



# CERTIFICATE OF ACCREDITATION

## The ANSI National Accreditation Board

Hereby attests that

**McCann Equipment Ltd.**

**10255 Côte de Liesse**

**Dorval, QC H9P 1A3**

**(and satellite locations as shown on the scope)**

Fulfills the requirements of

**ISO/IEC 17025:2017**

In the field of

**CALIBRATION**

This certificate is valid only when accompanied by a current scope of accreditation document.  
The current scope of accreditation can be verified at [www.anab.org](http://www.anab.org).

Jason Stine, Vice President

Expiry Date: 29 June 2027

Certificate Number: L2097-1



This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017.  
This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory  
quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).



## SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

### **McCann Equipment Ltd.**

10255 Côte de Liesse  
Dorval, QC, H9P 1A3  
Bill Blagdon 905-829-3393

### **CALIBRATION**

ISO/IEC 17025 Accreditation Granted: **29 June 2025**

Certificate Number: **AC-2097-1** Certificate Expiry Date: **29 June 2027**

### **Satellite locations in:**

[Edmonton, AB Canada \(L2097.01-1\)](#)

[Oakville, ON Canada \(L2097.02-1\)](#)

[Winnipeg, MB Canada \(L2097.03-1\)](#)

[Salem, NH USA \(L2097.05-1\)](#)

[Quebec, QC Canada \(L2097.06-1\)](#)

## Accredited Services performed at Main Site laboratory

(L2097-1)

### McCann Equipment Ltd.

10255 Côte de Liesse  
Dorval, QC, H9P 1A3  
Bill Blagdon 905-829-3393

#### Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Torque Indicator, Display Units	(-16 to 16) mV (-2 to 2) V	0.02 % of reading + 20 nV 0.02 % of reading + 20 nV	McCann Procedure with Fluke 8588A Multimeter

#### Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Adjustable Hand Torque Wrenches <sup>1</sup>	(0.6 to 100) lbf-in (8 to 50) lbf-ft (50 to 250) lbf-ft (250 to 750) lbf-ft (750 to 2 000) lbf-ft	0.79 % of applied load 0.71 % of applied load 0.7 % of applied load 0.71 % of applied load 1.1 % of applied load	McCann procedure based on ISO 6789:2017 with Electronic Transducer and Display Unit with ISO loader.
Dial Indicating Hand Torque Wrenches <sup>1</sup>	(0.6 to 15) lbf-in (15 to 600) lbf-in (50 to 250) lbf-ft (250 to 600) lbf-ft (600 to 2 000) lbf-ft	0.66 % of applied load 0.64 % of applied load 0.59 % of applied load 0.78 % of applied load 0.84 % of applied load	McCann procedure based on ISO 6789:2017 with Electronic Transducer and Display Unit with ISO loader.
Electronic Measurement Hand Torque Wrenches <sup>1</sup>	(0.2 to 250) lbf-ft (250 to 600) lbf-ft (600 to 750) lbf-ft (750 to 1 000) lbf-ft	0.68 % of applied load 0.61 % of applied load 0.55 % of applied load 0.52 % of applied load	McCann procedure based on ISO 6789:2017 with Electronic Transducer and Display Unit with ISO loader.
Torque Limiting Screwdrivers	(0.6 to 10) lbf-in (10 to 80) lbf-in (80 to 130) lbf-in	1.2 % of applied load 0.82 % of applied load 0.88 % of applied load	McCann procedure based on ISO 6789:2017 with Electronic Transducer and Display Unit
Pneumatic Torque Tools <sup>1</sup>	(0.4 to 5 000) lbf-ft (5 000 to 60 000) lbf-ft	1.1 % of applied load 0.93 % of applied load	McCann Procedure with Electronic Transducer and Display Unit

## Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Hydraulic Torque Tools <sup>1</sup>	(127 to 5 000) lbf-ft (5 000 to 25 000) lbf-ft (25 000 to 60 000) lbf-ft	0.79 % of applied load 0.83 % of applied load 0.83 % of applied load	McCann Procedure with Electronic Transducer and Display Unit
Electronic Torque Tools (Clutch Type)	(1.5 to 110) lbf-in	1.1 % of applied load	McCann Procedure with Electronic Transducer and Display Unit
Electronically Controlled Torque Tools	(100 to 6 700) lbf-ft (6 700 to 15 000) lbf-ft	0.43 % of applied load 0.33 % of applied load	McCann Procedure with Electronic Transducer and Display Unit
Hand Torque Multipliers	Up to 5 000 lbf-ft (5 000 to 35 000) lbf-ft	0.69 % of reading 0.66 % of reading	McCann Procedure with Electronic Transducer and Display Unit
Torque Closure Meters	(1 to 100) lbf-in	0.62 % of applied load	McCann Procedure with Electronic Transducer and Display Unit
Torque Transducers	4 ozf-in to 1 200 lbf-ft	0.07 % of applied load	BS7882:2017 Dead Weight Test and Unsupported Beams
Torque Testers	4 ozf-in to 1 200 lbf-ft	0.07 % of applied load	BS7882:2017 Dead Weight Test and Unsupported Beams
Torque Transducers	(350 to 60 000) lbf-ft	0.07 % of applied load	BS7882:2017 Hydraulically Actuated Supported Beam
Torque Testers	0.75 lbf-in to 2 500 lbf-ft	0.53 % of applied load	McCann Procedure with Electronic Transducer, Display Unit and ISO Loader
Tensiometers	(5 to 2 000) lbf	0.44 % of applied load	McCann Procedure with Electronic Transducer and Display Unit
Bolt Tension Meters	(200 to 10 000) lbf	0.16 % of applied load	Skidmore J: Load Cell and Display; Comparison Method
Bolt Tension Meters	(1 000 to 30 000) lbf	0.16 % of applied load	Skidmore J: Load Cell and Display; Comparison Method
Bolt Tension Meters	(2 000 to 110 000) lbf	0.16 % of applied load	Skidmore M, ML, RL, RJ: Load Cell and Display; Comparison Method

This Scope of Accreditation, version 013, was last updated on: 17 June 2025 and is valid only when accompanied by the Certificate.

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## Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Bolt Tension Meters	(1 000 to 126 000) lbf	0.13 % of applied load	Skidmore MZ: Load Cell and Display; Comparison Method
Bolt Tension Meters	(2 000 to 170 000) lbf	0.13 % of applied load	Skidmore H & HS: Load Cell and Display; Comparison Method
Bolt Tension Meters	(2 500 to 225 000) lbf	0.13 % of applied load	Skidmore K: Load Cell and Display; Comparison Method
Bolt Tension Meters	(5 000 to 450 000) lbf	0.13 % of applied load	Skidmore Super KL: Load Cell and Display; Comparison Method
Force Testing Systems – Compression Only	(20 000 to 300 000) lbf (100 000 to 996 000) lbf	0.08 % of applied load 0.08 % of applied load	ASTM E4-16 using ASTM E74 Class A Load Cells and Displays
Hydraulic Tensioners	(8 to 3 164) kN	0.75 % of applied load	McCann Procedure with Bolt Load Meter
Hydraulic Cylinders <sup>2</sup>	(0.5 to 500) tn	0.13 % of applied load	McCann Procedure with Load Cell and Display
Pressure Gauges	(1 to 30 000) psig	0.23 % of reading	ASME B40.100 with Electronic Dead Weight Tester, Fluke RPM4-E-DWT A200Me-L
Pressure Gauges	(0.1 to 300) psig	0.38 % of reading	ASME B40.100 with Additel Digital Tester
Pressure Gauges	(0.1 to 300) psig	0.11 % of applied load	ASME B40.100 with Druck Pressure Transducer for In-House Calibration of Additel Digital Tester

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## Accredited Services performed at satellite laboratory

(L2097.01-1)

