HOBART

SERVICE

HEAVY DUTY GAS GRIDDLES

Customer Maintenance Manual

SPECIFICATION SHEETS

INSTALLATION / OPERATION MANUAL

ADDITIONAL RESOURCES

SERVICE MANUALS

HOBART SERVICE PARTS STORE

CATALOG OF REPLACEMENT PARTS

F48028

GRIDDLES & BROILERS

MSA SERIES
HEAVY DUTY GAS GRIDDLES

Model MSA48

- ☐ **MSA24** 24" w x 24" d griddle plate
- ☐ **MSA36** 36" w x 24" d griddle plate
- ☐ **MSA48** 48" w x 24" d griddle plate
- ☐ **MSA60** 60" w x 24" d griddle plate
- ☐ **MSA72** 72" w x 24" d griddle plate

STANDARD FEATURES

- Stainless steel front, sides and front top ledge with “Cool Bullnose” design.
- Fully welded stainless and aluminized steel chassis frame.
- 11" low profile cooking height on 4" adjustable legs.
- 1" thick polished steel griddle plate with 12 gauge, 4" stainless steel back and tapered side splashes.
- Spatula wide 3½" grease gutter and chute is fully welded for easier cleaning and to stop grease migration.
- One 27,000 BTU/hr. “U” shaped aluminized steel burner for every 12" of griddle width.
- One embedded snap action thermostat per burner with temperature adjust from 200°F to 550°F on Steel or Chrome plate. Temperature adjusts from 200°F to 450°F on Rapid Recovery™ plate.
- Large 6 quart stainless steel grease drawer (2 drawers on 60" and 72" models).
- Heavy duty chromed thermostat knob guards.
- One pilot safety valve for every two burners. Safety will completely shut off gas to pilot and burners if pilot extinguishes.
- Manual ignition.
- Bottom heat shields.
- ¾" rear gas connection and gas pressure regulator.
- One year limited parts and labor warranty.

OPTIONAL FEATURES

- ☐ Full or partially grooved griddle plate (steel or chrome plate only).
- ☐ Rapid Recovery™ griddle plate (200-450°F controls, 48" maximum length).
- ☐ Hexavalent chrome plated cooking surface.
- ☐ 30" deep plate (steel plate only).
- ☐ Stainless steel stand with marine edges and casters.
- ☐ Cutting board, condiment rail, plate rail and banking strip accessories.

SPECIFICATIONS

Low profile heavy duty gas griddle, Vulcan Model No._____. Stainless steel front, sides and front top ledge. Fully welded stainless and aluminized steel body frame. 11" low profile cooking height on 4" legs. 1" thick polished steel griddle plate with 12 gage, 4" stainless steel back and tapered side splashes. Grease chute is fully welded to stop grease migration. One 27,000 BTU/hr. “U” shaped aluminized steel burner and mechanical snap action thermostat for each 12" of griddle width. Chrome thermostat knob guards. Temperature adjusts from 200° to 550°F. One pilot safety for every two burners. 3½" wide stainless steel grease trough. ¾" rear gas connection and gas pressure regulator.

Exterior Dimensions:
_____"w x 33" d x 15½" h on 4" legs.

CSA design certified. NSF listed.

SPECIFY TYPE OF GAS WHEN ORDERING.
SPECIFY ALTITUDE WHEN ABOVE 3,999 FT.

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

GRIDDLES & BROILERS

VULCAN

900RX SERIES
HEAVY DUTY GAS GRIDDLES

Model 948RX

- ☐ **924RX** 24" w x 24" d griddle plate
- ☐ **936RX** 36" w x 24" d griddle plate
- ☐ **948RX** 48" w x 24" d griddle plate
- ☐ **960RX** 60" w x 24" d griddle plate
- ☐ **972RX** 72" w x 24" d griddle plate

STANDARD FEATURES

- Stainless steel front, sides and front top ledge with “Cool Bullnose” design.
- Fully welded stainless and aluminized steel chassis frame.
- 11" low profile cooking height on 4" adjustable legs.
- 1" thick polished steel griddle plate with 12 gage, 4" stainless steel back and tapered side splashes.
- Spatula wide 3½" grease gutter and chute is fully welded for easier cleaning and to stop grease migration.
- One 27,000 BTU/hr. “U” shaped aluminized steel burner for every 12" of griddle width.
- One embedded snap action thermostat per burner with temperature adjust from 200°F to 550°F.
- Large 6 quart stainless steel grease drawer (2 drawers on 60" and 72" models).
- Heavy duty chromed thermostat knob guards.
- One pilot safety valve for every two burners. Safety will completely shut off gas to pilot and burners if pilot extinguishes.
- Manual shut-off valve for gas inlet.
- Dual (manual/electric) ignition.
- Bottom heat shields
- ¾" rear gas connection and gas pressure regulator.
- 120V 50/60Hz 1 Amp single phase with NEMA 5-15 USA plug.
- One year limited parts and labor warranty.

OPTIONAL FEATURES

- ☐ Hexavalent chrome plated cooking surface.
- ☐ 30" deep plate.
- ☐ Stainless steel stand with marine edges and casters.
- ☐ Cutting board, condiment rail, plate rail and banking strip accessories.
- ☐ Full or partially grooved griddle plate.

SPECIFICATIONS

Low profile heavy duty gas griddle, Vulcan Model No._____. Stainless steel front, sides and front top ledge. Fully welded stainless and aluminized steel body frame. 11" low profile cooking height on 4" legs. 1" thick polished steel griddle plate with 12 gage, 4" stainless steel back and tapered side splashes. Grease chute is fully welded to stop grease migration. One 27,000 BTU/hr. “U” shaped aluminized steel burner and mechanical snap action thermostat for each 12" of griddle width. Chrome thermostat knob guards. Temperature adjusts from 200° to 550° F. One pilot safety for every two burners. Manual shut-off valve. 3½" wide stainless steel grease trough. 120V 50/60Hz 1 Amp single phase electric ignition circuit. Plug type is NEMA 5-15 USA. ¾" rear gas connection and gas pressure regulator.

Exterior Dimensions:
_____"w x 33" d x 15½" h on 4" legs.

CSA design certified. NSF listed.

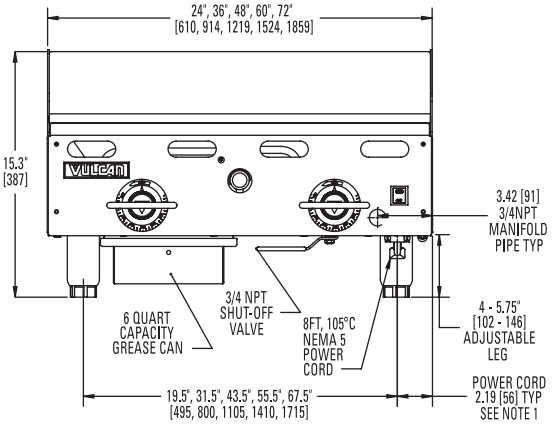
SPECIFY TYPE OF GAS WHEN ORDERING.
SPECIFY ALTITUDE WHEN ABOVE 3,999 FT.

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

900RX SERIES
HEAVY DUTY GAS GRIDDLES

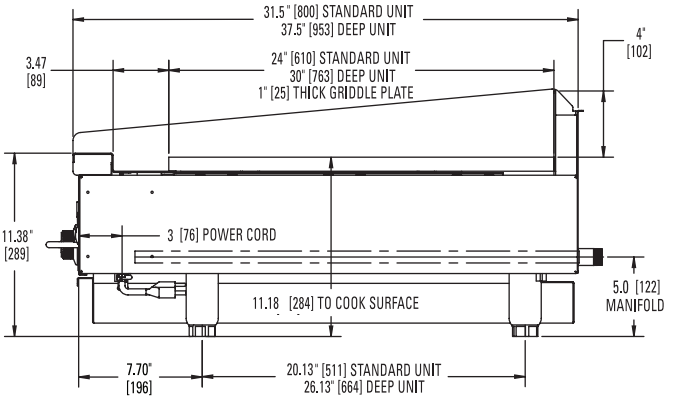
INSTALLATION INSTRUCTIONS

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. All models require a 6" (152 mm) clearance at both sides and rear adjacent to combustible and 0" from non-combustible constructions. All models require a 4" (102mm) bottom clearance and must be installed with minimum 4" legs.
3. These units are manufactured for installation in accordance with ANSI/NFPA-70, National Electrical code.
   An adequate ventilation system is required for Commercial Cooking Equipment (NFPA No. 96). Information may be obtained by writing to the National Fire Protection Association, Batterymarch Park, Quincy, MA 02169.
4. 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 ventilation hood or exhaust system equipped with a damper or with a power means of exhaust shall comply with 248 CMR.
5. This appliance is manufactured for commercial installation only and is not intended for home use.

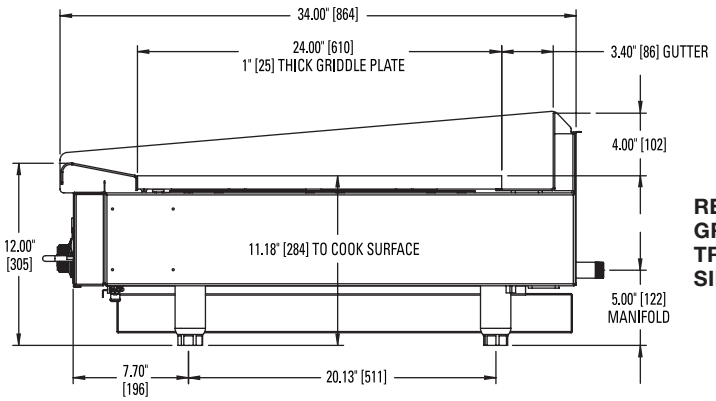


FRONT VIEW

NOTES:
1. 2.19" FROM RIGHT FOR 24, 36 & 48" GRIDDLES
   30.00" FROM RIGHT FOR 60" & 72" GRIDDLES
2. ADJUSTABLE LEGS ARE 2" IN DIAMETER.
   LEGS ARE RECESSED 1¼" FROM EACH SIDE.



FRONT GREASE TROUGH - SIDE VIEW



REAR GREASE TROUGH - SIDE VIEW

MODEL	WIDTH	DEPTH	OVERALL HEIGHT*	WORKING HEIGHT*	NO. OF BURNERS	TOTAL BTU/HR.	NO. OF DRAWERS	APPROX. SHIP. WT.
924RX	24"	31½"	15¼"	11⅛"	2	54,000	1	285 lbs. /129 kg.
936RX	36"	31½"	15¼"	11⅛"	3	81,000	1	400 lbs. /181 kg.
948RX	48"	31½"	15¼"	11⅛"	4	108,000	1	480 lbs. /218 kg.
960RX	60"	31½"	15¼"	11⅛"	5	135,000	2	650 lbs. /295 kg.
972RX	72"	31½"	15¼"	11⅛"	6	162,000	2	790 lbs. /358 kg.

*These are nominal dimensions and can vary by +1.75" with adjustable legs.

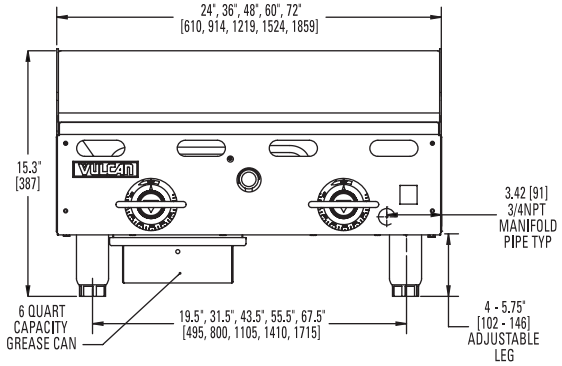
a division of ITW Food Equipment Group LLC

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

MSA SERIES
HEAVY DUTY GAS GRIDDLES

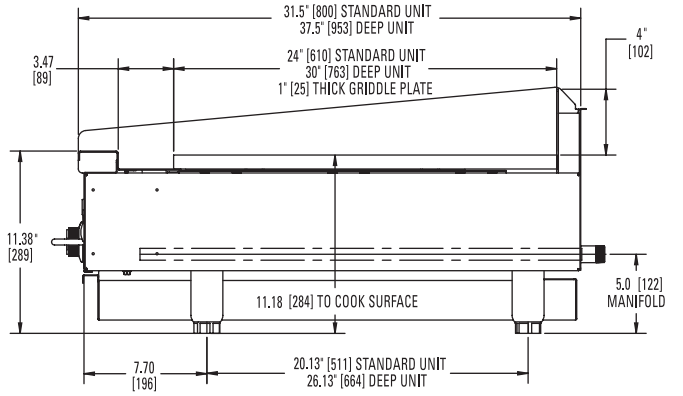
INSTALLATION INSTRUCTIONS

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. All models require a 6" (152 mm) clearance at both sides and rear adjacent to combustible and 0" from non-combustible constructions. All models require a 4" (102mm) bottom clearance and must be installed with minimum 4" legs.
3. These units are manufactured for installation in accordance with ANSI/NFPA-70, National Electrical code.
   An adequate ventilation system is required for Commercial Cooking Equipment (NFPA No. 96). Information may be obtained by writing to the National Fire Protection Association, Batterymarch Park, Quincy, MA 02169.
4. 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 ventilation hood or exhaust system equipped with a damper or with a power means of exhaust shall comply with 248 CMR.
5. This appliance is manufactured for commercial installation only and is not intended for home use.

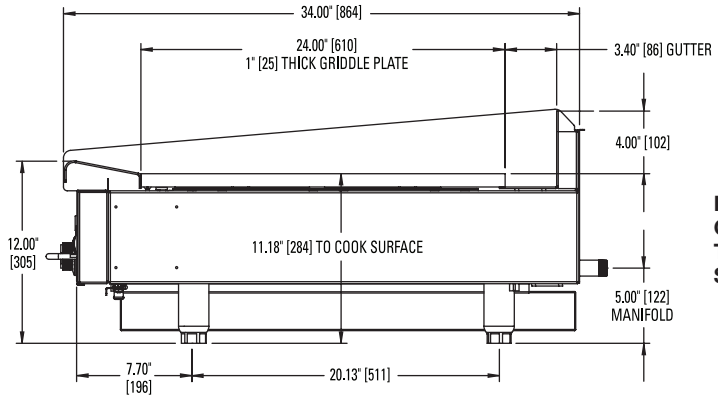


FRONT VIEW

NOTES:
1. ADJUSTABLE LEGS ARE 2" IN DIAMETER. LEGS ARE RECESSED 1¼" FROM EACH SIDE.



FRONT GREASE TROUGH - SIDE VIEW



REAR GREASE TROUGH - SIDE VIEW

MODEL	WIDTH	DEPTH	OVERALL HEIGHT*	WORKING HEIGHT*	NO. OF BURNERS	TOTAL BTU/HR.	NO. OF DRAWERS	APPROX. SHIP. WT.
MSA24	24"	31½"	15¼"	11⅛"	2	54,000	1	285 lbs./129 kg.
MSA36	36"	31½"	15¼"	11⅛"	3	81,000	1	400 lbs./181 kg.
MSA48	48"	31½"	15¼"	11⅛"	4	108,000	1	480 lbs./218 kg.
MSA60	60"	31½"	15¼"	11⅛"	5	135,000	2	650 lbs./295 kg.
MSA72	72"	31½"	15¼"	11⅛"	6	162,000	2	790 lbs./358 kg.

*These are nominal dimensions and can vary by +1.75" with adjustable legs.

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

VCCG SERIES
HEAVY DUTY GAS GRIDDLES

Model VCCG36-IC

Select models only. Contact factory for the latest.

- ☐ **VCCG24** 24" w x 24" d griddle plate
- ☐ **VCCG36** 36" w x 24" d griddle plate
- ☐ **VCCG48** 48" w x 24" d griddle plate
- ☐ **VCCG60** 60" w x 24" d griddle plate
- ☐ **VCCG72** 72" w x 24" d griddle plate

STANDARD FEATURES

- Stainless steel front, sides and front top ledge.
- Fully welded stainless and aluminized steel chassis.
- 14.7" cooking height on 4" adjustable legs.
- 1" thick polished steel plate for chrome or steel options. Rapid Recovery™ option ¾" composite griddle plate with stainless steel cooking surface.
- Stainless steel 4" back and tapered side splashes.
- Energy-efficient 24,000 BTU/hr. infrared burner or 30,000 BTU/hr. atmospheric burner for every 12" of griddle width.
- Every 12" griddle cooking zone is independently controlled by solid state temperature and electronic ignition system with diagnostics.
- Chrome plated knob guards.
- Temperature adjusts from 200° to 550° F on Steel or Chrome plate. Temperature adjusts from 200° to 450° F on Rapid Recovery™ composite plate.
- Electronic ignition with pilot protection system.
- High capacity, stainless steel grease drawer (6 quart). 60" and 72" models have two grease drawers.
- ¾" rear gas connection and internal gas pressure regulators.
- 120V 50/60 Hz. 2 Amp single phase with NEMA 5-15 USA plug.
- Griddles with chrome plate ship with palmetto brush, scraper and blade for cleaning.
- One year limited parts and labor warranty.

OPTIONS

- ☐ Side grease models with 3.75 gallon grease drawer.
- ☐ Cutting board, condiment rail, plate rail and banking strip accessories.
- ☐ Grooved steel plate (available with top seam welding).
- ☐ Rapid Recovery™ composite griddle plate (200-450° F controls, 60" maximum length, standard with top seam welding).
- ☐ Chrome griddle plate (not available with top seam welding).
- ☐ Top seam welding available on steel plate.

SPECIFICATIONS

Heavy duty gas griddle, Vulcan-Hart Model No. _____. Stainless steel front, sides and front top ledge. Fully welded stainless and aluminized steel chassis. 14.7" cooking height on 4" legs. 1" thick polished steel plate for chrome or steel options. Rapid Recovery™ option ¾" composite griddle plate with stainless steel cooking surface. Stainless steel back and tapered side splashes. Energy-efficient 24,000 BTU/hr. infrared burner or 30,000 BTU/hr. atmospheric burner for every 12" of griddle width. Every 12" griddle cooking zone is independently controlled by solid state temperature and electronic ignition system with diagnostic feature. Temperature adjusts from 200° to 550° F on Steel or Chrome plate. Temperature adjusts from 200° to 450° F on Rapid Recovery™ composite plate. Electronic ignition with pilot safety system. High capacity 6 quart stainless steel grease drawer. 120V 50/60Hz 2 amp single phase with NEMA 5-15 USA plug. ¾" rear gas connection and internal gas pressure regulators.

CSA Design Certified. NSF Certified.

SPECIFY GAS TYPE WHEN ORDERING.
SPECIFIY ALTITUDE WHEN ABOVE 3,999 FT.

SPECIFY CONFIGURATION WHEN ORDERING:
VCCGxx-XX (Example: VCCG36-AS = 36" griddle with atmospheric burners and steel plate)

-AC = atmospheric burner / Rapid Recovery™ composite plate	-IC = infrared burner / Rapid Recovery™ composite plate
-AR = atmospheric burner / chrome plate	-IR = infrared burner / chrome plate
-AS = atmospheric burner / steel plate	-IS = infrared burner / steel plate

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

VCCG SERIES
HEAVY DUTY GAS GRIDDLES

INSTALLATION INSTRUCTIONS

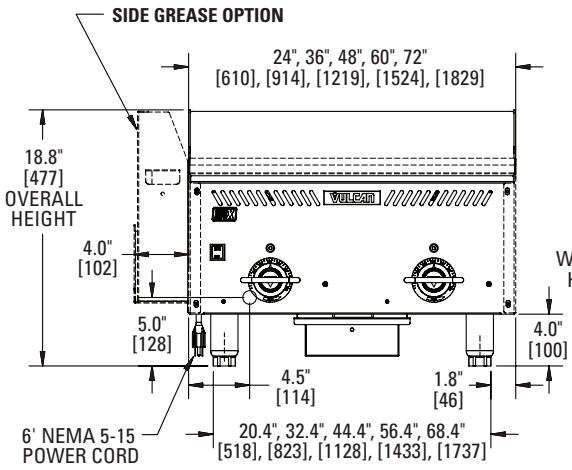
1. Internal gas pressure regulators are supplied with the unit;

   Natural Gas 4.0" (102 mm) W.C.
   Propane Gas 10.0" (254 mm) W.C.

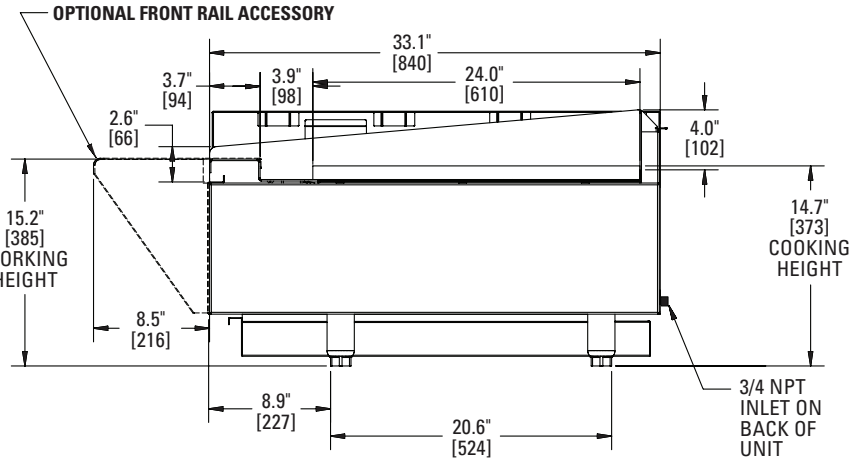
2. All models require a 6" (152 mm) clearance at both sides and rear adjacent to combustible and 0" from non-combustible constructions. All models require a 4" (102mm) bottom clearance and must be installed with minimum 4" legs.
3. These units are manufactured for installation in accordance with ANSI/NFPA-70, National Electrical code.

   An adequate ventilation system is required for Commercial Cooking Equipment (NFPA No. 96). Information may be obtained by writing to the National Fire Protection Association, Batterymarch Park, Quincy, MA 02169.
4. 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 ventilation hood or exhaust system equipped with a damper or with a power means of exhaust shall comply with 248 CMR.
5. This appliance is manufactured for commercial installation only and is not intended for home use.



FRONT VIEW



SIDE VIEW

MODEL	WIDTH	DEPTH	OVERALL HEIGHT*	COOKING HEIGHT*	NO. OF BURNERS	TOTAL BTU/HR. (Infrared/ Atmospheric)	NO. OF DRAWERS	APPROX. SHIP. WT.**	
								Steel Plate	Rapid Recovery™ Plate
VCCG24	24"	33.1"	18.8"	14.7"	2	48,000/60,000	1	380 lbs./172 kg.	264 lbs./120 kg.
VCCG36	36"	33.1"	18.8"	14.7"	3	72,000/90,000	1	475 lbs./215 kg.	302 lbs./137 kg.
VCCG48	48"	33.1"	18.8"	14.7"	4	96,000/120,000	1	575 lbs./261 kg.	344 lbs./156 kg.
VCCG60	60"	33.1"	18.8"	14.7"	5	120,000/150,000	2	665 lbs./301 kg.	377 lbs./171 kg.
VCCG72	72"	33.1"	18.8"	14.7"	6	144,000/180,000	2	855 lbs./388 kg.	515 lbs./234 kg.

*These are nominal dimensions and can vary by +1.75" with adjustable legs.
**For ship. wt. on Chrome plate, contact factory.
(Dimensions in parenthesis are in millimeters)

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

Item # _____ C.S.I. Section 11420

GRIDDLES & BROILERS

MSA SERIES
HEAVY DUTY GAS GRIDDLES
WITH RAPID RECOVERY™ GRIDDLE PLATE AND PIEZO IGNITION

Model MSA48
(Not shown with Rapid Recovery™ Griddle Plate or Piezo Ignition)

- ☐ **MSA24-C0100P** 24" w x 24" d griddle plate
- ☐ **MSA36-C0100P** 36" w x 24" d griddle plate
- ☐ **MSA48-C0100P** 48" w x 24" d griddle plate

STANDARD FEATURES

- 18 mm (¾") Rapid Recovery™ composite griddle plate with 12 gage, 4" stainless steel back and tapered side splashes.
- Rotary piezo ignition (no electric needed).
- Stainless steel front, sides and front top ledge with "Cool Bullnose" design.
- Fully welded stainless and aluminized steel chassis frame.
- 11" low profile cooking height on 4" adjustable legs.
- Spatula wide 3½" grease gutter and chute is fully welded for easier cleaning and to stop grease migration.
- One 27,000 BTU/hr. "U" shaped aluminized steel burner for every 12" of griddle width.
- One embedded snap action thermostat per burner with temperature adjust from 200°F to 450°F.
- Large 6 quart stainless steel grease drawer.
- Heavy duty chromed thermostat knob guards.
- One pilot safety valve for every two burners. Safety will completely shut off gas to pilot and burners if pilot extinguishes.
- Bottom heat shields.
- ¾" rear gas connection and gas pressure regulator.
- One year limited parts and labor warranty.

SPECIFICATIONS

Low profile heavy duty gas griddle, Vulcan Model No._____. Stainless steel front, sides and front top ledge. Fully welded stainless and aluminized steel body frame. 11" low profile cooking height on 4" legs. 18 mm (¾") Rapid Recovery™ composite griddle plate with 12 gage, 4" stainless steel back and tapered side splashes. Grease chute is fully welded to stop grease migration. One 27,000 BTU/hr. "U" shaped aluminized steel burner and mechanical snap action thermostat for each 12" of griddle width. Chrome thermostat knob guards. Temperature adjusts from 200° to 450°F. One pilot safety for every two burners. 3½" wide stainless steel grease trough. ¾" rear gas connection and gas pressure regulator.

Exterior Dimensions:
_____"w x 33" d x 15½" h on 4" legs.

CSA design certified. NSF listed.

SPECIFY TYPE OF GAS WHEN ORDERING.
SPECIFY ALTITUDE WHEN ABOVE 3,999 FT.

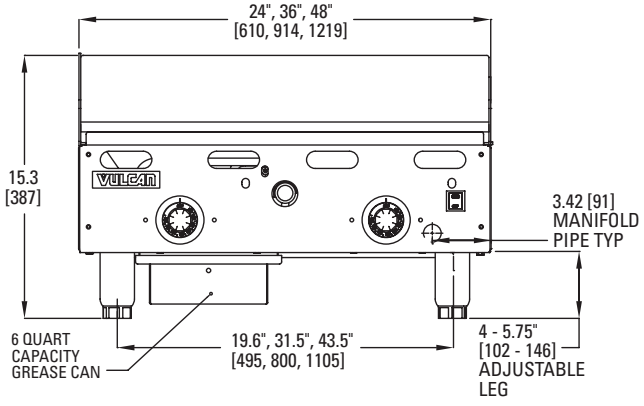
a division of ITW Food Equipment Group LLC

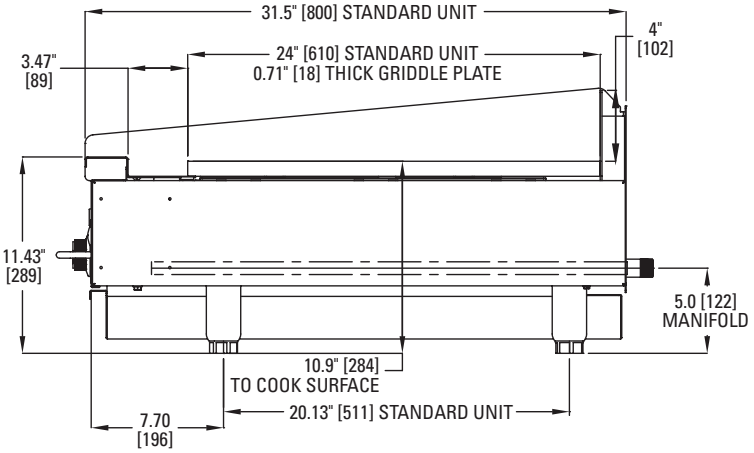
P.O. Box 696 ■ Louisville, KY 40201 ■ Toll-free: 1-800-814-2028 ■ Local: 502-778-2791 ■ Quote & Order Fax: 1-800-444-0602

MSA SERIES
HEAVY DUTY GAS GRIDDLES
WITH RAPID RECOVERY™ GRIDDLE PLATE AND PIEZO IGNITION

INSTALLATION INSTRUCTIONS

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. All models require a 6" (152 mm) clearance at both sides and rear adjacent to combustible and 0" from non-combustible constructions. All models require a 4" (102mm) bottom clearance and must be installed with minimum 4" legs.
3. These units are manufactured for installation in accordance with ANSI/NFPA-70, National Electrical code.
   An adequate ventilation system is required for Commercial Cooking Equipment (NFPA No. 96). Information may be obtained by writing to the National Fire Protection Association, Batterymarch Park, Quincy, MA 02169.
4. 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 ventilation hood or exhaust system equipped with a damper or with a power means of exhaust shall comply with 248 CMR.
5. This appliance is manufactured for commercial installation only and is not intended for home use.





MODEL	WIDTH	DEPTH	OVERALL HEIGHT*	WORKING HEIGHT*	NO. OF BURNERS	TOTAL BTU/HR.	NO. OF DRAWERS	APPROX. SHIP. WT.
MSA24	24"	31½"	15¼"	11⅛"	2	54,000	1	265 lbs./120 kg.
MSA36	36"	31½"	15¼"	11⅛"	3	81,000	1	395 lbs./179 kg.
MSA48	48"	31½"	15¼"	11⅛"	4	108,000	1	525 lbs./238 kg.

*These are nominal dimensions and can vary by +1.75" with adjustable legs.

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

ACCESSORIES
MSA AND 900RX HEAVY DUTY GAS GRIDDLES

PLATE RAIL MOUNTED ON MSA24 GRIDDLE

CUTTING BOARD

CONDIMENT RAIL
Containers not included

- ☐ **CUTTING BOARD**
- ☐ **CONDIMENT RAIL**
- ☐ **PLATE RAIL**
- ☐ **BANKING STRIP**

STANDARD FEATURES

- Stainless steel construction.
- Welded and smooth blended edges.
- Line matched to VACB charbroiler and VHP hotplate accessories.
- Cutting board accessory features stainless steel frame with removable board inserts. Inserts are 1" thick x 7" wide, Sani-TUFF® rubber NSF listed boards.
- Condiment rails will accommodate up to the following amounts of ⅙ size containers:
  - 24" model – 3
  - 36" model – 4
  - 48" model – 6
  - 60" model – 8
  - 72" model – 9
- Plate rails feature a full 10⅝" deep stainless steel shelf.
- Banking strip connects like side splashes together.
- One year limited parts and labor warranty.

SPECIFY GRIDDLE SIZE WHEN ORDERING.

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

ACCESSORIES
MSA AND 900RX HEAVY DUTY GAS GRIDDLES

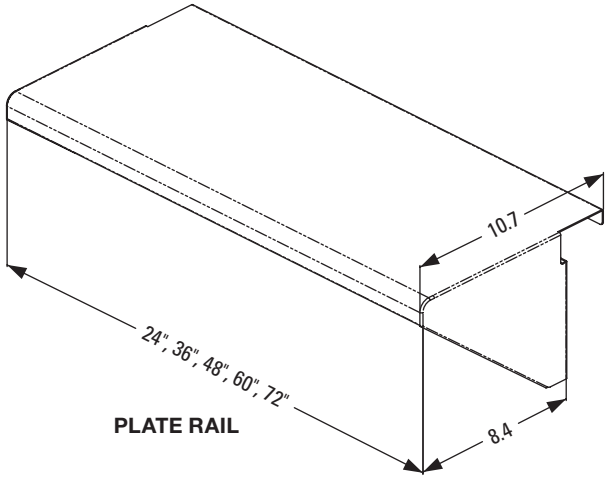
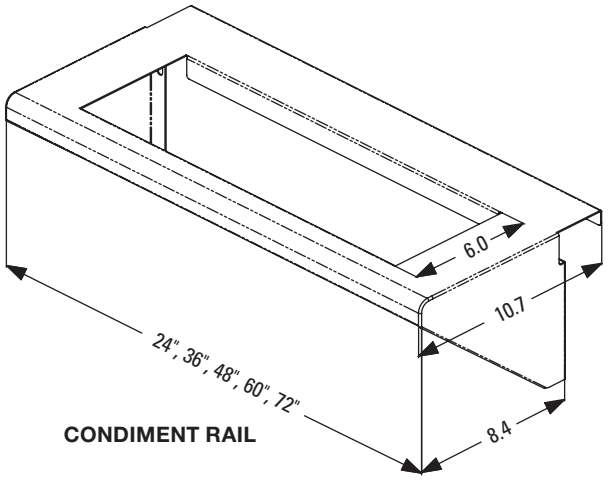
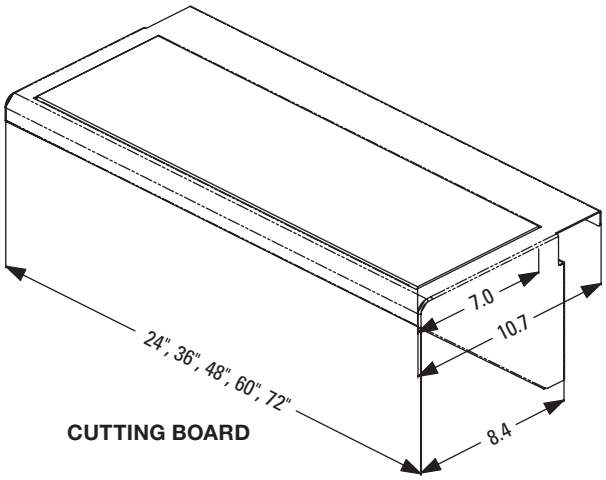


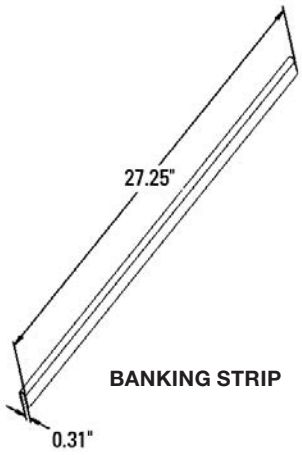
PLATE RAIL



CONDIMENT RAIL



CUTTING BOARD



BANKING STRIP

SIZE	ACCESSORY CODES		
	CUTTING BOARD	CONDIMENT RAIL	PLATE RAIL
24	CUTBD-24	CONRAIL-24	PLTRAIL-24
36	CUTBD-36	CONRAIL-36	PLTRAIL-36
48	CUTBD-48*	CONRAIL-48	PLTRAIL-48
60	CUTBD-60*	CONRAIL-60	PLTRAIL-60
72	CUTBD-72*	CONRAIL-72	PLTRAIL-72

*Two section board

DESCRIPTION	ACCESSORY CODE
Flex gas hose for gas griddles (¾" x 4 ft.)	3/4QDH-4FT
Transformer 220 V to 120 V	TRANSF-900RE
Griddle banking strip (connects side splashes of two units)	BANKING-STRIP

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

INSTALLATION & OPERATION MANUAL
HEAVY DUTY GAS GRIDDLES

948RX

MODELS

924RX
936RX
948RX
960RX
972RX

MSA48

MSA24	ASA24
MSA36	ASA36
MSA48	ASA48
MSA60	ASA60
MSA72	ASA72

AGM48

AGM24
AGM36
AGM48
AGM60
AGM72

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

3600 North Point Blvd.
Baltimore, MD 21222

RETAIN THIS MANUAL FOR FUTURE USE

FORM F-38315 (rev. 07-16)

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.

TABLE OF CONTENTS

INSTALLATION, OPERATION AND CARE OF HEAVY DUTY GAS GRIDDLES

GENERAL

Heavy Duty Gas Griddles are produced with quality workmanship and materials. Proper installation, usage and maintenance of your griddle will result in many years of satisfactory performance.

Thoroughly read this entire manual and carefully follow all of the instructions provided

Model	Number of Burners	BTU/hr Input Rating
924RX/MSA24/ASA24/AGM24	2	54,000
936RX/MSA36/ASA36/AGM36	3	81,000
948RX/MSA48/ASA48/AGM48	4	108,000
960RX/MSA60/ASA60/AGM60	5	135,000
972RX/MSA72/ASA72/AGM72	6	162,000

INSTALLATION

Before installing, verify that the type of gas supply (natural gas or propane) agrees with the specifications on the rating plate located on the outside right of the unit. If the supply and equipment requirements do not agree, do not proceed with the installation. Contact your dealer immediately. It is recommended that a trained gas service technician with the necessary tools, instruments and skills perform the installation of the griddle.

UNPACKING

This griddle 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 griddle 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 griddle cannot have been moved, installed, or modified.
5. Notify Vulcan Customer Service immediately at 800-814-2028.

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

LOCATION

The installation location must be kept free and clear of combustibles. When installing, never enclose the bottom of the griddle with a raised curb or other constructions that would obstruct flow of air into or out of the griddle. Adequate clearance for air openings into the combustion chamber must be provided. Make sure there is an adequate supply of air in the room to replace air taken out by the ventilation system.

Do not permit air to blow directly at the griddle. Avoid open windows next to the griddle wherever possible. Avoid wall-type fans which create air cross-currents within the room.

This griddle is Design Certified for installation on a non-combustible counter with 4" legs, or combustible floor with 25" high stand.

INSTALLATION CLEARANCES

	COMBUSTIBLE CONSTRUCTION	NON-COMBUSTIBLE CONSTRUCTION
Back:	6"	0"
Right	6"	0"
Left Side	6"	0"

INSTALLATION CODES AND STANDARDS

The griddle 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

GRIDDLES MOUNTED ON STANDS WITH CASTERS

Griddles 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•CSA6.16, and a quick-disconnect device that complies with Gas Fuel, ANSI Z21.3•CSA6.9. 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 griddle as shown in Fig. 1.

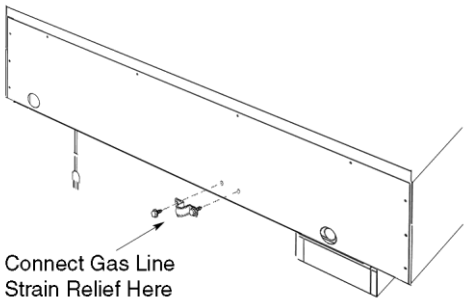


Fig. 1

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

Casters are only supplied on a griddle stand. If the griddle is moved for any reason the griddle should be re-leveled (see LEVELING in this manual).

FLUE CONNECTIONS

Do not obstruct the flow of flue gases from the flue, located at the rear of the griddle. It is recommended that 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” 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.

STANDS

The griddle has an optional 24” high by 30” deep stainless steel stand with casters. The two front casters lock. The stand includes a top shelf with marine edges style lip and a lower shelf.

