CIVIL AERONAUTICS MANUALS—Volume VI

U. S. Department of Commerce — Civil Aeronautics Administration

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SUBJECT: Revisions to Civil Aeronautics Manual 40 dated April 1956.

The existing provisions of section 40.392 (b) as adopted by the Civil Aeronautics Board provide that "no airplane shall take off when frost, snow, or ice is adhering to the wings, control surfaces, or propellers of the airplane." This provision was interpreted by the Civil Aeronautics Administration to mean frost, snow, or ice adhering to the aircraft" which might adversely affect its performance." Since there is no performance data available to determine the amount of frost, snow, or ice adhering to an aircraft which "might adversely affect its performance," the interpretation issued by the Administrator was rescinded in 22 F. R. 8898, November 6, 1957, effective November 6, 1957.

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Roy Keeley

ROY KEELEY,
Director, Office of Flight Operations and Airworthiness.

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any of the following or a combination thereof:

(1) Radio bearings from the airport of intended destination,

(2) Radio range course from the airport of intended destination,

(3) Radio range course projected over the alternate airport on a line with the intended course to be flown,

(4) Radio bearing from a radio facility located beyond the alternate airport on a line with the intended course to be flown, or

(5) Radio bearing from a radio facility located along the intended course to be flown.

(Published in 19 F. R. 7451, November 19, 1954, effective November 30, 1954.)

40.390–2 *Establishment of alternate airport landing minimums at airports where ILS or GCA only available instrument approach aids (CAA interpretations which apply to sec. 40.390 (a)).* Alternate airport landing minimums as low as 600–2, 700–1½, or 800–1 may be approved at airports where an ILS or GCA is the only instrument approach aid serving such airport: *Provided,* That adequate radio facilities are available to accomplish transition to the ILS or GCA.

(Published in 20 F. R. 3559 on May 21, 1955, effective June 15, 1955.)

40.390–3 *Establishment of alternate airport landing minimums at airports served by ILS (CAA policies which apply to sec. 40.390 (a)).* The landing minimums prescribed in section 40.390 (a) may be authorized at airports where the ILS is not equipped with approach lights.

(Published in 21 F. R. 4999, July 6, 1956, effective July 12, 1956.)

40.391–1 *Circumstances when incorporation of procedures may be authorized in the air carrier's manual for continued operation beyond a scheduled terminal (CAA policies which apply to sec. 40.391 (b)).* Authority to incorporate procedures in the air carrier manual for the continuation of flight beyond a scheduled terminal with an airplane which has inoperative required equipment [8] will be given to an air carrier when the air carrier shows that:

(1) Such procedures specify the required equipment that may be inoperative and the particular circumstances and conditions under which the airplane may continue in air transportation beyond a scheduled terminal without adversely affecting the safety of the flight; and

(2) Such procedures specify the place to which the flight may be continued and the inoperative required equipment will be repaired or replaced in lieu of the terminal stop: *Provided,* That the airplane may not continue flight beyond a place at which it is normally scheduled for the accomplishment of the next daily service or inspection by the air carrier.

(Published in 20 F. R. 6212 on August 25, 1955, effective September 15, 1955.)

40.406–1 *Takeoff and landing weather minimums (CAA rules which apply to sec. 40.406 (b)).*

(a) *General.* The ceiling and visibility contained in the main body of the latest weather report furnished by the U. S. Weather Bureau or a source approved by the Weather Bureau shall be used for instrument approach and landing or takeoff for all runways of an airport except as provided in paragraph (b).

(b) *Runway visibility.* Whenever the latest weather report furnished by the U. S. Weather Bureau or a source approved by the Weather Bureau, including an aural report from the control tower, contains a visibility value specified as runway visibility for a particular runway of an airport, such visibility shall be used for a straight-in instrument approach and landing or takeoff for that runway only.[9]

(Published in 20 F. R. 9039, December 9, 1955, effective December 15, 1955.)

