

SERVICE DATA TECH SHEET

Gas Free-Standing Ranges with Venturi Burner System

⚠ WARNING Before servicing, disconnect electrical supply at circuit breaker, fuse or power cord.

⚠ WARNING This service data sheet is intended for use by persons having electrical and mechanical training and a level of knowledge of these subjects generally considered acceptable in the appliance repair trade. The manufacturer cannot be responsible, nor assume any liability, for injury or damage of any kind arising from the use of this data sheet.

SAFE SERVICING PRACTICES

To avoid the possibility of personal injury and/or property damage, it is important that safe servicing practices be observed. The following are examples, but without limitation, of such practices.

- Before servicing or moving an appliance remove power cord from electrical outlet, trip circuit breaker to OFF, or remove fuse.
- Never interfere with the proper installation of any safety device.
- GROUNDING:** The standard color coding for safety ground wires is **GREEN** or **GREEN WITH YELLOW STRIPES**. Ground leads are not to be used as current carrying conductors. **It is extremely important that the service technician reestablish all safety grounds prior to completion of service. Failure to do so will create a potential safety hazard.**
- Prior to returning the product to service, ensure that:
 - All electric connections are correct and secure.
 - All electrical leads are properly dressed and secured away from sharp edges, high-temperature components, and moving parts.
 - All uninsulated electrical terminals, connectors, heaters, etc. are adequately spaced away from all metal parts and panels.
 - All safety grounds (both internal and external) are correctly and securely reassembled.

Gas Regulator & Shut-off Valve Location

The gas regulator is located on the back of the appliance (See Fig. 1).

The shut-off valve is located on the gas regulator as shown (Fig. 2). After properly installing or if converting the appliance to L.P. Gas, be sure to set the shut-off valve back to the "ON" position before operating.

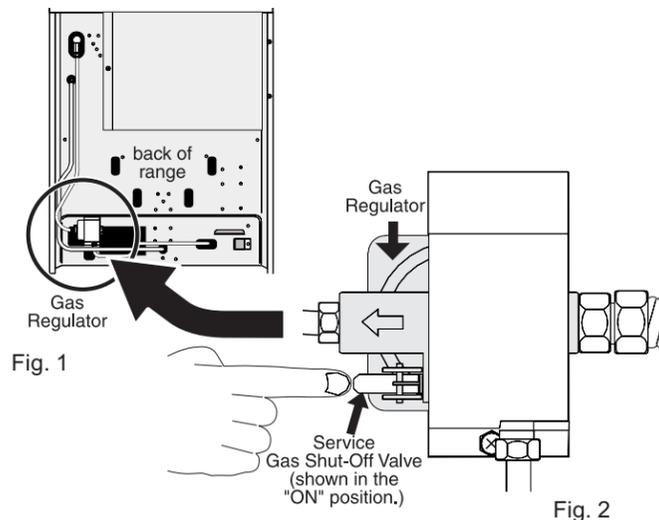


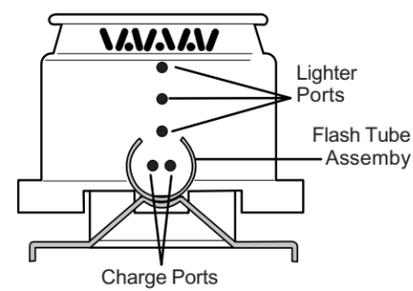
Fig. 1

Fig. 2

IMPORTANT
DO NOT REMOVE THIS BAG
OR DESTROY THE CONTENTS
 WIRING DIAGRAMS AND SERVICE INFORMATION ENCLOSED
REPLACE CONTENTS IN BAG

p/n 316904011 (0907)

