# Uncontrolled flight into terrain for undetermined reasons, Learjet 24B, N600XJ, Helendale, California, December 23, 2003

Micro-summary: This Learjet 24B crashed into terrain.

Event Date: 2003-12-23 at 0913 PST

Investigative Body: National Transportation Safety Board (NTSB), USA

Investigative Body's Web Site: http://www.ntsb.gov/

#### Cautions:

- 1. Accident reports can be and sometimes are revised. Be sure to consult the investigative agency for the latest version before basing anything significant on content (e.g., thesis, research, etc).
- 2. Readers are advised that each report is a glimpse of events at specific points in time. While broad themes permeate the causal events leading up to crashes, and we can learn from those, the specific regulatory and technological environments can and do change. Your company's flight operations manual is the final authority as to the safe operation of your aircraft!
- 3. Reports may or may not represent reality. Many many non-scientific factors go into an investigation, including the magnitude of the event, the experience of the investigator, the political climate, relationship with the regulatory authority, technological and recovery capabilities, etc. It is recommended that the reader review all reports analytically. Even a "bad" report can be a very useful launching point for learning.
- 4. Contact us before reproducing or redistributing a report from this anthology. Individual countries have very differing views on copyright! We can advise you on the steps to follow.

Aircraft Accident Reports on DVD, Copyright © 2006 by Flight Simulation Systems, LLC All rights reserved.

www.fss.aero



# **National Transportation Safety Board**

Washington, D.C. 20594

# **Aircraft Accident Brief**

**Accident Number:** LAX04FA075

Aircraft and Registration: Learjet 24B, N600XJ
Location: Helendale, California
Date: December 23, 2003

**Adopted On:** May 23, 2006

## **HISTORY OF FLIGHT**

On December 23, 2003, about 0913 Pacific standard time, <sup>1</sup> a Learjet 24B, N600XJ, registered to and operated by Pavair, Inc., of Santa Monica, California, departed controlled flight and crashed near Helendale, California. The captain and the first officer were killed, and the airplane was destroyed. The flight was operating under the provisions of 14 *Code of Federal Regulations* (CFR) Part 91<sup>2</sup> from San Bernardino County Airport (CNO), Chino, California, to Friedman Memorial Airport, Hailey, Idaho. Visual meteorological conditions prevailed for the flight, which operated on an instrument flight rules flight plan.

A review of radar data<sup>3</sup> and air traffic control (ATC) transcripts revealed that the flight departed CNO about 0858 and was cleared to climb to an altitude of 29,000 feet mean sea level (msl).<sup>4</sup> About 0909:55, as the airplane was climbing through an altitude of 26,000 feet, the first officer requested a return to CNO. About 0910:01, the controller asked the first officer if he needed to declare an emergency, and the first officer replied that he did not.<sup>5</sup> The controller then directed the flight crew to maintain an altitude of 24,000 feet.

Mode C information<sup>6</sup> for the flight showed that, from about 0910:12 to about 0910:59, the airplane descended from 26,500 to 24,000 feet at a rate of about 2,000 feet per minute (fpm). About 0911:08, the controller cleared the flight directly to HECTOR (a navigation fix) and asked the first officer to confirm that the airplane was in level flight at an altitude of 24,000 feet. The first officer did not respond. Radar data showed the airplane descending through 23,000 feet at a rate of about 6,500 fpm about that time. About 0911:24, while the airplane was descending at a

<sup>&</sup>lt;sup>1</sup> Unless otherwise noted, all times in this brief are Pacific standard time.

<sup>&</sup>lt;sup>2</sup> Pavair did not hold a 14 CFR Part 135 operating certificate; therefore, the company's flights were restricted to Part 91 operations.

<sup>&</sup>lt;sup>3</sup> These data were from the Southern California Air Route Surveillance Radar and the U.S. Air Force 84th Radar Evaluation Squadron.

<sup>&</sup>lt;sup>4</sup> Unless otherwise noted, all altitudes in this brief are reported as msl.

<sup>&</sup>lt;sup>5</sup> National Transportation Safety Board investigators compared the first officer's voice in this transmission with his voice in transmissions that he made earlier in the flight. The investigators noted that his voice sounded similar in this and previous transmissions.

