on the 48", 60", and 72" ranges.
- 3. Attach mounting plate to bottom of range using four (4) ¼ - 20 x ¾" thread cutting screws (provided). If casters are being installed, the locking casters should be mounted on the front.
- 4. After all legs/casters have been installed, carefully return the range to its upright position.

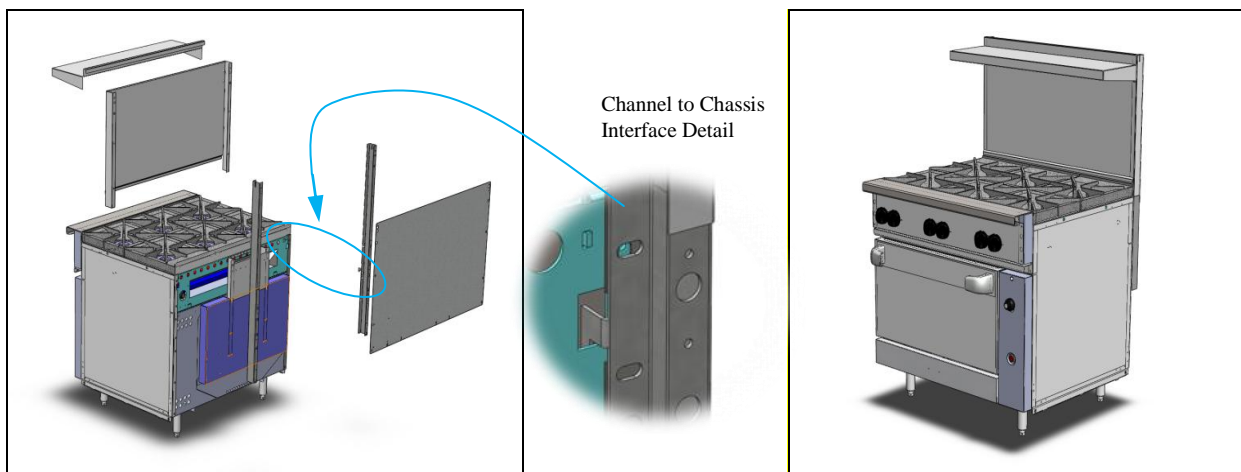
(For additional leg information, see "LEVELING" section of this manual).

Ranges mounted on casters must use a flexible connector (not included) 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 appliance without depending on the connector and the quick-disconnect device or its associated piping to limit appliance movement. Attach the restraining device at the rear of the range.

If disconnection of the restraint is necessary, turn off the gas supply before disconnection. Reconnect this restraint prior to turning the gas supply on and returning the range to its installation position.

If the range is installed on casters and is moved for any reason, it is recommended that the range be re-leveled front to back and side to side for even baking.

## FLUE RISER and SHELF INSTALLATION



1. Engage Tab on Channels into the slots in the back of the Chassis Top (shown).
2. Install Rear Channels and tighten mounting screws (QTY8 for 12", 24", 36", and 48" ranges, QTY 12 for 60" ranges, and QTY 16 for 72" ranges). All mounting Screws are #10-24 x ½ unless noted otherwise.

(For units shipped with a pre-assembled backsplash assembly, skip to Step 5.)

3. Slide Back Splash down over the Rear Channels.
4. Install the Rear Heat Shield and tighten mounting screws to the Rear Channels (QTY 8 for 24, 36, 48 or QTY 12 for 60 or QTY 16 for 72) and to the Flue Exhaust (QTY 2 for a Single Oven or QTY 4 for Double Oven).
5. Install Shelf over the top of the Back Splash; ensure the channel on the top of the Shelf engages the top flange of the Back Splash.
6. Reinstall Rear Grates if they were removed to install Back Splash and Shelf.

**DO NOT** obstruct the flow of flue gases from the flue located on the rear of the range. Proper venting of flue gas is vital to the safe and efficient operation of the range. Problems arising from the intentional

obstruction of the flue will result in voiding of warranty. It is recommended that the flue gases be ventilated to the outside of the building through a ventilation system installed by qualified personnel.

