



# Parts Technician Course Outline

**2022**

# TRAINING PROFILE CHART

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

Level One	Transcript Code	Hours
Parts Information Systems	AV 184 – Theory	19
Computer Applications	COAP 188 – Theory	20
Parts Workplace Skills	PART 177 – Theory	15
Applied Trade Measurement	MEAS 105 – Theory	15
Parts ID for Engines	PART 171 – Theory	20
Parts ID for Electrical	PART 172 – Theory	20
Parts ID for Vehicle Systems	PART 173 – Theory	20
Parts ID for Lubrication and Drive Systems	PART 174 – Theory	20
Machine/Vehicle Identification	PART 175 – Theory	20
Common Tools	PART 176 – Theory	29
Regulations and Safety	PART 183 – Theory	16
Warehouse and Documentation	PART 188 – Theory	26
		240

Level Two	Transcript Code	Hours
Parts Information Systems	AV 280 – Theory	12
Computers	COAP 283 – Theory	20
Customer Service	PART 279 – Theory	15
Engine Systems	PART 280 – Theory	35
Drive Train Components	PART 281 – Theory	30
Vehicle Systems	PART 282 – Theory	28
Hydraulic Systems	PART 283 – Theory	20
Standard Stock	PART 284 – Theory	21
Machine/Vehicle Identification	PART 285 – Theory	35
Parts Networking	PART 290 – Theory	12

Documentation	RPRT 280 – Theory	12
		240

Level Three	Transcript Code	Hours
Parts Business Practices	PART 378 – Theory	12
Parts Communications	PART 379 – Theory	12
Inventory Control	PART 380 – Theory	37
New Vehicle Technology	PART 381 – Theory	22
Facility Design	PART 382 – Theory	24
Purchasing	PART 384 – Theory	12
Parts Sales and Merchandising	PART 385 – Theory	37
Applied Parts Management	PART 386 – Theory	24
		180

# TECHNICAL TRAINING COURSE OUTLINE

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

<b>Level One</b>	<b>8 weeks</b>	<b>240 hours</b>
<b>Parts Information Systems – Theory</b>		<b>19 hours</b>
<ul style="list-style-type: none"><li>• identify the different tools that can be used to locate parts information</li><li>• describe the components of the different systems</li><li>• discuss the parts pricing structures</li><li>• demonstrate alternative methods for locating parts</li><li>• explain the use of serial numbers &amp; vehicle identification numbers (VIN)</li></ul>		
<b>Computer Applications – Theory</b>		<b>20 hours</b>
<ul style="list-style-type: none"><li>• discuss software programs used by parts departments</li><li>• discuss networks used by parts departments</li><li>• discuss the use of electronic parts catalogs</li><li>• discuss business and invoicing software</li></ul>		
<b>Parts Workplace Skills – Theory</b>		<b>15 hours</b>
<ul style="list-style-type: none"><li>• examine essential workplace procedures</li><li>• discuss customer communication skills</li><li>• explain workplace conflict resolution</li><li>• describe workplace mentoring</li></ul>		
<b>Applied Trade Measurement – Theory</b>		<b>15 hours</b>
<ul style="list-style-type: none"><li>• explain common trade measurements and their use</li><li>• use formula to calculate measurements</li><li>• apply common trade measurements</li></ul>		
<b>Parts ID for Engines – Theory</b>		<b>20 hours</b>
<ul style="list-style-type: none"><li>• describe the principles of combustion</li><li>• identify basic engine components</li><li>• describe engine classifications</li><li>• describe the principles of engine operation</li><li>• describe engine parts operation</li><li>• describe engine construction features</li><li>• examine engine parts failures</li><li>• describe engine repair procedures</li></ul>		
<b>Parts ID for Electrical – Theory</b>		<b>20 hours</b>
<ul style="list-style-type: none"><li>• identify the basic fundamentals of electricity and electronics</li><li>• explain battery types and functions</li><li>• describe charging system components and functions</li><li>• describe charging system problems</li></ul>		

- identify chassis wiring

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**Parts ID for Vehicle Systems – Theory****20 hours**