<sup>&</sup>lt;sup>6</sup> Mode C is a function of the transponder that provides altitude information to air traffic controllers.

rate of about 10,000 fpm, the first officer stated, "we're declaring an emergency now." No further transmissions were received from the airplane. No radar data were available after about 0911:35. Starting about 0911:47, mode C information was invalid. The airplane impacted high desert terrain (an elevation of 3,350 feet) about 3 miles southeast of Helendale. The accident site was located about 46 nautical miles (nm) north of CNO.

A witness to the accident, who was located about 4.5 miles northwest of the accident site, stated that, after hearing the sound of a jet flying high overhead, he looked up and observed the accident airplane flying straight and level below a high, overcast cloud layer. He stated that the airplane then pitched "nose down a little" and "straightened again." He also stated that, shortly thereafter, he observed the airplane's nose pitch "straight down" until it impacted terrain. The witness reported that he did not notice whether the airplane was rotating about its longitudinal axis during the descent, but he did indicate that the airplane appeared to be intact without any components separating from the airplane during the descent. The witness added that he did not observe any smoke or fire before the airplane impacted terrain and that the airplane exploded into a "mushroom cloud" when it impacted terrain.

San Bernardino County firefighters, who were performing controlled burns near the accident site, reported hearing an explosion about the time of the accident. The firefighters reported that they looked toward the direction of the explosion and saw a rising smoke cloud. None of the firefighters observed the airplane before the sound of the explosion. The firefighters drove to the accident site and were the first to arrive there. The firefighters extinguished small fires that had erupted as a result of the crash.

# PERSONNEL INFORMATION

# The Captain

The captain, age 51, held an airline transport pilot (ATP) certificate (issued on October 13, 1987)<sup>8</sup> with a multiengine land rating and type ratings in the Cessna 500 (Citation) and the Learjet.<sup>9</sup> The captain also held a commercial certificate with a single-engine land rating and a flight instructor certificate with single- and multiengine land and instrument ratings. The captain's most recent Federal Aviation Administration (FAA) first-class airman medical certificate was issued on October 1, 2003, with the limitation that he must wear corrective lenses to correct his near vision.

The captain's résumé indicated that he had been a Learjet and Cessna 500 captain, a flight instructor, and director of operations for an aircraft charter company from October 1985 to

<sup>&</sup>lt;sup>7</sup> Safety Board investigators noted that the first officer's voice during this transmission sounded agitated and highly distressed compared with his voice during earlier transmissions.

<sup>&</sup>lt;sup>8</sup> On April 13 and 25, 2002, the captain received "altitude awareness" faults during Cessna 500 checkrides. On September 9, 2002, the captain satisfactorily completed an ATP recheck in a Cessna 500 and was able to maintain his ATP certificate.

<sup>&</sup>lt;sup>9</sup> The Learjet model was not specified on the type rating, which was issued in May 1988, or identified on the captain's Federal Aviation Administration Form 8410-2, Airman Certificate and/or Rating Application, for the Learjet.

2000. The captain occasionally worked for the owner of XtraJet, Inc., <sup>10</sup> as a pilot but did not appear to be an employee (no hiring record could be found). During the course of the investigation, the National Transportation Safety Board was unable to locate any logbooks for the captain.

The Safety Board obtained information about the captain's flight hours from American Air Network (AAN), where he received training. A pilot summary, which was signed by the captain and dated October 6, 2003, indicated that, at that time, he had accumulated 11,783 total flight hours, about 7,900 hours of which were as pilot-in-command of Learjet airplanes. According to XtraJet's former director of operations, the captain completed initial Learjet 24 training at AAN because Pavair did not have an approved Learjet 24 training program. Further, the captain began recurrent Learjet 24 training at AAN but did not complete the training because the Learjet 24 was removed from AAN's operating certificate in November 2003.

#### The First Officer

The first officer, age 23, held a commercial pilot certificate (issued on November 8, 2002) with single-engine and multiengine land and instrument ratings. He also held a flight instructor certificate for single-engine land and instrument airplanes. His most recent FAA first-class airman medical certificate was issued on September 5, 2003, with no limitations.

