



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

ACT TEST SERVICES  
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MECHANICAL

Valid To: November 30, 2026

Certificate Number: 2745.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following types of tests on paint, electrocoat, metallic coatings, sealers and adhesives, tape, transit film, metal forming lubricants, metal, plastics, composite, glass, rubber and textile substrates, phosphateability and compatibility, weld analysis, paint and indirect material contamination:

<u>Test Type / Test Capabilities</u>	<u>Test Method(s)</u>
<b>Abrasion</b>	
Falling Sand	ASTM D968, Method A; GMW15487; JIS H8682-3
Taber	ASTM D3884; ASTM D4060; ASTM G195; Ford BN 108-02; Ford BN 108-04; GMW3208; Honda HES D6501 3.32, Method A; SAE J365; SAE J948, Procedure 3; SAE J1847
<b>Accelerated Weathering</b>	
Fluorescent UV Condensation QUV UVCON	ASTM D4587; ASTM G154; Navistar CEMS GT-31, Method C-F; SAE J2020
Xenon Weatherometer WOM	ASTM D7869; Navistar CEMS GT-31, Method A and B; SAE J2412; SAE J2527 SAE J2527 modified Type "S" per material spec Ford WSS-M9P10-A Section 3.8
<b>Accelerated Corrosion</b>	
Chipping Corrosion	FCA LP-463PB-52-01

<u>Test Type / Test Capabilities</u>	<u>Test Method(s)</u>
<b>Accelerated Corrosion Continued</b>	
Cyclic Corrosion Test (CCT) Arizona Proving Grounds (APG)	ASTM G85, Annex A5; Ford BI 123-01; Ford BI 123-03; Ford 00.00-L-3190; Ford CETP 00.00-L-467; Ford TM 00.00-L-467; GM 9505P, Cycle J (2010); GM 9540P (2010); GMW14124, Cycle J; GMW14872; ISO 11997-1, Cycle B; SAE J2334; SAE J2721; Tesla TP-0000808; VOLVO STD 423-0014; VOLVO STD 423-0069
Filiform Corrosion	ASTM D2803; GMW15287; Honda HES D6501 3.16.1 Condition 1; SAE J2635 (Dev: No master samples)
Scab Corrosion	GM 9511P (2010); GMW15288; IEEE C57.12.28, Annex A; IEEE C57.12.31, Annex A
<b>Appearance</b>	
DOI	ACT LabWI-192-20
Gloss Specular (20°, 60°, 85°)	ASTM D523; Ford BI 110-01; Navistar MPAPS GT-Paint GT-6A; VOLVO STD 423-0023
Instrumented Color Difference Spectrophotometer L*a*b* (CIELAB)	ASTM D2244; SAE J1767
Instrumented Color (45°:0°) Hemispherical (d:8°)	ASTM E1349 ASTM E1331
Multiangle Color	ACT LabWI-0079-20; SAE J1545
Surface Appearance	FCA AS-10169<A>
Visual for Color Colorfastness	ASTM D1729
Visual for Color Change Color fade (lightness) Hue Chroma	AATCC EP-1

<u>Test Type / Test Capabilities</u>	<u>Test Method(s)</u>
<b>Appearance Continued</b>	
Visual for Staining	AATCC EP-2
Wavescan & Orange Peel (R, LW, SW, Wa-We, Dullness)	ACT Lab WI-192-20; Navistar MPAPS GT-Paint GT-29
<b>Chemical Resistance</b>	
Cleaning/Polishing	Honda HES D6501 3.14
Fluids	ASTM D1308;
Spot	ASTM D2248;
Dip	Ford BI113-01;
Drip	Caterpillar MG1004-151;
Immersion	FCA LP-463PB-31-01;
Automotive	FCA LP-463PB-53-01;
Acid	FCA LP.7M052;
Alkali	Ford BI 168-01;
Household Chemicals	GMW14334;
Water	GMW14701 (Except Method 1);
Soap	GMW14664 3.5;
Migration Staining	GMW14671 3.9.1;
Condiments	GMW14671 3.9.3;
Degreaser	GMW15284;
	GMW17013;
	Honda HES D6501 3.23;
	Honda HES D6501 3.24;
	Honda HES D6501 3.25;
	Honda HES D6501 3.26.1;
	Honda HES D6501 3.27.1;
	Honda HES D6501 3.28.1;
	Honda HES D6501 3.28.2;
	Honda HES D6501 3.28.3;
	IEC 60068-2-74;
	ISO 2812-1;
	ISO 2812-3;
	ISO 2812-4;
	Navistar MPAPS GT-Paint GT-9B;
	Navistar MPAPS GT-Paint GT-14B;
	SAE J2792
	VOLVO 1023,8177;

