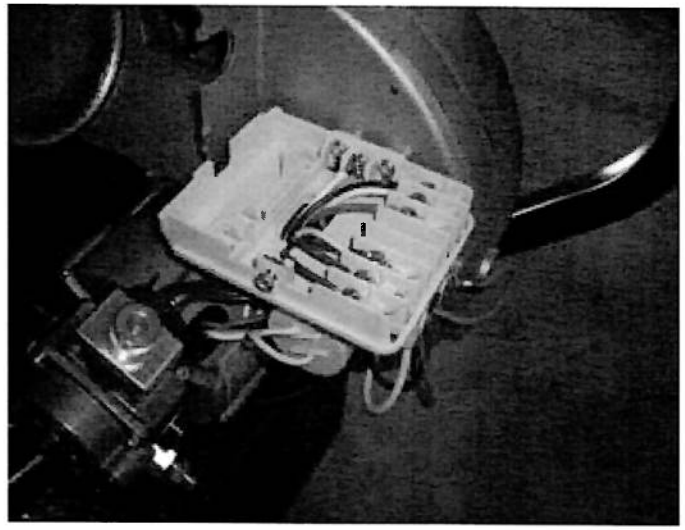
TROUBLESHOOTING

PROBLEM: BURNER WILL NOT GO INTO PRE-PURGE

Confirm power supply – is power indicator light green?
See POWER INDICATOR LIGHT instructions to help determine power issues.

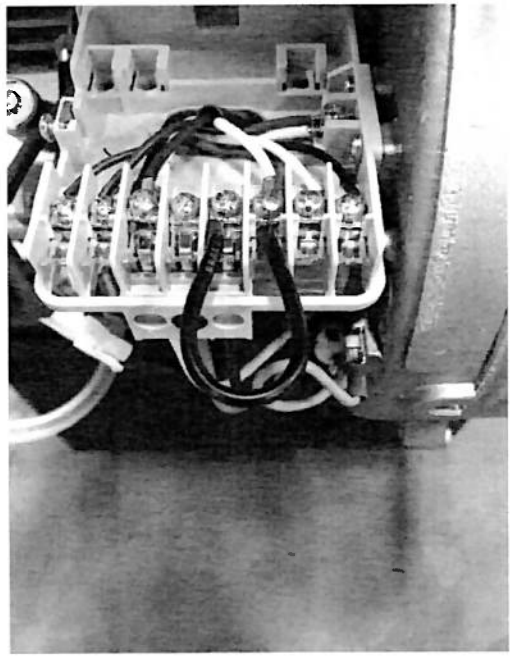
Confirm power to both rear and outlet HIGH LIMIT switches using a volt meter.
Ensure all spade connectors are secure and crimped properly.
Replace limit switch if necessary – if power is not found on both sides of the switch.

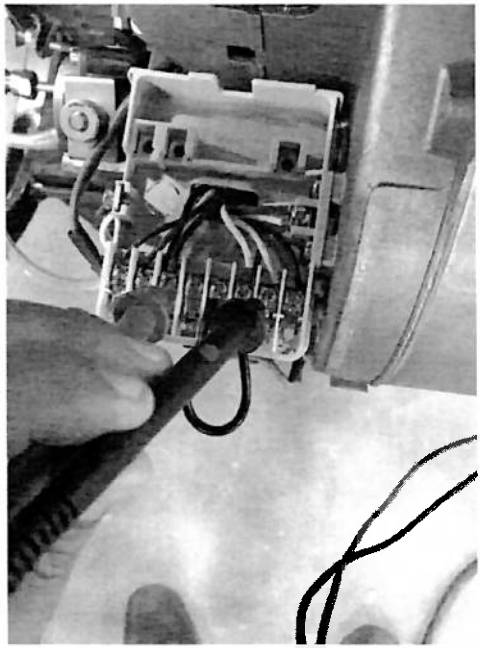
Check connections on control sub base.
Make sure none of the tabs on the sub base are bent and losing connection with the IGNITION MODULE.



