DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Parts 25, 121, 125, and 135

[Docket No. 24251; Notice No. 847–17A]

RIN 2120–AA49

Fuel System Vent Fire Protection

AGENCY: Federal Aviation Administration, DOT.

ACTION: Notice of proposed rulemaking.

SUMMARY: This notice proposes an amendment to the airworthiness standards for transport category airplanes to require fuel system vent protection during post-crash ground fires. This proposal is the result of information obtained from public hearings on aircraft fire safety, and recommendation by the Special Aviation Fire and Explosion Reduction (SAFER) Advisory Committee, and is intended to provide protection against a fuel tank explosion following a post-crash ground fire. The proposed amendment would apply to air carriers, air taxi operators, and commercial operators of transport category airplanes, as well as the manufacturers of such airplanes.

DATES: Comments must be received on or before June 2, 1995.

ADDRESSES: Comments on this proposal may be mailed in triplicate to: Federal Aviation Administration, Office of the Chief Counsel, Attention: Rules Docket (AGC–200), Docket No. 24251, 800 Independence Avenue SW., Washington, D.C. 20591, or delivered in triplicate to: Room 915G, 800 Independence Avenue SW., Washington, D.C. Comments must be marked: Docket No. 24251. Comments may be inspected in Room 915G weekdays, except Federal holidays, between 8:30 a.m. and 5:00 p.m. In addition, the FAA is maintaining an information docket of comments in the Office of the Assistant Chief Counsel (ANM–7), Federal Aviation Administration, Northwest Mountain Region, 1601 Lind Avenue SW, Renton, Washington 98055–4056. Comments in the information docket may be inspected in the Office of the Assistant Chief Counsel weekdays, except Federal holidays, between 7:30 a.m. and 4:00 p.m.

FOR FURTHER INFORMATION CONTACT: Mike McRae, FAA, Airframe and Propulsion Branch (ANM–112), Transport Airplane Directorate, Aircraft Certification Service, 1601 Lind Avenue SW., Renton, Washington 98055–4056; telephone (206) 227–2133.

SUPPLEMENTARY INFORMATION:

Comments Invited

Interested persons are invited to participate in this proposed rulemaking by submitting such written data, views, or arguments as they may desire. Comments relating to the environmental, energy, or economic impact that might result from adopting the proposals contained in this notice are invited. Substantive comments should be accompanied by cost estimates. Commenters should identify the regulatory docket or notice number and submit comments, in triplicate, to the Rules Docket address specified above. All comments received on or before the closing date for comments will be considered by the Administrator before taking action on this proposed rulemaking. The proposals contained in this notice may be changed in light of comments received. All comments will be available in the Rules Docket, both before and after the closing date for comments, for examination by interested persons. A report summarizing each substantive public contact with FAA personnel concerning this rulemaking will be filed in the docket. Commenters wishing the FAA to acknowledge receipt of their comments must submit with those comments a self-addressed, stamped postcard on which the following statement is made: ''Comments to Docket No. 24251.'' The postcard will be date stamped and returned to the commenter.

Availability of NPRM

Any person may obtain a copy of this NPRM by submitting a request to the Federal Aviation Administration, Office of Public Affairs, Attention: Public Information Center, APA–230, 800 Independence Avenue SW., Washington, D.C. 20591, or by calling (202) 267–3484. Communications must identify the notice number of this NPRM. Persons interested in being placed on a mailing list for future rulemaking documents should also request a copy of Advisory Circular No. 11–2A, Notice of Proposed Rulemaking Distribution System, which describes the application procedures.

Background

Section 25.954 (14 CFR 25.954) of the current airworthiness standards for transport category airplanes requires, in part, that any fuel system vents be designed to protect the fuel system from ignition by lightning strikes or electrostatic phenomenon. However, fuel system vents are not required to protect the fuel system from ignition during a post-crash ground fire. Improved fuel system vent fire protection is the subject of this NPRM.

To investigate the feasibility of reducing the severity or occurrence of airplane fires and explosions, the FAA held two public hearings in 1977. The first, in June, considered fire and explosion hazard reduction. The second, in November, dealt with the flammability of compartment interior materials. From the information obtained at those 1977 hearings, the FAA concluded that pending rulemaking actions on fuel tank explosion protection and flammability, toxicity, and smoke production concerning cabin materials were premature. The FAA decided to reexamine the technologies involved in reducing those hazards before going forward with any new rules.

To focus advice from the industry and the public at large for this review of available technology, the FAA formed the Special Aviation Fire and Explosion Reduction (SAFER) Advisory Committee on June 26, 1978. The committee consisted of a chairman and executive director, plus 24 representatives spanning the spectrum of international aviation interests.

The SAFER Committee's advice and recommendations to the FAA are embodied in a final report, FAA–ASF–80–4, dated June 26, 1980, Final Report of the Special Aviation Fire and Explosion Reduction (SAFER) Advisory Committee. This notice responds to the recommendation of the SAFER Committee concerning fuel system vent protection. Recommendations made in other areas are the subject of other rulemaking actions and are not relevant to this notice.

The SAFER Committee reviewed worldwide transport airplane accidents involving post-crash fuel tank explosions that had occurred since 1964 and concluded that with existing technology, the potential for post-crash explosion hazards could be reduced. The Committee considered that fuel system vent flame arrestors or surge tank explosion suppression systems used in some current airplanes to protect against lightning-induced ignition at fuel vent outlets might also be able to delay propagation of ground fires and the subsequent explosions, to provide additional time for safe evacuation of passengers. They also considered that a design practice in use on some current airplanes that provides for closure of both fuel tank-to-engine and engine fuel control shutoff valves during normal engine shutdown would also maximize the probability of engine fuel supply shutoff in post-crash fire accidents. On the basis of these