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# Part VII

# Department of Transportation

## Federal Aviation Administration

14 CFR 121, 129, and 135
Traffic Alert and Collision Avoidance System, TCAS I; Final Rule

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Parts 121, 129, and 135**

**[Docket No. 27663; Amdt No. 121-247, 129-24, 135-54]**

**RIN: 2120-AF24**

## Traffic Alert and Collision Avoidance System, TCAS I

**AGENCY:** Federal Aviation Administration (FAA), DOT

**ACTION:** Final rule.

**SUMMARY:** This document revises the Federal Aviation Regulations (FAR) to extend the compliance date from February 9, 1995, to December 31, 1995, for installing an approved traffic alert and collision avoidance system (TCAS I). This amendment is necessary due to delays in TCAS I equipment development and testing, the complexity of equipment use and installation, and the requirement to complete complex supplemental type certification programs.

**DATES:** This document is effective December 29, 1994. The final compliance date is December 31, 1995. Comments on the revision of section 121.356(b) must be received on or before February 27, 1995.

**ADDRESSES:** Send or deliver comments on the revision of section 121.356(b) in duplicate to: Federal Aviation Administration, Office of the Chief Counsel, Attn: Rules Docket (AGC-204), Room 916, 800 Independence Avenue, SW., Washington, DC 20591. Comments may be examined in the Rules Docket weekdays, except Federal Holidays, between 8:30 a.m. and 5:00 p.m.

**FOR FURTHER INFORMATION CONTACT:** Gary E. Davis, Project Development Branch, AFS-240, Air Transportation Division, Office of Flight Standards, Federal Aviation Administration, 800 Independence Avenue, SW., Washington, DC 20591, Telephone (202) 267-8096.

**SUPPLEMENTARY INFORMATION:**

### Background

In a petition for exemption dated October 13, 1992, the Regional Airline Association (RAA) petitioned on behalf of its affected member airlines and other similarly situated airlines for a temporary exemption from the February 9, 1995, deadline to install an approved TCAS I system (Docket No. 27008). The exemption was requested for operators of turbine-powered airplanes with 10 to 30 passenger seats. The FAA denied the petition on May 27, 1993. The FAA stated in its denial that the general relief requested by the RAA is more appropriately handled by rulemaking rather than exemption. This action is the subsequent rulemaking response to the RAA petition for exemption. The RAA's petition also sought a temporary exemption from the April 20, 1994, deadline to install an approved Ground Proximity Warning System (GPWS), which the FAA has denied and is not an issue in this rulemaking.

In its October 13 petition, the RAA stated that extension of the compliance date was needed because of delays in the development and operational testing of prototype TCAS I equipment. The RAA stated that when Amendment No. 135-30 established the TCAS I requirements on January 6, 1989, the FAA acknowledged that no TCAS I design had been approved, and no manufacturer had build a TCAS I unit. The FAA considered these points in establishing a compliance date for installation and operation of TCAS I at 6 years from the effective date of the amendment.

RAA further stated that it was informed early in 1990 by ARINC Research Corporation (ARINC), the FAA's TCAS I program contractor, that equipment would be available for a Limited Installation Program (LIP) testing by April 1991, and that the test would be completed in approximately 1 year. RAA stated that ARINC advised it that the development program for prototype TCAS I equipment was still not complete, and that the LIP for the operational evaluation was not expected to begin for at least several months.

RAA stated in its petition that because of this the TCAS I development and operational evaluation program was more than 18 months behind its original planned schedule, no TCAS I equipment had yet received a technical standards order (TSO) approval, and to the RAA's knowledge, only one manufacturer was currently accepting orders for TCAS I deliveries. Air carriers are naturally reluctant to place orders for this equipment before a TSO is issued and before the LIP has confirmed the validity of the equipment design.

RAA asserted that an extension of time was required to permit the evaluation and procurement of TCAS I equipment, to develop and obtain approval of supplemental type certificates (STC) for each affected airplane model, and to schedule equipment installations with minimum disruptions to scheduled service.

