



Recreation Vehicle Service Technician On-The-Job Training Guide

2022

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Recognition:

To promote transparency and consistency, this document has been adapted from the 2021 Recreation Vehicle Service 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 guide to course content contains the following sections:

Description of the Recreation Vehicle Service Technician trade: an overview of the trade's duties and training requirements.

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

Harmonization: a brief description on the Pan-Canadian Harmonization Initiative for the Recreation Vehicle Service Technician trade.

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 Service Technician Trade: a chart which outlines the topics of technical training with on-the-job examples for apprentice to achieve relevant experience at work.

DESCRIPTION OF THE RECREATION VEHICLE SERVICE TECHNICIAN TRADE

“Recreation vehicle service technician” is this trade’s official Red Seal occupational title approved by the CCDA. This standard covers tasks performed by a recreation vehicle service technician.

Recreation vehicle (RV) service technicians work on systems and components of recreation vehicles, including electrical components, plumbing, liquefied petroleum (LP) gas components, appliances, exterior and interior components, structural frames and towing systems. They diagnose, repair, replace, install, adjust, test, maintain and modify these components and systems. They may also perform maintenance and repairs on trailer frames and running gear. They must be knowledgeable about each system’s function and the interaction among them. However, it is important to note that they do not work on the motor or drive train components.

Recreation vehicles serviced in this trade include: class A, B, B+ and C motorhomes, travel trailers, fifth wheel trailers, park model trailers, truck campers and pop-up camping trailers. RV service technicians also work on toy haulers, utility trailers, flat deck trailers, construction living trailers and an assortment of mobile vehicles.

While recreation vehicle service technicians are experienced in all facets of the trade, many may develop specialized skills in areas such as electronics, appliances, hitching systems, and interior and exterior finishing.

Recreation vehicle service technicians are typically employed at RV dealerships, independent RV repair shops, RV manufacturers and may also be self-employed. They may work at indoor shops and outdoors at RV sites. Safety is important due to risks and hazards such as working at heights, with electricity, with explosive and volatile materials, and under vehicles.

Some important attributes include service, mechanical and mathematical skills, manual dexterity, an ability to plan and think sequentially and an ability to work as a team member. Customer relations skills are critical when providing on-site services. Sales skills are required when performing maintenance tasks and assisting customers with making decisions related to repair options.

The functions of recreation vehicle service technicians may overlap with a number of other trades such as parts technician, automotive service technician, construction electrician, plumber, gasfitter, carpenter, floorcovering installer, sheet metal worker, refrigeration and air conditioning mechanic, welder, auto body and collision technician, and appliance service technician.

Experienced recreation vehicle service technicians may advance to supervisory or training positions. They may also move into positions with manufacturers, wholesalers and sales divisions of RV dealerships.

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 1600 hours each year. Total trade time required is 4800 and at least 3 years in the trade.

There are three levels of technical training delivered by the Southern Alberta Institute of Technology (SAIT) Polytechnic in Calgary Alberta.

Journeyman 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 journeyman'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 relevant to the inspecting, diagnosing, servicing, repairing, replacing and overhauling of all components of an automobile, light truck or light bus
- provide the opportunity for apprentices to service the above systems and vehicles
- further the apprentice's ability to interpret technical drawings and schematics
- ensure that the apprentice can troubleshoot, diagnose and repair the vehicle and its systems

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.

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 journeyman 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	Math Credit at the Indicated Grade Level❶	Science Credit at Grade Level
Recreation Vehicle Service 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: http://www.curriculum.gov.sk.ca/#</p> <p>Individuals not meeting the entrance requirements will be subject to an assessment and any required training.</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.

READING

Recreation vehicle service technicians read labels on products and decals on equipment for instructions. They read code books, service bulletins, technical update sheets, work orders and recall notices from manufacturers. They also read service memos, warranty information, emails, texts, and notes from customers describing a problem. Recreation vehicle service technicians also read manuals for training purposes for example, when learning how to repair new or unfamiliar systems, or equipment.

DOCUMENT USE

Recreation vehicle service technicians refer to Workplace Hazardous Materials Information System (WHMIS) labels and Safety Data Sheets (SDS) for information on how to handle, dispose of or mix products. They refer to code books, charts, checklists and work schedules. They also refer to these work orders to determine what repairs need to be done. Recreation vehicle service technicians complete work orders, including information about problems encountered, the cause and how the issues were resolved. They also complete time sheets to record or track tasks done from a number of work orders.

Recreation vehicle service technicians may draw or read sketches to clarify steps in a procedure, refer to troubleshooting charts to diagnose a problem, or refer to wiring schematics, assembly diagrams and blueprints when installing equipment. They may also be required to take photos of equipment and service work for record keeping purposes.

WRITING

Recreation vehicle service technicians write notes to themselves, other co-workers and service managers about job details, customer requests, deadlines or supplies. They enter information in work orders to keep a record of tasks done for warranty purposes. They also write the reasons for recommending a particular procedure. They may also write warranty reports.

ORAL COMMUNICATION

Recreation vehicle service technicians call suppliers to obtain information about products. They also talk to other staff to clarify orders, to discuss complex repair problems and to provide explanations of service. They communicate with customers to explain features and to demonstrate proper operation of a system. They also explain and present to them repair options. This communication is done with tact and respect for customers. Recreation vehicle service technicians may also instruct and direct the work and learning of apprentices in the shop.

NUMERACY

Recreation vehicle service technicians measure size and location openings such as for appliances and accessories. They also measure weights, voltage, amperage, resistance and pressures using various tools and equipment such as scales, multimeters and gauges. They develop material lists based on this information. They may also estimate how much time it will take to complete various jobs.

THINKING

Recreation vehicle service technicians use problem solving skills to assess problems with the vehicle and its components. They consider information provided to them by the customer to determine causes of a malfunction. They often depend on their experience, knowledge and observations to diagnose and repair problems as service manuals may not cover all possible issues. They may have to design replacement pieces that are no longer available. They also carry out detailed troubleshooting techniques to deal with unexpected problems or unique difficulties, for example when making customized changes to a recreation vehicle, when diagnosing recurring electrical failures or when locating the source of a leak. They research information using service manuals and online resources, contact manufacturers' technical support lines, or consult with co-workers to help resolve problems.

Recreation vehicle service technicians use decision making skills to decide which tools and supplies to use. They also decide what repair or reconstruction to recommend taking into consideration time, cost and safety.

