

CERTIFICATE OF ACCREDITATION

The ANSI National Accreditation Board

Hereby attests that

FEMA Corporation 1716 Vanderbilt Ave.

Portage, MI 49024

Fulfills the requirements of

ISO/IEC 17025:2017

In the field of

TESTING

This certificate is valid only when accompanied by a current scope of accreditation document. The current scope of accreditation can be verified at <u>www.anab.org</u>.



R. Douglas Leonard Jr., VP, PILR SBU

Expiry Date: 20 December 2023 Certificate Number: AT-3051



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

FEMA Corporation

1716 Vanderbilt Ave. Portage, MI 49024 Cody Sturgill <u>csturgill@fema-corp.com</u> 269 323 1369

TESTING

Valid to: December 20, 2023

Certificate Number: AT-3051

Electrical

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Insulation Resistance	Customer Procedures: 0.1 to 5KVAC RMS @ 60Hz 0.5 to 19.5mA AC @ 60Hz 0.1 to 6KVDC 0.5 to 7mA DC 2 to 45,000 MΩ	Hydraulic Components	Megohm/Hipot Tester
Electrical Current and Voltage	Customer Procedures: Voltage: 330mV to 1,000 VAC 33mV to 1,000 VDC Current: 330 ACmA to 10 ACA 330 DCmA to 10 DCA		Digital Multimeter, Oscilloscope, Data Acquisition
Resistance	Customer Procedures: 101.5 mΩ to 50MΩ		Digital Multimeter, LCR Meter
Inductance	Customer Procedures: 100nH to 1kH		LCR Meter

Mechanical

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Salt/Water Immersion	Customer Procedures: -40 to 130°C Ambient	Hydraulic Components	Environmental Chamber Thermocouple
Humidity	Customer Procedures: 32.5% to 97.3%		Environmental Chamber





Electrical

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Thermal Shock (Air-Air and Liquid-Liquid)	Customer Procedures: Air to Air: -40 to 130°C Liquid-Liquid: -75 to 130°C		Thermal Shock Chamber
Thermal Cycle	Customer Procedures: -75 to 180°C		Environmental Chamber
Thermal Endurance	Customer Procedures: -75 to 180°C		Environmental Chamber, Data Acquisition, Power Supply
Random Vibration	Customer Procedures 10 to 2,700 Hz 3300lbs RMS 1" Stroke		Vibration Table
Sinusoidal Vibration	Customer Procedures: 10 to 2,700 Hz 4000lbs Peak 1" Stroke	Hydraulic Components	Vibration Table
Sine on Random Vibration	Customer Procedures: 10 to 2,700 Hz 4000lbs Peak 1" Stroke		Vibration Table
Shock	Customer Procedures: 100G 1" Stroke		Vibration Table, Drop Shock Fixture
Hydraulic Fatigue	NFPA/T2.6.1 R2-2001 (R2019), Customer Procedures: Up to 10,000psi		Hydraulic Fatigue Stand
Hydraulic Burst	NFPA/T2.6.1 R2-2001 (R2019), Customer Procedures: Up to 60,000psi		Hydraulic Burst Chamber
Compression Force	Customer Procedures: Up to 10,000 lbf Compression		Load Cell/Hydraulic Press
Flow versus Pressure	Customer Procedures: Up to 155 gpm Up to 10,000 psi		Flowmeter, Pressure Transducer





Note: 1. This scope is formatted as part of a single document including Certificate of Accreditation No. AT-3051.



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