



THE AMERICAN ASSOCIATION FOR  
LABORATORY ACCREDITATION

## ACCREDITED LABORATORY

A2LA has accredited

**Fastenal Company Laboratory**  
**Winona, MN**

for technical competence in the field of

**Mechanical Testing**

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 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 18 June 2005*).

Presented this 28<sup>th</sup> day of September 2006.

A handwritten signature in black ink, appearing to read "Peter Abney", written over a horizontal line.

President

For the Accreditation Council

Certificate Number 1046.01

Valid to September 30, 2008



For the tests or types of tests to which this accreditation applies,  
please refer to the laboratory's Mechanical Scope of Accreditation.

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

FASTENAL COMPANY LABORATORY  
1801 Theurer Boulevard  
Winona, MN 55987  
Brad Partington Phone: 507 453 8163

MECHANICAL

Valid To: September 30, 2008

Certificate Number: 1046.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following fastener tests on steel and stainless steel:

<u>Test</u>	<u>Test Methods</u>
Sampling	per product specification or ASME/ANSI B18.18.2M, B18.18.3M, B18.18.4M
Hardness (Rockwell: B, C, 30N)	ASTM A370, E18, F606, F606M; ISO 898-1, 898-2; NASM 1312-6; SAE J429, J995
Microhardness (Vickers)	ASTM E384
Tensile (axial, wedge, tension)	ASTM A370 (A3.2, 13.2.1), F606, F606M (3.4,3.5,3.6); DIN 267-11; ISO 898-1 (8.1,8.5), 898-2; NASM 1312-8; SAE J429 (6.5,6.6), J995; Mil Std FFS 85
Proof (internal/external threaded)	
Bolts	ASTM A370 (A3.2.1.2), F606M (3.2.3); ISO 898-1 (8.4); SAE J429 (6.4)
Nuts	ASTM A370 (A3.5.1), F606M (4.2); ISO 898-2 (8.1); SAE J995 (5.1)
Charpy Impact Strength	ASTM E23
Discontinuities (visual, MPT, LPT)	AMS 2644; ASTM A574, A574M, E709, F788, F788M, F812, F912, E1444; ISO 6157; SAE J122, J123

<u>Test</u>	<u>Test Methods</u>
Stress durability (hydrogen embrittlement)	ASTM F606, F606M; SAE J81, J933
Decarburization	ASTM A574, A574M, F835, F835M, F912, F912M; ISO 898-1, 898-5; SAE J419
Salt Spray	ASTM B117
Torsional strength	ASTM F880, F880M, F912, F912M; SAE J78, J81, J933
Hex socket strength	ASTM F880, F912
Ductility (torsional)	SAE J78, J81
Plating thickness	ASTM B487, B568
Case depth	SAE J423
Torque tension	IFI 101; SAE J174
Drill test	SAE J81, J933
Drill drive	SAE J78
Plating adhesion	ASTM B571
Rotational capacity	ASTM A325
Optical emission/spectroscopy on alloy & stainless steel for: C, Mn, Si, S, Cr, P, Ni, Mo, Cu, V, Pb, Nb, Co, Ti, W, B	ASTM E415, E1086
XRF PMI Analyzer	Niton Alloy Analyzer User's Guide

Dimensional testing:

<u>Parameter</u>	<u>Measurement Technique</u>	<u>Range</u>	<u>Best Uncertainty* (<math>\pm</math>)</u>	<u>Standards</u>
Threads (Sys 21)	Rings, plugs	#4 to 1 $\frac{7}{8}$ in M4 to M24	N/A N/A	ANSI B1.1, B1.3
	Plug gages	( $\frac{3}{8}$ to 2 $\frac{1}{2}$ ) in M3 to M22	N/A N/A	ANSI B1.1
	Pitch micrometer	Up to 3 in	0.002 in	ANSI B1.1
Linear	Gage maker	Up to 24 in	0.0003 in	NAVAIR 17-MD20-39
	Outside micrometers	Up to 3 in (3 to 6) in	0.00034 in 0.0013 in	IFI 7 <sup>th</sup> Edition
	Calipers 6, 12, 60 in	Up to 60 in	0.001 in	IFI 7 <sup>th</sup> Edition
	Digital indicator	Up to 1 in	0.0004 in	ASME B18.2.1
	Pin gage	(0.011 to 1.00) in	N/A	SAE J81
	Optical comparators	x axis: Up to 8 in y axis: Up to 4 in	0.0007 in 0.0016 in	IFI 7 <sup>th</sup> Edition IFI 7 <sup>th</sup> Edition
	Angle	Optical comparators	(0 to 360) $^{\circ}$	12'
Radii	Optical comparators	Up to 0.675 in	0.01 in	IFI 7 <sup>th</sup> Edition
Recesses	Recess penetration	Up to 1 in	0.002 in	ASME B18.6.3, B18.6.4
Flat head	Protrusion gage	Up to 1 in	0.002 in	ASME B18.6.3, B18.6.4

\* "Best Uncertainty" 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 of nearly ideal measuring equipment. Best uncertainties represent expanded uncertainties expressed at approximately the 95 % level of confidence, usually using a coverage factor of  $k = 2$ . The best uncertainty of a specific calibration performed by the laboratory may be greater than the best uncertainty due to the behavior of the customer's device and to influences from the circumstances of the specific calibration.



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LABORATORY ACCREDITATION

## ACCREDITED LABORATORY

A2LA has accredited

**Fastenal Company Laboratory**  
**Winona, MN**

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 18 June 2005*).



Presented this 28<sup>th</sup> day of September 2006.

A handwritten signature in cursive script, reading "Peter M. Meyer".

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President  
For the Accreditation Council  
Certificate Number 1046.02  
Valid to September 30, 2008

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

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

FASTENAL COMPANY LABORATORY  
1801 Theurer Boulevard  
Winona, MN 55987  
Brad Partington Phone: 507 453 8163

CALIBRATION

Valid To: September 30, 2008

Certificate Number: 1046.02

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

I. Dimensional

Parameter/Equipment	Range	Best Uncertainty <sup>2,3</sup> ( $\pm$ )	Comments
Calipers	Up to 60 in	$(620 + 7L) \mu\text{in}$	Gage blocks
Micrometers	Up to 24 in	$(40 + 5L) \mu\text{in}$	Gage blocks
Indicators	Up to 4 in	$(50 + 0.6R) \mu\text{in}$	ULM
Thread Plugs – Pitch Diameter Major Diameter	Up to 6 in Up to 6 in	$(90 + 10D) \mu\text{in}$ $(45 + 7D) \mu\text{in}$	ULM using 3-wire method
Threaded Rings – Functional Pitch Diameter	Up to 1 in (1 to 4) in	300 $\mu\text{in}$ 400 $\mu\text{in}$	Set plug gages
Threaded Rings – Minor Diameter	Up to 1 in	200 $\mu\text{in}$	Plain cylindrical plugs

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<sup>1</sup>This laboratory offers commercial calibration services.

<sup>2</sup>“Best Uncertainty” 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 of nearly ideal measuring equipment. Best uncertainties represent expanded uncertainties expressed at approximately the 95 % level of confidence, usually using a coverage factor of  $k = 2$ . The best uncertainty of a specific calibration performed by the laboratory may be greater than the best uncertainty due to the behavior of the customer’s device and to influences from the circumstances of the specific calibration.

<sup>3</sup>In the statement of best uncertainty,  $L$  is the numerical value of the nominal length of the device measured in inches,  $D$  is the diagonal length of the device measured in inches and  $R$  is the resolution of the unit under test.