

ONTARIO COLLEGE OF TRADES
ORDRE DES MÉTIERS DE L'ONTARIO

Apprenticeship
Training Standard
Log Book

Tool/Tooling Maker

630T

What Is This About?

The Apprenticeship Training Standard Log Book identifies all the skills associated with your trade in Ontario. It is written in statements that describe how you, the apprentice, must perform each skill in order to be considered competent in that skill.

Training As An Apprentice

- ✔ Notify Ministry of Advanced Education and Skills Development (MAESD) staff **immediately** of any changes to contact information or training agreement, especially if you change sponsors.
- ✔ Review the Log Book regularly with your trainer and sponsor to track your progress.
- ✔ Keep an accurate record of the hours you work.
- ✔ Attend classroom training when it is offered.
- ✔ Apply for the financial incentives for which you are eligible.
- ✔ Pay your annual membership fee to the Ontario College of Trades and keep your membership in good standing.



Completing Your Log Book

There are two types of signatures required in your Log Book:

Skill Confirmation

You and your trainer sign off each required skill to confirm that you have demonstrated competency in that skill.

Skill Set Confirmation

After you and your trainer have signed off all the required skills in a skill set, **your sponsor** signs the signature box at the end of each skill set to confirm your competency in the skill set.

Shaded boxes in your Log Book mean the skills are optional and do not have to be confirmed by your trainer or sponsor. However, you are encouraged to complete them as part of your training.

Changing Sponsors

- ✔ Contact MAESD immediately if you change sponsors as you will need to sign a new Registered Training Agreement.
- ✔ Record your original Sponsor's information in Sponsor Record #1 (the sponsor who has signed your initial Registered Training Agreement).



This document is the property of the apprentice named inside and represents the official record of your training. For information about completing your apprenticeship, see inside of back cover.



ONTARIO COLLEGE OF TRADES
ORDRE DES MÉTIERS DE L'ONTARIO

Apprentice Name: _____

Address: _____

Phone Number: _____

Email Address: _____

Trade: _____

Ministry of Advanced Education and Skills Development Registered Training Agreement #:

OCOT Membership #:

This document is the property of the Apprentice named herein and represents the official record of their training.

If you have questions about the use of this Training Standard Log Book or about your Apprenticeship program, contact your Apprenticeship office (see Appendix D in this book) or the Employment Ontario hotline at: 1-800-387-5656.

You must become a member of the College of Trades Apprentices Class and maintain your membership in good standing while you complete your training. For more information on membership, please visit the College of Trades website at: collegeoftrades.ca

Apprenticeship Pathway to a Certificate of Qualification

LEGEND

Ontario College of Trades → College

Ministry of Advanced Education and Skills Development → Ministry

Phase 1: Registration

Submit Application for Apprenticeship Training to local Employment Ontario office offering apprenticeship services

Ministry registers training agreement signed by both apprentice and sponsor

Submit College (Apprentice Class) membership application with annual membership fee

Obtain Apprenticeship Training Standard from College
collegeoftrades.ca/training-standards

Phase 2: Apprenticeship

Complete on-the-job training

Complete the on-the-job training set out in the Apprenticeship Training Standard Log Book established by College

Complete in-school training

Complete the in-class training set out in the Curriculum Training Standard established by College at an approved Training Delivery Agent

Maintain College membership

Submit proof of apprenticeship completion to Ministry

Ministry issues Certificate of Apprenticeship

Trades without examination — Trades with examination*

College activates 12-month membership in Journeyman Candidates Class

Contact College to make payment to attempt Certificate of Qualification examination

Contact Ministry to schedule Certificate of Qualification examination attempt

Pass Certificate of Qualification examination must receive grade of 70% or higher to pass

College issues Certificate of Qualification and membership in Journeypersons Class

Phase 3: Certification

Apprentices eligible to apply for apprenticeship grants (Red Seal trades), incentives and loans

Sponsor eligible to apply for the Apprenticeship Training Tax Credit (in specific trades) and other incentives

For information on the proof of completion required for your trade, contact your local Employment Ontario office offering apprenticeship services <http://services.findhelp.ca/eo/tcu/appoff>

Download the College's Exam Preparation Guide to help prepare to attempt the Certificate of Qualification examination
collegeoftrades.ca/resources/exam-process

If the exam is failed, another attempt may be scheduled 15 days after previous exam date. An exam fee is required for each attempt. The exam results letter shows areas of strength and weakness to help prepare for the next attempt

Apprentice eligible to apply for Apprenticeship Completion Bonus

Sponsor eligible to apply for Apprenticeship Completion Employer Bonus

* For a list of trades subject to a certification examination, visit: collegeoftrades.ca/resources/exam-process

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Ministry of Advanced Education and Skills Development Apprentice's Appendices

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Any updates to this publication are available on-line; to download this document in PDF format, please follow the link: collegeoftrades.ca.

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TERMS AND CONDITIONS AS PER REGISTERED TRAINING AGREEMENT

The Apprentice agrees:

- to inform the Ministry of Advanced Education and Skills Development of any change to their contact information or change in sponsor within 7 days;
- to follow the Sponsor's and Trainer's lawful instructions and make every effort to acquire the skills identified in the Apprentice Training Standard Log Book (Log Book) for the Trade which is part of the apprenticeship program established by the Ontario College of Trades for the trade;
- to obtain written verification from the Sponsor and the Trainer(s) that the requirements in the Log Book for the trade have been met.

The Sponsor agrees:

- to ensure that the Apprentice is provided with the training required as part of the apprenticeship program established by the College of Trades for this trade;
- to ensure that the Trainer(s) verifies, in writing, when each skill identified in the Log Book for the trade has been successfully completed by the Apprentice;
- to review the progress of training with the Apprentice, and with the Trainer(s) where the Sponsor and the Trainer are not the same party.

RESOURCE	LINK
Red Seal Program	red-seal.ca
Ministry of Advanced Education and Skills Development	tcu.gov.on.ca
Employment Ontario	tcu.gov.on.ca/eng/employmentontario.ca
Service Canada	servicecanada.gc.ca
Ontario College of Trades and Apprenticeship Act, 2009	<i>Ontario College of Trades and Apprenticeship Act, 2009</i>
Ontario Ministry of Labour – Health and Safety Partners	labour.gov.on.ca
College of Trades Appointments Council	cot-appointments.ca
Ontario Skills Passport (Essential Skills)	skills.edu.gov.on.ca
Exam Preparation Guide	collegeoftrades.ca

INTRODUCTION TO THE LOG BOOK

On April 8th, 2013, the Ontario College of Trades (College) became responsible for the development and maintenance of Log Books in the Province of Ontario.

Please refer to the College of Trades website for the most accurate and up-to-date information: collegeoftrades.ca

This Log Book is intended to be used by the Apprentice and Sponsor as an official record of training. The completion of this document is necessary to complete your apprenticeship and receive your Certificate of Apprenticeship.

The Log Book identifies skills required for this trade and its related training program. It has been written in statements which describe how you, the Apprentice, must perform each skill in order to become competent in your trade.

The Trainer and Apprentice are required to sign off and date each skill after the Apprentice has proven competence in these skills. However, if a skill is shaded, it is optional and does not need to be signed off.

This on-the-job Log Book is a document issued to Apprentices who sign a Registered Training Agreement in the Province of Ontario. It is designed to record an Apprentice's acquired skills and time worked for the trade to which they are registered. This Log Book is developed by the Ontario College of Trades and used by the Ministry of Advanced Education and Skills Development.

This Apprenticeship Log Book for Tool/Tooling Maker 630T was developed in consultation with representatives from industry and may include members from a related Trade Board/Working Committees.

The information presented in this standard is, to the best of our knowledge, current at time of printing and is intended for general application.

ROLES AND RESPONSIBILITIES

Ontario College of Trades

Under the [Ontario College of Trades and Apprenticeship Act, 2009 \(OCTAA\)](#), the College of Trades is responsible for:

- Establishing and maintaining qualifications for membership;
- Issuing Certificates of Qualification and Statements of Membership;
- Maintaining a [Public Register](#) of members;
- Receiving and investigating complaints, and determining disciplinary action;
- Establishing Apprenticeship Programs, Training Standards and Scopes of Practice for each trade;
- Conducting Trade Equivalency Assessments;
- Determining Journeyperson-to-Apprentice ratios;
- Addressing compliance with legislation (OCTAA) and regulations; and,
- Promoting the skilled trades and conducting research.

For any matters related to your membership in the Apprentices class, you must contact the College of Trades directly at: (647) 847-3000 or toll free at: 1(855) 299-0028.

Ministry of Advanced Education and Skills Development

Is responsible for:

- Registering Training Agreements;
- Approving which persons may provide apprenticeship training;
- Approving Training Delivery Agents;
- Issuing Certificates of Apprenticeship;
- Administering Certificate of Qualification examinations;
- Promoting skilled trades and apprenticeship;
- Conducting policy development, evaluation and research; and,
- Passing regulations.

For any matter related to your Registered Training Agreement or completing your apprenticeship, you must contact your Local Apprenticeship Office at the Ministry of Advanced Education and Skills Development.

Roles and Responsibilities of the Apprentice

An Apprentice is an individual who has entered into a Registered Training Agreement with a Sponsor to receive training in a trade as part of an apprenticeship program established by the College of Trades.

As an Apprentice, you have certain roles and responsibilities to follow throughout your apprenticeship training:

Steps:

1. You must become a member of the College of Trades Apprentices Class and maintain your membership in good standing while you complete your training. For more information on membership, please visit the College of Trades website at: collegeoftrades.ca
2. As an Apprentice, you are responsible for completing skills or skill sets in this Log Book and ensuring that they are dated and signed by both you and your Trainer.
3. You must also ensure your Skill Set Completion Form is completed and signed by your current Sponsor once you have demonstrated competence in all the mandatory skills in this Log Book. Once this is done, we recommend you submit the Log Book to your local Ministry of Advanced Education and Skills Development office.
4. You are responsible for informing the staff at your local Ministry of Advanced Education and Skills Development office regarding changes to the following:
 - Your Sponsor's address;
 - Your name and address; and/or,
 - Your Sponsor, including starting employment with a new Sponsor.
5. You must present the Apprentice Completion Form (Please refer to Appendix B), once all unshaded skills and skill sets have been completed within this document, along with your authorized Log Book to your local Ministry of Advanced Education and Skills Development office.

Roles and Responsibilities of Sponsors and Trainers

Log Books identify the on-the-job skills required for a trade and its related training program.

This Log Book has been written in concise statements which describe how well an Apprentice must perform each skill in order to become competent. Competence means being able to perform to the required standard.

By using this Log Book, Trainers will be able to ensure that the Apprentice is developing skills detailed for the trade.

Trainers and Apprentices are required to sign off and date the skills following each successful acquisition.

The detailed content listed for each skill is not intended to represent an inclusive list; rather, it is included to illustrate the intended direction for the skill acquisition.

The Trainer must provide their signature based on their assessment and professional judgment that the apprentice is competent in the skills described above. The Trainer's signature is not a general warranty or guarantee of the apprentice's future conduct.

Sponsors participating in this training program will be designated as the Signing Authority and are required to attest to successful achievement by signing the appropriate box included at the end of each skill set.

SAFETY

Safe working procedures and conditions, accident prevention and the preservation of health are of primary importance for apprenticeship programs in Ontario. These responsibilities are shared and require the joint efforts of government, sponsors, employers, employees and the public. Therefore, it is imperative that all parties become aware of circumstances that may lead to injury or harm. Safe learning experiences and environments can be created by controlling the variables and behaviours that may contribute to or cause an accident or injury.

It is generally recognized that a safe attitude contributes to an accident free environment. Everyone will benefit as a result of a healthy attitude towards prevention of accidents.

A worker is possibly exposed to more hazards than any other person in the work force and, therefore, should be familiar with and apply Occupational Health and Safety Act and Regulations dealing with personal safety and the personal safety rules applying to each task.

Legal and Administrative Aspects of Safety:

Accident prevention and the provisions of safe working conditions are the responsibilities of an employer and employee.

Employer's Responsibilities - The employer is responsible for:

- Providing and maintaining safety equipment and protective devices;
- Ensuring proper safe work clothing and personal protective equipment (PPE) is worn;
- Enforcing safe working procedures;
- Providing safeguards for machinery, equipment and tools;
- Observing all accident prevention regulations; and,
- Training employees in the safe use and operation of equipment.

Employee's Responsibilities - The employee is responsible for:

- Working in accordance with the safety regulations pertaining to the job environment;
- Working in such a way as not to endanger themselves or fellow employees and the public.

Workplace Health and Safety's Responsibilities:

- Workplace Health and Safety (Ontario's Ministry of Labour) will conduct periodic inspections of the workplace to ensure that safety regulations for industry are being observed.

APPRENTICESHIP PROGRAM SUMMARY

Scope of Practice

The Scope of Practice for the trade of Tool/Tooling Maker is set out in section 51 of Ontario Regulation 276/11 under OCTAA and reads as follows:

1. Reading and interpreting complex engineering drawings, bills of material, component and part prints, assembly drawings, tool and part drawings and work documentation.
2. Using conventional and numerically controlled metal cutting machines and specialized equipment.
3. Designing, building and assembling tools, jigs, fixtures, specialized equipment, instruments, models and prototypes.
4. Assembling and fitting tool and tooling components.
5. Final fitting and inspecting of tool sub-assemblies and components.
6. Final finishing and testing complex tools and tooling. O. Reg. 276/11, s. 51.

While the Log Book draws on the scope of practice regulation (Section 51 of Ontario Regulation 276/11 under OCTAA). The Log Book does not purport to add to or modify the scope of practice as provided in regulation.

Program Guidelines

On-the-Job Training Duration

Industry has identified 7280 hours as the duration necessary for any Apprentice to become competent in the skills required. There may be circumstances in which the duration varies from this guideline.

