

Curriculum Resource

Getting Ready for a Career as an Automotive Service Technician

OALCF Alignment

Competency	Task Group	Level
Competency A -Find and Use Information	A1. Read continuous text	1
Competency A -Find and Use Information	A2. Interpret documents	2
Competency A -Find and Use Information	A2. Interpret documents	3
Competency A -Find and Use Information	A3. Extract information from films, broadcasts and presentations	N/A
Competency B - Communicate Ideas and Information	B3. Complete and create documents	2
Competency B - Communicate Ideas and Information	B3. Complete and create documents	3
Competency C - Understand and Use Numbers	C1. Manage money	2
Competency D - Use Digital Technology	N/A	2
Competency E - Manage Learning	N/A	1

Goal Paths (check all that apply)

- Employment
- Apprenticeship
- Secondary School Credit
- Postsecondary
- Independence

Embedded Skills for Success (check all that apply)

- Adaptability
- Collaboration
- Communication
- Creativity and innovation
- Digital
- Numeracy
- Problem Solving
- Reading
- Writing

Notes:

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“Getting Ready for a Career as an Automotive Service Technician” is a compilation of new curriculum related to this specific skilled trade along with several task-based activities for learners on the apprenticeship goal path that were originally housed on QUILL’s [Task Based Activities for LBS](#) portal.

As part of Community Literacy of Ontario’s Skills for Success initiative, these task-based activities were updated and revised to reflect current automotive standards and processes, and the apprenticeship system in Ontario as of February 2023. The tasks included:

- Watch Automotive Video
- Automotive Vehicle Inspection
- Automotive Codes for Troubleshooting
- Automotive Service Repair Invoice

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Getting Ready for a Career as an Automotive Service Technician

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What is an Automotive Service Technician?

Are you thinking about a job in the skilled trades? Do you love cars, understanding how mechanical things work and fixing problems? A career as an Automotive Service Technician might be right for you!

Automotive service technicians look after cars and trucks to make sure they can operate safely. They do routine maintenance, diagnose what's wrong with cars and trucks that aren't working, and may fix any of the following parts of cars and trucks:

Engine and fuel systems	Suspension	Restraints
Steering system	Electrical	Trim
Brakes	Heating, ventilation and air conditioning (HVAC)	Accessories
Drive train		

If you would like to become an Automotive Service Technician, it is important to know that it is a **compulsory trade** in Ontario. To work in any compulsory trade, you first have to become **an apprentice**. Apprentices learn how to do a trade through a combination of on-the-job training and in-school learning.

To do on-the-job training, an apprentice has to actually have a job. This means they need to know **an employer** who is willing to hire them to learn the trade. Only employers who have fully certified Automotive Service Technicians on staff can hire an apprentice. This is because their training has to be done by an expert – someone who has completed an apprenticeship themselves and has met all of the requirements to earn their certification.

This fully certified technician is called a **journeyperson**, and they will teach the apprentice how to do their job properly. About 80% of an apprentice's time is spent learning on-the-job. The other 20% of their learning happens in a classroom at a college, trade school or union.

To become certified, Automotive Service Technicians need to:

- complete 6,500 hours of on-the-job training
- complete three levels of in-school training (720 hours total)
- pass a **Certificate of Qualification** exam that proves they know everything they need to do the job

Automotive Service Technician is also a **Red Seal** trade. That means that fully certified technicians can choose to take an additional exam. If they pass, they earn a Red Seal for their Certificate of Qualification, which allows them to work anywhere in Canada. This is very helpful if the journeyperson might move outside of Ontario sometime in the future.

Learn More About This Trade

Learn about the Automotive Service Technician trade by reading the information below, provided by [apprenticesearch.com](https://www.apprenticesearch.com). Then, answer the questions that follow.

Automotive Service Technician: Job Related Skills, Interests and Values

- Reviewing work orders and discussing them with co-workers or supervisors.
- Inspecting motors in operation; road testing vehicles; testing automotive systems and components to diagnose problems and isolate faults.
- Adjusting, repairing, or replacing automotive system parts and components, including fuel, brake, steering, and suspension systems; testing these systems to manufacturer specifications.
- Performing scheduled maintenance including oil changes, lubrications and tune ups.
- Advising customers about work performed, general vehicle conditions and future repair requirements.

