

NTS FACILITY SPOTLIGHT

# MONTREAL, QUEBEC

## ABOUT NTS MONTREAL

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.

## ABOUT NTS

Every hour of every day, NTS is fully invested in helping you build better, stronger, safer, more reliable products, and bring those products to market quickly and efficiently. Since conducting our first rounds of tests in 1961, NTS has become one of the largest commercial test laboratory networks in North America.

Our test, inspection and certification services cover environmental, dynamics, EMC, wireless, product safety, materials, ballistics and much more. NTS engineers and technicians have exceptional knowledge of all test and conformity requirements in both domestic and international arenas. Our client partners in Aerospace, Defense, Telecom and Energy rely on NTS to make sure they're putting their best products forward, and so can you.



Our Chamblly, Quebec headquarters



Temperature and humidity



Emissions and immunity testing



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## HIGHLIGHTS AND PRIMARY TEST SPECIFICATIONS

### 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

### Environmental (Climatic)

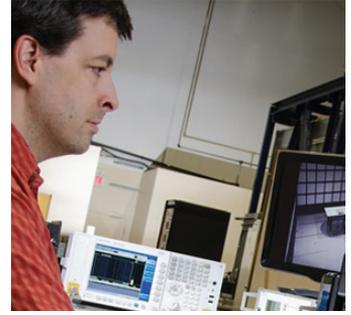
- Thermal Shock (air to air)
- Temperature Cycling
- High and Low Temperature
- Temperature and Humidity
- Temperature and Humidity Cycling
- High and Low Temperature Storage
- Corrosion Salt Fog
- Rapid Decompression/Over Pressure
- HAST
- Ingress Protection: Water (IPX1 to IPX9) or Dust (IP5X or IP6X)

### EMI/EMC

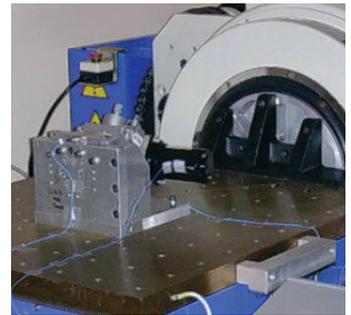
- Radiated electromagnetic field
- Conducted emissions
- Harmonic currents
- Voltage fluctuations and flicker
- Electrostatic Discharge (ESD) Immunity
- Radiated electromagnetic field immunity
- Electrical fast transient/burst immunity
- Surge immunity
- Immunity to conducted disturbances
- Pulse magnetic 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
- Power frequency magnetic field immunity

### Primary Test Specifications

- |               |                     |                    |                  |
|---------------|---------------------|--------------------|------------------|
| ● MIL-STD-167 | ● ASTM D999         | ● IEC 60255        | ● AS-NZS CISPR22 |
| ● MIL-STD-202 | ● ASTM B117         | ● IEC 62493        | ● 5IEC 61000--xx |
| ● MIL-STD-331 | ● GR-1209           | ● IEC 61373        | ● EN 55011       |
| ● MIL-STD-810 | ● GR-1221           | ● IEC 61547        | ● EN 55022       |
| ● MIL-STD-833 | ● GR-468            | ● JEDEC JESD22     | ● EN 61000-xx    |
| ● GM 3172     | ● Chrysler PF-11710 | ● RTCA DO-160      | ● EN 60255-xx    |
| ● GM 6139     | ● Chrysler PF-12032 | ● FCC Part 15 & 18 | ● EN 61547       |
| ● GM 15310    | ● Chrysler PF-12184 | ● CISPR 11         | ● KN 61000-xx    |
| ● GM 15725    | ● AS/NZS 61000-xx   | ● CISPR 12         | ● ISO 10605      |
| ● GM 16288    | ● ICES-001          | ● CISPR 14         | ● ISO 11452      |
| ● ASTM D3580  | ● ICES-003          | ● CISPR 15         | ● and more...    |
| ● ASTM D4728  | ● ICES-00           | ● CISPR 22         |                  |
| ● ASTM D775   | ● IEC 60068         | ● CISPR 32         |                  |



EMI testing



Vibration testing



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