Aviation Investigation Final Report

Location:	Queens, New York	**Incident Number:**	DCA23LA125
Date & Time:	January 13, 2023, 20:44 Local	**Registration:**	N914DU (A1); N754AN (A2)
Aircraft:	Boeing 737-900ER (A1); Boeing 777-223 (A2)	**Aircraft Damage:**	None (A1); None (A2)
Defining Event:	Runway incursion veh/AC/person	**Injuries:**	159 None (A1); 149 None (A2)
Flight Conducted Under:	Part 121: Air carrier - Scheduled (A1); Part 121: Air carrier - Scheduled (A2)		

Analysis

On January 13, 2023, about 2044 eastern standard time, the flight crew of American Airlines (AAL) flight 106, a Boeing 777-200, N754AN, crossed runway 4L on taxiway J without air traffic control (ATC) clearance at John F. Kennedy International Airport (JFK), Queens, New York, causing the flight crew of Delta Air Lines (DAL) flight 1943, a Boeing 737-900, N914DU, to abort their takeoff roll on runway 4L. None of the 6 crew and 153 passengers on DAL1943, nor the 12 crew and 137 passengers on AAL106, were injured, and there was no damage to either airplane. AAL106 operated as a Title 14 Code of Federal Regulations (CFR) Part 121 scheduled international passenger flight from JFK to London Heathrow International Airport (LHR), London, United Kingdom. DAL1943 was a CFR Part 121 scheduled international passenger flight from JFK to Santo Domingo (SDQ), Dominican Republic. Night visual meteorological conditions prevailed at the airport at the time of the incident.

Probable Cause and Findings

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

The American Airlines flight 106 (AAL106) crew's surface navigation error due to distractions caused by their performance of concurrent operational tasks during taxi, which resulted in a loss of situational awareness. Contributing to the incident was the air traffic control tower team's nondetection of the AAL106 crew's deviation from taxi instructions while performing

concurrent operational tasks; the timing of the runway status light system, which activated too late to prevent the AAL106 crew from crossing the runway hold short line; and American Airlines' lack of adequate risk controls to prevent concurrent flight crew tasks from leading to distraction, loss of situational awareness, and deviation from an authorized taxi clearance. Reducing the severity of the incident, and likely preventing an accident, was the activation of the ASDE-X warning in the air traffic control tower and the local controller's prompt cancellation of DAL1943's takeoff clearance.

Findings

Personnel issues (A1)	Incorrect action performance - Pilot of other aircraft
Personnel issues (A1)	Task monitoring/vigilance - Pilot of other aircraft
Personnel issues (A1)	Lack of action - ATC personnel
Environmental issues (A1)	Runway lighting - Timing of related info
Organizational issues (A1)	Adequacy of safety program - Operator
Aircraft (A1)	Data recorders (flight/maint) - Design
Personnel issues (A2)	Incorrect action performance - Flight crew
Personnel issues (A2)	Task monitoring/vigilance - Flight crew
Personnel issues (A2)	Lack of action - ATC personnel
Environmental issues (A2)	Runway lighting - Timing of related info
Organizational issues (A2)	Adequacy of safety program - Operator
Aircraft (A2)	Data recorders (flight/maint) - Design

Factual Information

History of Flight

Takeoff (A1)	Runway incursion veh/AC/person (Defining event)
Takeoff-rejected takeoff (A1)	Runway incursion veh/AC/person
Taxi (A2)	Runway incursion veh/AC/person

Information

Certificate:	**Age:**
Airplane Rating(s):	**Seat Occupied:**
Other Aircraft Rating(s):	**Restraint Used:**
Instrument Rating(s):	**Second Pilot Present:**
Instructor Rating(s):	**Toxicology Performed:**
Medical Certification:	**Last FAA Medical Exam:**
Occupational Pilot:	**Last Flight Review or Equivalent:**
Flight Time:	

Aircraft and Owner/Operator Information (A1)

