

Apprenticeship and Industry Training

Apprenticeship Curriculum Guide

Automotive Service Technician



Apprenticeship
and Industry
Training

Alberta 

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Description Of the Trade

Automotive service technicians perform preventative maintenance, diagnose faulty operations and repair automotive vehicles and light trucks.

Automotive service technicians adjust, test and repair engines, steering systems, braking systems, drive trains, vehicle suspensions, electrical systems, heating and cooling systems, and perform wheel alignments. Technicians sometimes specialize in repairing, rebuilding and servicing specific parts (e.g. transmissions, engines, electrical components, etc.) or they may work on a wider variety of jobs.

Automotive service technicians begin by reading the work order and examining the vehicle. To locate the cause of faulty operation and repair it, they:

- Use testing equipment, take the vehicle for a test drive, and/or refer to manufacturers' specifications and service information;
- Dismantle faulty assemblies, repair or replace worn or damaged parts; and
- Reassemble, adjust and test the repaired mechanism.

Apprenticeship Education Entrance Requirements



Apprenticeship education entrance requirements will **NOT** prevent an individual from registering into an apprentice education program as an apprentice, however they will restrict that individual's ability to register for the in-classroom training portion of the training until those requirements have satisfied the education entrance requirement for that trade. The minimum education entrance requirements for the Automotive Service Technician are:

- English 20-2, Math 20-3, and Science 10
- OR a pass mark in all five Canadian General Educational Development (GED) tests or Canadian Adult Education Credential tests
- OR an Apprenticeship and Industry Training entrance examination.

To increase an individual's chances of success in classroom instruction for the Automotive Service Technician Apprenticeship Education Program, successful completion of English 30-2, Math 30-3, Physics 30 OR Chemistry 30 OR Science 30 and related Career and Technology Studies (CTS) courses are recommended.

What To Expect

Apprenticeship is a training program that combines on-the-job and in-classroom training for a specific profession designated as a trade.

It may be a new form or model of learning to some individuals, however, has been the cornerstone to large portions of Alberta's industry training and economy for almost a century.

In the process of progressing through an apprenticeship education program, the learner experiences both the theoretical and practical components of their chosen discipline and will be assessed in both the classroom and working environments.

The following flow chart presents a visual representation of what a learner can expect while progressing through the Automotive Service Technician program.

Apprentice Pathway To Certification

Apply

Register (Pre-Apprenticeship)

- Choose a program.
- Meet the apprenticeship eligibility requirements.
- Complete the application and include any Prior learning assessments



Learn

Meet education entrance requirements or successfully complete the entrance exam.

- Continue as a sponsored or un-sponsored apprenticeship.
- Register for in-classroom instruction.

Sponsored Apprentices

Automotive Service Technician Period 1

- Classroom Instruction: 270 hours
- Competence-based assessments
- On-the-job learning: 1530 hours (sponsored)

Automotive Service Technician Period 2

- Classroom Instruction: 270 hours
- Competence-based assessments
- On-the-job learning: 1530 hours (sponsored)

Automotive Service Technician Period 3

- Classroom Instruction: 270 hours
- Competence-based assessments
- On-the-job learning: 1530 hours (sponsored)

Automotive Service Technician Period 4

- Classroom Instruction: 270 hours
- Competence-based assessments
- On-the-job learning: 1530 hours (sponsored)

Un-sponsored Apprentices

NOTE: Un-sponsored apprentices must find a Sponsor and complete an Apprenticeship Education Agreement to complete the requirements of an Apprenticeship Education Program.

Automotive Service Technician Period 1

- Classroom Instruction: 270 hours
- Competence-based assessments

Automotive Service Technician Period 2

- Classroom Instruction: 270 hours
- Competence-based assessments

Automotive Service Technician Period 3

- Classroom Instruction: 270 hours
- Competence-based assessments

Automotive Service Technician Period 4

- Classroom Instruction: 270 hours
- Competence-based assessments

Earn

Certification (sponsored apprentice)

- Post Secondary Education Credential
- Journeyman Certificate



Core Competences

The foundation of an apprenticeship education program is defined by its core competences. These competences are what the training will focus on as the learner progresses through the Automotive Service Technician Apprenticeship Education Program.

A core competence is an observable skill that is demonstrated by the learner. Competences are identified by industry subject matter experts and cover the job-related tasks and activities that an Automotive Service Technician will be required to perform in the course of their employment.

Determining Success

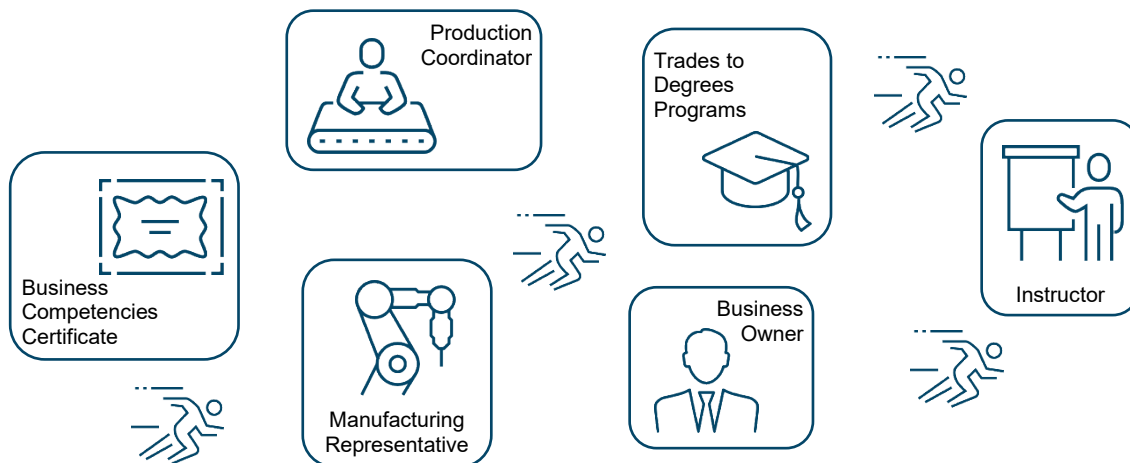
Grades for the theory component of technical training are calculated and based on a cumulative weighted average. To complete a period of technical training successfully, an apprentice must achieve a minimum cumulative weighted average of 65% across all sections in the technical training component of their apprenticeship education program with no grades below 50% in any one section.

Lab and shop components are calculated as a cumulative weighted average requiring a minimum of 65% with a minimum grade of 65% in each section.

Thriving

Successful completion of the Automotive Service Technician Apprenticeship Education Program is an accomplishment that should be celebrated and can continue to be a successful provider and career choice for a lifetime.

It can also become a useful lever that opens doors leading to future career choice enhancers and/or create alternate professions pathways. This may include some of the following:



Defined Learning

Core competence (Major category)

The section introduction paragraph outlines the intent of the skill set listed below and how it connects to other skill sets such as competency groups and competency levels in the case of a multi-period group (i.e. Apply hybrid and electric vehicle safety procedures and Repair hybrid electric and electric vehicles).

The major category is the grouping of work-related tasks that combine to form an identifiable portion of the trade.

Competence statement

This statement is a core competence as identified by industry. It is followed by the **weighting**, which provides and supports a guideline for instructional focus and assessment structure.



NOTE: Competence Statements will be identified by this symbol.

Weighting %

Each competence is assigned a weighting (in percent) by industry to reflect the amount of available time that is dedicated to it, on average, in the learning environment. This percentage is then converted to hours based on the total hours available for the entire training period. All percentages will total 100%.

Example: Core Competence

Foundational Skills	12%
Job Practices and Procedures	8%
Shop Equipment and Tools (A)	10%
Maintenance Services	28%
Inspect, Test, and Analyze	2%
Diagnostics	In Context
Systems Repair	40%
TOTAL	100%

Supporting competence

A supporting competence is a skill that supports the learning of the competence statement. This competence is a teachable skill that can be assessed to measure the abilities and progress of the learner (see Taxonomy).

It also has an assigned weighting (in percent) that will total 100%, however is derived based on the assigned core competence percentage.

