12. TROUBLESHOOTING (PILOT MODELS 2A, 2B, 3 AND 9 ONLY)

TROUBLE	POSSIBLE CAUSE	SOLUTIONS
Pilot will not stay lit when lighting the pilot...	◆ There is air in the gas line. ◆ The pilot orifice is clogged. ◆ The thermocouple is defective. ◆ The pilot safety valve is defective.	◆ Bleed the air out or continue to ignite the brooder until all the air is purged. ◆ Remove and clean the orifice as necessary. ◆ Replace the thermocouple. ◆ Replace the gas valve.
Brooder shuts off on pilot safety (i.e. pilot goes out)...	◆ The pilot orifice is clogged. ◆ The supply pressure is insufficient. ◆ The thermocouple is defective. ◆ The pilot safety valve is defective.	◆ Remove and clean the orifice as necessary. ◆ Check the manifold gas pressure and adjust as necessary. ◆ Replace the thermocouple. ◆ Replace the gas valve.
Brooder is not glowing red...	◆ The supply gas pressure is too low. ◆ The gas piping size is incorrect. ◆ The orifice is clogged. ◆ The orifice size is incorrect.	◆ Check the manifold gas pressure and adjust as necessary. ◆ If you are not sure of the performance, use the NFPA 54 gas pipe sizing table in this manual. ◆ Remove and clean the orifice as necessary. ◆ See the instructions for correct orifice size and replace if necessary.
Brooder will not attain the desired temperature...	◆ There is insufficient heat in the building for heat loss (i.e., not enough brooders). ◆ The thermostat sensing bulb is incorrectly placed. ◆ The thermostat is out of calibration.	◆ Conduct a heat loss and add brooders or other source of heat as necessary. ◆ Reposition the sensing bulb as necessary for proper operation. NOTE: The sensing bulb should be shielded from direct radiation to prevent short cycling of the brooder. ◆ Recalibrate (if possible) or replace.

12A BURNER OPERATION TROUBLESHOOTING (DSI MODELS 5B AND 5D ONLY)

A) IGNITION MODULE DIAGNOSTICS (DSI MODELS 5B AND 5C ONLY)

The LED located on the ignition module (see Figure 13) will flash ON for ¼ second, then OFF for ¼ second during a fault condition. The pause between fault codes is 3 seconds.

LED Indication	Error Mode
Steady On	Internal Control Failure
2 Flashes	Flame Sense Fault
3 Flashes	Ignition Lockout

B) FLAME SENSOR TESTING (DSI MODELS 5B AND 5D ONLY)

The flame current is the current that passes through the flame from the sensor to the ground. The minimum flame current necessary to keep the system from lockout is 0.7 microamps. To measure the flame current, connect an analog DC microammeter to the FC- and FC+ terminals per diagram. The meter should read 0.7 µA or higher when the burner is running full on. If the meter reads below zero, the meter leads are reversed. Disconnect power and reconnect the meter leads for proper polarity.

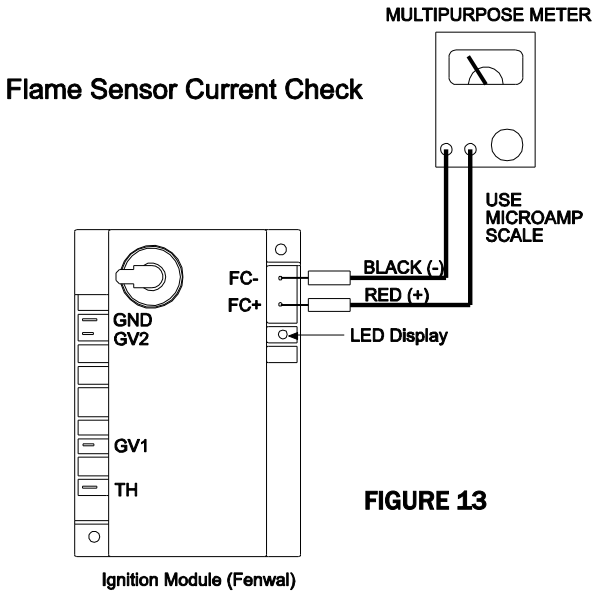

FIGURE 13

C) TROUBLESHOOTING CHART (DSI MODELS 5B AND 5D ONLY)

TROUBLE	POSSIBLE CAUSE	SOLUTIONS
Brooder is not glowing red...	◆ The supply gas pressure is too low. ◆ Improper size of gas piping. ◆ The orifice is clogged. ◆ Incorrect orifice size.	◆ Check the manifold gas pressure and adjust if necessary. ◆ If you are not sure of the performance, use the NFPA 54 gas pipe sizing table in these instructions. ◆ Clean the orifice. ◆ See the instructions for correct orifice size and replace if necessary.
Brooder will not attain the desired temperature...	◆ There is insufficient heat in the building for heat loss (i.e., not enough brooders). ◆ The thermostat sensing bulb is incorrectly placed. ◆ The thermostat is out of calibration.	◆ Conduct heat loss and add brooders or other source of heat as necessary. ◆ Reposition as necessary for proper operation. NOTE: The sensing bulb should be shielded from direct radiation to prevent short cycling of the brooder. ◆ Recalibrate (if possible) or replace.
Flames flaring up, outside of emitter surface...	◆ The gas pressure is too high. ◆ Incorrect orifice size. ◆ Incorrect type of gas supplied to the brooder. ◆ Not enough combustion air.	◆ Check the manifold gas pressure and adjust if necessary. ◆ See instructions for correct orifice size and replace if necessary. ◆ Check the nameplate to identify the correct type of gas the brooder is equipped to operate using. ◆ Clean the inside of the burner with a wire brush and blow out with compressed air.

ADDITIONAL TROUBLESHOOTING (DSI MODELS 5B AND 5D ONLY)