GAS CONNECTIONS

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

Use a ¾” NPT gas supply line for the griddle inlet, located at the rear of the griddle. All flexible and semi-rigid gas supply lines must comply with the applicable ANSI standard. To ensure maximum operating efficiency this appliance must be connected with a gas supply line of solid pipe or a commercial type Flexible Connector with the net inside diameter (I.D.) as large as or larger than the gas pipe inlet on this appliance. Codes require that a gas shutoff valve must be installed in the gas line upstream of the griddle.

⚠ 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 checking for leaks all lines receiving gas should be fully purged to remove air.

TESTING THE GAS SUPPLY SYSTEM

When the gas supply pressure exceeds ½ psig (3.45 kPa), the griddle and its individual shutoff valve must be disconnected from the gas supply piping system.

When the gas supply pressure is ½ psig (3.45 kPa) or less, the griddle should be isolated from the gas supply system by closing its individual manual shutoff valve.

GAS PRESSURE REGULATOR INSTALLATION

A gas pressure regulator is supplied with the griddle and must be installed. Install the regulator as close to the griddle 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 griddle (Fig. 2) and the regulator is positioned with the vent plug and adjustment screw upright (Fig. 3). Check and set the gas pressure after the regulator is installed. The pressure should be set for 4" water column (W.C.) for natural gas and 10" W.C. for propane gas while all burners are on. It is recommended that a trained gas service technician with the necessary tools, instruments and skills perform the installation of the griddle and gas pressure regulator.

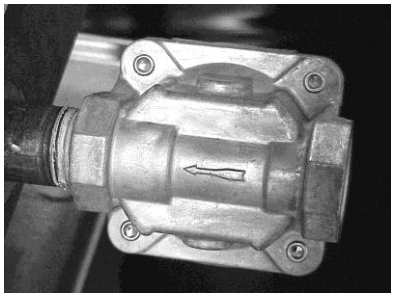


Fig. 2

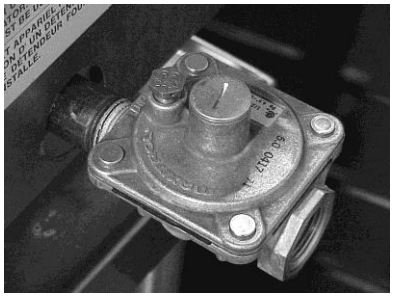


Fig. 3

The 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 griddle be connected to supply pressure greater than ½ psig (3.45 kPa) or 14" W.C.

ELECTRICAL CONNECTIONS – 900RX MODELS

⚠ 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 griddle and follow lockout / tagout procedures.

⚠ WARNING Appliances equipped with a flexible electric 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.

Power supply for electric ignition is 120 volts, 1 amp, 50/60 Hertz, 1 phase.

Do not connect the griddle to electrical supply until after gas connections are made.

OPERATION

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

BEFORE FIRST USE

Remove all packing material and protective plastic from the surfaces of the unit. 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 by adding water or a non-corrosive, grease dissolving commercial cleaner, following the manufacturer's directions. Scrape the oil residue from the plate with a griddle scraper. Rinse thoroughly and wipe dry with a soft clean cloth. Clean all accessories.

SEASONING THE GRIDDLE

Season the griddle to avoid possible surface corrosion before first use, and after every cleaning. This will also help reduce the sticking of cooked food product. 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.

CONTROLS – 900RX MODELS

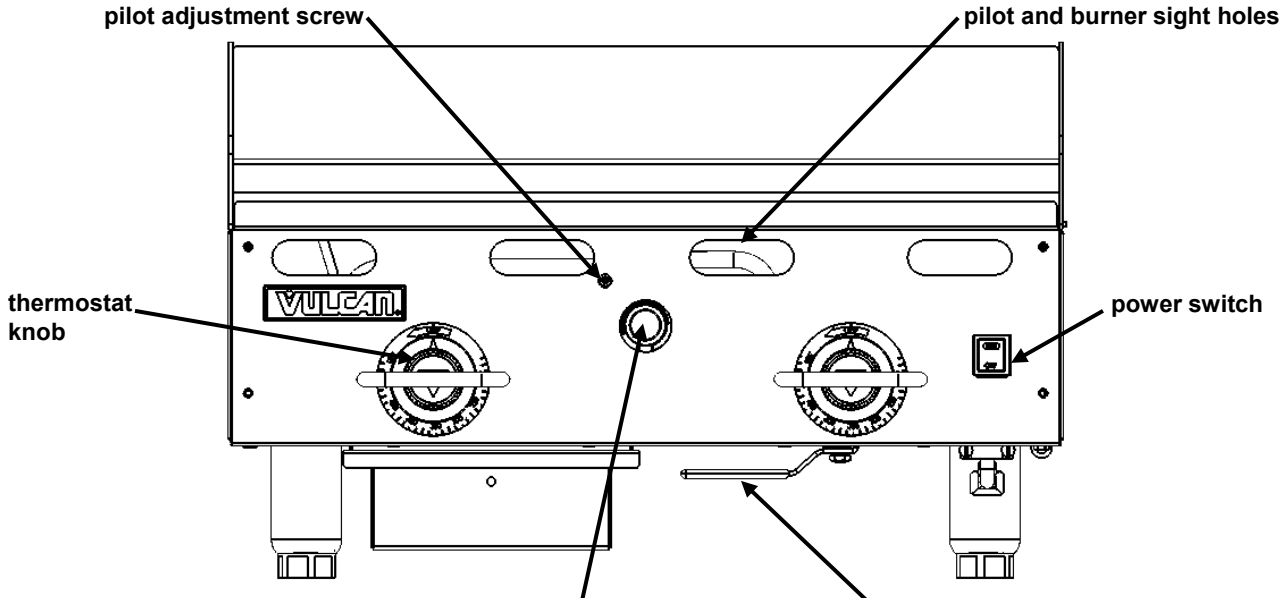


Fig. 4

This model features an electric ignition system that is controlled by a momentary power switch. The power switch turns the electric ignition system off and on only and will only supply power to the igniters when held down in the ON position. The burners and pilots will continue to work with power switch in the OFF position until the gas supply to the unit is cut off or the griddle gas shut-off valve is turned to the OFF position (Fig. 6). In the event of a failure of the electronic ignition system, it is possible to ignite the pilots with an outside source (such as a lit taper, etc). See pilot lighting procedure.

There is one pilot and one safety valve for every two burners except on the 36” and 60” models. The 36” and 60” models have an odd number of main burners, therefore one of the sets of pilots and safety valves in these models will control only one main burner. The pilot burners are aligned with the pilot safety valve bush buttons. The pilot burners are inset 12” from the front panel. The pilots are monitored by thermocouples and pilot safety valves. If the pilot goes out, the safety valve will shut-off the gas supply to the pilot and main burners.

Each 12” section of the griddle is independently controlled by a mechanical snap-action thermostatic valve. The thermostats have an operating range of 200 to 550 degrees. Once pilots are lit, turning the thermostats to the desired setting is all that is required to put the unit into service.

Each 12” griddle section may be turned off independently by setting the corresponding thermostat to the OFF position. You may also leave all thermostats set at the desired settings and turn all sections off at once by turning the griddle shut-off valve to the OFF position (Fig. 6). This will turn off the gas supply to the pilots and thermostats for all sections. Turning the griddle shut-off valve to the ON position (Fig. 5) and relighting the pilots at the beginning of the next cooking shift will be required to put the unit back in service. See pilot lighting procedure.

Fig. 5

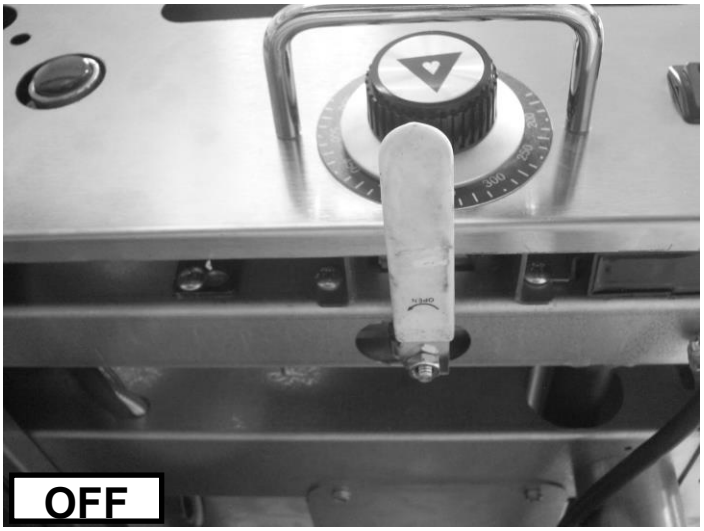


Fig. 6

CONTROLS – MSA AND ASA MODELS

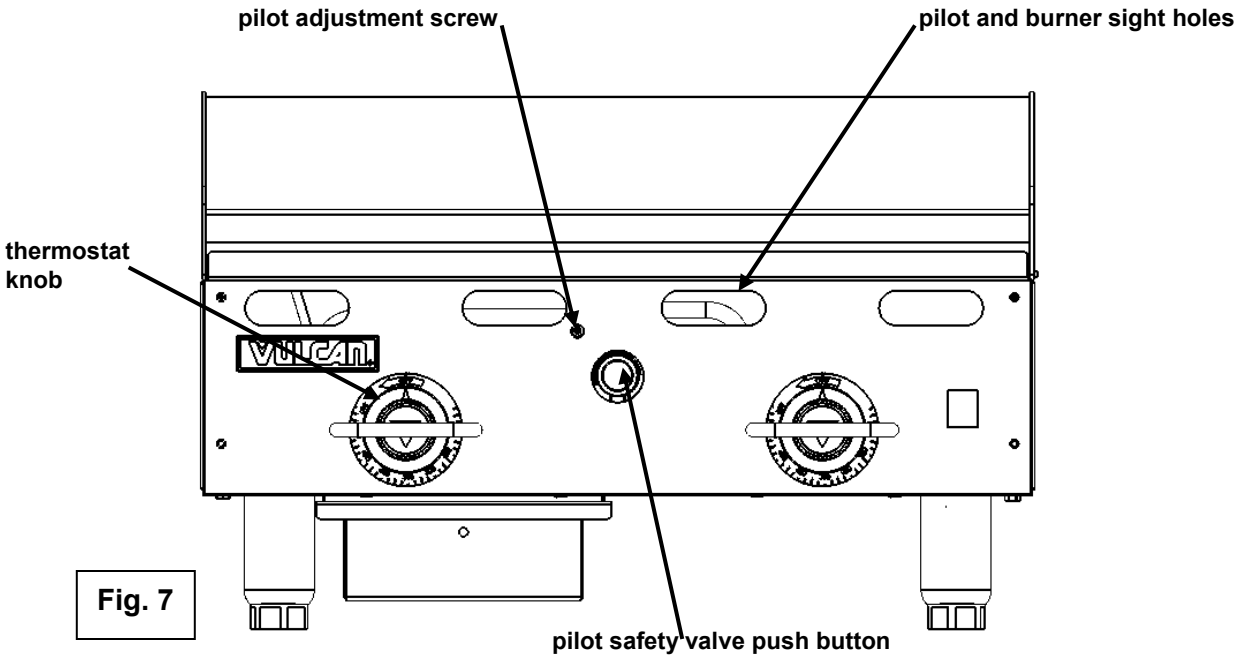


Fig. 7

This model features a standing pilot that must be manually lit with an outside ignition source (such as a lit taper, etc). 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. There is one pilot and one safety valve for every two burners except on the 36” and 60” models. The 36” and 60” models have an odd number of main burners, therefore one of the sets of pilots and safety valves in these models will control only one main burner. The pilot burners are aligned with the safety valve bush buttons. The pilot burners are inset 12” from the front panel. See pilot lighting procedure.

Each 12” section of the griddle is independently controlled by a mechanical snap-action thermostatic valve. The thermostats have an operating range of 200 to 550 degrees. If the pilots are lit, turning the thermostats to the desired setting is all that is required to put the unit into service.

CONTROLS – AGM MODELS

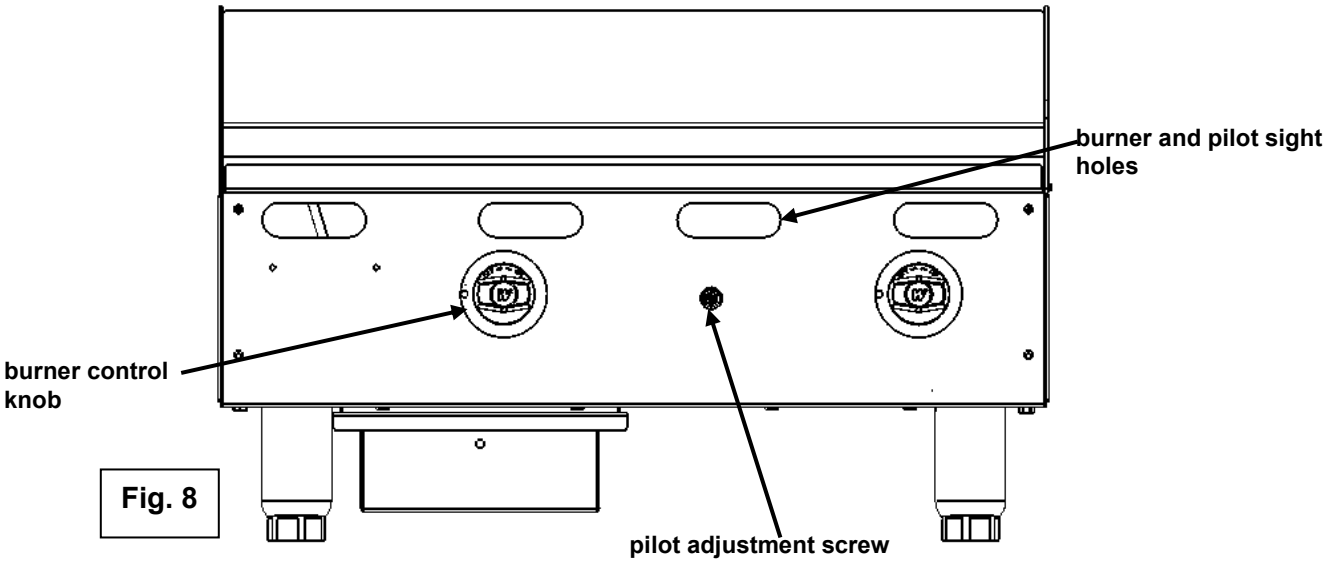


Fig. 8

The model is equipped with standing pilots. Gas will flow from the pilots as soon as the main gas supply to the unit is turned on. The pilots are lit with the use of an outside ignition source (such as a lit taper, etc). There is one pilot for every two burners except on the 36" and 60" models. The 36" and 60" models have an odd number of main burners; therefore, one of the sets of pilots in these models will control only one main burner. The pilots are inset 12" from the front panel. See pilot lighting procedure.

Each 12" section of the griddle is independently controlled by an infinite heat control valve. Once the pilots are lit, turning the burner control knob to the full ON position will light each burner. The burners will be in the full ON position when the knobs are turned all the way to the left (Fig. 10). The burners will be in the full OFF position when the knobs are turned all the way to the right (Fig. 9). The height of the burner flame and cooking plate temperature can be adjusted by turning the burner control knobs while viewing burners through the burner sight holes.

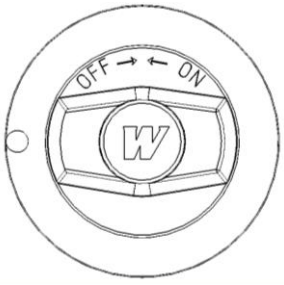


Fig. 9

Burner control knob in the OFF position. Turned all the way to the right.

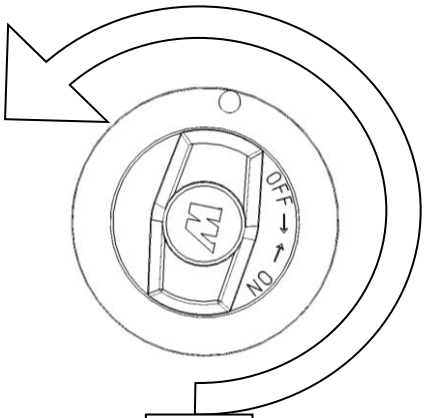


Fig. 10

Burner control knob in the full ON position. Turned all the way to the left - 225 degrees from the OFF position.

PILOT LIGHTING PROCEDURE – 900RX MODELS

1. Turn the griddle shut-off valve to the OFF position (See Fig.6 on page 9). Wait 5 minutes to allow any gas that may have accumulated in the burner compartment to escape.

2. Turn the griddle shut-off valve to the ON position (See Fig. 5 on page 9).

3. Push and hold the power switch in the ON position. The switch will illuminate and you will hear a "clicking" sound.

4. While continuing to hold the power switch in the ON position, depress and hold the red button on the pilot safety valve while the electric igniters light the corresponding pilots. You will have to monitor the pilot burners through the pilot sight holes. The pilot burners are aligned with the red buttons on the pilot safety valves. The pilot burners are inset 12" from the front of the unit.

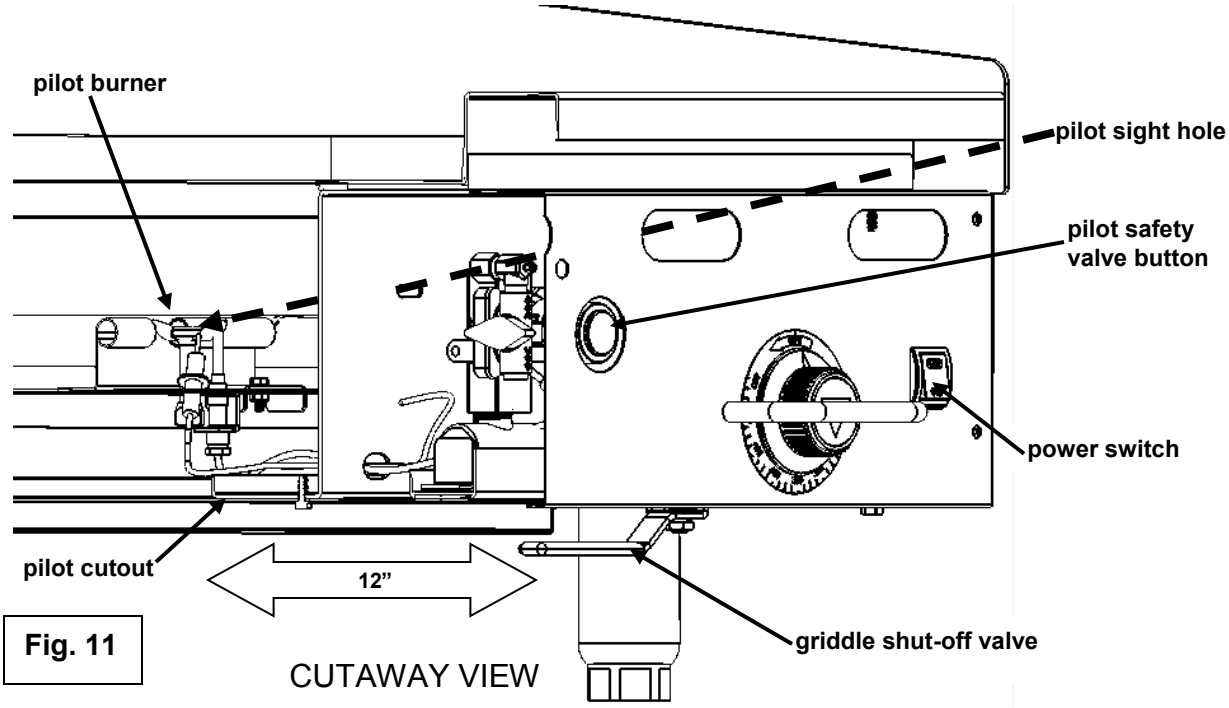


Fig. 11 CUTAWAY VIEW

5. Watch for the pilot burners to ignite. When the gas at the pilot has been burning for about 45 seconds, release the corresponding red button on the pilot safety valve. If the pilot does not remain lit, repeat the procedure allowing more time before releasing the button. The amount of time necessary to hold the safety valve button will increase at the initial installation of the unit and if the main gas supply has been turned off for a long period of time. It may be necessary to adjust the pilot valve to increase gas to the pilot.

6. Repeat steps until all pilots are lit.

7. The pilot burners can be lit manually in the event of a failure of the electronic ignition system. If this happens, repeat steps 1-5 without holding the power switch in the ON position. You will have to reach under the front of the unit and through the pilot cutout to ignite the pilots with an outside ignition source (such as a lit taper, etc.) while again depressing the corresponding red button.

8. If after completing steps 1 – 7 and the pilot does not light, turn the griddle shut-off valve to the OFF position (See Fig. 6 on page 9) and contact an authorized service contractor.

PILOT LIGHTING PROCEDURE- MSA AND ASA MODELS

1. Turn the main gas shut-off valve to the OFF position. Wait 5 minutes to allow any gas that may have accumulated in the burner compartment to escape.

2. Turn the main gas shut-off valve ON.

3. Depress and hold the safety valve button while lighting the corresponding pilot. You will have to reach under the front of the unit to light with an outside ignition source (such as a lit taper, etc.) while viewing thru the pilot sight hole.

4. When the gas at the pilot has been burning for about 45 seconds, release the safety valve button. If the pilot does not remain lit, repeat the operation allowing more time before releasing the button. The amount of time necessary to hold the safety valve button will increase at the initial installation of the unit and if the main gas supply has been turned off for a long period of time. It may be necessary to adjust the pilot valve to increase gas to the pilot.

5. Repeat steps until all pilots are lit.

6. If after completing steps 1-5 pilot does not light, turn off the main gas shut-off valve and contact an authorized service contractor.

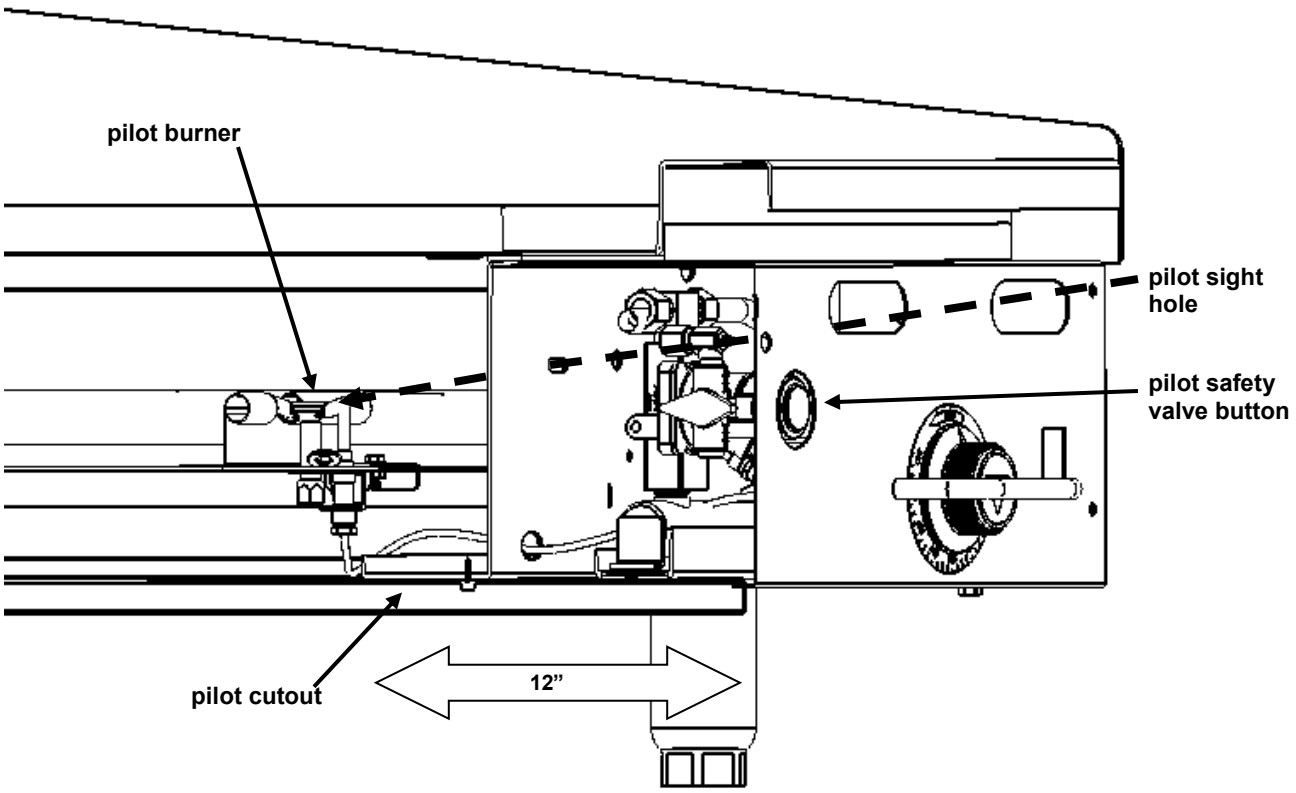


Fig. 12

CUTAWAY VIEW

PILOT LIGHTING PROCEDURE – AGM MODELS

1. Turn the main gas shut-off valve and all burner control knobs to the OFF position. Wait 5 minutes to allow any gas that may have accumulated in the burner compartment to escape.

2. Turn the main gas shut-off valve ON.

3. While viewing through the pilot sight hole, you will have to reach under the front of the unit and through the pilot cutout to ignite the pilots with an outside ignition source (such as a lit taper, etc.). It may be necessary to adjust the pilot valve to increase gas to the pilot.

4. Repeat steps until all pilots are lit

5. To light main burners, turn individual burner control knobs to the full ON position.

6. If after completing steps 1-5 main burners do not light, turn off the main gas shut-off valve and contact an authorized service contractor.

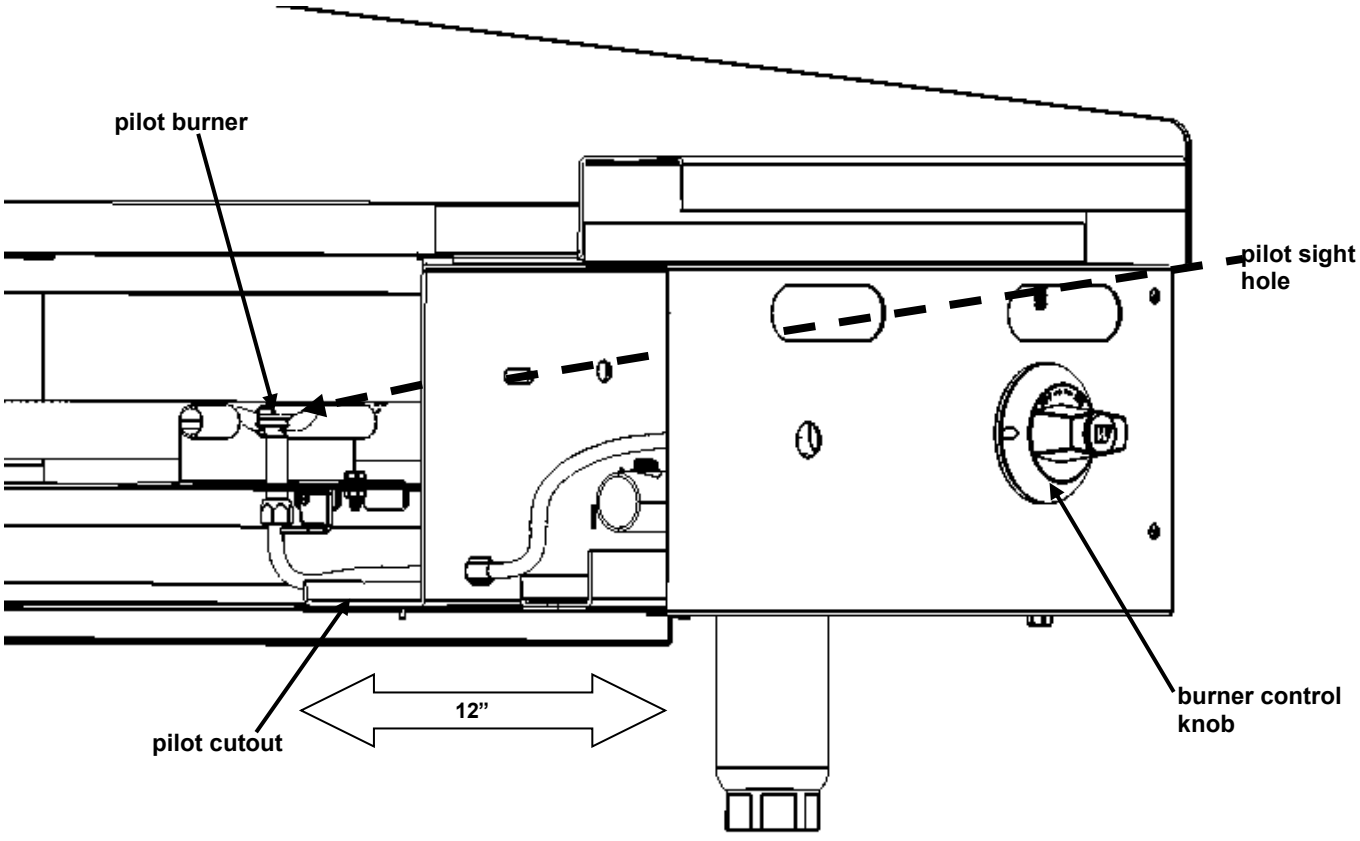


Fig. 13

CUTAWAY VIEW

USING THE GRIDDLE

To preheat, turn the burners on about 20-25 minutes before cooking.

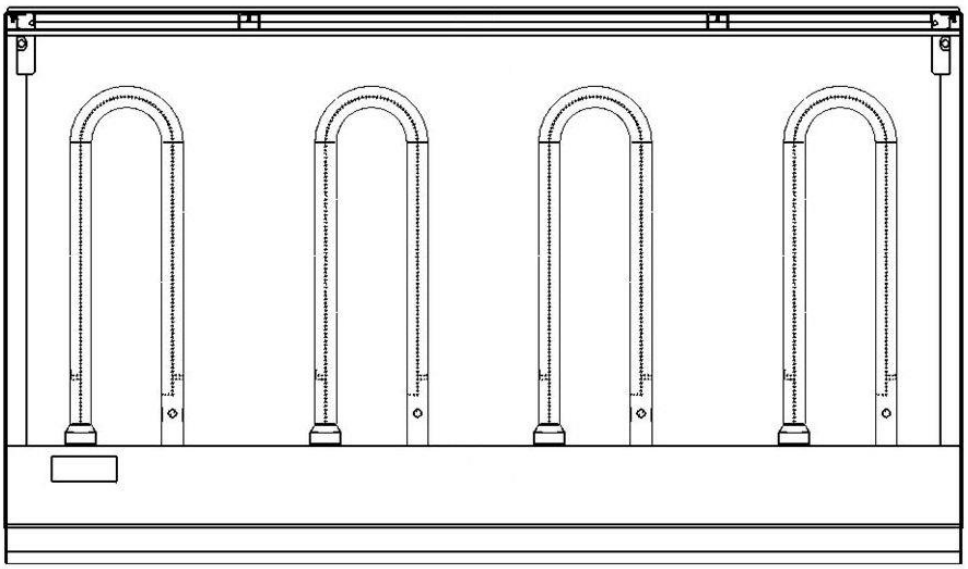
A uniform and systematic approach to loading the griddle will produce the most consistent product results.

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

ZONE COOKING

This griddle features a tubular U-shaped burner in 12” sections, each controlled by independent thermostats (900RX, MSA and ASA models) or manual valves (AGM models). Each 12” section is a separate cooking zone, and allows cooking a wide variety of products over a single griddle plate. The chart below is a suggested usage of zone cooking.

When zone cooking, it is suggested that you start with your lowest temperature setting at either side of the griddle, increasing the zone temperature as you move up the zone line. These zone cooking guidelines will vary depending on product temperatures, size and shape. This guide should be adjusted to suit your product and operational cooking preference.



ZONE 1 (300°F)	ZONE 2 (350°F)	ZONE 3 (350°F)	ZONE 4 (400°F)
PRODUCT	**PRODUCT**		**PRODUCT**
Sausage Eggs (Hard Fried) Eggs (Scrambled) Burger (Well Done) Steak (Well Done) Chicken Breast Frozen Foods Pork Chops	Pancakes French Toast Bacon Eggs (Sunny Side Up) Boiled Ham Steak (Medium Well) Fresh Burger (Medium Well) Small Frozen Burger (Medium Well)	Omelet Hash Browns Canadian Bacon	Steak (Rare) Stir Fry Vegetables Salmon Fish Cakes Lobster Scampi

CLEANING THE GRIDDLE

Empty the grease drawer as needed throughout the day and regularly clean at least once daily.

Clean the griddle regularly. A clean griddle always looks better, lasts longer and performs better. To produce evenly cooked, perfectly browned 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.

To keep the griddle clean and operating at peak efficiency, follow these procedures:

AFTER EACH USE

Clean the griddle cooking surface accordingly to the type of surface on your model. See the specific cleaning instructions by cooking surface finish. Empty the grease drawer throughout the day as needed.

ONCE PER DAY

Thoroughly clean the griddle back splash, sides and front. Do not hit the backsplash with a spatula or any other tool. This may create a gap between the splash and griddle plate that is hard to clean. Remove, empty and wash the grease drawer in the same manner as an ordinary cooking utensil.

ONCE PER WEEK

Clean the griddle surface thoroughly per the instructions for the surface finish of your particular model. After cleaning the plate, the griddle should be seasoned according to the instructions in this manual.

Clean stainless steel surfaces with a damp cloth and polish with a soft dry cloth. To remove discoloration, use a griddle cleaner.

If the griddle usage is very high, consider conducting this weekly cleaning procedure more than once per week.

CLEANING THE STANDARD STEEL GRIDDLE PLATE COOKING SURFACE

AFTER EACH USE

Clean the griddle cooking surface regularly with a griddle scraper during the work shift.

ONCE PER DAY

Turn the griddle off and allow it to cool down between 275°F-300°F, apply room temperature water and clean it with a griddle scraper.

ONCE PER WEEK

Clean the griddle surface thoroughly. Use a griddle brick, screen, or Scotch Bright™ pad on the surface as necessary. Rub with the grain of the metal while the griddle is still warm (not hot). A detergent may be used on the plate surface to help clean it, but be sure the detergent is thoroughly removed by flushing with clear water. After cleaning, reseason the cooking surface according to the instructions in this manual. If the griddle usage is very high, consider conducting this weekly cleaning procedure more than once per week.

CLEANING THE OPTIONAL CHROME GRIDDLE PLATE COOKING SURFACE

AFTER EACH USE

Clean the griddle cooking surface regularly with a palmetto brush and a bladed griddle scraper during the work shift. Never use an abrasive scouring pad or griddle brick on a chrome plate surface. The chrome surface can be damaged by careless use of a spatula or scraper.

ONCE PER DAY

Clean chrome surfaces with a damp cloth and polish with a soft dry cloth.

ONCE PER WEEK

If the chrome plate has become carbonized or blackened, use a non-abrasive, non-silicated cleaner such as Bon Ami®. Be sure the cleaning agent is thoroughly removed by flushing with clear water. Wipe with a damp cloth and polish with a soft dry cloth. After cleaning, reseason the cooking surface according to the instructions in this manual.

CLEANING THE OPTIONAL RAPID RECOVERY™ COMPOSITE GRIDDLE PLATE COOKING SURFACE

The Rapid Recovery™ griddle plate is a composite material which is engineered to provide a high heat transfer rate to the food. The top surface is stainless steel and can be scored or dented by careless use of a spatula or scraper.

AFTER EACH USE

Clean the griddle cooking surface regularly with Nemco Easy Grill Scraper™ or similar type of griddle scraper during the work shift.

ONCE PER DAY

Turn the griddle off and allow it to cool down between 275°F-300°F, apply room temperature water and clean it with a griddle scraper.

ONCE PER WEEK

Clean the griddle surface thoroughly with water, Scotch-Brite™ Quick Clean Griddle System or Ecolab Grease Express™ High-Temp Grill Cleaner. Be sure the cleaning agent is thoroughly removed by flushing with clear water. After cleaning, reseason the cooking surface according to the instructions in this manual.

If the griddle usage is very high, consider conducting this weekly cleaning procedure more than once per week.

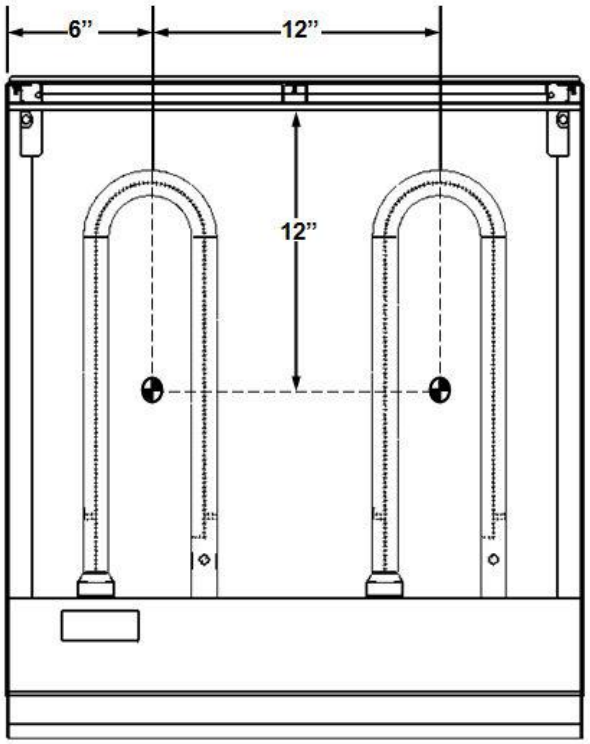
Do not use a brick or griddle stone for cleaning.

Do not use chlorine sanitizer in contact with griddle. Contact can cause discoloration, corrosion and permanent damage.

Do not use cleaning agents including Sodium Hydroxide, which is common in household oven cleaners.

ADJUSTMENTS

CALIBRATION-900RX AND MSA MODELS



1. Each thermostat controls a 12" zone of the griddle. Using a Surface Probe temperature measurement device, observe the temperatures at the center points of the cooking zones. These points are located by starting 6" from the side splash (left or right) and every 12" across the width of the griddle, with all points located 12" back from the front edge of the griddle plate.

   NOTE: Use of infrared thermometers is not recommended. These devices are highly sensitive to surface color (clean or dirty), angle of reading and distance from the unit.

2. Set thermostats to 350°F and allow to stabilize, allowing the burner to cycle ON and OFF at least two times.

3. Watch for burner to cycle OFF, then measure the temperature for that zone. The temperature should be 350°F ±15°F. If not, continue to Step 4.

