Federal Aviation Administration, DOT

29.45(a) and (b)(2)—General.
29.46(a)—Performance at minimum operating speed.
29.51—Takeoff data: General.
29.53—Takeoff: Category A.
29.55—Takeoff decision point: Category A.
29.59—Takeoff Path: Category A.
29.60—Elevated heliport takeoff path: Category A.
29.61—Takeoff distance: Category A.
29.62—Rejected takeoff: Category A.
29.64—Climb: General.
29.65(a)—Climb: AEO.
29.67(a)—Climb: OEI.
29.69—Landing: General.
29.72—Landing decision point: Category A.
29.79—Landing: Category A.
29.81—Landing distance (Ground level sites): Category A.
29.85—Balked landing: Category A.
29.87(a)—Height-velocity envelope.
29.89(a) and (b)—Main and tail rotor structure.
29.901(a)—Fire protection of structure, controls, and other parts.
29.903(b) (c) and (e)—Engines.
29.908(a)—Cooling fans.
29.917(b) and (c)(1)—Rotor drive system: Design.
29.927(c)(1)—Additional tests.
29.93(a)—Fuel system independence.
29.937(a)—Transmission and gearboxes: General.
29.94(a)(1), (b), (c), (d), and (f)—Climb cooling test procedures.
29.947(a)—Takeoff cooling test procedures.
29.118(a)—Designated fire zones: Regions included.
29.1187(e)—Drainage and ventilation of fire zones.
29.1189(c)—Shutoff means.
29.1191(a)(1)—Firewalls.
29.1193(e)—Cowling and engine compartment covering.
29.1195(a) and (d)—Fire extinguishing systems (one shot).
29.1197—Fire extinguishing agents.
29.1199—Extinguishing agent containers.
29.1201—Fire extinguishing system materials.
29.1203(a) (6) and (b)—Powerplant instruments.
29.1208(b)(2) (i) and (d)—Equipment, systems, and installations.
29.1323(c)(1)—Airspeed indicating system.
29.1331(b)—Instruments using a power supply.
29.1351(d)(2)—Electrical systems and equipment: General (operation without normal electrical power).
29.1359(a)—Performance information.

NOTE: In complying with the paragraphs listed in paragraph C27.2 above, relevant material in the AC “Certification of Transport Category Rotorcraft” should be used.

[Doc. No. 28008, 61 FR 21907, May 10, 1996]
TABLE III.—HIRF ENVIRONMENT III

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Field strength</th>
<th>Peak</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 kHz–100 kHz</td>
<td>150</td>
<td>150</td>
<td></td>
</tr>
<tr>
<td>100 kHz–400 MHz</td>
<td>200</td>
<td>200</td>
<td></td>
</tr>
<tr>
<td>400 MHz–700 MHz</td>
<td>730</td>
<td>200</td>
<td></td>
</tr>
<tr>
<td>700 MHz–1 GHz</td>
<td>1,400</td>
<td>240</td>
<td></td>
</tr>
<tr>
<td>1 GHz–2 GHz</td>
<td>5,000</td>
<td>250</td>
<td></td>
</tr>
<tr>
<td>2 GHz–4 GHz</td>
<td>7,200</td>
<td>490</td>
<td></td>
</tr>
<tr>
<td>4 GHz–6 GHz</td>
<td>7,200</td>
<td>400</td>
<td></td>
</tr>
<tr>
<td>6 GHz–8 GHz</td>
<td>1,100</td>
<td>170</td>
<td></td>
</tr>
<tr>
<td>8 GHz–12 GHz</td>
<td>5,000</td>
<td>330</td>
<td></td>
</tr>
<tr>
<td>12 GHz–18 GHz</td>
<td>2,000</td>
<td>330</td>
<td></td>
</tr>
<tr>
<td>18 GHz–40 GHz</td>
<td>1,000</td>
<td>420</td>
<td></td>
</tr>
</tbody>
</table>

In this table, the higher field strength applies at the frequency band edges.

(d) Equipment HIRF Test Level 1.
   (1) From 10 kilohertz (kHz) to 400 megahertz (MHz), use conducted susceptibility tests with continuous wave (CW) and 1 kHz square wave modulation with 90 percent depth or greater. The conducted susceptibility current must start at a minimum of 0.6 milliamperes (mA) at 10 kHz, increasing 20 decibels (dB) per frequency decade to a minimum of 30 mA at 500 kHz.
   (2) From 500 kHz to 40 MHz, the conducted susceptibility current must be at least 30 mA.
   (3) From 40 MHz to 400 MHz, use conducted susceptibility tests, starting at a minimum of 30 mA at 40 MHz, decreasing 20 dB per frequency decade to a minimum of 3 mA at 400 MHz.
   (4) From 100 MHz to 400 MHz, use radiated susceptibility tests at a minimum of 20 volts per meter (V/m) peak with CW and 1 kHz square wave modulation with 90 percent depth or greater.
   (5) From 300 MHz to 8 gigahertz (GHz), use radiated susceptibility tests at a minimum of 150 V/m peak with pulse modulation of 4 percent duty cycle with a 1 kHz pulse repetition frequency. This signal must be switched on and off at a rate of 1 Hz with a duty cycle of 50 percent.

(e) Equipment HIRF Test Level 2. Equipment HIRF test level 2 is HIRF environment II in table II of this appendix reduced by acceptable aircraft transfer function and attenuation curves. Testing must cover the frequency band of 10 kHz to 8 GHz.

(f) Equipment HIRF Test Level 3. (1) From 10 kHz to 400 MHz, use conducted susceptibility tests, starting at a minimum of 0.15 mA at 10 kHz, increasing 20 dB per frequency decade to a minimum of 7.5 mA at 500 kHz.
   (2) From 500 kHz to 40 MHz, use conducted susceptibility tests at a minimum of 7.5 mA.
   (3) From 40 MHz to 400 MHz, use conducted susceptibility tests, starting at a minimum of 7.5 mA at 40 MHz, decreasing 20 dB per frequency decade to a minimum of 0.75 mA at 400 MHz.

In this table, the higher field strength applies at the frequency band edges.

Part 29—Airworthiness Standards: Transport Category Rotorcraft

Subpart A—General
29.21 Proof of compliance.
29.25 Weight limits.
29.27 Center of gravity limits.
29.31 Removable ballast.
29.33 Main rotor speed and pitch limits.

Subpart B—Flight

General
29.45 General.
29.49 Performance at minimum operating speed.
29.51 Takeoff data: general.
29.53 Takeoff: Category A.
29.55 Takeoff decision point (TDP): Category A.
29.59 Takeoff path: Category A.
29.60 Elevated heliport takeoff path: Category A.
29.61 Takeoff distance: Category A.
29.62 Rejected takeoff: Category A.
29.63 Takeoff: Category B.
29.64 Climb: General.
29.65 Climb: All engines operating.
29.67 Climb: One engine inoperative (OEI).
29.71 Helicopter angle of glide: Category B.
29.75 Landing: General.
29.77 Landing Decision Point (LDP): Category A.
29.79 Landing: Category A.
29.81 Landing distance: Category A.
29.83 Landing: Category B.
29.85 Balked landing: Category A.
29.87 Height-velocity envelope.

Flight Characteristics
29.141 General.
29.143 Controllability and maneuverability.
29.151 Flight controls.
29.161 Trim control.
29.171 Stability: general.
29.173 Static longitudinal stability.
29.175 Demonstration of static longitudinal stability.
29.177 Static directional stability.
29.181 Dynamic stability: Category A rotorcraft.