RAA points out that simultaneously with the adoption of Amendment No. 135-30, Amendment No. 121-201 was also adopted which required development and installation of TCAS II on airplanes operating under part 121. This amendment required that all affected airplanes be equipped with TCAS II by December 30, 1991. After receiving numerous objections from operators and other sources, the FAA reconsidered this requirement and revised the installation dates; Amendment No. 121-217 established a phased installation schedule and delayed the full compliance TCAS II installation date to December 30, 1993.

RAA submitted that the arguments that supported the extension of time for TCAS II support a similar extension and phased installation schedule for TCAS I installations. In fact, the TCAS I LIP was just completed in June, 1994, and there remained, at the time of their petition, a lack of any approved equipment installations because of the lengthy STC approval process. Thus, the RAA expected that operators would not be able to complete equipment selections and installations on all airplanes by February 9, 1995.

RAA's petition for exemption also stated that FAA should rejustify the need for a TCAS I rule. The RAA based its rationale on the fact that the rule has a significantly higher-than-estimated cost to the airline industry. RAA and its member carriers continue to support realistic and achievable improvements in safety where the benefits clearly justify the costs. It believes that the cost of safety-related equipment must be compared to the potential benefits and the capability of the industry to afford it; therefore, the FAA should consider alternative approaches.

Aircraft seating 10 to 30 passengers and operating under part 121, 129, or 135 must be equipped with TCAS I by February 9, 1995, in accordance with the regulation issued January 5, 1989 (54 FR 940). RAA believed that the FAA should consider implementing a phased compliance schedule as was done for part 121 carriers that were required to install TCAS II (14 CFR 121.356), rather than adhere to the deadlines in affected regulations.

The air carriers represented by RAA believe that extending the compliance schedule for TCAS I would not adversely affect safety because it would allow affected airlines to devote limited economic resources to the orderly completion of TCAS I installations, along with other air-worthiness and safety-related requirements. They believe the general public will benefit by allowing for a more efficient allocation of an operator's resources, and by reducing the number of disruptions of scheduled service due to excessive unscheduled removal of

aircraft from service for equipment installation.

**Consideration of Comments**

The FAA published a notice of proposed rulemaking, in the Federal Register on March 31, 1994, (59 FR 15308), proposing an extension of the compliance date to March 31, 1997, to require that all affected aircraft be equipped with TCAS I and seeking comments on the use of a phased compliance schedule similar to the schedule that currently exists for TCAS II. The FAA also invited public comment on any issue discussed in the notice, and fully considered each commenter's position before making any final decision on extending the TCAS I compliance date.

Ten comments were received from individual operators, aircraft leasing companies, equipment manufacturers, and trade associations. Eight support the petition; two oppose it in its entirety, generally citing TCAS as cost prohibitive. Of the eight supporting the petition, five recommended that there be no phase in of the compliance schedule; three recommended some form of a phase in.

Equipment manufacturers that commented on this rule favored a phased compliance schedule because it would spread sales over a 2 year period. This would provide an orderly manufacturing process, thereby reducing product shortages as the final compliance date nears. Commenters that were not in favor of a phased compliance schedule felt that an arbitrary schedule sometimes places an undue burden on operators to remove equipment from revenue service early in order to meet the arbitrary date, when in fact, final installation may be scheduled a few months later during the normal maintenance cycle.

The FAA does not agree with commenters who want to rescind the rule. Analysis and experience indicate that the safety benefits from this rule more than justify its costs. In addition, the FAA considers those comments to be beyond the scope of the proposal.

**Discussion of the Amendment**

The FAA has considered all the facts and circumstances presented by the RAA and commenters and extends the compliance date until December 31, 1995, for the installation of TCAS I in parts 121, 129, and 135.

The RAA has presented certain problems involved in obtaining and installing TCAS I for part 135 operators. The FAA agrees that circumstances may not warrant requiring the affected operators to install TCAS I before February 9, 1995. A TSO has recently been issued. The first aircraft received a supplemental type certificate (STC) for a TCAS I installation in late July 1993, and the TCAS I LIP was completed in June, 1994.

