



Procedure PR-PRO-018

Preventive Maintenance

1. SUMMARY

- 1.1. The purpose of this procedure is to define the methods to maintain critical equipment to ensure such equipment does not impact product quality or delivery schedules.
- 1.2. Preventive maintenance only applies to “key process equipment”; these are defined as those devices or tooling that are critical for maintaining continuing process capability (i.e., uninterrupted manufacturing flow), and those machines and systems that the breakdown of which could adversely impact product quality.
- 1.3. Emphasis shall be put on preventive maintenance (P/M), designed to ensure equipment operates without unexpected down time or error. **Correcting a fault in a machine after it breaks is considered repair, and not maintenance.** The purpose of a robust P/M program is to eliminate the need for unscheduled repairs and down time.
- 1.4. The Director’s are responsible for implementation and management of this procedure.

2. REVISION AND APPROVAL

Rev.	Date	Nature of Changes	Approved By
1	01/01/2016	Original issue.	Kyle Devine
2	10/01/2017	Adapted to include electrical testing	Kyle Devine
3	06/12/2021	Updated document number and formatting	Kyle Devine

3. PROCEDURE: PREVENTIVE MAINTENANCE

- 3.1. Director’s are responsible for identifying key process equipment, machines, and systems to be included in the preventive maintenance program.
- 3.2. Director’s will maintain preventive maintenance records for each unique piece of key process equipment. This record will contain, at a minimum, the following information:
 - Type of device
 - Manufacturer
 - Model number
 - Serial number / company asset number
 - Location
 - P/M tasks required
 - Frequency of each P/M task (monthly, weekly, annually, before use, etc.)



- 3.3. P/M tasks shall be based on manufacturer's guidelines, but may be overridden or altered to suit the company's specific needs, based on equipment usage, criticality to quality, etc.
- 3.4. The resulting records may take the form of logs, procedure(s), databases, spreadsheets or other methods as deemed appropriate by the area manager.
- 3.5. Records of completed P/M tasks must be maintained. P/M records must show:
 - the completion of the required P/M step
 - the operator responsible for completing the step
 - the date of completion
 - any notes or problems encountered
- 3.6. For P/M tasks that are done daily, hourly, "before use" or at a more frequent basis, the need for a record is not required. Records must be maintained for any task performed at a frequency of weekly or greater.
- 3.7. Maintenance work may be performed by employees or approved third party maintenance service providers, as needed. If third party providers are used, the provider's maintenance records may be maintained in lieu of any company internal records.
- 3.8. In order to identify equipment problems at an early stage and to prevent breakdowns, process equipment operators are instructed to monitor tool wear, process performance, vibrations, etc., and report any abnormal functioning to their supervisors.

4. PROCEDURE: ELECTRICAL VALIDATION

- 4.1 Directors must ensure that a competent person inspects, tests and tags electrical equipment at required intervals outlined in tables 1 and 2.
- 4.2 A competent person is either a licensed electrician or a person who has completed training to inspect and test electrical equipment.
- 4.3 Directors should ensure that only electrical equipment with a current inspection/test tag is used in DET workplaces.
- 4.4 Persons inspecting and testing electrical equipment must ensure that all plugin type and fixed electrical equipment within the assigned work area is inspected, tested, tagged and recorded in accordance with these requirements and AS 3760 "In-service safety inspection and testing of electrical equipment".
- 4.5 Electrical appliances which are compliant with the inspection and testing procedure must be fitted with an electrical test tag.

The tag must include the identity of the person carrying out the testing and the test date and may be colour coded to identify the period in which the test was performed.



Table 1 – Electrical Equipment Inspection and Test Intervals (Modified from AS3760)

Type of environment or equipment	Inspection and Testing Intervals		
	Protectively earthed (3 pin plug)	Double insulated (2 pin plug)	Extension cords and power boards
Portable electrical equipment used in an external environment	6 monthly	Annually	6 monthly
All computers	5 yearly	5 yearly	Annually
Portable electrical equipment in office environments	Annually	5 yearly	Annually
Portable electrical equipment	6 monthly	5 yearly	Annually
Directional lighting	Annually	Annually	Annually
Staff kitchen/kitchenette areas (all electrical equipment including refrigerators and microwave ovens)	Annually	Annually	Annually
Equipment used for commercial cleaning	6 monthly	Annually	6 monthly
Repaired/serviced/used equipment.	After purchase, repair or service, on re-introduction to service		
Non-portable , plug-in equipment eg. photocopiers, faxes, shredders, refrigerators	5 yearly		