

COMPLETE FACILITY
MANAGEMENT SOLUTIONS



Staying Ahead of Reactive Maintenance

A 15-point Checklist from
Complete Facility Management Solutions



Staying Ahead of Reactive Maintenance

In the demanding world of facility management, the reactive approach to maintenance – waiting for equipment to fail before taking action – often leads to a cascade of unwelcome consequences. Unexpected breakdowns can trigger costly emergency repairs, significant operational downtime, and frustrating disruptions that impact productivity and your bottom line. The cumulative effect of these reactive measures not only strains your budget but also places undue stress on your resources and can even tarnish your facility's reputation. Recognizing the significant financial and operational burdens associated with this approach, we've developed a practical tool to help you transition towards a more controlled and cost-effective strategy.

1. **REGULAR EQUIPMENT INSPECTIONS**
2. **SCHEDULED LUBRICATION**
3. **FILTER REPLACEMENT**
4. **BELT AND HOSE CHECKS**
5. **FLUID LEVEL CHECKS**
6. **CLEANING**
7. **OPERATIONAL CHECKS**
8. **MAINTENANCE RECORDS**
9. **MANUFACTURER RECOMMENDATIONS**
10. **TRAINING AND PROCEDURES**
11. **PREDICTIVE MAINTENANCE TECHNOLOGIES**
12. **REGULAR REVIEW OF MAINTENANCE SCHEDULES**
13. **EMERGENCY PREPAREDNESS**
14. **DOCUMENTATION AND ANALYSIS**
15. **TAILORING PROACTIVE MAINTENANCE**

While this checklist provides a concise overview of essential proactive maintenance practices, understanding the “why” and “how” behind each item is crucial for effective implementation. The following sections dive into each point: explaining its importance, suggesting a likely schedule for accomplishment, highlighting unexpected things to look for during these activities, and outlining the likely problems that can be avoided by consistently applying these proactive measures.



1. Regular Equipment Inspections

Regular visual inspections are your first line of defense against potential problems. They allow you to identify early signs of wear and tear, leaks, damage, or misalignments before they lead to significant failures. Catching a loose wire or a small leak early can prevent a major electrical issue or a complete system shutdown, informing you of the quality of your upkeep.

- **Schedule:** The frequency depends on the criticality and usage of the equipment. Daily walk-arounds for high-impact machinery, weekly for moderately critical systems, and monthly for less frequently used equipment are common starting points.
- **Look For:** Pay attention to unusual noises, vibrations, smells (burning, chemical), visible leaks (oil, water, hydraulic fluid), loose or missing parts, excessive dust or debris buildup, and any signs of corrosion or damage.
- **Benefit:** Early detection can prevent catastrophic failures, reduce the need for emergency repairs, minimize downtime, extend the lifespan of your equipment, and improve overall safety.

2. Scheduled Lubrication

Proper lubrication reduces friction and wear between moving parts, preventing overheating, seizing, and premature failure. The right lubricant applied at the correct intervals is crucial for the upkeep, longevity, and efficient operation of mechanical equipment.

- **Schedule:** Lubrication schedules are typically based on manufacturer recommendations, equipment usage, and environmental conditions. This can range from daily or weekly for high-speed or heavily loaded components to monthly or quarterly for less demanding applications.
- **Look For:** Monitor for leaks around seals and bearings, lubricant color or consistency, and unusual noise from lubricated parts. Ensure the correct type and amount of lubricant are being used.
- **Benefit:** Prevents excessive wear on bearings, gears, and other moving parts, reduces energy consumption due to friction, minimizes heat generation, and avoids costly replacements and downtime.



3. Filter Replacement

Filters protect critical systems from contaminants such as dust, debris, and particles in air, fluids (oil, hydraulic), and water. Clogged or dirty filters restrict flow, reduce efficiency, and can cause damage to sensitive components.

- **Schedule:** Replacement intervals are usually based on manufacturer specifications and the operating environment. Air filters might need monthly or quarterly changes, while fluid filters could be on a semi-annual or annual schedule, depending on usage and contamination levels.
- **Look For:** Check for visible dirt buildup, restricted airflow or fluid flow, and any indicators that signal a filter is clogged or damaged (e.g., pressure drops).
- **Benefit:** Prevents damage to engines, HVAC systems, hydraulic systems, and other equipment caused by contaminants, ensures optimal performance and efficiency, and extends the life of critical components.

4. Belt and Hose Checks

Belts and hoses are critical for power transmission and fluid conveyance in many systems. Failure of a belt can stop machinery, while a burst hose can lead to leaks, overheating, and system damage.

