

**UNIVERSITY OF WASHINGTON LOCKOUT TAGOUT (LOTO) PROCEDURE**  
(WAC 296-803)

<b>DESCRIPTION:</b>	
University of Washington Department/Division: <i>Paul G. Allen School of Computer Science &amp; Engineering</i>	Building/Address: <i>3800 E Stevens Way NE, Box 352355, Seattle, WA 98195</i>
Equipment ID: <i>2045816</i>	Equipment/System Description: <i>PRS Alpha CNC Router &amp; Vacuum Tie</i>
Location: <i>CSE2 G15A</i>	Procedure last updated: <i>2022.12.19</i>

**PURPOSE:** (WAC 296-803-20005)  
This procedure establishes the minimum requirements necessary to protect employees from injury caused by the unexpected energization, start up, or release of stored energy during service or maintenance. Use this procedure to make sure the machine or equipment is stopped, isolated from all potentially hazardous energy sources, and locked out before any employee begins work

**AUTHORIZATION:** (WAC 296-803-20005)  
List any authorized persons authorized to lock and tag out the machine or equipment using this procedure:

Alexander Lefort, Fabrication Research Lab Manager

**SCOPE:** (WAC 296-803-20005)  
Provide a description of the scope of work for this service or maintenance work (include the work order #): Work order #:

Oiling/Greasing  
Tuning axes  
Replacement of spoil board.

**NOTIFY:** (WAC 296-803-20010)  
Notify all affected employees that the machine or equipment is to be shut down and locked out for service or maintenance:

Name/Job Title:	Notification Method:
<i>Listserv</i>	<b>E-mail</b>
Lab Personnel	Sign posted on equipment

**NORMAL SHUTDOWN:** (WAC 296-803-20010)  
Shut down the machine or equipment by normal stopping procedures (such as depressing a stop button, opening switches, or closing valves). List the types and locations of machine or equipment operating controls:



Shutdown Method:	Location:
Turn keyed spindle power switch to left, remove key.	Left side of machine in center of control box.
Turn control box power knob to 'OFF' position.	Left side of machine on left side of control box.
Turn vacuum tie-down cut-off box power knob to 'OFF' position.	Left side of machine, right of the control box.

**ISOLATE AND LOCKOUT:** (WAC 296-803-20001)


Isolate energy sources using appropriate isolating devices. Lock and tag out the energy isolating devices with assigned individual locks and tags:

**WARNING: The following are the known lockout steps. If additional steps are discovered, inform your supervisor, lock them out, and modify this procedure accordingly.**

1		<p>Energy source and magnitude:</p> <p>Type of energy source: <input type="text" value="Electrical"/></p> <p>Magnitude: <input type="text" value="208V 30A"/></p> <p>Energy Isolating Device Location:</p> <p><i>Left side of machine on control box</i></p> <p>Isolation device/procedure:</p> <p><i>Turn control box power knob to the 'OFF' position.</i></p> <p>Control Method: Lock/Tag Info <i>(Initial and Date)</i></p> <p><i>Apply lock-out pad lock by pressing black part of knob in toward the machine and insert pad lock hasp through revealed hole.</i></p> <p>Method to relieve residual/stored energy:</p> <p><i>N/A</i></p> <p>Verification Method:</p> <p><i>Attempt to turn control box knob to 'ON' position.</i></p> <p>Restored by: <i>(Initial and Date)</i>: <input type="text"/></p>
2		<p>Energy source and magnitude:</p> <p>Type of energy source: <input type="text" value="Electrical"/></p> <p>Magnitude: <input type="text" value="208V 30A"/></p> <p>Energy Isolating Device Location:</p> <p><i>Left side of machine toward center of control box.</i></p> <p>Isolation procedure:</p> <p><i>Rotate switch with key inserted to the left until it clicks.</i></p> <p>Control Method: Lock/Tag Info <i>(Initial and Date)</i></p> <p><i>Pull the key out and keep in manager's pedestal.</i></p> <p>Method to relieve residual/stored energy:</p> <p><i>N/A</i></p>

