National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : VARROC ENGINEERING LTD, C.T.S. NO. 4270, ELPRO COMPOUND, TALUKA- HAVELI, CHINCHWADGAON, PUNE, MAHARASHTRA, INDIA

Accreditation Standard ISO/IEC 17025:2017

Certificate Number TC-4147 **Page No** 1 of 4

Validity 24/05/2023 to 23/05/2025 **Last Amended on** -

S.No	Discipline / Group	Materials or Products tested	Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed	Test Method Specification against which tests are performed and / or the techniques / equipment used
Permanent Facility				
1	ELECTRICAL-ENVIRONMENTAL TEST FACILITY	Starter Motor Rectifier and Regulator Automotive Switches CDI (Capacitor discharge ignition) Instrument Cluster Magneto (Alternator current generator) TCI (Transistor Controlled Igniter) ECU, VCU, BCM DC DC converter Motor controller Automotive Lighting products Automotive Parts & Components	Corrosion resistance test Salt Spray test	ASTM B117
2	ELECTRICAL-ENVIRONMENTAL TEST FACILITY	Starter Motor Rectifier and Regulator Automotive Switches CDI (Capacitor discharge ignition) Instrument Cluster Magneto (Alternator current generator) TCI (Transistor Controlled Igniter) ECU, VCU, BCM DC DC converter Motor controller Automotive Lighting products Automotive Parts & Components	Driving Rain Test	IS 9000 (Part XVI)
3	ELECTRICAL-ENVIRONMENTAL TEST FACILITY	Starter Motor Rectifier and Regulator Automotive Switches CDI (Capacitor discharge ignition) Instrument Cluster Magneto (Alternator current generator) TCI (Transistor Controlled Igniter) ECU, VCU, BCM DC DC converter Motor controller Automotive Lighting products Automotive Parts & Components	High Temperature test	ISO16750-4
4	ELECTRICAL-ENVIRONMENTAL TEST FACILITY	Starter Motor Rectifier and Regulator Automotive Switches CDI (Capacitor discharge ignition) Instrument Cluster Magneto (Alternator current generator) TCI (Transistor Controlled Igniter) ECU, VCU, BCM DC DC converter Motor controller Automotive Lighting products Automotive Parts & Components	low temperature test	ISO 16750-4
5	ELECTRICAL-ENVIRONMENTAL TEST FACILITY	Starter Motor Rectifier and Regulator Automotive Switches CDI (Capacitor discharge ignition) Instrument Cluster Magneto (Alternator current generator) TCI (Transistor Controlled Igniter) ECU, VCU, BCM DC DC converter Motor controller Automotive Lighting products Automotive Parts & Components	Rapid Change of Temperature Thermal Shock Test (Air to Air)	IS 10250
6	ELECTRICAL-ENVIRONMENTAL TEST FACILITY	Starter Motor Rectifier and Regulator Automotive Switches CDI (Capacitor discharge ignition) Instrument Cluster Magneto (Alternator current generator) TCI (Transistor Controlled Igniter) ECU, VCU, BCM DC DC converter Motor controller Automotive Lighting products Automotive Parts & Components	NSS (Neutral salt spray)	JIS Z 2371
7	ELECTRICAL-ENVIRONMENTAL TEST FACILITY	Starter Motor Rectifier and Regulator Automotive Switches CDI (Capacitor discharge ignition) Instrument Cluster Magneto (Alternator current generator) TCI (Transistor Controlled Igniter) ECU, VCU, BCM DC DC converter Motor controller Automotive Lighting products Automotive Parts & Components	Immersion test - IPX7	ISO 20653

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8	ELECTRICAL-ENVIRONMENTAL TEST FACILITY	Starter Motor Rectifier and Regulator Automotive Switches CDI (Capacitor discharge ignition) Instrument Cluster Magneto (Alternator current generator) TCI (Transistor Controlled Igniter) ECU, VCU, BCM DC DC converter Motor controller Automotive Lighting products Automotive Parts & Components	Temperature step test	ISO 16750-4
9	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Starter Motor Rectifier and Regulator Automotive Switches CDI (Capacitor discharge ignition) Instrument Cluster Magneto (Alternator current generator) TCI (Transistor Controlled Igniter) ECU, VCU, BCM DC DC converter Motor controller Automotive Lighting products Automotive Parts & Components	Driving Rain Test	IS 9000 (Part XVI)
10	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Starter Motor Rectifier and Regulator Automotive Switches CDI (Capacitor discharge ignition) Instrument Cluster Magneto (Alternator current generator) TCI (Transistor Controlled Igniter) ECU, VCU, BCM DC DC converter Motor controller Automotive Lighting products Automotive Parts & Components	High Temperature Test	ISO 16750-4
11	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Starter Motor Rectifier and Regulator Automotive Switches CDI (Capacitor discharge ignition) Instrument Cluster Magneto (Alternator current generator) TCI (Transistor Controlled Igniter) ECU, VCU, BCM DC DC converter Motor controller Automotive Lighting products Automotive Parts & Components	low temperature test	ISO 16750-4
12	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Starter Motor Rectifier and Regulator Automotive Switches CDI (Capacitor discharge ignition) Instrument Cluster Magneto (Alternator current generator) TCI (Transistor Controlled Igniter) ECU, VCU, BCM DC DC converter Motor controller Automotive Lighting products Automotive Parts & Components	Rapid Change of Temperature Thermal Shock Test (Liquid to Liquid)	IS 10250
13	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Starter Motor Rectifier and Regulator Automotive Switches CDI (Capacitor discharge ignition) Instrument Cluster Magneto (Alternator current generator) TCI (Transistor Controlled Igniter) ECU, VCU, BCM DC DC converter Motor controller Automotive Lighting products Automotive Parts & Components	Salt Spray Test	ASTM B117
14	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Starter Motor Rectifier and Regulator Automotive Switches CDI (Capacitor discharge ignition) Instrument Cluster Magneto (Alternator current generator) TCI (Transistor Controlled Igniter) ECU, VCU, BCM DC DC converter Motor controller Automotive Lighting products Automotive Parts & Components	Water Spray Test: Shower - S1& S2, Rain - R1 & R2	JIS D 0203

