REFRIGERATION TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSES	POSSIBLE CORRECTIVE STEPS
Compressor will not run	1. Main switch open. 2. Fuse blown. 3. Thermal overloads tripped. 4. Defective contactor or coil. 5. System shut down by safety devices. 6. No cooling required. 7. Liquid line solenoid will not open. 8. Motor electrical trouble. 9. Loose wiring. 10. Phase loss monitor inoperative.	1. Close switch. 2. Check electrical circuits and motor winding for shorts or grounds. Investigate for possible overloading. Replace fuse after fault is corrected. 3. Overloads are automatically reset. Check unit closely when unit comes back on line. 4. Repair or replace. 5. Determine type and cause of shutdown and correct it before resetting safety switch. 6. None. Wait until calls for cooling. 7. Repair or replace coil. 8. Check motor for open windings, short circuit or burn out. 9. Check all wire junctions. Tighten all terminal screws. 10. Refer to page 18.
Compressor noisy or vibrating	1. Flooding of refrigerant into crankcase. 2. Improper piping support on suction or liquid line. 3. Worn compressor. 4. Scroll compressor rotation reversed.	1. Check setting of expansion valves. 2. Relocate, add or remove hangers. 3. Replace. 4. Rewire for phase change.
High discharge pressure	1. Non-condensables in system. 2. System overcharges with refrigerant. 3. Discharge shutoff valve partially closed. 4. Fan not running. 5. Head pressure control setting. 6. Dirty condenser coil.	1. Remove the non-condensables. 2. Remove excess. 3. Open valve. 4. Check electrical circuit. 5. Adjust. 6. Clean.
Low discharge pressure	1. Faulty condenser temperature regulation. 2. Suction shutoff valve partially closed. 3. Insufficient refrigerant in system. 4. Low suction pressure. 5. Variable head pressure valve.	1. Check condenser control operation. 2. Open valve. 3. Check for leaks. Repair and add charge. 4. See corrective steps for low suction pressure. 5. Check valve setting.
High suction pressure	1. Excessive load. 2. Expansion valve overfeeding.	1. Reduce load or add additional equipment. 2. Check remote bulb. Regulate superheat.
Low suction pressure	1. Lack of refrigerant. 2. Evaporator dirty or iced. 3. Clogged liquid line filter drier. 4. Clogged suction line or compressor suction gas strainers. 5. Expansion valve malfunctioning. 6. Condensing temperature too low. 7. Improper TXV.	1. Check for leaks. Repair and add charge. 2. Clean. 3. Replace cartridge(s). 4. Clean strainers. 5. Check and reset for proper superheat. 6. Check means for regulating condensing temperature. 7. Check for proper sizing.
Little or no oil pressure	1. Clogged suction oil strainer. 2. Excessive liquid in crankcase. 3. Low oil pressure safety switch defective. 4. Worn oil pump. 5. Oil pump reversing gear stuck in wrong position. 6. Worn bearings. 7. Low oil level. 8. Loose fitting on oil lines. 9. Pump housing gasket leaks.	1. Clean. 2. Check crankcase heater. Reset expansion valve for higher superheat. Check liquid line solenoid valve operation. 3. Replace. 4. Replace. 5. Reverse direction of compressor rotation. 6. Replace compressor. 7. Add oil and/or through defrost. 8. Check and tighten system. 9. Replace gasket.
Compressor loses oil	1. Lack of refrigerant. 2. Excessive compression ring blowby. 3. Refrigerant flood back. 4. Improper piping or traps.	1. Check for leaks and repair. Add refrigerant. 2. Replace compressor. 3. Maintain proper superheat at compressor. 4. Correct piping.
Compressor thermal protector switch open.	1. Operating beyond design conditions. 2. Discharge valve partially shut. 3. Blown valve plate gasket. 4. Dirty condenser coil. 5. Overcharged system.	1. Add facilities so that conditions are within allowable limits. 2. Open valve. 3. Replace gasket. 4. Clean coil. 5. Reduce charge.

Refer to manufacturer's instructions and local codes.