



ONTARIO COLLEGE OF TRADES
ORDRE DES MÉTIERS DE L'ONTARIO

Apprenticeship
Training Standard
Log Book

Tool and Die Maker

430A

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 Training, Colleges and Universities (MTCU) 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 MTCU 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 Training, Colleges and Universities Registered Training Agreement #:

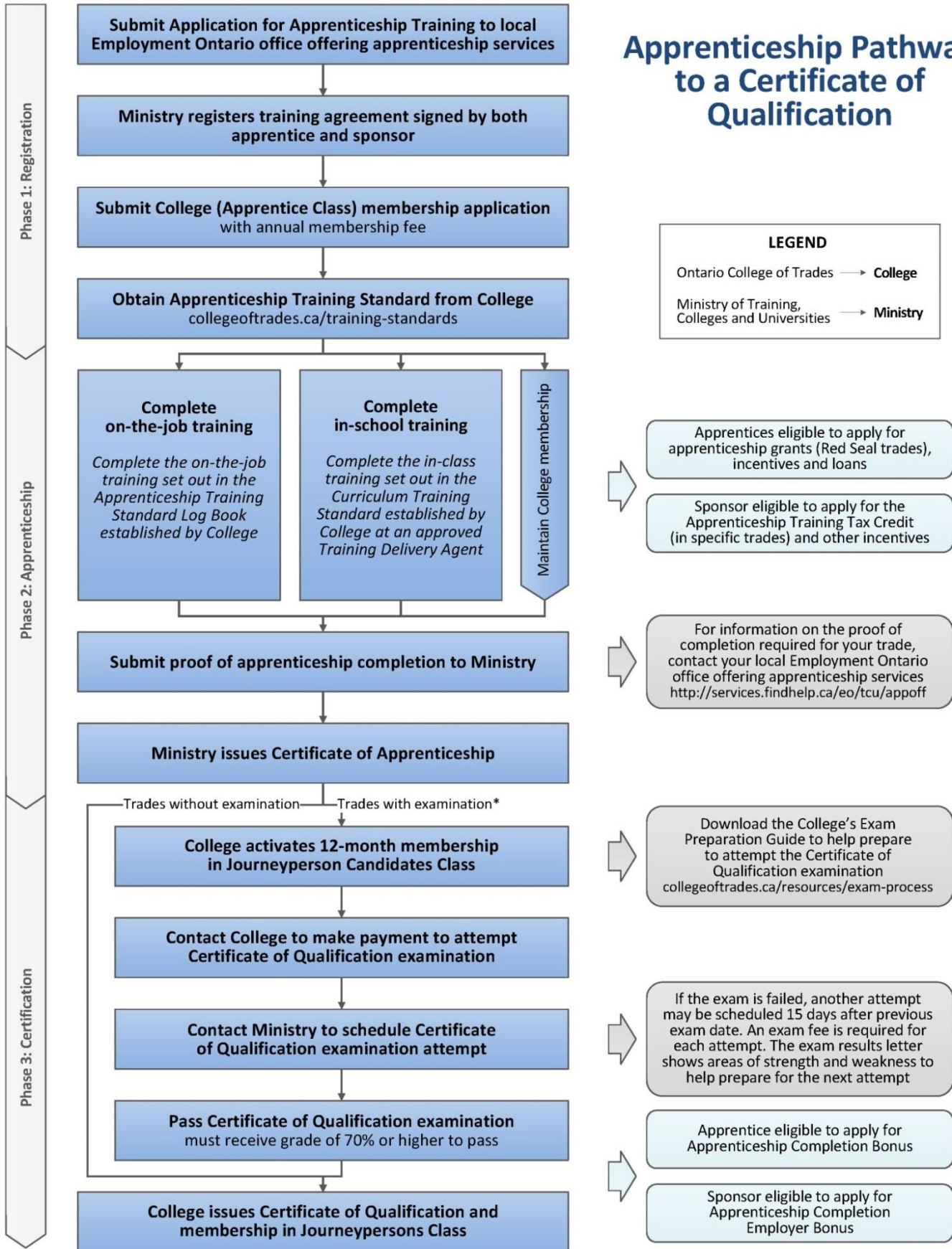
OCOT Membership #:

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



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

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Ministry of Training, Colleges and Universities Apprentice’s Appendices

- Instructions for Apprenticeship Program Completion (Appendix A)
- Apprentice Completion Form (Appendix B)
- Skill Set Completion for Sponsors (Appendix C)
- Ministry of Training, Colleges and Universities Apprenticeship Offices .. (Appendix D)

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 Training, Colleges and Universities 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 Training, Colleges and Universities	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 Training, Colleges and Universities.

This Apprenticeship Log Book for Tool and Die Maker 430A 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 Training, Colleges and Universities

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 Training, Colleges and Universities.