<u>Test Type / Test Capabilities</u>	<u>Test Method(s)</u>
<b>Chemical Resistance Continued</b>	
Fuel/Solvent Gas Diesel E85 Ethanol Biodiesel MEK Xylene	ASTM D5402; Ford BO 101-05; GM 9501P (2010); GMW14333 (Except not calculating water content); Honda HES D6501 3.21; Honda HES D6501 3.22; Honda HES D6501 3.28.4; Honda HES D6501 3.36; Honda HES D6501 3.38
Intergranular Corrosion	ISO 11846 (Methods A and B)
Paint Staining	FCA LP-463PB-57-02; Ford BI 113-07; Ford BI 113-08
<b>Chip Resistance</b>	
Gravelometer Stone Chip Gravel Granite Chilled Iron	ASTM D3170; Ford BI 157-06 (Dev: SAE J 400 Gravelometer); GM 9508P (2010); GMW14700; Honda HES D6501 3.33; SAE J400; VOLVO STD 1024,7132
Rating	GMW17456
<b>Coating Evaluation</b>	
Blisters	ASTM D714; ISO 4628-2; VOLVO STD 420-0001
Conductivity Electrostatic Paintability	Navistar MPAPS GT-Paint GT-18
Corrosion (Rating)	ASTM D610; FCA CS.00081; GM 8101G (2009); GMW15356; GMW15357; GMW15359; ISO 4628-3; VOLVO STD 420-0002
Corrosion Creep Back Creep Back from Scribe Total Width Max Left and Max Right	ASTM D1654; Ford BI 169-01; GM 9102P (2010) GMW15282; ISO 4628-8; ISO 17872; VOLVO STD 1021,2

<b><u>Test Type / Test Capabilities</u></b>	<b><u>Test Method(s)</u></b>
<b>Coating Evaluation Continued</b>	
Defect Rating Chalking Checking Flaking Cracking Crazing	ASTM D4214-07; ASTM B537; ASTM D661; ASTM D772; ISO 4628-1; ISO 4628-4; ISO 4628-5; ISO 10289;
Coating Thickness Elcometer Microscopic (Destructive) Cross Section	ASTM B487; ASTM D7091; Ford BI 117-01; Honda HES D6501 3.2.2; USI 2808, Sections 4.3, 5.3, 5.4.4.1, 5.5.7, 5.5.8; JIS H8501
<b>Coating Weight</b>	
PPG Thin Film	ACT LabWI-0090-20 (Excl. Aluminum Substrates)
Wet Strip Weigh Strip Weigh	ACT LabWI-351-21; FCA LP.7M046; ISO 3892
X Ray Fluorescence (XRF)	ACT LabWI-0259-21
<b>Compatibility</b>	
Electrocoat (E-coat, ELPO)	Ford BV 119-01; PPG QWI 0604.0; SAE J1969
Lubricant Cleaner Foamability Coating Cratering Coating Distortion	ACT LabWI-364-21 (Nissan NNA Oil Approval Test) ; ASP Auto/Steel Partnership Sections 3 and 5-7; FCA LP-463NB-29-02; FCA LP-463PB-63-01; Freightliner 49-00102; GMW16546; GMW16656; PPG QWI 0604.0
Paint Staining	ASTM D925, Method A
Phosphate Embrittlement	Ford WSS-M99P30 3.12; Toyota TSH1109G

