



Trouble Shooting Guide

RAA, 3-phase
(D3628)



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>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 chiller</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 - Call Lydall</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 - Call Lydall</p> <p>Improve ventilation/air-conditioning to maintain room temperature < 85EF</p> <p>Call Lydall</p> <p>Replace microprocessor</p> <p>Reduce cooling load</p> <p>Call Lydall</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 (continued)	<p>Solid State Relay failure</p> <p>Solenoid valve stuck in closed position</p> <p>Defective refrigeration low pressure cut-out</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>Dirty condenser coils</p>	<p>Replace Solid State Relay</p> <p>Repair or replace solenoid valve</p> <p>Repair or replace low pressure cut-out</p> <p>Replace thermal expansion valve</p> <p>Replace pump</p> <p>Call Lydall</p> <p>Repair or replace valve</p> <p>Clean condenser coils</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 Lydall</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 contactor or coil</p>
Pump motor overheats	<p>Pump thermal overload protection set too high</p> <p>Improper voltage supplied</p>	<p>Reset pump thermal overload relay, replace if faulty</p> <p>Correct voltage</p>

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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 - Call Lydall Adjust setting Adjust setting
Level light remains on	Low coolant level Reservoir level switch float stuck Time delay relay malfunction (where used) Level switch failure	Check for leakage, fill reservoir Clean reservoir and level switch Replace time delay relay Replace level switch
Level light does not work	Time delay relay has not timed out (where used) Lamp burned out Level switch failure	Wait for time delay relay to time out Replace lamp Replace level switch
Chiller cools well below the desired Set-Point	Microprocessor programmed incorrectly Malfunctioning solenoid valve Solid State Relay failure Microprocessor failure	Reprogram microprocessor or call Lydall Repair or replace solenoid valve Replace Solid State Relay Replace microprocessor
Fault light remains on	Low coolant flow No coolant flow Flow switch sticking	See Problem; Low coolant flow See Problem; No coolant flow Disassemble flow switch, clean and reinstall or replace

Problem	Possible Cause	Possible Remedy
Low coolant flow	<p>Pump suction strainer clogged</p> <p>Flow control valve not fully open</p> <p>Pressure relief valve set too low (unless not adjustable)</p> <p>Low coolant level in reservoir</p> <p>Restriction in coolant lines external to chiller</p> <p>Frozen evaporator</p> <p>Flow switch clogged</p>	<p>Remove suction strainer, clean and reinstall or replace</p> <p>Open flow control valve</p> <p>Adjust pressure relief valve to specification</p> <p>Fill reservoir to proper level</p> <p>Eliminate restriction in coolant lines external to chiller</p> <p>Call Lydall</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 improperly torqued</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 pump suction strainer, then reinstall</p> <p>Check for leaks, then fill reservoir</p> <p>Wait 5 minutes for the overload to automatically rest</p> <p>Replace pump or renew seal</p> <p>Remove pump, torque to specification, test, and reinstall</p> <p>Replace pump</p> <p>Call Lydall</p> <p>Check external piping for dirt or closed valve</p> <p>Check for leaks and repair as necessary</p>

Problem	Possible Cause	Possible Remedy
Chiller shuts down during operation	Refrigeration high pressure cut-out set too low	Adjust and reset refrigeration high pressure cut-out
	Refrigeration low pressure cut-out set too high	Adjust and reset refrigeration low pressure cut-out
	Dirty condenser fins	Gently clean condenser fins
	Excess refrigerant charge	Remove excess refrigerant, then charge to specification on serial tag
	Pump thermal overload setting too low	Adjust and reset pump thermal overload relay to specification, replace if faulty
	Pump overload tripped	Determine cause of trip, if pump is damaged, repair or replace
	Low voltage	Check electrical service to chiller
Temperature display reads incorrectly	Loose wire	Check wiring after disconnecting power
	Broken RTD	Replace RTD
	Microprocessor failure	Replace microprocessor
Compressor turns on and off automatically	Discharge pressure too high	Check condenser for restrictions
	Condenser fan(s) not on	Check motor(s) and wiring
	Refrigeration high pressure set to automatic	Check settings
Compressor does not run	Compressor internal thermostat tripped	Allow time for compressor to automatically reset
	Motor burned out	Replace - Call Lydall
Too much recirculating pressure to process	Flow control valve set too high	Throttle flow control valve
	Pressure relief valve set too high (unless not adjustable)	Adjust pressure relief valve

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