

NTS Facility Spotlight: Montreal, Quebec, Canada

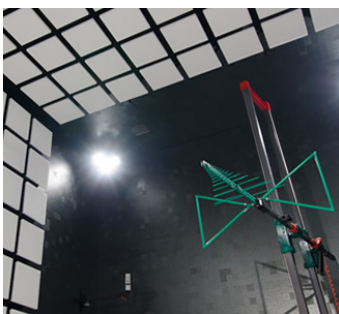
Environmental, Mechanical and EMI Testing



**Our Chamblly, Quebec
Headquarters**



Temperature and Humidity



Emissions and Immunity Testing

About NTS

Established in 2000 as Fiarex Testing Laboratory and CEM Testing Laboratory, the Montreal laboratories joined NTS in 2017 and offer an extensive array of test services delivered by an experienced and resourceful team dedicated to serving the testing needs of Aerospace, Defense, Transportation and a variety of Commercial customers.

The validation of a product can be made at various stages of development and NTS has the expertise to perform validation of prototypes, product robustness limits, and product qualification.

Dynamic and Mechanical Testing

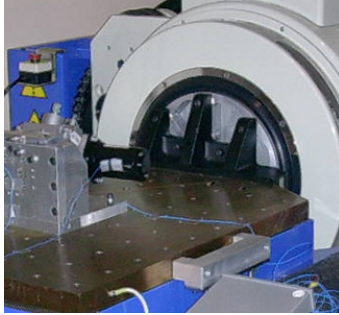
The expertise developed by our representatives allows analysis of product reliability and robustness improvement with advanced techniques. NTS offers acceleration testing, mechanical shock testing (free-fall and shaker), transportation simulation, free-fall drop testing, tensile, compression and cycling, HALT, foreign object impact resistance and vibration testing.

Environmental Testing

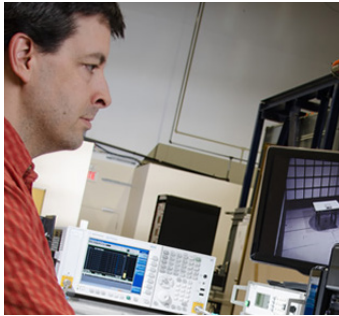
NTS is the primary choice for many manufacturers of high technology when it comes to the simulation of the behaviour of a product under intense environmental conditions. NTS can simulate a variety of environmental conditions including thermal shock, high and low temperature conditioning, humidity, thermal cycling, salt-fog corrosion, altitude, vacuum, pressure and fluid susceptibility.

EMI Testing

The conformity to electromagnetic compatibility and interference (EMC and EMI) norms and regulations is a crucial step in the development of every electric and electronic product. With its technical expertise, its semi-anechoic chambers and its state of the art equipment, the NTS EMC testing laboratory is your designated partner to provide support during your product's EMC and EMI qualification process; from prototype development to a proper product certification. NTS is also able to offer counseling services, along a reduced development time and a more efficient certification process.



Vibration Testing



EMI Testing



Ingress Protection Testing



Environmental Laboratory
2425 Industrial Blvd.
Chambly, Quebec
J3L 4W3 Canada

EMC/EMI Laboratory
1490-D, Nobel Street
Boucherville, QC
J4B 5H3, Canada

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Highlights and Primary Test Specifications

EMI/EMC

- ▶ Radiated electromagnetic field
- ▶ Conducted emissions
- ▶ Harmonic currents
- ▶ Voltage fluctuations and flicker
- ▶ Electrostatic Discharge (ESD) Immunity
- ▶ Radiated electromagnetic field immunity
- ▶ Electrical fast transient/burst immunity
- ▶ Surge immunity
- ▶ Immunity to conducted disturbances
- ▶ Power frequency magnetic field immunity
- ▶ Pulse magnetic field immunity
- ▶ Damped oscillatory magnetic field immunity
- ▶ Voltage dips, short interruptions and voltage variation immunity
- ▶ Immunity to conducted, common mode disturbances
- ▶ Ripple on DC Input Power Port Immunity
- ▶ Damped oscillatory wave immunity
- ▶ DC Input Power Port Immunity Tests

Environmental (Climatic)

- ▶ Thermal Shock (air to air)
- ▶ Temperature Cycling
- ▶ High and Low Temperature
- ▶ Temperature and Humidity
- ▶ Temperature and Humidity Cycling
- ▶ High and Low Temperature Storage
- ▶ Corrosion Salt Fog
- ▶ Rapid Decompression / Over Pressure
- ▶ HAST
- ▶ Ingress Protection: Water (IPX1 to IPX9) or Dust (IP5X or IP6X)

Mechanical and Dynamics

- ▶ Vibration
- ▶ Mechanical Shock
- ▶ Free Fall / Drop Shock
- ▶ Surface Impact
- ▶ Constant Acceleration
- ▶ Tensile, Compression and Cycling
- ▶ HALT / HASS - Random multi-axis vibration and rapid thermal cycling

Primary Test Specifications

- | | | | |
|---------------|---------------------|---------------------|----------------------------------|
| ▶ MIL-STD-167 | ▶ ASTM D775 | ▶ Chrysler PF-12032 | ▶ AS/NZS 61000-xx |
| ▶ MIL-STD-202 | ▶ ASTM D999 | ▶ Chrysler PF-12184 | ▶ ICES-001, 003, 005IEC 61000-xx |
| ▶ MIL-STD-331 | ▶ ASTM B117 | ▶ JEDEC JESD22 | ▶ EN 55011 |
| ▶ MIL-STD-810 | ▶ IEC 60068 | ▶ RTCA DO-160 | ▶ EN 55022 |
| ▶ MIL-STD-833 | ▶ IEC 60255 | ▶ FCC Part 15 & 18 | ▶ EN 61000-xx |
| ▶ GM 3172 | ▶ IEC 62493 | ▶ CISPR 11 | ▶ EN 60255-xx |
| ▶ GM 6139 | ▶ IEC 61373 | ▶ CISPR 12 | ▶ EN 61547 |
| ▶ GM 15310 | ▶ IEC 61547 | ▶ CISPR 14 | ▶ KN 61000-xx |
| ▶ GM 15725 | ▶ GR-1209 | ▶ CISPR 15 | ▶ ISO 10605 |
| ▶ GM 16288 | ▶ GR-1221 | ▶ CISPR 22 | ▶ ISO 11452 |
| ▶ ASTM D3580 | ▶ GR-468 | ▶ CISPR 32 | ▶ and more... |
| ▶ ASTM D4728 | ▶ Chrysler PF-11710 | ▶ AS-NZS CISPR22 | |

About NTS

NTS provides test, inspection and certification services to help clients build better, stronger, safer, more reliable products. Our engineers and technicians have extensive knowledge of current test and conformity requirements, both domestic and international. With a nationwide network of laboratories, we bring a unified solution to a global market.