











Motion™ F5 – Field-Ready Durability Testing

Test Type	Description
 Drop	<p>Motion’s drop test was performed in accordance with MIL-STD-810F. The Motion systems were dropped a total of 26 times while operating from a height of 36 inches onto plywood over concrete.</p>
 Vibration	<p>Motion’s vibration test was conducted in accordance with IEC 60068-2-6. We conducted both operational and non-operational tests.</p> <p>Operational: 1.5G, 5-500Hz</p> <p>Non-Operational: 2.5G, 5-500Hz</p>
 Water Resistance	<p>The water resistance test was conducted in accordance with IEC 60529 IP54. The number four is defined as “splashing water”. Water was sprayed against the unit from all directions with no harmful effects.</p>
 Humidity	<p>The operational humidity test was performed over a range of temperatures, humidity levels and times. The table below summarizes the test modes:</p> <p>Operational: 20% to 85% without condensation</p> <p>Storage: 95% without condensation</p>
 Dust Resistance	<p>The dust resistance test was conducted in accordance with IEC 60529 IP54. The number five is defined as “dust protected”. This means that the ingress of dust is not entirely prevented, but it must not enter in sufficient quantity to interfere with the satisfactory operation of the equipment.</p>
 High Temperature	<p>The operational temperature test was performed in accordance with IEC 60068-2-1 and IEC60068-2-2. This included a temperature range from 5°C to 40°C for three cycles over a 24 hour period.</p> <p>Operational: +5°C to +35°C</p> <p>The storage temperature test was conducted across the following range of temperatures:</p> <p>Storage: -30°C to +60°C</p>
 Thermal Shock	<p>The operational thermal shock test was conducted in accordance with IEC 60068-2-14.</p> <p>The non operational thermal shock test was conducted as follows: -30°C/2 hrs, 60°C/2hrs for 12 Testing Cycles</p>
 Altitude	<p>The operational altitude test was performed at 10,000 feet at 5°C for 12 hours and 40°C for 12 hours.</p> <p>The non operational test was performed at 15,000 feet at -30°C and all Motion systems passed without incident.</p>