

³For airplanes that can demonstrate the capability of deriving either the control input on control movement (one from the other) for all modes of operation and flight regimes, the "or" applies. For airplanes with non-mechanical control systems (fly-by-wire) the "and" applies. In airplanes with split surfaces, suitable combination of inputs is acceptable in lieu of recording each surface separately.

⁴This column applies to aircraft manufactured after October 11, 1991.

[Doc. No. 25530, 53 FR 26153, July 11, 1988; 53 FR 30906, Aug. 16, 1988]

APPENDIX E TO PART 135—HELICOPTER FLIGHT RECORDER SPECIFICATIONS

Parameters	Range	Accuracy sensor input to DFDR readout	Sampling interval (per second)	Resolution ² read out
Time (GMT)	24 Hrs	±0.125% Per Hour	0.25 (1 per 4 seconds).	1 sec
Altitude	− 1,000 ft to max certified altitude of aircraft.	±100 to ±700 ft (See Table 1, TSO-C51a).	1	5' to 30'.
Airspeed	As the installed measuring system.	±3%	1	1 kt
Heading	360°	±2°	1	0.5°.
Normal Acceleration (Vertical)	−3g to +6g	±1% of max range excluding datum error of ±5%.	8	0.01g
Pitch Attitude	±75°	±2°	2	0.5°
Roll Attitude	±180°	±2°	2	0.5°.
Radio Transmitter Keying	On-Off (Discrete)		1	0.25 sec
Power in Each Engine: Free Power Turbine Speed and Engine Torque.	0–130% (power Turbine Speed) Full range (Torque).	±2%	1 speed 1 torque (per engine).	0.2% ¹ to 0.4% ¹
Main Rotor Speed	0–130%	±2%	2	0.3% ¹
Altitude Rate	±6,000 ft/min	As installed	2	0.2% ¹
Pilot Input—Primary Controls (Collective, Longitudinal Cyclic, Lateral Cyclic, Pedal).	Full range	±3%	2	0.5% ¹
Flight Control Hydraulic Pressure Low.	Discrete, each circuit		1	
Flight Control Hydraulic Pressure Selector Switch Position, 1st and 2nd stage.	Discrete		1	
AFCS Mode and Engagement Status.	Discrete (5 bits necessary).		1	
Stability Augmentation System Engage.	Discrete		1	
SAS Fault Status	Discrete		0.25	
Main Gearbox Temperature Low.	As installed	As installed	0.25	0.5% ¹
Main Gearbox Temperature High.	As installed	As installed	0.5	0.5% ¹
Controllable Stabilator Position.	Full Range	±3%	2	0.4% ¹ .
Longitudinal Acceleration	±1g	±1.5% max range excluding datum error of ±5%.	4	0.01g.
Lateral Acceleration	±1g	±1.5% max range excluding datum of ±5%.	4	0.01g.
Master Warning	Discrete		1	
Nav 1 and 2 Frequency Selection.	Full range	As installed	0.25	
Outside Air Temperature	− 50° C to +90° C	±2° c	0.5	0.3° c

¹Per cent of full range.

²This column applies to aircraft manufactured after October 11, 1991.

[Doc. No. 25530, 53 FR 26154, July 11, 1988; 53 FR 30906, Aug. 16, 1988]

APPENDIX F TO PART 135—AIRPLANE FLIGHT RECORDER SPECIFICATION

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
1. Time or Relative Time Counts ¹ .	24 Hrs, 0 to 4095.	±0.125% Per Hour.	4	1 sec	UTC time preferred when available. Counter increments each 4 seconds of system operation.