§ 25.519 Jacking and tie-down provisions.

(a) General. The airplane must be designed to withstand the limit load conditions resulting from the static ground load conditions of paragraph (b) of this section and, if applicable, paragraph (c) of this section at the most critical combinations of airplane weight and center of gravity. The maximum allowable load at each jack pad must be specified.

(b) Jacking. The airplane must have provisions for jacking and must withstand the following limit loads when the airplane is supported on jacks—

(1) For jacking by the landing gear at the maximum ramp weight of the airplane, the airplane structure must be designed for a vertical load of 1.33 times the vertical static reaction at each jacking point acting singly and in combination with a horizontal load of 0.33 times the vertical static reaction applied in any direction.

(2) For jacking by other airplane structure at maximum approved jacking weight:

(i) The airplane structure must be designed for a vertical load of 1.33 times the vertical reaction at each jacking point acting singly and in combination with a horizontal load of 0.33 times the vertical static reaction applied in any direction.

(ii) The jacking pads and local structure must be designed for a vertical load of 2.0 times the vertical static reaction at each jacking point, acting singly and in combination with a horizontal load of 0.33 times the vertical static reaction applied in any direction.

(c) Tie-down. If tie-down points are provided, the main tie-down points and local structure must withstand the limit loads resulting from a 65-knot horizontal wind from any direction.


§ 25.525 Application of loads.

(a) Unless otherwise prescribed, the seaplane as a whole is assumed to be subjected to the loads corresponding to the load factors specified in § 25.527.

(b) In applying the loads resulting from the load factors prescribed in § 25.527, the loads may be distributed over the hull or main float bottom (in order to avoid excessive local shear loads and bending moments at the location of water load application) using pressures not less than those prescribed in § 25.533(b).

(c) For twin float seaplanes, each float must be treated as an equivalent hull on a fictitious seaplane with a weight equal to one-half the weight of the twin float seaplane.

(d) Except in the takeoff condition of § 25.531, the aerodynamic lift on the seaplane during the impact is assumed to be ⅔ of the weight of the seaplane.

§ 25.527 Hull and main float load factors.

(a) Water reaction load factors \( n_w \) must be computed in the following manner: