

# Your complete CHECKLIST

for your cooling tower winter shutdown- Counterflow

- ☐ **Prior to shutdown, all flow control valves should be left open as wide as possible.** *Our Advice: This will help reduce any excessive vacuum that would result from back siphoning effects.*
- ☐ **During shutdown periods the tower may become dry if, constructed of lumber, causing the lumber to shrink causing bolts to loosen.** *All external bolts, including stairway, ladder, hand rail bolts, etc., should be checked periodically and tightened if loose.*
- ☐ **In above 35 degree weather, wood portions of the tower can be protected from fire by operation of the wet down system. Your tower may have this installed, however if not, run one circulating water pump during no load periods.** *It is advisable to operate the wet down system for wood towers to prevent the lumber from drying out, potentially causing cracking and splitting of wood as well as a fire hazard.*
- ☐ **\*\* Do not wet down tower or circulate cold water over the tower during below freezing temperatures.**
- ☐ **If the length of shutdown is over one month and conditions are humid, the oil in the speed reducer should be checked. If excessive water is present in the oil, the oil should be changed to avoid emulsion.** *Each cell, which is out of operation for periods in excess of one week, should be started and run each week for at least ten minutes to reduce the danger of rust forming on gear elements above the oil level.*  
*\*\* For more information about checking your gearbox oil and gearbox maintenance, check out our [Gearbox Handbook](#).*
- ☐ **For extended shutdown over one month, Shell VSI or other rust inhibitor should be installed in the gear.** *The gear box vent valve should be closed. This will keep a rust inhibiting vapor inside the box to prevent rust from forming above the oil line.*

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- ☐ **Rotate fan blades or operate the fan at full speed for a 20 minute (minimum) period once a month to lubricate the gearbox.**
- ☐ **Ensure space heaters on motors are energized and operating (if supplied).**
- ☐ **In winter months, to prevent possible basin frost heave, water in the cold water basin should be maintained at the normal operating level.** *Draining of the basin should be limited to 3 days or less. If there is danger of the water completely freezing, place small diameter logs or other suitable wood material along perimeter of the basin next to the curb walls.*
- ☐ **Stop all pumps or close all valves to the hot water distribution system.**