



Aviation Investigation Final Report

Location:	Benton, Tennessee	Accident Number:	ATL02LA027
Date & Time:	December 29, 2001, 15:00 Local	Registration:	N5457T
Aircraft:	Flugzeugbau DG-200	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The glider pilot was flying north in a ridge lift about 400 feet above a plateau area where he had previously found good thermals. He started a turn towards the front of the ridge towards a valley and encountered a severe sink rate. He continued the turn and the sink rate increased between 1,500 to 3,000 feet per minute and the glider collided with trees. The pilot did not experienced a mechanical failure or malfunction of the airframe or flight control system.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's inadvertent encounter with a downdraft while maneuvering in a ridge lift during a turn resulting in an in-flight collision with trees.

Findings

Occurrence #1: IN FLIGHT ENCOUNTER WITH WEATHER
Phase of Operation: MANEUVERING

Findings
1. (C) WEATHER CONDITION - DOWNDRAFT

Occurrence #2: IN FLIGHT COLLISION WITH OBJECT
Phase of Operation: MANEUVERING

Findings

2. OBJECT - TREE(S)

Factual Information

On December 29, 2001, at about 1500 eastern standard time, a Glaser-Dirks Flugzeugbau DG-200, glider, N5457T, registered to a private owner, operating as a 14 CFR Part 91 personal flight collided with trees while maneuvering in the vicinity of Benton, Tennessee, following the loss of thermal lifting. Visual meteorological conditions prevailed and no flight plan was filed. The glider sustained substantial damage. The private pilot reported minor injuries. The flight originated from Chilhowee Glider Port, Benton, Tennessee, at 1300.

The pilot stated he was flying north in a ridge lift. He turned back over a plateau area where he had previously encountered good thermals. He looked at his airspeed indicator before turning and it indicated 90 knots. He continued his turn toward the front of the ridge toward the valley and encountered a severe sink rate about 180-degrees into the turn. The vertical speed indicator went from a climb to a 1,300 foot per minute descent. According to the pilot, the glider was about 400 feet above ground level which under normal circumstances should have been enough altitude to clear the ridgeline. As he continued the turn, the sink rate increased between 1,500 feet per minute to 3,000 feet per minute. The glider descended into trees short of the ridgeline.

The pilot further stated he did not experience any mechanical failure or malfunction of the airframe or flight control system.

Pilot Information

Certificate:	Private	Age:	34, Male
Airplane Rating(s):		Seat Occupied:	Front
Other Aircraft Rating(s):	Glider	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	None	Last FAA Medical Exam:	
Occupational Pilot:	No	Last Flight Review or Equivalent:	July 22, 2000
Flight Time:	422 hours (Total, all aircraft), 204 hours (Total, this make and model), 386 hours (Pilot In Command, all aircraft), 17 hours (Last 90 days, all aircraft), 2 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Flugzeugbau	Registration:	N5457T
Model/Series:	DG-200	Aircraft Category:	Glider
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Experimental (Special)	Serial Number:	2-57A
Landing Gear Type:	Tailwheel	Seats:	1
Date/Type of Last Inspection:	March 23, 2001 Annual	Certified Max Gross Wt.:	992 lbs
Time Since Last Inspection:	79 Hrs	Engines:	
Airframe Total Time:	1207 Hrs at time of accident	Engine Manufacturer:	
ELT:	Installed, activated, did not aid in locating accident	Engine Model/Series:	
Registered Owner:	Christopher J. Ruf	Rated Power:	
Operator:		Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	CHA,690 ft msl	Distance from Accident Site:	166 Nautical Miles
Observation Time:	14:53 Local	Direction from Accident Site:	330°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	10 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	350°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.98 inches Hg	Temperature/Dew Point:	9°C / 6°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Benton, TN (92A)	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	13:00 Local	Type of Airspace:	Class G

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:	35.226387,-84.584724

Administrative Information

Investigator In Charge (IIC):	Smith, Carrol
Additional Participating Persons:	Lynn D Heath; FAA Nashville FSDO-03; Nashville, TN
Original Publish Date:	April 29, 2003
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=53962

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