

# **ISOLATION PROCEDURES**

# **SAFE WORK PROCEDURE**

#### INTRODUCTION

This procedure outlines the necessary systems to emplace within the workplace to protect workers and visitors from potential injury within the workplace. This procedure sets the guidelines for protective measures to emplace during maintenance, installation and testing of any plant or equipment.

This procedure outlines the processes for the four aspects of isolation: Out of Service Tags, Danger Tags, Isolation Tag Out, Lock Out System.

### **OUT OF SERVICE TAGS**

Machinery, plant or equipment, which is not to be used, should be identified with an "OUT OF SERVICE" tag. Every person conducting work on isolated equipment should fit their own lock and/ or danger tag.

## When tagging equipment, ensure:

- Tags are dated and signed.
- Locks are accompanied by a tag to identified the date and person who locked the equipment.
- Tags should be removed by the person who applied the danger tag or by the supervisor.
- Ensure all required details are filled out, clear and legible on each tag, emphasis should be placed on the reason the tag has been placed.

\*Never use plant or equipment with an 'OUT OF SERVICE' tag attached.

### **DANGER TAGS**

Danger tags must be attached to isolated or dangerous devices to signify there could be a potential danger to a person if they operate the machine.

- Danger tags should always be fixed to devices once they are lock in the 'OFF' or 'SAFE' position.
- A separate "PERSONAL DANGER" Tag must be added for each person working on the equipment.
- The only person authorised to remove a danger tag is the person who put it there or a supervisor in the event the person is unavailable.
- Replace the "DANGER" tag with an "OUT OF SERVICE" tag if work is incomplete.
- Never use, switch on, manipulate or interfere with machinery, plant or equipment that has a personal "DANGER" tag attached.

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# **SAFE WORK PROCEDURE**

#### **ISOLATION TAG OUT**

For equipment that must be isolated, a tag indicating the device is "OUT OF SERVICE" should be placed on power switches and leads.

- Obtain permission to isolate plant and equipment (use a permit system if relevant).
- Isolate the plant, electrical equipment, machinery or circuit.
- Attach danger tags.
- · Erect safety barriers if required.
- Ensure all tools are properly insulated.
- Do not work on 'live' equipment and only start work when authorised to do so.

#### **LOCK OUT SYSTEM**

The Lock-out process is the most effective form of isolation to protect workers on or nearby equipment and machinery that is being repaired, installed, cleaned or maintained.

## The process is as follows:

- Shutdown the machinery and equipment, and isolate from the power source.
- Identify all isolation points and hazards.
- Lock out all isolation points.
- Tag machinery controls, energy sources and other hazards.
- A tag itself should not be used as a isolation device. Lock out is the only effective means of isolating an energy source.
- Test lock out system by 'trying' to reactivate the plant without exposing the tester or others to risk (failure to reactivate ensures that isolation procedures are effective and all stored energies have been dissipated).

## Energy sources include but are not limited to:

- Electricity (mains)
- Battery or capacitor banks
- Fuels
- Heat
- Steam
- Fluids or gases under pressure (water, air steam or hydraulic oil)
- Stored energy
- Gravity
- · Radiation.



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In order to isolate plant, a device that effectively locks out the isolation points will be used. These devices include:

- Switches with built-in locks
- Lock-out circuit breakers
- Use lockout devices
- · Lockout valves Other devices include
- Chains
- Safety lockout jaws (also known as hasps)
- Safety padlocks

When isolating an energy source, a lock that allows one or more padlocks to be fitted will be used. If more than one person is working on the plant at the same time, ensure that each worker is able to attach their own padlock to the device.

## When Working:

- Use safety observers if required (et.g. working in a confined space).
- Ensure you have followed correct procedures.
- Check that isolation/lock out/tag out systems are in place before resuming work after any break.

### ON COMPLETION OF WORK

- Ensure no tools are left on.
- Check the work is complete and the equipment is re-connected to the power source.
  Equipment not in use should always be switch off at the power source.
- Notify all relevant personnel that the equipment is to be reconnected or energised.
- Authorised person to sign off work permits (if relevant).
- Remove all Danger Tags and barriers, store these is the appropriate storage location.