Classroom Training Duration

Industry has identified 720 hours of in-school training as the duration necessary for an Apprentice to complete the in-school curriculum for this program.

Journeyman to Apprentice Ratio

The Industry Committee has identified a journeyman-to-apprentice ratio of one journeyman or individuals who are deemed equivalent to a journeyman status to one apprentice as the ratio generally necessary for an apprentice to be properly trained on the job in this program. There may be individual circumstances where the ratio varies from this guideline.

Ratio information is current at time of printing. Please check the Ontario College of Trades website for current information on ratios, please visit

<http://www.collegeoftrades.ca/public/journeyman-to-apprentice-ratios>

Program Requirements

Compulsory and Voluntary Classification

Regulations under OCTAA set out the regulated trades in Ontario and the classification of each trade as either “compulsory” or “voluntary.” The trade of Tool/Tooling Maker is voluntary

Eligibility for Apprenticeship Program Completion

The Apprentice must:

- Achieve competency in all mandatory (unshaded) skills as identified in the Log Book
- Complete the in-school training as outlined in the approved Curriculum Standard

It is the responsibility of an Apprentice to maintain a training record in the form of an Ontario College of Trades Apprenticeship Training Standard Log Book. The Sponsor and Trainer are required to sign off when competencies in the trade are achieved.

ESSENTIAL SKILLS SUMMARY

Essential skills are needed for work, learning and life. They provide the foundation for learning all other skills and enable people to evolve with their jobs and adapt to workplace change. Through extensive research, the Government of Canada and other national and international agencies have identified and validated nine essential skills. These skills are used in nearly every occupation and throughout daily life in different ways.

A series of tools endorsed by the Canadian Council of Directors of Apprenticeship (CCDA) have been developed to support apprentices in their training and to be better prepared for a career in the trades. The tools can be used independently or with the assistance of a tradesperson, trainer, employer, teacher or mentor to:

- Understand how essential skills are used in the trades;
- Learn about individual essential skills strengths and areas for improvement, and,
- Improve essential skills and increase success in an apprenticeship program.

A link to the complete essential skills profile for Red Seal trades can be found at red-seal.ca.

TRAINING THE APPRENTICE

Tips for Apprentices

Remember, it takes time to learn. The following is a list of additional tips and tools to help make the most of your apprenticeship training:

- Practice safe work habits;
- Use your Apprenticeship Log Book as a journal to keep track of the skills you have achieved;
- Listen to the suggestions of your Trainer;
- Discuss your training needs with your Sponsor;
- Review your training plan with your Training Consultant, Trainer, or Sponsor;
- Ask your Trainer questions if you are unsure of any skill you need to perform or any tools or equipment you need to use to perform your duties;
- Show enthusiasm and develop good work habits; and,
- Upon demonstration of competency, ensure that you and your Trainer sign off the individual skills. Once a 'set of skills' have been signed off, ensure your Sponsor signs off this area as well.

Sponsor

Sponsors are responsible for ensuring all terms are met as per the Registered Training Agreement. They are named on the Registered Training Agreement as the entity responsible for ensuring Apprentices receive the training required as part of an apprenticeship program. As a signatory to this agreement, they are designated as the 'Signing Authority' for the Apprentice's Skill Set Completion Form, and are required to attest to successful achievement by signing the appropriate box at the completion of each skill set.

Tips for Sponsors

- Select Trainers with good communication skills and who work well with others;
- Ensure that the Apprentice always works under the direction of or has access to a qualified Trainer;
- Encourage Trainers to take upgrading courses (e.g. Train the Trainer, Mentor, Coach, etc.);
- Encourage safe work habits;
- Provide time for the Trainer to demonstrate skills to the apprentice;
- Provide opportunities and time for the Apprentice to learn the trade;
- Ensure that the Apprentice receives the varied on-the-job trade training experience outlined in this document;
- Set out clear expectations, and recognize good performance;
- Involve both the Apprentice and Trainer in developing the training plan and observe frequently;
- Provide constructive feedback and conduct regular performance reviews involving the Apprentice and Trainer;
- Use the Log Book as a monitoring tool and a part of regular performance evaluations; and,
- Complete the Skill Set Completion Form once the Apprentice has demonstrated competency in the skills.

Trainer

A Trainer is an individual who oversees the performance of a task and sets the workplace expectations and practices for the Apprentice. In compulsory trades, a Trainer must hold a valid Certificate of Qualification and be a member of the College of Trades Journeypersons Class.

In voluntary trades, a Trainer is an individual who holds one of the following:

- A valid Certificate of Qualification and is a member of the College of Trades Journeypersons Class; or,
- Holds a Statement of Membership in the College of Trades Tradespersons Class; or,
- Holds a Certificate of Qualification previously issued by Ministry of Advanced Education and Skills Development; or,
- Holds a Certificate of Apprenticeship in the trade; or,
- Has completed both the workplace-based training (competencies and/or hours as applicable) and classroom training components of the trade's apprenticeship program; or,
- Has workplace experience equivalent to the apprenticeship program (eligible to apply to College membership in the Journeypersons or Tradespersons Classes) or has the skills outlined in the Log Book.

Tips for Trainers

Trainers are responsible for ensuring the Apprentice is developing the skills outlined in this document. Here is a list of tips and tools to help Trainers in their supervision of Apprentices:

- Demonstrate model safe work habits;
- Provide opportunities and time for the Apprentice to learn the trade;
- Treat Apprentices fairly and with respect;
- Review the Log Book with the Apprentice and develop a training plan;
- Set out clear expectations and recognize good performance;
- Ensure that the Apprentice receives on-the-job trade training experience as outlined in this document;
- Encourage and respond to all questions;
- Be patient;
- Explain, show and demonstrate the skill;
- Provide continuous feedback;
- Sign off skills when your Apprentice demonstrates competency, and,
- Use the Log Book as a guide to evaluate competence in each skill area. By using the Log Book, Trainers will be able to ensure that the Apprentice is developing skills outlined in this document.

NOTICE OF COLLECTION OF PERSONAL INFORMATION

1. At any time during your apprenticeship training, you may be required to show this Log Book to the Ministry of Advanced Education and Skills Development. You will be required to submit the signed Apprenticeship Completion form to the Ministry of Advanced Education and Skills Development in order to complete your program. The Ministry of Advanced Education and Skills Development will use your personal information to administer and finance Ontario's apprenticeship training system, including confirming your completion and issuing your Certificate of Apprenticeship.
2. The Ministry of Advanced Education and Skills Development will disclose information about your program completion and your Certificate of Apprenticeship to the Ontario College of Trades, as it is necessary for the College of Trades to carry out its responsibilities.
3. Your personal information is collected, used and disclosed by the Ministry under the authority of the *Ontario College of Trades and Apprenticeship Act, 2009*.
4. Questions about the collection, use and disclosure of your personal information by the Ministry may be addressed to the:

Manager, Employment Ontario Contact Centre
Ministry of Advanced Education and Skills Development
33 Bloor St. E, 2nd floor, Toronto, Ontario M7A 2S3
Toll-free: 1-800-387-5656; Toronto: 416-326-5656
TTY: 1-866-533-6339 or 416-325-4084.

COMPETENCY ANALYSIS PROFILE
Tool/Tooling Maker – 630T

(All unshaded skill sets must be demonstrated/completed)

SKILL SETS
SKILLS

PROTECT SELF AND OTHERS 5555.0	Identify health and safety hazards. 5555.01	Wear, adjust, and maintain personal protective equipment. 5555.02	Wear, adjust, and maintain respiratory protectors. 5555.03	Practise safe work habits. 5555.04	Follow fire procedures. 5555.05
	Operate emergency safety equipment. 5555.06	Practise industrial hygiene. 5555.07	Practise good housekeeping in the workplace. 5555.08	Conduct pre-operational check of equipment. 5555.09	Report injuries. 5555.10
	Follow procedures for applying first aid. 5555.11	Lock out and tag mechanical equipment. 5555.12	Handle designated substances. 5555.13	Operate lifting equipment. 5555.14	
PLAN AND PREPARE FOR MACHINING JOB 5556.0	Read and interpret engineering drawings. 5556.01	Perform calculations for machining operations. 5556.02	Read and interpret work-process documentation. 5556.03	Verify workpiece material. 5556.04	Identify and select cutting fluids. 5556.05
	Identify and select machines. 5556.06	Identify and check machine controls and systems. 5556.07	Identify and select tooling. 5556.08	Identify and prepare cutting tools. 5556.09	Identify and select measuring instruments and checking devices. 5556.10
	Select machine speeds and feeds. 5556.11	Lay out features of engineering drawings. 5556.12	Identify and select work-holding devices. 5556.13	Pick up datum/starting position. 5556.14	Identify and select lifting and rigging equipment. 5556.15
	Communicate with co-workers. 5556.16				

PERFORM WORK-IN-PROCESS DIMENSIONAL OR SURFACE VERIFICATION 5557.0	Check straight cuts.	Check shapes.	Check threads.	Check holes.	Check tapers.
	5557.01	5557.02	5557.03	5557.04	5557.05
	Check hardness.	Maintain material identification.	Debur workpiece.	Check surfaces.	Perform final inspection.
	5557.06	5557.07	5557.08	5557.09	5557.10
	Complete work documentation				
	5557.11				
PERFORM BENCHWORK 5558.0	Hand-file.	Hand-saw.	Hand-drill holes.	Hand-tap threaded holes.	Hand-ream.
	5558.01	5558.02	5558.03	5558.04	5558.05
	Chase threads.	Hand-grind.	Practise good housekeeping		
	5558.06	5558.07	5558.08		
PERFORM SAWING 5559.0	Check fused/welded blade.	Lay out features of engineering drawings.	Locate and position workpiece in saw.	Select speeds and feeds of saw.	Install and test-run blade.
	5559.01	5559.02	5559.03	5559.04	5559.05
	Check first cut-off.	Cut shapes using a vertical bandsaw.	Cut squared and angled surfaces using a power cut-off saw.	Maintain material identification.	Debur workpiece.
	5559.06	5559.07	5559.08	5559.09	5559.10
	Perform final inspection.	Complete work documentation.	Move workpiece.	Practise good housekeeping.	
	5559.11	5559.12	5559.13	5559.14	

TOOL/TOOLING MAKER

PERFORM DRILLING USING DRILL PRESS/MACHINE	Select drill tooling.	Identify and prepare cutting tools for drills.	Locate and position workpiece in drill.	Set up tooling in drills.	Select speeds and feeds of drill.
5560.0	5560.01	5560.02	5560.03	5560.04	5560.05
	Centre-drill a layout punch mark.	Drill a hole.	Chamfer a hole.	Ream a hole.	Machine-thread a hole.
	5560.06	5560.07	5560.08	5560.09	5560.10
	Spot-face a hole.	Counter-bore a hole.	Counter-sink a hole.	Maintain material identification.	Deburr workpiece.
	5560.11	5560.12	5560.13	5560.14	5560.15
	Perform final inspection.	Move workpiece.	Practise good housekeeping.	Complete work documentation.	
	5560.16	5560.17	5560.18	5560.19	
PERFORM MACHINE GRINDING	Select grinding wheel.	Check condition of grinding wheel.	Install grinding wheel.	Locate and position workpiece in grinder.	Surface grind workpiece.
5561.0	5561.01	5561.02	5561.03	5561.04	5561.05
	Hone holes.	Lap workpiece.	Grind inside and outside diameters. (ID/OD)	Grind tools and cutters.	Check surfaces.
	5561.06	5561.07	5561.08	5561.09	5561.10
	Perform final inspection.	Move workpiece.	Complete work documentation.	Practise good housekeeping.	
	5561.11	5561.12	5561.13	5561.14	
PERFORM LATHE WORK	Select lathe cutting tools.	Identify and prepare lathe cutting tools.	Locate and position workpiece in lathe.	Set up lathe cutting tools.	Select speeds and feeds of lathe.
5562.0	5562.01	5562.02	5562.03	5562.04	5562.05

TOOL/TOOLING MAKER

	Take a sizing (preliminary) cut. 5562.06	Establish a reference or starting point(datum). 5562.07	Face a surface. 5562.08	Turn an external diameter. 5562.09	Drill a hole. 5562.10
	Bore an internal diameter. 5562.11	Ream a hole. 5562.12	Tap a hole. 5562.13	Turn an internal or external thread. 5562.14	Produce a taper. 5562.15
	Knurl cylindrical surface patterns. 5562.16	Groove and part-off. 5562.17	Maintain material identification. 5562.18	Deburr workpiece. 5562.19	Perform final inspection. 5562.20
	Complete work documentation. 5562.21	Move workpiece. 5562.22	Practise good housekeeping 5562.23		
PERFORM MILLING 5563.0	Select milling cutting tools. 5563.01	Identify and prepare milling cutting tools. 5563.02	Set-up and maintain milling adjustable support tools. 5563.03	Set-up milling cutting tools. 5563.04	Select speeds and feeds of mill. 5563.05
	Perform fly-cutting. 5563.06	Face-mill. 5563.07	Machine steps, cut-outs, angles, and open slots. 5563.08	Machine a pocket or slot. 5563.09	Machine a hole. 5563.10
	Bore holes. 5563.11	Maintain material identification. 5563.12	Deburr workpiece. 5563.13	Perform final inspection. 5563.14	Move workpiece. 5563.15
	Complete work documentation. 5563.16	Practise good housekeeping. 5563.17			
PERFORM NC/CNC 5564.0	Identify and select numerically controlled machining process. 5564.01	Identify, select, and set up NC/CNC cutting tools and tool holders. 5564.02	Identify, select, and set machine parameters. 5564.03	Position, align, and secure workpiece in NC/CNC machine. 5564.04	Input and verify part program at NC/CNC machine controls. 5564.05

