

## Section 25 – Preventative Maintenance Program

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**PURPOSE** Preventative Maintenance (PM) Programs are implemented to ensure that machinery and equipment is serviced according to the manufacturer's specifications and/ or to meet all legislative requirements.

**SCOPE** We will ensure that all equipment used or operated is operating at its full capacity and not being burdened with undue stresses causes by poorly/ under serviced equipment.

### **RESPONSIBILITIES**

Health and Safety Coordinator Responsibilities:

- Arrange for specific PM to be scheduled and followed up.
- Ensure appropriate PM requirements are completed for all equipment or machinery as required.
- Provide and inform workers and supervisors in the lockout and tag procedures and equipment.
- Comply with all the requirements as defined under the Occupational Health and Safety Act and Regulations.
- Assist in developing PM Program for all workplaces and sites level equipment and vehicles.
- Distribute and communicate information to the appropriate parties regarding any nonconformance or deficiencies reported.

Senior Management Responsibilities:

- Take all measures reasonably necessary in the circumstances to protect employees from vehicles and equipment failures and breakdowns.
- Review Occupational Health and Safety Act and Regulations to ensure compliance within the PM Program.
- Ensure the appropriate PM is completed for all equipment or machinery is implemented across all areas of responsibility.
- Ensure that the equipment, materials and protective devices are provided, maintained in good condition and used as prescribed.
- Provide required protective devices, measures and procedures required by the Occupational Health and Safety Act and Regulations.

## Section 25 – Preventative Maintenance Program

---

### Supervisors Responsibilities:

- Ensure known site related hazards are defined and appropriate PM requirements are completed for all equipment or machinery as required.
- Take prompt and appropriate action when contraventions with the use or maintenance equipment or machinery been identified.
- Apply a tag to identified defective equipment and report to senior management.
- Take every precaution reasonable in the circumstances for the protection of a worker.
- Where so prescribed, provide a worker with written instructions as to the measures and procedures to be taken for protection of the worker

### Workers Responsibilities:

- Complete or schedule all equipment or machinery PM as required.
- Report any damage or malfunctioning equipment or machinery immediately to your supervisor.
- Works in the manner and with the protective devices, measures and procedures required by the Occupational Health and Safety Act and Regulations.
- Report to his or her Supervisor any contravention of the Occupational Health and Safety Act and Regulations or the absence/defect in any equipment or protective device.

### PROCEDURE

The Preventive Maintenance Program will address the following:

1. Machinery and Equipment Inventory
2. Preventive Maintenance Schedule
3. Preventive Maintenance Activities

The First Step in Preventive Maintenance is to develop a comprehensive listing of all equipment and machinery where capital investment costs on tools or equipment will be the criteria to be included under this list.

Once an inventory of equipment and machinery has been conducted the **Health and Safety Coordinator** will audit the equipment and machinery and develop time schedules for maintenance. Once complete, the **Health and Safety Coordinator** will ensure that the schedule is met, documented and conducted by competent service providers.

## Section 25 – Preventative Maintenance Program

---

Only certified providers are allowed to perform maintenance on machinery and/ or equipment.

All workers are to perform a visual inspection of their tools and equipment prior to use. Where a damaged or missing component of the tool is observed, the Supervisor shall be notified.

The Supervisor will observe the issue identified immediate remove that tool, machinery and/ or equipment from use and tag it to identify the reasons and issue.

A determination will be made with the Health and Safety Coordinator on whether the identified tool can be repaired by a certified repair provider or permanently removed from circulation and a replacement provided.

### **DISTRIBUTION**

All workers will be notified of any preventive maintenance work which will affect work/ production (a suitable time should be worked out).

### **Review**

The Preventative Maintenance Program shall be reviewed by Management and the Health and Safety Coordinator on an annual basis or more frequently as required to ensure that the program is in compliance with applicable legislation/ standards and that it is achieving the desired result of a safe and healthy workplace.

### **RECORDS**

The Health and Safety Coordinator will maintain all records on file for the life of the machinery or equipment.

## Section 25 – Preventative Maintenance Program

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### **MACHINERY AND EQUIPMENT INVENTORY**

#### **PROCEDURE**

An inventory of equipment and machinery will be used by the Health and Safety Coordinator in consultation with the Project Manager of maintenance to implement and maintain the Preventive Maintenance Program. An inventory of machinery and equipment used and developed by the Health and Safety Coordinator and in consultation with the Project where **capital investment costs on tools or equipment will be the criteria to be included under this list.** This Items to be reviewed when developing the inventory include:

- **Mobile equipment** (e.g., trucks, vehicles fixed generators, and other material handling equipment)
- **Other equipment** (e.g., Heating/ Ventilation and Air Conditioning (HVAC) Systems)

A Machinery and Equipment Inventory will be developed and used to document the inventory.

