



Aviation Investigation Preliminary Report

Location:	Chicago, IL	Occurrence Number:	DCA25LA141
Date & Time:	February 25, 2025, 08:48 Local	Registration:	N8517F (A1); N560FX (A2)
Aircraft:	Boeing 737-800 (A1); Bombardier BD-100-1A10 (CL-35) (A2)	Injuries:	142 None (A1); 3 None (A2)
Flight Conducted Under:	Part 121: Air carrier - Scheduled (A1); Part 91 subpart k: Fractional (A2)		

On February 25, 2025, about 0848 central standard time (CST), Flexjet flight 560 (LXJ 560), a Bombardier Challenger 350 CL-35, registration N560FX and Southwest Airlines flight 2504 (SWA2504), a Boeing 737-800, registration N8517F, were involved in a runway incursion that resulted in SWA2504 performing a go-around at Chicago Midway International Airport (MDW), Chicago, Illinois.

SWA2504 initiated the go-around while LXJ560 was crossing runway 31C. As LXJ560 cleared the active runway, SWA2504 passed less than 200 ft behind it (figures 1 and 2). SWA2504 subsequently made an uneventful landing a few minutes later. There was no damage to the involved airplanes and none of the 142 occupants aboard the SWA airplane and none of the 3 occupants on the Flexjet airplane were injured. LXJ560 was operating under the provisions of Title 14 *Code of Federal Regulations (CFR)* Part 91K as a flight from MDW to Tyson McGhee Airport (TYS), Alcoa, Tennessee. SWA2504 was operating under Title 14 *CFR* Part 121 as a regularly scheduled domestic passenger flight from Eppley Airfield (OMA), Omaha, Nebraska to MDW.



Figure 1. Flight paths for SWA2504 (orange) and ground path for LXJ560 (blue) with times and altitudes.

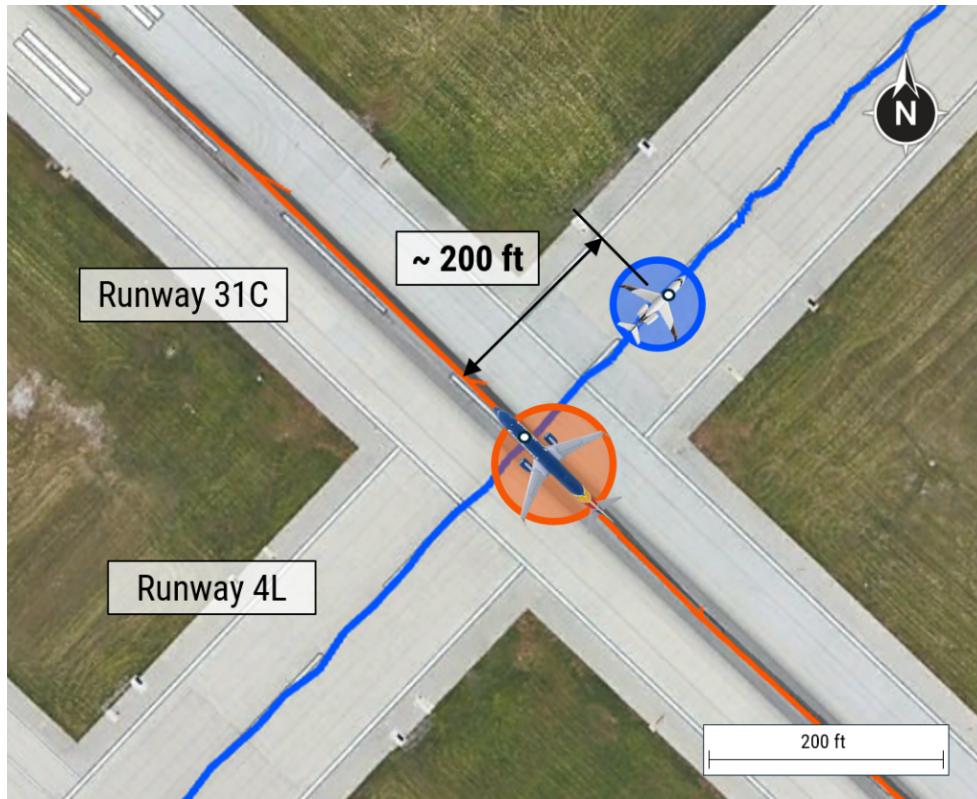


Figure 2. Flight paths for SWA2504 (orange) and ground path for LXJ560 (blue) showing minimum separation. The about 200 ft distance shown is the lateral distance between the approximate location of each airplanes' GPS antenna.

