GARLAND®

# INSTALLATION & OPERATING INSTRUCTIONS FOR THE GARLAND® STARFIRE SENTRY COMBINATION RANGE, MODEL STW286A

**FOR YOUR SAFETY**

**DO NOT STORE OR USE GASOLINE OR OTHER FLAMMABLE VAPORS OR LIQUIDS IN THE VICINITY OF THIS OR ANY OTHER APPLIANCE. KEEP APPLIANCE AREA FREE AND CLEAR FROM COMBUSTIBLES.**

**WARNING:**
**IMPROPER INSTALLATION, ADJUSTMENT, ALTERATION, SERVICE OR MAINTENANCE CAN CAUSE PROPERTY DAMAGE, INJURY OR DEATH. READ THE INSTALLATION, OPERATION AND MAINTENANCE INSTRUCTIONS THOROUGHLY BEFORE INSTALLING OR SERVICING THIS EQUIPMENT.**

***WARNING:*** **ELECTRICAL GROUNDING INSTRUCTIONS**
**THIS APPLIANCE IS EQUIPPED WITH A THREE-PRONG (GROUNDING) PLUG FOR YOUR PROTECTION AGAINST SHOCK HAZARD. IT SHOULD BE PLUGGED DIRECTLY INTO A PROPERLY GROUNDED THREE-PRONG RECEPTACLE. DO NOT CUT OR REMOVE THE GROUNDING PRONG FROM THIS PLUG**

**DO NOT OBSTRUCT THE FLOW OF COMBUSTION AND VENTILATION AIR TO THIS APPLIANCE.**

**PLEASE READ ALL SECTIONS OF THIS MANUAL AND RETAIN FOR FUTURE REFERENCE.**

**THIS PRODUCT HAS BEEN CERTIFIED AS COMMERCIAL COOKING EQUIPMENT AND MUST BE INSTALLED BY PROFESSIONAL PERSONNEL AS SPECIFIED.**

**For Your Safety:**
**Post in a prominent location, instructions to be followed in the event the user smells gas.**
**This information shall be obtained by consulting your local gas supplier.**

Users are cautioned that maintenance and repairs must be performed by a Garland authorized service agent using genuine Garland replacement parts. Garland will have no obligation with respect to any product that has been improperly installed, adjusted, operated or not maintained in accordance with national and local codes or installation instructions provided with the product, or any product that has its serial number defaced, obliterated or removed, or which has been modified or repaired using unauthorized parts or by unauthorized service agents. For a list of authorized service agents, please refer to the Garland web site at http://www.garland-group.com. The information contained herein, (including design and parts specifications), may be superseded and is subject to change without notice.

Continuous product improvement is a Garland policy, therefore design and specifications are subject to change without notice.

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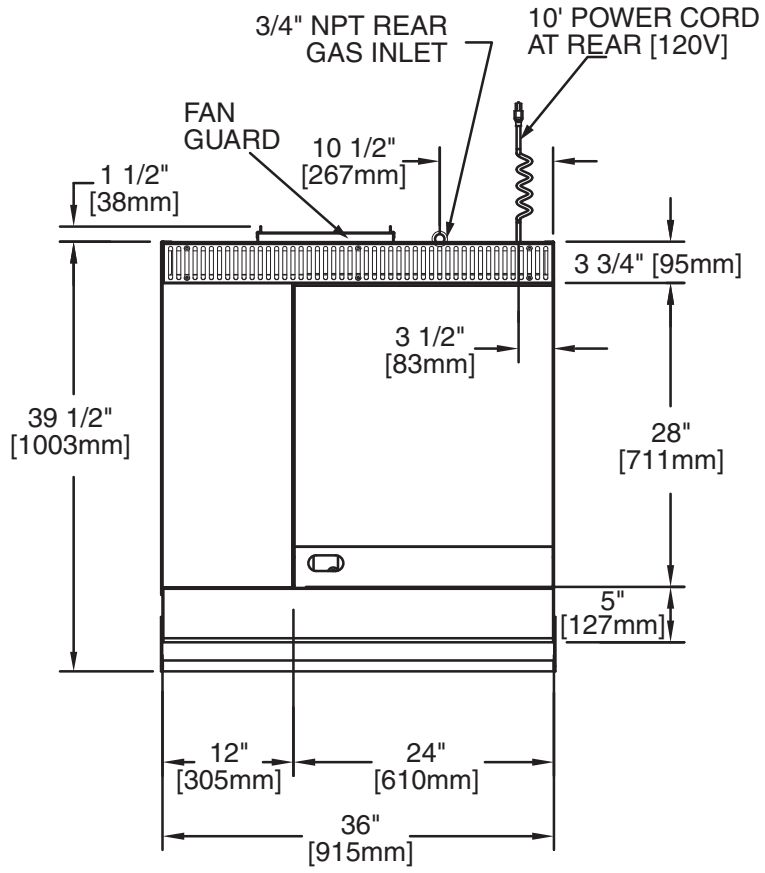
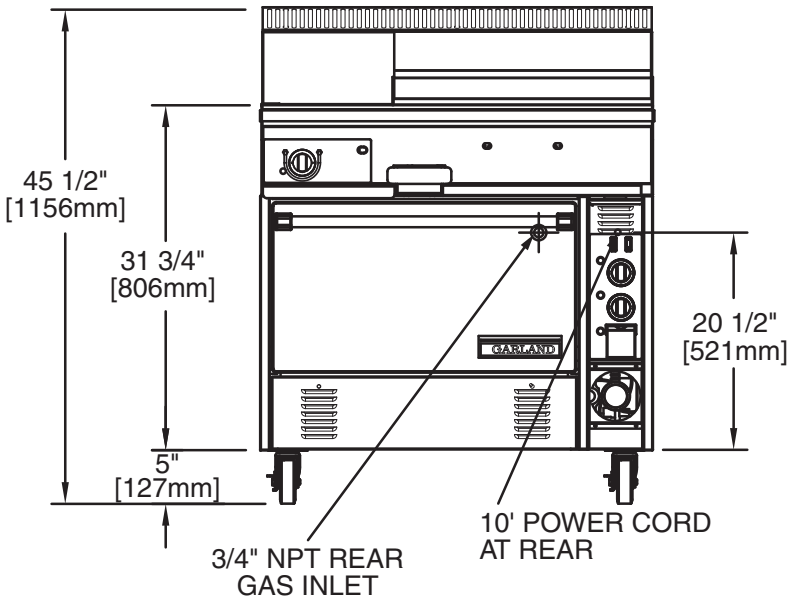
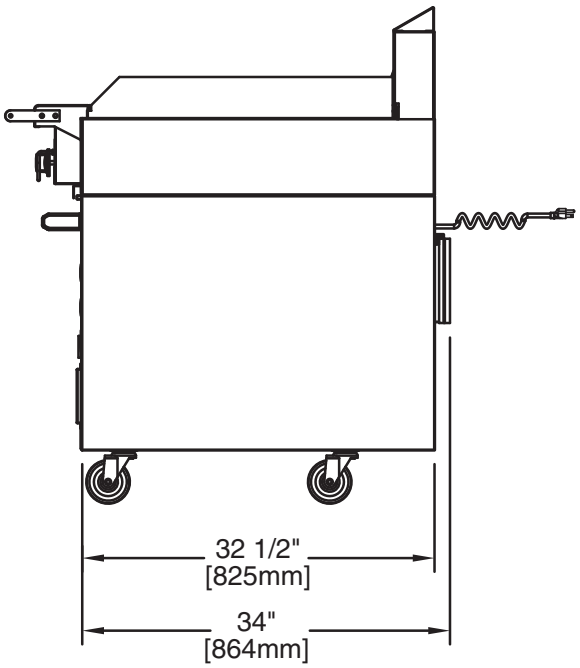
# DIMENSIONS


3/4" NPT REAR
GAS INLET
10' POWER CORD
AT REAR [120V]
FAN
GUARD
10 1/2"
[267mm]
1 1/2"
[38mm]
3 3/4" [95mm]
3 1/2"
[83mm]
39 1/2"
[1003mm]
28"
[711mm]
5"
[127mm]
12"
[305mm]
24"
[610mm]
36"
[915mm]


45 1/2"
[1156mm]
31 3/4"
[806mm]
20 1/2"
[521mm]
5"
[127mm]
GARLAND
3/4" NPT REAR
GAS INLET
10' POWER CORD
AT REAR


32 1/2"
[825mm]
34"
[864mm]

# SPECIFICATIONS

| Oven Interior Dimensions | | | Entry Clearance | | Installation Clearances | | Shipping Weight | Manifold Inlet Size |
|---|---|---|---|---|---|---|---|---|
| Height | Width | Depth | Crated | Uncrated | Sides | Rear | | |
| 13-12" (343mm) | 26-1/4" (667mm) | 22" (559mm) | 43" (1105mm) | 37-7/8" (648mm) | 7" (178mm) | 6" (152mm) | 584lbs. (265kg) | 3/4" NPT Female |

| Input Ratings | | | | | | | | Operating Pressure | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hot Top | | Griddle | | Oven | | Total | | Natural | | Propane | |
| BTU | kW | BTU | kW | BTU | kW | BTU | KW | "WC | mbar | "WC | mbar |
| 25,000 | 7.32 | 50,000 | 14.65 | 30,000 | 8.79 | 105,000 | 30.76 | 4.5 | 11 | 10 | 25 |

**NOTE:** Installation clearance reductions are applicable only where local codes permit.

**This product is not approved for residential use.**

Commercial cooking equipment requires an adequate ventilation system. For additional information, refer to the National Fire Protection Association's standard NFPA96.

# INTRODUCTION

This equipment must be installed and adjusted by a competent person in accordance with the law. Failure to install appliances correctly could lead to prosecution. It is in your own interests and that of safety to ensure that the law is complied with. Your Garland Dealer is well qualified to provide this service.

This appliance should be given regular care and maintenance. Periodic inspections by the dealer or a qualified service company are recommended to check temperature, burner adjustments and to ensure moving parts are operative. Wherever possible avoid overheating idle equipment as this is the primary cause of increased service cost.

"Regular maintenance ensures peak performance."

## Unpacking:

1. Check crate for possible damage sustained during transit. Carefully remove unit from crate and again check for damage. Any damage to the appliance must be reported to the carrier immediately.
2. The wires for retaining the burners and other packing material must be removed from units. Any protective material covering stainless steel parts must also be removed.
3. All ranges are shipped from the factory with casters fitted.
4. The type of gas and the supply pressure that the equipment was set up for at the factory is noted on the data plate and on the packaging. This type of gas supply must be used.
5. Do not remove permanently affixed labels, warnings or data plates from the appliance, for this may invalidate the manufacturer's warranty.

NOTE: Many parts of the equipment are raw steel i.e griddle top and solid hot top and can react with moisture forming rust. This is normal and not considered a defect. Clean with a stainless steel fiber pad. A light coating of salt free oil may be applied to prevent further rusting.

# INTRODUCTION continued

## Rating Plate

All burner input ratings are shown on the name/rating plate of each range which can be located behind the lower front kick panel, (located below oven door). To access, remove two (2) fasteners securing the panel shut.

For proper operation, the fuel information on the data plate of your new equipment must match your fuel supply.

When corresponding with the factory or equipment dealer regarding service problems or replacement parts, be sure to refer to the particular unit by the correct model number, including prefix and suffix letters and numbers and serial number. The rating plate affixed to the unit contains this information.

