

# FEDERAL AVIATION AGENCY

[ 14 CFR Part 121 ]

[ Docket No. 6979; Notice 65-30 ]

## AIRPLANES ENGAGED IN CARGO-ONLY OPERATIONS

### Airborne Weather Radar Equipment Requirements

The Federal Aviation Agency is considering amending Part 121 of the Federal Aviation Regulations to require the installation of approved airborne weather radar equipment on airplanes certificated under the transport category rules (except C-46 type airplanes) that are operated under that Part in cargo-only operations.

Interested persons may participate in the making of the proposed rule by submitting such written data, views or arguments as they may desire. Communications should identify the regulatory docket or notice number and be submitted in duplicate to the Federal Aviation Agency, Office of the General Counsel, Attention: Rules Docket, 800 Independence Avenue SW., Washington, D.C., 20553. All communications received on or before December 21, 1965, will be considered by the Administrator before taking action on the proposed rule. The proposal contained in this notice may be changed in the light of comments received. All comments submitted will be available for examination in the Rules Docket before and after the closing date for comments.

Section 121.357 of Part 121 presently requires approved airborne weather radar equipment installed for passenger-carrying operations of any airplane certificated under the transport category rules (except C-46 type airplanes). This requirement was issued January 7, 1960, as Special Civil Air Regulation No. SR-436. It was instituted to foster the avoidance of severe turbulence, commonly associated with thunderstorms, that in a number of incidents occasioned temporary inability of flight crews to maintain or regain longitudinal control of the airplane. As stated in the preamble of that regulation, a survey of air carrier aircraft accidents for the years 1950 through 1958 indicated the importance of airborne weather radar equipment as a safety measure in preventing

aircraft accidents during certain severe weather conditions. Its value was considered supported by the fact that a considerable number of air carrier airplanes were already equipped with this equipment, and provisions had been made for its installation on practically all new transport-type airplanes. Experience had indicated that this equipment contributed to greater safety in passenger operations, since it facilitates the early detection and location by the pilot of certain areas of severe turbulence, and enables him to avoid these areas or take such other action as may be necessary in the interest of safety.

The need for airborne weather radar equipment for cargo-only operations is essentially the same as that for passenger-carrying operations, conducted in the same types of airplanes. Without this equipment, pilots of airplanes engaged in cargo-only operations are unable to detect areas of severe turbulence associated with thunderstorms, for instance while traversing frontal weather. In addition, § 121.198 permits the cargo-only operation of certain transport category airplanes at five percent increase of zero fuel weight and an increase in the structural landing weight not in excess of the pounds increase of the zero fuel weight. Cargo-only operations normally are conducted at maximum gross weights. The penetration of thunderstorms with this increase in weight but without the benefit of radar may be detrimental to the airplane structure if severe turbulence is encountered shortly after takeoff. In these circumstances, both the airplane and persons on the ground may be placed in jeopardy.

According to Agency information, 170 large transport category and C-46 type airplanes presently are engaged in cargo-only operations. Sixty-one of these are C-46 type airplanes, and these would be excluded from the proposed requirements because of their low altitude capabilities and speed. Of the remaining 109 airplanes, 87 are presently equipped with approved airborne weather radar. Thus, 80 percent of the airplanes that would be affected by the proposed rule already have the required equipment.

The proposal would require compliance by December 31, 1966, for installation of approved equipment on trans-

port category turbojet engine powered airplanes engaged in cargo-only operations, and by December 31, 1967, for cargo airplanes powered by other than turbojet engines. The earlier date is provided for turbojet engine powered transport category airplanes because most airplanes with turbojet engines already have the equipment installed or the wiring to accommodate the installation of that equipment.

In consideration of the foregoing, it is proposed to amend § 121.357 of Part 121 of the Federal Aviation Regulations as follows:

1. By amending the section heading to read as follows:

§ 121.357 Airborne weather radar equipment requirements.

2. By redesignating paragraphs (b), (c), and (d) as paragraphs (c), (d), and (e), respectively.

3. By adding a new paragraph (b) to read as follows:

(b) No person may operate any of the following airplanes certificated under the transport category rules (except C-46 type airplanes) in cargo-only operations after the listed date unless approved airborne weather radar equipment has been installed in that airplane:

(1) Turbojet powered airplanes—December 31, 1966.

(2) Other transport category airplanes—December 31, 1967.

4. By amending the lead-in to redesignated paragraph (c) to read as follows:

(c) Each person operating a transport category airplane required to have approved airborne weather radar equipment installed shall, when using it under this part, operate it in accordance with the following:

5. By striking out the phrase "cargo only," from redesignated paragraph (d).

These amendments are proposed under the authority of sections 313(a), 601, 604, 605, and 607 of the Federal Aviation Act of 1958 (49 U.S.C. 1354, 1421, 1424, 1425, and 1427).

Issued in Washington, D.C., on October 18, 1965.

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