- **Schedule:** Regular visual inspections should be conducted weekly or monthly. More thorough checks for wear and tear might be scheduled quarterly or semi-annually.
- **Look For:** Inspect belts for cracks, fraying, glazing, stretching, and proper tension. Examine hoses for swelling, leaks, cracks, kinks, and loose connections.
- **Benefit:** Prevents sudden equipment breakdowns due to belt slippage or breakage, avoids leaks and potential damage from hose failures, and ensures efficient power transfer and fluid flow.



5. Fluid Level Checks

Maintaining proper fluid levels (e.g., oil, coolant, hydraulic fluid) is essential for lubrication, cooling, and the correct operation of many systems. Low fluid levels can lead to overheating, increased wear, and system failure.

- **Schedule:** Fluid levels should be checked regularly, often daily or weekly, especially for critical equipment.
- **Look For:** Observe any significant drops in fluid levels, which could indicate leaks. Also, check the color and consistency of the fluids for signs of contamination or degradation.
- **Benefit:** Prevents damage to engines, transmissions, hydraulic systems, and other fluid-dependent equipment due to insufficient lubrication or cooling, ensuring smooth and reliable operation.

6. Cleaning and Tightening

Keeping equipment clean prevents the buildup of dust, debris, and contaminants that can impede performance, cause overheating, and accelerate wear. Regularly tightening fasteners ensures structural integrity and prevents loosening due to vibration.

- **Schedule:** Cleaning should be performed regularly, with the frequency depending on the environment and the equipment. Fasteners should be checked and tightened during routine inspections or scheduled maintenance (e.g., monthly or quarterly).
- **Look For:** Notice any excessive buildup of dirt or debris, loose or missing fasteners, and signs of corrosion that might be exacerbated by accumulated contaminants.
- **Benefit:** Improves heat dissipation, prevents premature wear caused by abrasive particles, ensures secure connections, reduces the risk of electrical issues due to dust buildup, and maintains overall equipment reliability.



7. Operational Checks

Regularly running equipment and observing its performance can help identify subtle issues that might not be apparent during a static inspection. This includes checking for unusual noises, vibrations, or changes in operating parameters.

- **Schedule:** Operational checks can be integrated into daily or weekly routines, depending on the equipment and its usage.
- **Look For:** Listen for unusual sounds (grinding, squealing, knocking), observe for excessive vibration or jerky movements, and monitor operating parameters (pressure, temperature, speed) for deviations from normal.
- **Benefit:** Catches developing issues early, allowing for minor adjustments or repairs before they escalate into major problems or failures during critical operations.

8. Maintenance Records

Detailed records of all maintenance activities provide a valuable history of equipment performance, repairs, and replacements. This information helps identify trends, predict potential failures, optimize maintenance schedules, and track the effectiveness of your proactive maintenance efforts.

- **Schedule:** Records should be updated immediately after any maintenance activity, whether it's a simple inspection or a major repair. Regular review of these records (e.g., monthly or quarterly) is crucial for identifying patterns and making informed decisions.
- **Look For:** Note any recurring issues with specific equipment, increasing frequency of repairs, or discrepancies between scheduled and actual maintenance performed.
- **Benefit:** Enables data-driven maintenance decisions, helps optimize maintenance spending, improves equipment reliability by identifying and addressing chronic issues, and facilitates better planning for future maintenance and replacements.



9. Manufacturer Recommendations

Equipment manufacturers provide specific guidelines for maintenance, lubrication, and replacement of parts based on their design and testing. Following these recommendations is crucial for ensuring optimal performance, safety, and longevity of the equipment, and it may be a condition of warranties.

- **Schedule:** Maintenance schedules should be aligned with the manufacturer's recommendations, which are typically outlined in equipment manuals.
- **Look For:** Be aware of any updates or revisions to manufacturer recommendations and ensure your maintenance practices are aligned with the latest guidelines.
- **Benefit:** Ensures adherence to best practices for maintaining specific equipment, maximizes equipment lifespan, maintains warranty validity, and reduces the risk of failures due to improper maintenance.

10. Training and Procedures

Properly trained personnel are more likely to perform maintenance tasks correctly, identify potential issues during routine operations, and adhere to safety procedures. Investing in training empowers your team to be proactive in maintaining your facility.

- **Schedule:** Initial training should be provided upon hiring and when new equipment is introduced. This is a good time to ensure that procedures are documented and accurate. Refresher training and updates on best practices should be conducted periodically.
- **Look For:** Observe if personnel are consistently following procedures and identifying potential issues. Address any knowledge gaps with targeted training.
- **Benefit:** Reduces the risk of human error in maintenance tasks, improves the effectiveness of maintenance efforts, enhances safety, and fosters a culture of proactive maintenance within your organization.



