



# National Transportation Safety Board

Washington, D.C. 20594

## Safety Recommendation

Adopted 7-11-94  
log 2517  
2517

---

Date: July 18, 1994

In reply refer to: A-94-132

Mr. James E. Landry, President  
Air Transport Association of America  
1301 Pennsylvania Avenue, Suite 1100  
Washington, D.C. 20004-1707

---

On November 28, 1993, smoke began to come out of an overhead storage compartment in the passenger cabin of a Northwest Airlines Boeing 727-251. At the time, the airplane was being pushed back from the gate at Dorval International Airport, Montreal, Canada, to begin its scheduled flight from Montreal to Detroit, Michigan. Crewmembers extinguished the fire with two Halon fire extinguishers that were on board. During the subsequent emergency evacuation, 2 of the 60 passengers were slightly injured; these 2 passengers and 2 others, who were diabetic, were taken to a hospital where they were treated and released. None of the 6 crewmembers was injured. The airplane sustained minor heat and smoke damage to the storage compartment.

The incident was investigated by the Transportation Safety Board of Canada (TSBC) with assistance from the National Transportation Safety Board. The investigation determined that the fire originated in several blankets stored in the overhead compartment; the fire also burned part of a carry-on bag in the same compartment. No ignition sources were found in the overhead compartment. On the day after the fire, investigators found a fire-scorched paper towel in each of the two aft lavatories and a burned match beside each towel. The evidence strongly suggested that the fire in the overhead compartment had been deliberately set, most likely with a match. Police authorities in Montreal are conducting an arson investigation.

Blankets identical to those stored in the overhead compartment were examined following the incident. The fabric, 100-percent polyester, ignited easily with a match. Following ignition, the polyester melted and resulted in a molten polyester pool fire.

The flammability of aircraft interior materials is addressed by standards contained in Title 14 Code of Federal Regulations Part 25 (14 CFR 25). These standards were strengthened by the Federal Aviation Administration (FAA) in 1989 to reduce the flammability of interior materials by adding a rate of heat release criteria. Data provided to the TSBC by the blanket manufacturer indicated that the blankets had been subjected to a vertical flame spread test that included a burning molten drip requirement as described in Section 25.853, appendix F, part I. According to the results of the test, the blankets met the test criteria. The Safety Board notes, however, that

blankets supplied to aircraft operators are not required to meet FAA flammability standards. Fabrics used in aircraft seats and on other surfaces are required to meet the flame spread test and a heat release standard as described in Section 25.853, appendix F, part II.

The vertical flame spread test appears to be an inadequate method to measure the flammability of blankets, considering the ease with which folded blankets ignited and developed a molten polyester pool fire in the post-incident test. As demonstrated by the Montreal incident, the use of blankets that ignite and burn in such a manner increases the risk of a fire. The Safety Board believes that allowing the use of highly flammable blankets for passenger comfort is inconsistent with current FAA standards and requirements to reduce the flammability of interior cabin materials. Accordingly, the Board has issued a safety recommendation to the FAA asking the agency to develop a fire performance test method and performance criteria (standard) for blankets to be supplied to commercial operators, and to then require operators to use only those blankets that meet the standard.

Because these actions will take some time, the National Transportation Safety Board also recommends that the Air Transport Association of America:

Warn association members about the flammability of blankets used for passenger comfort and urge members to replace these blankets with blankets containing more fire-resistant materials. (Class II, Priority Action) (A-94-132)

The National Transportation Safety Board is an independent Federal agency with the statutory responsibility "...to promote transportation safety by conducting independent accident investigations and by formulating safety improvement recommendations" (Public Law 93-633). The Safety Board is vitally interested in any actions taken as a result of its safety recommendations and would appreciate a response from you regarding action taken or contemplated with respect to the recommendation in this letter. Please refer to Safety Recommendation A-94-132 in your reply.

Acting Chairman HALL, and Members LAUBER, HAMMERSCHMIDT, and VOGT concurred in this recommendation.

By:   
Jim Hall  
Acting Chairman