



Aviation Investigation Preliminary Report

Location:	Las Vegas, NV	Incident Number:	DCA25LA001
Date & Time:	October 5, 2024, 15:10 Local	Registration:	N701FR
Aircraft:	Airbus A321-211	Injuries:	197 None
Flight Conducted Under:	Part 121: Air carrier - Scheduled		

On October 5, 2024, at 1510 Pacific daylight time, Frontier Airlines flight 1326, an Airbus A321-211, N701FR, was involved in an incident due to a brake fire during landing on runway 26L at Harry Reid International Airport (LAS), Las Vegas, Nevada. The resulting damage was limited to landing gear, wheels, tires, and brakes and, therefore, is not considered to be substantial according to 49 *Code of Federal Regulations (CFR)* Part 830.2. The seven crewmembers and 190 passengers were not injured. The airplane was operated as a Title 14 *CFR* Part 121 scheduled domestic passenger flight from San Diego International Airport (SAN), San Diego, California to LAS.

History of Flight

According to the first officer, who was the pilot flying, while in cruise flight at flight level 290, just prior to the top of descent, the cabin crew advised the flight deck of an odor in the forward section of the airplane. The cabin crew described the odor as a chemical smell that was difficult to identify, and they were unable to determine its source. Shortly thereafter, the captain and first officer detected an odor in the cockpit, which they initially described as chemical and acrid in nature, or mildew-like. The flight crew stated the odor became increasingly pungent and evolved to smell like “burning rubber and/or petroleum products, such as plastics.”

The flight crew donned their oxygen masks, and the captain began the SMOKE/FUMES/AVNCS SMOKE checklist from the quick reference handbook (QRH). While following that checklist, the flight crew noted that there was no visible smoke in the cockpit and confirmed with the cabin crew that no smoke was visible in the cabin and that the odor persisted. At 1451, the first officer declared an emergency and requested a descent to LAS.

As they proceeded through the QRH checklist, the first officer noted that “aircraft systems began to degrade,” which included the unavailability of the autopilot and autothrottles. He

recalled that it was unclear if the degradations were the “result of damage to equipment from a possible fire, or a result of systems isolations [specified] in the checklist[s].”

The captain recalled that the QRH advised to consider the electrical emergency configuration (ELEC EMER CONFIG) procedure if: 1) the smoke/fumes were the greatest threat, and/or if: 2) the source of the smoke/fumes could not be determined. Because he was unable to determine the source of the odor, the captain, confirming with the first officer, elected to perform the ELEC EMER CONFIG procedure. Both acknowledged that this procedure would deploy the ram air turbine. As a result, the display screens, radio, and transponder stopped functioning on the first officer’s side. The first officer transferred airplane control to the captain then transitioned the transponder to the no. 1 position (captain’s side). At 1501, as designed when ELEC EMER CONFIG is established, the flight data recorder lost power

With the radios active only on the captain’s side, the crew experienced some difficulty transmitting to air traffic control (ATC); thereafter, the first officer acknowledged ATC transmissions and instructions using the IDENT button on the No. 1 transponder.

The crew described their workload as high and the environment as increasingly hectic and stressful. The captain opted to focus on landing the airplane and relied on outside visual references during the approach. The first officer acknowledged ATC communications and instructions and confirmed/reiterated them with the captain, while calling out airspeeds, altitudes, and configuration information. During this time, the first officer noted that the captain’s primary flight display (PFD) had “limited data represented.” The captain recalled that they used the speeds placard on the instrument panel when configuring the airplane because the speed symbols on the PFD airspeed indicator were not present.

According to the captain, when the airplane was within about 1,000 ft above field elevation (AFE), it was “a little high for [the] stabilized approach criteria.” However, by 500 ft AFE, it was within the criteria, and the descent rate was no more than 900 feet per minute for the remainder of the approach. The captain recalled that the 50 ft [radio altitude] aural alert occurred as the airplane crossed the runway threshold.

At 1510, the airplane touched down on runway 26L. The captain moved the thrust levers to full reverse and applied braking. He recalled that after touchdown, the airplane “had no auto brakes and felt like no anti-skid.”

A witness located about 300 ft to the left of the airplane as it touched down reported hearing “two loud bangs in quick succession as the tires exploded about 3 seconds after touchdown. Then there was a large screen of smoke behind them and fire around the tires.”

The captain reported that during the rollout, he was looking outside to maintain the runway centerline and did not note the level of brake pressure that he was applying. The airplane eventually started to veer off the centerline as the airplane slowed.

