



# **Automotive Refinishing Technician**

## **Guide to Course Content**

**2024**

Online: [www.saskapprenticeship.ca](http://www.saskapprenticeship.ca)

*Recognition:*

*To promote transparency and consistency, this document has been adapted from the 2019 Automotive Refinishing Technician Red Seal Occupational Standard (Employment and Social Development Canada).*

*A complete version of the Occupational Standard can be found at [www.red-seal.ca](http://www.red-seal.ca)*

## **Note: Automotive Refinisher Technician Technical Training is now Fully Harmonized**

# STRUCTURE OF THE GUIDE TO COURSE CONTENT

To facilitate understanding of the occupation, this guide to course content contains the following sections:

**Description of the Automotive Refinishing Technician subtrade:** an overview of the subtrade's duties and training requirements.

**Essential Skills Summary:** an overview of how each of the nine essential skills is applied in this subtrade.

**Elements of Harmonization for Apprenticeship Training:** includes adoption of Red Seal trade name, number of levels of apprenticeship, total training hours (on-the-job and in-school) and consistent sequencing of technical training content. Implementation for harmonization took place progressively. Level one was implemented in 2020/2021 and level two in 2021/2022.

**Task Matrix:** a chart which outlines graphically the major work activities, tasks and sub-tasks of this standard detailing the essential skills and the level of training where the content is covered.

**Major Work Activity (MWA):** the largest division within the standard that is comprised of a distinct set of trade activities.

**Task:** distinct actions that describe the activities within a major work activity.

**Sub-task:** distinct actions that describe the activities within a task.

**Training Profile Chart:** a chart which outlines the model for Saskatchewan Apprenticeship and Trade Certification Commission (SATCC) technical training.

**Technical Training Course Content for the Automotive Refinishing Technician subtrade:** a chart which outlines the model for SATCC technical training sequencing. For the harmonized level of training, a cross reference to the Harmonized apprenticeship technical training sequencing, at the learning outcome level, is provided.

**Appendix A: Post Harmonization Training Profile Chart:** a chart which outlines the finalized model for SATCC technical training sequencing with a cross reference to the Harmonized apprenticeship technical training sequencing, at the topic level.

# DESCRIPTION OF THE AUTOMOTIVE REFINISHING TECHNICIAN SUBTRADE

*Automotive Refinishing Technicians appraise and refinish motor vehicle bodies. This is a subtrade of the Auto Body and Collision Technician trade.*

Automotive refinishing technicians work on the surfaces of motor vehicles, primarily in restoring vehicle finishes once body work has been completed. Some of the duties that an automotive refinishing technician completes include: removing layers of old coatings; matching colours and mixing paints; preparing surfaces for painting by spot filling, sanding, and masking; applying primers, primer surfacers, sealers, base coats, single-stage and clear coats; cleaning and polishing painted surfaces; and applying protective coatings.

Automotive refinishing technicians use hand and power tools and automotive refinishing equipment in their work. Computers and related software are used for computerized paint colour reading, generating paint formulas and tinting recommendations, and documentation.

Journeypersons in this subtrade usually work indoors and can expect a work environment that includes paint fumes, dust and noise. Health and safety are important issues for automotive refinishing technicians, as they are exposed to chemical hazards such as paints and solvents, and physical hazards such as shop equipment, power tools and lifting equipment. Automotive refinishing technicians are exposed to repetitive movements, bending, lifting and reaching on a daily basis. Ongoing safety training and a good knowledge of government safety standards and regulations are important in providing a safer working environment as well as addressing environmental concerns.

Many automotive refinishing technicians work in close contact with automotive refinishing technicians who tend to work in multi-shop companies, independent or dealership auto body and collision shops. In places of employment, automotive refinishing technicians likely work as specialists, after body repairs have been completed. They may also work with estimators, parts technicians, detailers, preppers, glass installers and production managers. While they may work as part of the repair team, automotive refinishing technicians tend to work independently. They may work in the automotive, truck and transport, commercial transport, heavy equipment, motorcycle, specialty vehicle, aviation, and aerospace sectors.

Key attributes for people entering this subtrade include: mechanical aptitude; manual dexterity; good colour vision; the ability to do precise work that requires attention to detail; and, problem solving and multitasking skills. Good physical condition and agility are important because the work often requires considerable standing, bending, crouching, kneeling and reaching.