Wage Rate

The wage an apprentice earns will increase with skill and experience. Fully qualified workers earn up to \$29.00 per hour (as of 2022), depending on where they live. Some employers may offer benefits and overtime opportunities.

What Preparation and Training Do You Need?

- A secondary school diploma or equivalent; math, science, English and automotive mechanics credits are an asset
- Completion of a 7,220-hour apprenticeship, including on-the-job and in-school training
- Passing an exam to earn a Certificate of Qualification

What's Your Future as an Automotive Service Technician?

- Full-time, year-round employment; indoors with exposure to noise, vibration, liquids, fumes and odours
- May be employed with small shop and be required to work in all areas, or by large company and specialize in fuel and electrical systems, transmission, alignment/brakes, or trucks and coaches
- Employers include automobile dealers, motor vehicle and parts manufacturers, and automotive parts and accessory stores

Automotive Service Technician Self Rating

Ask yourself the following questions and circle the answer that applies most to you.

Do you have a valid and clean driver's license?	Yes	No
Do you have a passion for automobiles?	Yes	No
Are you able to read blueprints and measurements accurately?	Yes	No
Do you have strong math skills?	Yes	No
Are you able to follow Health & Safety guidelines?	Yes	No
Are you able to lift up to 50 lbs?	Yes	No
Can you stand or sit for longer periods of time?	Yes	No
Do you like working with measurements and specific design details?	Yes	No
Are you comfortable working with different pieces of equipment and tools?	Yes	No
Can you work well as a team?	Yes	No
Do you have good communication skills?	Yes	No

Task #1: What did you learn?

1. What sorts of things do Automotive Service Technicians need to advise customers about?

2. Do you need a secondary school diploma or equivalent to be an Automotive Service Technician? Circle the correct answer.

Yes

No

3. What sorts of things might an Automotive Service Technician be exposed to at work?

4. What is the difference between the type of work an Automotive Service Technician might do if they are working for these two kinds of employers?

A small shop: _____

A large company: _____

5. What wage could a fully qualified Automotive Service Technician earn per hour? _____

6. How many Self Rating questions did you answer YES to? _____

Tip: If you answered yes to six or more questions, a career as an Automotive Service Technician may be for you!

Hear from an Automotive Service Technician

Now that you know what is involved in apprenticing as an Automotive Service Technician, let's hear from someone who actually works in this trade. They will explain why they like the work they do, what skills they use, and what they do at work other than fixing cars.

Task #2: Watch a Video

Watch the Job Talks video *“Automotive Service Technician - Seaton Explains Why it's More Than Just Cars.”* You can search for this video on YouTube, or use this link:

<https://youtu.be/S6EtSEoW1Mo>

1. Why does Seaton say that learning new things is important as an Automotive Service Technician?

2. What is one thing Seaton does in the shop that *isn't* related to fixing cars?

3. Provide an example of something an Automotive Service Technician does that won't "get their hands dirty"?

Specific Tasks Automotive Service Technician Does

Now let's look at specific tasks Automotive Service Technicians do on-the-job. These are all things that you would learn during your on-the-job training as an apprentice. Read about each of the following tasks and complete the activity related to it.

Vehicle Inspections

When customers bring their car into a garage, Automotive Service Technicians do a routine inspection. They will look at many parts of the car, including the:

- windshield
- lights
- engine
- underside of the car
- fluid
- levels
- brakes
- tires

While they do this inspection, Automotive Service Technicians and apprentices fill out forms or reports to document what they see. These inspection reports may indicate recommended maintenance or repairs to the vehicle.

your vehicle report card

 CHECKED OK

 REQUIRES FUTURE ATTENTION

 REQUIRES IMMEDIATE ATTENTION

The inspection report used at Ford dealership garages is called “**your vehicle report card.**”

It helps guide the routine inspection and provides a place for Automotive Service

Technicians to record whether the parts they've inspected are okay, will need attention in the future, or need to be fixed right now.