WORKING WITH OTHERS

Recreation vehicle service technicians work as part of a team which includes other technicians, service managers, salespersons, parts technicians, shop foremen and support staff. However, they usually work independently on the particular unit assigned to them. They coordinate tasks with others as necessary and sometimes work with a partner, for example, when installing awnings and construction repair.

DIGITAL TECHNOLOGY

Recreation vehicle service technicians may use computer applications. For example, they may use handheld diagnostic tools. They may have access to service and repair information through online resources. They may also use point of sale software.

CONTINUOUS LEARNING

Recreation vehicle service technicians learn continuously through hands-on experience with a range of repairs. They learn from co-workers as a first resource. They participate in training courses and access materials provided by manufacturers and suppliers. Recreation vehicle service technicians also consult with their customers who can give the history of their recreation vehicle.

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 Recreation Vehicle Service Technician.

2. Number of Levels of Apprenticeship

The number of levels of technical training recommended for the Recreation Vehicle Service Technician trade is three.

3. Total Training Hours during Apprenticeship Training

The total hours of training, including both on-the-job and in-school training for the Recreation Vehicle Service Technician subtrade is 4800.

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

Implementation for harmonization will take place progressively. Level one to be implemented in 2022/2023, level two in 2023/2024 and level three in 2024/2025. See Appendix A for the finalized curriculum comparisons.

RECREATION VEHICLE SERVICE TECHNICIAN

TASK MATRIX

This chart outlines the major work activities, tasks and sub-tasks from the 2021 Recreation Vehicle Service 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 will take place progressively. Level one to be implemented in 2022/2023, level two in 2023/2024 and level three in 2024/2025.

A – Performs common occupational skills

Task A-1 Performs safety-related activities	A-1.01 Uses personal protective equipment (PPE) and safety equipment 1	A-1.02 Maintains safe work environment 1	
Task A-2 Uses and maintains tools and equipment	A-2.01 Uses tools and equipment 1	A-2.02 Uses lifting, moving and access equipment 1	
Task A-2 Uses and maintains tools and equipment	A-2.01 Uses tools and equipment 1	A-2.02 Uses lifting, moving and access equipment 1	
Task A-3 Performs common work practices and procedures	A-3.01 Uses documentation 1, 2,3	A-3.02 Identifies recalls and service bulletins 1	A-3.03 Performs pre-delivery inspections (PDI) 1
Task A-4 Uses communication and mentoring techniques	A-4.01 Uses communication techniques 1	A-4.02 Uses mentoring techniques 3	

B – Plumbing systems

Task B-5 Diagnoses plumbing systems	B-5.01 Diagnoses potable water systems 1	B-5.02 Diagnoses waste water systems 1	
Task B-6 Services potable water systems	B-6.01 Maintains potable water systems 1	B-6.02 Repairs potable water systems 1	B-6.03 Installs potable water systems 1
Task B-7 Services waste water systems	B-7.01 Maintains waste water systems 1	B-7.02 Repairs waste water systems 1	B-7.03 Installs waste water systems 1

C – Electrical systems

Task C-8 Diagnoses electrical systems	C-8.01 Diagnoses AC electrical systems 2	C-8.02 Diagnoses DC electrical systems 2	C-8.03 Diagnoses generators 3
Task C-9 Services AC electrical systems	C-9.01 Maintains AC electrical systems 1	C-9.02 Repairs AC electrical systems 2,3	C-9.03 Installs AC electrical systems 1,2,3
Task C-10 Services DC electrical systems	C-10.01 Maintains DC electrical systems 1	C-10.02 Repairs DC electrical systems 1,2,3	C-10.03 Installs DC electrical systems 1,2,3
Task C-11 Services generators	C-11.01 Maintains generators 3	C-11.02 Installs generators 3	

D – Liquefied petroleum (LP) gas systems

Task D-12 Diagnoses LP gas systems	D-12.01 Diagnoses LP gas supply systems (high pressure) 2	D-12.02 Diagnoses LP gas distribution systems (low pressure) 2	
Task D-13 Services LP gas systems	D-13.01 Maintains LP gas systems 1	D-13.02 Repairs LP gas systems 1,2,3	D-13.03 Installs LP gas systems 1,2,3

E – Appliances and consumer products

Task E-14 Diagnoses appliances	E-14.01 Diagnoses water heaters 2	E-14.02 Diagnoses furnaces 2,3	E-14.03 Diagnoses cooktops and ranges 2
	E-14.04 Diagnoses refrigerators and ice makers 2,3	E-14.05 Diagnoses air conditioners and heat pumps 2,3	
Task E-15 Services water heaters	E-15.01 Maintains water heaters 1	E-15.02 Repairs water heaters 2	E-15.03 Installs water heaters 2
Task E-16 Services furnaces	E-16.01 Maintains furnaces 1,2,3	E-16.02 Repairs furnaces 2,3	E-16.03 Installs furnaces 2,3
Task E-17 Services cooktops and ranges	E-17.01 Maintains cooktops and ranges 1,2	E-17.02 Repairs cooktops and ranges 2	E-17.03 Installs cooktops and ranges 2
Task E-18 Services refrigerators and ice makers	E-18.01 Maintains refrigerators and ice makers 1,2,3	E-18.02 Repairs refrigerators and ice makers 2,3	E-18.03 Installs refrigerators and ice makers 2,3

Task E-19 Services air conditioners and heat pumps	E-19.01 Maintains air conditioners and heat pumps 1,3	E-19.02 Repairs air conditioners and heat pumps 3	E-19.03 Installs air conditioners and heat pumps 3
Task E-20 Services consumer products	E-20.01 Replaces consumer products 1,3	E-20.02 Installs consumer products 1,3	

F – Interior and exterior components

Task F-21 Diagnoses interior and exterior components	F-21.01 Diagnoses interior components 2	F-21.02 Diagnoses exterior components 2	
Task F-22 Services interior components	F-22.01 Maintains interior components 2	F-22.02 Repairs interior components 2	F-22.03 Installs interior components 2
Task F-23 Services exterior components	F-23.01 Maintains exterior components 2	F-23.02 Repairs exterior components 2	F-23.03 Installs exterior components 2

G – Frames and mechanical components

Task G-24 Diagnoses frames and mechanical components	G-24.01 Diagnoses frames 1,3	G-24.02 Diagnoses running gear 1,3	G-21.03 Diagnoses levelling systems 1,3
	G-24.04 Diagnoses slide-out systems 1,3	G-24.05 Diagnoses lifting systems 1,3	
Task G-25 Services frames	G-25.01 Maintains frames 1	G-25.02 Repairs frames 3	

