

NTS FACILITY SPOTLIGHT

KITCHENER, ONTARIO

ABOUT NTS KITCHENER

NTS Kitchener, ON, formerly Sci-Lab Materials Testing, is an internationally accredited laboratory specializing in Automotive, Aerospace, Defense, and Consumer Product sector testing. NTS Kitchener provides failure analysis, durability and reliability testing, as well as certification and environmental services for a variety of materials and products. Tests are performed to the exacting specifications and procedures of ASTM, ISO, SAE, IEC, CSA, CGSB, Toyota, General Motors, Ford, Chrysler, Nissan, Mazda, Isuzu, Honda, VW, BMW, Mercedes, Hyundai/Kia, Mitsubishi, MIL-STD, NASA, Aerospace and Military OEM's.

NTS KITCHENER GUARANTEES

- **Excellence in Service** through professional project management and innovation
- **Customer Satisfaction** through cost effective, technically sound and "on time" testing solutions
- **Customer Commitments** are honored
- **Standardization** of operating and test procedures
- **Test/Data Integrity & Security** through verified testing and comprehensive secure access/information systems

NTS KITCHENER PROVIDES

- Routine and Customer Specific Testing by Technical and Professional Personnel, Engineers or Scientists
- Secure Facility Registered with Controlled Goods Directorate and Restricted Access with Full Surveillance
- International Accreditation by A2LA to ISO/IEC 17025, Standards Council of Canada (SCC) and NIST
- Laboratory-Wide Continuous Equipment Monitoring with Full Digital DAQ and Archiving
- Text/Email Equipment Failure Notification
- Controlled and Traceable Sample and Information Release

NTS KITCHENER TESTING

- Environmental Testing
- Failure Analysis
- Forensic Analysis
- Contamination Analysis
- Materials Properties Testing
- Durability Testing
- Reliability Testing
- Performance Testing



Robotic operation integrated with environmental chambers for continuous ambient/hot/cold/humidity cycling.



Rapid decompression for aerospace components



Air pressure and flow testing



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ENVIRONMENTAL TESTING

- Thermal Shock/Cycling
- Temperature/Humidity
- Thermal Vibration and Shock
- Robotic Engage/Disengage Integrated with Environmental Chambers
- Highly Accelerated Life Testing (HALT)
- Highly Accelerated Stress Screening (HASS)
- Water Ingress
- Water/Steam Exposure
- Sand and Dust
- Weathering / Weather-o-meter
- Wind Driven Rain, Icing, Freezing Rain
- Solar Radiation (UV, IR, Xenon, and Carbon Arc)
- Cyclic Corrosion
- Fluids Susceptibility, Submergence
- Altitude and Rapid Decompression
- Explosive Atmosphere
- Salt/Fog Spray
- Copper Accelerated Acetic Acid Salt Spray (CASS)

FAILURE / CONTAMINATION ANALYSIS AND FORENSICS

- Fourier Transform Infrared Spectroscopy (FTIR)
- Gas Chromatography/Mass Spectroscopy (GC/MS)
- UV/VIS Spectrophotometer
- Optical Microscopy
- High Pressure Liquid Chromatography (HPLC)
- Scanning Electron Microscopy/Energy Dispersive X-Ray Spectroscopy (SEM/EDS)
- Case Depth
- Grain Size, Grain Structure
- Heat Treat Verification
- Weld Quality and Strength

MATERIALS PROPERTIES

- Tension, Compression and Deflection
- Torque
- Fogging and Odor
- Color, Gloss, Orange Peel & DOI
- VOC Emissions and Substances of Concern
- Thermal Analysis (TGA & DSC)
- Karl Fisher Titration
- Wear & Abrasion (RCA, Taber, Wyzenbeek)
- Flammability
- Hardness and Micro-hardness
- Coating Thickness
- High Pressure Cleaner / Water Jet
- Chrome on Plastics incl. Plating thickness, Micro-Discontinuous Porosity and STEP
- Surface Roughness
- Impact and Gravelometer
- Friction Induced Wear
- Coefficients of Friction, Static/Dynamic
- Porosity
- Adhesion

DURABILITY, RELIABILITY AND PERFORMANCE

- Linear Acceleration and Crash Safety
- Vibration and Shock
- Flow, Pressure and Temperature
- Fire and Flammability
- Pressure Cycling (Overpressure and Burst)
- Gross and Fine Leak Testing
- Particle Impact Noise Detection (PIND)
- Die and Bond Shear Strength
- Dynamic Stress/Strain
- Tensile and Compressive Loading

ABOUT NTS

As one of the largest commercial test laboratory networks in North America, NTS offers test, inspection and certification services for environmental, dynamics, EMC, wireless, product safety, materials, ballistics and much more. Our client partners rely on NTS to bring quality products to market quickly and efficiently, and so can you.



Water ingress protection testing



Solar radiation exposure testing of automotive dashboard



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