



Aviation Investigation Final Report

Location:	BOULDER, Colorado	Accident Number:	DEN87FA111
Date & Time:	April 24, 1987, 20:30 Local	Registration:	N2005C
Aircraft:	TAYLORCRAFT F21 TC	Aircraft Damage:	Substantial
Defining Event:		Injuries:	2 Serious
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

THE FLT INSTRUCTOR AND STUDENT PLT WERE PRACTICING NIGHT TOUCH AND GO LANDINGS. FLT INSTRUCTOR REDUCED ENGINE POWER TO IDLE AFTER TAKEOFF TO SIMULATE AN ENGINE FAILURE. HE BANKED THE ACFT 'STEEPLY' TO THE LEFT AT A LOW ALTITUDE. THE ACFT STRUCK THE GROUND IN A WINGS LEVEL, NOSE LOW ATTITUDE. EXAM OF ACFT WRECKAGE REVEALED NO EVIDENCE OF A PRE-IMPACT MACHANICAL MALFUNCTION OR FAILURE OF THE ACFT. BOTH OCCUPANTS RECEIVED SERIOUS INJURIES.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

Findings

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

Findings

1. (C) MANEUVER - IMPROPER - PILOT IN COMMAND(CFI)
 2. (C) AIRSPEED - NOT MAINTAINED - PILOT IN COMMAND(CFI)
 3. (C) STALL - INADVERTENT - PILOT IN COMMAND(CFI)
 4. (C) EMERGENCY PROCEDURE - SIMULATED - PILOT IN COMMAND(CFI)
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Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: DESCENT - UNCONTROLLED

Factual Information

Pilot Information

Certificate:	Commercial; Flight instructor	Age:	25, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Right
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	Airplane single-engine	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	November 4, 1986
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	652 hours (Total, all aircraft), 60 hours (Total, this make and model), 639 hours (Pilot In Command, all aircraft), 9 hours (Last 90 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	TAYLORCRAFT	Registration:	N2005C
Model/Series:	F21 TC F21 TC	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	F1012
Landing Gear Type:	Tailwheel	Seats:	2
Date/Type of Last Inspection:	November 21, 1986 Annual	Certified Max Gross Wt.:	1500 lbs
Time Since Last Inspection:	150 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	728 Hrs	Engine Manufacturer:	LYCOMING
ELT:	Installed, not activated	Engine Model/Series:	O-235-L2C
Registered Owner:	BRISTOL ENTERPRISES INC.	Rated Power:	118 Horsepower
Operator:	BOULDER AVIATION	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:	Night/dark
Observation Facility, Elevation:	BJC ,5654 ft msl	Distance from Accident Site:	7 Nautical Miles
Observation Time:	20:45 Local	Direction from Accident Site:	180°
Lowest Cloud Condition:	Scattered / 8000 ft AGL	Visibility	50 miles
Lowest Ceiling:	Broken / 12000 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	9 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	50°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	20°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	BOULDER , CO (IVS)	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	20:00 Local	Type of Airspace:	Class G

Airport Information

Airport:		Runway Surface Type:	
Airport Elevation:	0 ft msl	Runway Surface Condition:	
Runway Used:	0	IFR Approach:	None
Runway Length/Width:	0 ft / 0 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	2 Serious	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 Serious	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC): Feith, Gregory

Additional Participating Persons: BLAIN ROBBINS; AURORA , CO

Original Publish Date: November 8, 1988

Last Revision Date:

Investigation Class: [Class](#)

Note:

Investigation Docket: <https://data.nts.gov/Docket?ProjectID=17107>

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).