Task G-26 Services running gear	G-26.01 Maintains running gear 1	G-26.02 Repairs running gear 1	
Task G-27 Services levelling systems	G-27.01 Maintains levelling systems 1	G-27.02 Repairs levelling systems 3	G-27.03 Installs levelling systems 3
Task G-28 Services slide-out systems	G-28.01 Maintains slide-out systems 1	G-28.02 Repairs slide-out systems 3	
Task G-29 Services lifting systems	G-29.01 Maintains lifting systems 1	G-29.02 Repairs lifting systems 3	

H – Towing systems

Task H-30 Diagnoses towing systems	H-30.01 Diagnoses tow vehicle systems 2	H-30.02 Diagnoses towed vehicle systems 3	
Task H-31 Services tow vehicle systems	H-31.01 Maintains tow vehicle systems 1	H-31.02 Repairs tow vehicle systems 2,3	F-31.03 Installs tow vehicle systems 2,3
Task H-32 Services towed vehicle systems	H-32.01 Maintains towed vehicle systems 1	H-32.02 Repairs towed vehicle systems 3	F-32.03 Installs towed vehicle systems 3

TRAINING PROFILE CHART ALBERTA

At this time, all Saskatchewan's Recreation Vehicle Service Technician apprentices attend technical training in Alberta at Southern Alberta Institute of Technology Polytechnic (SAIT) located in Calgary, AB.

Implementation for harmonization will take place progressively. Level one to be implemented in 2022/2023, level two 2023/2024 and level three in 2024/2025.

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

Southern Alberta Institute of Technology (NAIT, SAIT) Polytechnic Level One	Hours
SECTION ONE: STANDARD WORKPLACE SAFETY, INDUSTRY OVERVIEW, REGULATIONS AND ADMINISTRATION	38 hours total
Safety Legislation, Regulations & Industry Policy in the Trades	4
Climbing, Lifting, Rigging and Hoisting	3
Hazardous Materials & Fire Protection	3
Apprenticeship Orientation	2
Tools and Equipment	4
Cleaning Procedures	2
Vehicle Identification Number (VIN) Plates and Labels	2
Cutting and Heating	10
Pre-Delivery Inspection (PDI)	6
Motorhome Controls	2
SECTION TWO: PLUMBING	24 hours total
Potable Water Systems	9
Waste Water Systems	9
Winterizing and De-winterizing	2
Service Monitoring Systems	4
SECTION THREE: LIQUIFIED PETROLEUM (LP) SYSTEMS	44 hours total
Propane Systems	44
SECTION FOUR: DIRECT CURRENT (DC) ELECTRICAL SYSTEMS	48 hours total
DC Electrical System Service	33
Batteries	15
SECTION FIVE: APPLIANCE OPERATION AND ACCESSORIES	44 hours total
Appliance Operation and Replacement	12
Interior Accessories and Safety Components	12
Exterior Accessories	20
SECTION SIX: MECHANICAL AND TOWING SYSTEMS	42 hours total
Tow Vehicle	6
Hitch Systems	12
Brake Systems	12
Undercarriage	12
Level One:	240 hours total

Northern and Southern Alberta Institute of Technology (NAIT, SAIT) Polytechnic Level Two		Hours
SECTION ONE: STANDARD PRACTICES AND PROCEDURES		24 hours total
Work Orders		4
Estimating		10
Warranty and Recall Procedures		2
Parts Catalogues and Related References		4
Customer Relations		4
SECTION TWO: ALTERNATING CURRENT (AC) ELECTRICAL SYSTEMS		54 hours total
AC Electrical System Service		24
Generators		20
Convertors and Charging Systems		10
SECTION THREE: CONSUMER PRODUCTS		24 hours total
Consumer Media Products		24
SECTION FOUR: APPLIANCES		53 hours total
Cooking Equipment		5
Water Heating Systems		13
Heating Systems		35
SECTION FIVE: EXTERIOR STRUCTURES		61 hours total
Exterior Surfaces, Components and Structures		41
Body Panels		15
Camper Tie-Downs and Jacks		5
SECTION SIX: MECHANICAL AND SUSPENSION SYSTEMS		24 hours total
Suspension Aids		16
Lift and Wall Systems		8
Level Two:		240 hours total

Northern and Southern Alberta Institute of Technology (NAIT, SAIT) Polytechnic Level Three		Hours
SECTION ONE: INVERTER AND SOLAR SYSTEMS		30 hours total
Solar Systems		15
Inverter Systems		15
SECTION TWO: APPLIANCES		80 hours total
Air Conditioning and Heat Pumps		20
Refrigerators		35
Appliance Products		10
Electronic Control Systems		15
SECTION THREE: INTERIOR STRUCTURES AND COMPONENTS		30 hours total
Cabinets, Furnishings and Flooring		30
SECTION FOUR: SLIDE OUTS AND LEVELLING SYSTEMS		50 hours total
Hydraulic Systems		15
Slide Out Systems		20
Levelling Systems		15
SECTION FIVE: AUXILIARY FUELING SYSTEMS AND SPECIALTY HAULERS		25 hours total
Auxiliary Fueling Systems		15
Specialty Haulers		10
SECTION SIX: WELDING, COACHING, CERTIFICATION AND COMMITTEES		25 hours total
Gas Metal Arc Welding (GMAW)		15
Workplace Coaching Skills		4
Alberta's Industry Network		2
Interprovincial Standards Red Seal Program		4
Level Three:		240 hours total

ON-THE JOB AND IN-SCHOOL TRAINING CONTENT FOR THE RECREATION VEHICLE SERVICE TECHNICIAN TRADE

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	8 weeks	240 hours
Section One		38 hours total
SAFETY, TOOLS AND SHOP EQUIPMENT		
A safety legislation, regulations and industry policy in the trades		
B climbing, lifting, rigging and hoisting		
C hazardous materials and fire protection		
D apprenticeship orientation		
E tools and equipment		
F cleaning procedures		
G Vehicle Identification Number (VIN) plates and labels		
H cutting and heating		
I pre-delivery inspection (PDI)		
J motorhome controls		
A	safety legislation, regulations and industry policy in the trades	4 hours
	<ul style="list-style-type: none"> • Demonstrate the application of the Occupational Health and Safety Act, Regulation and Code • Describe the employer's and employee's role with Occupational Health and Safety (OH&S) regulations, Worksite Hazardous Materials Information Systems (WHMIS), fire regulations, Workers Compensation Board regulations and related advisory bodies and agencies. • Describe industry practices for hazard assessment and control procedures. • Describe the responsibilities of worker and employers to apply emergency procedures. • Describe tradesperson attitudes with respect to housekeeping, personal protective equipment and emergency procedures. • Describe the roles and responsibilities of employers and employees with the selection and use of personal protective equipment (PPE). • Maintain required PPE for tasks. • Use required PPE for tasks. 	
	Mentors can assist the apprentice to prepare for this section of technical training by:	
	<ul style="list-style-type: none"> • <i>describing legislation, regulations and practices intended to ensure a safe work place in this trade</i> • <i>explaining the use of personal protective equipment (PPE)</i> • <i>explaining the safety practices for hazardous materials and fire protection in this trade</i> 	

