

# 2021 PROVINCIAL SKILLS CANADA COMPETITION



## CONTEST DESCRIPTION

<b>CONTEST AREA: AUTOMOBILE TECHNOLOGY</b>			<b>LEVEL: Secondary</b>
<b>COMPETITION SCHEDULE:</b>			<b>LOCATION: COMPETITOR'S SCHOOL. SEE COMPETITION FORMAT INFORMATION BELOW</b>
Registration	April 21 <sup>st</sup>	8:00am-8:30am	
Orientation	April 21 <sup>st</sup>	8:30am-9:00am	
Competition	April 21 <sup>st</sup>	9:00am-3:30pm	
<b>DURATION: 6 HOURS</b>			<b>REGIONALIZED: Yes</b>
<p><b>COMPETITION FORMAT: (VIRTUAL/ IN SCHOOL)</b>            All secondary competitors will be competing with in their school environment and must arrange in advance with a teacher for a safe competition location, according to their school's Covid-19 safety policies. They will need to prepare their competition space with all of the required tools, equipment, materials, and technology (as listed below) that will be needed to complete the competition. Teachers and competitors will need to work together to ensure the competitor is ready for success on their competition day.</p> <p>Each competitor must have a teacher/ supervisor available throughout the day, in case of incident. (Teacher/Supervisor must be present at the competition orientation.)</p> <p>Competitors and Teachers should be prepared to receive additional information about the competition projects, livestreams, shipping, etc. prior to the competition. Please ensure you are double checking for emails from Skills, including checking junk mail.</p>			
<p><b>WEBEX LIVESTREAMS:</b>  <b>Competition Orientation:</b> The competition will begin with a virtual orientation. Competitors will join the assigned videoconference link that will be emailed to all registered competitors for the competition orientation. Camera's <b>MUST</b> be on and competitors visible on the camera during the orientation. <b>An email with the WebEx link will be sent out in advance of the competition.</b></p> <p><b>Live Streamed Competition: (If applicable)</b> Competitors must film their competition throughout the entire day. Camera's <b>MUST</b> be on and competitors visible on the camera, as well as mics working. Competitors must consider their camera angle and lighting in advance of the competition. It is the competitors responsibility to ensure they are prepared for a day long livestream.</p>			

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**PROJECT SUBMISSION DEADLINE: APRIL 21 BY 4:00PM**

**PROJECT SUBMISSION LINK:**

- <https://form.jotform.com/SkillsAB/2021PSCC>
- Multiple files can be uploaded at once, each file has a maximum size of 1G. If file sizes are larger than 1G, please follow alternate instructions through the submission link.

**ACCEPTED FILE TYPE:** pdf, doc, docx, xls, xlsx, csv, txt, rtf, html, zip, mp3, wma, mpg, flv, avi, jpg, jpeg, png, gif. If you would like to submit a different type of file, please place it in a zip folder.

To create a zip folder – Select all the files that you would like to submit and right-click your mouse, a menu will open, select Send To, and then click on Compressed (zipped) folder. A zip file will then be created containing your submission documents.

**Submissions will be due within 15 minutes of the end of competition time. Please note: Late submissions sent after the date and time specified above will not be accepted.**

## **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.

**Safety Checklist:** It is the responsibility of each competitor and teacher to review the Safety Checklist (<https://skillsalberta.com/additional-2021-competition-resources/>) in advance of the competition and ensure they are able to meet all safety requirements. During the orientation, the safety checklist will be formally reviewed.

**AWARDS CEREMONY INFORMATION:** Please join us for a live virtual awards ceremony on May 13<sup>th</sup> at 6:30PM.

**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.

## **CONTEST INTRODUCTION**

To identify and evaluate a competitor's knowledge of Automobile Technology. The competitor will display their understanding of specific areas of the automobile and demonstrate their skills for maintaining and repairing components related to those areas.

# 2021 PROVINCIAL SKILLS CANADA COMPETITION



## **SKILLS AND KNOWLEDGE TO BE TESTED**

There will be a combination of practical skill assessments and analysis of information and case studies.

## **PROJECT DESCRIPTION**

Station Set-Up Instructions will be released prior to the competition so teachers will be able to prepare each station prior to the competition.

### **Brakes and Stability Control Systems**

Competitors may be required to:

- Dis-assemble and assemble disc and drum brake assemblies.
- Measure minimum rotor thickness, maximum rotor thickness variation, and rotor run-out.
- Measure brake drum diameter and brake drum out of round.

### **Suspension and Steering Systems**

Competitors may be required to:

- Identify the type of suspension and steering systems used in a vehicle.
- Dismount and mount a tire on a rim.
- Perform a tire repair.
- Balance a tire and rim assembly and check the assembly for road force variation.
- Interpret wheel alignment readings and recommend corrective adjustments.

### **Driveline**

Competitors may be required to:

- Identify paths of power in a manual transmission.
- Identify components in a manual transmission.
- Interpret driveline angles.

### **Body Electrical**

Competitors may be required to:

- Interpret a wiring diagram.
- Diagnose faults in an electrical circuit.

