



**UNC**  
ENVIRONMENT,  
HEALTH & SAFETY

# Job Safety Analysis

Safety Information for The University of North Carolina at Chapel Hill

All UNC Shops

**JOB SAFETY ANALYSIS TOPIC:**

**Portable Air Compressor**



Title	Work Task	Hazards	Controls
<b>Pre-Operation and Preparing for the Job</b>	<ol style="list-style-type: none"> <li>1. Pre-plan the work and assess the work area.</li> <li>2. Assess the equipment for damaged parts</li> <li>3. Select the appropriate PPE needed to perform the job task.</li> </ol>	None	<ul style="list-style-type: none"> <li>• Administrative               <ul style="list-style-type: none"> <li>○ If equipment is damaged or broken, replace or have equipment repaired</li> </ul> </li> <li>• PPE               <ul style="list-style-type: none"> <li>○ Gloves</li> <li>○ Safety goggles</li> </ul> </li> </ul>
<b>Site Preparation</b>	<ol style="list-style-type: none"> <li>4. Place tank in a well-ventilated area preferably 20 ft from work area</li> <li>5. Mark off area where work will be done</li> <li>6. If device uses multiple hoses use colored tags or multicolored hoses to keep hoses from tangling</li> </ol>	<ul style="list-style-type: none"> <li>• Chemical (toxic)</li> <li>• Slips, trips, falls</li> </ul>	<ul style="list-style-type: none"> <li>• Engineering               <ul style="list-style-type: none"> <li>○ Ensure area is well ventilated</li> </ul> </li> <li>• Administrative               <ul style="list-style-type: none"> <li>○ Keep alert of all hoses when walking throughout area</li> </ul> </li> </ul>
<b>Using the Compressor</b>	<ol style="list-style-type: none"> <li>7. Turn the power switch to on</li> <li>8. Wait for compressor pump to fill air tank</li> <li>9. Connect any hoses or tools</li> <li>10. Prepare for tank to re-pressurize periodically throughout use</li> </ol>	<ul style="list-style-type: none"> <li>• Explosion (over pressurization)</li> <li>• Struck by</li> <li>• Noise</li> </ul>	<ul style="list-style-type: none"> <li>• Administrative               <ul style="list-style-type: none"> <li>○ If spraying compressed air, ensure regulator does not exceed 30 psi between uses</li> <li>○ If using for a pneumonic device only use recommend PSI for each device</li> <li>○ Do not touch moving parts</li> </ul> </li> <li>• PPE               <ul style="list-style-type: none"> <li>○ Same as above</li> <li>○ Hearing protection may be needed depending on devices used with compressor and proximity of compressor to work area</li> </ul> </li> </ul>
<b>Clean up</b>	<ol style="list-style-type: none"> <li>11. Turn off power switch</li> <li>12. Disconnect any hoses or tools</li> <li>13. Bleed air tank</li> <li>14. Unscrew valve at bottom of tank and allow remaining pressure to force out</li> </ol>	<ul style="list-style-type: none"> <li>• Struck by</li> <li>• Noise</li> </ul>	<ul style="list-style-type: none"> <li>• Administrative               <ul style="list-style-type: none"> <li>○ Regularly have equipment serviced and hydrostatically tested</li> </ul> </li> <li>• PPE               <ul style="list-style-type: none"> <li>○ Same as above</li> </ul> </li> </ul>

	any remaining liquid 15. Store tank indoors in a cool dry place with valves open		
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<b>Training</b>	Employees must receive training on this JSA, Hand and Power tools, and PPE Some trainings can be found on EHS website at <a href="https://ehs.unc.edu/training/self-study/">https://ehs.unc.edu/training/self-study/</a>	Supervisor is responsible for ensuring the employee reviews the JSA and any EHS guidelines.	
<b>Created</b>	Taylor Moore, Industrial Hygienist, February 21, 2020		
<b>Referenced Material</b>	EHS Website; UCLA job safety analysis - USING A PORTABLE AIR COMPRESSOR		
<b>Contact Info</b>	For more information about this JSA and other JSAs, contact: <i>Department of Environment, Health and Safety</i> UNC-CH, 1120 Estes Drive Extension, Chapel Hill NC 27599 CB# 1650 (919) 962-5507 <a href="https://ehs.unc.edu/">https://ehs.unc.edu/</a>		