Surface Burner Heads



Surface Gas Valves & Air Shutter

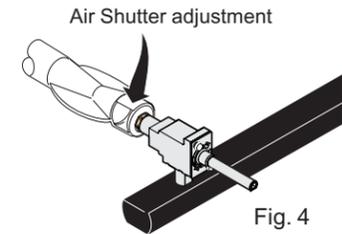


Fig. 4

Surface Burner System

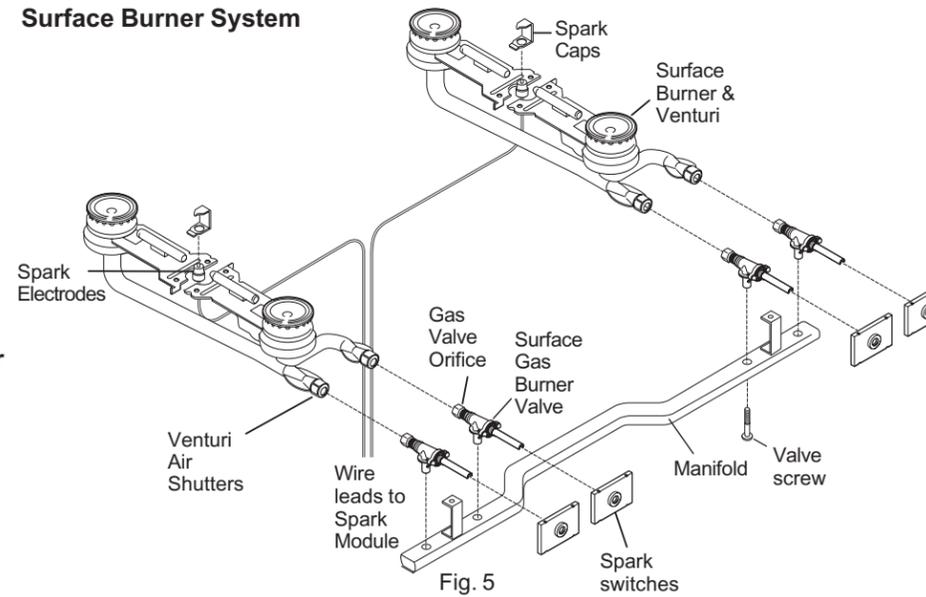


Fig. 5

Surface Burner Flame Adjustments

- The air shutter adjustment for each of the 4 surface burners is located at the open end of the venturi tube near the valve gas orifice (See Fig. 4). Should the air shutter need adjustment, rotate the air shutter to allow more or less air into the burner tube. If the air is properly adjusted, the flame will be steady, relatively quiet, and have approximately 1/2" sharp blue cone (usually the center of air shutter's adjustment). If the flame is yellow in color, increase air shutter opening size. If the flame is a distinct blue but lifting away from the burner, reduce the air shutter opening size.
- Check gas pressure with all burners ON (See **Check the Regulator Inlet & Outlet**).

Surface Burner Troubleshooting

Check the Regulator Inlet & Outlet -

Check gas pressure to manifold or surface burner. Ranges should be checked under maximum flow (all burners turned ON and with changes in flow). The outlet of ranges using Natural Gas should check 4" WCP; ranges on LP gas 10" WCP. If gas pressure is incorrect check inlet supply to gas regulator. Inlet pressure should be at least 1" WCP above outlet pressure. If pressure at inlet of the gas regulator exceeds 8" WCP Natural Gas or 11" WCP LP gas, the gas supplier should be contacted.

Surface Burners Slow to Ignite or Not Igniting -

- Check for spark at the 2 surface spark electrodes. If the spark electrodes are operating, go to step 2 below. If the spark electrodes are not operating, go to step 5 below.
- Check gas pressure with all surface burners turned ON (See **Check the Regulator Inlet & Outlet**).
- Clean surface burner head charge ports & lighter ports. The ports may be cleaned using a strand of wire or some similar object. **DO NOT ENLARGE BURNER PORTS** when cleaning (See Fig. 3).
- Check alignment of burner flash tube assemblies (See Fig. 3).
- Disconnect power & turn OFF power to the appliance. Remove the panel at the top right rear of the range that covers the spark module.
- Reconnect electrical power. Turn one of the surface burner valves to "LITE" and check between "L" and "N" on the spark module for 120 VAC. If the meter reads 120 VAC, go to step 7. If the meter reads 0 VAC, check the wiring to and from the surface burner switches and the surface burner switches. **Note:** It is unlikely that all 4 surface burner switches will fail simultaneously since the surface burner switches are wired in parallel.
- Listen to the spark module. If a snapping sound is heard and the surface electrodes are not arcing, the high voltage lead to surface electrodes is open. If the snapping sound is not heard go to step 8.

- Disconnect electrical power and remove the 2 wires from output terminals 1 & 2. Using an Ohm Meter check the high voltage wiring between the spark module and the burner electrodes for a short to the chassis. If no shorted wiring is found replace the spark module.

Oven Burner Troubleshooting

The oven burner is ignited by an electronic glowbar ignition system. The ignition circuit consists of the oven thermostat, the oven igniter and the oven safety valve. These 3 components are wired in series. The most important points to know about the oven ignition system are:

- The oven igniter resistance decrease as the igniter surface temperature increases.
- The gas safety valve operates by current not voltage.