Being an automotive refinishing technician is very rewarding. With experience, journeypersons have a number of career options, including supervisory or teaching/training in the field, insurance appraiser, estimator and manufacturers' representative.

**Training Requirements:** To graduate from each level of the apprenticeship program, an apprentice must successfully complete the required technical training and compile enough on-the-job experience to total at least 1800 hours each year. Total trade time required is 3600 and at least 2 years in the subtrade.

There are two levels of technical training delivered by the Northern Alberta Institute of Technology (NAIT) Polytechnic in Edmonton, Alberta and the Southern Alberta Institute of Technology (SAIT) Polytechnic in Calgary, Alberta.

Level One: 6 weeks

Level Two: 6 weeks

**Note:** Due to Harmonization, Level One Automotive Refinishing Technician technical training in AB is common with Automotive Refinishing Technician at the Saskatoon and Regina campuses of Saskatchewan Polytechnic. Automotive Body and Collision Technician apprentices that chose to switch to the Automotive Refinishing Technician subtrade receive Level One technical training credit and move into Level Two when sufficient trade time in Automotive Refinishing Technician is acquired and submitted.

The information contained in this guide to course content details the technical training delivered for each level of apprenticeship. An apprentice spends approximately 15% of their apprenticeship term in a technical training institute learning the technical and theoretical aspects of the trade. The hours and percentages of technical and practical training may vary according to class needs and progress.

The content of the technical training components is subject to change without notice.

### **Entrance Requirements for Apprenticeship Training**

Your grade twelve transcripts (with no modified classes) or GED 12 is your guarantee that you meet the educational entrance requirements for apprenticeship in Saskatchewan. In fact, employers prefer and recommend apprentices who have completed high school. This ensures the individual has all of the necessary skills required to successfully complete the apprenticeship program and receive journey person certification.

Individuals with “modified” or “general” classes in math or science do not meet our entry requirements. These individuals are required to take an entrance assessment prescribed by the SATCC.

English is the language of instruction in all apprenticeship programs and is the common language for business in Saskatchewan. Before admission, all apprentices and/or “upgraders” must be able to understand and communicate in the English language. Applicants whose first language is not English must have a minimum Canadian Language Benchmark Assessment of six (CLB6).

Note: A CLB assessment is valid for a one-year period from date of issue.

Designated Trade Name	<b>Math Credit</b> at the Indicated Grade Level❶	<b>Science Credit</b> at Grade Level
Automotive Refinishing Technician	Grade 10	Grade 10
<p>❶ - (One of the following) WA – Workplace and Apprenticeship; or F – Foundations; or P – Pre-calculus, or a Math at the indicated grade level (Modified and General Math credits are not acceptable.).</p> <p>*Applicants who have graduated in advance of 2015-2016, or who do not have access to the revised Science curricula will require a Science at the minimum grade level indicated by trade.</p> <p>For information about high school curriculum, including Math and Science course names, please see: <a href="http://www.curriculum.gov.sk.ca/#">http://www.curriculum.gov.sk.ca/#</a></p> <p><b>Individuals not meeting the entrance requirements will be subject to an assessment and any required training.</b></p>		

# 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 CCDA-endorsed tools 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.

Tools are available online or for order at: <https://www.canada.ca/en/employment-social-development/programs/essential-skills/tools.html>.

The application of these skills may be described throughout this document within the competency statements which support each subtask of the trade. The following are summaries of the requirements in each of the essential skills, taken from the essential skills profile. A link to the complete essential skills profile can be found at: [www.red-seal.ca](http://www.red-seal.ca).

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## READING

Automotive refinishing technicians read repair orders (work orders and estimates), labels, application or installation instructions, technical data sheets (TDS), manufacturers' service bulletins and manuals for safe use and storage of paints, solvents and equipment. They also read trade publications to learn about new technologies, products and materials.

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## DOCUMENT USE

Automotive refinishing technicians reference safety or hazard icons to obtain information on a product's toxicity. They read forms and tables to determine product specifications such as temperatures, humidity, drying times and ratios. Automotive refinishing technicians also use colour chips, vehicle information, tinting charts and technology to determine colour variant to achieve a blend-able match. They use safety and environmental documentation such as safety data sheets (SDS), VOC and isocyanates logs, maintenance logs, and TDS. They track and log colour libraries. They use business-related documentation such as: time sheets, repair orders (work orders), production schedules and pre-delivery checklists.