B climbing, lifting, rigging and hoisting

3 hours

- Describe manual lifting procedures.
- Describe rigging hardware and associated safety factors.
- Select equipment for rigging loads.
- Describe hoisting and load moving procedures.
- Maintain personal protective equipment (PPE) for climbing, lifting and load moving equipment.
- Use PPE for climbing, lifting and load moving equipment.

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

- Demonstrate the application of the Occupational Health and Safety Act, Regulation and Code
 - *explaining the use of personal protective equipment (PPE) and safe practices for climbing, lifting, rigging and hoisting in this trade*
-

C hazardous materials and fire protection

3 hours

- Describe roles, responsibilities, features and practices related to the Workplace Hazardous Materials Information System (WHMIS) program.
- Describe three key elements of WHMIS.
- Describe handling, storing and transporting procedures for hazardous material.
- Describe venting procedures when working with hazardous materials.
- Describe hazards, classes, procedures and equipment related to fire protection.

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

- *describing legislation, regulations and practices intended to ensure a safe work place in this trade*
 - *explaining the use of personal protective equipment (PPE)*
 - *describing legislation, regulations and practices intended to ensure a safe work place in this trade*
 - *explaining the safety practices for hazardous materials and fire protection in this trade*
-

D apprenticeship orientation

2 hours

- Describe the contractual responsibilities of the apprentice, employer and Alberta Apprenticeship and Industry Training.
- Describe the purpose of the apprentice record book.
- Describe the procedure for changing employers during an active apprenticeship.
- Describe the purpose of the course outline.
- Describe the procedure for progressing through an apprenticeship.
- Describe advancement opportunities in this trade.

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

- *explaining the process of training to become a journeyperson*
-

E tools and equipment

4 hours

- Describe the types and application of tools and equipment.
- Describe the procedures for maintaining tools and equipment.
- Maintain tools and equipment.
- Use tools and equipment

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

- *explaining the process of training to become a journeyperson*
- *demonstrating calibrating measuring devices*

- *demonstrating cleaning tools and equipment*
- *demonstrating organizing and store tools and equipment*
- *demonstrating lubricating and adding fluids to tools*
- *explaining identifying and report tools to be serviced or replaced*

F cleaning procedures**2 hours**

- Describe methods and products used for spot cleaning recreation vehicles.
- Describe the hazards associated with cleaning products and procedures.

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

- *Demonstrating methods and products used for spot cleaning recreation vehicles.*
- *explaining the hazards associated with cleaning products and procedures*

G Vehicle Identification Number (VIN) plates and labels**2 hours**

- Describe the types and purpose of labels applicable to recreation vehicles.
- Interpret information on VIN plates and labels

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

- *verifying vehicle and component operation*
- *verify vehicle and component operation*
- *record and report findings*
- *access and record component serial numbers*

H cutting and heating**10 hours**

- Describe cutting and heating operations permitted within the scope of this trade.
- Describe the characteristics and handling of cutting and heating gases.
- Describe the components of cutting and heating equipment.
- Perform a leak check on cutting and heating equipment.
- Describe the procedure for adjusting cutting and heating equipment.
- Demonstrate the procedure for storing and maintaining cutting and heating equipment.
- Perform cutting and heating operations.

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

- *demonstrating the use of welding equipment, characteristics, applications and procedures for use*
- *demonstrating knowledge of regulatory requirements to maintain safe work environment*

I pre-delivery inspection (PDI)**6 hours**

- Describe the purpose of a PDI.
- Describe PDI procedures.
- Describe the purpose of PDI documentation.
- Describe PDI tasks specific to recreation vehicle designs.
- Perform a PDI

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

- *demonstrate knowledge of pre-delivery inspections (PDI)*
- *demonstrate knowledge of performing pre-delivery inspections*

J motorhome controls

2 hours

- Describe the operation of motorhome control systems.
- Describe the purpose of motorhome safety equipment.
- Describe codes, regulations and liabilities relating to motorhomes.
- Describe diesel engine start-up procedures.
- Describe the operation of air brake systems

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

- *demonstrate knowledge of running gear, their characteristics and applications*
- *demonstrate knowledge of levelling systems, their characteristics and applications*
- *demonstrate knowledge of slide-out systems, their characteristics and applications*
- *demonstrate knowledge of lifting systems, their characteristics and applications*

Section Two

24 hours total

PLUMBING

- A potable water systems
- B waste water systems
- C winterizing and de-winterizing
- D service monitoring systems

A potable water systems

9 hours

- Describe the components and operation of potable water systems.
- Describe the procedure for installing and servicing potable water systems.
- Identify codes for potable water systems.
- Service potable water systems.

RSOS topics covered in this section of training:

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

- *explaining the function of potable water systems, their components, characteristics and applications*
- *Demonstrating the procedures to maintain potable water systems*

B waste water systems

9 hours

- Describe the components and operation of waste water systems.
- Describe the procedure for installing and servicing waste water systems.
- Identify codes for waste water systems.
- Service waste water systems

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

- *explaining the function of waste water systems, their components, characteristics and applications*
- *Demonstrating the procedures to maintain waste water systems*

C winterizing and de-winterizing

2 hours

- Describe the types and applications of plumbing antifreeze.
- Describe winterizing and de-winterizing procedures.

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

- *Explaining the steps in winterizing and de-winterizing of both potable and waste water systems*
- *Demonstrating the procedures in winterizing and de-winterizing of both potable and waste water systems*

D service monitoring systems**4 hours**

- Describe the components, principles of operation and owner procedures for monitoring systems.
- Describe servicing of monitor panels and sensors.