## Safety

It is essential that the instructions in this booklet are strictly followed for the safe and economical operation of the equipment. If it is known or suspected that a fault exists on the appliance then it must not be used until the fault is rectified by a competent person.

**Power Failure Note**: In the event of a power failure, no attempt should be made to operate the oven. The oven is gas operated but has electrical features, motor and door switches.

## Product Usage

The top of the range is designed for flexibility and the preparation of numerous types of products.

Preparation of soups, stocks and sauces are done on a hot top where slow even cooking is desirable. Heating larger quantities of food can be done more efficiently than heating small quantities. Pots and pans should be covered whenever possible to reduce energy consumption.

High acid sauces, such as tomato should be cooked in stainless steel vessels rather than aluminum since stainless will not react chemically. Light coloured sauces may be dicoloured by the aluminum especially if stirred with a metal spoon. Salty water may pit aluminum vessels if used frequently.

# INSTALLATION

## General Information

Before assembly and connection, check gas supply.

- The type of gas for which the unit is equipped is stamped on the name/rating plate. Connect a unit stamped “NAT” only to natural gas, and a unit stamped “PRO” only to propane.
- In a new installation, have the gas authorities check meter size and piping to ensure that the gas supply will deliver sufficient pressure to operate the unit properly.
- When adding or replacing equipment, have gas authorities check gas pressure to ensure that the existing meter and piping will supply fuel to the appliance with no more than 0.5 inch water column pressure drop during operation
- Before turning on the main gas supply, check the unit to be certain that all the controls are in the “OFF” position.
- When checking gas pressure, be sure that all other equipment on the same gas line is turned “ON.” A preset gas pressure regulator is supplied with GARLAND Restaurant Series Equipment. It may be necessary to adjust the regulator to deliver fuel at the pressure shown on the rating plate.

- In Canada, the installation must comply with local codes, or in the absence of local codes, with the Installation Codes for Gas Burning Appliances and Equipment CAN/CGA-B149.1 and CAN/CGA B149.2, (latest edition), and with the Canadian Electrical Code C22.1 (latest edition).

  In the United States the installation must comply with the National Fuel Gas Code ANSI Z223.1, (latest edition), NFPA No. 54, (latest edition), and the National Electrical Code ANSI/NFPA 70, (latest edition), and/or local codes to ensure a safe and efficient operation.

- This equipment must be electrically grounded in accordance with local codes, or in the absence of local codes, with National Electrical Code, ANSI/NFPA 70, or the Canadian Electrical Code, CSA C22.2, as applicable.

- The appliance and its individual shut-off (supplied by others) must be disconnected from the gas supply piping system during any pressure testing of the system at pressures in excess of 1/2 PSIG (3.45 KPA). The appliance must be isolated from the gas supply piping by closing its individual manual shut-off (supplied by others) during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 PSIG (3.45 KPA).

- Adequate clearance must be provided for servicing and proper operation.

## Clearances

Minimum installation clearance to adjacent combustible walls and type of floor or base:

| MINIMUM CLEARANCES STW286A | |
|---|---|
| **LOCATION** | **CLEARANCE** |
| Left Hand Side | 7" (178mm) |
| Right Hand Side | 7" (178mm) |
| Rear | 6" (152mm) |
| **TYPE OF FLOOR OR BASE** | |
| Combustible | |

## Location

The range should be installed on a firm, smooth and level floor designed to withstand the weight of the fully laden appliance. Any openings in the wall beside the appliance should be sealed.

## Appliances Equipped with Casters

- The installation shall be made with a connector that complies with the Standard for Connectors for Moveable Gas Appliances, ANSI Z21.69/CGA 6.16, (latest edition), addenda Z21.69a-1989, and a quick-disconnect device that complies with the Standard for Quick Disconnects for Use with Gas Fuel, ANSI Z21.41/CAN1 6.9, (latest edition).

- The front casters on the appliance are equipped with brakes to limit the movement of the appliance without placing any strain on the connector or quick disconnect device or its associated piping.

- Be aware; required restraint is attached to a bracket, which is located on the rear caster closest to the gas connection. If disconnection of the restraint is necessary, be sure to reconnect the device after the appliance is returned to its original position.

## Ventilation & Air Supply

The area in which the appliance is installed must be adequately ventilated to provide air for combustion, removal of products of combustion and removal of steam, etc. Proper ventilation is essential for optimum performance.

The ideal method of ventilating equipment is the use of a properly designed canopy which should extend six inches, (152mm), beyond all sides of the appliance(s) and six feet, six inches, (1981mm), above the floor.

A strong exhaust will create a vacuum in the room. For an exhaust vent to work properly, replacement air must enter the room. The amount of air that enters must equal the amount exhausted. All gas burners and pilots need sufficient air to operate. Large objects should not be placed in front of the appliance(s) which would obstruct the flow of air into the front.

## Gas Connection:

The gas pipe connection is made at the rear right hand side of the equipment. The size of the pipe work supplying the appliance must not be less than the inlet connection which is 3/4" NPT. An isolating valve is recommended to be close to the appliance to allow shut down during an emergency or routine servicing. After installation, the complete pipe work must be checked for soundness.

### TABLE A. Gas Flow Rate (total)

| NATURAL GAS ( $ft^3/h$ ) | PROPANE GAS ($ft^3/h$ ) |
|---|---|
| 105 | 42 |

### TABLE B. Heat Input Per Burner

| BURNER | NOMINAL HEAT INPUT | | | | | |
|---|---|---|---|---|---|---|
| | NATURAL GAS | | | PROPANE | | |
| | kW | BTU/HR | MJ/HR | kW | BTU/HR | MJ/HR |
| GRIDDLE | 7.32 | 25,000 | 26.37 | 7.32 | 25,000 | 26.37 |
| HOT TOP | 7.32 | 25,000 | 26.37 | 7.32 | 25,000 | 26.37 |
| OVEN | 8.79 | 30,000 | 31.65 | 8.79 | 30,000 | 31.65 |

### TABLE C. Manifold Pressure / Injector Size

| BURNER | NATURAL GAS | | | | PROPANE | | | |
|---|---|---|---|---|---|---|---|---|
| | Manifold Pressure | | Injector Size | | Manifold Pressure | | Injector Size | |
| | mbar | "W.C. | DMS | mm | mbar | "W.C. | DMS | mm |
| GRIDDLE | 11.2 | 4.5 | 42 | 2.4 | 25 | 10 | 53 | 1.51 |
| HOT TOP | 11.2 | 4.5 | 41 | 2.45 | 25 | 10 | — | 1.5 |
| OVEN | 11.2 | 4.5 | 35 | 2.8 | 25 | 10 | 51 | 1.7 |

**NOTE:** The pressure must be measured at the pressure test nipple located on the main manifold, located at the left hand front of the range where the hot top valve is situated, with all burners lit.

### TABLE D. Adjustment Pressure for "MIN" Valve Position (Hot Top section)

| NATURAL GAS | | PROPANE | |
|---|---|---|---|
| mbar | "w.c. | mbar | "w.c. |
| 2.0 | 0.8 | 4.5 | 1.8 |

**NOTE:** The pressure must be measured at the test nipple located downstream of the gas valve.

### TABLE E. Aeration Shutter Setting / Pilot Flame Length

| BURNER | SHUTTER OPENING | | | | PILOT FLAME LENGTH | |
|---|---|---|---|---|---|---|
| | NATURAL GAS | | PROPANE | | | |
| | mm | Ins. | mm | Ins. | mm | Ins. |
| OVEN | 19 | 0.750 | 19 | 0.750 | 25.4 | 1 |
| GRIDDLE | 41.3 | 1.625 | 41.3 | 1.625 | 25.4 | 1 |
| HOT TOP | 41.3 | 1.625 | 41.3 | 1.625 | 12.5 | 0.5 |

## Commissioning:

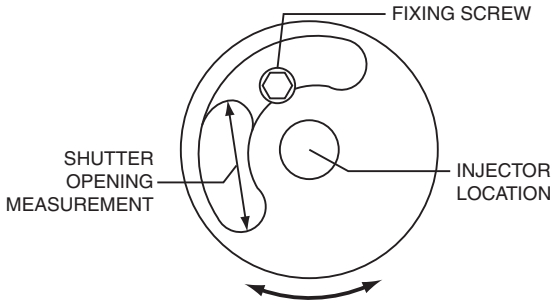
The whole of the gas installation, including the meter, should be inspected, purged and tested for leakage in accordance with local codes.

1. Ensure that all controls are in the off position and turn on the main gas supply and electrical mains.
2. Remove the screws securing the front fascia and connect a U-gauge manometer to the pressure test point on the main manifold. Operate the main burners in accordance with the instructions given in the User's manual.
3. Check that the setting pressure is correct per TABLE C on the previous page. If necessary, adjust the pressure governor located at the rear of the range, downstream of the shut-off valve, to give the required setting.

## Burner Adjustments:

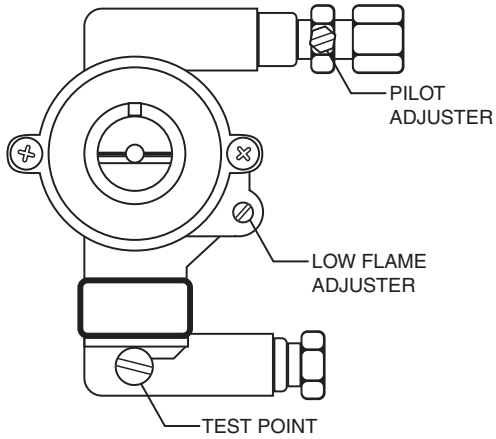
### Griddle /Solid Hot Top Burner

Check that the aeration shutter is set to provide the required opening per table E on the previous page. Adjust if necessary.



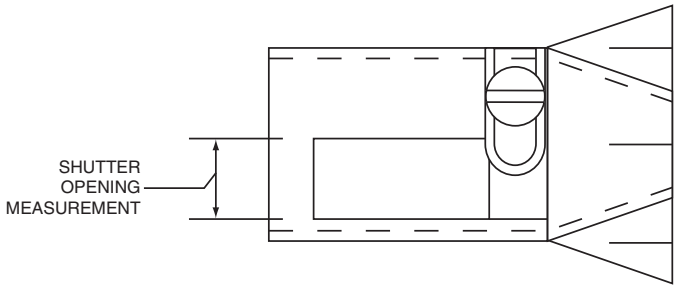

### Hot Top Minimum Flame Setting

1. Set the gas tap to the MIN position.
2. Connect a U-gauge manometer to the pressure test nipple located downstream of the gas tap.
3. With a flat screwdriver, turn the adjuster on the body of the tap clockwise to reduce the pressure or anti-clockwise to increase pressure. Set the pressure to correspond with table D.




### Oven Burner

1. Check that the aeration shutter is set to the required opening per table E. Adjust if necessary.




When all the settings have been checked, remove the U-gauge manometer, replace the pressure test point screw and the lower front panel.

Instruct the user or purchaser in the efficient and safe operation of the appliance.

Tell the user of the location of the gas isolation cock for use in an emergency. Leave this User Installation and Servicing Instruction Manual with the user or purchaser.

