



[4910-13]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 25

[Docket No. FAA-2016-8246; Special Conditions No. 25-624-SC]

Special Conditions: ATR Model ATR-42-200/-300/-320/-500 and ATR-72-102/-202/-212/-212A Airplanes; Seats with Non-Traditional, Large, Non-Metallic Panels

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final special conditions; request for comments.

SUMMARY: These special conditions are issued for ATR Model ATR-42-200/-300/-320/-500 and ATR-72-102/-202/-212/-212A airplanes. These airplanes will have a novel or unusual design feature when compared to the state of technology envisioned in the airworthiness standards for transport-category airplanes. This design feature is seats with non-traditional, large, non-metallic panels. The applicable airworthiness regulations do not contain adequate or appropriate safety standards for this design feature. These special conditions contain the additional safety standards that the Administrator considers necessary to establish a level of safety equivalent to that established by the existing airworthiness standards.

DATES: This action is effective on ATR on **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. We must receive your comments by **[INSERT DATE 45 DAYS AFTER PUBLICATION IN THE FEDERAL REGISTER]**.

ADDRESSES: Send comments identified by docket number FAA-2016-8246 using any of the following methods:

- *Federal eRegulations Portal:* Go to <http://www.regulations.gov/> and follow the online instructions for sending your comments electronically.
- *Mail:* Send comments to Docket Operations, M-30, U.S. Department of Transportation (DOT), 1200 New Jersey Avenue, SE., Room W12-140, West Building Ground Floor, Washington, DC, 20590-0001.
- *Hand Delivery or Courier:* Take comments to Docket Operations in Room W12-140 of the West Building Ground Floor at 1200 New Jersey Avenue, SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.
- *Fax:* Fax comments to Docket Operations at 202-493-2251.

Privacy: The FAA will post all comments it receives, without change, to <http://www.regulations.gov/>, including any personal information the commenter provides. Using the search function of the docket Web site, anyone can find and read the electronic form of all comments received into any FAA docket, including the name of the individual sending the comment (or signing the comment for an association, business, labor union, etc.). DOT's complete Privacy Act Statement can be found in the **Federal Register** published on April 11, 2000 (65 FR 19477-19478), as well as at <http://DocketsInfo.dot.gov/>.

Docket: Background documents or comments received may be read at <http://www.regulations.gov/> at any time. Follow the online instructions for accessing the docket or go to Docket Operations in Room W12-140 of the West Building Ground Floor at 1200 New Jersey Avenue, SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

FOR FURTHER INFORMATION CONTACT: John Sheldon, Airframe and Cabin Safety, ANM-115, Transport Airplane Directorate, Aircraft Certification Service, 1601 Lind Avenue SW., Renton, Washington 98057-3356; telephone 425-227-2785; facsimile 425-227-1149.

SUPPLEMENTARY INFORMATION:

The FAA has determined that notice of, and opportunity for prior public comment on, these special conditions is impracticable because these procedures would significantly delay issuance of the design approval, and thus delivery, of the affected airplanes.

In addition, the substance of these special conditions has been subject to the public-comment process in several prior instances with no substantive comments received. The FAA therefore finds that good cause exists for making these special conditions effective upon publication in the **Federal Register**.

Comments Invited

We invite interested people to take part in this rulemaking by sending written comments, data, or views. The most helpful comments reference a specific portion of the special conditions, explain the reason for any recommended change, and include supporting data.

We will consider all comments we receive by the closing date for comments. We may change these special conditions based on the comments we receive.

Background

On March 2, 2016, ATR applied for a change to type certificate no. A53EU for the installation of seats constructed of non-traditional, non-metallic materials in the Model ATR-42 -200/-300/-320/-500, and ATR-72-102/-202/-212/-212A airplanes.

The Model ATR-42/-72 series airplanes are twin-engine, turbopropeller-powered, transport-category airplanes with maximum passenger capacity up to 74, depending upon airplane model.

Type Certification Basis

Under the provisions of Title 14, Code of Federal Regulations (14 CFR) 21.101, ATR must show that the Model ATR-42-200/-300/-320/-500 and ATR-72-102/-202/-212/-212A airplanes, as changed, continue to meet the applicable provisions of the regulations listed in type certificate no. A53EU, or the applicable regulations in effect on the date of application for the change, except for earlier amendments as agreed upon by the FAA.

If the Administrator finds that the applicable airworthiness regulations (i.e., 14 CFR part 25) do not contain adequate or appropriate safety standards for the Model ATR-42-200/-300/-320/-500 and ATR-72-102/-202/-212/-212A airplanes because of a novel or unusual design feature, special conditions are prescribed under the provisions of § 21.16.

Special conditions are initially applicable to the model for which they are issued. Should the type certificate for that model be amended later to include any other model that incorporates the same novel or unusual design feature, or should any other model already included on the same type certificate be modified to incorporate the same novel or unusual design feature, these special conditions would also apply to the other model under § 21.101.

In addition to the applicable airworthiness regulations and special conditions, the Model ATR-42-200/-300/-320/-500 and ATR-72-102/-202/-212/-212A airplanes must comply with the fuel-vent and exhaust-emission requirements of 14 CFR part 34, and the noise-certification requirements of 14 CFR part 36.

The FAA issues special conditions, as defined in 14 CFR 11.19, in accordance with § 11.38, and they become part of the type certification basis under § 21.101.

Novel or Unusual Design Features

The Model ATR-42-200/-300/-320/-500 and ATR-72-102/-202/-212/-212A airplanes will incorporate the following novel or unusual design feature:

Passenger seats that incorporate non-traditional, large, non-metallic panels in lieu of the traditional metal frame covered by fabric.