4.

   a. Carefully loosen the knob set screw. DO NOT allow the knob to turn. Carefully remove the knob from the thermostat shaft, exposing the temperature dial.

   b. Loosen screws on the temperature dial and adjust so that the temperature indicated by the knob arrow matches the griddle plate temperature reading. Knob will have to be placed back on the shaft to verify adjustment.

   IMPORTANT: NEVER ADJUST THE SCREW IN THE CENTER OF THE THERMOSTAT SHAFT. This will ruin the factory calibration; the thermostat will no longer operate properly and will need to be replaced.

5. Once calibration is achieved, tighten the temperature dial screws and knob set screws.

Step 4a. Set knob & check Temperature. Remove knob

Step 4b. – Adjust temperature dial & verify temperature setting

Step 5 –Replace knob & tighten screws

LEVELING

The griddle must be level (side-to-side and front-to-back) during operation to ensure proper performance. Improper leveling can result in uneven temperature distribution, cold spots, and possibly damage electrical components.

1. Place a level on the griddle.
2. Adjust legs by turning the bullet feet at the bottom of each leg. Using pliers or a crescent wrench, turn the feet counter-clockwise to increase height, and clockwise to decrease height until leveling is achieved. Do not extend the legs more than 1-¾".

PILOT ADJUSTMENT

Using a flathead screwdriver, turn the slotted hex-head pilot adjustment screw clockwise to decrease the flame, and counterclockwise to increase the flame. See Fig. 14.

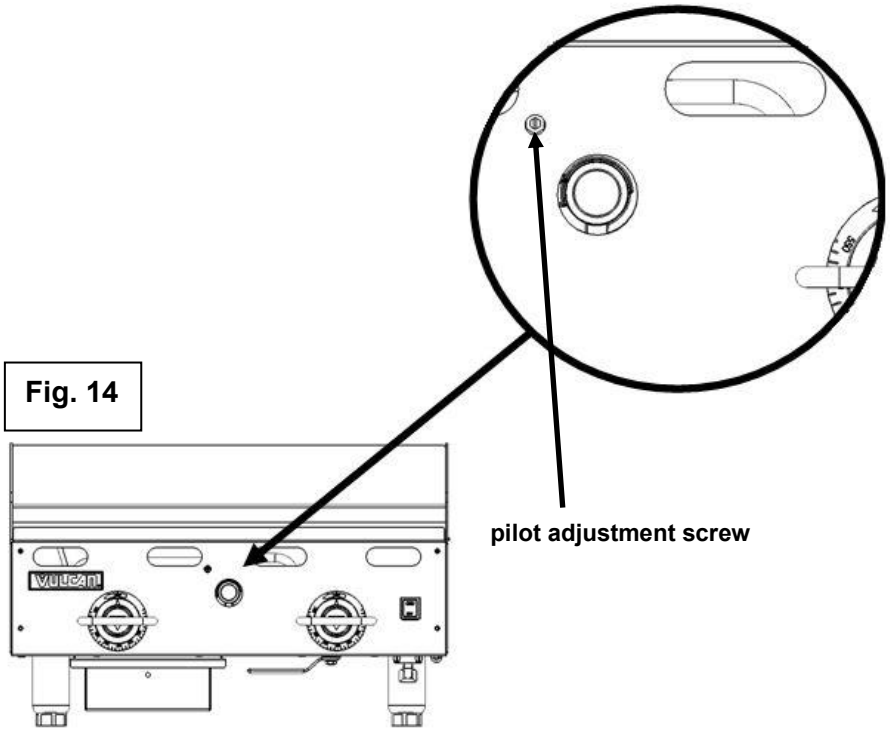


Fig. 14

SHUTDOWN OF GRIDDLE WITH ELECTRIC IGNITION SYSTEM – 900RX MODELS

1. Turn thermostats to the OFF position to cut off burners or turn griddle shut-off valve to the OFF position.

2. Turning the griddle shut-off valve to the OFF position will turn the gas off to all thermostats and pilots. The pilots will have to be relit when restarting the griddle.

3. The pilots will remain lit and monitored by the safety valve as long as the griddle shut-off valve is left in the ON position.

SHUTDOWN OF GRIDDLE – MSA AND ASA MODELS

1. Turn thermostats to the OFF position to cut off burners.
2. The pilots will remain lit and monitored by the safety valve as long as the main gas supply is on.

SHUTDOWN OF GRIDDLE WITH STANDING PILOT SYSTEM – AGM MODELS

1. Turn burner control knobs to the OFF position to cut off burners.
2. The pilots will remain lit as long as the main gas supply is on.

EXTENDED SHUTDOWN – ALL MODELS

1. Turn the griddle shut-off valve and/or the main gas supply valve to the OFF position.
2. Unplug the griddle electrical supply cord (if applicable).
3. Apply a heavy coat of vegetable oil over the griddle plate to inhibit rust.

MAINTENANCE

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

LUBRICATION

All valves must be checked and lubricated periodically. Check with your service agency for details.

VENT

Daily, when the griddle is cool, check the flue and clear any obstructions.

SERVICE AND PARTS INFORMATION

Contact the Service Contractor in your area to obtain service and parts information. For a complete listing of Service and Parts depots refer to **www.vulcanequipment.com**.

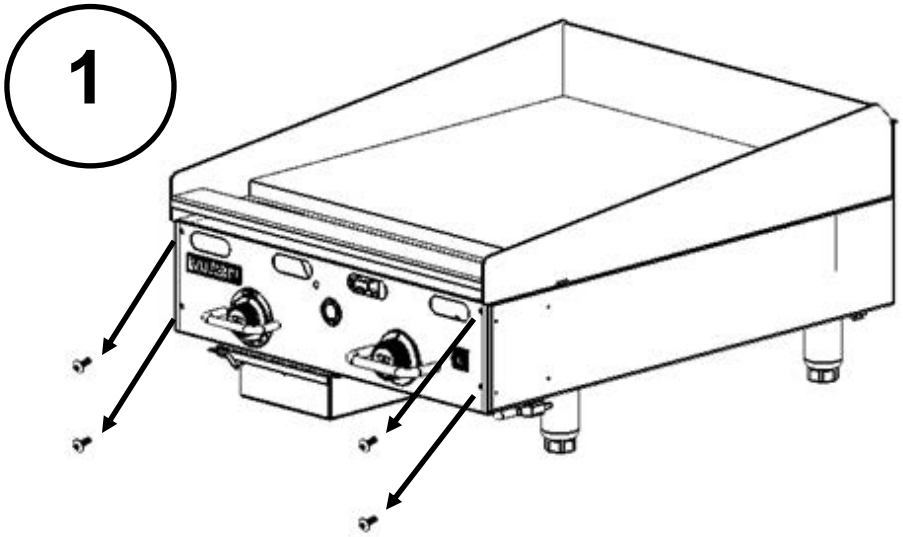
When calling for service the following information should be available from the appliance serial plate: Model Number, Serial Number and Gas Type. The appliance serial plate is located on the right side panel.

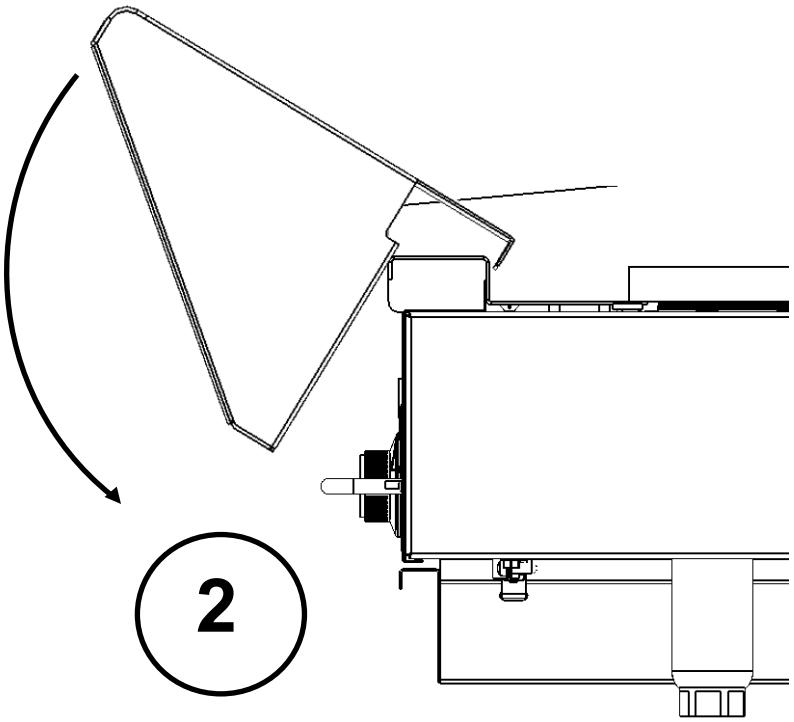
TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSES
Heat does not come on when the thermostat or burner valve is turned on	1. Problem with thermostat or burner valve. (Call for service) 2. Pilot burner not lit. 3. Griddle shut-off valve not in ON position. 4. Low gas pressure. (Call for service)
Pilot burner will not light	1. Griddle shut-off valve not in On position. 2. Obstructed pilot orifice. (Call for service) 3. Pilot gas turned off at pilot. Adjust pilot to allow gas flow 4. Problem with pilot safety valve. (Call for service) 5. Problem with thermocouple. (Call for service) 6. Low gas pressure. (Call for service)
Pilot burner will not stay lit	1. Obstructed or wrong size pilot orifice. (Call for service) 2. Gas supply not purged of air. Depress pilot safety button until air is purged. 3. Air blowing pilot out. (Call for service) 4. Problem with pilot safety valve. (Call for service) 5. Thermocouple not in flame. (Call for service) 6. Low gas pressure. (Call for service)
Fat appears to smoke excessively	1. Temperature set too high. 2. Moisture in food may be turning into steam
Food sticks to griddle or burned around edges or contains dark specs	1. Temperature set too high. 2. Griddle surface requires cleaning and/or seasoning. 3. Surface under food not covered with enough cooking oil.
Food under-cooked inside	1. Temperature set too low. 2. Food not cooked for long enough time.
Food tastes greasy or has objectionable off-flavor	1. Food itself may have off-flavor. 2. Food stored improperly before cooking. 3. Too much griddle fat used. 4. Temperature set too low.
Noticeable build-up of gum on griddle	1. Temperature set too high. 2. Griddle surface needs cleaning and/or seasoning. 3. Too much griddle fat used.

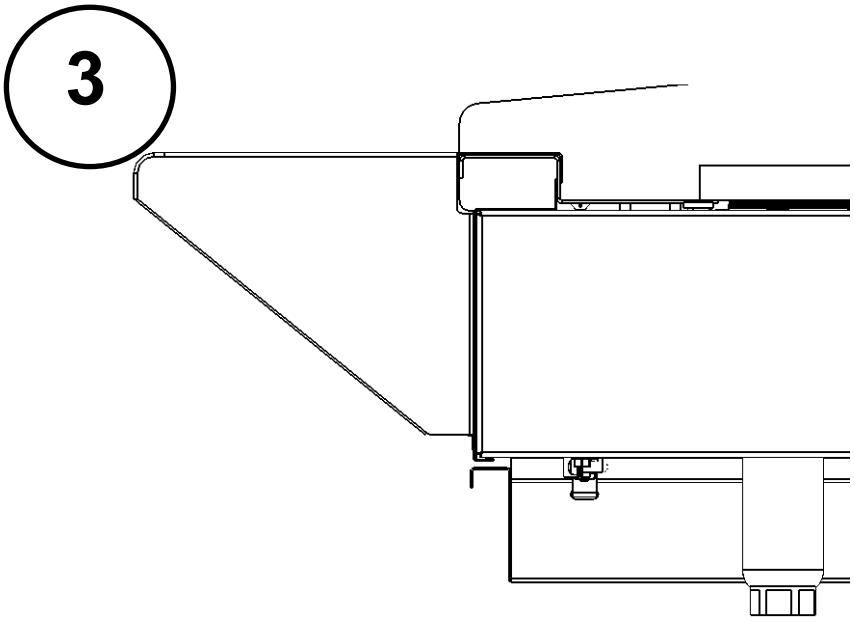
ACCESSORY INSTALLATION

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

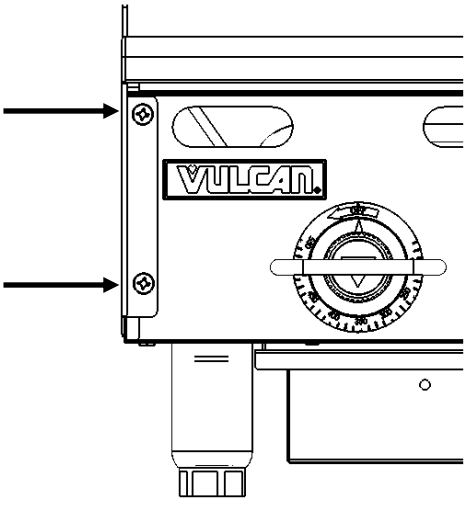




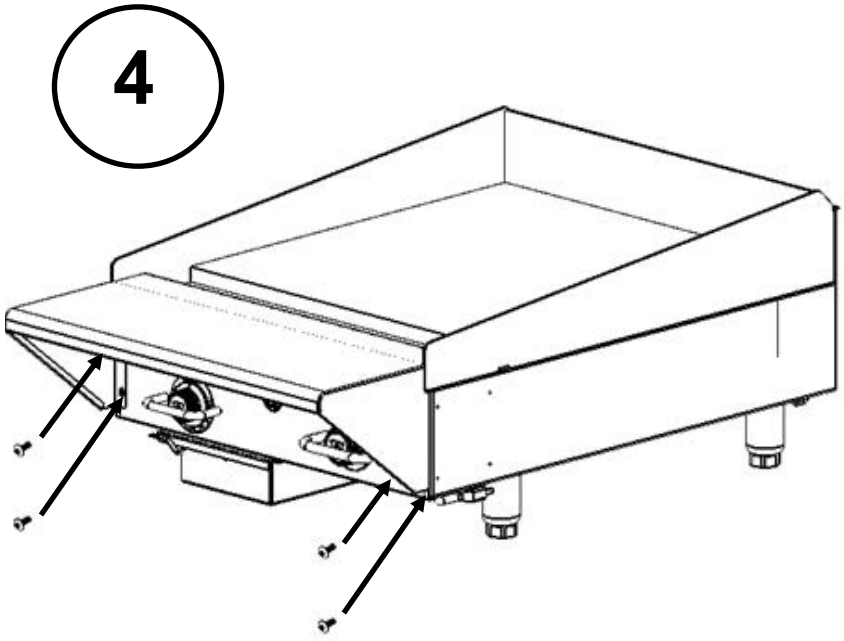
SIDE VIEW



SIDE VIEW



FRONT VIEW



NOTES

INSTALLATION & OPERATION MANUAL
HEAVY DUTY GAS GRIDDLES

VCCG36

MODELS

VCCG24
VCCG36
VCCG48
VCCG60
VCCG72

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

3600 North Point Blvd.
Baltimore, MD 21222

RETAIN THIS MANUAL FOR FUTURE USE

FORM F-45402 (rev. 10-15)

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.

TABLE OF CONTENTS

INSTALLATION, OPERATION AND CARE OF HEAVY DUTY GAS GRIDDLES

GENERAL

VCCG Heavy Duty Gas Griddles are produced with quality workmanship and materials. Proper installation, usage and maintenance of your griddle will result in many years of satisfactory performance.

Thoroughly read this entire manual and carefully follow all of the instructions provided.

Model	Number of Burners	BTU/hr Input Standard Infrared Burner		BTU/hr Input Optional U-Shaped Burner
		Natural Gas	Propane Gas	
VCCG24	2	48,000	44,000	60,000
VCCG36	3	72,000	66,000	90,000
VCCG48	4	96,000	88,000	120,000
VCCG60	5	120,000	110,000	150,000
VCCG72	6	144,000	132,000	180,000

INSTALLATION

Before installing, verify that the type of gas supply (natural gas or propane) agrees with the specifications on the rating plate located on the outside right of the unit. If the supply and equipment requirements do not agree, do not proceed with the installation. Contact your dealer immediately. It is recommended that a trained gas service technician with the necessary tools, instruments and skills perform the installation of the griddle.

UNPACKING

This griddle 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 griddle 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 griddle cannot have been moved, installed, or modified.
5. Notify Vulcan Customer Service immediately at 800-814-2028.

Carefully unpack your griddle and make sure that no parts are discarded with packaging material.

LOCATION

The installation location must be kept free and clear of combustibles. When installing, never enclose the bottom of the griddle with a raised curb or other constructions that would obstruct flow of air into or out of the griddle. Adequate clearance for air openings into the combustion chamber must be provided. Make sure there is an adequate supply of air in the room to replace air taken out by the ventilation system.

Do not permit air to blow directly at the griddle. Avoid open windows next to the griddle wherever possible. Avoid wall-type fans which create air cross-currents within the room.

This griddle is Design Certified for installation on a non-combustible counter with 4" legs, or combustible floor with a stand.

INSTALLATION CLEARANCES

	COMBUSTIBLE CONSTRUCTION	NON-COMBUSTIBLE CONSTRUCTION
Back:	6"	0"
Right	6"	0"
Left Side	6"	0"

INSTALLATION CODES AND STANDARDS

The griddle 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

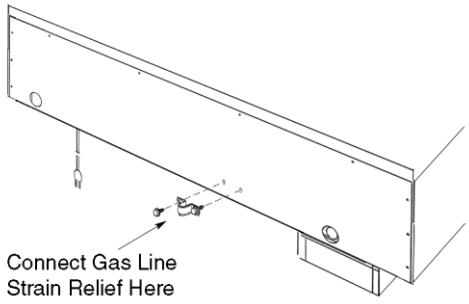
   All gas appliances vented through a ventilation hood or exhaust system equipped with a damper or with a power means of exhaust shall comply with 248 CMR.
3. NFPA Standard # 96 *Vapor Removal from Cooking Equipment*, latest edition, available from the National Fire Protection Association, Batterymarch 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

GRIDDLES MOUNTED ON STANDS WITH CASTERS

Griddles 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•CSA6.16, and a quick-disconnect device that complies with Gas Fuel, ANSI Z21.3•CSA6.9. 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 griddle as shown.



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

Casters are only supplied on a griddle stand. If the griddle is moved for any reason the griddle should be re-leveled (see LEVELING in this manual).

FLUE CONNECTIONS

Do not obstruct the flow of flue gases from the flue, located at the rear of the griddle. It is recommended that 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" 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.

STANDS

The griddle has an optional stainless steel stand with locking casters.

GAS CONNECTIONS

⚠ WARNING Gas supply connections and any pipe joint compound must be resistant to the action of propane gases.

Use a ¾" NPT gas supply line for the griddle inlet, located at the rear of the griddle. All flexible and semi-rigid gas supply lines must comply with the applicable ANSI standard. To ensure maximum operating efficiency this appliance must be connected with a gas supply line of solid pipe or a commercial type Flexible Connector with the net inside diameter (I.D.) as large as or larger than the gas pipe inlet on this appliance. Codes require that a gas shutoff valve must be installed in the gas line upstream of the griddle.

⚠ 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 checking for leaks all lines receiving gas should be fully purged to remove air.

TESTING THE GAS SUPPLY SYSTEM

When the gas supply pressure exceeds ½ psig (3.45 kPa), the griddle and its individual shutoff valve must be disconnected from the gas supply piping system.

When the gas supply pressure is ½ psig (3.45 kPa) or less, the griddle should be isolated from the gas supply system by closing its individual manual shutoff valve.

GAS PRESSURE REGULATION

The VCCG griddle is constructed with internal gas regulators on each burner valve. The valves are pre set to 4" W.C. on natural gas units or 10" W.C. on propane gas units. An external gas regulator is not required as long as the gas pressure supplied to the unit is not greater than ½ psig (3.45 kPa) or 14" W.C. The recommended supply pressure (upstream of the griddle) should be 7-9" W.C. for natural gas and 11-12" W.C. for propane gas.

NOTICE At no time should the griddle be connected to supply pressure greater than ½ psig (3.45 kPa) or 14" W.C.

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 griddle and follow lockout / tagout procedures.

⚠ WARNING Appliances equipped with a flexible electric 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.

Power supply for electric ignition is 120 volts, 2 amp, 50/60 Hertz, 1 phase.

Do not connect the griddle to electrical supply until after gas connections are made.

OPERATION

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

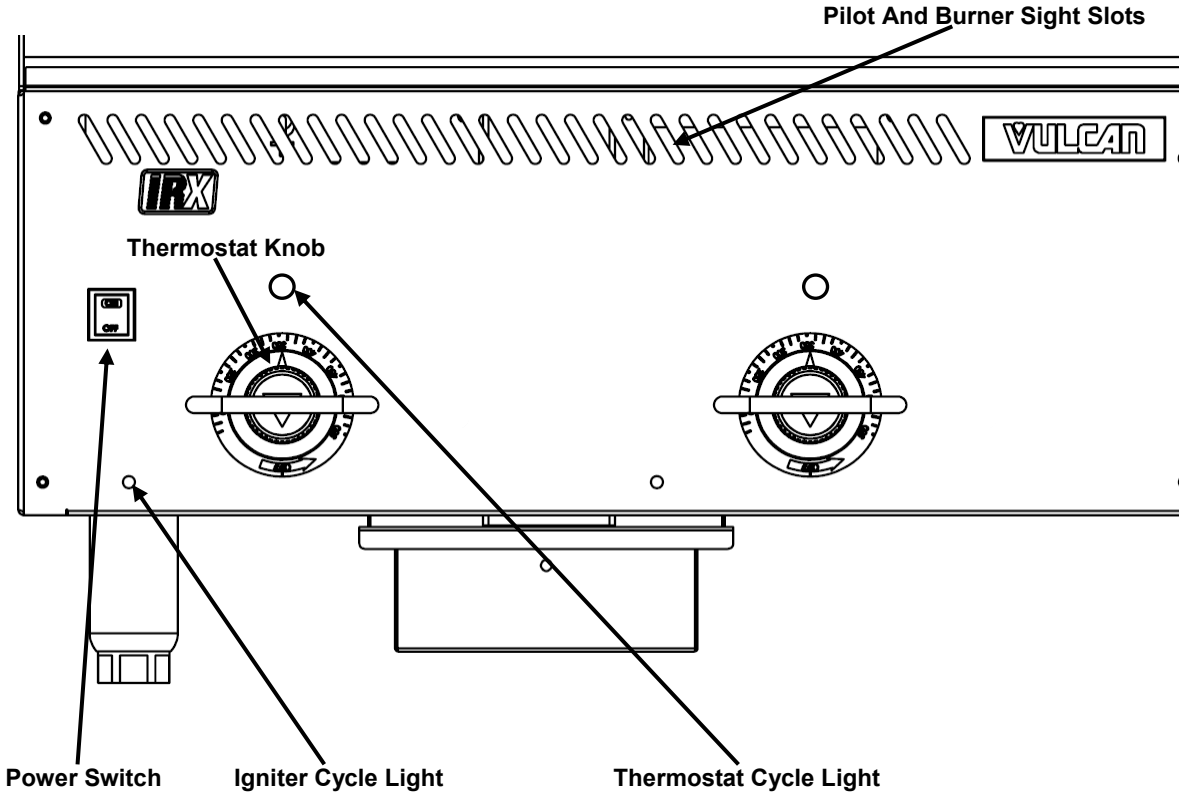
BEFORE FIRST USE

Remove all packing material and protective plastic from the surfaces of the unit. 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 by adding water or a non-corrosive, grease dissolving commercial cleaner, following the manufacturer's directions. Scrape the oil residue from the plate with a griddle scraper. Rinse thoroughly and wipe dry with a soft clean cloth. Clean all accessories.

SEASONING THE GRIDDLE

Season the griddle to avoid possible surface corrosion before first use, and after every cleaning. This will also help reduce the sticking of cooked food product. 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.

CONTROLS



POWER SWITCH

The VCCG turns off and on by a single power switch. Pushing the power switch to the ON position is all that is required to put the unit into production once the thermostats have been set.

IGNITER CYCLE LIGHT

The igniter cycle light is a clear hole where the user can view the diagnostic LED on the ignition module. In order to view the light, user must have a straight line of sight through the hole to be able to see the green or red light.

The igniter cycle lights are located at the 8 o'clock position to each corresponding thermostat knob. There is one pilot and one igniter cycle light for each burner (12" section of griddle). Once the power switch has been pushed to the ON position, the igniters will begin to ignite the pilots. The igniter cycle light will flash the color green while attempting

to ignite the pilot. Once the pilot is lit and recognized by the igniter safety, the light will illuminate a steady green color. The pilot must be ignited (burning) and the igniter cycle light must be emitting a steady green color before the griddle burner will be allowed to ignite.

If the pilot fails to ignite after approximately 90 seconds, the igniter cycle light will illuminate a flashing red color that indicates the pilot did not ignite. Pushing the power switch to the OFF position and then back to the ON position will restart the pilot ignition cycle and the pilots will attempt to ignite again.

THERMOSTAT KNOB

Each 12” section of the griddle is independently controlled by a solid state thermostat control. The thermostats have an operating range of 150 to 550 degrees for standard steel and chrome plate surfaces (150 to 450 degrees for Rapid Recovery™ composite plate option). The thermostat knobs will need to be turned to a temperature setting for the burners to ignite. Each 12” griddle section may be turned off independently by setting the corresponding thermostat to the OFF position. You may also leave all thermostats set at the desired settings and turn all sections off at once by pushing the power switch to the OFF position.

THERMOSTAT CYCLE LIGHT

The thermostat cycle lights are located at the 12 o’clock position to each corresponding thermostat knob. The light will illuminate when the surface cooking temperature drops below the thermostat knob set point. The illumination of this light indicates that the burner for that zone is lit.

STARTUP OF GRIDDLE

1. Set all thermostats to the desired temperature set points.

2. Push the power switch to the ON position. The red light behind the ON should illuminate indicating that electrical power is being supplied to the unit.

3. If the thermostat cycle lights do not illuminate a steady red color within approximately 90 seconds, push the power switch to OFF and back to ON again, this will restart the pilot ignition cycle .This process may need to be repeated several times on the initial installation of the griddle or if the griddle has been disconnected from the gas supply.

4. Check that all thermostat cycle lights are illuminating a steady red color to verify that all burners are lit and functioning properly.

SHUTDOWN OF GRIDDLE

Push the power switch to the OFF position, all lights should go off indicating that the griddle is no longer heating.

EXTENDED SHUTDOWN OF GRIDDLE

1. Push the power switch to the OFF position

1. Shut the main gas supply valve to the OFF position.

2. Unplug the griddle electrical supply cord.

3. Apply a coat of vegetable oil over the griddle plate to inhibit rust.

USING THE GRIDDLE

To preheat, turn the burners on about 20 minutes before cooking.

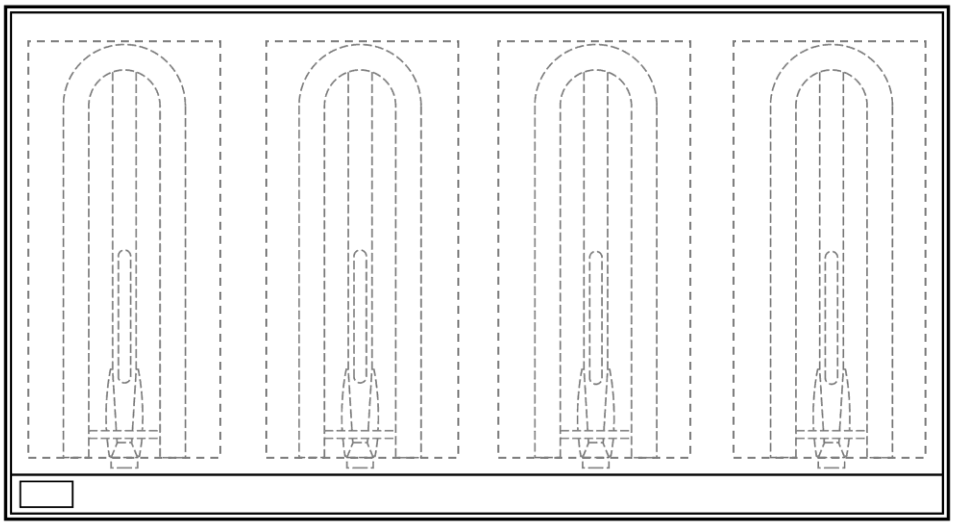
A uniform and systematic approach to loading the griddle will produce the most consistent product results.

The griddle plate is steel, but the surface is relatively soft and can be scored or dented by careless use of a spatula or scraper. Be careful not to dent, scratch, or gouge the plate surface. Do not try to knock off loose food that may be on the spatula by tapping the corner or the edge of the spatula on the griddle surface. Use spatulas with rounded edges. Do not use tempered steel utensils. Do not chop on the griddle cooking surface.

ZONE COOKING

This griddle features infrared box burners in 12” sections (U-shaped burners optional), each controlled by independent thermostat controllers. Each 12” section is a separate cooking zone, and allows for cooking a variety of products over a single griddle plate.

The chart is a suggested usage of zone cooking. When zone cooking, it is suggested that you start with your lowest temperature setting at either side of the griddle, increasing the zone temperature as you move up the zone line. Typically, the temperature differential between the center of one cooking zone to the center of another zone that is directly adjacent cannot be varied by more than 50 degrees. Some heat transfer from one area to the next is to be expected. These zone cooking guidelines will vary depending on product temperatures, size and shape. This guide should be adjusted to suit your product and operational cooking preference.



ZONE 1 (300°F)	ZONE 2 (350°F)	ZONE 3 (350°F)	ZONE 4 (400°F)
PRODUCT	**PRODUCT**		**PRODUCT**
Sausage Eggs (Hard Fried) Eggs (Scrambled) Burger (Well Done) Steak (Well Done) Chicken Breast Frozen Foods Pork Chops	Pancakes French Toast Bacon Eggs (Sunny Side Up) Boiled Ham Steak (Medium Well) Fresh Burger (Medium Well) Small Frozen Burger (Medium Well)	Omelet Hash Browns Canadian Bacon	Steak (Rare) Stir Fry Vegetables Salmon Fish Cakes Lobster Scampi

CLEANING

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

NOTICE Do not use a water jet stream to clean the griddle.

Empty the grease drawer as needed throughout the day and regularly clean at least once daily.

Clean the griddle regularly. A clean griddle always looks better, lasts longer and performs better. To produce evenly cooked, perfectly browned 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.

To keep the griddle clean and operating at peak efficiency, follow these procedures:

AFTER EACH USE

Clean the griddle cooking surface accordingly to the type of surface on your model. See the specific cleaning instructions by cooking surface finish. Empty the grease drawer throughout the day as needed.

ONCE PER DAY

Thoroughly clean the griddle back splash, sides and front. Do not hit the backsplash with a spatula or any other tool. This may create a gap between the splash and griddle plate that is hard to clean. Remove, empty and wash the grease drawer in the same manner as an ordinary cooking utensil.

ONCE PER WEEK

Clean the griddle surface thoroughly per the instructions for the surface finish of your particular model. After cleaning the plate, the griddle should be seasoned according to the instructions in this manual.

Clean stainless steel surfaces with a damp cloth and polish with a soft dry cloth. To remove discoloration, use a griddle cleaner.

If the griddle usage is very high, consider conducting this weekly cleaning procedure more than once per week.

CLEANING THE STANDARD STEEL GRIDDLE PLATE COOKING SURFACE

AFTER EACH USE
Clean the griddle cooking surface regularly with a griddle scraper during the work shift.

ONCE PER DAY
Turn the griddle off and allow it to cool down between 275°F-300°F, apply room temperature water and clean it with a griddle scraper.

ONCE PER WEEK
Clean the griddle surface thoroughly. Use a griddle brick, screen, or Scotch Bright™ pad on the surface as necessary. Rub with the grain of the metal while the griddle is still warm (not hot). A detergent may be used on the plate surface to help clean it, but be sure the detergent is thoroughly removed by flushing with clear water. After cleaning, reseason the cooking surface according to the instructions in this manual. If the griddle usage is very high, consider conducting this weekly cleaning procedure more than once per week.

CLEANING THE OPTIONAL CHROME GRIDDLE PLATE COOKING SURFACE

AFTER EACH USE
Clean the griddle cooking surface regularly with a palmetto brush and a bladed griddle scraper during the work shift. Never use an abrasive scouring pad or griddle brick on a chrome plate surface. The chrome surface can be damaged by careless use of a spatula or scraper.

ONCE PER DAY
Clean chrome surfaces with a damp cloth and polish with a soft dry cloth.

ONCE PER WEEK
If the chrome plate has become carbonized or blackened, use a non-abrasive, non-silicated cleaner such as Bon Ami®. Be sure the cleaning agent is thoroughly removed by flushing with clear water. Wipe with a damp cloth and polish with a soft dry cloth. After cleaning, reseason the cooking surface according to the instructions in this manual.

CLEANING THE OPTIONAL RAPID RECOVERY™ COMPOSITE GRIDDLE PLATE COOKING SURFACE

The Rapid Recovery™ griddle plate is a composite material which is engineered to provide a high heat transfer rate to the food. The top surface is stainless steel and can be scored or dented by careless use of a spatula or scraper.

AFTER EACH USE
Clean the griddle cooking surface regularly with Nemco Easy Grill Scraper™ or similar type of griddle scraper during the work shift.

ONCE PER DAY
Turn the griddle off and allow it to cool down between 275°F-300°F, apply room temperature water and clean it with a griddle scraper.

ONCE PER WEEK
Clean the griddle surface thoroughly with water, Scotch-Brite™ Quick Clean Griddle System or Ecolab Grease Express™ High-Temp Grill Cleaner. Be sure the cleaning agent is thoroughly removed by flushing with clear water. After cleaning, reseason the cooking surface according to the instructions in this manual.

If the griddle usage is very high, consider conducting this weekly cleaning procedure more than once per week.

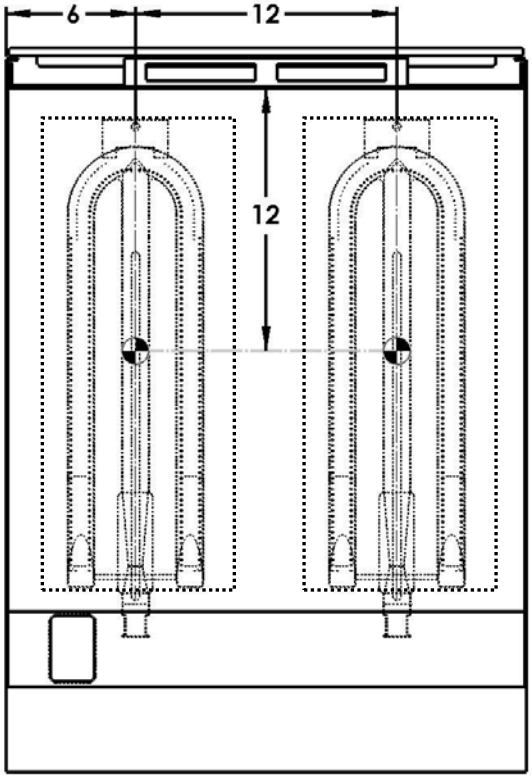
Do not use a brick or griddle stone for cleaning.

Do not use chlorine sanitizer in contact with griddle. Contact can cause discoloration, corrosion and permanent damage.

Do not use cleaning agents including Sodium Hydroxide, which is common in household oven cleaners.

ADJUSTMENTS

CALIBRATION



1. Each thermostat controls a 12” zone of the griddle. Using a Surface Probe temperature measurement device, observe the temperatures at the center points of the cooking zones. These points are located by starting 6” from the side splash (left or right) and every 12” across the width of the griddle, with all points located 12” back from the front edge of the griddle plate.

   NOTE: Use of infrared thermometers is not recommended. These devices are highly sensitive to surface color (clean or dirty), angle of reading and distance from the unit.

2. Set thermostats to 350°F and allow to stabilize, allowing the burner to cycle ON and OFF at least two times.

3. Watch for the thermostat cycle light to go OFF, then measure the temperature for that zone. The temperature should be 350°F ±10°F. If not, continue to Step 4.

4.

   a. Carefully loosen the knob set screw. DO NOT allow the knob to turn. Carefully remove the knob from the thermostat shaft, exposing the temperature dial.

   b. Loosen screws on the temperature dial and adjust so the temperature indicated by the knob arrow matches the griddle plate temperature reading. Knob will have to be placed back on the shaft to verify adjustment.

5. Once calibration is achieved, tighten the temperature dial screws and knob set screws.

Step 4a. Set knob & check Temperature. Remove knob

Step 4b. – Adjust temperature dial & verify temperature setting

Step 5 –Replace knob & tighten screws

LEVELING

The griddle must be level (side-to-side and front-to-back) during operation to ensure proper performance. Improper leveling can result in uneven temperature distribution, cold spots, and possibly damage electrical components.

1. Place a level on the griddle.
2. Adjust legs by turning the bullet feet at the bottom of each leg. Using pliers or a crescent wrench, turn the feet counter-clockwise to increase height, and clockwise to decrease height until leveling is achieved. Do not extend the legs more than 1-¾".

MAINTENANCE

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

GENERAL

The griddle should be checked yearly by a qualified gas service technician for proper calibration, proper gas pressure and grease or gas leaks.

VENT

Daily, when the griddle is cool, check the flue vent (at rear of unit) and clear any obstructions.

SERVICE AND PARTS INFORMATION

Contact the Service Contractor in your area to obtain service and parts information. For a complete listing of Service and Parts depots refer to **www.vulcanequipment.com**.

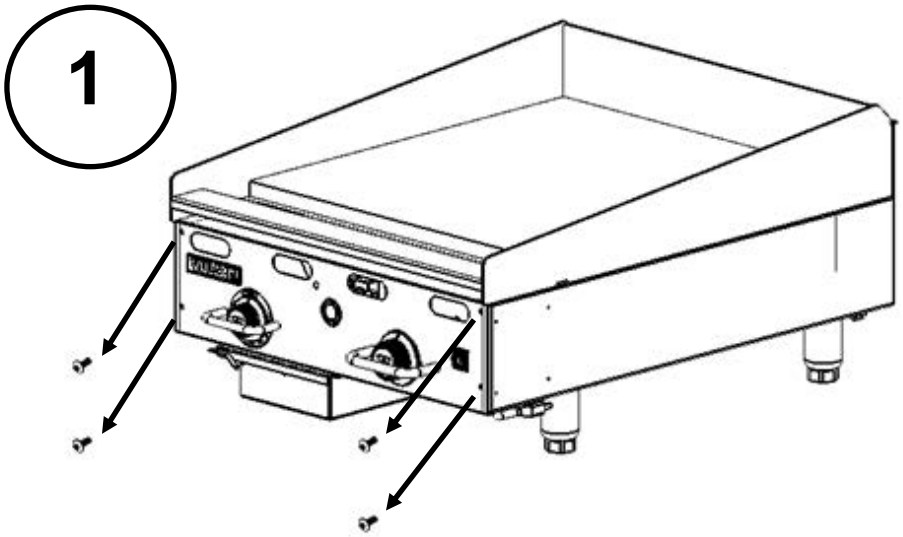
When calling for service the following information should be available from the appliance serial plate: Model Number, Serial Number and Gas Type. The appliance serial plate is located on the right side panel.

