

The recorded values must meet the designated range, resolution, and accuracy requirements during dynamic and static conditions. All data recorded must be correlated in time to within one second.

Parameters	Range	Accuracy (sensor input)	Seconds per sampling interval	Resolution	Remarks
88. All cockpit flight control input forces (control wheel, control column, rudder pedal).	Full range control wheel ±70 lb control column ±85 rudder pedal ±165.	±5% .....	1 .....	0.3% full range ..	For fly-by-wire flight control systems, where flight control surface position is a function of the displacement of the control input device only, it is not necessary to record this parameter. For airplanes that have a flight control break away) capability that allows either pilot to operate the control independently, record both control force inputs. The control force inputs may be sampled alternately once per 2 seconds to produce the sampling interval of 1.

<sup>1</sup> For A300 B2/B4 airplanes, resolution=6 seconds.  
<sup>2</sup> For A330/A340 series airplanes, resolution=0.703°.  
<sup>3</sup> For A318/A319/A320/A321 series airplanes, resolution=0.275% (0.088°>0.064°).  
<sup>4</sup> For A330/A340 series airplanes, resolution=2.20% (0.703°>0.064°).  
<sup>5</sup> For A318/A319/A320/A321 series airplanes, resolution=0.22% (0.088°>0.080°).  
<sup>6</sup> For A330/A340 series airplanes, resolution=1.76% (0.703°>0.080°).  
<sup>7</sup> For A330/A340 series airplanes, resolution = 1.18% (0.703°>0.120°).  
<sup>8</sup> For A330/A340 series airplanes, resolution=0.783% (0.352°>0.090°).  
<sup>9</sup> For A330/A340 series airplanes, aileron resolution = 0.704% (0.352°>0.100°). For A330/A340 series airplanes, spoiler resolution = 1.406% (0.703°>0.100°).  
<sup>10</sup> For A330/A340 series airplanes, resolution=0.30% (0.176°>0.12°).  
<sup>11</sup> For A330/A340 series airplanes, seconds per sampling interval=1.  
<sup>12</sup> For B-717 series airplanes, resolution = .005g. For Dassault F900C/F900EX airplanes, resolution = .007g.  
<sup>13</sup> For A330/A340 series airplanes, resolution=1.05% (0.250°>0.120°).  
<sup>14</sup> For A330/A340 series airplanes, resolution = 1.05% (0.250°>0.120°). For A300 B2/B4 series airplanes, resolution = 0.92% (0.230°>0.125°).  
<sup>15</sup> For A330/A340 series airplanes, spoiler resolution = 1.406% (0.703°>0.100°).  
<sup>16</sup> For A330/A340 series airplanes, resolution=0.5°C.  
<sup>17</sup> For Dassault F900C/F900EX airplanes, Radio altitude resolution = 1.25 ft.  
<sup>18</sup> For A330/A340 series airplanes, resolution = 0.352 degrees.  
<sup>19</sup> For A318/A319/A320/A321 series airplanes, resolution = 4.32%. For A330/A340 series airplanes, resolution is 3.27% of full range for throttle lever angle (TLA); for reverse thrust, reverse throttle lever angle (RLA) resolution is nonlinear over the active reverse thrust range, which is 51.54 degrees to 96.14 degrees. The resolved element is 2.8 degrees uniformly over the entire active reverse thrust range, or 2.9% of the full range value of 96.14 degrees.  
<sup>20</sup> For A318/A319/A320/A321 series airplanes, with IAE engines, resolution = 2.58%.

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APPENDIX N TO PART 121 [RESERVED]

APPENDIX O—HAZARDOUS MATERIALS TRAINING REQUIREMENTS FOR CERTIFICATE HOLDERS

This appendix prescribes the requirements for hazardous materials training under part 121, subpart Z, and part 135, subpart K of this chapter. The training requirements for various categories of persons are defined by job function or responsibility. An "X" in a box under a category of persons indicates that the specified category must receive the noted training. All training requirements apply to direct supervisors as well as to persons actually performing the job function. Training requirements for certificate holders

authorized in their operations specifications to transport hazardous materials (will-carry) are prescribed in Table 1. Those certificate holders with a prohibition in their operations specifications against carrying or handling hazardous materials (will-not-carry) must follow the curriculum prescribed in Table 2. The method of delivering the training will be determined by the certificate holder. The certificate holder is responsible for providing a method (may include email, telecommunication, etc.) to answer all questions prior to testing regardless of the method of instruction. The certificate holder must certify that a test has been completed satisfactorily to verify understanding of the regulations and requirements.