#### **Required Information**

The Machinery and Equipment Inventory will be completed by the Manager and the Health and Safety Coordinator to provide the following information for all machinery and equipment used in each specific work area of the shop:

- the name of the machinery or equipment
- the serial number
- the required maintenance activities
- the required frequency of the maintenance activities

#### **Completion of Machinery and Equipment Inventory**

The following steps should be taken when completing the Machinery and Equipment Inventory:

1. When recording the name of the machinery or equipment, both the common name used by employees for the machinery or equipment as well as the formal name (provided by the manufacturer) should be recorded. If a model number is identified on the machinery or equipment, also include the model number.
2. The asset or serial number for the specific piece of equipment must be recorded to distinguish between specific pieces of equipment with the same common or formal names.
3. The required preventive maintenance activities and frequency will be determined through a review of:

## Section 25 – Preventative Maintenance Program

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- the manufacturer's recommendations contained in any Operating Manuals available for the specific machinery or equipment
  - applicable legislative requirements or industry standards
  - current maintenance activities being performed
  - discussions with Managers or technicians and maintenance personnel
4. The completed Machinery and Equipment Inventory will be reviewed with the Health and Safety Coordinator, Project Manager and workers for the work area to ensure accuracy and completeness.

The completed Machinery and Equipment Inventory will be maintained by the Health and Safety Coordinator. The Health and Safety Coordinator will ensure the inventory is kept current.

## Section 25 – Preventative Maintenance Program

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### PREVENTIVE MAINTENANCE SCHEDULE

**PROCEDURE** A preventive maintenance schedule will be developed in conjunction with the preventive maintenance inventory and implemented to ensure that preventive maintenance activities are planned, scheduled and performed by appropriately qualified personnel at the required intervals.

Preventive maintenance schedules will be developed for each work required piece of equipment by the Project Manager and Health and Safety Coordinator.

Each schedule will address all items included on the Machinery and Equipment Inventory and will assign specific dates and assign responsibility for the performance of the preventive maintenance activities from the manufacturer's recommendations and legislative requirements.

Items to be considered when developing the schedule include:

- The specific parts of machinery or equipment to be reviewed and the required frequency of review (as indicated on the Machinery and Equipment Inventory)
- The effect preventive maintenance activities will have on production schedules (as these activities should be scheduled to minimize their effect on production scheduling)
- The required qualifications of the person(s) assigned responsibility for performing the preventive maintenance activities (i.e., the activity to be performed by maintenance personnel, machinery or equipment operators or by an external specialty contractor)

Only appropriately qualified personnel will be designated to perform preventive maintenance activities.

The Preventive Maintenance Schedule will be used to document the process conducted by the qualified personnel will be designated to perform preventive maintenance activities.

Copies of the completed Preventive Maintenance Schedule will be provided to the operators and site personnel.

The completed Preventive Maintenance Schedule will be maintained by the Health and Safety Coordinator. The Health and Safety Coordinator will ensure the schedule is kept current.

## Section 25 – Preventative Maintenance Program

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### **PREVENTIVE MAINTENANCE ACTIVITIES**

**PROCEDURE** Preventive Maintenance Activities will be performed by appropriately qualified personnel for each piece of equipment based on the Preventive Maintenance Schedule.

#### **Documentation**

Preventive Maintenance records will be used to document all preventive maintenance activities. This package should also be used to document damaged or worn parts observed during routine preventive maintenance activities.

Only certified providers are allowed to perform maintenance on machinery and/ or equipment.

#### **Preventive Maintenance Procedures**

Preventative Maintenance schedules will be developed for all equipment as required. Documentation of these maintenance activities must be maintained upon completion of the Preventive Maintenance.

### **PREVENTATIVE MAINTENANCE LOCKOUT/ TAGOUT PROCEDURES**

The following list has been developed to be used when the maintenance of equipment is overdue or other issues have been identified that require immediate removal of the machinery and/ or equipment from use. The following "Lockout/ Tagout" of equipment and machinery can be followed.

1. The Supervisor will obtain all the necessary equipment required to perform the Lockout/ Tagout (e.g. Lock, Tags, Voltmeter, etc.) as part of site required equipment.
1. Equipment operator or workers will inform the Supervisor of the identified issues.
2. Check all point of operation switches to ensure they are in the "Off" position and that all parts have stopped moving and/or cycling. Affix a Lockout Tag.
3. Where applicable, check Emergency stops and ensure that they not engaged.
4. Review the equipment Operators Manual to ensure all power sources and areas where locking, blocking, bleeding and tagging will be necessary, when in doubt ask for assistance.
5. Report damaged and tagged tool or equipment to the Project Manger.

## Section 25 – Preventative Maintenance Program

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6. A determination will be made with the Project Manager on whether the identified tool can be repaired by a certified repair provider or permanently removed from circulation and a replacement provided.

Notes:

- where and when available refer to equipment Operators manuals for identification and isolation of energy sources

Complete Preventive Maintenance records will be provided to the Health and Safety Coordinator on a monthly basis.

The completed Preventive Maintenance Records will be maintained by the Health and Safety Coordinator. The Health and Safety Coordinator will ensure the schedule is kept current.