



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017¹

SHANNON PRECISION FASTENER¹
31600 Stephenson Highway
Madison Heights, MI 48071
Phil Menzies Phone: 248 589 9670
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MECHANICAL

Valid To: December 31, 2025

Certificate Number: 3234.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory and to the satellite laboratories below to perform the following tests on male threaded fasteners using the following methods:

<u>Test:</u>	<u>Test Method:</u>
Tensile Axial/Wedge	FMVSS 571.209; ISO 898-1
Proof Load (Hardness Method)	ASTM F606/F606M; ISO 898-1
Rockwell Hardness (C, 15N)	ISO 6508-1
Vickers Hardness (300gf, 500gf)	ISO 6507-1
Grain Flow	SAE USCAR 8
Carburization/Decarburization/Case	ISO 898-1
Surface Discontinuities	ISO 6157-3

I. Dimensional Testing²

Parameter/Equipment	Range	CMC ³ (±)	Comments
Length ⁴ – 1D	Up to 305 mm Up to 25 mm Up to 280 mm Up to 100 mm Up to 300 mm	0.04 mm 0.012 mm 0.03 mm 0.05 mm 0.034 mm	Calipers Micrometers Optical comparator Contour tracer Optical CMM
Angle ⁴	Up to 180° Up to 180° Up to 180°	49’ 34’ 22’	Optical comparator Contour tracer Optical CMM
Radius ⁴	Up to 280 mm Up to 100 mm Up to 50 mm	0.04 mm 0.02 mm 0.028 mm	Optical comparator Contour tracer Optical CMM
Concentricity/Runout ⁴	Up to 25 mm	0.006 mm	Concentricity gage
Thread Pitch Diameter ⁴	M5 to M22 (0.25 to 0.75) in	0.026 mm 0.001 in	Single tri-rolls
Thread Functional Diameter ⁴	M5 to M22 (0.25 to .75) in M5 to M22 (0.25 to 0.75) in	0.026 mm 0.001 in	Johnson gage, segmented gages Thread ring gage

¹ This accreditation covers testing performed at the main laboratory listed above, and the following satellite laboratories listed below

² Commercial dimensional testing service is sometimes offered by this laboratory.

³ Calibration and Measurement Capability (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. Calibration and Measurement Capabilities 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.

⁴ This test is not equivalent to that of a calibration.



SATELLITE LABORATORY

SHANNON PRECISION FASTENER

4425 Purks Road

Auburn Hills, MI 48326

Phil Menzies Phone: 248 409 9676

pmenzies@shannonpf.com

Test:

Test Method:

Tensile

Axial/Wedge

FMVSS 571.209; ISO 898-1

ISO 898-1; ASTM F606/F606M

Proof Load (Hardness method)

Rockwell Hardness (C, 15N)

ISO 6508-1

Vickers Hardness (300gf, 500gf)

ISO 6507-1

Carburization/Decarburization/Case

ISO 898-1

Surface Discontinuities

ISO 6157-3

Grain Flow

SAE USCAR 8



I. Dimensional Testing²

Parameter/Equipment	Range	CMC ³ (±)	Comments
Length ⁴ – 1D	Up to 305 mm Up to 25 mm Up to 280 mm Up to 100 mm	0.04 mm 0.012 mm 0.03 mm 0.05 mm	Calipers Micrometers Optical comparator Contour tracer
Angle ⁴	Up to 180° Up to 180°	49’ 34’	Optical comparator Contour tracer
Radius ⁴	Up to 280 mm Up to 100 mm	0.04 mm 0.02 mm	Optical comparator Contour tracer
Runout ⁴	Up to 25 mm	0.006 mm	Concentricity gage
Thread Pitch Diameter ⁴	M5 to M22 (0.25 to 0.75) in	0.026 mm 0.001 in	Single tri-rolls
Thread Functional Diameter ⁴	M5 to M22 (0.25 to 0.75) in M5 to M22 (0.25 to 0.75) in	0.026 mm 0.001 in	Johnson gage, segmented gages Thread ring gage

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SHANNON PRECISION FASTENER
 800 East 14 Mile Road
 Madison Heights, MI 48071
 Phil Menzies Phone: 248 658 3015
 pmenzies@shannonpf.com

<u>Test:</u>	<u>Test Method:</u>
Torque Tension	ISO 16047
Tensile Testing Axial/Wedge	ISO 898-1; FMVSS 571.209
Rockwell Hardness (C)	ISO 6508-1
Hydrogen Embrittlement (Torque Method)	SAE/USCAR 7

I. Dimensional Testing²

Parameter/Equipment	Range	CMC ³ (±)	Comments
Length ⁴ – 1D	Up to 305 mm Up to 25 mm	0.04 mm 0.012 mm	Calipers Micrometers
Thread Functional Diameter ⁴	M5 to M22 (0.25 to 0.75) in		Thread ring gage

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SATELLITE LABORATORY
 SHANNON PRECISION FASTENER
 6161 Stony Run
 Holly, MI 48442
 Phil Menzies Phone: 248 409 9676
 pmenzies@shannonpf.com

<u>Test:</u>	<u>Test Method:</u>
Rockwell Hardness (C)	ISO 6508-1
Hydrogen Embrittlement (Torque Method)	SAE/USCAR 7
Torque Tension	ISO 16047

II. Dimensional Testing²

Parameter/Equipment	Range	CMC ³ (±)	Comments
Length ⁴ – 1D	Up to 305 mm Up to 25 mm	0.04 mm 0.012 mm	Calipers Micrometers
Thread Functional Diameter ⁴	M5 to M22 (0.25 to 0.75) in		Thread ring gage

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SATELLITE LABORATORY

SHANNON PRECISION FASTENER

6160 Stony Run

Holly, MI 48442

Phil Menzies Phone: 248 409 9676

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Test:

Test Method:

Tensile

Axial/Wedge

FMVSS 571.209

ISO 898-1

Proof Load (Hardness method)

ISO 898-1, ASTM F606/F606M

Rockwell Hardness (C, 15N)

ISO 6508-1

Vickers Hardness (300gf, 500gf)

ISO 6507-1

Carburization/Decarburization/Case

ISO 898-1

Surface Discontinuities

ISO 6157-3

Grain Flow

SAE USCAR 8



II. Dimensional Testing²

Parameter/Equipment	Range	CMC ³ (±)	Comments
Length ⁴ – 1D	Up to 305 mm Up to 25 mm Up to 280 mm Up to 100 mm	0.04 mm 0.012 mm 0.01 mm 0.05 mm	Calipers Micrometers Optical comparator Contour tracer
Angle ⁴	Up to 180° Up to 180°	49’ 34’	Optical comparator Contour tracer
Radius ⁴	Up to 280 mm Up to 100 mm	0.04 mm 0.02 mm	Optical comparator Contour tracer
Runout ⁴	Up to 25 mm	0.006 mm	Concentricity gage
Thread Pitch Diameter ⁴	M5 to M22 (0.25 to 0.75) in	0.026 mm 0.001 in	Single tri-rolls
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Accredited Laboratory

A2LA has accredited

SHANNON PRECISION FASTENER, LLC

Madison Heights, MI

for technical competence in the field of

Mechanical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 *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 April 2017).



Presented this 2nd day of January 2024.

A blue ink signature of Mr. Trace McInturff, written in a cursive style.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 3234.01
Valid to December 31, 2025

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