



# 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).

A handwritten signature in black ink, appearing to read 'R. Douglas Leonard Jr.', is positioned above a horizontal line.

R. Douglas Leonard Jr., VP, PILR SBU

Expiry Date: 29 June 2023

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  
Kathy McCann-Quart 514-636-6344

### **CALIBRATION**

Valid to: **June 29, 2023**

Certificate Number: **L2097-1**

### **Satellite locations in:**

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

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

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

[Surrey, BC Canada \(L2097.04-1\)](#)

[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

Kathy McCann-Quart

514-636-6344

**Electrical – DC/Low Frequency**

| Parameter/Equipment                | Range                         | Expanded Uncertainty of Measurement (+/-)              | Reference Standard, Method, and/or Equipment |
|------------------------------------|-------------------------------|--|--|
| Torque Indicator and Display Units | (-16 to 16) mV<br>(-2 to 2) V | 0.01 % of reading + 20 nV<br>0.01 % of reading + 20 nV | McCann Procedure with 8508A Fluke 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<br>(8 to 50) lbf-ft<br>(50 to 250) lbf-ft<br>(250 to 750) lbf-ft<br>(750 to 2 000) lbf-ft  | 0.79 % of applied load<br>0.71 % of applied load<br>0.7 % of applied load<br>0.71 % of applied load<br>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<br>(15 to 600) lbf-in<br>(50 to 250) lbf-ft<br>(250 to 600) lbf-ft<br>(600 to 2 000) lbf-ft | 0.66 % of applied load<br>0.64 % of applied load<br>0.59 % of applied load<br>0.78 % of applied load<br>0.84 % of applied load |  |
| Electronic Measurement Hand Torque Wrenches | (0.2 to 250) lbf-ft<br>(250 to 600) lbf-ft<br>(600 to 750) lbf-ft<br>(750 to 1 000) lbf-ft                     | 0.68 % of applied load<br>0.61 % of applied load<br>0.55 % of applied load<br>0.52 % of applied load                           |  |
| Torque Limiting Screwdrivers                | (0.6 to 10) lbf-in<br>(10 to 80) lbf-in<br>(80 to 130) lbf-in  | 1.2 % of applied load<br>0.82 % of applied load<br>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<br>(10 000 to 25 000) lbf-ft  | 1.1 % of applied load<br>0.93 % of applied load  | McCann Procedure with Electronic Transducer and Display Unit   |
| Hydraulic Torque Tools                      | (127 to 5 000) lbf-ft<br>(5 000 to 25 000) lbf-ft  | 0.79 % of applied load<br>0.83 % of applied load   |  |

**Mass and Mass Related**

| <b>Parameter/Equipment</b>             | <b>Range</b>                                      | <b>Expanded Uncertainty of Measurement (+/-)</b> | <b>Reference Standard, Method, and/or Equipment</b>                           |
|--|---|--|---|
| 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                             | 0.97 % of applied load                           |   |
| Hand Torque Multipliers                | (127 to 5 000) lbf-ft<br>(5 000 to 25 000) lbf-ft | 2.2 % of applied load<br>3.9 % of applied load   |   |
| Torque Closure Meters                  | (1 to 100) lbf-in                                 | 0.62 % of applied load                           |   |
| Torque Transducers                     | 4 ozf-in to 1 200 lbf-ft                          | 0.11 % of applied load                           | BS7882:2017 Dead Weight Test and Unsupported Beams                            |
| Torque Testers                         | (250 to 1 200) lbf-ft                             | 0.11 % of applied load                           |   |
| Torque Transducers                     | (250 to 5 000) lbf-ft                             | 0.11 % of applied load                           | BS7882:2017 Dead Weight Test and Supported Beam                               |
| Torque Transducers                     | (500 to 50 000) lbf-ft                            | 0.46 % of applied load                           | McCann Procedure based on BS7882:2017 with Hydraulic Activated Supported Beam |
| Torque Tester                          | (1.5 to 750) lbf-ft                               | 0.53 % of applied load                           | McCann Procedure with Electronic Transducer, Display Unit and ISO Loader      |
| Tensiometers                           | (10 to 2 000) lbf                                 | 0.44 % of applied load                           | McCann Procedure with Electronic Transducer and Display Unit                  |
| Bolt Tension Meter                     | (200 to 10 000) lbf                               | 0.54 % of applied load                           | Skidmore J: Load Cell and Display   |
|  | (1 000 to 30 000) lbf                             | 0.55 % of applied load                           | Skidmore J: Load Cell and Display   |
|  | (2 000 to 110 000) lbf                            | 0.66 % of applied load                           | Skidmore M, ML, RL, RJ: Load Cell and Display                                 |
|  | (1 000 to 126 000) lbf                            | 0.54 % of applied load                           | Skidmore MZ: Load Cell and Display  |
|  | (2 000 to 170 000) lbf                            | 0.66 % of applied load                           | Skidmore H & HS: Load Cell and Display  |
|  | (2 500 to 225 000) lbf                            | 0.71 % of applied load                           | Skidmore K: Load Cell and Display   |

