



LOCK OUT / TAG OUT GUIDELINES

PURPOSE

These guidelines support the *Health and Safety Policy* and *Health and Safety Management Standards* at the University.

The aim of these guidelines are to:

- Ensure adequate controls are implemented to eliminate risks associated with potential release of energy during servicing, commissioning, repairing or modification works on plant and equipment.

The scope of these guidelines include:

- All Curtin Campuses

DEFINITIONS

Authorised person	A person authorised by the Area Manager/Supervisor, who is sufficiently competent to lock out, tag out and isolate installations or plant for the purposes of cleaning, servicing, repairing or alteration.
Energy Sources	Anything with the capacity for doing work and includes springs under tension or compression, accumulators, capacitors and other energy storing devices.
Isolation of Plant	A means to prevent energy entering the plant and de-energising of plant, in such a way as to prevent the possibility of accidental or unplanned energisation of the whole, or a specific section of the plant.
Isolation Procedure	A set of predetermined steps that must be followed to ensure that plant and related hazards cannot jeopardise the safety of those working on the plant.
Lockout device and personal locks	A device, such as a lock, used to hold an isolating device in the safe position and prevent plant from becoming energised. A personal lock is a lockout device applied by an authorised person, who is in control of the key.



Out of Service Tag A tag used to indicate that the plant is unserviceable and should not be used



Personal Danger Tag

A personal danger tag on the isolation device of an item of plant is a warning that the plant is in an unsafe condition and that operation of that plant may endanger the person who attached the tag.



Plant

A general name for machinery, equipment, appliance, implement or tool and any component or fitting or accessory of these.

1. LOCK-OUT AND TAG-OUT

The manager of the area has a duty of care to ensure that they:

- a) Identify all relevant items of plant and all hazards associated with each item.
- b) Identify energy sources for each item of plant, including multiple energy sources such as electrical, fluids under pressure, fuels, etc.
- c) Authorise one or more employees (eg plant operator, supervisor, maintenance person) who must, if it is practicable to do so:
 - stop the plant, before the above work is carried out.
 - ensure that risks associated with identified hazards are reduced; and
 - ensure the procedure for isolation/lock-out tag-out below is followed.

Employees are required to reduce the risk of exposure to dangerous parts of plant and exposure to possible sources of stored energy during operation/maintenance/servicing.



Safety locks, tags and isolation procedures are required where plant:

- Is in a dangerous condition
- Is being maintained
- Has not been completely installed/commissioned
- Is out of service for repair or alteration.

It is important to note that a tag is NOT in itself an effective isolation device. A tag acts only as a means of providing information to others at the workplace. When practicable, a lock must be used in preference to a tag as an isolation device.

1.1. LOCKING OUT

- a) The lock-out device is to be attached at the isolation point of the energy sources and must effectively prevent the isolation point from being operated in any way.
- b) The authorised person who locks out the plant retains the key to the safety lock or ignition.
- c) Any stored energy in the locked-out plant must be discharged before any work can commence.
- d) If more than one person is working on the same plant, each person must attach their own lock to prevent the isolator being opened before all locks have been removed or opened. The isolation procedure should identify common lock out points to ensure energy cannot be restored while someone is still working on the plant.
- e) If at the end of the work period the job is not completed, the out-of-service tag is to be left on the plant.
- f) Plant should be locked out whenever workers work near dangerous parts that have not been guarded due to the location, and whenever guards are removed for maintenance or repair.

1.2. OUT OF SERVICE TAGS

- a) A yellow and black out of service tag on a piece of plant indicates that it is unserviceable and should not be used.
- b) These tags serve to indicate plant that is out of service for repairs, maintenance, cleaning, or being installed etc. A piece of plant fitted with an out of service tag must not be operated while the tag is in place.
- c) Prior to attaching an out of service tag, all required details on the tag must be clearly and permanently entered in the spaces provided, with emphasis given to the reason for placing the tag.
- d) Tags must be securely fixed and be clearly visible.
- e) If at the end of the work period the job is not completed, the out-of-service tag is to be left on the plant.
- f) Out of service tags should be removed only by an authorised person who is both familiar with the equipment and fully aware of the reason that the tag was placed, except in an emergency situation.



1.3. PERSONAL DANGER TAG

- a) A red and white personal danger tag should be used whenever work is required to be undertaken in or about equipment or machinery that could cause injury.
- b) A tag acts only as a means of providing information to others at the workplace. When practicable, a lock must be used in preference to a tag as an isolation device.
- c) These tags should be restricted to people who will be working on the equipment. These tags should only be applied by suitably skilled, experienced and authorised personnel.
- d) The person doing the work must personally fasten their personal danger tag on all lockout devices involved in the isolation procedure.
- e) Removal of a personal danger tag from an isolating device must be carried out as soon as practicable after completing the work. In every case a personal danger tag must be removed before leaving the worksite at the end of the shift.
- f) A personal danger tag should be removed only by the person whose name is written on the tag.
- g) The Out-of-Service tag must be left attached, unless the plant is safe to return to service.
- h) All disposable personal danger tags must be destroyed after use.