<b><u>Test Type / Test Capabilities</u></b>	<b><u>Test Method(s)</u></b>
<b>Compatibility Continued</b>	
Sealer/Adhesive Contamination	ACT LabWI-350-21; GM Adhesive/Sealer (Pretreatment Process Compatibility); ACT LabWI-366-21 (Ford Sealer Phosphate Test); ACT LabWI-373-21 (Sealer Compatibility with Zircobond); ACT LabWI-374-21 (Sealer Compatibility for Cleaners with Zircobond); FCA LP-463CB-12-02; FCA LP-463CB-12-03; FCA LP-463CB-12-04; FCA LP-463NB-09-01; Ford BV 153-08; GM3624M; GMW16549; Honda 0095Z-SZA-A000 4.22
Silicone Contamination	FCA LP-463PB-13-01
Crocking Mar Resistance Gloss Retention	Ford BI 161-01; Ford BN 107-01; FCA LP-463PB-54-01
<b>Cure Test</b>	
Solvent Rub (Resistance)	ASTM D4752; Navistar MPAPS GT-Paint GT-14A
Tackiness Imprinting	GM 9509P (2012); GMW15891; Honda HES D6501 3.12
Electrocoat (Ecoat) ELPO) Acid Base Equivalent (MEQ) Knife Edge Corrosion	ASTM D4370; Ford BI 120-01; Ford BI 127-01; GM 9535P (2013); GMW3008, Sections 3.2.3.1, 3.2.3.2, 3.3.1.1, 3.3.1.2, 3.3.1.4, 3.3.1.6 and 3.3.4.2
<b>Electroplate</b>	
Adhesion Chrome Plating	ASTM B571, Sections 4, 7, 8, 9
Zinc on Iron/Steel	ASTM B633-19 (Except Section 10.4)
<b>Environmental Cycling</b>	
Temperature Range (-70 to 500) °C Humidity Range (10 to 95) % RH ± 5 % 10% @ 60°C; 25°C @ 95% RH Freeze/Thaw Cycling Thermotron	ASTM D6944, Method B; FCA LP-463CB-10-01; FCA LP.7M070; Ford BQ 104-07; GMW14124, Cycles A, C, F, G, I, J, K, L, O, U, V, W; Navistar MPAPS GT-Paint GT-14C

<b><u>Test Type / Test Capabilities</u></b>	<b><u>Test Method(s)</u></b>
<b>Flexibility</b>	
Mandrel Bend Conical Cylindrical	ASTM D522; GMW16746; Honda HES D6501 3.10.1 and 3.11
<b>Hardness</b>	
Microhardness Knoop (Tukon) Vickers	ASTM D1474/D1474M; ASTM E384; AWS D8.9M 11.5.3; Ford BI 112-02
Pencil	ASTM D3363; Honda HES D6501 3.5; ISO 15184
<b>Impact Resistance</b>	
Ball Drop	GMW14093 Apparatus C
Cold Slam	FCA LP-463TB-09-01
Gardner Direct (Frontal) Indirect (Reverse)	ASTM D2794; ASTM D5420; Honda HES D6501 3.8.1 and 3.9.1; ISO 6272-2
PACCAR Paint Performance	CMT0033
<b>Paint Adhesion</b>	
High Pressure Wash	Ford BO 160-04 Method A; GMW16745 Method B; VOLVO STD 423-0015
Knife	ASTM D6677; VOLVO STD 423-0009
Pull-off Strength	ASTM D4541, Method D, PATTI and E, Positest; ISO 4624, Method B
Tape X Scribe Crosshatch Crosscut	ASTM D3359; FED-STD 141D, Method 6301.3; Ford BI 106-01; GM 9071P(2012); GMW14829; Honda HES D6501, Sections 3.6 and 3.7; ISO 2409; Navistar MPAPS GT-Paint GT-5B; Navistar MPAPS GT-Paint GT-5C; VOLVO STD 423-0012
Scratch/Mar (5 Finger)	FCA LP-463DD-18-01; FCA PF-11203, Sections 4.2 and 4.3; Ford BO162-01; GMW14698; ISO 1518-1
Scuffing and Marring	GMW14130; Navistar CEMS GT-12