	Verify tool sequence, tool path, and collision avoidance program. 5564.06	Monitor NC/CNC machining process. 5564.07	Make adjustments to tooling and offsets. 5564.08	Maintain material identification. 5564.09	Perform final inspection. 5564.10
	Move workpiece. 5564.11	Complete work documentation. 5564.12	Practise good housekeeping. 5564.13		
	PERFORM ELECTRICAL DISCHARGE MACHINING (EDM) 5565.0	Identify and select EDM process. 5565.01	Develop EDM electrodes. 5565.02	Identify, select, and set up EDM machining components. 5565.03	Identify, select, and set machine parameters. 5565.04
					Position, align, and secure workpiece in EDM machine. 5565.05
	Cut the workpiece by EDM. 5565.06	Maintain material identification. 5565.07	Perform final inspection. 5565.08	Move workpiece. 5565.09	Complete work documentation. 5565.10
	Practise good housekeeping. 5565.11				
DEVISE AND DETAIL A PLAN FOR THE TOOL/TOOLING BUILDING PROCESS 5566.0	Verify the features of too/tooling components. 5566.01	Develop and organize tool/tooling building plan. 5566.02	Perform tool/tooling build related calculations. 5566.03	Assemble and verify stock materials. 5566.04	Produce a detailed sketch of tool/tooling 5566.05

DEVELOP, BUILD, AND FIT TOOLS/ TOOLING (Production, Mechanical Devices, or Prototypes)	Verify features of tools/ tooling components.	Produce preliminary sketches.	Organize the tool/tooling build plan.	Build tooling aids.	Cut and prepare raw material.
5567.0	5567.01	5567.02	5567.03	5567.04	5567.05
	Block up and establish datum.	Machine production tools/tooling & components.	Machine prototypes and components.	Machine mechanical device components.	Heat-treat components.
	5567.06	5567.07	5567.08	5567.09	5567.10
	Mark the components.	Inspect tool/tooling components.	Document tool/tooling production.		
	5567.11	5567.12	5567.13		
FIT AND ASSEMBLE TOOLS/ TOOLING	Surface finish tools/tooling components.	Mark the tools/tooling components.	Assemble and fit tools/tooling components.	Final-fit sub-assemblies and components.	Inspect fit and function of tools/tooling.
5568.0	5568.01	5568.02	5568.03	5568.04	5568.05
	Perform final inspection.	Document assembly and fit of tools/tooling.			
	5568.06	5568.07			
FINAL-FINISH TOOLS/ TOOLING SURFACE CONTOURS	Identify and select finishing tools.	Finish tool/tooling surfaces.	Detail the workpiece.	Clean finished surfaces.	Final inspect the surface.
5569.0	5569.01	5569.02	5569.03	5569.04	5569.05
	Complete work documentation.	Practise good housekeeping.			
	5569.06	5569.07			

LIST OF TRAINERS

Trainer's Name (Please Print)	Trainer's Signature

U5555.00 PROTECT SELF AND OTHERS**GENERAL PERFORMANCE OBJECTIVE**

Protect self and others by: identifying health and safety hazards; wearing, adjusting, and maintaining protective clothing, equipment, and respiratory protectors; practising safe work habits, industrial hygiene, and good housekeeping; handling designated substances; following company fire procedures and first aid procedures; operating safety equipment, lifting devices, and material handling equipment; reporting injuries; assisting in completion of written safety and injury reports; conducting pre-operational check of equipment; and, locking out and tagging equipment.

SKILLS

U5555.01 Identify health and safety hazards in the workplace, so that the potential for personal injury, damage to equipment or the environment is prevented, and corrective action is taken as defined in Safety Legislation or company standards/procedures and hazards are reported.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

◇ A Trainer may be a Supervisor or the competent employee designated by the Apprentice's Sponsor

U5555.02 Wear, adjust, and maintain personal protective equipment including eye, ear, hand, and foot protectors, to ensure correct fit and optimum protection for the wearer and task being performed in compliance with company standards/procedures and Safety Legislation.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5555.03 **Wear, adjust, and maintain respiratory protectors** to ensure correct fit and optimum protection, in compliance with company standards/procedures and Safety Legislation.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5555.04 **Practise safe work habits** by staying outside guards and barricades, wearing required clothing (not loose or torn), confining long hair, and removing jewellery, in accordance with company standards/procedures and Safety Legislation.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5555.05 **Follow fire procedures** including locating and assessing the severity of the fire, taking appropriate action, suppressing minor fire, activating alarm, and reporting in compliance with company standards/procedures and Safety Legislation.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5555.06 Operate emergency safety equipment including (not limited to) fire extinguishers, respirators, barrier creams, and fire blankets, ensuring that procedures are carried out in a safe and efficient manner in accordance with company standards/procedures and Safety Legislation.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5555.07 Practise industrial hygiene by wearing required clothing and using eye wash or showering to avoid contamination or injury, in compliance with company standards/procedures and Safety Legislation.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5555.08 Practise good housekeeping in the workplace by cleaning up spills or leaks, keeping work area clean and clear of obstructions, and storing tools or equipment, so that the potential for accident or injury is prevented and tools or equipment are in place and available in compliance with company standards/procedures and Safety Legislation.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5555.09 Conduct pre-operational check of equipment by checking that guards and safety devices are in place, secured, and not damaged, in compliance with company standards/procedures and Safety Legislation.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5555.10 **Report injuries** to supervisor or first aid personnel promptly and clearly, ensuring that the injured person is attended to and information is reported precisely and accurately describing how incident occurred, so that future recurrence of similar accidents is prevented in compliance with company standards/procedures and Safety Legislation.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5555.11 **Follow procedures for applying first aid** to treat conditions including (not limited to) sudden illness, burns, cuts, abrasions, sprains, chemical inhalations, falls, and contaminants in eyes, so that the condition of the victim is stabilized and prepared for further first aid treatment in compliance with company standards/procedures and Safety Legislation.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5555.12 **Lock out mechanical equipment** for repair or maintenance by shutting down and tagging machine or manufacturing process to ensure that no materials can enter the equipment being repaired or maintained, no damage is caused to the machine, and accidents are prevented, in compliance with company standards/procedures and Safety Legislation.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5555.13 Handle designated substances using specified handling and storage equipment, so that the operator is protected from injury, the environment from contamination, and safe procedures are followed in compliance with Safety Legislation and company standards/procedures.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5555.14 Operate lifting equipment including (not limited to) hoists, overhead cranes, chain falls, lift pins, eye bolts, slings, cables, and chains, to remove, transport, and store materials, parts, or equipment in compliance with Safety Legislation and company standards/procedures.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

SPONSOR CONFIRMATION FOR 5555: PROTECT SELF AND OTHERS

Date Completed (mm/dd/yy)	Sponsor Name (Print)	Sponsor Signature
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U5556.00 PLAN AND PREPARE FOR MACHINING JOB**GENERAL PERFORMANCE OBJECTIVE**

Plan and prepare for machining job by: reading and interpreting engineering drawings; performing calculations; reading and interpreting work-process documentation; verifying workpiece material; identifying and selecting cutting fluids, machines, machine controls and systems, tooling, measuring or checking devices, work-holding devices, and lifting or rigging equipment; identifying and preparing cutting tools; selecting speeds and feeds; laying out features of the engineering drawing; picking up datum/starting position from layout lines; and, communicating with co-workers.

SKILLS

U5556.01 Read and interpret engineering drawings to identify dimensions and tolerances, machine surface designations and allowances, type of workpiece material, and any other information needed to plan the machining job in accordance with company standards/procedures and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

◇ A Trainer may be a Supervisor or the competent employee designated by the Apprentice's Sponsor

U5556.02 Perform calculations for machining operations including determining speeds and feeds, calculating cutting tool positions, workpiece alignments, and calculating dimensions to be measured and verified, and using both System International (S.I.) and Imperial System, so that all required specifications are correctly determined to machine the workpiece in accordance with engineering drawings and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5556.03 Read and interpret work-process documentation to identify required machines, job operations, sequencing of job, method of machining and set-ups, and any other information needed to plan the machining job.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5556.04 Verify workpiece material for correct size and type by checking colour codes, lettering, or numerical stamps to ensure that the workpiece selected conforms to the engineering drawings and job instruction sheets.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5556.05 Identify and select cutting fluids using manuals, charts, engineering drawings, and material safety data sheets, ensuring that the cutting fluid selected is the correct one to maximize machining without damage to workpiece, cutting tool, and machine.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5556.06 Identify and select machines including conventional and numerically controlled saws, drills, lathes, grinders, and vertical or horizontal mills, and Electrical Discharge Machines (EDM) using information from engineering drawings and work-process documentation, to ensure that machine selected is the correct one for the application and available to perform the job.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5556.07 Identify and check machine controls and systems including locating and identifying switches, buttons, levers, controls, and safety devices, to ensure that all controls are operational and functioning according to manufacturer's specifications and company standards/procedures.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5556.08 Identify and select tooling required to cut the workpiece by using information in engineering drawings and job instructions, to ensure that tooling selected is the correct size and type for application and available to perform the job.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5556.09 Identify and prepare cutting tools by sharpening or replacing tools so that the cutting shape and angle is prepared for optimum cutting and personal safety, in accordance with manufacturer's specifications, engineering drawings, and company standards/procedures.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5556.10 Identify and select measuring instruments and checking devices ensuring that instruments and devices selected are the correct ones to obtain the dimensions and tolerances specified in the engineering drawings and process layout.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5556.11 **Select machine speeds and feeds** using speed and feed charts and in accordance with the size, type, and hardness of workpiece materials, so that machines perform optimum cutting without damage to workpiece, cutting tools, or machines, and ensures personal safety.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5556.12 **Lay out features of engineering drawings** on to the workpiece using precision measuring instruments and layout equipment including (not limited to) scribe, center punch, vernier height gauge, surface plate, combination set, and layout medium or dyes, so that the completed layout conforms to engineering drawings or job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5556.13 **Identify and select work-holding devices** including (not limited to) vises, clamps, jigs, chucks, face plates, centers, catch plates, steady rest, tailstocks, and mandrels, ensuring that the work-holding device selected is the correct one to safely and securely position and locate the workpiece in the machine in accordance with Safety Legislation, job specifications, and company standards/procedures.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5556.14 **Pick up datum/starting position** using layout lines, tooling balls, or edge of the part and required tools including (not limited to) pointer, wiggler, indicator, and edge finder to identify and locate the marked position as specified in engineering drawings and job specifications.

(mm/dd/yy)	Trainer Print Name	Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5556.15 **Identify and select lifting and rigging equipment** including hoists, overhead cranes, chain falls, lift pins, cables, eye bolts, and chains, ensuring that equipment is selected in compliance with Safety Legislation and company standards/procedures for the safe handling and moving of workpiece and materials.

(mm/dd/yy)	Trainer Print Name	Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5556.16 **Communicate with co-workers** to identify previous job operations, availability of tools, parts, and machinery, scheduling requirements, and any other information needed to plan and prepare for machining job, ensuring that the information communicated is clear, concise, and accurate.

(mm/dd/yy)	Trainer Print Name	Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

SPONSOR CONFIRMATION FOR 5556: PLAN AND PREPARE FOR MACHINING JOB

Date Completed (mm/dd/yy)	Sponsor Name (Print)	Sponsor Signature
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U5557.00 PERFORM WORK-IN-PROCESS DIMENSIONAL OR SURFACE VERIFICATION**GENERAL PERFORMANCE OBJECTIVE**

Perform work-in-process dimensional or surface verification by: checking straight cuts, shapes, threads, holes, tapers, and hardness; maintaining material identification; deburring workpiece; checking surfaces; performing final inspection; completing work documentation.

SKILLS

U5557.01 Check straight cuts by using precision measuring instruments including (not limited to) micrometer, verniers, callipers, squares, straight edge, dial indicator, and surface comparator, to ensure that the accurate size, finish, parallelism, and squareness of straight cuts conform with engineering drawings and job specifications.

(mm/dd/yy)	Trainer Print Name	Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

♦ A Trainer may be a Supervisor or the competent employee designated by the Apprentice's Sponsor

U5557.02 Check shapes by using precision measuring instruments and checking devices including (not limited to) radius gauges, surface comparator, and verniers, to ensure that the profile and finish of the cut shape conform to engineering drawing and job specifications.

(mm/dd/yy)	Trainer Print Name	Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5557.03 **Check threads** by using precision measuring instruments, checking devices, and various checking methods including (not limited to) 3-wire method, thread micrometer, thread gauge, and plug or ring gauges, to ensure that the accuracy of pitch, thread geometry, and size of cut threads conform to the engineering drawings and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5557.04 **Check holes** by using precision measuring instruments and checking devices including (not limited to) dial indicators, bore gauges, plug gauges, telescopic gauges, surface comparators, and verniers, to ensure that the accuracy of the diameter, depth, concentricity, position, and finish of cut holes conform with engineering drawings and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5557.05 **Check tapers** using precision measuring instruments and checking devices including (not limited to) taper gauge, sine bar, micrometer, and vernier to ensure that the accuracy of the angle, taper/foot, and diameter of the cut tapers conform with engineering drawings and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5557.06 Check hardness using various types of hardness testers and comparison charts to ensure that the hardness level of the workpiece materials conforms with engineering drawings and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5557.07 Maintain material identification by marking or stamping workpiece and completing shop documentation, to facilitate traceability of the final product or work-in-process and to maintain inventory control in accordance with company standards/procedures.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5557.08 Deburr workpiece using files, scrapers, emery cloth, sanders, and hand or pedestal grinders to remove excess material and to ensure safe handling in accordance with engineering drawings and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5557.09 Check surfaces using surface comparators to ensure that surface is finished in micro-inches or microns as specified in the engineering drawings and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5557.10 Perform final inspection using precision measuring instruments and checking devices including (not limited to) inside and outside micrometers, vernier height gauges or indicators, gauge blocks, and pin gauges to ensure that the tolerances and dimensions of the workpiece conform to the engineering drawings and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5557.11 Complete work documentation including (not limited to) tracking sheets, sign-off sheets, inspection reports, or procedure sheets, to record the finalization of jobs and to facilitate traceability of work-in-process, ensuring that all data is recorded accurately and clearly in accordance with engineering drawings, job specifications, and company standards/procedures.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

SPONSOR CONFIRMATION FOR 5557: PERFORM WORK-IN-PROCESS DIMENSIONAL OR SURFACE VERIFICATION

Date Completed (mm/dd/yy)	Sponsor Name (Print)	Sponsor Signature
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U5558.00 PERFORM BENCHWORK

GENERAL PERFORMANCE OBJECTIVE

Perform benchwork by: hand-filing; hand-sawing; hand-drilling holes; hand-tapping threaded holes; hand-reaming; chasing threads; hand-grinding; and, practising good housekeeping.