**Mass and Mass Related**

| <b>Parameter/Equipment</b>                  | <b>Range</b>  | <b>Expanded Uncertainty of Measurement (+/-)</b> | <b>Reference Standard, Method, and/or Equipment</b>   |
|---|---|--|---|
| Bolt Tension Meter                          | (5 000 to 450 000) lbf                              | 0.74 % of applied load                           | Skidmore Super K:<br>Load Cell and Display  |
| Force Testing Systems –<br>Compression Only | (14 000 to 200 000) lbf<br>(122 000 to 997 000) lbf | 0.08 % of applied load<br>0.08 % of applied load | ASTM E4-16 using ASTM<br>E74 Class A Load Cells<br>and Displays   |
| Hydraulic Tensioners                        | (8 to 1 650) kN                                     | 0.75 % of applied load                           | McCann Procedure with<br>Bolt Load Meter  |
| Hydraulic Cylinders                         | (0.5 to 500) sh.tn                                  | 0.13 % of applied load                           | McCann Procedure with<br>Load Cell and Display  |
| Hydraulic Pressure Gauge                    | Up to 30 000 psig                                   | 0.23 % of reading                                | ASME B40.100 with<br>Electronic Dead Weight<br>Tester:<br>FLUKE Model No.<br>E-DWT-H A200Me-L           |
|   | Up to 30 000 psig                                   | 0.23 % of reading                                | McCann Procedure with<br>Electronic Dead Weight<br>Tester. (Accuracy Only)                              |
| Pneumatic Pressure Gauge                    | (0.1 to 300) psig                                   | 0.38 % of reading                                | ASME B40.100 with<br>Additel Digital Tester   |
|   | (0.1 to 300) psig                                   | 0.38 % of reading                                | McCann Procedure with<br>Additel Digital Tester.<br>(Accuracy Only)                                     |
|   | (0.1 to 300) psig                                   | 0.11 % of reading                                | ASME B40.100 with<br>Druck Pressure Transducer<br>for In-House Calibration of<br>Additel Digital Tester |

[Return to Site Listing \(top\)](#)

[Go to Notes \(bottom\)](#)

