



LOCK OUT/TAG OUT GUIDELINES

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1 Introduction

This guideline establishes the minimum requirements for the prevention of exposure to risks while performing maintenance and servicing activities on any plant and equipment or their associated systems.

2 Scope

This guideline defines processes to prevent unexpected energising or start-up of plant or equipment or any stored energy. This is while any individual or group is undertaking installation, repair, adjustment, or maintenance of plant and equipment or their associated systems for all of University locations.

3 Definitions

<i>Plant</i>	A general name for all machinery, tools, appliances and equipment. Types of plant include lifts, electrical equipment, power tools, computers, hand held tools, hand trolleys and workshop equipment
<i>Lock Out/Tag Out</i>	A means of controlling hazardous energy and preventing unexpected energising or start-up of plant and equipment. Used for protection of individuals or groups of individuals including contractors.
<i>Locks</i>	Personal locks are individually identifiable and do not require a tag to be placed on the plant and or equipment being locked out.
<i>Tag</i>	The attachment of a tag on plant or equipment other than personal locks to warn and or identify the activity being undertaken

4 Responsibilities

4.1 Management and Supervisors (Or Equivalent)

Management and Supervisors of Units have a responsibility to:

- identify processes and situations where this guidelines is applicable and implement accordingly
- provide training, instruction and supervision in relation to these guidelines
- implement risk control measures required for identified hazards in association with Lock Out/Tag Out
- consult with workers on the implementation of these guidelines.

4.2 Workers

Workers have a responsibility to:

- take reasonable care for their own health and safety
- take reasonable care for the health and safety of others
- comply with any reasonable instruction by the University in relation to Lock Out/Tag Out
- cooperate with any reasonable policies and procedures of the University in relation to Lock Out/Tag Out.

4.3 Personnel Conducting Lock Out/Tag Out process

Personnel conducting Lock Out/Tag Out procedures are required to:

- understand and implement the requirements of this guidelines and any local Unit Lock Out/Tag Out procedures
- report hazards or issues with the implementation of Lock Out/Tag Out procedures.

4.4 WHS Unit

The WHS Unit is responsible for:

- maintenance of this guideline and review of legislative requirements
- verification of implementation of these guidelines during verification audits.

5 Lock Out/Tag Out

5.1 Overview

This guideline establishes the minimum requirements for the prevention of exposure to risks while performing maintenance and servicing activities on any plant and equipment. The intent is to prevent unexpected energising or start-up of plant or equipment or any stored energy. This is while any individual, group or contractors are undertaking installation, repair, adjustment, or maintenance of plant and equipment or their associated systems for all of University locations.

Units will be responsible for ensuring compatible processes will be developed to complement this guideline as a result of risk assessments and local unit needs.

Lock Out/Tag Out will not be required where minimal activities are to be undertaken. Where minimal activities are to be undertaken, such activity will be conducted in accordance with the requirements of the WHS Risk Management Guidelines.

The lock-out process is the most effective isolation procedure. The process is as follows:

1. shut down the machinery and equipment
2. identify all energy sources and other hazards
3. identify all isolation points
4. isolate all energy sources
5. control or de-energise all stored energy
6. lock out all isolation points
7. tag machinery controls, energy sources and other hazards
8. test by 'trying' to reactivate the plant without exposing the tester or others to risk.
9. failure to reactivate the plant means that the isolation procedure is effective and that all stored energies have dissipated. This may require further measures to safely release these energies, for example hydraulic or pneumatic pressure, suspended weight or compressed springs.

5.2 Types of Written Lock Out/Tag Out Processes

Two types of Lock Out/Tag Out processes are authorised for use in maintenance and servicing activities of plant and equipment within the UOW. Business Units will be responsible for ensuring that the applicable control method is selected where appropriate. The two types of Lock Out/Tag Out or control processes to be used are as follows:

- Lock Out/Tag Out Process (Appendix 1)
- Unit specific plant or equipment instructions.

Development of Lock Out/Tag Out processes will be done in consultation with health and safety representatives and personnel who work on or with the relevant plant or equipment.

Supervisors will be responsible for ensuring that one of the above two processes must be used in any maintenance and servicing activity that involve potential exposure to hazardous energy.

5.3 Unit Specific Plant or Equipment Instructions

Unit specific instructions should be documented in consultation with health and safety representatives and employees who work on or with the relevant plant or equipment.

