



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	Denver, CO	<b>Accident Number:</b>	DCA09MA021
<b>Date &amp; Time:</b>	12/20/2008, 1818 MST	<b>Registration:</b>	N18611
<b>Aircraft:</b>	BOEING 737-524	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Runway excursion	<b>Injuries:</b>	6 Serious, 41 Minor, 68 None
<b>Flight Conducted Under:</b>	Part 121: Air Carrier - Scheduled		

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## Analysis

The Safety Board's full report is available at [http://www.nts.gov/publictn/A\\_Acc1.htm](http://www.nts.gov/publictn/A_Acc1.htm). The Aircraft Accident Report number is NTSB/AAR-10/04.

On December 20, 2008, about 1818 mountain standard time, Continental Airlines flight 1404, a Boeing 737-500, N18611, departed the left side of runway 34R during takeoff from Denver International Airport (DEN), Denver, Colorado. A postcrash fire ensued. The captain and 5 of the 110 passengers were seriously injured; the first officer, 2 cabin crewmembers, and 38 passengers received minor injuries; and 1 cabin crewmember and 67 passengers (3 of whom were lap-held children) were uninjured. The airplane was substantially damaged. The scheduled, domestic passenger flight, operated under the provisions of 14 Code of Federal Regulations Part 121, was departing DEN and was destined for George Bush Intercontinental Airport, Houston, Texas. At the time of the accident, visual meteorological conditions prevailed, with strong and gusty winds out of the west. The flight operated on an instrument flight rules flight plan.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The captain's cessation of right rudder input, which was needed to maintain directional control of the airplane, about 4 seconds before the excursion, when the airplane encountered a strong and gusty crosswind that exceeded the captain's training and experience. Contributing to the accident were the following factors: 1) an air traffic control system that did not require or facilitate the dissemination of key, available wind information to the air traffic controllers and pilots; and 2) inadequate crosswind training in the airline industry due to deficient simulator wind gust modeling.

## Findings

<b>Aircraft</b>	Directional control - Not attained/maintained (Cause) Crosswind correction - Not attained/maintained (Cause)
<b>Personnel issues</b>	Incomplete action - Pilot (Cause) Aircraft control - Pilot
<b>Environmental issues</b>	Crosswind - Response/compensation (Cause) Crosswind - Availability of related info (Factor)
<b>Organizational issues</b>	Between groups/organizations - ATC (Factor) Training - Not specified (Factor)

## Factual Information

The Safety Board's full report is available at [http://www.nts.gov/publicctn/A\\_Acc1.htm](http://www.nts.gov/publicctn/A_Acc1.htm). The Aircraft Accident Report number is NTSB/AAR-10/04.

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## History of Flight

Takeoff	Other weather encounter Loss of control on ground Runway excursion (Defining event)
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## Aircraft and Owner/Operator Information

Aircraft Manufacturer:	BOEING	Registration:	N18611
Model/Series:	737-524	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Transport	Serial Number:	27324
Landing Gear Type:	Tricycle	Seats:	115
Date/Type of Last Inspection:		Certified Max Gross Wt.:	
Time Since Last Inspection:		Engines:	2
Airframe Total Time:		Engine Manufacturer:	CFM INTL.
ELT:	Installed, not activated	Engine Model/Series:	CFM56 SERIES
Registered Owner:	WELLS FARGO BANK NORTHWEST NA TRUSTEE	Rated Power:	2200 hp
Operator:	CONTINENTAL AIRLINES INC	Air Carrier Operating Certificate:	Flag carrier (121)
Operator Does Business As:		Operator Designator Code:	CALA

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	
Observation Facility, Elevation:	KDEN	Observation Time:	1834 MST
Distance from Accident Site:		Direction from Accident Site:	
Lowest Cloud Condition:		Temperature/Dew Point:	
Lowest Ceiling:		Visibility	
Wind Speed/Gusts, Direction:	27 knots/ 42 knots, 270°	Visibility (RVR):	
Altimeter Setting:		Visibility (RVV):	
Precipitation and Obscuration:			
Departure Point:	Denver, CO (KDEN)	Type of Flight Plan Filed:	IFR
Destination:	Houston, TX (KIAH)	Type of Clearance:	IFR
Departure Time:	MST	Type of Airspace:	

## Airport Information

Airport:	Denver International Airport (KDEN)	Runway Surface Type:	Concrete
Airport Elevation:	5100 ft	Runway Surface Condition:	Dry
Runway Used:	34R	IFR Approach:	None
Runway Length/Width:	12000 ft / 150 ft	VFR Approach/Landing:	None

## Wreckage and Impact Information

Crew Injuries:	1 Serious, 3 Minor, 1 None	Aircraft Damage:	Substantial
Passenger Injuries:	5 Serious, 38 Minor, 67 None	Aircraft Fire:	On-Ground
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	6 Serious, 41 Minor, 68 None	Latitude, Longitude:	

## Administrative Information

Investigator In Charge (IIC):	William R English	Adopted Date:	08/17/2010
Additional Participating Persons:			
Publish Date:	08/17/2010		
Investigation Docket:	NTSB accident and incident docket serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at <a href="mailto:pubinq@ntsb.gov">pubinq@ntsb.gov</a> , or at 800-877-6799. Dockets released after this date are available at <a href="http://dms.nts.gov/pubdms/">http://dms.nts.gov/pubdms/</a> .		

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