Southwest Airlines flight 2504

According to post incident statements and interviews, the flight crew of SWA2504 reported that they were cleared by approach control for an instrument landing system (ILS) approach to runway 31C at MDW in visual meteorological conditions (VMC). Throughout the approach, the captain was the pilot flying (PF) and the first officer (FO) was the pilot monitoring (PM). The crew indicated that they contacted the MDW tower at RUNTS and received a clearance to land on runway 31C. The approach was uneventful, and the autopilot remained engaged until approximately 500 ft AGL. As they continued the approach, both the captain and FO visually surveyed the airport and noted seeing a general aviation (GA) aircraft taxiing on a surface perpendicular to their runway and assumed it would be holding short of runway 31C.

The FO indicated that after hearing the aircraft audible 100 ft call, he realized that the GA aircraft was not stopping and was going to cross onto runway 31C. The FO stated that he called for a go-around and the captain executed it. The flight crew indicated that standard go-around procedures were applied, and the maneuver was executed smoothly and without incident.

Flexjet (LXJ) flight 560

According to post incident statements, the flight crew of LXJ560 indicated that their flight was scheduled to depart MDW at 8:46 am local time. Before departure, they stated that they completed all of their pre-flight duties, embarked a passenger, started their engines and had completed all of the pertinent checklists.

They indicated that they called MDW ground control and asked for taxi instructions from the signature ramp at “whiskey”, however, the crew stated the response they received did not make sense to them. They were initially given a clearance to taxi to runway 22L via F taxiway and to hold short of 4L. After the flight crew requested ground control to clarify the taxi instructions, they were given a new taxi route of taxiway A to taxiway F with a hold short of runway 04L/22R (figure 3). When they were on Taxiway F, ground control instructed them to turn left onto runway 04L, cross runway 31L and then hold short of runway 31C. The flight crew initially read back the instructions incorrectly; however, the ground controller immediately reissued the instructions and received a correct readback.



Figure 3. The blue line shows the taxi route for LXJ560.

According to postincident statements, the flight crew of LXJ560 indicated that as they turned left onto runway 4L/22R, the sun was impeding visibility from the right side of the aircraft, however they did not recall seeing any hold short line/pavement markings or any other signs for the 31L intersection as they taxied onto runway 04L/22R. They stated that taxiway F and runway 13R/31L were in close proximity to each other and by the time the nosewheel had straightened out, they were likely halfway across runway 13R/31L. They further stated that runway 13R/31L appeared to have a very similar width to taxiways and that they had not recognized it as a runway. The captain stated that as he approached runway 13C/31C he had thought it was runway 13R/31L. As they approached the runway intersection the crew stated they both looked to the left and to the right and did not observe the SWA airplane on final.

As LXJ560 approached the hold short line for runway 31C the ground controller instructed LXJ560 to hold short, but the transmission was not acknowledged.

As they were crossing/exiting runway 13C/31C, they were contacted by ground informing them to hold position. The captain continued to clear the runway intersection and subsequently stopped the airplane so the tail was not over any part of the runway. Ground control requested they taxi forward to clear the runway safety area and then hold short of taxiway "H." Once the captain cleared the runway safety area, he stopped the airplane and ground control informed them that they had crossed 31C and provided a number to call for a possible pilot deviation.

After about 5 minutes the crew was issued taxi instructions to continue on runway 4L/22R, turn left on taxiway "N" to "N2," and hold in the north triangle. The captain once in the triangle set the parking brake, transferred control to the first officer, and contacted the tower via the phone number provided. He subsequently contacted the operator to notify them of the possible pilot deviation, assessed their well being to continue the flight, and subsequently departed about 25 minutes after the runway incursion. The rest of their flight was uneventful.

