



Aviation Investigation Final Report

Location:	VANDALIA, Illinois	Accident Number:	CHI89DEV01
Date & Time:	November 7, 1988, 19:10 Local	Registration:	N93085
Aircraft:	CESSNA 152	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 None
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

THE ENG BEGAN RUNNING ROUGH APRX 5 MIN AFTER THE PLT TOOK OFF FROM AN EN ROUTE ARPT DRG A NIGHT, X-COUNTRY TRAINING FLT. HE REVERSED COURSE BACK TOWARD THE DEPARTURE ARPT WITH THE ENG PROVIDING PARTIAL POWER. WHILE MANEUVERING TO LAND ON RWY 18, THE ENG CEASED PROVIDING POWER. SUBSEQUENTLY, THE PLT MADE AN EMERGENCY LANDING IN A PLOWED FIELD APRX 1/4 MI FROM THE ARPT. DRG THE LANDING, THE NOSE GEAR DUG INTO SOFT TERRAIN & THE ACFT NOSED OVER. AN EXAM OF THE ENG REVEALED THE HOLD DOWN BOLTS FOR THE #3 CYLINDER HAD BROKEN & THE CYLINDER HAD SEPARATED FROM THE CRANK CASE.

Probable Cause and Findings

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

Findings

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - MECH FAILURE/MALF
Phase of Operation: MANEUVERING - TURN TO LANDING AREA (EMERGENCY)

Findings

1. (C) ENGINE ASSEMBLY,CYLINDER - FAILURE,TOTAL

Occurrence #2: FORCED LANDING

Phase of Operation: DESCENT - EMERGENCY

Occurrence #3: NOSE OVER

Phase of Operation: LANDING

Findings

2. (F) LIGHT CONDITION - DARK NIGHT

3. (F) TERRAIN CONDITION - SOFT

Factual Information

Pilot Information

Certificate:	Private	Age:	21,Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
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 2 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	October 24, 1988
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	156 hours (Total, all aircraft), 109 hours (Total, this make and model), 102 hours (Pilot In Command, all aircraft), 24 hours (Last 90 days, all aircraft), 6 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	CESSNA	Registration:	N93085
Model/Series:	152 152	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Utility	Serial Number:	15285396
Landing Gear Type:	Tricycle	Seats:	2
Date/Type of Last Inspection:	October 23, 1988 Unknown	Certified Max Gross Wt.:	1670 lbs
Time Since Last Inspection:	38 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	4669 Hrs	Engine Manufacturer:	LYCOMING
ELT:	Installed, activated, did not aid in locating accident	Engine Model/Series:	O-235-L2C
Registered Owner:	BELLEVUE AREA COLLEGE	Rated Power:	110 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:	Night/dark
Observation Facility, Elevation:	STL ,600 ft msl	Distance from Accident Site:	60 Nautical Miles
Observation Time:	19:50 Local	Direction from Accident Site:	255°
Lowest Cloud Condition:	Scattered / 9500 ft AGL	Visibility	15 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	10 knots / None	Turbulence Type Forecast/Actual:	/
Wind Direction:	180°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	VANDALIA (VLA)	Type of Flight Plan Filed:	VFR
Destination:	CAHOKIA (CPS)	Type of Clearance:	None
Departure Time:	18:55 Local	Type of Airspace:	Class G

Airport Information

Airport:	VANDALIA VLA	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:	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	38.980155,-89.10009(est)

Administrative Information

Investigator In Charge (IIC): Mason, Richard

Additional Participating Persons:

Original Publish Date: November 28, 1989

Last Revision Date:

Investigation Class: [Class](#)

Note:

Investigation Docket: <https://data.nts.gov/Docket?ProjectID=14222>

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](#).