

Code of Federal Regulations

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▼Sec. 25.173

Part 25 AIRWORTHINESS STANDARDS: TRANSPORT CATEGORY AIRPLANES	
Subpart B--Flight	Stability

Sec. 25.173

Static longitudinal stability.

Under the conditions specified in Sec. 25.175, the characteristics of the elevator control forces (including friction) and the elevator control surface displacement must be as follows:

- (a) A pull must be required to obtain and maintain speeds below the specified trim speed, and a push must be required to obtain and maintain speeds above the specified trim speed. In addition, if the elevator control forces are not dependent upon the hinge moments of the elevator control surface, it must also be shown that upward displacement of the elevator trailing edge is required to obtain and maintain speeds below the specified trim speed, and a downward displacement of the elevator trailing edge is required to obtain and maintain speeds above the specified trim speed. This must be shown at any speed that can be obtained except speeds higher than the landing gear or wing flap operating limit speeds or V_{FC} / M_{FC} , whichever is appropriate, or lower than the minimum speed for steady, unstalled flight.
- (b) The airspeed must return to within 10 percent of the original trim speed when the control force is slowly released from any speed within the range specified in paragraph (a) of this section.
- (c) The stable slope of the stick force versus speed curve may not be less than 0.5 pound for each three knots or exceed a value beyond which control of the airplane is difficult.