TAKING LOCKOUT TO THE NEXT LEVEL
LOCK OUT / TAG OUT BEST PRACTICES

2020

Gena Hedger
734-301-6057
ghedger@mlock.com

Build a Safer LOTO Program by making LOTO easier/more efficient

Lean Principles in Lockout/Tagout

A very REAL way to help your team make the right choices and keep them safe

Leverage Visual Cues

Deployment

Installing and Removing Padlocks

Equipment Audits

Build Efficiencies into Lockout – Visual Cues

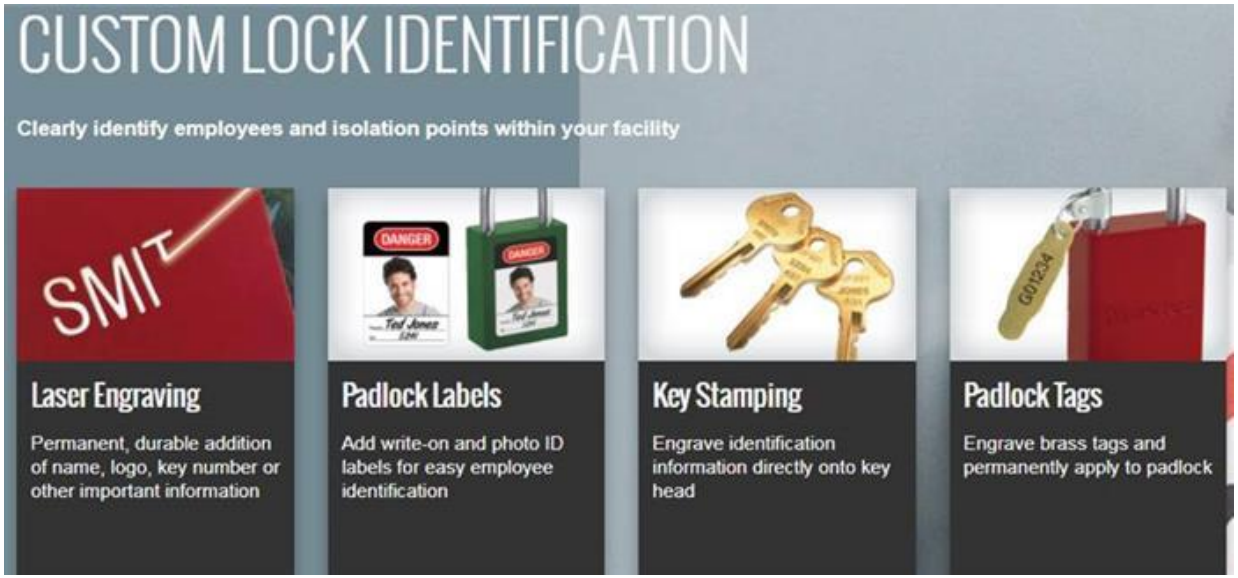
Upon seeing a safety padlock, one should be able to discern what lockout process is taking place and/or who is participating in the lockout.

Select padlock features and options that visually communicate this information to supervisors

Leverage Visual Cues

By User:
Maintenance, Electrical, HVAC etc

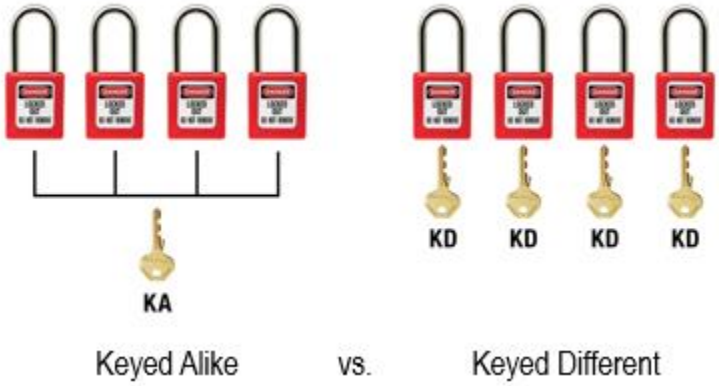
By Purpose:
Personal, equipment, contractor, control, transfer, etc



Build Efficiencies into Lockout – Installing and Removing Padlocks

With the understanding of how many locks are commonly applied during various lockout processes, lock features can be selected to make the application and removal of the locks efficient and frustration-free

INSTALLING AND REMOVING PADLOCKS



Adding information to the locks and keys can help identify which key opens which lock, can single out locks missing from a set, and can identify who owns the lock.

