

Flame Out – Flame Detection On Dryer

1. Make sure **fuel is turned** on at both the dryer (Maxon Valve) and the fuel source.
2. Make sure the **gas regulator valve** is open far enough to let gas get to the burner.
3. Make sure the **flame sensing probe is physically touching “Grabbing” the flame not just around it.**

The flame sensing probe is a metal rod without any moving or mechanical contacts to wear out.

The flame is used as an electrical conductor for a DC 120 volt current from the metal flame sensor probe to the burner fins.

If the flame is not constantly “grabbing” the probe the burner light may “flicker”. Use the heater light as a voltmeter. If the heater light flickers the dryer needs to be shut down and probe adjusted. Just because the flame probe is red hot does not mean it is adequately sensing flame.

Probe should be adjusted from about $\frac{1}{2}$ to $\frac{3}{4}$ inch from burner metal. It can be adjusted by bending for a suitable position in the flame. Be careful not to break the insulator when bending the probe. The probe must not come in contact with burner metal or it will short out (Error # 6). The probe is properly adjusted when it senses both the high and low flame at varying gas pressure settings.

The probe is not factory adjusted. The dryer must be filled with grain for proper adjustments.

(See Illustration ConductionFlameSensing.jpg or pdf)

4. **Check that the flame sensing wires** (J7-19) from flame rod and (J7-20) metal burner ground are attached and have continuity to the computer. If the “burner” light does not come on it is likely there is a break in the sensing wires.
5. **Note:** You may need to add a 200V diode in series.
 - (A Radio Shack will do. Try a 3A 200V catalog # 276-1143 (2 / 2.69)
 - Install in series at J7 – 19 (best) or J7 - 20. Take the wire out of the J7 – 19 socket and install one end of diode and connect removed wire to other terminal.
 - Diodes are direction sensitive. If the installation does not work try turning the diode end for end.