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 Training, Colleges and Universities office.
4. You are responsible for informing the staff at your local Ministry of Training, Colleges and Universities 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 Training, Colleges and Universities 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 and Die Maker is set out in section **49** of Ontario Regulation **276/11** under OCTAA and reads as follows:

49. The scope of practice for the trade of tool and die maker includes the following:
1. Reading and interpreting complex engineering drawings, die and tooling drawings and work-process documentation.
 2. Designing, making, changing and repairing dies, forms, cutting tools, gauges, jigs and fixtures in the manufacturing sector.
 3. Building precision dies, tooling and prototypes using metal cutting machines and equipment, including saws, drills, grinders, lathes, mills and electrical discharge machines.
 4. Performing work-in-process measuring and checking using specialized and precision dies, tools and equipment. O. Reg. 276/11, s. 49.

While the Log Book draws on the scope of practice regulation (Section 49 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 **7,280** 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

Ratio information is current at time of printing. Please check the Ontario College of Trades website for current information on Regulation 104/14 at www.collegeoftrades.ca/regulation

While some of the trades regulated under OCTAA are subject to Journeyman to Apprentice ratios (ratios) set out in regulation, this trade is not one of them. Instead, industry has recommended a Journeyman to Apprentice ratio guideline of one Journeyman or individuals who are deemed equivalent to a journeyman status to one Apprentice as the ratio necessary for an Apprentice to be properly trained on the job in this program.

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 and Die 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 Training, Colleges and Universities; 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 Training, Colleges and Universities. You will be required to submit the signed Apprenticeship Completion form to the Ministry of Training, Colleges and Universities in order to complete your program. The Ministry of Training, Colleges and Universities 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 Training, Colleges and Universities 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 Training, Colleges and Universities
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 and Die Maker – 430A
(All unshaded skill sets must be demonstrated/completed)

SKILL SETS

SKILLS

PROTECT SELF AND OTHERS 5265.0	Identify health and safety hazards. 5265.01	Wear, adjust, and maintain personal protective equipment. 5265.02	Wear, adjust, and maintain respiratory protectors. 5265.03	Practice safe work habits. 5265.04	Follow fire procedures. 5265.05
	Operate emergency safety equipment. 5265.06	Practice industrial hygiene. 5265.07	Practice good housekeeping in the workplace. 5265.08	Conduct pre-operational check of equipment. 5265.09	Report injuries. 5265.10
	Follow procedures for applying first aid. 5265.11	Lock out mechanical equipment for repair. 5265.12	Handle designated substances. 5265.13	Operate lifting equipment. 5265.14	
PLAN AND PREPARE FOR MACHINING JOB 5266.0	Read and interpret engineering drawings. 5266.01	Perform calculations for machining operations. 5266.02	Read and interpret work-process documentation 5266.03	Verify workpiece material. 5266.04	Identify and select cutting fluids. 5266.05
	Identify and select machines. 5266.06	Identify and check machine controls and systems. 5266.07	Identify and select tooling. 5266.08	Identify and prepare cutting tools. 5266.09	Identify and select measuring instruments and checking devices. 5266.10
	Select machine speeds and feeds. 5266.11	Lay out features of engineering drawings. 5266.12	Identify and select work-holding devices. 5266.13	Pick up datum/starting position. 5266.14	Identify and select lifting and rigging equipment. 5266.15
	Communicate with co-workers. 5266.16				

SKILL SETS

SKILLS

PERFORM WORK-IN- PROCESS DIMENSIONAL OR SURFACE VERIFICATION 5267.0	Check straight cuts.	Check shapes.	Check threads.	Check holes.	Check tapers.
	5267.01	5267.02	5267.03	5267.04	5267.05
	Check hardness.	Maintain material identification.	Deburr workpiece.	Check surfaces.	Perform final inspection.
	5267.06	5267.07	5267.08	5267.09	5267.10
	Complete work documentation.				
	5267.11				
PERFORM BENCH WORK 5268.0	Hand-file.	Hand-saw.	Hand-drill holes.	Hand-tap threaded holes.	Hand-ream.
	5268.01	5268.02	5268.03	5268.04	5268.05
	Chase threads.	Hand-grind.	Practice good housekeeping.		
	5268.06	5268.07	5268.08		
PERFORM SAWING 5269.0	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.
	5269.01	5269.02	5269.03	5269.04	5269.05
	Check first cut-off.	Cut shapes using a vertical bandsaw.	Cut squared and angled surfaces using a power cut-off saw.	Maintain material identification.	Deburr workpiece.
	5269.06	5269.07	5269.08	5269.09	5269.10
	Perform final inspection.	Complete work documentation.	Move workpiece.	Practice good housekeeping.	
	5269.11	5269.12	5269.13	5269.14	