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## WRITING

Automotive refinishing technicians write notes on repair orders (work orders) and forms to describe previous damage, work that was carried out and any irregularities. Automotive refinishing technicians may write reports describing workplace accidents and note information for the colour library, chemical tracking and equipment logs. They may prepare lists for ordering inventory.

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## **ORAL COMMUNICATION**

Automotive refinishing technicians communicate with colleagues and customers about the scope of work and work completed. They explain procedures to apprentices and estimators. Automotive refinishing technicians need to communicate with suppliers and manufacturer representatives.

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## **NUMERACY**

Automotive refinishing technicians monitor temperatures, humidity and pressure levels. They calculate quantities of materials needed and mix refinishing materials based on weight, volume, ratios and formulas. Automotive refinishing technicians may also estimate time required to complete painting tasks including force-drying calculations.

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## **THINKING**

Automotive refinishing technicians use analytical and problem solving skills to determine appropriate solutions to refinishing issues such as surface imperfections, contamination, production problems and equipment problems. Automotive refinishing technicians make decisions about which products to use to create the desired finish. They use organizational skills to enhance production schedule and maintain work flow.

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## **WORKING WITH OTHERS**

Automotive refinishing technicians spend most of their time working independently but they are required to coordinate activities with colleagues from body repair, detailing, vehicle preparation and office staff to maintain production schedule. They may also work directly with colleagues to help them with vehicle preparation duties.

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## **DIGITAL TECHNOLOGY**

Automotive refinishing technicians may use digital tools and equipment to measure temperature, humidity, air pressure and paint thickness. They may also use digital devices to determine paint colours and codes. Automotive refinishing technicians may use computer software to retrieve paint formulas and access instructions for selecting and mixing appropriate refinishing materials. Workplace records and technical and safety information may be recorded and accessed using computers.

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## **CONTINUOUS LEARNING**

Automotive refinishing technicians are continuously learning to keep up with the changes in the industry in relation to products, vehicles and equipment. They may attend manufacturers' or suppliers' seminars to become a certified user of their products. Some jurisdictions require automotive refinishing technicians to participate in continuous learning.



# ELEMENTS OF HARMONIZATION FOR APPRENTICESHIP TRAINING

At the request of industry, the Harmonization Initiative was launched in 2013 to *substantively align* apprenticeship systems across Canada by making training requirements more consistent in the Red Seal trades. Harmonization aims to improve the mobility of apprentices, support an increase in their completion rates and enable employers to access a larger pool of apprentices.

As part of this work, the Canadian Council of the Directors of Apprenticeship (CCDA) identified four main harmonization priorities in consultation with industry and training stakeholders:

## 1. Trade name

The official Red Seal name for this trade is Automotive Refinishing Technician.

## 2. Number of Levels of Apprenticeship

The number of levels of technical training recommended for the Automotive Refinishing Technician trade is two.

## 3. Total Training Hours during Apprenticeship Training

The total hours of training, including both on-the-job and in-school training for the Automotive Refinishing Technician subtrade is 3600.

## 4. Consistent sequencing of training content (at each level) using the most recent Occupational Standard

Implementation for harmonization was implemented progressively. Level one was implemented in 2020/2021 and level two in 2021/2022. See Appendix A for the finalized curriculum comparisons.

White boxes are “Topics,” grey boxes are “In-Context”. In-context means learning that has already taken place and is being applied to the applicable task. Learning outcomes for in-context topics are accomplished in other topics in that level.

<b>Level 1</b> (2020/2021 implementation)	<b>Level 2</b> (2021/2022 implementation)
Safety-Related Functions	Safety-Related Functions
Tools and Equipment	Tools and Equipment
Work Organization	Work Organization
Communication	Communication and Mentoring
Surface Preparation	Surface Preparation
Repair Materials	
Equipment Preparation	Equipment Preparation
Preparation of Refinishing Materials (Introduction)	Preparation of Refinishing Materials
Application of Refinishing Materials (Introduction)	Application of Refinishing Materials
	Post-Refinishing Functions

# AUTOMOTIVE REFINISHING TECHNICIAN TASK MATRIX

This chart outlines the major work activities, tasks and sub-tasks from the 2019 Automotive Refinishing Technician Red Seal Occupational Standard. Each sub-task details the corresponding essential skill and level of training where the content is covered. \*

\* Sub-tasks with numbers in the boxes is where the content will be delivered in training. The Task Matrix Chart will be updated every year until Harmonization implementation is complete. Implementation for harmonization took place progressively. Level one was implemented in 2020/2021 and level two in 2021/2022.

