



CERTIFICATE OF ACCREDITATION

The ANSI National Accreditation Board

Hereby attests that

Independent Test Services

**7704 Ronda Dr.
Canton, MI 48187**

Fulfills the requirements of

ISO/IEC 17025:2017

In the fields of

**CALIBRATION, TESTING
and DIMENSIONAL MEASUREMENT**

This certificate is valid only when accompanied by a current scope of accreditation document.

The current scope of accreditation can be verified at www.anab.org.

A handwritten signature in black ink, appearing to read 'R. Douglas Leonard Jr.', is positioned above a horizontal line.

R. Douglas Leonard Jr., VP, PILR SBU

Expiry Date: 19 March 2024
Certificate Number: ACT-1165



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

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

Independent Test Services

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CALIBRATION, TESTING & DIMENSIONAL MEASUREMENT

Valid to: **March 19, 2024**

Certificate Number: **ACT-1165**

CALIBRATION

Mass / Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Radial and Rotary Wheel Testing Equipment – Force/Load ³	(1 000 to 10 000) lbf (10 000 to 30 000) lbf	0.20% 0.20%	Reference load cell, signal conditioner and indicator ITS W-CAL-002, W-CAL-003
Lateral and Radial Runout Measuring Machine (Uniformity Analyzer) ³	Up to 5 mm	Master Wheel: 0.10% LVDT: 0.24%	Master Wheel and Gauge Block Set ITS W-CAL-009
Impact machine weights	Up to 700 lb	0.14%	W-CAL-008, scale, load cell
Adjusted Drop Height of Impact	Up to 230 mm	0.18%	W-CAL-004, velocimeter, weights
Impact Puck Calibration Deflection of 7.5 mm	+/- 0.75 mm	0.51 %	Reference load cell, signal conditioner and indicator, Press, fixture W-CAL-017, W-CAL-005 SAE J175
Fixture Angle	0 to 90 °	0.08 °	Digi Pas Digital Level W-CAL023
Speed (RPM, MPH)	Up to 70 mph Up to 600 rpm	0.22%	Tachometer W-CAL025
Rotary Deflection	Up to 4 in	0.50%	Gage Block Set LVDT W-CAL-024

TESTING

Mechanical

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Cycles at load prior to cracks	SAE J328 plus yellow dye penetrant crack inspection, ABNT NBR 6750, ABNT NBR 6751, ABNT NBR 6752, Fiat 7-B8000, PF-4399, DIS 3894, DIS 3006, Ford GWFS, GMW14909, JIS D 4103, LRES.48.01.006, 40300NDS10, PPS 3011, PPS 3017, PV 5605	Wheels – Radial Fatigue	Radial Wheel Test Equipment
Cycles at load prior to cracks	SAE J328 plus yellow dye penetrant crack inspection, SAE J267, ABNT NBR 6750, ABNT NBR 6751, ABNT NBR 6752, PF-4399, DIS 3894, DIS 3006, Ford GWFS, GMW14341, JIS D 4103, LRES.48.01.006, 40300NDS10, PPS 6009	Wheels – Rotary Fatigue	Rotary Wheel Test Equipment
Drop height and load prior to cracks	SAE J175 plus yellow dye penetrant crack inspection, InMetro Spec ABNT NBR 6752, AK-LH-08, ISO 7141, Fiat 7-B8002, PF-4399, Ford GWFS, ES-E7DC-1130-AA, GMW 15321, JIS D4103, GMW14910, LRES.48.01.006, 40300NDS10, PPS 3001, PPS 3045	Wheels, Wheels Caps, Covers - Impact	Impact Test Equipment per spec. SAE J175 and AK-LH-08
Cycles at load prior to cracks	SAE J2562 plus yellow dye penetrant, ABNT NBR 6751	Wheels – Biaxial Fatigue	Biaxial Fatigue Test Equipment per SAE J2562



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Environment Simulation

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Corrosion – Salt Spray (Fog)	ASTM B117, ASTM G85, ANBT 6750, ABNT NBR 6751, ISO 9227, GMW4298P, FLTM BI 3-1, USCAR 1-2012, GMW3286, GMW 15288, Ford FLTM BI 15288, Ford FLTM BI 103-01, Toyota TSH 1552G	Wheels, Wheel Caps, Wheel Covers, Finishes Salt Spray (Fog)	Salt Spray Chamber per ASTM B117
Corrosion – CASS	ASTM B368, ABNT NBR 6752, ISO 9227, GMW4476P, GMW14458, Ford FLTM BQ 105-01	Wheels, Wheel Caps, Wheel Covers, Finishes CASS Test	CASS Chamber per ASTM B368
Corrosion – Water Fog (100% RH)	ASTM D3175, ABNT NBR 6750, ABNT NBR 6751, FLTM BI 104-01, Chrysler LP-463PB-09-01	Wheels, Wheel Caps, Wheel Covers, Finishes Water Fog (100% RH)	Water Fog Chamber
Corrosion and Blistering	ASTM D3170, SAE J400, GMW9508P, GMW14700, PF-3834, WSS-M2P122-D1-D4, C1-C6	Wheels, Wheel Caps, Wheel Covers, Finishes Chip Resistance of Coatings	Gravelometer
Corrosion - Filiform	ASTM D2803, ASTM D1735, SAE J2635, ISO 4623, GMW 9450, ASTM D2247, GMW14728, GMW15287, GMW14885, GMW 15288, WSS-M2P122-D1/D2/D3/D4/C1-C6	Wheels, Wheel Caps, Wheel Covers, Fasteners, Finishes Filiform Corrosion	Filiform Chamber

DIMENSIONAL MEASUREMENT

2 Dimensional

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Lateral and Radial Runout ³	Up to 5 mm	0.30%	Uniformity Analyzer GM TWS # 9590710, Wheel Uniformity Requirements, 5.1.8 and 5.2.0 W-LAB-011

Calibration and Measurement Capability (CMC) is expressed in terms of the measurement parameter, measurement range, expanded uncertainty of measurement and reference standard, method, and/or equipment. The expanded uncertainty of measurement is expressed as the standard uncertainty of the measurement multiplied by a coverage factor of 2 ($k=2$), corresponding to a confidence level of approximately 95%.

Notes:

1. On-site calibration service is available for this parameter, since on-site conditions are typically more variable than those in the laboratory, larger measurement uncertainties are expected on-site than what is reported on the accredited scope
2. This scope is formatted as part of a single document including Certificate of Accreditation No. ACT-1165.
3. Field Services are provided for these calibration and measurement parameters.



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