



# Trouble Shooting Guide

FWA, 3-phase  
(D3635)



## Trouble Shooting Guide

Problem	Possible Cause	Possible Remedy
Unit does not start	No power to unit, breaker tripped	Verify correct power is applied, close breaker after correcting fault
	Low voltage	Check electrical service to unit
	Refrigeration high pressure cut-out tripped	Manually reset button on pressure switch after correcting fault
	Loose wire	Disconnect power, then check wiring
	Defective contactor or coil	Repair or replace contactor or coil
	Loss of refrigerant	Locate and repair leak, then recharge with type and amount of refrigerant specified on serial tag
	Compressor damaged	Replace compressor - Call Lydall
Unit does not cool	Compressor internal thermostat tripped	Allow time for compressor to cool and automatically reset
	Compressor damaged	Replace compressor - Call Lydall
	Evaporator damaged	Call Lydall
	Microprocessor failure	Replace microprocessor
	Facility Water control valve set too low	Reset Facility Water control valve - Call Lydall
	Microprocessor programmed incorrectly	Reprogram microprocessor - Call Lydall
	Insufficient flow of Facility Water	Increase flow of Facility Water
	Facility Water too warm	Provide cooler Facility Water
	Cooling load exceeds capacity of unit	Reduce cooling load
Refrigeration solenoid coil failure	Replace solenoid coil	

<b>Problem</b>	<b>Possible Cause</b>	<b>Possible Remedy</b>
Unit does not cool (continued)	<p>Loss of refrigerant</p> <p>Solid State Relay failure</p> <p>Solenoid valve stuck shut</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>Locate and repair leak, then recharge with type and amount of refrigerant specified on serial tag</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>
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 overload protection set too high</p> <p>Improper voltage supplied</p>	<p>Reset pump thermal overload relay, or replace if faulty</p> <p>Correct voltage</p>

<b>Problem</b>	<b>Possible Cause</b>	<b>Possible Remedy</b>
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 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
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
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
Low coolant flow	Pump suction strainer clogged  Pump rotating backwards  Flow control valve not fully open	Remove strainer, clean and reinstall or replace  Reverse one electrical phase  Open flow control valve

<b>Problem</b>	<b>Possible Cause</b>	<b>Possible Remedy</b>
Low coolant flow (continued)	Pressure relief valve set too low (unless not adjustable)	Adjust pressure relief valve to specification
	Low coolant level in reservoir	Fill reservoir to proper level
	Restriction in coolant lines external to chiller	Eliminate restrictions in coolant lines external to chiller
	Frozen evaporator	Call Lydall
	Flow switch clogged	Disassemble flow switch, clean and reinstall, or replace
No coolant flow	Pump not primed	Prime pump
	Pump suction strainer clogged	Remove and clean strainer, then reinstall
	No coolant in reservoir	Repair any leaks, then fill reservoir
	Pump overload tripped	Wait 5 minutes for overload to reset
	Pump motor shaft bound to seal	Replace pump or renew seal
	Pump housing improperly torqued	Remove pump, torque to specifications, test, and reinstall
	Damaged pump	Replace pump
	Frozen evaporator	Call Lydall
	Clogged line or closed valve in external piping	Check external piping for dirt or closed valve
	Leak(s) in external piping	Repair leaks as needed
Chiller cools well below the desired Set-Point	Microprocessor programmed incorrectly	Reprogram microprocessor - Call Lydall
	Malfunctioning solenoid valve	Repair or replace solenoid valve
	Solid State Relay failure	Replace Solid State Relay
	Microprocessor failure	Replace microprocessor

<b>Problem</b>	<b>Possible Cause</b>	<b>Possible Remedy</b>
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
	Water modulating valve set too high	Adjust water modulating valve
	Excess refrigerant charge	Remove excess refrigerant, then charge to specifications on serial tag
	Pump overload setting too low	Adjust and reset pump thermal overload relay to specifications, or replace if faulty
	Pump overload tripped	Determine cause, if pump is damaged, repair or replace
	Low voltage	Check electrical service to chiller
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
Compressor does not run	Compressor internal thermostat tripped	Allow time for compressor to cool and automatically reset
	Motor burned out	Replace - Call Lydall
Compressor turns on and off automatically	Discharge pressure too high	Check Facility Water for blockage
	Condenser fan(s) not on	Check motor(s) and wiring
	Refrigeration high pressure cut-out set to automatic	Check settings
Temperature display reads incorrectly	Loose wire	Disconnect power to unit, then check wiring
	Broken RTD	Replace RTD
	Microprocessor failure	Replace microprocessor

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