SKILL SETS

SKILLS

PERFORM DRILLING USING DRILL PRESS/MACHINE 5270.0	Select drill tooling. 5270.01	Identify and prepare cutting tools for drills. 5270.02	Locate and position workpiece in drill. 5270.03	Set up tooling in drills. 5270.04	Select speeds and feeds of drill. 5270.05
	Center-drill a layout punch mark. 5270.06	Drill a hole. 5270.07	Chamfer a hole. 5270.08	Ream a hole. 5270.09	Machine-thread a hole. 5270.10
	Spot-face a hole. 5270.11	Counter-bore a hole. 5270.12	Counter-sink a hole. 5270.13	Maintain material identification. 5270.14	Deburr workpiece. 5270.15
	Perform final inspection. 5270.16	Move workpiece. 5270.17	Practice good housekeeping. 5270.18	Complete work documentation. 5270.19	
PERFORM MACHINE GRINDING 5271.0	Select grinding wheel. 5271.01	Check condition of grinding wheel. 5271.02	Install grinding wheel. 5271.03	Locate and position workpiece in grinder. 5271.04	Surface grind workpiece. 5271.05
	Hone holes 5271.06	Lap workpiece 5271.07	Grind inside and outside diameters. (ID/OD) 5271.08	Grind tools and cutters. 5271.09	Check ground surfaces. 5271.10
	Perform final inspection. 5271.11	Move workpiece. 5271.12	Complete work documentation. 5271.13	Practice good housekeeping. 5271.14	

SKILL SETS

SKILLS

PERFORM MILLING 5273.0	Select milling cutting tools. 5273.01	Identify and prepare milling cutting tools. 5273.02	Set-up and maintain milling adjustable support tools. 5273.03	Set-up milling cutting tools. 5273.04	Select speeds and feeds of mill. 5273.05
	Perform fly-cutting. 5273.06	Face-mill. 5273.07	Machine steps, cut-outs, angles, and open slots. 5273.08	Machine a pocket or slot. 5273.09	Machine a hole. 5273.10
	Bore holes. 5273.11	Maintain material identification. 5273.12	Deburr workpiece. 5273.13	Perform final inspection. 5273.14	Move workpiece. 5273.15
	Complete work documentation. 5273.16	Practice good housekeeping. 5273.17			
PERFORM NC/CNC COMPUTERIZED CONTROLLED MACHINING 5274.0	Identify and select numerically controlled machining process 5274.01	Identify, select, and set up NC/CNC cutting tools and tool holders. 5274.02	Identify, select, and set machine parameters. 5274.03	Position, align, & secure workpiece in NC/CNC machine. 5274.04	Input and verify part program to NC/CNC machine controls. 5274.05
	Verify tool sequence, tool path, and collision avoidance program. 5274.06	Monitor NC/CNC machining process. 5274.07	Make adjustments to tooling and offsets. 5274.08	Maintain material identification. 5274.09	Perform final inspection. 5274.10
	Move workpiece. 5274.11	Complete work documentation. 5274.12	Practice good housekeeping. 5274.13		

SKILL SETS

SKILLS

PERFORM ELECTRICAL DISCHARGE MACHINING (EDM) 5275.0	Identify and select EDM process. 5275.01	Develop EDM electrodes. 5275.02	Identify, select, and set up EDM machining components. 5275.03	Identify, select, and set machine parameters. 5275.04	Position, align, and secure workpiece in EDM machine. 5275.05
	Cut the workpiece by EDM machine. 5275.06	Maintain material identification. 5275.07	Perform final inspection. 5275.08	Move workpiece. 5275.09	Complete work documentation. 5275.10
	Practise good housekeeping. 5275.11				
DEVISE AND DETAIL A PLAN FOR THE DIE OR TOOL-BUILDING PROCESS 5276.0	Verify the features of die or tool components. 5276.01	Develop and organize a die or tool-building plan. 5276.02	Perform die or tool-building related calculations. 5276.03	Assemble and verify die or tooling stock materials. 5276.04	Produce a detailed sketch of die or tooling components. 5276.05
FABRICATE COMPONENTS OF DIES, TOOLS, JIGS, OR FIXTURES 5277.0	Cut and prepare raw material. 5277.01	Block up and establish datum. 5277.02	Machine components of dies, tools, jigs, or fixtures. 5277.03	Heat-treat the components. 5277.04	Mark the die or tooling components. 5277.05
	Fabricate and assemble sub-assemblies 5277.06	Final fit sub-assemblies die, or tooling components. 5277.07	Inspect die or tooling fit and functions. 5277.08	Move workpiece. 5277.09	Complete work documentation. 5277.10