According to the first officer's September 4, 2003, pilot summary for AAN, he had accumulated 250 total flight hours. On October 25, 2003, the first officer completed AAN's basic indoctrination and emergency situation and procedures training for the Learjet 25 and 35. From November 3 to 17, 2003, he completed Learjet 35/36 training at FlightSafety International. This training consisted of 50 hours of ground training, 15 hours of briefing/debriefing training, and 24 hours of simulator training. On November 17, 2003, the first officer completed 4 hours of ground training and 2 hours of simulator differences training in Learjet 20 series airplanes. According to AAN personnel, the first officer received Learjet 20 series differences training so that he could fly those airplanes as second-in-command to build his flight time experience.

The first officer was listed as an approved pilot on AAN's Part 135 operating certificate on November 7, 2003, and, on the same day, he was given an airmen proficiency check in a Learjet 35A simulator in accordance with 14 CFR 135.293, "Initial and Recurrent Pilot Testing Requirements." A review of AAN's duty and flight time records revealed that the first officer flew 4.3 and 19.9 hours in a Learjet 35A in November and December 2003, respectively.

<sup>&</sup>lt;sup>10</sup> XtraJet is an FAA-approved charter company with a 14 CFR Part 135 operating certificate. Pavair and XtraJet are owned by the same individual and use the same staff.

<sup>&</sup>lt;sup>11</sup> AAN is a Part 135 certificate holder and an aircraft management company that arranges lease agreements for airplanes and flight crews and charges managerial service fees to operate the airplanes under the company's Part 135 certificate.

# AIRPLANE INFORMATION

#### **General Information**

The accident airplane, serial number 190, was manufactured in April 1969, in Wichita, Kansas. The airplane was equipped with two General Electric CJ-610-6 turbine engines and was operated and maintained in the United States until 1977. From 1977 to 1981, the airplane was in Europe. In 1981, the airplane returned to the United States, where it was operated and maintained until the time of the accident.

At the time of the accident, the airplane was registered to and operated by Pavair. The airplane was listed on AAN's 14 CFR Part 135 operating certificate from March 9, 2001, to November 17, 2003; at which time, the airplane was removed from the company's operating certificate. According to AAN, the airplane was removed from its operating certificate because Pavair had provided inadequate maintenance records.

The Safety Board requested a copy of all maintenance records for the accident airplane from Pavair and XtraJet. The airframe logbook from 1969 to October 1973 and the left engine logbook from 1981 to December 1998 were not provided to the Board. Further, no maintenance logbooks from April 1999 to the time of the accident were provided to the Board.

#### **Maintenance Actions**

The accident airplane was maintained by Jet Executive Transport Technologies (JETT) in Chino. <sup>12</sup> JETT provided the Safety Board with copies of its invoices and endorsements for the accident airplane from October 15, 2000, to December 19, 2003. According to JETT's maintenance records, on November 23, 2002, the accident airplane underwent 300- and 600-hour inspections in accordance with AAN's approved airworthiness inspection program. At the time of these inspections, the airplane had accumulated 9,439 total flight hours. The records also indicated that, on October 17, 2003, the left engine underwent a hot-section inspection. At the time of the inspection, the engine had accumulated 7,675 total flight hours (6,702 cycles), <sup>13</sup> and the airplane had accumulated 9,507 total flight hours.

XtraJet provided copies of the aircraft flight logs, flight manifests, and discrepancy logs to the Safety Board. The records were dated from February 27 to April 17, 2003. No discrepancies were noted. According to JETT maintenance personnel, the accident airplane was out of service from July to mid-October 2003 because the airplane's avionics were being replaced.

JETT also provided a major repair and alteration form (FAA Form 337), dated October 29, 2003, which revealed that all installed communication, navigation, and transponder equipment was removed and replaced with new components. The newly installed equipment

<sup>&</sup>lt;sup>12</sup> JETT was formerly known as Executive Aviation Logistics.

<sup>&</sup>lt;sup>13</sup> A cycle is one complete landing and takeoff sequence.

included a global navigation system, communication radios, transponders, radio magnetic indicators, distance measuring equipment, a horizontal situational indicator, a computer, and a control panel. According to JETT maintenance personnel, the new navigation system was coupled to the autopilot. The form was not signed, but a review of the form revealed that the airplane was inspected in a manner prescribed by the FAA and was approved by Xtrajet's FAA-approved inspector. The form had not been submitted to the FAA, as required by 14 CFR Part 43, Appendix B.

According to JETT, on the morning of the accident, the airplane's left battery was inoperative. JETT maintenance personnel took the left battery from a Learjet 25B and used it to replace the accident airplane's inoperative battery. No maintenance endorsement was provided for this work.

