

MPA

The MPA is a Flame Safety System. It monitors various inputs and will shut down the gas flow if it senses something wrong. It also manages various outputs, including turning the blower on and off and opening the gas valves. The error codes it displays can tell you which sensor was tripped, or at which point in the process a sensor was triggered out of order. See the **Flame Safety** section for a more in depth explanation of the MPA and its process.

Display Code	Other symptoms	Possible cause	Remedy
1	-Blower running, MPA doesn't go to next step to initiate trial for ignition	-Air pressure switch not confirming air pressure due to: Clogged air inlet filter, clogged air line, three way air outlet valve closed, relay stuck, loose wires	-Clean air inlet filter, check air line for clogs, open three way outlet valve, pop relay coil out and re-insert into relay body, check for loose wires
FA2	-System shut down during operation	-Gas pressure too low or too high -insufficient gas pressure at inlet -burners backfiring -temperature limit not satisfied: temperature out of range, loose or failed thermocouple or connections -When a CO monitor or ventilation system is tied in, this error can be caused	-Check gas pressure—has propane tank run out of gas, has natural gas service been cut off? All valves open? Regulator needs adjustment? -Has there been an issue with backfiring in the premix burners? -Check thermocouple connections.

FA6	Flame detected out of sequence (when not expected)	<ul style="list-style-type: none"> -UV scanner is defective or is detecting light from another source -ground connection on a flame rod -user inserted lighting torch too early 	<ul style="list-style-type: none"> -Replace UV Scanner -Remove other light source -Remedy ground connection on flame rod -Wait until the valves open with a click, blue light, or red indicator to insert torch
FA7	-System shuts down prior to establishing flame	<ul style="list-style-type: none"> -Failure to establish flame -Failure to detect established flame -Gas safety shutoff valves did not open -Ignition spark plug dirty or has faulty wiring -Mixture too lean or rich to establish flame -Faulty UV Scanner 	<ul style="list-style-type: none"> -Adjust gas/air mixture -Check wiring to gas valves -clean/replace spark plug -Swap L1 and N connections in wiring base (of monitor) -Replace UV Scanner -Check UV sight lines
FA8	System shuts down during operation	<ul style="list-style-type: none"> -Flame failure -Failure to detect established flame -Mixture too lean or rich to maintain established flame -Faulty UV Scanner 	<ul style="list-style-type: none"> -Adjust gas/air mixture -Replace UV Scanner -Test UV Scanner, (Return and + button to show flame strength signal) 0-58

F13	System shuts down or doesn't start up	<ul style="list-style-type: none"> -Blower still running after previous shutdown -Low gas pressure switch trips when gas valves open. 	<ul style="list-style-type: none"> -Wait for blower to stop running prior to reset -Remedy pressure drop in piping upstream of low gas pressure switch -Regulator may need adjustment or replacement -high or low gas pressure switch may need adjustment
FAA	Air flow detected out of sequence (when not expected)	<ul style="list-style-type: none"> -Air pressure switch defective -Blower has not stopped turning completely after shut down -Air flow from another source -Air pressure switch set incorrectly 	<ul style="list-style-type: none"> -Replace air pressure switch -Wait for blower to stop completely -Restrict air flow from other source -Set air pressure switch correctly

FAb	Air Failure	<ul style="list-style-type: none"> -blower filter is clogged -valve in air piping is closed -air piping has a major leak -control signal to blower is interrupted or insufficient -power to blower is interrupted or insufficient -blower rotor is locked -Air blower has failed 	<ul style="list-style-type: none"> -Clean filter -open valve (not the butterfly valve unless it has fully closed.—look for another valve to open) -repair leak in air piping -restore control signal -restore power supply -remove debris to unlock rotor -replace blower
Fb6	At startup, gas safety shutoff valves never open or they open then shut	<ul style="list-style-type: none"> -Proof of Closure switch not satisfied -safety shutoff valve failure -power to safety shutoff valve interrupted -wires have come loose 	<ul style="list-style-type: none"> -check power to safety shutoff valve during trial for ignition -reconnect/tighten any loose wires in the safety shutoff valve assembly -check adjustment of microswitch in Proof of Closure module on valve