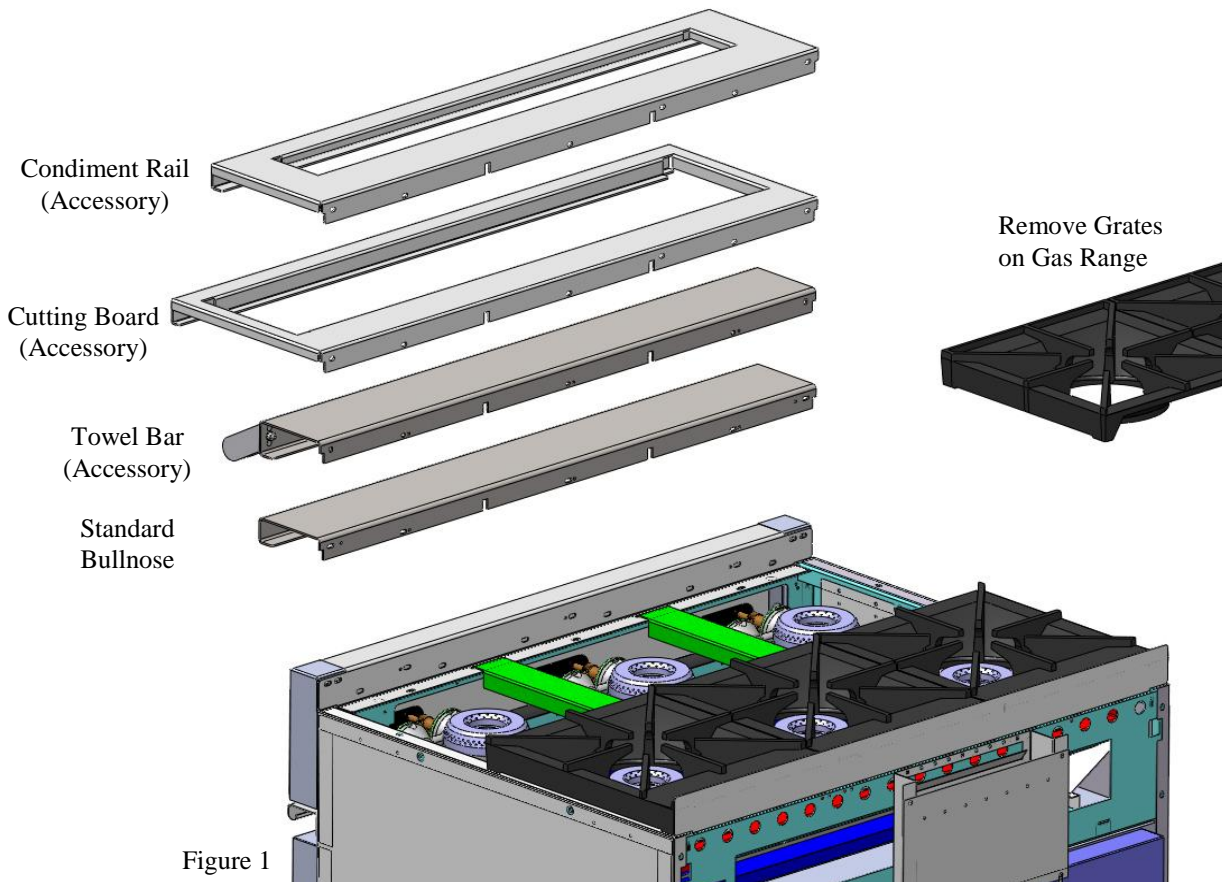
From the termination of the flue to the filters of the hood venting system, a minimum clearance of 18" (457 mm) must be maintained. Information on the construction and installation of ventilating hoods may be obtained from the standard for "Vapor Removal from Cooking Equipment," NFPA No. 96 (latest edition), available from the National Fire Protection Association, Batterymarch Park, Quincy, MA 02269.