## A – Performs common occupational skills

**16%**

<b>Task A-1 Performs safety-related functions</b>	<b>1.01 Maintains safe workplace</b>  1	<b>1.02 Uses personal protective equipment (PPE) and safety equipment</b>  1			
<b>Task A-2 Maintains tools and equipment</b>	<b>2.01 Maintains hand and power tools</b>  1	<b>2.02 Maintains spray booth</b>  1	<b>2.03 Maintains spray equipment</b>  1, 2	<b>2.04 Maintains mixing equipment</b>  1, 2	<b>2.05 Maintains shop equipment</b>  1
<b>Task A-3 Organizes work</b>	<b>3.01 Uses documentation</b>  1, 2	<b>3.02 Performs inspections</b>  1, 2	<b>3.03 Contributes to development of a repair plan</b>  1, 2	<b>3.04 Organizes refinish production schedule</b>  1, 2	
<b>Task A-4 Uses communication and mentoring techniques</b>	<b>4.01 Uses communication techniques</b>  1, 2	<b>4.02 Uses mentoring techniques</b>  1, 2			

## B – Performs Preparation

42%

<b>Task B-5 Prepares surface</b>	<b>5.01 Performs initial preparation</b>  1	<b>5.02 Masks surface</b>  1, 2	<b>5.03 Strips surface</b>  1	<b>5.04 Sands surface</b>  1
<b>Task B-6 Uses repair materials</b>	<b>6.01 Mixes repair materials</b>  1	<b>6.02 Applies repair materials</b>  1	<b>6.03 Applies protective coating</b>  1	

## C– Performs refinishing procedures

42%

<b>Task C-7 Prepares refinishing equipment</b>	<b>7.01 Prepares spray booth</b>  1, 2	<b>7.02 Performs spray gun setup</b>  1, 2		
<b>Task C-8 Prepares refinishing materials</b>	<b>8.01 Mixes refinishing materials</b>  1, 2	<b>8.02 Performs colour adjustments</b>  2		
<b>Task C-9 Applies refinishing materials</b>	<b>9.01 Applies sealers</b>  2	<b>9.02 Applies base coat</b>  1, 2	<b>9.03 Applies single-stage paint</b>  1, 2	<b>9.04 Applies clear coat</b>  2
<b>Task C-10 Performs post-refinishing functions</b>	<b>10.01 Removes masking materials</b>  1,2	<b>10.02 Corrects surface imperfections</b>  1,2	<b>10.03 Performs final check</b>  1,2	

# TRAINING PROFILE CHART SASKATCHEWAN

This Training Profile Chart represents Saskatchewan Apprenticeship and Trade Certification Commission (SATCC) technical training at the topic level.

**Note:** Level One Auto Body and Collision Technician and Automotive Refinishing Technician attend common Level One technical training. Either apprentice may switch to the other trade upon completion of level one technical training and work experience. Graduates of Saskatchewan Polytechnic's applied certificate ABCT program with sufficient work experience hours may enter Automotive Refinishing Technician apprenticeship at level two.

At this time, **all** Saskatchewan's Automotive Refinishing Technician apprentices attend technical training in Alberta at NAIT or SAIT for Level 2.

Level two Automotive Refinishing Technician apprenticeship technical training has yet to be developed. Once industry indentures sufficient, sustainable numbers of Automotive Refinishing Technician apprentices, level two will begin development.

Sask. Polytechnic Level One (Harmonized)	Transcript Code	Hours
Trade Mathematics	MATH 131 – Theory	12
Metal Repair	METL 122 – Theory	20
	METL 123 – Shop	36
Refinishing	PNTG 122 – Theory	24
	PNTG 123 – Shop	32
Vehicle Body Trim Repair	VEHC 122 – Theory	24
	VEHC 123 – Shop	32
		180

# TRAINING PROFILE CHART ALBERTA

This Training Profile Chart represents Alberta Apprenticeship and Industry Training (AIT) technical training at the topic Level 2.