From a cold start, the oven igniter needs 30-60 seconds with voltage applied, to reduce its electrical resistance enough to provide a minimum of 2.9 amps of current flow in the series circuit. This is the required current flow needed for the gas safety valve to open to supply gas to the oven burner. **NOTE:** The oven igniter needs 2.9 amps or greater to the open gas safety valve.

The oven igniter should provide a steady current flow of between 3.2 to 3.6 amps in the circuit. At that point the oven igniter temperature is between 1800° to 2500°F. The oven igniter will remain energized at all times during burner operation. If the oven igniter glows red but does not draw at least 2.9 amps, the fault is usually with the oven igniter, not the oven safety valve. If the oven igniter does not glow check the thermostat and circuit wiring for an open circuit. **NOTE:** Be sure that the oven shut-off valve lever located on the gas regulator is set to ON position (See Fig. 1).

Oven Burner Will Not Cycle Off -

- Disconnect electrical power from appliance. If the oven burner does not cycle OFF, the gas safety valve is defective. If the oven burner cycles OFF go to step 2.
- Check polarity to the appliance. If polarity is incorrect, check range wiring for a short to chassis. If polarity is correct go to step 3.
- Allow oven to heat to 300°F, disconnect power and lift the cooktop to obtain access to the oven thermostat. Set the oven thermostat to 200°F and remove wires from the oven thermostat.
- Check across the thermostat terminals with an Ohm Meter. If the meter reads continuity, the oven thermostat is defective.

Oven Burner System

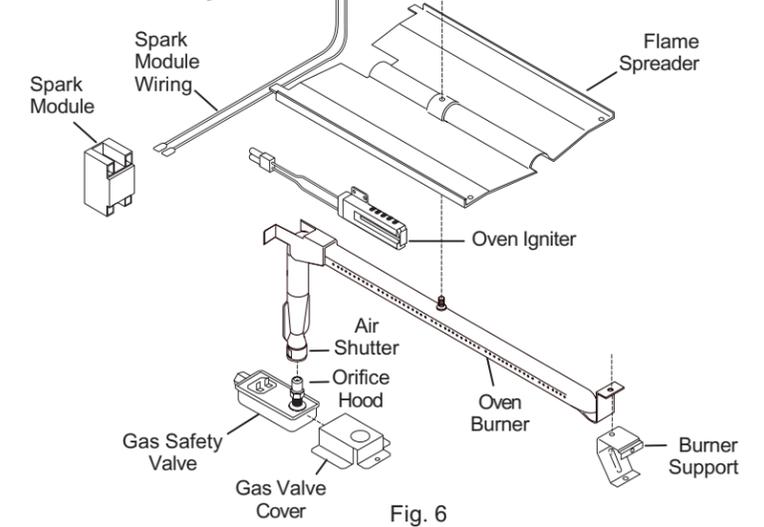


Fig. 6

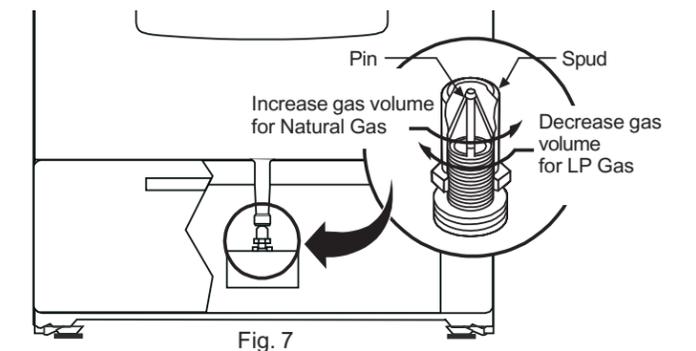


Fig. 7

Oven Burner Adjustments

- Check orifice hood adjustment on the oven safety valve to be sure it is adjusted for the type of gas supplied to the range (Natural or LP - See Fig. 7).
- Check the oven safety valve orifice hood for straight injection of gas into the oven burner. If the orifice hood is tipped, the oven burner will not draw in air properly.
- Check air shutter adjustments on oven burner (See Fig. 8).
- Check gas pressure (as described earlier).

