



CONTEST DESCRIPTION  
DESCRIPTION DE CONCOURS

**OUTDOOR POWER AND RECREATION EQUIPMENT**  
**MÉCANIQUE DE VEHICULES LÉGERS ET D'ÉQUIPEMENT**  
**SECONDARY**  
**NIVEAU SECONDAIRE**

CONTINUOUS LEARNING



FORMATION CONTINUE

DIGITAL



COMPÉTENCES NUMÉRIQUES

DOCUMENT USE



UTILISATION DE DOCUMENTS

NUMERACY



CALCUL

ORAL COMMUNICATION



COMMUNICATION ORALE

READING TEXT



LECTURE

WORKING WITH OTHERS



TRAVAIL D'ÉQUIPE

WRITING



RÉDACTION

THINKING



CAPACITÉ DE RAISONNEMENT

## 1. The Importance of Essential Skills for Careers in the Skilled Trades and Technology

SCC is currently working with Employment and Social Development Canada (ESDC) in order to bring awareness to the importance of Essential Skills that are absolutely crucial for success in the workforce. Part of this ongoing initiative requires the integration and identification of Essential Skills in contest descriptions, projects, and project documents. The next phase and very important aspect of our Essential Skills (ES) initiative is to provide an ES report card to each competitor at the Skills Canada National Competition. The purpose of the ES report card is to inform the competitor about their current level of essential skills based on their competition scores. With this knowledge, the competitor will be made aware which essential skill may require improvement. This will be piloted in a number of areas for 2016 with full implementation in the 2017 Skills Canada National Competition.

This is part of an ongoing initiative that requires the integration and identification of Essential Skills in contest descriptions, projects, and project documents. 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 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 in the legend below:

<sup>1</sup>Numeracy, <sup>2</sup>Oral Communication, <sup>3</sup>Working with Others, <sup>4</sup>Continuous Learning, <sup>5</sup>Reading Text, <sup>6</sup>Writing, <sup>7</sup>Thinking, <sup>8</sup>Document Use, <sup>9</sup>Digital

These essential skills have been identified with in section 2.3 and/or 3.2 of your Contest Description. The top three Essential Skills for your area of competition have been identified on your Project and all other supporting project documents.

## 2. CONTEST INTRODUCTION

### 2.1 Purpose of the Challenge.

To test each student's skill and knowledge in the areas of inspection, measurement, maintenance and repair of small engines and recreational vehicles. Prepare each student for employment in the industry.

### 2.2 Duration of contest.

12 Hours

**2.3 Skills and Knowledge to be tested.**

Theory 25% Practical 75%

All phases of measurement will deal exclusively with metric only.

**3. CONTEST DESCRIPTION**

**3.1** List of documents produced and timeline for when competitors have access to the documents.

DOCUMENT	DATE OF DISTRIBUTION VIA WEBSITE
No other documents will be distributed prior to the competition	

**3.2** Tasks that may be performed during the contest

- To demonstrate the skill and knowledge involved with the service and repair of two and four stroke engines
- Use of metric precision measuring tools
  - Micrometers
  - Dial bore gauge
  - Small hole gauge
  - Vernier caliper
  - Feeler gauge
  - Dial indicator
  - Plastigauge®
- Accurately measure and analyze engine components for wear. <sup>1</sup>
- Fuel system theory, adjustments, measuring and parts identification
- Use of repair manuals for procedures, specifications, and troubleshooting
- Properly record all answers, measurements, and specifications
- Accurately perform compression and crankcase pressure test<sup>7</sup>
- Technical competence and safe work practice/procedures
- Tool handling and recognition
- CVT Transmission service and theory of operation
- General knowledge of 4 Cycle theory
- General knowledge of 2 Cycle theory
- Use of Digital Volt-Ohm Meter
- Ignition, charging, and lighting system theory, inspection, and diagnosis<sup>7</sup>

*Essential Skills – <sup>1</sup>Numeracy, <sup>7</sup>Thinking (Critical), <sup>8</sup>Document Use*

#### 4. EQUIPMENT, MATERIAL, CLOTHING

##### 4.1 Equipment and material provided by Skills/Compétences Canada

- All necessary equipment and engines
- All necessary hand tools – Mactools
- All necessary measuring tools - Mitutoyo
- All necessary specialty tools

**COMPETITORS WILL BE REQUIRED TO USE THE MATERIAL AND EQUIPMENT PROVIDED BY SCC. ALL OTHER MATERIAL AND EQUIPMENT WILL BE REMOVED FROM THE SKILL AREA.**

##### 4.2 Equipment and material provided by the competitor

- Competitors are not required to supply any tools.

##### 4.3 Required clothing (Provided by competitor)

- Clean unmarked t-shirt (work shirt) and work pants

#### 5. SAFETY REQUIREMENTS

##### 5.1 List of required personal protective equipment (PPE) provided by competitors

- Safety Glasses
- CSA approved Safety footwear
- Hearing protection (optional)

**Note:** Competitors will not be allowed to compete if the above items are not brought and used

#### 6. ASSESSMENT

##### 6.1 Point breakdown

POINT BREAKDOWN	/100
100 Question Multiple Choice General Theory Test	10
Electrical Circuit Theory and Diagnostics Lab	10
CVT Service and Theory Lab	10
Ignition and Charging System Diagnostics Lab	10
Carburetor and EFI Service and Theory Lab	10
Hydraulic Disc Brake and Final Drive Service and Theory Lab	10
Engine Component Precision Measuring Lab	10
4 Stroke Crank Bearing Measurement Lab	10
1 Cylinder DOHC Valve Adjustment and Cam Timing Lab	10
2 Stroke Compression and Crankcase Pressure Test Lab	10

## 7. ADDITIONAL INFORMATION

### 7.1 Consecutive translation

If consecutive translation is required on site, the Skills/Compétences Canada Provincial/Territorial offices must advise Skills/Compétences Canada National Secretariat a minimum of 1 month prior to the competition or this service might not be guaranteed.

### 7.2 Test Project change at the Competition

Where the Test Project has been circulated to Competitors in advance, NTC shall change a maximum of 30% of the work content. Please refer to the Competition Rules.

### 7.3 Tie (No ties are allowed)

In the event of a tie, the competitor with the highest score in the Theory test will be declared the winner. If a second tie occurs, the competitor with the highest score in the Engine Component Precision Measuring Lab criteria will be declared the winner.

### 7.4 Competition Rules

Please refer to the competition rules of the Skills Canada National Competition.

## 8 NATIONAL TECHNICAL COMMITTEE MEMBERS

Member Organisation	Name	Email address
Manitoba – Chair	Dustin Blackwell	dblackwell@rrc.mb.ca
Ontario	Roy King	
Quebec	Jean-Pierre Lanteri	
Alberta	Mike Gamble	
New Brunswick	Victor Vienneau	
Saskatchewan	Cecil Machnee	
Yukon	Greg Fischer	
Prince Edward Island	Scott Harvey	