

California State University Fresno
Lockout/Tagout Standard Operating Procedure (SOP)
Equipment – Specific Template Instructions

Note Only one SOP is required for identical equipment set up in an identical configuration.

The template includes the following required sections:

- Signatures – Employee who completes the procedure should sign and date, then take the procedure to his/her supervisor for review and signature. If the supervisor has questions regarding any elements of the procedure, these should be taken to the next level manager and Environmental Health & Safety. The supervisor shall keep a copy of the completed form on file, and the original will be kept by the employee performing the work.
- Section A: Procedure Purpose – No additional information is required in this section.
- Section B: Equipment Description – Enter the building and room where the equipment is located. The equipment description should include enough detail to uniquely identify the specific piece of equipment covered by this procedure. If the equipment has an existing identification tag or number, this should be noted. Examples of equipment identification include, “Motor powering pump P-2”, “Air Handler located in southwest corner of the room”, etc.
- Section C: Hazardous Energy Assessment – Identify hazardous energy to which you may be exposed during your servicing work. Example:

| Type of Energy | Type / Magnitude | Danger Zone | Isolation Point(s) |
|--|-----------------------------------|--|--|
| Electrical- low voltage (50-600 V) - list amperage | 480VAC 3 phase 100 amp service | Wiring connection points in motor housing junction box | Disconnect adjacent to motor on right hand side. |

- Section D: Preparation and Notification
 Step 1, Preparation: Identify group lockouts, authorized personnel, and shift changes.
 Step 2, Notifications: Notify and record affected employees (example: department technician who will lose compressed air when compressor is shut down).
 Step 3, Equipment Shutdown: List equipment shut down procedure (note: this is NOT the lockout procedure, this is just the steps to stop and shut down the machine/equipment).

- Section E: Steps for Controlling Hazardous Energy Identified in Section C
For EACH energy source / isolation point identified in Section C, complete the applicable information. Example:

Energy source description: 480 VAC 3 phase 100 amp service

Isolate: Switch disconnect to "off"

Control: Apply lock and tag to disconnect

Dissipation: N/A

Verify zero energy state appropriate to the type of hazardous energy involved: Check voltage at wiring connection point on motor

- Section G: Steps to Return to Service

Refer to Lockout Tagout Program manual for general instructions.

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Author

Employee who completed this form(print name & sign)

date

This document has been reviewed and approved by

Supervisor (print name & sign)

date

Section A. Procedure Purpose

The purpose of this procedure is to identify all hazardous energies and hazardous energy isolation points and list all required steps to safely shut equipment down and return it to service after work is completed.

Failure to follow this lockout procedure may result in injury to personnel or damage to equipment and may result in disciplinary action, up to and including termination.

Section B. Equipment Description

Equipment Location: Building: _____ Room Number: _____

Equipment Description:

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Section C: Hazardous Energy Assessment

Evaluate the equipment for all hazardous potential energy sources and check the left hand box if present. For each, describe the type and magnitude, danger zone (the part(s) of the equipment where the energy is found), and isolation points. Note: Describe how to control each identified hazardous energy source in Section F.

| | Types of Energy | Type / Magnitude | Danger Zone | Isolation Point(s) |
|--------------------------|--|-------------------------|--------------------|---------------------------|
| <input type="checkbox"/> | Electrical - low voltage (<50 V) - list amperage | | | |
| <input type="checkbox"/> | Electrical - low voltage (50-600 V) - list amperage | | | |
| <input type="checkbox"/> | Electrical - high voltage (>600 V) - list amperage | | | |
| <input type="checkbox"/> | Pressure - hydraulic, pneumatic > 150 psi in rigid pipe 50 psi in flexible, unsecured lines | | | |
| <input type="checkbox"/> | Mechanical - capable of crushing, pinching, cutting, snagging, striking | | | |
| <input type="checkbox"/> | Thermal - high temperature-surface temperature, hot liquids, steam Liquids or gases > 125°F (52°C) Surfaces ≥ 140° F (60°C) | | | |
| <input type="checkbox"/> | Stored energy - flywheel, springs, differences in elevation, capacitors, batteries, etc. | | | |
| <input type="checkbox"/> | Emergency power - does the equipment maintain an emergency power/uninterruptible power supply? | | | |
| <input type="checkbox"/> | Other - describe | | | |

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Section D: Preparation and Notification

Step 1. Is this a Group Lockout? Yes No

If "yes" list all authorized employees working under this lockout:

Primary Authorized Employee: _____

Other Authorized Employees: _____

Will this lockout span a shift change? Yes No

If "yes" then supervisor or manager must sign this section confirming that the following shift has been notified of the presence of the lockout and the need to place their locking devices at the energy control point before working on the locked out equipment:

Name of Supervisor/Manager: _____

Signature of Supervisor/Manager: _____

Step 2. Notify

Prior to starting work, notify affected workers of the lock out activity.

Employees notified: _____

Step 3. Shut equipment down steps:

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Section E. Steps for Controlling Hazardous Energy Identified in Section C

Energy source description:

Isolate:

Control:

Dissipation:

Verify zero energy state appropriate to the type of hazardous energy involved:

Energy source description:

Isolate:

Control:

Dissipation:

Verify zero energy state appropriate to the type of hazardous energy involved:

Energy source description:

Isolate:

Control:

Dissipation:

Verify zero energy state appropriate to the type of hazardous energy involved:

Energy source description:

Isolate:

Control:

Dissipation:

Verify zero energy state appropriate to the type of hazardous energy involved:

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Section G: Steps to Return to Service

Step 1. Verify equipment and area is clear of tools, workers, equipment, materials, and debris.

Step 2. Unlock and remove any blocking devices; remove linkages.

Step 3. Reposition any safety devices, guards, interlocks.

Step 4. Warn workers to stay clear of area.

Step 5. Remove all locks and tags for energy control points.

Step 6. Verify affected areas are clear of personnel.

Step 7. Re-energize the equipment. Note: be certain to consider effects of re-energization on all systems “downstream” of energy source.

Step 8. Notify supervisor when work is complete.

Step 9. If you find any errors in this procedure, or have suggestions on how to improve it, provide your comments to your supervisor.