The Lockout Time Crisis:
Six Insights
to Improve Access to Lockout Equipment That Save Valuable Time

A MASTER LOCK WHITE PAPER

Master Lock
SAFETY SOLUTIONS™

Introduction

Too often the time to lockout equipment is weighed against the time to fix the issue. Even worse, poor access to the necessary procedural information, lockout equipment and isolation points are excuses used by workers to justify not protecting themselves. This crisis of time management results in needless injuries and deaths every year. Let's take a look at an example of how this might occur and what you can do to protect your workers and your company's reputation.

#1

A Typical Accident Scenario

Jack is an equipment operator on a production line. He realises his machine has jammed, bending a metal part badly enough that it cannot be automatically cleared. For a simple jam, he just reaches in and removes the part manually like he's been shown by his co-workers. Jack has had enough lockout training to know he should call maintenance.

Eric is one of the production maintenance workers at the plant and feels like he is spread pretty thin. He goes over to Jack to determine the problem. Eric knows he should lockout out before removing the jammed part, but doesn't have the air valve lockout device with him. It's being used on another machine nearby that he is currently repairing. So are most of his locks. Eric decides not to waste time with lockout and use his pliers to pull the bent part out. He wrestles the jammed part loose and discards it as scrap. He reaches in to confirm no damage has occurred to the machine clamping equipment and, in doing so, triggers a sensor that slides the next piece of metal into the fixture. His hand is caught by the incoming metal and the clamps automatically engage, trapping his fingers and crushing his hand.

Insight: What This Scenario Teaches Us

- Most companies only train maintenance personnel to perform lockout, resulting in too few people attending to equipment issues.
- Although Jack knew to call maintenance, he routinely engages in the unsafe practice of clearing his machine because that's how he was trained.
- Safework reports that incidents involving moving machinery and maintenance accounted for 10% of total workplace fatalities between 2015 and 2019.

- The time required to apply and remove lockout is most frequently given as the root cause during accident investigations, which includes:
    - too great a distance or poor access to LOTO equipment
    - poor access to the specific procedures for locking out the machine, and
    - insufficient or missing LOTO equipment.
- Eric said that he believed he could fix the machine quickly without LOTO, that there was no access to LOTO equipment for it, and that his LOTO equipment was already in use elsewhere.

#2

Best Practices: The Importance of Following the WH&S Codes of Practice

a) The Codes of Practice as released by Safe Work Australia state "that any person conducting a business or undertaking (PCBU) has an obligation to eliminate or minimise the safety risks their employees are exposed to at their place of work. This includes access to a robust, simple and well understood lockout process, standardised isolation plans, adequate and frequent competency assessed training, and access to fit for purpose equipment."

b) The Codes of Practice regarding Management of Electrical Risks at the Workplace state that "PCBU's must ensure that electrical equipment that has been de-energised to allow electrical work to be carried out on it is not inadvertently re-energised while the work is being carried out. This should be achieved by fitting the correct lockout device to the energy source undergoing maintenance."

c) When managing the risks of Plant in the Workplace, all workers conducting maintenance on an isolated energy source must have a padlock fitted to the energy source, or a multi-point lockout device attached to the energy source. In order to isolate plant you should use a device that effectively locks out the isolation points.

Insight: The Real Cost of an Accident

The estimated direct cost of Eric's accident was $70,000, which included medical expenses, worker compensation premiums and WH&S penalties and fines. But what isn't included are the indirect costs: loss of productivity, hiring and training a replacement for Eric, repairs to equipment, overtime to compensate, investigation costs, lower morale of other workers, administration costs, and damage to reputation. These indirect costs routinely are five times greater than the direct costs.

#3

Safety Is Also Good Business Practice

Lean Manufacturing is a management strategy that focuses on the perspective of the customer who consumes a product or service. Lean Manufacturing makes obvious what adds value by reducing everything that could result in wasteful activity that does not add value. There is nothing value-added about a worker accident, damaged machine or the inefficiencies that result, and customers are not willing to absorb those preventable costs.