## LEVELING

To level the range, place a carpenter's level on the range top and check leveling of the unit side to side and front to rear. Achieve leveling by turning each foot section of the unit's leg as needed. Turning the foot in a counter clockwise direction will increase height and clockwise will decrease.

## BULLNOSE INSTALLATION

- 1.) Remove Grate Castings along the front of edge of the Range.
- 2.) Slide Bullnose over mounting bracket and align with Range so that it is not offset in either direction.
- 3.) Start screw at one end of the Range, do not tighten completely.
- 4.) Going across the width of the Range install the next screw, as shown in Figure 2, set the alignment and tighten screw completely.
- 5.) Install the remaining screws and tighten all screws completely.





**Note:** Align the end of the Bullnose with the Range for fit.

Install Screws, #10-24 x ½ Phillips Head, in slots on Bullnose as noted.

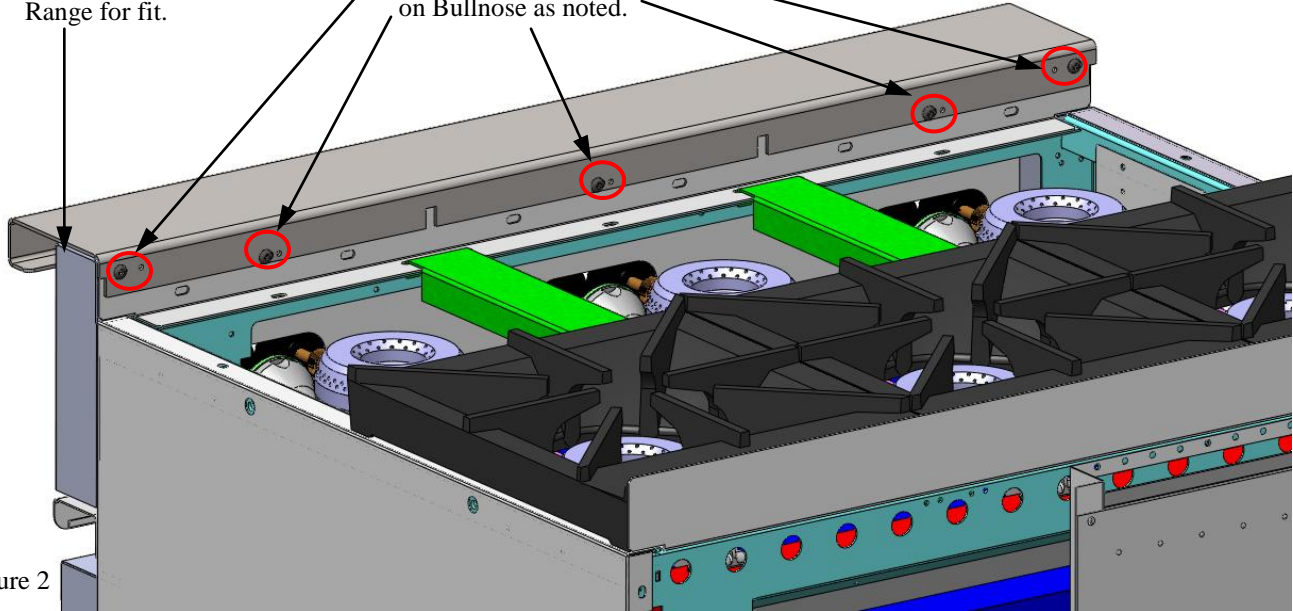


Figure 2

Re-install the Grate Castings along the front edge of the range.

### MOTOR ASSEMBLY INSTALLATION INSTRUCTIONS

1. Remove the oven racks and the box containing legs, regulator and plumbing fittings. In some instances, the legs, regulator and plumbing fittings will be shipped in separate finishing kit. Check that all the listed components shown in figure are present.

