



Recreation Vehicle Service Technician Guide to Course Content

Online: www.saskapprenticeship.ca

Recognition:

To promote transparency and consistency, this document has been adapted from the 2022 Recreation Vehicle Service Technician Red Seal Occupational Standard (Employment and Social Development Canada).

A complete version of the Occupational Analysis 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 Recreation Vehicle Service 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 RECREATION VEHICLE SERVICE TECHNICIAN TRADE

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 hours and at least 3 years in the trade.

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

Level One:	8 weeks
Level Two:	8 weeks
Level Three:	8 weeks

The information contained in this guide to course content document 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 journeyperson 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 Level ❶	Science Credit at Grade Level
Recreation Vehicle Service 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.		

RECREATION VEHICLE SERVICE TECHNICIAN

TASK MATRIX

This chart outlines the major work activities, tasks and sub-tasks from the 2022 Recreation Vehicle Service 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 – Common Occupational Skills

9%

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

B – Plumbing Systems

14%

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

C – Electrical Systems

18%

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

D – Liquefied Petroleum (LP) Gas Systems

15%

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

E – Appliances and Consumer Products

15%

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

E-19 Services air conditioners and heat pumps	19.01 Maintains air conditioners and heat pumps 1,3	19.02 Repairs air conditioners and heat pumps 3	19.03 Installs air conditioners and heat pumps 3
E-20 Services consumer products	20.01 Replaces consumer products 1,2,3	20.02 Installs consumer products 1,2,3	

F – Interior and Exterior Components

12%

F-21 Diagnoses interior and exterior components	21.01 Diagnoses interior components 2	21.02 Diagnoses exterior components 2	
F-22 Services interior components	22.01 Maintains interior components 1,2	22.02 Repairs interior components 1,2	22.03 Installs interior components 1,2
F-23 Services exterior components	23.01 Maintains exterior components 1,2	23.02 Repairs exterior components 1,2	23.03 Installs exterior components 1,2

G – Frames and Mechanical Components

10%

G-24 Diagnoses frames and mechanical components	24.01 Diagnoses frames 1,2,3	24.02 Diagnoses running gear 1,3	24.03 Diagnoses levelling systems 1,3	24.04 Diagnoses slide-out systems 1,3	24.05 Diagnoses lifting systems 1,3
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G-25 Services frames	25.01 Maintains frames 1	25.02 Repairs frames 3	
G-26 Services running gear	26.01 Maintains running gear 1	26.02 Repairs running gear 1	
G-27 Services levelling systems	27.01 Maintains levelling systems 1	27.02 Repairs levelling systems 3	27.03 Installs levelling systems 3
G-28 Services slide-out systems	28.01 Maintains slide-out systems 1	28.02 Repairs slide-out systems 3	
G-29 Services lifting systems	29.01 Maintains lifting systems 1	29.02 Repairs lifting systems 3	

H - Towing Systems

7%

H-30 Diagnoses towing systems	30.01 Diagnoses tow vehicle systems 2	30.02 Diagnoses towed vehicle systems 3	
H-31 Services tow vehicle systems	31.01 Maintains tow vehicle systems 1	31.02 Repairs tow vehicle systems 2,3	31.03 Installs tow vehicle systems 2,3

H-32 Services towed vehicle systems	32.01 Maintains towed vehicle systems	32.02 Repairs towed vehicle systems	32.03 Installs towed vehicle systems
	1	3	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.

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

Southern Alberta Institute of Technology (SAIT) Polytechnic Level One	Hours
Standard Workplace Safety, Industry Overview, Regulations and Administration	38
Plumbing	24
Liquified Petroleum (LP) Systems	44
Direct Current (DC) Electrical Systems	48
Appliance Operation and Accessories	44
Mechanical and Towing Systems	42
	240

Northern and Southern Alberta Institute of Technology (SAIT) Polytechnic Level Two	Hours
Standard Practices and Procedures	24
Alternating Current (AC) Electrical Systems	54
Consumer Products	24
Appliances	53
Exterior Structures	61
Mechanical and Suspension Systems	24
	240

