Aviation Investigation Final Report

Location:	ADELANTO, California	**Accident Number:**	LAX95LA047
Date & Time:	December 10, 1994, 14:26 Local	**Registration:**	UNREG
Aircraft:	BENSON B8M	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	1 Serious
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

AFTER TAKEOFF FROM A DRY LAKE BED IN THE UNREGISTERED AND UNCERTIFICATED GYROCOPTER, THE PILOT TURNED CROSSWIND AND THEN DOWNWIND AT A WITNESS-ESTIMATED ALTITUDE OF BETWEEN 200 AND 300 FEET AGL. THE WITNESS SAW THE AIRCRAFT DESCEND AND STRIKE POWER LINES, THEN FALL TO THE GROUND. THE PILOT OF A SECOND AIRCRAFT THAT TOOK OFF AHEAD OF THE ACCIDENT AIRCRAFT STATED THAT AS HE TURNED DOWNWIND, HE FOUND IT NECESSARY TO ADD BOTH POWER AND COLLECTIVE IN ORDER TO MAINTAIN ALTITUDE BECAUSE OF THE WINDS. THE AIRFRAME WAS EXAMINED WITH NO DISCREPANCIES NOTED. THE GYROCOPTER IS NOT EQUIPPED WITH AN AIRSPEED INDICATOR AND THE PILOT MUST JUDGE HIS AIRSPEED BY RELATIVE GROUND MOTION.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the pilot's inadequate compensation for the wind conditions during the downwind turn and his resulting failure to maintain adequate rotor rpm. A factor in the accident was the lack of an airspeed indicator.

Findings

Occurrence #1: IN FLIGHT COLLISION WITH OBJECT
Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings
1. OBJECT - WIRE,TRANSMISSION
2. WEATHER CONDITION - TAILWIND
3. (C) COMPENSATION FOR WIND CONDITIONS - INADEQUATE - PILOT IN COMMAND
4. (F) AIRSPEED INDICATOR - NOT AVAILABLE
5. (C) AIRSPEED - NOT CORRECTED - PILOT IN COMMAND
6. (C) ROTOR RPM - NOT MAINTAINED - PILOT IN COMMAND
7. DESCENT - NOT CORRECTED - PILOT IN COMMAND

Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: DESCENT - UNCONTROLLED

Factual Information

HISTORY OF FLIGHT

On December 10, 1994, at 1426 Pacific standard time, an unregistered Benson B8M Gyrocopter was destroyed when it struck wires after takeoff at Adelanto, California. The aircraft was owned and operated by the pilot and was on a personal solo flight. Visual meteorological conditions prevailed at the time and no flight plan was filed for the operation. The certificated private pilot sustained serious injuries. The flight originated from the El Mirage dry lake bed at 1425 on the day of the accident.

In a telephone interview, the pilot stated that after his initial takeoff he turned crosswind and was turning downwind when the accident occurred. He reported that he had no recollection after the downwind turn.

The pilot stated that the aircraft is not equipped with an airspeed indicator and airspeed must be judged by relative ground motion and tactile feelings.

The pilot of a second aircraft that took off ahead of the accident aircraft stated that as he turned downwind he found it necessary to add both power and collective in order to maintain altitude. After turning downwind, he looked back to locate the position of the accident aircraft, but it had already crashed. A ground witness to the accident, who was standing about 1/4 mile from the crash site, stated that he saw the aircraft proceeding on a southwesterly heading at between 200 and 300 feet agl. He said that he believed the aircraft must have lost power or the pilot was not aware there were power lines in his flight path. He saw the aircraft descend and strike the lines, "somersault" over, and fall to the ground.

The witness estimated the distance the aircraft traveled from wire contact to ground impact as 180 to 200 feet. He observed that during the impact sequence, the pilot and his seat separated from the aircraft. He immediately asked another person to call "911" and then proceeded to the crash site to render aid. Upon reaching the pilot, he stated that the pilot asked him "what happened?" He noted that the pilot appeared to have sustained serious injuries to his legs.