Note: Inspection reports will vary between manufacturers, garages and employers. This is one example of the many types of vehicle inspection reports used by Automotive Service Technicians.

Task #3: Vehicle Report Card

Read the description of what an Automotive Service Technician finds as they do a routine inspection on a customer's car. Then, enter the required information on the Vehicle Report Card on the following page.

1. The car has an odometer reading of 238,126 km. Enter the odometer reading into the appropriate boxes on the vehicle report card.
2. When doing a visual parameter inspection, the automotive service technician notices that the right front (RF) headlight is burnt out. It needs to be replaced immediately. Record this information on the vehicle report card.
3. The tread on the right front (RF), left front (LF), right rear (RR) and left rear (LR) tire measures 2/32, which is the minimum legal tread depth. At this level, tires are considered bald and unsafe. Record the tire tread depth on the vehicle report card and indicate that these four tires need immediate attention.
4. The car's owner mentions that the check oil light is on. When the automotive service technician looks under the vehicle, they see that oil is leaking. They check the fluid levels and find the oil is very low and needs to be replaced immediately. Check the appropriate boxes on the vehicle report card.

Using Technology to Diagnose Issues

Visual inspections aren't the only tool Automotive Service Technicians and apprentices use to find out what might be wrong with a car. Today, most cars include dozens of computerized controls, making on-board diagnostics (or OBD) an important digital tool. OBD is a system built into cars that can recognize problems and report them using a series of error codes. Using an OBD system, Automotive Service Technicians can find out what's wrong with an engine or other systems without even opening the hood.

Because OBD systems are very common, understanding and being comfortable using digital technology is important for apprentices in the automotive trades. It is also important to know how to look up error codes to find out what they mean. There are error code databases and charts that provide descriptions of each error code, and most can be found on the internet as well.

Here is an example of a simple error code chart. Error codes are five digits long, and the last two digits are specific to the actual fault description. This chart shares the meanings of the first three commonly used digits.

First Character - System	Second Digit - Code Type	Third Digit - Sub-System
P = Powertrain	0 = Generic (used by many manufacturers)	0, 1 and 2 = air/fuel mixture
B = Body	1 = Enhanced (used only by a few Manufacturers)	3 = ignition system
C = Chassis		4 = checking auxiliary emissions
U = Network & Vehicle Integration		5 = engine idling
		6 = onboard computer and ancillary outputs
		7, 8 and 9 = transmission (gearbox)
		A, B and C = hybrid propulsion

Task #4: Interpret Automotive Error Codes

1. A Nissan Infiniti is reporting error code B1049. What do the first three characters and digits in the code represent? Look at the error code chart and write your answer below.

2. Open a web browser (ex., Chrome) and go to a search engine (ex., Google). Search for “Infiniti B1049”. What does this code indicate as the possible problem?

3. Search the internet for the following error codes. What is the problem these codes are reporting?

P0460: _____

P0169: _____

P0636: _____

P0811: _____

4. Are the codes in Question 3 generic (used by many manufacturers) or enhanced (used only by a few Manufacturers)? How do you know?

Automotive Repair Invoices

Each item that has been inspected, adjusted or fixed on a vehicle will appear on an invoice for the customer. The total cost of maintenance or repairs could include things like:

- Replacement parts
- Fluids like engine oil
- Labour
- Recycling fees
- Taxes
- Additional services like tire storage

Being able to calculate these costs means apprentice Automotive Service Technicians need to rely on their numeracy skills. What sort of mathematical skills do you think they would use when creating invoices? Write your answers below.

Task #5: Complete an Invoice

Look at the “ABC Auto Repair” invoice on the next page. Then, follow the instructions below. You can use a calculator to figure out the costs if you want.

1. On the invoice, highlight, underline or circle the notes/instructions for this job.
2. Calculate the cost for the repair shop to “weld brackets on L F for new bumper”. Enter the answer into the invoice.
3. Calculate the cost for the repair shop to “L F brake Cyl rebuild”. Enter the answer into the invoice.
4. Calculate the cost for the repair shop to “Straighten Frame”. Enter the answer into the invoice.
5. Calculate the subtotal for waste disposal, labour total, parts total, fuel, and sub out for repairs. Enter the answer into the invoice.
6. Calculate the amount of tax (HST) that will be added to the subtotal. Enter the answer into the invoice.
7. Calculate the final total the customer will pay for this repair work. Enter the answer into the invoice.