**McCann Equipment Ltd.**

4817 – 89<sup>th</sup> Street

Edmonton, AB T6E 5L3

Bill Blagdon 905-829-3393

### Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Adjustable Hand Torque Wrenches	(0.6 to 100) lbf-in (8 to 50) lbf-ft (50 to 250) lbf-ft (250 to 750) lbf-ft (750 to 2 000) lbf-ft	0.79 % of applied load 0.71 % of applied load 0.7 % of applied load 0.71 % of applied load 1.1 % of applied load	McCann procedure based on ISO 6789:2017 with Electronic Transducer, Display Unit and ISO loader
Dial Indicating Hand Torque Wrenches	(0.6 to 15) lbf-in (15 to 600) lbf-in (50 to 250) lbf-ft (250 to 600) lbf-ft (600 to 2 000) lbf-ft	0.66 % of applied load 0.64 % of applied load 0.59 % of applied load 0.78 % of applied load 0.84 % of applied load	McCann procedure based on ISO 6789:2017 with Electronic Transducer, Display Unit and ISO loader
Electronic Measurement Hand Torque Wrenches	(0.2 to 250) lbf-ft (250 to 600) lbf-ft (600 to 750) lbf-ft (750 to 1 000) lbf-ft	0.68 % of applied load 0.61 % of applied load 0.55 % of applied load 0.52 % of applied load	McCann procedure based on ISO 6789:2017 with Electronic Transducer, Display Unit and ISO loader
Torque Limiting Screwdrivers	(0.6 to 10) lbf-in (10 to 80) lbf-in (80 to 130) lbf-in	1.2 % of applied load 0.82 % of applied load 0.88 % of applied load	McCann procedure based on ISO 6789:2017 with Electronic Transducer and Display Unit
Pneumatic Torque Tools	(0.4 to 10 000) lbf-ft (10 000 to 25 000) lbf-ft	1.1 % of applied load 0.93 % of applied load	McCann procedure with Electronic Transducer and Display Unit
Hydraulic Torque Tools	(127 to 5 000) lbf-ft (5 000 to 25 000) lbf-ft	0.79 % of applied load 0.83 % of applied load	McCann procedure with Electronic Transducer and Display Unit
Hand Torque Multipliers	Up to 5 000 lbf-ft (5 000 to 25 000) lbf-ft	0.69 % of applied load 0.66 % of applied load	McCann procedure with Electronic Transducer and Display Unit



## Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Torque Testers	0.75 lbf-in to 2 500 lbf-ft	0.53 % of applied load	McCann procedure with Electronic Transducer, Display Unit and ISO Loader
Electronically Controlled Torque Tools	(100 to 6 700) lbf-ft (6 700 to 15 000) lbf-ft	0.43 % of applied load 0.33 % of applied load	McCann procedure with Electronic Transducer and Display Unit
Pressure Gauges	(1 to 30 000) psig	0.23 % of reading	ASME B40.100 with Electronic Dead Weight Tester, Fluke RPM-4-E-DWT A200M-B
Pressure Gauges	(0.1 to 300) psig	0.38 % of reading	ASME B40.100 with Additel Digital Tester
Bolt Tension Meters	(200 to 10 000) lbf	0.16 % of applied load	Skidmore J: Load Cell and Display; Comparison Method
Bolt Tension Meters	(1 000 to 30 000) lbf	0.16 % of applied load	Skidmore J: Load Cell and Display; Comparison Method
Bolt Tension Meters	(2 000 to 110 000) lbf	0.16 % of applied load	Skidmore M, ML, RL, RJ: Load Cell and Display; Comparison Method
Bolt Tension Meters	(1 000 to 126 000) lbf	0.13 % of applied load	Skidmore MZ: Load Cell and Display; Comparison Method
Bolt Tension Meters	(2 000 to 170 000) lbf	0.13 % of applied load	Skidmore H & HS: Load Cell and Display; Comparison Method
Hydraulic Tensioners	(8 to 3 164) kN	0.75 % of applied load	McCann Procedure and Bolt Load Meter

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## Accredited Services performed at satellite laboratory

(L2097.02-1)

### McCann Equipment Ltd.

2750 Coventry Road  
Oakville, ON L6H 6R1  
Bill Blagdon 905-829-3393

#### Electrical – DC/Low Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Torque Indicator, Display Units	(-16 to 16) mV (-2 to 2) V	0.02 % of reading + 20 nV 0.02 % of reading + 20 nV	McCann Procedure with Fluke 8508A Multimeter

#### Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Adjustable Hand Torque Wrenches	(0.6 to 100) lbf·in (8 to 50) lbf·ft (50 to 250) lbf·ft (250 to 750) lbf·ft (750 to 2 000) lbf·ft	0.79 % of applied load 0.71 % of applied load 0.7 % of applied load 0.71 % of applied load 1.1 % of applied load	McCann procedure based on ISO 6789:2017 with Electronic Transducer and Display Unit with ISO loader
Dial Indicating Hand Torque Wrenches	(0.6 to 15) lbf·in (15 to 600) lbf·in (50 to 250) lbf·ft (250 to 600) lbf·ft (600 to 2 000) lbf·ft	0.66 % of applied load 0.64 % of applied load 0.59 % of applied load 0.78 % of applied load 0.84 % of applied load	McCann procedure based on ISO 6789:2017 with Electronic Transducer and Display Unit with ISO loader
Electronic Measurement Hand Torque Wrenches	(0.2 to 250) lbf·ft (250 to 600) lbf·ft (600 to 750) lbf·ft (750 to 1 000) lbf·ft	0.68 % of applied load 0.61 % of applied load 0.55 % of applied load 0.52 % of applied load	McCann procedure based on ISO 6789:2017 with Electronic Transducer and Display Unit with ISO loader
Torque Limiting Screwdrivers	(0.6 to 10) lbf·in (10 to 80) lbf·in (80 to 130) lbf·in	1.2 % of applied load 0.82 % of applied load 0.88 % of applied load	McCann procedure based on ISO 6789:2017 with Electronic Transducer and Display Unit
Pneumatic Torque Tools	(0.4 to 10 000) lbf·ft (10 000 to 25 000) lbf·ft	1.1 % of applied load 0.93 % of applied load	McCann Procedure with Electronic Transducer and Display Unit

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## Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Hydraulic Torque Tools	(127 to 5 000) lbf-ft (5 000 to 25 000) lbf-ft	0.79 % of applied load 0.83 % of applied load	McCann Procedure with Electronic Transducer and Display Unit
Electronic Torque Tools (Clutch Type)	(1.5 to 110) lbf-in	1.1 % of applied load	McCann Procedure with Electronic Transducer and Display Unit
Electronically Controlled Torque Tools	(100 to 6 700) lbf-ft (6 700 to 15 000) lbf-ft	0.43 % of applied load 0.33 % of applied load	McCann Procedure with Electronic Transducer and Display Unit
Electronically Controlled Torque Tools <sup>1</sup> (Desoutter)	(1 to 4 000) N·m	0.57 % of applied load	McCann Procedure with Electronic Transducer and Display Unit
Hand Torque Multipliers	Up to 5 000 lbf-ft (5 000 to 25 000) lbf-ft	0.69 % of reading 0.66 % of reading	McCann Procedure with Electronic Transducer and Display Unit
Torque Closure Meters	(1 to 100) lbf-in	0.62 % of applied load	McCann Procedure with Electronic Transducer and Display Unit
Torque Transducers, Torque Testers	1.5 lbf-in to 1 200 lbf-ft	0.07 % of applied load	ISO BS7882:2017 with Dead Weight Test and Unsupported Beams
Torque Testers	0.75 lbf-in to 2 500 lbf-ft	0.53 % of applied load	McCann Procedure with Electronic Transducer, Display Unit and ISO Loader
Pressure Gauges	(1 to 30 000) psig	0.23 % of reading	ASME B40.100 with Electronic Dead Weight Tester, Fluke RPM4-E-DWT A200Me-L
Pressure Gauges	(0.1 to 300) psig	0.38 % of reading	ASME B40.100 with Additel Digital Tester
Bolt Tension Meters	(200 to 10 000) lbf	0.16 % of applied load	Skidmore J: Load Cell and Display; Comparison Method
Bolt Tension Meters	(1 000 to 30 000) lbf	0.16 % of applied load	Skidmore J: Load Cell and Display; Comparison Method

## Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Bolt Tension Meters	(2 000 to 110 000) lbf	0.16 % of applied load	Skidmore M, ML, RL, RJ: Load Cell and Display; Comparison Method
Bolt Tension Meters	(1 000 to 126 000) lbf	0.13 % of applied load	Skidmore MZ: Load Cell and Display; Comparison Method
Bolt Tension Meters	(2 000 to 170 000) lbf	0.13 % of applied load	Skidmore H & HS: Load Cell and Display; Comparison Method
Hydraulic Tensioners	(8 to 3 164) kN	0.75 % of applied load	McCann Procedure with Bolt Load Meter