Example: Supporting Competence (Systems Repairs) - 40%

Perform motor vehicle repairs on braking systems	33% (of 40%)
Perform motor vehicle repairs on steering systems	34% (of 40%)
Perform motor vehicle repairs on suspension systems	16% (of 40%)
Perform motor vehicle repairs on drive train systems	9% (of 40%)
Perform motor vehicle repairs on electrical systems	8% (of 40%)
TOTAL	100% of 10%

Taxonomy

Taxonomies are a cognitive framework of learning behaviors organized hierarchically in categories: knowledge, comprehension, application, analysis, evaluation, and synthesis. Taxonomy is used as a tool to identify and create learning objectives that define and measure the learning experience for all stakeholders involved.

For the purposes of Alberta's apprenticeship education programs, **supporting competences** are classified into three of these categories; Taxonomy I – **Know it**, Taxonomy II – **Do it** and Taxonomy III – **Solve it**.

These categories identify the type of skill set that will be applied to be successful.

Some supporting competences have multiple taxonomies that will require the training to address different skill sets.



NOTE: A Taxonomy verb list is also attached in the appendix to demonstrate the level and/or complexity of a given taxonomy.

- Taxonomy I competences focus on recollection of facts, definitions, and principles.
- Taxonomy II competences are a procedural application of knowledge (i.e. reference to a step-by-step process).
- Taxonomy III competences deal with critical thinking and problem solving (i.e. diagnosis and analysis).

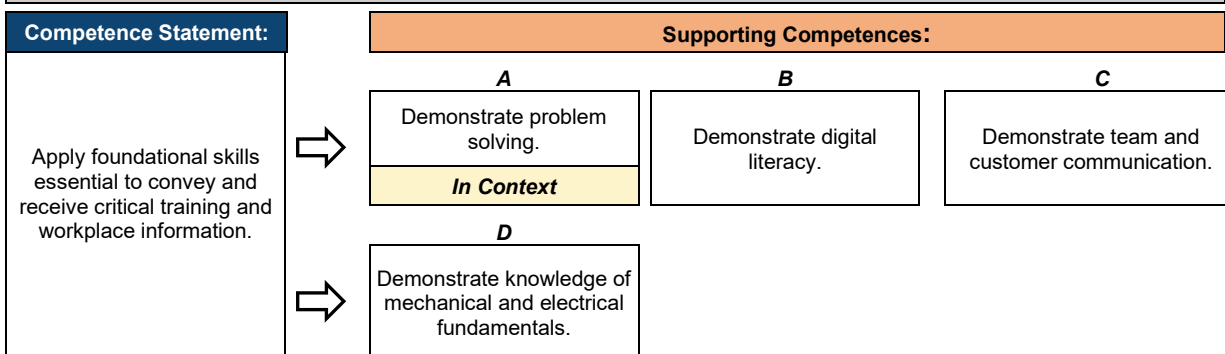
Course Content Overview



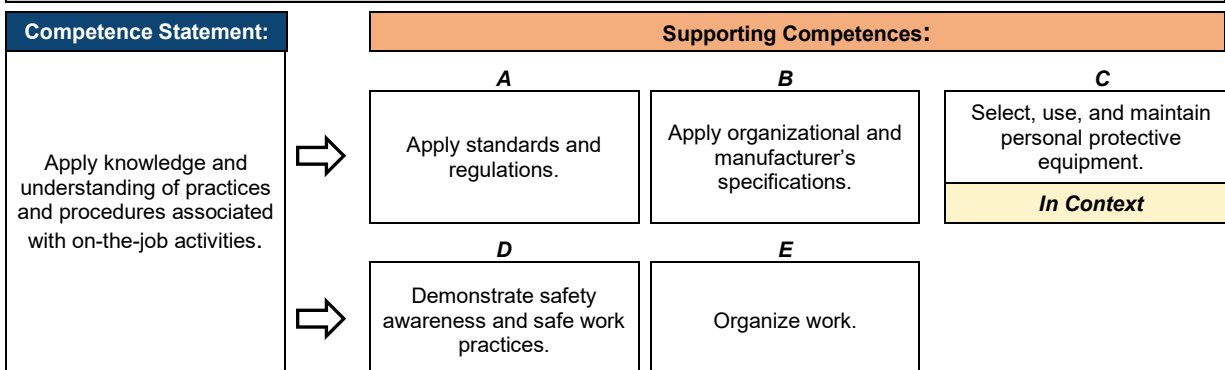
The term ***“In Context”*** indicates that the supporting competence will become integrated learning and/or utilized as a component of the competence statement. It will **not** have an assigned weighting and will **not** be assessed as an examination item.

PERIOD ONE COURSE CONTENT

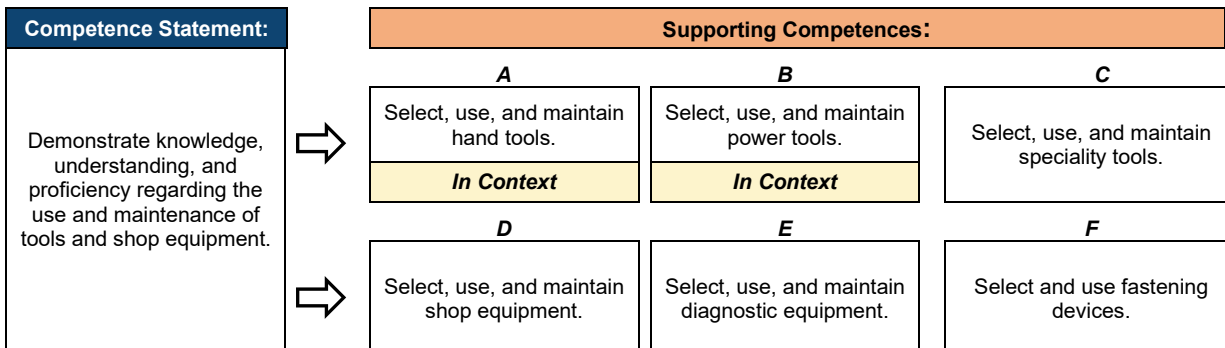
CORE COMPETENCE ONE: Foundational Skills



CORE COMPETENCE TWO: Job Practices and Procedures



CORE COMPETENCE THREE: (A) Shop Equipment and Tools



CORE COMPETENCE FOUR: Maintenance Services

Competence Statement:	Supporting Competences:		
Demonstrate knowledge, understanding and proficiency when performing motor vehicle maintenance services.	⇒	A Perform motor vehicle maintenance services on braking systems.	B Perform motor vehicle maintenance services on steering systems.
			C Perform motor vehicle maintenance services on suspension systems. <i>In Context</i>
	⇒	D Perform motor vehicle maintenance services on drive train systems. <i>In Context</i>	E Perform motor vehicle maintenance services on heating, ventilation, and air conditioning systems.
			F Perform motor vehicle maintenance services on light utility trailers.
	⇒	G Perform motor vehicle maintenance services on oils, fluids, and greases. <i>In Context</i>	H Perform motor vehicle maintenance services on filters, gaskets, and sealants. <i>In Context</i>
			I Perform motor vehicle maintenance services on tires and wheels.
	⇒	J Perform motor vehicle maintenance services on belts and hoses. <i>In Context</i>	K Perform motor vehicle maintenance services on electrical storage devices.

CORE COMPETENCE FIVE: Inspect, Test, and Analyze

Competence Statement:	Supporting Competences:		
Demonstrate knowledge, understanding, and proficiency regarding the inspection, testing, and analysis of motor vehicle systems.	⇒	A Inspect, test, and analyze motor vehicle braking systems. <i>In Context</i>	B Inspect, test, and analyze motor vehicle steering systems. <i>In Context</i>
			C Inspect, test, and analyze motor vehicle suspension systems.
	⇒	D Inspect, test, and analyze motor vehicle drive train systems. <i>In Context</i>	E Inspect, test, and analyze motor vehicle electrical systems. <i>In Context</i>
			F Inspect, test, and analyze motor vehicle heating, ventilation, and air conditioning systems. <i>In Context</i>
	⇒	G Inspect, test, and analyze motor vehicle light utility trailers. <i>In Context</i>	H Inspect, test, and analyze motor vehicle tires and wheels. <i>In Context</i>
			I Inspect, test, and analyze motor vehicle electrical storage devices. <i>In Context</i>

CORE COMPETENCE SIX: Diagnostics

Competence Statement:

Demonstrate knowledge, understanding, and proficiency when performing motor vehicle system diagnostics.

