



National Transportation Safety Board Aviation Accident Factual Report

Location:	BRIDGEPORT, MI	Accident Number:	CHI95LA144
Date & Time:	05/02/1995, 1550 EST	Registration:	N100GB
Aircraft:	QUAD CITY CHALLENGER	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	1 None

Flight Conducted Under: Part 91: General Aviation - Personal

On May 2, 1995, at 1550 eastern daylight time, an ultralight Challenger, N100GB, was destroyed when it impacted trees shortly after taking off from a private grass strip in Bridgeport, Michigan. The pilot, who was not injured, reported a loss of control. The local 14 CFR Part 91 flight operated without flight plan in visual meteorological conditions.

According to the pilot, while making a right climbing turn after takeoff, at approximately 500 feet above the ground, the airplane started to bank to the left. The pilot stated despite his use of full right rudder, the banking continued. He continued to stated, "The plane kept tightening up into a left flat spiral to the ground."

The pilot had approximately 4 hours of flight time in the Challenger. The optional kit doors were installed on the ultralight during all four hours of flight time.

In a telephone interview, the pilot stated that he had experienced this same type of left banking once before while landing. In that incident he was able to regain control of the ultralight. The pilot stated he believes that the ailerons of the Challenger are almost non-effective and a pilot needs to use the rudder more then in any other airplane that he has ever flown before. He stated that the rudder has to be used to make the Challenger turn.

The Chief Engineer with Popular Flying Association in the United Kingdom, stated in a telephone interview that the Challenger is directionally unstable when the doors are installed. As a result, several modifications to the Challenger are mandatory before their operation is permitted in the United Kingdom. The modification consists of the installation of a larger tail fin, rudder, and reinforcements.

This investigator has spoken to the President of the Quad City Ultralight Aircraft Corporation, the Challenger manufacturer, on several occasions concerning the flight characteristics of the Challenger when the doors are installed. In a written statement, the president stated the Challenger II was designed in 1984 as a two place ultralight trainer to be used by Challenger dealers to train their customers to fly the single seat Challenger ultralight. The president stated, "We never intended [the Challenger] to have doors." The doors were designed by a

Challenger dealer in Canada. A set of these doors were purchased by Quad City Ultralight Aircraft Corporation and installed. The president stated, "We liked the doors for winter flying and noticed no stability problems other than they made the plane more rudder dominated; i.e., you had to steer more with your feet than previously." Because of the large request, Quad City Ultralight Aircraft Corporation started offering the doors in kit form to their customers and dealers.

When questioned about the directional stability of the Challenger when the doors are installed, the president stated he believes the problem lies in the inexperience of the pilots. He stated the Challenger is a rudder dominant and sensitive airplane. He continued to stated that when the doors are installed, a pilot can not take his feet off the rudder pedals. The president stated that inexperienced pilots find it difficult to adapt to this kind of flying.

Pilot Information

Certificate:	Flight Instructor; Commercial	Age:	60, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Front
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	Airplane Single-engine	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical--w/ waivers/lim.	Last FAA Medical Exam:	05/23/1994
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	3091 hours (Total, all aircraft), 4 hours (Total, this make and model), 12 hours (Last 90 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	QUAD CITY	Registration:	N100GB
Model/Series:	CHALLENGER CHALLENGER	Aircraft Category:	Ultralight
Year of Manufacture:		Amateur Built:	Yes
Airworthiness Certificate:	Experimental	Serial Number:	CW0844
Landing Gear Type:	Tricycle	Seats:	2
Date/Type of Last Inspection:	05/25/1994, Annual	Certified Max Gross Wt.:	850 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	ROTAX
ELT:	Not installed	Engine Model/Series:	503
Registered Owner:	DOYLE W. MCKIMMY	Rated Power:	52 hp
Operator:	DOYLE W. MCKIMMY	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	, 0 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	0000	Direction from Accident Site:	0°
Lowest Cloud Condition:	Unknown / 0 ft agl	Visibility	15 Miles
Lowest Ceiling:	Broken / 9000 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	5 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	50°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	16 °C
Precipitation and Obscuration:			
Departure Point:	(NONE)	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	1550 EST	Type of Airspace:	Class G

Airport Information

Airport:		Runway Surface Type:	
Airport Elevation:		Runway Surface Condition:	
Runway Used:	0	IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Destroyed
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC):	CHRISTINE M CORSONES
Additional Participating Persons:	CHRIS LAWRENCE; GRAND RAPIDS, MI
Investigation Docket:	NTSB accident and incident dockets 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 pubinq@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.nts.gov/pubdms/ .