

**Record of Work Experiences
Trade Qualifier or Pre-Apprenticeship Credits**

TOOL & DIE MAKER

Note to Apprenticeship Applicants

The work experiences on this form are for credit only and must have been performed prior to your registration as an apprentice.

Applicant Information

Name: _____
Surname First Initial

Address: _____ / _____ / _____ / _____
P. O. Box/Street City/Town Province Postal Code

Telephone: (____) _____ **Cell:** (____) _____ **Email Address:** _____

Employer Information & Verification

Note to Employer

By completing the section below you are confirming that the hours indicated for the applicant are specific to employment in the **Tool And Die Maker Trade**.

Verified By: _____ **CRA* Business #:** _____
Company Name 9 digits

Address: _____ / _____ / _____ / _____
P. O. Box/Street City/Town Province Postal Code

Telephone: (____) _____ **Email Address:** _____
Employer or Representative

Employer or Representative Signature Employer or Representative (Print)

Date of applicant's employment from: _____ / _____ / _____ **to:** _____ / _____ / _____
Month Day Year Month Day Year

Total hours of employment the applicant worked in the **Tool and Die Maker Trade:** _____ Hours

Note: CRA- Canada Revenue Agency

Please check the appropriate box:

Trade Qualifiers <input type="checkbox"/>	The signature of the journeyperson that follows each of the required skills acknowledges that the applicant has met the competencies in each of the skill areas according to the Industry Standard associated with this trade.
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Pre- Apprenticeship Credits <input type="checkbox"/>	The signature of the journeyperson that follows each of the required skills acknowledges that the applicant has performed in each of the skill areas appropriate for this trade.
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- The Advisory Committee in the **Tool and Die Maker Trade** has identified the work experiences or skills listed below as those required for the trade.
- Journeypersons must be certified in the trade stated by this document. A Journeyperson in another trade may sign certain sections if the skills are common to both trades.

Skills Required For Certification	Journeyperson Signature	Verified By Applicant
Safety:		
Recognize potential health and safety hazards.		
Recognize hazardous materials in accordance with WHMIS.		
Handle hazardous materials in accordance with WHMIS.		
Comply with government safety standards and regulations.		
Wear protective equipment and clothing.		
Operate emergency safety equipment.		
Maintain good housekeeping.		
Use and maintain tools and equipment in safe manner.		
Report injuries to supervisor.		
Give hand signals.		
Apply basic first aid.		
Observe environmental protocol.		

Skills Required For Certification	Journeyperson Signature	Verified By Applicant
Recognize pressure capacities and hazards.		
Comply with safety precautions while solving initial setups.		
Planning, Preparation, and Verification:		
Determine dimensions.		
Identify tolerances.		
Compare drawing information to measurements and features on the work piece.		
Prepare sketches of mechanical components and assemblies.		
Determine materials to be used.		
Determine most current revision of drawing.		
Read geometric dimensioning and tolerance symbols.		
Assess engineering drawings for feasibility.		
Identify and verify ferrous metals.		
Identify and select non-ferrous metals and alloys.		
Identify and select non-metallic materials.		
Mark work piece for identification.		
Assess suitability of specified materials.		
Identify and select hardware and standard components.		
Read and interpret specifications from engineering drawings.		
Calculate layout dimensions and reference points.		
Calculate angles, arcs and locations from reference points.		
Select layout on work piece.		
Perform layout on work piece.		
Verify layouts.		
Select and use simple measuring tools and equipment.		
Select and use precision measuring tools.		

Skills Required For Certification	Journeyperson Signature	Verified By Applicant
Select and use fixed and adjustable gauges.		
Calibrate precision measuring tools such as micrometers, verniers, and height gauges.		
Measure parts using CMM.		
Clean measuring tools.		
Store measuring tools.		
Inspect surface finishes.		
Measure parts using optical and laser measuring equipment.		
Select and apply lubricants.		
Select and apply coolants.		
Select and apply compounds.		
Mix coolants and lubricants.		
Prioritize the sequence of operations.		
Select cutting tools and equipment.		
Select work holding devices.		
Select drills.		
Select counterbores, countersinks, and spot facers.		
Select machine reamers.		
Select taps and dies.		
Select single and multi-point cutting tools.		
Select single and multi-point forming tools.		
Select tool holders and adaptors.		
Select boring bars.		
Select deburring tools.		
Drilling Machine Operations:		
Plan sequence of drilling operations.		
Select drilling machines.		
Select and install drills.		
Select and install tool holders.		
Align and clamp work pieces, jigs, and fixtures with drill spindle.		
Select speeds, feeds and depth of cuts.		

