



Trouble Shooting Guide

PAA, 3-phase (D4977)

Trouble Shooting Guide

Problem	Possible Cause	Possible Remedy
Unit does not start	<p>No power to unit, breaker tripped</p> <p>Low voltage</p> <p>Refrigeration high pressure cut-out tripped</p> <p>Loose wire</p> <p>Defective contactor or coil</p> <p>Loss of refrigerant</p> <p>Compressor damaged</p>	<p>Verify supply power is on, close breaker after correcting fault</p> <p>Check electrical service to unit</p> <p>Will automatically reset after correcting fault</p> <p>Check wiring after disconnecting power</p> <p>Repair or replace contactor or coil</p> <p>Repair leak, recharge with type and amount of refrigerant specified on serial tag</p> <p>Replace compressor - Call Lytron Affinity</p>
Unit does not cool	<p>Compressor internal thermostat tripped</p> <p>Compressor damaged</p> <p>Room temperature exceeds 85EF, causing cooling capacity to be derated</p> <p>Evaporator damaged</p> <p>Microprocessor failure</p> <p>Cooling load exceeds capacity of unit</p> <p>Microprocessor programmed incorrectly</p> <p>Loss of refrigerant</p> <p>Refrigeration solenoid coil failure</p>	<p>Allow time for compressor to cool and automatically reset</p> <p>Replace compressor - Call Lytron Affinity</p> <p>Improve ventilation/air-conditioning to maintain room temperature < 85EF</p> <p>Call Lytron Affinity</p> <p>Replace microprocessor</p> <p>Reduce cooling load</p> <p>Call Lytron Affinity</p> <p>Locate and repair leak, recharge with type and amount of refrigerant specified on serial tag</p> <p>Replace solenoid coil</p>

Problem	Possible Cause	Possible Remedy
Unit does not cool	<p>Solid State Relay failure</p> <p>Solenoid valve stuck in closed position</p> <p>Defective refrigeration low pressure cut-out</p> <p>Dirty condenser fins</p> <p>Malfunctioning thermal expansion valve</p> <p>Pump damaged, loss of flow</p> <p>Hot gas bypass valve setting too high</p> <p>Hot gas bypass valve stuck open</p>	<p>Replace Solid State Relay</p> <p>Repair or replace solenoid valve</p> <p>Repair or replace low pressure cut-out</p> <p>Gently clean condenser fins</p> <p>Replace thermal expansion valve</p> <p>Replace pump</p> <p>Call Lytron Affinity</p> <p>Repair or replace valve</p>
Pump leaks	<p>Faulty pump casing</p> <p>Shaft seal damaged</p> <p>Pump housing O-Ring damaged</p> <p>Improper fluid</p>	<p>Replace pump assembly</p> <p>Replace shaft seal</p> <p>Remove pump and rebuild</p> <p>Call Lytron Affinity</p>
Excessive noise on Start-Up	<p>Low voltage</p> <p>Wrong voltage taps used on transformer</p> <p>Contact or coil failure</p>	<p>Check electrical service to unit</p> <p>Connect to proper taps</p> <p>Replace contact or coil</p>
Level light remains on	<p>Low coolant level</p> <p>Reservoir level switch float stuck</p> <p>Time delay relay malfunction (when used)</p> <p>Level switch failure</p>	<p>Check for leaks, then fill reservoir</p> <p>Clean reservoir and level switch</p> <p>Replace time delay relay</p> <p>Replace level switch</p>

Problem	Possible Cause	Possible Remedy
Level light does not work	Time delay relay (where used) Lamp burned out Level switch failure	Wait for time delay relay to time out Replace lamp Replace level switch
Pump motor overheats	Improper voltage supplied to unit	Correct voltage
Noisy compressor	Flooding of refrigerant into crankcase Worn compressor Refrigeration high pressure cut-out set too high Refrigeration low pressure cut-out set too low	Warm crankcase if unit has been off for a long period or has been left in a cool ambient for more than a few hours Replace compressor - Call Lytron Affinity Adjust setting Adjust setting
Fault light remains on	Low coolant flow No coolant flow Flow switch sticking Dirty condenser Air flow to condenser blocked Room temperature exceeds 85EF, causing cooling capacity to be derated	See Problem; Low coolant flow See Problem' No coolant flow Disassemble flow switch, clean and reinstall or replace Clean condenser Provide free space to allow air flow Improve ventilation/air-conditioning to maintain room temperature < 85EF
Low coolant flow	Pump suction strainer clogged Pump rotating backwards	Remove strainer, clean and reinstall or replace strainer Reverse one electrical phase

Problem	Possible Cause	Possible Remedy
Low coolant flow (continued)	<p>Flow control valve not fully open</p> <p>Low coolant level in reservoir</p> <p>Pressure relief valve set too low (unless not adjustable)</p> <p>Restriction in coolant lines external to chiller</p> <p>Frozen evaporator</p> <p>Flow switch clogged</p>	<p>Open flow control valve</p> <p>Fill reservoir to proper level</p> <p>Adjust pressure relief valve to specifications</p> <p>Eliminate restriction in coolant lines external to chiller</p> <p>Call Lytron Affinity</p> <p>Disassemble flow switch, clean and reinstall or replace</p>
No coolant flow	<p>Pump not primed</p> <p>Pump suction strainer clogged</p> <p>No coolant in reservoir</p> <p>Pump overload tripped</p> <p>Pump motor shaft bound to seal</p> <p>Pump housing torqued improperly</p> <p>Damaged pump</p> <p>Frozen evaporator</p> <p>Clogged line or closed valve in external piping</p> <p>Leak(s) in external piping</p>	<p>Prime pump</p> <p>Remove and clean strainer, then reinstall or replace</p> <p>Check for leaks, then fill reservoir</p> <p>Wait 5 minutes for overload to reset</p> <p>Replace pump or renew seal</p> <p>Remove pump, torque to specification, test, and reinstall</p> <p>Replace pump</p> <p>Call Lytron Affinity</p> <p>Check external piping for dirt or closed valve</p> <p>Check for leaks and repair if needed</p>
Too much recirculating pressure to process	<p>Flow control valve set too high</p> <p>Pressure relief valve set too high (unless not adjustable)</p>	<p>Throttle flow control valve</p> <p>Adjust pressure relief valve</p>

Problem	Possible Cause	Possible Remedy
Unit shuts down during operation	Refrigeration high pressure cut-out set too low Refrigeration low pressure cut-out set too high Excess refrigerant charge Dirty condenser Pump thermal overload set too low Pump overload tripped Low voltage	Adjust and reset refrigeration high pressure cut-out Adjust and reset refrigeration low pressure cut-out Remove excess refrigerant and charge with refrigerant to specifications on serial tag Gently clean condenser Adjust and reset pump thermal overload relay to specifications, or replace if faulty Determine cause of trip, if pump is damaged, repair or replace Check electrical service to unit
Compressor turns on and off automatically	Discharge pressure too high Condenser fan(s) not on Refrigeration high pressure cut-out set to automatic	Check condenser for restrictions Check motor(s) and wiring Check settings
Compressor does not run	Compressor internal thermostat tripped Motor burned out	Allow time for compressor to cool and automatically reset Replace - Call Lytron Affinity
Temperature display reads incorrectly	Loose wire Broken RTD Microprocessor failure	Disconnect power to unit, then check wiring Replace RTD Replace microprocessor

Problem	Possible Cause	Possible Remedy
Microprocessor does not work	5 second delay has not timed out Microprocessor programmed incorrectly Microprocessor failure	Wait at least 5 seconds after turning on Reprogram microprocessor - Call Lytron Affinity Replace microprocessor

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