Provincial Scope Document

AUTOMOTIVE SERVICE (Post-Secondary) 2025

Purpose of the Challenge:

To evaluate performance in areas such as theory, diagnosis and repair of automotive systems.

Skills & Knowledge Test:

Competition Topics May Include:

1. DRIVABILITY PROBLEM – FUEL / IGNITION / EMISSION

May Include:

a) Use of fuel pressure testing equipment.
b) Primary and secondary ignition scope pattern analysis (ignition scope will be connected to vehicle).
c) Use of "scan tool" to access data stream trouble codes and information.
d) Use of "four gas analyzer" for testing vehicle emissions.
e) Testing emission control devices or systems.
f) Use of service manuals or electronic information systems for accessing test procedures or technical data.

2. "MIL" LIGHT – DIAGNOSE CAUSE

May Include:

a) Use of "scan tool" to retrieve fault codes and/or clear codes.
b) Use of service manuals or electronic information systems for accessing test procedures or technical data.

3. ELECTRICAL SYSTEMS – LIGHT OR ACCESSORY CIRCUITS

May Include:

a) Visual inspection of components and/or wiring/connection integrity.
b) Use of digital "D.V.O.M." for testing components and/or wiring/connection integrity.
c) Use of service manuals or electronic information systems for accessing test procedures, wiring schematics or technical data.

4. CRANKING SYSTEMS – DIAGNOSIS

May Include:

a) Use of "A.V.R." tester for battery, alternator, starter and circuit testing.
b) Use of digital "D.V.O.M." for "voltage drop" testing and/or wiring/connection integrity.
c) Use of service manuals or electronic information systems for accessing test procedures or technical data.

5. COMPONENT TESTING – ELECTRICAL / ELECTRONIC

May Include:

a) Use of digital "D.V.O.M." for circuit testing.
b) Use of service manuals or electronic information systems for accessing test procedures or technical data.
c) Electric Drive System operation and Safety.

6. C.V. JOINT – DISASSEMBLE, INSPECT, REASSEMBLE

May Include:

a) Use of hand tools required to disassemble and reassemble component.
b) Visual inspection of parts and written recommendations.
c) Use of service manuals or electronic information systems for accessing test procedures or technical data.

7. DIFFERENTIAL RWD – INSPECT AND ADJUST

May Include:

a) Visual inspection of parts and written recommendations.
b) Testing and/or adjusting pinion bearing preloads.
c) Testing and/or adjusting differential side bearing preloads.
d) Testing and/or adjusting pinion and ring gear backlash.
e) Use of "marking" compounds to interpret "drive and coast" patterns.
f) Use of service manuals or electronic information systems for accessing test procedures or technical data.

8. BRAKES – INSPECT, EVALUATION AND REASSEMBLY

May Include:

a) Visual inspection or parts and written recommendations.
b) Use of applicable measuring tools (micrometer, calipers, drum gauge, etc.).
c) Reassembly of brake system.
d) Use of service manuals or electronic information systems for accessing test procedures or technical data.

9. ENGINE BLOCK – COMPONENT INSPECTION AND MEASUREMENT

May Include:

a) Visual inspection of parts and written recommendations.
b) Use of applicable measuring tools (bore gauge, micrometers, calipers, etc.).
c) Use of service manuals or electronic information systems for accessing test procedures or technical data.

10. THEORY EXAM – COMPONENT IDENTIFICATION AND WRITTEN EXAM

May Include:

a) Multiple choice exam that includes questions from all automotive mechanical systems.
b) Multiple choice questions/answers for identifying various automotive components.

11. TOOLS AND EQUIPMENT – FABRCATION

May Include:

a) Select and operate appropriate fabricating hand tools
b) Select and operate appropriate fabricating shop equipment

12. WHEELS, TIRES AND HUBS

May Include:

a) Mounting and balancing tires
b) Repairing tire punctures
c) Measuring and analyzing tire wear
d) Suspension Diagnosis

Specific Requirements:

- CSA safety footwear and safety glasses, and coveralls to be supplied by the contestant.
- Tools, and equipment will be supplied by the committee.
- Contestants may supply and use their own DVOM.

Safety Instructions:

Safety awareness/requirements will be maintained within minimum industry standards at all times. A contestant will not be allowed to compete without the safety equipment noted on this document.

Equipment / Tools / Materials

Supplied by Committee:

- All necessary tools and equipment

Supplied by Contestant:

- CSA Approved or Similar Safety Footwear
- Coveralls or Shop Skirt and Pants
- Safety Glasses

Judging / Distribution of Marks

Each student will be evaluated on:

a)	Diagnosis / Repair / Adjustment procedures and sequences	20 points
b)	Accuracy of Diagnosis / Repairs / Adjustments	20 points
c)	Correct use of equipment and tools	20 points
d)	Correct Safety Procedures	20 points
e)	Efficient use of written and electronic information systems	20 points
	Total	**100 points**
	Note: If Theory Exam is used it will be based on	**100 points**

Technical Committee:

VCC Skills Representative – Kyle Merkt

Mike Coard – Department Head
Cateno Vassallo – Skills Canada National Technical Chair

Alex Romashenko
Jason Devisser
Bill Barnes
Gary Mui
Louis Lui
Andu Keddis
Ryan Lee
Ralph Spolowicz
Jay Copeland
Herb Ruppe
Eric Rasmusson
Ben Yazdani
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