

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

CATERPILLAR INC.  
Machine & Components Materials Technology - Decatur  
27th & Pershing Road  
Decatur, IL 62525  
William J. Trimble Phone: 217 475 5691

## MECHANICAL

Valid To: December 31, 2018

Certificate Number: 2757.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following tests on metals and metal fasteners:

<u>Test(s):</u>	<u>Test Method(s):</u>
<u>Physical Testing:</u>	
Charpy Impact Test	ASTM E23
Hardness	
Brinell (3000Kg)	ASTM E10
Equotip (Leeb) (Ld)	ASTM A956
Microhardness	
Knoop (500gr)	ASTM E384
Vickers (500gr)	ASTM E384
Rockwell (B, C, 15N, 30N)	ASTM E18
Tensile (Machined and Axial and Wedge Tensile)	ASTM E8/E8M, F606/F606M
<u>Metallographic Evaluation:</u>	
Test Item Preparation	ASTM E3
Case Depth	SAE J423
Depth of Decarburization	ASTM E1077
Discontinuities	ASTM F788, F812
Grain Size	ASTM E112 (Comparison Method)
Inclusions	ASTM E45 (Method A, Micro.)
Micro/Macro Etching	ASTM E340, E407
Microstructure of Graphite in Iron Castings	ASTM A247

<u>Test(s):</u>	<u>Test Method(s):</u>
<u>Nondestructive Evaluation</u>	
Computed Radiography (X-Ray and Gamma, Digital)	ASTM E2007
Liquid Penetrant (Visible, Solvent Removable)	ASTM E1220
Magnetic Particle (Yoke, Dry Visible and Wet Fluorescent)	ASTM E1444/E1444M
Radiography (Film, Interpretation Only)	ASTM E1030/E1030M, E1032, E1742/E1742M
Ultrasonic (Contact, Straight and Angle Beam)	ASTM E114, E164, E587, E797/E797M
<u>Chemical Analysis</u>	
Kinematic Viscosity	ASTM D445; ISO 3104
Spectroscopy – Optical Emission	ASTM E415, E1999
Carbon/Low Alloy Steel (Al, B, C, Cr, Cu, Mn, Mo, Nb, Ni, P, S, Si, Ti, V)	
Cast Iron (Al, Cr, Cu, Mg, Mn, Mo, Ni, P, S, Si, Sn, Ti, V)	
Failure Analysis	Using the methods listed above in accordance with ASM Handbook, Volume 11 and MF – 1016

INACTIVE





## Accredited Laboratory

A2LA has accredited

**CATERPILLAR INC.**

*Decatur, IL*

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 22<sup>nd</sup> day of December 2016.

A handwritten signature in black ink, appearing to read "L. Sen", is written over a horizontal line.

President and CEO  
For the Accreditation Council  
Certificate Number 2757.01  
Valid to December 31, 2018

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