Northern and Southern Alberta Institute of Technology (SAIT) Polytechnic Level Three	Hours
Inverter And Solar Systems	30
Appliances	80
Interior Structures and Components	30
Slide outs and Levelling Systems	50
Auxiliary Fueling Systems and Specialty Haulers	25
Welding, Coaching, Certification and Committees	25
	240

TECHNICAL TRAINING COURSE CONTENT

This chart outlines the model for Alberta Apprenticeship and Trade Certification 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	8 weeks	240 hours
Section One- Standard Workplace Safety, Industry Overview, Regulations and Administration		38 hours total
Safety Legislation, Regulations and Industry Policy in the Trades		4 hours
• 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		
RSOS topics covered in this section of training:		
A-1 Performs safety-related activities		
A-1.01 Uses personal protective equipment (PPE) and safety equipment		
A-1.02 Maintains safe work environment		
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		
RSOS topics covered in this section of training:		
A-2 Uses and maintains tools and equipment		
A-2.02 Uses lifting, moving and access equipment		

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

RSOS topics covered in this section of training:**Task 1 Performs safety-related activities**

A-1.01 Uses personal protective equipment (PPE) and safety equipment

A-1.02 Maintains safe work environment

Apprenticeship Orientation**2 hours**

- Describe the contractual responsibilities of the apprentice, employer and 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

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.

Tools and Equipment**4 hours**

- Describe the types and application of tools and equipment
- Maintain tools and equipment
- Use tools and equipment

RSOS topics covered in this section of training:**Task 2 Uses and maintains tools and equipment**A-2.01 Maintains tools and equipment

Cleaning Procedures**2 hours**

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

RSOS topics covered in this section of training:**Task 1 Performs safety-related activities**A-1.02 Maintains safe work environment

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

RSOS topics covered in this section of training:**A-3 Performs common work practices and procedures**A-3.03 Performs pre-delivery inspections (PDI)

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

RSOS topics covered in this section of training:

Task 2 Uses and maintains tools and equipment

A-2.01 Uses tools and equipment

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

RSOS topics covered in this section of training:

Task 3 Performs common work practices and procedures

A-3.03 Performs pre-delivery inspections (PDI)

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

RSOS topics covered in this section of training:

G-24 Diagnoses frames and mechanical components

G-24.01 Diagnoses frames

G-24.02 Diagnoses running gear

G-24.03 Diagnoses levelling systems

G-24.04 Diagnoses slide-out systems

G-24.05 Diagnoses lifting systems

Section Two- Plumbing

24 hours total

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

RSOS topics covered in this section of training:

B-5 Diagnoses plumbing systems

B-5.01 Diagnoses potable water systems

B-5.02 Diagnoses waste water systems

B-6 Services potable water systems

B-6.01 Maintains potable water systems

B-6.02 Repairs potable water systems

B-6.03 Installs potable water systems

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

RSOS topics covered in this section of training:

B-7 Services waste water systems

B-7.01 Maintains waste water systems

B-7.02 Repairs waste water systems

B-7.03 Installs waste water systems

Winterizing and De-Winterizing

2 hours

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

RSOS topics covered in this section of training:

B-6 Services potable water systems

B-6.01 Maintains potable water systems

B-6.02 Repairs potable water systems

B-6.03 Installs potable water systems

B-7 Services waste water systems

B-7.01 Maintains waste water systems

Service Monitoring Systems

4 hours

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

RSOS topics covered in this section of training:

C-9 Services AC electrical systems

C-9.01 Maintains AC electrical systems

Section Three- Liquified Petroleum Gas (LP) Systems

44 hours total

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 and 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

RSOS topics covered in this section of training:

A-3 Performs common work practices and procedures

A-3.01 Uses documentation

D-12 Diagnoses LP gas systems

D-12.01 Diagnoses LP gas supply systems (high pressure)

D-13 Services LP gas systems

D-13.01 Maintains LP gas systems

D-13.02 Repairs LP gas systems

D-13.03 Installs LP gas systems

Section Four- Direct Current (DC) Electrical Systems

48 hours total

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

RSOS topics covered in this section of training:

C-10 Services DC electrical systems

C-10.01 Maintains DC electrical systems

C-10.02 Repairs DC electrical systems

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

RSOS topics covered in this section of training:

C-10 Services DC electrical systems

C-10.01 Maintains DC electrical systems

C-10.02 Repairs DC electrical systems

Section Five- Appliances and Accessories

44 hours total

Appliances Operation and Replacement

12 hours

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

RSOS topics covered in this section of training:

E-15 Services water heaters

E-15.01 Maintains water heaters

E-15.02 Repairs water heaters

E-15.03 Installs water heaters

E-16 Services furnaces

E-16.01 Maintains furnaces

E-16.02 Repairs furnaces

E-16.03 Installs furnaces

E-17 Services cooktops and ranges

E-17.01 Maintains cooktops and ranges

E-17.02 Repairs cooktops and ranges

E-17.03 Installs cooktops and ranges

E-18 Services refrigerators and ice makers

E-18.01 Maintains refrigerators and ice makers

E-18.02 Repairs refrigerators and ice makers

E-18.03 Installs refrigerators and ice makers

E-19 Services air conditioners and heat pumps

E-19.01 Maintains air conditioners and heat pumps

E-19.02 Repairs air conditioners and heat pumps

E-19.03 Installs air conditioners and heat pumps

Interior Accessories and Safety Components

12 hours

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

RSOS topics covered in this section of training:

E-20 Services consumer products

E-20.01 Replaces consumer products

E-20.02 Installs consumer products

Exterior Accessories

20 hours

- Describe the procedure for installing and servicing awnings
- Describe the procedure for installing and servicing screen rooms
- Describe the procedure for installing aftermarket/optional exterior accessories

- Describe the procedure for installing and servicing back-up alarms and monitoring devices
- Describe the procedure for installing and servicing steps

RSOS topics covered in this section of training:

E-20 Services consumer products

E-20.01 Replaces consumer products

E-20.02 Installs consumer products

F-21 Diagnoses interior and exterior components

F-21.02 Diagnoses exterior components

F-23 Services exterior components

F-23.01 Maintains exterior components

F-23.02 Repairs exterior components

F-23.03 Installs exterior components

Section Six- Mechanical and Towing Systems

42 hours total

Tow Vehicle

6 hours

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

RSOS topics covered in this section of training:

H-31 Services tow vehicle systems

H-31.01 Maintains tow vehicle systems

H-32 Services towed vehicle systems

H-32.01 Maintains towed vehicle systems

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 towing

RSOS topics covered in this section of training:

H-31 Services tow vehicle systems

H-31.01 Maintains tow vehicle systems

H-31.02 Repairs tow vehicle systems

H-31.03 Installs tow vehicle systems

H-32 Services towed vehicle systems

H-32.01 Maintains towed vehicle systems

H-32.02 Repairs towed vehicle systems

H-32.03 Installs towed vehicle systems

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

RSOS topics covered in this section of training:

G-24 Diagnoses frames and mechanical components

G-24.02 Diagnoses running gear

G-26 Services running gear

G-26.01 Maintains running gear

G-26.02 Repairs running gear

H-31 Services tow vehicle systems

H-31.01 Maintains tow vehicle systems

H-31.02 Repairs tow vehicle systems

H-31.03 Installs tow vehicle systems

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

RSOS topics covered in this section of training:

G-25 Services Frames

G-25.01 Maintains frames

Level Two	8 weeks	240 hours
Section One- Standard Practices and Procedures		24 hours total
Work Orders		4 hours
- Describe purpose and types of work orders - Describe air supply systems - Describe procedure for documenting parts, labour and shop supplies		
RSOS topics covered in this section of training:		
A-3 Performs common work practices and procedures		
A-3.02 Identifies outstanding recalls and service bulletins		
Estimating		10 hours
- Describe the purpose and types of estimates - Describe estimating policies and procedures - Perform an estimate		
RSOS topics covered in this section of training:		
A-3 Performs common work practices and procedures		
A-3.01 Uses documentation		
F-21 Diagnoses interior and exterior components		
F-21.01 Diagnoses interior components		
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:		
A-3 Performs common work practices and procedures		
A-3.01 Uses documentation		
Parts Catalogues and Related References		4 hours
- Describe warranty policies and procedures - Describe the procedure for processing recalls and service bulletins		
RSOS topics covered in this section of training:		
A-3 Performs common work practices and procedures		
A-3.01 Uses documentation		
A-3.02 Identifies recalls and service bulletins		
Customer Relations		4 hours
- Describe how to provide courteous service to a customer and project a professional image - Identify how to address customer needs and expectations - Describe expectations for professional conduct during customer communications		