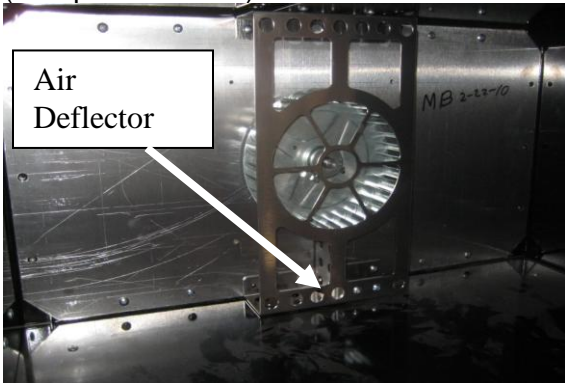


- Motor Assembly
- LH Rack Guide
- RH Rack
- Motor Grease

2. Remove the packaging and motor grease guard from inside the oven and slide out the rack guides. Tip the Motor Assembly to upright position.
3. Push the motor assembly to the rear in the oven cavity, taking care not to pinch the power cord or the wiring conduit. Assemble the motor assembly **from the inside of the oven** and the blower cover with #10-24 x ½ phillips truss head screws provided in the hardware bag.



4. Ensure that blower cover is assembled such that air deflector is to the bottom side of the oven. (See picture below).



5. Remove protective plastic on the rack guides. Assemble rack guides by inserting the two tabs into slots on the side wall. Insert oven racks.



6. Assemble the motor grease guard from the rear of the unit with QTY 4 #10-24 x 1/2 screws.



## HOT TOPS

The hot tops are coated with oil as a rust inhibitor. Remove this film when the hot tops are being cleaned prior to its first cooking use. Heat the hot tops to 200-300°F to loosen and melt the coating, then clean the surface with a non-corrosive, grease dissolving commercial cleaner, following the manufacturer's directions. Rinse thoroughly and wipe dry with a soft clean cloth.

**NOTICE** The hot tops are steel, but the surface is soft and can be scored or dented by careless use of spatulas or scrappers. Be careful not to dent, scratch or gouge the hot tops.

## INSTALLATION OF GRIDDLE/BROILER BRICKS

1. Remove six 5 ¼" x 2 ¼" (133 x 57 mm) and six 5 ¼" x 5 ⅛" (133 x 129 mm) bricks from the shipping box packaged in the oven cavity.
2. Install the 5 ¼" x 2 ¼" (133 x 57 mm) bricks to the left and right hand sides of the broiler by inserting the bricks individually through the front opening in the broiler. Angle the brick sideways for easy fit between the burner edges. Set the bricks flat in place, resting on the broiler side and burner edges. Push each brick as far to the rear of the broiler as possible to ensure easy fit of the last brick.
3. Install the remaining six 5 ¼" x 5 ⅛" (133 x 129 mm) bricks to the center section as described in step 2. Place the bricks on the center burner edges only.

## PLUMBING

A preset gas pressure regulator and plumbing fittings are shipped uninstalled. This regulator must be installed by an authorized service person before the unit is placed into operation. See full unit data plate located on the rear of the range, or the secondary data plate, riveted to the kick panel, for pressure regulator setting information. If a manometer is being used, utilizing one of the available pressure taps in the manifold, the manifold pressure with one burner on should be ± 0.3" W.C. of the value indicated on the rating plate.

1. Refer to the Modular Range Field Plumbing Reference Guide (p/n 921861) shipped with the regulator and fittings for 48", 60", and 72" ranges.
2. Cover the pipe threads with pipe joint compound resistant to propane gases.
3. For 12", 24", and 36" ranges, screw the reducer, pipe nipple, and regulator onto the pipe with the regulator flow direction arrow pointing towards the back of the unit and the regulator adjustment in the upright position.

For 48", 60", and 72" ranges, follow the assembly steps as detailed in the Modular Range Field Plumbing Reference Guide.

4. The pressure regulator must be mounted horizontally to ensure the proper preset outlet pressure. If mounted in any other direction, the outlet pressure must be rechecked and possibly reset. A leak limiter is supplied with every regulator to allow excess gas pressure to escape. Do not obstruct the limiter or the gas regulator, as obstruction may cause the regulator to malfunction.

## GAS CONNECTIONS

**NOTICE** All gas supply connections and any pipe joint compound used 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.

After piping has been checked for leaks, all piping receiving gas should be fully purged to remove air.

