RECOMMENDED MAINTENANCE PROGRAM

In order to obtain maximum compressor unit performance and ensure reliable operation, a regular maintenance program should be followed.

The compressor unit should be checked daily for leaks, abnormal vibration, noise, and proper operation. A log should also be maintained. Initial Oil analysis and Vibration analysis should be done at start-up and continued as recommended by the Maintenance Schedule.

VIBRATION ANALYSIS

Periodic vibration analysis can be useful in detecting bearing wear and other mechanical failures. If vibration analysis is used as a part of your preventive maintenance program, take the following guidelines into consideration.

1. Always take vibration readings from exactly the same places and at exactly the same percentage of load.
2. Use vibration readings taken from the new unit at start-up as the base line reference.
3. Evaluate vibration readings carefully as the instrument range and function used can vary. Findings can be easily misinterpreted.
4. Vibration readings can be influenced by other equipment operating in the vicinity or connected to the same piping as the unit.

OIL QUALITY and ANALYSIS

High quality refrigeration oil is necessary to ensure compressor longevity and reliability. Oil quality will rapidly deteriorate in refrigeration systems containing moisture and air or other contaminants. In order to ensure the quality of the refrigeration oil in the compressor unit.

WARNING! DO NOT MIX OILS of different brands, manufactures, or types. Mixing of oils may cause excessive gas or oil leakage and catastrophic compressor failure.
NOTE: The Frick oil charge shipped with the unit is the best suited lubricant for the conditions specified at the time of purchase. If there is any doubt due to the refrigerant, operating pressures, or temperatures, refer to Frick Oil publication 160-802 SPC for guidance.

1. Only use Frick oil filter elements or warranty claim may be denied.
2. Participate in a regular, periodic oil analysis program to maintain oil and system integrity. Oil Analysis Kit part number: 333Q0001853.
3. Oil samples for analysis should be taken after the oil filter. A 1/4” purge valve is provided in the oil filter canister head.

OPERATING LOG

The use of an operating log as included in this manual (see Table of Contents) permits thorough analysis of the operation of a refrigeration system by those responsible for its maintenance and servicing. Continual recording of gauge pressures, temperatures, and other pertinent information, enables the observer and serviceman to be constantly familiar with the operation of the system and to recognize immediately any deviations from normal operating conditions. It is recommended that readings be taken at least every four hours.

MAINTENANCE SCHEDULE

This schedule should be followed to ensure trouble-free operation of the compressor unit.

MAINTENANCE	FREQUENCY OR HOURS OF OPERATION (MAXIMUM)																					
	200	1000	5000	8000	10,000	15,000	20,000	25,000	30,000	35,000	40,000	45,000	50,000	55,000	60,000	65,000	70,000	75,000	80,000	85,000	90,000	95,000
Change Oil	As Directed By Oil Analysis																					
Oil Analysis		■	Every 6 Months																			
Replace Filters	■		■		■		■		■		■		■		■		■		■		■	
Clean Oil Strainers	■		■		■		■		■		■		■		■		■		■		■	
Clean Liquid Strainers	■		■		■		■		■		■		■		■		■		■		■	
Replace Coalescers									■						■						■	
Check and Clean Suction Strainer	■		■		■		■		■		■		■		■		■		■		■	
Check Coupling (a)	■	Annually Regardless of Operating Hours																				
Suction & Disch Flange Bolts (d)	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
VFD Units Check Skip Freq. (f)	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Check Electrical Connections (b)	■		■		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Check Sensor Calibration (c)	■	■	■		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Vibration Analysis (e)	■	Every 6 Months, More Frequently If Levels Increase																				
Replace Shaft Seal	When Leak Rate Exceeds 7 - 8 Drops Per Minute																					

a. Check bolts, shim packs, center inserts, keys, and all bolt torques.
b. Check and torque all terminals in the processor and starter panel per the specification posted in the enclosure.
c. Check calibration of Slide Valve, Slide Stop, pressures and temperatures.
d. Verify tightness of bolts on suction and discharge flanges. See table below for torque requirements.
e. Vibration measurement must be carried out continuously to obtain optimum preventative control on bearings. If not continuously controlled, then every 6 months, more frequently if levels increase.
f. Units with varible speed drives - check for excess vibration and skip frequencies anytime unit operating conditions change.