RSOS topics covered in this section of training:

A-4 Uses communication and mentoring techniques

A-4.01 Uses communication techniques

Section Two- Alternating Current (AC) Electrical Systems

54 hours total

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

RSOS topics covered in this section of training:

C-8 Diagnoses electrical systems

C-8.01 Diagnoses AC electrical systems

C-9 Services AC electrical systems

C-9.02 Repairs AC electrical systems

C-9.03 Installs AC electrical systems

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

RSOS topics covered in this section of training:

C-11 Services generators

C-11.01 Maintains generators

C-11.02 Installs generators

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

RSOS topics covered in this section of training:

C-8 Diagnoses electrical systems

C-8.02 Diagnoses DC electrical systems

C-10 Services DC electrical systems

C-10.01 Maintains DC electrical systems

C-10.02 Repairs DC electrical systems

C-10.03 Installs DC electrical systems

Section Three- Consumer Products

24 hours total

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 antennae, satellite and entertainment systems

RSOS topics covered in this section of training:

E-20 Services consumer products

E-20.01 Replaces consumer products

E-20.02 Installs consumer products

F-22 Services interior components

F-22.01 Maintains interior components

F-22.02 Repairs interior components

F-22.03 Installs interior components

Section Four- Appliances

53 hours total

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

RSOS topics covered in this section of training:

D-12 Diagnoses LP gas systems

D-12.01 Diagnoses LP gas supply systems (high pressure)

D-12.02 Diagnoses LP gas distribution systems (low pressure)

D-13 Services LP gas systems

D-13.01 Maintains LP gas systems

D-13.02 Repairs LP gas systems

D-13.03 Installs LP gas systems

E-17 Services cooktops and ranges

E-17.01 Maintains cooktops and ranges

E-17.02 Repairs cooktops and ranges

E-17.03 Installs cooktops and ranges

E-18 Services refrigerators and ice makers

E-18.01 Maintains refrigerators and ice makers

E-18.02 Repairs refrigerators and ice makers

E-18.03 Installs refrigerators and ice makers

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

RSOS topics covered in this section of training:

E-14 Diagnoses appliances

E-14.01 Diagnoses water heaters

E-15 Services water heaters

E-15.01 Maintains water heaters

E-15.02 Repairs water heaters

E-15.03 Installs water heaters

Heating Systems

35 hours

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

RSOS topics covered in this section of training:

E-16 Services furnaces

E-16.01 Maintains furnaces

E-16.02 Repairs furnaces

E-16.03 Install furnaces

Section Five- Exterior Structures

61 hours total

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 and 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

RSOS topics covered in this section of training:

F-23 Services exterior components

F-23.01 Maintains exterior components

F-23.02 Repairs exterior components

F-23.03 Installs exterior components

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

RSOS topics covered in this section of training:**F-22.01 Maintains interior components**

F-22.02 Repairs interior components

F-22.03 Installs interior components

F-23 Services exterior components

F-23.01 Maintains exterior components

F-23.02 Repairs exterior components

F-23.03 Installs exterior components

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

RSOS topics covered in this section of training:**H-30 Diagnoses towing systems**

H-30.01 Diagnoses tow vehicle systems

H-31 Services tow vehicle systems

H-31.02 Repairs tow vehicle systems

H-31.03 Installs tow vehicle systems

Section Six-Mechanical and Suspension Systems**24 hours total****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

RSOS topics covered in this section of training:**G-24 Diagnoses frames and mechanical components**

G-24.01 Diagnoses frames

G-24.02 Diagnoses running gear

Task G-25 Services frames

G-25.01 Maintains frames

G-25.02 Repairs frames

Task G-26 Services running gear

G-26.01 Maintains running gear

G-26.02 Repairs running gear

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

RSOS topics covered in this section of training:**F-21 Diagnoses interior and exterior components**

