Federal Aviation Administration, DOT

§ 27.175 Demonstration of static longitudinal stability.

(a) Climb. Static longitudinal stability must be shown in the climb condition at speeds from Vy – 10 kt to Vy + 10 kt with—

(1) Critical weight;
(2) Critical center of gravity;
(3) Maximum continuous power;
(4) The landing gear retracted; and
(5) The rotorcraft trimmed at VY.

(b) Cruise. Static longitudinal stability must be shown in the cruise condition at speeds from 0.8 VNE – 10 kt to 0.8 VNE + 10 kt or, if VNH is less than 0.8 VNE, from VNH – 10 kt to VNH + 10 kt, with—

(1) Critical weight;
(2) Critical center of gravity;
(3) Power for level flight at 0.8 VNE or VNH, whichever is less;