# **Right Engine Discrepancy History**

According to XtraJet, JETT, and FAA personnel, on November 26, 2003, during a flight from Las Vegas, Nevada, to Mesa, Arizona, the accident airplane's right engine flamed out. The pilot was able to relight the engine during the descent to Mesa, and the airplane landed without incident. A JETT mechanic was flown to Mesa to examine the airplane. The cause of the flameout could not be determined, and the airplane was flown to CNO on November 29, 2003. During the flight, the right engine flamed out again. The pilot of the flight diverted the airplane to Palm Springs, California, and made an uneventful landing. The engine was examined by another maintenance facility, and the cause of the flameout once again could not be determined.

According to the Riverside Flight Standards District Office (FSDO), an airworthiness inspector followed up on the airplane's engine issue and asked Pavair to provide him with the airplane's maintenance records. Because Pavair did not provide the inspector with the accident airplane's maintenance records, he placed an aircraft condition notice on the airplane on December 12, 2003, that indicated the following:

Operation of this aircraft may be in violation of FAR [Federal Aviation Regulations] 91.409, FAR 91.417, and FAR 91.419. The airplane owner is asked to provide for review to the Riverside FSDO: 1. Aircraft maintenance records for the past 2 years, 2. List of complied ADs [airworthiness directives]. Owner shall provide the data for review no later than 12/29/2003.

On December 22, 2003 (the day before the accident), JETT maintenance personnel tried to contact the airworthiness inspector who had placed the condition notice on the airplane. He was not in the office, so they spoke with another Riverside FSDO airworthiness inspector. According to this inspector, JETT reported (on behalf of Pavair) that it had complied with the limitations of the condition notice; therefore, he verbally released the airplane for operations. However, the investigation revealed that Pavair's maintenance records for the accident airplane were never received by the Riverside FSDO.

<sup>&</sup>lt;sup>14</sup> FAA Order 8300.10, Volume 3, Chapter 124, refers to the issuance of aircraft condition notices. The chapter provides no guidance on release of airplanes for operation.

#### METEOROLOGICAL INFORMATION

Meteorological data were obtained from the Daggett and Palmdale, California, Automated Surface Observing Systems (ASOS). About 0853, the Daggett ASOS reported that winds were calm, visibility was 10 statute miles, clouds were few at 10,000 feet above the ground, the temperature was 7° Celsius (C), the dew point was -3° C, and the altimeter setting was 30.10 inches of mercury (Hg). About 0854, the Palmdale ASOS reported that winds were from 100° at 4 knots, visibility was 10 statute miles, skies were clear, the temperature was 7° C, the dew point was -2° C, and the altimeter setting was 30.11 inches of Hg.

The closest upper air sounding (that is, a vertical profile of atmospheric conditions) was from San Diego, California (110 nm south of the accident site). According to the 0400 sounding, at an altitude of 24,000 feet, winds were from 235° at 35 knots.

Weather Surveillance Radar depicted no precipitation radar returns near the accident site. No in-flight weather advisories were in effect surrounding the time of the accident.

At the time of the accident, two AIRMETs (Airman's Meteorological Information) were in effect for the accident area. One AIRMET indicated moderate turbulence between 18,000 and 38,000 feet. The other AIRMET indicated occasional moderate rime or mixed ice in clouds and precipitation between the freezing level, which sloped between 10,000 feet in the north and 12,000 feet in the south.

#### **FLIGHT RECORDERS**

The airplane was not equipped with a cockpit voice recorder or a flight data recorder and was not required by Federal regulations to be so equipped.

#### WRECKAGE AND IMPACT INFORMATION

The accident site was located in high desert terrain (an elevation of 3,350 feet) about 3 miles southeast of Helendale.

The accident airplane was severely fragmented. The accident site consisted of an impact crater located on the top of a ridgeline with a circular debris field measuring about 0.3 mile in diameter. The impact crater measured 43 feet long by 17 feet wide and was between 24 and 30 inches deep. The Safety Board accounted for all flight controls at the accident site. Because the flight controls were severely fragmented and deformed, flight control continuity could not be established. The engines were found fractured into numerous sections, which were scattered throughout the debris field.

