

# 2012 Edmonton Regional Skills Canada Competition

## Scope Document

### NAIT, Main Campus

### April 14, 2012

<b>EVENT:</b> Auto Service	<b>LEVEL:</b> Secondary
<b>TIMES:</b> Registration: 7:30 AM Orientation: 7:45 AM Competition Start Time: 8:00 AM Lunch: 12:00 PM – 1:00 PM	<b>LOCATION:</b> NAIT, Main Campus - A109 & A111
<b>DURATION:</b> 6 Hours	<b>REGIONALIZED:</b> Yes
Number of Competitors That Will Qualify for the 2012 Provincial Skills Canada Competition: 4	

#### GENERAL DESCRIPTION

Practical testing to identify and evaluate a student's performance of Automotive Service technology, while demonstrating the skills required for maintaining and repairing automobiles.

#### SKILLS AND KNOWLEDGE TO BE TESTED

Practical Demonstrations 100%

#### SENIOR COMPETITION TOPICS – Practical Demonstrations 100%

Component Identification

- The students will be identifying automotive components, both on and off the vehicle.

Drivability & Scan Tools

- The students will diagnose a drivability concern on a General Motors vehicle. Tech 2 scanners will be used for this competition.

Body Electrical

- The students will be diagnosing basic electrical circuits and components using a DVOM. These could include series circuits, parallel circuits and series-parallel circuits. Relay operation may be incorporated into the circuits. DVOM use for making voltage measurements, voltage drops, amperage and resistance measurements.

Brakes and Stability

- The student may be required to identify components of the brake and stability systems. Component removal, inspection, measurement and replacement of the above systems may be tested.

Engine Measurement

- The students will be required to correctly identify various engine components. The engine measurements may include crankshaft or connecting rod bore measurements, camshaft measurements, piston measurements and valve train measurements. The student may also be tested on basic engine timing concepts.

Manual Transmissions

- The students will be required to identify paths of power through a manual transmission. Service checks such as endplay measurements may be tested as well as component descriptions.

Steering and Suspension

- The students will be required to correctly inspect a suspension and steering system. Component identification and system identification may be tested. Adjustments and service procedures for these systems may be tested also.

## EQUIPMENT & MATERIALS

### Equipment and Materials Competitors Must Supply:

The committee will supply all necessary hand tools, materials and electrical test equipment required to perform the tasks.

### Equipment and Materials Supplied by the Committee:

HB Pencil

Calculator

## SAFETY

The health, safety and welfare of all individuals involved with Skills Canada Alberta are of vital importance. Safety is a condition of participation with Skills Canada Alberta and shall not be sacrificed for the sake of expediency. At the discretion of the judges and technical committees, any competitor can be denied the right to participate should they not have the required proper safety equipment and/or act in an unsafe manner that can cause harm to themselves or others.

## COMPETITORS MUST SUPPLY AND WEAR THE FOLLOWING:

CSA Approved Safety Glasses

CSA Approved steel toed shoes/boots

Smock or Coverall

## JUDGING CRITERIA

Each student will be scored for their ability to comprehend written instructions, interpret and perform tasks related to each practical test, and demonstrate common safety practices.

## RELATED CAREER AND TECHNOLOGY STUDIES COURSES

Descriptions of all modules are located at the following website:

<http://www.education.gov.ab.ca/cts>

(ANY OF THESE MODULES THAT PERTAIN TO THE SEVEN COMPETITION AREAS LISTED ABOVE)

MEC 1040: Engine Fundamentals

MEC 1090: Electrical Fundamentals

MEC 2030: Lubrication & Cooling

MEC 2040: Fuel & Exhaust Systems

MEC 2060: Ignition Systems

MEC 2070: Emission Controls

MEC 2090: Electrical Components

MEC 2110: Braking Systems

MEC 2130: Drive Line

MEC 2140: Transmissions/Transaxles

MEC 2150: Suspension Systems

MEC 2160: Steering Systems

MEC 3030: Engine Diagnosis

MEC 3040: Engine Tune Up

MEC 3060: Engine Reconditioning – Head

MEC 3070: Engine Reconditioning – Block

MEC 3090: Computer Systems

MEC 3130: Automatic Transmissions

MEC: 3150: Wheel Alignment



#### **ADDITIONAL INFORMATION**

- Lunch will be provided for all competitors.
- An Awards Ceremony will start at 5:00 PM at the Shaw Theatre (NAIT Main Campus). Snacks and beverages will be provided in the Shaw Theatre lobby starting at 4:00 PM.

#### **COMMITTEE MEMBERS**

Cal Coley  
Calvin Feist  
James Spurr  
Mike Morris  
Darren Jones  
Kevin Kalke  
Rob Ings  
John Shigehiro  
Ron Lavigne  
Russ Belik  
Leo Hoyer  
Dan Brochu  
Rob Prediger