LASER ENGRAVING
Permanently engrave owner, department info, lock ID, key number into the lock body

KEY STAMPING
Permanently stamp ID number, key number or other info on key head

Build Efficiencies into Lockout – Deployment

Don't allow lack of – or access to – lockout equipment to be an excuse for not locking out.
Target 15 seconds as the maximum time it should take to access padlocks and other lockout equipment.

DEPLOYMENT

Rapid Access to
Lockout Equipment

On Person

- Eliminates need for time/ movement to obtain locks, lockout equipment
- Utilization is high
- Carrying through distributed facilities may be burdensome

At Point of Lockout

- Progressive cells, common machinery, machinery in proximity
- Minimizes time to access with no need to transport equipment
- Ideal for distributed facilities and/ or locations where lockout is frequent

Build Efficiencies into Lockout – Equipment Audits

Create a checklist of items that belong in a personal lockout kit or in a lockout station and do a periodic inventory to ensure that all items are in place. (Not to be confused with equipment-specific procedure audit)

EQUIPMENT AUDITS

City of Santa Ana Water Dept PERSONAL Lockout Kits

Employee Name: _____

Part #	Description	Pic	Qty in Kit	Qty Rcvd
S1010	Unfilled Lockout Toolbox		1	
S1107KAMKWA417RMVKREDL21NOKEY & S1106KAMKWA417RMVKREDL213KS	Red Locks, Keyed alike in sets of 12, Master Keyed, Laser engraved		12	
493B	Circuit Breaker Lockout Fits standard height and tie-bar toggles typically found on 120 and 240 volt breakers.		6	
491B	Circuit Breaker Lockout 480 volt Fits wide or tall breaker toggles typically found on hi-voltage/hi-amperage breakers.		3	
S806	6 foot adjustable cable lockout.		1	
S2324	Miniature Circuit Breaker Lockout		3	
7C5RED	Lanyard Lockout		3	
429	Steel Lockout Hasp. 1" jaw. 1-3/4" x 4-1/2" with 1" inside jaw diameter, holds up to 6 padlocks. Heavy gauge steel jaw with red vinyl coated handle.		2	
S4002	Reusable Tags English. Write on with permanent marker, wipe off with isopropyl alcohol. 10 year warranty.		1	
S4050	Rewrite/Reuse durable tags w/10 yr life. 6 per pack. For Out of Service		1	
S3068	Clamps tight on handle stop to prevent handle movement. Can be applied to 1/4" to 4" sized valves		1	

Received Key #_____

Employee Signed: _____

Boiler Lockout Station

Part #	Description	Pic	Qty in Kit	Qty Rcvd
2CJL7	Unfilled Lockout Toolbox		1	
S1106MKWA417KRED	Red lockout locks, Master Keyed		10	
S3821	Circuit Breaker Lockout Fits standard height and tie-bar toggles typically found on 120 and 240 volt breakers.		5	
S3822	Circuit Breaker Lockout 480 volt Fits wide or tall breaker toggles typically found on hi-voltage/hi-amperage breakers.		3	
S3823	Circuit Breaker lockut 480/600V Extra large		3	
6ADF4	6 foot adjustable cable lockout.		5	
40CL92	Lockout Hasp features a 1-1/2in (38mm) inside jaw diameter and can hold up to six padlocks		10	
6CCZ2	Reusable Tags English. Write on with permanent marker, wipe off with isopropyl alcohol. 10 year warranty.		2	
2CJJ6	Gate Valve Lockout 2"-5"		2	
4EMY9	Clamps tight on handle stop to prevent handle movement. Can be applied to 1/4" to 4" sized valves		6	

Build Efficiencies into Lockout – Group Lockout

When servicing and/or maintenance is performed by group of authorized workers , they can use a procedure that provides a level of protection equal to each placing personal lock out lock at each energy control point.