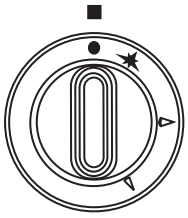
# OPERATION

## Safety concerns

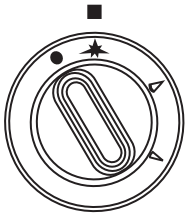
It is the responsibility of the supervisor or equivalent person to ensure that users of this equipment wear suitable protective clothing and draw attention to the fact that some parts will by necessity become very hot and will cause burns if touched accidentally.

## Operation Controls

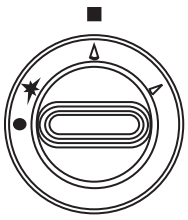
SOLID TOP (STW286A)



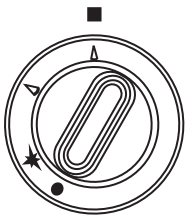
OFF



IGNITION

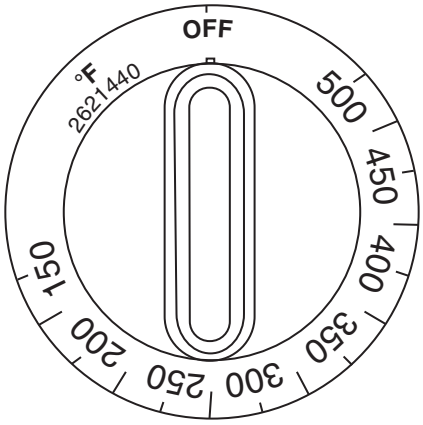


FULL FLAME



LOW FLAME

OVEN/GRIDDLE TOP




## Griddles

Griddle tops are designed to have food cooked directly on the surface. Do not put pots or pans on the griddle surface as this will scratch or nick the surface and will result in improper cooking or sticking of the product. Never salt food over the griddle since this will build up a gummy residue making it difficult to clean.

Avoid hitting the surface of the griddle with the edge of a spatula since this will cause nicks. The most frequently used temperatures are 300° F (149°C) to 350°(177°C). After one firing, the griddle plate will discolour, this is normal and will not affect cooking performance.

Check the grease container and drain frequently during heavy use to prevent overflow.

## Preparing A New Griddle

1. Remove the protective coating on the surface using a mild detergent.
2. Thoroughly rinse the griddle with vinegar and a water solution (3/4 cup vinegar per quart of water) and dry.

## Lighting The Griddle

NOTE: Ensure that the gas and electrical supply to the appliance are turned "ON". During the initial ignition cycle, air must be purged from the gas line and thus it may take two or three tries for ignition to occur.

1. Turn the power switch to the "ON" position.
2. Set the thermostat to the desired temperature.
3. If ignition fails and /or the ignition system goes into lockout, set the power switch to the "O" position.
4. Wait five minutes and repeat steps 1 and 2. If the problem persists have the unit checked by a competent service technician.

## Seasoning The Griddle

1. Use a clean cloth, rub a thin and even layer of oil into the griddle surface. Oil should be an unsalted shortening or high temperature cooking oil.
2. Set the griddle thermostat to 131°F (55°C) and heat the griddle surface until the oil begins to caramelize (turn a golden brow colour). Once this occurs, turn the thermostat to "O".
3. Scrape off the caramelized oil with a standard spatula.
4. Repeat step 1 and set the griddle thermostat to 275°F (135°C).
5. Repeat steps 2 & 3. The griddle is now seasoned and ready for use.

## Shut Down

1. Set the thermostat to the lowest setting and turn the power switch to the "O" position.

## Solid Hot Tops (STW286A)

Recommended where long term stock pot cooking is required for soups, sauces or stocks. Pots can be placed anywhere on the hot top. The maximum recommended stockpot size is 12" (305mm) in diameter

The recommended pre-heat time is 30 minutes. This will thoroughly saturate the plate. Pots must have flat bottoms for maximum contact with the hot surface. Roasting pans with straps should never be used on a top since only the straps touch the surface and heat transfer will be minimal.

## Lighting The Solid Hot Top

1. Push in the tap and turn it anti-clockwise to the ignition position "✶"
2. Holding the tap fully in, depress the ignitor switch button and observe that the pilot lights. If it does not, depress the ignitor switch button until it does.
3. When the pilot is lit, continue to hold the tap for 20 seconds, then release it. If the pilot extinguishes or fails to hold, wait five (5) minutes and then repeat step 1.
4. When the pilot is established, push the tap in again and turn it anti-clockwise to the full flame position "⧋" thus lighting the main burner.
5. For low flame or simmer, push the tap in again and turn it anti-clockwise to the low flame "⧋" position.
6. To shut the burner off, turn the dial to the "●" position and the safety device will disengage within 60 seconds.

## Oven

The temperature is automatically controlled by the thermostat so that satisfactory cooking can be repeated. For the best performance the following instructions should be followed.

GRID SHELVES – There are three shelf positions. The shelf position is governed by the size of the product to be cooked. Always push the shelf back into the oven until it stops by making contact with the rear of the oven.

TRAY SIZE – A cake tray may be used on each shelf. Single trays or dishes must not be allowed to overhang the shelf in any direction, since this will adversely affect the heat circulation.

PREHEAT TIME – Allow at least 45 minutes after turning the oven on from cold, with the thermostat at the desired temperature before loading the oven with food to be cooked. Put the food in quickly and close the oven door.

### Convection Oven

The forced air range oven consists of a food preparation chamber completely sealed from the combustion area. This permits an efficient method of circulating the heated air within the cooking chamber.

### Lighting the Oven

NOTE: Ensure that the gas and electrical supply to the appliance are turned "ON". During the initial ignition cycle, air must be purged from the gas line and thus it may take two to three tries for ignition to occur.

1 Turn the power switch to the "ON" position and the Cook/cool switch to the "COOK" position.

2 Set the thermostat to the desired position.

3. If ignition fails and or the ignition system goes into lockout, set the power switch to the "O" position.
4. Wait five minutes and repeat steps 1 and 2. If a problem persists have the unit checked by a competent technician.

### Shut Down

1. Set the thermostat to the lowest setting and turn the power switch to the "O" position.

### Operating Suggestions

1. Turn the power switch to the "O" position when the range is not in use.
2. Clean the range as soon as possible after cooking tomato or vinegar based products that have a high acid content. These foods can cause pitting of the surface.
3. Allow the oven to preheat before adding product.
4. During an electrical power interruption, turn the power switch to the "O" position. The oven cannot be made to operate without electrical power

## MAINTENANCE & CLEANING

Regular servicing by a competent person is recommended to ensure the continued safe and efficient performance of the appliance. The frequency will vary, depending on the installation conditions and usage. Usually once per year is adequate

WARNING: Turn off the gas supply to the appliance at the service cock and the electrical mains before commencing any servicing work.

IMPORTANT: Test for gas leakage on completion of any servicing work.

A regular cleaning schedule should be established to ensure efficient operation.

**WARNING:** This appliance is not protected against water jets. Do not clean with water jets.

### Stainless steel

Stainless Steel should be cleaned using a mild detergent, a soft cloth and hot water. If it is necessary to use a non-metallic scouring pad, always rub in the direction of the grain in the metal to prevent scratching. Wash a small area at a time and rinse the washed area with a clean sponge dipped into a disinfectant and wipe dry with a soft clean cloth before it can dry.

Use only stainless steel, wood or plastic tools to scrape off heavy deposits of grease or oil. Do not use ordinary steel scrapers or knives as particles of iron my become embedded and rust. NEVER USE STEEL WOOL.

## Exhaust Filter

Inspect the front exhaust filter weekly, if on inspection the filter appears dirty it can be cleaned by hand with hot water and dish detergent. The filter is easily removed by sliding out of the lower front panel of the unit.

## Enameled/Painted Surfaces

Establish a regular cleaning schedule. Any spills should be wiped off immediately. The unit should be allowed to cool down before cleaning any exterior surfaces. Wipe exposed cleanable surfaces when cool with mild detergent and hot water. Stubborn residue spots may be removed with a scouring pad. Dry thoroughly with a clean cloth.

## Griddle

### Cleaning instructions (After each use)

1. Use a traditional 2.5"-3" (64mm-76mm) scraper or spatula to scrape the griddle surface (to remove food particles and oil residues) towards the grease trough using even back to front strokes.
2. Pour shortening or oil onto the griddle surface using a straight front to back motion. Clean the griddle using a griddle stone or grill screen. Always wipe with the grain of the steel, never sideways.
3. Using a clean cloth, rub a thin and even layer of oil into the griddle surface.
4. Remove the grease drawer, empty and wash thoroughly with soap and water. Replace.

### Cleaning Instructions (For Heavy Build Up)

NOTE: After using cleaners & grease cutter, re-season the griddle

NOTE: Apply to a warm griddle for best results.

1. Using a traditional 2.5"-3" (64mm-76mm) scraper or spatula scrape the griddle surface (to remove food particles and oil residues) towards the grease trough using even back to front strokes.
2. Apply griddle cleaner evenly over the griddle surface and let it sit as directed. Follow the procedures on the label of the specific cleaning product.
3. Using a traditional scraper or spatula, slosh around the griddle cleaner to remove the build up.
4. Scrape the griddle surface towards the grease-trough using even back to front strokes. Repeat step 2 if necessary.
5. Using a mild detergent, clean the surface and rinse thoroughly with water and vinegar solution, Dry the griddle.
6. Using a clean cloth rub a thin and even layer of oil into the griddle surface.
7. Re-season the griddle as detailed in griddle operation. The griddle is now ready for use.

### Griddle Do's & Don'ts

**Do's**

1. Season the griddle, This will prevent foods from sticking and make it easier to keep the surface clean.
2. Keep the surface clean. Scraping the surface throughout production to clear foods and oils prevents build up and will make it easier to keep the surface clean.
3. Turn the temperature down during slow periods. Reducing the temperature or turning sections off during slow periods will conserve energy and prevent the plate from over heating.

**Don'ts**

1. Do not use salt to clean the griddle surface. Salt is corrosive and can cause pitting of the griddle.

2. Do not allow metal utensils (Spatula, scraper, etc.) to nick and/or dent the surface of the griddle, The edges of these utensils are sharp and will create divots that oil can collect in and caramelize which will cause sticking.
3. Do not use the griddle as a hot top. A large pan or pot will trap heat and cause the griddle plate to warp.
4. Do not overheat the griddle to preheat faster. Preheating takes 15-20 minutes.

## Cleaning Burners

### Griddle / Solid Hot Plate

1. Lift off the griddle plate or solid hot top. Use caution: This will require assistance due to the weight of the griddle / solid hot top.
2. Lift the rear of the burner and slide backwards off the injector fitting.
3. Clean the burners in hot soapy water with a stiff scrubbing brush.
4. Rinse and shake well to remove any debris.
5. Reassemble in the reverse order.

### Convection Oven

1. Open the lower kick panel.
2. Remove the left & right hand oven door springs. USE CAUTION: the oven door will need additional support to remain closed.
3. Remove the left and right hand radiation shields.
4. Remove the two (2) screws that secure the pilot bracket and disconnect the pilot tubing at the union connection.
5. Remove the injector support and slide the burner and burner pan forwards out of the combustion chamber.
6. Clean the burner with a stiff scrubbing brush and shake the burner well to ensure that ports are clear of any debris.
7. Reassemble in the reverse order.

### Pilot Burner Cleaning

1. Remove the main burners (refer to the section on main burner cleaning).
2. Disconnect the pilot gas supply pipe from the pilot jet.
3. Remove the pilot jet.
4. Clean by blowing through or washing. Do not use wire to clear the pilot jet.
5. Reassemble in the reverse order.

