FO9 If a FO9, flame failure, appears on initial start-up, **first** check if the gas lines have been properly bleed of air and that the gas is turned on. Or in the case of LPG installations, check to see if you still have gas left.

Second check with a manometer your incoming gas pressure for natural gas or LPG is at least 7" water column, but no greater than 14". Too low a pressure will cause it to flame fail, too high a gas pressure will jam the gas valve closed and will damage it. The gas regulator may be defective, call your gas supplier. LPG can be problematic, in cold climates moisture can get in the regulator diaphragm and freeze. It runs during the day, but fails at night. Condensation or moisture in the regulator could also be the cause. The test port on the Munchkin gas valve is shown on page 11 of the manual and says "IN" on the gas valve. Loosen the screw on the inlet gas pressure tap and slid your manometer hose over the tip. If you suspect that the gas valve is defective, here is a ***simple test of the gas valve***; place your manometer over "OUT" gas tap (first loosen the screw). The manometer must not be of liquid type. Turn on Munchkin and simulate a demand. Watch the manometer indicator go into the negatives (we are drawing a vacuum against the gas valve). If the valve opens your manometer should read zero and it is good. If it does not open the reading will remain in the negatives.

Third, make sure you are at least 10' from your gas meter or regulator and that you are supplying at least ¾" gas line to the Munchkin. If flex lines are used they must be full size interior ¾". The Munchkin draws a vacuum against the gas line and must have the full volume of gas to ignite. If it is impossible to have a full ¾" gas line, an oversized drip leg like 2" x 12" should work.

Fourth, check the through the viewing port that the ignitor is actually sparking (both are in the 11:00 position on the boiler face plate) and whether the ignitor is directed downward toward burner. Gentle tweaking of the ignitor is recommended to direct the ignitor toward the burner.

Fifth, make sure that the ignitor gap is ¼". Note: the Munchkin FO9 is commonly the result of an improper air/gas mixture. Every unit is fired at the factory before delivery and it is set at 100 ppm at high fire, but because of significantly differing gas caloric and atmospheric site conditions, field gas regulator adjustments on the Munchkin can be necessary. See page 11 of manual for location of the "Throttle Adjustment Screw." To start a challenging boiler, cover the air intake located on the left side of the blower ½ to ¾ of the way with your hand (essentially choking the air intake). The unit should fire. Temporarily place tape over the air intake. Once a solid flame is established, you should be able to set the CO level to 100 to 110 ppm on high fire by adjusting the throttle adjustment screw. Check the rpm's on your display board at high fire. To get the Munchkin go immediately to high fire, go into Test Mode, and press S3 & S4 simultaneously for on second. Then press S2 key and adjust the fan speed to its highest setting. Your CO ppm should be dialed in at this point. Press S1 to get to low fire and you can set you low fire ppms. If you are unable to fire with out choking the air inlet and adjusting the gas valve throttle, replace the gas valve and blower. Something is interfering with the air to fuel mixture that could be lodged inside the gas valve or blower..

Sixth, if the Munchkin has been working for a while but now FO9's once or twice a day, check to see if your condensate is properly draining. Check whether the condensate neutralizer is plugged and needs replacing. Check inside the combustion chamber for water flooding marks. Sometimes you could get wet when you open the chamber, so watch out! If the condensate is plugged and combustion chamber is sooted up, this could be the result of the fuel to air mixture either being operated too high or too low for incomplete combustion. Adjust throttle screw as previously indicated to set CO around 100 ppm's. Clean combustion chamber according to manual instructions on page 43. Or