Supporting Competences:

A

Perform motor vehicle diagnostics for braking systems.

In Context

B

Perform motor vehicle diagnostics for steering systems.

In Context

C

Perform motor vehicle diagnostics for suspension systems.

In Context

D

Perform motor vehicle diagnostics for drive train systems.

In Context

E

Perform motor vehicle diagnostics for electrical systems.

In Context

F

Perform motor vehicle diagnostics for light utility trailers.

In Context

G

Perform motor vehicle diagnostics for tires and wheels.

In Context

H

Perform motor vehicle diagnostics for electrical storage devices.

In Context

CORE COMPETENCE SEVEN: Systems Repair

Competence Statement:

Demonstrate knowledge, understanding, and proficiency when performing motor vehicle system repairs.

Supporting Competences:

A

Perform motor vehicle repairs on braking systems.

B

Perform motor vehicle repairs on steering systems.

C

Perform motor vehicle repairs on suspension systems.

D

Perform motor vehicle repairs on drive train systems.

E

Perform motor vehicle repairs on electrical systems.

PERIOD TWO COURSE CONTENT

CORE COMPETENCE ONE: Foundational Skills

Competence Statement:	Supporting Competences:		
Apply foundational skills essential to convey and receive critical training and workplace information.	A	B	C
	Demonstrate problem solving.	Demonstrate digital literacy.	Demonstrate team and customer communication.
	<i>In Context</i>	<i>In Context</i>	<i>In Context</i>
	D		
	Demonstrate knowledge of mechanical and electrical fundamentals.		
	<i>In Context</i>		

CORE COMPETENCE TWO: Job Practices and Procedures

Competence Statement:	Supporting Competences:		
Apply knowledge and understanding of practices and procedures associated with on-the-job activities.	A	B	C
	Apply standards and regulations.	Apply organizational and manufacturer's specifications.	Select, use, and maintain personal protective equipment.
	<i>In Context</i>	<i>In Context</i>	<i>In Context</i>
	D	E	
	Demonstrate safety awareness and safe work practices.	Organize work.	
	<i>In Context</i>	<i>In Context</i>	

CORE COMPETENCE THREE: (A) Shop Equipment and Tools

Competence Statement:	Supporting Competences:		
Demonstrate knowledge, understanding, and proficiency regarding the use and maintenance of tools and shop equipment.	A	B	C
	Select, use, and maintain hand tools.	Select, use, and maintain power tools.	Select, use, and maintain speciality tools.
	<i>In Context</i>	<i>In Context</i>	<i>In Context</i>
	D	E	F
	Select, use, and maintain shop equipment.	Select, use, and maintain diagnostic equipment.	Select and use fastening devices.
	<i>In Context</i>	<i>In Context</i>	<i>In Context</i>

CORE COMPETENCE THREE: (B) Shop Equipment and Tools (Oxy-fuel heating and cutting and gas metal arc welding)

Competence Statement:	Supporting Competences:	
Demonstrate knowledge, understanding, and proficiency when heating and cutting with oxy-fuel equipment and when welding with Gas Metal Arc Welding (GMAW) equipment.	A	B
	Demonstrate handling procedures for oxy-fuel and GMAW equipment. <i>In Context</i>	Use oxy-fuel equipment for heating and cutting and GMAW equipment for welding.

CORE COMPETENCE FOUR: Maintenance Services

Competence Statement:	Supporting Competences:		
Demonstrate knowledge, understanding, and proficiency when performing motor vehicle maintenance services.	A	B	C
	Perform motor vehicle maintenance services on propulsion systems. <i>In Context</i>	Perform motor vehicle maintenance services on emission control systems. <i>In Context</i>	Perform motor vehicle maintenance services on drive train systems. <i>In Context</i>
	D	E	F
	Perform motor vehicle maintenance services on oils, fluids, and greases. <i>In Context</i>	Perform motor vehicle maintenance services on filters, gaskets, and sealants. <i>In Context</i>	Perform motor vehicle maintenance services on belts and hoses. <i>In Context</i>
	G		
	Perform motor vehicle maintenance services on electrical storage devices. <i>In Context</i>		

CORE COMPETENCE FIVE: Inspect, Test, and Analyze

Competence Statement:	Supporting Competences:		
Demonstrate knowledge, understanding, and proficiency regarding the inspection, testing and analysis of motor vehicle systems.	A	B	C
	Inspect, test, and analyze motor vehicle propulsion systems. <i>In Context</i>	Inspect, test, and analyze motor vehicle emission control systems. <i>In Context</i>	Inspect, test, and analyze motor vehicle drive train systems. <i>In Context</i>
	D		
	Inspect, test, and analyze motor vehicle electrical systems. <i>In Context</i>		

CORE COMPETENCE SIX: Diagnostics**Competence Statement:**

Demonstrate knowledge, understanding, and proficiency when performing motor vehicle system diagnostics.

**Supporting Competences:****A**

Perform motor vehicle diagnostics for propulsion systems.

B

Perform motor vehicle diagnostics for emission control systems.

*In Context***C**

Perform motor vehicle diagnostics for drive train systems.

*In Context***D**

Perform motor vehicle diagnostics for electrical systems.

CORE COMPETENCE SEVEN: Systems Repair**Competence Statement:**

Demonstrate knowledge, understanding, and proficiency when performing motor vehicle system repairs.

**Supporting Competences:****A**

Perform motor vehicle repairs on propulsion systems.

B

Perform motor vehicle repairs on emission control systems.

C

Perform motor vehicle repairs on drive train systems.

D

Perform motor vehicle repairs on electrical systems.

PERIOD THREE COURSE CONTENT

CORE COMPETENCE ONE: Foundational Skills

Competence Statement:	Supporting Competences:		
Apply foundational skills essential to convey and receive critical training and workplace information.	A	B	C
	Demonstrate problem solving.	Demonstrate digital literacy.	Demonstrate team and customer communication.
	<i>In Context</i>	<i>In Context</i>	<i>In Context</i>
	D		
	Demonstrate knowledge of mechanical and electrical fundamentals.		

CORE COMPETENCE TWO: Job Practices and Procedures

Competence Statement:	Supporting Competences:		
Apply knowledge and understanding of practices and procedures associated with on-the-job activities.	A	B	C
	Apply standards and regulations.	Apply organizational and manufacturer's specifications.	Select, use, and maintain personal protective equipment.
	<i>In Context</i>	<i>In Context</i>	<i>In Context</i>
	D	E	
	Demonstrate safety awareness and safe work practices.	Organize work.	
	<i>In Context</i>	<i>In Context</i>	

CORE COMPETENCE THREE: (A) Shop Equipment and Tools

Competence Statement:	Supporting Competences:		
Demonstrate knowledge, understanding, and proficiency regarding the use and maintenance of tools and shop equipment.	A	B	C
	Select, use, and maintain hand tools.	Select, use, and maintain power tools.	Select, use, and maintain speciality tools.
	<i>In Context</i>	<i>In Context</i>	<i>In Context</i>
	D	E	F
	Select, use, and maintain shop equipment.	Select, use, and maintain diagnostic equipment.	Select and use fastening devices.
	<i>In Context</i>		<i>In Context</i>

CORE COMPETENCE FOUR: Maintenance Services

Competence Statement:	Supporting Competences:		
Demonstrate knowledge, understanding, and proficiency when performing motor vehicle maintenance services.	⇒	A Perform motor vehicle maintenance services on fuel systems. <i>In Context</i>	B Perform motor vehicle maintenance services on emission control systems. <i>In Context</i>
			C Perform motor vehicle maintenance services on oils, fluids, and greases. <i>In Context</i>
	⇒	D Perform motor vehicle maintenance services on filters, gaskets, and sealants. <i>In Context</i>	E Perform motor vehicle maintenance services on belts and hoses. <i>In Context</i>