Northern and Southern Alberta Institute of Technology (NAIT, SAIT) Polytechnic Level Two (Harmonized)	Hours
Shop Practices and Procedures	24
Product Preparation	49
Topcoat Application	107
	180

# TECHNICAL TRAINING COURSE CONTENT

This chart outlines the model for Saskatchewan Apprenticeship and Trade Certification Commission (SATCC) technical training sequencing. For the harmonized level of training, a cross reference to the Red Seal Occupational Standard (RSOS) apprenticeship technical training sequencing, at the learning outcome level, is provided.

Implementation for harmonization took place progressively. Level one was implemented in 2020/2021 and level two 2021/2022

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<b>Level One</b>	<b>6 weeks</b>	<b>180 hours</b>
<b>Trade Mathematics</b>		<b>12 hours</b>
<ul style="list-style-type: none"><li>• use basic mathematics</li><li>• use basic algebra</li><li>• use metric system and formulas</li></ul>		
<b>RSOS topics covered in this section of training:</b>		
<b>This section of training exceeds RSOS scope of work in Level One and exceeds the minimum sequencing as set out in the Automotive Refinishing Technician RSOS. Its purpose is to assist in the understanding of the Automotive Refinishing Technician trade (i.e. mixing ratios of chemicals.)</b>		
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<b>Metal Repair – Theory</b>		<b>20 hours</b>
<ul style="list-style-type: none"><li>• discuss auto body hand and power tools</li><li>• identify metal shaping procedures</li><li>• discuss metal preparation procedures</li><li>• describe minor dent repair procedures</li><li>• describe application and finishing procedures of fillers</li><li>• describe oxy-acetylene cutting and heating procedures</li><li>• describe plasma cutting procedures</li><li>• describe trade-related documents</li></ul>		
<b>Metal Repair – Shop</b>		<b>36 hours</b>
<ul style="list-style-type: none"><li>• demonstrate knowledge of trade terminology</li><li>• use auto body hand tools</li><li>• use auto body power tools</li><li>• demonstrate metal working procedures</li><li>• perform the application and finish filler process</li><li>• use oxy-acetylene equipment</li><li>• use plasma arc</li></ul>		
<b>RSOS topics covered in this section of training:</b>		
<b>A-1 Performs safety related functions</b>		
A-1.01 Maintains safe workplace		
<ul style="list-style-type: none"><li>• safe work practices</li><li>• regulatory requirements pertaining to safety</li><li>• safety-related documentation and its use</li></ul>		
A-1.02 Uses personal protective equipment (PPE) and safety equipment		
<ul style="list-style-type: none"><li>• PPE and safety equipment, their applications, maintenance, storage and procedures for use</li><li>• regulatory requirements pertaining to PPE and safety equipment</li></ul>		

### **A-3 Organizes work**

- A-3.01 Uses documentation
  - trade-related documentation and its use
- A-3.02 Performs inspection
  - procedures used to perform an inspection
- A-3.03 Contributes to development of repair plan
  - development of repair estimates and their applications
- A-3.04 Organizes refinish production schedule
  - shop production schedules
  - refinish production schedules

### **A-4 Uses communication and mentoring techniques**

- A-4.01 Uses communication techniques
  - trade terminology
  - effective communication practices
- A-4.02 Uses mentoring techniques
  - strategies for learning skills in the workplace
  - strategies for teaching workplace skills

### **C-10 Performs post-refinishing functions**

- C-10.02 Corrects surface imperfections
  - surface imperfections
  - corrective action of various surface imperfections
  - causes of various surface imperfections'
- C-10.03 Performs final check
  - performing final check

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### **Refinishing – Theory**

**24 hours**

- describe preparation of panel to be painted
- identify methods of stripping paint
- describe undercoat application procedures
- identify primer sealers
- describe spray equipment
- describe paint mixing procedures
- explain paint application procedures
- describe procedures for paint defect correction
- describe air supply systems
- describe vehicle detailing procedures

### **Refinishing – Shop**

**32 hours**

- prepare panel to be painted
- strip painted panel
- apply undercoats
- apply primer sealers
- clean and maintain spray equipment
- mix paint
- apply paint to a panel
- correct paint defects
- service air supply systems
- perform an interior and exterior vehicle clean up

