

# Dell Precision 7760 mobile workstation

Summary of Environmental Tests Passed for Precision 7000 Series, Model 7760

Testing performed April 2021

## MIL-STD 810H Tests Performed:

Test Category	Test Method	Test Parameters	Test Results
Altitude Storage/Air Transport	Method 500.6 Procedure I	Test Pressure: Equivalent to cabin altitude of 15,000ft Temperature: 21°C Altitude Change Rate: <10 m/s Duration: 1 hour Unit is non-operational during test. (Product tested to exceed MIL-STD; meets 35,000ft)	Pass
Altitude Operation/Air Carriage	Method 500.6 Procedure II	Test Pressure: Equivalent to cabin altitude of 15,000ft Temperature: 21°C Altitude Change Rate: <10 m/s Duration: 1 hour Unit is operational during test.	Pass
High Temperature* Storage and Transition	Method 501.7 Procedure I	Duration: 7 day exposure (7 X 24 hr. cycles) Temperature: 33 - 71°C See official MIL-STD Table 501.5 - III High temperature cycles, climate category A1 Hot Dry Unit is non-operational during test.	Pass
High Temperature Operational	Method 501.7 Procedure II	Duration: 5 day exposure (5 X 24 hr. cycles) Temperature: 140°F/60°C Cycling temperature exposure Unit is operational during test.	Pass
Low Temperature (Exaggerated)	Method 502.7 Procedure I	Duration: 24 hour exposure Temperature: -51°C Unit is non-operational during test.	Pass
Low Temperature	Method 502.7 Procedure II	Duration: 24 hour exposure Temperature: -29°C Unit is operational during test.	Pass
Humidity Storage & Transit	Method 507.6 Procedure 1 A and B	Duration: 15 Days. See official MIL-STD Table 507.5-I Hot-humid (Cycle B3), Nonhazardous test, Unit is non-operational during test.	Pass
Sand and Dust Blowing Dust	Method 510.7 Procedure I	Duration: 12 Hour Air velocity = 1.5 m/s (300 ft/min) to 8.9 m/s (1750 ft/min) Temperature: 60°C Relative Humidity: 30% Unit is operational during test.	Pass
Vibration Operational	Method 514.8 Procedure I Cat. 4	Operational Vibration, 10-500 Hz, 1.04 Grms, random 1 hour on Bottom, Left and Back side. Unit is operational during test.	Pass
Vibration Non-operational	Method 514.8 Procedure I Cat. 24	Non-operational vibration, 20-2000 Hz, 7.69 Grms., random 30 mins. Unit is non-operational during test.	Pass
Shock Functional Shock	Method 516.8 Procedure I	185g, 2ms Half Sine 1 shock/axis/direction for a total of 6 shocks. Unit is operational during test.	Pass
Shock Material to be Packaged	Method 516.8 Procedure II	30G, 304ips Square Wave Shock 1 shocks/axis/direction for a total of 6 shocks. Unit is non-operational during test.	Pass

Test Category	Test Method	Test Parameters	Test Results
Shock Bench Handling	Method 516.8 Procedure VI	Angle drops onto solid wooden bench thickness least 4.25cm (1.675 inch). Test height judgment as two conditions as rise test units at one edge 100mm (4 inch) or rise an angle of 45° about a solid wooden bench top, whichever is less Unit is operational during test.	Pass
Shock Crash Hazard	Method 516.8 Procedure V	185g, 2ms Half Sine 2 shocks/axis/direction for a total of 12 shocks. Unit is non-operational during test.	Pass
Shock Transit Drop	Method 516.8 Procedure IV	Modified - 26 X 30 drops onto 2" of plywood over non-yielding surface. The 26-drop requirement (See official MIL-STD Table 516.6-VI) may be divided among up to five samples of the same test item in any combination. Test was completed with 4 systems. Unit is non-operational during test.	Pass
Shock Temperature	Method 503.7 Procedure I-A	Non-operational. High Temperature: 96°C (205°F) Low Temperature: -51° C (-60°F) 3 high-to-low cycles	Pass

## Pass Criteria and Test Scope information

- A Pass indicates that a unit remained operational during the test for tests that were run with unit operating.
- A functional verification was performed immediately after the test exposure.
- After 24 hours, the unit again underwent functional verification.
- Sample sizes tested are not statistically significant.
- Due to battery runtime limitations, operational tests that exceed 2 hours in duration are excluded from being tested using battery power.
- Cosmetic damage does not constitute a failure unless there is a safety concern (crack greater than 1mm diameter)
- HDD, SDD, LCD (non-touch/touch), keyboard, battery, ODD are represented in the tests unless otherwise noted.

\* Battery swelling at high temperatures is possible and can result in cosmetic product defects.