

TRADE PROFILE

Automotive Service Technician

2016



red-seal.ca
sceau-rouge.ca





TRADE PROFILE

AUTOMOTIVE SERVICE

TECHNICIAN



STRUCTURE OF THE TRADE PROFILE

This profile has two sections that provide a snapshot of the trade's description, and all trade activities as they are organized in the Red Seal Occupational Standard:

Description of the Automotive Service Technician trade: an overview of the trade's duties, work environment, job requirements, similar occupations and career progression

Task Matrix: a chart which outlines graphically the major work activities, tasks and sub-tasks of this trade

Major Work Activity (MWA): the largest division within the standard that is comprised of a distinct set of trade activities

Task: distinct actions that describe the activities within a major work activity

Sub-task: distinct actions that describe the activities within a task

A complete version of the occupational standard, which provides additional detail for the trade activities, skills and knowledge can be found at www.red-seal.ca

DESCRIPTION OF THE AUTOMOTIVE SERVICE TECHNICIAN TRADE

Automotive Service Technician is this trade's official Red Seal occupational title approved by the CCDA. This standard covers tasks performed by Automotive Service Technicians whose occupational title has been identified by some provinces and territories of Canada under the following names:

	NL	NS	PE	NB	QC	ON	MB	SK	AB	BC	NT	YT	NU
Automotive Service Technician	■	■	■	■	■	■	■	■	■	■	■	■	■

Automotive service technicians possess the full range of knowledge and abilities required to perform preventative maintenance, diagnose problems and repair vehicle systems including engines, vehicle management, hybrids, steering, braking, tires, wheels, drivetrains, suspension, electrical, electronics, heating, ventilation and air conditioning (HVAC), restraints, trim and accessories of automotive vehicles and light trucks.

Automotive service technicians may be employed by automotive repair shops, dealerships, automotive specialty repair shops, large organizations that may own a fleet of vehicles and motor vehicle body repair companies.

While the scope of the automotive service technician trade includes many aspects of vehicle service and repair, an increasing number of technicians specialize in specific areas of automotive vehicle repair due to the complexity of today's motor vehicle systems.

Technicians usually work indoors and can expect a work environment that includes noise, fumes, odours, hazardous compounds, drafts, vibrations, and confined spaces. The work often requires considerable standing, bending, crawling, lifting, pulling and reaching.

Some important attributes of automotive service technicians are: good hand-eye coordination, mechanical aptitude, time management skills, logical thinking and decision making skills, excellent communication skills, computer skills and the ability to continue learning as technology advances. It is also imperative to have a valid driver's licence.

With additional training, experienced automotive service technicians may advance to shop supervisor or service manager positions. Also technicians can transfer their skills and knowledge to related occupations such as automotive instructor, truck and transport mechanic, agricultural equipment technician or heavy duty equipment technician. Some technicians may open their own garage or automotive specialty shop.

AUTOMOTIVE SERVICE TECHNICIAN

TASK MATRIX

A – PERFORMS COMMON OCCUPATIONAL SKILLS

6%

Task A-1 Performs safety-related functions 31%	A-1.01 Maintains safe work environment	A-1.02 Uses personal protective equipment (PPE) and safety equipment		
Task A-2 Uses tools, equipment and documentation 50%	A-2.01 Uses tools and equipment	A-2.02 Uses fasteners, tubing, hoses and fittings	A-2.03 Uses hoisting and lifting equipment	
	A-2.04 Uses technical information			
Task A-3 Uses communication and mentoring techniques 19%	A-3.01 Uses communication techniques	A-3.02 Uses mentoring techniques		

B – DIAGNOSES AND REPAIRS ENGINE AND ENGINE SUPPORT SYSTEMS

19%

Task B-4
Diagnoses engine systems
19%

B-4.01 Diagnoses cooling systems	B-4.02 Diagnoses lubricating systems	B-4.03 Diagnoses engine assembly
B-4.04 Diagnoses accessory drive systems		

Task B-5
Repairs engine systems
16%

B-5.01 Repairs cooling systems	B-5.02 Repairs lubricating systems	B-5.03 Repairs engine assembly
B-5.04 Repairs accessory drive systems		

Task B-6
Diagnoses gasoline engine support systems
25%

B-6.01 Diagnoses gasoline fuel delivery and injection systems	B-6.02 Diagnoses gasoline ignition systems	B-6.03 Diagnoses gasoline intake/exhaust systems
B-6.04 Diagnoses gasoline emission control systems		

Task B-7
Repairs gasoline engine support systems
19%

B-7.01 Repairs gasoline fuel delivery and injection systems	B-7.02 Repairs gasoline ignition systems	B-7.03 Repairs gasoline intake/exhaust systems
B-7.04 Repairs gasoline emission control systems		

Task B-8 Diagnoses diesel engine support systems 12%
Task B-9 Repairs diesel engine support systems 9%

