

Log 2513B



**National Transportation Safety Board**  
Washington D.C. 20594  
**Safety Recommendation**

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**Date:** December 15, 1995

**In reply refer to: A-95-147**

Honorable William J. Perry  
Secretary  
Department of Defense  
Washington, D.C. 20301

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On December 14, 1994, about 1146:23 pacific standard time (PST), a Phoenix Air Group, Inc. (Phoenix Air) Learjet 35A, registration N521PA, crashed in Fresno, California. Operating under the call sign Dart 21, the flightcrew had declared an emergency inbound to Fresno Air Terminal due to engine fire indications. They flew the airplane toward a right base for their requested runway, but the airplane continued past the airport. The flightcrew was heard on Fresno tower frequency attempting to diagnose the emergency conditions and control the airplane until it crashed, with landing gear down, on an avenue in Fresno. Both pilots were fatally injured. Twenty-one persons on the ground were injured, and 12 apartment units in 2 buildings were destroyed or substantially damaged by impact and fire.<sup>1</sup>

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<sup>1</sup>For more detailed information, read Aircraft Accident Report -- "Crash During Emergency Landing, Phoenix Air, Learjet 35A, N521PA, Fresno, California, December 14, 1994" (NTSB/AAR-95/04)

The National Transportation Safety Board has determined that the probable causes of this accident were: 1) improperly installed electrical wiring for special mission operations that led to an in-flight fire that caused airplane systems and structural damage and subsequent airplane control difficulties; 2) improper maintenance and inspection procedures followed by the operator; and, 3) inadequate oversight and approval of the maintenance and inspection practice by the operator in the installation of the special mission systems.

N521PA was a public-use aircraft,<sup>2</sup> under contract to the U.S. Air Force (USAF) to provide training for Air National Guard (ANG) F-16 fighters. The airplane had been modified with electronic equipment to satisfy the mission requirements.

The investigation revealed that the USAF and ANG did not play a direct role in the circumstances that led to the accident because they were not responsible for the actual installation of the special mission wiring or for the inspection of the installation. In accordance with the USAF contract for services, the contractor specified that the airplane be maintained in accordance with Federal Aviation Administration (FAA) regulations.

The contract included a Performance Work Statement (PWS) that outlined the responsibilities of the contractor, which was Phoenix Air. The PWS required that contractor flightcrews possess FAA commercial pilot certificates with instrument privileges. It also stated that contractor flightcrews would be certified in accordance with the applicable FAA directives for their respective duties and would operate aircraft in accordance with FAA, USAF, ANG, host unit regulations, and host nation requirements (non-US overseas locations). Further, it specified that flightcrews would operate aircraft within FAA flight time and crew duty time limitations.

It is understandable that the USAF and ANG would rely on the FAA-approved maintenance program and the FAA-approved Form 337 installation of the special mission wiring. Although the USAF did have oversight authority and

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<sup>2</sup>The Independent Safety Board Act Amendments of 1994, which became effective on April 23, 1995, altered the division between public and civil aircraft. Nevertheless, under either the former or current definition, N521PA was a public-use aircraft.

responsibilities under the contract, it would not necessarily inspect FAA-approved installations.

The use of FAA Form 337 for approval of the installation of the special mission equipment, and the fact that a Phoenix Air mechanic holding Inspection Authorization (IA)<sup>3</sup> privileges signed off on the installation procedures, placed the responsibility for quality and oversight on the operator. The operator failed in these responsibilities.

The Safety Board believes that a qualified mechanic should not have overlooked basic electrical power wire installation practices, such as ensuring proper current overload protection for the entire system. Similarly, the failure of the FAA-certified avionics inspector to compare the actual installation with the specified installation instructions is inexcusable. The instructions for the work specified the proper installation; however, it was not followed by the mechanic, and the IA did not meet his inspection responsibilities. These failures, coupled with the fact that 14 additional airplanes had been modified incorrectly, reflect on the competence of the individuals involved and a lack of adequate oversight by the operator's maintenance management personnel.

Subsequent to the operator's grounding and inspection of the other airplanes, the ANG temporarily halted the mission. After a new Form 337 was written and approved that included more detailed instructions on the proper installation, and the airplanes were modified correctly, the ANG mission was reinstated.

On March 21 and 22, 1994, the Chief of the Department of Defense (DOD) Air Carrier Survey and Analysis Office, Headquarters, Air Mobility Command (AMC/XOB) and staff conducted a "biennial survey" of Phoenix Air at the company's headquarters. The purpose of the survey was to assess the operator's ability to continue providing safe and reliable airlift support to the DOD under the provisions of a Military Traffic Command tender of service for passenger and cargo operations. The company was rated "Average" in all areas that were evaluated, except for "Training" and "Operational Control," which received evaluations of

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<sup>3</sup>An IA is obtained from the FAA after meeting prerequisites, which include the following: 1) The individual must have been an active A&P [airframe and powerplant mechanic] for the previous 2 years; and 2) must have completed a written examination and an oral evaluation. An IA is renewed yearly.

"Above Average," and "Quality Assurance," which received an evaluation of "Below Average." The evaluator graded the operator "Average" in the following maintenance-related areas: maintenance inspection activity, maintenance training, maintenance control/planning, aircraft maintenance program, and aircraft maintenance records.

The survey stated that Phoenix Air met all DOD commercial air quality and safety requirements, with an exception in the area of maintenance. It was noted that the Quality Assurance Program had an incomplete vendor audit program. Also, "Continuing analysis and surveillance (CAS) is informal. Accomplished by monitoring the daily maintenance activity and aircraft status." In response, Phoenix Air developed a satisfactory monitoring program of vendors and improved documentation of records regarding vendors to ensure that its airplanes were maintained with approved parts.

If it were not for the responsibility of the DOD to assess the operator's ability to continue providing safe and reliable airlift support under the provisions of a Military Traffic Command tender of service for passenger and cargo operations, there would most likely not have been a safety survey. Rather, the USAF inspections involved broader matters related to the maintenance and operation of the contract airplanes. Nevertheless, the USAF's inspection program for this operator was less comprehensive than FAA oversight of 14 Code of Federal Regulations, Part 135, aircraft operators. Although the USAF had specified that the operator must use an FAA-approved maintenance program, this did not diminish the fact that the airplane was being operated as a public-use aircraft requiring USAF oversight. The Safety Board believes that the DOD should have provided audits of contractor maintenance actions on specific aircraft. To this end, a centralized command for oversight of contracted aircraft services to all DOD components (U.S. Army, USAF, etc.) could help to ensure that oversight is provided in a variety of conditions.

Therefore, as a result of its investigation of this accident, the National Transportation Safety Board recommends that the Department of Defense:

Centralize contractual oversight for safety for all Department of Defense components using contracted aircraft services. (Class II, Priority Action) (A-95-147)

Also, the Safety Board issued Safety Recommendation A-95-79 to the Federal Aviation Administration and A-95-80 to Phoenix Air.

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

By:   
Jim Hall  
Chairman

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