SKILLS

U5558.01 Hand-file using files including (not limited to) flat, needle, bastard, rat-tail, lathe, and half-round files to remove excessive material so that workpiece is filed in accordance with engineering drawings and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

◇ A Trainer may be a Supervisor or the competent employee designated by the Apprentice's Sponsor

U5558.02 Hand-saw using cut-off saws to cut workpiece to specified lengths in accordance with engineering drawings and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5558.03 Hand-drill holes using power drill and drill bits, so that the size of the drilled holes conform with engineering drawings and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5558.04 Hand-tap threaded holes using taps, T-handle, and tapping block so that the depth and squareness of tapped threads conform to engineering drawings and job specifications..

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5558.05 Hand-ream using straight or spiral-fluted reamers to remove excessive material, so that the diameter and depth of reamed hole conform to engineering drawings and job specifications

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5558.06 Chase threads using hand taps and dies to repair or clean damaged threads, so that the chased threads conform with engineering drawings and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5558.07 Hand-grind using pneumatic or electric hand grinders to remove excess material, so that the workpiece is ground in accordance with engineering drawings and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5558.08 **Practise good housekeeping** in the workplace by cleaning up spills or leaks, keeping work area clean and clear of obstructions, and storing tools or equipment so that the potential for accident or injury is prevented and tools and equipment are in place and available, in compliance with company standards/procedures and Safety Legislation.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

SPONSOR CONFIRMATION FOR 5558: PERFORM BENCHWORK

Date Completed (mm/dd/yy)	Sponsor Name (Print)	Sponsor Signature
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U5559.00 PERFORM SAWING

GENERAL PERFORMANCE OBJECTIVE

Perform sawing by: checking fused/welded blade; laying out features of the engineering drawings; locating and positioning workpiece in saw; selecting speeds and feeds; installing and test-running blade; checking first cut-off; cutting shapes with vertical bandsaw; cutting squared and angled surfaces with a power cut-off saw; maintaining material identification; deburring workpiece; performing final inspection; completing work documentation; moving workpiece; and, practising good housekeeping.

SKILLS

U5559.01 Check fused/welded blade to ensure that joined saw has a continuous cutting edge in accordance with manufacturer's or job specifications and company standards/procedures.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

◇ A Trainer may be a Supervisor or the competent employee designated by the Apprentice's Sponsor

U5559.02 **Lay out features of engineering drawings** on to the workpiece using precision measuring instruments and layout equipment including (not limited to) scribe, centre punch, vernier height gauge, surface plate, combination set, and layout medium or dyes, so that the completed layout conforms to engineering drawings or job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5559.03 **Locate and position workpiece in saw** to required operational clearances by setting up workholding devices including (not limited to) clamps, nesting fixtures, vises, or roller supports, so that the workpiece is aligned, secured, and stable during sawing operations in accordance with job specifications and Safety Legislation.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5559.04 **Select speeds and feeds of saws** using speed and feed charts and in accordance with the size, type, and hardness of workpiece material, so that machines perform optimum cutting without damage to workpiece, cutting tools, or machines, and ensures personal safety.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5559.05 **Install and test-run blade** to check alignments and movements, so that the blade is installed to make the required cut, prevents machine or blade damage, and ensures personal safety in accordance with company standards/procedures and Safety Legislation.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5559.06 **Check first cut-off** by measuring and checking a cut-off piece, to ensure that the angles, squareness, and length of the sawed piece conforms to the engineering drawings and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5559.07 **Cut shapes using a vertical bandsaw** and required sawing sequences, speeds, feeds, and cutting fluids, so that the profile, size, and dimensions of the cut shapes conform to engineering drawings, job specifications, and Safety Legislation.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5559.08 **Cut squared and angled surfaces using a power cut-off saw** and required sawing sequences, speeds, feeds, and cutting fluids, so that the squareness, angles, and size of cut surfaces conform to engineering drawings, job specifications, and Safety Legislation.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5559.09 **Maintain material identification** by marking or stamping workpiece and completing shop documentation, to facilitate traceability of the final product or work-in-process and to maintain inventory control in accordance with company standards/procedures and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5559.10 **Deburr workpiece** using files, scrapers, emery cloth, sanders, and hand or pedestal grinders, to remove excess material and to ensure safe handling in accordance with engineering drawings, job specifications, and Safety Legislation.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5559.11 **Perform final inspection** using precision measuring instruments and checking devices including (not limited to) inside and outside micrometers, vernier height gauges or indicators, gauge blocks, and pin gauges, to ensure that the tolerances and dimensions of the sawed workpiece conform to the engineering drawings and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5559.12 Complete work documentation including (not limited to) tracking sheets, sign-off sheets, inspection reports, or procedure sheets, to record the finalization of jobs and to facilitate traceability of work-in-process, ensuring that data is recorded accurately and clearly in accordance with engineering drawings, job specifications, and company standards/procedures.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5559.13 Move workpiece by operating lifting and rigging equipment including (not limited to) hoists, overhead cranes, chain falls, lift pins, eye bolts, slings, cables, and chains, to remove, transport, and store materials, parts, and equipment in compliance with Safety Legislation and company standards/procedures.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5559.14 Practise good housekeeping in the workplace by cleaning up spills or leaks, keeping work area clean and clear of obstructions, and storing tools or equipment so that the potential for accident or injury is prevented and tools and equipment are in place and available in compliance with company standards/procedures and Safety Legislation.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

SPONSOR CONFIRMATION FOR 5559: PERFORM SAWING

Date Completed (mm/dd/yy)	Sponsor Name (Print)	Sponsor Signature
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U5560.00 PERFORM DRILLING USING DRILL PRESS/MACHINES**GENERAL PERFORMANCE OBJECTIVE**

Perform drilling using drill press/machine by: selecting drill tooling; identifying and preparing cutting tools; locating and positioning workpiece in drill; setting up tooling; selecting speeds and feeds; centre-drilling a layout punch mark; drilling, chamfering, reaming, machine-threading, spot-facing, counter-boring, and counter-sinking a hole; maintaining material identification; deburring workpiece; performing final inspection; completing work documentation; moving workpiece; practising good housekeeping.

SKILLS

U5560.01 Select drill tooling including drill bits, centre-drill, reamers, taps, counter-bores, counter-sinks, or spot-faces, by using information in engineering drawings and job specifications, to ensure that tooling is the correct size, shape, type, and grade for the application.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

◇ A Trainer may be a Supervisor or the competent employee designated by the Apprentice's Sponsor

U5560.02 Identify and prepare cutting tools for drills by sharpening or replacing tools, so that the cutting shape and angle is prepared for optimum cutting and personal safety in accordance with job or manufacturer's specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5560.03 **Locate and position workpiece in drill** to required operational clearances by setting up and securing workpiece with holding devices including (not limited to) drilling vises, clamps, jigs, angle plates, and chucks, so that the workpiece is aligned, secured, and stable during drilling in accordance with job specifications and Safety Legislation.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5560.04 **Set up tooling in drills** to required operational alignments using holding devices including (not limited to) drill chucks, taper sleeves, and tapping heads, to ensure that tooling is in position and held securely during drilling in accordance with job specifications and Safety Legislation.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5560.05 **Select speeds and feeds of drills** using speed and feed charts and in accordance with size, type, and hardness of workpiece material, so that machines performs optimum cutting without damage to workpiece, cutting tools, and machines, and ensures personal safety.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5560.06 Centre-drill a layout punch mark using a drill press/machine, chuck, centre-drill, and cutting fluid, so that the punch mark is drilled in accordance with engineering drawings and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5560.07 Drill a hole using a drilling machine, drill bits, and cutting fluids so that the size and depth of drilled hole conform to engineering drawings and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5560.08 Chamfer a hole using a drilling machine, countersinks, and cutting fluids to break sharp edges, so that the chamfered hole conforms to engineering drawings and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5560.09 Ream a hole using a drilling machine, reamers, and cutting fluids, so that the diameter of the reamed hole conforms to engineering drawing or job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5560.10 Machine-thread a hole using a drilling machine, tapping heads, taps, and cutting fluids, so that the depth, size, and pitch of the threaded depth of the hole conform with engineering drawings and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5560.11 Spot-face a hole using a drilling machine, spot-facing tools, and cutting fluids, so that the depth and diameter of the spot-faced hole conform to engineering drawings or job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5560.12 Counter-bore a hole using a drilling machine, counter-boring tools, and cutting fluids, so that the depth and diameter of the counter-bored hole conform to engineering drawings and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5560.13 Counter-sink a hole using a drilling machine, countersinks, and cutting fluids, so that the depth and diameter of the counter-sunk hole conform to engineering drawings and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5560.14 Maintain material identification by marking or stamping workpiece and completing shop documentation, to facilitate traceability of the final product or work-in-process and to maintain inventory control in accordance with company standards/procedures and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5560.15 Deburr workpiece using files, scrapers, emery cloth, sanders, and hand or pedestal grinders, to remove excess material and to ensure safe handling in accordance with engineering drawings, job specifications, and Safety Legislation.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5560.16 Perform final inspection using precision measuring instruments and checking devices including (not limited to) inside and outside micrometers, vernier height gauges or indicators, gauge blocks, and pin gauges, to ensure that the tolerances and dimensions of the drilled workpiece conform to the engineering drawings and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5560.17 **Move workpiece** by operating lifting and rigging equipment including hoists, overhead cranes, chain falls, lift pins, eye bolts, slings, cables, and chains, to remove, transport, and store materials, parts, or equipment in compliance with Safety Legislation and company standards.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5560.18 **Practise good housekeeping** in the workplace by cleaning up spills or leaks, keeping work area clean and clear of obstructions, and storing tools or equipment, so that the potential for accident or injury is prevented and tools or equipment are in place and available in compliance with company standards/procedures and Safety Legislation.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5560.19 **Complete work documentation** including (not limited to) tracking sheets, sign-off sheets, inspection reports, or procedure sheets to record the finalization of jobs and to facilitate traceability of work-in-process, ensuring that all data is recorded accurately and clearly in accordance with engineering drawings, job specifications, and company standards/procedures.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

SPONSOR CONFIRMATION FOR 5560: PERFORM DRILLING USING DRILL PRESS/MACHINES

Date Completed (mm/dd/yy)	Sponsor Name (Print)	Sponsor Signature
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U5561.00 PERFORM MACHINE GRINDING**GENERAL PERFORMANCE OBJECTIVE**

Perform machine grinding by: selecting grinding wheels; checking condition of grinding wheel; installing grinding wheel; locating and positioning workpiece; surface grinding workpiece; honing holes; lapping workpiece; grinding inside and outside diameters; grinding tools and cutters; checking ground surfaces; performing final inspection; completing work documentation; moving workpiece; and, practising good housekeeping.

SKILLS

U5561.01 Select grinding wheel by using information in engineering drawings, charts, and job specifications, to ensure that the wheel selected is the correct grade and size needed to finish, shape, and size workface in accordance with the hardness and finish of the workpiece and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

◇ A Trainer may be a Supervisor or the competent employee designated by the Apprentice's Sponsor

U5561.02 Check condition of grinding wheel for defects, cracks, or chips, and by taking corrective action or replacing if required, to ensure personal safety and to perform optimum cutting in accordance with job specifications and Safety Legislation.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5561.03 **Install grinding wheel** to specified radii and tangents/angles using diamond or star-wheel dresser, to ensure personal safety and to perform optimum grinding in accordance with job specifications, Safety Legislation, and company standards/procedures.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5561.04 **Locate and position workpiece in grinder** to required operational clearances by setting up workholding devices including (not limited to) angle plate, magnetic holders, vises, chucks, centres, jigs, V-block, or mandrels, so that the workpiece is aligned, secured, and stable during grinding operations in accordance with job specifications and Safety Legislation.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5561.05 **Surface grind workpiece** so that the finish, flatness, and size of ground surfaces conform to engineering drawings and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5561.06 **Hone holes on a honing machine** using required attachments, so that the dimension and tolerance of honed hole conform to engineering drawings and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5561.07 Lap workpiece by hand grinding or using a power lapping machine so that the finish and flatness of the lapped surface conforms to engineering drawings and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5561.08 Grind inside and outside diameters (ID/OD) using machine grinders so that the dimensions and tolerances of ground ID/OD surfaces conform to engineering drawings and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5561.09 Grind tools and cutters using pedestal, surface, or tool and cutter grinders, so that the ground cutting edge of tools or cutters conforms to tool geometry standards to ensure optimum metal removal and finish.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5561.10 Check surfaces using surface comparators to ensure that the surface is finished in micro-inches or microns as specified in the engineering drawings and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5561.11 Perform final inspection using precision measuring instruments and checking devices including (not limited to) inside and outside micrometers, vernier height gauges or indicators, gauge blocks, and pin gauges, to ensure that the tolerances and dimensions of the ground workpiece conform to the engineering drawings and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5561.12 Move workpiece by operating lifting and rigging equipment including (not limited to) hoists, overhead cranes, chain falls, lift pins, eye bolts, slings, cables, or chains, to remove, transport, and store materials, parts, or equipment in compliance with Safety Legislation and company standards/procedures.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5561.13 Complete work documentation including (not limited to) tracking sheets, sign-off sheets, inspection reports, or procedure sheets, to record the finalization of jobs and traceability of work-in-process, ensuring that all data is recorded accurately and clearly in accordance with engineering drawings, job specifications, and company standards/procedures.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5561.14 **Practise good housekeeping** in the workplace by cleaning up spills leaks, keeping work area clean and clear of obstructions, and storing tools or equipment so that the potential for accident or injury is prevented and tools and equipment are in place and available, in compliance with company standards/procedures and Safety Legislation.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

SPONSOR CONFIRMATION FOR 5561: PERFORM MACHINE GRINDING

Date Completed (mm/dd/yy)	Sponsor Name (Print)	Sponsor Signature
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U5562.00 PERFORM LATHE WORK

GENERAL PERFORMANCE OBJECTIVE

Perform lathe work by: selecting, identifying, and preparing cutting tools; locating and positioning workpiece; setting up lathe cutting tools; selecting speeds and feeds of lathe; taking a sizing (preliminary) cut; establishing a reference or starting point (datum); facing a surface; turning an external diameter; drilling, boring, reaming, and tapping a hole; turning an internal or external thread; producing a taper; knurling cylindrical surface patterns; grooving and parting-off; maintaining material identification; deburring workpiece; performing final inspection; moving workpiece; completing work documentation; and, practising good housekeeping.

