

DEPARTMENT OF TRANSPORTATION**Federal Aviation Administration****14 CFR Parts 121, 125, and 129**

[Docket No.: FAA-2001-10910; Amendment Nos. 121-286, 125-41, and 129-37]

RIN 2120-AG90

Collision Avoidance Systems

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is revising the applicability of certain collision avoidance system requirements for airplanes. The current rules are based on passenger seating configuration and therefore exclude all-cargo airplanes. This final rule will use airplane weight and performance characteristics as the basis for collision avoidance system requirements to capture cargo airplanes weighing more than 33,000 pounds (lbs.) maximum certificated takeoff weight (MCTOW). This final rule is intended to reduce the risk of a mid-air collision involving a cargo airplane, which will increase safety for cargo crewmembers, the public on the ground, and occupants of airplanes that already have collision avoidance systems.

DATES: Effective May 1, 2003, except for the revisions of §§ 121.356, 125.224, and 129.18 which are effective January 1, 2005.

FOR FURTHER INFORMATION CONTACT: Alberta Brown, Air Carrier Operations Branch, Flight Standards Service, AFS-220, Federal Aviation Administration, 800 Independence Avenue, SW., Washington, DC 20591, telephone (202) 267-8321.

SUPPLEMENTARY INFORMATION:**Availability of Rulemaking Documents**

You can get an electronic copy using the Internet by:

- (1) Searching the Department of Transportation's electronic Docket Management System (DMS) web page (<http://dms.dot.gov/search>);
- (2) Visiting the Office of Rulemaking's web page at <http://www.faa.gov/avr/arm/index.cfm>; or
- (3) Accessing the Government Printing Office's web page at http://www.access.gpo.gov/su_docs/aces/aces140.html.

You can also get a copy by submitting a request to the Federal Aviation Administration, Office of Rulemaking, ARM-1, 800 Independence Avenue SW., Washington, DC 20591, or by calling (202) 267-9680. Make sure to

identify the amendment number or docket number of this rulemaking.

Anyone is able to search the electronic form of all comments received into any of our dockets by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, labor union, etc.). You may review DOT's complete Privacy Act statement in the **Federal Register** published on April 11, 2000 (Volume 65, Number 70; Pages 19477-19478) or you may visit <http://dms.dot.gov>.

Small Business Regulatory Enforcement Fairness Act

The Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996 requires FAA to comply with small entity requests for information or advice about compliance with statutes and regulations within its jurisdiction. Therefore, any small entity that has a question regarding this document may contact SBREFA. You can find out more about SBREFA on the Internet at our site, <http://www.faa.gov/avr/arm/sbreffa.htm>. For more information on SBREFA, e-mail us at 9-AWA-SBREFA@faa.gov.

Background*Statement of the Problem*

Current FAA rules do not require collision avoidance systems on all-cargo airplanes. When the FAA issued the traffic alert and collision avoidance system (TCAS) rules for passenger airplanes in 1987, the overnight cargo industry expansion was in its infancy, it operated few airplanes and those were primarily at night. Congress, in its legislation directing installation of TCAS in passenger airplanes, determined that those cargo airplanes did not represent a significant risk to passenger-carrying airplanes, which operated primarily during the day.

In promulgating the rules the FAA recognized that those few cargo airplanes would benefit some from the TCAS requirement for passenger airplanes because transponder-equipped cargo airplanes are displayed to pilots of TCAS-equipped passenger airplanes. Cargo airplanes also benefit because of the large number of passenger airplanes that are equipped with TCAS. In addition, the FAA determined that the cost/benefit analysis and risk level at that time did not support requiring cargo operators to equip their airplanes with TCAS.

Since those early days of TCAS, cargo operations have grown significantly and we now believe the increase in traffic presents an increased risk of a mid-air

collision involving a cargo airplane. We are issuing this amendment to use airplane weight and performance characteristics to encompass cargo as well as passenger airplanes and to standardize and clarify the collision avoidance rules in parts 121, 125, and 129. The FAA believes this would reduce the risk of midair collisions, increasing public safety in the air and on the ground.

History

On April 5, 2000, the Wendell H. Ford Aviation Investment and Reform Act (AIR-21) was enacted (Pub. L. 106-181) and later codified at 49 U.S.C. 44716(g). That section directs the FAA to require all cargo airplanes of more than 15,000 kilograms (kg.) MCTOW to be equipped with collision avoidance equipment by December 31, 2002. It also provides for an extension of up to 2 years for safety or public interest reasons.

Section 44716(g) defines collision avoidance equipment as "equipment that provides protection from mid-air collisions using technology that provides cockpit-based detection and conflict resolution guidance, including display of traffic; and a margin of safety of at least the same level as provided by the collision avoidance system known as TCAS II."

Before Congress passed AIR-21, the FAA had been working on a proposal to require collision avoidance systems on cargo airplanes. The justification for that effort was:

- The large increases in all-cargo traffic volume (night and day operations),
- Two near mid-air collisions (NMACs) involving cargo airplanes,
- A petition for rulemaking to put TCAS on cargo airplanes from the Independent Pilots' Association (representing United Parcel Service pilots),
- The International Civil Aviation Organization (ICAO)'s recommendation to equip all airplanes with an airborne collision avoidance system (ACAS), which is equivalent to TCAS II, version 7.0, and
- The National Transportation Safety Board (NTSB)'s recommendation urging the FAA to require TCAS II and a Mode S transponder on certain airplanes.

The Proposed Rule

On November 1, 2001, the FAA published Notice of Proposed Rulemaking (NPRM) No. 01-12 (66 FR 55506) "Collision Avoidance Systems." That document proposed collision avoidance requirements for part 121, 125, and 129 operators of certain airplanes. Specifically, turbine-powered