

# JOB SAFETY ANALYSIS

Safety Information for the University of California, Berkeley

## DEPARTMENT OF MECHANICAL ENGINEERING

### OPERATING A DRILL PRESS

TASK	HAZARDS	CONTROLS
1. Assess work area; is it clear of obstructions and slip/trip/fall hazards?	<ul style="list-style-type: none"><li>Slip, trip, or fall</li></ul>	<ul style="list-style-type: none"><li>Clear work area of any obstructions or slip/trip/fall hazards</li></ul>
2. Secure work piece to table using vise or T-slot clamps	<ul style="list-style-type: none"><li>Pinch points for fingers</li><li>Lacerations to fingers/hands from material</li><li>Work piece coming loose or flying out of vise</li></ul>	<ul style="list-style-type: none"><li>Keep hands free from pinch points, do not put fingers under part or vise</li><li>Deburr work piece before loading into vise, <b>wear gloves only when loading/unloading material</b></li><li>Tug on work and check if secure prior to drilling</li></ul>
3. Load drill bit into chuck	<ul style="list-style-type: none"><li>Pinching hazards</li><li>Lacerations to hands/fingers from bit</li><li>Misalignment of bit in chuck</li></ul>	<ul style="list-style-type: none"><li>Keep hands free from pinch points</li><li>Handle tool bit with care; avoid sharp edges</li><li>Ensure all 3 chuck jaws are making contact with the bit</li></ul>
4. Perform drilling operation	<ul style="list-style-type: none"><li>Part ejected from vise, hitting operator</li><li>Flying debris from drilling operation</li><li>Entanglement of operator</li><li>Excessive noise levels</li></ul>	<ul style="list-style-type: none"><li>Ensure the part is secure in the vise. Use appropriate feed and speed</li><li>Always wear safety glasses when operating</li><li>Never wear loose clothing when operating, tie hair back, tuck in drawstrings, and remove jewelry</li><li>Wear hearing protection if necessary</li></ul>

<b>Other Information:</b> <b>Contributors:</b> <b>Created:</b> <b>JSA Library Number:</b>	5. Unload part from vise	<ul style="list-style-type: none"> <li>• Pinching hazard to hands/fingers</li> <li>• Laceration hazard to hands/fingers</li> <li>• Foot injury from falling vise or part</li> </ul>	<ul style="list-style-type: none"> <li>• Keep hands/fingers clear of pinch points</li> <li>• <b>Wear gloves only when loading/unloading material</b></li> <li>• Do not leave vise unsecured, keep feet a safe distance away from potential falling objects</li> </ul>
	6. Clean table after use	<ul style="list-style-type: none"> <li>• Eye injury from debris</li> </ul>	<ul style="list-style-type: none"> <li>• Wear eye protection</li> <li>• Do not use compressed air to clean table. Use a chip brush and wipe up excess oil.</li> </ul>
	<b>Required Training:</b> Student Shop Safety Training Program ( <i>Phase I</i> )	<b>Required Personal Protective Equipment (PPE)</b> Leather gloves, safety glasses, ear plugs/muffs	
	<p><a href="#">Delta Drill Press Manual</a></p> <p>Scott G. McCormick; R&amp;D Engineering Manager, Jacob Gallego; Principal Lab. Mech.</p> <p>July 2020</p> <p>(EH&amp;S will insert number here, if applicable)</p> <p>For more information about this JSA, contact the <i>Office of Environment, Health and Safety</i> at UC Berkeley, 317 University Hall #1150, Berkeley, CA 94720-1150 (510) 642-3073 • <a href="http://www.ehs.berkeley.edu">http://www.ehs.berkeley.edu</a></p>		