CORE COMPETENCE FIVE: Inspect, Test, and Analyze

Competence Statement:	Supporting Competences:		
Demonstrate knowledge, understanding, and proficiency regarding the inspection, testing and analysis of motor vehicle systems.	⇒	A Inspect, test, and analyze motor vehicle propulsion systems. <i>In Context</i>	B Inspect, test, and analyze motor vehicle fuel systems. <i>In Context</i>
			C Inspect, test, and analyze motor vehicle emission control systems. <i>In Context</i>
	⇒	D Inspect, test, and analyze motor vehicle braking systems. <i>In Context</i>	E Inspect, test, and analyze motor vehicle steering systems. <i>In Context</i>
			F Inspect, test, and analyze motor vehicle suspension systems. <i>In Context</i>
	⇒	G Inspect, test, and analyze motor vehicle drive train systems. <i>In Context</i>	H Inspect, test, and analyze motor vehicle management systems. <i>In Context</i>
			I Inspect, test, and analyze motor vehicle electrical systems. <i>In Context</i>
	⇒	J Inspect, test, and analyze motor vehicle occupant crash protection systems. <i>In Context</i>	

CORE COMPETENCE SIX: Diagnostics

Competence Statement:		Supporting Competences:		
Demonstrate knowledge, understanding, and proficiency when performing motor vehicle system diagnostics.	⇒	A Perform motor vehicle diagnostics for propulsion systems. <i>In Context</i>	B Perform motor vehicle diagnostics for fuel systems. <i>In Context</i>	C Perform motor vehicle diagnostics for emission control systems. <i>In Context</i>
	⇒	D Perform motor vehicle diagnostics for braking systems. <i>In Context</i>	E Perform motor vehicle diagnostics for steering systems. <i>In Context</i>	F Perform motor vehicle diagnostics for suspension systems. <i>In Context</i>
	⇒	G Perform motor vehicle diagnostics for drive train systems. <i>In Context</i>	H Perform motor vehicle diagnostics for vehicle management systems.	I Perform motor vehicle diagnostics for electrical systems.
	⇒	J Perform motor vehicle diagnostics for occupant crash protection systems. <i>In Context</i>		

CORE COMPETENCE SEVEN: Systems Repair

Competence Statement:		Supporting Competences:		
Demonstrate knowledge, understanding, and proficiency when performing motor vehicle system repairs.	⇒	A Perform motor vehicle repairs on fuel systems.	B Perform motor vehicle repairs on emission control systems.	C Perform motor vehicle repairs on vehicle management systems.
	⇒	D Perform motor vehicle repairs on electrical systems.	E Perform motor vehicle repairs on occupant crash protection systems.	

PERIOD FOUR COURSE CONTENT

CORE COMPETENCE ONE: Foundational Skills

Competence Statement:	Supporting Competences:		
Apply foundational skills essential to convey and receive critical training and workplace information.	A	B	C
	Demonstrate problem solving.	Demonstrate digital literacy.	Demonstrate team and customer communication.
	<i>In Context</i>		<i>In Context</i>
	D	E	
	Demonstrate mentorship.	Demonstrate knowledge of mechanical and electrical fundamentals.	
		<i>In Context</i>	

CORE COMPETENCE TWO: Job Practices and Procedures

Competence Statement:	Supporting Competences:		
Apply knowledge and understanding of practices and procedures associated with on-the-job activities.	A	B	C
	Apply standards and regulations.	Apply organizational and manufacturer's specifications.	Select, use, and maintain personal protective equipment.
	<i>In Context</i>	<i>In Context</i>	<i>In Context</i>
	D	E	
	Demonstrate safety awareness and safe work practices.	Organize work.	
	<i>In Context</i>	<i>In Context</i>	

CORE COMPETENCE THREE: (A) Shop Equipment and Tools

Competence Statement:	Supporting Competences:		
Demonstrate knowledge, understanding, and proficiency regarding the use and maintenance of tools and shop equipment.	A	B	C
	Select, use, and maintain hand tools.	Select, use, and maintain power tools.	Select, use, and maintain speciality tools.
	<i>In Context</i>	<i>In Context</i>	<i>In Context</i>
	D	E	F
	Select, use, and maintain shop equipment.	Select, use, and maintain diagnostic equipment.	Select and use fastening devices.
	<i>In Context</i>	<i>In Context</i>	<i>In Context</i>

CORE COMPETENCE FOUR: Maintenance Services

Competence Statement:		Supporting Competences:		
Demonstrate knowledge, understanding, and proficiency when performing motor vehicle maintenance services.	⇒	A Perform motor vehicle maintenance services on propulsion systems. <i>In Context</i>	B Perform motor vehicle maintenance services on fuel systems. <i>In Context</i>	C Perform motor vehicle maintenance services on emission control systems. <i>In Context</i>
	⇒	D Perform motor vehicle maintenance services on braking systems. <i>In Context</i>	E Perform motor vehicle maintenance services on drive train systems. <i>In Context</i>	F Perform motor vehicle maintenance services on heating, ventilation, and air conditioning systems. <i>In Context</i>
	⇒	G Perform motor vehicle maintenance services on oils, fluids, and greases. <i>In Context</i>	H Perform motor vehicle maintenance services on filters, gaskets, and sealants. <i>In Context</i>	I Perform motor vehicle maintenance services on tires and wheels. <i>In Context</i>
	⇒	J Perform motor vehicle maintenance services on belts and hoses. <i>In Context</i>		

CORE COMPETENCE FIVE: Inspect, Test, and Analyze

Competence Statement:		Supporting Competences:		
Demonstrate knowledge, understanding, and proficiency regarding the inspection, testing and analysis of motor vehicle systems.	⇒	A Inspect, test, and analyze motor vehicle propulsion systems. <i>In Context</i>	B Inspect, test, and analyze motor vehicle emission control systems. <i>In Context</i>	C Inspect, test, and analyze motor vehicle braking systems. <i>In Context</i>
		D Inspect, test, and analyze motor vehicle drive train systems. <i>In Context</i>	E Inspect, test, and analyze motor vehicle management systems. <i>In Context</i>	F Inspect, test, and analyze motor vehicle electrical systems. <i>In Context</i>
		G Inspect, test, and analyze motor vehicle heating, ventilation, and air conditioning systems. <i>In Context</i>	H Inspect, test, and analyze motor vehicle tires and wheels. <i>In Context</i>	

CORE COMPETENCE SIX: Diagnostics

Competence Statement:	Supporting Competences:		
Demonstrate knowledge, understanding, and proficiency when performing motor vehicle system diagnostics.	⇒	A Perform motor vehicle diagnostics for propulsion systems.	B Perform motor vehicle diagnostics for fuel systems.
			C Perform motor vehicle diagnostics for emission control systems.
		D Perform motor vehicle diagnostics for braking systems.	E Perform motor vehicle diagnostics for drive train systems.
	⇒	<i>In Context</i>	F Perform motor vehicle diagnostics for vehicle management systems.
			<i>In Context</i>
		G Perform motor vehicle diagnostics for electrical systems.	H Perform motor vehicle diagnostics for heating, ventilation, and air conditioning systems.
	⇒	<i>In Context</i>	I Perform motor vehicle diagnostics for tires and wheels.
			<i>In Context</i>
			<i>In Context</i>

CORE COMPETENCE SEVEN: Systems Repair

Competence Statement:	Supporting Competences:		
Demonstrate knowledge, understanding, and proficiency when performing motor vehicle system repairs.	⇒	A Perform motor vehicle repairs on propulsion systems.	B Perform motor vehicle repairs on fuel systems.
			C Perform motor vehicle repairs on drive train systems.
	⇒	D Perform motor vehicle repairs on heating, ventilation, and air conditioning systems.	

Period One Course Content

(9 weeks – 270 hours)

Period One Core Competences	Weighting
Foundational Skills	12%
Job Practices and Procedures	8%
Shop Equipment and Tools (A)	10%
Maintenance Services	28%
Inspect, Test, and Analyze	2%
Diagnostics	In Context
Systems Repair	40%

Core Competence 1: Foundational Skills

Weighting – 12%



Automotive Service Technicians utilize a variety of foundational skills that enable them to understand and perform their job responsibilities. They form the basis upon which more specialized knowledge, skills, and abilities are developed. These skills are developed, practiced, and refined explicitly and implicitly throughout the entire apprenticeship education program and are essential components to a successful career in the trade.