The only cockpit and cabin components that could be positively identified were an oxygen mask, seat components, window frames, Plexiglas pieces, main entry door components,

excerpts from flight logs, weight and balance calculation sheets, and a binder containing Jeppesen charts. No remnants of flight instruments could be located.

# **Wreckage Examinations**

The wreckage was collected and transported to Aircraft Recovery Services, Littlerock, California, where it was laid out and examined by a Safety Board investigator and Bombardier Learjet representatives. No evidence of in-flight fire damage or soot patterns was found. Components that would normally be positioned adjacent to each other in the airplane displayed contradictory soot and heat signatures.

The flight control actuating components were destroyed. All systems (including atmospheric, oxygen, electrical, flight control, navigation, communications, hydraulic, fire suppression, fuel, and engine) were destroyed, and no system continuity or functionality could be confirmed.

The left and right engines sustained severe accordion crushing along the longitudinal axis. Numerous rotor and stator blades were separated from their roots. The blades were flattened against each other and were mated to other stator and rotor blades along the engine's airflow path.

An examination of the electrical wire components revealed that some of the wire bundles sustained fire damage but that none displayed molten metal or fused components, which would have indicated a shorted condition. The fracture ends of various wire bundles were examined. The separated wire areas displayed necking deformation in a rounded manner that was indicative of a tensile failure. The external surfaces of the wire strands contained soot, but, after removing the soot, the wire strands were shiny.

#### MEDICAL AND PATHOLOGICAL INFORMATION

The San Bernardino County Sheriff's Office, Coroner Division, could not perform a complete autopsy examination for either pilot because of the condition of their remains. The coroner determined that the cause of death for the pilots was massive blunt force trauma.

The Civil Aerospace Medical Institute, Oklahoma City, Oklahoma, conducted a toxicological examination on a tissue specimen from the captain. The tissue tested negative for alcohol and other performance-impairing drugs. A tissue specimen from the first officer could not be obtained.

#### TESTS AND RESEARCH

#### **Actuator Examinations**

Two flap actuators, one spoiler actuator, one rudder trim actuator, one landing gear door actuator, and the horizontal stabilizer actuator were recovered from the wreckage and shipped to Learjet's facility in Wichita, Kansas, for further examination under the FAA's supervision.

According to Learjet, at the time of impact, the flap actuators were in the retracted position. The damage to the spoiler actuator prevented the determination of a definitive impact position, but Learjet stated that the actuator was either deployed to 1.5° or stowed. The rudder trim was found in the near-neutral position. Impact damage prevented the determination of the position of the landing gear door actuator.

The horizontal stabilizer actuator's upper attachment rod end, which attaches to the horizontal stabilizer, was detached from the actuator. The U-bolt, which is installed over the rod end, was still attached to the actuator at one end. The lower attachment lug, which attaches to the vertical stabilizer, was also detached from the actuator. Examination of the fracture surfaces revealed 45° shear lips and irregular fracture features. No evidence of fatigue or cracking was noted during a microscopic examination.

The horizontal stabilizer's actuator jackscrew dustcover was pressed into the jackscrew threads. A 3.2-inch portion of the jackscrew extended from the nut. The extended portion of the screw was bent and fractured at the screw and nut interface. A measurement of the nut showed that the overall length of the actuator was stretched by 0.30 inch (the original overall length of the actuator was 9.89 inches). The screw and nut were examined for evidence of galling or abnormal wear, but none was found. The screw and stop were installed in accordance with Learjet's recommended positions.

A slot and small window were milled into the body of the cylindrical nut to view the location of the screw stop in relation to the nut threads. The distance from the mechanical stop to the fully extended position was 0.812 inch, which corresponded to a horizontal stabilizer position of -1.8° nose down. According to Learjet, with this trim setting and the airplane's estimated weight and balance at the time of departure, the airplane would have been trimmed for a calibrated airspeed of 285 knots (± 25 knots calibrated airspeed).

# **Air Traffic Control Sound Spectrum Study**

The Safety Board conducted an ATC sound spectrum study on all of the radio transmissions from the accident airplane. The frequency response of the first officer's headset, the accident airplane's radios, and the Los Angeles Air Route Traffic Control Center's recording system prevented background sound signatures associated with the airplane's systems and engines from being recorded during any of the transmissions associated with the accident flight.

