Refrigerator Gas Problem

Question: I'm having a problem with the refrigerator and would like your input. The unit works fine when plugged in, but it goes into a check condition af ter 45 seconds when going to gas. I've cleaned the burner jet (soaked in alcohol), blown out the burner tube and removed the power module. I cleaned each connector on the module and then put dielectric grease on the board terminals and reinstalled them. I also removed and cleaned all of the ground connections on the back of the unit and reinstalled with dielectric grease. I have not cleaned the flue baffle, it doesn't seem to be dirty, but the book says to run a brush through it. Outside of running something down the flue the only thing that makes sense is replacing the power module board.

Do any of you have some thoughts on what I should do next?

Answer: Good thorough job on what you have done so far. Most of the time a circuit board Molex plug connection or a clogged gas jet will be the culprit. A better jet cleaning technique would be to soak it overnight in vinegar. For a quick fix you can get a round wood toothpick, wet it and twirl it in the jet orifice. Since you are lighting the burner and getting a nice blue flame before it goes out then the gas valve is probably not staying open. Check the following:

1. The three fuses on the circuit board.

2. Good 12 volt supply to the board

3. Gas pressure of 11 inches of wa- ter. If you have a built in meter great. Otherwise, (for a quick check) turn on the furnace, hot water heater and the cook top burners and see if the Fridge still lights.

4. Check the thermocouple that is adjacent to the burner and in the flame. With the flame on, you should read about 30 millivolts on its terminals. This is used to signal the electronics that the flame is on and the gas valve should be kept on to run the fridge. You disconnect the thermocouple and clip test leads to it and have someone start the fridge while you read the meter.

5. Replace the board. These are qual- ity parts and they don't usually go bad, however, they are almost always blamed (incorrectly) as being the problem.

Follow-up: The fuses are good, the meter I have says 11 inches of water, the 12 volt supply is OK. I finally purchased a digital voltmeter (which I have needed for some time) and the thermocouple was indeed bad. I now have a spare board, which I had already purchased, since I was sure that would be the problem. I appreciate your help on this one.