## TESTING THE GAS SUPPLY SYSTEM

When test pressures exceed ½ psig (3.45 kPa), the range and its individual shutoff valve must be disconnected from the gas supply piping system.

When test pressures are ½ psig (3.45 kPa) or less, the range must be isolated from the gas supply system by closing its individual manual shutoff valve.

## ELECTRICAL CONNECTIONS

**WARNING** Electrical and grounding connections must comply with the applicable portions of the National Electrical Code and/or other local electrical codes.

**WARNING** Disconnect the electrical power to the machine and follow Lockout / Tagout procedures.

**WARNING** Appliances equipped with a flexible electrical supply cord are provided with a three-prong grounding plug. It is imperative that this plug be connected into a properly grounded three-prong receptacle. If the receptacle is not the proper grounding type, contact an electrician. Do not remove the grounding prong from this plug.

The convection range is designed for 120 volt power supply and is provided with a flexible electric supply cord and plug that must be plugged into the proper receptacle. Do not connect the convection range to electrical supply until after gas connections have been made. The wiring diagram for the convection range is located on the rear of the appliance.

# OPERATION

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

## CONTROLS

**Open Top Burner Valve** — Allows gas to flow to the top burners. To open valve, turn knob counterclockwise. To close valve, turn knob clockwise.

**Manual Griddle Valve** — Allows gas to flow to the griddle burners. To open valve, turn knob counterclockwise. To close valve, turn knob clockwise.

**Oven Thermostat** — Regulates oven temperature. The thermostat temperature range is from LOW at approximately 250°F (121°C) to HI at approximately 500°F (260°C). Turn the thermostat counterclockwise to increase temperature and clockwise to decrease temperature. Oven temperature regulation is the most accurate between 300°F (149°C) and 500°F (260°C).

**Griddle Thermostat** — Regulates griddle temperature. The thermostat temperature range is from LOW at approximately 200°F (93°C) to HI at approximately 550°F (288°C). Turn the thermostat clockwise to increase temperature and counterclockwise to decrease temperature.

**Safety Valve** – Monitors standing pilot. The oven and thermostatic griddle feature a standing pilot that must be manually lit. The pilot is monitored by a thermocouple and pilot safety valve. If the pilot goes out, the safety valve will shut-off the gas supply to the pilot and main burners.

**Fan Switch** – Turns fan on and off (Convection Ovens only). Fan turns on when door is closed. Fan turns off when door is opened.

## **BEFORE FIRST USE**

### **Ovens**

New ovens require a burn off period to break in the oven and eliminate unappetizing odors from penetrating the food product.

Turn on gas to unit and set the thermostat to 475°F (246°C). Allow the oven to operate at this temperature for 30 to 45 minutes.

### **Griddles**

Before leaving the factory the griddle is coated with vegetable oil as a rust inhibitor. Remove this film when the griddle plate is being cleaned prior to its first cooking use. Heat the griddle to 200-300°F to loosen and melt the coating, then clean the surface with a non-corrosive, grease dissolving commercial cleaner, following the manufacturer's directions. Rinse thoroughly and wipe dry with a soft clean cloth. Clean all accessories.

**NOTICE** The griddle plate is steel, but the surface is soft and can be scored or dented by careless use of spatulas or scrapers. Be careful not to dent, scratch or gouge the plate. Do not try to knock off loose food that may be on the spatula by tapping the corner edge of the spatula on the griddle surface.

Season the griddle to avoid possible surface corrosion before first use, and after every cleaning. Heat griddle to a low temperature (300-350°F) and apply a small amount of cooking oil – about one ounce per square foot of surface. Use a soft lint-free cloth to spread the oil over the entire griddle surface to create a thin film. Wipe off any excess oil with a cloth. Repeat the procedure until the griddle has a slick, mirror-like finish.

## **LIGHTING AND SHUTTING DOWN PILOTS**

### **TOP SECTIONS**

#### **Open Top, Manual Griddle**

1. Remove front row of grates (Open Top Only).
2. Turn the main gas supply valve to the ON position.
3. Light all standing pilots.

