



# **TERRITORIAL COMPETITION**

## **CONTEST DESCRIPTION DOCUMENT**

### **33 - AUTOMOBILE TECHNOLOGY Secondary & Post-Secondary Level**

(NOTE: Scope may change without notice)

#### **PURPOSE OF THE CHALLENGE**

**DURATION: 12 HOURS**

Assess the competitor skills in correctly inspecting, repairing and adjusting detached and/or mounted auto parts, as compared to industry standards. Practical assignments will be based on selected areas of the scope document.

#### **SKILLS AND KNOWLEDGE THAT MAY BE TESTED**

##### **SERVICE INFORMATION RETRIEVAL**

- Electronic system use
- Traditional manual use

##### **THEORY**

- Examination questions regarding all aspects of the repair and diagnosis of automobiles.

##### **FABRICATION**

- Select and operate appropriate fabricating hand tools.

##### **ENGINE MECHANICAL**

- Assembly / disassembly
- Identify components
- Component fault diagnosis
- Inspection and testing
- Diagnosis of cylinder heads and blocks
- Measurements

## **FUEL SYSTEMS**

- Identify components
- Inspection and testing

## **ENGINE MANAGEMENT**

- Identify components
- Drivability diagnostics
- Test equipment usage – Scan tool, Multimeter
- Component operation and testing

## **IGNITION SYSTEMS**

- Identify components
- Inspection and testing
- Diagnostics
- Adjustments

## **ELECTRICAL**

- Starting systems
- Charging systems
- Batteries
- Testing and diagnosis of vehicle electrical equipment

## **BRAKING SYSTEMS (EXCLUDING AIR BRAKES)**

- Identify components
- Inspection and testing
- Assembly / disassembly
- Basic systems
- ABS
- Routine maintenance / adjustments
- Diagnostics

## **SUSPENSION AND STEERING**

- Identify components
- Inspection and testing
- Assembly / disassembly
- Routine maintenance and adjustments
- Diagnostics

## **EQUIPMENT, TOOLS, AND SUPPLIES**

- Competitors must supply their own safety boots, safety glasses, clothing and hearing protection.
- Safety boots and eye protection must be worn at all times.
- All tools and equipment will be supplied and will be generic in nature whenever possible.
- Competitors are not required to supply any tools or equipment.

## SAFETY REQUIREMENTS

Failure to comply with safety regulations may result in disqualification or removal of the competitor from competition.

### SAFETY

All competitors must follow safety standards as per competition area. Proper eye protection and clothing MUST be worn at all times during the competition.

- CSA approved footwear
- Safety glasses / goggles
- Appropriate work apparel must be worn (coveralls, shop coat, pants and shirt).

## SCORING / POINT BREAKDOWN

Each competition station will have a stated maximum available point score. The actual point scores from each station will be added up to calculate an individual competitor's final total score for the competition. In the event of a tie, the written exam mark will be used to determine the winner.

### POINT BREAKDOWN

- Use of safety equipment and safe and clean workspace
- Use and interpretation of service manuals & schematic diagrams
- Logical order of repair
- Proper use of tools
- Precise adjustment of components
- Accurate measurements
- Superior Workmanship
- Identification of faults, codes, or components

## TECHNICAL COMMITTEE MEMBERS - JUDGES

### **Richard Kent, Technical Chair**

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