Skills Required For Certification	Journeyperson Signature	Verified By Applicant
Drill holes.		
Ream holes.		
Countersink holes.		
Counterbore holes.		
Spot face holes.		
Tap work pieces.		
Lap and hone holes.		
Use drilling accessories.		
Troubleshoot drills.		
Perform preventative maintenance.		
Lathe Operations:		
Plan sequence of lathe operations.		
Select lathe.		
Select tooling.		
Install tooling.		
Align and secure work piece, work holding devices, jigs, and fixtures.		
Align work piece between centers.		
Mount and adjust steady and follower/traveling rests.		
Select speed feeds and depth of cuts.		
Face external shapes and surfaces.		
Turn external shapes and surfaces.		
Perform forming cutting operations.		
Knurl work pieces.		
Drill work pieces.		
Ream work pieces.		
Bore internal surfaces and shapes.		
Face internal surfaces.		
Recess internal surfaces.		
Undercut diameters and shoulders.		
Turn eccentrics.		
Part off work pieces.		

Skills Required For Certification	Journeyperson Signature	Verified By Applicant
Turn internal tapers.		
Turn external tapers.		
Cut internal threads.		
Cut external threads.		
Cut special thread forms.		
Wind springs.		
Use lathe accessories.		
Perform trepanning operations.		
Perform reliving operations.		
Perform spinning operations.		
Troubleshoot machining problems.		
Perform preventative maintenance.		
Troubleshoot lathe problems.		
Milling Operations:		
Plan sequence of milling operations.		
Select milling machines.		
Align vertical milling machine head.		
Align and secure work pieces.		
Select and secure work holding devices.		
Select and secure jigs and fixtures.		
Select and install arbors.		
Select and install tool holders.		
Select and install cutters.		
Establish work piece datum.		
Select speeds, feeds and depth of cuts.		
Mill surfaces.		
Mill shapes.		
Mill using indexing heads.		
Mill using rotary tables.		
Drill holes.		
Ream holes.		
Bore holes.		

Skills Required For Certification	Journeyperson Signature	Verified By Applicant
Counterbore holes.		
Countersink holes.		
Spot faces holes.		
Machine cavities.		
Machine angles and radii.		
Machine keyways.		
Machine slots.		
Machine dovetails.		
Mill gears and racks.		
Mill helical contours.		
Perform gang milling.		
Perform straddle milling.		
Perform final part inspection.		
Trepan holes.		
Use milling accessories.		
Troubleshoot milling operations.		
Perform preventative maintenance.		
Sawing Operations:		
Select power saws.		
Select saw blades.		
Install new blades.		
Cut and join saw blades.		
Set up work pieces.		
Select speeds, feeds, and depth of cut.		
Straight cut material to desired dimensions.		
Set up and cut angles.		
Cut profiles.		
Use new accessories.		
Troubleshoot sawing operations.		
Perform preventative maintenance of power sawing equipment.		
Grinding Operations:		
Plan sequence of grinding operations.		

Skills Required For Certification	Journeyperson Signature	Verified By Applicant
Select grinder.		
Select grinding wheels.		
Mount and balance grinding wheels.		
Dress grinding wheels.		
Align and secure work piece and work holding devices.		
Align grinder heads, tables and fixtures.		
Select speeds, feeds, and depth of cuts.		
Grind parts between centers.		
Parallel grind internal surfaces and shapes.		
Plunge grind internal diameters.		
Plunge grinds internal shoulders.		
Face grinds internal shoulders.		
Cut off parts.		
Grind surfaces and shapes.		
Grind blind holes.		
Taper grinds internal contours and shapes.		
Taper grinds external contours and shapes.		
Grind cutting tools.		
Grind relief's.		
Perform precision grinding.		
Grind threads.		
Check operation of dust extraction system.		
Troubleshoot grinding problems.		
Perform preventative maintenance.		
Troubleshoot grinding equipment.		
Numerical Control (NC)/ computer Numerical Control (CNC) Operations:		
Analyze drawings for CNC operations.		
Interpret tooling and set-up instruction sheets.		
Load and verify programs.		
Select tooling and tool holders.		
Inspect tooling and tool holders.		