## **Aircraft Performance Study**

The Safety Board examined the FAA's radar data and computed the accident airplane's calibrated airspeed and Mach number throughout the flight. Review of the radar data revealed that the airplane's airspeed continued to increase after the pilots initiated the descent and declared an emergency.

#### ORGANIZATION AND MANAGEMENT INFORMATION

At the time of the accident, XtraJet employed eight pilots and four dispatchers and operated two Gulfstream 1159 airplanes and one Learjet 36 airplane. The captain and first officer were employees of AAN and were not listed on XtraJet's Part 135 operating certificate. <sup>15</sup> The accident airplane was not listed on XtraJet's or any other Part 135 certificate. XtraJet representatives stated that the company had intended to add the captain, first officer, and airplane to its Part 135 certificate before the accident but had not done so. According to XtraJet's former director of operations, the accident airplane had maintenance-related issues that needed to be resolved before it could be inspected for Part 135 conformity and then added to the certificate. Xtrajet's former director of operations believed placement on the company's certificate would not have happened until spring 2004.

During initial postaccident interviews, XtraJet personnel told a Safety Board investigator that the flight was operated as a personal flight to pick up a family member of the companies' owner. During subsequent interviews, XtraJet's former director of operations stated that he had reason to believe that the intended passenger was not a family member but was instead "a loyal paying customer."

<sup>&</sup>lt;sup>15</sup> XtraJet listed a JETT employee on its Part 135 certificate as the company's director of maintenance.

#### **ANALYSIS**

About 0913, a Learjet 24B, N600XJ, registered to and operated by Pavair, Inc., departed controlled flight, entered a near-vertical descent, and crashed into high desert terrain near Helendale, California. Review of ATC communications and airplane radar data revealed that the flight crew requested a return to the departure airport about 12 minutes after takeoff as the flight was climbing through 26,000 feet. The controller asked the pilots if they were declaring an emergency, and the first officer replied that they were not. During this transmission, the first officer's voice sounded similar to the voice he used during his transmissions earlier in the flight, indicating that he was not under any increased stress at that time. The flight crew was instructed to descend to and maintain 24,000 feet. As the controller was issuing additional route clearance information, he asked the flight crew to confirm that the airplane was level at 24,000 feet. At that time, the radar data showed that the airplane had descended through 23,000 feet. About 15 seconds later, the first officer declared an emergency. The first officer's voice sounded agitated and highly distressed during this transmission compared with his earlier transmissions. Transcripts of recorded air-to-ground communications showed that about 2.5 minutes had elapsed from the flight crew's request to return to the departure airport and the declaration of the emergency.

A review of the radar data showed that the flight had a normal descent rate from 26,000 to 24,000 feet (less than 2,000 fpm [feet per minute]). The descent rate then rapidly increased to 6,500 fpm and then to 10,000 fpm. Integration of the communications times and the radar data revealed that the first officer's declaration of an emergency occurred about the time of the increase in the descent rate to 10,000 fpm. A witness on the ground saw the airplane in level flight before it pitched nose down slightly, returned to level flight, and then pitched nose down in a near-vertical descent. He stated that the airplane remained in a nose-down attitude until it impacted terrain and exploded. The witness added that he did not observe any components separate from the airplane or any smoke or fire before the airplane impacted terrain.

All airplane system components were destroyed and thus could not be examined. All primary and secondary flight control surfaces were identified; however, impact damage precluded any determination of preimpact control system continuity. The horizontal stabilizer was trimmed for 285 knots calibrated airspeed. No useful remnants remained from the cockpit instrument panel. No evidence of an in-flight fire was found. Impact damage precluded a determination of whether the engines were operating at impact. An aircraft performance study for this accident revealed that the accident airplane did not approach its maximum operating airspeeds until after the pilots initiated the descent and declared an emergency. No unusual or hazardous meteorological phenomena were near the airplane at the time of the loss of control.

#### PROBABLE CAUSE

The National Transportation Safety Board determines that the probable cause of this accident was a loss of airplane control for undetermined reasons.

# Member Kathryn O'Leary Higgins, concurring:

I have concurred in the probable cause in this aircraft accident brief addressing the circumstances surrounding controlled flight into terrain by a Learjet 24B on December 23, 2003, near Helendale, California. The investigation disclosed a loss of airplane control for undetermined reasons. I appreciate the detailed and difficult work done by NTSB staff in this investigation as they attempted to determine the probable cause of this accident, given that there was no information from a flight data recorder or a cockpit voice recorder.