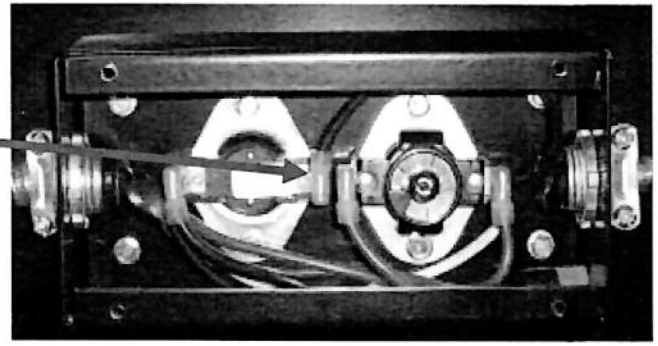
PROBLEM: BURNER WILL NOT GO INTO PRE-PURGE (CONTINUED)

Supply direct power to purge motor.
While Ignition Module is off, put a jumper wire between terminal #5 (input burner power) & terminal #6 (purge motor power supply). Turn toggle switch manual position, if burner goes into prepurge, measure 120 AC between terminals# 3 & 7. Voltage should be between 39-51 volts. If voltage is correct, check pump & drive key. If motors does not come on, try new ignition module & check power supply to burner or inspect purge motor & capacitor.



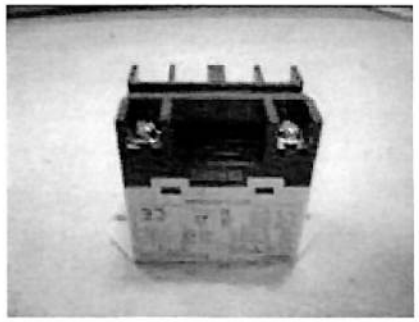


PROBLEM: FAN MOTOR DOES NOT ENGAGE

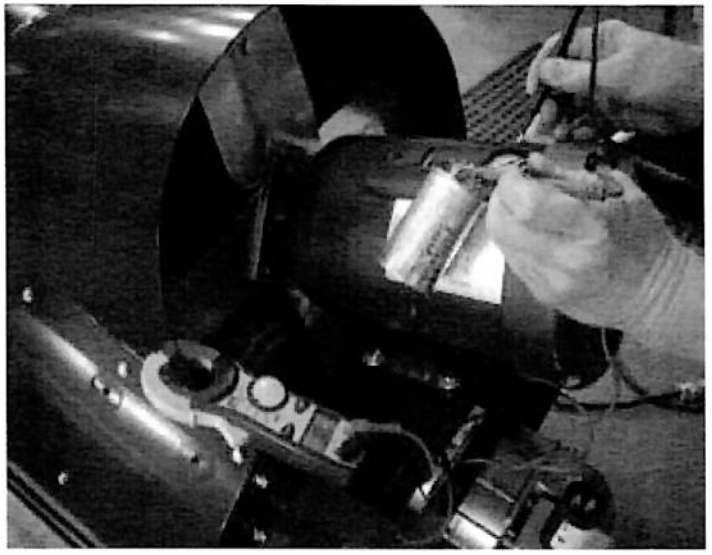


Confirm FAN LIMIT is not faulty. Try to bypass FAN LIMIT and check if motor engages. Replace FAN LIMIT if necessary.

Confirm power on both sides of RELAY. Replace RELAY if necessary.



Check connections on motor overload. If motor overload connections are corroded it will prevent the motor from operating properly.



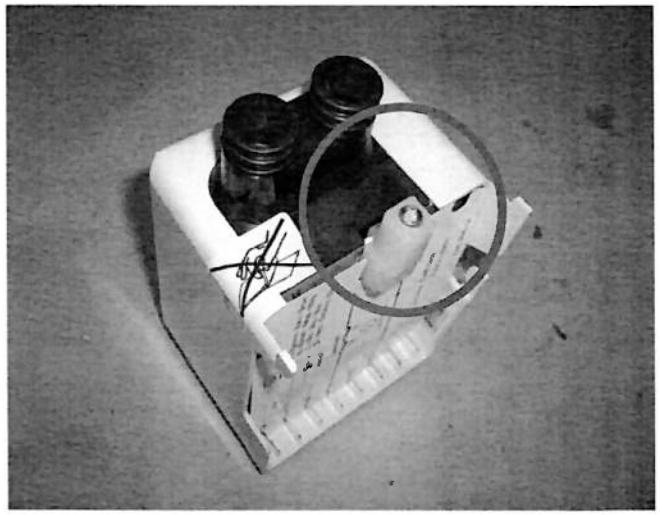
Check both the START and RUN CAPACITORS. Use volt meter to confirm OHM reading from CAPACITOR terminals to ground. If OHM reading is close to zero, the CAPACITOR should be replaced.

