

PREVENTATIVE MAINTENANCE CHECKLIST

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CTP Manufacturing
"The Cooling Tower Parts Specialist"

INTRODUCTION

Cooling tower service life and performance are very dependent upon customers implementing preventative maintenance programs to continually monitor, maintain, and address identified problems before they become problematic and result in more serious maintenance by a third party professional. Water treatment programs are equally important to ensure that circulating water is being maintained within manufacturer recommended parameters to ensure that your tower fill media and inlet louvers do not become blocked or fouled which can affect overall performance.

One program without the other should not be considered a satisfactory preventative maintenance program. The following is a guide to help assist your facility staff with recommended procedures associated with maintenance on a cooling tower. Each manufacturer has their own recommendations and you should follow the program provided with your tower as it should provide specifics to that particular Brand and Model. Most are available via digital download through the manufacturer website.

Programs should include Monthly, Quarterly, and Annual procedures.

ANNUAL PROCEDURES

ANNUAL PROCEDURES	DATE
Vibration Switches – Test and adjust sensitivity as needed.	
Adjustable motor bases – adjust, grease, and inspect for corrosion or stress cracks.	
Stainless Steel Towers – Inspect all seams for leaks	
Galvanized Towers – Thoroughly inspect coating along interior and exterior for any corrosion or damage. Address immediately to prevent further damage.	
Perform annual cooling tower cleanings	
Inspect fill media for debris and condition.	

SEMI-ANNUAL PROCEDURES

Semi-Annual Procedures	Spring	Fall
Gear Reducers – Drain and replace oil		
Sand Filters / Separators – Check condition of media or strainers, check sweeper piping and pumps.		

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MONTHLY PROCEDURES

MONTHLY PROCEDURE	JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
Clean cold water basin strainers												
Bearings – Inspect and lubricate if needed.												
Check water level in basin and adjust float as needed.												
Check distribution system for debris												
Check for missing, broken or plugged nozzles												
Check belt tension and adjust												
Check fan screens for debris												
Check inlet louvers for debris or blockage, clean as needed												
Check motor for unusual noise												
Check fan assembly for scale buildup, vibration, or noise												
Vibration Switches – Inspect inside for moisture or loose wiring												
Gear reducer – Check oil level and oil seals, fill if needed.												
Oil pump – check for leaks												
Couplings – Check condition and visually inspect hardware												

QUARTERLY PROCEDURES

QUARTERLY PROCEDURES	1 st QTR	2 nd QTR	3 rd QTR	4 th QTR
Cold Water Basin – Drain, Clean, Refill				
Drift Eliminators – Check for damage or corrosion				
Fans – Check fan blades or blower wheels for excessive vibrations, cracks, or missing weights.				
Bearings – lubricate bearings and inspect grease lines / automatic greasers				
Basin Heaters – Check heater thermostat, clean probes, and inspect the heating element.				
Make-up Valve – check for operation and adjust. <i>Electronic Make-up valves</i> – check solenoid valve and stilling chamber. <i>External Float assemblies</i> – clean interior of stilling chamber to ensure float is free and clear of side walls.				
Cross Flow Towers – Flush hot water pans and remove all debris. Ensure covers are replaced and fastened down.				

CONCLUSION

Performing simple maintenance on a cooling tower will go a long way in extending the service life of your tower. It will also help to identify problems early on so that they can be addressed before they become more serious. Ignoring your cooling tower can have major effects to not only the cooling tower, but to the performance and life of equipment downstream which can be more costly to repair or operate. Remember to also consult with a local water treatment specialist whom can aid you in establishing a proper water treatment program. Combined, you should see years of great service without the need for costly repairs.

