Frymaster Dean

Service Bulletin

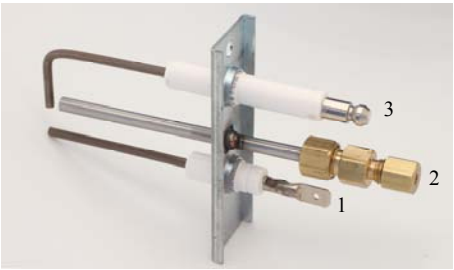
(This bulletin and all other active bulletins are downloadable from our website at http://www.frymaster.com/?xhtml=xhtml/fry/us/en/minisite/service/literature.html&xsl=minisite.xsl.)

SUBJECT: Intermittent Heat Failure in LOV/OCF Fryers

There have been cases of intermittent heat failures in dual-vat, low-volume gas fryers. The majority of these failures are due to environmental issues. The steps below will increase the tolerance of the fryer for these environmental issues. The sequence of component activity in a successful ignition and the sequence in an unsuccessful burner ignition are also detailed to assist in troubleshooting. This is not a fix all. Normal troubleshooting should be followed if these steps do not resolve the issue.

	Initial Reading	After Adjustment
24V Transformer		
Gas Type		
Orifice Size		
Gas Pressure — Right		
Gas Pressure — Left		
Micro Amps — Right		
Micro Amps — Left		
Blower Shutter Setting		

1. Ensure the oil-is-back sensor is clean. Some discoloration is acceptable; there should be no carbon build up.
2. Check initial readings/settings and fill in chart above.
3. Verify that all wires and connections are tight, especially ground wires and flame-sense wire connections. The wires should not be pinched below any sheet metal plates, which can cause short circuits.
4. Use igniter (826-3053), if available, which tends to generate higher flame-sense current at the start of heating cycles and also during extended burns.



An 826-3053 igniter (above) is visibly different than an 826-0981: 1: No nut on the sense-wire terminal; 2: Fitting on the enrichment tube; 3: Connection on spark rod.

OVER

Frymaster L.L.C., 8700 Line Avenue, Shreveport, LA 71106-6800
TEL 318-865-1711 FAX 318-219-7135 24-Hour SERVICE HOTLINE 800-551-8633
WebSite - http://www.frymaster.com/?xhtml=xhtml/fry/us/en/minisite/service/literature.html&xsl=minisite.xsl
E-mail - service@frymaster.com

5. Check voltage supplied by the 24 volt transformer. If voltage is below 25 volts (under load), move the input power taps on the transformer to generate higher voltage. Optimal voltage to increase flame-sense current is 25-26.5 volts. Higher voltage input to the ignition module will generate higher flame sense current and reduce heat failure.
6. Check that the gas type and gas pressure supplied to the unit is consistent and correct.
7. Adjust the blower shutter settings and gas pressure supplied to the burners to create the maximum flame-sense current at the start of a heating cycle. Usually this means increasing the air opening. Observe several cold-start ignitions. They should be reliable and with no delayed ignitions (popping). Target micro amps should be greater than 1.5 during the beginning of a cold start and the start of any idle heating cycle. Verify that the micro amps are over 2 after a continuous burn of over 1 minute.

Component Activity in Burn Sequence

1. Call for heat from computer.
2. Ground applied to one side of the coil of the heat relay.
3. Relay activates blower.
4. Pressure switch closes and passes 24 VAC to interface board.
5. Heat relay supplies ignition module with 24 VAC.
6. Module outputs 24 VAC and HV for spark.
7. 24 VAC passes through Hi limit.
8. 24 VAC passes through time-delay relay board.
9. 24 VAC applied to gas valve.
10. Gas valve opens.
11. Spark ignites burner.
12. Module reads micro amps and cuts off HV spark voltage.

Low Micro Amps/Lockout Sequence During a Burn

1. Micro amps drop below minimum.
2. Module continues to supply 24 VAC to gas valve.
3. Module supplies HV spark voltage for 3 seconds.
4. No micro amps; module locks out.
5. Module sends alarm signal to computer via interface board.
6. Computer stops calling for heat and displays heat failure.