SKILLS

U5562.01 Select lathe cutting tools including (not limited to) drill bits, boring, parting, threading, facing, or turning tools, by using information from engineering drawings and job instructions to ensure that the tools selected are the correct ones needed to cut the workpiece material.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

◇ A Trainer may be a Supervisor or the competent employee designated by the Apprentice's Sponsor

U5562.02 Identify and prepare lathe cutting tools by sharpening or replacing, so that the cutting shape and angle is prepared for optimum cutting and personal safety in accordance with manufacturer's specifications and company standards/procedures.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5562.03 Locate and position workpiece in lathe to required operational clearances by setting up and securing workholding devices including (not limited to) chucks, face plates, centres, catch plates, steady rest, or tail stock, so that the workpiece is aligned, secured, and stable during machining in accordance with job specifications, Safety Legislation, and engineering drawings.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5562.04 Set up lathe cutting tools to required operational alignments using tool posts and tail stocks, to ensure that tools are in position and held securely during machining in accordance with job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5562.05 **Select speeds and feeds of lathe** using speed and feed charts and in accordance with the size, type, and hardness of workpiece material, so that the lathe performs optimum cutting without damage to workpiece, cutting tools, or machine and ensures personal safety in accordance with job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5562.06 **Take a sizing (preliminary) cut** to determine reference workface and to check speeds and feeds to ensure that lathe is set up in accordance with engineering drawings and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5562.07 **Establish a reference or starting point (datum)** by zeroing out machine and ensuring that the datum is correctly located in accordance with job specifications, engineering drawings, and company standards/procedures

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5562.08 **Face a surface** using a lathe and single-point tool bit and by measuring or checking with vernier, straight edge, or micrometer, so that the surface flatness and finished edge conform to engineering drawings and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5562.09 Turn an external diameter using a lathe and single-point tool and by measuring or checking with a vernier and by measuring or checking with a vernier or micrometer, so that the turned diameter conforms to engineering drawings and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5562.10 Drill a hole using a lathe, centre-drill, drills, and tailstock, so that the diameter and depth of the drilled hole conform to engineering drawings and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5562.11 Bore an internal diameter using a lathe and boring bars mounted in a toolpost, so that the close-toleranced internal diameters conform to engineering drawings and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5562.12 Ream a hole using a lathe, centre-drill, drills, reamers, and tail-stock, and by measuring or checking with vernier, micrometer, and gauges, so that the depth and diameter of the reamed hole conform to engineering drawings and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5562.13 **Tap a hole** using on lathe, taps, tapping head, and tailstock, so that the depth, diameter, and thread pitch of the tapped hole conform to engineering drawings and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5562.14 **Turn an internal or external thread** using a lathe and single-point tool bit and by measuring or checking with thread micrometers and thread plug gauge (go-no-go), so that the pitch, geometrical form, and dimensional tolerance of the turned thread conform to engineering drawings and thread standards.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5562.15 **Produce a taper** using a lathe, offset tail stock, taper-turning attachment, and compound rest, and by measuring or checking with protractors, micrometers, vernier height gauges, or templates, so that the size and angle of turned taper conform to engineering drawings and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5562.16 Knurl cylindrical surface patterns using a lathe and knurling tools, so that the diameter, form, depth, and finish of knurled surface patterns conform to engineering drawings and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5562.17 Groove and part-off using a lathe and grooving or parting tools, so that the width, length, depth, and square of cut-offs conform to engineering drawings and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5562.18 Maintain material identification by marking or stamping workpiece and completing shop documentation, to facilitate traceability of the final product or work-in-process and to maintain inventory control in accordance with company standards/procedures.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5562.19 Deburr workpiece using files, scrapers, emery cloth, sanders, and hand or pedestal grinders, to remove excess material and to ensure safe handling in accordance with engineering drawings, job specifications, and Safety Legislation.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5562.20 **Perform final inspection** using precision measuring instruments and checking devices including (not limited to) inside and outside micrometers, vernier height gauges or indicators, gauge blocks, and pin gauges, to ensure that the tolerances and dimensions of the completed workpiece conform to the engineering drawings and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5562.21 **Complete work documentation** including (not limited to) tracking sheets, sign-off sheets, inspection reports, or procedure sheets to record the finalization of jobs and to facilitate traceability of work-in-process, ensuring that all data is recorded accurately and clearly in accordance with engineering drawings, job specifications, and company standards/procedures.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5562.22 **Move workpiece** by operating lifting and rigging equipment including (not limited to) hoists, overhead cranes, chain falls, lift pins, eye bolts, slings, cables, and chains, to remove, transport, and store materials, parts, or equipment in compliance with Safety Legislation and company standards/procedures.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5562.23 **Practise good housekeeping** in the workplace by cleaning up spills or leaks, keeping work area clean and clear of obstructions, and storing tools or equipment so that the potential for accident or injury is prevented and tools and equipment are in place and available, in compliance with company standards/procedures and Safety Legislation.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

SPONSOR CONFIRMATION FOR 5562: PERFORM LATHE WORK

Date Completed (mm/dd/yy)	Sponsor Name (Print)	Sponsor Signature
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U5563.00 PERFORM MILLING

GENERAL PERFORMANCE OBJECTIVE

Perform milling by: selecting milling cutter tools; identifying and preparing cutting tools; setting up and maintaining adjustable support tools; setting up milling cutting tools; selecting speeds and feeds; performing fly-cutting; face-milling; machining steps, cut-outs, angles, and open slots, pockets or slots; machining and boring holes; maintaining material identification; deburring workpiece; performing final inspection; moving workpiece; completing work documentation, and, practising good housekeeping.

SKILLS

U5563.01 **Select milling cutting tools** including (not limited to) end mills, face mills, shell cutters, slot drills, boring bars, slitting saws, and boring head, by using information from engineering drawings and job instructions to ensure that the tools selected are the correct ones needed to mill the workpiece to specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

◇ A Trainer may be a Supervisor or the competent employee designated by the Apprentice's Sponsor

U5563.02 Identify and prepare milling cutting tools by sharpening or replacing tools so that the cutting shape and angle is prepared for optimum cutting and personal safety in accordance with manufacturer's specifications and company standards/procedures.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5563.03 Set-up and maintain milling adjustable support tools including (not limited to) indexing heads, vises, angle plates, sine bars, and tables, ensuring that the support tool is the correct one for the application and the workpiece is located and secured during machining in accordance with job specifications and Safety Legislation.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5563.04 Set up milling cutting tools to required operational alignments using arbors, collets, and drill chucks, to ensure that the tools are in position and held securely during machining in accordance with job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5563.05 **Select speeds and feeds of mill** using speed and feed charts and in accordance with size, type, and hardness of workpiece material, so that the mill performs optimum cutting without damage to the workpiece, cutting tools, or machine and ensures personal safety.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5563.06 **Perform fly-cutting** using a milling machine, single-point tool bit, and required cutting fluid, so that the size, shape, squareness, and flatness of the fly-cut workpiece conform to engineering drawings and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5563.07 **Face-mill** using a milling machine, multi-point tool bit, face mill, and required cutting fluids, so that the size, shape, squareness, and flatness of the faced workpiece conform to engineering drawings and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5563.08 **Machine steps, cut-outs, angles, and open slots** using a milling machine, end mill, and required cutting fluid, so that the size, shape, and angle of the end-milled workpiece conform to engineering drawings and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5563.09 Machine a pocket or slot using a milling machine, slot drill, center cutting end mill, and required cutting fluid, so that the size, shape, and angle of milled pockets or slots conform to engineering drawings and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5563.10 Machine a hole using a milling machine, drill bits, reamers, slot drills, and required cutting fluid, so that the diameter, depth, and tolerance of the milled hole conform to engineering drawings and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5563.11 Bore holes using a milling machine, boring bar, boring head, and required cutting fluid, so that the diameter, finish, depth and location of the bored hole conform to engineering drawings and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5563.12 Maintain material identification by marking or stamping workpiece and completing shop documentation, to facilitate traceability of the final product or work-in-process and to maintain inventory control in accordance with company standards/procedures.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5563.13 Deburr workpiece using files, scrapers, emery cloth, sanders, and hand or pedestal grinders, to remove excess material and to ensure safe handling in accordance with engineering drawings, job specifications, and Safety Legislation.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5563.14 Perform final inspection using precision measuring and checking devices instruments including (not limited to) inside and outside micrometers, vernier height gauges or indicators, gauge blocks, and pin gauges, to ensure that the tolerances and dimensions of the milled workpiece conform to the engineering drawings and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5563.15 Move workpiece by operating lifting and rigging equipment including (not limited to) hoists, overhead cranes, chain falls, lift pins, eye bolts, slings, cables, and chains to remove, transport, and store materials, parts, and equipment in compliance with Safety Legislation and company standards/procedures.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5563.16 **Complete work documentation** including (not limited to) tracking sheets, sign-off sheets, inspection reports or procedure sheets to record the finalization of jobs and to facilitate traceability of work-in-process, ensuring that all data is recorded accurately and clearly in accordance with engineering drawings, job specifications, and company standards/procedures.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5563.18 **Practise good housekeeping** in the workplace by cleaning up spills or leaks, keeping work area clean and clear of obstructions, and storing tools or equipment so that the potential for accident or injury is prevented and tools and equipment are in place and available, in compliance with company standards/procedures and Safety Legislation.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

SPONSOR CONFIRMATION FOR 5563: PERFORM MILLING

Date Completed (mm/dd/yy)	Sponsor Name (Print)	Sponsor Signature
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U5564.00 **PERFORM NUMERICALLY CONTROLLED(NC)/COMPUTERIZED NUMERICALLY CONTROLLED(CNC) MACHINING**

GENERAL PERFORMANCE OBJECTIVE

Perform NC/CNC machining by: identifying and selecting numerically controlled process; identifying, selecting, and setting up cutting tools and tool holders; identifying, selecting, and setting machine parameters; positioning, aligning, and securing workpiece in machine; inputting and verifying part program to the machine control; verifying tool sequence, tool path, and collision avoidance program; monitoring machining process; making adjustments to tooling and offsets; maintaining material identification; performing final inspection; moving workpiece; completing work documentation; and, practising good housekeeping.

SKILLS

U5564.01 Identify and select numerically controlled machining process including Numerically Controlled (NC) and Computerized Numerically Controlled (CNC) machines, using information from the engineering drawings and job specifications to ensure that machining process selected is the correct one to make the parts or components.

(mm/dd/yy)	Trainer Print Name	Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

♦ A Trainer may be a Supervisor or the competent employee designated by the Apprentice's Sponsor

U5564.02 Identify, select, and set up NC/CNC cutting tools and tool holders including tool holders, end and face mills, carbide insert tools, centre-drill, drill, taps, reamers, counter bores, and boring head, to pre-determined reference points, by using information from the engineering drawings, prepared sequence sheet, and tool lists to ensure that tools and tooling selected are the correct ones to machine-cut the workpiece efficiently and safely.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5564.03 Identify, select and set machine parameters including spindle feeds, table feeds, and power settings using speed and feed charts and according to the type, size, grade, and hardness of material to be cut, so that the workpiece is machined efficiently and safely without damage to tooling, machine, or workpiece and ensures personal safety, in accordance with CAD data, job specifications, and engineering drawings.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5564.04 Position, align, and secure workpiece in NC/CNC machine to specified datums and required alignments, using devices, chucks, face plates, collets, vises, clamps, stops, and fixtures, to locate and position the workpiece, avoid collisions, and ensure maximum stability during machining in accordance with job specifications and Safety Legislation.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5564.05 **Input and verify part program to the NC/CNC machine control** by: performing a dry run; taking a test cut; interrupting machining; measuring and checking dimensions; making adjustments to machine feeds, speeds, and offsets; editing the program; taking a final cut; and, performing an inspection prior to the production run; to ensure that the dimensions, shape, and tolerances of the machined part conform to the CAD data, engineering drawings and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5564.06 **Verify tool sequence, tool path, and collision avoidance program**, by performing a dry run and editing program as required, to ensure that workpiece is machined in accordance with CAD data, engineering drawings and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5564.07 **Monitor NC/CNC machining process** by interrupting machining, measuring or checking dimensions, and making adjustments to machine feeds, speeds, and offsets, so that the dimensions, shape, and tolerances of the machined workpiece are maintained during machining in conformance with engineering drawings, CAD data, and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5564.08 **Make adjustments to tooling and offsets** so that the displayed or modified offsets and tooling conform with CAD data, engineering drawings, and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5564.09 **Maintain material identification** by marking or stamping workpiece and completing shop documentation, to facilitate traceability of the final product or work-in-process and to maintain inventory control in accordance with company standards/procedures.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5564.10 **Perform final inspection** using precision measuring and checking devices instruments including (not limited to) inside and outside micrometers, vernier height gauges or indicators, gauge blocks, and pin gauges, to ensure that the tolerances and dimensions of the machined workpiece conform to the engineering drawings and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5564.11 **Move workpiece** by operating lifting and rigging equipment including (not limited to) hoists, overhead cranes, chain falls, lift pins, eye bolts, slings, cables, and chains, to remove, transport, and store materials, parts, and equipment in compliance with Safety Legislation and company standards/procedures.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5564.12 **Complete work documentation** including (not limited to) data sheets, tracking sheets, sign-off sheets, inspection reports, or procedure sheets, to record the finalization of jobs and to facilitate traceability of work-in-process, ensuring that all data is recorded accurately and clearly in accordance with engineering drawings, job specifications, and company standards/procedures.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5564.13 **Practise good housekeeping** in the workplace by cleaning up spills or leaks, keeping work area clean and clear of obstructions, and storing tools or equipment, so that the potential for accident or injury is prevented and tools or equipment are in place and available in compliance with company standards/procedures and Safety Legislation.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

SPONSOR CONFIRMATION FOR 5564: PERFORM NUMERICALLY CONTROLLED(NC)/COMPUTERIZED NUMERICALLY CONTROLLED(CNC) MACHINING

Date Completed (mm/dd/yy)	Sponsor Name (Print)	Sponsor Signature
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U5565.00 PERFORM ELECTRICAL DISCHARGE MACHINING (EDM)**GENERAL PERFORMANCE OBJECTIVE**

Perform EDM machining by: identifying and selecting EDM machining process; developing electrodes; identifying, selecting, and setting up EDM machining components; identifying, selecting, and setting machine parameters; positioning, aligning, and securing workpiece in EDM machine; cutting the workpiece; maintaining material identification; performing final inspection; moving workpiece; completing work documentation; and, practising good housekeeping.

SKILLS

U5565.01 Identify and select Electrical Discharge Machining (EDM) process using information from CAD data, engineering drawings and job specifications to ensure that process selected is the correct one to cut parts or components.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

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U5565.02 Develop EDM electrodes by selecting the correct material according to the workpiece material, complexity and quantity of electrodes, surface finish, tolerances, flushing or removal rates, engineering drawings, and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5565.03 Identify, select, and set up EDM machining components including cutting tools, tool holders, EDM wire and guides, to pre-determined reference points by using information from the engineering drawings, prepared sequence sheet, and tool lists, to ensure that tools and tooling selected are the correct ones to cut the workpiece efficiently and safely.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5565.04 Identify, select and set machine parameters including rotations, flushing rates, and power settings using speed and feed charts and according to the type, size, grade, and hardness of material to be cut, so that the workpiece is machined efficiently and safely without damage to tooling, machine, or workpiece and ensures personal safety in accordance with engineering drawings and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5565.05 Position, align, and secure workpiece in EDM machine to specified datums and required alignments using workholding devices to locate and position the workpiece and ensure maximum stability during machining, in accordance with engineering drawings and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5565.06 **Cut the workpiece by electrical discharge machining** and measuring or checking using verniers, depth micrometer, and indicators, so that the completed shape, contour, and size of the machined workpiece conform to engineering drawings and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5565.07 **Maintain material identification** by marking or stamping workpiece and completing shop documentation, to facilitate traceability of the final product or work-in-process and to maintain inventory control in accordance with company standards/procedures and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5565.08 **Perform final inspection** using precision measuring and checking devices instruments including (not limited to) inside and outside micrometers, vernier height gauges or indicators, gauge blocks, and pin gauges, to ensure that the tolerances and dimensions of the completed workpiece conform to the engineering drawings and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5565.09 **Move workpiece** by operating lifting and rigging equipment including (not limited to) hoists, overhead cranes, chain falls, lift pins, eye bolts, slings, cables, and chains, to remove, transport, and store materials, parts, or equipment in compliance with Safety Legislation and company standards/procedures.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5565.10 **Complete work documentation** including (not limited to) tracking sheets, sign-off sheets, inspection reports, or procedure sheets, to record the finalization of jobs and to facilitate traceability of work-in-process, ensuring that all data is recorded accurately and clearly in accordance with engineering drawings, job specifications, and company standards/procedures.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5565.11 **Practise good housekeeping** in the workplace by cleaning up spills or leaks, keeping work area clean and clear of obstructions, and storing tools or equipment so that the potential for accident or injury is prevented and tools or equipment are in place and available in compliance with company standards/procedures and Safety Legislation.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

SPONSOR CONFIRMATION FOR 5565: PERFORM ELECTRICAL DISCHARGE MACHINING (EDM)

Date Completed (mm/dd/yy)	Sponsor Name (Print)	Sponsor Signature
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U5566.00 DEVISE AND DETAIL A PLAN FOR THE TOOL/TOOLING-BUILD PROCESS

GENERAL PERFORMANCE OBJECTIVE

Devise and detail a plan for the tool/tooling-build process by: verifying the features of tool/tooling components; developing and organizing a tool/tooling-building plan; performing tool/tooling-building related calculations; assembling and verifying tool/ tooling stock materials; producing a detailed sketch of tool/tooling components.

SKILLS

U5566.01 Verify features of tool/tooling components by reading bill of materials, engineering drawings, component prints, assembly, tool and part drawings to correctly identify: type of tool or tooling; tolerances; sizes; diameters; drawing revision level; projection; section views; pick-up datum point; shapes; number of working components; material specifications; assembly process; number of functions; and, quantity and type of parts; so that all required component features are identified, checked, and verified.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

◇ A Trainer may be a Supervisor or the competent employee designated by the Apprentice's Sponsor

U5566.02 Develop and organize a tool/tooling-build plan to identify and document: types of machines and tools; job operations; sequencing of job; machining processes; required fixtures and tooling; and, the machining, assembly, and fabrication processes; so that all features of the tool/tooling plan are correctly identified and conform to engineering drawings, bill of materials, scheduled target dates, company standards/procedures, and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5566.03 Perform tool/tooling build related calculations using conversion tables or charts, material and product-specification tables or charts, and occupational graphs, to correctly identify clearances, tolerances, and contraction or expansion variables, so that all tool/tooling dimensions, tolerances, sizes, and shapes are accurately determined and documented in accordance with engineering drawings, bill of materials, company standards/procedures, and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5566.04 Assemble and verify stock materials for surface condition, hardening ability, heat-treat response, type, grade, and dimensions, by checking colour codes, lettering, numerical stamps, charts, and stock lists, to ensure that the workpiece materials are the correct ones to build the tools in accordance with the company standards/procedures, engineering drawings, and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5566.05 Produce a detailed sketch of tool/tooling using engineering drawings and tool or part drawings, so that the components and assemblies are correctly identified and sketched for shape, dimensions, tolerances, finishes, and assembly interrelationship.

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(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

SPONSOR CONFIRMATION FOR 5566: DEVISE AND DETAIL A PLAN FOR THE TOOL/TOOLING BUILD PROCESS

Date Completed (mm/dd/yy)	Sponsor Name (Print)	Sponsor Signature
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U5567.00 DEVELOP, BUILD, AND FIT TOOLS/TOOLING (Production, Mechanical Devices, and Prototypes)

GENERAL PERFORMANCE OBJECTIVE

Develop, build, and fit tools/ tooling (production, mechanical devices, and prototypes) by: organizing the tool/tooling build plan; producing preliminary sketches; building tool/tooling aids; cutting and preparing raw material; blocking up and establishing datum; machining production tooling and components; machining prototypes and components; machining mechanical device components; heat-treating tool/tooling components; marking tool/tooling components; inspecting tool/tooling components; documenting tool/tooling production.

SKILLS

U5567.01 Verify features of tools/tooling components by reading bill of materials, engineering drawings, component prints, assembly, or part drawings to correctly identify: type of tool/ tooling including (not limited to) production, mechanical devices, or prototypes; tolerances; sizes; diameters; revision level; projection and section views; pick-up or datum point; component shapes; number of working components; material specifications; thickness and type of workpiece material; assembly process; number of functions; quantity and type of parts, tool, and tooling; ensuring that all required component features are checked and identified.

(mm/dd/yy)	Trainer Print Name	Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

♦ A Trainer may be a Supervisor or the competent employee designated by the Apprentice's Sponsor

U5567.02 Produce preliminary sketches from job specifications and engineering drawings, so that the components and assemblies are correctly identified and sketched for shape, dimensions, functions, tolerances, finishes, and part or assembly interrelationship and processes.

(mm/dd/yy)	Trainer Print Name	Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5567.03 Organize the tool/ tooling-build plan to identify and document: type of machining process; job operations; sequencing of jobs; required tooling aids, fixtures and tooling; and, assembly and fabrication sequences or processes; so that all features of the building process conform to the prepared build plan, engineering drawings, scheduled target dates, bill of materials, company standards/procedures, and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5567.04 Build tooling aids including workholding and support fixtures, so that the reference features, size, shape, and finish of the tooling aid is accurately produced to assist in the building process in conformance to the prepared sketches or build plan, company standards/procedures, and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5567.05 Cut and prepare raw material to specified lengths and allowances by machining using a bandsaw or abrasive cut-off wheels and by checking dimensions using tape or scale, so that the rough-machined part conforms to engineering drawings, company standards/procedures, and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5567.06 **Block up and establish datum** on the workpiece by machining with mill or lathe machines and by checking with micrometers, verniers, and height gauges, so that datum faces are identified and the height, width, squareness, and allowances of the blocked-up workpiece conform to engineering drawings and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5567.07 **Machine production tool/tooling and components** including (not limited to) jigs, fixtures, templates, gauges, measuring tools, comparators, cutting or forming tools, tool holders, and work aids by: using prepared sketches and build-plan; following pre-determined machining processes; and, measuring or checking using gauge blocks, micrometers, verniers, height gauges, and dial test indicators; so that dimensions, shapes, tolerances, and surface finish of the machined components conform to the engineering drawings. company standards/procedures, and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5567.08 **Machine prototypes and components** including (not limited to) models, specimens, gauges, or specialized tools and instruments by: using preliminary sketches and build-plan; following pre-determined machining processes; and, measuring or checking using gauge blocks, micrometers, verniers, height gauges, and dial test indicators; so that the dimensions, shapes, tolerances, and surface finish of the machined components conform to the engineering drawings, company standards/procedures, and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5567.09 Machine mechanical device components including (not limited to) shaft and pulleys, levers, pins, springs, brackets, bushings, couplings, fasteners, tubes, flanges, housings, plates, blocks, vessels, or guide ways by: using prepared sketches and build-plan; following pre-determined machining processes; and, measuring or checking using gauge blocks, micrometers, verniers, height gauges, and dial test indicators; so that the dimensions, shapes, tolerances, and surface finish of the machined components conform to the engineering drawings, company standards/procedures, and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5567.10 Heat-treat components using heat treating equipment or tools and following required procedures so that components are tempered and hardened as specified in the engineering drawings, job specifications, company standards/procedures and Safety Legislation.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5567.11 Mark the components by marking item number, hardness factor, and type of material on the workpiece using marking stamps and etching or engraving tools, to ensure traceability of components in accordance with company standards/procedures.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5567.12 **Inspect tool/tooling components** using precision measuring and checking equipment including (not limited to) inside and outside micrometers, vernier height gauges or indicators, gauge blocks, pin gauges, and Co-ordinate Measuring Machine (CMM), to ensure that the tolerances and dimensions of the completed workpiece conforms to engineering drawings, company standards/procedures, and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5567.13 **Document tool/tooling production** to identify: materials; job sequences; procedures and processes utilized in the design; and, production information ensuring that all development information is clearly and accurately recorded in accordance with job specifications and company standards/procedures.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

SPONSOR CONFIRMATION FOR 5567: DEVELOP, BUILD, AND FIT TOOLS/TOOLING

Date Completed (mm/dd/yy)	Sponsor Name (Print)	Sponsor Signature
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U5568.00 FIT AND ASSEMBLE TOOLS/TOOLING

GENERAL PERFORMANCE OBJECTIVE

Fit and assemble tools/tooling by: surface-finishing tools/tooling components; marking the tools/tooling components; assembling and fitting tools/tooling components; final-fitting sub-assemblies and components; inspecting fit and function of tools/tooling; performing final inspection; documenting assembly and fit of tools/tooling.