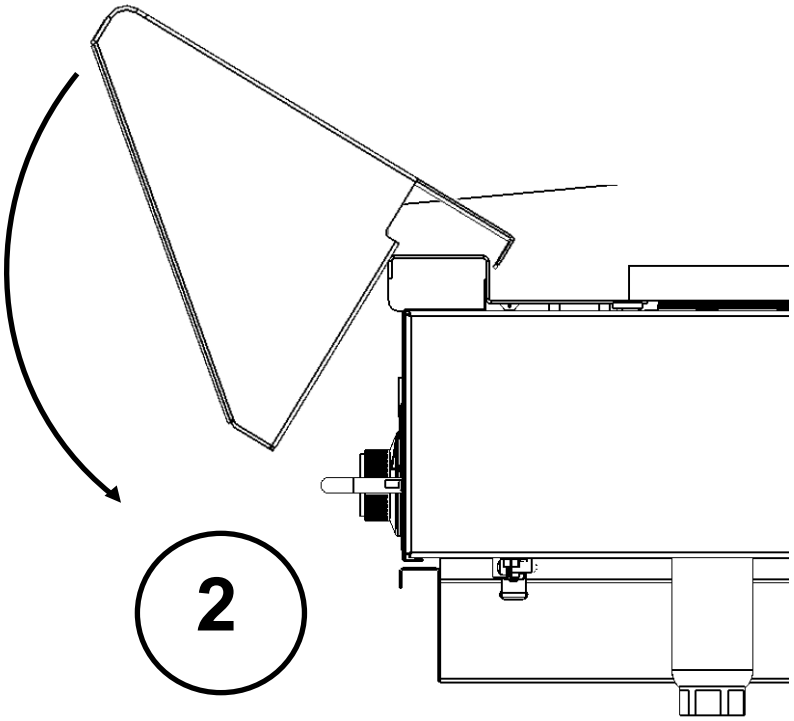
TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSES
Heat does not come on when individual thermostat knob is set	1. Cooking surface temp is above set point. 2. Pilot burner not lit. 3. Problem with burner solenoid valves. (Call for service) 4. Problem with thermocouple. (Call for service) 5. Low gas pressure. (Call for service)
Pilot burners will not light	1. Main gas shut-off valve not in On position. 2. Power switch not in ON position. 3. Push power switch to OFF and back to ON to restart pilot ignition cycle. 4. Problem with safety-ignition module. (Call for service) 5. Obstructed pilot orifice. (Call for service) 6. Low gas pressure. (Call for service)
Pilot burner will not stay lit	1. Obstructed orifice. (Call for service) 2. Gas supply not purged of air. Air blowing pilot out. (Call for service) 3. Problem with pilot safety valve. (Call for service) 4. Electrode sensor not in flame. (Call for service) 5. Low gas pressure. (Call for service)
Fat appears to smoke excessively	1. Temperature set too high. 2. Moisture in food may be turning into steam
Food sticks to griddle or burned around edges or contains dark specs	1. Temperature set too high. 2. Griddle surface requires cleaning and/or seasoning. 3. Surface under food not covered with enough cooking oil.
Food under-cooked inside	1. Temperature set too low. 2. Food not cooked for long enough time.
Food tastes greasy or has objectionable off-flavor	1. Food itself may have off-flavor. 2. Food stored improperly before cooking. 3. Too much griddle fat used. 4. Temperature set too low.
Noticeable build-up of gum on griddle	1. Temperature set too high. 2. Griddle surface needs cleaning and/or seasoning. 3. Too much griddle fat used.

ACCESSORY INSTALLATION

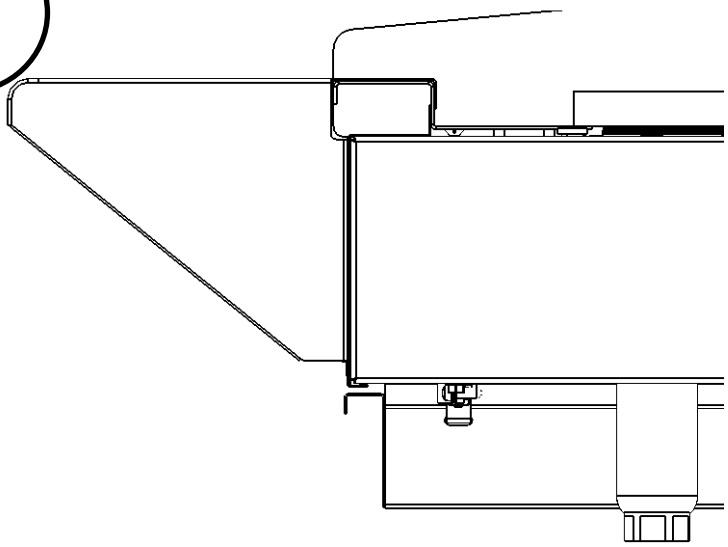
⚠ WARNING The griddle and its parts are hot. Use care when operating, cleaning or servicing the griddle.



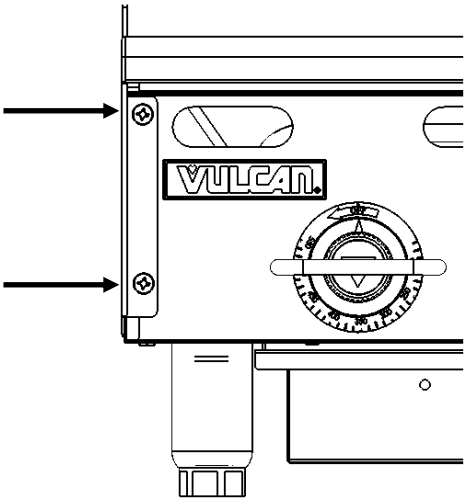


SIDE VIEW

3

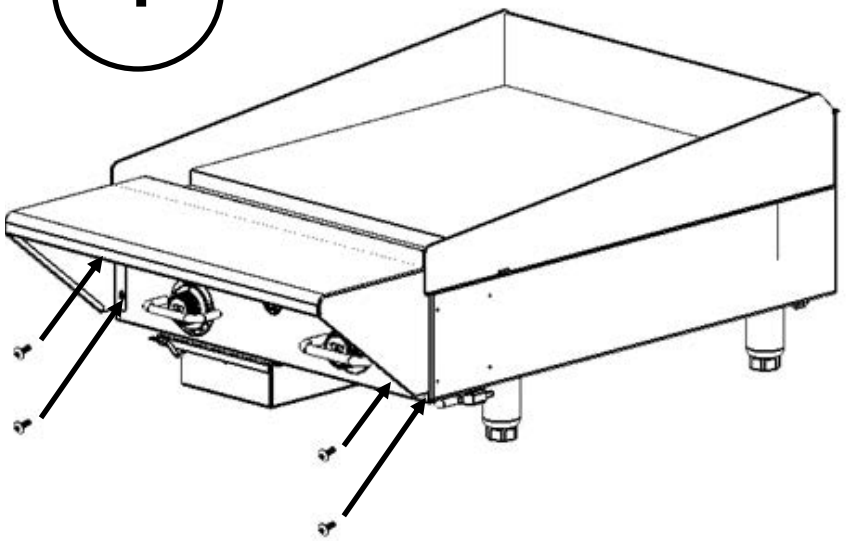


SIDE VIEW



FRONT VIEW

4



NOTES

EXTENDED SHUTDOWN & RESTART OF YOUR VULCAN COOKING EQUIPMENT

Following you will find instructions on how to shut down your Vulcan cooking equipment for an extended period, and how to safely restart equipment after idle.

Always refer to the procedures as instructed in the Installation & Operation manual for your specific model. Manuals may be found by visiting the Vulcan website and clicking on RESOURCES at the top right of the home page.

Always remember that cooking equipment and its parts are hot. Use care when operating, cleaning or performing maintenance.

For additional product resources, please visit https://www.vulcanequipment.com/.

GAS & ELECTRIC GRIDDLES

Follow the cleaning procedure in the Installation & Operation manual.

Pay close attention to flue area on gas equipment. Grease will harden over time and anything not cleaned could become a failure point at restart.

Model MSA48

EXTENDED SHUTDOWN – 900RX, MSA, ASA, AGM MODELS

1. Turn the griddle shut-off valve and/or the main gas supply valve to the off position.
2. Unplug the griddle electrical supply cord (if applicable).
3. Apply a heavy coat of vegetable oil over the griddle plate to inhibit rust.

EXTENDED SHUTDOWN – VCCG GRIDDLE

1. Push the power switch to the off position.
2. Shut the main gas supply valve to the off position.
3. Unplug the griddle electrical supply cord.
4. Apply a coat of vegetable oil over the griddle plate to inhibit rust.

EXTENDED SHUTDOWN – HEG, RRE, WEG ELECTRIC GRIDDLES

1. Turn all thermostats to the off position.
2. Shut off the main electrical supply.
3. Apply a heavy coat of vegetable oil over the griddle plate to inhibit rust.

RESTART FROM EXTENDED SHUTDOWN – ALL MODELS

1. Schedule a qualified gas service technician to be onsite upon restart if kitchen has been down for more than 30 days.
    a. Check all gas equipment in kitchen for gas leaks.
2. Perform the BEFORE FIRST USE cleaning instructions as instructed in the Installation & Operation manual for your specific model.

SERVICE MANUAL

22444

948RX

Heavy Duty Gas Griddles

924RX
936RX
948RX
960RX
972RX
MSA24
MSA36
MSA48
MSA60
MSA72
ASA24
ASA36
ASA48
ASA60
ASA72

- NOTICE -

This Manual is prepared for the use of trained Vulcan Service Technicians and should not be used by those not properly qualified.

This manual is not intended to be all encompassing. If you have not attended a Vulcan Service School for this product, 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 be performed by a trained Vulcan Service Technician.

This manual has been provided to you by ITW Food Equipment Group LLC ("ITW FEG") without charge and remains the property of ITW FEG, and by accepting this manual you agree that you will return it to ITW FEG promptly upon its request for such return at any time in the future.

TABLE OF CONTENTS

SERVICES UPDATES

SERVICE UPDATES

November, 2018
- Added TIS Document List.

February 2019
- Updated PILOT, THERMOCOUPLE ASSEMBLY.

TIS DOCUMENT LIST - 900RX SERIES

SERVICE TAB	
Document Title	**Document Type**
900RX Series Heavy Duty Gas Griddles Service Manual	Service Manual

SERVICE TAB (Multimedia)	
Document Title	**Document Type**
Repairing Flood-Damaged Food Equipment	Misc
900RX Series Heavy Duty Gas Operation & Installation Manual	Operator
AGE, AGM, 900RE, 900RX, and ASA Series Gas Griddle Grease Chute P/N 498234-A Installation Instructions	Service Instructions
Fundamentals of Gas	Service Instructions
Rating Plate Locations on Current Vulcan-Hart/Wolf Range Equipment	Technical Service Bulletin (TSB)
TSB 0842 4 Position/3 Heat Switch - Ranges, Ovens, Broilers	Technical Service Bulletin (TSB)
TSB 1037A Hobart to Vulcan "Common" Model Cross Reference List	Technical Service Bulletin (TSB)
TSB 1301 Onwatch Quicklook 72 for Gas Cooking Equipment	Technical Service Bulletin (TSB)
TSB 682 Griddle Lead Wire Upgrading	Technical Service Bulletin (TSB)
RobertShaw FS Flame Switch Recall Vulcan & Wolf Equipment Effected - PN 713933	Temporary Service Instructions (TSI)

PARTS TAB	
Document Title	**Document Type**
900RX and MSA Heavy Duty Gas Griddles Parts Catalog	Parts Catalog

GENERAL

⚠ WARNING

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

INTRODUCTION

This Service Manual covers specific service information related to the models listed on the front cover and built after March 2010.

Procedures in this manual will apply to all 900RX models unless specified. No procedure in this manual will require the removal or raising of the griddle plate. Pictures and illustrations can be of any model unless the picture or illustration needs to be model specific.

MSA griddles have a standing pilot that must be lit manually. One pilot services two burners via a flame tube between the burners. The 900RX utilizes a spark ignition system that has a 'momentarily on' switch - that means the switch must be held down for sparking to take place, and it ceases sparking when released.

The MSA and 900RX have BASO® pilot safety valves that must be pressed to allow gas to feed the pilot burner. For the 900RX, the pilot buttons must be pressed at the same time the power switch is pressed in order to light the pilot.

INSTALLATION

Generally, installations are made by the dealer or contracted by the dealer or owner. Detailed installation instructions are included in the Installation and Operation Manual that is sent with each unit. However, it should be noted that an improperly installed unit, especially an unlevel unit can lead to premature electrical component failures. A unit that is higher in the front will cause the flue gases to vent improperly and gather in the front near the electrical components. All models must be installed with an externally mounted regulator.

OPERATION

Detailed operation instructions are included in the Installation & Operation Manual sent with each unit and are also available at WWW.VULCANHART.COM.

The 900RX models feature an electric ignition system that is controlled by a momentary power switch. The power switch turns the electric ignition system off and on only and will only supply power to the igniters when held down in the ON position. The burners and pilots will continue to work with the power switch in the OFF position until the gas supply to the unit is cut off or the griddle gas shut-off valve is turned to the OFF position. The pilots are monitored by thermocouples and pilot safety valves. If the pilot goes out, the safety valve will shut-off the gas supply to the pilot and main burners. In the event of a failure of the electronic ignition system, it is possible to ignite the pilots with an outside source (such as a lit taper). You will have to reach under the front of the unit and through the pilot cutout to ignite the pilots while again depressing the corresponding red button.

CLEANING

Detailed cleaning procedures are included in the Installation & Operation manual sent with each unit.

SPECIFICATIONS

Stainless steel front, sides and front top ledge. Fully welded stainless and aluminized steel body frame. 11" low profile cooking height on 4" legs. 1" thick polished steel griddle plate with 12 gage, 4" stainless steel back and tapered side splashes. Grease chute is fully welded to stop grease migration.

One 27,000 BTU/hr. “U” shaped aluminized steel burner and mechanical snap action thermostat for each 12" of griddle width. Chrome thermostat knob guards. Temperature adjusts from 200° to 550° F. One pilot safety for every two burners. Manual shut-off valve. 3½" wide stainless steel grease trough. 120V 50/60Hz 1 Amp single phase electric ignition circuit. Plug type is NEMA 5-15 USA. ¾" rear gas connection and gas pressure regulator.

A gas pressure regulator supplied with the unit must be installed.

Check and set the gas pressure after the regulator is installed.

Manifold pressure should be:

Natural Gas 4.0" W.C.

Propane Gas 10.0" W.C.

Incoming pressure should be 5-9" W.C. for Natural Gas and 11.0" W.C. for Propane Gas.

Incoming pressure should not exceed 14.0" W.C.

TOOLS

- Standard set of hand tools.
- VOM with A/C current tester (any quality VOM with a sensitivity of at least 20,000 ohms per volt can be used).
- Temperature tester (thermocouple type).
- U-Tube or Digital Manometer.
- Thread sealant suitable for use with natural or propane gas.
- Aluminum Foil Tape - McMaster Carr Part No. 7631421 or equivalent.
- Adapter to test thermocouple, Johnstone Supply Part No. H23-226 or equivalent.

Fig. 1

COMPONENT LOCATION

Front View 924RX

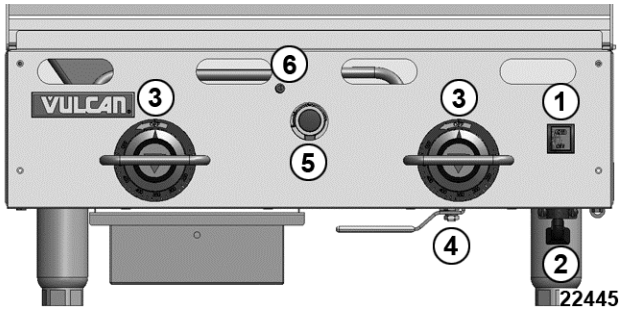


Fig. 2

1. Pilot electric ignition system control switch (RX only)
2. Power cord (RX only)
3. Thermostat
4. Gas shut off valve (RX only)
5. BASO® pilot safety valve
6. Pilot flame adjustment

Top View 924RX

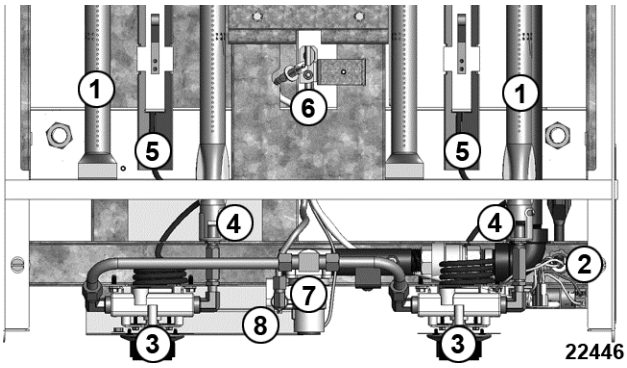


Fig. 3

1. Burner assembly
2. Electric igniter (RX only)
3. Thermostat
4. Orifice
5. Thermostat capillary tube
6. Pilot, igniter (RX only) and thermocouple
7. BASO® pilot safety valve
8. Pilot adjustment valve

REMOVAL AND REPLACEMENT OF PARTS

COVERS AND PANELS

⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

FRONT PANEL

1. Turn all thermostats to off position, loosen set screw securing thermostat knobs and pull off knobs.

NOT IN OFF POSITION FOR VIEW

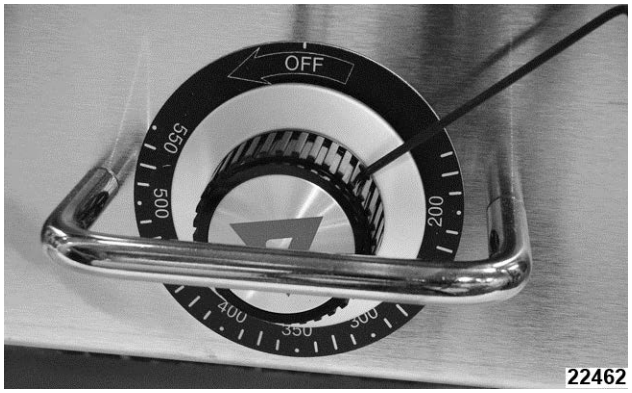


Fig. 4

2. Remove screws securing front panel to griddle.
3. Pull front panel forward and lay aside. If servicing a 900RX lay front panel face down in front of unit.
4. Install in reverse order.

NOTE: Before installing front panel, check that lineof-sight through the front panel to see both pilot burners and griddle burners. Move any flexible gas tubing, or capillary tubing that may obstruct the sight holes.

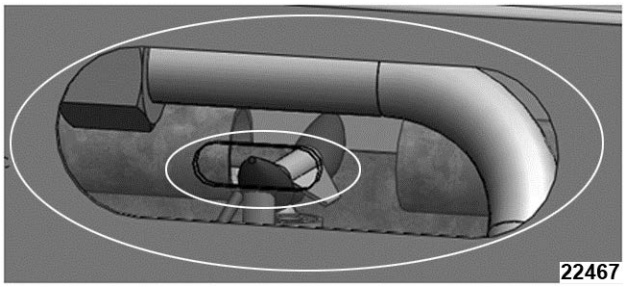


Fig. 5

BACK PANEL

⚠ WARNING

Shut off the gas before servicing the unit and follow lockout / tagout procedures.

⚠ WARNING

All gas joints disturbed during servicing must be checked for leaks. Check with a soap and water solution (bubbles). Do not use an open flame.

NOTE: It will be necessary to remove the back panel when changing a burner or to remove excessive grease build up from flue area.

1. Disconnect gas supply at griddle.

   Remove screws securing back panel to griddle.

   Install in reverse order.

MOMENTARY POWER SWITCH (900RX)

⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Remove FRONT PANEL.
2. Label and disconnect wires from power switch.
3. Squeeze switch retainers and slide switch out through front of panel.

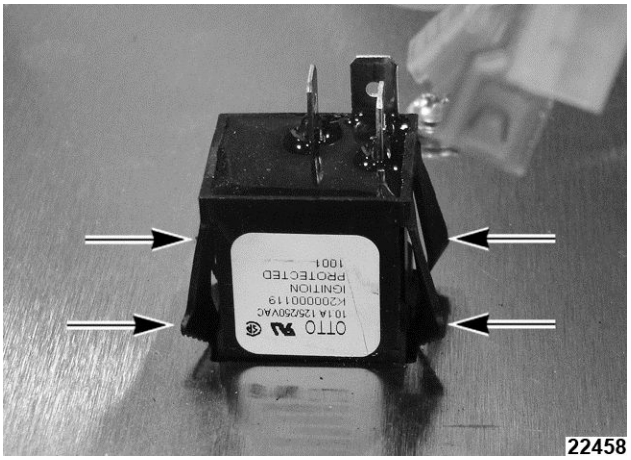


Fig. 6

4. Install in reverse order.

ELECTRIC IGNITER (900RX)

⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Remove FRONT PANEL.
2. Push tab to release igniter from frame and pull out of unit.

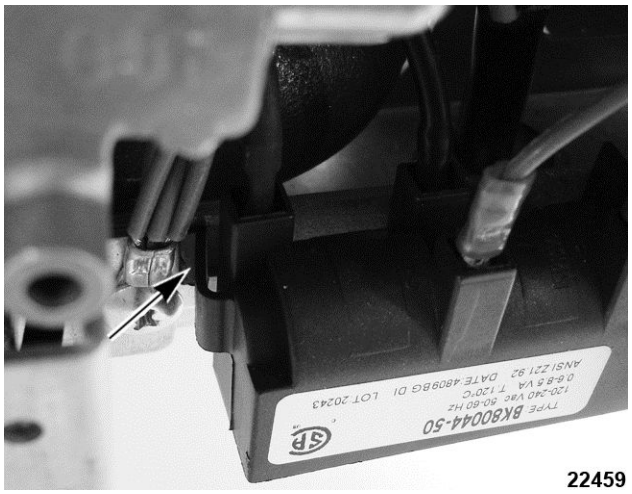


Fig. 7

3. Label and disconnect wires from electric igniter.
4. Install in reverse order.

BASO SAFETY VALVE

⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

⚠ WARNING

Shut off the gas before servicing the unit and follow lockout / tagout procedures.

⚠ WARNING

All gas joints disturbed during servicing must be checked for leaks. Check with a soap and water solution (bubbles). Do not use an open flame.

1. Remove FRONT PANEL.
2. Measure distance between manifold pipe and valve for reassembly later.

NOTE: Ignition wires must be routed in front of valves as shown to prevent them from touching hot heat shield.

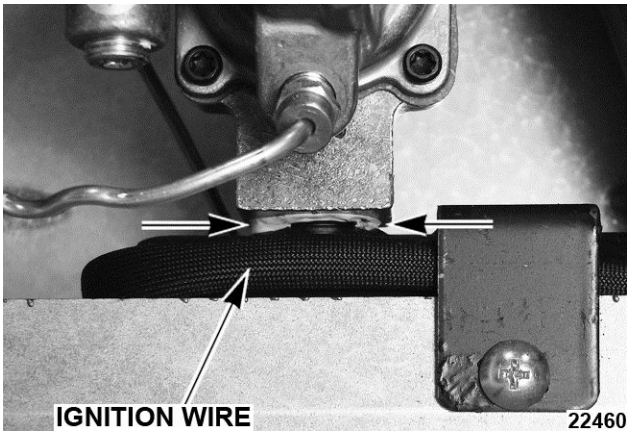


Fig. 8

3. Disconnect all gas lines and thermocouple from valve.
4. Remove valve from unit.
5. Transfer fittings from old valve to new valve. Use thread sealant on assembly.
6. Install new valve to same measurement as in Step 2.
7. Continue to install in reverse order.

THERMOSTAT VALVE ASSEMBLY

⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

⚠ WARNING

Shut off the gas before servicing the unit and follow lockout / tagout procedures.

⚠ WARNING

All gas joints disturbed during servicing must be checked for leaks. Check with a soap and water solution (bubbles). Do not use an open flame.

1. Remove FRONT PANEL.
2. Disconnect gas line.

3. Remove screws securing thermostat mounting bracket to frame.

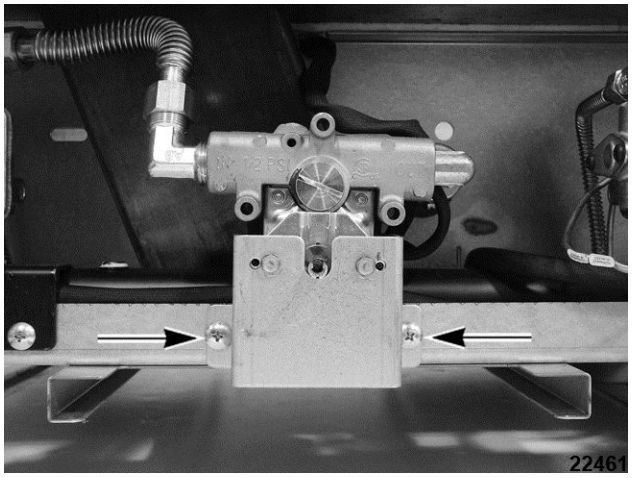


Fig. 9

4. Pull capillary tube out from underneath griddle plate.
5. Transfer fittings from old thermostat to new thermostat. Use thread sealant.
6. Transfer thermostat mounting bracket to new thermostat.
7. Remove insulator sleeve from old capillary tube and install on new thermostat.
8. Secure end of insulator sleeve to thick end of capillary tube with metal tape as shown.

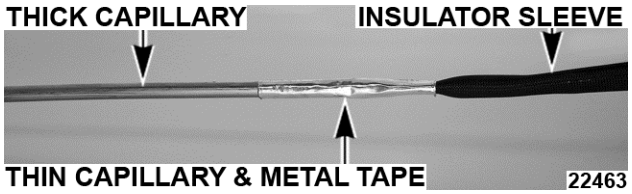


Fig. 10

9. Slide capillary tube all the way into slot underneath griddle plate until it is fully seated.
10. Carefully insert orifice into burner and secure thermostat mounting bracket to frame.

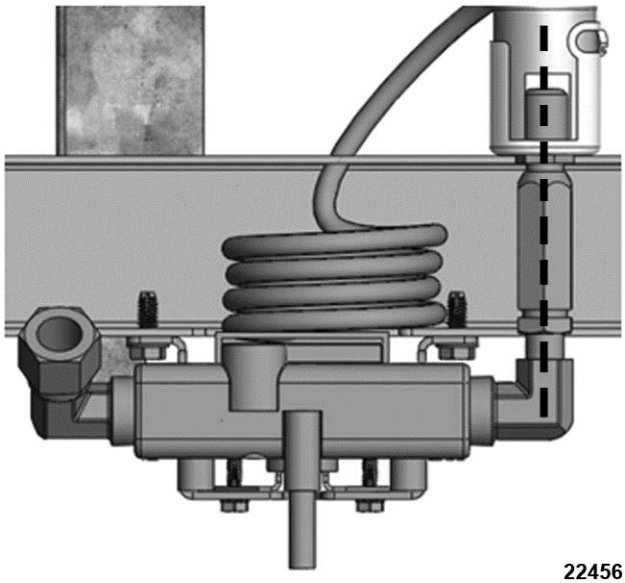


Fig. 11

11. Inlet to burner must be straight. Adjust thread on orifice and/or extension to close gap between orifice and burner to 1/16".

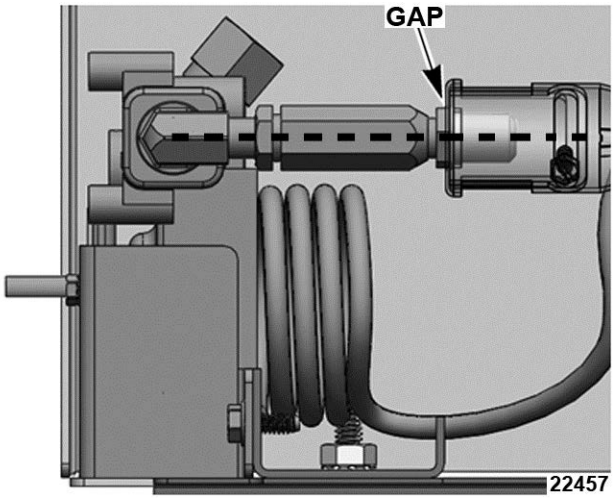


Fig. 12

12. Continue to install in reverse order.

BURNER

⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

⚠ WARNING

Shut off the gas before servicing the unit and follow lockout / tagout procedures.

⚠ WARNING

All gas joints disturbed during servicing must be checked for leaks. Check with a soap and water solution (bubbles). Do not use an open flame.

1. Remove FRONT PANEL and BACK PANEL.
2. Disconnect gas supply at griddle.
3. Remove screw securing burner to wall.

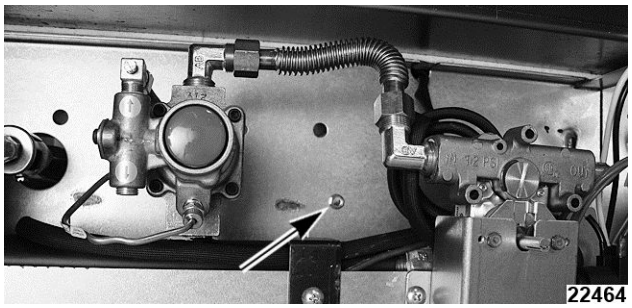


Fig. 13

4. At rear of unit, pull burner enough to disengage burner pin from frame and pull burner out.

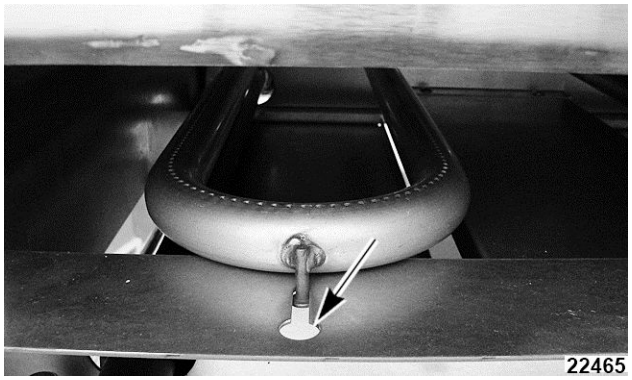


Fig. 14

5. Install in reverse order.
6. Adjust as outlined in BURNER ADJUSTMENT.

PILOT, THERMOCOUPLE ASSEMBLY

⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

⚠ WARNING

Shut off the gas before servicing the unit and follow lockout / tagout procedures.

1. Remove FRONT PANEL.
2. From underneath the front of the griddle, remove screw securing pilot assembly bracket.

VIEW FROM REAR OF UNIT TO SEE PARTS

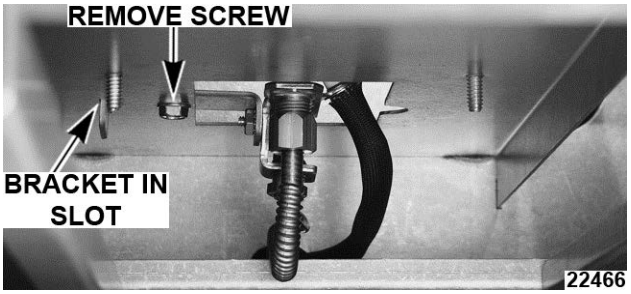


Fig. 15

3. Carefully lift to disengage bracket from slot and work assembly down to access parts.
4. With pilot (1, Fig. 16) centered in flash tube opening, center align ignition ports with both sides of flash tube (2, Fig. 16). Verify 1/8” gap between the end of flash tube and burner on both sides.

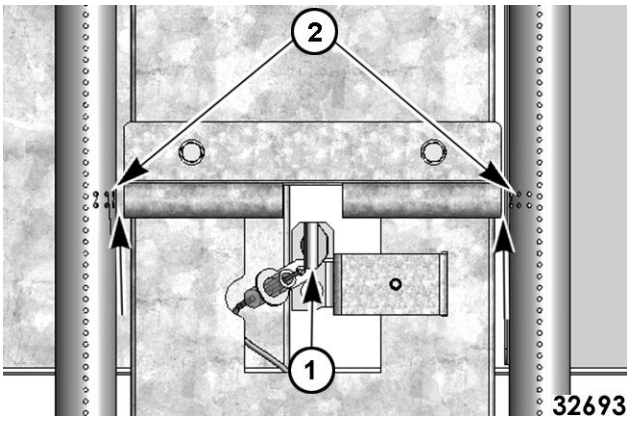


Fig. 16

5. Service assembly as required and assemble in reverse order being sure bracket is seated in slot for alignment.

SERVICE PROCEDURES AND ADJUSTMENTS

CALIBRATION

LEVEL

The griddle must be level (side-to-side and front-to-back) during operation to ensure proper performance. Improper leveling can result in uneven temperature distribution, cold spots, and possibly damage electrical components.

1. Place a level on the griddle.
2. Adjust legs by turning the bullet feet at the bottom of each leg. Using pliers or a crescent wrench, turn the feet counter-clockwise to increase height, and clockwise to decrease height until leveling is achieved. Do not extend the legs more than 1-¾".

CALIBRATE

1. Each thermostat controls a 12" zone of the griddle. Using a Surface Probe temperature measurement device, observe the temperatures at the center points of the cooking zones. These points are located by starting 6" from the side splash (left or right) and every 12" across the width of the griddle, with all points located 12" back from the front edge of the griddle plate.

NOTE: Use of infrared thermometers is not recommended. These devices are highly sensitive to surface color (clean or dirty), angle of reading and distance from the unit.

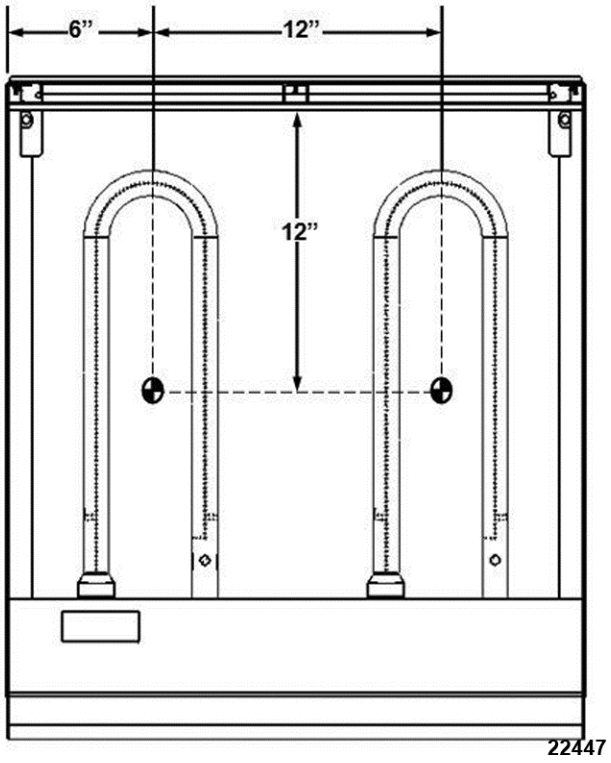


Fig. 17

2. Set thermostats to 350°F and allow to stabilize.
3. Record the temperature tester readouts for each zone for *3 cycles*.

Temperature Tester turn-*off* deg F	**Temperature Tester turn-*on* deg F**	**Turn-Off + Turn-On divide by 2 = average**
		Total averages
		divide by 3 ____ deg F

4. Calculate total average temperature for that zone.
5. The temperature should be 350°F ±15°F. If not, continue to next step.

6. Carefully loosen the knob set screw. DO NOT allow the knob to turn. Carefully remove the knob from the thermostat shaft, exposing the temperature dial.

Fig. 21

7. Loosen screws on the temperature dial and adjust it so that the temperature indicated by the knob arrow matches the griddle plate temperature reading. Knob will have to be carefully placed back on the shaft to verify adjustment.

Fig. 22

NOTICE

Never adjust the screw in the center of the thermostat shaft. This will ruin the factory calibration; the thermostat will no longer operate properly and will need to be replaced.

8. Once calibration is achieved, tighten the temperature dial screws and knob set screws.

Fig. 23

9. Repeat Steps 3 thru 8 for each zone.

PILOT ADJUSTMENT

Using a flathead screwdriver, turn the slotted pilot adjustment screw clockwise to decrease the flame, and counterclockwise to increase the flame.

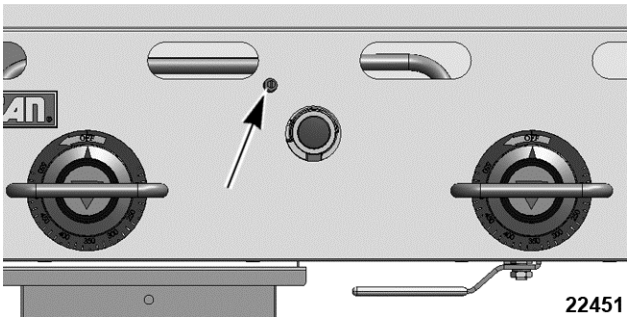


Fig. 24

GAS PRESSURE MEASUREMENT

⚠ WARNING

All gas joints disturbed during servicing must be checked for leaks. Check with a soap and water solution (bubbles). Do not use an open flame.

1. Turn the gas supply off at a manual shutoff valve.
2. Remove the control panel.
3. Remove the pressure tap plug and attach manometer.
4. Turn gas back on.
5. Light pilot(s).
6. Turn all thermostats on to the maximum setting so that all burners are on.
7. Turn all the equipment on the same supply line on.

8. Check gas pressure.
9. Gas pressure should read 4” W.C. for natural and 10” W.C. for propane gas. If not correct, refer to GAS PRESSURE REGULATOR ADJUSTMENT.
10. Turn gas supply off, disconnect manometer and reinstall pressure tap plug.