## Gas Valve

Re-greasing of the gas taps is not recommended. If the tap spindle becomes seized or difficult to turn, refer to Replacement of Parts section in this manual.

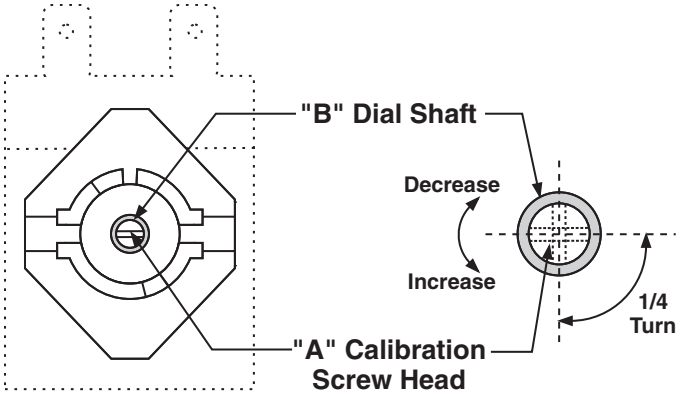
## Thermostat Calibration

### Oven

It is normal for a hydraulic thermostat cycling with a temperature differential of 45° to 50°F. If the thermostat is cycling beyond the 15° tolerance above or below the set point and the appliance is under warranty, recalibrate the thermostat or if not under warranty, consult owner for proper action. If the thermostat is out of calibration more than 50°, it will not likely hold an attempt of recalibration. We suggest that the thermostat be replaced.

1. Place the thermocouple of the test instrument in the center of the oven.
2. Turn the oven temperature control dial to 400°F. In order to allow the oven temperature to stabilize, the oven control must be allowed to cycle twice before taking a test reading.

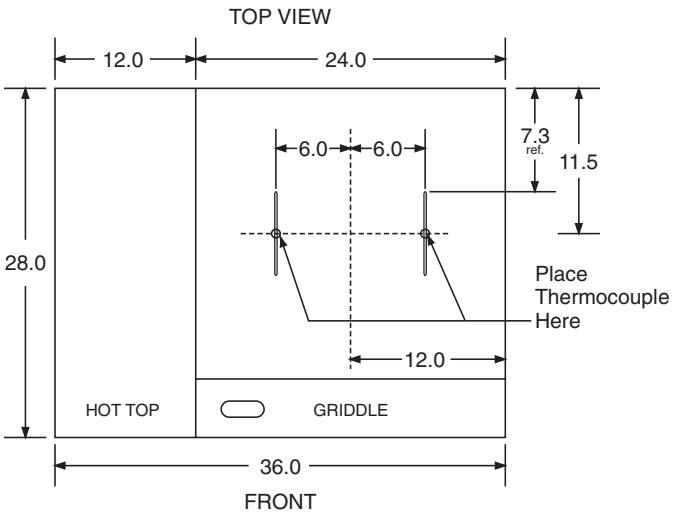
3. Check the temperature reading just when the control cycles "OFF" as indicated by cycling pilot lamp. If the temperature does not read within 15°F of the dial setting, recalibrate as follows:
4. Carefully remove the thermostat dial, not disturbing the dial setting.




5. Hold the thermostat shaft steady and with a small flat blade screw driver, turn the calibration screw located inside the shaft clockwise to decrease the temperature and anti-clockwise to increase the temperature. Note: Each 1/4 turn of the screw will create a change of approximately 25°F.
6. Replace the thermostat dial and repeat steps 1 through 3 to verify that correct adjustment has been made.

## Griddle

1. Use a test instrument with a special disc type thermocouple or a reliable surface type pyrometer. Note: a drop of oil on the face of the disc will provide better contact with the plate.
2. Set all griddle thermostats to 300°F. In order to allow the griddle temperature to stabilize, the thermostats must be allowed to cycle twice before taking a test reading.




*To find the location of the sensing bulbs, locate the exact center of the griddle. Measure 6" to the left and 6" to the right. Place the temperature sensor there.*

3. Check the griddle temperature when the thermostat just cycles "OFF" by placing the thermocouple firmly on the griddle surface directly above the sensing bulb of the thermostat. (see the following diagram for how to find the location directly above the thermostat sensing bulb) The reading should be between 285°F and 315°F. If the reading is outside of these limits, calibrate as follows:
4. Carefully remove the thermostat dial, not disturbing the dial setting.
5. Hold the thermostat shaft steady and with a small flat blade screw driver, turn the calibration screw located inside the shaft clockwise to decrease the temperature and anti-clockwise to increase the temperature. Note: Each 1/4 turn of the screw will create a change of approximately 25°F.
6. Replace the thermostat dial and repeat steps 1 through 3 to verify that correct adjustment has been made.

# MAINTENANCE & CLEANING continued

## Miscellaneous

1. Grease the door hinges and check for loose fasteners. Tighten as necessary.
2. Wire brush the surface of the griddle to remove baked on material, wash with hot water, dry thoroughly. Lightly coat the surface with vegetable oil to prevent rusting.
3. Wipe exposed cleanable surfaces with a mild detergent and hot water. Stubborn residue may be removed with a lightweight non-metallic scouring pad. Stainless steel areas should be washed with a mild detergent, hot water and a soft cloth. If necessary to use a non-metallic scouring pad always rub in the direction of the grain in the metal to prevent scratching. NEVER USE STEEL WOOL.
4. Check the operation of the flame safety device by closing the gas supply during burner operation. Listen for the flame failure valve on the combination gas control "clicking" closed. This action must occur within 1 second of extinguishing the main burner flame.
5. Clean the oven racks, shelves and guides with hot soapy water and dry thoroughly. Clean the oven interior with a propriety oven cleaner following the manufacturers instructions.

# CONVERSION INSTRUCTIONS

Servicing must be carried out by a competent person in accordance with the law.

WARNING: Turn off the gas supply to the appliance at the service cock and the electrical mains before commencing any servicing work.

IMPORTANT: Test for gas leakage on completion of any servicing work.

The following instructions are intended to describe the operations necessary to convert equipment from operation on one gas to another.

1. Ensure that all of the parts necessary to make the conversion have been supplied as follows:

   a. Injector fittings ( One required for each main burner & one required for each pilot)

   b. Regulator, (one per unit )

   If any of the required parts are missing, contact your Garland dealer before attempting to carry out the conversion.
2. Remove the burners following the instructions given in this manual.
3. Replace each injector fitting with the new fitting that is supplied.

   **NOTE:** Before doing so, refer to Table C in this manual to ensure that the correct injector has been supplied for the gas supply being converted to.
4. Replace the spring in the governor with the new spring supplied.

Upon completion of all the above operations, follow the section in the manual on "Commissioning" and ensure that the setting pressure and all burner flame settings are adjusted accordingly.

# FAULT FINDING

| PROBLEM | POSSIBLE CAUSES | SOLUTION |
|---|---|---|
| Cook/Cool Down switch set to “Cook” position. Light off. Motor not working. | No power to oven. | Check power supply. |
| | Defective Cook/Cool Down switch | Replace switch. |
| | Faulty wiring. | Check condition of all wires & connections |
| | Defective door switch. | Replace switch |
| Cook/Cool Down switch set to “Cook” position. Light on motor not working. | Oven door partially open. | Close door. |
| | Door switch out of alignment. | Align switch. |
| | Defective motor. | Replace motor. |
| | Faulty wiring. | Check condition of all wires & connections |
| | Faulty motor relay | Replace relay |
| Cook/Cool Down switch set to”Cook.” Motor working thermostat set to temperature, lamp “on,” oven not heating. | Combination gas valve not opening. | Defective thermostat replace. |
| | Defective valve/thermostat | Replace valve/thermostat. |
| Noisy convection oven. | Blower wheel rubbing on oven baffle | Adjust blower wheel. |
| | Blower wheel loose on motor shaft. | Retighten blower wheel. |
| | Defective motor | Replace motor. |
| Cook/Cool Down switch set to “Cool Down”, motor not working. | Defective Cook/Cool down switch. | Replace switch. |
| | Defective door switch. | Replace switch. |
| | Door switch out of alignment. | Align switch. |
| | Faulty wiring. | Check condition of all wires & connections |
| Oven too hot or not hot enough | Thermostat out of calibration. | Check calibration/replace thermostat. |
| No spark to igniter | Disconnected or loose hi voltage wires. | Reconnect hi voltage wires. |
| | Defective DSI control module. | Replace DSI module |
| | No power to oven | Check power supply. |
| Spark to igniter,thermostat set to temperature. Burner does not go on. | Defective combination gas valve. | Replace valve. |
| | Defective thermostat controller. | Replace controller |
| Oven doors will not stay closed. | Broken or damaged door spring | Replace door spring |

Wiring Diagrams can be found at the end of this manual. A relevant schematic can be found on the inside of the control panel when it is slid out for service.

# REPLACEMENT OF PARTS

WARNING: Turn off the gas supply to the appliance at the service cock and the electrical mains before commencing any servicing work.

IMPORTANT: Test for gas leakage on completion of any servicing work.

## Gas Taps

1. Pull the knob off of each gas tap and thermostat on the unit.
2. Remove the screws securing the fascia panel and remove panel and grease drawer.
3. Remove the appropriate burner (if necessary) following the procedure given in the section on Main Burner Cleaning.
4. Disconnect the thermocouple connection at the gas tap.
5. Disconnect the pilot and main burner tubing connections at the gas tap.
6. Disconnect the tubing connection at the inlet of the gas tap and remove the tap.
7. Replace with the new tap.
8. Reassemble in the reverse order.

## Door Switch

1. Remove the lower kick panel.
2. Disconnect the wires from the terminals on the body of the switch.
3. Remove the screws securing the door switch to the mounting bracket and remove the door switch.
4. Replace the faulty door switch.
5. Make certain that the newly installed door switch is properly adjusted so as to interrupt the power supply to the gas control system and fan motor when the oven doors are opened.

## Control Panel Rocker Switches

1. Remove the fastener securing the control compartment access panel.
2. Slide out the control drawer to access the switch.
3. Disconnect the wires from the taps on the switch. Be sure to note which wire connects to which terminal on the switch.
4. Depress the tabs of the switch body and push the switch through the opening in the control panel.
5. Replace the switch and reassemble in the reverse order.

## Thermostat

1. Remove the fastener securing the control compartment access panel.
2. Slide out the control drawer to access the thermostat.
3. Remove the dial from the thermostat and the screws securing the thermostat body to the control panel.
4. Remove the wires from the thermostat terminals. Be sure to note which wire connects to which terminal on the thermostat.
5. Remove the thermostat sense bulb.
6. Replace the faulty thermostat and reassemble in the reverse order.

## Heat-On Lamp

1. Remove the fastener securing the control compartment access panel.
2. Slide out the control drawer to access the lamp.
3. Disconnect the supply wires to the lamp body and remove the faulty lamp.
4. Reassemble in the reverse order.

## Gas Control Valve

1. Remove the fastener securing the control compartment access panel.
2. Slide out the control drawer.
3. Remove the main body side panel to access the gas train.

4. Break the pipe union connection at the inlet of the gas control and the 7/16" union connection located at the outlet of the control.
5. Remove the wires from the connections to the gas valve. Be sure to note which wires connect to which terminal before doing so.
7. Replace the control and reassemble in the reverse order.