SKILLS

U5568.01 Surface-finish tools/tooling components using grinders, files, oil stones, and abrasive cloths to remove machining marks or burrs and to establish a final contour, ensuring that the surface blend, finish, size, or shape of the part conform with the engineering drawings, company standards/procedures, and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

◇ A Trainer may be a Supervisor or the competent employee designated by the Apprentice's Sponsor

U5568.02 Mark the tools/tooling components using marking stamps and etching or engraving tools to mark the item number, hardness factor, and type of material on to the workpiece, to facilitate traceability of components in accordance with company standards/procedures and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5568.03 Assemble and fit tools/tooling components by following required procedures including (not limited to): fastening; dowelling; fitting; soldering; and, measuring or checking; so that the components and sub-assemblies are aligned, mated, and assembled in accordance with the engineering drawings, company standard/procedures, and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5568.04 Final-fit sub-assemblies and components by following required procedures including (not limited to): fastening; dowelling; fitting; soldering; and, measuring or checking; so that the assembly is aligned, mated, and assembled as specified in engineering drawings, company standards/procedures, and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5568.05 Inspect fit and function of tools/tooling by: trying out tools/tooling; checking tool/tooling components for failure, wear, or defects; and, making adjustments; to ensure that the fit and function of tools/tooling conform to engineering drawings, company standards/procedures, and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5568.06 **Perform final inspection** using precision measuring and checking equipment including (not limited to) inside and outside micrometers, vernier height gauges or indicators, gauge blocks, pin gauges, or Co-ordinate Measuring Machine (CMM) to ensure that the tolerances and dimensions of the completed workpiece conform to engineering drawings and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5568.07 **Document assembly and fit of tools/tooling** to identify and document: materials; sequence; assembly and fitting procedures; and processes utilized in the design and production of the tools/tooling; ensuring that all assembly and fitting information is clearly and accurately recorded in accordance with job specifications and company standards/procedures.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

SPONSOR CONFIRMATION FOR 5568: FIT AND ASSEMBLE TOOLS/TOOLING

Date Completed (mm/dd/yy)	Sponsor Name (Print)	Sponsor Signature
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U5569.00 FINAL-FINISH TOOLS/TOOLING SURFACE CONTOURS**GENERAL PERFORMANCE OBJECTIVE**

Final-finish tools/tooling surface contours by: identifying and selecting finishing tools; finishing tool/tooling surfaces; detailing the workpiece; cleaning finished surfaces; final inspecting the surfaces; and completing work documentation.

SKILLS

U5569.01 Identify and select finishing tools including (not limited to) rifflers, hand grinders, abrasive compounds and cloths, oil and water stones, files, and/or burrs, by using information from engineering drawings and job specifications to ensure that the hand-finishing tools selected are the correct ones to final-finish the workpiece.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

◇ A Trainer may be a Supervisor or the competent employee designated by the Apprentice's Sponsor

U5569.02 Finish tool/tooling surfaces by using required tools and performing polishing, filing, lapping, honing, and deburring techniques to remove tool and cutter marks, burrs, and excess material, so that the surface finish conforms with engineering specifications, company standards/procedures, and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5569.03 **Detail the workpiece** by hand-engraving using carbide burrs, grinding wheels, chisels, files, air or electric hand tools, and punches, so that the shape and profile of the detailed workpiece conform with the engineering drawings, company standards/procedures, and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5569.04 **Clean finished surfaces** using burrs, solvents, cleaning compounds, compressed air, or water to remove debris, abrasive deposits, grease, oil, and layout medium, so that tools/tooling is cleaned and prepared for final assembly and inspection in accordance with engineering drawings, company standards/procedures, and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5569.05 **Final inspect the surface** by using measuring and checking equipment including (not limited to) templates, CMM, modeling compounds, low heat metal, surface indicators, optical comparators, or microscopes to ensure that the integrity of the tool/tooling surface conforms to the engineering drawings, company standards/procedures, and job specifications.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5569.06 **Complete work documentation** including (not limited to) tracking sheets, sign-off sheets, inspection reports, or procedure sheets to record the finalization of jobs and traceability of work in process, ensuring that all data is recorded accurately and clearly in accordance with engineering drawings, job specifications, and company standards/procedures.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

U5569.07 **Practise good housekeeping** in the workplace by cleaning up spills or leaks, keeping work area clean and clear of obstructions, and storing tools or equipment, so that the potential for accident or injury is prevented and tools or equipment are in place and available in compliance with company standards/procedures and Safety Legislation.

(mm/dd/yy)	Trainer Print Name	◇Trainer Signature
(mm/dd/yy)	Apprentice Signature	Apprentice's College of Trades ID

SPONSOR CONFIRMATION FOR 5569: FINAL-FINISH TOOLS/TOOLING SURFACE CONTOURS

Date Completed (mm/dd/yy)	Sponsor Name (Print)	Sponsor Signature
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DEFINITIONS

Apprentices Class

Individuals in this class:

- Hold one or more valid Registered Training Agreements with the Ministry of Advanced Education and Skills Development in either compulsory or voluntary trades;
- Hold a valid statement of membership with the Ontario College of Trades in the Apprenticeship class;
- Are subject to any ratios or wage rates that have been set out in regulation for their trade(s);
- Can remain in this class until they receive their Certificate of Apprenticeship;
- Can hold themselves out as Apprentices.

Certificate of Apprenticeship (C of A)

A certificate issued by the Minister of Training, Colleges and Universities to individuals who have demonstrated that they have completed an apprenticeship program in Ontario.

Certificate of Qualification (C of Q)

A certificate issued by the Registrar on behalf of the College of Trades to a Journeyperson. A Certificate of Qualification will serve as proof of having met any testing/program requirements and membership in the College's Journeypersons Class.

Competence

The ability of an individual to perform a skill repeatedly and without assistance in the workplace as set out in the Log Book.

Competency Analysis Profile (CAP Chart)

A chart that identifies the training needs of an individual trade and details the skills/skill sets that must be demonstrated during an apprenticeship program.

Competent Person

A competent person is defined by the *Occupational Health and Safety Act* as being a person who:

- Is qualified because of their knowledge, training and experience to organize the work and its performance;
- Is familiar with the *Occupational Health and Safety Act* and its regulations that apply to the work; and has knowledge of any potential or actual danger to health or safety in the workplace.

Competent Worker

A competent worker is defined by the *Occupational Health and Safety Act* as being a person who:

- Is qualified because of knowledge, training and experience to perform the work;
- Is familiar with the *Occupational Health and Safety Act* and with the provisions of the regulations that apply to the work; and
- Has knowledge of all potential or actual danger to health or safety in the work.

Sponsor

Means a person that has entered into a Registered Training Agreement under which the person is required to ensure that an individual is provided with workplace-based training in a trade as part of an apprenticeship program established by the College of Trades.

Sponsor of Record

Refers to the Sponsor documented as being signatory to the current training agreement or contract. In order for a Sponsor to be considered for the training of Apprentices, they must identify that the workplace has qualified Journeypersons or the equivalent on site, and can identify that the workplace has the tools, equipment, materials, and processes which have been identified by the Industry representatives for the trade.

Incompetence

According to the *Ontario College of Trades and Apprenticeship Act, 2009*, a member of the College of Trades may be found to be incompetent by the College Of Trades Discipline Committee if the Committee feels that the member has displayed a lack of knowledge, skill or disregard for another person's welfare while practising their trade. If this happens, the individual may be found unfit to practise their trade and their Statement of Membership/Certificate of Qualification may be revoked, suspended, or be subject to terms, conditions or limitations.

Journeyperson

Compulsory Trades Journeyperson:

- Someone who holds a valid Certificate of Qualification in the trade and who is a member in good standing of the College of Trades Journeypersons Class for the same trade; or
- Someone who holds a valid Provisional Certificate of Qualification in the trade and who is a member in good standing of the College of Trades Journeypersons Class for the same trade.

Voluntary Trades Journeyperson:

- Someone who holds a valid Certificate of Qualification in the trade and who is a member in good standing of the College of Trades Journeypersons Class for the same trade; or
- Someone who holds a Certificate of Qualification in the trade that was issued by the Ministry of Advanced Education and Skills Development prior to April 8, 2013 (membership in the College of Trades is not required in this scenario).

Journeyperson Candidates Class

An individual who has completed an Ontario apprenticeship program (Certificate of Apprenticeship) in a voluntary or compulsory trade that has a Certificate of Qualification examination, but has not passed the Certificate of Qualification examination for their trade. There is a maximum time limit of one year to remain in the Journeyperson Candidates Class. Individuals in this class:

- are subject to any ratios and/or wage rates that have been set out for their trade(s), if they practise a compulsory trade.
- can continue to work legally in their trade if they are in a compulsory trade, as they prepare to write their examination (individuals in voluntary trades do not have to be members of the College of Trades to work legally); and can hold themselves out as Journeyperson Candidates (they are neither Apprentices nor Journeypersons).
- can remain in this class for a maximum of one year or until they pass the Certificate of Qualification exam and become members of the Journeypersons class. However, they can only remain in this class for a maximum of one year. After one year they can move into the Tradespersons Class if they are in a voluntary trade. If they are in a compulsory trade and have been in the Journeyperson Candidates Class for one year, they can no longer work legally in that trade until they pass the Certificate of Qualification examination.

Mandatory Skill

Status assigned to unshaded individual skills, skill sets or general performance objectives which must be signed off for the Apprentice to complete their program.

OCTAA

Ontario College of Trades and Apprenticeship Act, 2009

Optional Skill

Status assigned to shaded individual skills, skills sets or general performance objectives for which sign off is not required for the Apprentice to complete the program.

Ratios

For up to date information regarding Journeyperson to Apprentice ratios, please visit: collegeoftrades.ca

Red Seal Program

The Interprovincial Standards Red Seal Program (also known as the Red Seal Program) was established more than 50 years ago to provide greater mobility across Canada for skilled workers and represents a standard of excellence for industry. Through the program, individuals are able to obtain a Red Seal endorsement on their provincial/territorial certificates by achieving 70% or higher on an interprovincial Red Seal examination. The Interprovincial Standards Red Seal Program acknowledges their competence and ensures recognition of their certification throughout Canada without further examination. There are currently over 50 Red Seal designated trades. The Red Seal Program is recognized as the interprovincial *standard of excellence* in the skilled trades. The Interprovincial Standards Red Seal Program is a partnership between the Government of Canada, the Provinces, the Territories and various stakeholders.

Sign off

Signature of the Sponsor of record, or an individual to whom that Sponsor has delegated signing authority, (e.g. Trainer) indicating an Apprentice's demonstration of competence.

Skill

Individual skill described in the Log Book (note: does not mean the larger skill groups referred to in the Log Book as Skill Sets, Training Units, or General Performance Objectives, but the individual skills that make up those groups).

Skill Sets

Group of individual skills found in the Log Book (may also be called Training Unit or General Performance Objective).

Skill Set Completion for Sponsors

Listing for all skill sets and includes space for sign off by Sponsor of record.

Supervisor

An individual who oversees the performance of a task and oversees the actions or work of others.

Trade Board

Under the *Ontario College of Trades and Apprenticeship Act, 2009*, the [College of Trades Appointments Council](#) (COTAC) may appoint a Trade Board for each designated trade, composed of Employee and Employer representatives from the industry. Trade Boards are responsible for advising and making recommendations to the College of Trades Divisional Boards on issues relating to their trade. When there is no appointed trade board for a trade, the respective sector Divisional Board will act as the default Trade Board for the trade.

Tradespersons Class

A Class of Membership for individuals who practise in a voluntary trade which may or may not have a Certificate of Qualification examination.

Individuals in this class:

Have been members of the Journeyperson Candidates Class or are not eligible for Journeyperson Candidates Class and have been assessed to have experience and/or qualifications that are equivalent to a Certificate of Apprenticeship in that trade

- Are preparing to write/have no plans to write/have not passed the available Certificate of Qualification exam for their trade(s);
- Can remain in this class indefinitely or until they pass the available Certificate of Qualification exam for their trade(s); and
- Can hold themselves out as tradespersons (they are neither apprentices nor journeypersons).

Note: Individuals in the Tradespersons Class are considered Journeypersons for the purpose of determining ratios for that trade.

Trainer

A qualified Trainer in a compulsory trade is a Journeyperson with a Certificate of Qualification. In a voluntary trade, a Trainer is an individual who is considered equivalent to a Journeyperson with a Certificate of Qualification.

READY TO WRITE YOUR EXAM?

Many of the skilled trades in Ontario have a final certification examination that you must pass to become certified in your trade. Passing the examination gives you the right to join the Journeypersons class of members at the Ontario College of Trades and receive a Certificate of Qualification in your trade.

There are two types of trade certification examinations in Ontario:

1. Provincial (Ontario) examinations - which lead to a Certificate of Qualification.
2. Red Seal examinations – which lead to a Certificate of Qualification with an Interprovincial Red Seal endorsement.

If a trade is designated as Red Seal in Ontario, you will be writing the Red Seal examination. To access the Red Seal preparation guide please visit: red-seal.ca

You will write an Ontario-only examination when your trade is not designated as Red Seal trade in Ontario.

Ontario's Exam Preparation Guide

collegeoftrades.ca/resources/exam-process

Basic Examination Details for You to Know

You will have **up to four hours to write your examination**. If you need more time, you must ask for it when you schedule the examination, not on the day of your examination. You can leave the examination centre if you complete the examination in less than four hours.

You need a mark of 70% to pass.

Exam questions are multiple choice with four options from which you must choose the correct answer. Your examination may have between 90 and 150 multiple choice questions.

Scheduling Your Examination

The examination scheduling process is currently outlined in detail on the College of Trades website: collegeoftrades.ca

Remember these 3 basic steps:

1. Confirm your eligibility to write the examination with the College of Trades.
2. Contact Client Services at the College of Trades to pay your examination fee.
3. Contact the local Ministry apprenticeship office to schedule your examination in their examination centre: <http://services.findhelp.ca/eo/tcu/appoff>

INSTRUCTIONS FOR RECORDING A CHANGE IN SPONSOR

1. Record your first sponsor's information in Sponsor Record #1 – this would be the sponsor who has signed your initial apprenticeship Training Agreement for this trade.
2. If you do change sponsors prior to completing this apprenticeship, please contact your local Ministry of Advanced Education and Skills Development Apprenticeship Office immediately to update your sponsor record.
3. Please make sure you do record all of the information regarding any additional sponsors of record towards your apprenticeship using the Sponsor Records on the following pages (if applicable).

You must fill out a CHANGE OF SPONSOR RECORD each time you change your sponsor.

SPONSOR RECORD #1

SPONSOR INFORMATION		
Apprentice Name		
Registered Training Agreement #		Date (mm/dd/yy)
Sponsor Name		
Address		
Telephone		
E-mail Address		

SUMMARY OF TRAINING	
Employment Start Date	
Employment End Date	
Total hours of training & instruction between dates of employment.	
Skill Sets Completed (e.g. UXXXX)	

As the Sponsor, I hereby confirm that the above information is true and accurate to the best of my knowledge.