**Accredited Services performed at satellite laboratory**

**(L2097.01-1)**

**McCann Equipment Ltd.**

4817 – 89<sup>th</sup> Street

Edmonton, AB T6E 5L3

Kathy McCann-Quart 780-414-1808

**Mass and Mass Related**

| <b>Parameter/Equipment</b>                  | <b>Range</b>   | <b>Expanded Uncertainty of Measurement (+/-)</b>   | <b>Reference Standard, Method, and/or Equipment</b>   |
|---|--|--|---|
| Adjustable Hand Torque Wrenches             | (0.6 to 100) lbf-in<br>(8 to 50) lbf-ft<br>(50 to 250) lbf-ft<br>(250 to 750) lbf-ft<br>(750 to 2 000) lbf-ft  | 0.79 % of applied load<br>0.71 % of applied load<br>0.7 % of applied load<br>0.71 % of applied load<br>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<br>(15 to 600) lbf-in<br>(50 to 250) lbf-ft<br>(250 to 600) lbf-ft<br>(600 to 2 000) lbf-ft | 0.66 % of applied load<br>0.64 % of applied load<br>0.59 % of applied load<br>0.78 % of applied load<br>0.84 % of applied load |   |
| Electronic Measurement Hand Torque Wrenches | (0.2 to 250) lbf-ft<br>(250 to 600) lbf-ft<br>(600 to 750) lbf-ft<br>(750 to 1 000) lbf-ft                     | 0.68 % of applied load<br>0.61 % of applied load<br>0.55 % of applied load<br>0.52 % of applied load                           |   |
| Torque Limiting Screwdrivers                | (0.6 to 10) lbf-in<br>(10 to 80) lbf-in<br>(80 to 130) lbf-in  | 1.2 % of applied load<br>0.82 % of applied load<br>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<br>(10 000 to 25 000) lbf-ft  | 1.1 % of applied load<br>0.93 % of applied load  | McCann procedure with Electronic Transducer and Display Unit                                    |
| Hydraulic Torque Tools                      | (127 to 5 000) lbf-ft<br>(5 000 to 25 000) lbf-ft  | 0.79 % of applied load<br>0.83 % of applied load   |   |
| Hand Torque Multipliers                     | (127 to 5 000) lbf-ft<br>(5 000 to 25 000) lbf-ft  | 2.2 % of applied load<br>3.9 % of applied load   |   |
| Torque Tester                               | (1.5 to 750) 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  | 0.97 % of applied load   | McCann procedure with Electronic Transducer and Display Unit                                    |

**Mass and Mass Related**

| <b>Parameter/Equipment</b> | <b>Range</b>           | <b>Expanded Uncertainty of Measurement (+/-)</b> | <b>Reference Standard, Method, and/or Equipment</b>                                       |
|----------------------------|------------------------|--|---|
| Hydraulic Pressure Gauge   | Up to 30 000 psig      | 0.23 % of reading                                | ASME B40.100 with Electronic Dead Weight Tester:<br>FLUKE Model No. RPM4-E-DWT-H A200Me-L |
|                            | Up to 30 000 psig      | 0.23 % of reading                                | McCann Procedure with Electronic Dead Weight Tester. (Accuracy Only)                      |
| Pneumatic Pressure Gauge   | (0.1 to 300) psig      | 0.38 % of reading                                | ASME B40.100 with Additel Digital Tester  |
|                            | (0.1 to 300) psig      | 0.38 % of reading                                | McCann Procedure with Additel Digital Tester. (Accuracy Only)                             |
| Bolt Tension Meter         | (200 to 10 000) lbf    | 0.54 % of applied load                           | Skidmore J:<br>Load Cell and Display  |
|                            | (1 000 to 30 000) lbf  | 0.55 % of applied load                           | Skidmore J:<br>Load Cell and Display  |
|                            | (2 000 to 110 000) lbf | 0.66 % of applied load                           | Skidmore M, ML, RL, RJ:<br>Load Cell and Display  |
|                            | (1 000 to 126 000) lbf | 0.54 % of applied load                           | Skidmore MZ:<br>Load Cell and Display   |
|                            | (2 000 to 170 000) lbf | 0.66 % of applied load                           | Skidmore H & HS:<br>Load Cell and Display   |

[Return to Site Listing \(top\)](#)

[Go to Notes \(bottom\)](#)