- describe the parts and function of the fuel system
- describe the parts and function of the exhaust system
- describe the parts and function of the emissions system
- describe parts and function of the cooling system
- describe parts and function of the heating system

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**Parts ID for Lubrication and Drive Systems – Theory****20 hours**

- describe the parts and operation of the lubrication system
- discuss lubricants
- identify belt and chain drive components
- describe shaft couplers and clutches

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**Machine/Vehicle Identification – Theory****20 hours**

- identify different passenger vehicle types
- identify agricultural machinery
- identify industrial machinery
- identify heavy truck and trailer vehicle types
- identify recreational vehicles

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**Common Tools – Theory****29 hours**

- identify the different types of hand tools
- describe the use and purpose of hand tools
- identify the different types of power tools
- describe the use and purpose of power tools
- identify measuring tools and equipment
- demonstrate measuring tool use and operation

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**Regulations and Safety – Theory****16 hours**

- describe the types of distribution networks
- identify the duties and responsibilities of parts department personnel
- recognize safe working practices and safety equipment
- explain fire safety

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**Warehouse and Documentation – Theory****26 hours**

- identify the different point of sale documentation
- describe the use of order forms
- describe the use of warranty claim and return forms
- explain shipping methods and procedures
- explain receiving procedures and practices
- demonstrate the completion of shipping and receiving forms

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## Level Two

8 weeks

240 hours

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### Parts Information Systems – Theory

12 hours

- identify the different tools that can be used to locate parts information
  - describe the components of the different systems
  - identify alternative methods for locating parts
  - use service manuals to reference specifications and procedures
  - demonstrate knowledge of procedures to ship and track special orders
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### Computers – Theory

20 hours

- identify the basic types of computer hardware systems
  - discuss the advantages of different software programs
  - discuss how computers are used in industry
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### Customer Service – Theory

15 hours

- identify different types of customers
  - describe the elements of customer service
  - explain methods of meeting customer's needs
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### Engine Systems – Theory

35 hours

- explain the function of the ignition circuit
  - describe the components of the ignition system
  - explain diesel fuel characteristics
  - describe the parts and function of the diesel fuel system
  - explain the differences between gas and diesel engines
  - explain the difference between turbo charger and super charger
  - identify controllers and monitors used on diesel engines
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### Drive Train Components – Theory

30 hours

- describe axle and driveline parts and their functions
  - discuss clutches and torque converters
  - discuss transmissions and transaxles
  - discuss differentials and final drives
  - compare the different drive train systems
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### Vehicle Systems – Theory

28 hours

- Describe parts and operation of the air conditioning system.
  - Describe the components and principles of operation of the suspension system.
  - Describe the components and principles of operation of the steering system
  - Describe the components and principles of operation of the brake system
  - Discuss a variety of tires and vehicle ballasting
  - Identify the components of track systems
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### Hydraulic Systems – Theory

20 hours

- identify the basic hydraulic principles
  - identify hydraulic system components
  - describe hydraulic system circuits
  - discuss hydraulic system operation
  - explain hydraulic steering systems
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- discuss the hydrostatic drive systems

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**Standard Stock – Theory****21 hours**

- Discuss types and functions of fasteners
- Discuss types and functions of fittings
- Describe friction and non-friction bearings and their applications
- Describe static and dynamic seals and their applications
- Compare common products used within the parts industry
- Describe the parts and operation of the lubrication system

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**Machine/Vehicle Identification – Theory****35 hours**

- discuss body structure design
- identify chassis components
- explain body styles and classifications
- describe vehicle comfort and safety systems
- discuss vehicle identification codes and labels
- identify operator features and controls
- compare parts supply and systems
- identify types of agricultural equipment and their function
- describe the fast wearing components of agricultural equipment
- identify types of industrial equipment and their function
- describe the fast wearing components of industrial equipment

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**Parts Networking – Theory****12 hours**

- describe parts networking
- demonstrate the use of peer-to-peer communication
- demonstrate the use of technologies

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**Documentation – Theory****12 hours**