Unit specific instructions must contain the following information:

- method and order of identifying, locating, isolating, and locking out or tagging out each energy source
- method of verifying a zero energy state, including any required testing
- method and order of reconnecting each energy source to the equipment or system.

5.4 Isolation Verification

After plant or equipment has been shut down, locked out and tagged, all isolated power sources should be tested first with appropriate instruments and then by trying to activate the plant or equipment, before any personnel attempt to start work.

This should be done by personnel familiar with the plant or equipment to ensure isolation procedures have been effective.

5.5 Testing and Positioning

On occasions, the plant or equipment may be energised to test or position the plant or equipment or its components. Personnel devices may be temporarily removed, but only in accordance with the Lock Out/Tag Out process.

The work must be performed using alternative measures that provide effective protection, and all energy sources unnecessary to the task must be locked out tagged out. In all circumstances that require troubleshooting, individuals performing the task must comply with Lock Out/Tag Out process.

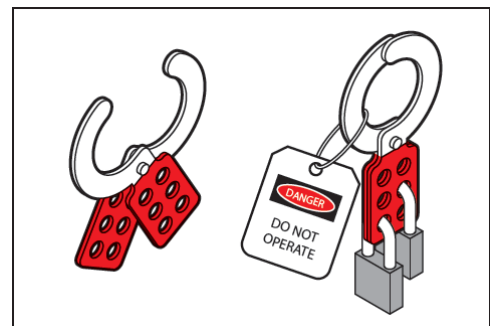
5.6 Group Lock Out/Tag Out Process

Whenever more than one individual is involved in a task or activity including contractors, it should be considered a group Lock Out/Tag Out activity.

In most cases, use of group lockout devices such as a multiple lock adaptor (hasp or scissors) allows each personnel or contractor involved in the task to place their lock(s) and/or tag(s) on each energy-isolating device.

The first UOW personnel who applies their lock or tag becomes the group Lock Out/Tag Out leader for the task and oversees or leads that group to ensure compliance with this procedure.

Under standard group Lock Out/Tag Out, each individual or contractor in the group applies their personal lock or tag to the multiple lock or tag adaptor that is attached to each energy-isolating device controlling a piece of plant or equipment.



The group Lock Out/Tag Out leader is the first to apply and the last to remove their lock or tag from the plant or equipment.

5.7 Lock Out/Tag Out Removal Process

Each individual is required to remove their own locks and tags at the conclusion of the activity associated with the plant or equipment.

However, in extraordinary situations, the Unit Manager may determine that it is necessary to remove a Lock Out/Tag Out device when the individual who applied it is not at UOW (e.g. an individual may have left the activity after it is completed and forget to remove their Lock Out/Tag Out device).

In these situations, the Unit Manager is responsible for ensuring that the site personnel comply with the following;

- check that the person is no longer on site
- check that the plant or equipment is serviceable, and
- check that no person is endangered by the operation of the plant or equipment.

If the checks are positive, the tag shall be removed, but consideration should be given to requesting the person whose tag requires removal to return to the site to remove the tag.

5.8 Lock Out/Tag Out Signs

The business unit manager will be responsible for ensuring that each energy-isolating device should be permanently marked or labelled at an appropriate location at or near the Lock Out/Tag Out point.

Signage used to identify requirements for lockout tag out in the identification of the hazardous situations will be installed and maintained in accordance with [WHS Communication Guidelines](#).

5.9 Lock Out/Tag Out Devices

Lock Out and Tag Out devices should be standardised within UOW in colour, shape, and size in a way personnel or contractors can recognise. No other equipment shall be used to apply Lock Out/Tag Out unless a formal risk assessment is completed.

Minimum requirements for Lock Out/Tag Out devices to be used within UOW are as follows:

- type of locks - identification of the type, colour, and brand of lock used for lockout purposes. Determine if the locks will be issued to UOW employees or placed at central locations.
- type of tags - identify the type and brand of tag to be used for Lock Out/Tag Out purposes. Determine if the tags will be issued to each individual or placed in central locations.
- attaching Tags - use a one-piece cable tie.

Two types of tags used on University of Wollongong sites are;

- **Danger Tags** - Danger tags and Lock-outs are applied by all personnel who will be working on energy supply services, i.e. electrical, water, gas and hydraulics. A danger tag and lock-out on an isolating device is a warning that operation of that device may endanger the personnel who attached the tag and lock-out. Note: Lock out devices are to be used in conjunction with all danger tags.