**Accredited Services performed at satellite laboratory**

**(L2097.02-1)**

**McCann Equipment Ltd.**

2750 Coventry Road

Oakville, ON L6H 6R1

Kathy McCann-Quart 905-829-3393

**Mass and Mass Related**

| <b>Parameter/Equipment</b>                         | <b>Range</b>   | <b>Expanded Uncertainty of Measurement (+/-)</b>   | <b>Reference Standard, Method, and/or Equipment</b>   |
|--|--|--|---|
| Adjustable Hand Torque Wrenches                    | (0.6 to 100) lbf·in<br>(8 to 50) lbf·ft<br>(50 to 250) lbf·ft<br>(250 to 750) lbf·ft<br>(750 to 2 000) lbf·ft  | 0.79 % of applied load<br>0.71 % of applied load<br>0.7 % of applied load<br>0.71 % of applied load<br>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<br>(15 to 600) lbf·in<br>(50 to 250) lbf·ft<br>(250 to 600) lbf·ft<br>(600 to 2 000) lbf·ft | 0.66 % of applied load<br>0.64 % of applied load<br>0.59 % of applied load<br>0.78 % of applied load<br>0.84 % of applied load |   |
| Electronic Measurement Hand Torque Wrenches        | (0.2 to 250) lbf·ft<br>(250 to 600) lbf·ft<br>(600 to 750) lbf·ft<br>(750 to 1 000) lbf·ft                     | 0.68 % of applied load<br>0.61 % of applied load<br>0.55 % of applied load<br>0.52 % of applied load                           |   |
| Torque Limiting Screwdrivers                       | (0.6 to 10) lbf·in<br>(10 to 80) lbf·in<br>(80 to 130) lbf·in  | 1.2 % of applied load<br>0.82 % of applied load<br>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<br>(10 000 to 25 000) lbf·ft  | 1.1 % of applied load<br>0.93 % of applied load  | McCann Procedure with Electronic Transducer and Display Unit                                    |
| Hydraulic Torque Tools                             | (127 to 5 000) lbf·ft<br>(5 000 to 25 000) lbf·ft  | 0.79 % of applied load<br>0.83 % of applied load   |   |
| Electronic Torque Tools (Clutch Type)              | 1.5 lbf.in to 110 lbf·in   | 1.1 % of applied load  |   |
| Electronically Controlled Torque Tools             | (100 to 6 700) lbf·ft  | 0.97 % of applied load   |   |
| Electronically Controlled Torque Tools (Desoutter) | (1 to 4 000) N·m   | 0.57 % of applied load   | McCann Procedure with Electronic Transducer and Display Unit                                    |



**Mass and Mass Related**

| <b>Parameter/Equipment</b>           | <b>Range</b>                                      | <b>Expanded Uncertainty of Measurement (+/-)</b> | <b>Reference Standard, Method, and/or Equipment</b>                                       |
|--------------------------------------|---|--|---|
| Hand Torque Multipliers              | (127 to 5 000) lbf·ft<br>(5 000 to 25 000) lbf·ft | 2.2 % of applied load<br>3.9 % of applied load   | McCann Procedure with Electronic Transducer and Display Unit                              |
| Torque Closure Meters                | (1 to 100) lbf·in                                 | 0.62 % of applied load                           |   |
| Torque Transducers<br>Torque Testers | 0.2 lbf.in to 1 200 lbf·ft                        | 0.11 % of applied load                           | ISO BS7882:2017 with Dead Weight Test and Unsupported Beams                               |
| Torque Tester                        | (1.5 to 750) lbf·ft                               | 0.53 % of applied load                           | McCann Procedure with Electronic Transducer, Display Unit and ISO Loader                  |
| Hydraulic Pressure Gauge             | Up to 30 000 psig                                 | 0.23 % of reading                                | ASME B40.100 with Electronic Dead Weight Tester:<br>FLUKE Model No. RPM4-E-DWT-H A200Me-L |
|                                      | Up to 30 000 psig                                 | 0.23 % of reading                                | McCann Procedure with Electronic Dead Weight Tester. (Accuracy Only)                      |
| Pneumatic Pressure Gauge             | (0.1 to 300) psig                                 | 0.38 % of reading                                | ASME B40.100 with Additel Digital Tester  |
|                                      | (0.1 to 300) psig                                 | 0.38 % of reading                                | McCann Procedure with Additel Digital Tester. (Accuracy Only)                             |
| Bolt Tension Meter                   | (200 to 10 000) lbf                               | 0.54 % of applied load                           | Skidmore J:<br>Load Cell and Display  |
|                                      | (1 000 to 30 000) lbf                             | 0.55 % of applied load                           | Skidmore J:<br>Load Cell and Display  |
|                                      | (2 000 to 110 000) lbf                            | 0.66 % of applied load                           | Skidmore M, ML, RL, RJ:<br>Load Cell and Display  |
|                                      | (1 000 to 126 000) lbf                            | 0.54 % of applied load                           | Skidmore MZ:<br>Load Cell and Display   |
|                                      | (2 000 to 170 000) lbf                            | 0.66 % of applied load                           | Skidmore H & HS:<br>Load Cell and Display   |
| Hydraulic Tensioners                 | (8 to 1 650) kN                                   | 0.75 % of applied pressure                       | McCann Procedure with Bolt Load Meter   |