924RX SHOWN

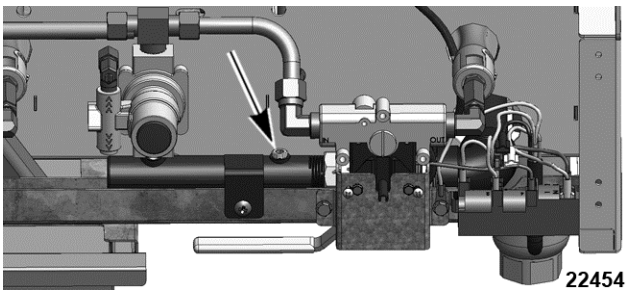


Fig. 25

GAS PRESSURE REGULATOR ADJUSTMENT

A gas pressure regulator is supplied with the griddle and must be installed as close to the griddle 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 griddle and the regulator is positioned with the vent plug and adjustment screw upright. Check that vent plug is not clogged by grease and debris.

Check and set the gas pressure after the regulator is installed. The pressure should be set for 4” water column (W.C.) for natural gas and 10” W.C. for propane gas while all burners are on.

The 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 griddle be connected to supply pressure greater than ½ psig (3.45 kPa) or 14” W.C.

Graphic shows pressure plug location.

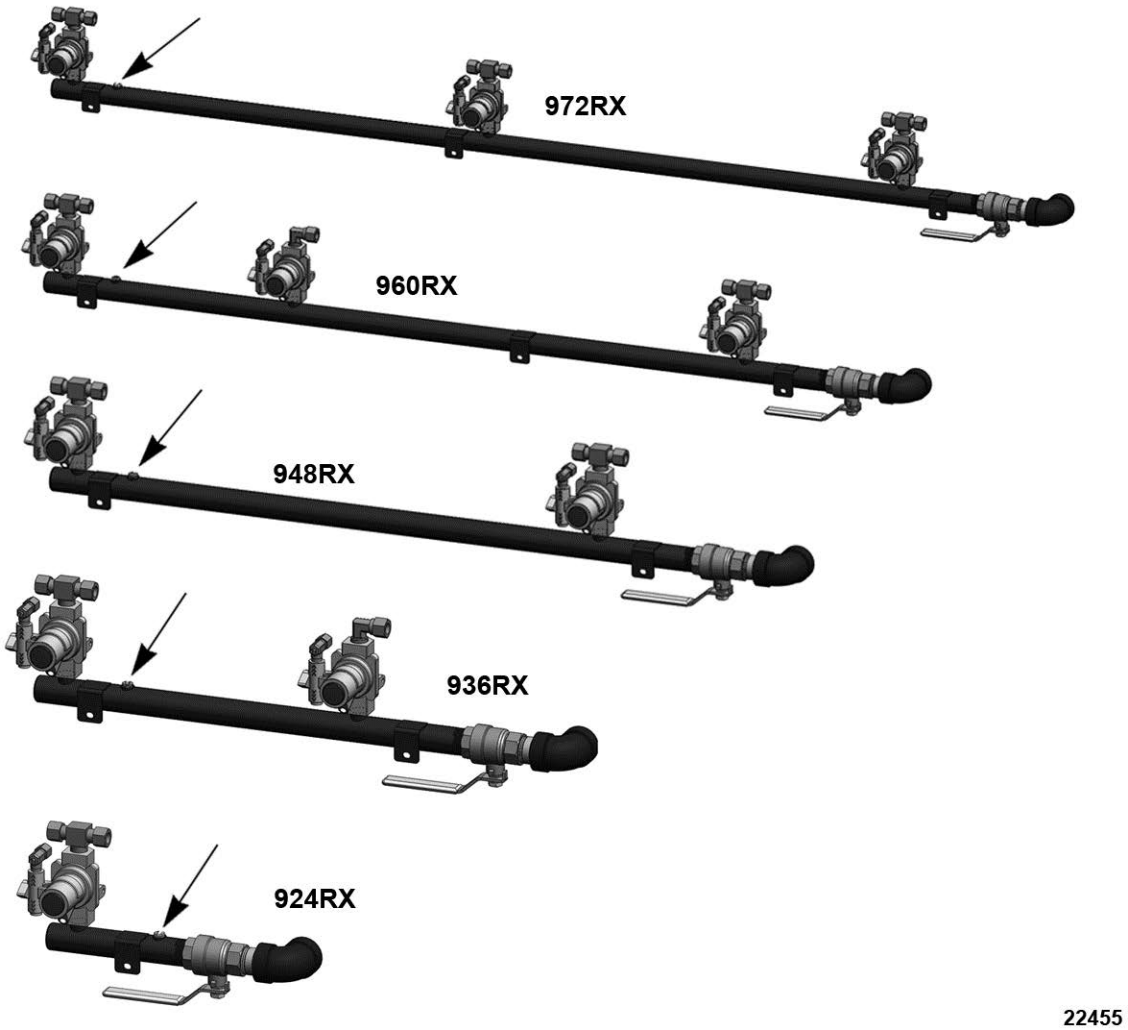


Fig. 26

NOTE: MSA models are in same locations. There are no shut off valves.

BURNER ADJUSTMENT

For efficient burner operation, it is important that a proper balance of gas volume and primary air supply is maintained to give complete combustion. Insufficient air supply results in a yellow streaming flame. Primary air supply is controlled by the air shutter on the front of the burner venturi. Loosen the screw on the venturi and adjust the air shutter to just eliminate yellow tips on the burner flames. Lock the air shutter in place in place by tightening the screw. Repeat this procedure as necessary with all burners.

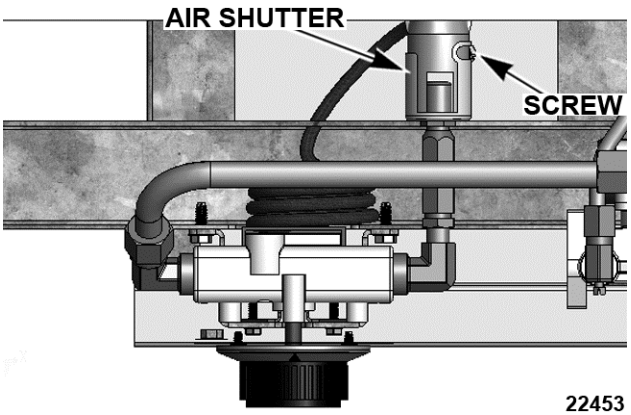


Fig. 27

THERMOCOUPLE TEST

1. Unscrew thermocouple fitting from safety valve.

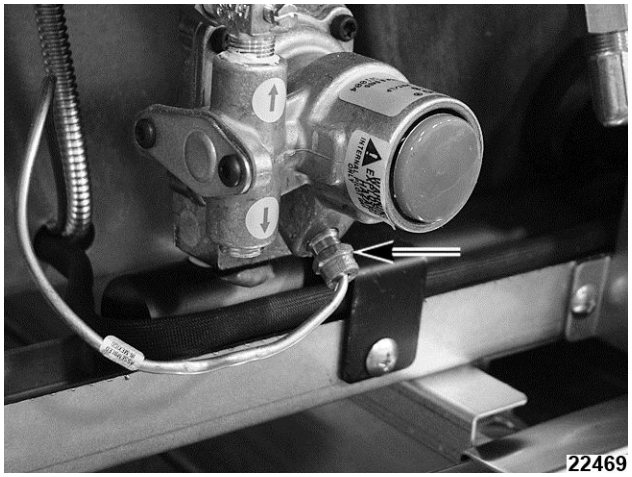


Fig. 28

2. Install thermocouple test adapter finger tight plus a quarter turn.
3. Install thermocouple into test adapter finger tight plus a quarter turn.

NOTE: Over tightening can cause thermocouple tip to short out.

4. Set VOM to DC millivolt scale and connect (+) meter lead to pin on thermocouple adapter and (-) meter lead to thermocouple.

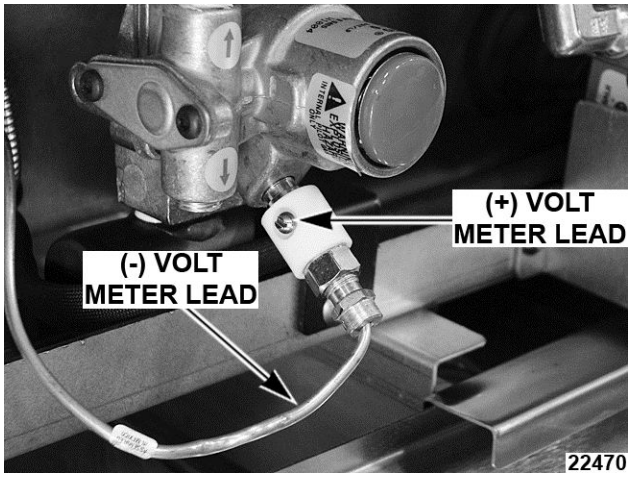


Fig. 29

5. Light pilot flame.
6. Verify that thermocouple is sufficiently immersed in flame. Adjust pilot valve to allow more gas flow if necessary.
7. With thermostat off, allow pilot to burn for 3-4 minutes to stabilize voltage output from thermocouple.
8. Verify thermocouple output voltage.
   A. If 25 - 35 millivolts is measured, the thermocouple is functioning properly.
   B. If less than 17 millivolts is measured, install a replacement thermocouple.
9. Remove test adapter.

ELECTRICAL OPERATION

ELECTRICAL DIAGRAM

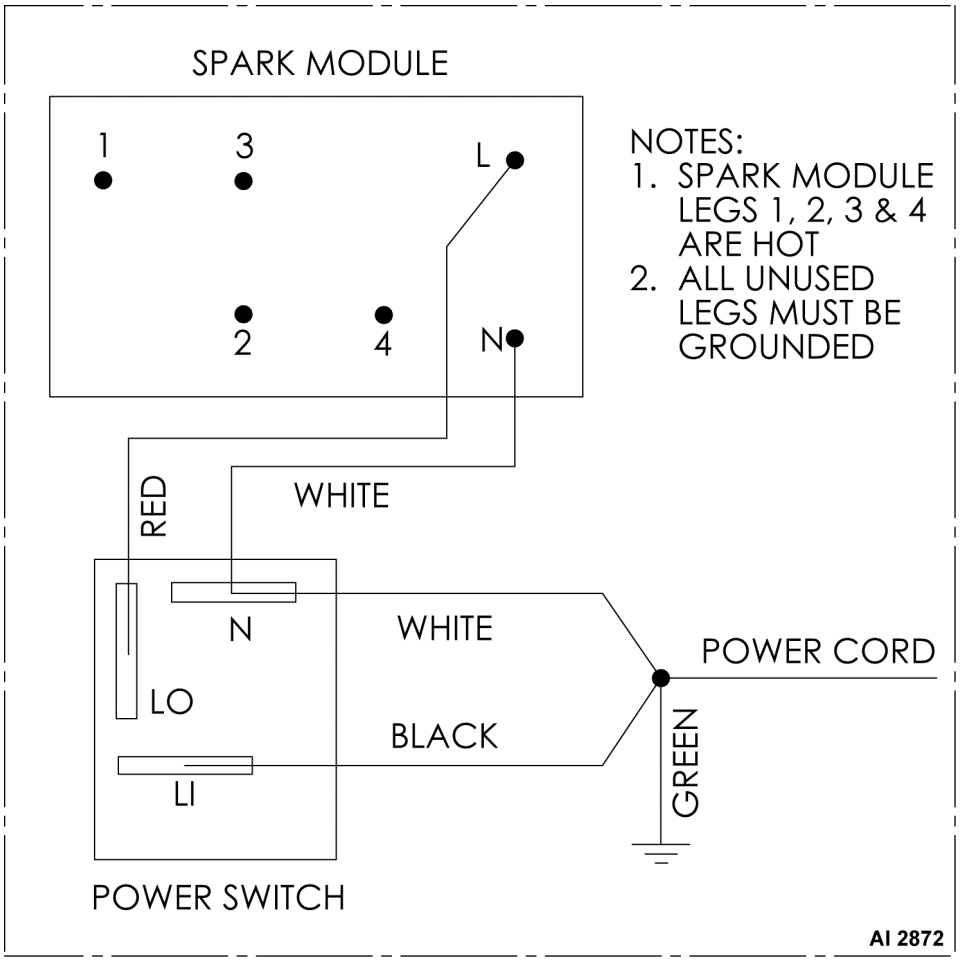


Fig. 30

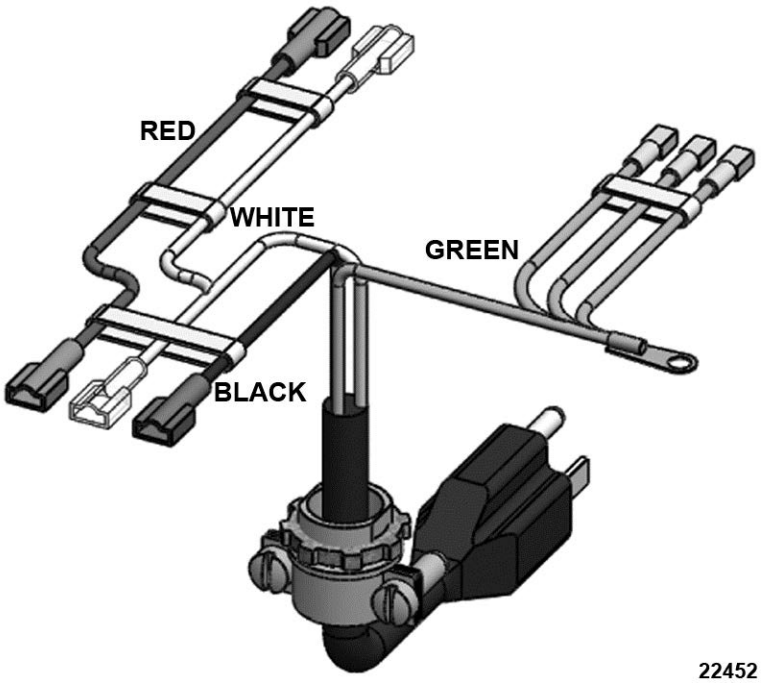


Fig. 31

TROUBLESHOOTING

TROUBLESHOOTING

SYMPTOMS	POSSIBLE CAUSES
No spark to ignite pilot gas.	1. Power cord unplugged. 2. Igniter switch malfunction. 3. Shorted electrode on ignitor. 4. Ignitor cable malfunction. 5. Interconnecting wiring malfunction. 6. Electric Igniter Module malfunction.
Sparks but gas does not ignite.	1. Service gas valve closed. 2. Gas supply not purged of air. Depress pilot safety button until air is purged. 3. Gas supply off or insufficient gas pressure. 4. Adjust pilot valve to allow more gas flow. 5. Safety valve malfunction.
Gas pilot ignites but will not maintain flame.	1. Air blowing pilot out. Prevent air flow from affecting unit. 2. Gas supply not purged of air. Depress pilot safety button until air is purged. 3. Adjust pilot valve to allow more gas flow. 4. Thermocouple not sufficiently immersed in flame. Adjust accordingly. 5. Thermocouple malfunction. Refer to THERMOCOUPLE TEST. 6. Obstructed pilot orifice. 7. Insufficient gas pressure. 8. Safety valve malfunction.
Gas burners ignite but will not maintain flame.	1. Gas pressure incorrect or fluctuating. 2. Obstructed flue. 3. Gas orifice obstructed, improperly aligned / spaced, or incorrect. 4. Burner malfunction.
One or more burners have lower flame level than the others.	1. Check gas pressure. 2. External air flow or vent hood problems may agitate affected burners. 3. Gas orifice obstructed, improperly aligned / spaced, or incorrect. 4. Adjust burner air shutter.

SYMPTOMS	POSSIBLE CAUSES
One burner has a delayed ignition; a several second lapse when the burner actually lights.	1. Check gas pressure. 2. Check that burner is properly seated. 3. Check that burner ignition ports, pilot flash tube and pilot burner are all aligned. 4. Gas orifice obstructed, improperly aligned / spaced, or incorrect. 5. Check burner shutter adjustment. 6. Check pilot flame adjustment.
Excessive or low heat.	1. Gas shut off valve not completely open. 2. Thermostats need calibrated. See CALIBRATION section. 3. Thermostat malfunction. 4. Gas pressure incorrect. 5. Unit's gas regulator not installed or malfunctioning. 6. Incorrect gas type. 7. Gas orifice obstructed or incorrect.
Heat does not come on when the thermostat is turned on.	1. Pilot burner not lit. 2. Griddle shut-off valve not in ON position. 3. Low gas pressure. 4. Thermostat malfunction.

SERVICE MANUAL

VCCG36 Shown

VCCG Series Heavy Duty Gas Griddle

VCCG24
VCCG36
VCCG48
VCCG60
VCCG72

- NOTICE -

This Manual is prepared for the use of trained Vulcan Service Technicians and should not be used by those not properly qualified.

This manual is not intended to be all encompassing. If you have not attended a Vulcan Service School for this product, 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 be performed by a trained Vulcan Service Technician.

This manual has been provided to you by ITW Food Equipment Group LLC ("ITW FEG") without charge and remains the property of ITW FEG, and by accepting this manual you agree that you will return it to ITW FEG promptly upon its request for such return at any time in the future.

TABLE OF CONTENTS

GENERAL

INTRODUCTION

This Service Manual covers specific service information related to the models listed on the front cover. Procedures in this manual will apply to all VCCG Heavy Duty Gas Griddles unless otherwise specified. Raising the griddle plate is not required for servicing the griddle components. Griddle components are serviced through the front and rear. Pictures and illustrations can be of any model unless the picture or illustration needs to be model specific.

The VCCG griddles are available with three different cooking surface types:

- Steel (standard).
- Chrome (optional).
- Rapid Recovery™ Griddle Plate* (optional).

*The Rapid Recovery Griddle plate is a composite material which is engineered to provide a high heat transfer rate to the food. The top surface can be scored or dented by careless use of a spatula or scraper. The center of the plate is an aluminum core with sheets of stainless steel laminated to the top and bottom exterior surfaces.

MODELS

Vulcan

- VCCG24 - 24" x 24" (width x depth) griddle plate.
- VCCG36 - 36" x 24" (width x depth) griddle plate.
- VCCG48 - 48" x 24" (width x depth) griddle plate.
- VCCG60 - 60" x 24" (width x depth) griddle plate.
- VCCG72 - 72" x 24" (width x depth) griddle plate.

INSTALLATION

Generally, installations are made by the dealer or contracted by the dealer or owner. Detailed installation instructions are included in Installation & Operation Manual that is sent with each unit.

It should be noted that an improperly installed unit, especially an unleveled unit can lead to premature electrical component failures. A unit that is higher in the front will cause the flue gases to vent improperly and gather in the front near the electrical components.

OPERATION

Detailed operation instructions are included in the Installation & Operation Manual sent with each unit. The manual is also available online at www.vulcanequipment.com.

SPECIFICATIONS

Electrical

- 120VAC 50/60Hz 2 amp single phase.

- 6 foot corded plug with ground provided.

Gas Manifold Pressure:

- Natural Gas 4.0" W.C.

- Propane Gas 10.0" W.C.

Incoming Gas Pressure:

- 7" to 9" W.C. Natural Gas

- 11" to 12" W.C. Propane Gas.

- Incoming pressure should not exceed 14.0" W.C. (0.5 PSI) for either gas type.

Burner Types

- Griddles with Infrared Burners have one 24,000 BTU/HR burner for each 12" of griddle width.

- Griddles with Radiant Burners***** have one 30,000 BTU/HR burner for each 12" of griddle width.

*****Atmospheric type “U” shaped aluminized steel.

Controls

- One Solid State thermostat with thermocouple probe for each 12" of griddle width.

- Temperature adjustment range 150°F to 550°F on all griddle plate surface types except the Rapid Recovery Griddle plate (150°F to 450°F).

- One Electronic Ignition module with pilot safety system for each 12" of griddle width.

- One Dual Solenoid gas valve with internal regulator for each 12" of griddle width.

TOOLS

Standard

- Standard set of hand tools.
- VOM with ability to measure micro amp current.

- VOM with minimum of NFPA-70E CAT III 600V, UL/CSA/TUV listed. Sensitivity of at least 20,000 ohms per volt. Meter leads must also be rated at CAT III 600V.
- Temperature tester (K type thermocouple preferred) with surface probe.
- U-Tube or Digital Manometer.
- Thread sealant suitable for use with natural or propane gas.

Special

- Torque wrench capable of measuring at least 25 in-lbs. for tightening thermocouple probe to griddle plate. Bolt size 5/16"-18.
- Safekote 60™ or equivalent Heat Transfer and Anti-Seize Compound rated for 600°F (purchase locally). Apply to thermocouple probe.

REMOVAL AND REPLACEMENT OF PARTS

FRONT PANEL

⚠ WARNING Disconnect the electrical power to the machine and follow lockout / tagout procedures.

The front panel holds the temperature controllers, thermostat cycle lights and lighted power switch.

1. Remove four screws securing the front panel to frame.

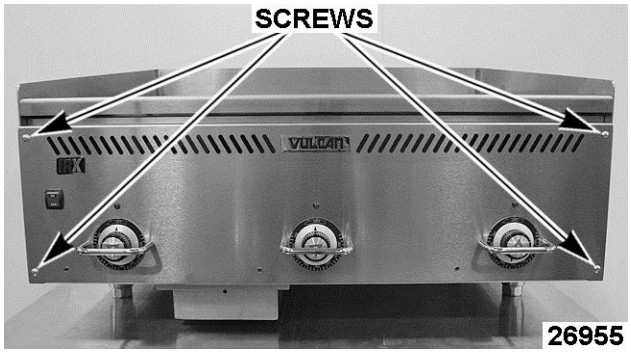


Fig. 1

2. Lay front panel face down in front of the unit while servicing. Pull the drawer out to support the panel as necessary.

NOTE: Griddles that are 60" and 72" wide have 2 grease drawers.

3. Reverse procedure to install.

BACK PANEL

⚠ WARNING Disconnect the electrical power to the machine and follow lockout / tagout procedures.

⚠ WARNING Shut off the gas before servicing the unit.

⚠ WARNING All gas joints disturbed during servicing must be checked for leaks. Check with a soap and water solution (bubbles). Do not use an open flame.

NOTE: Remove the back panel when servicing a burner, temperature probe, pilot burner; or to remove excessive grease build up from the flue area.

1. Disconnect gas supply at griddle.
2. Remove all screws from rear of griddle securing the back panel.

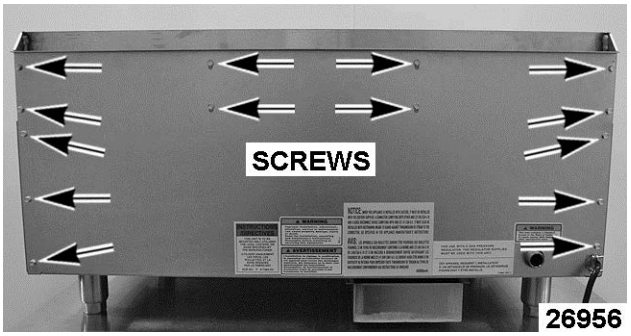


Fig. 2

3. Reverse procedure to install.

CONTROL DEFLECTOR (HEAT SHIELD)

⚠ WARNING Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Remove FRONT PANEL.
2. Remove control deflector (heat shield) from griddle frame. The number of mounting screws installed depends on griddle width. After screws are removed, lift the control deflector and rotate forward to remove from griddle.

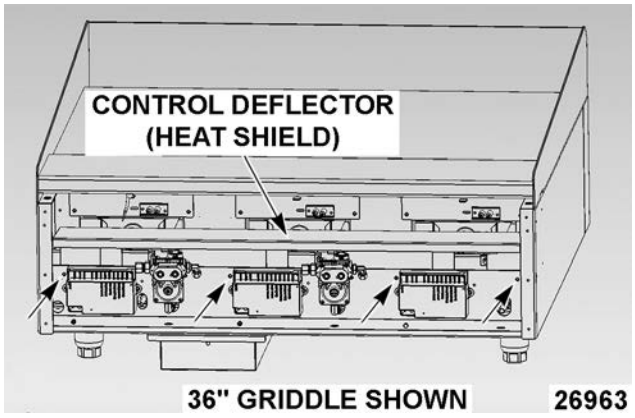


Fig. 3

3. Reverse procedure to install and check for proper operation.

TEMPERATURE CONTROLLER

⚠ WARNING Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Remove FRONT PANEL.
2. Note wire connections then disconnect them from temperature controller.
3. Loosen screws securing knob guard to front panel to provide clearance for knob removal.

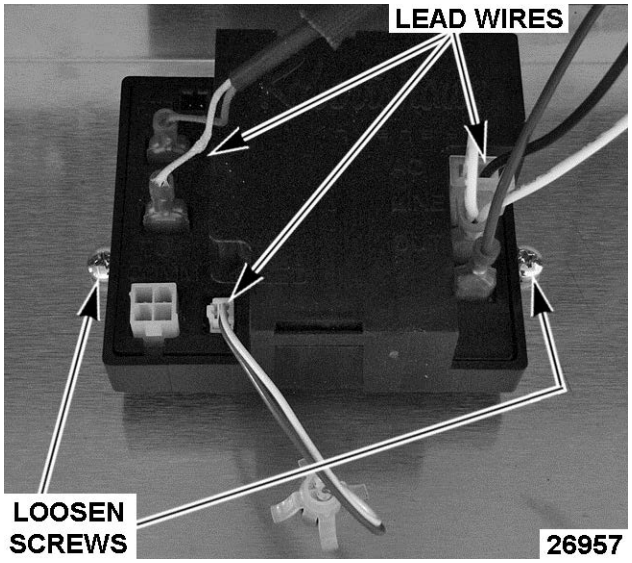


Fig. 4

4. Loosen set screw then remove knob from temperature control shaft.
5. Remove screws securing temperature controller to front panel.

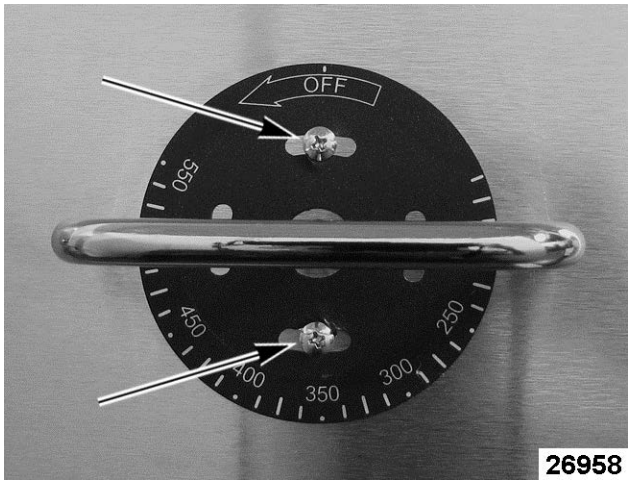


Fig. 5

6. Reverse procedure to install.
7. Check TEMPERATURE CONTROLLER CALIBRATION.

RADIANT BURNER

⚠ WARNING Disconnect the electrical power to the machine and follow lockout / tagout procedures.

⚠ WARNING Shut off the gas before servicing the unit.

⚠ WARNING All gas joints disturbed during servicing must be checked for leaks. Check with a soap and water solution (bubbles). Do not use an open flame.

NOTE: Radiant burner is removed through the front of griddle.

1. Remove BACK PANEL.
2. Remove FRONT PANEL.
3. Remove CONTROL DEFLECTOR (HEAT SHIELD).
4. Remove burner flexible tubing from the burner orifice elbow and gas valve fitting.

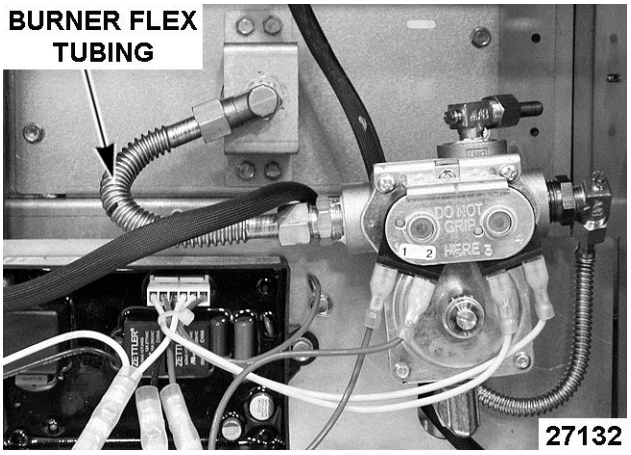


Fig. 6

5. Disconnect compression fitting from gas valve inlet and slide gas valve off the tubing.

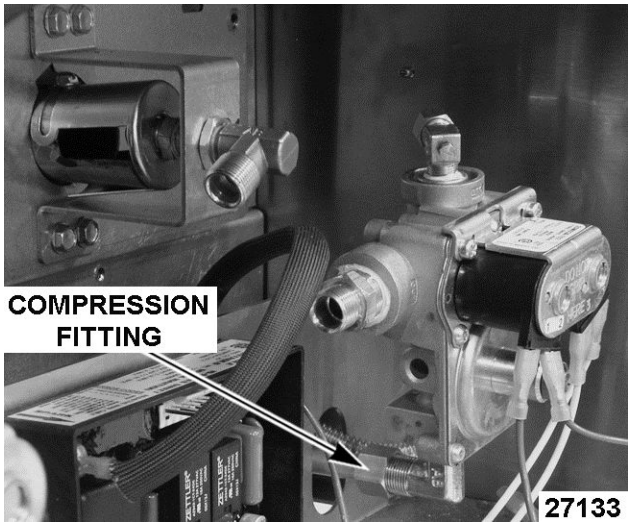


Fig. 7

6. Note thermocouple connections then disconnect from temperature controller.
7. Remove burner shield assembly and burner from griddle (burner remains attached to the burner shield assembly).

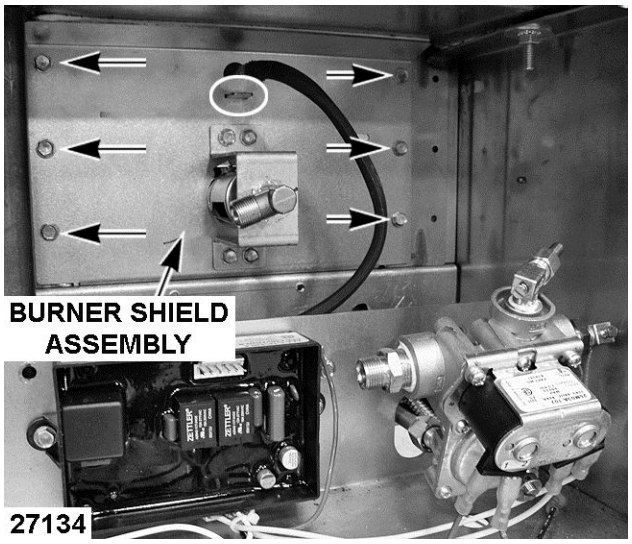


Fig. 8

NOTE: When installing burner, ensure the locating pin and mounting plate at the rear of burner are properly inserted in the mounting slot. At the front of griddle, ensure the thermocouple shield front mounting tab is inserted in the burner shield slot to support the thermocouple shield.

8. Remove orifice holder bracket from burner shield assembly.

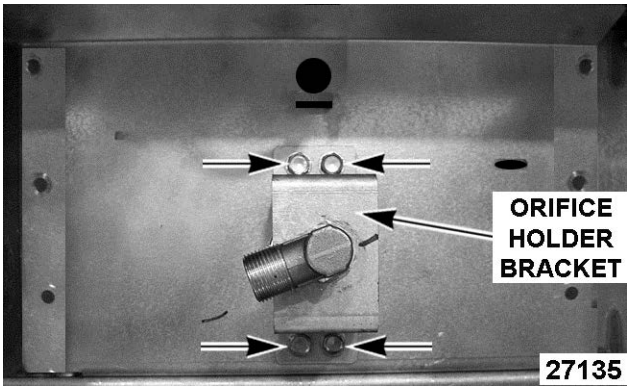


Fig. 9

9. Align mounting screw head on the burner air shutter to the slot in heat shield assembly hole and remove burner from heat shield.
10. Reverse procedure to install and check for proper operation.

THERMOCOUPLE (RADIANT BURNER)

⚠WARNING Disconnect the electrical power to the machine and follow lockout / tagout procedures.

Removal

1. Remove RADIANT BURNER (steps 1 through 8) to access thermocouple shield and thermocouple.
2. Push thermocouple shield toward the front of griddle to disengage the rear mounting tab on thermocouple shield from the support bracket on the bottom of griddle plate.

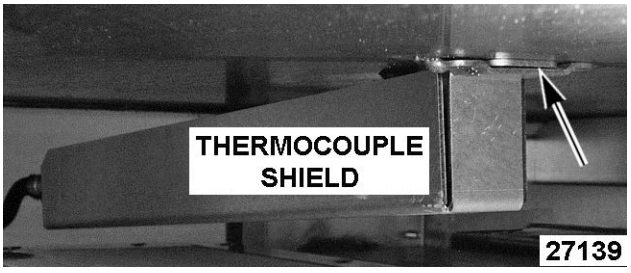


Fig. 10

3. Loosen mounting nut and remove thermocouple probe from bottom of griddle plate.

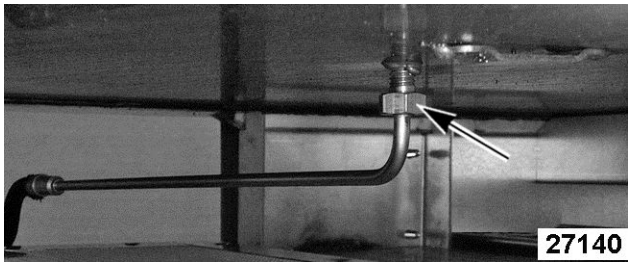


Fig. 11

4. Remove insulating sleeve from thermocouple wires and retain for use on replacement thermocouple.

Installation

1. Slide insulating sleeve over thermocouple wires.
2. Apply a thin coating of heat transfer and anti-seize compound to the thermocouple probe tip and mounting nut threads.
3. Route thermocouple probe through the front opening in griddle frame and lay it on top of burner mounting panel.
4. From rear of griddle, thread thermocouple probe into the mounting hole in griddle plate and stop when probe tip touches the plate. Torque the mounting nut to a maximum of 25 in-lbs.

NOTICE Do not over tighten or damage to the thermocouple probe may occur. Due to the aluminum plate core, it is also possible to create a raised area over the probe if overtightened.

5. Insert rear mounting tab on thermocouple shield into the support bracket on the bottom of griddle plate.
6. Route thermocouple wires through the opening in burner shield assembly.
7. Re-install RADIANT BURNER.
8. Check TEMPERATURE CONTROLLER CALIBRATION.

PILOT (RADIANT BURNER)

⚠WARNING Disconnect the electrical power to the machine and follow lockout / tagout procedures.

⚠WARNING Shut off the gas before servicing the unit.

⚠WARNING All gas joints disturbed during servicing must be checked for leaks. Check with a soap and water solution (bubbles). Do not use an open flame.

1. Remove RADIANT BURNER.
2. Disconnect compression fitting from pilot.

NOTICE When disconnecting compression fitting for the pilot, support bracket to prevent bending.

3. Remove pilot and mounting bracket from the burner mounting panel.
4. Pull spark wire through the hole in control mounting panel and remove pilot from griddle.
5. Remove pilot from pilot mounting bracket.

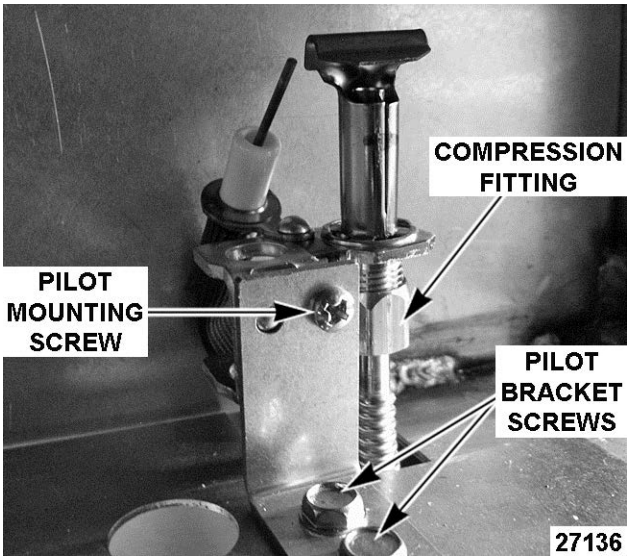


Fig. 12

6. Reverse procedure to install.

NOTE: When installing, verify spark gap is 1/8".

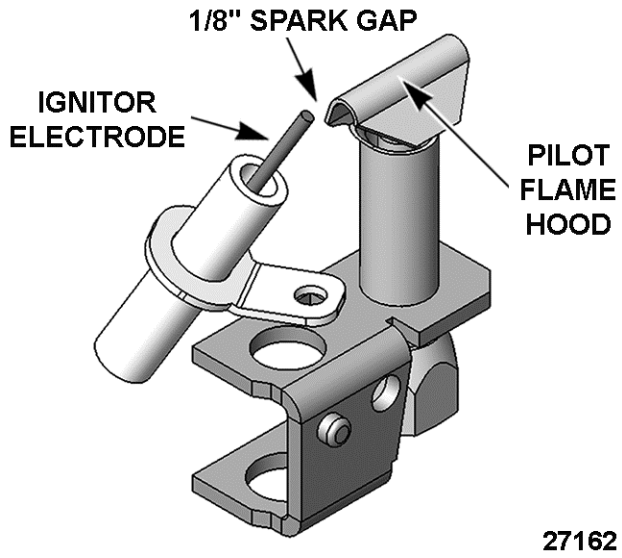


Fig. 13

7. Check for proper operation.

IGNITION MODULE

⚠WARNING Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Remove FRONT PANEL.
2. Disconnect ignitor cable and wire harness connector.
3. Remove two screws securing ignition module to the mounting panel.

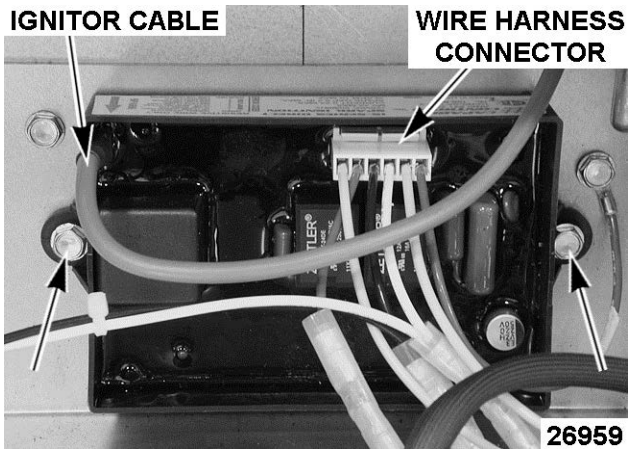


Fig. 14

4. Reverse procedure to install and verify proper operation.

GAS VALVE

⚠WARNING Disconnect the electrical power to the machine and follow lockout / tagout procedures.