SKILL SETS

SKILLS

FABRICATE A PROTOTYPE PIECE PART 5278.0	Develop and organize a prototype building-plan 5278.01	Produce preliminary sketches of the prototype. 5278.02	Build tooling aids for the prototype. 5278.03	Manufacture the prototype piece part. 5278.04	Perform final inspection. 5278.05
	Document the prototype piece part building-process. 5278.06				
	ASSEMBLE AND FINALIZE DIES 5279.0	Read and interpret die drawings and sketches. 5279.01	Set up and operate press. 5279.02	Spot-form the steels and tools. 5279.03	Prepare and form an initial blank. 5279.04
Finalize the blank shape. 5279.06		Prepare and finalize cutting steels. 5279.07	Finalize die assembly for final piece part production. 5279.08	Try out and trouble-shoot the die. 5279.09	Inspect part produced by developed die. 5279.10
Final inspect die. 5279.11		Complete work documentation. 5279.12			

5265.00 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 fire procedures and first aid procedures; operating safety equipment, lifting devices, and material handling equipment; reporting injuries; conducting pre-operational check of equipment; and, locking out equipment.

SKILLS

5265.01 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

5265.02 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 the 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

5265.03 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

5265.04 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

5265.05 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

5465.06 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

5265.07 Practise industrial hygiene by wearing required clothing and using eye wash or showering to avoid contamination and 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

5265.08 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

5265.09 Conduct pre-operational check of equipment, ensuring 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

5265.10 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

5265.11 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

5265.12 Lock out mechanical equipment for repair and 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

5265.13 Handle designated substances using specified handling and storage equipment, so that the operator is protected from injury, the environment from contamination, and 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

5265.14 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 U5265: PROTECT SELF AND OTHERS

Date Completed (mm/dd/yy)	Sponsor Name (Print)	Sponsor Signature
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5266.00 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 position from layout lines; and, communicating with co-workers.

SKILLS

5266.01 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.

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

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5266.02 Perform calculations for machining operations including determining speeds and feeds, calculating cutting tool positions, workpiece alignments, and dimensions to be measured and verified using both System International (S.I.) and Imperial System, so that all required specifications and parameters 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

5266.03 Read and interpret work-process documentation to identify required machines, job operations, sequencing of job, method of machining, required 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

5266.04 Verify workpiece material for correct size and type by checking colour codes, lettering, or numerical stamps, to ensure that the workpiece selected conforms to 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

5266.05 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, or machine.

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

5266.06 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

5266.07 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

5266.08 Identify and select tooling required to perform cutting by using information in engineering drawings and job instructions, to ensure that the tooling selected is the correct size and type 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

5266.09 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

5266.10 Identify and select measuring instruments and checking devices, ensuring that instruments and devices selected are capable of measuring to obtain the dimensions and tolerances specified in the engineering drawings, job specifications, and process layout.

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

5266.11 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

5266.12 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 and job specifications.

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

5266.13 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

5266.14 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 datum/start 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

5266.15 Identify and select lifting and rigging equipment including (not limited to) 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 materials

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

5266.16 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 the 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 U5266: PLAN AND PREPARE FOR MACHINING JOB		
Date Completed (mm/dd/yy)	Sponsor Name (Print)	Sponsor Signature

5267.00 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

5267.01 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

5267.02 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

5267.03 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

5267.04 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

5267.05 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

5267.06 Check hardness using various types of hardness testers and comparison charts to ensure that the hardness level of the workpiece materials is 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

5267.07 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

5267.08 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 Safety Legislation, engineering drawings, and job specifications.

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

5267.09 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

5267.10 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

5267.11 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 U5267: PERFORM WORK-IN-PROCESS DIMENSIONAL OR SURFACE VERIFICATION

Date Completed (mm/dd/yy)	Sponsor Name (Print)	Sponsor Signature
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5268.00 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

5268.01 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

5268.02 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

5268.03 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

5268.04 Hand-tap threaded holes using taps, T-handle, and tapping block, so that the depth and squareness of tapped threads to 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

5268.05 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

5268.06 Chase threads using hand taps and dies to repair or clean damaged threads, so that the 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

5268.07 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

5268.08 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

SPONSOR CONFIRMATION FOR U5268: PERFORM BENCHWORK		
Date Completed (mm/dd/yy)	Sponsor Name (Print)	Sponsor Signature

5269.00 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

5269.01 Check fused/welded blade to ensure that joined saw has a continuous cutting edge in accordance with manufacturer's or 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

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

5269.02 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 and job specifications.

