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CIVIL AERONAUTICS MANUAL 40

U. S. Department of Commerce **Civil Aeronautics Administration**

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Supplement No. 4 **September 15, 1955**

SUBJECT: Revisions to Civil Aeronautics Manual 40 dated April 1954.

This supplement outlines circumstances when incorporation of procedures for continued operation beyond a scheduled terminal may be authorized in the air carrier's manual.

Remove and destroy the following pages:	*Insert in lieu thereof the following pages (Revised 9/15/55):*
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NOTE: New and revised material is indicated by brackets [ ].

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A. S. KOCH, *Director,*
Office of Aviation Safety.

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300 feet and 1 mile, 400 feet and three-quarters mile, or 500 feet and one-half mile.

"(1) *Airplanes having 2 or 3 engines.* Alternate airport located at a distance no greater than 1 hour of flying time in still air at normal cruising speed with 1 engine inoperative.

"(2) *Airplanes having 4 or more engines.* Alternate airport located at a distance no greater than 2 hours of flying time in still air at normal cruising speed with 1 engine inoperative.

"(b) The alternate airport weather requirements shall be those specified in section 40.390.

"(c) All required alternate airports shall be listed in the dispatch release."

"40.389 *Alternate airport for destination; IFR or over-the-top.*

"(a) For all IFR or over-the-top operations there shall be at least one alternate airport designated for each airport of destination and, when the weather conditions forecast for the destination and first alternate are marginal, at least one additional alternate airport: *Provided,* That no alternate need be designated when, for the period 2 hours before to 2 hours after the estimated time of arrival, the ceiling at the airport to which the flight is dispatched is forecast to be at least 1,000 feet above the minimum initial approach altitude applicable to such airport and the visibility at such airport is forecast to be at least 3 miles.

"(b) The alternate airport weather requirements shall be those specified in section 40.390.

"(c) All required alternate airports shall be listed in the dispatch release."

"40.390 *Alternate airport weather minimums.* An airport shall not be specified in the dispatch release as an alternate airport unless the weather conditions existing there at the time of dispatch are equal to or above the ceiling and visibility minimums approved for such airport when using it as an alternate, and the appropriate weather reports and forecasts, or a combination thereof, indicate that the weather conditions will be at or above such minimums until the flight shall arrive thereat. The weather minimums at such alternate airport shall not be less than one of the following and in no event less than the corresponding minimums specified for the airport when used as a regular airport: *Provided,* That the Administrator may approve higher or lower minimums at particular airports where the safe conduct of flight requires or permits, considering the character of the terrain being traversed, the meteorological service and navigational facilities available, and other conditions affecting flight.

"(a) An airport served by an approved radio navigational facility and either an instrument landing system or a ground control approach system which the carrier has been authorized to use: Ceiling 800 feet and visibility of 1 mile; or ceiling 700 feet and visibility of 1½ miles; or ceiling 600 feet and visibility of 2 miles;

"(b) An airport served by an approved radionavigational facility: Ceiling 1,000 feet and visibility of 1 mile; or ceiling 900 feet and visibility of 1½ miles; or ceiling 800 feet and visibility of 2 miles;

"(c) An airport not served by an approved radio navigational facility: If overcast, ceiling 1,000 feet above the minimum en route instrument altitude applicable to the route to such alternate airport and visibility of 2 miles; if broken clouds, ceiling 1,000 feet above the elevation of the airport and visibility of 2 miles."

40.390–1 *Alternate airport landing minimums for airports not served by a radio navigation facility (CAA policies which apply to sec. 40.390 (c)).* When there is no minimum en route instrument altitude associated with an alternate airport, the approval of alternate airport landing minimums under overcast conditions will be contingent upon (a) the incorporation of appropriate minimum en route altitudes in the air carriers operations manual in order to provide a basis for establishing weather minimums in accordance with section 40.390 (c) and (b) the availability of radio navigation facilities of sufficient adequacy to permit safe navigation *over* such alternate airport. The latter may be accomplished by using 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. 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.)