Note: Capacitor must be attached to motor to perform this test.

PROBLEM: BURNER STAYS IN PRE-PURGE – DOES NOT LIGHT

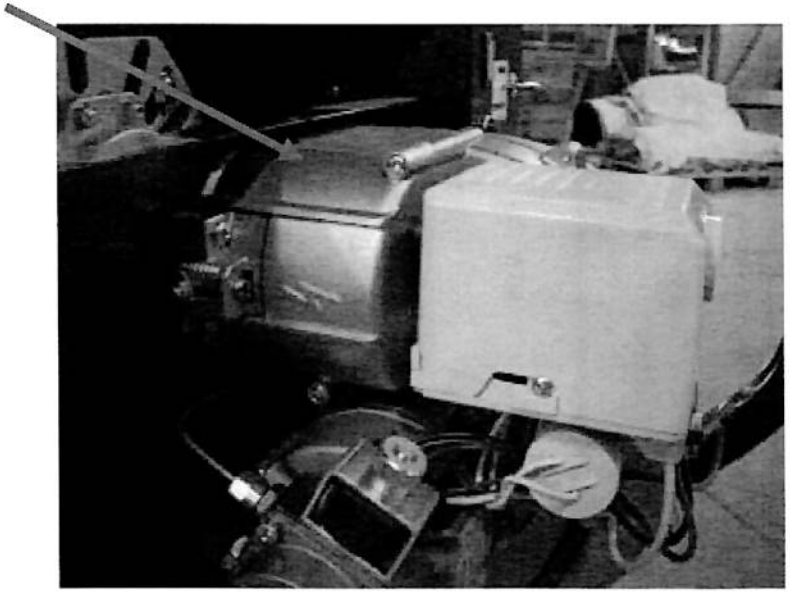
Inspect PHOTO CELL.
Ensure the eye of the PHOTO CELL is clean.
Ensure the PHOTO CELL is secure on IGNITION MODULE.

Note: Always replace the AIR COVER on the burner assembly before starting the burner.
If this cover is not installed, natural light can trick the PHOTO CELL into thinking there is flame.



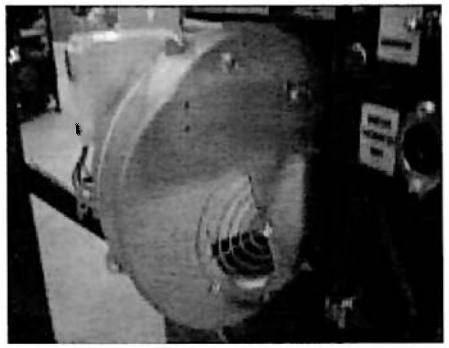
SERVICE TIP:

Remove PHOTO CELL and re-install the IGNITION BOARD.
Try for ignition, if burner now fires and locks out, then PHOTO CELL should be replaced.

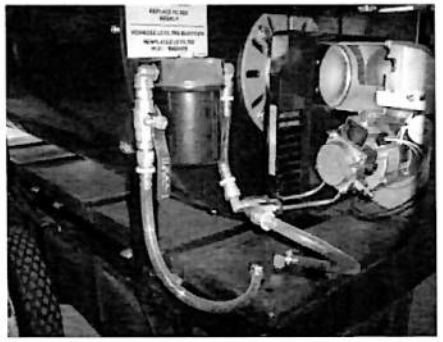


PROBLEM: BURNER IGNITES AND LOCKS OUT IMMEDIATELY:

Check COMBUSTION AIR SETTING.
Be sure the AIR GATE is set to the correct setting. Typically this setting is 4.5. See COMBUSTION AIR ADJUSTMENTS page.



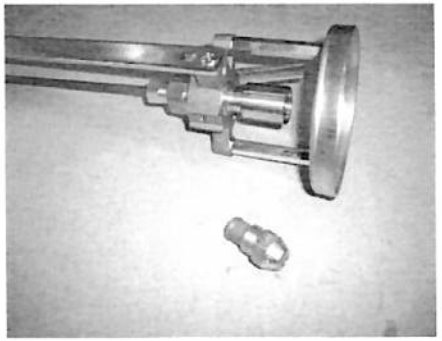
Check fuel supply.
Make sure the clear fuel lines are not blocked and there are no signs of air in the lines. Make sure all connections are tight.



