

 <b>DALHOUSIE UNIVERSITY</b> <i>Inspiring Minds</i>  <b>Safe Work Instructions for          General Purpose Wrenches          and          Pipe Wrenches</b>	<i>Policy Sponsor:</i> Assistant Vice President Facilities Management	<i>Approval Date:</i> May 2010
	<i>Responsible Unit:</i> Facilities Management	<i>Revisions:</i> January 2018
<b>Service: Trade Services</b>		
<b>Shop: Mechanical and other Shops</b>		

<b>Hazards Identified:</b>  Slippery floors, slippery wrenches, poor positioning / lack of balance, wrench not in full contact with the nut or bolt, flying particles or falling debris,
<b>Personal Protective Equipment Required:</b>  Safety footwear, safety goggles or glasses, face shield (if working where debris can fall on the employees face),
<b>Training Required:</b>

These safe work practices must be followed at all times and are to be reviewed annually.

1. Only properly trained, competent, employees are allowed to operate this equipment.
2. DO NOT use this equipment for any purposes other than those intended by the manufacturer.
3. Always follow the manufacturer's instructions for use and maintenance.
4. Required PPE must be worn at all times during the operation of this equipment.
5. Always inspect a wrench before you use it to ensure that it is in good working condition.
6. Ensure the wrench is free of oil, grease or anything slippery that may affect your grip.

7. Check for cracks or signs of metal fatigue.
8. Discard wrenches that damaged in any way.
9. Ensure that the jaws are in good condition, free from burrs, rounded edges, etc.
10. Always use the proper wrench for the job, select the proper jaw size to avoid any chance of the wrench slipping.
11. Never hammer at a wrench to loosen a nut.
12. Never use a wrench as a hammer.
13. Never use an extension on a wrench handle to improve your leverage.
14. Use penetrating oil to help free "frozen" nuts.
15. Clean all wrenches after use and store in proper container or specified location.
16. Never expose wrenches to extreme temperature fluctuations that may compromise the integrity of the metal.

### **General Purpose Wrenches**

1. Always use general use wrenches for nuts and bolts.
2. Only use adjustable wrenches when an open-end, socket or box wrench will not fit.
3. Ensure that the adjustment screw works well and can tighten snugly.
4. Never use open end or adjustable wrenches to start loosening or for the final tightening of a nut.
5. Ensure that adjustable wrenches are tight on the nut before pulling on the wrench.
6. Always use torque wrenches on nuts that are to be set to a specific torque.
7. Only use non-sparking wrenches in an area where there are flammables.

8. When possible use a box or socket wrench with a straight handle rather than an off-set handle.
9. When using a ratchet wrench apply a small amount of pressure to begin with to ensure the ratchet gear is engaged with the pawl for the direction in which you will be working.
10. Always support the head of a ratchet wrench when you are using a socket extension.
11. Always apply a steady, slow pressure on a wrench not fast or jerky movement.
12. Do not use pipe wrenches on nuts and bolts.

### **Pipe Wrenches**

1. Ensure the pipe wrench you will choose is adequate for the work to be performed.
2. Use pipe wrenches to turn or hold pipes not to bend or lift a pipe.
3. Ensure the grip of any pipe wrench you are using is adjusted to maintain a gap between the back of the hook jaw and the pipe.
4. Always position a pipe wrench facing forward so that any pressure exerted is against the heel jaw.
5. Always pull rather than pushing on pipe wrenches.