

## § 27.731

(d) *Operation tests.* The proper functioning of the retracting mechanism must be shown by operation tests.

(e) *Position indicator.* There must be a means to indicate to the pilot when the gear is secured in the extreme positions.

(f) *Control.* The location and operation of the retraction control must meet the requirements of §§ 27.777 and 27.779.

(g) *Landing gear warning.* An aural or equally effective landing gear warning device must be provided that functions continuously when the rotorcraft is in a normal landing mode and the landing gear is not fully extended and locked. A manual shutoff capability must be provided for the warning device and the warning system must automatically reset when the rotorcraft is no longer in the landing mode.

[Amdt. 27-21, 49 FR 44434, Nov. 6, 1984]

## § 27.731 Wheels.

(a) Each landing gear wheel must be approved.

(b) The maximum static load rating of each wheel may not be less than the corresponding static ground reaction with—

- (1) Maximum weight; and
- (2) Critical center of gravity.

(c) The maximum limit load rating of each wheel must equal or exceed the maximum radial limit load determined under the applicable ground load requirements of this part.

## § 27.733 Tires.

(a) Each landing gear wheel must have a tire—

- (1) That is a proper fit on the rim of the wheel; and
- (2) Of the proper rating.

(b) The maximum static load rating of each tire must equal or exceed the static ground reaction obtained at its wheel, assuming—

- (1) The design maximum weight; and
- (2) The most unfavorable center of gravity.

(c) Each tire installed on a retractable landing gear system must, at the maximum size of the tire type expected in service, have a clearance to surrounding structure and systems that is adequate to prevent contact between

the tire and any part of the structure or systems.

[Doc. No. 5074, 29 FR 15695, Nov. 24, 1964, as amended by Amdt. 27-11, 41 FR 55469, Dec. 20, 1976]

## § 27.735 Brakes.

For rotorcraft with wheel-type landing gear, a braking device must be installed that is—

- (a) Controllable by the pilot;
- (b) Usable during power-off landings; and
- (c) Adequate to—
  - (1) Counteract any normal unbalanced torque when starting or stopping the rotor; and
  - (2) Hold the rotorcraft parked on a 10-degree slope on a dry, smooth pavement.

[Doc. No. 5074, 29 FR 15695, Nov. 24, 1964, as amended by Amdt. 27-21, 49 FR 44434, Nov. 6, 1984]

## § 27.737 Skis.

The maximum limit load rating of each ski must equal or exceed the maximum limit load determined under the applicable ground load requirements of this part.

## FLOATS AND HULLS

### § 27.751 Main float buoyancy.

(a) For main floats, the buoyancy necessary to support the maximum weight of the rotorcraft in fresh water must be exceeded by—

- (1) 50 percent, for single floats; and
- (2) 60 percent, for multiple floats.

(b) Each main float must have enough water-tight compartments so that, with any single main float compartment flooded, the main floats will provide a margin of positive stability great enough to minimize the probability of capsizing.

[Doc. No. 5074, 29 FR 15695, Nov. 24, 1964, as amended by Amdt. 27-2, 33 FR 963, Jan. 26, 1968]

### § 27.753 Main float design.

(a) *Bag floats.* Each bag float must be designed to withstand—

- (1) The maximum pressure differential that might be developed at the maximum altitude for which certification with that float is requested; and