B-8.01 Diagnoses diesel fuel delivery and injection systems	B-8.02 Diagnoses diesel intake/exhaust systems	B-8.03 Diagnoses diesel emission control systems
B-9.01 Repairs diesel fuel delivery and injection systems	B-9.02 Repairs diesel intake/exhaust systems	B-9.03 Repairs diesel emission control systems

C – DIAGNOSES AND REPAIRS VEHICLE MODULE COMMUNICATIONS SYSTEMS

9%

Task C-10 Diagnoses vehicle networking systems 67%

C-10.01 Reads diagnostic trouble codes (DTCs)	C-10.02 Monitors data	C-10.03 Interprets test results
C-10.04 Tests system circuitry and components		

Task C-11 Repairs vehicle networking systems 33%

C-11.01 Updates component software	C-11.02 Replaces components	C-11.03 Verifies vehicle module communications system repair
---	------------------------------------	---

D – DIAGNOSES AND REPAIRS DRIVELINE SYSTEMS

15%

Task D-12 Diagnoses driveline systems 59%
--

D-12.01 Diagnoses drive shafts and axles	D-12.02 Diagnoses manual transmissions/transaxles	D-12.03 Diagnoses automatic transmissions/transaxles
D-12.04 Diagnoses clutches	D-12.05 Diagnoses transfer cases	D-12.06 Diagnoses final drive assemblies

Task D-13
Repairs driveline systems
41%

D-13.01 Repairs drive shafts and axles	D-13.02 Repairs manual transmissions/transaxles	D-13.03 Repairs automatic transmissions/transaxles
D-13.04 Repairs clutches	D-13.05 Repairs transfer cases	D-13.06 Repairs final drive assemblies

E – DIAGNOSES AND REPAIRS ELECTRICAL AND COMFORT CONTROL SYSTEMS

17%

Task E-14
Diagnoses electrical systems and components
41%

E-14.01 Diagnoses basic wiring and electrical systems	E-14.02 Diagnoses starting/charging systems and batteries	E-14.03 Diagnoses lighting and wiper systems
E-14.04 Diagnoses entertainment systems	E-14.05 Diagnoses electrical options	E-14.06 Diagnoses instrumentation and information displays
E-14.07 Diagnoses electrical accessories		

Task E-15
Repairs electrical systems and components
19%

E-15.01 Repairs basic wiring and electrical systems	E-15.02 Repairs starting/charging systems and batteries	E-15.03 Repairs lighting and wiper systems
E-15.04 Repairs entertainment systems	E-15.05 Repairs electrical options	E-15.06 Repairs instrumentation and information displays
E-15.07 Installs electrical accessories	E-15.08 Repairs electrical accessories	

Task E-16 Diagnoses heating, ventilation and air conditioning (HVAC) and comfort control systems 25%
Task E-17 Repairs HVAC and comfort control systems 15%

E-16.01 Diagnoses air flow control systems	E-16.02 Diagnoses refrigerant systems	E-16.03 Diagnoses heating systems
E-17.01 Repairs air flow control systems	E-17.02 Repairs refrigerant systems	E-17.03 Repairs heating systems

F – DIAGNOSES AND REPAIRS STEERING AND SUSPENSION, BRAKING, CONTROL SYSTEMS, TIRES, HUBS AND WHEEL BEARINGS

21%

Task F-18 Diagnoses steering and suspension, braking, control systems, tires, wheels, hubs and wheel bearings 59%
Task F-19 Repairs steering and suspension, braking, control systems, tires, wheels, hubs and wheel bearings 41%

F-18.01 Diagnoses steering, suspension and control systems	F-18.02 Diagnoses braking and control systems	F-18.03 Diagnoses tires, wheels, hubs and wheel bearings
F-19.01 Repairs steering, suspension and control systems	F-19.02 Repairs braking and control systems	F-19.03 Repairs tires, wheels, hubs and wheel bearings

G – DIAGNOSES AND REPAIRS RESTRAINT SYSTEMS, BODY COMPONENTS, ACCESSORIES AND TRIM

8%

Task G-20

Diagnoses restraint systems, body components, accessories and trim

64%

G-20.01 Diagnoses restraint systems

G-20.02 Diagnoses wind noises, rattles and water leaks

G-20.03 Diagnoses interior and exterior components, accessories and trim

G-20.04 Diagnoses latches, locks and movable glass

Task G-21

Repairs restraint systems, body components, accessories and trim

36%

G-21.01 Repairs restraint systems

G-21.02 Repairs wind noises, rattles and water leaks

G-21.03 Repairs interior and exterior components, accessories and trim

G-21.04 Repairs latches, locks and movable glass

H – DIAGNOSES AND REPAIRS HYBRID AND ELECTRIC VEHICLES (EV)

5%

Task H-22

Diagnoses hybrid and EV

64%

H-22.01 Implements specific safety protocols for hybrid and EV

H-22.02 Diagnoses hybrid and EV systems

Task H-23

Repairs hybrid and EV

36%

H-23.01 Repairs hybrid vehicle systems

H-23.02 Repairs EV systems