Skills Canada National Competition

SCOPE DOCUMENT	
Competition Year	2012
Competition location	Edmonton, AB
Trade Number	03
Trade Name	Precision Machining
Level	Secondary and Post-Secondary

1. INTRODUCTION

1.1 Purpose of the Challenge.

Assess the contestant's precision machining skills and trade knowledge through practical testing at the secondary & post secondary levels.

1.2 Duration of contest.

6.5 hours

1.3 Skills and Knowledge to be tested.

The contest will occur over two days. The contest will consist of 7 hours of practical machining. The contest involves machining a project using a conventional engine lathe and a conventional vertical milling machine.

2. CONTEST DESCRIPTION

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

DOCUMENT	DATE OF DISTRIBUTION VIA WEBSITE
Project drawing	April 14th , 2012

2.2 Tasks that may be performed during the contest

Conventional Engine Lathe may include

- External and internal cylindrical turning
- External and Internal threading
- Grooving (external and/or internal)
- Applied metrology
- Assembly of parts
- Knurling
- Taper turning
- Trade related calculations

Conventional Vertical Milling Machine may include

- Conventional vertical milling
- Drilling ,Reaming and Tapping
- Pocket milling
- Use of offset boring head
- Applied metrology
- Milling of Dovetails including calculations
- Assembly of parts
- Trade related calculations

3. EQUIPMENT, MATERIAL, CLOTHING

3.1 Equipment and material provided by Skills/Compétences Canada

The dimensioning system or equipment may be metric or imperial (Dependant on machine availability).

- Competitors may be required to share supplied tools and equipment (dependant on availability)
- All cutting tools
- May include, Low carbon steel
- May include, Brass
- May include, Bronze
- May include, Aluminum
- Each contestant will be supplied with the material to complete the lathe and milling machine projects.

3.2 Equipment and material provided by the competitor

- Competitors will not be allowed to use their own cutting tools
- 6-8 inch digital or dial caliper
- 0 to 4 inch outside micrometers (no digital micrometers permitted)
- Depth micrometers (no digital micrometers permitted)
- 6 inch rule
- Set of feeler gauges
- dial indicators-magnetic (back and/or magnetic base)
- dial test indicator
- edge finder
- parallel set
- telescoping gauges
- files and deburring tools
- Machinist's Ready Reference/Machinery's Handbook.(optional)
- Other reference material.(optional)
- A non-programmable scientific calculator.(optional)

3.3 Required clothing (provided by the competitor)

- Shop coat or equivalent. (optional)

4. SAFETY REQUIREMENTS

4.1 List of required personal protective equipment (PPE) provided by the competitor

☑ Safety Glasses	☑ CSA approved safety shoes	☐ Latex gloves
☐ Safety Gloves	☐ Welding helmet	☐ Dust Mask
☐ Hard Hat	☐ Welding gloves	☐ Leather gloves
☐ Hearing protection	☐ Respiratory protection	☐ No PPE required

Prior to the start of the competition contestants and coaches will be provided with a comprehensive safety rules orientation which will include machine operations. This orientation will be up to one hour.

4.2 List of required personal protective equipment provided by Skills/Compétences Canada

☐ Safety Glasses	☐ CSA approved safety shoes	☐ Latex gloves
☐ Safety Gloves	☐ Welding helmet	☐ Dust Mask
☐ Hard Hat	☐ Welding gloves	☐ No PPE required
☐ Hearing protection	☐ Respiratory protection	☑ No additional PPE will be supplied by S/CC

5. ASSESSMENT

5.1 Point breakdown

POINT BREAKDOWN / 1000 TOTAL	Turning	Milling
Compliance with occupational health and safety regulations	50	50
Compliance with dimensions, tolerances and fits as specified in plan	850	850
Compliance with appropriate surface finish and deburring	100	100

6. ADDITIONAL INFORMATION

6.1 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.

6.2 Software requirements

If French software is required 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 software might not be guaranteed.

6.3 Computer keyboard requirements

English Keyboards will be provided, if a French keyboard is required 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 keyboard might not be guaranteed.

6.4 Tie (No ties are allowed)

In the event of a tie the contestant who completes the project in the shortest period of time will be awarded the higher placement.

6.5 Competition rules

Please refer to the competition rules for all general SCNC information.

7. NATIONAL TECHNICAL COMMITTEE MEMBERS

Region	Name	Email address
Pacific Region	Gary Lindquist	gary.lindquist@sait.ca
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