



# 2010 13<sup>th</sup> ANNUAL SKILLS MANITOBA COMPETITION CONTEST SCOPE

**CONTEST NAME:** Precision Machining

**CONTEST NO:** 03

**CATEGORY:** Secondary and Post Secondary

**NOTE:** Secondary Level: 2 students from each school for a maximum of 8.  
Post-Secondary Level: 2 students from each school for a maximum of 4.

**CONTEST LOCATION:** Red River College - Notre Dame Campus

**CONTEST START TIME AND DURATION:**  
5 hours starting immediately after the opening ceremonies

**PURPOSE OF CHALLENGE:**  
To assess the contestant's precision machining skills and trade knowledge through practical testing at the secondary and post-secondary levels.

**SKILLS AND KNOWLEDGE TO BE TESTED:**  
The contest will occur over one day. The contest involves machining a project using a conventional engine lathe.

Conventional Engine Lathe (may include any of the following):

- External and internal cylindrical turning
- Taper turning (internal and external)
- External threading
- Grooving (external)
- Drilling and Reaming
- Tapping
- Applied metrology
- Assembly of parts

**POINT BREAKDOWN / 1000 TOTAL:**  
\* Project completion 100  
\* Compliance with occupational health and safety regulations 100  
\* Compliance with dimensions, tolerances, and fits as specified in plans 700

\* Compliance with appropriate surface finish and deburring 100  
TOTAL 1000

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

- All appropriate measuring tools for the project.
- All appropriate Lathe cutting tools.
- Material: Turning project- 12L14 steel

Each contestant will be supplied with a maximum of two work piece blanks for the projects.

**NOTE!** If a second work piece blank is required, the contestant will lose 10% of the total project mark.

**NOTE!** Contestants may be required to share some of the supplied tools and equipment.

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

Contestants may bring the following optional items:

- lathe tools
- measuring tools
- hand tools
- machinist ready reference
- project drawings
- calculators

**WORKSITE SAFETY RULES / REQUIREMENTS:**

- CSA approved safety glasses and safety boots or shoes.
- Shop coat or equivalent

\*Prior to the start of the competition, contestants and coaches will be provided with a comprehensive safety orientation, which will include machine operations.

Henri Trudel – Safety Officer

**SPECIAL CONDITIONS / ADDITIONAL INFORMATION:**

PROJECT DRAWINGS:

All project drawings will be provided one month prior to the Skills Manitoba competition. No dimensions will be identified.

**FOR MORE INFORMATION PLEASE CONTACT TECHNICAL COMMITTEE MEMBERS:**

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