## Front Cooling Fan

1. Remove fastener securing the control compartment access panel.
2. Slide out the control drawer.
3. Disconnect the fan supply harness form the unit wiring harness.
4. Remove fasteners retaining the fan and set aside.
5. Replace the faulty motor.
6. Reassemble in the reverse order.

## Motor

1. Open the oven doors.
2. Remove the oven racks and guides.
3. Remove the two (2) wing screws securing the fan guard and remove the guard.
4. Using an allen head wrench loosen the screw securing the blower wheel to the motor shaft and remove the wheel.
5. Remove the four (4) screws securing the motor mount plate to the oven casing back and pull the plate forward into the oven compartment.
6. Disconnect the motor wire connections (note which wire connects to which) and replace faulty motor.
8. Reassemble in the reverse order.

## Ignition Control

1. Remove the fastener securing the control compartment access panel.
2. Slide out the control drawer to access the lamp.
3. Disconnect the supply wires to faulty ignition control (noting the wire connections)
4. Replace the faulty control.
6. Reassemble in the reverse order.

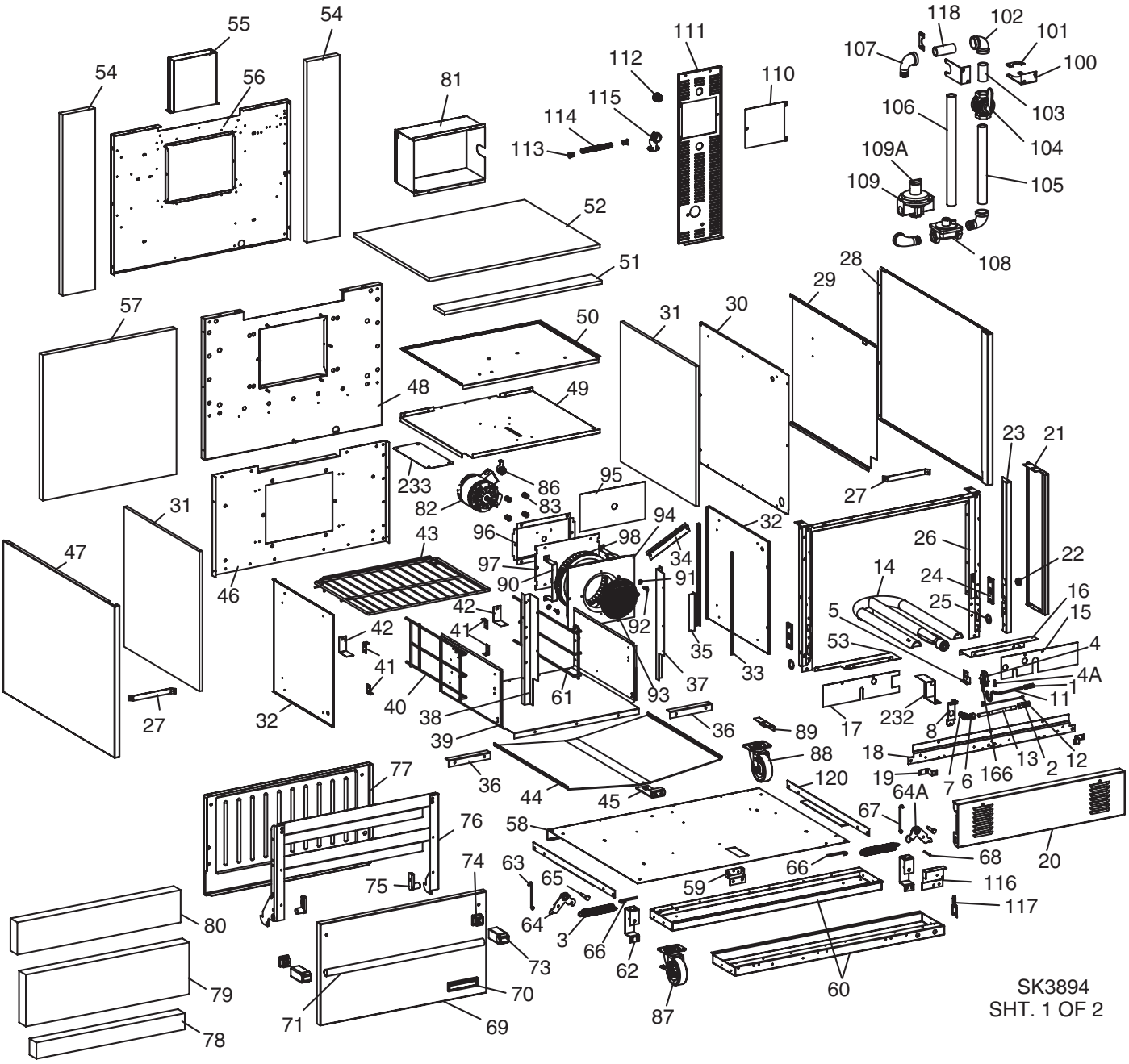
## Hot Top Ignition Momentary Switch

1. Remove the griddle grease drawer.
2. Remove the fasteners securing the front panel.
3. Remove the nuts securing the switch box to the front panel.
4. Disconnect the 2 wires to the switch.
5. Unscrew the switch from the front panel.
6. Replace the switch and reassemble in reverse order.

## Hot Top Spark Generator

1. Remove the fastener securing the control compartment access panel.
2. Slide out the control drawer to access the generator module.
3. Disconnect the wires to the generator.
4. Remove fastener retaining the generator.
5. Replace the faulty module and reassemble in reverse order.

# REPLACEMENT PARTS IDENTIFICATION



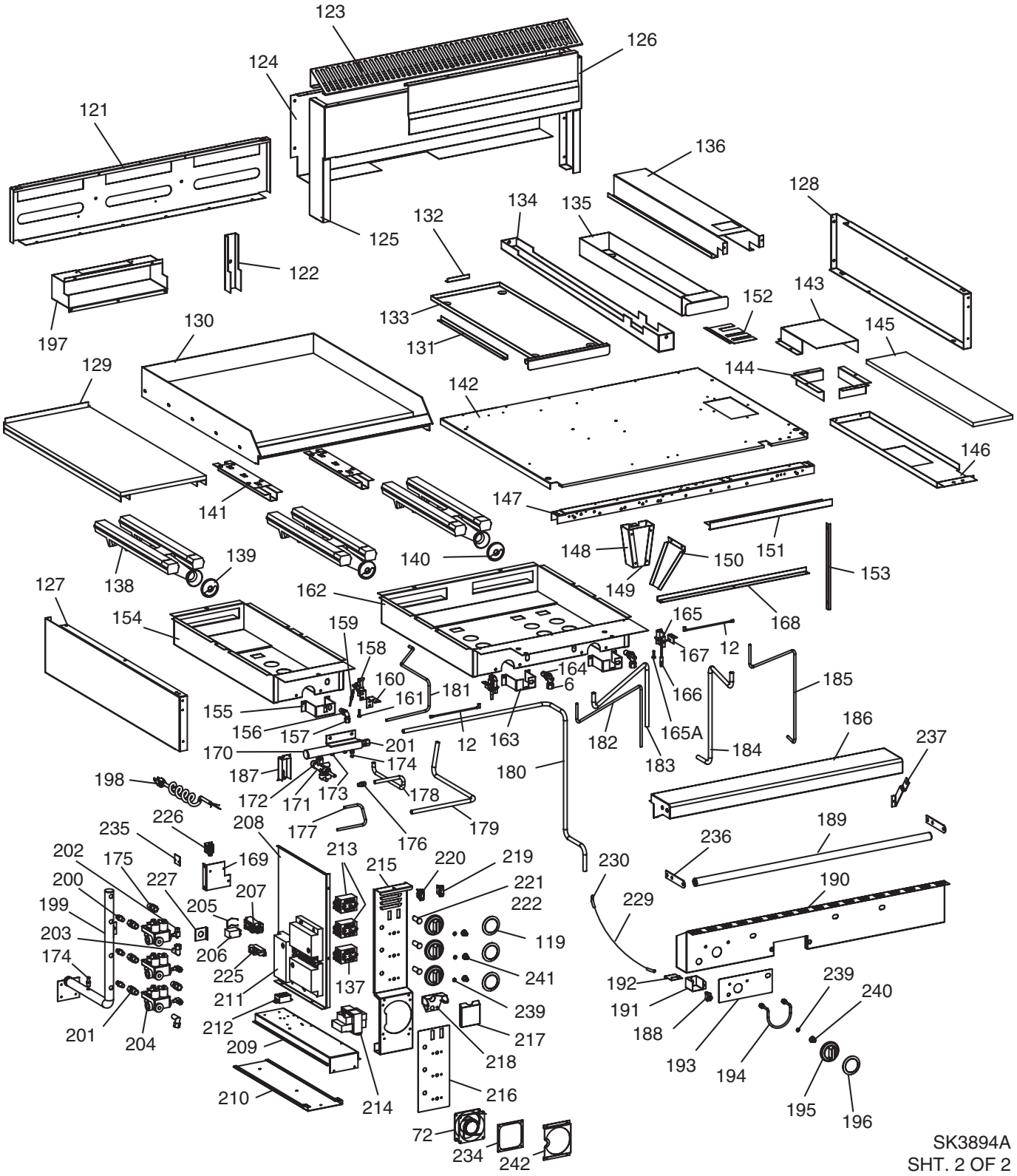

| ITEM | PART No | DESCRIPTION | STW286A |
|---|---|---|---|
| 1 | 076050-87 | 1/4 Compression Union | 1 |
| 2 | 076050-88 | 7/16 Compression Union | 1 |
| 3 | 1005800 | Door Spring | 2 |
| 4 | 2206513 | Oven Spark Ignition Pilot NAT | 1 |
| | 2206512 | Oven Spark Ignition Pilot PRO | 1 |
| 4A | | Oven Pilot Orifice (Specify Gas) | 1 |
| 5 | 4518183 | Pilot Bracket, Oven | 1 |
| 6 | 22701XX | Oven Orifice Fitting | 3 |

