



2018 21st ANNUAL SKILLS MANITOBA COMPETITION CONTEST DESCRIPTION

CONTEST NAME: Automobile Technology

CONTEST NO: 33

LEVEL: Secondary & Post-Secondary & MVM L1-L2 Apprenticeship
Maximum number of competitor's Secondary level – 12 (Note: one competitor per school for the secondary contest)
Maximum number of competitors' Post-Secondary level – 12 (Colleges and Apprenticeship)

CONTEST LOCATION: Red River College - Notre Dame Campus – Automotive Building “M”

CONTEST START TIME AND DURATION:

Registration will take place in Building “M” Room M-107 (Engine Lab).
Competitors are to arrive at 7:00 a.m. and change into their PPE.
Competitor orientation and workstation walk through taking place @ 7:00 a.m. to 7:55 a.m.
Station Leads will guide competitors through the competition area prior to the commencement of the competition.
Contest starts at 8:00 a.m. SHARP in Building “M” Automotive Building.
Each Station has a time limit of 40 minutes.
Each Station is worth 100 points.
There will be no cell phone use allowed for the entirety of the competition. They will be gathered and locked in a secure location for the event and handed back at the end of the competition.

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

- Proper eye protection and clothing **MUST** be worn at all times during the competition.
- CSA approved footwear
- Safety glasses / goggles
- **Clean** Coveralls / Shop coats
- All competitors must follow Red River Colleges safety protocol in each of the competition areas

Service Information Retrieval

- Traditional manual use
- Mitchell On Demand and AllData On Line 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 / Driveline and Manual Transmissions

- Identify components.
- Calculate gear ratios / and speed gear locations
- Transmission and Differential Power flow
- Clutch Diagnosis / Disassembly and reassembly.
- Component failure diagnostics
- Differential Inspection and/or Testing procedures

Engine Mechanical

- Assembly / disassembly of front end engine components (**Honda**)
- 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, plastigage and or straight edges.
- Service Manual interpretation

Engine Management: Snap-On Verus Pro and Verus Edge scanners provided in this Station.

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
- Tubing / Flaring **Project** (To be judged by 3 Judges)
- 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 and Steering

- On car inspection and testing (Ford Product TBA)
- Removal and replacement of a major front end component (FWD)
- Routine maintenance / adjustments
- Road trip inspection / Tire and Wheel Inspection
- Component Identification

Examination Station: This computer lab examination will encapsulate ten industry / educational standard style of questions from each of the six stations through a visual medium. This medium will allow competitors to use their knowledge and recall to answer questions using a digital visual aid format. Ten additional questions on trade specific topics like safety, welding, machine shop practices etc. will add up to seventy questions

POINT BREAKDOWN (700 POINTS): Seven 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

SPECIALTY EQUIPMENT, TOOLS and or MATERIALS WILL BE PROVIDED BY COMMITTEE:

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)
- 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.
- Appropriate work apparel is to be worn by all competitors.

WORKSITE SAFETY RULES / REQUIREMENTS:

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

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.

Failure to comply will result in the removal of the competitor from the competition. Secondary schools or post-secondary schools in violation will lose the right to enter the Auto Service #33 Competition for the next upcoming year.

FOR MORE INFORMATION, PLEASE CONTACT:

Len Grieve (204) 632-3996

lgrieve@rrc.ca