[Return to Site Listing \(top\)](#)

[Go to Notes \(bottom\)](#)

**Accredited Services performed at satellite laboratory**

**(2097.03-1)**

**McCann Equipment Ltd.**

1448 Wellington Ave.  
Winnipeg, MB R3E 0K5  
Kathy McCann-Quart 204-774-2277

**Mass and Mass Related**

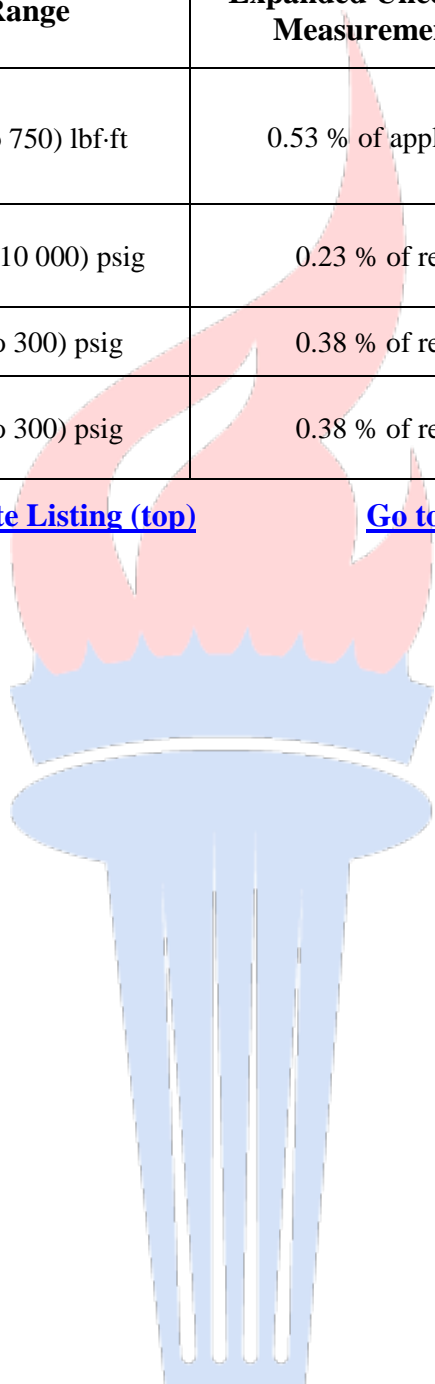
| <b>Parameter/Equipment</b>                  | <b>Range</b>   | <b>Expanded Uncertainty of Measurement (+/-)</b>   | <b>Reference Standard, Method, and/or Equipment</b>   |
|---|--|--|---|
| Adjustable Hand Torque Wrenches             | (0.6 to 100) lbf-in<br>(8 to 50) lbf-ft<br>(50 to 250) lbf-ft<br>(250 to 750) lbf-ft<br>(750 to 2 000) lbf-ft  | 0.79 % of applied load<br>0.71 % of applied load<br>0.7 % of applied load<br>0.71 % of applied load<br>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<br>(15 to 600) lbf-in<br>(50 to 250) lbf-ft<br>(250 to 600) lbf-ft<br>(600 to 2 000) lbf-ft | 0.66 % of applied load<br>0.64 % of applied load<br>0.59 % of applied load<br>0.78 % of applied load<br>0.84 % of applied load |   |
| Electronic Measurement Hand Torque Wrenches | (0.2 to 250) lbf-ft<br>(250 to 600) lbf-ft<br>(600 to 750) lbf-ft<br>(750 to 1 000) lbf-ft                     | 0.68 % of applied load<br>0.61 % of applied load<br>0.55 % of applied load<br>0.52 % of applied load                           |   |
| Torque Limiting Screwdrivers                | (0.6 to 10) lbf-in<br>(10 to 80) lbf-in<br>(80 to 130) lbf-in  | 1.2 % of applied load<br>0.82 % of applied load<br>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<br>(5 000 to 10 000) lbf-ft  | 0.79 % of applied load<br>0.83 % of applied load   |   |
| Electronic Torque Tools (Clutch Type)       | (1.5 to 110) lbf-in  | 1.1 % of applied load  |   |
| Electronically Controlled Torque Tools      | (100 to 6 700) lbf-ft  | 0.97 % of applied load   |   |
| Hand Torque Multipliers                     | (127 to 5 000) lbf-ft<br>(5 000 to 10 000) lbf-ft  | 2.2 % of applied load<br>3.9 % of applied load   | McCann Procedure with Electronic Transducers and Display Units                                  |

