

Turboexpanders With Oil Bearings

FX-TURBO Wellness Checklist



- Machine Skid:**
KEEP IT CLEAN! A clean machine skid allows you to locate leaks. Pressure-wash the equipment annually and fix leaks promptly.

- Expander Inlet/Outlet:**
Check and record the pressures/temperatures of the expander inlet/outlet to ensure the unit is operating within the specified process conditions.

- Compressor Suction/Discharge:**
Check and record the pressures/temperatures of the compressor suction/discharge to ensure the unit is operating within the specified process conditions.

- Accumulator Charge:**
Check the accumulator charge pressure.

- Lube Oil:**
Inspect the lube oil. If oil is questionable upon visual inspection, send an oil sample for analysis. If required, change the oil.

- Valves:**
Verify all valves are in the correct open or closed position.

- Duplex Lube Oil Filter:**
If there is an alarm, simply switch to the other oil filter in the assembly. Later inspect and replace oil filter elements as needed.

- Seal Gas Filter:**
Open, inspect, and replace the seal gas filter elements as needed.

- Fan & Pump Motor Bearings:**
Grease the motor bearings per sub-vendor instructions.

- Instrumentation:**
Verify the proper operation of temperature and pressure instruments.

- Alarm:**
Refer to the instruction manual to verify the operation of the alarm and shutdown logic.

- Batteries:**
Check the original install date of the battery. Perform replacements of HMI batteries every four years and Allen Bradley Legacy PLC (SLC500) batteries every two years. Always record the date of the battery change.

- Variable Nozzle Actuator:**
Check the variable nozzle actuator for air supply pressure, air operating pressure and spring pre-load. NOTE: Shut down the machine prior to checking.

- Expander Shutdown Valve:**
Check operation of the expander shutdown valve. NOTE: Schedule and perform this check during a plant outage/turnaround. Operating this valve while the turboexpander is in operation will cause the machine to shut down.