RECIPROCATING AIR CONDITIONING AND REFRIGERATION LOG

Think Ahead™

CENTRAL INSURANCE

EXCELLENCE IS OUR POLICY.™

MANUFACTURER	NUMBER	SIZE	LOCATION
		UNDER 25 HP	

The following checklist is designed to alert owners, operators and service technicians of air conditioning equipment to particular areas requiring attention prior to seasonal start up.

PRE-SEASON MAINTENANCE AND START-UP LOG

MOTORS – OPEN/HERMETIC

- ☐ Take insulation resistance readings of motor windings. If the readings indicate less than one megohm resistance, do not start the motor. Check for the cause of low resistance. NOTE: Hermetic Motor Readings less than 30 megohms may indicate moisture in the system or refrigerant in the motor/compressor.
- ☐ Check air ventilation openings on open-type motors for obstruction.
- ☐ Check bearings on open-type motors for adequate and proper lubrication.

FANS

- ☐ Check for broken, cracked, bent or loose blades and hubs.
- ☐ Check fan, shaft, and bearings.
- ☐ Check belt tension and condition.

REFRIGERANT CIRCUIT

- ☐ Be sure that liquid line is equipped with a moisture indicator.
- ☐ If moisture is indicated, dehydrate the system. Determine and correct source of moisture.

MOTORS CONTROLS

- ☐ Inspect starter contacts for deterioration, pitting, corrosion, etc.
- ☐ Check terminal connections for tightness.
- ☐ Examine overload protection for adequate size and defects.
- ☐ Determine that timing devices have correct operating sequence.
- ☐ Check mechanical linkage for binding and looseness.

OPERATING AND SAFETY CONTROLS

- ☐ Test thermostatic controls by immersing in bucket of ice water.
- ☐ Test oil-pressure-differential switches and high-pressure cut out mechanically and electrically.
- ☐ Examine flow switch by removing and checking for corrosion and proper linkage operation.
- ☐ Determine that all controls are properly calibrated and in good working condition. Thermostatic expansion valve checked for proper superheat.

PUMPS

- ☐ Check condition of bearings, packing shaft coupling, and seals

AIR/SHELL AND TUBE/EVAPORATIVE

CONDENSER

- ☐ Clean heat transfer surfaces with solution marketed for their specific use and type.
- ☐ Cooling towers: Baffles should be tight, sound, and clean. The sump, spray nozzles and overflow drain should be clean. The makeup water valve should be checked for proper operation.

COMPRESSORS

- ☐ Crankcase heaters energized 24 hours before start up.
- ☐ Crankcase oil at normal level in sight glass.
- ☐ Lubricating oil tested for acidity and color.
- ☐ Examine valves for signs of wear, cracking, and fatigue.

NAME OF SERVICE COMPANY AND TELEPHONE NUMBER	NAME OF SERVICE TECHNICIAN	DATE SERVICED

OPERATING CHARACTERISTICS

Normal operating conditions include certain levels of noise, vibration, temperature, and pressure. These levels may vary within certain limits depending on the season of the year or the heat load applied to the system. Any change in the normal operating characteristics is a warning of trouble. Your service concern should be notified. A reliable service concern should regularly check all parts of the system to minimize the possibility of breakdown.

LOG THIS INFORMATION WEEKLY

DESCRIPTION OF NORMAL OPERATING CONDITIONS		NORMAL OPERATING STANDARDS		1	2	3	4	5
MOISTURE INDICATOR SIGHT GLASS	This device should be observed to determine any change in the indicator chemical color or the presence of gas bubbles in the liquid refrigerant. In either case your service technician should be consulted.	COLOR						
OIL SIGHT GLASS	Observe this glass to establish that sufficient oil is in the compressor crankcase. Oil leakage should not be tolerated. Any change in the normal oil level should be investigated immediately by your service technician.	LEVEL						
TEMPERATURE	In-operation temperature levels for the compressor suction and discharge should be established and recorded. Any unusual change in these temperatures should be called to the attention of your service technician.	DISCHARGE TEMP.	SUCTION TEMP.					
PRESSURE	The operating pressure levels should be established and recorded. Any unusual change in these pressures should be called to the attention of your service technician.	DISCHARGE PRESSURE	SUCTION PRESSURE					
FILTERS	Regular cleaning of the air filters serving the evaporator and the air-cooled condenser is important to the successful operation of your unit. If a water cooled condenser is used, the water side must be kept clean.	**EVAPORATOR FILTER**						
		CONDENSER FILTER						

AUTH.

NAME OF EMPLOYEE RESPONSIBLE FOR LOG UPDATE	LOG REVIEWED BY (Give Name)	DATE REVIEWED