

# TROUBLESHOOTING

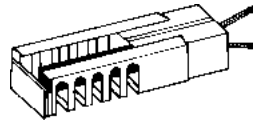
## GAS RANGE - HOT SURFACE IGNITION IDENTIFICATION, OPERATION AND TROUBLESHOOTING

### IGNITOR IDENTIFICATION

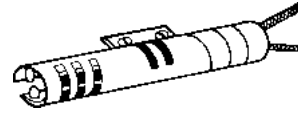
Two types of Hot Surface Igniters are found in gas ranges. The major difference, and key identification features are their shape and length.

Ignitors made by NORTON are rectangular (usually called flat or square).

Ignitors made by CARBORUNDUM are cylindrical (usually called round).



NORTON



CARBORUNDUM

Each type of ignitor has a different operating current rating and the appropriate model bimetal gas valve must be used: NORTON ignitors limit the operating current flow in the circuit to 3.2 to 3.6 amps.

CARBORUNDUM ignitors limit the operating current flow in the circuit to 2.5 to 3.0 amps.

(A special "powder-blue" flat ceramic NORTON model is available as an adaptive replacement for many CARBORUNDUM models).

### IGNITOR SYSTEM TROUBLESHOOTING IGNITOR DOES NOT GLOW

1. Disconnect or remove ignitor and measure its resistance. Cold resistance should be between 50 and 150 Ohms. (The value of the resistance is not important as long as the ignitor is not open or shorted).
2. Check internal fuses, switches and 120 VAC power supply.
3. If power is working -
  - A. Disconnect oven power and remove wires at "B" and "C" (Figure 1).
    - 1) Check continuity between wire "B" and terminal "C". If continuity is present go to Step 4.
  - B. If continuity NOT present - remove wire at "D" and probe terminals "D" and "C" for continuity. If NO continuity - replace the bimetal valve.
  - C. If continuity is present at "D" and "C" - probe wires "B" and "D". If NO continuity - replace the ignitor.
4. If continuity is present in step 3.A.1 - Check thermostat.
  - A. Make sure the oven is not heated. Turn power off, disconnect wiring and turn thermostat dial to 350°F. Probe at terminals "A" and "B". If NO continuity - replace the oven thermostat.

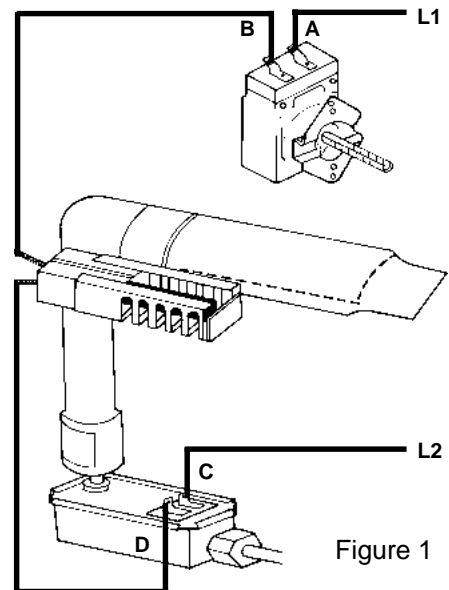


Figure 1

### IGNITOR GLOWS WITH NO IGNITION

1. Check that gas is turned on to the range.
2. Check ampere draw at bimetal valve. Power on. Thermostat set at 350°F.
  - A. Using wrap-around amp. meter - test one leg for amp. draw at "D" or "C".
    - 1) NORTON (flat) Ignitor - 3.2 to 3.6 amps.
    - 2) CARBORUNDUM (round) Ignitor - 2.5 to 3.0 amps. \*If amp. draw NOT within proper range - replace the ignitor.
  - B. If correct amp. draw is present - replace valve.

For safety purposes, when measuring the current flow through the ignitor circuit, shut off the main or the oven gas shut-off valve.

\* NORTON (flat) ignitor with "powder-blue" ceramic body has CARBORUNDUM value of 2.5 to 3.0 amps.