# REPLACEMENT PARTS IDENTIFICATION continued

| ITEM | PART No | DESCRIPTION | STW286A |
|---|---|---|---|
| 7 | M9-XX | Oven Orifice Hood (Specify Gas) | 1 |
| 8 | 2635100 | Oven Orifice Support Bracket | 1 |
| 11 | 2624900 | Tube ¼ - Oven Pilot to ¼ Compression Union | 1 |
| 12 | 2642800 | Sensor Wire | 3 |
| 13 | 2624800 | Tube 7/16 – 7/16 Oven Orifice to Compression Union | 1 |
| 14 | 4518182 | Oven Burner | 1 |
| 15 | 1390702 | RH Roll Out Shield | 1 |
| 16 | 1391100 | Roll Out Shield Support | 1 |
| 17 | 4518184 | LH Roll Out Shield | 1 |
| 18 | 2512700 | Lower Front Plate | 1 |
| 19 | 2628699 | Kick Panel Bracket | 2 |
| 20 | 4517059 | Kick Panel | 1 |
| 21 | 2622200 | Front Support | 1 |
| 22 | G01487-8 | Heyco Bushing | 1 |
| 23 | 2604400 | RH Door Filler | 1 |
| 24 | 1083001 | Trunion Support | 2 |
| 25 | 1082700 | Harness Ring | 2 |
| 26 | 1730296 | Front Frame Assy | 1 |
| 27 | 2621300 | Body Side Support | 2 |
| 28 | 2614100 | Body Side R/H | 1 |
| 29 | 2642000 | Wall Shield | 1 |
| 30 | 2604200 | Inner Liner | 1 |
| 31 | 1309021 | Body Side Insulation - .5” Thick (Burglas 1200) | 2 |
| 32 | 3020000 | Side Insulation Pan | 2 |
| 33 | 3019900 | Flue Spacer Angle | 6 |
| 34 | G02905-01-8E | Capillary Guard Assy | 1 |
| 35 | 1402400 | Casing Support Angle | 2 |
| 36 | 1325900 | Fire Plate Rear Support | 2 |
| 37 | 1411302 | Casing Support RH | 1 |
| 38 | 1411303 | Casing Support LH | 1 |
| 39 | 3019701 | Casing Bottom | 1 |
| 40 | 1311100 | Rack Guide Assy - LH | 1 |
| 41 | 1356600 | Rack Guide Clip | 4 |
| 42 | 1411700 | Insulation Support | 2 |
| 43 | 2301200 | Oven Rack | 2 |
|  | 4519087 | Divided Oven Rack | 1 |
| 44 | 1357702 | Fire Plate | 1 |
| 45 | 1412098 | Fire Plate Front Support Bracket Assembly | 1 |
| 46 | 3019601 | Casing Back | 1 |
| 47 | 2614101 | Body Side LH | 1 |
| 48 | 3014099 | Main Back Insulation Pan Assy | 1 |
| 49 | 3019898 | Casing Top | 1 |
| 50 | 3020199 | Top Insulation Pan Assy | 1 |
| 51 | 1309025 | Insulation - Oven Cavity Top Front | 1 |

| ITEM | PART No | DESCRIPTION | STW286A |
|---|---|---|---|
| 52 | 1309022 | Insulation - Oven Cavity Top Rear | 1 |
| 53 | 2677600 | LH Roll Out Shield Aupport | 1 |
| 54 | 1472202 | Insulation - Oven Cavity Rear Sides | 2 |
| 55 | 2621199 | Flue Riser Assy | 1 |
| 56 | 3013900 | Main Back | 1 |
| 57 | 1472200 | Insulation - Cavity Back | 1 |
| 58 | 2620800 | Main Bottom | 1 |
| 59 | 2301300 | Door Spring Support | 1 |
| 60 | 2620900 | Main Bottom Support Channel | 2 |
| 61 | 1311101 | Rack Guide Assy - RH | 1 |
| 62 | 1386100 | Bell Crank Support | 2 |
| 63 | 1082803 | Oven Door Hinge Link LH | 1 |
| 64 | 1082198 | LH Bell Crank | 1 |
| 64A | 1082199 | RH Bell Crank | 1 |
| 65 | 1082200 | Bell Crank Bolt | 2 |
| 66 | 9004701 | Oven Door Spring Hook | 2 |
| 67 | 1082802 | Oven Door Hinge Link RH | 1 |
| 68 | G01503-16 | Weld Stud 1/4-20 x 1.75 | 1 |
| 69 | 1439901 | Oven Door Panel | 1 |
| 70 | 3077100 | Nameplate | 1 |
| 71 | 3017000 | Handle | 1 |
| 72 | 4516836 | 120V Cooling Fan Assembly | 1 |
| | 4517669 | 230 V Cooling Fas Assembly | 1 |
| 73 | 3007300 | Handle End | 2 |
| 74 | 3010000 | Handle End Plastic Insert | 2 |
| 75 | 1082500 | Oven Door Trunion | 2 |
| 76 | G03984-03-8 | Oven Door Insert Assy | 1 |
| 77 | 1439796 | Oven Door Lining | 1 |
| 78 | 1472303 | Insulation - Oven Door Interior Lower Section | 1 |
| 79 | 1472301 | Insulation - Oven Door Interior Middle Section | 1 |
| 80 | 1472302 | Insulation - Oven Door Interior Upper Section | 1 |
| 81 | 2519799 | Motor Guard Assy | 1 |
| 82 | 2485801 | Motor 115V | 1 |
| | 2485800 | Motor 208/240V | 1 |
| 83 | G01503-3 | Ohio Weld Nut 1/4-20 | 8 |
| 86 | G01497-1 | BX Connector Straight | 2 |
| 87 | 4519840 | Casters, Swivel, Locking | 2 |
| 88 | 4519839 | Casters, Swivel | 2 |
| 89 | 1748701 | Restraint Attachment Bracket | 1 |
| 90 | 1361299 | Air Baffle Support Assy | 2 |
| 91 | F542 | Aluminum Padded Washer | 2 |
| 92 | F543 | Stainless Steel Wing Screw | 2 |
| 93 | 2520100 | Fan Protector Screen | 1 |
| 94 | 2395999 | Air Baffle Assy | 1 |

# REPLACEMENT PARTS IDENTIFICATION continued



# REPLACEMENT PARTS IDENTIFICATION continued

| ITEM | PART No | DESCRIPTION | STW286A |
|---|---|---|---|
| 95 | 1669101 | Motor Pocket Insulation Board | 1 |
| 96 | 3013301 | Motor Mount Pocket | 1 |
| 97 | 3013401 | Motor Mount Plate | 1 |
| 98 | G02952-01P | Blower Wheel | 1 |
| 100 | 2640700 | Manifold Support Bracket | 2 |
| 101 | 2640800 | Manifold Support Clamp | 2 |
| 102 | G01474-5 | 3/4” NPT Elbow | 1 |
| 103 | G01738-14 | Nipple 3/4” NPT X 2” (Domestic Model) | 1 |
| 104 | G01518-1 | Valve-Swing Type Shut Off Gas (Domestic Model) | 1 |
| 105 | G01738-9 | Nipple 3/4” NPT X 9.5” (Domestic Model) | 1 |
| 106 | G01738-13 | Nipple 3/4” NPT X 13.5” (Export Model) | 1 |
| 107 | G01475-2 | 3/4” NPT 90 Deg. Street Elbow | 3 |
| 108 | 2127502 | Gas Regulator (NAT) (Domestic Model) | 1 |
| | 2127500 | Gas Regulator (PRO) (Domestic Model) | 1 |
| 109 | 2525200 | Jeavons Regulator (NAT) (Export Model) | 1 |
| 109A | 2525300* | Regulator Spring (PRO) | 1 |
| 110 | 2622400 | Wiring Access Cover | 1 |
| 111 | 4517369 | Control Compartment Back | 1 |
| 112 | 2490500 | Straight Thru Relief Bushing (Domestic Model) | 1 |
| 113 | 1029600 | Antishorts | 2 |
| 114 | 1029400 | 3/8” BX Cable | 1 |
| 115 | 1028500 | BX Connector - 90 Deg. | 2 |
| 116 | 4517402 | Door Switch Bracket/Heat Shield | 1 |
| 117 | 2628000 | Door Switch | 1 |
| 117A | 3096100* | Door Switch Wiring Harness | 1 |
| 118 | G01738-4 | Nipple 2.5” | 1 |
| 119 | 2621400 | Oven/Griddle Dial Insert Fahrenheit | 3 |
| | 2621401 | Oven/Griddle Dial Insert Celsius | 3 |
| 120 | 2620700 | Lifting Angle | 2 |
| 121 | 2615900 | Burner Box Back | 1 |
| 122 | 1414600 | Burner Box Back Support | 1 |
| 123 | 2374301 | Backguard Top 36” | 1 |
| 124 | 2614200 | Backguard Back | 1 |
| 125 | 2374101 | Backguard Front | 1 |
| 126 | 2629400 | Griddle Splash Shield | 1 |
| 127 | 2614398 | Burner Box Side Assy LH | 1 |
| 128 | 2614399 | Burner Box Side Assy RH | 1 |
| 129 | 2604799 | Hot Top Assy | 1 |
| 130 | 4517072 | Griddle Assy | 1 |
| 131 | 2616100 | Drip Tray Guide | 1 |
| 132 | 2616000 | Drip Tray Stop | 1 |
| 133 | 4516888 | Drip Tray | 1 |
| 134 | 2618000 | Grease Trough | 1 |
| 135 | 4516885 | Grease Drawer Assy | 1 |