- explain the different point of sale documentation
- discuss the purpose and required information on a work order
- describe the purpose and use of an estimate
- prepare an order form from suppliers
- describe the process when handling a warranty claim
- explain the forms used to handle core returns
- describe the forms required to complete transfers of inventory

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## Level Three

6 weeks

180 hours

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### Parts Business Practices – Theory

12 hours

- compare different forms of business ownership
  - discuss financial sources available for a business
  - review the financial status of a business
  - discuss tax implications of a business
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### Parts Communications – Theory

12 hours

- discuss effective communication skills for dealing with customers
  - examine effective communication skills for dealing with coworkers
  - discuss issues related to supervising coworkers
  - evaluate potential new employees
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### Inventory Control – Theory

37 hours

- identify inventory ordering systems
  - discuss inventory monitoring tools
  - discuss reasons for adjusting inventory
  - discuss parts activity
  - compare methods used to control inventory
  - discuss the importance of proper procedures for a physical inventory
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### New Vehicle Technology – Theory

22 hours

- identify recent technology changes in vehicles and engines
  - identify recent changes to vehicle electrical and electronic systems
  - compare new lubricant and chemical technology and industry requirements for these products
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### Facility Design – Theory

24 hours

- describe the required areas for a parts facility
  - describe the supplemental areas
  - explain various types of binning systems
  - prepare a layout of a parts storage facility with display area
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### Purchasing – Theory

12 hours

- identify product needs
  - demonstrate proper supplier selection
  - compare different types of orders
  - compare different types of freight transportation
  - identify different purchasing documents
  - explain expedited freight
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### Parts Sales and Merchandising – Theory

37 hours

- describe pricing for sales
  - explain styles of marketing and merchandising
  - explain personal selling
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**Applied Parts Management – Theory****24 hours**

- demonstrate the use of communication skills
- demonstrate the use of business skills
- demonstrate the use of marketing skills
- demonstrate the use of facilities management skills
- demonstrate the use of scheduling skills
- demonstrate the operations of parts and warehousing skills

# PARTS TECHNICIAN TASK MATRIX

This chart outlines the major work activities, tasks and sub-tasks from the 2020 Parts 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.

Implementation for harmonization will take place progressively. Level one to be implemented in 2021/2022, level two 2022.2023 and level three in 2023/2024.

## A – Performs common occupational skills

<b>Task A-1</b> <b>Performs safety-related functions</b>	<b>A-1.01 Maintains safe work environment</b>  <b>1</b> <b>(2, 3 in context)</b>	<b>A-1.02 Uses personal protective equipment (PPE) and safety equipment</b>  <b>1</b> <b>(2, 3 in context)</b>	
<b>Task A-2</b> <b>Uses tools and equipment</b>	<b>A-2.01 Uses catalogs and price lists</b>  <b>1</b> <b>(2, 3 in context)</b>	<b>A-2.02 Uses hand tools</b>  <b>1</b> <b>(2, 3 in context)</b>	<b>A-2.03 Operates power tools</b>  <b>1</b> <b>(2, 3 in context)</b>
	<b>A-2.04 Operates warehouse tools and equipment</b>  <b>1</b> <b>(2, 3 in context)</b>	<b>A-2.05 Uses measuring and testing tools and equipment</b>  <b>1</b> <b>(2, 3 in context)</b>	<b>A-2.06 Operates business machines</b>  <b>1</b> <b>(2, 3 in context)</b>
	<b>A-2.07 Uses computers and digital devices</b>  <b>1</b> <b>(2, 3 in context)</b>		
<b>Task A-3</b> <b>Organizes work</b>	<b>A-3.01 Uses work-related documents</b>  <b>1</b> <b>(2, 3 in context)</b>	<b>A-3.02 Prioritizes tasks</b>  <b>1</b> <b>(2, 3 in context)</b>	
<b>Task A-4</b> <b>Communicates with others</b>	<b>A-4.01 Uses communication techniques</b>  <b>1</b>	<b>A-4.02 Uses mentoring techniques</b>  <b>3</b>	

