, A-11-46

FEDERAL AVIATION AGENCY
FLIGHT STANDARDS SERVICE
WASHINGTON 25, D. C.

September 21, 1961

CIVIL AIR REGULATIONS DRAFT RELEASE NO. 61- 20

SUBJECT: Illumination of Passenger Emergency Exit Markings in Air Carrier Aircraft

---

The Flight Standards Service of the Federal Aviation Agency has under consideration amendments to Parts 40, 41, 42, and 46 of the Civil Air Regulations concerning the illumination of passenger exit markings. The reasons therefor are set forth in the explanatory statement of the attached proposal which is being published in the Federal Register as a notice of proposed rule making.

The Flight Standards Service desires that all persons who will be affected by the requirements of this proposal be fully informed as to its effect upon them and is therefore circulating copies in order to afford interested persons ample opportunity to submit comments as they may desire.

Because of the large number of comments which we anticipate receiving in response to this draft release, we will be unable to acknowledge receipt of each reply. However, you may be assured that all comment will be given careful consideration.

It should be noted that comments should be submitted in duplicate to the Docket Section of the Federal Aviation Agency, and in order to insure consideration must be received on or before November 15, 1961

George C. Prill

Director,
Flight Standards Service

587h

FEDERAL AVIATION AGENCY

FLIGHT STANDARDS SERVICE

[14 CFR Parts 40, 41, 42, 46]
[Regulatory Docket No. 904; Draft Release No. 61-20]

NOTICE OF PROPOSED RULE MAKING

Illumination of Passenger Emergency Exit Markings

Pursuant to the authority delegated to me by the Administrator (14 CFR 405.27), notice is hereby given that there is under consideration a proposal to amend Parts 40, 41, 42, and 46 of the Civil Air Regulations as hereinafter set forth. Since the proposed amendments are substantially the same for all four parts, only the proposed changes to Part 40 are set forth in detail.

Interested persons may participate in the making of the proposed rules by submitting such written data, views, or arguments as they may desire. Communications should be submitted in duplicate to the Docket Section of the Federal Aviation Agency, Room C-226, 1711 New York Avenue, N.W., Washington 25, D.C. All communications received on or before November 15, 1961, will be considered by the Administrator before taking action on the proposed rules. The proposal contained in this notice may be changed in the light of comments received. All comments submitted will be available in the Docket Section for examination by interested persons when the prescribed date for return of comments has expired.

Sections 40.173(f)(2), 41.23d(b)(2), 42.24c(b)(2), and 46.173(d) require, for night operations in passenger-carrying aircraft, an independent lighting system to illuminate passenger emergency exit markings. This system is not required for daytime operations, because at the time these regulations were adopted it was not anticipated that emergency lighting would be necessary in a daylight accident.

During Civil Aeronautics Board hearings on a recent airplane accident, the passengers and crewmembers testified that both the cabin and the cockpit areas were quite dark after the accident, even though it happened in bright daylight. This darkness was caused by dust and smoke inside the airplane, as well as by mud that smeared the windows when the airplane came to rest on its back in mud and grass. There was no illumination in the cockpit or the cabin after the crash, and the emergency lights did not come on. As a result of this investigation and hearing, the Board recommended that the Administrator reexamine the present procedures for providing illumination of passenger emergency exit markings.

The report that the cabin area was dark following the daylight accident raises a serious question as to the adequacy of current operating rules that require emergency exit lighting for night operations only. A regulation to require such emergency lighting in the daytime would necessitate no more than minor changes in the operating procedures of the air carriers, and the report that darkness contributed to passenger confusion inside the cabin in this particular accident indicates that provisions should be made for emergency lighting in the daytime as well as at night.

The amendments proposed herein would require a source of emergency exit lighting for all passenger-carrying aircraft for both day and night operations. In addition, when such lights require manual operation to function, the amendments would require that they be turned on prior to each takeoff and landing, during the day as well as at night. The air carriers have been asked to adopt these procedures voluntarily, and many carriers have done so. Those carriers whose aircraft are equipped with fully automatic emergency exit lighting systems would not be affected by these amendments. Those whose systems have to be armed would be required to keep them armed for day operations as well as night, and those with lights that require manual operation to function would have to turn the lights on for all takeoffs and landings.

We realize that the lack of emergency lighting in the particular accident which prompted the Board's recommendation for reexamination of the emergency exit lighting procedures cannot be attributed to the lack of a regulation requiring such lights in the daytime. The emergency lighting system on the airplane involved in that accident was designed to function aufomatically in a crash landing, and the crew had armed it in exactly the same way they would have for a landing at night. However, this aspect of emergency exit lighting—the reliability and effectiveness of the lighting systems installed on air carrier aircraft—is being studied by the Agency in connection with a general study of all the provisions for emergency evacuation of aircraft, and is not covered by the amendments proposed herein.

In consideration of the foregoing, it is proposed to amend Parts 40, 41, 42, and 46 of the Civil Air Regulations as follows:

1. By amending § 40.173(f)(2) of Part 40 to read as follows:

40.173 *Emergency equipment for all operations.* * * *

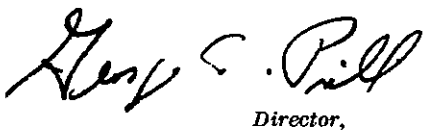
(f) *Interior emergency exit marking.* * * *

(2) In all passenger-carrying airplanes, a source or sources of light with an energy supply independent of the main lighting system shall be installed to illuminate all passenger emergency exit markings. Such lights shall be designed to function automatically in a crash landing and to continue to function there-

after, and shall also be operable manually; or shall be designed only for manual operation and also to continue to function following a crash landing. When such lights require arming of the system to function automatically, the system shall be armed prior to each takeoff and landing. When such lights require manual operation to function, they shall be turned on prior to each takeoff and landing.

2. By promulgating amendments to Parts 41, 42, and 46 of the Civil Air Regulations similar to that proposed herein.

These amendments are proposed under the authority of sections 313(a), 601, 604, 605 of the Federal Aviation Act of 1958 (72 Stat. 752, 775, 778; 49 U.S.C. 1354, 1421, 1424, 1425).



Director,
Flight Standards Service

Issued in Washington, D.C., on September 21, 1961.

62-3556