# REPLACEMENT PARTS IDENTIFICATION continued

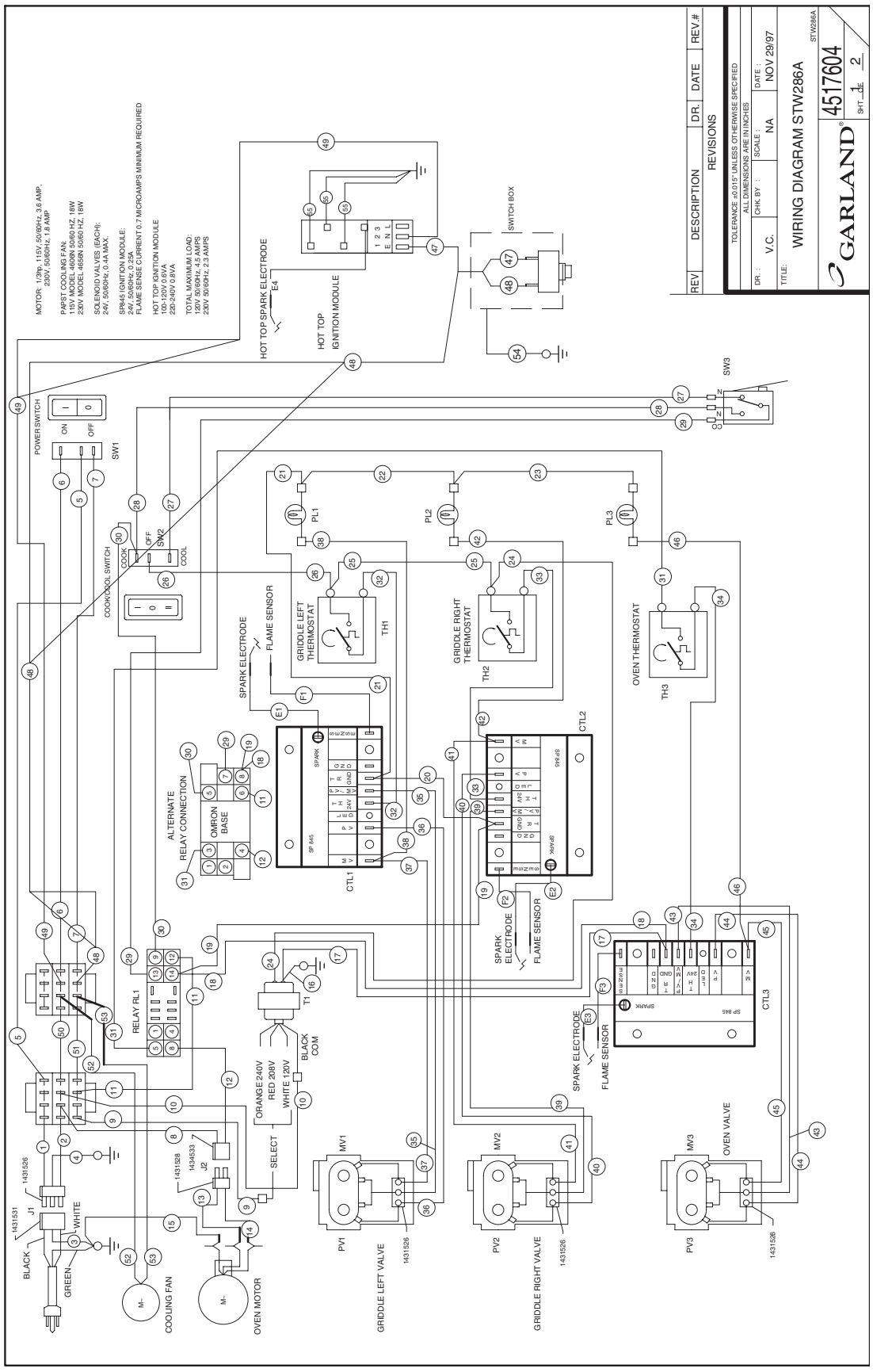
| ITEM | PART No | DESCRIPTION | STW286A |
|---|---|---|---|
| 136 | 4516887 | Grease Sleeve | 1 |
| 137 | 4517610 | Thermostat - Oven | 1 |
| 138 | 1014900 | Cast Iron H-Burner | 3 |
| 139 | 1028002 | Air Shutter (Hot Top Burner) | 1 |
| 140 | 2512100 | Air Shutter (Griddle Burner) | 2 |
| 141 | 4517190 | Bulb Clamp/Shield Assy | 2 |
| 142 | 2614500 | Burner Box Bottom | 1 |
| 143 | 4517373 | Heat Shield-Tubing | 1 |
| 144 | 2619400 | Insulation Shield | 2 |
| 145 | 2642100 | Control Compartment Top Insulation | 1 |
| 146 | 2608100 | Insulation Retainer | 1 |
| 147 | 1085000 | Burner Box Front Channel 36” | 1 |
| 148 | 4517408 | Grease Chute Front | 1 |
| 149 | 4517409 | Grease Chute Back | 1 |
| 150 | 2618100 | Grease Deflector | 1 |
| 151 | 4516890 | False Handle | 1 |
| 152 | 4516884 | Heat Shield - Upper Tubing | 1 |
| 153 | 2615700 | Panel Stop | 1 |
| 154 | 2614698 | Hot Top Burner Box Assy | 1 |
| 155 | 2617500 | Orifice Support Hot Top | 1 |
| 156 | M8-XX | Orifice Hood - Hot Top (Specify Gas) | 1 |
| 157 | G02486-00 | Orifice Fitting less Hood (Hot Top) | 1 |
| 158 | 2200700 | SIT Pilot RH | 1 |
| 158A | 2200704 | 3/16” Comp Nut | 1 |
| 158B | 2200705 | Olive Ball Sleeve | 1 |
| 158C | 2200706 | Nut Thermo Retaining | 1 |
| 158D | 2200707 | Nut Electrode | 1 |
| 158E | 2200708 | Electrode | 1 |
| 159 | 2200600 | 18” Thermocouple - Hot Top | 1 |
| 160 | 2614900 | Bracket - Hot Top Pilot | 1 |
| 161 | 2200702 | Orifice - Hot Top Pilot #32 (NAT) | 1 |
| | 2200703 | Orifice - Hot Top Pilot #23 (PRO) | 1 |
| 162 | 4516665 | Griddle Burner Box Assy | 1 |
| 163 | 2617400 | Orifice Support –Griddle | 2 |
| 164 | M9-XX | Orifice Hood - Griddle (Specify Gas) | 2 |
| 165 | 2206514 | Griddle Spark Ignition Pilot (PRO) | 2 |
| | 2206515 | Griddle Spark Ignition Pilot (NAT) | 2 |
| 165A | | Griddle Spark Ignition Pilot Orifice (Specify Gas) | 2 |
| 166 | 1466100 | Flame Sensor | 3 |
| 167 | 2614800 | Griddle Pilot Bracket | 2 |
| 168 | 4517038 | Heat Shield - Griddle Burner Box | 1 |
| 169 | 2617000 | Main Manifold Retainer Bracket | 1 |
| 170 | 2612399 | Sub-Manifold Assembly | 1 |
| 171 | 2200199 | Valve (Hot Top) | 1 |

# REPLACEMENT PARTS IDENTIFICATION continued

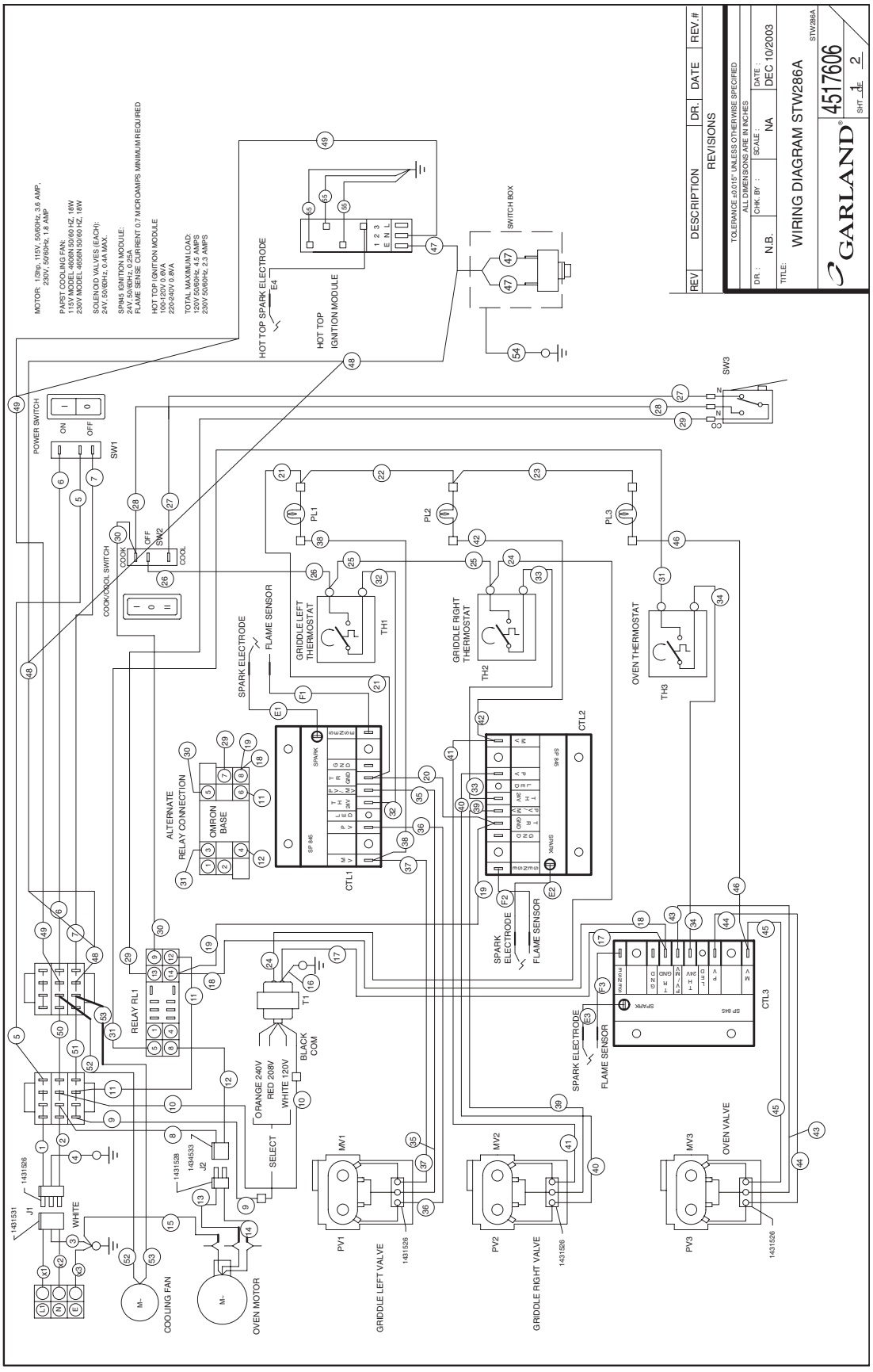
| ITEM | PART No | DESCRIPTION | STW286A |
|---|---|---|---|
| 172 | 2198102 | Valve Connector Fitting 10mm | 1 |
| 173 | 2203400 | 1/8" NPT Plug | 2 |
| 174 | G02251-1 | Pressure Test Spigot | 2 |
| 175 | G01243-1 | Fitting 68-7B | 1 |
| 176 | 1086597 | Gum Valve – 3/16" Pilot | 1 |
| 177 | 4517599 | Tube (¼") - Hot Top Valve to Hot Top Orifice Fitting | 1 |
| 178 | 2625000 | Tube (3/16") - Hot Top Valve to Hot Top Pilot | 1 |
| 179 | 2624700 | Tube (7/16") -Oven Solenoid Valve to 7/16 Compression Coupling | 1 |
| 180 | 2619100 | Tube (7/16") –Manifold to Sub Manifold | 1 |
| 181 | 2624600 | Tube (¼") -Oven Solenoid Valve to (¼) Compression Coupling | 1 |
| 182 | 4517601 | Tube (¼") –Solenoid Valve to Griddle Pilot LH | 1 |
| 183 | 4517602 | Tube (7/16") –Solenoid Valve to Griddle Burner Orifice LH | 1 |
| 184 | 4517603 | Tube (7/16") –Solenoid Valve to Griddle Burner Orifice RH | 1 |
| 185 | 4517600 | Tube (1/4") –Solenoid Valve to Griddle Pilot RH | 1 |
| 186 | 4517062 | Front Rail | 1 |
| 187 | 4517039 | Heat Shield - Hot Top Valve | 1 |
| 188 | G03053-1 | Momentary Push Button Switch | 1 |
| 189 | 4516937 | Handle Assy | 1 |
| 190 | 4517048 | Valve Panel | 1 |
| 191 | 4517416 | Switch Box | 1 |
| 192 | 4517417 | Switch Box Cover | 1 |
| 193 | 4517061 | Hot Top Overlay | 1 |
| 194 | G0728-1-8 | Thermostat Guard | 1 |
| 195 | 3043100 | Valve Knob | 4 |
| 196 | 2310000 | Dial Insert (Hot Top) | 1 |
| 197 | 2615802 | Flue Box | 1 |
| 198 | 2642200 | Coiled Cord (Domestic Model) | 1 |
| 199 | 2612299 | Main Manifold | 1 |
| 200 | 2621500 | Valve Connector Fitting (7/16") | 3 |
| 201 | 1095499 | 3/8 NPT to 7/16 Comp Fitting | 5 |
| 202 | G03674-3 | Valve -Pilot ¼" Angle 90Deg | 3 |
| 203 | G02352-1 | Elbow 3/8 NPT to 7/16cc Male | 2 |
| 204 | 2619500 | Solenoid Valve 24v | 3 |
| 205 | 2475700 | Relay Clip | 1 |
| 206 | 2672200 | Relay | 1 |
| 207 | 2475600 | Relay Base | 1 |
| 208 | 2617300 | Component Side Support | 1 |
| 209 | 2613300 | Component Support | 1 |
| 210 | 2613400 | Component Slide | 1 |
| 211 | 2619600 | Pilot Ignition Control 24V | 3 |
| 212 | 2573000 | Terminal Block 3 Circuit | 2 |
| 213 | 4517609 | Thermostat - Griddle | 2 |
| 214 | 2652401 | 75VA Transformer (120V) | 1 |
| | 2652402 | 75VA Transformer (208/240V) | 1 |