The automotive service technician first period will provide instruction on the following skills: digital literacy, team and customer communication, and mechanical and electrical fundamentals.



Apply foundational skills essential to convey and receive critical training and workplace information.

Core Competence 1: Foundational Skills

Supporting Competence	Taxonomy	Weighting
1A. Demonstrate problem solving		In Context
1B. Demonstrate digital literacy	II, III	9%
1C. Demonstrate team and customer communication	I, II, III	9%
1D. Demonstrate knowledge of mechanical and electrical fundamentals	I, II	82%

Core Competence 2: Job Practices and Procedures**Weighting – 8%**

Automotive Service Technicians utilize a variety of on-the-job practices and procedures that enable them to perform their work in a safe, accurate, and efficient manner that meets criteria established by both manufacturers and regulatory agencies. These job practices and procedures are utilized and refined through explicit and implicit instruction extensively throughout the entire apprenticeship education program and are essential components to a successful career in the trade and beyond.

The automotive service technician first period will provide instruction on the following job practices and procedures: apply standards and regulations, apply organizational and manufacturer's specifications, demonstrate safety awareness and safe work practices, and organize work.



Apply knowledge and understanding of practices and procedures associated with on-the-job activities.

Core Competence 2: Job Practices and Procedures

Supporting Competence	Taxonomy	Weighting
2A. Apply standards and regulations	I, II	9%
2B. Apply organizational and manufacturer's specifications	I, II	57%
2C. Select, use, and maintain personal protective equipment		In Context
2D. Demonstrate safety awareness and safe work practices	I, II	24%

Core Competence 2: Job Practices and Procedures

Supporting Competence	Taxonomy	Weighting
2E. Organize work	I, II	10%

Core Competence 3: Shop Equipment and Tools

Weighting – 10%



Automotive Service Technicians utilize various types of shop equipment and tools to perform their work. Completing tasks safely, efficiently, and effectively requires knowledge and experience to select, use, and maintain the appropriate tools for the specific task. Skill in this area will be developed, practiced, and refined explicitly and implicitly throughout the entire apprenticeship education program and is an essential component to a successful career in the trade.

The automotive service technician first period will provide instruction on selecting, using, and maintaining the following: specialty tools, shop equipment, diagnostic equipment, and fastening devices.



Demonstrate knowledge, understanding and proficiency regarding the use and maintenance of tools and shop equipment.

Core Competence 3A: Shop Equipment and Tools

Supporting Competence	Taxonomy	Weighting
3A. Select, use, and maintain hand tools		In Context
3B. Select, use, and maintain power tools		In Context
3C. Select, use, and maintain speciality tools	I, II	54%
3D. Select, use, and maintain shop equipment	I, II	12%
3E. Select, use, and maintain diagnostic equipment	II	19%
3F. Select and use fastening devices	I, II	15%

Core Competence 4: Maintenance Services

Weighting – 28%



Automotive Service Technicians assess the need for and perform regular upkeep and servicing on vehicle systems and components to ensure their safe and efficient operation over time. Proficiency in carrying out these tasks and procedures helps prevent breakdowns, extends vehicle lifespan, and maintains optimal vehicle performance.

The automotive service technician first period will provide instruction on how to perform maintenance services on braking systems, steering systems, heating, ventilation and air conditioning systems, light utility trailers, tires and wheels, and electrical storage devices.



Demonstrate knowledge, understanding and proficiency when conducting motor vehicle maintenance services.

Core Competence 4: Maintenance Services

Supporting Competence	Taxonomy	Weighting
4A. Perform motor vehicle maintenance services on braking systems	I, II, III	16%
4B. Perform motor vehicle maintenance services on steering systems	I, II, III	39%
4C. Perform motor vehicle maintenance services on suspension systems		In Context
4D. Perform motor vehicle maintenance services on drive train systems		In Context
4E. Perform motor vehicle maintenance services on heating, ventilation, and air conditioning systems	I, II	15%
4F. Perform motor vehicle maintenance services on light utility trailers	I, II	8%
4G. Perform motor vehicle maintenance services on oils, fluids, and greases		In Context
4H. Perform motor vehicle maintenance services on filters, gaskets, and sealants		In Context
4I. Perform motor vehicle maintenance services on tires and wheels	I, II, III	13%
4J. Perform motor vehicle maintenance services on belts and hoses		In Context
4K. Perform motor vehicle maintenance services on electrical storage devices	I, II, III	9%

Core Competence 5: Inspect, Test, and Analyze**Weighting – 2%**

Automotive Service Technicians utilize a systematic approach to assess and understand the condition of the systems and components they are tasked with working on. Proficiency in this approach is a necessary step in addressing customer concerns in an efficient and effective manner.

The automotive service technician first period will provide instruction on how to inspect, test and analyze suspension systems.



Demonstrate knowledge, understanding and proficiency regarding the inspection, testing and analysis of motor vehicle systems.

Core Competence 5: Inspect, Test, and Analyze

Supporting Competence	Taxonomy	Weighting
5A. Inspect, test, and analyze motor vehicle braking systems		In Context
5B. Inspect, test, and analyze motor vehicle steering systems		In Context
5C. Inspect, test, and analyze motor vehicle suspension systems	I, II	100%
5D. Inspect, test, and analyze motor vehicle drive train systems		In Context
5E. Inspect, test, and analyze motor vehicle electrical systems		In Context
5F. Inspect, test, and analyze motor vehicle heating, ventilation, and air conditioning systems		In Context
5G. Inspect, test, and analyze motor vehicle light utility trailers		In Context
5H. Inspect, test, and analyze motor vehicle tires and wheels		In Context
5I. Inspect, test, and analyze motor vehicle electrical storage devices		In Context

Core Competence 6: Diagnostics

Weighting – In Context



Automotive Service Technicians utilize a variety of diagnostic tools and techniques to assess and understand the underlying reasons for observed faults, defects or performance issues on the systems and components they are tasked with working on. Proficiency in this area is a necessary step in addressing customer concerns in an efficient and effective manner.

All instruction for diagnostics in the first period will be provided in the context of instruction in systems repair.



Demonstrate knowledge, understanding and proficiency when performing motor vehicle system diagnostics.

Core Competence 6: Diagnostics

Supporting Competence	Taxonomy	Weighting
6A. Perform motor vehicle diagnostics for braking systems		In Context
6B. Perform motor vehicle diagnostics for steering systems		In Context
6C. Perform motor vehicle diagnostics for suspension systems		In Context
6D. Perform motor vehicle diagnostics for drive train systems		In Context
6E. Perform motor vehicle diagnostics for electrical systems		In Context
6F. Perform motor vehicle diagnostics for light utility trailers		In Context
6G. Perform motor vehicle diagnostics for tires and wheels		In Context
6H. Perform motor vehicle diagnostics for electrical storage devices		In Context

Core Competence 7: Systems Repair**Weighting – 40%**

Automotive Service Technicians use a variety of tools and techniques to repair vehicle systems and components to restore the vehicle's functionality, reliability, and safety. Proficiency in this area is necessary to address customer concerns in an efficient and effective manner.

The automotive service technician first period will provide instruction on how to perform repairs on the following systems: braking, steering, suspension, drive train, and electrical.



Demonstrate knowledge, understanding, and proficiency when performing motor vehicle system repairs.