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

5269.03 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 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

5269.04 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 the saw performs 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

5269.05 Install and test-run blade to check alignments and movement, 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

5269.06 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

5269.07 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

5269.08 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

5269.09 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

5269.10 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

5269.11 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

5269.12 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

5269.13 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

5269.14 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 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 U5269: PERFORM SAWING

Date Completed (mm/dd/yy)	Sponsor Name (Print)	Sponsor Signature
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5270.00 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

5270.01 Select drill tooling including drill bits, centre-drill, reamers, taps, counter-bores, counter-sinks, and 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

5270.02 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 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

5270.03 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

5270.04 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

5270.05 Select speeds and feeds of drill using speed and feed charts and in accordance with the size, type, and hardness of workpiece material, so that the drill performs 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

5270.06 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

5270.07 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

5270.08 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

5270.09 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

5270.10 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

5270.11 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

5270.12 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

5270.13 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

5270.14 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

5270.15 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

5270.16 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

5270.17 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

5270.18 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

5270.19 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 U5270: PERFORM DRILLING USING DRILL PRESS/MACHINES

Date Completed (mm/dd/yy)	Sponsor Name (Print)	Sponsor Signature
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5271.00 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

5271.01 Select grinding wheel 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

5271.02 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

5271.03 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

5271.04 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

5271.05 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

5271.06 Hone holes using a honing machine and required attachments, so that the dimension and tolerance of honed 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

5271.07 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

5271.08 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

5271.09 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

5271.10 Check ground surfaces using surface comparators, to ensure that the surface is finished in microinches 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

5271.11 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

5271.12 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

5271.13 Complete work documentation including (not limited to) tracking sheets, sign-off sheets, inspection reports, or procedure sheets, to record the finalization of jobs and 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

5272.14 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 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 U5271: PERFORM MACHINE GRINDING

Date Completed (mm/dd/yy)	Sponsor Name (Print)	Sponsor Signature
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5272.00 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; 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

5272.01 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

5272.02 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

5272.03 **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

5272.04 **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

5272.05 **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

5272.06 **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

5272.07 **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

5272.08 **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

5272.09 **Turn an external diameter** using a lathe and single-point tool 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

5272.10 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

5272.11 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

5272.12 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

5272.13 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

5272.14 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

5272.15 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

5272.16 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

5272.17 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

5272.18 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

5272.19 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

5272.20 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

5272.21 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

5272.22 Move workpiece by operating lifting and rigging equipment including (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/procedures.

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

5272.23 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 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 U5272: PERFORM LATHE WORK

Date Completed (mm/dd/yy)	Sponsor Name (Print)	Sponsor Signature
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5273.00 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; machining a pocket or slot; machining and boring holes; maintaining material identification; deburring workpiece; performing final inspection; moving workpiece; completing work documentation, and, practising good housekeeping.

SKILLS

5273.01 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

5273.02 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

5273.03 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

5273.04 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 and manufacturer's specifications.

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

5273.05 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

5273.06 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

5273.07 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

5273.08 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

5273.09 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

5273.10 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

5273.11 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

5273.12 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

5273.13 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

5273.14 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

5273.15 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

5273.16 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

5273.17 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 U5273: PERFORM MILLING

Date Completed (mm/dd/yy)	Sponsor Name (Print)	Sponsor Signature
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5274.00 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 NC/CNC cutting tools and tool holders; identifying, selecting, and setting machine parameters; positioning, aligning, and securing workpiece in NC/CNC machine; inputting and verifying part program to the NC/CNC machine control; verifying tool sequence, tool path, and collision avoidance program; monitoring NC/CNC machining process; making adjustments to tooling and offsets; maintaining material identification; performing final inspection; moving workpiece; completing work documentation; and, practising good housekeeping.

SKILLS

5274.01 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

5274.02 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

5274.03 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

5274.04 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

5274.05 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

5274.06 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

5274.07 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

5274.08 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

5274.09 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

5274.10 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

5274.11 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

5274.12 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

5274.13 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 U5274: PERFORM NUMERICALLY CONTROLLED (NC) / COMPUTERIZED NUMERICALLY CONTROLLED (CNC) MACHINING

Date Completed (mm/dd/yy)	Sponsor Name (Print)	Sponsor Signature
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5275.00 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, and 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

5275.01 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

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

5275.02 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

5275.03 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

5275.04 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

5275.05 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

5275.06 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 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

5275.07 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

5275.08 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

5275.09 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

5275.10 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

5275.11 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 U5275: PERFORM ELECTRICAL DISCHARGE MACHINING (EDM)

Date Completed (mm/dd/yy)	Sponsor Name (Print)	Sponsor Signature
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5276.00 DEVISE AND DETAIL A PLAN FOR THE DIE OR TOOL-BUILDING PROCESS

GENERAL PERFORMANCE OBJECTIVE

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

SKILLS

5276.01 Verify the features of die or tool components by reading bill of materials, engineering drawings, component prints, assembly, die, or part drawings to correctly identify: tolerances; sizes; diameters; revision level; projection and section views; pick-up datum point; component shapes; number of stations; number of working components; material specifications; thickness and type of steel; assembly process; number of functions; and, quantity and type of parts, tools, and dies; 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

5276.02 Organize the die or tool-building plan to identify and document: types of machines and tools; job operations; sequencing of jobs; machining processes; required fixtures and tooling; and, assembly and fabrication sequences or processes; so that all features of the die or tool-building process conform to the engineering drawings, scheduled target dates, bill of materials, and job specifications.

