



## Contest Description

Edmonton Expo Centre, Edmonton

May 7 & 8, 2024

<b>EVENT:</b> Precision Machining	<b>LEVEL:</b> Secondary														
<b>WORLDSKILLS TRADE #:</b> 03	<b>LOCATION:</b> Hall C, Edmonton EXPO Centre, Edmonton														
<b>DURATION:</b> 7 Hours (over 2 days)	<b>REGIONALIZED:</b> No														
<b>COMPETITION SCHEDULE:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <b>May 7:</b>  <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>ORIENTATION</td><td>8:00AM-9:00AM</td></tr> <tr><td>COMPETITION</td><td>9:00AM-12:00 NOON</td></tr> <tr><td>LUNCH</td><td>12:00 NOON-1:00PM</td></tr> <tr><td>COMPETITION</td><td>1:00PM-4:00PM</td></tr> </table> </div> <div style="width: 48%;"> <b>May 8:</b>  <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>COMPETITION</td><td>8:00AM-11:00AM</td></tr> <tr><td>LUNCH</td><td>11:00AM-12:00 NOON</td></tr> <tr><td>COMPETITION</td><td>12:00 NOON-3:00PM</td></tr> </table> </div> </div>		ORIENTATION	8:00AM-9:00AM	COMPETITION	9:00AM-12:00 NOON	LUNCH	12:00 NOON-1:00PM	COMPETITION	1:00PM-4:00PM	COMPETITION	8:00AM-11:00AM	LUNCH	11:00AM-12:00 NOON	COMPETITION	12:00 NOON-3:00PM
ORIENTATION	8:00AM-9:00AM														
COMPETITION	9:00AM-12:00 NOON														
LUNCH	12:00 NOON-1:00PM														
COMPETITION	1:00PM-4:00PM														
COMPETITION	8:00AM-11:00AM														
LUNCH	11:00AM-12:00 NOON														
COMPETITION	12:00 NOON-3:00PM														

***Please Note: This document is subject to change as competition information is updated. Competitors are responsible for staying up to date with the most recent information. Check the footer for last updated date. Changes will be highlighted in yellow.***

The Precision Machining Secondary competition will not be included as part of the Skills Canada National Competition in 2025. As a result, the winner of this competition will unfortunately not be part of Team Alberta and will not have the opportunity to compete at the Skills Canada National Competition.

## CONTEST INTRODUCTION

A machinist uses machine tools to manufacture parts from raw material for a variety of industries. Nearly all consumer goods have been machined or are manufactured from tools or equipment which has been manufactured by a machinist.

## Purpose of the Challenge:

Assess the contestant's precision machining skills and trade knowledge through practical testing.



### Skills and Knowledge to be Tested:

The competition will occur over two days (7 hours of competition). On the first day of competition there will be a 1-hour professional consultation followed by 3 hours of machining. The second day there will be 3 hours of machining. Competitors will machine in either the morning or afternoon. The machining section of the contest involves machining projects using a conventional engine lathe and a conventional vertical milling machine.

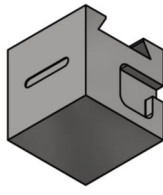
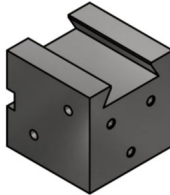
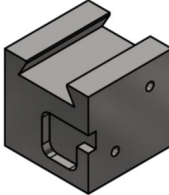
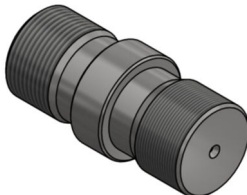
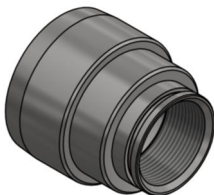
### PROJECT DESCRIPTION

- #### Conventional Engine Lathe

  - Safe operating procedures
  - Applied Metrology
  - Cylindrical & Taper Turning / Grooving / Cylindrical Threading operations
  - Three and Four-jaw chuck work

#### Conventional Vertical Milling Machine

  - Safe operating procedures
  - Applied Metrology
  - Face / Pocket / Form milling
  - Drilling / Counter Boring / Reaming operations



