Periodic Inspection Report

Model #: _____ **Serial #**: _____

Inspected by: _____ **Date**: _____

NOTICE: This is a general overview of the minimum items that may need to be inspected on your LEWCO Industrial Oven. The actual list may vary depending on the specific equipment provided. Reference owner's manual and component literature for further detail.

WARNING: Do not attempt any maintenance on this equipment unless all sources of energy are disconnected and locked out by properly trained personnel. Additionally, before performing work on fan(s), wheel must be secure.

Maintenance Item	Frequency			
	Daily	Monthly	6 Months	Annual
Inspect the oven workspace, and if applicable, the fan(s), ductwork, and vent stack for accumulation of foreign matter. Clean as required.	■			
Inspect oven door(s) for gasket wear and tear. Replace as needed.	■			
Inspect electrical connections and components periodically for tightness and signs of wear		■		
Explosion venting latches on doors and panels must be inspected monthly to confirm adequate lubrication and freedom of movement.		■		
Oil the pivot joint and apply grease to the latch spring and cam on the door(s).		■		
Inspect circulating and exhaust fan(s). Tighten set-screws between bearings and shaft, and also wheel set-screws on all circulating and exhaust fans.		■		
Check for belt tension and wear on belt driven fans. Replace belt as needed.		■		
Lubricate fan(s) shaft bearings every 500 hours of operation. As standard, no special heat resistant grease is required.		■		
Motors should be lubricated at least every 5,500 hours of service.			■	
Confirm operation of airflow pressure switches.			■	
Confirm exhaust rate at the stack outlet with the oven nameplate or drawing attached hereto. Inspect exhaust stack for cleanliness and integrity.			■	
Measure full load amperage on each heater leg and compare to the schematic				■
Conduct operator training course or refresher course				■
All safety interlocks should be tested for proper function. Refer to schematics.				■
Calibrate all thermocouples / RTD's				■

Equipment Overview:

1. Batch Oven was originally designed for (describe process, batch time, temperature range, & materials being heated):

_____

_____

_____

As each item is completed, mark your initials or mark N/A in the space provided. If a maintenance item needs to be completed, address the issue and detail a maintenance log, then initial.

Inspection Items:

_____ Reference the above "Equipment Overview." No changes have been made in the ovens original purpose, including batch time, temperature range, and materials being heated.

- If changes have been made, describe: _____

  _____

  _____

_____ All electrical connections and wiring are secure, and no wires are exposed in a manner that may be hazardous

_____ Contactors, relays, motor starters and other components with contacts have been inspected for wear or sticking.

_____ All fuses have been inspected and replaced as necessary.

_____ Oven workspace is clean and free of foreign matter, including:

_____ Heating Elements

_____ Air Inlets/ Exhaust Vent

_____ Ductwork

_____ Temperature Controller and Limit Controller thermocouple(s) have been inspected for damage and are in open air, unobstructed, with nothing touching them.

_____ Exhaust vent from oven is unobstructed and free of debris

____ Fresh air ductwork and/or filters have been inspected and cleaned as necessary

_____ Controls enclosure and components (interior and exterior) are clean and free of foreign matter

_____ Painted surfaces have been touched up to prevent rusting

_____ Roof of oven is clean and nothing is sitting on top of the unit

_____ Doors are free to move and not obstructed.

_____ Doors close properly and seal tight against oven face.

_____ Door gaskets are not catching, dragging, or torn.

_____ Circulating fan motor(s) have been lubricated

_____ Bearings on circulating fan shafts have been lubricated.

_____ Set screws between bearings and shaft is tight on all fans, as well as fan wheels.

_____ Fan blades are clean and free of build-up from residue.

_____ Fan belts are in good condition and have been inspected for tension.

ELECTRIC BATCH OVENS

_____ Inspect heating elements for damage

_____ Verify electrical connections to heating elements are tight

_____ Check that temperature controller does not cycle separate (back-up) contactors.

_____ Shut down oven and make sure main contactors (or SCR power controller) and separate contactors all open.

_____ Confirm door switch(s) operation (note: does not turn off fan)

_____ Inspect explosion relief devices

For the following, apply power to the Oven

_____ Confirm supply voltage & amperage are consistent with oven nameplate and electrical schematics

Supply voltage - measure between all three (3) phases: _____/ _____/ _____

Amperage (with everything running) - measure all incoming lines: _____/ _____/ _____

_____ Verify all circulating fans are rotating in the proper direction, as indicated with arrow on fan housing.

_____ Verify electrical disconnect switch works properly (turn everything off prior to disconnecting)

_____ Verify emergency stop buttons work properly, including that they release to disengage emergency stop.

_____ Verify each heater leg is within 10% of the FLA listed on the oven schematic.

TEMPERATURE CONTROLS

_____ Heat the oven to operating temperature and check Temperature Controller calibration.

_____ Calibrate all thermocouples/ RTD's

_____ Disconnect one side of thermocouple connection to confirm upscale break protection is operating on main temperature controller and excess temperature limit interlock.

_____ Verify functionality of Limit Controller by setting the Temperature Controller set-point above Limit Controller set-point. Make sure excess temperature limit interlock shuts down heat by opening main contactor (or SCR power controller) and separate contactors on electric ovens.

_____ Limit Controller does not exceed a set-point higher than 20°F of max temperature.

_____ Limit Controller exceeds Temperature Controller by a minimum of 20°F.

LOCATION

_____ No changes in the oven location have created a hazardous condition such as external heat, vibration, mechanical hazard or corrosive environment.

_____ No changes in the oven location have created a hazardous condition such as external heat, vibration, mechanical hazard or corrosive environment.

_____ Nothing is directly touching the oven that could melt or cause fire.

_____ The oven has a minimum airspace of 4” is around it for neighboring structures or equipment.

_____ Portable fire extinguishers are located near the oven and have been inspected.

TRAINING

_____ Operators, maintenance personnel, and supervisors have read the supplied LEWCO Owner’s Manual

_____ Review the hazards associated with this equipment, as well as its design limitations

_____ Operators have been properly trained on start-up and shut-down procedures

_____ Review location of emergency stop button(s), as well as emergency shut-down & start-up procedure

NOTES:

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