§ 29.45 General.

(a) The performance prescribed in this subpart must be determined—

(1) With normal piloting skill and;

(2) Without exceptionally favorable conditions.

(b) Compliance with the performance requirements of this subpart must be shown—

(1) For still air at sea level with a standard atmosphere and;

(2) For the approved range of atmospheric variables.

(c) The available power must correspond to engine power, not exceeding the approved power, less—

(1) Installation losses; and

(2) The power absorbed by the accessories and services at the values for which certification is requested and approved.

(d) For reciprocating engine-powered rotorcraft, the performance, as affected by engine power, must be based on a relative humidity of 80 percent in a standard atmosphere.

(e) For turbine engine-powered rotorcraft, the performance, as affected by engine power, must be based on a relative humidity of—

(1) 80 percent, at and below standard temperature; and

(2) 34 percent, at and above standard temperature plus 50 °F.

Between these two temperatures, the relative humidity must vary linearly.

(f) For turbine-engine-powered rotorcraft, a means must be provided to permit the pilot to determine prior to takeoff that each engine is capable of developing the power necessary to achieve the applicable rotorcraft performance prescribed in this subpart.

(See 313(a), 601, 603, 604, and 605 of the Federal Aviation Act of 1958 (49 U.S.C. 1354(a), 1421, 1423, 1424, and 1425); and sec. 6(c), Dept. of Transportation Act (49 U.S.C. 1655(c)))


§ 29.49 Performance at minimum operating speed.

(a) For each Category A helicopter, the hovering performance must be determined over the ranges of weight, altitude, and temperature for which takeoff data are scheduled—

(1) With not more than takeoff power;

(2) With the landing gear extended; and

(3) At a height consistent with the procedure used in establishing the takeoff, climbout, and rejected takeoff paths.

(b) For each Category B helicopter, the hovering performance must be determined over the ranges of weight, altitude, and temperature for which certification is requested, with—

(1) Takeoff power;

(2) The landing gear extended; and

(3) The helicopter in ground effect at a height consistent with normal takeoff procedures.

(c) For each helicopter, the out-of-ground effect hovering performance must be determined over the ranges of weight, altitude, and temperature for which certification is requested with takeoff power.

(d) For rotorcraft other than helicopters, the steady rate of climb at the
Federal Aviation Administration, DOT  

§ 29.59  

Takeoff path: Category A.  

(a) The takeoff path extends from the point of commencement of the takeoff procedure to a point at which the rotorcraft is 1,000 feet above the takeoff surface and compliance with §29.67(a)(2) is shown. In addition—  

(1) The takeoff path must remain clear of the height-velocity envelope established in accordance with §29.87; and  

(2) The rotorcraft must be flown to the engine failure point; at which point, the critical engine must be made inoperative and remain inoperative for the rest of the takeoff.  

(c) Determination of the TDP must include the pilot recognition time interval following failure of the critical engine.  

[Doc. No. 24802, 61 FR 21899, May 10, 1996]

§ 29.59  

Takeoff path: Category A.  

(a) The takeoff path extends from the point of commencement of the takeoff procedure to a point at which the rotorcraft is 1,000 feet above the takeoff surface and compliance with §29.67(a)(2) is shown. In addition—  

(1) The takeoff path must remain clear of the height-velocity envelope established in accordance with §29.87; and  

(2) The rotorcraft must be flown to the engine failure point; at which point, the critical engine must be made inoperative and remain inoperative for the rest of the takeoff.  

(c) Determination of the TDP must include the pilot recognition time interval following failure of the critical engine.  

[Doc. No. 24802, 61 FR 21899, May 10, 1996]

§ 29.59  

Takeoff path: Category A.  

(a) The takeoff path extends from the point of commencement of the takeoff procedure to a point at which the rotorcraft is 1,000 feet above the takeoff surface and compliance with §29.67(a)(2) is shown. In addition—  

(1) The takeoff path must remain clear of the height-velocity envelope established in accordance with §29.87; and  

(2) The rotorcraft must be flown to the engine failure point; at which point, the critical engine must be made inoperative and remain inoperative for the rest of the takeoff.  

(c) Determination of the TDP must include the pilot recognition time interval following failure of the critical engine.  

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