Standards Council of Canada
Conseil canadien des normes

TESTING AND CALIBRATION LABORATORY ACCREDITATION PROGRAM (LAP)

Scope of Accreditation

Accredited Laboratory No. 22

Legal Name of Accredited Laboratory:	**Transcat Canada, Inc.**
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SCC File Number:	15006
Accreditation Standard(s):	ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories
Fields of Testing:	Mechanical/Physical
Initial Accreditation:	1985-10-08
Most Recent Accreditation:	2020-08-06
Accreditation Valid to:	2023-10-08

MACHINERY

COORDINATE MEASURING MACHINE - MEASURING/TESTING SERVICES FOR:

Automotive:

Engine, transmission, suspension, trim and other parts and assemblies.

Aerospace:

Turbine blades, engine parts, landing gear, trim and other parts and assemblies.

Power Generation:

Turbine blades, generator parts, pump parts and other parts and assemblies.

Dies, Jigs, Tooling and Fixtures:

Jigs, tooling and inspection fixtures for areas of work including (but not limited to) those listed above.

Typical Materials used in manufacture:

Metal, plastic, composites, ceramic and glass.

Typical Processes used in manufacture:

Machined parts, fabrications, castings, forgings, stampings, extruded and punched parts.

Parameter	Range	CMC (Calibration and Measurement Capability) [1] (±)	Remarks
Length (L)			
Three-dimensional	2500, 1500, 1000 mm X, Y, Z	(0.006 + 9E-6 L) mm where, L is in mm	See notes
Three-dimensional	98, 59, 39 in X, Y, Z	(0.00024 + 9E-6 L) in where, L is in inches	See notes
Two-dimensional	In X - Y plane	(0.006 + 9E-6 L) mm where, L is in mm	See notes
Two-dimensional	In X - Y plane	(0.00024 + 9E-6 L) in where, L is in inches	See notes
One-dimensional	In either X or Y axes	(0.008 + 4E-6 L) mm where, L is in mm	See notes
One-dimensional	In either X or Y axes	(0.00036 + 4E-6 L) in where, L is in inches	See notes

Maximum load bearing capacity = 15000 lb.

Notes:

1. Calibration and Measurement Capability (CMC) is the smallest uncertainty of measurement that the laboratory can achieve within its scope of accreditation when performing routine testing of nearly ideal measuring equipment or measurement standards. The actual measurement uncertainty of specific workpiece geometrical measurements as performed by the laboratory may be greater than the published CMC due to the less than ideal geometrical characteristics of the workpiece.

   CMC represents an expanded uncertainty using a coverage factor, k=2.

2. The CMC listed can only be achieved if the item to be measured is suitable for such measurement.

3. The CMC listed is presented in a simplified form. Inspection and test results are given at the reference temperature (20°C).
4. ISO 14253-2 "*Geometrical Product Specification (GPS)-Inspection by measurement of workpieces and measuring equipment - Part 2: Guide to the estimation of uncertainty in GPS measurement, in calibration of measuring equipment and in product verification"* was used as a reference document.
5. Careful consideration is given to part clamping and fixturing to prevent deformation of the inspected parts. Some parts, particularly sheet metal may deform under small probing forces, it is the customers' responsibility to provide suitable fixturing to reduce this deformation to an acceptable level. However, studies (i.e. gauge repeatability and reproducibility) may be employed to quantify such effects. Such studies would only be carried out if requested by a customer and with appropriate funding.
6. Successful testing of parts/fixtures requires that all necessary information be made available at the time of inspection. Such information would include (but is not limited to) part material properties (i.e. coefficient of linear thermal expansion for the material, and associated uncertainty), engineering drawings and specifications.
7. The responsibility for adverse affects on measurement uncertainty due to poorly dimensioned or datumed drawings rests with the customer.
8. During the measurement process it may be found that properties of critical features (or datums) such as large form errors may adversely affect measurement uncertainties (see note 2). If this is discovered during the measurement process a revised uncertainty statement will be issued to the customer.
9. The CMC listed is appropriate for the measurement of length between 2 probed points (in 1, 2 or 3 dimensions). Additional uncertainties of measurement should be included for the relationships between geometric features (or datums) (i.e. the distance between 2 holes), additional uncertainties can be included in the uncertainty budget and this is carried out on a case-by-case basis (see note 4).
10. The CMC is evaluated on a case-by-case basis using proprietary software. Individual uncertainty assessments will be presented to the customer with the written quotation for the inspection work. Acceptance of the quotation is also considered to be an acceptance of the accompanying uncertainty statement.

    In some situations the technician responsible for the measurement may choose to replace or verify measurements using measurement techniques other than a CMM. In this case, the specific measurement uncertainty will not be represented by the CMC listed above. However, this process is logged and the measurement uncertainty for the supplemental instrument is known.

Other (specify):

Number of Scope Listings: 1

Other scope (s)

The laboratory has a separately issued Calibration scope that can be viewed at:
https://www.scc.ca/en/accreditation/laboratoires/transcat-canada-burlington

Notes:

ISO/IEC 17025: General Requirements for the Competence of Testing and Calibration Laboratories

This document forms part of the Certificate of Accreditation issued by the Standards Council of Canada (SCC). The original version is available in the Directory of Accredited Laboratories on the SCC website at www.scc.ca.

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