### EQUIPMENT & MATERIALS

- Equipment and Materials Competitors Must Supply:**
- CSA approved safety glasses
  - CSA approved steel toed footwear
  - Shop coat (coveralls)
  - Ear Plugs
  - Competitors are required to follow all industry safety standards during the competition
- \*Competitors will not be allowed into the competition area without the required safety equipment.**

### Equipment and Materials Supplied by the Committee:

- The following will be supplied to each competitor:
- All appropriate measuring tools for the Lathe and Milling Machine projects
  - All appropriate lathe and milling machine cutting tools and holders.
  - Hand tools
  - Project Materials may include
    - Mild Steel, Alloy Steel, Aluminum



## JUDGING CRITERIA

	<b>Mill</b>	<b>Lathe</b>
Project Completion	2.5%	2.5%
Compliance with Occupational Health and Safety regulations	2.5%	2.5%
Compliance with dimensions, tolerances, and fits as specified in plans	40%	40%
Compliance with appropriate surface finish and deburring	5%	5%
	<b>50%</b>	<b>50%</b>
	<b>Total 100%</b>	

### Note:

**If a second work piece blank is required, the contestant will lose 20% from the “Compliance with dimensions, tolerances and fits as specified in plans” section.**

## TIE BREAKING PROCESS

The time required by the contestants to complete their projects will determine the tie breaker.

## RELATED CAREER AND TECHNOLOGY STUDIES COURSES

Descriptions of all modules are located at the following website:

<https://education.alberta.ca/career-and-technology-studies/tmt-cluster-tradesmanufacturingtransport/>

- FAB 1130: Principles of Machining
- FAB 2130: Precision Turning 1
- FAB 3130: Precision Turning 2
- FAB 2140: Precision Milling 1
- FAB 3140: Precision Milling 2

## SAFETY

The health, safety and welfare of all individuals involved with Skills Canada Alberta are of vital importance. Safety is a condition of participation with Skills Canada Alberta and shall not be sacrificed for the sake of expediency. At the discretion of the judges and technical committees, any competitor can be denied the right to participate should they not have the required proper safety equipment and/or act in an unsafe manner that can cause harm to themselves or others.





## ADDITIONAL INFORMATION

### Team Alberta

The Precision Machining Secondary Competition will not be included as part of the Skills Canada National Competition in 2025. As a result, the winner of this competition will unfortunately not be part of Team Alberta and will not have the opportunity to compete at the Skills Canada National Competition.

### Skills Canada Alberta Regional and Provincial Rules and Regulations

[Regional and Provincial Rules and Regulations](#)

### Project Change at the Competition

Where a Test Project has been circulated to competitors in advance, the PTC can change the project up to a maximum of 30% of the work content for the competition.

### Competitor Registration

Registration for Provincial Skills Canada Competition (PSCC) will open online on January 15, 2025 @ 8:30 AM. Please refer to this competitions event page for additional registration and competition information: <https://skillsalberta.com/competition/>

### Lunch

Lunch for accredited competitors will be provided by Skills Canada Alberta.

### Parking & Venue Maps

Parking is FREE for all attendees.

<http://edmontonexpocentre.com/attend/parking/>

### Opening Ceremonies / Competitor Registration

Opening Ceremonies for the PSCC will take place on Tuesday May 6, 2025, at 6:00 pm in Hall D of the Edmonton EXPO Centre. Admission is free, and everyone is welcome to attend. It is important to note that competitor registration will open immediately following the Opening Ceremonies.

### Awards Ceremony

The Awards Ceremony will take place on Thursday May 8, 2025, at 6:30 pm in Hall D of the Edmonton EXPO Centre. Admission is free and everyone is welcome to attend. The Awards Ceremony will be shown live at <http://skillsalberta.com/>

### Questions?

Please contact Mike Sury [MikeS@SkillsAlberta.com](mailto:MikeS@SkillsAlberta.com)



COMMITTEE MEMBERS

Brandon Walker	Ryan Reeves	Lee Blakely
Jason Aalders	Tim Wong	Marko Crepulja
Rob Fortier	Matthew Wood	Darren Roth
Graham Greenhall	Phillip Townsend	