Core Competence 7: Systems Repair

Supporting Competence	Taxonomy	Weighting
7A. Perform motor vehicle repairs on braking systems	I, II, III	33%
7B. Perform motor vehicle repairs on steering systems	I, II, III	34%
7C. Perform motor vehicle repairs on suspension systems	I, II, III	16%
7D. Perform motor vehicle repairs on drive train systems	I, II, II	9%
7E. Perform motor vehicle repairs on electrical systems	I, II, III	8%

Period Two Course Content

(9 weeks – 270 hours)

Period Two Core Competences	Weighting
Foundational Skills	In Context
Job Practices and Procedures	In Context
Shop Equipment and Tools (A)	In Context
Shop Equipment and Tools (B) Oxy Fuel Heating and Cutting and GMAW Welding	7%
Maintenance Services	In Context
Inspect, Test, and Analyze	5%
Diagnostics	15%
Systems Repair	73%

Core Competence 1: Foundational Skills Weighting – In Context



Automotive Service Technicians utilize a variety of foundational skills that enable them to understand and perform their job responsibilities. They form the basis upon which more specialized knowledge, skills, and abilities are developed. These skills are developed, practiced, and refined explicitly and implicitly throughout the entire apprenticeship education program and are essential components to a successful career in the trade.

All instruction for foundational skills in the second period will be provided in the context of instruction in the other core competences.



Apply foundational skills essential to convey and receive critical training and workplace information.

Core Competence 1: Foundational Skills

Supporting Competence	Taxonomy	Weighting
1A. Demonstrate problem solving		In Context
1B. Demonstrate digital literacy		In Context
1C. Demonstrate team and customer communication		In Context
1D. Demonstrate knowledge of mechanical and electrical fundamentals		In Context

Core Competence 2: Job Practices and Procedures**Weighting – In Context**

Automotive Service Technicians utilize a variety of on-the-job practices and procedures that enable them to perform their work in a safe, accurate, and efficient manner that meets criteria established by both manufacturers and regulatory agencies. These job practices and procedures are utilized and refined through explicit and implicit instruction extensively throughout the entire apprenticeship education program and are essential components to a successful career in the trade and beyond.

All instruction for job practices and procedures in the second period will be provided in the context of instruction in the other core competences.



Apply knowledge and understanding of practices and procedures associated with on-the-job activities.

Core Competence 2: Job Practices and Procedures

Supporting Competence	Taxonomy	Weighting
2A. Apply standards and regulations		In Context
2B. Apply organizational and manufacture's specifications		In Context
2C. Select, use, and maintain personal protective equipment		In Context
2D. Demonstrate safety awareness and safe work practices		In Context
2E. Organize work		In Context

Core Competence 3: Shop Equipment and Tools



Automotive Service Technicians utilize various types of shop equipment and tools to perform their work. Completing tasks safely, efficiently, and effectively requires knowledge and experience to select, use, and maintain the appropriate tools for the specific task. Skill in this area will be developed, practiced, and refined explicitly and implicitly throughout the entire apprenticeship education program and is an essential component to a successful career in the trade.

The automotive service technician second period will provide instruction on the use of oxy-fuel equipment for heating and cutting and Gas Metal Arc Welding (GMAW) equipment for welding.

Core Competence 3A: Shop Equipment and Tools

Weighting – In Context



Demonstrate knowledge, understanding and proficiency regarding the use and maintenance of tools and shop equipment.

Core Competence 3A: Shop Equipment and Tools

Supporting Competence	Taxonomy	Weighting
3aA. Select, use, and maintain hand tools		In Context
3aB. Select, use, and maintain power tools		In Context
3aC. Select, use, and maintain specialty tools		In Context
3aD. Select, use, and maintain shop equipment		In Context
3aE. Select, use, and maintain diagnostic equipment		In Context
3aF. Select and use fastening devices		In Context

Core Competence 3B: Oxy Fuel Heating and Cutting and GMAW Welding

Weighting – 7%



Demonstrate knowledge, understanding and proficiency when heating and cutting with oxy-fuel equipment and when welding with GMAW equipment.

Core Competence 3B: Oxy Fuel Heating and Cutting and GMAW Welding

Supporting Competence	Taxonomy	Weighting
3bA. Demonstrate handling procedures for oxy-fuel and GMAW equipment		In Context
3bB. Use oxy-fuel equipment for heating and cutting and GMAW equipment for welding	I, II	100%

Core Competence 4: Maintenance Services**Weighting – In Context**

Automotive Service Technicians assess the need for and perform regular upkeep and servicing on vehicle systems and components to ensure their safe and efficient operation over time. Proficiency in carrying out these tasks and procedures helps prevent breakdowns, extends vehicle lifespan, and maintains optimal vehicle performance.

All instruction for maintenance services in the second period will be provided in the context of instruction in the other core competencies.



Demonstrate knowledge, understanding and proficiency when conducting motor vehicle maintenance services.

Core Competence 4: Maintenance Services

Supporting Competence	Taxonomy	Weighting
4A. Perform motor vehicle maintenance services on propulsion systems		In Context
4B. Perform motor vehicle maintenance services on emission control systems		In Context
4C. Perform motor vehicle maintenance services on drive train systems		In Context
4D. Perform motor vehicle maintenance services on oils, fluids, and greases		In Context
4E. Perform motor vehicle maintenance services on filters, gaskets, and sealants		In Context
4F. Perform motor vehicle maintenance services on belts and hoses		In Context
4G. Perform motor vehicle maintenance services on electrical storage devices		In Context

Core Competence 5: Inspect, Test, and Analyze

Weighting – 5%



Automotive Service Technicians utilize a systematic approach to assess and understand the condition of the systems and components they are tasked with working on. Proficiency in this approach is a necessary step in addressing customer concerns in an efficient and effective manner.

The automotive service technician second period will provide instruction on how to inspect, test and analyze propulsion systems.



Demonstrate knowledge, understanding and proficiency regarding the inspection, testing and analysis of motor vehicle systems.

Core Competence 5: Inspect, Test, and Analyze

Supporting Competence	Taxonomy	Weighting
5A. Inspect, test, and analyze motor vehicle propulsion systems	I, II	100%
5B. Inspect, test, and analyze motor vehicle emission control systems		In Context
5C. Inspect, test, and analyze motor vehicle drive train system		In Context
5D. Inspect, test, and analyze motor vehicle electrical systems		In Context

Core Competence 6: Diagnostics

Weighting – 15%



Automotive Service Technicians utilize a variety of diagnostic tools and techniques to assess and understand the underlying reasons for observed faults, defects or performance issues on the systems and components they are tasked with working on. Proficiency in this area is a necessary step in addressing customer concerns in an efficient and effective manner.

The automotive service technician second period will provide instruction on how to perform diagnostics on the following systems: propulsion and electrical.



Demonstrate knowledge, understanding and proficiency when performing motor vehicle system diagnostics.

Core Competence 6: Diagnostics

Supporting Competence	Taxonomy	Weighting
6A. Perform motor vehicle diagnostics for propulsion systems	I, II, III	40%
6B. Perform motor vehicle diagnostics for emission control systems		In Context
6C. Perform motor vehicle diagnostics for drive train systems		In Context
6D. Perform motor vehicle diagnostics for electrical systems	I, II, III	60%

Core Competence 7: Systems Repair**Weighting – 73%**

Automotive Service Technicians use a variety of tools and techniques to repair vehicle systems and components to restore the vehicle's functionality, reliability, and safety. Proficiency in this area is necessary to address customer concerns in an efficient and effective manner.

The automotive service technician second period will provide instruction on how to perform repairs on the following systems: propulsion, emission control, drive train, and electrical.



Demonstrate knowledge, understanding, and proficiency when performing motor vehicle system repairs.

Core Competence 7: Systems Repair

Supporting Competence	Taxonomy	Weighting
7A. Perform motor vehicle repairs on propulsion systems	I, II, III	35%
7B. Perform motor vehicle repairs on emission control systems	I, II, III	2%
7C. Perform motor vehicle repairs on drive train systems	I, II, III	46%
7D. Perform motor vehicle repairs on electrical systems	I, II, III	17%

Period Three Course Content

(9 weeks – 270 hours)

Period Three Core Competences	Weighting
Foundational Skills	6%
Job Practices and Procedures	In Context
Shop Equipment and Tools (A)	6%
Maintenance Services	In Context
Inspect, Test, and Analyze	In Context
Diagnostics	16%
Systems Repair	72%

Core Competence 1: Foundational Skills

Weighting – 6%



Automotive Service Technicians utilize a variety of foundational skills that enable them to understand and perform their job responsibilities. They form the basis upon which more specialized knowledge, skills, and abilities are developed. These skills are developed, practiced, and refined explicitly and implicitly throughout the entire apprenticeship education program and are essential components to a successful career in the trade.