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## Accredited Services performed at satellite laboratory

(2097.03-1)

### McCann Equipment Ltd.

1448 Wellington Ave.  
Winnipeg, MB R3E 0K5  
Bill Blagdon 905-829-3393

#### Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Adjustable Hand Torque Wrenches	(0.6 to 100) lbf-in (8 to 50) lbf-ft (50 to 250) lbf-ft (250 to 750) lbf-ft (750 to 2 000) lbf-ft	0.79 % of applied load 0.71 % of applied load 0.7 % of applied load 0.71 % of applied load 1.1 % of applied load	McCann procedure based on ISO 6789:2017 with Electronic Transducer, Display Unit and ISO loader
Dial Indicating Hand Torque Wrenches	(0.6 to 15) lbf-in (15 to 600) lbf-in (50 to 250) lbf-ft (250 to 600) lbf-ft (600 to 2 000) lbf-ft	0.66 % of applied load 0.64 % of applied load 0.59 % of applied load 0.78 % of applied load 0.84 % of applied load	McCann procedure based on ISO 6789:2017 with Electronic Transducer, Display Unit and ISO loader
Electronic Measurement Hand Torque Wrenches	(0.2 to 250) lbf-ft (250 to 600) lbf-ft (600 to 750) lbf-ft (750 to 1 000) lbf-ft	0.68 % of applied load 0.61 % of applied load 0.55 % of applied load 0.52 % of applied load	McCann procedure based on ISO 6789:2017 with Electronic Transducer, Display Unit and ISO loader
Torque Limiting Screwdrivers	(0.6 to 10) lbf-in (10 to 80) lbf-in (80 to 130) lbf-in	1.2 % of applied load 0.82 % of applied load 0.88 % of applied load	McCann procedure based on ISO 6789:2017 with Electronic Transducer and Display Unit
Pneumatic Torque Tools	(0.4 to 10 000) lbf-ft	1.1 % of applied load	McCann Procedure with Electronic Transducer and Display Unit
Hydraulic Torque Tools	(127 to 5 000) lbf-ft (5 000 to 10 000) lbf-ft	0.79 % of applied load 0.83 % of applied load	McCann Procedure with Electronic Transducer and Display Unit
Electronic Torque Tools (Clutch Type)	(1.5 to 110) lbf-in	1.1 % of applied load	McCann Procedure with Electronic Transducer and Display Unit

## Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Electronically Controlled Torque Tools	(100 to 6 700) lbf·ft (6 700 to 15 000) lbf·ft	0.43 % of applied load 0.33 % of applied load	McCann Procedure with Electronic Transducer and Display Unit
Hand Torque Multipliers	Up to 5 000 lbf·ft (5 000 to 10 000) lbf·ft	0.69 % of applied load 0.66 % of applied load	McCann Procedure with Electronic Transducers and Display Units
Torque Testers	0.75 lbf·in to 2 500 lbf·ft	0.53 % of applied load	McCann Procedure with Electronic Transducer, Display Unit and ISO Loader
Pressure Gauges	(200 to 15 000) psig	0.23 % of reading	Conformity Assessment to Accuracy Requirement with Digital Pressure Tester.
Pressure Gauges	(0.1 to 300) psig	0.38 % of reading	ASME B40.100 with Additel Digital Tester

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## Accredited Services performed at satellite laboratory

(L2097.05-1)

