



Automotive Refinishing Technician

Guide to Course Content

Online: 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

STRUCTURE OF THE **GUIDE TO COURSE** **CONTENT**

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

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. The Task Matrix is broken down into the following:

Major Work Activity: 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 trade: 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.

TRAINING REQUIREMENTS FOR THE AUTOMOTIVE REFINISHING TECHNICIAN SUBTRADE

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.

Designated Trade Name	Math Credit at the Indicated Grade Level❶	Science Credit at Grade Level
Automotive Refinishing Technician	Grade 10	Grade 10
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.). *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. For information about high school curriculum, including Math and Science course names, please see: http://www.curriculum.gov.sk.ca/# Individuals not meeting the entrance requirements will be subject to an assessment and any required training.		

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.

A – Performs Common Occupational Skills

16%

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

B – Performs Preparation

42%

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

C– Performs Refinishing Procedures

42%

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

Level One	6 weeks	180 hours
Trade Mathematics 12 hours • use basic mathematics • use basic algebra • use metric system and formulas RSOS topics covered in this section of training: 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.)		
Metal Repair – Theory 20 hours • discuss auto body hand and power tools • identify metal shaping procedures • discuss metal preparation procedures • describe minor dent repair procedures • describe application and finishing procedures of fillers • describe oxy-acetylene cutting and heating procedures • describe plasma cutting procedures • describe trade-related documents		
Metal Repair – Shop 36 hours • demonstrate knowledge of trade terminology • use auto body hand tools • use auto body power tools • demonstrate metal working procedures • perform the application and finish filler process • use oxy-acetylene equipment • use plasma arc RSOS topics covered in this section of training: A-1 Performs safety related functions A-1.01 Maintains safe workplace A-1.02 Uses personal protective equipment (PPE) and safety equipment A-3 Organizes work A-3.01 Uses documentation A-3.02 Performs inspection A-3.03 Contributes to development of repair plan A-3.04 Organizes refinish production schedule		

A-4 Uses communication and mentoring techniques

A-4.01 Uses communication techniques

A-4.02 Uses mentoring techniques

C-10 Performs post-refinishing functions

C-10.02 Corrects surface imperfections

C-10.03 Performs final check

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

A-3.02 Performs inspection

A-3.03 Contributes to development of repair plan

A-3.04 Organizes refinish production schedule

A-4 Uses communication and mentoring techniques

A-4.01 Uses communication techniques

A-4.02 Uses mentoring techniques

B-5 Prepares surface

B-5.01 Performs initial preparation

B-5.03 Strips surface

B-5.04 Sands surface

B-6 Uses repair materials

B-6.01 Mixes repair materials

B-6.02 Applies repair materials

B-6.03 Applies protective coating

C-7 Prepares refinishing equipment

C-7.01 Prepares spray booth

C-7.02 Performs spray gun setup

C-8 Prepares refinishing materials

C-8.01 Mixes refinishing materials

C-9 Applies refinishing materials

C-9.02 Applies base coat

C-9.03 Applies single-stage paint

C-10 Performs post-refinishing functions

C-10.01 Removes masking materials

C-10.02 Corrects surface imperfections

C-10.03 Performs final check

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

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

A-2 Maintains tools and equipment

A-2.01 Maintains hand and power tools

A-2.02 Maintains spray booth

A-2.03 Maintains spray equipment

A-2.04 Maintain mixing equipment

A-2.05 Maintains safe workplace

A-3 Organizes work

A-3.01 Uses documentation

A-3.02 Performs inspection

A-3.03 Contributes to development of repair plan

A-3.04 Organizes refinish production schedule

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.

Level Two	6 weeks	180 hours
Section One – Shop Practices and Procedures		24 hours total
Shop Maintenance		18 hours
- describe spray environment set-up - describe air supply systems - describe record keeping procedures - describe the management of materials inventory - describe the management of waste materials - identify mixing room requirements - maintain mixing room - maintain spray environment - maintain refinishing equipment		
RSOS topics covered in this section of training:		
A-2 Maintains tools and equipment		
A-2.03 Maintains spray equipment		
A-2.04 Maintain mixing equipment		
B-5 Prepares surface		
B-5.02 Masks surface		
C-7 Prepares refinishing equipment		
C-7.01 Prepares spray booth		
C-7.02 Performs spray gum setup		
C-8 Prepares refinishing materials		
C-8.01 Mixes refinishing materials		
C-8.02 Performs colour adjustments		
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		
A-3.02 Performs inspection		
A-3.03 Contributes to development of repair plan		
A-3.04 Organizes refinish production schedule		
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

C-8.02 Performs colour adjustments

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

C-8.02 Performs colour adjustments

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

C-8.02 Performs colour adjustments

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

C-9.02 Applies base coat

C-9.03 Applies single-stage paint

C-9.04 Applies clear coat

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

C-10.03 Performs final check

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 13

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.

A-1 Performs safety related functions

A-1.01 Maintains safe workplace

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

A-4 Uses communication and mentoring techniques

A-4.01 Uses communication techniques

A-4.02 Uses mentoring techniques