The delays in equipment development and testing that were reviewed in the Notice, the complexity of the equipment use and installation, and the requirement to complete complex supplemental type certification programs remain as issues today just as they were when the RAA petition was received. The passage of time has not completely abated these concerns.

The FAA estimates that there are at least 25 different makes and models of airplanes that operate under part 135 and are required to have TCAS I installed. Many of these aircraft have been designed and manufactured overseas, thus complicating the issue of availability of design data for supplemental type certification, which is required of each different make/model installation. The FAA, however, believes that the compliance date of December 31, 1995, can be met by the majority of affected air carriers. Because the basic requirement for TCAS has been part of the regulations since 1989, the FAA believes that air carriers have been making and implementing plans to install the TCAS system, i.e., identifying requirements, identifying sources of equipment, budgeting, projecting affected maintenance schedules, etc., even though the initial testing phase of the equipment was behind schedule.

**Deviation Procedures**

The FAA recognizes that, in rare cases and despite the exercise of best efforts, there may be justification for some additional extension to the mandated compliance date. Accordingly, the FAA has provided a means to request and receive a deviation of up to 6 months from the carrier's local Principal Avionics Inspector (PAI) with the concurrence of the Director, Flight Standards Service (AFS–1). Air carriers must plan appropriate petition lead times to gain these approvals, with a minimum of 60 days required from receipt of request to final approval. Deviations will only be granted in extraordinary and unforeseen circumstances, beyond the control of the air carrier. Even in such circumstances, a deviation will not be granted unless specific criteria are met: The carrier must show that a good faith effort has been expended to meet the compliance date of December 31, 1995. In addition, the carrier must document that it cannot meet certain milestones such as TCAS equipment delivery, STC approval, installation schedules, and that the aircraft could not be removed from service without a significant adverse impact on the flying public.

Based on the above factors, and those discussed elsewhere in this document and in the Notice, the FAA is extending the compliance date to December 31, 1995. The FAA finds that this extension is in the public interest, in that it represents an appropriate balance between enhancement of safety and reasonable feasibility of compliance. Since parts 121 and 129 contain a similar rule for operators of aircraft with 30 seats or less, the FAA is extending the compliance date for those operators as well. However, the FAA does not find it appropriate to grant as much relief as originally proposed because, as recognized by the FAA, the TCAS system is an important piece of equipment, which provides a significant enhancement of the safety of air travel. Therefore, the compliance schedule has been adjusted from the original Notice.

Because TCAS is an important part of the overall safety system, the FAA wants certificate holders to comply with this TCAS rule as soon as possible. In an effort to facilitate this, the FAA will advise the traveling public of air carriers that have complied with this rule significantly earlier than the required compliance date.

The TCAS rule, which was originally adopted in 1989, envisioned covering all aircraft with 10 or more passenger seats. The preamble to the original rule indicated the FAA's intent to require TCAS I for the 10 to 30 passenger seat aircraft, which are primarily operated under part 135. However, the notice inadvertently did not propose a similar provision for these aircraft for part 121, to cover those infrequent circumstances in which these aircraft are operated under that part. The original final rule, however, did insert a provision in part 121 covering combination cargo/passenger airplanes with 10–30 passenger seats. This final rule will revise that part 121 TCAS I provision in section 121.356(b) to cover all 10–30 passenger-seat airplanes. The FAA views this change as posing no additional burden to the industry because these aircraft are usually operated under part 135. Carriers who operate both these aircraft and larger aircraft sometimes seek FAA authorization to operate all aircraft under part 121 to simplify functions such as crewmember training. These operators do not seek to follow part 121 rules to avoid the installation of TCAS.