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

5276.03 Perform die or tool-building related calculations using conversion tables/charts, material and product-specifications tables/charts, and occupational graphs, to correctly identify clearances, tolerances, and variances of material contraction or expansion, so that all die or tooling clearances, dimensions, tolerances, size, and shapes are accurately determined and documented in accordance with engineering drawings, job specifications, die drawings, and bill of materials.

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

5276.04 Assemble and verify die or tooling 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 die or tooling as specified in the engineering drawings, bill of materials, and job specifications.

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

5276.05 Produce a detailed sketch of die or tooling components using engineering drawings, die, or part drawings, so that the die or tooling components and assemblies are correctly identified and sketched for shape, dimensions, tolerances, finishes, and assembly interrelationship and processes.

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

SPONSOR CONFIRMATION FOR U5276: DEVISE AND DETAIL A PLAN FOR THE DIE OR TOOL-BUILDING PROCESS

Date Completed (mm/dd/yy)	Sponsor Name (Print)	Sponsor Signature
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5277.00 FABRICATE COMPONENTS OF DIES, TOOLS, JIGS, OR FIXTURES

GENERAL PERFORMANCE OBJECTIVE

Fabricate components of dies, tools, jigs, or fixtures by: cutting and preparing raw material; blocking up and establishing datum; machining components of dies, tools, jigs, and fixtures; heat-treating the components; marking the components; fabricating and assembling sub-assemblies; final fitting sub-assemblies, dies, and tool components; inspecting the die or tooling fit and functions; moving workpiece; and, completing work documentation.

SKILLS

5277.01 Cut and prepare raw material to specified lengths and allowances by machining using a bandsaw or cut-off wheels and by measuring or checking dimensions, so that the rough-machined part 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

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5277.02 Block up and establish datum on a workpiece by measuring or checking with micrometers, verniers, and height gauges and by machining using mills or lathes, so that the datum faces are identified and the height, width, squareness, and grinding allowances of the blocked-up 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

5277.03 Machine components of dies, tools, jigs, or fixtures using pre-determined machining processes and by 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 and job specifications.

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

5277.04 Heat-treat the components by following heat-treating processes and procedures, so that the components are tempered and hardened as required 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

5277.05 Mark the die or tooling components using stamps, etching, or engraving tools by marking item number, hardness factor, and type of material, 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

5277.06 Fabricate and assemble sub-assemblies by fastening, dowelling, fitting, and soldering, so that the assembled sub-assemblies are fabricated, aligned, mated, and assembled in accordance with 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

5277.07 Final fit sub-assemblies, die, or tooling components by fastening, dowelling, fitting, and spot joining, so that the final-assembled workpieces are aligned, mated, and fabricated 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

5277.08 Inspect die or tooling fit and functions by trying out die or tooling and checking the components for failure, wear, or defects, to ensure that the fit and functionality of the dies or tooling 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

5277.09 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, 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

5277.10 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

SPONSOR CONFIRMATION FOR U5277: FABRICATE COMPONENTS OF DIES, TOOLS, JIGS, OR FIXTURES		
Date Completed (mm/dd/yy)	Sponsor Name (Print)	Sponsor Signature

5278.00 FABRICATE A PROTOTYPE PIECE PART

GENERAL PERFORMANCE OBJECTIVE

Fabricate a prototype piece part by: developing and organizing a prototype building-plan; producing preliminary sketches of the prototype components; building tooling aids for the prototype; manufacturing a prototype piece part; performing final inspection; documenting the prototype piece part building-process.

SKILLS

5278.01 Develop and organize a prototype building-plan to identify: types of machines and tools; job operations; sequencing of jobs; machining processes; required fixtures, tooling and tooling aids, assembly and fabrication processes; and, sequencing of processes; ensuring that all features of the prototype building process are clearly identified, documented, and conform to the engineering drawings, job specifications, and scheduled target dates.

(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

5278.02 Produce preliminary sketches of the prototype using bill of materials, component catalogues, and engineering drawings, so that the prototype components and assemblies are correctly identified and sketched for shape, dimensions, functions, tolerances, and assembly interrelationship and process.

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

5278.03 Build tooling aids for the prototype using predetermined machining processes and by measuring or checking, so that the size, shape, and finish of the tooling aids are accurately produced to assist in the prototype-building process in accordance with prepared sketches, engineering drawings, and job specifications.

