



Cariboo Regional Skills Competition

Scope Document

Automotive Service (Secondary) (2023)

Thompson Rivers University
March 3, 2023

Automotive Service (Secondary) (2023)

Purpose of the Challenge:

To evaluate a student's performance in areas such as automotive theory and diagnosis and repair of automotive systems.

Skills & Knowledge to be Tested: The competition topics MAY include:

1. DRIVABILITY PROBLEM – FUEL / IGNITION / EMISSION

- 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) Testing emission control devices or systems.
- e) Use of service manuals or electronic information systems for accessing test procedures or technical data.

2. “MIL” LIGHT – DIAGNOSE CAUSE

- 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

- 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

- 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

- 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.

6. BRAKES – INSPECT, EVALUATION AND REASSEMBLY

- 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.
- e) Multiple choice questions for identifying various automotive components and tools.

7. OIL CHANGE

- a) Change the oil in a vehicle.

8. THEORY EXAM

- a) Multiple choice questions that include questions from all automotive mechanical systems and servicing techniques.

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:

- Safety footwear (CSA approved or similar)
- Safety glasses
- Coveralls

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:

Technical Chair: John Wrigley jwrigley@tru.ca