C-Series Liquid Chillers
Troubleshooting Guide

ISSUE	POSSIBLE CAUSE	SUGGESTED REMEDY
UNIT WILL NOT START	1. Main circuit breaker tripped	1. Reset breaker
	2. Main disconnect—blown fuse	2. Check and replace fuse
	3. Power lines loose at terminal or broken wire	3. Replace or repair wiring
COMPRESSOR WILL NOT START	1. Compressor fuses blown	1. Replace fuses
	2. Faulty wiring	2. Check for loose connection or broken wire
	3. Control not set in accordance with chart	3. See charts on pages 26
	4. On-Off switch defective	4. Replace
	5. Defective temperature control	5. Replace control
	6. Defective suction-discharge control	6. Replace control
	7. Defective freeze-up protection control	7. Replace control
	8. Defective oil pressure control	8. Replace control
	9. Compressor external overload protector defective	9. Replace overload
	10. Defective internal overload protector or sensor	10. Replace compressor
	11. Defective control module on compressor (solid state protection model compressors only)	11. Replace module
	12. (Optional) High temperature lock-out control tripped	12. Reset control
	13. Grounded compressor	13. Replace compressor
	SINGLE PHASE COMPRESSORS	
	14. Defective capacitor relay	14. Replace relay
	15. Defective start or run capacitor	15. Replace capacitor
SYSTEM OR BY-PASS PUMP WILL NOT START	1. Faulty wiring	1. Check for loose or broken wires
	2. Defective contactor	2. Replace contactor
	3. Pump fuses blown	3. Replace fuses
	4. Defective On-Off switch	4. Replace switch
	5. Defective motor internal overload	5. Replace motor
	6. Mechanical shaft seizure	6. Replace pump assembly
	SINGLE PHASE MOTORS	
	7. Defective motor capacitor	7. Replace capacitor
FAN WILL NOT START	1. Faulty wiring	1. Check for loose or broken wires
	2. Defective contactor	2. Replace contactor
	3. Fan fuse blown	3. Replace fuses
	4. Defective motor internal overload	4. Replace motor
	5. Mechanical shaft or bearing seizure	5. Replace or repair shaft or bearings
	6. Loose or broken fan belt	6. Tighten or replace belt
	HEAD PRESSURE CONTROL MODELS	
	7. Defective pressure staging switch	7. Replace switch

ISSUE	POSSIBLE CAUSE	SUGGESTED REMEDY
COMPRESSOR GOES OFF ON HIGH PRESSURE DURING NORMAL EQUIPMENT OPERATION	**AIR COOLED**	
	1. Dirty condenser	1. Clean
	2. Fan motor fuses blow	2. Replaces fuse
	3. Fan motor fails	3. Replace motor
	4. Fan motor belt failure	4. Replace belt
	5. Fan shaft or bearing seizure	5. Replace or repair shaft or bearing
	6. Exhaust duct clogged	6. Remove and clean
	7. Filter dryer clogged	7. Replace dryer
	8. Restriction in refrigerant lines	8. Find restriction and correct
	9. Air intake to condenser restricted	9. Remove restriction
	10. Control setting too low	10. Set in accordance with chart on page 26
	WATER COOLED	
	11. Shortage of coolant to condenser	11. Increase feed
	12. Defective water regulating valve	12. Replace valve
COMPRESSOR GOES OFF ON LOW SUCTION CONTROL	1. Control settings incorrect	1. Set in accordance with charts on page 26
	2. Pump failure	2. See “Pump Will Not Start” section
	3. Low on refrigerant	3. Check for leaks, repair and recharge
	4. Low on coolant solution	4. Add additional solution
	5. Coolant filter screens on equipment being cooled clogged	5. Remove, clean, and reinstall screens
	6. Restriction in refrigerant lines	6. Find restriction and correct
COMPRESSOR GOES OFF ON OIL PRESSURE	1. Low on oil	1. Check level and add oil
	2. Oil restrainer clogged	2. Remove, clean and reinstall
	3. Oil pump defective	3. Replace oil pump
	4. Defective oil pressure control	4. Replace oil pressure control
	5. Faulty wiring to resistors in oil pressure control	5. Trace wiring in accordance with electrical schematic
	6. Erratic expansion valve	6. Check for dirt on seat of valve, clean and reinstall, replace if defective
COMPRESSOR GOES OFF ON FREEZE-UP PROTECTION	1. Control setting wrong	1. Set in accordance with charts on page 26
	2. Pump failure	2. See “Pump Will Not Start” section
	3. Low on refrigerant	3. Check for leak, repair, and recharge
	4. Low on coolant solution	4. Add additional solution
	5. Coolant filter screens on equipment being cooled clogged	5. Remove, clean and reinstall
	6. Restriction on refrigerant lines	6. Find restriction and correct
	7. Faulty wiring to resistors on oil pressure control	7. Trace wiring in accordance with electrical schematic
COMPRESSOR RUNS CONTINUOUSLY REGARDLESS OF LOADING CONDITIONS	1. Low on refrigerant charge	1. Check for leaks, repair and recharge
	2. Defective low pressure control	2. Replace control
	3. Defective solenoid valve (Will not pump down)	3. Replace valve
	4. Leaky compressor valves	4. Replace valve plates

ISSUE	POSSIBLE CAUSE	SUGGESTED REMEDY
COMPRESSOR SHORT CYCLES	1. Low on refrigerant	1. Check for leaks, repair and recharge
	2. Liquid line solenoid valve not holding (Model CC-20 Ton and up)	2. Remove, inspect for particles on seat, clean and reinstall, replace if defective
	3. Discharge valve leaking on compressor	3. Replace valve plates
	4. Compressor has ruptured internal safety relief valve	4. Replace valve
	5. Cut-in and cut-out on suction pressure control set too close	5. Set in accordance with charts on page 26