- Identify an Authorized lock out Leader to be responsible for the effective lock out of equipment according to the written procedure to ensure the protection for all others participating in the work to be done
- Group lock out locks shall be placed at all energy control points and all control locks used shall have their keys placed in a group lockbox which is then secured by the lock out Leader placing their personal lock to secure the control keys
- All participating Authorized personnel should verify the proper lock out procedure has been followed to provide a zero energy condition in the machinery they will be working on
- All participating Authorized personnel must then add their personal lock to the group lockbox securing the control keys and must remove their personal lock(s) when he or she stops working on the machine or equipment being serviced

Build Efficiencies into Lockout – Group Lockout

Let's count the locks…

10 Authorized Users x 10 Isolation Points = 100 Locks

3 day project spanning over 3 Shifts

Contractors and Facility Employees

How do you manage a job like this and ensure everyone is safe?

Group Lockbox would require 10 locks in total (1 for each isolation point), plus 1 lock per individual to be applied to the group lock box.

10 isolation locks + 10 personal locks = 20 Locks

Build Efficiencies into Lockout – Group Lockout

Example Scenario for Group Lockout

Who: Sanitation Group

Deployment Strategy: Group Lockout Box mounted near equipment line

Recommended Padlock Approach:

- Single lock color for job/equipment locks
- Keyed alike set based on total number of isolation points
- Only one key kept in Group Lockbox
- Laser engraved with name of the line, key number
- Non-key retaining, no need to cycle key open/ closed to apply lock

Build Efficiencies into Lockout – Transfer Locks

Shift Change!

4 Options:

- **Authorized Employees leave personal LOTO locks & devices in place until job completed.**
- **On-coming Employees apply their personal LOTO locks & devices before the off going Employee(s) remove their personal LOTO devices**
- **On-coming employee starts LOTO from scratch by applying and releasing LOTO for the entire time of servicing. Equipment returned to operational status, with guards in place, and next employee performs LOTO on the equipment.**
- **The use of shift or personnel transfer locks (Continuity Locks)**

Build Efficiencies into Lockout – Transfer Locks

Continuity Lock(s) Best Practices

Continuity Lock(s) – a lock that is intended to ensure continuity of employee protection during shift and personnel changes.

- Different Color/Type than Personal LOTO locks.
- Keyed alike on a common key that all authorized users have access to.
- No work or lockout activities are EVER to be performed under the protection of a Transfer lock. A personal safety lock MUST be utilized before work can proceed.

Supervisory Lock– 1st Lock to be placed on the energy isolation device, and last lock to be removed when job is completed. May be identified and responsible as a group such as:

- Operations Department
- Maintenance Department
- Managing Contractors

Application and Removal of Lock(s) may be different Authorized Employees

Build Efficiencies into Lockout – Transfer Locks

Key Control

Personal Lock = 1 Person 1 Key

Job/Production/Transfer Lock = Multiple Keyed Sets with protocol for Control by designated Authorized Employees