Open Top - Pilot access can be reached under the grate support beam running from left to right.  
Manual Griddle – Pilot access can be reached under the griddle plate through the slotted opening in the manifold cover near the burner valve knob.

4. Turn the burner valve ON to the desired heat.
5. If burners fail to light, turn off all valves, and call an authorized installation or service person.
6. To shut down, turn the burner valve to the OFF position.
7. For complete shut down, turn all burner valves to the OFF position. Turn off main gas supply.

#### **Thermostatic Griddle**

1. Turn the thermostat to the OFF position.
2. Turn the main gas supply valve to the ON position.
3. Depress and hold the red button on the safety valve and light the pilot through the slotted opening in the manifold cover near the burner valve knob.
4. Hold red button down for at least 30 seconds.
5. When button is released, pilot should remain lit.
6. Pilot flame must be high enough to heat thermocouple.
7. Turn thermostat to desired temperature setting.
8. If ignition fails, turn the control knob to OFF. Wait 5 minutes and repeat the above procedure.

**DO NOT** attempt to relight pilot without waiting 5 minutes.

9. For temporary or nightly shutdown, turn control knob to OFF position.
10. For complete shutdown, turn control knob to OFF position, and turn off main gas supply.

#### **Hot Top, Griddle/Broiler**

1. Turn the main gas supply valve to the ON position.
2. Light all standing pilots.  
Hot Top – Pilot access can be reached under the hot top through the slotted opening in the manifold cover near the burner valve knob.  
Griddle/Broiler – Pilot access can be reached under the griddle through the broiler opening. The pilot burner is on the bottom left side of the griddle/broiler burner.
3. Turn the burner valve ON to the desired heat.
4. If burners fail to light, turn off all valves, and then call an authorized installation or service person.
5. To shut down, turn the burner valve to the OFF position.
6. For complete shutdown, turn all burner valves to OFF position. Turn off main gas supply.

## **OVEN SECTION**

### **Standard Oven with Standing Pilot, Convection Oven with Standing Pilot**

1. Turn thermostat to OFF position.
2. Turn the main gas supply valve to the ON position.
3. Lift up on the kick panel and rotate down 90°.
4. Depress red button on safety valve and light pilot through opening in burner box area.
5. Hold red button down for at least 30 seconds.
6. When button is released, pilot should remain lit.
7. Pilot flame must be high enough to heat thermocouple.
8. Return the kick panel to original position.
9. Convection Oven – Turn on fan switch located between oven control knob and pilot safety valve.
10. Turn thermostat to desired temperature setting.
11. Standard Oven – If ignition fails, turn the oven control knob to OFF. Wait 5 minutes and repeat the above procedure.  
Convection Oven – If ignition fails, turn the fan switch and oven control knob to OFF. Wait 5 minutes and repeat the above procedure.

**DO NOT** attempt to relight pilot without waiting 5 minutes.

12. Standard Oven – For temporary or nightly shutdown, turn oven control knob to OFF position.  
Convection Oven – For temporary or nightly shutdown, turn fan switch and oven control knob to OFF position.
13. Standard Oven – For complete shutdown, turn oven control knob to OFF position, and turn off main gas supply.  
Convection Oven – For complete shutdown, turn fan switch and oven control knob to OFF position, and turn off main gas supply.

## **OPERATING SUGGESTIONS**

### **Open-Top Burners**

Open-top burners are quickly lit and require no preheating time. Open top burners have a wide low to high burner flame adjustment range. This allows for better simmering performance at the lowest possible stabilized setting. When simmering, turn the burner valve knob down until you reach the optimum lowest burner flame setting to maintain the desired simmer point.

### **Manual Griddle**

Pre-heat the griddle top for approximately 15 - 20 minutes before cooking. The top can be kept hot with burners turned partially down. During off periods, turn the burners down or heat only half of the top.

### **Thermostatic Griddle**

Pre-heat the griddle top for approximately 15 - 20 minutes before cooking. The griddle thermostats regulate temperatures for each 12" section of the griddle from a low setting at approximately 200°F (93°C) to high setting at approximately 550°F (288°C).