Witness photographs, (see figures 1 through 3), and video recordings showed that shortly after touchdown, smoke began trailing behind both main landing gear before flames were visible from the same area. The flames appeared to extinguish shortly before the airplane came to a stop. Airport firefighting personnel and equipment arrived shortly thereafter and dispensed fire extinguishing agent around the landing gear and engines.



Figure 1. N701FR at touchdown (Source: Owen Denning).



Figure 2. Photograph showing smoke trailing behind N701FR's main landing gear (Source: Owen Denning).



Figure 3. Photograph showing flames behind N701FR's left main landing gear (Source: Owen Denning).

After the airplane stopped, the captain applied the parking brake and instructed the cabin occupants to remain seated. The first officer opened the cockpit side window to talk to first responders. The responders initially reported to the crew that there had been a no. 2 (right) engine fire, which had been extinguished. The flight crew recalled being surprised by this, as there had been no engine fire indications in the cockpit.

The flight crew reestablished radio communications with first responders and requested to evacuate the airplane on the runway. They began the emergency evacuation checklist but ultimately chose not to evacuate after the firefighting personnel assured them that the fire was extinguished and that the smoke was eliminated and no longer a threat. All passengers deplaned via stairs brought to the airplane.

Recovered Data and Checklists

Data messages recovered from the Electronic Centralized Aircraft Monitor system indicated that at 1449, a fault was detected in a fan unit that cools the avionics compartment. The unit was retained for further examination.

The flight data and cockpit voice recorder were sent to the National Transportation Safety Board's (NTSB) Vehicle Recorder Laboratory in Washington, DC. The flight data recorder captured most of the flight. However, it stopped recording about 9 minutes prior to touchdown due to a loss of electrical power when the ELEC EMER CONFIG was established. The cockpit voice recorder captured the entire flight.

According to the Quick Reference Handbook, when the airplane is in the ELEC EMER CONFIG condition, the wheel brake anti-skid, engine reversers, and nosewheel steering systems (among others) are inoperative, due to the limited electrical power available.

The SMOKE/FUMES/AVNCS SMOKE checklist includes a provision to restore electrical system capability prior to landing, to allow for the recovery of some or all of the inoperative systems.

The following NTSB specialists were assigned to investigate the accident: Cockpit Voice Recorder, Flight Data Recorder, Operations, Systems, and Human Performance. Parties to the investigation are Frontier Airlines, the Federal Aviation Administration, and the Air Line Pilots Association. In accordance with the provisions of Annex 13 to the Convention on International Civil Aviation, the Bureau d'Enquêtes et d'Analyses of France is the accredited representative for the State of Manufacture, and Airbus is a technical advisor.

The investigation is continuing.

Aircraft and Owner/Operator Information

Aircraft Make:	Airbus	Registration:	N701FR
Model/Series:	A321-211	Aircraft Category:	Airplane
Amateur Built:			
Operator:	Frontier Airlines	Operating Certificate(s) Held:	Flag carrier (121)
Operator Designator Code:			

Meteorological Information and Flight Plan

Conditions at Accident Site:	VMC	Condition of Light:	Day
Observation Facility, Elevation:	KLAS,2180 ft msl	Observation Time:	14:56 Local
Distance from Accident Site:	1 Nautical Miles	Temperature/Dew Point:	37°C /-2°C
Lowest Cloud Condition:	Few / 10000 ft AGL	Wind Speed/Gusts, Direction:	/ ,
Lowest Ceiling:		Visibility:	10 miles
Altimeter Setting:	30.03 inches Hg	Type of Flight Plan Filed:	
Departure Point:	San Diego , CA (SAN)	Destination:	Las Vegas, NV

Wreckage and Impact Information

Crew Injuries:	7 None	Aircraft Damage:	Unknown
Passenger Injuries:	190 None	Aircraft Fire:	Unknown
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	197 None	Latitude, Longitude:	36.080044,-115.15223 (est)

Administrative Information

Investigator In Charge (IIC):	Brazy, Douglass
Additional Participating Persons:	Patrick Lusch; FAA/AVP100; Washington, DC Thierry ROZEC; BEA France; Le Bourget Cedex, OF Brian Faulkison; Frontier Airlines; Denver, CO Ryan Greene; Air Line Pilots Association; McLean, VA
Investigation Class:	Class 3
Note:	The NTSB did not travel to the scene of this incident.