SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

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MECHANICAL

Valid To: November 30, 2016 Certificate Number: 1046.05

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:

Test	Test Method(s)
Hardness	
Rockwell: B, C, 30N	ASTM A370, E18, F606; ISO 898-1, 898-2
Microhardness	
Vickers (300g, 500g)	ASTM E384
Stress Durability (Twist Test for Split Lock Washer and Flat Press Test for Lock Washer)	ASME B18.21.1
Tensile (Axial & Wedge) Yield Strength, Elongation and Reduction of Area	ASTM A370 (A3.2), F606 (3.4, 3.5, 3.6, 3.7); ISO 898-1 (9.1, 9.2, 9.7), 3506-1
Proof	
Bolts	ASTM A370 (A3.2.1.2), F606 (3.2.1); ISO 898-1 (9.6)
Nuts	ASTM A962 (11.1), F606 (4.2); DIN 267 Part 4; ISO 898-2 (8.1); SAE J995 (5.1)
Charpy Impact Strength	ASTM A370, E23
Metallographic Evaluation	
Decarburization	ASTM F835, F912, F2328; ISO 898-1, 898-5; SAE J121, J419
Case Depth	SAE J423
Discontinuity (External Thread Acceptance)	ASTM F788

I. Dimensional Testing[1]:

Parameter	Range	CMC[2] (±)	Technique / Method
Threads[3] (System 21)	#4 to 2 in M10 to M27	N/A	Rings / ASME B1.3M, ASME B1.16M
	Up to 2 in	0.00083 in.	Pitch micrometer / ASME B1.3M
	#4 to 1-1/2 in M6 to M27	N/A	Plug gages / ASME B1.3M, ASME B1.16M
Linear[3] – 1D	Up to 3 in	0.00016 in	Outside micrometers
	6 in	0.0015 in	Calipers
	Up to 2 in	0.00065 in	Digital indicator / ASME B18.2.1
	Up to 12 in	0.0014 in	Length gage
	Up to 24 in	0.0017 in	Height gage
Linear[3] – 2D	x axis: Up to 12 in y axis: Up to 8 in	0.00074 in 0.00081 in	Video measurement / QA7M-114
Angle[3]	0º to 180º	0.09º	Video measurement / QA7M-114
Radii[3]	Up to 5 mm	14 µm	Video measurement / QA7M-114
Recess Penetration[3]	Hex: 5/64 to 3/8 in 4 to 10 mm Philips: #1, #2, #3 Slot Pin	0.0020 in	Recess penetration gage / ASME B18.6.3, B18.6.4

Parameter	Range	CMC[2] (±)	Technique/Method
Wobble[3]	Phillips #2, #3	0.58 °	Wobble gage / ASME B18.6.4
Flat Head[3]	Up to 3/8 in	0.00065 in	Protrusion gage / ASME B18.6.3, B18.6.4

[1]Commercial dimensional testing service is sometimes available for this laboratory.

[2]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 measurements of nearly ideal measurement standards or nearly ideal measuring equipment. CMC's 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 measurement 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 measurement.

[3] This test is not equivalent to that of a calibration.

Accredited Laboratory

A2LA has accredited

FASTENAL COMPANY LABORATORY-MALAYSIA

Johor, Malaysia

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 8 January 2009*).

Presented this 3rd day of March 2015.

Senior Director of Quality and Communications
For the Accreditation Council
Certificate Number 1046.05
Valid to November 30, 2016
Revised: October 31, 2016

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