### **Standard Oven Cooking**

Allow time to preheat ovens before using (25 minutes to 400°F [204°C]). The oven thermostat regulates temperature from a low setting at approximately 250°F (121°C) to high setting at approximately 500°F (260°C). If properly used, the automatic temperature control is an efficient system. Turn thermostat down to LOW when oven is idling, or turn the oven control to OFF when not in use.

Moderate oven temperatures will produce better food, reduce shrinkage and keep maintenance costs down. Using a low temperature for roasting (recommended 325°F [162°C] or lower) will reduce meat costs by reducing shrinkage.

A pan of water (approximately 12" x 20" x 1" [305 mm x 508 mm x 25.4 mm]) may be placed in the oven bottom. This water supplies humidity to reduce shrinkage. If necessary, add water during roasting.

### **Convection Oven Cooking**

Cooking time and temperature in convection oven may vary slightly from normal time and temperature.

### **LOADING AND UNLOADING THE OVEN**

Open the door and load the oven as quickly as practical to conserve heat. Take care to avoid spilling liquids while loading. Close the door and refer to recipe for cooking time.

Provide adequate space for product unloading. Rapid unloading will conserve heat and ensure proper reheating conditions for the next load, if applicable.

## **CLEANING**

**⚠ WARNING** Disconnect the electrical power to the machine and follow Lockout / Tagout procedures.

**⚠ WARNING** Shut off the gas before cleaning the appliance.

**⚠ WARNING** The appliance and its parts are hot. Be very careful when operating, cleaning, or servicing the appliance.

Exterior surfaces may be cleaned using soft cloth and mild detergent. Do not use Dawn® dish detergent to clean the exterior or interior components of the range.

Do not use scouring powder. It is extremely difficult to remove completely. It can build up accumulations that will damage the oven.

Vulcan / Wolf equipment is strongly constructed and is designed to give you long, satisfactory service at low cost, provided you give it proper care. Frequent cleaning and occasional adjusting should reward you with low operating and maintenance costs and faster, better service.



## **DAILY CLEANING**

### **Oven**

Remove chrome-plated racks and clean in a sink.

While still warm, wipe top with a soft cloth or other grease absorbing material to remove spillovers, grease, etc., before they burn in.

Clean oven and oven door daily, especially if fruit pies or tomato sauces were baked, meats roasted, and if there have been spillovers.

After processing some foods at low temperatures, odors may linger in the oven. These odors may be cleared by setting the thermostat at 500°F (260°C) and allowing the oven to operate unloaded for 30 to 45 minutes.

### **Open Top**

Clean cast iron open top grates with a mild soap and water solution. Rinse thoroughly and dry with a clean, water-absorbent towel. Immediately after drying (with grates still removed from the range top), season grates lightly with liquid vegetable or spray-type cooking oil.

After seasoning, replace grates onto the range. Turn on all open top sections to LOW and allow them to burn for at least 15 minutes before using pots or pans on the range top. Season the open top grates after each cleaning. Failure to season grates will cause grates to rust.

### **Griddle Top with Tray**

Empty the grease drawer as needed throughout the day and regularly clean at least once daily. The Grease tray has a weep hole to indicate that grease tray is full. Service calls resulting from failure to properly empty grease tray/drawer will not be covered under warranty.

Clean the griddle regularly. A clean griddle always looks better, lasts longer and performs better. To produce evenly cooked griddle products, keep the griddle plate clean and free of carbonized grease. Carbonized grease on the surface hinders the transfer of heat from the griddle surface to the food, resulting in spotty browning and loss of cooking efficiency. Carbonized grease tends to cling to griddle foods, giving them a highly unsatisfactory and unappetizing appearance.

After each use, clean the griddle with a scouring pad or flexible spatula.

Once a day, thoroughly clean the griddle back splash, sides and front. Remove, empty and wash the grease drawer in the same manner as an ordinary cooking utensil.