**Mass and Mass Related**

| <b>Parameter/Equipment</b> | <b>Range</b>         | <b>Expanded Uncertainty of Measurement (+/-)</b> | <b>Reference Standard, Method, and/or Equipment</b>                      |
|----------------------------|----------------------|--|--|
| Torque Tester              | (1.5 to 750) lbf-ft  | 0.53 % of applied load                           | McCann Procedure with Electronic Transducer, Display Unit and ISO Loader |
| Hydraulic Pressure Gauge   | (400 to 10 000) psig | 0.23 % of reading                                | McCann Procedure with Electronic Dead Weight Tester. (Accuracy Only)     |
| Pneumatic Pressure Gauge   | (0.1 to 300) psig    | 0.38 % of reading                                | ASME B40.100 with Additel Digital Tester                                 |
|                            | (0.1 to 300) psig    | 0.38 % of reading                                | McCann Procedure with Additel Digital Tester. (Accuracy Only)            |

[Return to Site Listing \(top\)](#)

[Go to Notes \(bottom\)](#)



**Accredited Services performed at satellite laboratory**

**(L2097.04-1)**

**McCann Equipment Ltd.**

#1, 7533 – 135<sup>th</sup> Street

Surrey, BC, V3W 0N6

Kathy McCann-Quart

604-596-4077

**Mass and Mass Related**

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

[Return to Site Listing \(top\)](#)

[Go to Notes \(bottom\)](#)

