Aviation Investigation Final Report

Location:	Great Bend, Kansas	**Accident Number:**	DEN07LA040
Date & Time:	October 9, 2006, 19:30 Local	**Registration:**	N1801V
Aircraft:	Beech A-36	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot stated he was level in cruise flight at 7,000 feet. He said that approximately 30 miles from his destination, he entered the localizer frequency into his GPS (global positioning system). "The airplane entered an unusual attitude. When [aircraft] control [was] regained, [the] HSI (horizon situation indicator) [was] inaccurate. [I] navigated to GBD with ATC assistance." ATC reported the pilot stated he was in instrument conditions, had become disoriented, advised that he was having a lot of trouble, and "needed to control the aircraft." The pilot then requested "vector/navigational assistance." The controller decided to treat the airplane as an emergency and gave him vectors to a nearby airport where visual weather conditions prevailed. The pilot was cleared for a visual approach at the airport . The airplane landed without further incident. An examination of the airplane showed upward bending of the wing spars of both wings. Flight control continuity was confirmed. An examination of the airplane's systems did not reveal any anomalies.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's spatial disorientation and subsequent loss of aircraft control while changing radio frequencies and abruptly applying control forces in excess of the design limits of the airframe.

Findings

Occurrence #1: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: CRUISE

Findings
1. (C) AIRCRAFT CONTROL - NOT MAINTAINED - PILOT IN COMMAND
2. (C) SPATIAL DISORIENTATION - PILOT IN COMMAND
3. WEATHER CONDITION - OTHER

Occurrence #2: ABRUPT MANEUVER
Phase of Operation: CRUISE

Findings
4. REMEDIAL ACTION - PERFORMED - PILOT IN COMMAND
5. AIRSPEED(VA) - EXCEEDED
6. WING,SPAR - BENT

Factual Information

On October 9, 2006, at 1930 central daylight time, a Beech A-36, N1801V, was substantially damaged while in cruise flight near Great Bend, Kansas (GBD). Instrument meteorological conditions prevailed at the time of the accident. The personal cross-country flight was operating on an Instrument Flight Rules flight plan from Scott City, Kansas, to Hays, Kansas, under the provisions of Title 14 Code of Federal Regulations Part 91. The pilot, the sole person on board the airplane, was not injured. The flight originated at 1845.

The Kansas City Air Route Traffic Control Center (ZKC ARTCC) reported that at 1921, the pilot stated he was in instrument conditions, had become disoriented, advised that he was having a lot of trouble, and "needed to control the aircraft." The pilot then requested "vector/navigational assistance." The controller decided to treat the airplane as an emergency and gave him vectors to GBD where visual weather conditions prevailed. At 2004, the pilot was cleared for a visual approach at GBD and was instructed to switch to the airport's Unicom frequency. The airplane landed without further incident.

The pilot stated he was level in cruise flight at 7,000 feet. He said that approximately 30 miles from his destination, he entered the localizer frequency into his GPS (global positioning system). "The airplane entered an unusual attitude. When [aircraft] control [was] regained, [the] HSI (horizon situation indicator) [was] inaccurate. [I] navigated to GBD with ATC assistance."

On December 22, 2006, the pilot informed the Federal Aviation Administration, Flight Standards District Office, Wichita, Kansas, that his airplane had sustained substantial damage during the recovery maneuver. An examination of the airplane showed wrinkling in the upper and lower wing skins at the wing roots and upward bending of the wing spars of both wings. Additionally, there were buckles in the fuselage skin at the wing roots. Further examination showed skin wrinkles in the horizontal and vertical stabilizers. Flight control continuity was confirmed. An examination of the airplane's systems did not reveal any anomalies.

Pilot Information

Certificate:	Private	**Age:**	52,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 3 With waivers/limitations	**Last FAA Medical Exam:**	July 1, 2005
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	May 1, 2005
Flight Time:	869 hours (Total, all aircraft), 373 hours (Total, this make and model), 869 hours (Pilot In Command, all aircraft), 15 hours (Last 90 days, all aircraft), 11 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Beech	**Registration:**	N1801V
Model/Series:	A-36	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	E-1859
Landing Gear Type:	Retractable - Tricycle	**Seats:**	6
Date/Type of Last Inspection:	July 1, 2006 Annual	**Certified Max Gross Wt.:**	3600 lbs
Time Since Last Inspection:	16 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	3326 Hrs at time of accident	**Engine Manufacturer:**	Continental
ELT:	Installed, not activated	**Engine Model/Series:**	IO-550-B5F
Registered Owner:	Southwind Aviation LLC	**Rated Power:**	300 Horsepower
Operator:		**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument (IMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	GBD,1887 ft msl	**Distance from Accident Site:**	1 Nautical Miles
Observation Time:	19:35 Local	**Direction from Accident Site:**	359°
Lowest Cloud Condition:	Unknown	**Visibility**	10 miles
Lowest Ceiling:	Overcast	**Visibility (RVR):**	
Wind Speed/Gusts:	8 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	315°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29.92 inches Hg	**Temperature/Dew Point:**	8°C / 5°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Scott City, KS (TQK)	**Type of Flight Plan Filed:**	IFR
Destination:	Hays, KS (HYS)	**Type of Clearance:**	IFR
Departure Time:	18:45 Local	**Type of Airspace:**	

Wreckage and Impact Information

Crew Injuries:	1 None	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 None	**Latitude, Longitude:**	38.344444,-98.859169

Administrative Information

Investigator In Charge (IIC):	Bowling, David
Additional Participating Persons:	Jerry Eichelberger; Federal Aviation Administration; Wichita, KS
Original Publish Date:	March 26, 2007
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=65077