

# Troubleshooting Guide

## ---- Rotor Section ----

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
<b>Rotor Does Not Turn</b>	Power not on	Turn selector switch to DH
	Rotor Stuck or Frozen in place	Determine cause from other inspection and repair
	Drive Motor does not turn	Fuse blown, replace if necessary Replace Drive Motor if necessary
	Seals are sticking	Loosen if stuck or frozen to unit
	Drive belt is not engaging spokes on wheel	Adjust, straighten or Replace drive band
	Tensioner not tight	Adjust Tensioner
<b>Rotor Turns, But Drying Performance is Poor</b>	Poor performance	Determine Cause from other inspection
	Seal not engaging with cassette causing bypass of air.	Check seal clearance, adjust or Replace seals if necessary
	Dirty or damaged rotor	Blow out dirt if possible with compressed air, replace if necessary
<b>High Process Outlet Temperature</b>	Poor seal clearance	Check seal clearance, adjust or Replace seals if necessary
	Check Rotor Speed	Contact Factory
<b>Low Reactivation Outlet Temperature</b>	Poor seal clearance	Check seal clearance, adjust or Replace seals if necessary
	Check Rotor Speed	Contact Factory
	Check Heated Temperature	Check heated to temperature adjust to proper setpoint if necessary

For trouble with rotor not covered by the chart above, contact the factory at the cover address

## Troubleshooting Guide

### --- General Unit Shut Down problems ---

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
<b>Unit Will Not Start at All</b>	Unit selector switch not in the Vent or DH position  Phase Monitor (If Installed) ON light not lit up	Check to see if unit is calling for DH mode to run. Make sure the jumper plug is plugged in or the optional humidistat. Or selector switch is in the proper mode  See (Phase Monitor (If Installed) ON light not lit up under "Red Faults Lights On" in Fault Light Section)
<b>Unit Runs for 10 Minutes and Shuts Down</b>	DH Motor Not Running  High Limit Tripped  Rotation Switch not hitting cam on the rotor	Check the fuse for rotor motor and replace if necessary. If fuse is good check to make sure there is power to the motor, replace motor if necessary, or see (DH Rotor Not Turning)  Make sure the switch is set for 325 to 350° and then reset high limit switch, if you can not reset you may need to replace.  Adjust switch to hit the cam on rotor when the switch is half way up the ramp.
<b>Unit Runs for 15 Minutes and Shuts Down</b>	Temperature not staying above 95° F on the reactivation outlet	See (Low Reactivation Temperature under "Red Fault Lights On" in Fault Light Section)

# Troubleshooting Guide

## --- Reactivation Section ---

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
<b>No Blower Operation</b>	<b><u>Mode Selector Switch</u></b> Switch in OFF or VENT position	Place switch in proper mode
	<b><u>Control Transformer</u></b> No input voltage Blown control fuse Defective transformer	Check disconnect and supply fusing Replace control fuse Replace transformer
	<b><u>Motor Protection</u></b> Overload on motor tripped Fuse blown	Reset overload and check motor amps/overload setting Replace fuse
	<b><u>Motor Starter</u></b> Defective motor starter	Replace motor starter
	<b><u>Motor</u></b> No input voltage Improper wiring Defective motor	Check fusing Correct wiring Replace motor
	<b><u>Blower Damage</u></b> Defective or locked bearings Check for physical damage Wheel came loose from Shaft	Replace bearings Replace or repair blower Realign and tighten

## Troubleshooting Guide

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
<b>No Blower Operation</b>	<b><u>Control Relays</u></b>	
	Improper part	Check relay voltage
	Improper wiring	Check wiring
	Defective relay	Replace relay
	<b><u>Open Humidistat (Optional)</u></b>	
	Humidistat satisfied	Adjust humidistat, if applicable
	Defective humidistat	Replace humidistat
<b>Blower Runs; No Heat;</b>	<b><u>Mode Selector Switch</u></b>	
	Switch in VENT position	Place switch in proper mode
	<b><u>Manual Gas Valve</u></b>	
	Gas valve(s) closed	Open gas valve(s)
	<b><u>Airflow Switch</u></b>	
	Blower running backwards	Reverse motor direction
	Blocked intake or discharge	Find and remove obstructions
	Clogged airflow tube or pick-up ports	Clean or replace tubing or pick-up ports
Defective switch	Replace switch	
	<b><u>Flame Safeguard Relay (FSR)</u></b>	
	No input voltage	Checking wiring
	Defective FSR	Replace FSR

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PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
<b>Blower Runs; No Heat;</b>	<b><u>Igniter</u></b> No current (open igniter) No voltage	During trial for ignition: Check igniter current and spark Check FSR output to spark rod
	<b><u>High Limit</u></b> High limit tripped High limit does not reset	Reset high limit Replace high limit
	<b><u>Gas Valve</u></b> Main valve does not open  Defective solenoid	Check FSR output to main valve during ignition trial. Check gas valve circuit and wiring. Compare supply voltage to nameplate voltage. Inlet gas pressure too high. Clean and/or replace gas valve parts. Replace solenoid or valve assembly.
	<b><u>Regulator</u></b> Clogged vent orifice No supply pressure Improper manifold pressure Defective regulator	Clean or replace orifice Check all gas cocks and piping Adjust regulator Replace regulator