Earning Your Automotive Service Technician Certification

Once you have completed all 7,220 hours of your on-the-job and in-school training, you will need to pass a test to earn your Certificate of Qualification. The Certificate of Qualification is required because Automotive Service Technician is a compulsory trade. Legally, you must have this certificate to work as an Automotive Service Technician in Ontario.

According to Skilled Trades Ontario, the organization that oversees apprenticeship in Ontario:



There are many resources available to help you prepare for your certifying exam. First, you will need to be familiar with your Apprenticeship Training Standard. Other preparation resources include preparation courses, sample exams, study guides, materials and various texts. You can also use your own network of support by speaking to your employers, previous instructors and colleagues at work.”

Task #6: Review an Exam Preparation Guide

The exam preparation guide from Skilled Trades Ontario has useful information to help you prepare. You can find this guide on the Certification page of the Skilled Trades Ontario website using this link: <https://www.skilledtradesontario.ca/certification/exam-resources/>

First, read the information titled “Basic Examination Details for You to Know” on Page 5 of the exam preparation guide and answer the questions below.

1. How much time do you have to write the exam? _____
2. What mark do you need to pass the exam? _____

3. Did this Automotive Service Technician pass their Certificate of Qualification exam?

- Yes No

Examination Results Letter – Sample

Re: Certifying Exam Result: 310S - Automotive Service Technician

Thank you for taking the certifying exam in the trade of **310S - Automotive Service Technician** on **January 20th, 2022**. **We are pleased to inform you that you have achieved a passing score.**

The required pass score for both provincial and Inter-Provincial certifying exams is 70%. You obtained a score of **96 out of a possible 125**. This represents a **percentage score of 77%**.

The results of your exam and your score report are given below:

Section	Description	Possible Marks	Your Mark
1	Occupational Skills	6	6
2	Engine and Engine Support Systems	21	16
3	Vehicle Management Systems	20	17
4	Drive Line Systems	19	11
5	Electrical and Comfort Control Systems	21	18
6	Steering and Suspension, Braking, Control Systems, Tires, Hubs and Wheel Bearings	24	17
7	Body Components, Trim and Restraint Systems	7	5
8	Hybrid and Alternate Fuel Systems	7	6
Total Marks		125	96

4. What kind of questions are on the exam? Check the correct answer below.

- Multiple choice questions with three options. Test takers can choose up to two correct answers.
- Short and long answer questions.
- Multiple choice questions with four options. Test takers must choose the correct answer.
- True and False questions.

5. How many questions are on the exam? _____

6. Who should you contact if you need additional accommodations (such as extra time, separate room, Interpreter/Reader)?

Next, read the General Tips in the section called “Studying for the Examination” on Page 31 of the exam preparation guide. Fill in the blanks below.

Don't put things off, make _____ for study.

Decide on a _____ that works for you.

Try to set specific _____ to study and stick with them.

Find a comfortable place to study, away from _____.

Use _____ study periods as they are the most effective for peak concentration and retention.

Take _____ to give yourself a chance to absorb the material.

Assign yourself study time for a topic based on _____ on the examination.

_____ for study success.

Conclusion

Using this resource, you have learned more about the Automotive Service Technician trade. You know how long you would need to be an apprentice along with some of the very specific tasks Automotive Service Technicians do on the job. You also know how to start preparing for your Certificate of Qualification exam.

Now that you have this information, do you think you would like to become an apprentice and learn how to become an Automotive Service Technician?

- Yes No

If you chose **YES**, what do you think your next step towards this goal should be?

If you chose **NO**, what do you think you would be more interested in doing?

No matter what skilled trade you decide to pursue, if you find out:

- what education you require
- how long the training takes
- what to expect during the training
- what sort of skills you need and tasks you would do on the job
- how to complete your training and earn your certification

you will be setting yourself up for success!