

Pt. 121, App. M

14 CFR Ch. I (1–19 Edition)

Part 121 section	Applicable aircraft	Provisions: CFR/FR references
§ 121.312(c)	Airplane type certificated in accordance with SFAR No. 41; maximum certificated takeoff weight in excess of 12,500 pounds.	Compartment interior requirements. 14 CFR 25.853(a) in effect March 6, 1995: 14 CFR parts 1 to 59, Revised as of January 1, 1995, and amended by \n25–83, 60 FR 6623, February 2, 1995. Formerly 14 CFR 25.853(a), (b–1), (b–2), and (b–3) in effect on September 26, 1978: 14 CFR parts 1 to 59, Revised as of January 1, 1978.
§ 121.314(a)	Transport category airplanes type certificated after January 1, 1958.	Class C or D cargo or baggage compartment definition, 14 CFR 25.857 in effect on June 16, 1986, 14 CFR parts 1 to 59, Revised 1/1/97, and amended by Amendment 25–60, 51 FR 18243, May 16, 1986.

[Doc. No. 28154, 60 FR 65936, Dec. 20, 1995, as amended by Amdt. 121–269, 63 FR 8049, Feb. 17, 1998]

APPENDIX M TO PART 121—AIRPLANE FLIGHT RECORDER SPECIFICATIONS

The recorded values must meet the designated range, resolution and accuracy requirements during static and dynamic conditions. Dynamic condition means the parameter is experiencing change at the maximum rate attainable, including the maximum rate of reversal. All data recorded must be correlated in time to within one second.

Parameters	Range	Accuracy (sensor input)	Seconds per sampling interval	Resolution	Remarks
1. Time or relative times counts. ¹	24 Hrs, 0 to 4095.	±0.125% per hour.	4	1 sec	UTC time preferred when available. Count increments each 4 seconds of system operation.
2. Pressure Altitude.	– 1000 ft to max certificated altitude of aircraft. + 5000 ft.	±100 to ±700 ft (see table, TSO C124a or TSO C51a).	1	5' to 35'	Data should be obtained from the air data computer when practicable.
3. Indicated airspeed or Calibrated airspeed.	50 KIAS or minimum value to Max V _{so} to 1.2 V _D .	±5% and ±3%	1	1 kt	Data should be obtained from the air data computer when practicable.
4. Heading (Primary flight crew reference).	0–360° and Discrete "true" or "mag".	±2°	1	0.5°	When true or magnetic heading can be selected as the primary heading reference, a discrete indicating selection must be recorded.
5. Normal acceleration (vertical) ⁹ .	–3g to + 6g	±1% of max range excluding datum error of ±5%.	0.125	0.004g.	
6. Pitch Attitude ..	±75°	±2°	1 or 0.25 for airplanes operated under § 121.344(f).	0.5°	A sampling rate of 0.25 is recommended.
7. Roll attitude ² ...	±180°	±2°	1 or 0.5 for airplanes operated under § 121.344(f).	0.5	A sampling rate of 0.5 is recommended.
8. Manual Radio Transmitter Keying or CVR/DFDR synchronization reference.	On-Off (Discrete) None	1	Preferably each crew member but one discrete acceptable for all transmission provided the CVR/FDR system complies with TSO C124a CVR synchronization requirements (paragraph 4.2.1 ED–55).
9. Thrust/power on each engine—primary flight crew reference.	Full range forward.	±2%	1 (per engine) ...	0.3% of full range.	Sufficient parameters (e.g. EPR, N1 or Torque, NP) as appropriate to the particular engine being recorded to determine power in forward and reverse thrust, including potential overspeed condition.