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

5278.04 Manufacture the prototype piece part using preliminary sketches, fabricated tooling aids, fixtures, press, and finishes, so that the dimensions, shape, tolerances, and surface finish of the piece part conform to job specifications and engineering drawings.

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

5278.05 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 prototype 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

5278.06 Document the prototype piece part building-process to identify drawings, materials used, and all sequences, procedures, and processes utilized in the design and production of the prototype, ensuring that all developmental 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 U5278: FABRICATE A PROTOTYPE PIECE PART

Date Completed (mm/dd/yy)	Sponsor Name (Print)	Sponsor Signature
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5279.00 ASSEMBLE AND FINALIZE DIES

GENERAL PERFORMANCE OBJECTIVE

Assemble and finalize dies by: reading and interpreting die drawings and sketches; setting up and operating try-out press; spot-forming the steels and tools; preparing and forming an initial blank; tool-proofing forming stations; finalizing the blank shape; preparing and finalizing cutting steels; finalizing die assembly for final piece part production; trying-out and trouble-shooting the die; inspecting part produced by the developed die; final inspecting die; and, completing work documentation.

SKILLS

5279.01 Read and interpret die drawings and sketches to identify tolerances, material specifications, machine finishes, section views, revision level, diameters, sizes, tolerances, projections, and any other information required for the die development process.

(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

5279.02 Set up and operate press for trying out the die to determine that all operations are in sequence, controls are set for the correct strokes per minute, and the pre-fabricated die is located and positioned, so that no damage is caused to press or die and personal safety is ensured in accordance with engineering drawings, 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

5279.03 Spot-form the steels and tools by performing spot-forming procedures and using try-out materials and equipment, high-spot blue, and die-grinding equipment, so that the material gap is adjusted to the required thickness as specified in the engineering specifications, sketches, and company standards/procedures.

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

5279.04 Prepare and form an initial blank by performing forming and machining procedures and calculating the bend allowances and draw, so that the initial blank is the correct size and shape for try out in the forming operation in accordance with engineering drawings, sketches, and job specifications.

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

5279.05 Tool-proof forming stations using the previously formed blank and circle-grid analysis or graphing procedures to analyse the material flow, so that forming failures are corrected and necessary adjustments are made to the form including (not limited to) adding draw beads, changing the form radii, and changing clearances in accordance with engineering drawings, sketches, and job specifications.

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

5279.06 Finalize the blank shape by: using information from job documentation; inspecting the formed part; and, performing circle-grid analysis or graphing procedures; so that the failures are corrected and modifications are made to the size and shape of the initial blank in conformance with the piece part, job specifications and engineering drawings.

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

5279.07 Prepare and finalize cutting steels using the finalized blank and information from engineering drawings, so that the size and shape of the cutting steels are finalized to produce a die-cut blank to the required cutting clearances 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

5279.08 Finalize die assembly for final piece part production by following required procedures and using fasteners including (not limited to) dowels, adhesives, and assembly equipment so that the assembled die 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

5279.09 Try out and trouble-shoot the die by following required procedures including (not limited to): trying out in die press; checking for workpiece failures including worn, dull, or chipped edges, distortion of parts, excessive burrs, and inadequate or improper lubrication; measuring and checking; making adjustments or modifications; and, continuing to re-try until the die passes final quality inspection and conforms 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

5279.10 Inspect part produced by developed die using information from part drawings and by checking all specifications using measuring instruments and checking devices to ensure that the piece part produced by the die conforms to 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

5279.11 Final inspect die by analysing, checking, and making adjustments, so that the finalized die functions without premature die failures and 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

5279.12 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 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 U5279: ASSEMBLE AND FINALIZE DIES		
Date Completed (mm/dd/yy)	Sponsor Name (Print)	Sponsor Signature

DEFINITIONS

Apprentices Class

Individuals in this class:

- Hold one or more valid Registered Training Agreements with the Ministry of Training, Colleges and Universities 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 Journeyman. A Certificate of Qualification will serve as proof of having met any testing/program requirements and membership in the College's Journeymen 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 Training, Colleges and Universities prior to April 8, 2013 (membership in the College of Trades is not required in this scenario).

