

2012 South East Regional Skills Canada Competition

Auto Service Scope Document

Medicine Hat College

April 26, 2012

EVENT: Auto Service	LEVEL: Secondary
TIMES: Registration: 7:00-7:45 AM Orientation: 7:45 AM Competition Start Time: 8:30 AM	LOCATION: T143
DURATION: 6 Hours	REGIONALIZED: Yes
Number of Competitors That Will Qualify for the 2012 Provincial Skills Canada Competition: 2	

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 EVALUATED

Practical Demonstrations: (85%)

Component Identification & Steering and Suspension

- The students will be identifying automotive components, both on and off the vehicle – service procedures for these systems may also be tested. The students will be required to correctly inspect a suspension and steering system.

Drivability & Scan Tools

- The students will be able to diagnose a drivability concern on a General Motors vehicle. A Tech II, or OTC Genisys scanner will be made available for competitors use.

Body Electrical

- The students will be diagnosing basic electrical circuits and components using a DVCM. These could include series circuits, parallel circuits and series-parallel circuits. Relay operation may be incorporated into the circuits. DVCM 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.

Piston Removal and Cylinder 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.

Cylinder Head Disassembly and Measurement

- Students will be required to disassemble and reassemble a cylinder head using proper techniques. They will be required to make measurements for the condition of the head and note any possible failures.

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.

Theory Exam: (15%)

- This is a broad based Theory Examination (multiply-choice) where competitors will be tested on the following systems of a modern automobile: basic materials tools and skills, power train and drivelines, suspension and steering, brakes, electrical, gasoline and diesel engines, manual transmissions, rear axle assemblies, basic automatic transmissions and power accessories. The exam will test the competitor's knowledge of specific items or systems, problem solving and application of automotive theory.
- Details of this trade's theory section can be found at <http://www.tradesecrets.org>

EQUIPMENT AND MATERIALS:

Supplied by the Competitor:

All competitors are encouraged to bring their own coveralls or shop coats, safety glasses, and scan tools

Supplied by the Committee:

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

SAFETY AND CLOTHING REQUIREMENTS:

The health, safety and welfare of all individuals involved with the regional skills competition are of vital importance. Safety is a condition of participation 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 footwear
- Smock or Coverall

JUDGING CRITERIA:

Judging criteria will be based upon the contest objectives listed in this document. Each student will be scored on their ability to comprehend written instructions, interpret and perform tasks related to each practical test, and demonstrate common safety practices. In addition, each student will be evaluated for performance on theory exam performance.

RELATED CAREER AND TECHNOLOGY STUDIES MODULES:

Module descriptions are available through the following website:

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

MEC 1040: Engine Fundamentals	MEC 2150: Suspension Systems
MEC 1090: Electrical Fundamentals	MEC 2160: Steering Systems
MEC 2030: Lubrication & Cooling	MEC 3030: Engine Diagnosis
MEC 2040: Fuel & Exhaust Systems	MEC 3040: Engine Tune Up
MEC 2060: Ignition Systems	MEC 3060: Engine Reconditioning – Head
MEC 2070: Emission Controls	MEC 3070: Engine Reconditioning – Block
MEC 2090: Electrical Components	MEC 3090: Computer Systems
MEC 2110: Braking Systems	MEC 3130: Automatic Transmissions
MEC 2130: Drive Line	MEC: 3150: Wheel Alignment
MEC 2140: Transmissions/Transaxles	

TECHNICAL JUDGES:

Ray Shannon	MHC – AST Coordinator
Lee Eiserman	MHC – AST Instructor
Corey Rogers	MHC – AST Instructor
Nelson Haas	MHC – HET Instructor
Keon Cliff	MHC – HET Instructor
Chad Schulz	MHC – HET Instructor

COMMITTEE MEMBERS:

Ray Shannon	MHC – AST Coordinator
Jerry Friesen	Brooks Composite High School
Aaron Biro	Crescent Heights High School
Russ Kenschuh	Medicine Hat High School
Roy Graf	Monsignor McCoy high School
Susan Feeny	Project Manager, Southeast Alberta Regional Skills Competition