

## Release Of Updated Training Standard Log Book

<b>Trade Name and Code</b>	<b>429A General Machinist</b>
<b>Implementation Date of New Standard</b>	September 23, 2016
<b>Implementation Plan</b>	<ul style="list-style-type: none"> <li>• Apprentices who began their apprenticeship on the former 2003 Training Standard can complete their program using that standard.</li> <li>• All apprentices with initial training agreements registered on or after September 23, 2016, must be trained to the new standard.</li> <li>• On or after September 23, 2016, any apprentice who loses his or her training standard must be trained to and completed with the new standard even if they began their apprenticeship with the 2003 version.</li> </ul>
<b>Curriculum Standard Impact</b>	<ul style="list-style-type: none"> <li>• None</li> </ul>
<b>Training Standard Access</b>	<p>As of September 23, 2016:</p> <ul style="list-style-type: none"> <li>• The new Log Book will be available on the Ontario College of Trades at <a href="http://collegeoftrades.ca/training-standards">collegeoftrades.ca/training-standards</a>. The College will mail a printed Log Book to each apprentice who becomes a new member of their Apprentices Class in the General Machinist trade when they are mailed their Apprentice's Statement of Membership card.</li> <li>• If the Apprentice wants a copy of the Log Book before receiving the printed copy in the mail, the apprentice can download/print a copy from the College's website.</li> </ul>
<b>Skill(s) or Skill Set(s) Added (New)</b>	<p>Within Skill Set <b>U5230 Protect Self and Others:</b></p> <ul style="list-style-type: none"> <li>▪ <b>Skill U5230.02 Identify And Locate Workplace Safety Features</b> Rationale: This elevates workplace safety awareness beyond Personal Protective Equipment knowledge.</li> </ul> <p>Within Skill Set <b>U5233 Perform Bench Work</b> four new skills added:</p> <ul style="list-style-type: none"> <li>▪ <b>U5233.08 Hand-Broach</b></li> <li>▪ <b>U5233.09 Operate Heating Equipment</b></li> <li>▪ <b>U5233.10 Refurbish Machines and Components</b></li> <li>▪ <b>U5233.12 Complete Work Documentation</b> Rationale: To align with <b>Task 4 Performs hand processes</b> in the current Machinist Red Seal National Occupational Analysis (NOA). These are common bench tasks that an apprentice requires.</li> </ul> <p>Within Skill Set <b>U5236 Perform Machine Grinding:</b></p> <ul style="list-style-type: none"> <li>▪ <b>U5236.02 Select Feed Rate and Depth of Cut</b> Rationale: This skill/task is part of every job in the machine shop and is critical training for an apprentice.</li> </ul>