<b><u>Test Type / Test Capabilities</u></b>	<b><u>Test Method(s)</u></b>
<b>Salt Spray</b>	
Acetic Acid Salt Spray (AASS)	ASTM G85, Annex A1, A2, A3; ISO 9227; JIS H8502; VOLVO STD 423-0010
Copper Accelerated Salt Spray (CASS)	ASTM B368; Ford BQ 105-01; GMW14458; ISO 9227; JIS H8502; VOLVO STD 423-0010
Neutral Salt Spray (NSS) Salt Fog	ASTM B117; Ford BI 103-01; GM 4298P (2010); GMW3286; Honda HES D6501, Sections 3.15.1 and 3.15.2; ISO 9227; JIS H8502; JIS Z2371; SAE USCAR-1; VOLVO STD 423-0010
Pitting Corrosion	ASTM G46; Ford CA 005-01
<b>Scanning Electron Microscopy (SEM)</b>	
Scanning Electron Microscopy (SEM)	ACT LabWI-348-21 (Without EDS)
Phosphate (Macro), Crystal Size (Micro)	ACT LabWI-0079-20
<b>Sealers/Adhesives</b>	
Adhesions Quick Knife	Ford BV 101-02; GMW3368; GMW14706
Failure Pattern	ISO 10365
Low Temperature Tests	SAE J243 ADS-2
Paint Staining	FCA LP-463NB-09-01
Sag	Ford BV 118-01
Wash Resistance	Ford BV 116-01; Ford BV 116-02; Ford BV 116-03; GMW16700 Method B; SAE J243 ADS-5
Surface Energy (Wetting Tension)	Inalfa IES 60.043; ISO 8296



<b><u>Test Type / Test Capabilities</u></b>	<b><u>Test Method(s)</u></b>
<b>Tensile / Compression (Up to 100 kN)</b>	
Cross Lap	AWS D8.9M 11.6.3 and 11.6.3.2; GM 9753P (2011); Navistar MPAPS K-6900 4.2.3
Lap Shear (Instron)	AWS D8.9M 11.6.3 and 11.6.3.1; DIN EN 1465; ISO 4587; Navistar MPAPS K-6900 4.2.2; SAE J1523; Tesla TS-0002074
T Peel	ASTM D1876; ISO 11339; Navistar MPAPS K-6900 4.2.12
90° peel 180° peel	ASTM D6862; ASTM D903; ASTM D1000; ISO 8510-2
<b>Water Resistance</b>	
Cleveland Condensing Humidity	ASTM D4585/D4585M; Ford BI 104-02; ISO 6270-1
Condensing Humidity Condensation	ASTM D1748 ; ASTM D2247; ISO 6270-2; VOLVO STD 423-0018
Humidity	Honda HES D6501, Section 3.19; SAE J1389
Water Fog	ASTM D1735; GM 4465P (2011); GMW14729, Option A
Water Immersion	ASTM D870; Ford BI 104-01; GME60410 (2009); GMW14704; Honda HES D6501 3.18; ISO 2812-2 (Dev: Water per ASTM D1193, Type 4); Navistar MPAPS GT-Paint GT-7G
Corrodkote	ASTM B380; JIS H8502



# Accredited Laboratory

A2LA has accredited

## ACT TEST SERVICES

*Hillsdale, 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 21<sup>st</sup> day of November 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 2745.01  
Valid to November 30, 2026

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