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PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
<b>Blower Runs; No Heat;</b>	<p><b><u>No Flame Signal</u></b></p> <p>Flame rod oxidized</p> <p>Dirt build-up on insulator</p> <p>(Low fire not properly adjusted) Low fire set to low</p> <p>Flame rod ceramic cracked</p>	<p>Scrape oxide coating off rod or replace flame rod.</p> <p>Clean dirt deposit from insulator surface and install protective boot.</p> <p>Adjust low fire.</p> <p>Replace flame rod.</p>
	<p><b><u>Flame Safeguard Relay (FSR)</u></b></p> <p>Defective FSR</p>	<p>Replace FSR</p>
<b>High Limit Tripped</b>	<p><b><u>High Limit</u></b></p> <p>Temperature reading for high limit went above 325° F</p> <p>High limit will not reset</p>	<p>Reset high limit</p> <p>Replace high limit</p>
	<p><b><u>Airflow Restricted</u></b></p> <p>Blower running backwards</p> <p>Belts slipping</p> <p>Blocked intake or discharge</p>	<p>Reverse motor direction</p> <p>Tighten and/or replace belts</p> <p>Find and remove obstruction</p>
	<p><b><u>Continuous High Fire</u></b></p> <p>Foreign material holding valve open</p> <p>Plunger jammed</p> <p>Faulty amplifier</p>	<p>Clean, replace valve and/or seat if necessary</p> <p>Clean, or if necessary, replace plunger</p> <p>Replace faulty amplifier</p>

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PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
<b>High Limit Tripped</b>	<p><u>Unit Over firing</u></p> <p>The discharge temperature with burner operating exceeds allowable temperature rise for heater</p>	Adjust modulating valve or regulator to obtain temperature rise specified for unit
<b>Modulating Valve Does Not Modulate; Continuous High Fire</b>	<p><u>Modulating Valve</u></p> <p>Foreign material holding valve open</p> <p>Plunger jammed</p>	<p>Disassemble valve remove foreign material replace valve and/or seat if necessary</p> <p>Clean or if necessary replace plunger</p>
	<p><u>Discharge Or Entering Air Temperature Sensor</u></p> <p>Open circuit in discharge temperature sensor</p> <p>Temperature control system out of calibration range</p> <p>Sensor cross-wired to controller</p>	<p>Replace the sensor</p> <p>Perform temperature control system calibration</p> <p>Correct wiring terminations</p>
	<p><u>Amplifier (SC11B)</u></p> <p>Faulty amplifier</p>	Replace faulty amplifier
<b>Modulating Valve Does Not Modulate; Continuous Low Fire</b>	<p><u>Amplifier (SC11B)</u></p> <p>Three position dip switches on circuit board not set to correct position for 4-20mA or 0-10 volt input signal</p> <p>SC11B input not phased correctly for + &amp; -</p> <p>Faulty amplifier</p>	<p>Set dip switches to desired position for operation</p> <p>Switch wires around to match + or -</p> <p>Replace faulty amplifier</p>

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PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
<b>Modulating Valve Does Not Modulate; Continuous Low Fire</b>	<b><u>Transformer</u></b> No voltage output to amplifier	Replace transformer (also check for short in modulating valve coil)
	<b><u>Modulating Valve</u></b> Valve coil is open or shorted  Plunger jammed  Ruptured main or balancing diaphragm	Replace coil if its resistance is less than 40W or greater than 85W.  Clean or replace plunger  Determine diaphragm condition and replace if defective
	<b><u>Carel Controller</u></b> No output from the controller to the SC11B amplifier	Replace controller if defective



# Troubleshooting Guide

## ---- Process - Supply Section ----

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
<b>No Blower Operation</b>	<b><u>Mode Selector Switch</u></b> Switch in OFF position	Place switch in proper mode
	<b><u>Control Transformer</u></b> No input voltage Blown control fuse Defective transformer	Check disconnect and supply fusing Replace control fuse Replace transformer
	<b><u>Motor Protection</u></b> Motor overload tripped Fuse Blown	Reset motor overload and check motor amps Replace Fuses
	<b><u>Motor Starter</u></b> Defective starter	Replace motor starter
	<b><u>Motor</u></b> No input voltage Improper wiring Defective motor	Check fusing Correct wiring Replace motor
	<b><u>Blower Damage</u></b> Defective or locked bearings Check for physical damage	Replace bearings Replace or repair blower

## Troubleshooting Guide

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
<b>No Blower Operation</b>	<b><u>Control Relays</u></b>	
	Improper part	Check relay voltage
	Improper wiring	Check wiring
	Defective relay	Replace relay
	<b><u>Open humidistat (Optional)</u></b>	
Humidistat satisfied	Adjust humidistat, if applicable	
Defective humidistat	Replace humidistat	