PERSONNEL INFORMATION

The pilot stated that he had logged approximately 50 hours in gyrocopters; however, a review of Federal Aviation Administration (FAA) airmen records showed that although the pilot was licensed to operate single-engine fixed wing aircraft, he was not rated in gyrocopters. The pilot told FAA inspectors that he thought his aircraft met the ultralight definition as outlined in Federal Aviation Regulations (FAR) and required neither registration nor a pilot's certificate in

order to fly.

WRECKAGE AND IMPACT INFORMATION

A postaccident inspection of the aircraft was conducted by a pilot deputy sheriff from the San Bernardino Sheriff's Department Aero Bureau.

The crash site was characterized by light vegetation and both hard- and soft-packed sand. The area was free of obstructions except for a set of power lines located 66 yards east of the aircraft's final position. Two power lines had been severed and were lying on the ground.

All parts of the aircraft were located and control continuity was established to all flight control surfaces.

The aircraft came to rest inverted on its right side and on a northeasterly heading. The pilot's seat, which also serves as a fuel tank, was separated and had been moved by witnesses. The tank was leaking fuel. Two batteries had also been removed from the aircraft. The nose wheel was located approximately 60 yards west of the aircraft.

There were sections missing from the trailing edges of both main rotor blades. Both blades exhibited scarring on the upper and lower surfaces as well as deformation. The control tubes were bent. The rudder was bent to the right and there was visible damage to the rudder hinge.

The main rotor mount exhibited deformation in the area of the four mounting holes as well as a crack in the mount itself. All four screws were present in their holes. The nose wheel was separated from the nose wheel retaining plate. The instrument panel mounts were fractured and the panel remained attached only by several wires. The ignition key was in the "on" position. The engine had broken away from the engine mounts. No other damage to the engine was noted.

Pilot Information

Certificate:	Private	**Age:**	49,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Center
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:**	June 18, 1993
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	460 hours (Total, all aircraft), 50 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	BENSON	**Registration:**	UNREG
Model/Series:	B8M B8M	**Aircraft Category:**	Gyroplane
Year of Manufacture:		**Amateur Built:**	Yes
Airworthiness Certificate:		**Serial Number:**	
Landing Gear Type:	Tricycle	**Seats:**	1
Date/Type of Last Inspection:	Unknown	**Certified Max Gross Wt.:**	350 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:	10 Hrs	**Engine Manufacturer:**	VOLKSWAGEN
ELT:	Not installed	**Engine Model/Series:**	1835
Registered Owner:	MOSES H. RASCON	**Rated Power:**	75 Horsepower
Operator:		**Operating Certificate(s) Held:**	None
Operator Does Business As:		**Operator Designator Code:**	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	PMD ,2543 ft msl	**Distance from Accident Site:**	27 Nautical Miles
Observation Time:	19:48 Local	**Direction from Accident Site:**	253°
Lowest Cloud Condition:	Scattered / 10000 ft AGL	**Visibility**	40 miles
Lowest Ceiling:	Overcast / 2000 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	6 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	330°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30 inches Hg	**Temperature/Dew Point:**	8°C / -17°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:		**Type of Flight Plan Filed:**	None
Destination:		**Type of Clearance:**	None
Departure Time:	14:25 Local	**Type of Airspace:**	Class G

Airport Information

Airport:	EL MIRAGE DRY LAKE BED	**Runway Surface Type:**	Dirt
Airport Elevation:		**Runway Surface Condition:**	Dry
Runway Used:	0	**IFR Approach:**	
Runway Length/Width:		**VFR Approach/Landing:**	

Wreckage and Impact Information

Crew Injuries:	1 Serious	**Aircraft Damage:**	Destroyed
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Serious	**Latitude, Longitude:**	34.659057,-117.510063(est)

Administrative Information

Investigator In Charge (IIC):	Crispin, Robert
Additional Participating Persons:	JESUS LUCERO; RIVERSIDE , CA
Original Publish Date:	August 23, 1995
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=28989