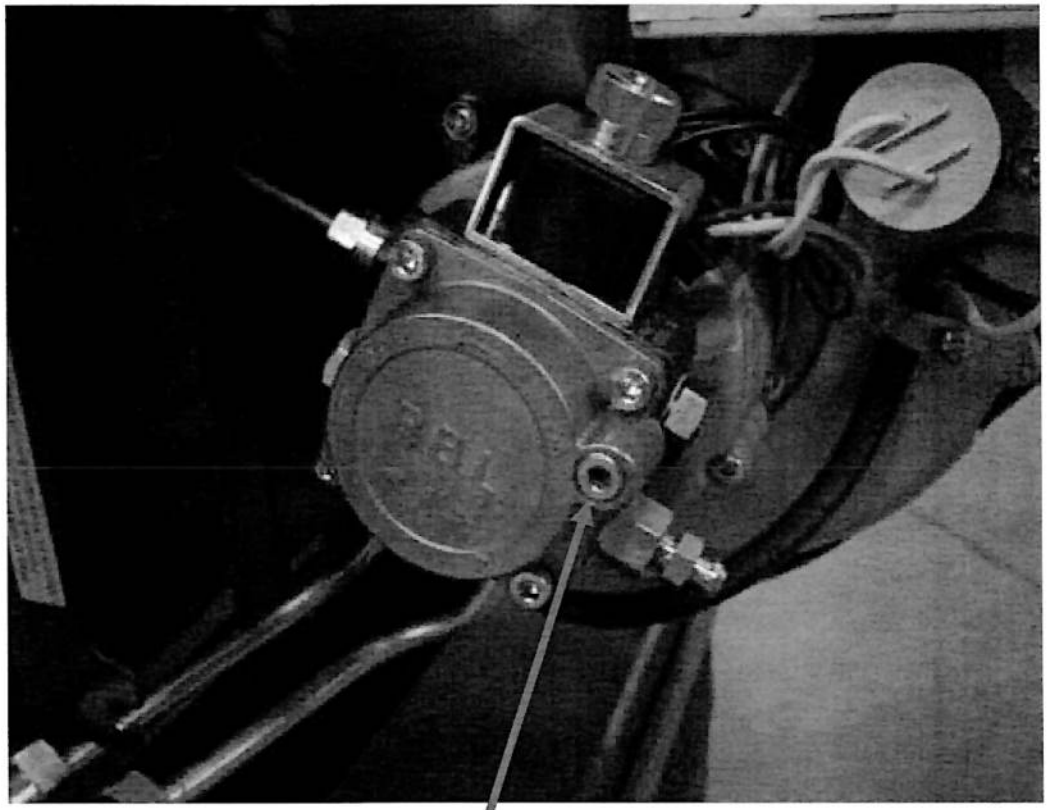
Inspect the FUEL FILTER.
This FUEL FILTER should be changed weekly.
Be sure there is no debris or ice inside the FILTER.

Change NOZZLE.
It is possible the NOZZLE is not allowing fuel to pass properly. Replace if necessary.

The NOZZLE should be replaced annually.



Confirm pump pressure during PRE-PURGE.
If the pressure during pre-purge is not between 50-100psig the pump motor may need to be replaced.



Check VACCUM pressure on PUMP.
Attach vacuum gauge to the vacuum port shown here.

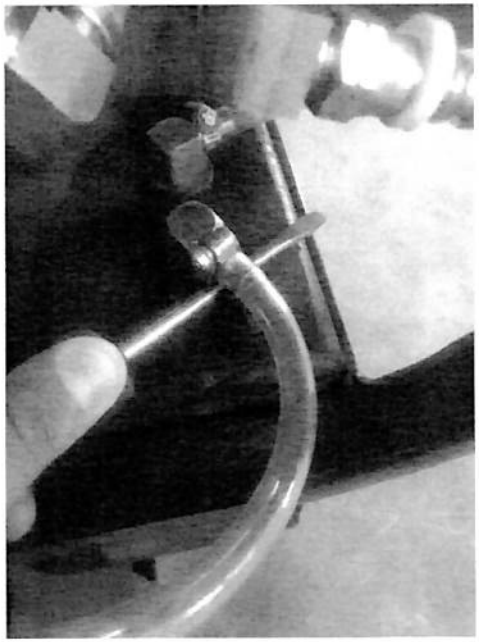
While the burner is in pre-purge, the reading should be no more than 11" W.C.
If the reading is higher, there is most likely a blockage in the fuel lines.

