



National Transportation Safety Board Aviation Accident Final Report

Location:	Gerlach, NV	Accident Number:	LAX01LA298
Date & Time:	09/01/2001, 1830 PDT	Registration:	N301CS
Aircraft:	Sparke Air Command 582 Dual	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 None
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

After turning downwind following takeoff, the gyrocopter lost forward speed and began to descend. It touched down on the left tire, rolled over, and the main rotor blades contacted the ground. The pilot reported there was no mechanical malfunction. He stated the engine and propeller combination was not providing sufficient performance to operate the gyrocopter safely, and he had been modifying it since it was built 2 years previously. This was the second flight of the day after he had shifted the occupant seats to provide better airflow to the propeller.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's inability to maintain altitude because of the gyrocopter's inadequately designed performance capability.

Findings

Occurrence #1: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings

1. (C) AIRCRAFT PERFORMANCE - INADEQUATE
2. (C) ALTITUDE - NOT OBTAINED/MAINTAINED - PILOT IN COMMAND
3. (C) ACFT/EQUIP, INADEQUATE HANDLING/PERF CAPABILITIES - PILOT IN COMMAND

Factual Information

On September 1, 2001, at 1830 hours Pacific daylight time, a Sparke Air Command 582 Dual, N301CS, descended to the ground during the takeoff initial climb from a dry lake bed, 10 miles north of Gerlach, Nevada. The private pilot, who was the sole occupant, was uninjured, and the gyrocopter was substantially damaged. Visual meteorological conditions prevailed for the flight conducted by the pilot under 14 CFR Part 91. The experimental gyrocopter's flight was originating at the time, and no flight plan was filed.

The pilot stated that the gyrocopter was still in the testing phase of the certification process. He had built it about 2 years ago and had been modifying it in order to reach an acceptable performance level. It had been flown approximately 10 times since construction, but the pilot stated that the engine and propeller combination was not giving him the performance needed to operate the gyrocopter safely. He had recently moved the pilot and passenger seats closer together to improve the airflow to the propeller, and was testing this latest modification at a dry lake bed near Gerlach. The gyrocopter was taken to the lake bed by trailer and assembled on site. The pilot made one test flight and returned to readjust the propeller pitch setting. On the second flight, the pilot departed upwind and climbed to 30 feet. When he turned to a downwind heading, he lost forward speed and the gyrocopter began to descend. The gyrocopter contacted the ground on the left tire, which resulted in a rollover. The rotor blades then contacted the ground and were destroyed. The pilot did not note any mechanical malfunction prior to or after the accident.

A report of the accident on NTSB Form 6120.1/2 was not provided.

Pilot Information

Certificate:	Private	Age:	42, Male
Airplane Rating(s):	Single-engine Land	Seat Occupied:	Unknown
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Valid Medical--w/ waivers/lim.	Last FAA Medical Exam:	06/25/2001
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:			

Aircraft and Owner/Operator Information

Aircraft Make:	Sparke	Registration:	N301CS
Model/Series:	Air Command 582 Dual	Aircraft Category:	Gyroplane
Year of Manufacture:		Amateur Built:	Yes
Airworthiness Certificate:	Experimental	Serial Number:	CLS01
Landing Gear Type:		Seats:	2
Date/Type of Last Inspection:	Unknown	Certified Max Gross Wt.:	
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	Bombardier
ELT:		Engine Model/Series:	unknown
Registered Owner:	On file	Rated Power:	
Operator:	On file	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	
Observation Facility, Elevation:	KLLOL, 3904 ft msl	Distance from Accident Site:	
Observation Time:	1853 PDT	Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Visibility	10 Miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	5 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	160°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.88 inches Hg	Temperature/Dew Point:	31 °C / 0 °C
Precipitation and Obscuration:			
Departure Point:	Gerlach, NV	Type of Flight Plan Filed:	None
Destination:	Gerlach, NV	Type of Clearance:	None
Departure Time:	1830 PDT	Type of Airspace:	Class G

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
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): STEVEN R CLINE **Report Date:** 05/01/2003

Additional Participating Persons: Gary Hamlin; FAA Flight Standards District Office; Reno, NV

Publish Date:

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/>.

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The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).