

Cooling Tower Long Term Storage

When placing a cooling tower into long term storage (generally considered one month or longer) there are some basic but critical maintenance steps. Completing the steps ensures the tower will be ready to perform as designed when the cooling season arrives.

If the tower has *not* been installed or connected to power:

1. Fan and motor shafts need to be turned by hand at least once per month. 10 revolutions minimum of the fan and motor shafts is recommended to ensure lubrication of bearings and/or gears.
2. Lubricate motor (if motor has that option) and/or fan shaft bearings every 3 months.
3. Store electrical equipment inside (if possible) to prevent condensation, dust, insects, etc. from entering the cabinets. If storing outside, locate and/or mount so that cabinets are allowed to breathe and drain as designed. Check electrical equipment manufacturers User Manuals for proper storage instructions.
4. Consider connecting and energizing motor space heaters (if supplied) to prevent condensation in the motor.
5. Make sure all tower drains are open and all galvanized steel components are stored where water will drain and dry completely after exposure to rain or snow to prevent storage stains.

If the tower will sit idle **6 months or longer** also consider adding these steps:

6. In lieu of turning the fan shaft by hand, fill the gearbox full of oil (if equipped with a gearbox). Drain to normal level prior to returning to service. Reference *Cooling Tower Downtime Instructions*, SPX User Manual Z0238848 available at spxcooling.com for the procedure.
7. Insulation test motor windings before returning to service.

If the tower has been installed *and* connected to power:

1. The motor should be operated for at least three hours once a month. This serves to dry out windings and lubricate bearing surfaces. Reference *Cooling Tower Motor* SPX User Manual Z0239042 available at spxcooling.com.
2. By operating the motor, as long as your belt, coupling, or driveshaft is still connected, the fan shaft will be turned allowing for lubrication of bearings and/or gears.
3. Check electrical equipment manufacturers User Manuals for proper storage instructions.
4. Consider energizing motor space heaters (if supplied) to prevent condensation in the motor.
5. Make sure all tower drains are open to ensure the water will drain and dry completely after exposure to rain or snow to prevent storage stain.

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