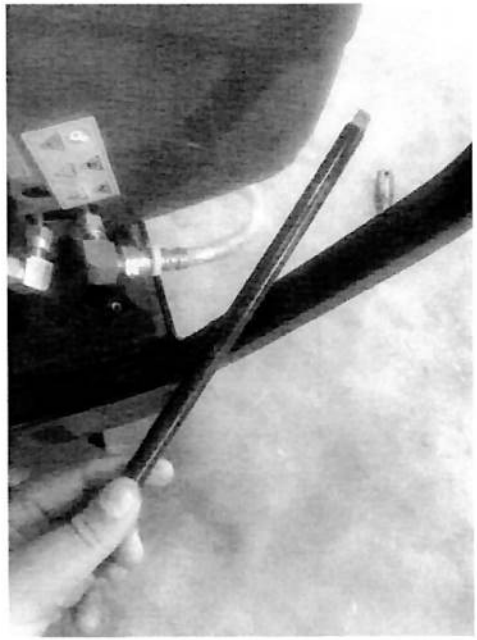
PROBLEM: BURNER GOES THROUGH PREPURGE, IGNITES & FLAME DROPS OUT, RELIGHTS OVER & OVER:

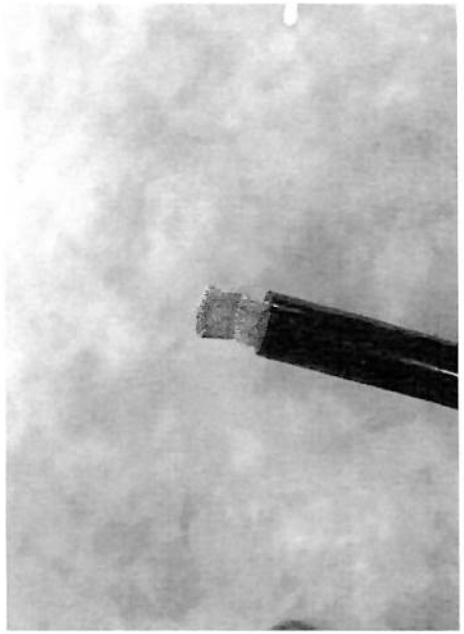
Check FUEL LINES.
Inspect supply line coming from tank, if it fuel is not clear & appears to look like foam, Remove supply line from tank & inspect filter screen on bottom of supply line. Filter Screen may be crushed or blocked .

SERVICE TIP:

When removing supply elbow from tank, use a large screw driver to lift elbow out of grommet. When reinstalling supply elbow, insert grommet in tank first, then push elbow in place after.





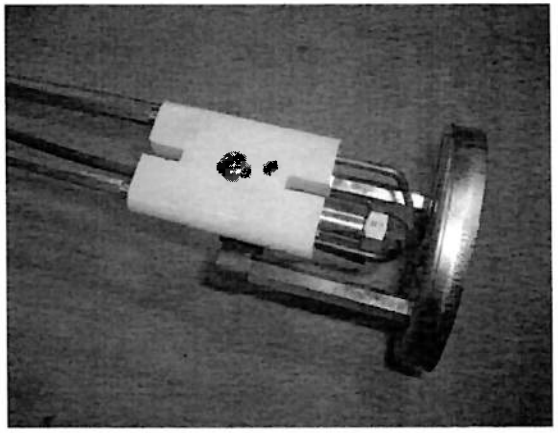


PROBLEM: BURNER TRIES FOR IGNITION & LOCKS OUT:

Check FUEL LINES.
Make sure there are no air bubbles in the clear FUEL LINES.

SERVICE TIP:
If the pump motor has been replaced, make sure the bypass plug has been properly installed in the return side of the pump.

Check IGNITION MODULE.
Make sure the module is secure to SUB BASE and the terminals are not bent.
Make sure the ignitor probes are installed properly into the IGNITION MODULE.
Replace IGNITION MODULE if necessary.



