



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Central Region

Aircraft Examination and Accident Information Summary

CEN23LA056

A. ACCIDENT

Location: Batesville, Arkansas

Date: November 29, 2022

Aircraft: Lear 45XR

NTSB IIC: Michael Folkerts

B. SUMMARY

On November 29, 2022, about 1910 central standard time, a Learjet 45 airplane, N988MC, was substantially damaged when it was involved in an accident at Batesville Regional Airport (BVX), Batesville, Arkansas. The two pilots sustained minor injuries and the six passengers were not injured. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 business flight.

A review of automatic dependent surveillance-broadcast (ADS-B) data revealed that the airplane departed Waterloo Regional Airport (ACO), Waterloo, Iowa, about 1757 on an instrument flight rules (IFR) flight plan and climbed to cruise at flight level (FL) 410 enroute to BVX.

During the arrival to BVX, a non-towered airport, the air traffic controller cleared the airplane for the RNAV (GPS) Rwy 8 approach and the crew cancelled IFR after visually acquiring the runway environment. The captain flew the arrival and landing.

The airplane crossed the final approach fix at 265 knots ADS-B groundspeed and the Runway 8 threshold at 190 knots ADS-B groundspeed. The airplane touched down near the midpoint of the 6,022 ft runway, which was wet due to earlier precipitation. The airplane exited the runway end at an airspeed of about 100 knots, then continued forward and struck a ditch and the airport perimeter fence. During the collision with the fence the forward fuselage sustained substantial damage.

C. DETAILS OF THE INVESTIGATION

Overview

Examination of the airplane and collection of accident information was conducted by two FAA inspectors from the Little Rock Flight Standards Office and two Bombardier air safety investigators.

Tire marks consistent with intermittent braking application started about 3,021 ft from the end of Runway 8. Tire marks consistent with continuous anti-skid braking application began about 2,069 ft from the end of the Runway 8 and continued until the end of the runway.

The aircraft left the runway surface 25 feet left of centerline at a surface ADS-B groundspeed of more than 100 knots. The aircraft continued through the overrun area and crossed a north/south runway. The aircraft came to rest on a 070° magnetic heading about 1,181 ft past the departure

end of Runway 8 against the airport perimeter fence alongside US Highway 167 (see Photos 1 and 2).



Photo 1 – Overhead View of Airplane at Accident Site, Courtesy of the FAA.



Photo 2 – Front View of Airplane at Accident Site, Courtesy of the FAA.

Airframe Examination

Flight controls continuity was confirmed from control inputs to control surfaces with no abnormalities noted. Ailerons were free to move with no binding noted, correct sense of movement and full travel was achieved. Roll direction was correct to control wheel input. Rudder travel was free to move with no binding, correct sense of movement and full travel was achieved. Elevators were free to move with no binding, correct sense of movement and full travel was achieved. Spoiler, flap and trim movement could not be tested due to the aircraft not being powered.

The spoilers were found in the deployed position, matching the cockpit handle position (extend). The flap handle was found in the flaps 20 setting and the flap surfaces positions appeared to match the commanded position. Measurements were taken of the flap surfaces positions with an iPhone inclinometer app and a wing angle. These were later compared to similar measurements taken on another Learjet 45 with the flaps in the full DOWN position (40 degrees). From the comparison it was confirmed that the flaps on the accident aircraft were at 20 degrees.

The engine throttles were found in the cutoff position, consistent with a normal shutdown. No emergency disconnects were deployed. The emergency brake handle was found in the stowed position.

Normal brakes function could not be verified due to the aircraft not being powered. The brake assemblies were present on the left and right landing gear but buried in mud. Once the aircraft was recovered from the mud the main landing gear tires were all examined and appeared to be inflated.

Thrust reversers were found in the stowed position. Thrust reversers being stowed were consistent with the throttles in the cutoff position. The tailpipes of the engines were visually inspected. There was no visible mud or debris on the inside of the thrust reverser buckets to indicate deployment while the aircraft was traveling off hard surface. The left hand thrust reverser deploy circuit breaker was found in the OUT position. The functioning of the thrust reverser system could not be verified due to the aircraft not being powered.

Examination of the structure found that everything in the nose compartment forward of flight station (FS) 144 was displaced aft. The cockpit voice recorder was removed from the aircraft and secured for download.

Weather Information

BVX is equipped with an AWOS-3PT with a chart supplement notation of “Ceiling Unreliable”. 5 Minute weather at 0110Z was surface wind 240° at 5 knots, visibility 10 statute miles, 1,000 ft overcast, temperature 17°, dewpoint 16°, altimeter setting of 29.68.

KBVX 300110Z AUTO 24005KT 10SM OVC010 17/16 A2968 RMK T01700160

The two pilots and airport manager reported that Runway 8 was wet. The airport Manager reported heavy rains had been present for the previous 7 days and rain had ended that morning. The 1514z AWOS report showed moderate rain and Mist with the conditions ending by the 1556z report.

Airport Information

BVX is located 3 miles south of Batesville, AR on top of a low plateau at an elevation of 465’ MSL. The airport has two runways with the main runway being a good condition 6,002 ft x 150 ft non-grooved asphalt runway. Runway 08 has a listed slope of 0.22%.

The airfield has three instrument approach procedures that consists of two RNAV and one localizer approach with Runway 08/26 as the only instrument approach runway. Runway 08 has a 2 Light Precision Approach Path Indicator (PAPI) located on the left side with a 3.00 degree Glidepath.

An AWOS-3PT is located on the field and is available via VHF aircraft radio on 126.375 MHz.

The airport fixed base operator (FBO) provided surveillance video of the accident sequence. The camera is mounted on the Northwest corner of the FBO Building pointed in a SW direction. The Field of View is roughly 90° with a fisheye style lens. The video captured the accident aircraft from 19:10:00 to 19:10:58 crossing from frame upper right to frame upper left. The aircraft can be seen on approach just prior to the RNAV 08 visual descent point. The aircraft continues until passing the cameras left most extent while traveling across Runway 18/36.

Surface level ADS-B data of the accident airplane was captured by a VirTower device at BVX. VirTower devices provide for operational tracking and logging of aircraft at airports worldwide.

Review of the airport's surface level ADS-B data indicated the airplane's approximate groundspeed was 185 knots at the runway threshold, 180 knots at the runway aiming point (1,000 ft markers), 160 knots near the midfield point of the runway, and 150 knots with 1,500 ft of remaining runway. The airplane's groundspeed was more than 100 knots at the end of the runway and the airplane impacted the airport perimeter fence at about 40 knots.