



Aviation Investigation Final Report

Location:	HINCKLEY, Illinois	Accident Number:	DCA92MA048
Date & Time:	September 7, 1992, 12:40 Local	Registration:	N3657G
Aircraft:	BEECH C-45H	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	12 Fatal
Flight Conducted Under:	Part 91: General aviation - Skydiving		

Analysis

AFTER TAKEOFF, THE AIRPLANE WAS SEEN AT LOW ALTITUDE TRAILING SMOKE FROM THE LEFT ENGINE. WITNESSES SAW THE WINGS 'TIPPING' BACK AND FORTH, THEN A WING DROPPED AND HIT THE GROUND. EXAMINATION REVEALED THAT A SUPERCHARGER BEARING HAD FAILED IN THE LEFT ENGINE. THE LEFT ENGINE HAD BEEN RECENTLY INSTALLED BY NON-CERTIFICATED PERSONNEL AFTER BEING INACTIVE FOR 18 YRS WITHOUT PRESERVATION. THE AIRPLANE HAD FLOWN ABOUT 184 HRS SINCE THE LAST ANNUAL INSPECTION; NO RECORD OF SUBSEQUENT 100-HR INSPECTION. THE LEFT PROP BLADES WERE FOUND IN AN INTERMEDIATE POSITION BETWEEN THE OPERATING RANGE AND THE FEATHERED POSITION. THE LEFT PROP WAS CHANGED SEVERAL WEEKS PRIOR TO THE ACCIDENT. THERE IS NO EVIDENCE THAT THE LEFT PROP HAD EVER BEEN SUCCESSFULLY CYCLED TO THE FULL FEATHER POSITION. THE OPERATOR AND PILOTS WERE NOT AWARE OF HAMILTON STANDARD SB 657 RECOMMENDING FULL-FEATHER CHECKS EVERY 30 DAYS. LEFT PROP FEATHERING MOTOR RELAYS NOT RECOVERED. ALL 11 PARACHUTISTS WERE FOUND IN CENTER PART OF FUSELAGE; NO EVIDENCE OF RESTRAINT USEAGE.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: INADEQUATE MAINTENANCE AND INSPECTION BY THE OPERATOR WHICH RESULTED IN AN ENGINE POWER LOSS DURING THE CRITICAL TAKEOFF PHASE OF FLIGHT. IN ADDITION, THE PILOT DID NOT, OR WAS UNABLE TO, ATTAIN A FULL-FEATHER POSITION ON THE LEFT ENGINE PROPELLER, WHICH WOULD HAVE MOST LIKELY ENABLED THE AIRPLANE TO SUSTAIN MINIMUM CONTROL AIRSPEED.

Findings

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - MECH FAILURE/MALF

Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings

1. (C) ENG ASSEMBLY, BLOWER/IMPELLER/INTEGRAL SUPERCHARGER - FAILURE, TOTAL
2. (C) MAINTENANCE - INADEQUATE - COMPANY/OPERATOR MANAGEMENT
3. (C) MAINTENANCE, 100-HOUR INSPECTION - NOT PERFORMED - COMPANY/OPERATOR MANAGEMENT

Occurrence #2: FORCED LANDING

Phase of Operation: MANEUVERING - TURN TO LANDING AREA (EMERGENCY)

Findings

4. MAINTENANCE, SERVICE BULLETIN/LETTER - NOT FOLLOWED - COMPANY/OPERATOR MANAGEMENT
5. (C) PROPELLER FEATHERING - NOT ATTAINED

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: MANEUVERING - TURN TO LANDING AREA (EMERGENCY)

Findings

6. SEAT BELT - NOT USED - PASSENGER

Factual Information

Pilot Information

Certificate:	Commercial	Age:	54, Male
Airplane Rating(s):	Single-engine land; Multi-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:	Yes
Medical Certification:	Class 2 Valid Medical--w/ waivers/lim	Last FAA Medical Exam:	April 1, 1992
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	3030 hours (Total, all aircraft), 867 hours (Total, this make and model), 2705 hours (Pilot In Command, all aircraft), 240 hours (Last 90 days, all aircraft), 190 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	BEECH	Registration:	N3657G
Model/Series:	C-45H C-45H	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	AF461
Landing Gear Type:	Retractable - Tailwheel	Seats:	2
Date/Type of Last Inspection:	April 27, 1992 Annual	Certified Max Gross Wt.:	9360 lbs
Time Since Last Inspection:		Engines:	2 Reciprocating
Airframe Total Time:	7780 Hrs	Engine Manufacturer:	P&W
ELT:	Not installed	Engine Model/Series:	R-985-AN-14B
Registered Owner:	EXA, INCORPORATED	Rated Power:	450 Horsepower
Operator:	EXA, INCORPORATED	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	DPA ,758 ft msl	Distance from Accident Site:	18 Nautical Miles
Observation Time:	12:15 Local	Direction from Accident Site:	60°
Lowest Cloud Condition:	Unknown / 3300 ft AGL	Visibility	10 miles
Lowest Ceiling:	Broken / 3300 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	12 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	180°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	28°C / 19°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	(OC2)	Type of Flight Plan Filed:	None
Destination:	(OC2)	Type of Clearance:	None
Departure Time:	00:00 Local	Type of Airspace:	Class G

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 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:	11 Fatal	Aircraft Fire:	On-ground
Ground Injuries:	N/A	Aircraft Explosion:	On-ground
Total Injuries:	12 Fatal	Latitude, Longitude:	41.760795,-88.640335(est)

Administrative Information

Investigator In Charge (IIC): Macintosh, Robert

Additional Participating Persons:

Original Publish Date: November 30, 1993

Last Revision Date:

Investigation Class: [Class](#)

Note:

Investigation Docket: <https://data.nts.gov/Docket?ProjectID=15957>

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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](#).