### **Engine Mechanical**

Competitors may be required to:

- Measure engine components for flatness, out of round, taper, diameter, endplay, clearance and lift.
- The competitor may be required to use dial indicators, straight edges, feeler gauges, micrometers, cylinder bore gauge, telescopic gauges, plastigauge or calipers.

# 2021 PROVINCIAL SKILLS CANADA COMPETITION



## Engine Performance

- Diagnose operational characteristics of the engine. Follow the manufacturer’s diagnostic procedures to identify the cause of the DTC and the repair required to remedy the condition.

## EQUIPMENT & MATERIALS

### School Provided Tools, Materials, and Equipment\*

Brakes and Stability	Suspension and Steering	Driveline	Body Electrical	Engine Mechanical	Engine Performance
Vehicle w/disc brake or training unit with components mounted in the correct orientation	Wheel & Tire Assembly Tire Repair Tools and supplies.	This exercise will be the analysis of provided written or visual material	This exercise will be the analysis of provided written or visual material	Engine Components (Piston Assembly, Cam Shaft, Crank Shaft)	This exercise will be the analysis of provided written or visual material
Brake Measuring Tools. Dial Indicator, Vernier Micrometer, Drum Brake Micrometer	Wheel Balancing Equipment Tire Removal/Installation Equipment			Measuring Tools Vernier Micrometer Set. Bench Vise with Soft Jaws.	

\*Competitors and schools will need to work together to arrange for the tools, equipment, and materials provided by the competitor. If a competitor and/or school is not able to procure a certain item, please contact [mikes@skillsalberta.com](mailto:mikes@skillsalberta.com) to inquire if additional arrangements can be made.

### VIRTUAL COMPETITION RESOURCE SUPPORT FORM

A \$40 competition resource subsidy is available to all competitors. It is intended for items that were purchased to support competitors (e.g. food supplies, materials, technical equipment, tools, etc.). The form can be accessed at the following link: <https://skillsalberta.com/additional-2021-competition-resources/>

# 2021 PROVINCIAL SKILLS CANADA COMPETITION



## **JUDGING CRITERIA**

Each competitor will be judged for their ability to comprehend written instructions, interpret, and perform tasks related to each practical or written test. Each competitor must demonstrate common safety practices. All tasks are equally weighted, and the total is comprised of an average of all tasks combined.

Teachers will act as a Judge for the competition for their competitor(s). Judging sheets and judging information will be released to teachers prior to the competition. Teachers will judge each station on the judging sheets released.

## **TIE BREAKING PROCESS**

Highest mark in Engine Mechanical and Body Electrical combined will break the tie.

## **SAFETY**

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## **CLOTHING REQUIREMENT**

Appropriate work clothing must be worn to compete. All clothing must be neat and clean, and free of rips and tears. Casual wear such as shorts and open toed shoes/sandals will not be permitted. No loose-fitting clothes or jewelry.

## **ADDITIONAL INFORMATION**

Skills Canada Alberta Regional and Provincial Rules and Regulations  
[Regional and Provincial Rules and Regulations](#)

### **Competitor Registration**

Competition Registration will open online at <https://portal.skillsalberta.com/> on January 12, 2021 at 8:30AM for the Regional Skills Canada Competition and on January 14, 2021 at 8:30 AM for the Provincial Skills Canada Competition (PSCC)

### **Lunch**

Lunch will be provided by Skills Canada Alberta

### **Virtual Awards Ceremony**

# 2021 PROVINCIAL SKILLS CANADA COMPETITION



The Virtual Awards Ceremony will take place **Thursday, May 13<sup>th</sup> at 6:30PM**. A link will be made available on the website with additional information.

## Team Alberta Information

Team Alberta will be selected from competition Gold medalists who will then be eligible to participate at the Skills Canada National Competition (SCNC) in a virtual format May 25-30, 2021. It is recommended that competitors review the SCNC contest description to be familiar with the national contest description and project at <http://www.skillscanada.com/>.

## Ethical Conduct

We recognize that participants will be competing individually in their own unique environments. We expect all competitors to compete fairly, respecting and abiding by the established rules in the true spirit of Skills Canada Alberta.

## Letter of Participation

Competitors who participate in the 2021 Provincial Skills Canada Competition are eligible for a Letter of Participation that can be downloaded on the Registration Portal after the competition ends.

## COMMITTEE MEMBERS and DESIGNERS

<b>Lee Swalm SAIT</b>	<b>Russ Belik NAIT</b>	<b>Martin Larsen GPRC</b>
<b>Harley Breadner SAIT</b>	<b>Brad Gabrielson RDC</b>	<b>Andrey Imanoff SAIT</b>
<b>Ryan Hauswirth SAIT</b>	<b>Lena Spicer SAIT</b>	<b>Barry Wong SAIT</b>
<b>Wade Maillet SAIT</b>	<b>Wayne Martineau SAIT</b>	<b>Patrick Brown-Harrison SAIT</b>
<b>Patrick Jackson SAIT</b>	<b>Jerry Kokot SAIT</b>	<b>Rick Martineau ConsuLab</b>