



Troubleshooting Guide for Straight Cool & Heat Pumps

Possible Cause Indicate "Possible Cause"	Complaint												Test Method/ Remedy								
	No Heating or Cooling										No Cooling	No Heating									
	SYSTEM WILL NOT START	COMPRESSOR WILL NOT START - FANS RUN	COMPRESSOR AND OUTDOOR FAN WILL NOT START	INDOOR FAN WILL NOT START	OUTDOOR FAN WILL NOT START	COMPRESSOR HUMS - WILL NOT START	COMPRESSOR CYCLES ON OVERLOAD	COMPRESSOR IS NOISY	HIGH HEAD PRESSURE	LOW HEAD PRESSURE	HIGH SUCTION PRESSURE	LOW SUCTION PRESSURE		SYSTEM RUNS CONTINUOUSLY - LITTLE COOLING	TOO COOL AND THEN TOO WARM	NOT COOL ENOUGH ON WARM DAYS	COMPRESSOR RUNS CONTINUOUSLY - LITTLE HEAT	SYSTEM RUNS - BLOWS COLD AIR	UNIT DEFROSTS - NO FROST ON COIL	UNIT WILL NOT TERMINATE DEFROST	UNIT WILL NOT DEFROST
POWER FAILURE	●																				TEST VOLTAGE
BLOWN FUSE	●																				INSPECT FUSE TYPE & SIZE
LOOSE CONNECTIONS						●															INSPECT CONNECTIONS - TIGHTEN
SHORTED OR BROKEN WIRES	●	●	●	●	●	●															TEST CIRCUITS WITH OHM METER
OPEN OVERLOAD		●																			TEST CONTINUITY OF OVERLOAD
FAULTY THERMOSTAT	●		●	●									●								TEST CONTINUITY OF THERMOSTAT AND WIRING
FAULTY TRANSFORMER	●																				CHECK CONTROL CIRCUIT WITH VOLTMETER
SHORTED OR OPEN CAPACITOR		●		●	●	●															TEST CAPACITOR
SHORTED OR GROUNDED COMPRESSOR		●																			TEST MOTOR WINDINGS
FAULTY COMPRESSOR CONTACTOR		●	●			●	●														TEST CONTINUITY OF COIL AND CONTACTS
FAULTY FAN RELAY				●																	TEST CONTINUITY OF COIL AND CONTACTS
LOW VOLTAGE						●	●														TEST VOLTAGE
SHORTED OR GROUNDED FAN MOTOR				●	●																TEST MOTOR WINDINGS
UNBALANCED POWER - 30																					TEST VOLTAGE
HIGH-PRESSURE CONTROL OPEN																					RESET AND TEST CONTROL
FAULTY REVERSING RELAY			●														●				TEST CONTINUITY OF COIL AND CONTACTS
FAULTY DEFROST RELAY					●													●	●		TEST CONTINUITY OF COIL AND CONTACTS
FAULTY REVERSING VALVE										●								●	●	●	TEST OPERATION OF VALVE
COMPRESSOR STUCK		●				●															USE TEST CORD
IMPROPER COOLING ANTICIPATOR						●	●						●								CHECK RESISTANCE OF ANTICIPATOR
WRONG TYPE I.D. COIL EXPANSION VALVE																					REPLACE VALVE
EXPANSION VALVE RESTRICTED																					REPLACE VALVE
UNDERSIZED EXANSION VALVE																					REPLACE VALVE
OVERSIZED EXPANSION VALVE																					REPLACE VALVE
INOPERATIVE EXPANSION VALVE																					CHECK VALVE OPERATION
EXPANSION VALVE BULB LOOSE																					TIGHTEN BULB
SHORTAGE OF REFRIGERANT							●			●		●	●			●				●	TEST FOR LEAKS - ADD REFRIGERANT
RESTRICTED LIQUID LINE							●					●	●			●					REPLACE RESTRICTED PART
DIRTY AIR FILTER									●			●	●		●	●					CLEAN OR REPLACE
DIRTY I.D. COIL									●			●	●		●	●					CLEAN COIL
NOT ENOUGH AIR ACROSS I.D. COIL									●			●	●		●	●					SPEED BLOWER, CHECK DUCT STATIC PRESSURE
OVERCHARGE OF REFRIGERANT								●			●										RELEASE PART OF CHARGE
DIRTY OUTDOOR COIL									●			●			●					●	CLEAN COIL
NONCONDENSIBLES									●			●			●						REMOVE CHARGE, EVACUATE, RECHARGE
RECIRCULATION OF CONDENSING AIR									●			●			●						REMOVE OBSTRUCTION TO AIRFLOW
LOOSE HOLD-DOWN BOLTS									●												TIGHTEN BOLTS
BROKEN INTERNAL PARTS									●												REPLACE COMPRESSOR
INEFFICIENT COMPRESSOR										●		●				●					TEST COMPRESSOR EFFICIENCY
LEAKING CHECK VALVE								●			●										REPLACE VALVE
IMPROPERLY LOCATED THERMOSTAT													●								RELOCATE THERMOSTAT
AIRFLOW UNBALANCED													●								REPOSITION AIR VOLUME DAMPERS
UNDERSIZED LIQUID LINE																					REPLACE LINE
UNDERSIZED SUCTION LINE																					REPLACE LINE
FROSTED O.D. COIL																	●				CHECK DEFROST CONTROLS
FAULTY DEFROST TIMER																			●		TEST TIMER OPERATION
FAULTY 30%/60° CONTROL																			●	●	TEST CONTROL
ADDITIONAL AUX. ELEC. HEAT REQ.																				●	REFIGURE HEATING LOAD - ADD HEATERS
BLOWN FUSES IN AUX. HEATER CIRCUIT																				●	INSPECT FUSES - CHANGE
O.D. THERMOSTAT SETTING TOO LOW																				●	RAISE SETTING