Investigation

On February 25, 2025, the National Transportation Safety Board (NTSB) was notified by SWA and Flexjet about the event and, in response, began an incident investigation. As part of the investigative process, the NTSB invited qualified parties to participate in the investigation. These include the Federal Aviation Administration (FAA), SWA, Southwest Airlines Pilots Association (SWAPA), the Boeing Company, and Flexjet. Pursuant to International Civil Aviation Organization (ICAO) Annex 13, Transportation Safety Board of Canada was asked to provide an Accredited Representative. One was appointed and Bombardier is their Technical Advisor.

NTSB group chairs in the areas of operations, vehicle performance, human performance, airport operations, air traffic control and flight data recorders were assigned.

The SWA flight data recorder (FDR) and data from the Flexjet FDR were sent to the NTSB's Vehicle Recorder Laboratory in Washington, DC, for analysis. The cockpit voice recorders (CVRs) from both airplanes were overwritten.

On March 4, 2025, the operational factors group, with assistance from an NTSB Human Performance Specialist convened in Cleveland, Ohio. The group interviewed the Flexjet flight 560 flight crew, and Flexjet Chief Pilot at the Flexjet Headquarters facility. On March 13th, the operational factors group, with assistance from an NTSB Human Performance Specialist conducted interviews of the SWA flight crew.

Certified ADS-B data and audio recordings were provided to the NTSB by the FAA. In addition, photos were provided by Midway Airport Operations of the runway environment showing the runway signs (vertical white-on-red signs erected on either side of the runway hold short position markings) and the hold short line for runway 13C/31C (figure 4).



Figure 4. Photos of the hold short line for runway 13C/31C (source – Midway Airport Operations)

The weather at the time of the incursion was winds from the northwest at 8 kts, better than 10 statute miles of visibility and clear skies. In addition, the sun was 22.4° above the horizon and from the intersection of runway 4L/22R and runway 13C/31C it was on an azimuth of 126°.

The NTSB’s investigation is ongoing.

Aircraft and Owner/Operator Information (A1)

Aircraft Make:	Boeing	Registration:	N8517F
Model/Series:	737-800	Aircraft Category:	Airplane
Amateur Built:			
Operator:	SOUTHWEST AIRLINES CO	Operating Certificate(s) Held:	Flag carrier (121)
Operator Designator Code:			

Aircraft and Owner/Operator Information (A2)

Aircraft Make:	Bombardier	Registration:	N560FX
Model/Series:	BD-100-1A10 (CL-35)	Aircraft Category:	Airplane
Amateur Built:			
Operator:	FLEXJET LLC	Operating Certificate(s) Held:	Commuter air carrier (135), Fractional ownership
Operator Designator Code:			

Meteorological Information and Flight Plan

Conditions at Accident Site:	VMC	Condition of Light:	Day
Observation Facility, Elevation:	770.1	Observation Time:	13:53 Local
Distance from Accident Site:		Temperature/Dew Point:	7°C /3°C
Lowest Cloud Condition:	Clear	Wind Speed/Gusts, Direction:	8 knots / , 310°
Lowest Ceiling:		Visibility:	11.5 miles
Altimeter Setting:	29.8 inches Hg	Type of Flight Plan Filed:	IFR (A1); IFR (A2)
Departure Point:	Omaha, NE (KOMA) (A1); Chicago, IL (A2)	Destination:	Chicago, IL (KMDW) (A1); Knoxville, TN (KTYS) (A2)

Wreckage and Impact Information (A1)

Crew Injuries:	6 None	Aircraft Damage:	None
Passenger Injuries:	136 None	Aircraft Fire:	None
Ground Injuries:		Aircraft Explosion:	None
Total Injuries:	142 None	Latitude, Longitude:	41.785999,-87.752403

Wreckage and Impact Information (A2)

Crew Injuries:	2 None	Aircraft Damage:	None
Passenger Injuries:	1 None	Aircraft Fire:	None
Ground Injuries:		Aircraft Explosion:	None
Total Injuries:	3 None	Latitude, Longitude:	41.785999,-87.752403

Administrative Information

Investigator In Charge (IIC):	Hauf, Michael
Additional Participating Persons:	Vinny Percesepe; FAA Tahereh Behbehani; Southwest Airlines Jacob Zeiger; Boeing Air Safety Investigation; WA Tyler Boring; Flexjet Chris Shaver; SWAPA Jean-Pierre Regnier; TSB Canada Ac Rep
Investigation Class:	Class 3
Note:	The NTSB did not travel to the scene of this occurrence.