The FAA considers further comment on this provision to be unnecessary, and is adopting this revision in this final

rule. However, in accordance with DOT policy, interested persons are invited to submit comments on the revision of section 121.356(b) as they may desire. Correspondence should identify the docket number and be submitted in duplicate to the address provided above. All communications received on or before the close of the comment period will be considered by the Administrator, and this amendment may be changed in the light of comments received. All comments will be available for public review, both before and after the closing date for comments, in the rules docket.

**Regulatory Analyses**

Executive Order 12866 established the requirement that, within the extent permitted by law, a Federal regulatory action may be undertaken only if the potential benefits to society for the regulation outweigh the potential costs to society. In response to this requirement, and in accordance with Department of Transportation policies and procedures, the FAA has estimated the anticipated benefits and costs of this rulemaking action. The FAA has determined that this rule is not a "significant rulemaking action," as defined by Executive Order 12866 (Regulatory Planning and Review).

The rule will extend the compliance date to install an approved traffic alert and collision avoidance systems (TCAS I) from February 9, 1995, to December 31, 1995. This rule will apply to turbine-powered aircraft with 10 to 30 seats operated under parts 121, 135 and 129. This extension of the compliance deadline is necessary because of delays in the development and operational testing of prototype TCAS I equipment, the complexity of the equipment use and installation, and the requirement to complete complex supplemental type certification programs.

**Final Regulatory Flexibility Determination**

The Regulatory Flexibility Act of 1980 (RFA) was enacted by Congress to ensure that small entities are not unnecessarily burdened by government regulations. The RFA requires agencies to review rules that may have a "significant economic impact on a substantial number of small entities."

Under FAA Order 2100.14A, the criterion for a "substantial number" is a number that is not less than 11 and that is more than one third of the small entities subject to the rules. For operators of aircraft for hire, a small operator is one that owns, but not necessarily operates, nine or fewer aircraft. This proposal would mainly affect part 135 scheduled operators, although some unscheduled operators could be affected as well. The FAA's criterion for a "significant impact" is $116,300 or more per year for a scheduled operator and $4,600 or more for an unscheduled operator.

This rule to extend the compliance date for installing TCAS I equipment will not have any economic impact on small operators. Therefore, the FAA has determined that the final rule will not have a significant impact on a substantial number of small operators.

**International Trade Impact Assessment**

The Office of Management and Budget directs agencies to assess the effects of regulatory changes on international trade. The impact of the rule change on international trade should be limited by the regionalized nature of the routes that are typically flown by aircraft with 10 to 30 seats. In addition, the fact that this rule will have the same economic impact on both the domestic (part 135) and foreign operators (part 129) of this size range of aircraft will limit its impact on competitive relationships between these two classes of operators. Based on this information, the FAA concludes that the rule change will have a negligible impact on international trade.

**Federalism Implications**

This amendment does not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with Executive Order 12612, it is determined that this rule change does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

**Paperwork Reduction Act**

There are no requirements for information collection associated with this rule that requires approval from the Office of Management and Budget pursuant to the Paperwork Reduction Act of 1980 (Pub. L. 96–511).

**Conclusion**

For the reasons discussed in the preamble, this regulation is not significant under Executive Order 12866. In addition, it is certified that this amendment does not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. However, this amendment is considered significant under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979).

**List of Subjects**

*14 CFR Part 121*

Air carriers, Aircraft, Aviation safety, Charter flights, Safety.

*14 CFR Part 129*

Air carriers, Aircraft, Aviation safety.

*14 CFR Part 135*

Air carriers, Aircraft, Airplanes, Air taxis, Air transportation, Aviation safety, Charter flights, Safety, Transportation.

**The Amendment**

In consideration of the foregoing, the Federal Aviation Administration amends parts 121, 129, and 135 of the Federal Aviation Regulations (14 CFR part 121, 14 CFR part 129, and 14 CFR part 135) as follows:

## PART 121—CERTIFICATION AND OPERATIONS: DOMESTIC, FLAG, AND SUPPLEMENTAL AIR CARRIERS AND COMMERCIAL OPERATORS OF LARGE AIRCRAFT

1. The authority citation for part 121 continues to read as follows:

**Authority:** 49 U.S.C. 1354(a), 1355, 1356, 1357, 1401, 1421–1430, 1472, 1485, and 1502; 49 U.S.C. 106(g) (Revised Pub. L. 97–449, January 12, 1983).