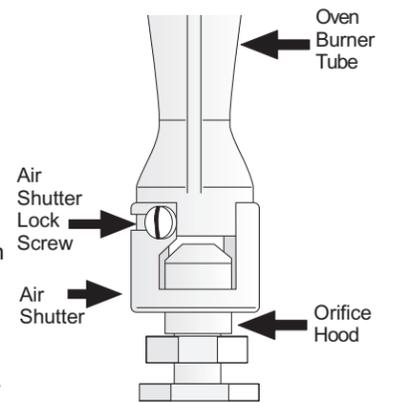


Fig. 8

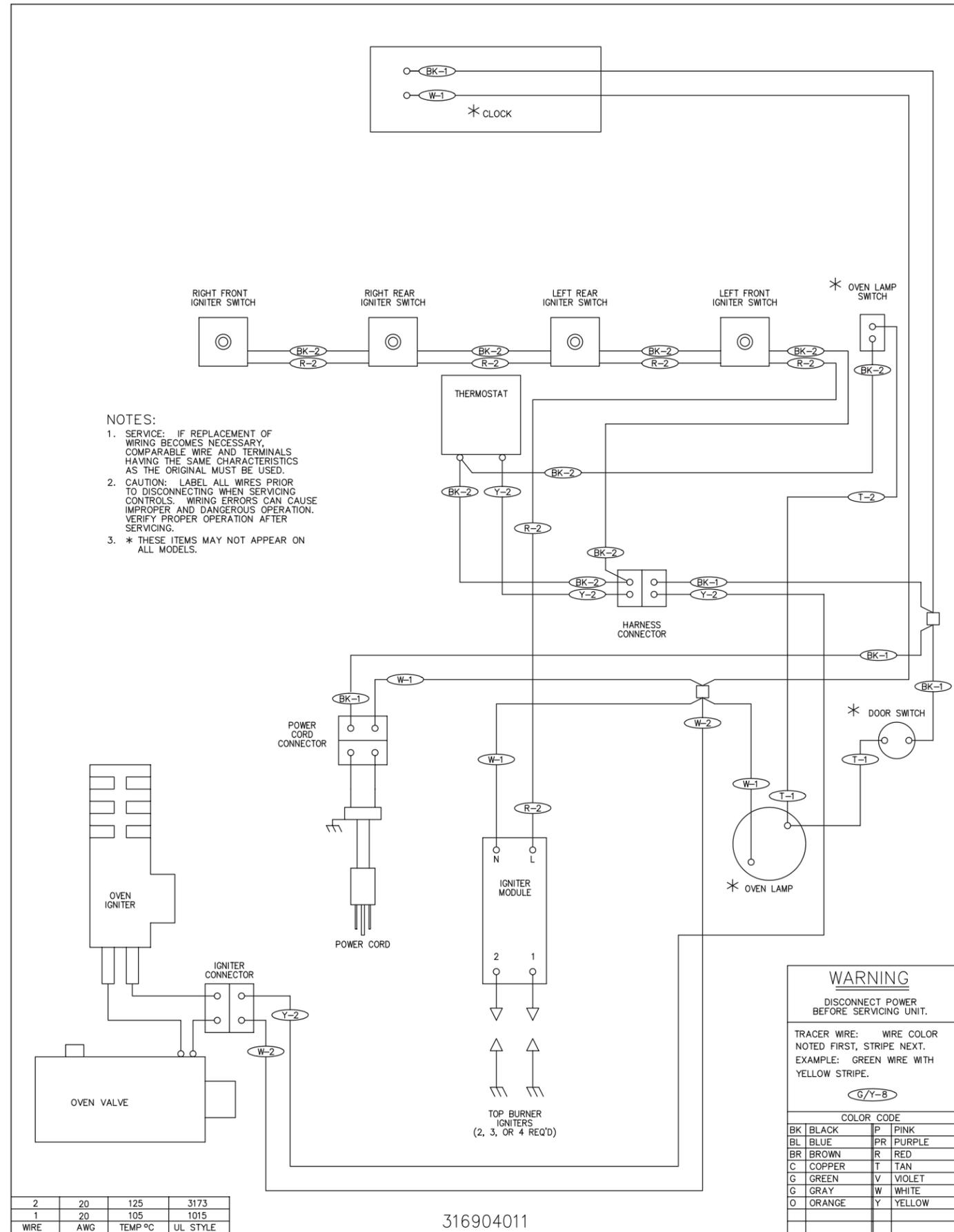
Oven Calibration -

- Place the probe for the oven tester in the center of the oven.
- Turn thermostat to 350°F and allow it to cycle 3 times. Record the temperatures at the highest and lowest point of the third cycle and determine the average.
- If the average temperature does not fall within 330° to 390°F, replace the oven thermostat.

Natural Gas BTU Ratings

This appliance is factory preset for use with Natural Gas with a 9,000 BTU rating for each surface burner and 18,000 BTU rating for the oven burner. **NOTE:** For operation at elevations above 2000 ft., appliance rating shall be reduced at the rate of 4 percent for each 1000 ft. above sea level.

General Troubleshooting Wiring Diagram



General Troubleshooting Wiring Schematic