Skills Required For Certification	Journeyperson Signature	Verified By Applicant
Install tooling and tool holders.		
Install, align, and orient work holding devices to program specifications.		
Enter offset data.		
Establish work piece coordinates and tool length measurements.		
Analyze drawings for CNC operations.		
Develop work process plans.		
Perform calculation for parts geometry.		
Select programming codes.		
Establish feeds, speeds, and depth of cuts.		
Establish tool offsets.		
Write programs.		
Load programs.		
Establish and maintain program storage systems.		
Interpret engineering drawings.		
Load CAD/ CAM software.		
Initialize CAD/CAM software.		
Create standard tooling library.		
Update standard tooling library.		
Input part profile using points, lines, circles and arcs.		
Input tool path.		
Input work piece material.		
Select and input tooling.		
Establish tooling offsets and registers.		
Select speed and feed for tooling and material combination.		
Define roughing cycles.		
Define finishing cycles.		
Run NC/CNC programs through protocol interpreter/post processors.		
Direct transfer programs to NC/CNC machines.		
Print tooling lists, process sheets and tool path		

Skills Required For Certification	Journeyperson Signature	Verified By Applicant
plots.		
Transfer program to storage media.		
Perform dry run cycles.		
Respond to alarm codes.		
Inspect material dimensions.		
Load work pieces.		
Produce test parts.		
Inspect test parts.		
Adjust tooling and offsets.		
Edit and optimize programs.		
Perform preventative maintenance.		
Boring:		
Plan sequence of boring operations.		
Plan sequence of facing operations.		
Select boring mills and machines.		
Align and secure work piece, work holding devices, jigs and fixtures.		
Select tool holders and cutters.		
Select arbour and cutters.		
Install arbour and cutters.		
Select speed, feed and depth of cuts.		
Drill holes.		
Ream holes.		
Counterbore holes.		
Countersink holes.		
Spot faces holes.		
Bore holes.		
Perform facing operation.		
Bore using rotary table.		
Bore using indexing heads.		
Machine cavities.		
Machine angles and radii.		
Machine keyways.		

Skills Required For Certification	Journeyperson Signature	Verified By Applicant
Machine slots.		
Machine dovetails.		
Cut grooves in internal bores.		
Trepenn holes.		
Use boring accessories.		
Troubleshoot boring and facing problems.		
Troubleshoot boring and facing machines.		
Perform preventative maintenance.		
Other Machining Processes:		
Plan sequences of EDM operations.		
Select EDMs.		
Align and secure work pieces, work holding devices, jigs and fixtures.		
Select and install electrodes.		
Select currents.		
Select metal removal rates.		
Select flushing devices.		
Load programs.		
Machine work pieces using EDM's.		
Remove broken taps and fasteners using EDMs.		
Cut work pieces using EDM's.		
Troubleshoot EDM operations.		
Perform preventative maintenance.		
Bench Work and Die Development:		
Clean and maintain hand and power tools.		
Ream holes.		
Cut thread with taps and dies.		
Cut material to size.		
File shapes and surfaces.		
Remove damaged and broken fasteners.		
Repair internal and external damaged threads.		
Deburr parts.		

Skills Required For Certification	Journeyperson Signature	Verified By Applicant
Polish and buff parts.		
Lap surfaces.		
Hone holes.		
Hand grinds parts.		
Scrape parts.		
Engrave parts.		
Etch parts.		
Demagnetize parts.		
Dismantle components.		
Clean components.		
Inspect components.		
Apply protective coatings.		
Repair and replace components.		
Identify and store components.		
Fit and assemble parts.		
Check and align clearance.		
Spot and transfer hole position.		
Drill, ream and dowels alignment holes.		
Identify and select joining techniques.		
Prepare material for joining.		
Join material using adhesives.		
Solder material.		
Perform brazing operations.		
Perform gas fusion welding.		
Perform electric arc welding.		
Perform tungsten inert-gas (TEG) welding operations.		
Spray coats metal.		
Select molding compound.		
Mix molding materials.		
Pour and apply molding materials.		
Strip and finish components.		
Interpret tool and die assembly drawings.		