⚠WARNING Shut off the gas before servicing the unit.

⚠WARNING All gas joints disturbed during servicing must be checked for leaks. Check with a soap and water solution (bubbles). Do not use an open flame.

NOTE: The gas valve is dual solenoid with internal regulator. One valve supplies gas for the pilot burner and the other valve supplies gas for the main burner.

1. Remove FRONT PANEL.
2. Note lead wire locations and disconnect from gas valve.

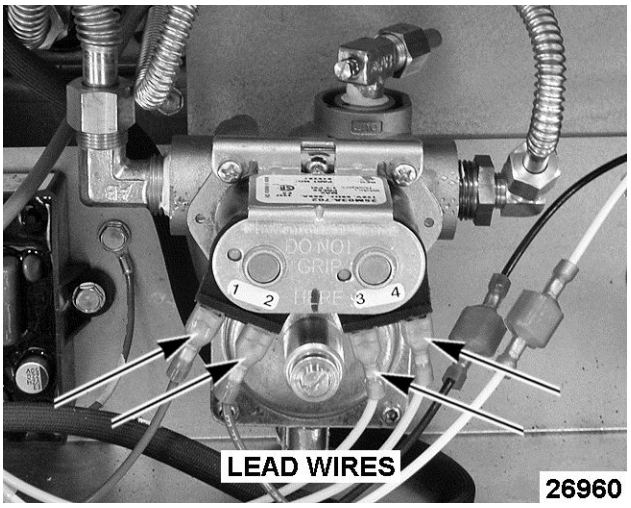


Fig. 15

3. Disconnect compression fitting nuts (3 places) and remove gas valve from griddle.
4. Note position of the four compression fitting elbows and one pipe bushing on gas valve. Remove fittings from valve.

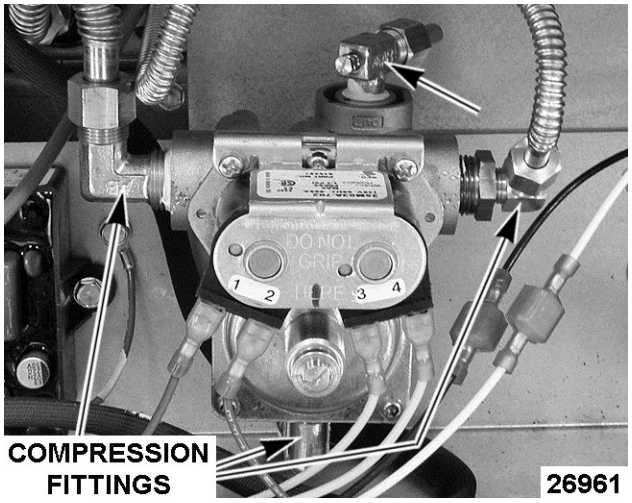


Fig. 16

5. Install compression fitting elbows on replacement gas valve then reverse procedure to install the valve.

⚠ WARNING Clean pipe threads and apply thread sealant that is suitable for use with propane gases.

6. Perform GAS MANIFOLD PRESSURE ADJUSTMENT.

INFRARED BURNER

⚠ WARNING Disconnect the electrical power to the machine and follow lockout / tagout procedures.

⚠ WARNING Shut off the gas before servicing the unit.

NOTE: Infrared burner is removed through the front of griddle.

1. Remove FRONT PANEL.
2. Remove CONTROL DEFLECTOR (HEAT SHIELD).
3. Perform THERMOCOUPLE (INFRARED BURNER) removal procedure to access the thermocouple shield and remove it. The shield must be removed for burner removal clearance but the thermocouple can remain installed.
4. Disconnect compression fitting from pilot orifice fitting at pilot venturi inlet on burner.
5. Disconnect compression fitting from burner orifice fitting at burner venturi inlet.

NOTICE Two wrenches may be required to disconnect compression fittings if the orifice fittings begin to turn or damage to the flexible tubing may occur. Use (1) wrench on compression fitting and (1) wrench on the orifice fitting.

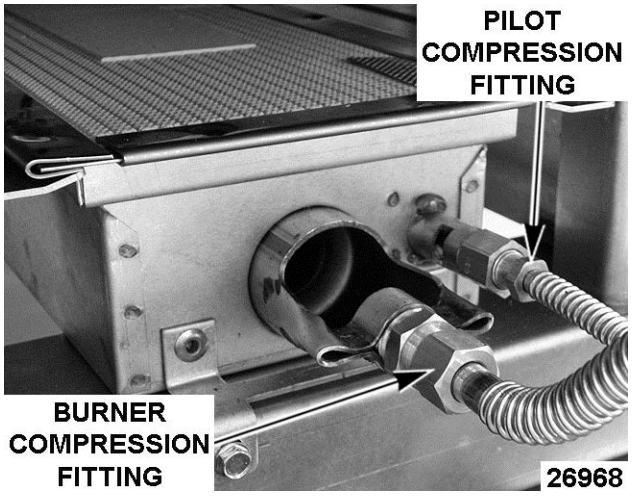


Fig. 17

6. Disconnect the pilot and burner flexible tubing from gas valve.
7. Remove screws (2) securing front of burner to frame.

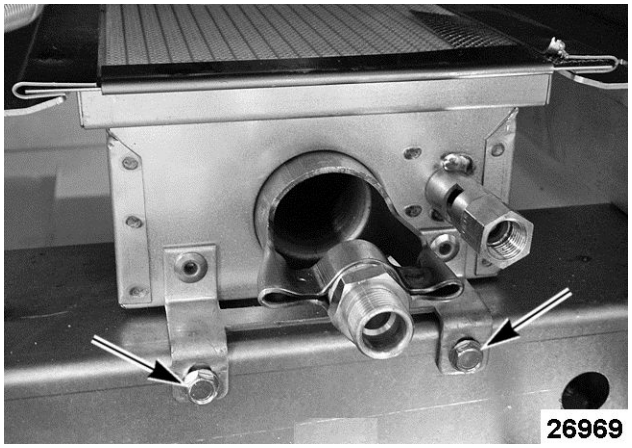


Fig. 18

8. Lift burner up at the front and pull out to remove from griddle.
   A. Remove pilot orifice fitting and burner orifice fitting from burner. Install on replacement burner.

⚠ WARNING Clean pipe threads and apply thread sealant that is suitable for use with propane gases.

9. Reverse procedure to install replacement burner.
10. Check for proper operation.

THERMOCOUPLE (INFRARED BURNER)

⚠ WARNING Disconnect the electrical power to the machine and follow lockout / tagout procedures.

Removal

1. Remove BACK PANEL.
2. Remove FRONT PANEL.
3. Remove CONTROL DEFLECTOR (HEAT SHIELD).
4. Note thermocouple connections then disconnect from temperature controller.
5. Remove burner shield to access the thermocouple shield and thermocouple.

NOTE: The burner shield provides a slotted opening to support the front mounting tab on thermocouple shield.

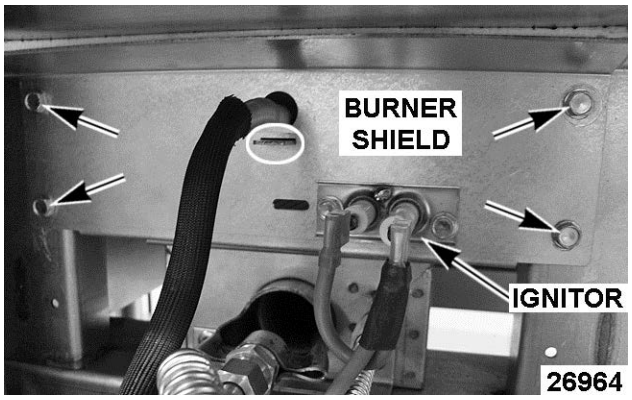


Fig. 19

6. Remove IGNITOR (INFRARED BURNER) from burner shield.
7. Push thermocouple shield toward the front of griddle to disengage the rear mounting tab on thermocouple shield from the support bracket on the bottom of griddle plate.

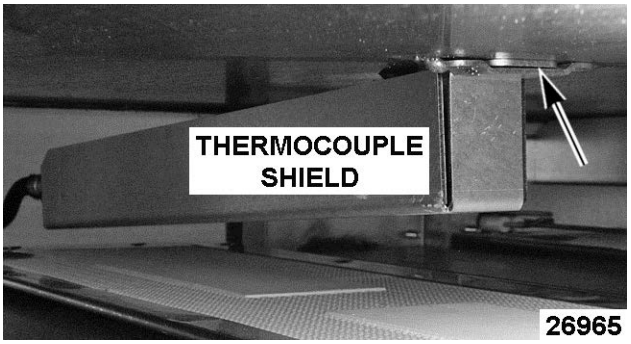


Fig. 20

8. Loosen mounting nut and remove thermocouple probe from bottom of griddle plate.

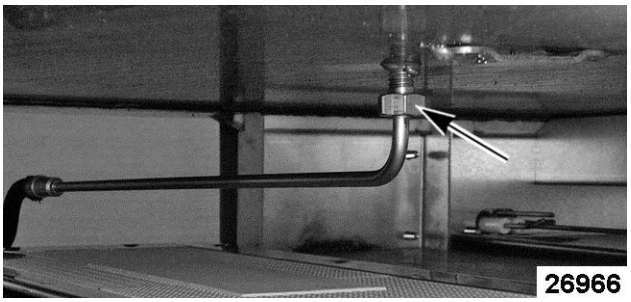


Fig. 21

9. Remove insulating sleeve from thermocouple wires and retain for use on replacement thermocouple.

Installation

1. Slide insulating sleeve over thermocouple wires.
2. Apply a thin coating of heat transfer and anti-seize compound to the thermocouple probe tip and mounting nut threads.
3. Route thermocouple probe through the front opening in griddle frame and lay it on top of burner.
4. From rear of griddle, thread thermocouple probe into the mounting hole in griddle plate and stop when probe tip touches the plate. Torque the mounting nut to a maximum of 25 in-lbs.

NOTICE Do not over tighten or damage to the thermocouple probe may occur. Due to the aluminum plate core, it is also possible to create a raised area over the probe if overtightened.

5. Insert rear mounting tab on thermocouple shield into the support bracket on the bottom of griddle plate.

6. Route thermocouple wires through the opening in burner shield. Lift burner shield and position it so the front mounting tab on the thermocouple shield can be inserted into the upper slotted opening in the burner shield. Secure burner shield to griddle.
7. Install ignitor to burner shield.
8. Connect thermocouple wires to the temperature controller.
9. Install control deflector (heat shield).
10. Install front and back panels.
11. Check TEMPERATURE CONTROLLER CALIBRATION.

IGNITOR (INFRARED BURNER)

⚠ WARNING Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Remove FRONT PANEL.
2. Note connection locations then disconnect ignitor cable and jumper from ignitor terminals.
3. Remove screws securing ignitor to burner shield.

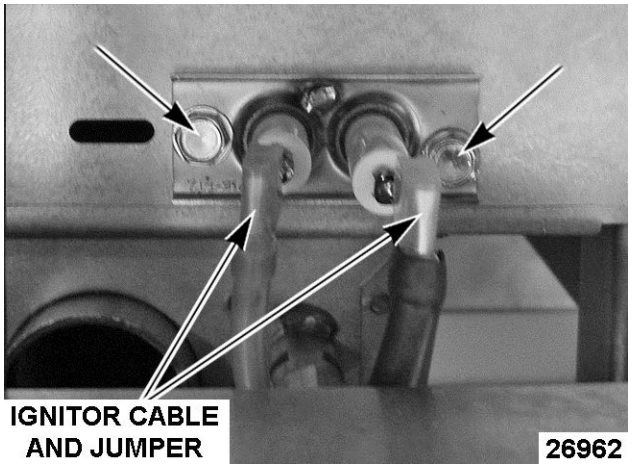


Fig. 22

4. Ensure spark gap between ignitor electrode and ground rod is approximately 1/8". If adjustment is necessary, position the ground rod to achieve the correct spark gap.
5. Reverse procedure to install and check for proper operation.

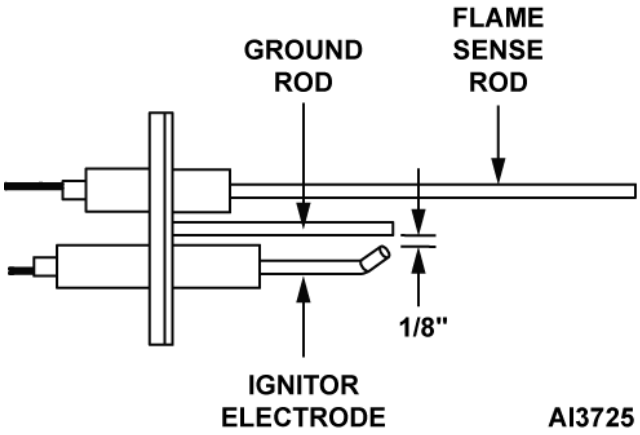


Fig. 23

PILOT ORIFICE (INFRARED BURNER)

⚠ WARNING Disconnect the electrical power to the machine and follow lockout / tagout procedures.

⚠ WARNING Shut off the gas before servicing the unit.

⚠ WARNING All gas joints disturbed during servicing must be checked for leaks. Check with a soap and water solution (bubbles). Do not use an open flame.

1. Remove FRONT PANEL.
2. Remove CONTROL DEFLECTOR (HEAT SHIELD).
3. Remove burner shield.

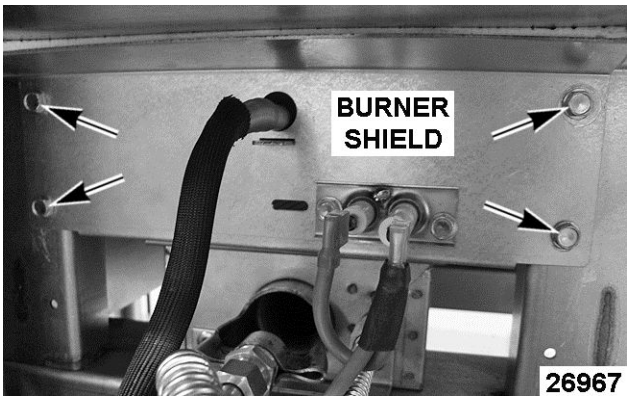


Fig. 24

4. Disconnect compression fitting from pilot orifice fitting.

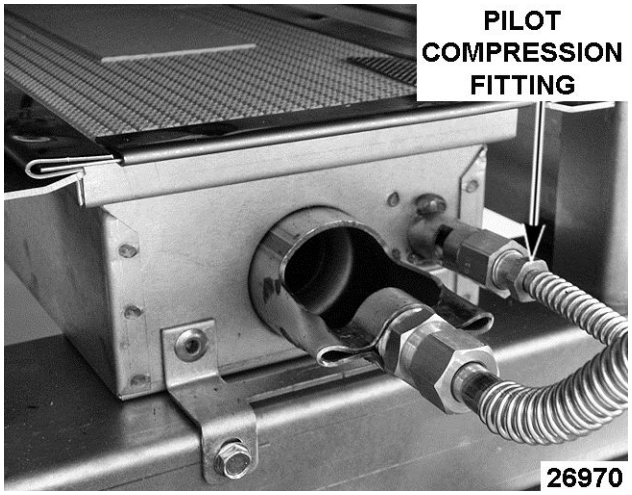


Fig. 25

5. Remove pilot orifice fitting from burner.
6. Tilt pilot orifice fitting to remove the orifice.
7. Reverse procedure to install.

NOTE: When installing, verify orifice size is correct for gas type and is free from debris. Clean the orifice with air or water only.

8. Check for proper operation.

GRIDDLE PLATE ASSEMBLY

⚠ WARNING Disconnect the electrical power to the machine and follow lockout / tagout procedures.

⚠ WARNING Shut off the gas before servicing the unit.

⚠ WARNING All gas joints disturbed during servicing must be checked for leaks. Check with a soap and water solution (bubbles). Do not use an open flame.

NOTICE For larger units, removal and replacement of the griddle plate weld assembly should be done by more than one service technician .

1. Remove FRONT PANEL.
2. Remove BACK PANEL.
3. Remove THERMOCOUPLE (INFRARED BURNER) or THERMOCOUPLE (RADIANT BURNER) from griddle plate. Leave thermocouple wires connected at temperature controller.
4. Remove screws (2) securing griddle plate to frame at the front of griddle.
5. Cut two lengths of 2x4 appropriate for the griddle plate width, leaving additional length to grasp on each side of griddle plate.
6. Lift front of griddle plate and support with 2x4 then lift rear of griddle plate and support with 2x4.

Fig. 26

7. Lift griddle plate and remove from base of equipment.
8. Reverse procedure for installation.

SERVICE PROCEDURES AND ADJUSTMENTS

TEMPERATURE CONTROLLER CALIBRATION

NOTE: Ensure the griddle is level before performing calibration as outlined under LEVELING in the Installation & Operation Manual.

NOTE: Do not use an infrared thermometer for measuring griddle surface temperatures. These devices are highly sensitive to surface color (clean or dirty), angle of reading and distance from the surface. Use a temperature meter with surface probe for all griddle surface temperature measurements.

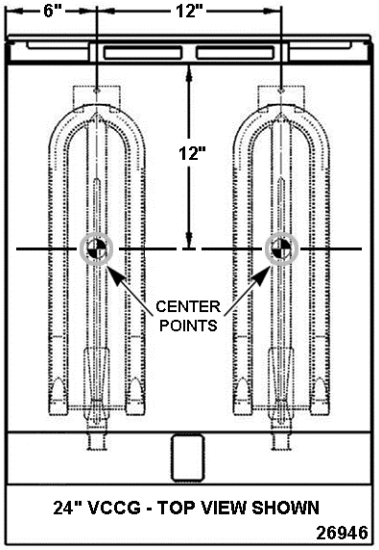


Fig. 27

CALIBRATION CHECK

1. Each temperature controller controls a 12" zone of the griddle. Center point area of cooking zones are located 6" from the side splash (left or right), every 12" across the width of griddle, and 12" back from the front of griddle plate.
2. Clean the center point areas of cooking zones to ensure good contact with surface probe.
3. Set thermostats to 350°F and allow the thermostat cycle light to cycle ON and OFF at least three times to stabilize griddle surface temperatures.
4. Monitor the thermostat cycle light for the temperature controller calibration being checked. When the light cycles OFF, record temperature for that zone.
    - If temperature measurement is 350°F ±10°F the control is properly calibrated.
    - If temperature measurement is outside of tolerance then temperature control **must** be calibrated.

CALIBRATING TEMPERATURE CONTROL

1. Remove FRONT PANEL.
2. Loosen screws (2) securring knob guard to the control panel for temperature controller being calibrated.
3. Loosen set screw then remove knob from temperature control shaft. Do not rotate the knob during removal.

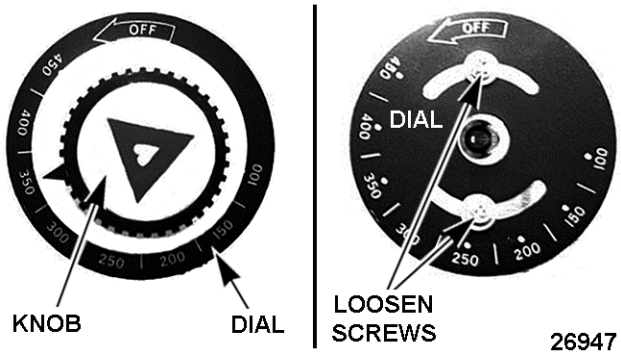


Fig. 28

4. Loosen screws on the temperature dial so the dial will rotate.
5. Install knob onto the temperature control shaft. Do not rotate the knob during installation.
6. Rotate temperature dial to match the temperature reading. Hold dial in position and remove knob. This adjustment offsets the indicated temperature on the dial to the actual temperature measured.
7. Tighten dial screws.
8. Install knob onto the temperature control shaft and tighten set screw.
9. Repeat CALIBRATION CHECK to verify adjustment. Adjust calibration until temperature is within tolerance.

RADIANT BURNER - AIR SHUTTER ADJUSTMENT

⚠ WARNING Disconnect the electrical power to the machine and follow lockout / tagout procedures.

⚠ WARNING Shut off the gas before servicing the unit.

The efficiency of the burner depends on a delicate balance between the air supply and volume of gas. Whenever this balance is disturbed, poor operating characteristics and excessive gas consumption may occur. An air shutter on the front of the burner controls the gas mixer balance. A yellow streaming flame on the burner is an indication of insufficient primary air. A white-blue flame is a result of excessive primary air. A proper flame should be blue in color, well-defined and seated on the burner port.

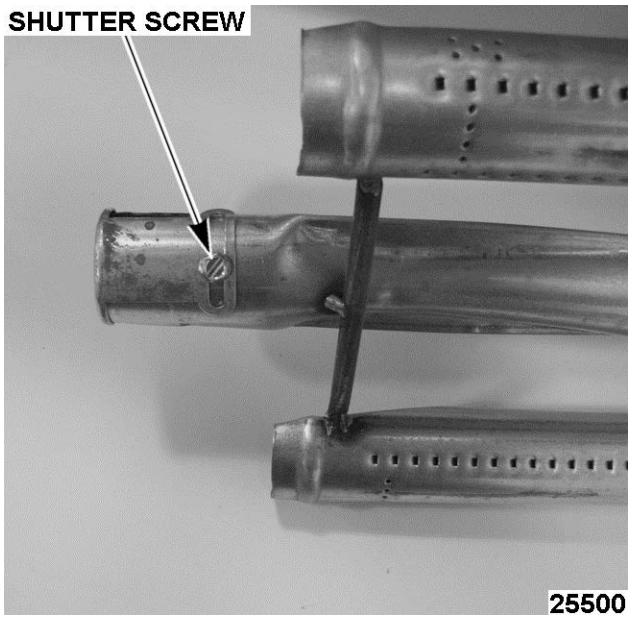


Fig. 29

1. Remove BACK PANEL.
2. Re-connect gas supply to machine then turn the supply on.
3. Connect power to machine.
4. Turn power switch on and rotate temperature controller knob to call for heat.
5. With burner lit, observe flame from back of machine.
   A. If a proper flame is observed as described in the beginning paragraph, no further adjustment is necessary.
   B. If flame is yellow tipping and lifting from burner, continue with procedure to adjust.
6. Disconnect power and turn gas supply off.
7. Remove RADIANT BURNER.

NOTE: The factory default air shutter positions are half open natural; full open propane.

8. Loosen the air shutter screw and hold the shutter in place to prevent movement.
   A. If flame is yellow streaming, slightly rotate shutter to open it. Hold shutter in position and tighten screw to secure the shutter.
   B. If flame is white-blue, slightly rotate shutter to close it. Hold shutter in position and tighten screw to secure the shutter.
9. Install radiant burner.
10. Install back panel.
11. Check for proper operation.

GAS MANIFOLD PRESSURE ADJUSTMENT

⚠ WARNING Disconnect the electrical power to the machine and follow lockout / tagout procedures.

⚠ WARNING Shut off the gas before servicing the unit.

1. Remove FRONT PANEL.
2. Connect manometer to the pressure check fitting at the top of gas valve being checked.
3. Open the needle valve on the pressure check fitting to allow gas pressure measurement.

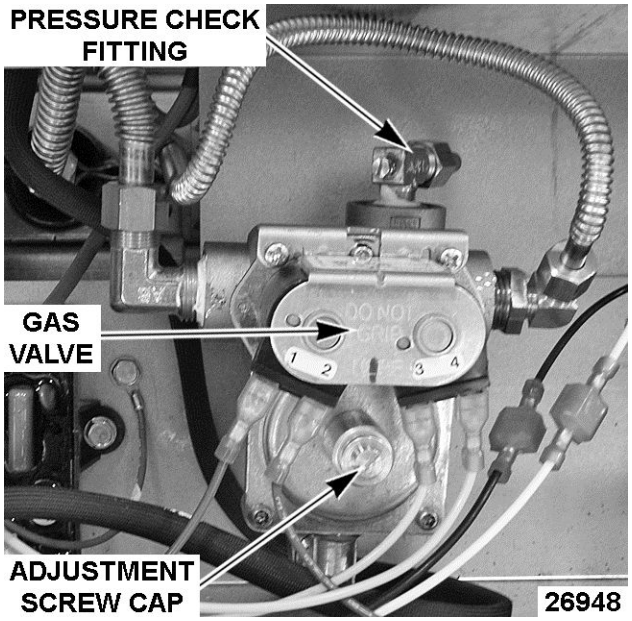


Fig. 30

4. Turn gas supply on.
5. Connect power and turn power switch on.
6. Set all the temperature controls on the griddle to their highest setting and allow burners to light. All burners must be lit during test and adjustment.
7. Check manifold pressure reading and compare to the value in the table below.
   A. If pressure is within the allowable tolerance, then no adjustment is necessary. Turn off the power switch and gas supply. Return needle valve to the closed position then disconnect manometer.
   B. If pressure is outside the allowable tolerance, continue with procedure.

GAS TYPE	PRESSURE READINGS (IN W.C.)		
		INCOMING LINE	
	MANIFOLD	RECOMMEND	MAX
Natural	4.0	7.0 to 9.0	14.0
Propane	10.0	11.0 to 12.0	

NOTE: To correctly set the manifold pressure, the incoming line pressure must be within the recommended values for the gas type shown in the table.

8. To adjust, remove adjustment screw cap from the gas valve being checked.
9. Turn the adjusting screw to obtain the proper gas pressure (clockwise = increase; counterclockwise = decrease).
10. Once the correct pressure has been set, turn off the power switch and gas supply. Return needle valve to the closed position then disconnect manometer.
11. Install the adjustment screw cap.
12. Check for proper operation.

BURNER GAS ORIFICE CHECK

⚠ WARNING Disconnect the electrical power to the machine and follow lockout / tagout procedures.

⚠ WARNING Shut off the gas before servicing the unit.

If burner operation seems poor and other systems have been checked, access the burner for the griddle section being serviced and inspect the burner gas orifice.

- **Radiant Burner** - The gas orifice and elbow fitting is mounted to the orifice holder bracket at the front of the burner venturi inlet.

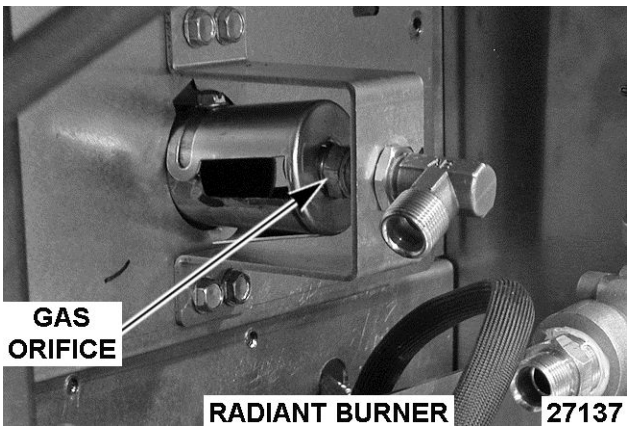


Fig. 31

- **Infrared Burner** - The gas orifice is mounted to the burner at the venturi inlet.

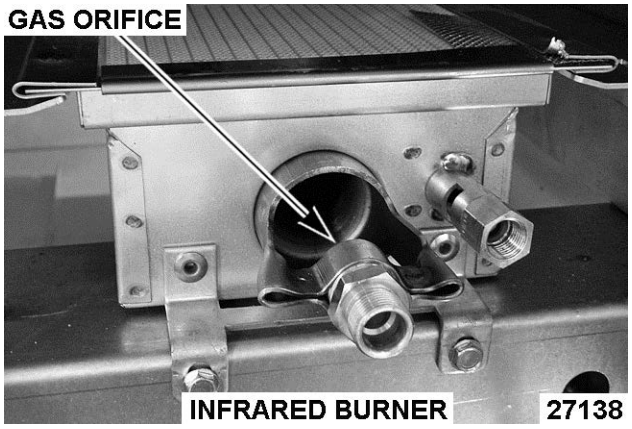


Fig. 32

1. Remove FRONT PANEL.
2. Verify gas orifice is threaded into the fitting properly, and is centered and mounted perpendicular to the burner venturi opening. Adjust alignment as necessary.
3. Check gas orifice for blockage or damage. If dirty, clean with air or water only.
4. Verify gas orifice is correct for the altitude. Contact the appropriate service support department for gas orifice information. Please have the machine model, serial number and gas type ready.

THERMOCOUPLE TEST

1. Cycle the power switch and set temperature knob to call for heat. Observe thermostat cycle light on front panel.
   A. If blinking, there may be a problem with thermocouple or temperature controller. To identify error code, refer to TEMPERATURE CONTROLLER - LED DIAGNOSTICS AND OPERATING STATUS .
2. Access TEMPERATURE CONTROLLER.
3. Remove thermocouple connections from temperature controller.

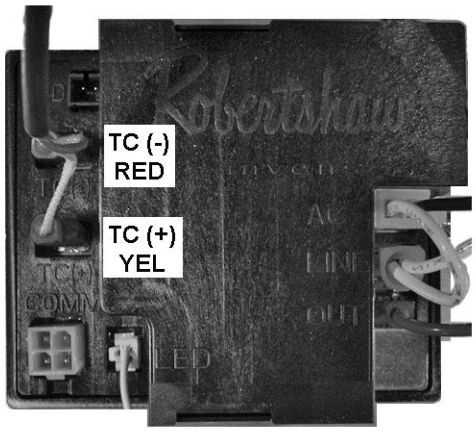


Fig. 33

4. Check the thermocouple for resistance.
   A. If meter reads an overload (OL) condition (open), or zero ohms (short) replace the thermocouple and check temperature controller for proper operation.
5. If resistance is measured, thermocouple is good.

TEMPERATURE CONTROLLER TEST

1. Cycle the power switch and set temperature knob to call for heat. Observe thermostat cycle light on front panel.
   A. If blinking, there may be a problem with thermocouple or temperature controller. To identify error code, refer to TEMPERATURE CONTROLLER - LED DIAGNOSTICS AND OPERATING STATUS .
   B. Turn temperature knob to off.
2. Access the TEMPERATURE CONTROLLER.
3. Connect power to the machine.
4. Turn power switch on.
5. Verify temperature controller is receiving 120VAC at pins 1 & 2 on connector, polarity is correct and machine is properly grounded.

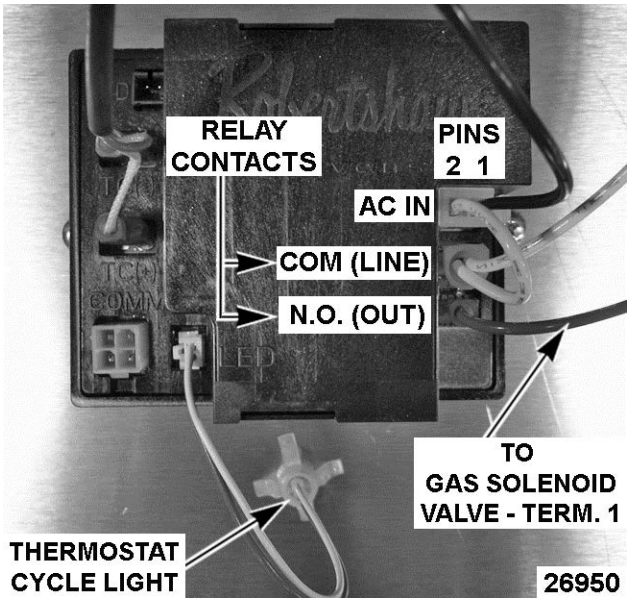


Fig. 34

6. Turn temperature knob to call for heat.
7. Verify thermostat cycle light on the front panel turns on and burner lights.
    A. If thermostat cycle light and burner come on but turn off within 10 seconds, perform THERMOCOUPLE TEST.

NOTE: Temperature controller will de-energize internal relay if the circuitry detects an open thermocouple and the thermostat cycle light will display a blink code.

    B. If thermostat cycle light and burner do **not** come on, verify internal relay contact operation. Check for 120VAC at terminals 1 & 2 on gas solenoid valve. If voltage is not present, install a replacement temperature controller and perform TEMPERATURE CONTROLLER CALIBRATION.

IGNITION MODULE TEST

NOTE: Igntion module has 10 second ignition trial time, 5 second inter-purge (delay) before retry and will attempt to light pilot 7 times then lockout if unsuccessful.

1. Cycle the power switch and set temperature knob to call for heat.
2. Ignition module is energized and ignition cycle starts. Observe ignition module LED thru front panel sight glass.
    A. If LED is Red and blinking an error code, there may be a problem with pilot burner, flame sense or ignition module. To identify error code, refer to IGNITION MODULE - LED DIAGNOSTICS AND OPERATING STATUS .
    B. LED is Green and blinking during ignition trial and inter-purge. LED then turns to solid Green when pilot flame is established (flame is sensed).

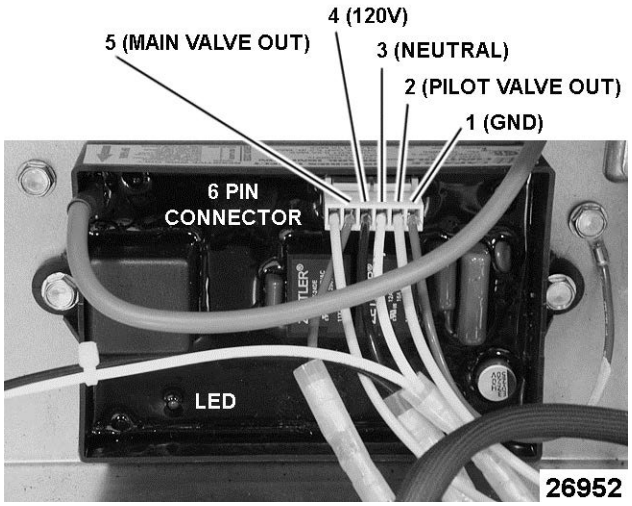


Fig. 35

3. Pilot solenoid valve energized by pilot valve output from ignition module (pin 2) allowing gas flow to the pilot burner. Ignition module generates spark voltage and ignitor begins sparking. If there is no spark then check the following.
    A. Check for 120VAC at ignition module pin 3 (NEUTRAL) and pin 4 (120V).
    B. Inspect ignitor cable for damage and continuity.
    C. Verify spark gap is set at 1/8".
    D. If component passes the above tests and is not sparking, then replace ignition module.
4. Pilot burner lights and flame is sensed. If electrode continues to spark after pilot is lit then check the following.
    A. On models with Radiant burner, verify the electrode is fully engulfed by pilot flame.
    B. Verify ground wire (pin 1) from ignition module is securely grounded to chassis.
5. As long as the ignition module is sensing flame current, then the pilot will stay lit.

6. Main burner valve energized by main valve output (pin 5) from ignition module allowing gas flow to burner and the burner lights.

RADIANT BURNER - PILOT FLAME ADJUSTMENT

⚠ WARNING Disconnect the electrical power to the machine and follow lockout / tagout procedures.

The VCCG series griddle with Radiant burner utilizes a gas valve (dual solenoid) and 90° elbow compression fitting with needle valve adjustment to control gas flow to pilot burner. Each 12" griddle section has individual controls.

1. Turn thermostat knob to the off position.
2. Remove BACK PANEL.
3. Connect power to machine and turn power switch on.
4. Ignitor begins sparking and pilot valve opens to allow gas to pilot.
   A. If flame envelops 3/8" to 1/2" of the ignitor/ flame sense electrode, pilot burner is adjusted properly.
   B. If flame is outside of specified range, continue with procedure.
5. Remove FRONT PANEL.
6. Locate the needle valve and adjust.

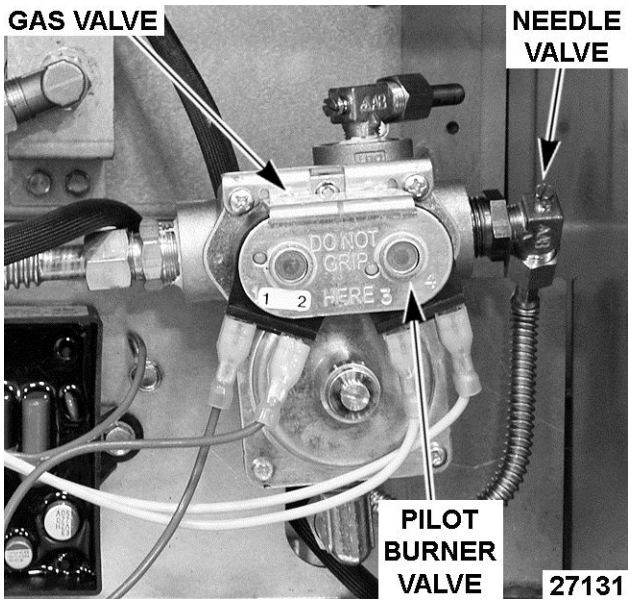


Fig. 36

   A. To increase pilot flame turn valve needle *counterclockwise*. To decrease pilot flame, turn valve needle *clockwise*.
7. Once pilot flame is adjusted correctly, turn thermostat knob to call for heat.
8. Verify pilot burner remains lit when burner lights. Adjust pilot flame as necessary.
9. Disconnect power to machine.
10. Install front and rear panels.
11. Check for proper operation.

GAS VALVE TESTS

⚠ WARNING Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Remove FRONT PANEL.
2. Connect power to machine.
3. Turn on power switch and adjust temperature controller to call for heat.

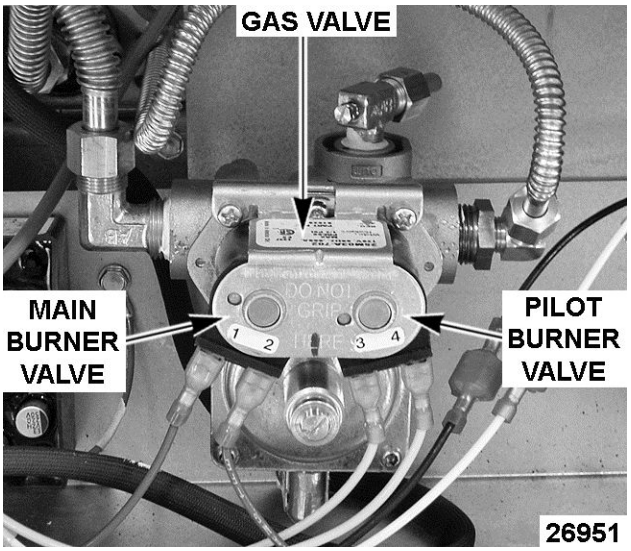


Fig. 37

4. Check for 120VAC to the gas valve (dual solenoid) - Main burner solenoid valve (terminals 1 & 2) and Pilot solenoid valve (terminals 3 & 4).
   A. If no voltage to either one of the solenoid valves, check wiring connections.
   B. If pilot solenoid valve has no voltage, perform IGNITION MODULE TEST.