# Troubleshooting Guide

## ----- Fault Lights -----

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
<p><b>Red Fault Lights On</b></p>	<p><u>Other Faults</u></p> <p>Phase Monitor (If Installed) ON light not lit up</p> <p>Some Customer supplied device is tied into the external faults relay.</p>	<p>Check all of the setting on the phase monitor to be sure they are properly set to the voltage you are operating the unit at and then check rotation of the motors on the unit to make sure it is correct, check to make sure you have proper voltage supplied to the unit &amp; that the amp draw on all three power legs is approximately the same. If this does not solve the problem call ARID-Dry Customer Service Department @ 810-229-7900</p> <p>Make sure that any external device provided by customer are not causing the alarm to the unit.</p>
	<p><u>Rotation Faults</u></p> <p>DH Motor Not Running</p> <p>High Limit Tripped</p> <p>Rotation Switch not hitting cam on the rotor</p>	<p>Check the fuse for rotor motor and replace if necessary. If fuse is good check to make sure there is power to the motor, replace motor if necessary, or see (DH Rotor Not Turning)</p> <p>Reset high limit switch</p> <p>Adjust switch to hit the cam on rotor when the switch is half way up the ramp.</p>

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PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
<p><b>Red Fault Lights On (cont.)</b></p>	<p><u>Rotation Faults (cont)</u></p> <p>Rotation Switch is not closing when triggered</p>	<p>Change out switch</p>
	<p><u>Low Reactivation Temperature</u></p> <p>Bad Inlet or Outlet sensor causing the unit to drop to a max of 50% output.</p> <p>Manual gas valve to the burner is closed not allowing gas to flow to main burner.</p> <p>Spark Rod not set properly.</p> <p>Crack in porcelain of flame rod or spark rod causing grounding of the rod.</p> <p>No gas getting to the pilot assembly.</p> <p>Pilot regulator plugged or Bad</p> <p>Gas valve for pilot not opening</p> <p>No gas to unit or main valve closed</p>	<p>Replace sensor</p> <p>Shut unit off and open the gas valve, then restart the unit.</p> <p>Adjusts spark rod to proper location between two of the holes on the pilot tube.</p> <p>Replace if cracked</p> <p>Pilot regulator plugged or Bad, Replace if you have a good flame but no signal, after making sure to check the condition of the wire.</p> <p>Make sure pilot regulator is not plugged and replace if necessary.</p> <p>Check for voltage to the coil and replace if necessary.</p> <p>Turn main gas valves open and then bleed the gas line if necessary.</p>

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PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
<p><b>Red Fault Lights On (cont.)</b></p>	<p><u>Low Reactivation Temperature (cont.)</u></p> <p>No power from the RRC controller to the SC11B Maxitrol Selectra Signal Conditioner</p> <p>Power to the SC11B Maxitrol Selectra Signal Conditioner but none out</p>	<p>After call for DH unit will not have any power output for 60 seconds and then should have an output. If no output replace RRC card.</p> <p>Check to make sure the SC11B has 24 volt power supply between terminals 1 &amp; 2. If you have power and an inlet voltage to terminals 5 &amp; 6 but no output from 3 &amp; 4 you will need to replace the defective part.</p>
	<p><b>Green Lights Not On</b></p>	<p><u>Process Fan Light Not On</u></p> <p>Unit selector switch not in the Vent or DH position</p>
<p><u>Process Air Flow Light Not On</u></p> <p>Process Airflow switch is not closing</p> <p>Plugged or broken Airflow switch lines</p>		<p>Check to make sure the process fan is running, if not check to make sure the breaker for the fan is not tripped.</p> <p>If supply motor is running make sure the tubes attached to the airflow switch are in good condition, replace tubes or switch if necessary.</p>

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PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
Green Lights Not On (cont.)	<b><u>Reactivation Fan Light Not On</u></b>  Unit Not Calling for DH  High Limit Tripped	  Check to see if unit is calling for DH mode to run. Make sure the jumper plug is plugged in or the optional humidistat. Or selector switch is in the proper mode  Reset high limit switch
	<b><u>Reactivation Air Flow Light Not On</u></b>  Reactivation Airflow switch is not closing.	  Check to make sure the reactivation fan is running, if not check to make sure the breaker for the fan is not tripped.  If Reactivation motor is not running see (Reactivation Motor Not Running)  If reactivation motor is running make sure the tubes attached to the airflow switch are in good condition, replace tubes or switch if necessary.

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PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
<p><b>Amber Lights Not On</b></p>	<p><u>Power Light Not On</u></p> <p>Selector switch is in the off position</p> <p>Main Power Disconnect Switch in the off position</p>	<p>Move selector switch to the Auto or Manual position</p> <p>Move Disconnect switch to the ON position</p>
	<p><u>Call For Dehumidification Light Not On</u></p> <p>Selector switch is in the OFF position</p> <p>Unit Not Calling for DH</p>	<p>Move selector switch to the Vent or DH position</p> <p>Is the “Call for Dehumidification” relay energized, if not adjust humidity transmitter to a lower set point to make the unit call for Dehumidification.</p>