"40.391 *Continuance of flight; flight hazards.*

"(a) No airplane shall be continued in flight toward any airport to which it has been dispatched when, in the opinion of the pilot in command or the aircraft dispatcher, the flight cannot be completed with safety, unless in the opinion of the pilot in command there is no safer procedure. In the latter event, continuation shall constitute an emergency situation as set forth in section 40.360.

"(b) If any item of equipment required pursuant to the regulations of this subchapter for the particular operation being conducted becomes unserviceable en route, the pilot in command shall comply with the procedures specified in the manual for such occurrence: *Provided,* That the Administrator may authorize the incorporation in the air carrier manual of procedures for the continued operation of an airplane beyond a scheduled terminal where he finds that, in the particular circumstances of the case, literal compliance with this requirement is not necessary in the interest of safety."

[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 [6a] will be given to an air carrier when

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

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.

"40.392 *Operation in icing conditions.*

"(a) An airplane shall not be dispatched, en route operations continued, or landing made when, in the opinion of the pilot in command or aircraft dispatcher, icing conditions are expected or encountered which might adversely affect the safety of the flight.

"(b) No airplane shall take off when frost, snow, or ice is adhering to the wings, control surfaces, or propellers of the airplane."

40.392–1 *Operation in icing conditions (CAA interpretations which apply to sec. 40.392 (b)).* No takeoff will be made when frost, snow, or ice adhering to any part of the airplane might adversely affect its performance.

(Published in 20 F. R. 4002 on June 9, 1955, effective June 30, 1955.)

"40.393 *Redispatch and continuance of flight.*

"(a) Any regular, provisional, or refueling airport, the use of which is authorized for the type of airplane to be operated may be specified as a destination for the purpose of original dispatch.

"(b) An airport specified as a destination or alternate for the purpose of original dispatch may be changed en route to another

[6a Required equipment is that equipment which is specified in section 40.170 of this part

airport which is authorized for the type of airplane to be operated, provided that the appropriate requirements of sections 40.381 through 40.409 and section 40.70 or section 40.90 are met at the time of redispatch.

"(c) No flight shall be continued to any airport to which it has been dispatched unless the weather conditions at an alternate airport specified in the dispatch release remain at or above the minimums specified for such airport when used as an alternate: *Provided,* That the dispatch release may be amended en route to include any approved alternate airport lying within the fuel range of the airplane as specified in sections 40.396 and 40.397.

"(d) When the dispatch release is amended while the airplane is en route, such amendments shall be made a matter of record."

"40.394 *Dispatch to and from provisional airport.*

"(a) No aircraft dispatcher shall dispatch an airplane to a provisional airport unless such airport complies with all of the requirements of this part pertinent to regular airports.

"(b) Dispatch from a provisional airport shall be accomplished in accordance with the same regulations governing dispatch from a regular airport."

"40.395 *Takeoffs from alternate airports or from airports not listed in the operation specifications.* No airplane shall take off from an alternate airport or from an airport which is not listed in the air carrier operations specifications unless:

"(a) Such airport and related facilities are adequate for the operation of the airplane,

"(b) In taking off it is possible to comply with the applicable airplane operating limitations,

"(c) The weather conditions at that airport are equal to or better than those prescribed for such airport, and

"(d) The airplane is dispatched in accordance with all dispatching rules applicable to operation from an approved airport."

"40.396 *Fuel supply for all operations.* No airplane shall be dispatched unless it carries sufficient fuel:

"(a) To fly to the airport to which dispatched, and thereafter,

"(b) To fly to and land at the most distant alternate for the airport to which dispatched where such alternate is required and thereafter,

"(c) To fly for a period of at least 45 minutes at normal cruising consumption."

"40.397 *Factors involved in computing fuel required.* In computing the fuel required, consideration shall be given to the wind and other weather conditions forecast, traffic delays anticipated, and any other conditions which might delay the landing of the airplane. Required fuel shall be additional to unusable fuel."

"40.405 *Takeoff and landing weather minimum; VFR.* Irrespective of any clearance which may be obtained from air traffic control, no airplane shall take off or land under VFR when the reported ceiling or ground