



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

Aviation Investigation Final Report

Location:	Dallas, Texas	Accident Number:	DCA23LA196
Date & Time:	March 2, 2023, 14:20 Local	Registration:	N366FR
Aircraft:	Airbus A320-251N	Aircraft Damage:	None
Defining Event:	Turbulence encounter	Injuries:	1 Serious, 196 None
Flight Conducted Under:	Part 121: Air carrier - Scheduled		

Analysis

Frontier Airlines flight 1369 experienced convective turbulence during the descent from cruise altitude to land at Dallas-Fort Worth International Airport (DFW).

The captain stated they were briefed and were expecting a mostly smooth flight from Chicago Midway International airport to the Saint Louis area, and then anticipated a “bumpy ride” the remainder of the flight to the DFW, and those were exactly the conditions they encountered.

He said that about halfway through the flight it became rough, and they were allowed to deviate around some convective cells to get a smoother ride. Air traffic control (ATC) also gave an additional reroute to transition south of the weather and return to the same arrival transition east to DFW. The captain said that the ride became smoother, so he turned off the seat belt sign as the flight was descending on the arrival at DFW.

During arrival, the flight was given a descent to flight level (FL) 240 and told to maintain 290 knots or better. It was mostly smooth, so the captain kept the seat belt sign off, but as the descent progressed, they started getting some light chop, and all of a sudden experienced “one big, unexpected bump”. The captain said he immediately turned the seat belt sign on and made a call to the flight attendants (FA) to get seated. He said the “A” FA told him that one crew member fell and hit her head and hip and was in pain and unable to get up.

The first officer (FO) stated they were instructed to descend from FL280 to FL240 and during the descent the airplane flew through a cloud that looked “light with no apparent indications of adverse conditions”, but upon entering the cloud the ride went from smooth, to light, to moderate turbulence. There had been no pilot reports (PIREPS) prior to entering the descent, and the flight attendants had been preparing the cabin for landing and were about to be seated. The FO recalled that the seat belt sign was on throughout the descent.

The FO said he immediately got on the public address (PA) system and told the flight attendants to be seated, and shortly thereafter they were informed that the “D” flight attendant had been thrown around and was injured.

The flight crew informed ATC of the medical event, requested priority handling, and asked for paramedics to meet the airplane at the gate. ATC declared an emergency for the flight crew. The injured flight attendant was on the galley floor and could not get up. She was assisted by another flight attendant and two passenger nurses, and the flight landed otherwise uneventfully. After landing the injured flight attendant was given medical care and diagnosed with a broken hip.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

The flight’s encounter with convective turbulence.

Findings

Environmental issues	(general) - Effect on personnel
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Factual Information

History of Flight

Approach	Turbulence encounter (Defining event)
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Pilot Information

Certificate:	Airline transport	Age:	45,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	5-point
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	
Medical Certification:	Class 1 With waivers/limitations	Last FAA Medical Exam:	December 16, 2022
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	January 9, 2023
Flight Time:	11000 hours (Total, all aircraft), 3854 hours (Total, this make and model)		

Co-pilot Information

Certificate:	Airline transport	Age:	32,Male
Airplane Rating(s):	Multi-engine land	Seat Occupied:	Right
Other Aircraft Rating(s):	None	Restraint Used:	5-point
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	
Medical Certification:	Class 1 Without waivers/limitations	Last FAA Medical Exam:	July 5, 2022
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	July 17, 2023
Flight Time:	2298 hours (Total, all aircraft), 1253 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	Airbus	Registration:	N366FR
Model/Series:	A320-251N	Aircraft Category:	Airplane
Year of Manufacture:	2020	Amateur Built:	
Airworthiness Certificate:	Transport	Serial Number:	9465
Landing Gear Type:	Retractable - Tricycle	Seats:	190
Date/Type of Last Inspection:		Certified Max Gross Wt.:	
Time Since Last Inspection:		Engines:	2 Turbo jet
Airframe Total Time:		Engine Manufacturer:	CFM INTL
ELT:	C126 installed	Engine Model/Series:	LEAP-1A26
Registered Owner:	BANK OF UTAH TRUSTEE	Rated Power:	27120 Lbs thrust
Operator:	Frontier Airlines	Operating Certificate(s) Held:	Flag carrier (121)
Operator Does Business As:	Frontier Airlines, Inc.	Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:		Distance from Accident Site:	
Observation Time:		Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Visibility	
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	/
Wind Direction:		Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	
Precipitation and Obscuration:			
Departure Point:	Chicago, IL (KMDW)	Type of Flight Plan Filed:	IFR
Destination:	Dallas, TX (KDFW)	Type of Clearance:	IFR
Departure Time:	19:39 UTC	Type of Airspace:	

Wreckage and Impact Information

Crew Injuries:	1 Serious, 5 None	Aircraft Damage:	None
Passenger Injuries:	191 None	Aircraft Fire:	None
Ground Injuries:		Aircraft Explosion:	None
Total Injuries:	1 Serious, 196 None	Latitude, Longitude:	32.8998,-97.0403

Administrative Information

Investigator In Charge (IIC): Lovell, John

Additional Participating Persons: Sandy Shepherd; Frontier Airlines
AVP-110; Federal Aviation Administration

Original Publish Date: July 18, 2024

Last Revision Date:

Investigation Class: [Class 4](#)

Note: The NTSB did not travel to the scene of this accident.

Investigation Docket: <https://data.ntsb.gov/Docket?ProjectID=106815>

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).