Skills Required For Certification	Journeyperson Signature	Verified By Applicant
Develop a sequence and coordinate operations.		
Select materials and standard die components.		
Perform layout of die parts.		
Fabricate, assemble and fit parts.		
Check progression of tooling.		
Check alignments.		
Check stock guides.		
Check spring pressures.		
Select and install sensory devices.		
Conducts die tryouts.		
Analyze and correct die faults.		
Align and install material feeding devices.		
Interpret jigs, fixture and tooling drawings.		
Select materials for standard jigs, fixtures and tooling parts.		
Perform layout of jigs, fixtures and tooling.		
Fabricate, assemble, align and fit jigs, fixtures and tooling.		
Conduct tryouts of jigs, fixtures and tooling.		
Analyze and correct jigs, fixtures and tooling.		
Interpret blueprints for tooling assemblies.		
Select hardware and components for tooling assemblies.		
Assemble, align and fit tooling assemblies.		
Conduct tryouts of tooling assemblies.		
Analyze and correct tooling assembly faults.		
Set up and operate pressed.		
Prepare and form initial blank.		
Tool proofs form station.		
Finalize blank.		
Prepare and finalize cutting steels.		
Inspect part produced by die.		
Develop and organize prototype build plan.		

Skills Required For Certification	Journeyperson Signature	Verified By Applicant
Build prototype-tooling aids.		
Manufacturers prototype.		
Metallurgy and Materials:		
Request testing of materials.		
Test metals for surface cracks.		
Perform hardness test.		
Request heat treatment.		
Select heating mediums.		
Operate heating furnaces.		
Select quenching mediums.		
Temper materials.		
Anneal materials.		
Stress relief materials.		
Normalize material.		
Carburize and case harden material.		

Note to Journeypersons

- Journeypersons who have applied their signatures to the skills required for the certification section of this document must complete the following sections.
- The Apprenticeship and Trades Certification Division, for the purpose of verification, may contact Journeypersons who have applied their signatures to skills for applicants.

Journeyperson Supervisor Verification

Name: _____
Surname First Initial

Address: _____ / _____ / _____ / _____
P. O. Box/Street City/Town Province Postal Code

Telephone: (____) _____ **Cell phone:** (____) _____

Email address: _____

Certificate Number: _____ **and/or I.P. Number** _____

Name (signature): _____

Journeyperson Supervisor Verification

Name: _____
Surname First Initial

Address: _____ / _____ / _____ / _____
P. O. Box/Street City/Town Province Postal Code

Telephone: (____) _____ **Cell phone:** (____) _____

Email address: _____

Certificate Number: _____ **and/or I.P. Number** _____

Name (signature): _____

For Office Use Only

Credit: _____

Approved by: _____ Date: _____
m / d / y

Note To Trade Qualifier Applicants

If employer verification is not possible, please contact the nearest Apprenticeship and Trades Certification Office to discuss available options.

Contact Information

Avalon	Clarenville	Central	Western	Labrador
Department of Immigration, Population Growth and Skills Industrial Training Section 1170 Topsail Road P.O. Box 8700 St. John's, NL A1B 4J6 Phone: (709) 729-2729 Fax: (709) 729-5878 Toll Free: 1-877-771-3737	Department of Immigration, Population Growth and Skills Industrial Training Section 45 Tilley's Road Clarenville, NL A5A 1Z4 Phone: (709) 466-3982 Fax: (709) 466-3987 Toll Free: 1-877-771-3737	Department of Immigration, Population Growth and Skills Industrial Training Section 42 Harding Avenue Grand Falls-Windsor, NL A2A 2J9 Phone: (709) 292-4215 Fax: (709) 292-4502 Toll Free 1-877-771-3737	Department of Immigration, Population Growth and Skills Industrial Training Section 1-3 Union Street Aylward Building, 2 nd Floor P.O. Box 2006 Corner Brook, NL A2H 6J8 Phone: (709) 637-2366 Fax: (709) 637-2519 Toll Free 1-877-771-3737	Department of Immigration, Population Growth and Skills Industrial Training Section 163 Hamilton River Road Burse Building P.O. Box 3014, Station "B" Happy Valley-Goose Bay, NL AOP 1E0 Phone: (709) 896-6348 Fax: (709) 896-6703 Toll Free 1-877-771-3737

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