Journey person 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 Journey person 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 Journey person Candidates (they are neither Apprentices nor Journey persons).
- 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 Journey persons class. However, they can only remain in this class for a maximum of one year. After one year they can move into the Trades persons Class if they are in a voluntary trade. If they are in a compulsory trade and have been in the Journey person 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 Journey person 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

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 Training, Colleges and Universities 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 #	
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 #	
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 #	
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 #4

SPONSOR INFORMATION	
Apprentice Name	
Registered Training Agreement #	
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 Training, Colleges and Universities 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 Training, Colleges and Universities 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 Journeyman 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 Journeymen's 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 Journeymen's 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 Training, Colleges and Universities 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
5265.0	PROTECT SELF AND OTHERS	
5266.0	PLAN AND PREPARE FOR MACHINING JOB	
5267.0	PERFORM WORK-IN-PROCESS DIMENSIONAL OR SURFACE VERIFICATION	
5268.0	PERFORM BENCHWORK	
5269.0	PERFORM SAWING	
5270.0	PERFORM DRILLING USING DRILL PRESS/MACHINE	
5271.0	PERFORM MACHINE GRINDING	
5272.0	PERFORM LATHE WORK	
5273.0	PERFORM MILLING	
5274.0	PERFORM NUMERICALLY CONTROLLED (NC)/ COMPUTERIZED NUMERICALLY CONTROLLED (CNC) MACHINING	
5275.0	PERFORM ELECTRICAL DISCHARGE (EDM) MACHINING	
5276.0	DEVISE AND DETAIL A PLAN FOR THE DIE OR TOOL-BUILDING PROCESS	
5277.0	FABRICATES DIES, TOOLS, JOGS AND FIXTURES	
5278.0	FABRICATE A PROTOTYPE PIECE PART	
5279.0	ASSEMBLE AND FINALIZE DIES	

MINISTRY OF TRAINING, COLLEGES AND UNIVERSITIES 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 TRAINING, COLLEGES AND UNIVERSITIES
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	Ottawa 613-731-7100	Preston Square, 347 Preston St 3rd Flr, Ottawa, ON K1S 3H8
Brantford 519-756-5197	505 Park Rd North Suite 201, Brantford, ON N3R 7K8	Owen Sound 519-376-5790	1450 1st Ave West Suite 100, Owen Sound, ON N4K 6W2
Chatham 519-354-2766	870 Richmond St West 1st Floor, Chatham, ON N7M 5J5	Pembroke 613-735-3911	615 Pembroke St East, Pembroke, ON K8A 3L7
Cornwall 613-938-9702	132 Second St East Ste 202, Cornwall, ON K6H 1Y4	Peterborough 705-745-1918	901 Lansdowne St West, Peterborough, ON K9J 1Z5
Dryden 807-223-4632	Provincial Government Building, 479 Government St, Dryden, ON P8N 3K9	Pickering (City of) 905-837-7721	1420 Bayly St Unit 1, Pickering, ON L1W 3R4
Elliot Lake 705-848-4661	50 Hillside Dr North, Elliot Lake, ON P5A 1X4	Sarnia 519-542-7705	Bayside Mall, 150 Christina St North, Sarnia, ON N7T 7W5
Fort Frances 807-274-8634	922 Scott St 2nd Flr, Fort Frances, ON P9A 1J4	Sault Ste. Marie 705-945-6815	477 Queen St East 4th Flr, Sault Ste Marie, ON P6A 1Z5
Hamilton Central 905-521-7764	Ellen Fairclough Bldg, 119 King St West 8th Flr, Hamilton, ON L8P 4Y7	St Catharines 905-704-2991	Garden City Tower, 301 St Paul St 10th Flr, St Catharines, ON L2R 7R4
Kapuskasing 705-337-4381	Ontario Government Complex, 122 Government Rd West, Kapuskasing, ON P5N 2X8	Sudbury 705-564-3030	159 Cedar St Ste 506, Sudbury, ON P3E 6A5
Kenora 807-468-2879	227 1/2 Second St South, Kenora, ON P9N 1G4	Thunder Bay 807-346-1550	189 Red River Rd Suite 103, Thunder Bay, ON P7B 1A2
Kingston 613-548-1151	Cornell Corporate Centre, 299 Concession St Ste 201, Kingston, ON K7K 2B9	Timmins 705-235-1950	Ontario Government Complex, 5520 Highway 101 East Wing B, South Porcupine, ON P0N 1H0
Kitchener 519- 653-5758	4275 King St East Ste 200, Kitchener, ON N2P 2E9	Toronto Central 416-326-5800	625 Church St 1st Fl, Toronto, ON M7A 2B5
London 519-675-7788	1200 Commissioners Rd E Unit 72, London, ON N5Z 4R3	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 MTCU staff may have, and provide any additional completion documentation they may require.
- ✔ Once they confirm completion, MTCU 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

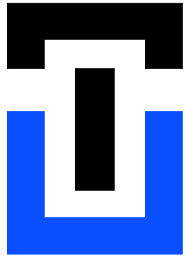
Find out if your trade has a Certificate of Qualification exam at:

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

For permission to schedule an exam once completion is confirmed by MTCU, 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 MTCU 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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Tool and Die Maker



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