

#### SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

#### PRATT AND WHITNEY MEASUREMENT SYSTEMS, INC 66 Douglas Street Bloomfield, CT 06002 Matthew Noonan Phone: 800 371 7174 ext. 440

#### CALIBRATION

Valid to: March 31, 2018

Certificate Number: 2629.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following calibrations and dimensional inspections<sup>1</sup>:

#### I. Dimensional

| Parameter/Equipment                | Range           | CMC <sup>2, 4</sup> (±)   | Comments                 |
|------------------------------------|-----------------|---------------------------|--------------------------|
| Laseruler                          | (0.5 to 7.5) in | (3.7 + 0.7 <i>L</i> ) μin | Gage blocks              |
| Labmaster Universal<br>Model 175   | (0.5 to 6.5) in | (2.8 + 0.8 <i>L</i> ) μin | Gage blocks              |
| Labmaster Universal<br>Model 1000A | Up to 40 in     | (2.8 + 0.8 <i>L</i> ) μin | Gage blocks, force gages |
| Labmaster Universal<br>Model 1000M | Up to 40 in     | (2.8 + 0.8 <i>L</i> ) μin | Gage blocks, force gages |
| Labmaster Standard                 | (0.5 to 7.5) in | (2.8 + 0.8 <i>L</i> ) µin | Gage blocks              |
| Labmicrometer                      | (0.5 to 7.5) in | (3.6 + 0.7 <i>L</i> ) μin | Gage blocks              |

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| Parameter/Equipment   | Range                           | CMC <sup>2, 4</sup> (±)                                 | Comments                             |
|---|---------------------------------|---|--------------------------------------|
| Universal<br>Supermicrometer Model<br>501 <sup>3</sup> and Model 504 <sup>3</sup> | Up to 2 in                      | 6.7 μin   | Gage blocks                          |
| Supermicrometer<br>Model C <sup>3</sup>   | Up to 1 in                      | 15 μin  | Gage blocks                          |
| Supermicrometer<br>Model B <sup>3</sup>   | Up to 1 in                      | 18 μin  | Gage blocks                          |
| Digital Measuring<br>Machine –  |                                 |   |                                      |
| Lead Screw <sup>3</sup>   | Up to 1 in                      | 15 μin  | Gage blocks                          |
| Machine Button Bar  | (1 to 20) in                    | (54 + 0.7 <i>L</i> ) μin                                |                                      |
| Standard Measuring<br>Machine –   |                                 |   |                                      |
| Lead Screw <sup>3</sup>   | Up to 1 in                      | 18 µin  | Gage blocks                          |
| Machine Button Bar  | (1 to 20) in                    | (55 +0.7 <i>L</i> ) μin                                 |                                      |
| Plain Cylindrical Ring<br>Gages   | (0.020 to 1) in<br>(1 to 14) in | 6.5 μin<br>(3.5 + 0.8 <i>L</i> ) μin                    | Labmaster Universal                  |
| Calibration of Ball Bars  | (20 to 41) in                   | (16 + 0.8 <i>L</i> ) μin                                | Gage blocks, Labmaster<br>Universal  |
| Calibration of Long<br>Gage Blocks  | (4 to 20) in<br>(20 to 40) in   | (6.5 + 0.75 <i>L</i> ) μin<br>(15 + 0.96 <i>L</i> ) μin | LMU 1000A, LMU<br>1000M, gage blocks |

#### II. Mechanical

| Parameter/Equipment   | Range  | $CMC^{2}(\pm)$   | Comments   |
|---|--|--|------------|
| Force System –<br>Fixed Points <sup>3</sup> ,<br>Labmaster Universal,<br>Laser Measuring Machine,<br>Digital Measuring Machine,<br>Standard Measuring Machine,<br>Supermicrometer Model C,<br>Supermicrometer Model B | 2 ozf<br>8 ozf<br>16 ozf<br>24 ozf<br>32 ozf<br>40 ozf                     | 0.2 ozf<br>1.8 ozf<br>1.9 ozf<br>2.0 ozf<br>2.2 ozf<br>2.4 ozf                             | Force gage |
| Force System –<br>Fixed Points <sup>3</sup> ,<br>Universal Supermicrometer,<br>Labmicrometer  | -8 ozf<br>-2 ozf<br>2 ozf<br>8 ozf<br>16 ozf<br>24 ozf<br>32 ozf<br>40 ozf | 0.34 ozf<br>0.22 ozf<br>0.22 ozf<br>0.34 ozf<br>0.63 ozf<br>0.92 ozf<br>1.3 ozf<br>1.6 ozf | Force gage |

<sup>1</sup> This laboratory offers commercial and field calibration service.

- <sup>2</sup> Calibration and Measurement Capability Uncertainty (CMC) is the smallest uncertainty of measurement that a laboratory can achieve within its scope of accreditation when performing more or less routine calibrations of nearly ideal measurement standards or nearly ideal measuring equipment. CMCs represent expanded uncertainties expressed at approximately the 95 % level of confidence, usually using a coverage factor of k = 2. The actual measurement uncertainty of a specific calibration performed by the laboratory may be greater than the CMC due to the behavior of the customer's device and to influences from the circumstances of the specific calibration.
- <sup>3</sup> Field calibration service is available for this calibration and this laboratory meets A2LA *R104 General Requirements: Accreditation of Field Testing and Field Calibration Laboratories* for these calibrations. Please note the actual measurement uncertainties achievable on a customer's site can normally be expected to be larger than the CMC found on the A2LA Scope. Allowance must be made for aspects such as the environment at the place of calibration and for other possible adverse effects such as those caused by transportation of the calibration equipment. The usual allowance for the actual uncertainty introduced by the item being calibrated, (e.g. resolution) must also be considered and this, on its own, could result in the actual measurement uncertainty achievable on a customer's site being larger than the CMC.
- <sup>4</sup> In the statement of the CMC, L is the numerical value of the nominal length of the device measured in inches.

Inter





# **Accredited Laboratory**

A2LA has accredited

## PRATT & WHITNEY MEASUREMENT SYSTEMS, INC.

Bloomfield, CT

for technical competence in the field of

### Calibration

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 General requirements for the competence of testing and calibration laboratories. This laboratory also meets any additional program requirements in the field of calibration. 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 8 January 2009).



Presented this 25<sup>th</sup> day of March 2016.

President and CEO For the Accreditation Council Certificate Number 2629.01 Valid to March 31, 2018 Revised February 22, 2018

For the calibrations to which this accreditation applies, please refer to the laboratory's Calibration Scope of Accreditation.