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

- *describing monitoring systems*
 - *Demonstrating the procedures in servicing of monitor panels and sensors*
-

Section Three**44 hours total****LIQUIFIED PETROLEUM GAS (LP) SYSTEMS**A propane systems

A propane systems**44 hours**

- Describe the properties of propane.
- Describe safety procedures for working with propane.
- Describe the types and applications of propane storage vessels.
- Describe the requirements for inspecting, recertifying and filling propane storage vessels.
- Describe the purpose of propane system components.
- Describe the operation of propane system components.
- Describe the operation of leak detectors.
- Identify codes for propane systems.
- Perform a leak and pressure test.
- Perform operations to make connections in propane systems.
- Adjust a propane regulator.

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

- *describing the procedures to diagnose LP gas supply systems (high pressure)*
 - *Demonstrating the certification requirements to diagnose LP gas supply systems (high pressure)*
 - *explaining the regulatory requirements to diagnose LP gas supply systems (high pressure)*
 - *Demonstrating the servicing of LP gas distribution systems (low pressure), their components, characteristics and applications*
 - *Demonstrating the procedures to diagnose LP gas distribution systems (low pressure)*
 - *Demonstrating the certification requirements to diagnose LP gas distribution systems (low pressure)*
 - *Demonstrating the regulatory requirements to diagnose LP gas distribution systems (low pressure)*
-

Section Four**48 hours total****DIRECT CURRENT (dc) ELECTRICAL SYSTEMS**

A DC electrical systems

B batteries

A DC electrical systems**33 hours**

- Describe electrical principles.
- Describe the function and operation of dc circuits and circuit components.
- Describe the use of schematics in servicing dc electrical systems.
- Construct dc electrical circuits.
- Identify codes for dc electrical systems.

-
- Service dc components and circuits

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

- *explaining the procedures of DC systems and their components, characteristics and applications*
 - *demonstrating the procedures to maintain DC systems and their components*
 - *explaining the training and certification requirements to maintain DC systems and components*
 - *explaining the regulatory requirements to install DC systems and their components*
-

B batteries

15 hours

- Identify the types and application of batteries.
- Describe the principles of battery operation.
- Describe the procedure for storing and installing batteries.
- Describe the procedure for testing, recharging and boosting batteries.
- Identify the types of battery disconnect devices and systems.

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

- *explaining DC systems and their components, characteristics and applications*
 - *demonstrating the procedures to maintain DC systems and their components*
 - *explaining the training and certification requirements to maintain DC systems and their components*
 - *explaining the regulatory requirements to maintain DC systems and their components*
-

Section Five

44 hours total

APPLIANCES AND ACCESSORIES

- A appliance operation and replacement
 - B interior accessories and safety components
 - C exterior accessories
-

A Appliances operation and replacement

12 hours

- Describe the general operation of RV appliances.
- Describe the precautions and procedures for removing and installing RV appliances.

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

- *explaining the function of water heaters, their components, characteristics and applications*
- *demonstrating the procedures to diagnose water heaters*
- *explaining the certification requirements to diagnose water heaters*
- *explaining the regulatory requirements to diagnose water heaters*
- *explaining the function of furnaces, their components, characteristics and applications*
- *demonstrating the procedures to diagnose furnaces*
- *explaining the certification requirements to diagnose furnaces*
- *explaining the regulatory requirements to diagnose furnaces*
- *explaining the function of cooktops and ranges, their components, characteristics and applications*
- *demonstrating the procedures to diagnose cooktops and ranges*
- *explaining the certification requirements to diagnose cooktops and ranges*
- *explaining the regulatory requirements to diagnose cooktops and ranges*
- *explaining the function of refrigerator and ice maker components*

- *demonstrating the procedures to inspect refrigerator and ice maker components and cooling unit components*
- *explaining the function of air conditioners and heat pumps, their components, characteristics and applications*
- *demonstrating the procedures to maintain air conditioners and heat pumps*

B interior accessories and safety components

12 hours

- Describe the purpose of interior accessories and safety components.
- Describe the operation of interior accessories and safety components.
- Describe the procedure for installing and servicing interior accessories and safety components.

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

- *explaining the function of consumer products, their characteristics, applications and operation*
- *demonstrating the procedures to repair interior and exterior consumer products*
- *demonstrating the procedures to install interior and exterior consumer products*

Section Six

42 hours total

MECHANICAL AND TOWING SYSTEMS

- A tow vehicle
- B hitch systems
- C brake systems
- D undercarriage

A tow vehicle

6 hours

- Describe the requirements and procedure for installing wiring trailer connections on a tow vehicle.
- Describe the operation, application and installation of charging system isolators and relays.

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

- *explaining the function of tow vehicle systems and their components, characteristics and applications*
- *demonstrating the procedures to diagnose tow vehicle systems*
- *explaining the regulatory requirements to diagnose tow and towed vehicle systems*
- *demonstrate knowledge of towed vehicle systems and their components, characteristics and applications*
- *demonstrating the procedures to diagnose towed vehicle systems*
- *demonstrating the procedures to maintain tow and towed vehicle systems*
- *demonstrating the procedures to o repair tow and towed vehicle systems*
- *demonstrating the procedures to install tow and towed vehicle systems*

B hitch systems

12 hours

- Describe the types and application of hitch and tow systems.
- Describe the procedure for installing and adjusting hitch and tow systems.
- Describe the types and application of sway control devices.
- Describe the purpose and requirements for safety chains.
- Describe methods, regulations and applications for dinghy towing.

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

- *explaining the function of tow hitch systems and their components, characteristics and applications*

- *demonstrating the procedures to diagnose tow hitch systems*
- *explaining the regulatory requirements to diagnose tow and towed hitch systems*
- *demonstrating the procedures to diagnose towed hitch systems*
- *demonstrating the procedures to maintain tow and towed hitch systems*
- *demonstrating the procedures to o repair tow and towed hitch systems*
- *demonstrating the procedures to to install tow and towed hitch systems*

C brake systems

6 hours

- Describe the components and operation of brake systems.
- Describe the procedure for installing a tow vehicle brake control system.
- Service brake systems and components.

