



26th ANNUAL SKILLS MANITOBA COMPETITION CONTEST SCOPE APRIL 11, 2024

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. Written examination

Theoretical knowledge of all aspects of heavy equipment service.

3. Measuring

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

4. 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

5. Machine Shop (Layout and Bench work)

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

6. Perform Engine Adjustments

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

7. Drive Train Repair and Analysis.

Perform adjustments and or Analyze Drive components.
Make adjustments 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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