**RSOS topics covered in this section of training:**

**A-3 Organizes work**

- A-3.01 Uses documentation
  - trade-related documentation and its use
- A-3.02 Performs inspection
  - procedures used to perform an inspection
- A-3.03 Contributes to development of repair plan
  - development of repair estimates and their applications
- A-3.04 Organizes refinish production schedule
  - shop production schedules
  - refinish production schedules

**A-4 Uses communication and mentoring techniques**

- A-4.01 Uses communication techniques
  - trade terminology
  - effective communication practices
- A-4.02 Uses mentoring techniques
  - strategies for learning skills in the workplace
  - strategies for teaching workplace skills

**B-5 Prepares surface**

- B-5.01 Performs initial preparation
  - performing initial preparation of substrates and surfaces
- B-5.03 Strips surface
  - stripping equipment and products, their applications, safety precautions and procedures for use
- B-5.04 Sands surface
  - sanding equipment and materials, their applications, safety precautions and procedures for use

**B-6 Uses repair materials**

- B-6.01 Mixes repair materials
  - repair materials, their applications and procedures for use
- B-6.02 Applies repair materials
  - applying repair materials
- B-6.03 Applies protective coating
  - identify areas needing protective coatings
  - clean, prepare and mask substrate
  - apply protective coating to repaired location
  - protective coatings, their applications and procedures for use

**C-7 Prepares refinishing equipment**

- C-7.01 Prepares spray booth
  - spray booths, their function and preparation procedures
  - spray booth problems and troubleshooting methods
- C-7.02 Performs spray gum setup
  - spray guns, their application and setup
  - spray pattern problems and correction methods

**C-8 Prepares refinishing materials**

- C-8.01 Mixes refinishing materials
  - refinishing materials and their applications
  - procedures used to mix refinishing materials



### **C-9 Applies refinishing materials**

#### C-9.02 Applies base coat

- applying base coats

#### C-9.03 Applies single-stage paint

- applying single-stage paint

### **C-10 Performs post-refinishing functions**

#### C-10.01 Removes masking materials

- removing masking materials
- masking issues

#### C-10.02 Corrects surface imperfections

- surface imperfections
- corrective action of various surface imperfections
- causes of various surface imperfections

#### C-10.03 Performs final check

- performing final check

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### **Vehicle Body Trim Repair – Theory**

**24 hours**

- discuss personal and shop safety
- discuss electrical systems
- identify fastening devices
- describe body trim and mouldings
- identify passenger restraint systems
- describe plastic repair
- describe body panel replacement and alignment

### **Vehicle Body Trim Repair – Shop**

**32 hours**

- repair electrical systems
- replace vehicle trim components
- repair plastic components
- replace body panels and associated trim

### **RSOS topics covered in this section of training:**

#### **A-1 Performs safety related functions**

##### A-1.01 Maintains safe workplace

- safe work practices
- regulatory requirements pertaining to safety
- safety-related documentation and its use

##### A-1.02 Uses personal protective equipment (PPE) and safety equipment

- PPE and safety equipment, their applications, maintenance, storage and procedures for use
- regulatory requirements pertaining to PPE and safety equipment

#### **A-2 Maintains tools and equipment**

##### A-2.01 Maintains hand and power tools

- hand and power tools, their applications and procedures for use
- maintenance and storage of hand and power tools

##### A-2.02 Maintains spray booth

- types of spray booths and their components and applications
- spray booth maintenance and adjustments
- interpreting maintenance schedules

##### A-2.03 Maintains spray equipment

- spray equipment and its components
- compressors, filters, lines, regulators and nitrogen generators



- spray equipment maintenance
- A-2.04 Maintain mixing equipment
- paint manufacturers' software and equipment, their applications and procedures for use
  - paint manufacturers' software and equipment maintenance
- A-2.05 Maintains safe workplace
- shop equipment, their applications and procedures for use
  - shop equipment maintenance and storage

### **A-3 Organizes work**

- A-3.01 Uses documentation
- trade-related documentation and its use
- A-3.02 Performs inspection
- procedures used to perform an inspection
- A-3.03 Contributes to development of repair plan
- development of repair estimates and their applications
- A-3.04 Organizes refinish production schedule
- shop production schedules
  - refinish production schedules

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**No Level One topics from the RSOS are taught in context.**

Technical training for Level two is only available in Alberta. The chart below outlines the model for NAIT and SAIT Training in Alberta. For the harmonized level of training, a cross reference to the Red Seal Occupational Standard (RSOS) apprenticeship technical training sequencing, at the learning outcome level, is provided.