Aircraft Make:	Boeing	**Registration:**	N914DU
Model/Series:	737-900ER	**Aircraft Category:**	Airplane
Year of Manufacture:	2019	**Amateur Built:**	
Airworthiness Certificate:	Transport	**Serial Number:**	62782
Landing Gear Type:		**Seats:**	222
Date/Type of Last Inspection:		**Certified Max Gross Wt.:**	
Time Since Last Inspection:		**Engines:**	2 Turbo fan
Airframe Total Time:		**Engine Manufacturer:**	CFM INTL
ELT:		**Engine Model/Series:**	CFM56-7B27E/B
Registered Owner:	Delta Air Lines	**Rated Power:**	27300 Lbs thrust
Operator:	Delta Air Lines	**Operating Certificate(s) Held:**	Flag carrier (121)

Aircraft and Owner/Operator Information (A2)

Aircraft Make:	Boeing	**Registration:**	N754AN
Model/Series:	777-223	**Aircraft Category:**	Airplane
Year of Manufacture:	2001	**Amateur Built:**	
Airworthiness Certificate:	Transport	**Serial Number:**	30262
Landing Gear Type:	Retractable - Tricycle	**Seats:**	440
Date/Type of Last Inspection:	January 13, 2023 Continuous airworthiness	**Certified Max Gross Wt.:**	648000 lbs
Time Since Last Inspection:		**Engines:**	2 Turbo fan
Airframe Total Time:	80362 Hrs at time of accident	**Engine Manufacturer:**	ROLLS-ROYC
ELT:	C126 installed, not activated	**Engine Model/Series:**	TRENT 892-17 W/QEC
Registered Owner:	American Airlines	**Rated Power:**	90000 Lbs thrust
Operator:	American Airlines	**Operating Certificate(s) Held:**	Flag carrier (121)
Operator Does Business As:		**Operator Designator Code:**	AALA

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Night
Observation Facility, Elevation:	JFK	**Distance from Accident Site:**	0 Nautical Miles
Observation Time:	01:51 Local	**Direction from Accident Site:**	
Lowest Cloud Condition:	Clear	**Visibility**	
Lowest Ceiling:	Overcast / 3000 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	17 knots / 25 knots	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	320°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29.7 inches Hg	**Temperature/Dew Point:**	-15.6°C / -20°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Queens, NY (A1); Queens, NY (A2)	**Type of Flight Plan Filed:**	
Destination:	Santo Domingo, OF (SDQ) (A1); London, OF (LHR) (A2)	**Type of Clearance:**	VFR (A1); Unknown (A2)
Departure Time:		**Type of Airspace:**	

Airport Information

Airport:	John F. Kennedy International Airport KJFK	**Runway Surface Type:**	Asphalt
Airport Elevation:	13 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	4L	**IFR Approach:**	None
Runway Length/Width:	12079 ft / 200 ft	**VFR Approach/Landing:**	None

Wreckage and Impact Information (A1)

Crew Injuries:	6 None	**Aircraft Damage:**	None
Passenger Injuries:	153 None	**Aircraft Fire:**	None
Ground Injuries:		**Aircraft Explosion:**	None
Total Injuries:	159 None	**Latitude, Longitude:**	40.6413,-73.7781

Wreckage and Impact Information (A2)

Crew Injuries:	12 None	**Aircraft Damage:**	None
Passenger Injuries:	137 None	**Aircraft Fire:**	None
Ground Injuries:		**Aircraft Explosion:**	None
Total Injuries:	149 None	**Latitude, Longitude:**	40.6413,-73.7781

Administrative Information

Investigator In Charge (IIC):	Bower, Daniel
Additional Participating Persons:	Patrick Lusch; FAA Joshua Migdal; Delta Air Lines John DeLeeuw; American Airlines Eric East; Boeing Craig Stroup; Allied Pilots Association Brandon Johnson; National Air Traffic Controllers Association
Original Publish Date:	June 12, 2024
Last Revision Date:	
Investigation Class:	Class 1
Note:	The NTSB did not travel to the scene of this incident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=106577