The automotive service technician third period will provide instruction on mechanical and electrical fundamentals.



Apply foundational skills essential to convey and receive critical training and workplace information.

Core Competence 1: Foundational Skills

Supporting Competence	Taxonomy	Weighting
1A. Demonstrate problem solving		In Context
1B. Demonstrate digital literacy		In Context
1C. Demonstrate team and customer communication		In Context
1D. Demonstrate knowledge of mechanical and electrical fundamentals	I, II, III	100%

Core Competence 2: Job Practices and Procedures**Weighting – In Context**

Automotive Service Technicians utilize a variety of on-the-job practices and procedures that enable them to perform their work in a safe, accurate, and efficient manner that meets criteria established by both manufacturers and regulatory agencies. These job practices and procedures are utilized and refined through explicit and implicit instruction extensively throughout the entire apprenticeship education program and are essential components to a successful career in the trade and beyond.

All instruction for job practices and procedures in the third period will be provided in the context of instruction in the other core competences.



Apply knowledge and understanding of practices and procedures associated with on-the-job activities.

Core Competence 2: Job Practices and Procedures

Supporting Competence	Taxonomy	Weighting
2A. Apply standards and regulations		In Context
2B. Apply organizational and manufacture's specifications		In Context
2C. Select, use, and maintain personal protective equipment		In Context
2D. Demonstrate safety awareness and safe work practices		In Context
2E. Organize work		In Context

Core Competence 3: Shop Equipment and Tools

Weighting – 6%



Automotive Service Technicians utilize various types of shop equipment and tools to perform their work. Completing tasks safely, efficiently, and effectively requires knowledge and experience to select, use, and maintain the appropriate tools for the specific task. Skill in this area will be developed, practiced, and refined explicitly and implicitly throughout the entire apprenticeship education program and is an essential component to a successful career in the trade.

The automotive service technician third period will provide instruction on selecting, using, and maintaining diagnostic equipment.



Demonstrate knowledge, understanding and proficiency regarding the use and maintenance of tools and shop equipment.

Core Competence 3A: Shop Equipment and Tools

Supporting Competence	Taxonomy	Weighting
3aA. Select, use, and maintain hand tools		In Context
3aB. Select, use, and maintain power tools		In Context
3aC. Select, use, and maintain specialty tools		In Context
3aD. Select, use, and maintain shop equipment		In Context
3aE. Select, use, and maintain diagnostic equipment	I, II, III	100%
3aF. Select and use fastening devices		In Context

Core Competence 4: Maintenance Services

Weighting – In Context



Automotive Service Technicians assess the need for and perform regular upkeep and servicing on vehicle systems and components to ensure their safe and efficient operation over time. Proficiency in carrying out these tasks and procedures helps prevent breakdowns, extends vehicle lifespan, and maintains optimal vehicle performance.

All instruction for maintenance services in the third period will be provided in the context of instruction in the other core competencies.



Demonstrate knowledge, understanding and proficiency when conducting motor vehicle maintenance services.

Core Competence 4: Maintenance Services

Supporting Competence	Taxonomy	Weighting
4A. Perform motor vehicle maintenance services on fuel systems		In Context
4B. Perform motor vehicle maintenance services on emission control systems		In Context
4C. Perform motor vehicle maintenance services on oils, fluids, and greases		In Context
4D. Perform motor vehicle maintenance services on filters, gaskets, and sealants		In Context
4E. Perform motor vehicle maintenance services on belts and hoses		In Context

Core Competence 5: Inspect, Test, and Analyze

Weighting – In Context



Automotive Service Technicians utilize a systematic approach to assess and understand the condition of the systems and components they are tasked with working on. Proficiency in this approach is a necessary step in addressing customer concerns in an efficient and effective manner.

All instruction for inspecting, testing, and analyzing systems in the third period will be provided in the context of instruction in the other core competences.



Demonstrate knowledge, understanding and proficiency regarding the inspection, testing and analysis of motor vehicle systems.

Core Competence 5: Inspect, Test, and Analyze

Supporting Competence	Taxonomy	Weighting
5A. Inspect, test, and analyze motor vehicle propulsion systems		In Context
5B. Inspect, test, and analyze motor vehicle fuel systems		In Context

Core Competence 5: Inspect, Test, and Analyze

Supporting Competence	Taxonomy	Weighting
5C. Inspect, test, and analyze motor vehicle emission control systems		In Context
5D. Inspect, test, and analyze motor vehicle braking systems		In Context
5E. Inspect, test, and analyze motor vehicle steering systems		In Context
5F. Inspect, test, and analyze motor vehicle suspension systems		In Context
5G. Inspect, test, and analyze motor vehicle drive train systems		In Context
5H. Inspect, test, and analyze motor vehicle management systems		In Context
5I. Inspect, test, and analyze motor vehicle electrical systems		In Context
5J. Inspect, test, and analyze motor vehicle occupant crash protection systems		In Context

Core Competence 6: Diagnostics**Weighting – 16%**

Automotive Service Technicians utilize a variety of diagnostic tools and techniques to assess and understand the underlying reasons for observed faults, defects or performance issues on the systems and components they are tasked with working on. Proficiency in this area is a necessary step in addressing customer concerns in an efficient and effective manner.

The automotive service technician third period will provide instruction on how to perform diagnostics on the following systems: vehicle management and electrical.



Demonstrate knowledge, understanding and proficiency when performing motor vehicle system diagnostics.

Core Competence 6: Diagnostics

Supporting Competence	Taxonomy	Weighting
6A. Perform motor vehicle diagnostics for propulsion systems		In Context

Core Competence 6: Diagnostics

Supporting Competence	Taxonomy	Weighting
6B. Perform motor vehicle diagnostics for fuel systems		In Context
6C. Perform motor vehicle diagnostics for emission control systems		In Context
6D. Perform motor vehicle diagnostics for braking systems		In Context
6E. Perform motor vehicle diagnostics for steering systems		In Context
6F. Perform motor vehicle diagnostics for suspension systems		In Context
6G. Perform motor vehicle diagnostics for drive train systems		In Context
6H. Perform motor vehicle diagnostics for vehicle management systems	I, II, III	77%
6I. Perform motor vehicle diagnostics for electrical systems.	II, III	23%
6J. Perform motor vehicle diagnostics for occupant crash protection systems.		In Context

Core Competence 7: Systems Repair**Weighting – 72%**

Automotive Service Technicians use a variety of tools and techniques to repair vehicle systems and components to restore the vehicle's functionality, reliability, and safety. Proficiency in this area is necessary to address customer concerns in an efficient and effective manner.

The automotive service technician third period will provide instruction on how to perform repairs on the following systems: fuel, emission control, vehicle management, electrical, and occupant crash protection.



Demonstrate knowledge, understanding, and proficiency when performing motor vehicle system repairs.

Core Competence 7: Systems Repair

Supporting Competence	Taxonomy	Weighting
7A. Perform motor vehicle repairs on fuel systems	I, II, III	29%
7B. Perform motor vehicle repairs on emission control systems	I, II, III	8%
7C. Perform motor vehicle repairs on vehicle management systems	I, II, III	34%
7D. Perform motor vehicle repairs on electrical systems	I, II, III	24%
7E. Perform motor vehicle system repairs on occupant crash protection systems	I, II	5%

Period Four Course Content

(9 weeks – 270 hours)

Period One Core Competences	Weighting
Foundational Skills	4%
Job Practices and Procedures	In Context
Shop Equipment and Tools (A)	In Context
Maintenance Services	In Context
Inspect, Test, and Analyze	In Context
Diagnostics	45%
Systems Repair	51%

Core Competence 1: Foundational Skills

Weighting – 4%



Automotive Service Technicians utilize a variety of foundational skills that enable them to understand and perform their job responsibilities. They form the basis upon which more specialized knowledge, skills, and abilities are developed. These skills are developed, practiced, and refined explicitly and implicitly throughout the entire apprenticeship education program and are essential components to a successful career in the trade.