11. Predictive Maintenance Technologies

Predictive maintenance (PdM) uses advanced technologies like infrared thermography, vibration analysis, and oil analysis to monitor equipment condition in real-time and predict potential failures before they occur. This allows for proactive interventions based on actual equipment condition rather than fixed schedules.

- **Schedule:** Implementation and usage depend on the specific technology and the criticality of the equipment. Monitoring can be continuous or periodic, based on the chosen methods.
- **Look For:** Learn to interpret the data provided by these technologies to identify anomalies and trends that indicate developing problems.
- **Benefit:** Enables highly targeted maintenance interventions, minimizes unnecessary downtime, maximizes equipment lifespan, and can lead to significant cost savings by addressing issues in their early stages.

12. Regular Review of Maintenance Schedules

Maintenance schedules should not be static. Regularly reviewing their effectiveness based on equipment performance, maintenance records, and operational needs allows for optimization and ensures that resources are being used efficiently.

- **Schedule:** Maintenance schedules should be reviewed at least annually, or more frequently if significant changes occur in equipment usage or performance.
- **Look For:** Identify equipment that requires more or less frequent maintenance than currently scheduled, and adjust accordingly. Look for opportunities to optimize tasks and improve efficiency.
- **Benefit:** Ensures that maintenance efforts are aligned with actual needs, prevents over- or under-maintenance, optimizes resource allocation, and continuously improves the effectiveness of your proactive maintenance program.



13. Emergency Preparedness

Even with the most robust proactive maintenance program, unexpected failures can still occur. Having clear emergency procedures in place minimizes downtime, ensures safety, and facilitates a swift and effective response.

- **Schedule:** Emergency preparedness plans should be developed and reviewed annually, and drills should be conducted periodically to ensure personnel are familiar with the procedures.
- **Look For:** Ensure that contact information for key personnel and external resources is up-to-date, emergency equipment is readily accessible and functional, and communication protocols are clear.
- **Benefit:** Minimizes the impact of unexpected failures, ensures the safety of personnel, facilitates a faster return to normal operations, and reduces potential secondary damage.

14. Documentation and Analysis

Focus on the importance of documenting and analyzing failures and maintenance trends to identify patterns and prevent future issues. Failure Reporting, Analysis, and Corrective Action System (FRACAS) is a systematic approach used in maintenance to identify, analyze, and resolve failures in assets. This system plays a crucial role in improving equipment reliability and reducing downtime with four steps that work together to enhance equipment performance and reliability: *Failure Reporting, Failure Analysis, Corrective Actions, and Validation*.

- **Schedule:** Continuous
- **Look For:** Failure rates, common failure modes, equipment downtime, maintenance costs, repair times, and the effectiveness of previous maintenance actions.
- **Benefit:** Reduced downtime, improved equipment reliability, optimized maintenance schedules, and lower maintenance costs.



15. Tailoring Proactive Maintenance (SOPs)

Developing Standard Operating Procedures (SOPs) that include proactive maintenance tasks involves moving beyond generic manufacturer recommendations to create precise, step-by-step instructions that align with the facility's unique equipment, environment, and operational needs. This ensures that proactive maintenance is not only performed but is also carried out correctly, consistently, and efficiently by all personnel. Effective SOPs minimize variability, reduce the risk of errors, and optimize the lifespan and performance of assets.

- **Schedule:** SOPs should be developed when equipment is installed or changed, and regularly reviewed/updated to maintain effectiveness. Implementation and training must occur before any proactive maintenance task.
- **Look For:** SOPs that are unavailable, unclear, or inaccessible for all critical assets. Lack of SOP familiarity or training, irregular reviews and updates, or lack of adherence.
- **Benefit:** Well-tailored SOPs increase the consistency and reliability of proactive maintenance, reduce errors, improve safety, and optimize efficiency, ultimately leading to better equipment lifespan and performance.

By adopting the principles in this checklist, facilities can move beyond the costly cycle of reactive repairs and embrace a future of optimized operations, reduced downtime, and enhanced asset longevity. While this checklist provides a starting roadmap for getting ahead of reactive maintenance, the journey requires careful planning, diligent execution, and ongoing commitment.

For facility managers seeking to streamline this transition and ensure long-term success, partnering with a trusted partner like Complete Facility Management Solutions can be invaluable. CFMS offers the expertise and support necessary to implement and manage a proactive maintenance program, from initial assessments and customized planning to ongoing monitoring, analysis, and optimization. Let us help you unlock the full potential of proactive maintenance, minimize disruptions, and achieve significant, sustainable improvements in operational efficiency and cost-effectiveness.

Thank you,

The Complete Facility Management Solutions Team