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

- *explaining the function of trailer brake systems and their components, characteristics and applications*
- *demonstrating the procedures to maintain and repair trailer braking systems*

D undercarriage

12 hours

- Describe the purpose of undercarriage components.
- Describe the construction of trailer frames.
- Describe axle types, suspension systems and weight ratings.
- Describe the procedure for aligning an axle.
- Describe wheel and tire types and ratings.
- Describe tire wear patterns and causes.
- Describe types of landing gear and trailer tongue jacks.
- Describe the procedure for servicing landing gear and trailer tongue jacks.
- Perform wheel and tire balance.
- Service wheel bearings and seals

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

- *explaining the function of frames, their characteristics and applications*
- *demonstrate knowledge of procedures to maintain frames*
- *demonstrating the procedures to maintain and perform minor repairs of frames, their characteristics and applications*

Level Two

8 weeks

240 hours

Section One

24 hours total

STANDARD PRACTICES AND PROCEDURES

- A work orders
 - B estimating
 - C warranty and recall procedures
 - D parts catalogs and related references
 - E customer relations
-

A work orders

4 hours

- Describe purpose and types of work orders.
- Describe air supply systems.
- Describe procedure for documenting parts, labour and shop supplies.

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

- *explaining the function of technical and business documents, their characteristics and applications*
 - *demonstrating the procedures to interpret technical and business documents*
-

B estimating

10 hours

- Describe the purpose and types of estimates.
- Describe estimating policies and procedures.
- Perform an estimate.

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

- *explaining the function of technical and business documents, their characteristics and applications*
 - *demonstrating the procedures to use and interpret technical and business documents*
-

C warranty and recall procedures

2 hours

- Describe warranty policies and procedures.
- Describe the procedure for processing recalls and service bulletins.

RSOS topics covered in this section of training:

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

- *explaining the function of technical and business documents, their characteristics and applications*
 - *demonstrating the procedures to use and interpret technical and business documents*
 - *demonstrating the procedures to interpret recalls and service bulletins*
-

D parts catalogues and related references

4 hours

- Describe warranty policies and procedures.
- Describe the procedure for processing recalls and service bulletins.

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

- *explaining the function of technical and business documents, their characteristics and applications*
-

E customer relations**4 hours**

- Describe how to provide courtesy to a customer and project a professional image.
- Identify how to address customer needs and expectations.
- Describe expectations for professional conduct during customer communications

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

- *explaining trade terminology*
 - *demonstrating effective communication practices*
 - *demonstrating strategies for learning skills in workplace*
 - *demonstrating strategies for teaching workplace skills*
-

Section Two**54 hours total****ALTERNATING CURRENT (ac) ELECTRICAL SYSTEMS**

- A AC electrical system service
 - B generators
 - C converters and charging systems
-

A AC electrical system service**24 hours**

- Describe the difference between ac and dc circuits.
- Describe safety precautions used when servicing ac electrical systems.
- Describe the purpose and operation of ac circuit components.
- Describe the purpose and operation of Energy Management Systems.
- Describe codes for ac electrical systems.

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

- *explaining the function of AC systems, and their components, characteristics and applications*
 - *demonstrating the procedures to diagnose AC systems and their components*
 - *explaining training and certification requirements to diagnose AC systems and their components*
 - *explaining regulatory requirements to diagnose AC systems and their components*
-

B generators**20 hours**

- Describe safety hazards associated with generators.
- Calculate output requirements for generators.
- Describe the procedure for installing generators.
- Describe codes for generator systems.
- Describe the procedure for servicing generators.
- Test generator output.

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

- *explaining the function of generators, their components, characteristics and applications*
 - *demonstrating the procedures to maintain and install generators*
 - *explaining the training and certification requirements to maintain and install generators*
 - *explaining the of regulatory requirements to maintain and install generators*
-

C converters and charging systems**10 hours**

- Describe types of converters and charging systems.
 - Describe the operation of converters and charging systems.
 - Describe the operation of power centers.
-

- Describe the procedure for servicing converters, power centers and charging systems.
- Calculate convertor requirements.

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

- *explaining the function of DC systems, their components, characteristics and applications*
- *demonstrating the procedures to diagnose DC systems and their components*
- *explaining the training and certification requirements to diagnose DC systems and their components*
- *explaining the regulatory requirements to diagnose DC systems and their components*
- *demonstrating the procedures to repair DC systems and their components*
- *demonstrating the procedures to install DC systems and their components*

Section Three

24 hours total

CONSUMER PRODUCTS

A consumer media products

A consumer media products

24 hours

- Describe the types of consumer media products.
- Describe the general operation and set up procedures for common consumer products.
- Describe the procedure for installing and servicing entertainment systems.
- Describe the procedure for installing and servicing antennae and satellite systems.

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

- *explaining the function of consumer products, their characteristics, applications and operation*
- *demonstrating the procedures to repair and install consumer products*
- *explaining the of training and certification requirements to repair consumer products*
- *explaining the of regulatory requirements to repair consumer products*

Section Four

53 hours total

APPLIANCES

A cooking equipment
 B water heating systems
 C heating systems

A cooking equipment

5 hours

- Describe the types of cooking equipment.
- Describe the purpose and operation of cooking equipment components.
- Describe codes relating to cooking equipment.
- Describe the procedure for servicing cooking equipment

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

- *explaining the function of of cooktops and ranges, their components, characteristics and applications*
- *demonstrating the procedures to repair, install and maintain cooktops and ranges*
- *explaining the certification requirements to maintain cooktops and ranges*
- *explaining the regulatory requirements to maintain cooktops and ranges*

B water heating systems**13 hours**

- Describe the types of water heating systems.
- Describe the purpose and operation of water heating system components.
- Describe codes for water heating systems.
- Service water heating systems

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

- *explaining the function of water heaters, their components, characteristics and applications*
- *demonstrating the procedures to repair, install and maintain water heaters*
- *explaining the certification requirements to maintain water heaters*
- *explaining the regulatory requirements to maintain water heaters*
-

C heating systems**35 hours**

- Describe the types and operation of heating systems.
- Describe the purpose and operation of heating systems components.
- Describe the types and operation of thermostats and climate controls.
- Describe codes for heating systems.
- Describe the procedure for servicing heating systems

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

- *explaining the function of furnaces, their components, characteristics and applications*
- *demonstrating the procedures to repair, install and maintain furnaces and their components*
- *explaining the certification requirements to maintain furnaces and their components*
- *explaining the regulatory requirements to maintain furnaces and their components*

Section Five**61 hours total****EXTERIOR STRUCTURES**

- A exterior surfaces, components and structures
- B body panels
- C camper tie-downs and jacks

A exterior surfaces, components and structures**41 hours**

- Describe framing and insulating methods, materials and design.
- Describe the types of exterior finishes.
- Describe the procedure for servicing framing.
- Describe the procedure for servicing exterior components.
- Describe the procedure for replacing fiber reinforced plastic (FRP).
- Describe the types of material used in windows.
- Describe the types of roof construction.
- Describe the procedure for servicing roofing systems.
- Describe the procedure for preparing units for cold weather use.
- Describe the design and construction of slide-out rooms.
- Describe the procedure for servicing interior walls, ceiling coverings and panels.
- Identify codes relating to the servicing of exterior structures.
- Replace metal siding.
- Service structural and exterior components

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

- *demonstrating the procedures to repair, install and maintain furnaces and their components*

- explaining the function of exterior components, their characteristics and applications
- demonstrating the procedures to repair, install and maintain exterior components
- explaining the training and certification requirements to maintain exterior components
- explaining the regulatory requirements to maintain exterior components

B body panels

15 hours

- Describe the composition of body panels and components.
- Describe the procedure for servicing FRP, fibre glass panels and components.
- Describe the procedure for servicing plastic components.
- Describe the procedure for installing and replacing decals and graphics.