Conduction Flame Sensing

Illustration 1

Flame out Condition

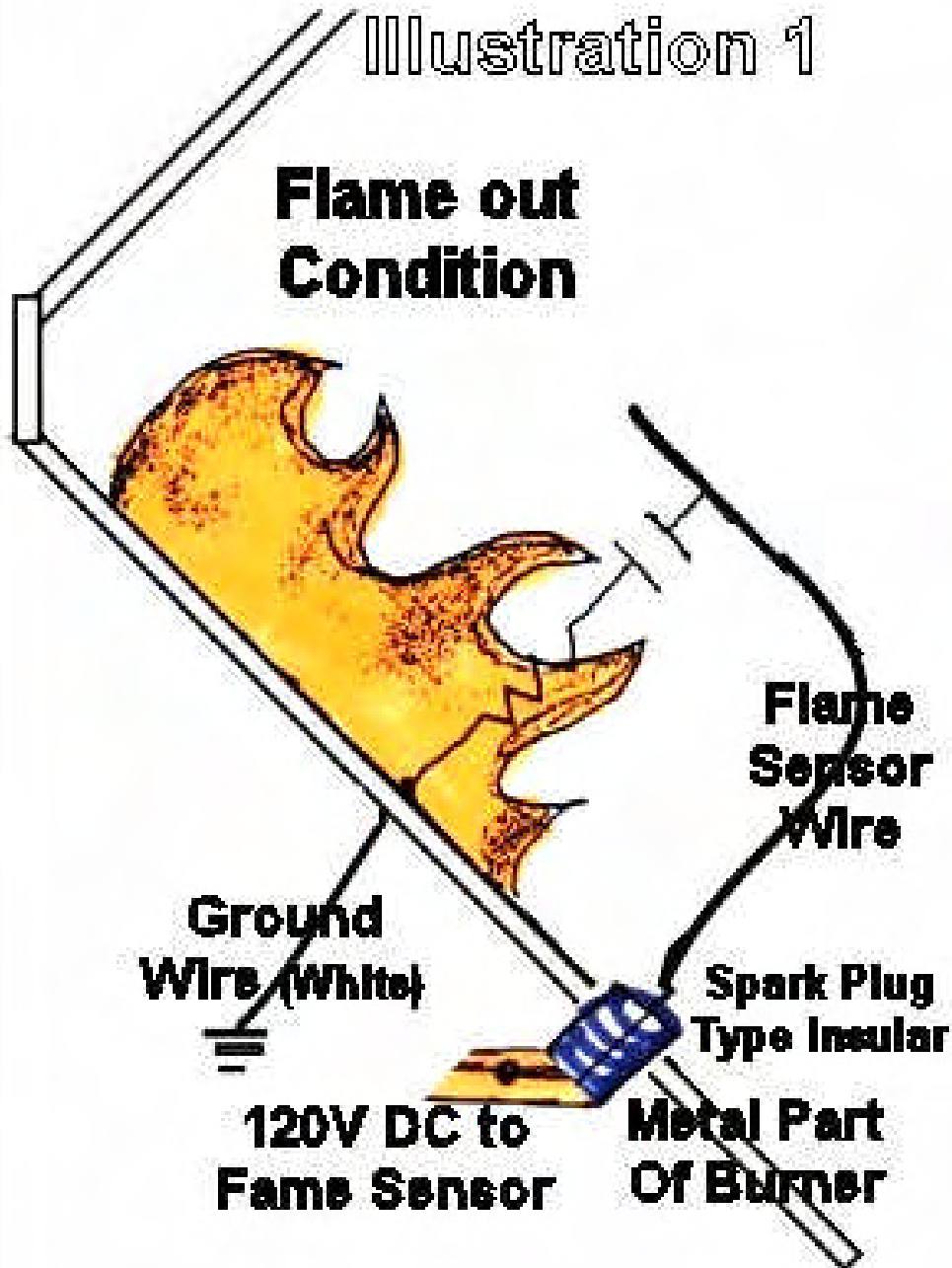
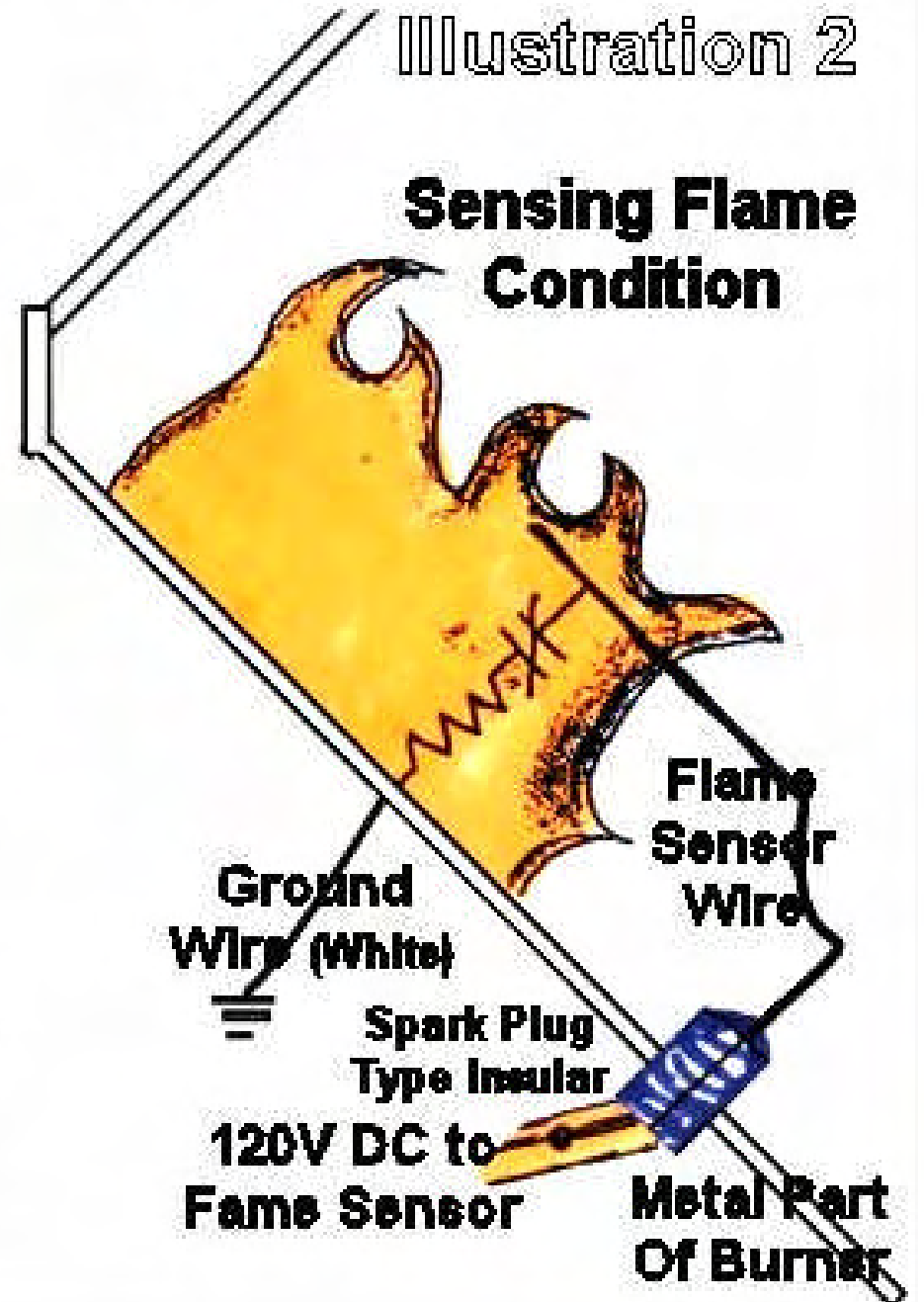


Illustration 2

Sensing Flame Condition





Flame Sensor Assembly



Flame Sensor Wire



Insulator Assembly



Flame Sensor Bracket