		<p>Verification Method:</p> <p>Attempt to turn switch to the right.</p> <p>Restored by: (Initial and Date): <input type="text"/></p>
3		<p>Energy source and magnitude:</p> <p>Type of energy source: Electrical</p> <p>Magnitude: 208V 50A</p> <p>Energy Isolating Device Location:</p> <p>Left side of machine, to right of control box.</p> <p>Isolation device/procedure:</p> <p>Turn power knob to 'OFF' position.</p> <p>Control Method: Lock/Tag Info (Initial and Date):</p> <p>Pull out the knob's forward face to reveal lock-out point. Use lock-out hasp lock by feeding hasp through hole.</p> <p>Method to relieve residual/stored energy:</p> <p>N/A</p> <p>Verification Method:</p> <p>Attempt to turn knob to 'ON' position.</p> <p>Restored by: (Initial and Date): <input type="text"/></p>
4		<p>Energy source and magnitude:</p> <p>Type of energy source: Electrical</p> <p>Magnitude: 208V 30A</p> <p>Energy Isolating Device Location:</p> <p>On back wall behind CNC router. Right-hand box.</p> <p>Isolation device/procedure:</p> <p>Pull disconnect lever down until it clicks into place.</p> <p>Control Method: Lock/Tag Info (Initial and Date)</p> <p>Feed hasp of a lock-out pad lock through the hole in the disconnect lever.</p> <p>Method to relieve residual/stored energy:</p> <p>N/A</p>



		Verification Method: <div style="border: 1px solid black; padding: 2px;">Attempt to turn on router via control box power switch.</div> Restored by: (Initial and Date): <input style="width: 80%;" type="text"/>
5		Energy source and magnitude: Type of energy source: <input style="width: 80%;" type="text" value="Electrical"/> Magnitude: <input style="width: 80%;" type="text" value="208V 50A"/> Energy Isolating Device Location: <div style="border: 1px solid black; padding: 2px;">On back wall behind CNC router. Left-hand box.</div> Isolation device/procedure: <div style="border: 1px solid black; padding: 2px;">Pull disconnect lever down until it clicks into place.</div> Control Method: Lock/Tag Info (Initial and Date) <div style="border: 1px solid black; padding: 2px;">Feed hasp of a lock-out pad lock through the hole in the disconnect lever.</div> Method to relieve residual/stored energy: <div style="border: 1px solid black; padding: 2px;">N/A</div> Verification Method: <div style="border: 1px solid black; padding: 2px;">Attempt to turn on vacuum motor at vacuum disconnect.</div> Restored by: (Initial and Date): <input style="width: 80%;" type="text"/>

**GROUP LOTO: (WAC 296-803-50050)**  
Determine which procedures to use if more than one person will be involved in the LOTO procedure:

<p style="color: red; text-align: center;"><b>Will more than one person will be involved in this procedure?</b></p> <p><i>If you select NO, group LOTO will not be used, skip to next section</i></p> <p><i>If you select YES, a group LOTO will be used, and describe your group LOTO method below</i></p>	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
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**Choose a group LOTO method:**

A hasp will be used for this procedure

A lock box will be used for this procedure    Lock Box Identification #:

A Primary Authorized Person    Name:

Name:

During shift or personnel changes, make sure there is continuous LOTO protection and record the new PAP and date each time there is a change.

**THE MACHINE OR EQUIPMENT IS NOW LOCKED OUT AND SERVICE OR MAINTENANCE CAN BE DONE**



**RESTORE:** (WAC 296-803-50035)

Restore the machine or equipment to service after the service or maintenance is completed.

**Step 1:** Check the machine or equipment and the immediate area around it to make sure all non essential items have been removed and that the machine or equipment is in operating condition and ready to energize.

**Step 2:** Make sure all employees are safely positioned for starting or energizing the machine or equipment.

**Step 3:** Verify that the controls are in neutral.

**Step 4:** Remove the lockout devices and reenergize the machine or equipment.

**Note:** Some forms of blocking may require re-energization of the machine before they can be safely removed.

**Step 5:** Notify affected employees that the servicing or maintenance is completed and the machine or equipment is ready to use.