## B – Performs customer service

<b>Task B-5</b> Provides services to retail customers	<b>B-5.01 Identifies retail customers' needs</b>  1	<b>B-5.02 Provides technical information to retail customers</b>  2	
<b>Task B-6</b> Provides services to wholesale customers	<b>B-6.01 Identifies wholesale customers' needs</b>  1, 2 (3 in context)	<b>B-6.02 Provides training opportunities and technical information to wholesale customers</b>  1, 2 (3 in context)	
<b>Task B-7</b> Provides services to internal customers	<b>B-7.01 Identifies internal customers' needs</b>  1, 3 (2 in context)	<b>B-7.02 Maintains inventory and records for internal customers</b>  3 (2 in context)	
<b>Task B-8</b> Provides general customer service and support	<b>B-8.01 Prepares customer quotes</b>  2, 3	<b>B-8.02 Provides no-fee value-added services and information</b>  1, 2, 3	<b>B-8.03 Records customer information</b>  1, 2, 3
	<b>B-8.04 Implements product improvement programs (PIP)</b>  2		

## C – Performs parts acquisition

<b>Task C-9</b> Identifies parts	<b>C-9.01 Identifies parts function</b>  1, 2	<b>C-9.02 Identifies parts application</b>  1, 2	<b>C-9.03 Identifies parts number</b>  1, 2
<b>Task C-10</b> Sources parts	<b>C-10.01 Searches inventory for parts</b>  1, 2	<b>C-10.02 Identifies suppliers</b>  1, 2, 3	<b>C-10.03 Purchases parts</b>  2, 3
	<b>C-10.04 Arranges shipment of special orders</b>  2, 3		

## D – Performs warehousing and inventory

<b>Task D-11</b> <b>Handles parts and materials</b>	<b>D-11.01 Maintains storage design layout</b>  <b>3</b>	<b>D-11.02 Handles sensitive products</b>  <b>3</b>	<b>D-11.03 Rotates inventory</b>  <b>2, 3</b>
	<b>D-11.04 Places inventory in designated location</b>  <b>2, 3</b>		
<b>Task D-12</b> <b>Performs inventory control</b>	<b>D-12.01 Manages core and warranty inventory</b>  <b>2, 3</b>	<b>D-12.02 Handles parts inventory recalls</b>  <b>3</b>	<b>D-12.03 Maintains inventory levels</b>  <b>3</b>
	<b>D-12.04 Participates in periodic physical inventory count</b>  <b>2, 3</b>		
<b>Task D-13</b> <b>Performs shipping and receiving duties</b>	<b>D-13.01 Verifies estimated time of arrival (ETA)</b>  <b>1, 2, 3</b>	<b>D-13.02 Receives incoming shipment</b>  <b>1, 2, 3</b>	<b>D-13.03 Resolves order discrepancies</b>  <b>1, 2, 3</b>
	<b>D-13.04 Prepares for shipment</b>  <b>1, 2, 3</b>		

## E – Applies business practices

<b>Task E-14</b> <b>Promotes products and services</b>	<b>E-14.01 Displays products and literature</b>  <b>3</b>	<b>E-14.02 Uses digital marketing</b>  <b>2, 3</b>	<b>E-14.03 Recommends parts and products to customer</b>  <b>2, 3</b>
	<b>D-14.04 Recommends services to customer</b>  <b>2, 3</b>		
<b>Task E-15</b> <b>Implements pricing formula</b>	<b>E-15.01 Calculates additional costs</b>  <b>3</b>	<b>E-15.02 Overrides price</b>  <b>3</b>	
	<b>Task E-16</b> <b>Processes financial transactions</b>	<b>E-16.01 Generates invoices</b>  <b>1, 2</b>	<b>E-16.02 Accepts payments</b>  <b>2</b>
	<b>E-16.04 Processes day-end reports</b>  <b>2, 3</b>		

*\*The Parts Technician Red Seal Occupational Standard (RSOS), describing the “full scope” of the trade, can be found at [www.red-seal.ca](http://www.red-seal.ca).*

*For more detailed information on course content, please refer to the Parts Technician Guide to Course Content at [www.saskapprenticeship.ca](http://www.saskapprenticeship.ca).*