

# Memorandum

U.S. Department  
of Transportation

**Federal Aviation  
Administration**

Subject: **INFORMATION:** Policy Statement on Evaluating a Seat  
Armrest Cavity for a Potential Fire Hazard.

Date: July 14, 2004

From: Manager, Transport Airplane Directorate,  
Aircraft Certification Service, ANM-100

Reply to  
Attn. of: PS-ANM100-2003-  
10019

To: See Distribution

Regulatory § 25.601  
Reference:

## Summary

The purpose of this memorandum is to clarify Federal Aviation Administration (FAA) certification policy with respect to evaluating a seat armrest cavity for a potential fire hazard.

## Current Regulatory and Advisory Material

Section 25.601 requires that an airplane not have design features or details that experience has shown to be hazardous or unreliable.

## Relevant Past Practice

Due to a concern about trapped waste materials being a potential fire hazard, the FAA has required seat armrest cavities, which typically hold tray tables or video monitors, to either be completely enclosed or have an open bottom. A completely enclosed armrest cavity would not support an internal fire due to oxygen starvation. An armrest with an open bottom would allow waste material entering from the top opening to fall to the floor. This would prevent waste material from accumulating in the armrest cavity and becoming fuel for a potential fire.

## Policy

Because the extent to which trapped waste material would constitute a fire hazard was not definitively established, the FAA initiated testing to make this determination. The testing included evaluation with different levels of ventilation. Federal Aviation Administration Report DOT/FAA/AR-TN02/105, "Burning Behavior Within a Seat Armrest Cavity," dated September 2002, documents the results of fire tests conducted to examine the characteristics of several fire scenarios that could occur in an armrest cavity and the fire-containment capability of the cavity. In all the tests conducted with actual

seat armrests, the fire self-extinguished, the armrest material did not ignite, and the fire was contained within the armrest cavity.

The FAA has reviewed the practice of requiring seat armrest cavities to either be completely enclosed or have an open bottom. We have determined that armrest cavities do not constitute a significant fire hazard regardless of whether or not these conditions are met. Accordingly, the armrest cavity may be open or closed to any degree and will not be hazardous under § 25.601.

This policy is applicable to armrest cavities of typical size and does not address armrest cavities that are significantly larger than those studied by the FAA in FAA Report DOT/FAA/AR-TN02/105.

### **Effect of Policy**

The general policy stated in this document does not constitute a new regulation or create what the courts refer to as a “binding norm.” Offices implementing policy should follow this policy when applicable to the specific project. Whenever an applicant's proposed method of compliance is outside this established policy, it must be coordinated with the policy issuing office (e.g., through the issue paper process or equivalent). Similarly, if the implementing office becomes aware of reasons that an applicant’s proposal that meets this policy should not be approved, the office must coordinate its response with the policy issuing office.

Applicants should expect that the certificating officials will consider this information when making findings of compliance relevant to new certificate actions. Also, as with all advisory material, this policy statement identifies one means, but not the only means, of compliance.

/s/

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