



Aviation Investigation Final Report

Location:	COTTAGE GROVE, Minnesota	Accident Number:	CHI91LA167
Date & Time:	May 28, 1991, 00:24 Local	Registration:	N5172M
Aircraft:	BEECH C-23	Aircraft Damage:	Substantial
Defining Event:		Injuries:	4 Minor
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

THE PILOT AIRPLANE WAS FLYING A NIGHT CROSS COUNTRY TRIP WHEN THE ENGINE CEASED TO OPERATE. HE MADE A FORCED LANDING ONTO A RAIN SOAKER PLOWED FIELD. UPON LANDING, THE AIRPLANE ROLLED A SHORT DISTANCE AND NOSED OVER. AN ON SCENE INVESTIGATION REVEALED THAT THE FUEL TANKS WERE EMPTY.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: THE PILOT IN COMMAND'S IMPROPER PRE FLIGHT PLANNING AND PREPARATION. FACTORS CONTRIBUTING TO THIS ACCIDENT WERE THE PILOT IN COMMAND'S LACK OF FAMILIARITY WITH THE AIRPLANE AND IMPROPER FUEL CONSUMPTION CALCULATIONS.

Findings

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - NONMECHANICAL
Phase of Operation: CRUISE - NORMAL

Findings

1. FLUID,FUEL - EXHAUSTION
 2. (C) PREFLIGHT PLANNING/PREPARATION - IMPROPER - PILOT IN COMMAND
 3. (F) LACK OF FAMILIARITY WITH AIRCRAFT - PILOT IN COMMAND
 4. (F) FUEL CONSUMPTION CALCULATIONS - IMPROPER - PILOT IN COMMAND
-

Occurrence #2: FORCED LANDING
Phase of Operation: DESCENT - EMERGENCY

Findings
5. EMERGENCY PROCEDURE - PERFORMED - PILOT IN COMMAND

Occurrence #3: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER
Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings
6. TERRAIN CONDITION - SOFT

Occurrence #4: NOSE OVER
Phase of Operation: LANDING - ROLL

Factual Information

Pilot Information

Certificate:	Private	Age:	20, 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):		Toxicology Performed:	No
Medical Certification:	Class 3 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	May 7, 1990
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	
Flight Time:	74 hours (Total, all aircraft), 3 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	BEECH	Registration:	N5172M
Model/Series:	C-23 C-23	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:		Serial Number:	M-2046
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	Unknown	Certified Max Gross Wt.:	2450 lbs
Time Since Last Inspection:	0 Hrs	Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	LYCOMING
ELT:	Installed, activated	Engine Model/Series:	O-360-A4K
Registered Owner:	GENERAL AVAITION SERVICES	Rated Power:	180 Horsepower
Operator:	GENERAL AVAITION SERVICES	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/bright
Observation Facility, Elevation:	FCM ,906 ft msl	Distance from Accident Site:	25 Nautical Miles
Observation Time:	20:50 Local	Direction from Accident Site:	95°
Lowest Cloud Condition:	Scattered / 4000 ft AGL	Visibility	15 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	10 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	310°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	-18°C / -18°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	DULUTH , MN (DLH)	Type of Flight Plan Filed:	None
Destination:	EDEN PRAIRIE , MN (FCM)	Type of Clearance:	None
Departure Time:	22:22 Local	Type of Airspace:	

Airport Information

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

Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Substantial
Passenger Injuries:	3 Minor	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	4 Minor	Latitude, Longitude:	44.81034,-92.920288(est)

Administrative Information

Investigator In Charge (IIC):	Gattolin, Frank
Additional Participating Persons:	KEITH RUNYAN; MINNEAPOLIS , MN
Original Publish Date:	February 8, 1993
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=15074

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](#).