Implementation for harmonization took place progressively. Level one was implemented in 2020/2021 and level two 2021/2022

<b>Level Two</b>	<b>6 weeks</b>	<b>180 hours</b>
<b>Section One – Shop Practices and Procedures</b>		<b>24 hours total</b>
<b>Shop Maintenance</b>		<b>18 hours</b>
<ul style="list-style-type: none"> <li>• describe spray environment set-up</li> <li>• describe air supply systems</li> <li>• describe record keeping procedures</li> <li>• describe the management of materials inventory</li> <li>• describe the management of waste materials</li> <li>• identify mixing room requirements</li> <li>• maintain mixing room</li> <li>• maintain spray environment</li> <li>• maintain refinishing equipment</li> </ul>		
<b>RSOS topics covered in this section of training:</b>		
<b>A-2 Maintains tools and equipment</b>		
A-2.03 Maintains spray equipment		
<ul style="list-style-type: none"> <li>• spray equipment and its components</li> <li>• compressors, filters, lines, regulators and nitrogen generators</li> <li>• spray equipment maintenance</li> </ul>		
A-2.04 Maintain mixing equipment		
<ul style="list-style-type: none"> <li>• paint manufacturers' software and equipment, their applications and procedures for use</li> <li>• paint manufacturers' software and equipment maintenance</li> </ul>		
<b>B-5 Prepares surface</b>		
B-5.02 Masks surface		
<ul style="list-style-type: none"> <li>• masking materials, their applications and procedures for use</li> </ul>		
<b>C-7 Prepares refinishing equipment</b>		
C-7.01 Prepares spray booth		
<ul style="list-style-type: none"> <li>• spray booths, their function and preparation procedures</li> <li>• spray booth problems and troubleshooting methods</li> </ul>		
C-7.02 Performs spray gum setup		
<ul style="list-style-type: none"> <li>• spray guns, their application and setup</li> <li>• spray pattern problems and correction methods</li> </ul>		
<b>C-8 Prepares refinishing materials</b>		
C-8.01 Mixes refinishing materials		
<ul style="list-style-type: none"> <li>• refinishing materials and their applications</li> <li>• procedures used to mix refinishing materials</li> </ul>		
C-8.02 Performs colour adjustments		
<ul style="list-style-type: none"> <li>• performing colour matching</li> </ul>		

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## Shop Procedures

6 hours

- explain a refinish supplement
- explain a refinish estimate
- identify refinish work required
- develop refinish schedule

### RSOS topics covered in this section of training:

#### A-3 Organizes work

##### A-3.01 Uses documentation

- trade-related documentation and its use

##### A-3.02 Performs inspection

- procedures used to perform an inspection

##### A-3.03 Contributes to development of repair plan

- development of repair estimates and their applications

##### A-3.04 Organizes refinish production schedule

- shop production schedules
  - refinish production schedules
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## Section Two – Product Preparation

49 hours total

### Topcoat Identification

18 hours

- identify existing substrates
- describe topcoat considerations for complete panel refinish
- describe topcoat considerations for spot repair
- select a formula that corresponds to a paint code. Maintain spray environment

### RSOS topics covered in this section of training:

#### A- C-8 Prepares refinishing materials

##### C-8.01 Mixes refinishing materials

- refinishing materials and their applications
- procedures used to mix refinishing materials

##### C-8.02 Performs colour adjustments

- performing colour matching
- 

### Mixing Identification

4 hours

- describe additive considerations
- mix paint according to specifications
- correct an over-pour situation when mixing paint

### RSOS topics covered in this section of training:

#### A- C-8 Prepares refinishing materials

##### C-8.01 Mixes refinishing materials

- refinishing materials and their applications
- procedures used to mix refinishing materials

##### C-8.02 Performs colour adjustments

- performing colour matching
- 

### Colour Matching

27 hours

- explain colour theory
- identify a colour mismatch
- adjust colour using gun technique
- adjust colour by tinting

**RSOS topics covered in this section of training:**

**A- C-8 Prepares refinishing materials**

C-8.01 Mixes refinishing materials

- refinishing materials and their applications
- procedures used to mix refinishing materials

C-8.02 Performs colour adjustments

- performing colour matching

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**Section Three – Topcoat Application**

