

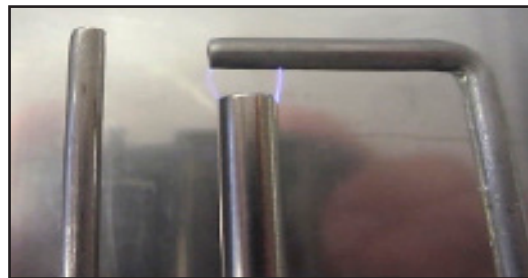
# Service Bulletin

**Subject: High Efficiency Fryer Delayed Ignition/  
Popping**

10/27/2015

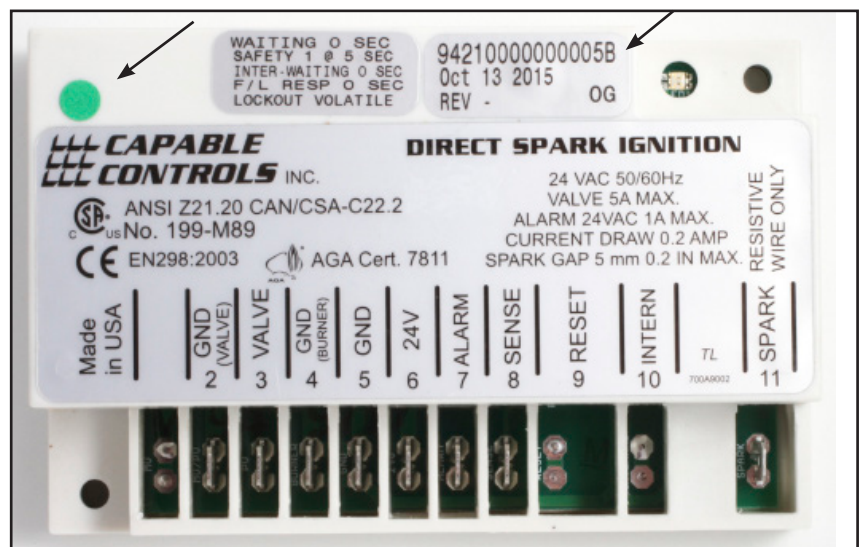


Weak, Inadequate Spark



Strong Spark

A weak or low-frequency spark can contribute to delayed ignition/popping in LOV, OCF and H55 fryers. When responding to a popping problem in one of these fryers, inspect the intensity of the spark. With the gas turned OFF, test the spark to ground using a screw driver in the igniter end of the high voltage cable. The spark frequency should be greater than 10 sparks per second and it should spark continuously, not start and stop. The arc should be able to jump a 2/10th inch gap. If the spark frequency or strength is suspect, contact Frymaster at 800-551-8633. A revised version of the module will be dispatched. The new Capable Control modules, which have higher frequency spark, are identifiable by an attached green dot and a B suffix in the manufacturer's part number. See photo above.



A revised module (shown above) is identifiable by a green dot on the left (left arrow) and a B suffix in the manufacturer's part number (arrow right).

If the spark is adequate, perform these tests:

1. Inspect plenum/motor mounting. It should be flat. If the blower plenum has weld burrs under the flange, it will not seal properly. All mounting nuts should be present and tight. Clean all blower

inlets of dirt and debris.

2. Check flue for obstructions or excessive oil migration. Verify there is sufficient makeup air to the fryer.
3. Ensure all gas lines are properly sized for the fryer and connected properly. Check installation manual for gas line specifications.
4. Turn off gas valve and let the fryer cycle six times. Listen for high-voltage arcing. If heard, find the source. Most likely it is a shorted or loose HV cable connection. Inspect the cable for damage. The spark inside the chamber should be inaudible.
5. Check blower shutter opening. Reducing the blower shutter can improve ignition and reduce flame current lock outs, especially during cold starts. Too much restriction can cause increased popping during heavy use or following a filtration. Alternately, if the blower shutter is open past the factory setting and the fryer is installed in a high-flow hood or negative pressure kitchen, the blower shutter should be reduced slightly to reduce flame current lock outs (heating alarms) during cold operation or following filters. Don't block the blower to reduce opening more than is possible with the shutter alone. Fryer performance may be adversely affected.
6. Check flame sense (see chart) current. Do not adjust blower to maximum flame current.
7. Attach a manometer and verify the gas valve is supplying gas smoothly upon receiving voltage without large spikes or delays. Check the vent tube for obstruction. A clogged vent tube will cause the gas valve to not regulate properly.
8. Gas pressure must not exceed rating plate. If high, reduce pressure to stock settings. In some cases, reducing the gas pressure by 10% of the stock rating plate will help poor ignition or delayed ignition. Blower shutter adjustments may be needed if pressure is reduced. Typically, a reduction in the blower opening is required for good combustion and ignition at reduced pressure.
9. Check incoming supply pressure with all gas appliances calling for heat. A pressure fluctuation or drop across the main gas supply low-pressure regulator of more than 2.5 inches is a sign of possible supply pressure or flow issues. Contact the gas company to verify the regulator is sized properly for the entire location and that it is regulating properly during times of heavy demand.
10. The burner should go infrared within 45 seconds to a minute of a full burn. Burner glow should be dull orange to bright orange but not bright yellow-orange. Inspect the burner surface visible through the sight glasses for cracked tiles or large chips. Replace cracked burners.
11. Check for combustion leaks around the burner-sealing surfaces and front insulation retainers. Ensure all insulation retainer mounting studs are secure and not broken. Replace missing insulation and reinstall any insulation retainers. Recheck for leaks.
12. Verify the heat/latch relay is functioning correctly. If not, replace relay. For units without a pressure switch, voltage should be supplied to the blower motor and ignition modules simultaneously via the heat relay. If either side of the relay is not pulling in at the same time or one side isn't supplying voltage, replace the relay.
13. Check igniters for proper enrichment tube alignment. Ensure they are perpendicular to the igniter bracket. Inspect enrichment tubes for kinks or extreme bends. Remove enrichment tubes and inspect for clogging. Ensure the igniter gap is less than 0.2 inch. Adjust the gap if necessary or replace if needed. Use new igniter insulation when replacing the igniters

Module	Optimal UA Output
Honeywell	2.5-3.5
Capable Controls	0.4-0.8