<p><b>Optional Skills Become Mandatory</b></p>	<p>Within Skill Set <b>U5231 Plan and Prepare for Machining Job:</b></p> <ul style="list-style-type: none"> <li>▪ <b>U5231.15 Select and inspect lifting and rigging equipment</b> Rationale: To align with <b>Task 1 Organizes work</b> in the current Machinist Red Seal National Occupational Analysis (NOA). This is also an essential skill to safely perform work.</li> </ul> <p>Within Skill Set <b>U5232 Perform Work-in-Process Dimensional or Surface Verification:</b></p> <ul style="list-style-type: none"> <li>▪ <b>U5232.07 Maintain material identification</b> Rationale: To be consistent with other Skill Sets in the document and this is also an important skill/task especially when working in aerospace or on lifting devices.</li> </ul> <p>Within Skill Set <b>U5232 Perform Work-in-Process Dimensional or Surface Verification:</b></p> <ul style="list-style-type: none"> <li>▪ <b>U5232.09 Check Surfaces</b> Rationale: The Working Group felt this skill is necessary to ensure surface is properly prepared prior to any machining activity.</li> </ul> <p>Within Skill Set <b>U5233 Perform Bench Work:</b></p> <ul style="list-style-type: none"> <li>▪ <b>U5233.06 Repair Threads</b> (formerly known as Chase Threads) Rationale: To align with <b>Task 4 Performs hand processes</b> in the current Machinist Red Seal National Occupational Analysis (NOA). This is also a basic skill that every machinist should be able to perform.</li> </ul> <p>Within Skill Set <b>U5234 Perform Power Sawing:</b></p> <ul style="list-style-type: none"> <li>▪ <b>U5234.07 Cut Shapes Using a Vertical Bandsaw</b> Rationale: To align with <b>Block F Power Saws, Tasks 12 and 13</b> of the Machinist NOA. This is a basic skill that every machinist should be able to perform.</li> <li>▪ <b>U5234.09 Maintain Material Identification</b> Rationale: To be consistent with other Skill Sets in the document and this needs to be a mandatory skill. This is an important skill for machinists so offcuts do not get misused later on.</li> </ul> <p>Within Skill Set <b>U5237 Perform Lathe Work:</b></p> <ul style="list-style-type: none"> <li>▪ <b>U5237.16 Knurl Cylindrical Surface Patterns</b> Rationale: To align with <b>Task 9, Operates conventional lathes</b> of the Machinist NOA. This is a basic machining skill that can also be used in repair work.</li> </ul> <p>Within Skill Set <b>U5238 Perform Milling:</b></p> <ul style="list-style-type: none"> <li>▪ <b>U5238.06 Perform Fly-Cutting</b> Rationale: To align with <b>Block E Conventional Milling Machines, Tasks 10 and 11</b>, to align with the Machinist NOA which the Red Seal exam is based upon. This is an important milling operation for apprentices to master.</li> </ul>
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	<p>Within Skill Set <b>U5239 Perform CNC Machining</b>: CNC Machinists are becoming more prevalent in the machining world. These basic skills/tasks have been included to ensure all apprentices get exposure to CNC machining.</p> <ul style="list-style-type: none"> <li>▪ <b>U5239.02 Prepare CNC Set-Up Sheet</b> Rationale: To align with <b>Block H – Computer Numerical Control (CNC) Machine-Tools, Tasks 16, 17 and 18</b> of the Machinist NOA.</li> <li>▪ <b>U5239.04 Determine Tool Path and Calculate Coordinates</b> Rationale: To align with <b>Block H – Computer Numerical Control (CNC) Machine-Tools, Tasks 16, 17 and 18</b> of the Machinist NOA.</li> <li>▪ <b>U5239.05 Identify and Select CNC Cutting Tools and Tooling</b> Rationale: To align with <b>Block H – Computer Numerical Control (CNC) Machine-Tools, Tasks 16, 17 and 18</b> of the Machinist NOA</li> <li>▪ <b>U5239.08 Position and Align Workpiece in CNC Machine</b> Rationale: To align with <b>Block H – Computer Numerical Control (CNC) Machine-Tools, Tasks 16, 17 and 18</b> of the Machinist NOA.</li> </ul>
<p><b>Mandatory Skill(s) Become Optional</b></p>	<p>N/A</p>
<p><b>Skill(s) or Skill Set(s) Removed</b></p>	<p>Within Skill Set <b>U5234 Perform Power Sawing</b>:</p> <ul style="list-style-type: none"> <li>▪ <b>Perform Final Inspection</b> Rationale: This skill is part of best work practices which is covered within <b>U5232 Perform Work-in-Process Dimensional or Surface Verification</b></li> <li>▪ <b>Move Workpiece</b> Rationale: This skill is part of every job in the machine shop which is covered within <b>U5231.15 Select and Inspects Lifting and Rigging Equipment</b>.</li> </ul> <p>Within Skill Set <b>U5235 Perform Drilling Using Drill Press/Machine</b>:</p> <ul style="list-style-type: none"> <li>▪ <b>Maintain Material Identification</b> Rationale: This skill is covered within <b>U5232 Perform Work-in-Process Dimensional or Surface Verification</b>. Each company has their own standards for material identification.</li> <li>▪ <b>Move Workpiece</b> Rationale: This skill is part of every job in the machine shop which is covered within <b>U5231.15 Select and Inspects Lifting and Rigging Equipment</b>.</li> </ul> <p>Within Skill Set <b>U5236 Perform Machine Grinding</b>:</p> <ul style="list-style-type: none"> <li>▪ <b>Move Workpiece</b> Rationale: This skill is part of every job in the machine shop which is covered within <b>U5231.15 Select and Inspects Lifting and Rigging Equipment</b>.</li> </ul>

	<p>Within Skill Set <b>U5237 Perform Lathe Work:</b></p> <ul style="list-style-type: none"> <li>▪ <b>Maintain Material Identification</b> Rationale: This skill is covered within <b>U5232.07 Maintain Material Identification</b>. Each company has their own standards for material identification.</li>   <li>▪ <b>Move Workpiece</b> Rationale: This skill/task is part of every job in the machine shop which is covered within <b>U5231.15 Select and Inspects Lifting and Rigging Equipment</b>.</li> </ul> <p>Within Skill Set <b>U5238 Perform Milling:</b></p> <ul style="list-style-type: none"> <li>▪ <b>Maintain material identification</b> Rationale: This skill is covered within <b>U5232.07 Maintain Material Identification</b>. Each company has their own standards for material identification.</li>   <li>▪ <b>Move Workpiece</b> Rationale: This skill/task is part of every job in the machine shop which is covered within <b>U5231.15 Select and Inspects Lifting and Rigging Equipment</b>.</li> </ul> <p>Within Skill Set <b>U5239 Perform CNC Machining:</b></p> <ul style="list-style-type: none"> <li>▪ <b>Verify Tool Sequence, Tool Path, And Collision Avoidance Program</b> Rationale: This skill is covered within Skill Set <b>U5231 Plan and Prepare For Machining Job</b>.</li> <li>▪ <b>Make adjustments to tooling and offsets</b> Rationale: This skill is covered within Skill Set <b>U5231 Plan and Prepare For Machining Job</b>.</li> <li>▪ <b>Maintain material identification</b> Rationale: This skill is covered within <b>U5232.07 Maintain Material Identification</b>. Each company has their own standards for material identification.</li> <li>▪ <b>Move Workpiece</b> Rationale: This skill is part of every job in the machine shop which is covered within <b>U5231.15 Select And Inspects Lifting and Rigging Equipment</b></li> </ul>
<b>General Notes</b>	The 2016 Training Standard was last updated in 2003 and was no longer reflective of industry needs. All of the changes reflect the evolution of the trade and industry's needs.