**107 hours total**

**Apply Topcoat**

**95 hours**

- describe topcoat application
- describe blending techniques and applications
- prepare the refinisher for topcoat application
- prepare the work piece for topcoat application
- prepare spray equipment for topcoat application
- perform topcoat application
- perform multi-stage blend repair

**RSOS topics covered in this section of training:**

**C-9 Applies refinishing materials**

C-9.01 Applies sealers

- applying sealers

C-9.02 Applies base coat

- applying base coats

C-9.03 Applies single-stage paint

- applying single-stage paint

C-9.04 Applies clear coat

- applying clear coat

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**Paint Faults**

**12 hours**

- identify paint faults
- repair paint faults

**RSOS topics covered in this section of training:**

**C-10 Performs post-refinishing functions**

C-10.02 Corrects surface imperfections

- surface imperfections
- corrective action of various surface imperfections
- causes of various surface imperfections'

C-10.03 Performs final check

- performing final check

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**Level Two topics from the RSOS that are taught in context:**

**A-1 Performs Safety-Related Functions**

**For details regarding the In Context Topics, see page 25**

# IN CONTEXT TOPICS

In context means learning that has already taken place and is being applied to the applicable task. Learning outcomes for in context topics are accomplished in other topics in that level.

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## **A-1 Performs safety related functions**

### A-1.01 Maintains safe workplace

- safe work practices
- regulatory requirements pertaining to safety
- safety-related documentation and its use

### A-1.02 Uses personal protective equipment (PPE) and safety equipment

- PPE and safety equipment, their applications, maintenance, storage and procedures for use
- regulatory requirements pertaining to PPE and safety equipment

## **A-4 Uses communication and mentoring techniques**

### A-4.01 Uses communication techniques

- trade terminology
- effective communication practices

### A-4.02 Uses mentoring techniques

- strategies for learning skills in the workplace
- strategies for teaching workplace skills

# APPENDIX A: POST HARMONIZATION TRAINING PROFILE CHART

This chart which outlines the finalized model for SATCC technical training sequencing with a cross reference to the Harmonized apprenticeship technical training sequencing, at the topic level.

Note: Level One Auto Body and Collision Technician (ABCT) and Automotive Refinishing Technician (ART) are granted the same technical training credit by the SATCC. Either apprentice may switch to the other trade upon completion of level one technical training and work experience. Graduates of Saskatchewan Polytechnic's applied certificate ABCT program with sufficient work experience hours may enter Automotive Refinishing Technician apprenticeship at level two.

At this time, all Saskatchewan's ART apprentices attend technical training in Alberta at NAIT or SAIT.

ART Level two apprenticeship technical training has yet to be developed. Once industry indentures sufficient, sustainable numbers of ART apprentices, level two will begin development.

SATCC Level One	Transcript Code	Hours	Pan-Canadian Harmonized Level One
Trade Mathematics	MATH 131	12	<i>*Exceed</i>
Metal Repair	METL 122 – Theory	20	Communication Tools and Equipment Welding Equipment (Basic/Introduction)
	METL 123 – Shop	36	Work Organization and Document Use Metal Panels and Components (Removes, Repairs and Installs)
Refinishing	PNTG 122 – Theory	24	Surface Preparation Repair Materials Refinishing Equipment Preparation Refinishing Materials (Prepares)
	PNTG 123 – Shop	32	Refinishing Materials (Applies) Post-Refinishing Functions Exterior Detailing Vehicle Cleaning
Vehicle Body Trim Repair	VEHC 122 – Theory	24	Safety-Related Functions Trim and Hardware
	VEHC 123 – Shop	32	Plastic and Composite Panels and Components (Removes, Repairs and Installs)
		180	

Northern and Southern Alberta Institute of Technology (NAIT, SAIT) Polytechnic Level Two (Harmonized)	Hours	Pan-Canadian Harmonized Level Two
Shop Practices and Procedures	24	Tools and Equipment Work Organization
Product Preparation	49	Surface Preparation Equipment Preparation
Topcoat Application	107	Applying Refinishing Materials Post Refinishing Functions
	180	

\*Exceed Topics

Throughout this guide to course content there are topics which exceed the minimum scope of work as set out in the Automotive Refinishing Technician RSOS. Industry in Saskatchewan has deemed certain topics to fall within the scope of work of the Automotive refinishing technician subtrade in Saskatchewan and therefore require technical training to cover these topics.