



National Transportation Safety Board Aviation Accident Data Summary

Location:	SALEM, OR	Accident Number:	SEA00LA079
Date & Time:	05/01/2000, 0818 PDT	Registration:	N1143L
Aircraft:	MORTON CHRISTAVIA MARK I	Injuries:	1 None
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

The pilot/builder of the kitplane took off from runway 13 on the aircraft's initial test flight and immediately encountered a nose heavy condition. He declared an emergency and maneuvered to land on runway 34. He reported that during his approach the aircraft was controllable as long as power was applied, but on short final he instinctively reduced power and the nose of the aircraft abruptly pitched down. The aircraft then impacted the ground and slid up onto the runway. The center of gravity range limits had been calculated by the pilot/builder as between 10.5 to 19.5 inches with the aircraft's empty weight CG at 11.0 inches. Following the calculations, the pilot/builder changed the aircraft's battery (located forward of the cockpit) which added 7 pounds, and added a new engine exhaust system adding 2-3 additional pounds. A new CG was not calculated. Center of gravity calculations based on the earlier weight/CG of the aircraft, including the weight of the pilot and the 96 pounds of fuel also placed the CG 0.5 inch forward of the old forward limit.

Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot/builder's failure to correct the center of gravity computations after a weight increase. A contributing factor was the pilot/builder's exceeding the forward CG limit in fuel weight, of which both conditions resulted in a degradation of aircraft control.

Findings

Occurrence #1: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: APPROACH - VFR PATTERN - FINAL APPROACH

- Findings
1. (C) AIRCRAFT WEIGHT AND BALANCE - NOT CORRECTED - PILOT IN COMMAND
 2. (F) AIRCRAFT WEIGHT AND BALANCE - EXCEEDED - PILOT IN COMMAND
 3. AIRCRAFT CONTROL - DIMINISHED
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Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: DESCENT - UNCONTROLLED

Pilot Information

Certificate:	Private	Age:	70
Airplane Rating(s):	Single-engine Land	Instrument Rating(s):	None
Other Aircraft Rating(s):	None	Instructor Rating(s):	None
Flight Time:	624 hours (Total, all aircraft), 624 hours (Pilot In Command, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	MORTON	Registration:	N1143L
Model/Series:	CHRISTAVIA MARK I CHRISTAVIA	Engines:	1 Reciprocating
Operator:	MORTON, JOHN, W.	Engine Manufacturer:	Lycoming
Operating Certificate(s) Held:	None	Engine Model/Series:	O-235
Flight Conducted Under:	Part 91: General Aviation - Personal		

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	SLE, 210 ft msl	Weather Information Source:	Weather Observation Facility
Lowest Ceiling:	None / 0 ft agl	Wind Speed/Gusts, Direction:	7 knots / , 120°
Temperature:	12° C	Visibility	10 Miles
Precipitation and Obscuration:			
Departure Point:	(SLE)	Destination:	

Airport Information

Airport:	MCNARY FIELD (SLE)	Runway Surface Type:	Asphalt
Runway Used:	34	Runway Surface Condition:	Dry
Runway Length/Width:	5145 ft / 140 ft		

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
Latitude, Longitude:			

Administrative Information

Investigator In Charge (IIC): STEVEN A MCCREARY Adopted Date: 12/04/2000

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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