2. Section 121.356 is amended by revising paragraph (b) to read as follows:

**§ 121.356 Traffic Alert and Collision Avoidance System.**

(b) * * *

(b) Unless otherwise authorized by the Administrator, after December 31, 1995, no person may operate a passenger or combination cargo/passenger seat configuration, excluding any pilot seat, of 10 to 30 seats unless it is equipped with an approved traffic alert and collision avoidance system. If a TCAS II system is installed, it must be capable of coordinating with TCAS units that meet TSO C–119.

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## PART 129—OPERATIONS: FOREIGN AIR CARRIERS AND FOREIGN OPERATORS OF U.S. REGISTERED AIRCRAFT ENGAGED IN COMMON CARRIAGE

3. The authority citation for part 129 continues to read as follows:

**Authority:** 49 U.S.C. App. 1346, 1354(a), 1356, 1357, 1421, 1502, and 1511; 49 U.S.C. 106(g) (revised Pub. L. 97–449, January 12, 1983).

4. Section 129.18 is amended by revising paragraph (b) to read as follows:

**§ 129.18 Traffic Alert and Collision Avoidance System.**

(a) * * *

(b) Unless otherwise authorized by the Administrator, after December 31, 1995, no foreign air carrier may operate in the United States a turbine powered airplane that has a passenger seat configuration, excluding any pilot seat, of 10 to 30 seats unless it is equipped with an approved traffic alert and collision avoidance system. If a TCAS II system is installed, it must be capable of coordinating with TCAS units that meet TSO C–119.

## PART 135—AIR TAXI OPERATORS AND COMMERCIAL OPERATORS

5. The authority citation for part 135 continues to read as follows:

**Authority:** 49 U.S.C. 1354(a), 1355(a), 1421 through 1431, and 1502; 49 U.S.C. 106(g) (revised Pub. L. 97–449, January 12, 1983).

6. Section 135.180 is amended by revising paragraph (a) to read as follows:

**§ 135.180 Traffic Alert and Collision Avoidance System.**

(a) Unless otherwise authorized by the Administrator, after December 31, 1995, no person may operate a turbine powered airplane that has a passenger seat configuration, excluding any pilot seat, of 10 to 30 seats unless it is equipped with an approved traffic alert and collision avoidance system. If a TCAS II system is installed, it must be capable of coordinating with TCAS units that meet TSO C–119.

* * * * *

Issued in Washington, D.C., on December 23, 1994.

**David R. Hinson,**

*Administration.*

[FR Doc. 94–32108 Filed 12–23–94; 2:54 pm]

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**14 CFR Parts 121, 129, and 135**

**[Docket No. 27663; Amdt. No. 121–246]**

**RIN 2120–AF24**

## Traffic Alert and Collision Avoidance System, TCAS I

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule; correction.

**SUMMARY:** This document contains a correction to a final rule, Traffic Alert and collision avoidance System, TCAS I, published in the Federal Register on December 29, 1994.

**DATES:** This document is effective December 29, 1994. The final compliance date is December 31, 1995. Comments on the revision of § 121.356(b) must be received on or before February 27, 1995.

**FOR FURTHER INFORMATION CONTACT:**

Gary E. Davis, telephone (202) 267–8096.

### Correction to Final Rule

In the final rule beginning on page 67584, in the issue of Thursday, December 29, 1994, the following correciton is being made:

1. On page 67584, first column, and in the heading, the amendment number should read "121–246", instead of "121–247".

Dated: January 4, 1995.

**Donald P. Byrne,**

*Assistant Chief Counsel, Office of Chief Counsel.*

[FR Doc. 95–571 Filed 1–9–95; 8:45 am]

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