## **EXTERIOR CLEANING**

### **Daily**

Clean exterior finish with a mild solution of soap or grease-dissolving cleaner. To remove discoloration, use a nonabrasive cleaner. Always rub with the grain of the metal. Stainless steel areas of the range can be polished by using a soft dry cloth. If needed, add stainless steel polish to the soft cloth.

### **STAINLESS STEEL**

Here are a few simple cleaning procedures that have been found effective for keeping stainless steel equipment clean, sparkling and bright.

## **General Cleaning**

Use ordinary soap or detergent and water for routine cleaning of stainless steel. To prevent water spots and streaks, rinse thoroughly with warm water and wipe dry with a soft clean cloth. The addition of a rinsing agent will also help prevent spotting. Do not pressure wash any portion of the range.

## **Fingerprints**

Fingerprints are sometimes a problem on highly polished surfaces of stainless steel. They can be minimized by applying a cleaner that will leave a thin oily or waxy film. To use these cleaners, simply wipe on and remove excess with a soft dry cloth. After using, subsequent fingerprints will usually disappear when wiped lightly with a soft cloth or with a cloth containing a little of the cleaner. If the surface is especially dirty to start, wash first with soap or detergent and water.

## **Heat Tint**

Straw-colored or slightly darkened areas may appear on stainless steel in and around ovens and ranges where temperatures reach 500°F (260°C) or more. This "heat tint" is caused by a slight oxidation of the stainless steel and is not harmful. To control or minimize this condition, never use more heat than is absolutely necessary.

# **MAINTENANCE & ADJUSTMENTS**



**WARNING** Disconnect the electrical power to the machine and follow Lockout / Tagout procedures.

## **LUBRICATION**

All moving parts must be checked for wear and lubricated. Contact your local authorized servicer. Motors in Vulcan Endurance / Wolf Challenger convection ranges are permanently lubricated and require no additional maintenance.

## **FLUE**

Check the flue when it is cool to be sure it is free of obstructions.

## **SERVICE AND PARTS INFORMATION**

To obtain service and parts information, contact an authorized service agency in your area (refer to our website, [www.vulcanequipment.com](http://www.vulcanequipment.com) or [www.wolfequipment.com](http://www.wolfequipment.com) for a complete listing of authorized service and parts depots). When calling for service, the following information must be available: model number, serial number, and gas type. This information can be found on the main data plate, located on the rear of the unit, or on the secondary plate located inside the lower front kick panel. Lift up and lower the front kick panel to view the secondary data plate.

## **PRECAUTIONS**

When scraping off heavy deposits of grease or oil from stainless steel equipment, never use ordinary steel scrapers. Particles of ordinary steel may become embedded in, or lodge on, the surface of the stainless steel. These will rust, causing unsightly stains and possible contamination of food. If it is necessary to scrape, use stainless steel, wood, plastic or rubber tools.

# TROUBLESHOOTING

## OVEN

<b>PROBLEM</b>	<b>CAUSES / CORRECTIONS</b>
Uneven Baking Side to Side	Range not level side to side. Oven burner or bottom improperly installed. Wrong temperature setting for product. Warped pans. Flue not venting properly. Improper regulator setting. Contact service provider.
Uneven Baking Front to Rear	Range not level front to back. Door not closing properly. Flue not venting properly. Improper regulator setting. Contact service provider.
Too Much Top / Bottom Heat	Build-up on side liners obstructing vent holes. Flue not venting properly.
Dried Out Products	Too low temperature (Overcooking). Too long baking time. Thermostat calibration (Call for service).
Excessive Meat Shrinkage	Roasting Temperature too high. Not enough moisture (Add pan of water).
Pilot Outage	Call for service.

## TOP BURNER OPERATION

<b>PROBLEM</b>	<b>CAUSES / CORRECTIONS</b>
Excessive Valve Handle Temperatures / Sticking Top Burner Valves	Verify that oven door is closed. If door is closed properly, call for service. Improper ventilation.
Poor Ignition	Call for service.
Pilot and Burners Will Not Light	Verify that main gas supply is turned on. Verify that burner assembly is properly installed. Call for service.

# NOTES