C. If main burner solenoid valve has no voltage, perform IGNITION MODULE TEST and TEMPERATURE CONTROLLER TEST.

5. If 120VAC is present on solenoid valve terminals after performing previous steps, either the solenoid coil or valve is malfunctioning.

6. To determine if solenoid coil is malfunctioning, check resistance between main burner solenoid (terminals 1 & 2) and pilot solenoid (terminals 3 & 4). Readings of 100 ohms or less on either solenoid indicate a shorted coil. Install a replacement gas valve and verify GAS MANIFOLD PRESSURE ADJUSTMENT.

INFRARED BURNER

Adjustment
The only adjustment for the Infared burner is the gas manifold pressure. Verify the pressure is set correctly as outlined under GAS MANIFOLD PRESSURE ADJUSTMENT.

Flame Appearance
Access the infrared burner by removing BACK PANEL. When the Infared burner first lights you should see a small rolling blue flame, which will clear up after the burner warms. Once warm, a low profile orange flame is the best description of the Infared burner flame. In some cases, if the burner is operating correctly, you may not be able to see the actual flame. Instead you will see the glow of the ceramic bricks in the burner.

ELECTRICAL OPERATION

COMPONENT FUNCTION

Temperature Controller . . . . . Controls griddle surface temperature for the individual heat zone by monitoring thermocouple input (K type).

Temperature Probe . . . Senses griddle surface temperature for the individual heat zone using a K type thermocouple. Provides input to the temperature controller.

Power Switch (SPST switch) . . . . . Controls power to all electrical components - gas valve (double regulated), temperature controller and ignition module).

Thermostat Cycle Light . . . . . When lit, the light (red LED) indicates temperature controller is calling for heat (internal contacts closed, output is on).

Ignition Module . . . . . Controls and monitors gas heating. Generates spark to light gas at the pilot burner, monitors the presence of flame and energizes the main burner solenoid valve upon a call for heat from the temperature control. Module has a 10 second ignition trial time, a 5 second inter-purge (delay) before retry and will attempt to light pilot for 7 times then lockout if unsuccessful.

Ignitor/Flame Sense Electrode . . . . . Ignites pilot burner and senses the presence of a flame. Provides flame sense input to the ignition module.

Pilot Burner . . . . . When lit, lights the main burner.

Gas Valve . . . . . A dual solenoid valve with internal regulator that controls gas flow to the pilot burner and main burner. Pilot solenoid valve is energized by the ignition module after power switch is turned on. Main burner solenoid valve is energized by the temperature controller after the pilot safety circuit is established (pilot lit) and thermostat is calling for heat.

SEQUENCE OF OPERATION

Operation is the same for all griddle models. Each 12" heat zone on the griddle plate has its own temperature controller, thermostat cycle light and ignition system components. Refer to Griddle Wiring Diagram AI3724.

1. Conditions.
   - A. 120VAC connected to griddle and is properly grounded.
   - B. Incoming neutral line - L2 is connected to power switch terminal N (non switching) and to each:
     - 1) Ignition module connector at pin 3 NEUTRAL.
     - 2) Temperature controller at the LINE terminal (internal relay - COM) and jumpered to pin 2 NEUTRAL on temperature controller.
   - C. Incoming hot line - L1 is connected to power switch terminal L1.
   - D. Power switch off (SPST).
   - E. Temperature knobs OFF.
   - F. Griddle temperature below 150°F.
   - G. Gas supply on.
2. Turn power switch ON.
   - A. Power switch internal red light turns on.
   - B. All ignition modules are powered at pin 4 (120V).
   - C. Ignition modules generate spark voltage from the spark/sense terminals to begin sparking at the ignitor/flame sense electrode. LED's blink green during 5 second inter-purge (delay) and 10 second trial for ignition (normal operation).
   - D. Ignition modules turn on the pilot valve output at pin 2 and provide 120V to terminal 3 on the pilot valves. Pilot valve solenoids on the gas valves are energized and gas flows to pilot burners.
   - E. Pilot burners light, flame is sensed and ignitors stop sparking. LED stops blinking and remains solid green.

F. Ignition modules turn on the main valve output at pin 5.

G. L1 present at terminal 2 on the main valve solenoids output and jumpered to LINE IN at pin 1 on temperature controllers. Temperature controllers are powered.

3. Turn temperature knobs to 350°F.

A. Thermostat cycle lights (red) turn on. The lights will cycle on/off with the call for heat.

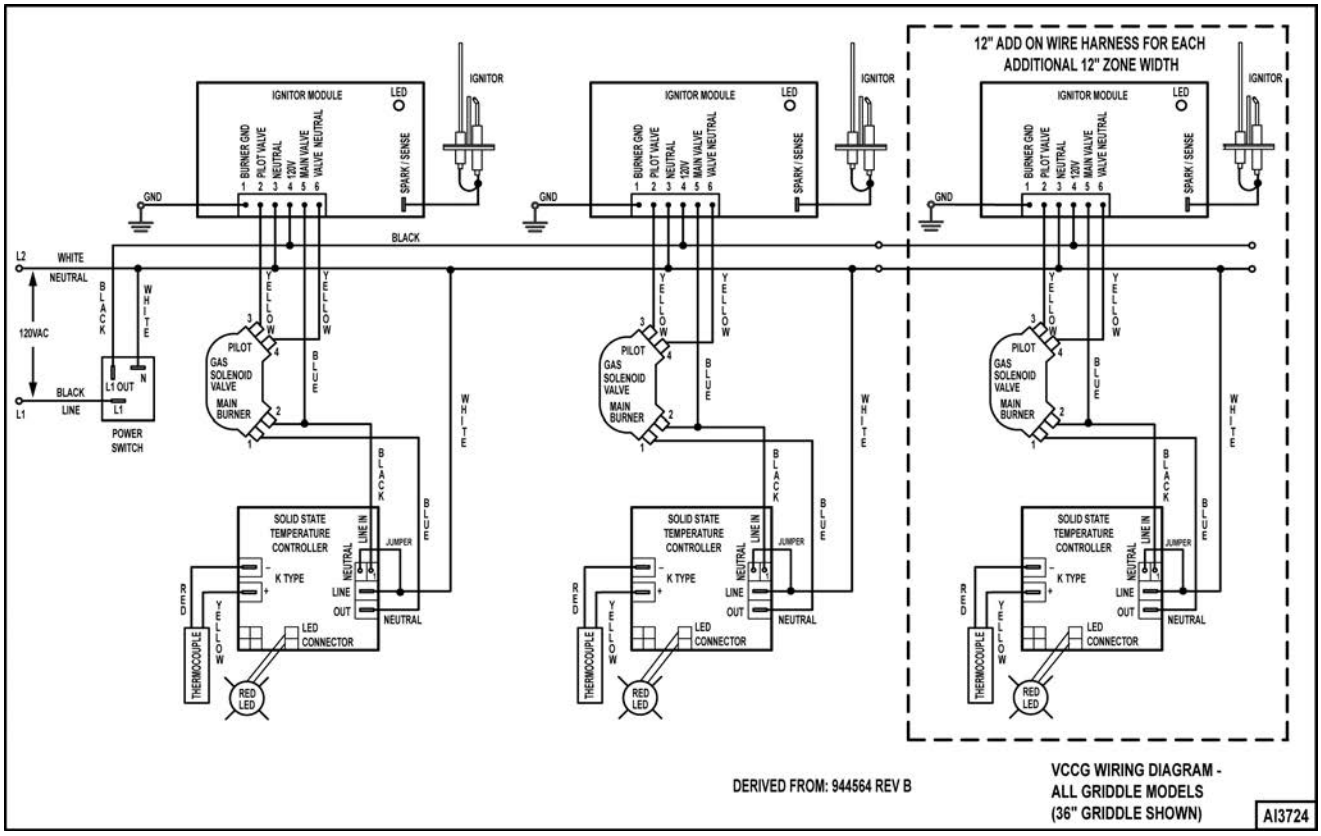
B. Temperature controller's internal contacts close (N.O.) and provide L2 (neutral) from the OUT terminal to terminal 1 for main burner solenoids on the gas valves.

C. Main burner solenoids on gas valves are energized and gas flows to each burner. Burners light and begin heating griddle.

4. Griddle will continue to cycle with the temperature controller until the temperature knob is turned off; or the power switch is turned off.

GRIDDLE WIRING DIAGRAM

NOTE: The base model griddle is 24" wide. Each additional 12" griddle section has its own set of identical controls that are conected using a 12" add on wire harness. Because the components and wiring are identical for each section, the diagram below can be used for all models.



GRIDDLE WIRING DIAGRAM

TROUBLESHOOTING

TEMPERATURE CONTROLLER - LED DIAGNOSTICS AND OPERATING STATUS

NOTE: Each of the individual thermostat LED's are externally mounted to the front panel and are refered to as thermostat cycle lights. Each 12" griddle section has individual controls.

LED Codes

- Solid Red - Indicates temperature controller internal relay is energized "Call For Heat" requested.
- Two quick flashes every 3 seconds indicates a “No Heating” fault condition.
  - LED sequence is - ON for 1 second, OFF for 1 second, ON for 1 second, then OFF for 4 seconds and repeats.
- Three quick flashes every 3 seconds indicates temperature probe input circuit is open.
  - LED sequence is - ON for 1 second, OFF for 1 second, ON for 1 second, OFF for 1 second ON for 1 second, then OFF for 4 seconds and repeat.
- Continuous ON - OFF - ON - OFF - ON cycle indicates an internal problem and the temperature controller must be replaced.

IGNITION MODULE - LED DIAGNOSTICS AND OPERATING STATUS

LED Green for Normal Operation

- Green, ½ sec on, ½ sec off - Inter-purge (delay before ignition re-try if flame is lost)
- Green, blinking rapidly - Trial for ignition
- Green, on solid - Flame detected, pilot/main burner on

LED Red for Error on Operation

Upon detection of a fault by the ignition modules internal diagnostics, sparking is turned off and the output for the pilot valve and main valve are turned off (valves close). De-pending on the error, the ignition module then enters lockout mode or standby mode and flashes a red LED error code.

- In lockout mode, all operation is disabled. To clear the error, power must be removed from the module or the temperature controller must be cycled (OFF/ON) to the remove the call for heat.
- In standby mode, the control disables operation until the error is corrected, at which time the normal operation sequence is initiated again.

IGNITION MODULE ERROR CODES			
Red Flashes	**Error Definition**	**Error Type**	**Possible Cause**
1 flash, then pause	No pilot flame in trial time	Lockout	1. Verify gas supply is turned on and gas supply pressure is correct. 2. Air not purged from gas supply line. Cycle power switch 2-3 times to see if pilot will light. 3. Gas orifice clogged. 4. Ignitor not sparking - Check wiring connections, condition of ignitor (cracks in ceramic or corrosion build up on flame sense probe) and spark gap.
2 flashes, then pause	Flame sense stuck on	Lockout	1. Ignition module malfunction.
3 flashes, then pause	Pilot valve or Main valve output - relay malfunction	Lockout	1. Ignition module malfunction.
4 flashes, then pause	Repetitive flame loss error	Lockout	1. Verify gas supply is turned on and gas supply pressure is correct. 2. Gas orifice clogged. 3. Pilot flame is not in good contact with flame sense probe. 4. Ignitor malfunction - Check wiring connections, condition of ignitor (cracks in ceramic or corrosion build up on flame sense probe) and spark gap. 5. Heavy drafts in room or vent hood settings.
7 flashes, then pause	Internal control error	Lockout	1. Ignition module malfunction.
On Solid Red	Line voltage or Frequency error	Standby	1. Verify 120VAC supply, polarity is correct and ground is present. 2. Voltage drops or power brown outs during times of heavy usage; or electrical nose created by other equipment running on the same line.

GENERAL

NOTE: Before performing any of the troubleshooting steps listed in this section, check to see if the LED's for the Temperature Controller and the Ignition Module are blinking to indicate a possible problem with the component. The service technician can use the LED blinking codes to assist in determining if these components are functioning properly or in need of replacement.

GENERAL	
PROBLEM	**POSSIBLE CAUSES**
No spark to ignite pilot burner.	1. Power switch inoperative. 2. No power to ignitor module. 3. Ignition module not properly grounded. 4. Spark gap incorrect. 5. Ignitor/flame sense wire inoperative. 6. Ignition module malfunction.
Spark at ignitor but pilot burner does not light.	1. No power to pilot solenoid valve. 2. Pilot solenoid valve malfunction. 3. Gas supply off or insufficient.
Pilot burner will not stay lit.	1. Spark/flame sense wire connections incorrect. 2. Improper ground on pilot burner. 3. Ignitor/flame sense malfunction. 4. Gas pressure not within specified range; or Incorrect gas type. 5. Pilot flame needs adjusted.
Pilot burner is lit but main burners will not light or maintain flame.	1. Power to temperature controller incorrect. 2. Thermocouple malfunction. 3. Temperature controller malfunction. 4. Gas pressure incorrect or incorrect gas type. 5. Burner orifice obstructed or malfunction. 6. Power to main burner valve incorrect. 7. Main burner valve malfunction.
High/Low heat.	1. Gas pressure incorrect; or incorrect gas type. 2. Burner orifice malfunction or incorrect. See BURNER GAS ORIFICE CHECK. 3. Air shutter not properly adjusted (radiant burner only). 4. Thermocouple malfunction. 5. Temperature controller not properly calibrated.

INFRARED BURNER

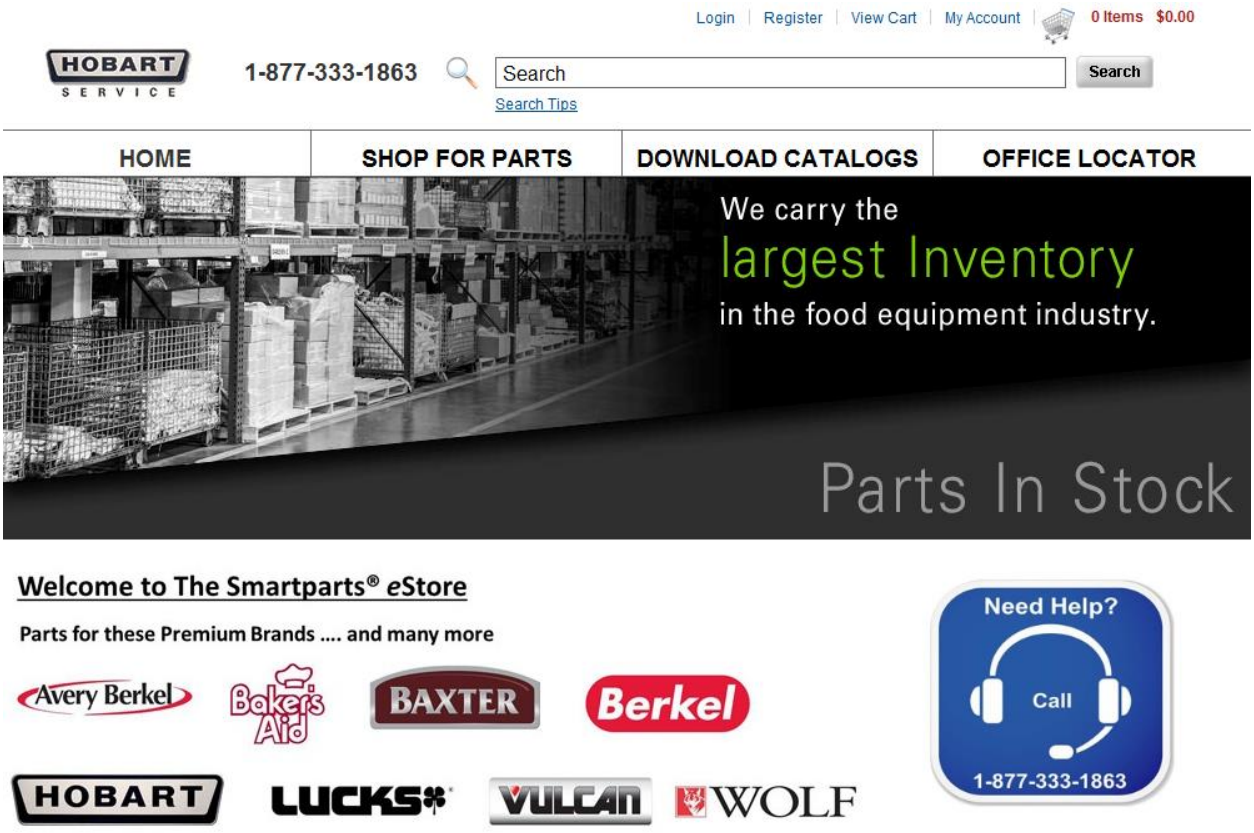
INFRARED BURNER	
SYMPTOM	**POSSIBLE CAUSE**
Burner not lighting properly; or poor burner flame appearance; or burner flame not orange.	1. Orifice incorrect size or dirty. 2. Incorrect gas pressure. 3. Incorrect gas type. 4. Orifice misaligned in venturi. 5. Appliance not venting properly. 6. Burner malfunction.
Burner not lighting properly due to clogged ports.	1. Griddle with Infrared burner is mounted too close to a fryer or charbroiler and the grease laden air is causing burner ports to clog. If burner ports are found to be clogged, install a replacement burner. **NOTE:** Grease laden air is detrimental to the life of the Infrared burner. If a technician sees a griddle with Infrared burner mounted in a location close to a fryer or charbroiler, please recommend to the customer to move the griddle away from the grease laden air source to prolong the life of the Infrared burner.

RADIANT BURNER

RADIANT BURNER	
SYMPTOM	**POSSIBLE CAUSE**
Burner flame too yellow.	1. Orifice incorrect size or dirty. 2. Air shutter not adjusted correctly or dirty 3. Incorrect gas pressure. 4. Incorrect gas type. 5. Orifice misaligned in venturi. 6. Appliance not venting properly.
Low burner flame (all burners).	1. Gas valve not adjusted properly or low gas pressure. 2. Incorrect gas type.
Low burner flame (individual burner).	1. Air mixture incorrect.
Burner flame floats on burner.	1. Inadequate air supply. 2. Restricted exhaust flue.

ONLINE PARTS CATALOG

Order parts online at our Hobart Service Parts store: http://thesmartpartsestore.hobartservice.com/



CATALOG OF REPLACEMENT PARTS

900RX AND MSA HEAVY DUTY GAS GRIDDLES

924RX

936RX

948RX

960RX

972RX

MSA24

MSA36

MSA48

MSA60

MSA72

ASA24

ASA36

ASA48

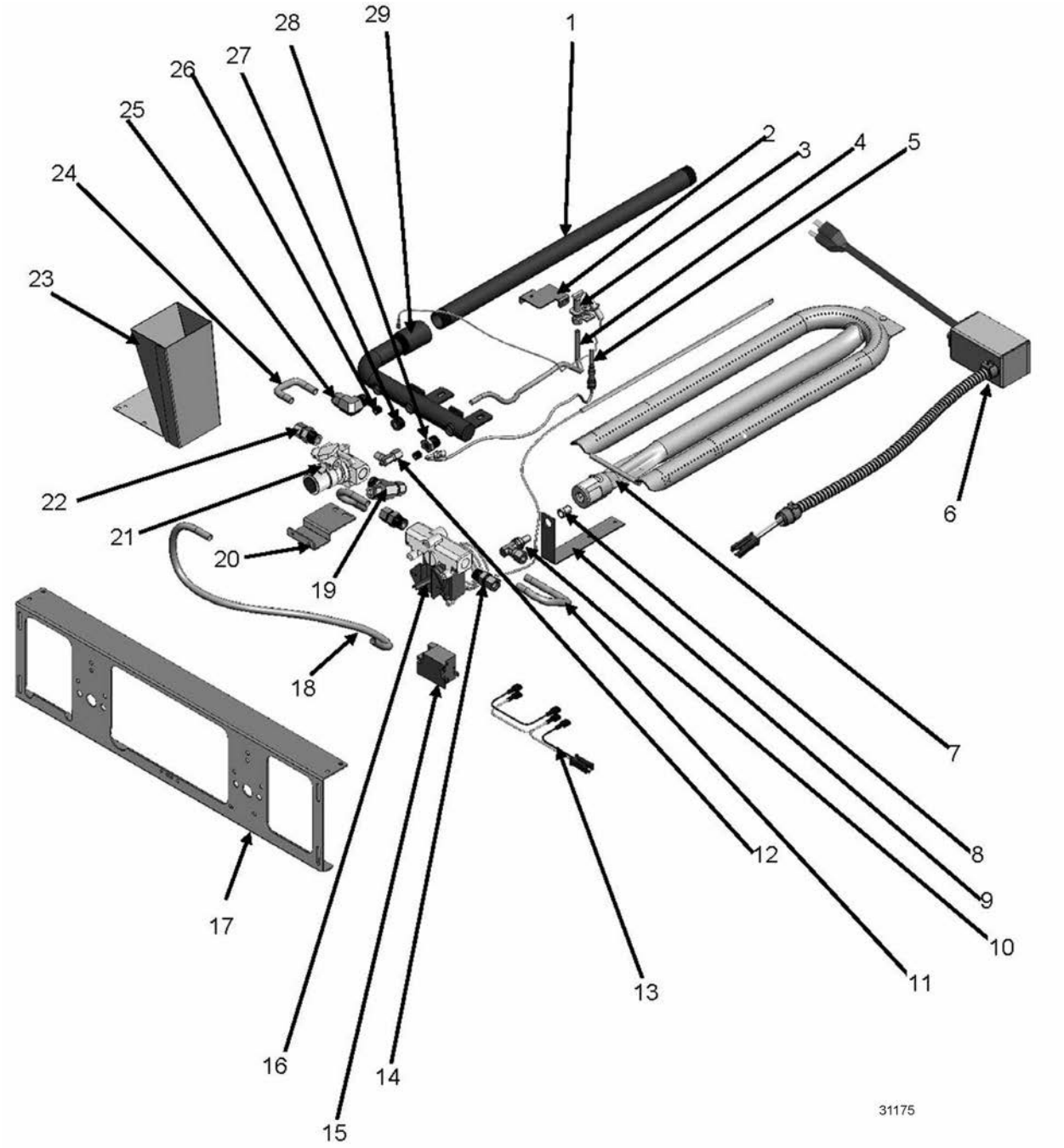
ASA60

ASA72

VULCAN-HART DIVISION OF ITW FOOD EQUIPMENT GROUP, LLC 3600 NORTH POINT BLVD., BALTIMORE, MD 21222

FORM 38316 Rev. D (July 2020)

Table of Contents



900RX AND MSA MODELS MANUFACTURED PRIOR TO MARCH 2010 INTERIOR COMPONENTS

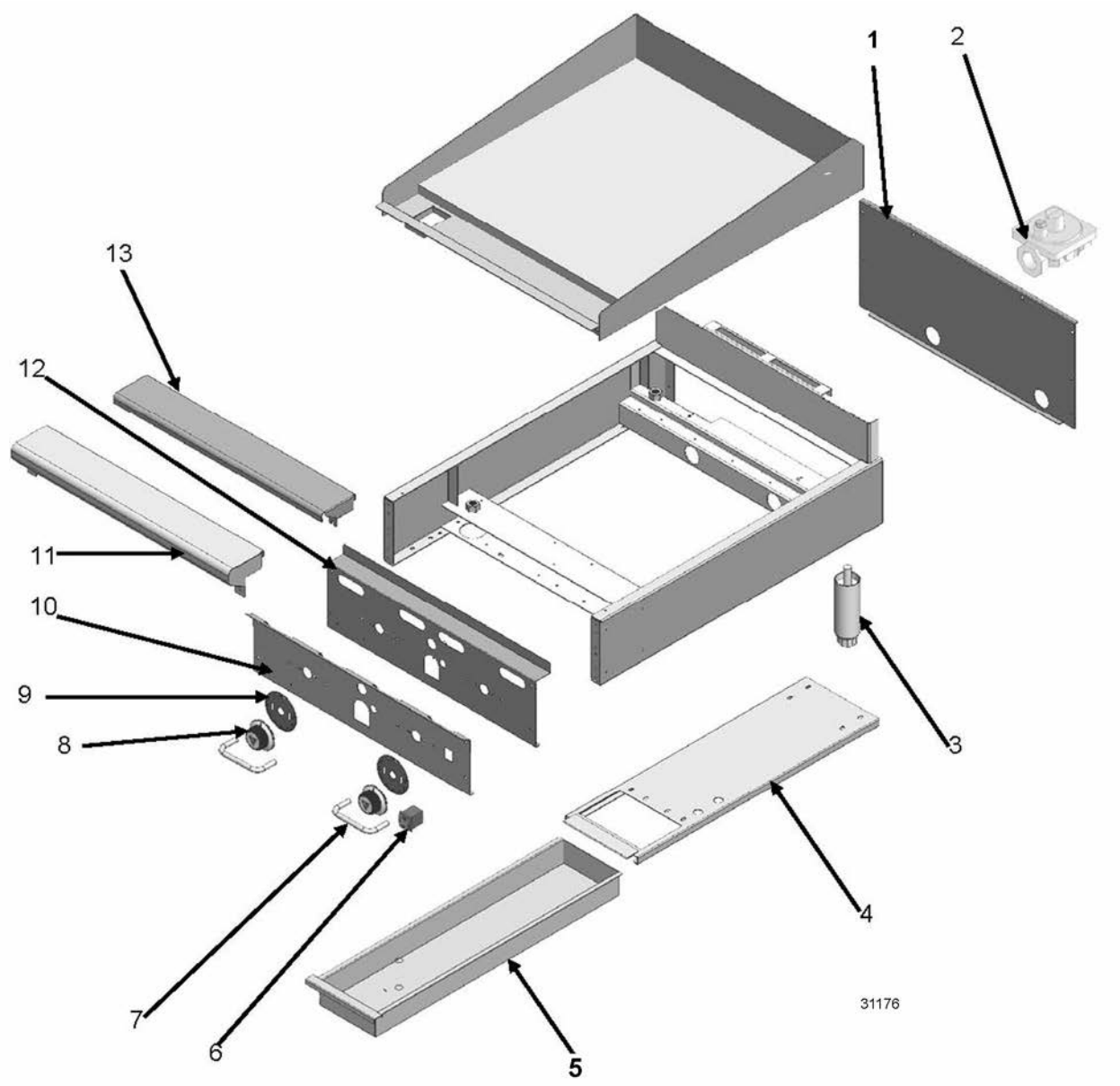
900RX AND MSA MODELS MANUFACTURED PRIOR TO MARCH 2010 INTERIOR COMPONENTS

ILLUS. PL-31175	PART NO.	NAME OF PART	AMT.
1	00-713494	3/4" NPT X 22.75" NIPPLE	1
2	00-498057	Pilot Bracket - 24"	1
	00-498057	Pilot Bracket - 36", 48"	2
	00-498057	Pilot Bracket - 60", 72"	3
3	00-498061	Spark Burner Pilot (NAT. Gas - 900RX) - 24"	1
	00-498061	Spark Burner Pilot (NAT. Gas - 900RX) - 36", 48"	2
	00-498061	Spark Burner Pilot (NAT. Gas - 900RX) - 60", 72"	3
	00-714269	Pilot (NAT. Gas - MSA) - 24"	1
	00-714269	Pilot (NAT. Gas - MSA) - 36", 48"	2
	00-714269	Pilot (NAT. Gas - MSA) - 60", 72"	3
	00-712363	LP Gas Pilot Orifice - 24"	1
	00-712363	LP Gas Pilot Orifice - 36", 48"	2
	00-712363	LP Gas Pilot Orifice - 60", 72"	3
	00-720041	NAT. Pilot Orifice - 24"	1
	00-720041	NAT. Pilot Orifice - 36", 48"	2
	00-720041	NAT. Pilot Orifice - 60", 72"	3
4	00-722229	1/4" X 18" Flex Tubing - 24"	1
	00-722229	1/4" X 18" Flex Tubing - 36", 48"	2
	00-722229	1/4" X 18" Flex Tubing - 60", 72"	3
5	00-714268	Thermocouple T46 18" - 24"	1
	00-714268	Thermocouple T46 18" - 36", 48"	2
	00-714268	Thermocouple T46 18" - 60", 72"	3
6	00-758567-000A1	J-BOX ASSEMBLY (Box, Conduit, Power Cord and Insulated Lead Wires - 900RX)	1
7	00-719737-00005	Burner Assy. - 24"	2
	00-719737-00005	Burner Assy. - 36"	3
	00-719737-00005	Burner Assy. - 48"	4
	00-719737-00005	Burner Assy. - 60"	5
	00-719737-00005	Burner Assy. - 72"	6
8	00-719951-00041	Hood - Orifice (Drill 41) (NAT. Gas) - 24"	2
	00-719951-00041	Hood - Orifice (Drill 41) (NAT. Gas) - 36"	3
	00-719951-00041	Hood - Orifice (Drill 41) (NAT. Gas) - 48"	4
	00-719951-00041	Hood - Orifice (Drill 41) (NAT. Gas) - 60"	5
	00-719951-00041	Hood - Orifice (Drill 41) (NAT. Gas) - 72"	6
	00-719951-00052	Hood - Orifice (Drill 52) (LP. Gas) - 24"	2
	00-719951-00052	Hood - Orifice (Drill 52) (LP. Gas) - 36"	3
	00-719951-00052	Hood - Orifice (Drill 52) (LP. Gas) - 48"	4
	00-719951-00052	Hood - Orifice (Drill 52) (LP. Gas) - 60"	5
	00-719951-00052	Hood - Orifice (Drill 52) (LP. Gas) - 72"	6
9	00-498033	Orifice Bracket - 24"	2
	00-498033	Orifice Bracket - 36"	3
	00-498033	Orifice Bracket - 48"	4
	00-498033	Orifice Bracket - 60"	5
	00-498033	Orifice Bracket - 72"	6
10	00-719383	Elbow 3/8 Orifice MPT - 24"	2
	00-719383	Elbow 3/8 Orifice MPT - 36"	3
	00-719383	Elbow 3/8 Orifice MPT - 48"	4
	00-719383	Elbow 3/8 Orifice MPT - 60"	5
	00-719383	Elbow 3/8 Orifice MPT - 72"	6
11	00-722220	Tube - Flex (3/8 X 6 In.) - 24"	2
	00-722220	Tube - Flex (3/8 X 6 In.) - 36", 48"	3
	00-722220	Tube - Flex (3/8 X 6 In.) - 60", 72"	4
12	00-404193-00001	Valve - Pilot - 24"	1
	00-404193-00001	Valve - Pilot - 36", 48"	2
	00-404193-00001	Valve - Pilot - 60", 72"	3
13	00-498202-00024	924RX Wire Harness - 24"	1

900RX AND MSA MODELS MANUFACTURED PRIOR TO MARCH 2010 INTERIOR COMPONENTS

ILLUS. PL-31175	PART NO.	NAME OF PART	AMT.
	00-498202-00048	936RX and 948RX Wire Harness - 36", 48"	1
	00-498202-00072	960RX and 972RX Wire Harness - 60", 72"	1
14	00-719377	Connector - Straight 3/8 x 3/8 (Brass) - 24"	5
	00-719377	Connector - Straight 3/8 x 3/8 (Brass) - 36"	9
	00-719377	Connector - Straight 3/8 x 3/8 (Brass) - 48"	10
	00-719377	Connector - Straight 3/8 x 3/8 (Brass) - 60"	13
	00-719377	Connector - Straight 3/8 x 3/8 (Brass) - 72"	15
15	00-720385	Spark Module (900RX) - 24"	1
	00-720385	Spark Module (900RX) - 36", 48"	2
	00-720385	Spark Module (900RX) - 60", 72"	3
16	00-498096-00550	Valve (550F) T-Stat Combo	AR
17	00-498024-00024	24" Control Panel Bracket - 24", 60"	1
	00-498024-00024	24" Control Panel Bracket - 48"	2
	00-498024-00024	24" Control Panel Bracket - 72"	3
	00-498024-00036	36" Control Panel Bracket - 36", 60"	1
18	00-722425	Tube - Flex (3/8 x 8 In.) - 24"	2
	00-722425	Tube - Flex (3/8 x 8 In.) - 36"	3
	00-722425	Tube - Flex (3/8 x 8 In.) - 48"	4
	00-722425	Tube - Flex (3/8 x 8 In.) - 60", 72"	5
	00-722221	Flex Tubing (3/8 x 12 In.) - 36", 60", 72"	1
	00-722222	Flex Tube 3/8" X 18" - 24"	1
	00-722222	Flex Tube 3/8" X 18" - 36", 48"	2
	00-722222	Flex Tube 3/8" X 18" - 60"	3
	00-722222	Flex Tube 3/8" X 18" - 72"	4
	00-722224	Flex Tube 3/8" X 30" - 72"	1
19	00-498028	Tee 3/8 Male Compression - 24", 36"	1
	00-498028	Tee 3/8 Male Compression - 48", 60"	2
	00-498028	Tee 3/8 Male Compression - 72"	3
20	00-498049	Safety Valve Bracket - 24"	1
	00-498049	Safety Valve Bracket - 36", 48"	2
	00-498049	Safety Valve Bracket - 60", 72"	3
21	00-498025	Valve - BASO - 24"	1
	00-498025	Valve - BASO - 36", 48"	2
	00-498025	Valve - BASO - 60", 72"	3
22	00-719377	Connector - Straight 3/8 x 3/8 (Brass) - 24"	5
	00-719377	Connector - Straight 3/8 x 3/8 (Brass) - 36"	9
	00-719377	Connector - Straight 3/8 x 3/8 (Brass) - 48"	10
	00-719377	Connector - Straight 3/8 x 3/8 (Brass) - 60"	13
	00-719377	Connector - Straight 3/8 x 3/8 (Brass) - 72"	15
23	00-498234-0000A	Grease Chute Assembly - 24", 36", 48"	1
	00-498234-0000A	Grease Chute Assembly - 60", 72"	2
24	00-722220	Tube - Flex (3/8 X 6 In.) - 24"	2
	00-722220	Tube - Flex (3/8 X 6 In.) - 36", 48"	3
	00-722220	Tube - Flex (3/8 X 6 In.) - 60", 72"	4
25	00-719376	Elbow 3/8 x 3/8 - 24"	1
	00-719376	Elbow 3/8 x 3/8 - 36", 48"	2
	00-719376	Elbow 3/8 x 3/8 - 60", 72"	3
26	00-719363	Plug 1/8 NPT Countersink - 24", 36", 48"	2
	00-719363	Plug 1/8 NPT Countersink - 60", 72"	1
27	00-719365	Plug 3/8 Countersink - 24"	1
28	00-719066	Bushing - Pipe 3/8 -1/8	1
29	00-498035-0024A	Manifold Pipe - 24", 36", 48"	1
	00-498035-0060A	Manifold Pipe - 60", 72"	1
	00-719566	1/4" Fiberglass Sleeving (for TSTAT Wire) - 24"	2
	00-719566	1/4" Fiberglass Sleeving (for TSTAT Wire) - 36"	3
	00-719566	1/4" Fiberglass Sleeving (for TSTAT Wire) - 48"	4
	00-719566	1/4" Fiberglass Sleeving (for TSTAT Wire) - 60"	5
	00-719566	1/4" Fiberglass Sleeving (for TSTAT Wire) - 72"	6

