



Contest Description

Edmonton Expo Centre, Edmonton

May 8 & 9, 2024

EVENT: Refrigeration and Air Conditioning	LEVEL: Post-Secondary																								
WORLDSKILLS TRADE #: 38	LOCATION: Hall A, Edmonton EXPO Centre, Edmonton																								
DURATION: 12 Hrs. (Two Days)																									
COMPETITION SCHEDULE: <div> <div> May 8: <table> <tr><td>ORIENTATION</td><td>7:30AM-8:00AM</td></tr> <tr><td>COMPETITION</td><td>8:00AM-10:00AM</td></tr> <tr><td>BREAK</td><td>10:00AM-10:15AM</td></tr> <tr><td>COMPETITION</td><td>10:15AM-12:15PM</td></tr> <tr><td>LUNCH</td><td>12:15PM-1:00PM</td></tr> <tr><td>COMPETITION</td><td>1:00PM-3:00PM</td></tr> </table> </div> <div> May 9: <table> <tr><td>ORIENTATION</td><td>7:00AM-7:30AM</td></tr> <tr><td>COMPETITION</td><td>7:30AM-9:30AM</td></tr> <tr><td>BREAK</td><td>9:30AM-9:45AM</td></tr> <tr><td>COMPETITION</td><td>9:45AM-11:45AM</td></tr> <tr><td>LUNCH</td><td>11:45AM-12:30PM</td></tr> <tr><td>COMPETITION</td><td>12:30PM-2:30PM</td></tr> </table> </div> </div>		ORIENTATION	7:30AM-8:00AM	COMPETITION	8:00AM-10:00AM	BREAK	10:00AM-10:15AM	COMPETITION	10:15AM-12:15PM	LUNCH	12:15PM-1:00PM	COMPETITION	1:00PM-3:00PM	ORIENTATION	7:00AM-7:30AM	COMPETITION	7:30AM-9:30AM	BREAK	9:30AM-9:45AM	COMPETITION	9:45AM-11:45AM	LUNCH	11:45AM-12:30PM	COMPETITION	12:30PM-2:30PM
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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 assess the competitors ability to demonstrate theoretical and practical skills in performing Refrigeration and Air Conditioning system installation, start-up, maintenance/service, troubleshooting, and customer relations.

SKILLS AND KNOWLEDGE TO BE TESTED:

- Exemplify safety, use of PPE & Code of Practice
- Maintain neatness and cleanliness
- Effective planning and use of time
- Accurate application of wiring diagrams
- Troubleshooting and installation of wiring and controls
- Pipe measurement, cutting, connecting within tolerances
- Demonstrate efficient use of materials

- Demonstrate proper/safe use of trade specific tools & equipment
- Perform system pressure testing, evacuation, and charging
- Perform system commissioning
- Exhibit interpersonal ability

PROJECT DESCRIPTION

- Troubleshoot an HVAC system and Refrigeration system
- Low temperature refrigeration system installation project

EQUIPMENT & MATERIALS

Equipment and Materials Competitors Must Supply:

Common screwdrivers (Phillips, Robertson, slot, terminal)	Electrical side cutters	Swaging tool kit
Common nut drivers ¼" – ½"	Hammer	Inspection mirror, flashlight & spare batteries
Set of combination wrenches	File set	Pens, pencils, erasers, rulers, notepads & calculator
6", 10", 12" adjustable wrenches	Set of imperial allen keys	Tape measure
Linesman, needle nose, slip joint and water pump pliers	Valve wrenches	Tubing cutter ¼" – ¾"
Pressure Temperature Chart	Refrigeration gauge manifold	Utility knife
Separate or combination wire strippers and crimpers	Flaring block and yoke	CSA approved safety glasses
CSA approved safety steel toed footwear	CSA approved hearing protection	Task specific gloves for brazing, refrigerant charging, mechanical work, delicate dexterity, and cutting

Equipment and Materials Supplied by the Committee:

Charging scale and equipment	Refrigerant	Leak Detector
Vacuum pump and equipment	Torches and Brazing materials	Nitrogen Cylinder and Regulator
Micron gauge	Tube benders (competitor can supply)	Purging flow meters
Electrical meters	Parts and fittings	Probe style, and pipe clamp thermometers
Cord Caps and Padlocks		



JUDGING CRITERIA

- Controls/wiring
- Piping
- Refrigerant Handling
- Safety
- Functionality/Commissioning
- Trade Knowledge
- Effective Communication

*Points will be awarded or deducted as evaluated by the judges. Competitors will be ranked by total accumulated points.

TIE BREAKING PROCESS

In the event of a tie for any ranking, total refrigeration project time will be the tie breaker. If competitors are tied on time, then the main project score will rank the competitors. If the competitors are still tied after the main project score, then the troubleshooting score will then rank the competitors. The final tie breaking process if competitors are tied on time, main project score, and troubleshooting score then the competition safety score will be the last tie breaker.

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.

CLOTHING REQUIREMENT

Appropriate clothing (preferably natural fibers or fire retardant), free of rips or tears must be worn to compete. All clothing including boots and PPE must be in good repair, neat, clean and free of rips tears or anything that may compromise the integrity of the protection it offers (i.e. worn toes on work boots, holes in gloves). Casual wear such as shorts will not be permitted. No loose clothing or jewelry allowed for your safety. Long sleeve shirts must be worn while brazing.



ADDITIONAL INFORMATION

Skills Canada Alberta Regional and Provincial Rules and Regulations

[Regional and Provincial Rules and Regulations](#)

Test Project change at the Competition

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

Lunch

Lunch for competitors will be provided by Skills Canada Alberta.

Parking & Venue Maps

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

Parking is FREE for all attendees.

Opening Ceremonies / On-site Provincial Competitor Registration

Opening Ceremonies for the PSCC will take place on Tuesday May 7, 2024, 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 9, 2024, 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/>

Team Alberta Information

Team Alberta will be selected at the PSCC Awards Ceremony. Gold medalists will then be eligible to participate at the Skills Canada National Competition (SCNC) on May 27- June 1, 2024, in Quebec City, QC. 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/>.

During the PSCC Awards Ceremony on Thursday May 9, 2024, gold medalists will be given their Team Alberta information package and will confirm their participation in the SCNC. Students must be present at the Awards Ceremony to claim their position on Team Alberta. If the Gold medalist is not able to attend SCNC, the next top ranking individuals will be asked to participate. If a student is not able to attend the Awards Ceremony a letter confirming the student's interest in Team Alberta participation must be emailed to javierad@skillsalberta.com prior to the start of competition on May 8, 2024.



Please prepare your students in advance to accept a position on Team Alberta and outline how your school will support their participation.

Questions?

Please contact Whitney Koop at whitneyk@skillsalberta.com if you have any questions regarding the Contest Description.

COMMITTEE MEMBERS

Justin Evernden – NAIT	Tyson Frank – SAIT
Paul Fleischhauer - SAIT	Ty Smith
Adam Budde	