

LEAN MAINTENANCE: A QUICK OVERVIEW

Transform your maintenance strategy with proven lean practices

LEAN MAINTENANCE TOOLS



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What it is: A method for organizing work areas to minimize or eliminate waste.

Example: Obsolete inventory is removed from inventory and stockroom locations are clearly labeled, reducing time spent searching for parts.



KAIZEN

What it is: A method of proactively working with employees at all levels to make incremental improvements to the maintenance process.

Example: The maintenance team holds regular check-in meetings to find ways to reduce downtime, like reorganizing the stockroom for faster access or standardizing procedures.



MISTAKE-PROOFING

What it is: The use of processes and controls to prevent human error or highlight mistakes when they occur.

Example: Technicians scan barcodes on stockroom storage shelves or bins, ensuring the right parts are being taken for repairs.



JUST-IN-TIME (JIT)

What it is: A method for minimizing the amount of inventory held in stock based on expected demand.

Example: Parts for preventive maintenance work are ordered shortly before they are needed instead of taking up space in the stockroom.



KANBAN

What it is: A visual system used to track progress through a workflow.

Example: The maintenance team uses a signboard, organized by status, to monitor inventory levels of critical parts and follow work order progress through each stage.



GEMBA

What it is: A method for improving maintenance processes through direct observation, speaking with employees, and interacting with equipment.

Example: A maintenance manager visit the production line to observe machine usage and adjusts the preventive maintenance schedule based on real-world conditions.



ANDON SYSTEM

What it is: A visual indicator that brings attention to problems with equipment.

Example: A machine uses a color-coded stack light to alert the maintenance team that the equipment is in need of service or that failure is imminent.



STANDARDIZED WORK

What it is: Documented procedures that specify best practices for completing tasks.

Example: The maintenance manager provides step-by-step instructions for each preventive maintenance task, ensuring tasks are done the same way no matter who performs them.

LEAN MAINTENANCE SYSTEMS & STRATEGIES



COMPUTERIZED MAINTENANCE MANAGEMENT SYSTEM (CMMS)

What it is: Software that helps organizations better organize, manage, document, and track maintenance activities.

Example: A technician uses a computer or mobile device to access work orders, asset history, and part details from a centralized database.



TOTAL PRODUCTIVE MAINTENANCE (TPM)

What it is: A team-based approach for maximizing equipment reliability.

Example: Machine operators perform daily inspections and perform simple preventive maintenance tasks.



ROOT CAUSE ANALYSIS (RCA)

What it is: A systematic process for investigating why a specific failure occurred and developing ways to respond to and resolve it.

Example: After a failure, the maintenance team identifies the problem and updates procedures to reduce the likelihood of recurrence.



RELIABILITY-CENTERED MAINTENANCE (RCM)

What it is: A method of identifying critical equipment, identifying failure modes, and selecting the most appropriate maintenance tasks to manage the risk of failure.

Example: More emphasis is put on proactive maintenance for critical equipment, while less important ones are allowed to run to failure.



PREDICTIVE MAINTENANCE (PDM)

What it is: A maintenance strategy that uses condition data, historical performance data, and analytics to forecast when failure will occur.

Example: Vibration sensors alert the maintenance team to a failing bearing before it breaks down.

PERFORMANCE METRICS



KEY PERFORMANCE INDICATORS (KPIs)

What it is: A set of metrics used to measure performance, track progress towards goals, and guide maintenance decisions.

Example: The maintenance team regularly compares their performance to internal targets and industry benchmarks.



OVERALL EQUIPMENT EFFECTIVENESS (OEE)

What it is: A metric that measures equipment's ideal performance to actual performance.

Example: An organization tracks Overall Equipment Effectiveness to determine whether maintenance process changes are needed to improve performance.



MEAN TIME TO REPAIR (MTTR)

What it is: A metric that measures the average amount of time required to repair a piece of equipment.

Example: An organization tracks Mean Time to Repair to identify bottlenecks in the repair process and improve turnaround time.



MEAN TIME BETWEEN FAILURE (MTBF)

What it is: A metric that measures equipment reliability – how long, on average, the equipment performs its intended function before a failure occurs.

Example: An organization tracks Mean Time between Failure to estimate when maintenance is likely needed and to schedule preventive maintenance work.