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15	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Starter Motor Rectifier and Regulator Automotive Switches CDI (Capacitor discharge ignition) Instrument Cluster Magneto (Alternator current generator) TCI (Transistor Controlled Igniter) ECU, VCU, BCM DC DC converter Motor controller Automotive Lighting products Automotive Parts & Components	NSS (Neutral salt spray)	JIS Z 2371
16	ELECTRONICS-ENVIRONMENTAL TEST FACILITY	Starter Motor Rectifier and Regulator Automotive Switches CDI (Capacitor discharge ignition) Instrument Cluster Magneto (Alternator current generator) TCI (Transistor Controlled Igniter) ECU, VCU, BCM DC DC converter Motor controller Automotive Lighting products Automotive Parts & Components	Rapid change of temperature with specified transition duration	ISO 16750-4
17	MECHANICAL- NOISE & VIBRATION	Starter Motor Rectifier and Regulator Automotive Switches CDI (Capacitor discharge ignition) Instrument Cluster Magneto (Alternator current generator) TCI (Transistor Controlled Igniter) ECU, VCU, BCM DC DC converter Motor controller Automotive Lighting products Automotive Parts & Components	Impact durability test	Cl.No. 7.7 - JIS D 5500
18	MECHANICAL- NOISE & VIBRATION	Starter Motor Rectifier and Regulator Automotive Switches CDI (Capacitor discharge ignition) Instrument Cluster Magneto (Alternator current generator) TCI (Transistor Controlled Igniter) ECU, VCU, BCM DC DC converter Motor controller Automotive Lighting products Automotive Parts & Components	Resonance Frequency detection, Vibration function test, Vibration endurance test	JIS D1601
19	MECHANICAL- NOISE & VIBRATION	Starter Motor Rectifier and Regulator Automotive Switches CDI (Capacitor discharge ignition) Instrument Cluster Magneto (Alternator current generator) TCI (Transistor Controlled Igniter) ECU, VCU, BCM DC DC converter Motor controller Automotive Lighting products Automotive Parts & Components	Shock test	Cl. No. 4.2.2.2 - ISO 16750-3
20	MECHANICAL-PERFORMANCE/DURABILITY/ SAFETY TEST	Starter Motor	Continuous cranking test	Cl. No 7.11 - IS 3141
21	MECHANICAL-PERFORMANCE/DURABILITY/ SAFETY TEST	Starter Motor	Cold cranking test	CINo. 7.12 - IS 3141
22	MECHANICAL-PERFORMANCE/DURABILITY/ SAFETY TEST	Starter Motor	Insulation Resistance Test	Cl.No. 7.5 - IS 3141
23	MECHANICAL-PERFORMANCE/DURABILITY/ SAFETY TEST	Starter Motor	Light Running Test	Cl. No. 7.6.1 - IS 3141

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24	MECHANICAL-PERFORMANCE/DURABILITY/ SAFETY TEST	Starter Motor	Locked Torque test	Cl.No. 7.6.2 - IS 3141
25	PHOTOMETRY-LUMINARIES	a) Stop Lamp b) Front position lamps c) Rear position lamp d) Day time running Lamp e) Direction Indicator lamps (Front, Rear & Side)	a) Light Distribution b) Color Measurement	ECE R 50 Rev 3; ECE R 7 Rev 7; ECE R 87 Rev 3; ECE R 148; ECE R 48; ECE R 6 Rev 7
26	PHOTOMETRY-LUMINARIES	Front Fog Lamp	a) Light Distribution b) Color Measurement	ECE R-149, ECE R 48; ECE R-19 Rev 8
27	PHOTOMETRY-LUMINARIES	Head Lamps	Light Distribution in: Driving Beam and Passing Beam; Color Measurement	ECE R-112 Rev 3, ECE R-149, ECE R 48; ECE R-113 Rev 3
28	PHOTOMETRY-LUMINARIES	Rear Fog Lamp	a) Light Distribution b) Color Measurement	ECE R-148, ECE R 48; ECE R-38 Rev 3
29	PHOTOMETRY-LUMINARIES	Reverse Lamp	a) Light Distribution b) Color Measurement	ECE R-148; ECE R 48; ECE R 23 Rev 5