- **Out-of-Service-Tags** - An out of service tag is a notice that distinguishes equipment out of operation for repairs or alteration, or plant that is still being installed or commissioned. Do not operate equipment whilst this tag is in use.



5.10 Contractors

As a condition of work all contractors working at UOW site must comply with this procedure, subject only to exceptions agreed to in writing. The business unit manager will be responsible for ensuring that a copy of this document is provided to all contractors working at UOW before they undertake work.

Contractors are expected to provide all locks, tags, and other devices required for Lock Out/Tag Out with the possible exception of specialty items unique to UOW plant or equipment.

Contractors involved in an activity that requires Lock Out/Tag Out and who lack the necessary locks, tags, and other devices, may not participate in the work on plant or equipment until they have obtained and applied the required devices.

5.11 Lock Out/Tag Out Purchasing Requirements

The purchaser will be responsible for ensuring that Lock Out/Tag Out requirements are incorporated into purchasing specifications for new plant and equipment. This includes consideration of the appropriate isolation points for all energy sources to enable any work on the plant or equipment to be carried out safely. Where relevant plant or equipment specific Lock Out/Tag Out instructions will be determined on new plant and equipment through the undertaking of a risk assessment.

5.12 Training

The Unit Manager will be responsible for identifying the applicable level of training required for UOW personnel and contractors to performing Lock Out/Tag Out activity.

The Unit Manager will be responsible for ensuring that every individual must be trained to the level of expertise required to understand or perform Lock Out/Tag Out activity in accordance with the plant and equipment being worked upon.

6 Records

All records shall be kept and maintained by the Unit in accordance with the [University Records Management Guideline](#).

7 Monitoring

7.1 Control Measures

The effectiveness of control measures implemented to minimise the risk of identified WHS hazards are to be monitored as per the [UOW Risk Management Guidelines](#). This includes:

- post implementation follow-up of corrective actions
- scheduled workplace inspections and testing by local units
- review of incident and hazard reports
- WHS verification audits.

7.2 Reporting

Any hazards that are identified with Lock Out/Tag Out need to be reported on [SafetyNet](#).

8 Program Evaluation

In order to ensure that these guidelines continue to be effective and applicable to the University, the program will be reviewed triennially. However, more frequent reviews may be required as per legislative changes, corrective actions or continuous improvement.

Following completion of any review, these guidelines will be revised in order to correct any deficiencies. Any changes will be consulted via the WHS Committee.

9 Related Documents and Reference Material

9.1 Related Documents:

- [Risk Management Guidelines](#)

9.2 Reference Material:

- [NSW WHS Act 2011](#)
- [NSW WHS Regulation 2011](#)
- [Code of Practice: Managing the Risks of Plant](#)

10 Version Control Table

Version Control	Date Released	Approved By	Amendment
1	15 April 2013	WHS Manager	Document created
2	April 2016	WHS Manager	Scheduled review

Appendix 1: Lock Out/Tag Out Process

The Lock Out/Tag Out process consists of the following steps:

Step 1: Prepare for Lockout

- a. Identify the equipment to be worked on.
- b. Review any written Lock Out/Tag Out instructions if applicable.
- c. Identify the type, number of energy sources associated with the plant or equipment and the controlling energy-isolating devices.
- d. Inform any UOW personnel or contractors affected by the application of Lock Out/Tag Out process.

Step 2: Lock Out/Tag Out Plant or Equipment

- a. Stop the plant or equipment using the appropriate stop control.
- b. Manually shift/move/operate the energy-isolating device(s) into the de-energised position.
- c. Apply the Lock Out/Tag Out device.
- d. When using tag out (only if the plant or equipment is not lockable), the following additional precautions: remove an isolating circuit element or similar.
- e. Verify the plant or equipment is de-energised (for example, attempt to restart or test the plant or equipment).

Step 3: Perform the Task

- a. Execute the maintenance or servicing task.

Step 4: Prepare to Restart the Plant or Equipment

- a. Remove all tools and parts.
- b. Re-secure all guards.
- c. Inform all individuals working in the area that the plant or equipment is being placed back into service.

Step 5: Restart the Equipment

- a. Remove all locks and tags from energy-isolating devices.
- b. Re-engage the energy-isolating devices.
- c. Restart and check the equipment or system for proper operation and functioning.