



National Transportation Safety Board

Washington, D.C. 20594
Safety Recommendation

Log # 2654C

Date: SEP - 9 1997

In reply refer to: A-97-82

Ms. Carol B. Hallett
President and CEO

Air Transport Association
1301 Pennsylvania Avenue, NW
Suite 1100
Washington, D.C. 20004

On May 11, 1996, at 1413:42 eastern daylight time, a Douglas DC-9-32 crashed into the Everglades about 10 minutes after takeoff from Miami International Airport, Miami, Florida. The airplane, N904VJ, was being operated by ValuJet Airlines, Inc., as flight 592. Both pilots, the three flight attendants, and all 105 passengers were killed. Visual meteorological conditions existed in the Miami area at the time of the takeoff. Flight 592, operating under the provisions of Title 14 Code of Federal Regulations (CFR) Part 121, was on an instrument flight rules flight plan destined for the William B. Hartsfield International Airport, Atlanta, Georgia.

The investigation revealed that shortly before flight 592's departure from Miami, five boxes of unexpended chemical oxygen generators and three tires (two of which included wheel assemblies) were loaded into the forward cargo compartment (a class D compartment). Personnel from the SabreTech Corporation, a maintenance facility with which ValuJet had an ongoing contractual relationship for line maintenance and heavy aircraft maintenance, had loaded the boxes on flight 592 before takeoff. The oxygen generators, all of which were near or past their expiration dates, had been removed from three ValuJet MD-80s at SabreTech. Passenger baggage and U.S. mail (62 pounds), which included a mailing tube, a film box, and one priority mail bag were also loaded into this compartment.

The National Transportation Safety Board determined that the probable causes of the accident, which resulted from a fire in the airplane's class D cargo compartment that was initiated by the actuation of one or more oxygen generators being improperly carried as cargo, were (1) the failure of SabreTech to properly prepare, package, and identify unexpended chemical oxygen generators before presenting them to ValuJet for carriage; (2) the failure of ValuJet to properly oversee its contract maintenance program to ensure compliance with maintenance, maintenance training, and hazardous materials requirements and practices; and (3) the failure of the Federal Aviation Administration (FAA) to require smoke detection and fire suppression systems in class D cargo compartments.

Contributing to the accident was the failure of the FAA to adequately monitor ValuJet's heavy maintenance programs and responsibilities, including ValuJet's oversight of its contractors, and SabreTech's repair station certificate; the failure of the FAA to adequately respond to prior chemical oxygen generator fires with programs to address the potential hazards; and ValuJet's failure to ensure that both ValuJet and contract maintenance facility employees were aware of the carrier's "no-carry" hazardous materials policy and had received appropriate hazardous materials training.¹

According to the U.S. Postal Service, it handled over 21.9 billion pounds of mail in 1996; about 2.3 billion pounds were transported by air. Also, about one million pounds of domestic mail is transported by air per day in packages weighing more than 16 ounces (1 pound). The Postal Service accepts limited quantities of hazardous materials for transportation in the mail provided they are packaged and identified in accordance with the Department of Transportation and U.S. Postal Service regulations. However, several accidents and incidents investigated by the U.S. Postal Service and the Safety Board have involved undeclared hazardous materials inadvertently or unintentionally mailed that exceeded the set quantity limits and were not properly packaged or identified; some of this mail has been transported on aircraft.

The Safety Board has had a long standing concern about the transportation of undeclared hazardous materials. As a result of a February 3, 1988, accident on American Airlines flight 132,² the Safety Board stated that the safe transportation of hazardous materials depended on sufficient information to identify the materials and the hazards presented during transportation. Accordingly, the Board noted that both shippers and carriers had a responsibility to determine if materials offered for transportation were hazardous and in proper condition to ensure their safe transportation. Although the in-flight fire on American Airlines flight 132 did not involve hazardous materials in the mail, the accident focused attention on the issue of undeclared hazardous materials being placed on aircraft through the U.S. mail.

The ValuJet accident and the incidents that have occurred since clearly demonstrate that the shipment of undeclared hazardous materials in air transportation is a serious problem that has not been adequately addressed. Efforts to address this issue have been hindered by the apparently limited authority of Postal Service employees to ask questions of customers about the contents of their packages and the lack of authority for FAA inspectors to open mail bags or packages carried in the U.S. mail without a U.S. postal inspector present. Also, because of the 1990 Public Law 101-615, which specifically excludes the DOT from regulating hazardous materials in the U.S. Postal Service, the FAA's efforts to monitor hazardous materials on airplanes have been further hindered. Additionally, because the U.S. Postal Service has only criminal enforcement authority to address willful violations, and does not have civil authority, the Postal Service is

¹ For more detailed information, read Aircraft Accident Report—"In-flight Fire and Impact with Terrain, ValuJet Airlines Flight 592, DC-9-32, N904VJ, Everglades, near Miami, Florida, May 11, 1996." (NTSB/AAR-97/06).

² *In-flight Fire, McDonnell Douglas DC-9-83, N569AA, Nashville Metropolitan Airport, Nashville, Tennessee, February 3, 1988*, Hazardous Materials Incident Report NTSB/HZM-88/02. National Transportation Safety Board. Washington, D.C. 1988.

limited in dealing with unintentional shipments of hazardous materials. In contrast, DOT's civil enforcement authority is one of the primary tools used by the FAA in dealing with unintentional shipments by air of hazardous materials discovered during investigations.

The Safety Board concludes that the limited authority of the U.S. Postal Service and the FAA to inspect and thus successfully identify undeclared hazardous materials in U.S. mail loaded on airplanes creates a situation in which undeclared shipments of hazardous materials can readily find their way on board passenger airplanes. Although the shipper endorsement requirements for non-U.S. mail shipments issued under 14 CFR Part 109³ might help to reduce the number of undeclared hazardous materials shipments by shippers and freight forwarders, this action does not help to identify undeclared hazardous materials in the U.S. mail. Additional measures to focus on air passengers and postal patrons are needed given the significant number of packages that are transported by aircraft. Therefore, the Safety Board believes that the U.S. Postal Service, in cooperation with the FAA and the ATA, should develop programs to educate passengers, shippers and postal customers about the dangers of transporting undeclared hazardous materials aboard aircraft and about the need to properly identify and package hazardous materials before offering them for air transportation. The programs should focus on passenger baggage, air cargo, and mail offered by U.S. Postal Service customers.


Therefore, as a result of its investigation of this accident, the National Transportation Safety Board recommends the following to the Air Transport Association:

Develop, in cooperation with the Federal Aviation Administration and the U.S. Postal Service, programs to educate passengers, shippers and postal customers about the dangers of transporting undeclared hazardous materials aboard aircraft and about the need to properly identify and package hazardous materials before offering them for air transportation. The programs should focus on passenger baggage, air cargo, and mail offered by U.S. Postal Service customers. (A-97-82)

Also as a result of this investigation, Safety Recommendations A-97-56 through -77 were issued to the Federal Aviation Administration; Safety Recommendation A-97-78 was issued to the Research and Special Programs Administration; and Safety Recommendations A-97-79 through -81 were issued to the U.S. Postal Service.

Chairman HALL, Vice Chairman FRANCIS, and Members HAMMERSCHMIDT, GOGLIA, and BLACK concurred in this recommendation.

By:



Jim Hall
Chairman

³ These provisions require shippers and freight forwarders, but not postal patrons, to certify that each shipment, not identified as carrying hazardous materials, does not contain any "unauthorized explosives, destructive devices or hazardous materials."

