



## ANNUAL SKILLS MANITOBA COMPETITION CONTEST DESCRIPTION

**CONTEST DATE:** April 5 - 9, 2021

**CONTEST NAME:** Automobile Technology

**CONTEST NO:** 33

**LEVEL:** Secondary & Post-Secondary & MVM L1-L2 Apprenticeship  
Maximum number of competitor's Secondary level –6 (Note: one competitor per school for the secondary contest)  
Maximum number of competitors' Post-Secondary level – 6 (Colleges and Apprenticeship)

**CONTEST LOCATIONS:** Competitors will complete their stations in the school in which they attend. All stations will be recorded via web cam provided by the host. Proctors will be required to take/submit pictures at key points in the procedures, as outlined in the scoring sheet.

### **CONTEST START TIME AND DURATION:**

Competitors will compete at their own school at the agreed upon time with their proctor. Proctors will guide competitors through the competition area prior to the commencement of the competition.

Contest must be completed and scores submitted by April 13..

Each Station has a time limit of 40 minutes.

Each Station is worth 100 points.

### **PURPOSE OF CHALLENGE:**

Assess the contestant's skills in correctly inspecting, repairing, diagnosing and adjusting detached and / or mounted auto parts, as related to industry standards. Each station will incorporate separate tasks for Secondary and Post-Secondary competitors.

## **SKILLS AND KNOWLEDGE TO BE TESTED:**

### **Safety**

- CSA approved footwear
- Safety glasses / goggles
- **Clean** Coveralls / Shop coats
- All competitors must follow the host school's safety protocol in each of the competition areas

### **Service Information Retrieval**

- Traditional manual use
- Mitchell Pro Demand Online service information.

### **Customer Relations**

- Satisfy customer inquiries
- Interprets customer information to convey diagnostic approach
- Explanation of service work performed in written or verbal form.

### **Powertrain Mechanical**

- Assembly / disassembly of engine components
- Identification of engine components
- Component fault diagnosis
- Inspection, testing, adjustments and service manual interpretation
- Diagnosis and repair procedures for overhead cam timing
- Use of precision measuring devices as practiced in the automotive industry.
- Proper use of micrometers, feeler gauges, plasti-gauge and or straight edges.
- Service Manual interpretation
- Powertrain component servicing and identification (including clutches, transmissions, final drive assemblies, axles, driveshafts and related components)

### **Engine Management: Scanners Provided by the host school**

#### **Vehicles: TBA**

- Inspection and testing
- Drivability diagnostics and Trouble Code interpretation
- Scan Tool / Multi-meter Usage
- Component operation and testing
- Test equipment usage
- Ignition / Emission Systems
- Identify components

#### **Electrical Accessories / Electrical Systems**

#### **Vehicles: TBA**

- On car testing and diagnosis of electrical accessories
- Individual component testing

- Construction of electrical circuits ( **Consulab** )
- Wiring Schematic interpretation
- Diagnostic test equipment usage

### **Braking Systems (excluding air brake systems)**

- Identification of components
- Inspection and diagnosis on Front Disc and Drum Brake Systems
- Assembly and disassembly of brake components
- Routine maintenance / adjustments
- Demonstrate ability to use Tubing / Flaring tooling/equipment
- Measuring Tool usage following the Manitoba Motor Vehicle Safety Inspection Procedures. I.e. Drum sizing / Rotor Runout and/or thickness / Shoe or pad wear etc.

### **Suspension, Steering and Chassis systems**

- On car inspection and testing
- Removal and servicing/replacement of a major front end components
- Routine maintenance / adjustments
- Road trip inspection / Tire and Wheel Inspection
- Component Identification
- Servicing of major steering and suspension components

**Examination Station:** This examination will encapsulate industry / educational standard style of questioning. This medium will allow competitors to use their knowledge to answer questions pertaining to the automotive service industry and automotive fundamentals/concepts. This may also include additional questions on trade specific topics like safety, welding, machine shop practices etc.

### **POINT BREAKDOWN (600 POINTS): Six Stations**

Follows procedures as per industry standards

- Achieves target results.
- Time.
- Compliance with safety regulations.
- Vehicle and equipment care.
- Respects vehicle integrity.
- Respects parts integrity.
- Performs each task using industry-accepted practices.
- Shows a positive attitude to the judges and other contestants.
- Emphasis in marking should be toward overall performance as opposed to completion of station.
- Each practical station shall have equal value and total 100% of the competition.
- **Tie Breaker:** In the event of a tie, the Head Judge and Lead facilitator will exercise their right to use a count back system by combining and then averaging the two scores from the **Electrical and Engine Management Stations**. The winner or medallist will be determined by the highest **total mark** of the combined stations earned by the competitor through the process of a count back.

### **NATIONAL COMPETITION ELIGIBILITY:**

- A mark of **70% or higher** must be scored by the gold medalist in each contest in order to attend the National Skills Competition

**All tools and equipment will be supplied by the Proctoring School**

### **EQUIPMENT, TOOLS, MATERIALS SUPPLIED BY COMPETITOR:**

- Safety goggles / glasses are to be worn at all times. (to be supplied by contestant)
- CSA approved safety footwear must be worn at all times.(to be supplied by contestant)
- Appropriate work apparel is to be worn by all competitors.
- Failure to comply with safety guidelines will result in the disqualification or removal of competitor from competition.
- All tools and equipment will be supplied and generic in nature.

### **EQUIPMENT AND MATERIALS:**

#### **Virtual Competition Resource Support Form**

A \$40 competition resource subsidy is available to all competitors of the Skills Canada Manitoba Competition – Virtual Edition who are required to purchase items for their respective competition.. It is intended for items that were purchased to support competitors. (e.g. food supplies, materials, technical equipment, tools etc.) Please complete the Virtual Competition Resource Support Form found on the Skills Manitoba website. Please note that receipts or a school invoice are required:

### **WORKSITE SAFETY RULES / REQUIREMENTS:**

Judges will be qualified industry representatives, wherever possible. Every attempt is made to ensure judges are qualified industry representatives.

The health, safety and welfare of all individuals involved with Skills Canada Manitoba are of vital importance.

At the discretion of the judges and technical committees, any competitor submission can be denied should the participant not have the required proper safety equipment and/or act in an unsafe manner that can cause harm to themselves or others.

All competitors must complete and submit a Safety Checklist with your project submission. The Safety Checklist is located in the Skills Manitoba Competition Information package as well as on the Skills Manitoba website.

Submissions will not be judged if the completed Safety Checklist is not included in the submission.

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### **THE IMPORTANCE OF ESSENTIAL SKILLS FOR CAREERS IN THE SKILLED TRADES;**

Essential skills are used in nearly every job and at different levels of complexity. They provide the foundation for learning all other skills and enable people to evolve with their jobs and adapt to workplace change. Good Essential Skills means you will understand and remember concepts introduced in technical training. The level of Essential Skills required for most trades is as high as or higher than it is for many office jobs.

The following 9 skills have been identified and validated as key essential skills for the workplace:

Numeracy, Oral Communication, Working with Others, Continuous Learning, Reading Text, Writing, Thinking, Document Use, Digital.

Top Essential Skills for Automotive Service: Document Use, Oral Communication, Thinking: Problem Solving, Decision Making

**IMPORTANT NOTE: Teachers / Instructors and or coaches are not allowed to speak with their competitor or enter any station during the duration of the competition.**

### **FOR MORE INFORMATION, PLEASE CONTACT:**

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