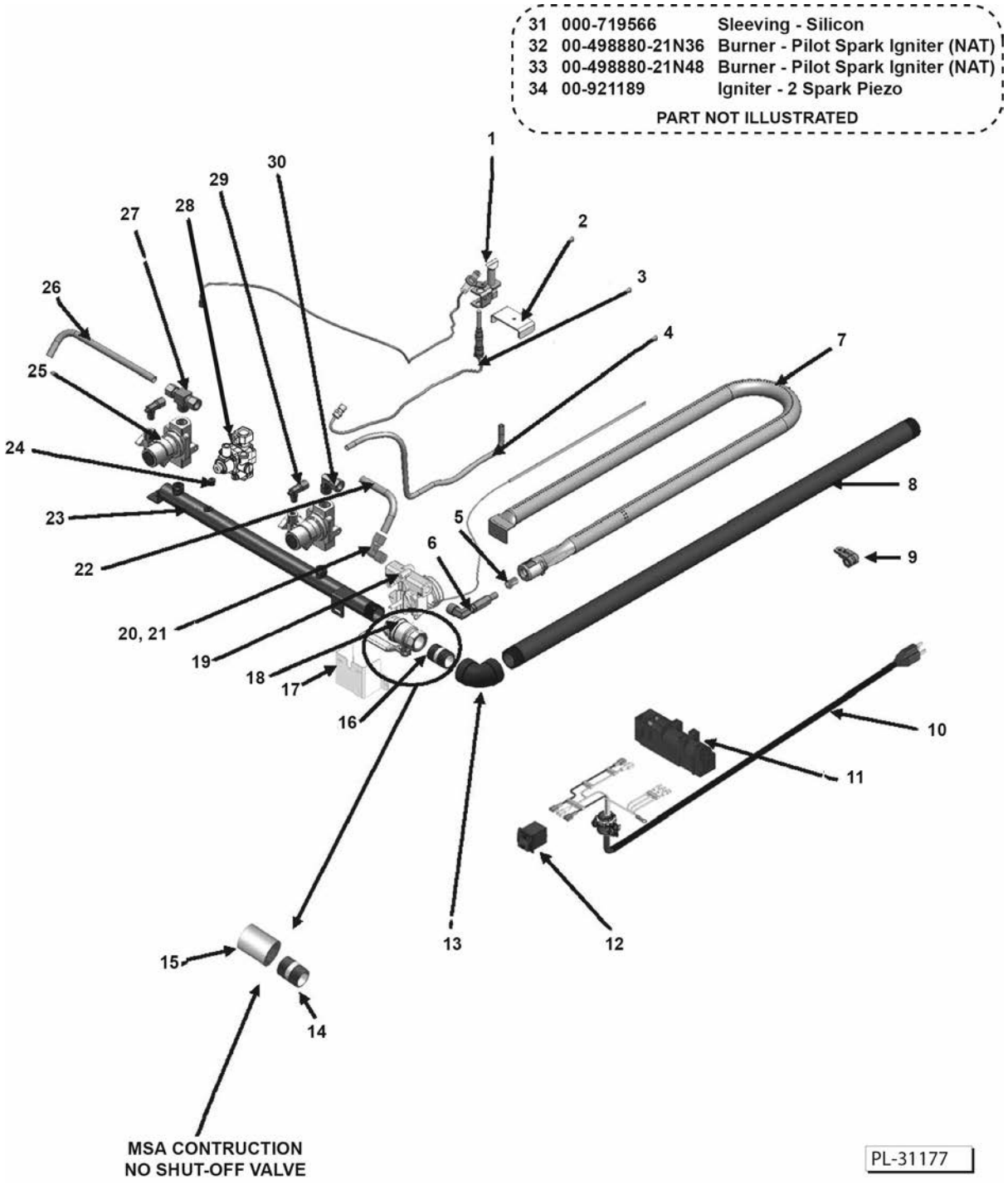
NOTES



900RX AND MSA MODELS MANUFACTURED PRIOR TO MARCH 2010 EXTERIOR COMPONENTS

900RX AND MSA MODELS MANUFACTURED PRIOR TO MARCH 2010 EXTERIOR COMPONENTS

ILLUS. PL-31176	PART NO.	NAME OF PART	AMT.
1	00-788824	NLA - Obsolete--24"" Griddle Back Panel	1
	00-788825	NLA - Obsolete--36"" Griddle Back Panel	1
	00-788801	NLA - Obsolete--48"" Griddle Back Panel	1
	00-788826	NLA - Obsolete--60"" Griddle Back Panel	1
	00-788827	72" Griddle Back Panel	1
2	00-408279-00025	Regulator - Pressure 3/4 In. (NAT)	1
	00-408279-00021	Regulator - Pressure 3/4 (LP)	1
3	00-723532	Leg - Adjustable (6 In. Lg.)	4
4	00-498398	Grease Can Guide Bracket - 24", 36", 48"	1
	00-498398	Grease Can Guide Bracket - 60", 72"	2
5	00-498082-0000A	Trough - Grease (Front) - 24", 36", 48"	1
	00-498082-0000A	Trough - Grease (Front) - 60", 72"	2
	00-790081-0000A	Trough - Grease (Rear)	1
6	00-810280-00001	Switch - Power (900RX)	1
7	00-498690	Wire Knob Guard - 24"	2
	00-498690	Wire Knob Guard - 36"	3
	00-498690	Wire Knob Guard - 48"	4
	00-498690	Wire Knob Guard - 60"	5
	00-498690	Wire Knob Guard - 72"	6
8	00-498041-00012	Knob Vulcan Griddle Knob - 24"	2
	00-498041-00012	Knob Vulcan Griddle Knob - 36"	3
	00-498041-00012	Knob Vulcan Griddle Knob - 48"	4
	00-498041-00012	Knob Vulcan Griddle Knob - 60"	5
	00-498041-00012	Knob Vulcan Griddle Knob - 72"	6
9	00-498037-0000A	Griddle Temp Dial - 24"	2
	00-498037-0000A	Griddle Temp Dial - 36"	3
	00-498037-0000A	Griddle Temp Dial - 48"	4
	00-498037-0000A	Griddle Temp Dial - 60"	5
	00-498037-0000A	Griddle Temp Dial - 72"	6
10	00-498056-00024	924RX Front Panel - 24", 60"	1
	00-498056-00036	936RX Front Panel - 36"	1
	00-498056-00048	948RX Front Panel - 48"	1
	00-498056-00060	960RX Front Panel - 60"	1
	00-498056-00072	972RX Front Panel - 72"	1
11	00-498058-0024A	924RX Bullnose - 24"	1
	00-498058-0036A	936RX Bullnose - 36"	1
	00-498058-0048A	948RX Bullnose - 48"	1
	00-498058-0060A	960RX Bullnose - 60"	1
	00-498058-0072A	NLA - Obsolete--972RX Bullnose - 72"	1
12	00-498019-00024	NLA - Obsolete--MSA24 Front Panel - 24"	1
	00-498019-00036	MSA36 Front Panel - 36"	1
	00-498019-00048	NLA - Obsolete--MSA48 Front Panel - 48"	1
	00-498019-00060	NLA - Obsolete--MSA60 Front Panel - 60"	1
	00-498019-00072	MSA72 Front Panel - 72"	1
13	00-498023-00024	MSA24 Bullnose - 24"	1
	00-498023-00036	MSA36 Bullnose - 36"	1
	00-498023-00048	MSA48 Bullnose - 48"	1
	00-498023-00060	MSA60 Bullnose - 60"	1
	00-498023-00072	MSA72 Bullnose - 72"	1



900RX AND MSA MODELS MANUFACTURED MARCH 2010 TO PRESENT INTERIOR COMPONENTS

900RX AND MSA MODELS MANUFACTURED MARCH 2010 TO PRESENT INTERIOR COMPONENTS

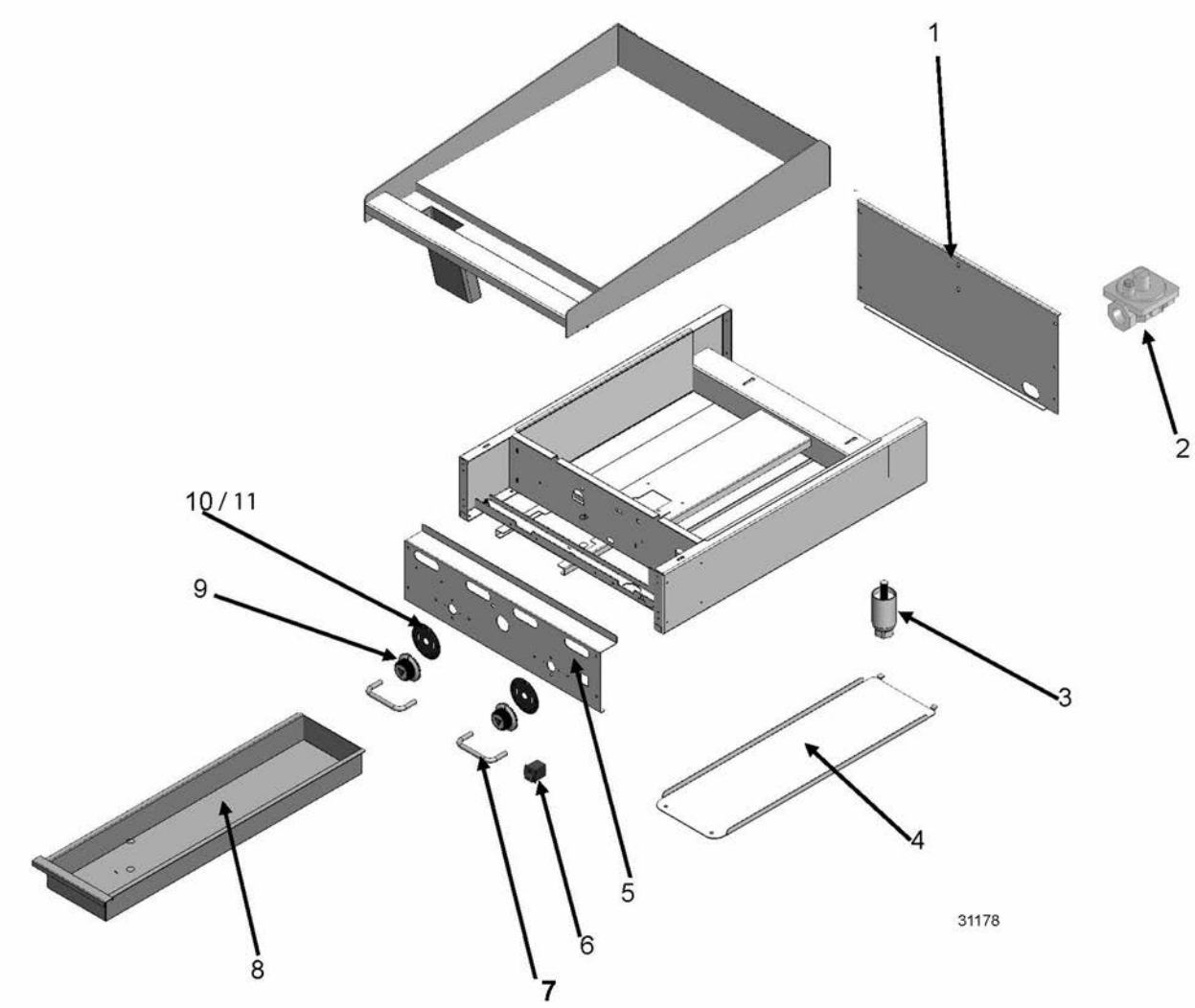
ILLUS. PL-31177	PART NO.	NAME OF PART	AMT.
1	00-498880-18N36	Spark Burner Pilot 36" (NAT. Gas- 900RX) - 24", 48"	1
	00-498880-18N36	Spark Burner Pilot 36" (NAT. Gas- 900RX) - 36"	2
	00-498880-18N36	Spark Burner Pilot 36" (NAT. Gas- 900RX) - 60", 72"	3
	00-498880-18N48	Spark Burner Pilot 48" (NAT. Gas- 900RX) - 48"	1
	00-714269	Pilot (NAT. Gas - MSA) - 24"	1
	00-714269	Pilot (NAT. Gas - MSA) - 36", 48"	2
	00-714269	Pilot (NAT. Gas - MSA) - 60", 72"	3
	00-712363	LP Gas Pilot Orifice - 24"	1
	00-712363	LP Gas Pilot Orifice - 36", 48"	2
	00-712363	LP Gas Pilot Orifice - 60", 72"	3
	00-720041	NAT Gas Pilot Orifice - 24"	1
	00-720041	NAT Gas Pilot Orifice - 36", 48"	2
	00-720041	NAT Gas Pilot Orifice - 60", 72"	3
2	00-498682	Griddle Pilot Bracket - 24"	1
	00-498682	Griddle Pilot Bracket - 36", 48"	2
	00-498682	Griddle Pilot Bracket - 60", 72"	3
3	00-714268	Thermocouple T46 18" - 24"	1
	00-714268	Thermocouple T46 18" - 36", 48"	2
	00-714268	Thermocouple T46 18" - 60", 72"	3
4	00-498887	Tube - Flex (1/4 x 14 In.) - 24"	1
	00-498887	Tube - Flex (1/4 x 14 In.) - 36", 48"	2
	00-498887	Tube - Flex (1/4 x 14 In.) - 60", 72"	3
5	00-719951-00037	Hood - Orifice (Drill 37) (NAT. Gas) - 24"	2
	00-719951-00037	Hood - Orifice (Drill 37) (NAT. Gas) - 36"	3
	00-719951-00037	Hood - Orifice (Drill 37) (NAT. Gas) - 48"	4
	00-719951-00037	Hood - Orifice (Drill 37) (NAT. Gas) - 60"	5
	00-719951-00037	Hood - Orifice (Drill 37) (NAT. Gas) - 72"	6
	00-719951-00052	Hood - Orifice (Drill 52) (LP Gas) - 24"	2
	00-719951-00052	Hood - Orifice (Drill 52) (LP Gas) - 36"	3
	00-719951-00052	Hood - Orifice (Drill 52) (LP Gas) - 48"	4
	00-719951-00052	Hood - Orifice (Drill 52) (LP Gas) - 60"	5
	00-719951-00052	Hood - Orifice (Drill 52) (LP Gas) - 72"	6
6	00-498892-0000A	Thermostat Orifice Elbow Assembly - 24"	2
	00-498892-0000A	Thermostat Orifice Elbow Assembly - 36"	3
	00-498892-0000A	Thermostat Orifice Elbow Assembly - 48"	4
	00-498892-0000A	Thermostat Orifice Elbow Assembly - 60"	5
	00-498892-0000A	Thermostat Orifice Elbow Assembly - 72"	6
7	00-498900-0000A	Griddle Burner - 24"	2
	00-498900-0000A	Griddle Burner - 36"	3
	00-498900-0000A	Griddle Burner - 48"	4
	00-498900-0000A	Griddle Burner - 60"	5
	00-498900-0000A	Griddle Burner - 72"	6
8	00-498199	3/4" NPT X 29" Nipple	1
9	00-498883	.38 Cushioned Cord Clamp (900RX)	1
10	00-498209-0000A	Power Harness Cord (900RX)	1
11	00-498890	Electric Igniter (900RX)	1
12	00-498899	Momentary Power Switch (900RX)	1
13	00-719049	Elbow 3/4 NPT	1
14	00-498798	3/4" X 2" NPT Nipple (MSA)	1
15	00-719004	3/4" NPT Coupling (MSA) - 24", 36", 60", 72"	1
	00-719004	3/4" NPT Coupling (MSA) - 48"	4
16	00-719105	NLA - Obsolete--3/4"" NPT Close Nipple (900RX)	1
17	00-498407	Bracket - Thermostat - 24"	2
	00-498407	Bracket - Thermostat - 36"	3
	00-498407	Bracket - Thermostat - 48"	4

900RX AND MSA MODELS MANUFACTURED MARCH 2010 TO PRESENT INTERIOR COMPONENTS

ILLUS. PL-31177	PART NO.	NAME OF PART	AMT.
	00-498407	Bracket - Thermostat - 60"	5
	00-498407	Bracket - Thermostat - 72"	6
18	00-498799	3/4" NPT Straight Valve (900RX)	1
19	00-498096-00550	Valve (550F) T-Stat Combo	AR
*20	00-498096-00450	Valve (450F) T-Stat Combo - 24"	2
*	00-498096-00450	Valve (450F) T-Stat Combo - 36"	3
*	00-498096-00450	Valve (450F) T-Stat Combo - 48"	4
*	00-498096-00450	Valve (450F) T-Stat Combo - 60"	5
*	00-498096-00450	Valve (450F) T-Stat Combo - 72"	6
21	FP-085-68	Fitting- Elbow (7/16 TBG X 3/8 MPT) - 24", 48"	2
	FP-085-68	Fitting- Elbow (7/16 TBG X 3/8 MPT) - 36"	3
	FP-085-68	Fitting- Elbow (7/16 TBG X 3/8 MPT) - 60"	5
	FP-085-68	Fitting- Elbow (7/16 TBG X 3/8 MPT) - 72"	6
22	00-426508-00005	7/16" X 5" Flex Tube - 24"	1
	00-426508-00005	7/16" X 5" Flex Tube - 36"	2
	00-426508-00005	7/16" X 5" Flex Tube - 60", 72"	3
23	00-498052-0024A	24" Griddle Manifold W/A - 24"	1
	00-498052-0036A	36" Griddle Manifold W/A - 36"	1
	00-498052-0048A	48" Griddle Manifold W/A - 48"	1
	00-498052-0060A	60" Griddle Manifold W/A - 60"	1
	00-498052-0072A	72" Griddle Manifold W/A - 72"	1
24	00-719363	Plug 1/8 NPT Countersink - 24", 36", 60", 72"	1
	00-719363	Plug 1/8 NPT Countersink - 48"	2
**25	00-498025	Valve - BASO - 24"	1
**	00-498025	Valve - BASO - 36", 48"	2
**	00-498025	Valve - BASO - 60", 72"	3
26	00-426508-00010	Tube - Flex 7/16" O.D. 10" Lg. - 24", 36"	1
	00-426508-00010	Tube - Flex 7/16" O.D. 10" Lg. - 48", 60"	2
	00-426508-00010	Tube - Flex 7/16" O.D. 10" Lg. - 72"	3
27	00-498715	3/8" MPT X 7/16" CC TEE - 24", 36"	1
	00-498715	3/8" MPT X 7/16" CC TEE - 48", 60"	2
	00-498715	3/8" MPT X 7/16" CC TEE - 72"	3
***28	00-944649	Valve - RobertShaw - 24"	1
***	00-944649	Valve - RobertShaw - 36", 48"	2
***	00-944649	Valve - RobertShaw - 60", 72"	3
29	00-404193-00001	Valve - Pilot - 24"	1
	00-404193-00001	Valve - Pilot - 36", 48"	2
	00-404193-00001	Valve - Pilot - 60", 72"	3
30	FP-085-68	Fitting- Elbow (7/16 TBG X 3/8 MPT) - 36", 60"	1
31	00-719566	1/4" Fiberglass Sleeving (for TSTAT Wire) - 24"	2
	00-719566	1/4" Fiberglass Sleeving (for TSTAT Wire) - 36"	3
	00-719566	1/4" Fiberglass Sleeving (for TSTAT Wire) - 48"	4
	00-719566	1/4" Fiberglass Sleeving (for TSTAT Wire) - 60"	5
	00-719566	1/4" Fiberglass Sleeving (for TSTAT Wire) - 72"	6
32	00-498880-21N36	Burner - Pilot Spark Igniter (NAT)	AR
33	00-498880-21N48	Burner - Pilot Spark Igniter (NAT)	AR
34	00-921189	Igniter - 2 Spark Piezo	AR
****35	00-944255	Igniter (Rotary) (3-Pole) Not Shown	1
****36	00-944545	Knob, Rotary igniter Not Shown	1
****37	00-498880-21N36	Pilot Pilot burner with electrode Piezo ignition OR use 00-498880-21NPZ	1
****38	00-498880-21NPZ	Pilot Pilot burner with electrode Piezo ignition OR use 00-498880-21N36	AR
****39	00-810069	Dial (Used with Thermostat) 450F Thermostat Dial	AR

* Must Be Used With Composite Plate Giddles
** Units Built 5/15/17 & Before
*** Units Built After 5/15/17
**** Not Shown

NOTES



900RX AND MSA MODELS MANUFACTURED MARCH 2010 TO PRESENT EXTERIOR COMPONENTS

900RX AND MSA MODELS MANUFACTURED MARCH 2010 TO PRESENT
EXTERIOR COMPONENTS

ILLUS. PL-31178	PART NO.	NAME OF PART	AMT.
1	00-498791-00024	24" Griddle Back Panel	1
	00-498791-00036	36" Griddle Back Panel	1
	00-498791-00048	48" Griddle Back Panel	1
	00-498791-00060	60" Griddle Back Panel	1
	00-498791-00072	72" Griddle Back Panel	1
2	00-408279-00026	NAT. Gas Pressure Regulator	1
	00-408279-00021	Regulator - Pressure 3/4 (LP)	1
3	00-710503	Leg - Adjustable (4 In. Lg.) (Standard)	4
	00-723532	Leg - Adjustable (6 In. Lg.) (Optional)	4
	00-723532-00002	2" OD X 10" L Adjustable Leg (Optional)	4
4	00-498790	Chassis Bottom Heat Shield - 24"	1
	00-498790	Chassis Bottom Heat Shield - 36"	2
	00-498790	Chassis Bottom Heat Shield - 48", 60"	4
	00-498790	Chassis Bottom Heat Shield - 72"	6
5	00-498778-00024	24" Griddle Front Panel	1
	00-498778-00036	36" Griddle Front Panel	1
	00-498778-00048	48" Griddle Front Panel	1
	00-498778-00060	60" Griddle Front Panel	1
	00-498778-00072	72" Griddle Front Panel	1
6	00-498898	Switch Hole Plug (MSA)	1
7	00-498690	Guard - Knob - 24"	2
	00-498690	Guard - Knob - 36"	3
	00-498690	Guard - Knob - 48"	4
	00-498690	Guard - Knob - 60"	5
	00-498690	Guard - Knob - 72"	6
8	00-498082-0000A	Trough - Grease - 24", 36", 48"	1
	00-498082-0000A	Trough - Grease - 60", 72"	2
	00-790081-0000A	Trough - Grease (Rear)	1
9	00-498041-00012	Knob - 24"	2
	00-498041-00012	Knob - 36"	3
	00-498041-00012	Knob - 48"	4
	00-498041-00012	Knob - 60"	5
	00-498041-00012	Knob - 72"	6
10	00-498037-0000A	Dial, 550 Degree - 24"	2
	00-498037-0000A	Dial, 550 Degree - 36"	3
	00-498037-0000A	Dial, 550 Degree - 48"	4
	00-498037-0000A	Dial, 550 Degree - 60"	5
	00-498037-0000A	Dial, 550 Degree - 72"	6
11	00-498945-0000A	Dial	1

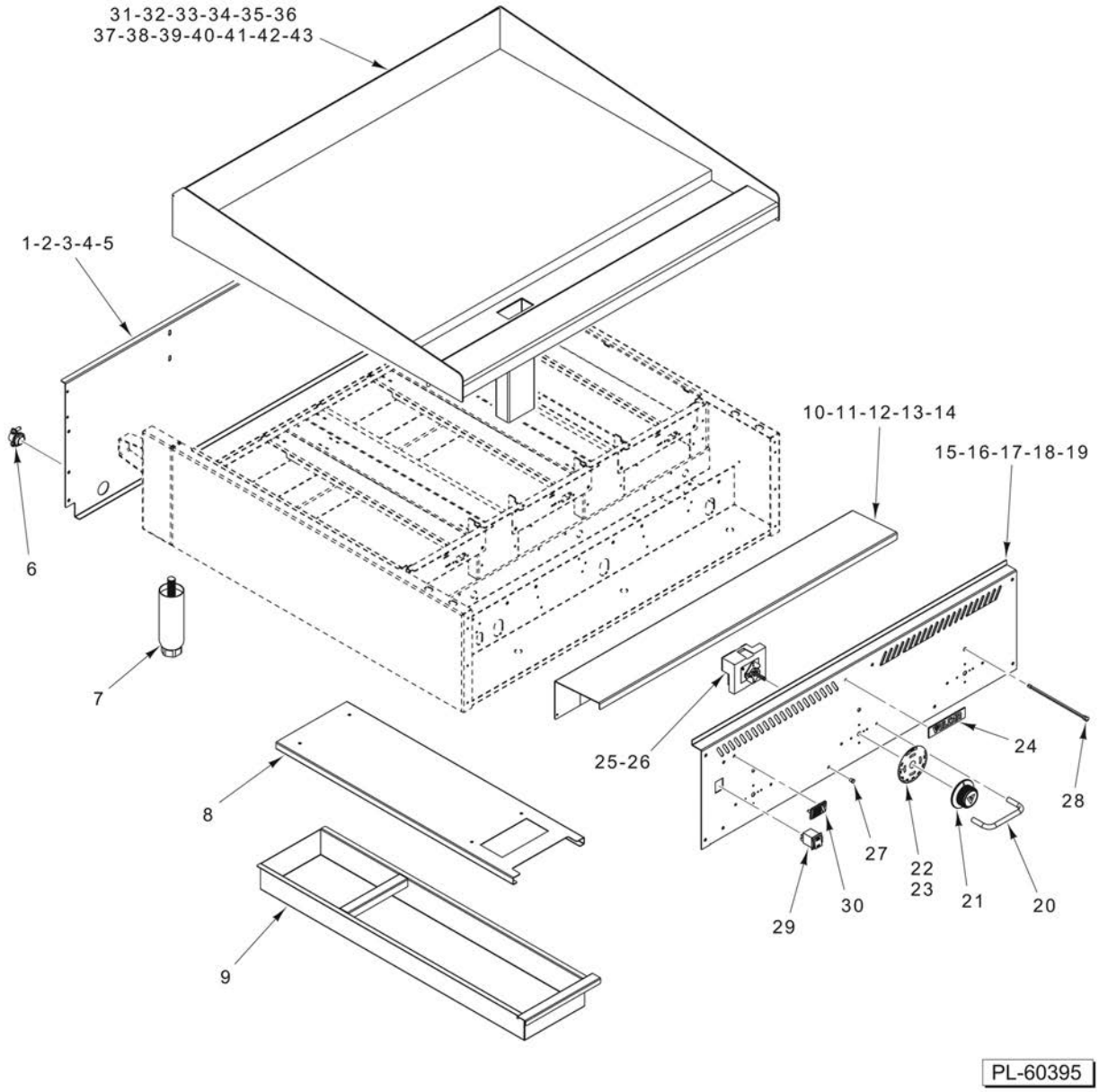
CATALOG OF REPLACEMENT PARTS

VCCG SERIES GAS GRIDDLES

VULCAN-HART DIVISION OF ITW FOOD EQUIPMENT GROUP, LLC 3600 NORTH POINT BLVD., BALTIMORE, MD 21222

FORM 43294 (February 2020)

Table of Contents

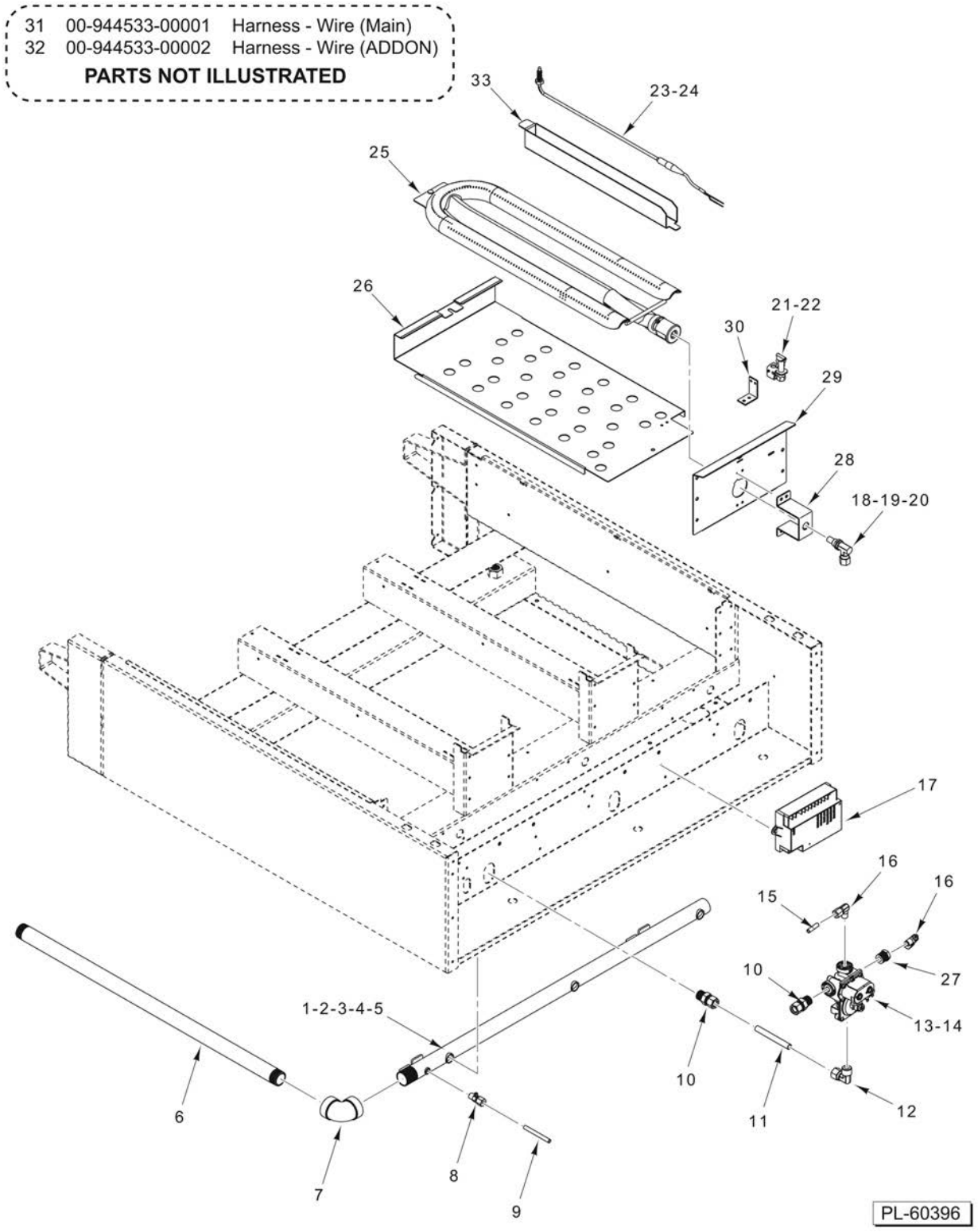


CONTROLS AND GRIDDLE PLATE

CONTROLS AND GRIDDLE PLATE

ILLUS. PL-60395	PART NO.	NAME OF PART	AMT.
1	00-944318-00024	Panel - Back (24 In.)	1
2	00-944318-00036	Panel - Back (36 In.)	1
3	00-944318-00048	Panel - Back (48 In.)	1
4	00-944318-00060	Panel - Back (60 In.)	1
5	00-944318-00072	Panel - Back (72 In.)	1
6	00-944526	Cord - Power (120 V.)	1
7	00-723532	Leg - Adjustable (6 In. Lg.)	4
8	00-944320-10001	Bracket - Can Guide	AR
9	00-498082-0000A	Weldment - Grease Can	1
10	00-944521-00024	Deflector - Control (24 In.)	1
11	00-944521-00036	Deflector - Control (36 In.)	1
12	00-944521-00048	Deflector - Control (48 In.)	1
13	00-944521-00060	Deflector - Control (60 In.)	1
14	00-944521-00072	Deflector - Control (72 In.)	1
15	00-944326-00024	Panel - Front (24 In.)	1
16	00-944326-00036	Panel - Front (36 In.)	1
17	00-944326-00048	Panel - Front (48 In.)	1
18	00-944326-00060	Panel - Front (60 In.)	1
19	00-944326-00072	Panel - Front (72 In.)	1
20	00-498690	Guard - Knob	AR
21	00-498041-00012	Knob AR	AR
22	00-498037-0000A	Dial, 550 Degree (550 Deg.) (Griddle Temperature) (Use With Item 25)	AR
*23	00-498945-0000A	Dial (450 Deg.) (Use With Item 26)	AR
24	00-957916-00003	Nameplate - Small (Vulcan)	1
25	00-944524-00001	Thermostat (550 Deg.) (120 V.)	AR
*26	00-944524-00002	Thermostat (450 Deg.) (120 V.)	AR
27	00-944540	Lens (Clear)	AR
28	00-944539	Indicator (Red)	AR
29	00-810280-00001	Switch - Power	1
**30	00-944264	Logo (VTEC)	1
31		Griddle Plate Assy. (24 In.) (Steel)	1
32		Griddle Plate Assy. (24 In.) (Chrome)	1
33		Griddle Plate Assy. (24 In.) (Composite)	1
34		Griddle Plate Assy. (36 In.) (Steel)	1
35		Griddle Plate Assy. (36 In.) (Chrome)	1
36		Griddle Plate Assy. (36 In.) (Composite)	1
37		Griddle Plate Assy. (48 In.) (Steel)	1
38		Griddle Plate Assy. (48 In.) (Chrome)	1
39		Griddle Plate Assy. (48 In.) (Composite)	1
40		Griddle Plate Assy. (60 In.) (Steel)	1
41		Griddle Plate Assy. (60 In.) (Chrome)	1
42		Griddle Plate Assy. (72 In.) (Steel)	1
43		Griddle Plate Assy. (72 In.) (Chrome)	1

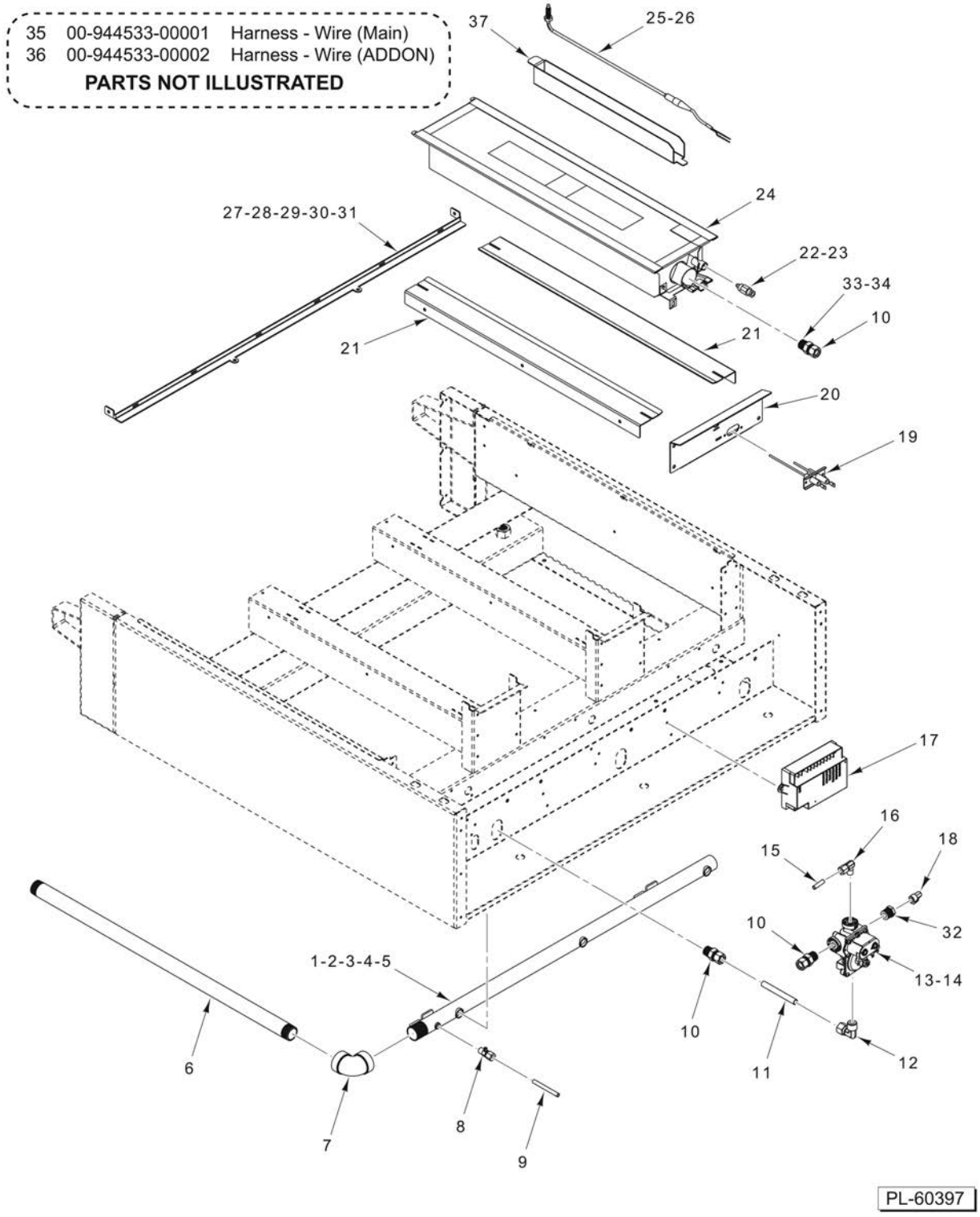
* (Units W/Infrared Burners or Composite Griddle Plate)
** (Infrared Units Only)



GAS COMPONENTS (RADIANT)

GAS COMPONENTS (RADIANT)

ILLUS. PL-60396	PART NO.	NAME OF PART	AMT.
1	00-944519-0024A	Manifold (24 In.)	1
2	00-944519-0036A	Manifold (36 In.)	1
3	00-944519-0048A	Manifold (48 In.)	1
4	00-944519-0060A	Manifold (60 In.)	1
5	00-944519-0072A	Manifold (72 In.)	1
6	00-944523	Pipe	1
7	00-719049	Elbow 3/4 NPT	1
8	00-719179	Valve - Single Pilot	1
9	00-944525-00001	Tubing (1/4 In.)	1
10	00-719377	Connector - Straight 3/8 x 3/8 (Brass)	AR
11	00-944525-00002	Tubing (3/8 In.)	AR
12	00-719376	Elbow 3/8 x 3/8	AR
13	00-944391	Valve - Gas (Double Regulated) (NAT)	AR
14	00-819298	Valve - Gas (Double Regulated) (LP)	AR
15	00-944525-00003	Tubing (1/4 In.)	AR
16	00-404193-00001	Valve - Pilot	AR
17	00-944520	Module - Ignition	AR
18	00-719383	Elbow 3/8 Orifice	AR
19	00-719951-00038	Hood - Orifice (Drill 38) (NAT)	AR
20	00-719951-00052	Hood - Orifice (Drill 52) (LP)	AR
21	00-498880-21N36	Pilot (NAT)	AR
22	00-712363	Orifice - Pilot (LP)	AR
23	00-944541	Thermocouple (K-Type, Long) (Temperature - Used with 550 Deg. Thermostat)	AR
24	00-498432-0000A	Thermocouple (K-Type, Short) (Temperature - Used with 450 Deg. Thermostat)	AR
25	00-719737-00005	Burner Assy	AR
26	00-944535	Mount - Burner	AR
27	00-719066	Bushing - Pipe 3/8 -1/8	AR
28	00-944553	Holder - Orifice	AR
29	00-944552	Shield	AR
30	00-944543	Bracket - Pilot	AR
31	00-944533-00001	Harness - Wiring (Main) (24 In.)	AR
32	00-944533-00002	Harness - Wiring (ADDON) (12 In.)	AR
32a	00-976537-00001	Cable, Ignition	AR
33	00-944332	Shield - Thermocouple	AR



GAS COMPONENTS (INFRARED)

GAS COMPONENTS (INFRARED)

ILLUS. PL-60397	PART NO.	NAME OF PART	AMT.
1	00-944519-0024A	Manifold (24 In.)	1
2	00-944519-0036A	Manifold (36 In.)	1
3	00-944519-0048A	Manifold (48 In.)	1
4	00-944519-0060A	Manifold (60 In.)	1
5	00-944519-0072A	Manifold (72 In.)	1
6	00-944523	Pipe	1
7	00-719049	Elbow 3/4 NPT	1
8	00-719179	Valve - Single Pilot	1
9	00-944525-00001	Tubing (1/4 In.)	1
10	00-719377	Connector - Straight 3/8 x 3/8 (Brass)	AR
11	00-944525-00002	Tubing (3/8 In.)	AR
12	00-719376	Elbow 3/8 x 3/8	AR
13	00-944391	Valve - Gas (Double Regulated) (NAT)	AR
14	00-819298	Valve - Gas (Double Regulated) (LP)	AR
15	00-944525-00003	Tubing (1/4 In.)	AR
16	00-404193-00001	Valve - Pilot	AR
17	00-944520	Module - Ignition	AR
18	00-719156	Elbow 3/8 x 7/16	AR
19	00-944517	Ignitor	AR
20	00-944324	Shield - Burner	AR
21	00-944321	Support - Burner	AR
22	00-944548-00001	Orifice - Pilot (NAT)	AR
23	00-944548-00002	Orifice - Pilot (LP)	AR
24	00-944501	Burner (Infrared)	AR
25	00-944541	Thermocouple (K-Type, Long) (Temperature - Used with 550 Deg. Thermostat)	AR
26	00-498432-0000A	Thermocouple (K-Type, Short) (Temperature - Used with 450 Deg. Thermostat)	AR
27	00-944331-00024	Baffle (24 In.)	1
28	00-944331-00036	Baffle (36 In.)	1
29	00-944331-00048	Baffle (48 In.)	1
30	00-944331-00060	Baffle (60 In.)	1
31	00-944331-00072	Baffle (72 In.)	1
32	00-719066	Bushing - Pipe 3/8 -1/8	AR
33	00-945079-00044	Orifice (NAT)	AR
34	00-945079-00053	Orifice (LP)	AR
35	00-944533-00001	Harness - Wiring (Main) (24 In.)	AR
36	00-944533-00002	Harness - Wiring (ADDON) (12 In.)	AR
37	00-944332	Shield - Thermocouple	AR
38	00-976537-00001	Cable, Ignition Not Shown	1