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

- explaining the function of exterior components, their characteristics and applications
- demonstrating the procedures to repair, install and maintain exterior components
- explaining the training and certification requirements to maintain exterior components
- explaining the regulatory requirements to maintain exterior components

C camper tie-down systems and jacks

5 hours

- Describe the types and capacities of tie down systems.
- Describe the types and capacities of camper jacks.
- Describe the procedure for installing and servicing camper jacks.
- Describe the procedure for installing and servicing tie down systems.

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

- explaining the function of exterior components, their characteristics and applications
- demonstrating the procedures to repair, install and maintain exterior components
- explaining the training and certification requirements to maintain exterior components
- explaining the regulatory requirements to maintain exterior components

Section Six

24 hours total

MECHANICAL AND SUSPENSION SYSTEMS

- A suspension aids
- B lift and wall systems

A suspension aids

16 hours

- Describe trailer frame types and features.
- Describe types of suspension systems.
- Describe the effect of add-on suspension aids.
- Describe the effect of vehicle modifications on suspension operation.
- Describe the procedure for installing suspension aids.
- Describe the procedure for adjusting suspension aids.
- Describe the procedure for servicing suspension aids

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

- demonstrating the procedures to repair, install and maintain exterior components
- explaining the function of levelling systems, their characteristics and applications
- demonstrating the procedures to repair, install and maintain levelling systems
- de explaining the levelling systems, their characteristics and applications
- explaining the procedures to repair levelling systems

B lift and wall systems**8 hours**

- Describe the types of lift systems.
- Describe the operation of lift systems.
- Describe the servicing of lift systems.
- Describe the procedure for servicing wall systems

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

- *explaining the function of exterior components, their characteristics and applications*
- *demonstrating the procedures to repair, install and maintain exterior components*
- *explaining the training and certification requirements to maintain exterior components*
- *explaining the regulatory requirements to maintain exterior components*

Level Three

8 weeks

240 hours

Section One

30 hours total

INVERTER AND SOLAR PANELS

- A solar systems
 - B inverter systems
-

A solar systems

15 hours

- Describe the purpose of solar charging system components.
- Describe the operation and application of solar charging systems.
- Describe the procedure for installing solar charging systems.
- Size a solar charging and battery system to meet customer requirements.
- Describe the procedure for expanding a solar charging system to match higher requirements.
- Describe the procedure for servicing a solar charging system.

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

- *explaining the function of AC systems, and their components, characteristics and applications*
 - *demonstrating the procedures to diagnose, maintain and repair AC systems and their components*
 - *explaining the training and certification requirements to diagnose AC systems and their components*
 - *explaining the regulatory requirements to maintain AC systems and their components*
 - *explaining the function of DC systems and their components, characteristics and applications*
 - *demonstrate knowledge of procedures to diagnose, maintain and repair DC systems and their components*
 - *explaining the training and certification requirements to maintain DC systems and their components*
 - *explaining the regulatory requirements to maintain DC systems and their components*
-

B inverter systems

15 hours

- Describe the purpose and operation of an inverter system.
- Describe types of inverters and remote control panels.
- Describe the procedure for installing an inverter system.
- Calculate power draws, battery requirements, cable sizes and load protection devices.
- Describe the procedure for servicing inverter systems

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

- *explaining the function of AC systems, and their components, characteristics and applications*
- *demonstrating the procedures to diagnose, maintain and repair AC systems and their components*
- *explaining the training and certification requirements to diagnose AC systems and their components*
- *explaining the regulatory requirements to maintain AC systems and their components*
- *explaining the function of DC systems and their components, characteristics and applications*
- *demonstrate knowledge of procedures to diagnose, maintain and repair DC systems and their components*
- *explaining the training and certification requirements to maintain DC systems and their components*
- *explaining the regulatory requirements to maintain DC systems and their components*

Section Two

80 hours total

APPLIANCES

- A air conditioning and heat pumps
 - B refrigerators
 - C appliance products
 - D electronic control systems
-

A air conditioning and heat pumps

20 hours

- Describe the types of air conditioners and heat pumps.
- Describe the purpose of air conditioner and heat pump components.
- Describe types and operation of thermostats and climate controls.
- Describe the procedure for servicing air conditioners and heat pump systems.
- Describe the procedure for disposing, reclaiming and recycling refrigerants.
- Describe codes for air conditioners and heat pumps.

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

- *explaining the function of air conditioners and heat pumps, their components, characteristics and applications*
 - *demonstrating the procedures to diagnose, maintain and repair air conditioners and heat pumps*
 - *explaining the training and certification requirements to maintain air conditioners and heat pumps*
 - *explaining the regulatory requirements to maintain air conditioners and heat pumps*
-

B refrigerators

35 hours

- Describe the types and operation of refrigerators.
- Describe the purpose of refrigerator components.
- Describe the procedure for servicing refrigerators.
- Describe codes related to refrigerators.
- Service refrigerators.

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

- *explaining the function of refrigerators and ice makers, their components characteristics and applications*
 - *demonstrating the procedures to diagnose, maintain and repair refrigerators and ice makers*
 - *explaining the certification requirements to maintain refrigerators and ice makers*
 - *explaining the regulatory requirements to maintain refrigerators and ice makers*
-

C appliance products

10 hours

- Describe types of appliance and consumer products.
- Describe the procedure for servicing appliances and consumer products.
- Describe the procedure for installing appliance and consumer products.

