



RISK &  
SUSTAINABILITY  
SERVICES

# The TEG Explainer Guide to LOTO

---

# What is LOTO and what does stand for?

---



## LOCK OUT TAG OUT

Every year, hundreds of Kiwi employees are seriously injured or killed by machinery. Fingers blades and bodies are crushed by presses.

Many of these incidents occur because energy source isolation and de-energisation has not carried out by the machine operator.

LOTO stands for **LOCK OUT, TAG OUT** and is a set of established procedures that includes locking out and tagging out each of the energy sources on a machine.

### Why is LOTO necessary?

Every manufacturing workplace with machines should have a hazardous energy control programme in place. One of the most important features of this programme is LOTO.

### What are the risks associated with Hazardous Energy Control and LOTO?

Nearly all machines and equipment carry some element of 'hazardous energy.' This is any type of energy that can be released without warning, potentially causing harm to a person using, cleaning, or servicing the machine.

Hazardous energy can be chemical, electrical, hydraulic, mechanical, pneumatic, thermal, or gravitational. Without the right safety procedures, all workers are at risk of being injured when a machine releases any of these forms of energy.



---

---

---

---

---

---



### Examples of hazardous energy causing harm:

- **A worker is servicing a press.**  
Another worker is unaware of this and starts the press. The service worker is caught in the press and suffers severe injuries.
- **A conveyor jams and a worker reaches in to clear the jam.**  
The jam suddenly clears and the machine starts again unexpectedly, crushing the worker.
- **A worker notices that the chains have fallen off the double-idler sprocket at the bottom of a sawmill unscrambler.**  
He turns the power off but doesn't lock out the power source. He then starts to put the chains back on the sprocket. Meanwhile, another worker notices that the unscrambler isn't running, so he turns the power back on. The machine starts up and the worker suffers serious injuries.

### What arrangements are necessary to support a robust LOTO Programme?

For LOTO to be effectively implemented by those who interact with the machine, e.g., operators, cleaners, maintainers, and repairers, the process should be as quick and simple as possible.

- 1 **Place isolation devices close to the machine.**  
If cleaners have to walk down a hallway to a switchboard to get to the isolator, they are less likely to lock it out.
- 2 **Make isolation devices easy to find.**  
If they are not, ensure that they are well-labelled or signposted, e.g., with pictures or labels. If pneumatic isolation valves are hidden or multiple valves are present, risk of error and subsequent harm increases if the correct isolator is not secured.
- 3 **Document** any specific shutdown, testing, or reinstatement procedures.
- 4 **Make procedures and information easily accessible** to contractors, temp staff, and rotating staff, ideally at the point of use.



---

---

---

---

---

---

# Why is LOTO a particularly relevant machine safety programme area?



**Current Health and Safety in Employment Regulations 1995 require organisations to isolate and secure energy sources and movement of machinery.**

A robust LOTO programme requires a well-developed management system with systematic plant reviews and well-trained and supervised staff. The manufacturing industry has not implemented these measures to a high standard. Furthermore, the low standard of guarding on New Zealand equipment means that fixed guards are often in place where routine access to hazardous zones is required. (Interlocked guards should be fitted instead.) This means an even greater reliance on often suboptimal LOTO procedures.

## Why is LOTO often done poorly?

Robust LOTO processes require adherence to a specific procedure, machine by machine:

- a.** Machine-by-machine inspection and evaluation is required to develop processes, which takes more time than people can give or requires engineering or machine knowledge that people don't have
- b.** A large number of machines and energy sources means a lot of information to collect, log, track, and update. Without specialist tools, this process can become time-consuming and error-prone
- c.** If procedures are documented, they are often in SOPs that sit in a manual that aren't easily accessed by all relevant people
- d.** Isolating devices may be hard to find/access or the line has not been designed for easy isolation



