



# 27th ANNUAL SKILLS MANITOBA COMPETITION

## CONTEST SCOPE

### APRIL 10, 2025

**CONTEST NAME:** Heavy Vehicle Technology

**CONTEST NO:** 49

**CATEGORY:** Post-Secondary

**CONTEST LOCATION:** Red River College - Heavy Equipment Training Center  
Building Z

**CONTEST START TIME AND DURATION:**  
8:00am - 6 hours

#### **PURPOSE OF CHALLENGE:**

To give students and apprentices the opportunity to apply their knowledge and abilities in the trade of Heavy Equipment repair. To build confidence and elevate self-esteem in contestants and to provide a non-threatening and friendly atmosphere where they can compete in a fair and equitable competition.

#### **SKILLS AND KNOWLEDGE TO BE TESTED:**

##### **1. Hydraulics**

Diagnose various hydraulic system faults.  
Safely identify Hydraulic pressures and flows

##### **2. Measuring**

Perform precision measuring on various components  
Selection of the proper measuring devices

##### **3. Electrical Diagnostics**

Perform electrical tests on heavy duty equipment using various pieces of electrical test equipment. Perform electrical fault analysis through the use of diagnostic equipment

#### **4. Machine Shop (Layout and Bench work)**

Perform a layout on a selected piece of metal. Drilling, taping and bolt extraction.  
Selection of proper drill bits and taps.

#### **5. Perform Engine Adjustments**

Perform adjustments on engine top end components  
Adjust engine, fuel timing, and injectors  
Engine brake adjustments

#### **6. Drive Train Repair and Analysis.**

Perform adjustments and or Analyze Drive components.  
Adjust if necessary to Clutches, Rear axles, or Transmissions related to Heavy Equipment.

#### **POINT BREAKDOWN / 1000 TOTAL:**

Each practical station shall have equal value and total 100% of the competition total

#### **Contestants will be judged on the following:**

Follows correct procedures  
Achieves target results  
Time  
Compliance with safety regulations  
Vehicle and equipment care  
Uses industry accepted practices  
Shows a positive attitude toward other contestants and judges

#### **NATIONAL COMPETITION ELIGIBILITY:**

- A mark of **70% or higher** must be scored by the gold medalist in order to attend the National Skills Competition

#### **EQUIPMENT, TOOLS, MATERIALS TO BE PROVIDED BY COMMITTEE:**

- All tools and equipment will be provided by the committee

#### **EQUIPMENT, TOOLS, MATERIALS TO BE SUPPLIED BY COMPETITOR:**

- Competitors may use their own Flashlight, Multimeter.

#### **WORKSITE SAFETY RULES / REQUIREMENTS:**

- Proper Safety glasses/Goggles and clothing must be worn at all times during the competition.
- CSA approved footwear
- Coveralls

## **THE IMPORTANCE OF SKILLS FOR SUCCESS FOR CAREERS IN THE SKILLED TRADES AND TECHNOLOGY:**

In response to the evolving labour market and changing skill needs, the Government of Canada has launched the new Skills for Success (former Essential Skills) model defining nine key skills needed by Canadians to participate in work, in education and training, and in modern society more broadly. SCC is currently working with Employment and Social Development Canada (ESDC) to bring awareness of the importance of these skills that are absolutely crucial for success in Trade and Technology careers. Part of this ongoing initiative requires the integration and identification of the Skills for Success in contest descriptions, projects, and project documents. The following 9 skills have been identified and validated as key skills for success for the workplace: 1.Numeracy, 2.Communication, 3.Collaboration, 4.Adaptability, 5.Reading, 6.Writing, 7.Problem Solving, 8.Creativity and Innovation, 9.Digital

## **TECHNICAL COMMITTEE MEMBERS CONTACT INFORMATION:**

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