

STANDARD OPERATING PROCEDURE

Equipment Maintenance and Safety Inspection Protocol

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Document Owner:	Operations Manager	Approved By:	John Smith, Director

1. PURPOSE AND SCOPE

1.1 Purpose

This Standard Operating Procedure (SOP) establishes standardized protocols for routine equipment maintenance and safety inspections to ensure optimal performance, extend equipment lifespan, and maintain workplace safety standards.

1.2 Scope

This SOP applies to all production equipment, safety systems, and mechanical devices within the facility. It covers daily, weekly, monthly, and annual maintenance procedures for all operational staff and maintenance personnel.

1.3 Objectives

- Ensure consistent maintenance practices across all equipment
- Minimize unplanned downtime through preventive maintenance
- Maintain compliance with safety regulations and standards
- Document maintenance activities for audit and tracking purposes

2. DEFINITIONS AND ABBREVIATIONS

Preventive Maintenance (PM): Scheduled maintenance activities performed to prevent equipment failure

Corrective Maintenance: Maintenance performed after equipment failure or malfunction

PPE: Personal Protective Equipment

LOTO: Lockout/Tagout procedures

OEM: Original Equipment Manufacturer

3. RESPONSIBILITIES

3.1 Operations Manager

- Overall responsibility for SOP implementation and compliance
- Resource allocation for maintenance activities
- Review and approval of maintenance schedules

3.2 Maintenance Supervisor

- Daily oversight of maintenance activities
- Staff training and competency verification
- Maintenance record review and analysis

3.3 Maintenance Technicians

- Execute maintenance procedures as scheduled
- Complete accurate documentation of all activities
- Report equipment anomalies immediately

4. EQUIPMENT AND MATERIALS

4.1 Required Tools

- Standard tool kit with wrenches, screwdrivers, and measuring devices
- Torque wrenches (various sizes)
- Digital multimeter
- Infrared thermometer
- Lubrication equipment and supplies

4.2 Safety Equipment

- Safety glasses and face shields
- Work gloves (cut-resistant)
- Hard hats
- Safety shoes with slip-resistant soles
- Lockout/Tagout devices

5. DETAILED PROCEDURES

5.1 Daily Equipment Inspection (Pre-shift)

Step 1: Preparation

- Don appropriate PPE
- Review previous shift maintenance logs
- Gather required inspection tools and checklists

Step 2: Visual Inspection

- Check for obvious damage, wear, or abnormalities
- Inspect safety guards and protective devices
- Verify all warning labels and signage are visible
- Look for leaks, corrosion, or unusual wear patterns


Step 3: Operational Checks

- Test emergency stop functions
- Verify proper lubrication levels
- Check belt tension and alignment
- Monitor operating temperatures and pressures

Step 4: Documentation

- Record all observations on inspection checklist
- Note any deviations from normal operating parameters
- Sign and date completed inspection forms

5.2 Weekly Preventive Maintenance

 **SAFETY WARNING:** Always follow proper lockout/tagout procedures before beginning maintenance work.

Step 1: Equipment Shutdown and Isolation

- Follow proper shutdown procedures
- Implement LOTO protocols
- Verify zero energy state before proceeding

Step 2: Lubrication Service

- Apply specified lubricants per manufacturer guidelines
- Check and top off all fluid levels
- Replace grease fittings if damaged

6. SAFETY CONSIDERATIONS

6.1 Personal Safety

- Always use appropriate PPE for each task
- Never bypass safety devices or guards
- Work with a partner when performing high-risk activities
- Follow confined space procedures when applicable

6.2 Equipment Safety

- Ensure proper lockout/tagout before maintenance
- Use only approved tools and procedures
- Maintain proper lifting techniques for heavy components
- Verify equipment is safe to return to service

7. DOCUMENTATION AND RECORDS

7.1 Required Documentation

- Daily inspection checklists
- Weekly maintenance logs
- Monthly comprehensive inspection reports
- Work order completion records

7.2 Record Retention

Record Type	Retention Period
Daily records	1 year
Weekly records	3 years
Monthly records	5 years
Major repair records	Equipment lifetime

8. TRAINING REQUIREMENTS

8.1 Initial Training

- 8-hour SOP orientation for new personnel
- Hands-on demonstration of all procedures
- Written competency examination (minimum 80% score)
- Supervised practice period (minimum 40 hours)

8.2 Ongoing Training

- Annual refresher training (4 hours)
- Update training when procedures change
- Specialized training for new equipment

9. EMERGENCY PROCEDURES

9.1 Equipment Failure

1. Immediately shut down affected equipment
2. Secure area and notify supervision
3. Document failure circumstances
4. Initiate corrective maintenance procedures

9.2 Safety Incidents

1. Provide immediate medical attention if required
2. Secure incident scene
3. Notify management and safety personnel
4. Complete incident investigation and documentation

10. REVISION HISTORY

Version	Date	Author	Description of Changes
1.0	June 18, 2025	Operations Team	Initial version - comprehensive maintenance protocol

APPROVAL SIGNATURES

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Document Control:

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