40.406–2 *Ceiling and visibility minimums—IFR (CAA policies which apply to sec. 40.406).*

(a) *General.* The policies set forth in this section will be used by the Civil Aeronautics Administration in authorizing the ceiling and visibility minimums contained in the operations

[8] Required equipment is that equipment which is specified in section 40.170.

[9] Information respecting the official runway visibility observations reported by the control tower operator may be obtained from the Office of the U. S. Weather Bureau for the airport concerned. Such office maintains a continuous graph recording of the runway visibility shown on the visibility meter in the control tower.

specifications issued to scheduled air carriers. Specific deviations from these policies may be approved in instances where CAA and industry representatives concur that the safety of the operation would not be prejudiced.

(1) *Military airports.* When an air carrier is authorized to use a military airport, the ceiling and visibility minimums approved for takeoff and landing at that airport will not be less than those agreed upon by the military authorities having jurisdiction over the airport.

(b) *Takeoff minimums.*

(1) *Regular, refueling, and provisional airports.*

(i) *General; all aircraft.* In approving takeoff minimums for scheduled air carriers, consideration will be given to the following factors:

(*a*) Obstructions and terrain in the vicinity of the airport.

(*b*) Effective length of each runway to be used by the air carrier.

(*c*) The performance characteristics of each type aircraft to be used by the air carrier at the airport.

(*d*) IFR departure procedures in use at the airport.

(*e*) Runway lighting facilities and runway pavement marking available at the airport.

(*f*) Radio navigation facilities serving the airport.

(ii) *Two-engine aircraft.* The lowest takeoff minimums for two-engine aircraft normally will be 300–1. However, minimums as low as 200–½ may be approved in accordance with certain specific conditions and limitations prescribed in the air carrier's operations specifications.

(iii) *Four-engine aircraft.* The lowest takeoff minimums for four-engine aircraft will normally be 200–½. However, takeoff minimums as low as 200–¼ may be approved in accordance with certain specific conditions and limitations prescribed in the air carrier's operations specifications.

(2) *Alternate airports.* Takeoff minimums for both two- and four-engine aircraft may be approved as low as 300–1 when the air carrier is authorized to use a particular airport as an alternate airport only. When an airport is used as an alternate airport and such airport is also authorized in the air carrier's operations specifications as a regular, refueling, or provisional airport, the takeoff minimums shown on the applicable Form ACA–511 may be used: *Provided*, That the pilot-in-command is currently qualified into the airport in accordance with the applicable Civil Air Regulations, otherwise, takeoff minimums of 300–1 or the takeoff minimums shown on the Form ACA–511, whichever are greater, will be applicable.

(c) *Landing minimums, regular, refueling, or provisional airports.*

(1) *Circling approach.* When it is necessary to circle an airport to effect a landing, higher landing minimums are required for aircraft with higher maneuvering, approach, and landing speeds than are required for slower type aircraft. The stall speed at maximum certificated landing weight with full flaps, landing gear extended and power-off will be used to differentiate between the two types of aircraft. Circling approach minimums are normally the same for all instrument approach procedures without regard to the type of radio navigational facility used to conduct the instrument approach, and will be established in accordance with the following:

(i) *Aircraft with stall speed in excess of 75 m. p. h.* The minimum ceiling will be, (*a*) at least 500 feet above the established elevation of the airport, (*b*) not less than 300 feet above all obstructions within a radius of 2 miles from the airport boundary and (*c*) 300 feet above all obstructions within a distance of 2 miles on each side of the final approach course from the radio facility to the airport. The minimum visibility that will be authorized for such aircraft will normally be 1½ miles. However, a minimum visibility of not less than 1 mile may be authorized by application of the sliding scale authorized in the air carrier's operations specifications. A minimum visibility of 1 mile may also be authorized for those two-engine aircraft having a stall speed in excess of 75 m. p. h., which can be safely maneuvered within a radius of not more than ½ mile.

(ii) *Aircraft with stall speed of 75 m. p. h. or less.* Such aircraft will normally be authorized to operate into airports with minimums of 100–½ lower than the minimums es-