| ITEM | PART No | DESCRIPTION | STW286A |
|---|---|---|---|
| 215 | 4516857 | Control Panel | 1 |
| 216 | 4517060 | Overlay - Control Panel | 1 |
| 217 | 2629000 | Oven Control Cover | 1 |
| 218 | 2628700 | Oven Control Cover Support | 1 |
| 219 | 2630200 | Switch SPDT ON-OFF-ON | 1 |
| 220 | 2146800 | Illuminated Power Switch | 1 |
| 221 | 2667200 | Pilot Assy Amber | 3 |
| 222 | 4517756* | Extra 7/16” c.c. Hardware | 1 |
| 225 | 4514749 | Spark Generator - 230V, 4 outlet | 1 |
| | 4514750 | Spark Generator - 120V, 4 outlet | 1 |
| 226 | 3050401 | Terminal Block (Export Model) | 1 |
| 227 | 4517052 | BX-Connector Retainer | 1 |
| 229 | G03883R | Thermoflex Insulating Sleeve | 1 |
| 230 | 2200203 | High Tension Wire Lead 64” | 1 |
| 232 | 4520038 | Vent Cover | 1 |
| 233 | 4520028 | Exhaust Fan Filter Frame/Screen | 1 |
| 234 | 4516839 | Exhaust Fan Filter | 1 |
| 235 | 4517051 | Capillary Heat Shield | 1 |
| 236 | 4516938 | Handle End | 2 |
| 237 | 4517424 | Front Rail Support Bracket - RH | 1 |
| 239 | 3043300 | Spring Retainer | 4 |
| 240 | 3043202 | Hot Top Valve Knob Hub | 1 |
| 241 | 3043207 | Griddle/Oven Valve Knob Hub | 3 |
| 242 | 4520024 | Filter Cover | 1 |
| 243 | G01500-1 | Ground Terminal (230V) | 1 |
| * NOT ILLUSTRATED | | | |

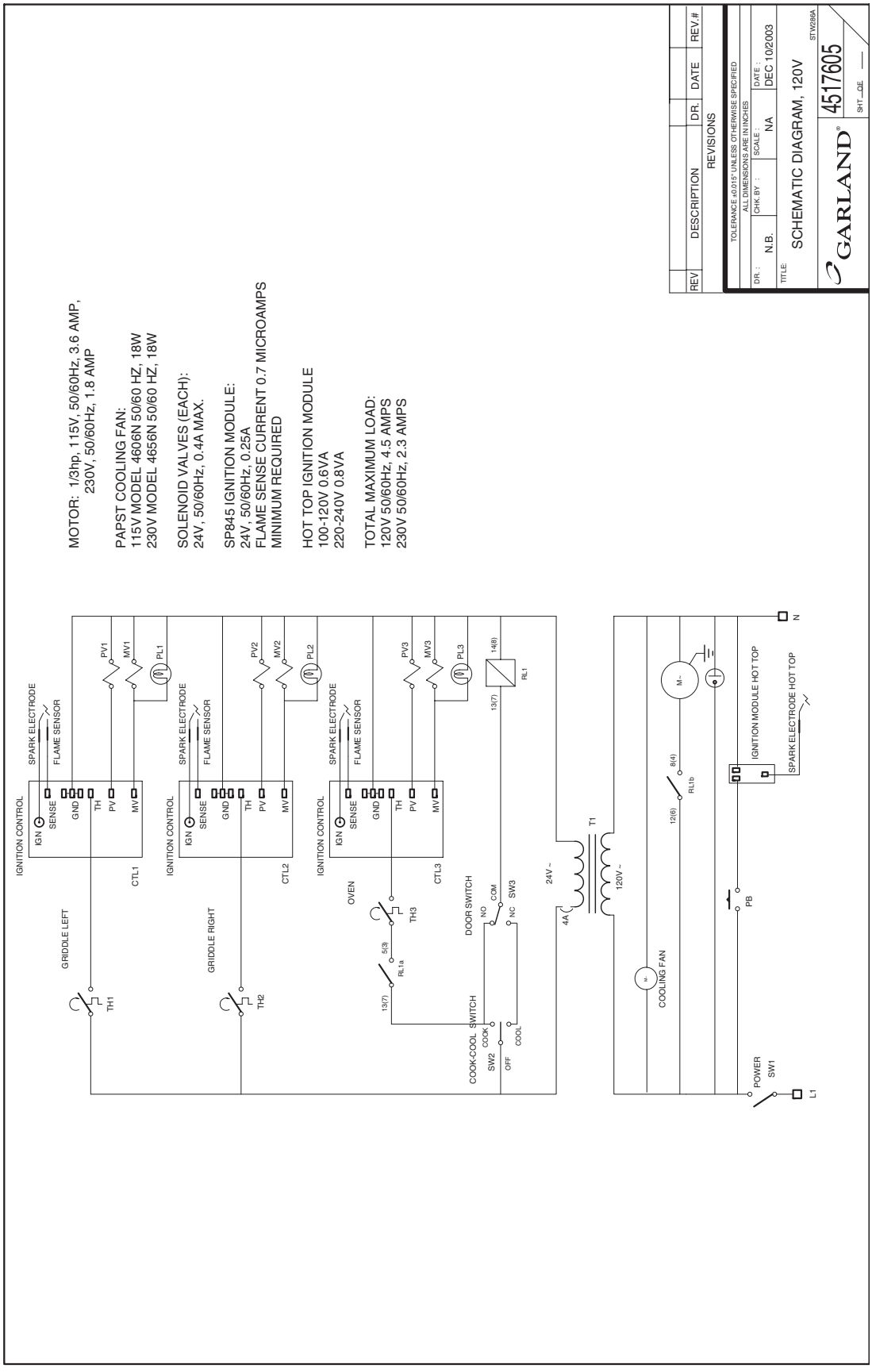
# WIRING DIAGRAMS

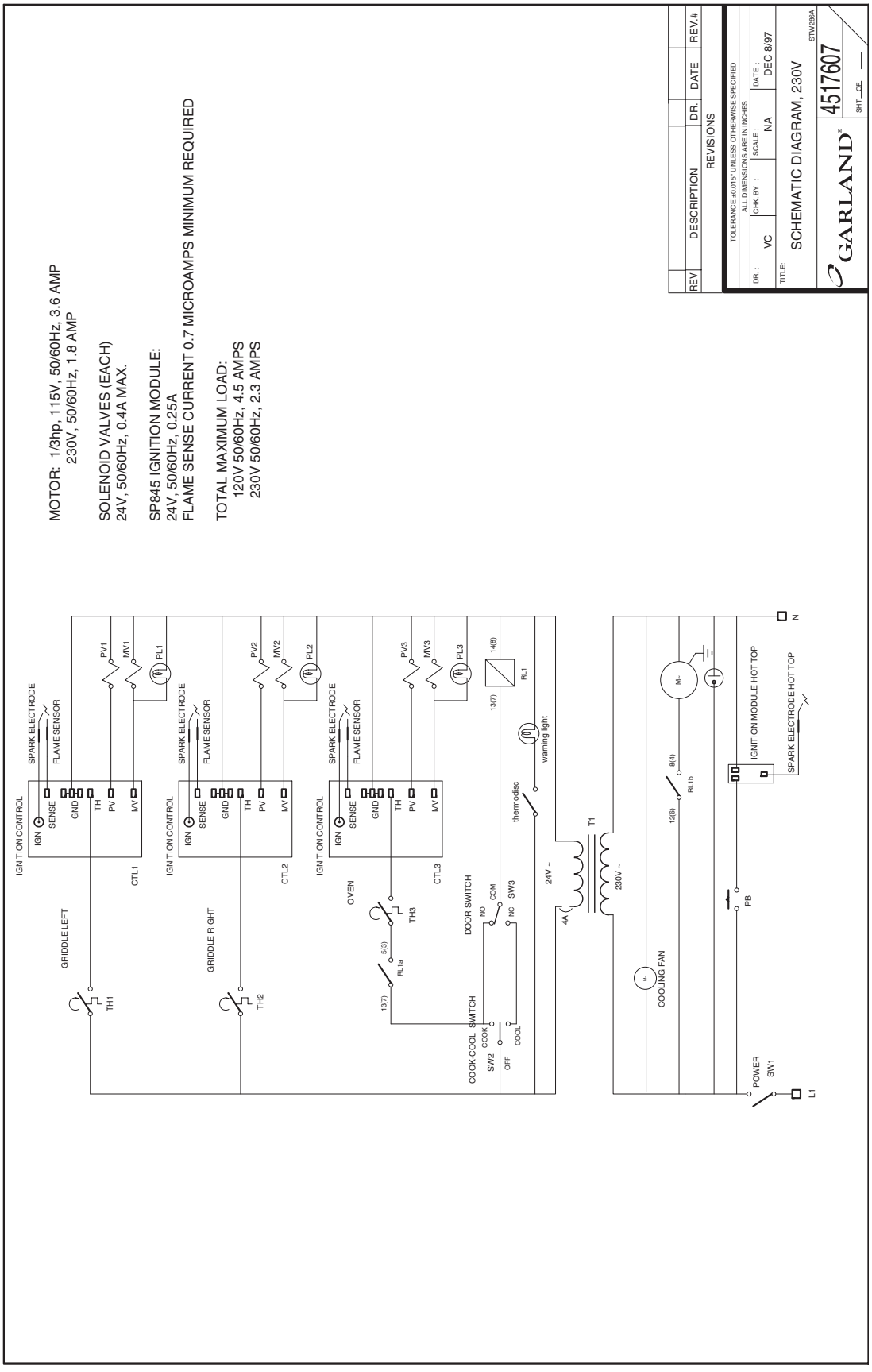


# WIRING DIAGRAMS



# WIRING DIAGRAMS




MOTOR: 1/3hp, 115V, 50/60Hz, 3.6 AMP
230V, 50/60Hz, 1.8 AMP
SOLENOID VALVES (EACH)
24V, 50/60Hz, 0.4A MAX.
SP845 IGNITION MODULE:
24V, 50/60Hz, 0.25A
FLAME SENSE CURRENT 0.7 MICROAMPS MINIMUM REQUIRED
TOTAL MAXIMUM LOAD:
120V 50/60Hz, 4.5 AMPS
230V 50/60Hz, 2.3 AMPS
REV
DESCRIPTION
DR.
DATE
REV.#
REVISIONS
TOLERANCE ±0.015" UNLESS OTHERWISE SPECIFIED
ALL DIMENSIONS ARE IN INCHES
DR. :
VC
CHK. BY :
SCALE :
NA
DATE :
DEC 8/97
TITLE:
SCHEMATIC DIAGRAM, 230V
STW286A
GARLAND®
4517607
SHT_OF_
IGNITION CONTROL
IGN
SENSE
GND
TH
PV
MV
SPARK ELECTRODE
FLAME SENSOR
CTL1
CTL2
CTL3
PV1
MV1
PL1
PV2
MV2
PL2
PV3
MV3
PL3
GRIDDLE LEFT
TH1
GRIDDLE RIGHT
TH2
OVEN
TH3
5(3)
RL1a
13(7)
DOOR SWITCH
NO
COM
NC
SW3
COOK-COOL SWITCH
SW2
COOK
OFF
COOL
thermodisc
warning light
14(8)
RL1
13(7)
24V ~
4A
T1
230V ~
COOLING FAN
M-
8(4)
12(6)
RL1b
IGNITION MODULE HOT TOP
SPARK ELECTRODE HOT TOP
PB
POWER
SW1
L1
N


GARLAND®