**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

Kathy McCann-Quart 603-893-7662

**Mass and Mass Related**

| <b>Parameter/Equipment</b>                  | <b>Range</b>   | <b>Expanded Uncertainty of Measurement (+/-)</b>   | <b>Reference Standard, Method, and/or Equipment</b>   |
|---|--|--|---|
| Adjustable Hand Torque Wrenches             | (0.6 to 100) lbf-in<br>(8 to 50) lbf-ft<br>(50 to 250) lbf-ft<br>(250 to 750) lbf-ft<br>(750 to 2 000) lbf-ft  | 0.79 % of applied load<br>0.71 % of applied load<br>0.7 % of applied load<br>0.71 % of applied load<br>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<br>(15 to 600) lbf-in<br>(50 to 250) lbf-ft<br>(250 to 600) lbf-ft<br>(600 to 2 000) lbf-ft | 0.66 % of applied load<br>0.64 % of applied load<br>0.59 % of applied load<br>0.78 % of applied load<br>0.84 % of applied load |   |
| Electronic Measurement Hand Torque Wrenches | (0.2 to 250) lbf-ft<br>(250 to 600) lbf-ft<br>(600 to 750) lbf-ft<br>(750 to 1 000) lbf-ft                     | 0.68 % of applied load<br>0.61 % of applied load<br>0.55 % of applied load<br>0.52 % of applied load                           |   |
| Torque Limiting Screwdrivers                | (0.6 to 10) lbf-in<br>(10 to 80) lbf-in<br>(80 to 130) lbf-in  | 1.2 % of applied load<br>0.82 % of applied load<br>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<br>(5 000 to 10 000) lbf-ft  | 0.79 % of applied load<br>0.83 % of applied load   |   |
| Electronic Torque Tools (Clutch Type)       | (1.5 to 110) lbf-in  | 1.1 % of applied load  |   |
| Electronically Controlled Torque Tools      | (100 to 6 700) lbf-ft  | 0.97 % of applied load   |   |
| Hand Torque Multipliers                     | (127 to 5 000) lbf-ft<br>(5 000 to 10 000) lbf-ft  | 2.2 % of applied load<br>3.9 % of applied load   | McCann Procedure with Electronic Transducers and Display Units                                  |

**Mass and Mass Related**

| <b>Parameter/Equipment</b> | <b>Range</b>           | <b>Expanded Uncertainty of Measurement (+/-)</b> | <b>Reference Standard, Method, and/or Equipment</b>                      |
|----------------------------|------------------------|--|--|
| Torque Tester              | (1.5 to 750) lbf·ft    | 0.53 % of applied load                           | McCann Procedure with Electronic Transducer, Display Unit and ISO Loader |
| Bolt Tension Meter         | (200 to 10 000) lbf    | 0.54 % of applied load                           | Skidmore J: Load Cell and Display  |
|                            | (1 000 to 30 000) lbf  | 0.55 % of applied load                           | Skidmore J: Load Cell and Display  |
|                            | (2 000 to 110 000) lbf | 0.66 % of applied load                           | Skidmore M, ML, RL, RJ: Load Cell and Display                            |
|                            | (1 000 to 126 000) lbf | 0.54 % of applied load                           | Skidmore MZ: Load Cell and Display                                       |
|                            | (2 000 to 170 000) lbf | 0.66 % of applied load                           | Skidmore H & HS: Load Cell and Display                                   |
| Hydraulic Bolt Tensioners  | (8 to 880) kN          | 0.75 % of applied pressure                       | McCann Procedure with Bolt Load Meter                                    |
| Hydraulic Cylinders        | (0.5 to 100) sh.tn.    | 0.13 % of applied load                           | McCann Procedure with Load Cell and Display                              |
| Pneumatic Pressure Gauge   | (0.1 to 300) psig      | 0.38 % of reading                                | ASME B40.100 with Additel Digital Tester                                 |
|                            | (0.1 to 300) psig      | 0.38 % of reading                                | McCann Procedure with Additel Digital Tester. (Accuracy Only)            |

[Return to Site Listing \(top\)](#)

[Go to Notes \(bottom\)](#)