---

---

---

---

---

**HOW TEG RISK AND THE MINRISK APP HELP WITH LOTO**

**Lock Out, Tag Out (LOTO) procedures** are even easier with The MinRisk App, TEG Risk’s machine risk assessment app.

**The MinRisk App automates the LOTO process** and can produce LOTO cards or placards for each machine.

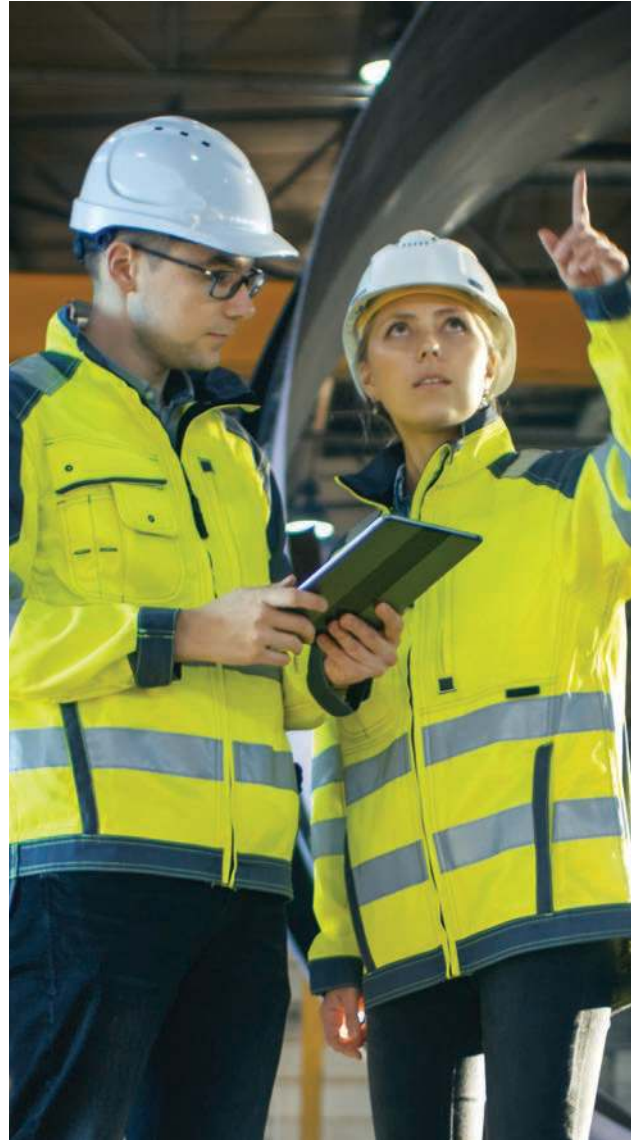
**LOTO allows a company to minimise the risks** associated with machinery when it comes to cleaning, maintenance, and repair.

**The MinRisk App allows you to capture information** at the machine as you walk around the plant. This includes reference photos that you can mark up to highlight isolation points.

**The MinRisk App’s structured workflow** allows the systematic and consistent recording of required information. Granular data capture facilitates quicker updates.

**Corrective action functionality as well as meaning required improvements**, e.g., fitting a new isolator can be recorded and an action plan generated.

Once all the data and photos have been captured, you can **produce LOTO cards with the touch of a button**. LOTO cards include information on energy sources, instructional steps, and informative, marked-up photos showing where isolators are and how to safely secure them. The MinRisk App can produce the cards in PDF format so employers can print them, laminate them, and place them at the machine. The file can even be printed on a plastic card if a more durable solution is required.




---



---



---



---



---

# LOTO improves worker safety

---

Applying LOTO allows companies to minimise the risks associated with machinery when it comes to cleaning, maintenance, and repair.

By creating detailed LOTO cards, your machine operators will have access to vital information including energy sources, isolator locations, and how to secure them. Providing this resource for your workplace will make it safer and more compliant.

**Get in touch with our team if you're looking to improve your LOTO procedures.**

## GET IN TOUCH

Contact us to find out more about **TEG Risk**

P. 0800 6255 582

E. [info@tegrisk.co.nz](mailto:info@tegrisk.co.nz)

Or visit [www.tegrisk.co.nz](http://www.tegrisk.co.nz)