Discussion

In the early 1980s, the FAA conducted extensive research on the effects of post-crash flammability in the passenger cabin. As a result of this research and service experience, the FAA adopted new standards for interior surfaces associated with large surface-area parts. Specifically, the rules require measurement of heat release and smoke emission (part 25, Appendix F, parts IV and V) for the affected parts. Heat release has been shown to have a direct correlation with post-crash-fire survival time. Materials that comply with the standards (i.e., § 25.853, “Compartment interiors” at Amendment 25-61 and Amendment 25-66) extend survival time by approximately 2 minutes over materials that do not comply.

At the time these standards were written, the potential application of the requirements of seat heat release and smoke emission was explored. The seat frame itself was not a concern because it was primarily made of aluminum and only small amounts of non-metallic materials. Research determined that the overall effect on survivability was negligible, whether or not the food trays met the heat-release and smoke-emission requirements. The requirements therefore did not address seats. The preambles to both the Notice of Proposed Rule Making (NPRM), Notice No. 85-10 (50 FR 15038, April 16, 1985), and the Final Rule at Amendment 25-61 (51 FR

26206, July 21, 1986), specifically note that seats were excluded “because the recently adopted standards for flammability of seat cushions will greatly inhibit involvement of the seats.”

Subsequently, the Final Rule at Amendment 25-83 (60 FR 6615, March 6, 1995) clarified the definition of minimum panel size: “It is not possible to cite a specific size that will apply in all installations; however, as a general rule, components with exposed surface areas of one square foot or less may be considered small enough that they do not have to meet the new standards. Components with exposed surface areas greater than two square feet may be considered large enough that they do have to meet the new standards. Those with exposed surface areas greater than one square foot, but less than two square feet, must be considered in conjunction with the areas of the cabin in which they are installed before a determination could be made.”

In the late 1990s, the FAA issued Policy Memorandum 97-112-39, “Guidance for Flammability Testing of Seat/Console Installations,” October 17, 1997 (<http://rgl.faa.gov>). That memo was issued when it became clear that seat designs were evolving to include large, non-metallic panels with surface areas that would impact survivability during a cabin-fire event, comparable to partitions or galleys. The memo noted that large-surface-area panels must comply with heat-release and smoke-emission requirements, even if they were attached to a seat. If the FAA had not issued such policy, seat designs could have been viewed as a loophole to the airworthiness standards that would result in an unacceptable decrease in survivability during a cabin-fire event.

In October of 2004, an issue was raised regarding the appropriate flammability standards for passenger seats that incorporated non-traditional, large, non-metallic panels in lieu of the traditional metal covered by fabric. The FAA Seattle Aircraft Certification Office and Transport Standards Staff reviewed this design, and determined that it represented the kind and quantity of

material that should be required to pass the heat-release and smoke-emissions requirements. The FAA has determined that special conditions would be issued to apply the standards defined in 14 CFR 25.853(d) to seats with large, non-metallic panels in their design. Traditional seat panels would not be covered by the special conditions.

These special conditions contain the additional safety standards that the Administrator considers necessary to establish a level of safety equivalent to that established by the existing airworthiness standards.

Applicability

As discussed above, these special conditions are applicable to the Model ATR-42-200/-300/-320/-500 and ATR-72-102/-202/-212/-212A airplanes. Should ATR apply at a later date for a change to the type certificate to include another model incorporating the same novel or unusual design feature, these special conditions would apply to that model as well. These special conditions apply to new seat-certification programs. Previously approved seats are not affected by these special conditions.

Conclusion

This action affects only certain novel or unusual design features on two model series of airplanes. It is not a rule of general applicability.

The substance of these special conditions has been subjected to the notice and comment period in several prior instances and has been derived without substantive change from those previously issued. It is unlikely that prior public comment would result in a significant change from the substance contained herein. Therefore, because a delay would significantly affect the certification of the airplane, which is imminent, the FAA has determined that prior public notice and comment are unnecessary and impracticable, and good cause exists for adopting these special

conditions upon publication in the **Federal Register**. The FAA is requesting comments to allow interested persons to submit views that may not have been submitted in response to the prior opportunities for comment described above.

List of Subjects in 14 CFR Part 25

Aircraft, Aviation safety, Reporting and recordkeeping requirements.

The authority citation for these special conditions is as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701, 44702, 44704.

The Special Conditions

Accordingly, pursuant to the authority delegated to me by the Administrator, the following special conditions are issued as part of the type certification basis for ATR Model ATR-42-200/-300/-320/-500 and ATR-72-102/-202/-212/-212A airplanes for new seat-certification programs.

1. Compliance with 14 CFR part 25 Appendix F, parts IV and V, “Heat release and smoke emission,” is required for seats that incorporate non-traditional, large, non-metallic panels that may be either a single component or multiple components in a concentrated area in their design.
2. The applicant may designate up to and including 1.5 square feet of non-traditional, non-metallic panel material per seat place that does not have to comply with special condition 1, above. A triple seat assembly may have a total of 4.5 square feet excluded on any portion of the assembly (e.g., outboard seat place, 1 sq. ft.; middle, 1 sq. ft.; and inboard, 2.5 sq. ft.)

3. Seats need not meet the test requirements of 14 CFR part 25 Appendix F, parts IV and V, when installed in compartments that are not otherwise required to meet these requirements. Examples include airplanes:
 - a. with passenger capacities of 19 or fewer;
 - b. that do not have smoke-emission and heat-release test requirements in their certification basis, and that are not required by 14 CFR 121.312 to conduct such tests; or
 - c. that are exempted from smoke-emission and heat-release testing.

Issued in Renton, Washington, on July 21, 2016.

/s/

Michael Kaszycki
Assistant Manager, Transport Airplane Directorate
Aircraft Certification Service
[FR Doc. 2016-17846 Filed: 7/28/2016 8:45 am; Publication Date: 7/29/2016]