2. ISOLATION PROCEDURES

- a) There must be an isolation procedure for each item of plant, including the application of isolation devices, locks and tags.
- b) The isolation procedure should be displayed in a prominent position as close to the plant as possible.
- c) While isolation procedures may vary in detail because of differences in plant, power sources, hazards and processes, the employee(s) authorised by the employer must ensure that the isolation/ lock-out tag-out procedure below is followed:
 - i. The plant is stopped/shut down.
 - ii. All energy sources are de-energised.
 - iii. All energy sources are isolated using an isolation device and locked out using a lock-out device –
 - all common lock-out points have been identified to ensure energy cannot be restored while someone is still working on the plant; and
 - if more than one person carries out the work, consider a multiple lock system so that each person can attach their own 'personal' lock to prevent the plant is operated before all locks have been removed.
 - iv. An out of service tag is fixed to the plant.
 - v. Danger tags are fixed at the energy sources and the operating controls of the plant.
 - vi. All other potential hazards are controlled.
 - vii. Before any work is carried out, the plant is tested by trying to re-activate the plant, without exposing the tester or others to a risk.
 - viii. The work is carried out on the plant; and



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- ix. Once the work is completed, the workers who tagged the controls remove the locks and tags and carry out the de-isolation process, before the plant is returned to operational status. (See section 2.4)
- d) Once this system has been introduced it must be strictly adhered to and reviewed regularly to ensure it remains relevant.
- e) Certain isolations require a permit-to-work. Go to the [Curtin Properties](#) page for more information

2.1. TESTING ISOLATION PROCEDURE

After plant 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, before any person attempts to start work on the plant.

This should be done by a person familiar with the plant or parts of the plant, including control stations and computers remote from the plant, to ensure isolation procedures have been effective.

Work on the plant should not begin until the authorised person confirms it is safe to do so.

2.2. IF ISOLATION IS NOT PRACTICABLE

If access to plant is required for the above work and it is not practicable to stop the plant, the employer must:

- a) Ensure the plant is fitted with operating controls that allow controlled movement of the plant.
- b) Provide written procedures to be followed; and
- c) Ensure that persons working on the plant carry out the work in accordance with the procedures.

If items of plant are hard-wired or where there are no isolation points:

- a) The appropriate circuit on the switchboard is de-energised and locked out with a lock-out device;
or
- b) The appropriate circuit is de-energised and the switchboard cover is locked with a lock-out device.

These procedures must be strictly followed and reviewed regularly to ensure they remain relevant.

2.3. ENERGY SOURCES AND HAZARDS

All energy sources and other hazards likely to place people doing the work at risk must be identified. An authorised person, who knows the complexities of plant, must ensure all energy sources and potential hazards to those working on the plant are isolated prior to any work being done.

- a) Plant energy sources include, but are not limited to:
 - electricity (mains, solar and by generator)
 - chemicals
 - fuels
 - heat
 - steam
 - pneumatic pressure (compressed air)
 - fluids under pressure, such as water or hydraulic oil



- energy storing devices, such as batteries, springs, flywheels, accumulators and capacitors
 - gravity; and
 - radiation
- b) Depending on the type of plant, other hazards may include:
- hazardous substances, such as gases, acids, alkalis, solvents, glues or pooled liquids in which a person may drown
 - falls
 - burns
 - asphyxiation; and/or
 - impact

2.4. DE-ISOLATING AND RE-INSTATING

The lock-out device may only be removed under certain conditions by an authorised person. An authorised person has determined that it is safe to de-isolate by:

- a) ensuring the installation, plant or equipment is safe to re-energise
- b) notifying all relevant persons that the installation, plant or equipment is about to be re-energised; and
- c) completing a visual inspection to determine that all tools, surplus materials and wastes have been removed

Should authorisation need to be handed over to another person, all personal lock-out devices and danger tags must be replaced to identify the new authorised person.

Where the authorised person cannot remove the lock-out device or cannot hand over to another authorised person, the supervisor/manager may remove the lock-out device only after:

- a) confirming that the authorised person is not available;
- b) ensuring that no one is working on the installation, plant or equipment;
- c) engaging with a suitably competent person to ensure that the de-isolation is safe by:
 - i. identifying energy sources
 - ii. controlling energy sources
 - iii. complying with this procedure; and
 - iv. complying with the relevant local procedures.

EXEMPTIONS

Nil



RELEVANT DOCUMENTS/LINKS

[Health and Safety Policy](#)

[Health and Safety Management Standards](#)

[Isolation of Plant/LOTO Checklist – WorkSafe WA](#)

[Work Health and Safety Act 2020](#)

[Work Health and Safety \(General\) Regulations 2022](#)

[WorkSafe WA \(2010\) Guidance Note – Isolation of Plant](#)

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