Build Efficiencies into Lockout – Transfer Locks

1st Shift

Personal Lock Shift 1

Transfer/ Job Lock

Build Efficiencies into Lockout – Transfer Locks

1st Shift Work Complete

Build Efficiencies into Lockout – Transfer Locks

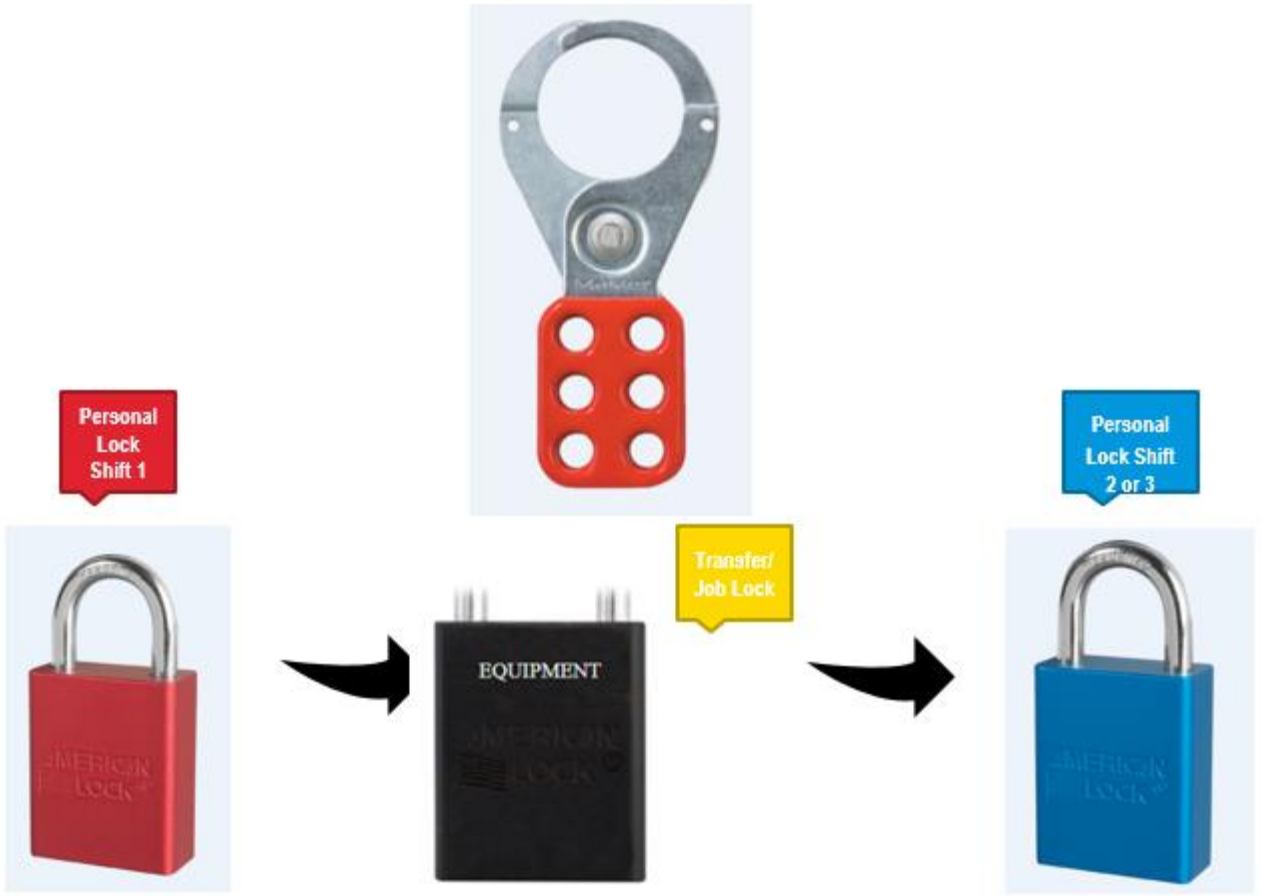
2nd or 3rd Shift

Transfer/
Job Lock

Personal
Lock Shift
2 or 3

Build Efficiencies into Lockout – Transfer Locks

Safe Transfer of Control



Build Efficiencies into Lockout – Transfer Locks

Verification System

- On-coming shift must verify for themselves de-energization and isolation of hazardous energy has been complete.
- Shall not depend upon the actions of the off-going shift that hazardous energy has been isolated.