Insight: The 15 Second Rule

Here's what I've found to be common practice at many facilities: if a worker has to walk more than 15 seconds to get the lockout equipment and procedures he needs, chances are he's going to think twice about taking the time to work safely.

Because production situations requiring lockout happen frequently, keeping the necessary lockout equipment close by—within a 15 second walk—and easily accessible by authorised personnel in the area, eliminates excuses like:

- "The job was quick and I didn't have time to get my equipment."
- "I wasn't sure what I needed to lockout."
- "The lockout equipment I needed wasn't available because someone else had it."

Eliminating excuses like these promotes safety and actually reduces waste by saving time and preventing equipment damage and worker injuries.

#4

Turning The Localisation of 5S into 6S

5S (Sort Out, Organise, Housekeeping, Standardise, Sustain & Improve) is a system that enhances quality and productivity by organising a work space for efficiency and effectiveness through the identification and organisation of the items used, maintaining the area and items, and then sustaining what was accomplished. The process is applied in all work areas or cells to standardise resources, layout and methods to improve the consistency and quality of how the job is completed. 6S ensures that Safety is built into the process of organising and sustaining this kind of workplace.

Insight: The Advantages of 6S

- All needed tools, materials and safety equipment are conveniently located in uncluttered work areas.
- Operators spend less time looking for items or going to get them.
- A clean and orderly workplace leads to greater well-being and increased motivation.
- Company performance improves via:
    - productivity increases,
    - accidents and near-misses decline,
    - quality improves,
    - time savings are achieved, and
    - improved machine maintenance.
- This leads to higher workstation efficiency, which results in higher ROI.

#5

Applying 6S to Lockout Preparations

- Each piece of machinery in the work area should be accurately documented by written lockout procedures. The procedures should use a user-friendly format that goes through step-by-step what it takes to lockout a machine, verifies that the primary energy has been secured, demonstrates that any stored energy has been properly released, and no re-accumulation opportunity exists. And it gives you guidance on how to test the machine to make sure you have been successful in applying your lockout.

- Sufficient authorised workers should be available to quickly respond to all tasks requiring lockout. What I commonly see are companies having only maintenance personnel authorised to lockout. In my opening scenario, Jack, who frequently has jams in his machinery, could easily be trained to lockout his own machine. This keeps production moving more efficiently and saves maintenance people for larger issues.

- Lockout procedures should be posted on the machinery or be immediately available within the work area. Many times I have seen the procedures glued to the machine—the worker can't even turn them over to read the other side!

Regardless of how you post the procedures—on the machine, electronically, nearby binders—make sure the worker can access the whole document.

- Sufficient numbers of personal lockout locks should be assigned to authorised workers and lockout equipment should be organised (wall stations, drawers, moveable stations, tethered to machines, etc) so that a lockout can happen in an efficient and timely manner.
- The complexity of group lockout requirements need to be understood and provided for by application of multi-hole hasps or lock boxes when required.

#6

6S Brings a Local Approach to All Safety Issues

The notion of dividing your facility into cells or departments is very important for:

- chemical safety programs,
- personal protective equipment,
- slip/fall prevention,
- forklift safety,
- confined space entry, and
- hearing protection.

Insight: Take a Local Approach

Part of a successful 6S program is that, instead of trying to account for every single activity at your facility or instituting a blanket one-size-fits-all approach, you put the people who really understand their activity in a position to manage their localised needs and exposures—like Jack and his machine. Using this approach puts the protection where it is necessary, based on localised information and decisions that best protect workers.

Conclusion

With the benefit of this learning, how would Jack and Eric work out in our opening scenario? Jack learnsto safely lockout his own machine using equipment that is nearby. He saves his company time and keepsthe production line running more efficiently. Eric never gets involved in Jack's situation and keeps focused on his own work. The result? No injuries and no added costs for the company both in money and morale.

Please email us at safesite@mayohardware.com.au for more information or with any questions.