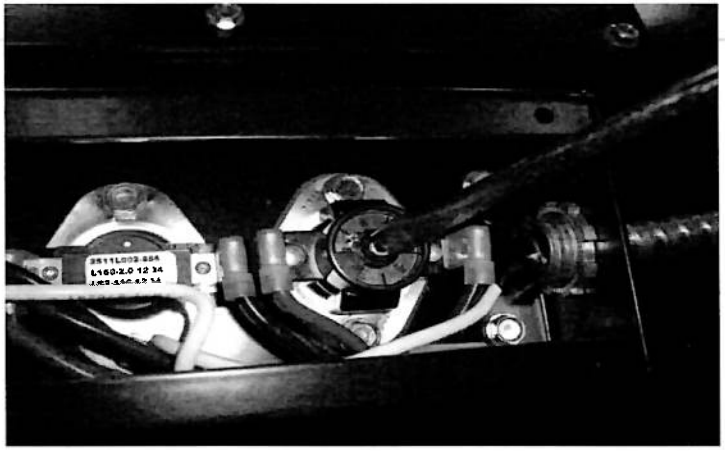
Check IGNITOR ASSEMBLY.
Make sure the ceramic assembly is not cracked or damaged.
Make sure the gapping between the probes and face of the NOZZLE are correct.

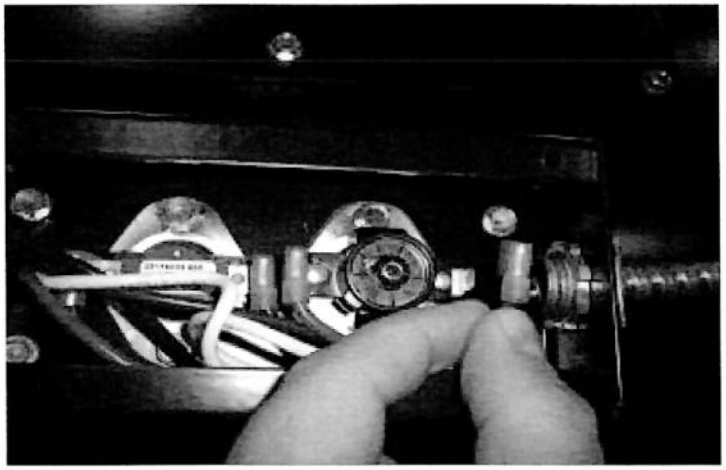
PRIMARY FAN MOTOR CYCLES ON & OFF

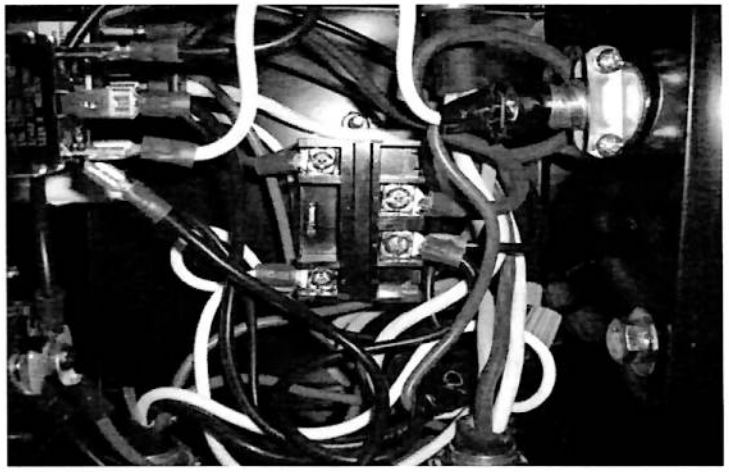
Check setting on Fan Limit dial, if temperature setting is too high, Fan Limit can cycle. Use a flat head screw driver and turn dial counter clockwise to reduce temperature setting. If Primary Fan continues to cycle at lowest temperature setting, refer to Feeler Gauge set up instructions on page 14.

PRIMARY FAN MOTOR WILL NOT SHUT OFF

Unplug heater and disconnect one of the wires on Fan Limit, plug heater back in. If Primary Fan stays off, Fan Limit may be faulty. If Primary Fan continues to run, problem is most likely with main relay. Replace if required.







FV SERIES WIRING DIAGRAM