The automotive service technician fourth period will provide instruction on the following skills: digital literacy and mentorship.



Apply foundational skills essential to convey and receive critical training and workplace information.

Core Competence 1: Foundational Skills

Supporting Competence	Taxonomy	Weighting
1A. Demonstrate problem solving		In Context
1B. Demonstrate digital literacy	I, II	75%
1C. Demonstrate team and customer communication		In Context
1D. Demonstrate mentorship	II	25%
1E. Demonstrate knowledge of mechanical and electrical fundamentals		In Context

Core Competence 2: Job Practices and Procedures**Weighting – In Context**

Automotive Service Technicians utilize a variety of on-the-job practices and procedures that enable them to perform their work in a safe, accurate, and efficient manner that meets criteria established by both manufacturers and regulatory agencies. These job practices and procedures are utilized and refined through explicit and implicit instruction extensively throughout the entire apprenticeship education program and are essential components to a successful career in the trade and beyond.

All instruction for job practices and procedures in the fourth period will be provided in the context of instruction in the other core competences.



Apply knowledge and understanding of practices and procedures associated with on-the-job activities.

Core Competence 2: Job Practices and Procedures

Supporting Competence	Taxonomy	Weighting
2A. Apply standards and regulations		In Context
2B. Apply organizational and manufacture's specifications		In Context
2C. Select, use, and maintain personal protective equipment		In Context
2D. Demonstrate safety awareness and safe work practices		In Context

Core Competence 2: Job Practices and Procedures

Supporting Competence	Taxonomy	Weighting
2E. Organize work		In Context

Core Competence 3: Shop Equipment and Tools

Weighting – In Context



Automotive Service Technicians utilize various types of shop equipment and tools to perform their work. Completing tasks safely, efficiently, and effectively requires knowledge and experience to select, use, and maintain the appropriate tools for the specific task. Skill in this area will be developed, practiced, and refined explicitly and implicitly throughout the entire apprenticeship education program and is an essential component to a successful career in the trade.

All instruction for shop equipment and tools in the fourth period will be provided in the context of instruction in the other core competences.



Demonstrate knowledge, understanding and proficiency regarding the use and maintenance of tools and shop equipment.

Core Competence 3A: Shop Equipment and Tools

Supporting Competence	Taxonomy	Weighting
3aA. Select, use, and maintain hand tools		In Context
3aB. Select, use, and maintain power tools		In Context
3aC. Select, use, and maintain specialty tools		In Context
3aD. Select, use, and maintain shop equipment		In Context
3aE. Select, use, and maintain diagnostic equipment		In Context
3aF. Select and use fastening devices		In Context

Core Competence 4: Maintenance Services

Weighting – In Context



Automotive Service Technicians assess the need for and perform regular upkeep and servicing on vehicle systems and components to ensure their safe and efficient operation over time. Proficiency in carrying out these tasks and procedures helps prevent breakdowns, extends vehicle lifespan, and maintains optimal vehicle performance.

All instruction for maintenance services in the fourth period will be provided in the context of instruction in the other core competences



Demonstrate knowledge, understanding and proficiency when conducting motor vehicle maintenance services.

Core Competence 4: Maintenance Services

Supporting Competence	Taxonomy	Weighting
4A. Perform motor vehicle maintenance services on propulsion systems		In Context
4B. Perform motor vehicle maintenance services on fuel systems		In Context
4C. Perform motor vehicle maintenance services on emission control systems		In Context
4D. Perform motor vehicle maintenance services on braking systems		In Context
4E. Perform motor vehicle maintenance services on drive train systems		In Context
4F. Perform motor vehicle maintenance services on heating, ventilation, and air conditioning systems		In Context
4G. Perform motor vehicle maintenance services on oils, fluids, and greases		In Context
4H. Perform motor vehicle maintenance services on filters, gaskets, and sealants		In Context
4I. Perform motor vehicle maintenance services on tires and wheels		In Context
4J. Perform motor vehicle maintenance services on belts and hoses		In Context

Core Competence 5: Inspect, Test, and Analyze

Weighting – In Context



Automotive Service Technicians utilize a systematic approach to assess and understand the condition of the systems and components they are tasked with working on. Proficiency in this approach is a necessary step in addressing customer concerns in an efficient and effective manner.

All instruction for inspecting, testing, and analyzing systems in the fourth period will be provided in the context of instruction in the other core competences.



Demonstrate knowledge, understanding and proficiency regarding the inspection, testing and analysis of motor vehicle systems.

Core Competence 5: Inspect, Test, and Analyze

Supporting Competence	Taxonomy	Weighting
5A. Inspect, test, and analyze motor vehicle propulsion systems		In Context
5B. Inspect, test, and analyze motor vehicle emission control systems		In Context
5C. Inspect, test, and analyze motor vehicle braking systems		In Context
5D. Inspect, test, and analyze motor vehicle drive train systems		In Context
5E. Inspect, test, and analyze motor vehicle management systems		In Context
5F. Inspect, test, and analyze motor vehicle electrical systems		In Context
5G. Inspect, test, and analyze motor vehicle heating, ventilation, and air conditioning systems		In Context
5H. Inspect, test, and analyze motor vehicle tires and wheels		In Context

Core Competence 6: Diagnostics**Weighting – 45%**

Automotive Service Technicians utilize a variety of diagnostic tools and techniques to assess and understand the underlying reasons for observed faults, defects or performance issues on the systems and components they are tasked with working on. Proficiency in this area is a necessary step in addressing customer concerns in an efficient and effective manner.

The automotive service technician fourth period will provide instruction on how to perform diagnostics on the following systems: propulsion, fuel, emission control, and drive train.



Demonstrate knowledge, understanding and proficiency when performing motor vehicle system diagnostics.

Core Competence 6: Diagnostics

Supporting Competence	Taxonomy	Weighting
6A. Perform motor vehicle diagnostics for propulsion systems	I, II, III	13%
6B. Perform motor vehicle diagnostics for fuel systems	I, II, III	7%
6C. Perform motor vehicle diagnostics for emission control systems	I, II, III	12%
6D. Perform motor vehicle diagnostics for braking systems		In Context
6E. Perform motor vehicle diagnostics for drive train systems	I, II, III	68%
6F. Perform motor vehicle diagnostics for vehicle management systems		In Context
6G. Perform motor vehicle diagnostics for electrical systems		In Context
6H. Perform motor vehicle diagnostics for heating, ventilation, and air conditioning systems		In Context
6I. Perform motor vehicle diagnostics for tires and wheels		In Context

Core Competence 7: Systems Repair**Weighting – 51%**

Automotive Service Technicians use a variety of tools and techniques to repair vehicle systems and components to restore the vehicle's functionality, reliability, and safety. Proficiency in this area is necessary to address customer concerns in an efficient and effective manner.

The automotive service technician fourth period will provide instruction on how to perform repairs on the following systems: propulsion, fuel, drive train, and heating, ventilation, and air conditioning.



Demonstrate knowledge, understanding, and proficiency when performing motor vehicle system repairs.

Core Competence 7: Systems Repair

Supporting Competence	Taxonomy	Weighting
7A. Perform motor vehicle repairs on propulsion systems	I, II, III	35%
7B. Perform motor vehicle repairs on fuel systems	I, II, III	10%
7C. Perform motor vehicle repairs on drive train systems	I, II, III	27%
7D. Perform motor vehicle repairs on heating, ventilation, and air conditioning systems	I, II, III	28%

Taxonomy

Verb List

This is a list of commons verbs used to demonstrate the level and/or complexity of a given taxonomy. It is only intended as a guide and is not meant to exclude additional verbs.

Taxonomy I (*Recall It*)

Verbs	
Convert	Define
Describe	Explain
Identify	List
Recognize	State

Taxonomy II (*Do It*)

Verbs	
Apply	Connect
Demonstrate	Draw
Extract	Locate
Maintain	Perform
Select	Splice
Tap	Terminate
Use	

Taxonomy III (*Solve It*)

Verbs	
Analyze	Calculate
Create	Determine
Develop	Interpret
Program	Solve
Troubleshoot	Verify



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