SPECIAL CIVIL AIR REGULATION NO. SR–436B

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Airborne Weather Radar Equipment Requirements for Airplanes Carrying Passengers

Special Civil Air Regulation No. SR–436A (25 F.R. 6130), which superseded SR–436 (25 F.R. 167), requires the installation of approved airborne weather radar equipment in certain transport category airplanes used for the carriage of passengers under Part 40, 41, or 42 of the Civil Air Regulations. This requirement is based on the fact that airborne weather radar equipment facilitates the early detection and location by the pilot of certain areas of turbulence and enables him to avoid such areas or to take such other action as may be necessary in the interest of safety.

Section 4 of SR–436A expressly excepts from the provisions of the regulation airplanes used solely within the States of Alaska and Hawaii. These operations were excluded because thunderstorms and other potentially hazardous meteorological conditions detectable by weather radar rarely occur in those areas.

Recently, the Federal Aviation Agency received a request from an air carrier operating in the State of Alaska to amend section 4 of SR–436A to expand the exceptions contained in that section to include certain areas of the Dominion of Canada. In support of its request the air carrier points out that because of the physical shape of the State of Alaska, the use of airways which overfly northwest Canada provide a more direct route between northeast Alaska and southeast Alaska. Moreover, when operating over the Canadian Airways Dawson and Whitehorse, Yukon Territory, Canada, are ideally located and suitably equipped to provide refueling service. However, when carrying passengers under the provisions of Part 41 or 42, compliance with the present provisions of SR–436A prevents the use of both the more direct airways over Canada and the Canadian refueling stops unless approved airborne weather radar is installed on the airplane being utilized.

At an industry meeting held in the State of Alaska, subsequent to this request, the feasibility of amending SR–436A was discussed. It was suggested at this meeting that if an amendment is made to section 4 of SR–436A it should include all of the Dominion of Canada west of a north-south line which would encompass the city of Edmonton, Alberta, Canada. This would include all of Canada west of longitude 110° W., between the northern coastline of Canada and the northern boundary of the continental United States. This request was based upon a contention that there is light thunderstorm activity in that part of Canada.

As a result of these requests, the Federal Aviation Agency initiated a study into the feasibility of amending section 4 of SR–436A to except airplanes operated in certain parts of Canada from the requirement of

installing airborne weather radar. Information was received from the U.S. Weather Bureau that the area of Canada west of longitude 130° W., between latitude 70° N. and latitude 53° N., has meteorological conditions similar to the State of Alaska. This information also shows that thunderstorms and other potentially hazardous meteorological conditions rarely occur in that area. However, in the area of Canada that is east and south of that area and adjacent to the United States northern boundary and which encompasses Edmonton, Alberta, the thunderstorm activity increases considerably and is equal to or greater than that of a large portion of the United States where airborne weather radar is mandatory.

After considering the foregoing, it has been determined that the level of safety in air carrier passenger operations would not be reduced by excluding from the provisions of SR-436A airplanes used for the carriage of passengers within Alaska and that portion of Canada west of longitude 130° W., between latitude 70° N. and latitude 53° N., where thunderstorms and other potentially hazardous weather conditions rarely occur. In addition, such an exclusion would permit the use of more direct routes and refueling stops between northeast and southeast Alaska. Therefore, section 4 of SR-436A is amended to exclude airplanes used within the State of Alaska and that portion of Canada west of longitude 130° W., between latitude 70° N. and latitude 53° N., from the weather radar requirements.

This Special Civil Air Regulation incorporates into one document all of the provisions of SR-436A with amendments to exclude the foregoing portions of Canada. Since it imposes no additional burden on any person and relieves a restriction, I find that notice and public procedure hereon are unnecessary, and that good cause exists for making this regulation effective on less than 30 days' notice.

In consideration of the foregoing, the following Special Civil Air Regulation is hereby adopted:

1. *Airborne weather radar equipment requirement.* After the dates specified, the following transport category airplanes shall not be used for the carriage of passengers under the provisions of Part 40, 41, or 42 of the Civil Air Regulations, unless approved airborne weather radar equipment is installed in such airplanes:

(a) July 1, 1960, for all turbine-powered airplanes certificated under the transport category rules;

(b) January 1, 1961, for the Douglas DC-7 Series, Douglas DC-6 Series, and Lockheed 1049 and 1649 Series type airplanes; and

(c) January 1, 1962, for all airplanes certificated under the transport category rules, except C-46 type airplanes.

NOTE: Airplanes subject to the provisions of paragraph (c) of this section include, but are not limited to, the following types: Boeing 377; Convair 240, 340, and 440; Lockheed 049 and 749; Martin 202 and 404; and Douglas DC-4.

2. *Schedule for installation of equipment.*

(a) Each operator conducting passenger operations under the provisions of Part 40, 41, or 42 of the Civil Air Regulations with transport category airplanes on which airborne weather radar is not installed, shall establish a schedule for the progressive completion of such radar installations, in accordance with the provisions of section 1 of this regulation. The schedule shall provide for the completion of all required radar

installations on or before the dates specified in section 1 of this regulation, and the completion of at least 40 percent of the required installations on or before the following dates:

(1) August 1, 1960, for airplanes of the types specified in section 1(b), and

(2) February 1, 1961, for airplanes of the types specified in section 1(c).

(b) On or before July 1, 1960, a copy of the schedule required by paragraph (a) of this section shall be submitted to an authorized representative of the Administrator, together with a list of any airplanes the operator intends to discontinue using in the carriage of passengers prior to the date on which radar equipment must be installed.

3. *Requirement for dispatch and continuance of flight.* After the effective date specified in section 6 of this regulation, all transport category airplanes having approved airborne weather radar installed shall be operated in accordance with the following rules when used in passenger operations under Part 40, 41, or 42:

(a) *Dispatch.* No airplane shall be dispatched (or flight of an airplane started under the provisions of Part 42) under IFR or night VFR conditions when current weather reports indicate thunderstorms, or other potentially hazardous weather conditions which can be detected by airborne weather radar, may reasonably be expected to be encountered along the route to be flown, unless approved airborne weather radar equipment installed in the airplane is in a satisfactory operating condition.

(b) *En route.* In the event the airborne weather radar becomes inoperative en route, the airplane shall be operated in accordance with the instructions and procedures specified in the operations manual for such occurrence. After the date specified by section 1 of this regulation for the mandatory installation of approved airborne weather radar on the type of airplane involved, such instructions and procedures shall meet with the approval of an authorized representative of the Administrator.

4. *Exceptions.* The provisions of this regulation shall not apply to airplanes used (a) solely within the State of Hawaii or within the State of Alaska and that portion of the Dominion of Canada west of longitude 130° W., between latitude 70° N. and latitude 53° N., or (b) during all-cargo, training, test, or ferry flights.

5. *Electrical power supply.* Contrary provisions of the Civil Air Regulations notwithstanding, an alternate electrical power supply need not be provided for airborne weather radar equipment.

6. *Effective date.* This Special Civil Air Regulation shall become effective on January 5, 1962, and supersedes Special Civil Air Regulation No. SR-436A.