F-21.02 Diagnoses exterior components

F-23 Services exterior components

F-23.01 Maintains exterior components

F-23.02 Repairs exterior components

F-23.03 Installs exterior components

Level Three

8 weeks

240 hours

Section One- Inverter and Solar Panels

30 hours total

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

RSOS topics covered in this section of training:

C-8 Diagnoses electrical systems

C C-8.01 Diagnoses AC electrical systems

C-10 Services DC electrical systems

C-10.01 Maintains DC electrical systems

C-10.02 Repairs DC electrical systems

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

RSOS topics covered in this section of training:

C-9 Services AC electrical systems

C-9.02 Repairs AC electrical systems

C-9.03 Installs AC electrical systems

C-10 Services DC electrical systems

C-10.01 Maintains DC electrical systems

C-10.02 Repairs DC electrical systems

Section Two-Appliances

80 hours total

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

RSOS topics covered in this section of training:

E-19 Services air conditioners and heat pumps

E-19.01 Maintains air conditioners and heat pumps

E-19.02 Repairs air conditioners and heat pumps

E-19.03 Installs air conditioners and heat pumps

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

RSOS topics covered in this section of training:

E-14 Diagnoses appliances

E-14.04 Diagnoses refrigerators and ice makers

E-18 Services refrigerators and ice makers

E-18.01 Maintains refrigerators and ice makers

E-18.02 Repairs refrigerators and ice makers

E-18.03 Installs refrigerators and ice makers

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

RSOS topics covered in this section of training:

E-20 Services consumer products

E-20.01 Replaces consumer products

E-20.02 Installs consumer products

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

RSOS topics covered in this section of training:

C-10 Services DC electrical systems

C-10.02 Repairs DC electrical systems

C-10.03 Installs DC electrical systems

Section Three- Interior Structures and Components

30 hours total

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

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.

Section Four- Slide Outs and Levelling Systems

50 hours total

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

RSOS topics covered in this section of training:

G-24 Diagnoses frames and mechanical components

G-24.03 Diagnoses levelling systems

G-27 Services levelling systems

G-27.02 Repairs levelling systems

G-27.03 Installs levelling systems

G-29 Services lifting systems

G-29.01 Maintains lifting systems

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

RSOS topics covered in this section of training:

G-24 Diagnoses frames and mechanical components

G-24.04 Diagnoses slide-out systems

G-25 Services frames

G-25.01 Maintains frames

G-25.02 Repairs frames

G-28 Services slide-out systems

G-28.01 Maintains slide-out systems

G-28.02 Repairs slide-out systems

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

RSOS topics covered in this section of training:

G-24 Diagnoses frames and mechanical components

G-24.03 Diagnoses levelling systems

G-27 Services levelling systems

G-27.02 Repairs levelling systems

G-27.03 Installs levelling systems

Section Five- Auxiliary Fueling Systems and Specialty Haulers

25 hours total

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

RSOS topics covered in this section of training:

C-8 Diagnoses electrical systems

C-8.03 Diagnoses generators

C-11 Services generators

C-11.01 Maintains generators

C-11.02 Installs generators

Specialty Haulers

10 hours

- Describe the purpose and 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:

H-30 Diagnoses towing systems

H-30.02 Diagnoses towed vehicle systems

H-31 Services tow vehicle systems

H-31.02 Repairs tow vehicle systems

H-31.03 Installs tow vehicle systems

H-32 Services towed vehicle systems

H-32.02 Repairs towed vehicle systems

H-32.03 Installs towed vehicle systems

Section Six- Welding, Coaching, Certification and Committees

25 hours total

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

RSOS topics covered in this section of training:

A-2 Uses and maintains tools and equipment

A-2.01 Maintains tools and equipment

Workplace Coaching Skills

4 hours

- Describe the process for coaching an apprentice

RSOS topics covered in this section of training:

A-4 Uses communication and mentoring techniques

A-4.02 Uses mentoring techniques

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)

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.

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

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.