While I concurred with the report and the probable cause determination, I have several concerns with the information disclosed by our investigation. I continue to be concerned about the criteria used to grant, oversee, and revoke a part 135 operating certificate and the criteria used to determine which entity then operates under a new certificate. In this case, there were several entities involved in ownership, operation, maintenance, and control of the accident aircraft: Pavair Inc.; XtraJet, Inc.; American Air Network (AAN); and Jet Executive Transport Technologies (JETT). According to information in the docket, these various entities in some manner had responsibility for the aircraft; the pilots; pilot training; maintenance and maintenance records; and scheduling of aircraft, aircraft maintenance, and crew.

An informal search of internet news sources disclosed several articles stating that the registered owner and operator of the Learjet 24B aircraft and the principle of two of the companies involved in this accident was implicated in criminal activity and served time in prison. This history seems to have predated the formation of the companies he owned that were involved with the accident aircraft.

I am concerned that there is no requirement for a criminal background check of individuals who would provide the management and first line safety oversight of commercial aviation operations. Docket information suggests that a limited criminal history records check was done on the pilots of the accident aircraft in preparation for adding these pilots to the part 135 certificate of another company owned and operated by the Learjet 24B owner and operator. Yet, there is no similar requirement that the owner and operator of a commercial aviation company providing air transportation undergo either a basic pre-employment background investigation or a criminal history or other background check as part of the part 135 certification process. It is not clear that such a requirement would have prevented this accident, but it might have raised questions about the qualifications of such an individual to operate under a part 135 certificate and helped to focus oversight resources. Apparently this same individual was granted permission by the FAA to operate under the name AFTA, Inc. after the accident, at the same time he was being investigated for other illegal activities to which he subsequently pleaded guilty. In essence, I make an argument for a "totality of the circumstances" approach by the FAA in granting such a certificate, which by necessity requires a more extensive examination of a prospective operator's background.

Ultimately, the FAA revoked the part 135 operating certificate of AAN, a self-described "part 135 management company" for failure to retain operational control of the aircraft listed on its operations specifications. The accident plane was owned by Pavair but operated by AAN until a few weeks before the accident. Despite what seem to be serious regulatory violations of the operational control requirements, a settlement agreement executed after appeal of the revocation action would allow the same management personnel to hold similar management positions under a new air carrier operating certificate. If the inability to exercise sufficient operational control is significant enough to warrant emergency revocation of an operating certificate, I question why and how the same people, without additional training or demonstration of competence, would be able to exercise appropriate operational control of a company under a new part 135 certificate.

According to the information in the NTSB docket, there were at least four seemingly independent entities, but more accurately intertwined operations, touching the airplane and its day-to-day operations. And, unfortunately, it is still not clear to me how the FAA screens and subsequently oversees these types of enterprises.

Another issue of concern is the release of the accident airplane on the morning of the accident. A conscientious FAA airworthiness inspector from the Riverside Flight Standards District Office (FSDO) grounded the accident aircraft when he became concerned about two separate in-flight right engine flameout reports for the accident airplane. In both reports, the cause of the flameout could not be determined after examination. The inspector followed up and asked Pavair to provide the accident airplane maintenance records for review. When Pavair did not provide the records, the airworthiness inspector placed an aircraft condition notice on the aircraft, effectively grounding the aircraft. The condition notice required the owner to provide the records for review within 17 days. (Emphasis added.) There were only two simple requirements: the owner must provide the records, and the FAA must review them. Based only on the verbal assertions of the third party that maintained the airplane claiming that the conditions had been satisfied, a different inspector from the Riverside FSDO released the airplane for operations on the morning of the accident. Not only were the records never reviewed by the FAA, they were never provided for review.

While there are written procedures for issuing a condition notice, there is little guidance for inspectors to follow in releasing the condition notice and returning a grounded aircraft to service. The condition notice is intended to ensure that the aircraft is in a safe condition for safe operation – or it does not fly. Without review of the records, the second inspector could not make that determination and the good work of the first inspector was negated. Additional guidance within the FAA governing the release of planes grounded with a condition notice is clearly needed.

Member Hersman joined Member Higgins in this concurring statement.

Kathryn O'Leary Higgins May 31, 2006