**Accredited Services performed at satellite laboratory**

**(L2097.06-1)**

**McCann Equipment Ltd.**

925, ave Newton, #107

Quebec, QC G1P 4M2

Kathy McCann-Quart 418-877-7718

**Mass and Mass Related**

| <b>Parameter/Equipment</b>                  | <b>Range</b>   | <b>Expanded Uncertainty of Measurement (+/-)</b>   | <b>Reference Standard, Method, and/or Equipment</b>   |
|---|--|--|---|
| Adjustable Hand Torque Wrenches             | (0.6 to 100) lbf-in<br>(8 to 50) lbf-ft<br>(50 to 250) lbf-ft<br>(250 to 750) lbf-ft<br>(750 to 1 000) lbf-ft  | 0.79 % of applied load<br>0.71 % of applied load<br>0.7 % of applied load<br>0.71 % of applied load<br>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<br>(15 to 600) lbf-in<br>(50 to 250) lbf-ft<br>(250 to 600) lbf-ft<br>(600 to 1 000) lbf-ft | 0.66 % of applied load<br>0.64 % of applied load<br>0.59 % of applied load<br>0.78 % of applied load<br>0.84 % of applied load |   |
| Electronic Measurement Hand Torque Wrenches | (0.2 to 250) lbf-ft<br>(250 to 600) lbf-ft<br>(600 to 750) lbf-ft<br>(750 to 1 000) lbf-ft                     | 0.68 % of applied load<br>0.61 % of applied load<br>0.55 % of applied load<br>0.52 % of applied load                           |   |
| Torque Limiting Screwdrivers                | (0.6 to 10) lbf-in<br>(10 to 80) lbf-in<br>(80 to 130) lbf-in  | 1.2 % of applied load<br>0.82 % of applied load<br>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   |   |
| Hand Torque Multipliers                     | (127 to 5 000) lbf-ft  | 2.2 % of applied load  |   |
| Electronic Torque Tools (Clutch Type)       | (1.5 to 110) lbf-in  | 1.1 % of applied load  |   |
| Electronically Controlled Torque Tools      | (100 to 4 500) lbf-ft  | 0.87 % of applied load   | McCann Procedure with Electronic Transducer and Display Unit                                    |
| Bolt Tension Meter                          | (200 to 10 000) lbf  | 0.54 % of applied load   | Skidmore J:<br>Load Cell and Display  |

**Mass and Mass Related**

| Parameter/Equipment      | Range                  | Expanded Uncertainty of Measurement (+/-) | Reference Standard, Method, and/or Equipment                               |
|--------------------------|------------------------|---|--|
| Bolt Tension Meter       | (1 000 to 110 000) lbf | 0.55 % of applied load                    | Skidmore J:<br>Load Cell and Display                                       |
|                          | (2 000 to 110 000) lbf | 0.66 % of applied load                    | Skidmore M, ML, RL, RJ:<br>Load Cell and Display                           |
|                          | (1 000 to 126 000) lbf | 0.54 % of applied load                    | Skidmore MZ:<br>Load Cell and Display                                      |
| Hydraulic Cylinders      | (0.5 to 200) sh.tn     | 0.13 % of applied load                    | McCann Procedure with<br>Load Cell and Display                             |
| Hydraulic Pressure Gauge | (3 to 16 000) psig     | 0.23 % of reading                         | ASME B40.100 with Dead<br>Weight Tester                                    |
|                          | (3 to 16 000) psig     | 0.23 % of reading                         | McCann Procedure with<br>Electronic Dead Weight<br>Tester. (Accuracy Only) |
| Pneumatic Pressure Gauge | (0.1 to 300) psig      | 0.38 % of reading                         | ASME B40.100 with<br>Crystal Digital Tester                                |
|                          | (0.1 to 300) psig      | 0.38 % of reading                         | McCann Procedure with<br>Crystal Digital Tester.<br>(Accuracy Only)        |

[Return to Site Listing \(top\)](#)

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. This scope is formatted as part of a single document including Certificate of Accreditation No. L2097-1. Site specific sections are identified by city and suffix (L2097.xx-1) for convenience.



R. Douglas Leonard Jr., VP, PILR SBU