Automotive Refinishing Technician On-the-Job Training Guide

2024



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 ON-THE-JOB TRAINING GUIDE

To facilitate understanding of the occupation, this on-the-job training guide 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.

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.

On-the-Job Training Content for the Automotive Refinishing Technician Subtrade: a chart which outlines the topics of technical training with on-the-job examples for apprentice to achieve relevant experience at work.

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.

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.

Journeyperson to apprentice ratio for this trade is: 1:2

The information contained in this on-the-job-training guide serves as a guide for employers and apprentices. Apprenticeship training is mutually beneficial to both employer and apprentice. The employer's investment in training apprentices results in skilled and certified workers. The document summarizes the tasks to be covered by the apprentice during their on-the-job portion of apprenticeship training. An apprentice spends approximately 85% of their apprenticeship term training on-the-job.

It is the employer's or journeyperson's responsibility to supervise an apprentice's practical skills development until a satisfactory level of proficiency has been reached.

EMPLOYER TRAINING RESPONSIBILITY

- promote a safety-conscious workplace
- provide mentored, hands-on practice in the use of tools and equipment
- demonstrate procedures to appraise automobiles and light trucks
- provide guided, hands-on practice refinishing automobiles and light trucks
- ensure that the apprentice can evaluate the end product

Employers should make every effort to expose their apprentices to work experience in as many areas of the trade as possible.

In the On-the-Job Training Guide, in-school instruction is listed first; on-the-job suggestions to help employers assist the apprentice to prepare for in-school training are listed next.

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



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. *

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			

^{*} Sub-tasks with numbers in the boxes is where the content will be delivered in training.

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 Collison 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, <u>all</u> 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
Motel Beneir	METL 122 – Theory	20
Metal Repair	METL 123 – Shop	36
Refinishing	PNTG 122 – Theory	24
Remissing	PNTG 123 – Shop	32
Vehicle Body Trim Repair	VEHC 122 – Theory	24
verlicle body Tilli Kepali	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



ON-THE JOB AND IN-SCHOOL TRAINING CONTENT FOR THE AUTOMOTIVE REFINISHING TECHNICIAN SUBTRADE

This chart outlines on-the-job examples for apprentices to achieve relevant work experience to prepare for the topics of technical training. Topics of technical training are provided with the associated learning outcomes.

Level One 6 weeks 180 hours

Trade Mathematics

12 hours

- use basic mathematics
- use basic algebra
- use metric system and formulas

Mentors can assist the apprentice to prepare for this section of technical training by:

 having the apprentice perform calculations using basic math, algebra and formulas for trade related activities.

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

- having the apprentice participate in training for workplace safety and health regulations such as Material Safety Data Sheets (MSDS), Workplace Hazardous Material Information Systems (WHMIS) and Occupational Health and Safety (OH&S)
- demonstrating the use of supplied breathing systems
- describing the care, use, and maintenance of body hand tools
- describing the procedures and techniques for shrinking metal so that it conforms to its original contour
- allowing the apprentice to perform rough out procedures for buckles and creases



- having the apprentice apply and finish body filler to the original contour of the panel
- allowing the apprentice to operate oxy-acetylene cutting equipment
- allowing the apprentice to operate plasma arc cutting equipment

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

- describing the procedures for service, maintenance, and cleaning of spray equipment
- describing the procedures for service, maintenance, and cleaning of air supply systems
- describing the appropriate selection and maintenance of respirators
- describing the procedures for paint booth maintenance
- having the apprentice identify substrate and panel preparation to ensure compatibility with paint manufacturer's specifications
- allowing the apprentice to mask and tape a panel for refinishing
- exposing the apprentice to the selection and application of primers for various substrate
- exposing the apprentice to the selection and application of sealers designed to perform various functions
- allowing the apprentice to select and mix paints according to colour code and compatibility with existing vehicle finish
- allowing the apprentice to paint various substrate in accordance to paint manufacturer's specifications
- describing the procedures for the disposal of paint, solvent, and shop wastes
- having the apprentice polish a refinished panel or vehicle
- describing the procedure for the selection and use of cleaners for removing various types of stains and dirt from upholstery materials and interior components
- having the apprentices to perform vehicle interior and exterior cleanup
- allowing the apprentice to complete a final checklist



Vehicle Body Trim Repair - Theory

- 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

24 hours

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

- allowing the apprentice to remove, install and align of bumpers, header panels, hoods, fenders and skirts, bolt-on radiator supports and deck lids
- showing the apprentice procedures on diagnosing and repairing air, dust, and water leaks
- allowing the apprentice to remove, install and align headlights
- allowing the apprentice remove, install, and align of doors and door hardware
- explaining the creation and accuracy in work estimates
- having the apprentice use a multimeter to diagnose electrical circuits and components
- describing the operation, basic diagnosis, and repair of electrical wiring and lighting systems
- discussing the protection of electronic components from static discharge and damage from welding processes, impact, or heat
- having the apprentice use the tools and shop equipment common for an Automotive Refinishing Technician

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.

Mentors can assist the apprentice to prepare for this section of technical training by:

- explaining the spray environment set-up and air supply systems
- demonstrating record keeping procedures and the management of materials inventory
- explaining the management of waste materials
- identifying mixing room requirements
- the maintaining of the mixing room.
- the maintaining spray environment and the refinishing equipment.

Shop Procedures

6 hours

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

Mentors can assist the apprentice to prepare for this section of technical training by:

- explaining a refinish supplement
- explaining a refinish estimate
- Identifying refinish work that is required
- develop a refinish 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

- identifying existing substrates
- describing topcoat considerations for complete panel refinish
- describing topcoat considerations for spot repair
- selecting a formula that corresponds to a paint code
- describing additive considerations



Mixing Identification

4 hours

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

Mentors can assist the apprentice to prepare for this section of technical training by:

- explaining colour theory
- identifying a colour mismatch
- correcting an over-pour situation when mixing paint
- adjusting colour using gun technique
- adjusting colour by tinting

Colour Matching

27 hours

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

Mentors can assist the apprentice to prepare for this section of technical training by:

- explaining colour theory
- identifying a colour mismatch
- adjusting colour using gun technique
- adjusting colour by tinting

Section Three – Topcoat Application

107 hours total

95 hours

Apply Topcoat

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

Mentors can assist the apprentice to prepare for this section of technical training by:

- describing topcoat application
- describing blending techniques and applications
- preparing the refinisher for topcoat application
- preparing the workpiece for topcoat application
- preparing the spray equipment for topcoat application
- supervising the apprentice during the performing a topcoat application
- supervising the apprentice during the performing multi-stage blend repair

Paint Faults 12 hours

- identify paint faults
- · repair paint faults

- supervising the apprentice during the identifying paint faults
- supervising the apprentice during the repairing paint faults



Consider apprenticeship training as an investment in the future of your company and in the future of your workforce. Ultimately, skilled and certified workers increase your bottom line.

Get involved in the apprenticeship training system. Your commitment to training helps to maintain the integrity of the trade.

Do you have employees who have been working in the trade for a number of years but don't have trade certification?

Contact your local apprenticeship office for details on how they might obtain the certification they need.

Saskatchewan Apprenticeship & Trade Certification Commission

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