



Trouble Shooting Guide

FAA, 1-phase,
(D3633)



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 correct power is applied, 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, then recharge with type and amount of refrigerant specified on serial tag</p> <p>Replace compressor - Call Lydall</p>
Unit does not cool	<p>Compressor internal thermostat tripped</p> <p>Compressor damaged</p> <p>Room temperature exceeds 85EF, causing the cooling capacity to be derated</p> <p>Evaporator damaged</p> <p>Microprocessor programmed incorrectly</p> <p>Microprocessor failure</p> <p>Cooling load exceeds capacity of unit</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 Lydall</p> <p>Improve ventilation/air-conditioning to maintain room temperature < 85EF</p> <p>Call Lydall</p> <p>Reprogram microprocessor - Call Lydall</p> <p>Replace microprocessor</p> <p>Reduce cooling load</p> <p>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)	Solid State Relay failure Solenoid valve stuck shut Defective refrigeration low pressure cut-out Malfunctioning thermal expansion valve Pump damaged, loss of flow Hot gas bypass valve setting too high Hot gas bypass valve stuck open Dirty condenser fins	Replace Solid State Relay Repair or replace solenoid valve Repair or replace low pressure cut-out Replace thermal expansion valve Replace pump Call Lydall Repair or replace valve Gently clean condenser fins
Pump leaks	Faulty pump casing Shaft seal damaged Pump housing O-Ring damaged Improper fluid	Replace pump assembly Replace shaft seal Remove pump and rebuild Call Lydall
Excessive noise on Start-Up	Low voltage Wrong voltage taps used on transformer Contactor or coil failure	Check electrical service to unit Connect to proper taps Replace contactor or coil
Pump motor overheats	Pump thermal overload protection set too high Improper voltage supplied	Reset pump thermal overload relay or replace if faulty Correct voltage
Noisy compressor	Flooding of refrigerant into crankcase	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

Problem	Possible Cause	Possible Remedy
Noisy compressor (continued)	Worn compressor Refrigeration high pressure cut-out set too high Refrigeration low pressure cut-out set too low	Replace compressor - Call Lydall Adjust setting Adjust setting
Level light remains on	Low coolant level Reservoir level switch float stuck Time delay relay malfunction (when used) Level switch failure	Check for leaks, then 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 (when used) Lamp burned out Level switch failure	Wait for time delay relay to time out Replace lamp Replace level switch
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
Low coolant flow	Pump suction strainer clogged Flow control valve not fully open Pressure relief valve set too low (unless not adjustable) Low coolant level in reservoir Restriction in coolant lines external to chiller	Remove strainer, clean, and reinstall or replace Fully open flow control valve Adjust pressure relief valve to specifications Fill reservoir to proper level Eliminate restrictions in coolant lines external to chiller

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Low coolant flow (continued)	Frozen evaporator Flow switch clogged	Call Lydall Disassemble flow switch, clean and reinstall or replace
No coolant flow	Pump not primed Pump suction strainer clogged No coolant in reservoir Pump overload tripped Pump motor shaft bound to seal Pump housing improperly torqued Damaged pump Frozen evaporator Clogged line or closed valve in external piping Leak(s) in external piping	Prime pump Remove and clean strainer, then reinstall Repair any leaks, then fill reservoir Wait 5 minutes for overload to reset Replace pump or renew seal Remove pump, torque to specifications, test, and reinstall Replace pump Call Lydall Check external piping for dirt or closed valve Check for leaks, repair as necessary
Chiller shuts down during operation	Refrigeration high pressure cut-out set too low Refrigeration low pressure cut-out set too high Dirty condenser fins Excess refrigerant charge Pump thermal overload setting too low	Adjust and reset high pressure cut-out Adjust and reset low pressure cut-out Gently clean condenser fins Remove excess charge, then charge with refrigerant to specifications on serial tag Adjust and reset pump thermal overload relay to specifications, or replace if faulty

Problem	Possible Cause	Possible Remedy
Chiller shuts down during operation	Pump overload tripped Low voltage	Determine reason for trip. If pump is damaged, repair or replace Check electrical service to chiller
Temperature display reads incorrectly	Loose wire Broken RTD Microprocessor failure	Disconnect power to unit, then check wiring Replace RTD Replace microprocessor
Too much recirculating pressure to process	Flow control valve set too high Pressure relief valve set too high (unless not adjustable)	Throttle flow control valve Adjust pressure relief valve
Compressor turns on and off automatically	Discharge pressure too high Condenser fan(s) not on Refrigeration high pressure cut-out set to automatic	Determine cause and correct Check motor(s) and wiring Check settings
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 Lydall Replace microprocessor
Chiller cools well below desired Set-Point	Microprocessor programmed incorrectly Malfunctioning solenoid valve Solid State Relay failure Microprocessor failure	Reprogram microprocessor - Call Lydall Repair or replace solenoid valve Replace Solid State Relay Replace microprocessor

Problem	Possible Cause	Possible Remedy
Compressor does not run	Compressor internal thermostat tripped	Allow time for compressor to cool and automatically reset
	Motor burned out	Replace - Call Lydall

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