### Eastern Pneumatics & Hydraulics Inc., A division of McCann Equipment Ltd.

40 Lowell Road, Unit #3  
Salem, NH 03079  
Bill Blagdon 905-829-3393

#### Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Adjustable Hand Torque Wrenches	(0.6 to 100) lbf-in (8 to 50) lbf-ft (50 to 250) lbf-ft (250 to 750) lbf-ft (750 to 2 000) lbf-ft	0.79 % of applied load 0.71 % of applied load 0.7 % of applied load 0.71 % of applied load 1.1 % of applied load	McCann procedure based on ISO 6789:2017 with Electronic Transducer, Display Unit and ISO Loader
Dial Indicating Hand Torque Wrenches	(0.6 to 15) lbf-in (15 to 600) lbf-in (50 to 250) lbf-ft (250 to 600) lbf-ft (600 to 2 000) lbf-ft	0.66 % of applied load 0.64 % of applied load 0.59 % of applied load 0.78 % of applied load 0.84 % of applied load	McCann procedure based on ISO 6789:2017 with Electronic Transducer, Display Unit and ISO Loader
Electronic Measurement Hand Torque Wrenches	(0.2 to 250) lbf-ft (250 to 600) lbf-ft (600 to 750) lbf-ft (750 to 1 000) lbf-ft	0.68 % of applied load 0.61 % of applied load 0.55 % of applied load 0.52 % of applied load	McCann procedure based on ISO 6789:2017 with Electronic Transducer, Display Unit and ISO Loader
Torque Limiting Screwdrivers	(0.6 to 10) lbf-in (10 to 80) lbf-in (80 to 130) lbf-in	1.2 % of applied load 0.82 % of applied load 0.88 % of applied load	McCann procedure based on ISO 6789:2017 with Electronic Transducer and Display Unit
Pneumatic Torque Tools	(0.4 to 10 000) lbf-ft	1.1 % of applied load	McCann Procedure with Electronic Transducer and Display Unit
Hydraulic Torque Tools	(127 to 5 000) lbf-ft (5 000 to 10 000) lbf-ft	0.79 % of applied load 0.83 % of applied load	McCann Procedure with Electronic Transducer and Display Unit
Electronic Torque Tools (Clutch Type)	(1.5 to 110) lbf-in	1.1 % of applied load	McCann Procedure with Electronic Transducer and Display Unit

## Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Electronically Controlled Torque Tools	(100 to 6 700) lbf·ft (6 700 to 15 000) lbf·ft	0.43 % of applied load 0.33 % of applied load	McCann Procedure with Electronic Transducer and Display Unit
Hand Torque Multipliers	Up to 5 000 lbf·ft (5 000 to 10 000) lbf·ft	0.69 % of applied load 0.69 % of applied load	McCann Procedure with Electronic Transducers and Display Units
Torque Testers	0.75 lbf·in to 2 500 lbf·ft	0.53 % of applied load	McCann Procedure with Electronic Transducer, Display Unit and ISO Loader
Bolt Tension Meters	(200 to 10 000) lbf	0.16 % of applied load	Skidmore J: Load Cell and Display; Comparison Method
Bolt Tension Meters	(1 000 to 30 000) lbf	0.16 % of applied load	Skidmore J: Load Cell and Display; Comparison Method
Bolt Tension Meters	(2 000 to 110 000) lbf	0.16 % of applied load	Skidmore M, ML, RL, RJ: Load Cell and Display; Comparison Method
Bolt Tension Meters	(1 000 to 126 000) lbf	0.13 % of applied load	Skidmore MZ: Load Cell and Display; Comparison Method
Bolt Tension Meters	(2 000 to 170 000) lbf	0.13 % of applied load	Skidmore H & HS: Load Cell and Display; Comparison Method
Hydraulic Bolt Tensioners	(8 to 1 779.25) kN	0.75 % of applied load	McCann Procedure with Bolt Load Meter
Hydraulic Cylinders <sup>2</sup>	(0.5 to 100) tn	0.13 % of applied load	McCann Procedure with Load Cell and Display
Pressure Gauges	(0.1 to 300) psig	0.38 % of reading	ASME B40.100 with Additel Digital Tester

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## Accredited Services performed at satellite laboratory

(L2097.06-1)

