



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

A. AGRATI SPA
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MECHANICAL

Valid To: October 31, 2019

Certificate Number: 0204.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory at the location listed above, as well as the one satellite laboratory location listed below¹, to perform the following fastener tests:

Test(s):

Test Method(s):

Hardness

Rockwell (B and C)
Brinell (HB 2.5/187.5)
Vickers (HV5-HV30)

ASTM E18; EN 10109-1 (withdrawn 1999)²; ISO 6508-1
ASTM E10; EN 10003-1 (withdrawn 1999)²; ISO 6506-1
ASTM E384; ISO 6507-1

Tensile

Proof
Axial Tensile
Wedge Tensile

ASTM F606/F606M; ISO 898, 6892
SAE J429, J995; UNI EN 10002
SAE J429, J995; UNI EN 10002

Torque Tension

FORD WZ-100, FORD WZ-101; RENAULT 01-50-005;
SAE J174; ISO 16047; VDA 235-203; GMW 3359;
EN 14399-2, EN 14831; CAT IE1675; PSA C100054;
FIAT 7-G0114; GME 00150 (withdrawn 2011)²

Metallographic Evaluation

Preparation
Grain Size (Comparison Method)
Inclusion (Method A)
Plating Thickness
Case Depth
Discontinuities

ASTM E3
ASTM E112; ISO 643
SAE J422; UNI 3244
ASTM B499; ISO 1463, 2178, 3497
SAE J423
ASTM F788/F788M (discontinued 2013)²;
ISO 6157-1,-2,-3

Decarburization, Depth of Decarburization

ASTM E1077; ISO 898-1; SAE J419

Coating Thickness

ASTM B499; ISO 2178, 3497, 3882

Test(s):

Salt Spray

Surface Finish

Microhardness
(Vickers- HV0.3, HV0.5 and HV1)**Test Method(s):**

ASTM B117; UNI ISO 9227

ISO 4288

ASTM E384; ISO 6507

Chemical Testing:

Optical Emission Spectroscopy on Carbon and Low Alloy Steel (Al, C, Cr, Cu, Mn, Mo, Ni, P, S, Si) ASTM E415

I. Dimensional Testing³

Parameter	Range	CMC ⁴ (±)	Technique/Method
Angle ⁵	Up to 360°	20'	Profilometer/ISO 4759-1
Radius ⁵	Up to 100 mm	0.005 mm	Profilometer/ISO 4759-1
Threads ⁵ –			
Major Diameter	Up to 50 mm	0.003 mm	Micrometer/ISO 965-2
Functional Diameter	Up to 50 mm	0.003 mm	Tri-roll/UNI 5541
Length ⁵	Up to 50 mm	0.003 mm	Micrometer/ISO 4759-1
	Up to 200 mm	0.01 mm	Digital caliper/ISO 4759-1
	(200 to 600) mm	0.05 mm	Dial indicator/ISO 4759-1
	Up to 13 mm	0.004 mm	Digital indicator/ISO 4759-1
	Up to 50 mm	0.03 mm	Analog indicator/ISO 4759-1



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Test(s):

Salt Spray

Coating Thickness

Friction Test

Test Method(s):

ASTM B117; DIN 50021; UNI ISO 9227

ASTM B499; ISO 2178, 3497, 3882

CAT IE1675; DIN 946; EN14399.2, 14831;
FIAT 7-G0114; FORD WZ100, WZ101;
GMW3359, E00150; PSA C100054, C100055;
RENAULT 01.50.005; SAE J174, ISO 16047;
VDA 235-203;

¹This accreditation covers testing/calibrations performed at all laboratory locations listed in this scope of accreditation.

²This laboratory's scope contains withdrawn or superseded methods. As a clarifier, this indicates that the applicable method itself has been withdrawn or is now considered "historical" and not that the laboratory's accreditation for the method has been withdrawn.

³This laboratory does not offer commercial dimensional testing services.

⁴Calibration 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.

⁵This test is not equivalent to that of a calibration.





Accredited Laboratory

A2LA has accredited

A. AGRATI SPA

Monza Brianza, Italy

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 April 2017).



Presented this 5th day of December 2017.

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

President and CEO
For the Accreditation Council
Certificate Number 204.01
Valid to October 31, 2019
Revised July 12, 2018

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