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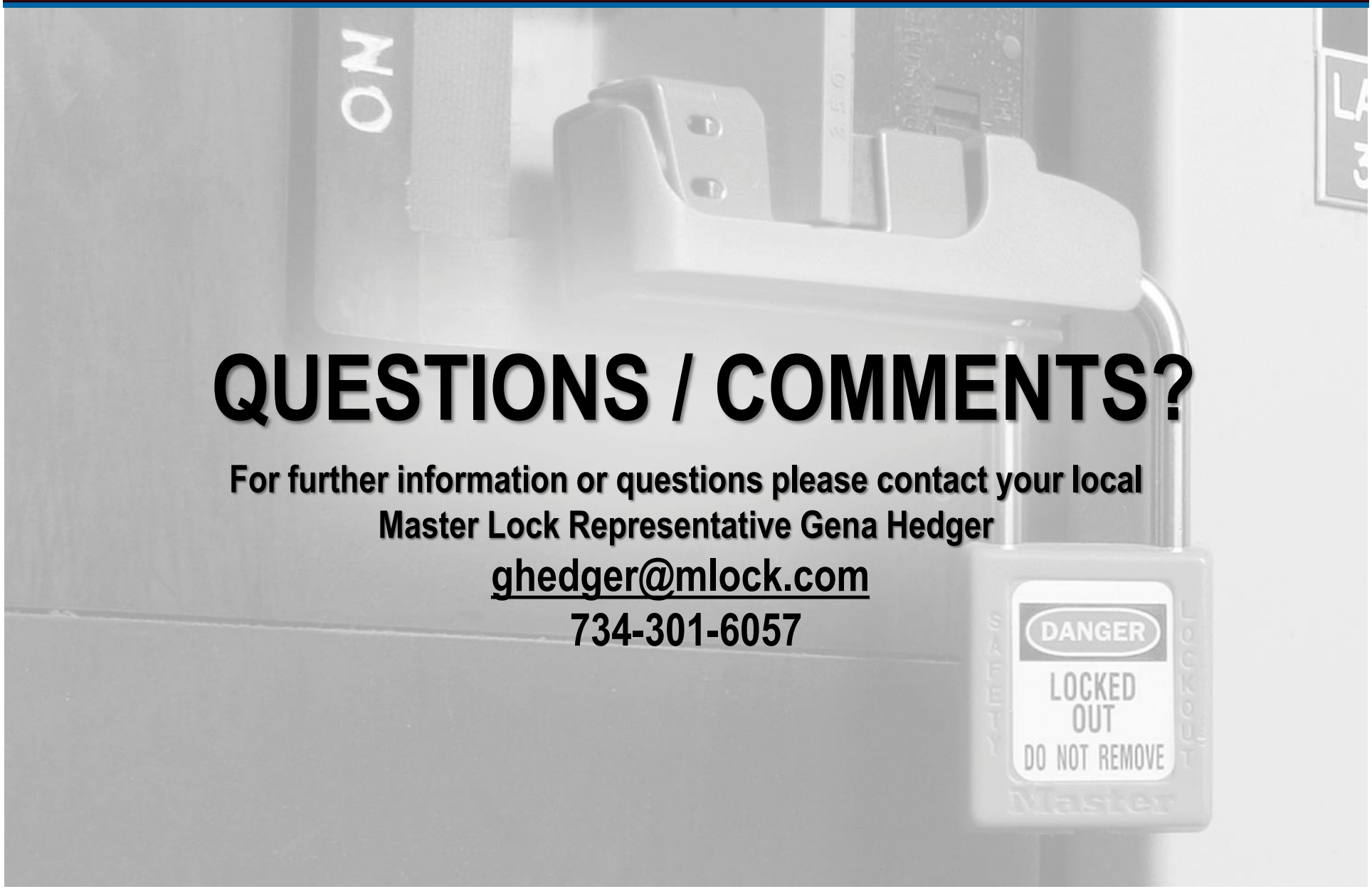
- How do users access their locks & devices? Do they have everything they need within a 15 seconds?
- Placing LOTO gear nearby eliminates wasted time from unnecessary trips back & forth.
- Incorporating Lean into LOTO drives a SAFER BEHAVIOR. If people perceive LOTO as being easy, they are more likely to USE it.
- Keying locks alike in sets is more efficient.

Leverage Visual Cues

Deployment

Installing and Removing Padlocks

Equipment Audits



QUESTIONS / COMMENTS?

For further information or questions please contact your local Master Lock Representative Gena Hedger

ghedger@mlock.com

734-301-6057