Signature: _____ Date: (mm/dd/yy)

The Sponsor is required to sign off and date the skills after the Apprentice has proven competence in those skills. However, if a skill is shaded, it is optional and does not need to be signed off.

****If you need additional copies of the Sponsor Record, please photocopy as needed or visit collegeoftrades.ca and search Sponsor Record Form.***

CHANGE OF SPONSOR RECORD #2

SPONSOR INFORMATION		
Apprentice Name		
Registered Training Agreement #		Date (mm/dd/yy)
Sponsor Name		
Address		
Telephone		
E-mail Address		

SUMMARY OF TRAINING	
Employment Start Date	
Employment End Date	
Total hours of training & instruction between dates of employment.	
Skill Sets Completed (e.g. UXXXX)	

As the Sponsor, I hereby confirm that the above information is true and accurate to the best of my knowledge.

Signature:_____ Date: (mm/dd/yy)

The Sponsor is required to sign off and date the skills after the Apprentice has proven competence in those skills. However, if a skill is shaded, it is optional and does not need to be signed off.

****If you need additional copies of the Sponsor Record, please photocopy as needed or visit collegeoftrades.ca and search Sponsor Record Form.***

CHANGE OF SPONSOR RECORD #3

SPONSOR INFORMATION		
Apprentice Name		
Registered Training Agreement #		Date (mm/dd/yy)
Sponsor Name		
Address		
Telephone		
E-mail Address		

SUMMARY OF TRAINING	
Employment Start Date	
Employment End Date	
Total hours of training & instruction between dates of employment.	
Skill Sets Completed (e.g. UXXXX)	

As the Sponsor, I hereby confirm that the above information is true and accurate to the best of my knowledge.

Signature: _____ Date: (mm/dd/yy)

The Sponsor is required to sign off and date the skills after the Apprentice has proven competence in those skills. However, if a skill is shaded, it is optional and does not need to be signed off.

****If you need additional copies of the Sponsor Record, please photocopy as needed or visit collegeoftrades.ca and search Sponsor Record Form.***

INSTRUCTIONS FOR APPRENTICESHIP PROGRAM COMPLETION (Appendix A)

Once an Apprentice has completed all the classroom training and on-the-job hours specified for the trade, and has acquired all the mandatory skills included in this Log Book:

1. The Apprentice and the Sponsor complete the Apprentice Completion Form and the Skill Set Completion for Sponsors Form located on the following pages.
2. They sign the forms and submit them to their local Ministry of Advanced Education and Skills Development apprenticeship office. To find the closest office, check the contact information at <http://services.findhelp.ca/eo/tcu/appoff> or call the Employment Ontario toll free number at (1-800-387-5656).
3. Since this trade is competency based, all mandatory skills in the Log Book must be signed off. If the Sponsor is completing the Apprentice before the industry recommended training hours are done, Ministry staff may request further information regarding the Apprentice's on-the-job training. An example of a request would be a letter from the Sponsor confirming the Apprentice worked for some time in the trade before the initial Training Agreement was registered, thereby acquiring some skills beforehand.

If Apprentices are submitting the completion request form and supporting documentation to their local Ministry of Advanced Education and Skills Development apprenticeship office by mail, fax, or email (as a scanned document), they should not include their Log Book; if they are presenting this form in person at the local apprenticeship office, they should bring their Log Book with them.

After Ministry staff verifies all the information in the completion request, they may contact either the Apprentice or the Sponsor for further information or documentation. Once the completion has been confirmed, the Ministry will issue a Certificate of Apprenticeship to the Apprentice.

The Ontario College of Trades will receive notification of this completion, and complete the individual's membership in the Apprentices class for the trade. If the Apprentice has completed a program in a compulsory trade, the College of Trades will automatically register the Apprentice as a member of the Journeyperson Candidates class so the Apprentice can continue to work legally for one year while preparing for the certification examination. If an apprentice completes their apprenticeship in a voluntary trade **and** there is no Certificate of Qualification exam, they can apply for membership in the Journeypersons Class at the Ontario College of Trades. If there is a Certificate of Qualification exam, they must write and pass the exam in order to enter the Journeypersons Class at the Ontario College of Trades.

For permission to schedule an exam once completion is confirmed by the Ministry, the individual must first contact the College of Trades Client Services Department at 647-847-3000 or toll free at 1-855-299-0028 to pay the certification examination fee.

APPRENTICE COMPLETION FORM (Appendix B)

Please fill out both sides of this form, including the Skill Set Completion for Sponsors (see back of form). Once both sides are completed, submit the form to your local Ministry of Advanced Education and Skills Development apprenticeship office (find contact information at <http://services.findhelp.ca/eo/tcu/appoff> or by calling Employment Ontario at (1-800-387-5656).

APPRENTICE INFORMATION	
Name (print)	
Client ID # Issued by Ministry	
Telephone Number(s)	

SPONSOR INFORMATION	
Legal Name	
Address	
Telephone Number(s)	
Sponsor's Signing Authority (<i>print name</i>)	
E-mail Address	

PROGRAM INFORMATION			
Trade Name			
Number of hours required as per Training Agreement (<i>for hours-based trades only</i>)			
Hours completed? (<i>documentation attached</i>)	Yes ()	No ()	Not applicable ()
Classroom training completed or exempt?	Yes ()	No ()	Not applicable ()

I hereby confirm that the information submitted on both sides of this form is true and accurate.

X _____
Apprentice's Signature Date

X _____
Signature of Sponsor's Signing Authority Date

SKILL SET COMPLETION FOR SPONSORS (Appendix C)

You will find the skill set numbers and titles in the Log Book's Table of Contents. By signing off each skill set in the table below, you are providing final confirmation, as the Apprentice's Sponsor, that the Apprentice has demonstrated competency in all the mandatory skills included in the skill set.

SKILL SET #	SKILL SET TITLE	SIGNING AUTHORITY SIGNATURE
5555.0	PROTECT SELF AND OTHERS	
5556.0	PLAN AND PREPARE FOR MACHINING JOB	
5557.0	PERFORM WORK-IN-PROCESS DIMENSIONAL OR SURFACE VERIFICATION	
5558.0	PERFORM BENCHWORK	
5559.0	PERFORM SAWING	
5560.0	PERFORM DRILLING USING DRILL PRESS/MACHINE	
5561.0	PERFORM MACHINE GRINDING	
5562.0	PERFORM LATHE WORK	
5563.0	PERFORM MILLING	
5564.0	PERFORM NUMERICALLY CONTROLLED (NC)/COMPUTERIZED NUMERICALLY CONTROLLED (CNC) MACHINING	
5565.0	PERFORM ELECTRICAL DISCHARGE MACHINING (EDM)	
5566.0	DEVISE AND DETAIL A PLAN FOR THE TOOL/TOOLING-BUILD PROCESS	
5567.0	DEVELOP. BUILD, AND FIT TOOLS/TOOLING (PRODUCTION, MECHANICAL DEVICES, AND PROTOTYPES)	
5568.0	FIT AND ASSEMBLE TOOLS/TOOLING	
5569.0	FINAL-FINISH TOOL/TOOLING SURFACE CONTOURS	

MINISTRY OF ADVANCED EDUCATION AND SKILLS DEVELOPMENT USE ONLY:

Sponsor verified as most recent sponsor of record: Yes () No ()
 Documentation to support completion of hours attached: Yes () No ()
 Completion of classroom training verified: Yes () No ()

Staff Name _____ Signature _____ Date _____

MINISTRY OF ADVANCED EDUCATION AND SKILLS DEVELOPMENT
APPRENTICESHIP OFFICES IN ONTARIO (Appendix D)

Location	Contact	Location	Contact
Barrie 705-737-1431	55 Cedar Pointe Dr Unit 609, Barrie, ON L4N 5R7	North Bay 705-495-8515	200 First Ave West, North Bay, ON P1B 3B9
Belleville 613-968-5558	135 North Front St, Belleville, ON K8P 3B5	Oakville 905-842-5105	700 Dorval Dr., Suite 100, Oakville, ON L6K 3V3
Brantford 519-756-5197	505 Park Rd North Suite 201, Brantford, ON N3R 7K8	Oshawa 905-433-0595	78 Richmond Street West, Unit 100, Oshawa, ON L1G 1E1
Chatham 519-354-2766	870 Richmond St West 1st Floor, Chatham, ON N7M 5J5	Ottawa 613-731-7100	Preston Square, 347 Preston St 3rd Flr, Ottawa, ON K1S 3H8
Cornwall 613-938-9702	132 Second St East Ste 202, Cornwall, ON K6H 1Y4	Owen Sound 519-376-5790	1450 1st Ave West Suite 100, Owen Sound, ON N4K 6W2
Dryden 807-223-4632	Provincial Government Building, 479 Government St, Dryden, ON P8N 3K9	Pembroke 613-735-3911	615 Pembroke St East, Pembroke, ON K8A 3L7
Elliot Lake 705-848-4661	50 Hillside Dr North, Elliot Lake, ON P5A 1X4	Peterborough 705-745-1918	901 Lansdowne St West, Peterborough, ON K9J 1Z5
Fort Frances 807-274-8634	922 Scott St 2nd Flr, Fort Frances, ON P9A 1J4	Sarnia 519-542-7705	Bayside Mall, 150 Christina St North, Sarnia, ON N7T 7W5
Hamilton Central 905-521-7764	Ellen Fairclough Bldg, 119 King St West 8th Flr, Hamilton, ON L8P 4Y7	Sault Ste. Marie 705-945-6815	477 Queen St East 4th Flr, Sault Ste Marie, ON P6A 1Z5
Kapuskasing 705-337-4381	Ontario Government Complex, 122 Government Rd West, Kapuskasing, ON P5N 2X8	St Catharines 905-704-2991	Garden City Tower, 301 St Paul St 10th Flr, St Catharines, ON L2R 7R4
Kenora 807-468-2879	227 1/2 Second St South, Kenora, ON P9N 1G4	Sudbury 705-564-3030	159 Cedar St Ste 506, Sudbury, ON P3E 6A5
Kingston 613-548-1151	Cornell Corporate Centre, 299 Concession St Ste 201, Kingston, ON K7K 2B9	Thunder Bay 807-346-1550	189 Red River Rd Suite 103, Thunder Bay, ON P7B 1A2
Kitchener 519- 653-5758	4275 King St East Ste 200, Kitchener, ON N2P 2E9	Timmins 705-235-1950	Ontario Government Complex, 5520 Highway 101 East Wing B, South Porcupine, ON P0N 1H0
London 519-675-7788	1200 Commissioners Rd E Unit 72, London, ON N5Z 4R3	Toronto Central 416-326-5800	625 Church St 1st Fl, Toronto, ON M7A 2B5
Markham 905-513-2695	140 Allstate Parkway, Suite 505, Markham, ON L3R 5Y8	Windsor Central 519-973-1441	Roundhouse Centre, 3155 Howard Ave 2nd Fl, Ste 200, Windsor, ON N8X 4Y8
Mississauga (City of) 905-279-7333	The Emerald Centre, 10 Kingsbridge Garden Cir Ste 404, Mississauga, ON L5R 3K6		

For current office listings, please visit: <http://services.findhelp.ca/eo/tcu/appoff>

Completing Your Apprenticeship Program

Once your sponsor agrees that your hours are complete and you are competent in the required skills, and you have completed all the levels of classroom training required for your trade:

- ✔ Check the Ontario College of Trades Public Register to make sure your Apprentices class membership is still active:
<https://tmsportal.collegeoftrades.ca/web/ocot-public-services-v3/public-registry>
- ✔ Follow the completion instructions on the Completion Form (Appendix A) in the Log Book.
- ✔ Answer any questions that MAESD staff may have, and provide any additional completion documentation they may require.
- ✔ Once they confirm completion, MAESD will issue you a Certificate of Apprenticeship and notify the Ontario College of Trades of your completion.

After Your Apprenticeship

If you are in a trade with a certification exam, the College of Trades will **automatically** complete your membership in the Apprentices class and activate your 12-month membership in the Journeyperson Candidates class. This change will be reflected on your account with the College as well as on the College's Public Register.

Membership in the Journeyperson Candidates class will allow you to continue practising in a compulsory trade for 12 months while you prepare for and write your exam; if you are in a voluntary trade, it is your automatic approval to challenge the certification exam.

The College will send you a Journeyperson Candidates class welcome letter within 3 weeks of completion that outlines any/all of your future requirements for membership and examination as appropriate (different situations for voluntary and compulsory trades).

If you complete an apprenticeship program for which there is no exam, you can submit an application to become a member of the College's Journeypersons class on the basis of having earned a Certificate of Apprenticeship in the trade.

Preparing For Your Exam

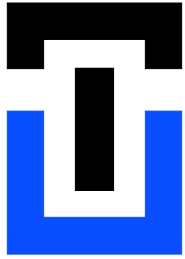
Find out if your trade has a Certificate of Qualification exam at:

www.collegeoftrades.ca/wp-content/uploads/tradesOntarioTradesCodes_En.pdf

For permission to schedule an exam once completion is confirmed by MAESD, you must first contact the College's Client Services Department at 647-847-3000 or toll free at 1-855-299-0028 to pay the certification exam fee. Once you have paid, contact your local MAESD Apprenticeship office to book your exam.

Download Ontario College of Trades exam preparation guide at:

www.collegeoftrades.ca/resources/exam-process and/or view the exam preparation guide for Red Seal trades at: www.red-seal.ca/w.2lc.4m.2@-eng.jsp



ONTARIO COLLEGE OF TRADES

ORDRE DES MÉTIERS DE L'ONTARIO

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