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

- *explaining the function of consumer products, their characteristics, applications and operation*
 - *demonstrating the procedures to diagnose, maintain and repair consumer products*
 - *explaining the training and certification requirements to repair consumer products*
 - *explaining the regulatory requirements to repair consumer products*
-

D electronic control systems

15 hours

- Describe the operation of electronic components.
- Describe precautions required for handling electronics.
- Service the wiring connection to an electronic component.
- Describe common faults in electronic components.
- Test electronic components

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

- *explaining the function of DC systems, their components, characteristics and applications*
- *demonstrating the procedures to diagnose, maintain and repair DC systems and their components*
- *explaining the training and certification requirements to diagnose DC systems and their components*
- *explaining the regulatory requirements to diagnose DC systems and their components*

Section Three

30 hours total

INTERIOR STRUCTURES AND COMPONENTS

A cabinets, furnishings and flooring

A cabinets, furnishings and flooring

30 hours

- Describe the types of material used in counter top construction.
- Describe the procedure for servicing countertops.
- Describe the types of materials used in cabinet construction.
- Describe the procedure for servicing cabinet structures.
- Describe the procedure for servicing cabinet trim, doors and hardware.
- Describe the procedure for servicing drawers and hardware.
- Describe the procedure for servicing upholstery components.
- Describe the procedure for servicing window coverings, blinds and valances.
- Describe the procedure for servicing floor coverings.
- Service interior components

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

- *explaining the function of interior components, their characteristics and applications*
- *demonstrating the procedures to diagnose, install, maintain and repair interior components*
- *explaining the training and certification requirements to diagnose interior components*
- *explaining the regulatory requirements to diagnose interior components*

Section Four

50 hours total

SLIDE OUTS AND LEVELLING SYSTEMS

- A hydraulic systems
- B slide out systems
- C levelling systems

A hydraulic systems

15 hours

- Describe the function of hydraulic system components.
- Describe hydraulic system operation, applications and testing.
- Describe the procedure for servicing hydraulic system components.
- Describe the procedure for adjusting hydraulic systems.
- Describe safety procedures relating to hydraulic systems.

-
- Test a hydraulic system

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

- *explaining the function of levelling systems, their characteristics and applications*
 - *demonstrating the procedures to diagnose, maintain and repair levelling systems*
-

B slide out systems

20 hours

- Describe the purpose of slide out system components.
- Describe the operation of slide out systems.
- Describe the procedure for servicing slide out systems.
- Describe procedure for adjusting, removing and replacing slide out rooms.

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

- *explaining the function of slide out systems, their characteristics and applications*
 - *demonstrating the procedures to diagnose, maintain and repair slide-out systems, their characteristics and applications*
-

C levelling systems

15 hours

- Describe the purpose of levelling systems.
- Describe types of levelling systems.
- Describe the purpose of levelling system components.
- Describe the operation of levelling systems.
- Describe the procedure for installing levelling systems.
- Describe the procedure for servicing levelling systems

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

- *explaining the function of levelling out systems, their characteristics and applications*
 - *demonstrating the procedures to diagnose, maintain and repair levelling systems, their characteristics and applications*
-

Section Five

25 hours total

AUXILIARY FUELING SYSTEMS AND SPECIALTY HAULERS

- A auxiliary fueling systems
 - B specialty haulers
-

A auxiliary fueling systems

15 hours

- Describe the properties of gasoline and diesel fuel.
- Describe auxiliary fuel system components.
- Describe the procedure for handling fuel.
- Describe the procedure for dispensing fuel.
- Identify codes for auxiliary fuel systems

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

- *explaining the function of generators, their components, characteristics and operation*
 - *demonstrating the procedures to diagnose, maintain and repair generators*
 - *explaining the training and certification requirements to diagnose, maintain and repair generators*
 - *demonstrating the procedures to to diagnose LP gas supply systems (low and high pressure)*
 - *explaining the certification requirements to diagnose LP gas supply systems (low and high pressure)*
 - *explaining the regulatory requirements to diagnose, install service and repair LP gas supply systems (low and high pressure)*
-

B specialty haulers**10 hours**

- Describe the purpose of speciality hauler components.
- Describe the operation of speciality hauler components
- Describe the types of materials used in constructing speciality haulers.
- Describe the design and ventilation requirements.
- Describe codes and safety procedures relating to the servicing of speciality haulers.

RSOS topics covered in this section of training:

This section of training exceeds RSOS scope of work in Level Three and exceeds the minimum sequencing as set out in the Recreation Vehicle Service Technician RSOS. Its purpose is to assist in the understanding of speciality haulers and components.

Section Six**25 hours total****WELDING, COACHING, CERTIFICATION AND COMMITTEES**

- A gas metal arc welding (GMAW)
- B workplace coaching skills
- C Alberta's industry network
- D Interprovincial Standards Red Seal Program

A gas metal arc welding (GMAW)**15 hours**

- Describe the welding operations permitted within the scope of this trade.
- Describe the function of GMAW components of GMAW equipment.
- Describe the operation of GMAW equipment.
- Describe troubleshooting of GMAW equipment.
- Demonstrate material preparation.
- Perform the sequence of start-up and shut down of GMAW equipment.
- Perform tack welds using GMAW

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

- *explaining the function of welding equipment, characteristics, applications and procedures for use*
- *demonstrating the procedures to use welding equipment, characteristics, applications and procedures for use*
- *explaining the regulatory requirements to maintain safe work environment*

B workplace coaching skills**4 hours**

- Describe the process for coaching an apprentice

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

- *demonstrate strategies for learning skills in workplace*
- *demonstrate strategies for teaching workplace skills*

C Alberta's industry network**2 hours**

- Describe Alberta's Apprenticeship and Industry Training system.
- Describe roles and responsibilities of the Alberta Apprenticeship and Industry Training Board, the Government of Alberta and post-secondary institutions.
- Describe roles and responsibilities of the Provincial Apprenticeship Committees (PACs), Local Apprenticeship Committees (LACs) and Occupational Committees (OCs).

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 Recreation Vehicle Service Technician RSOS. Its purpose is to assist in the understanding of Alberta's Apprenticeship and Industry Training system.

D Interprovincial Standards Red Seal Program

4 hours

- Identify Red Seal products used to develop Interprovincial examinations.
- Use Red Seal products to prepare for an Interprovincial examination.

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 Recreation Vehicle Service Technician RSOS. Its purpose is to assist in the understanding of an apprentice the steps to earn journeyman certification with understanding of the Red Seal Program.



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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Fax: (306) 787-5105

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District Offices

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La Ronge (306) 425-4385

Moose Jaw (306) 694-3735

North Battleford (306) 446-7409

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