### McCann Equipment Ltd.

925, ave Newton, #107  
Quebec City, QC G1P 4M2  
Bill Blagdon 905-829-3393

#### Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Adjustable Hand Torque Wrenches	(0.6 to 100) lbf·in (8 to 50) lbf·ft (50 to 250) lbf·ft (250 to 750) lbf·ft (750 to 1 000) lbf·ft	0.79 % of applied load 0.71 % of applied load 0.7 % of applied load 0.71 % of applied load 1.1 % of applied load	McCann procedure based on ISO 6789:2017 with Electronic Transducer, Display Unit and ISO loader
Dial Indicating Hand Torque Wrenches	(0.6 to 15) lbf·in (15 to 600) lbf·in (50 to 250) lbf·ft (250 to 600) lbf·ft (600 to 1 000) lbf·ft	0.66 % of applied load 0.64 % of applied load 0.59 % of applied load 0.78 % of applied load 0.84 % of applied load	McCann procedure based on ISO 6789:2017 with Electronic Transducer, Display Unit and ISO loader
Electronic Measurement Hand Torque Wrenches	(0.2 to 250) lbf·ft (250 to 600) lbf·ft (600 to 750) lbf·ft (750 to 1 000) lbf·ft	0.68 % of applied load 0.61 % of applied load 0.55 % of applied load 0.52 % of applied load	McCann procedure based on ISO 6789:2017 with Electronic Transducer, Display Unit and ISO loader
Torque Limiting Screwdrivers	(0.6 to 10) lbf·in (10 to 80) lbf·in (80 to 130) lbf·in	1.2 % of applied load 0.82 % of applied load 0.88 % of applied load	McCann procedure based on ISO 6789:2017 with Electronic Transducer and Display Unit
Pneumatic Torque Tools	(0.4 to 5 000) lbf·ft	1.1 % of applied load	McCann Procedure with Electronic Transducer and Display Unit
Hydraulic Torque Tools	(127 to 5 000) lbf·ft	0.79 % of applied load	McCann Procedure with Electronic Transducer and Display Unit
Hand Torque Multipliers	Up to 5 000 lbf·ft	0.69 % of applied load	McCann Procedure with Electronic Transducer and Display Unit

## Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Electronic Torque Tools (Clutch Type)	(1.5 to 110) lbf-in	1.1 % of applied load	McCann Procedure with Electronic Transducer and Display Unit
Electronically Controlled Torque Tools	(100 to 5 000) lbf-ft	0.43 % of applied load	McCann Procedure with Electronic Transducer and Display Unit
Bolt Tension Meters	(200 to 10 000) lbf	0.16 % of applied load	Skidmore J: Load Cell and Display; Comparison Method
Bolt Tension Meters	(1 000 to 110 000) lbf	0.16 % of applied load	Skidmore J: Load Cell and Display; Comparison Method
Bolt Tension Meters	(2 000 to 110 000) lbf	0.16 % of applied load	Skidmore M, ML, RL, RJ: Load Cell and Display; Comparison Method
Bolt Tension Meters	(1 000 to 126 000) lbf	0.13 % of applied load	Skidmore MZ: Load Cell and Display; Comparison Method
Bolt Tension Meters	(2 000 to 170 000) lbf	0.13 % of applied load	Skidmore H, HS: Load Cell and Display; Comparison Method
Hydraulic Cylinders <sup>2</sup>	(0.5 to 200) tn	0.13 % of applied load	McCann Procedure with Load Cell and Display
Hydraulic Tensioners	(8 to 3 164) kN	0.75 % of applied load	McCann Procedure with Bolt Load Meter
Pressure Gauges	(1 to 30 000) psig	0.23 % of reading	ASME B40.100 with Electronic Dead Weight Tester, Fluke RPM4-E-DWT A200M-B
Pressure Gauges	(0.1 to 300) psig	0.38 % of reading	ASME B40.100 with Crystal Digital Tester
Vacuum Gauges	(-13.5 to 0) psi	0.22 % of reading	McCann Procedure with comparison to Crystal Digital Gauge. (Accuracy Only)

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Calibration and Measurement Capability (CMC) is expressed in terms of the measurement parameter, measurement range, expanded uncertainty of measurement and reference standard, method, and/or equipment. The expanded uncertainty of measurement is expressed as the standard uncertainty of the measurement multiplied by a coverage factor of 2 ( $k=2$ ), corresponding to a confidence level of approximately 95%.

Notes:

1. On-site calibration service is available for this parameter, since on-site conditions are typically more variable than those in the laboratory, larger measurement uncertainties are expected on-site than what is reported on the accredited scope.
2. tn = short ton.
3. Unless otherwise specified in the far-right column, the calibration procedure being used was internally written by the laboratory.
4. Site specific sections are identified by city and suffix (L2097.xx-1) for convenience.



Jason Stine, Vice President

