



National Transportation Safety Board Aviation Accident Final Report

Location:	FRENCHTOWN, NJ	Accident Number:	NYC90FA040
Date & Time:	12/21/1989, 1035 EST	Registration:	N6894Y
Aircraft:	PIPER PA-60-602P	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	1 Fatal

Flight Conducted Under: Part 91: General Aviation - Business

Analysis

ON JANUARY 16, 1989, MACHEN NACELLE MOUNTED INDUCTION AIR INTERCOOLERS WERE INSTALLED ON N6894Y. ON DECEMBER 14, 1989, AN ANNUAL INSPECTION WAS PERFORMED, AND A MACHEN SUPERSTAR I-680 KIT WAS INSTALLED. ON DECEMBER 21, 1989, N6894Y WAS AT 6000 FEET WHEN THE PILOT REPORTED A PROBLEM WITH THE RIGHT ENGINE. THE PILOT REPORTED A FIRE IN THE RIGHT ENGINE. A COUPLE OF MINUTES LATER, HE RADIOED HE COULD NOT SHUT DOWN THE RIGHT ENGINE. AT 1034:37 THE PILOT ADVISED HIS 'RIGHT ENGINE JUST TORE OFF' AND THAT HE WAS 'IN A SPIN HEADING DOWN.' THE EXHAUST TAILPIPE OF THE LEFT TURBOCHARGER ON THE RIGHT ENGINE WAS FOUND TO HAVE SEPARATED. METALLURGICAL EXAMINATION REVEALED THE TAILPIPE FAILED DUE TO FATIGUE CRACKING. RECORDS SHOWED THAT PART I OF PIPER SERVICE BULLETIN 920 (ENGINE TAILPIPE INSPECTION) HAD BEEN COMPLETED, WHILE PART II (ADDITION OF FIRE DETECTION SYSTEM) HAD NOT BEEN ACCOMPLISHED DUE TO THE LACK OF AVAILABLE KITS.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: THE INADEQUATE MAINTENANCE AND INSPECTION OF THE TURBOCHARGER TAILPIPE EXHAUST STACK ON THE RIGHT ENGINE BY THE MECHANIC(S). THE FAILURE OF THE TAILPIPE PERMITTED HEAT FROM THE EXHAUST TO WEAKEN THE MAIN SPAR OF THE RIGHT WING RESULTING IN A CATASTROPHIC FAILURE.

Findings

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION

Phase of Operation: CRUISE - NORMAL

Findings

1. (C) EXHAUST SYSTEM,STACK - SEPARATION
2. (C) MAINTENANCE,ANNUAL INSPECTION - INADEQUATE - OTHER MAINTENANCE PERSONNEL

Occurrence #2: FIRE

Phase of Operation: CRUISE - NORMAL

Findings

3. WING,SPAR - FAILURE,TOTAL

Occurrence #3: LOSS OF CONTROL - IN FLIGHT

Phase of Operation: DESCENT - EMERGENCY

Occurrence #4: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: DESCENT - UNCONTROLLED

Factual Information

Pilot Information

Certificate:	Private	Age:	45, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Unknown
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):		Toxicology Performed:	Yes
Medical Certification:	Class 3 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	10/24/1989
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	2061 hours (Total, all aircraft), 312 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	PIPER	Registration:	N6894Y
Model/Series:	PA-60-602P PA-60-602P	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:		Serial Number:	62P0909816
Landing Gear Type:	Retractable - Tricycle	Seats:	6
Date/Type of Last Inspection:	Unknown	Certified Max Gross Wt.:	6000 lbs
Time Since Last Inspection:	0 Hours	Engines:	2 Reciprocating
Airframe Total Time:		Engine Manufacturer:	LYCOMING
ELT:	Installed	Engine Model/Series:	IO-540
Registered Owner:		Rated Power:	250 hp
Operator:	WALTER V. WICKER, JR	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument Conditions	Condition of Light:	Day
Observation Facility, Elevation:	ABE, 394 ft msl	Distance from Accident Site:	15 Nautical Miles
Observation Time:	1040 EST	Direction from Accident Site:	300°
Lowest Cloud Condition:	Partial Obscuration / 0 ft agl	Visibility	3 Miles
Lowest Ceiling:	Broken / 3000 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	11 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	290°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	-18°C / -18°C
Precipitation and Obscuration:			
Departure Point:	TETERBORO, NJ (TEB)	Type of Flight Plan Filed:	IFR
Destination:	READING, PA (RDG)	Type of Clearance:	IFR
Departure Time:	1015 EST	Type of Airspace:	

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:	N/A	Aircraft Fire:	In-Flight
Ground Injuries:	N/A	Aircraft Explosion:	In-Flight
Total Injuries:	1 Fatal	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC):	CHAUNCEY D TWINE, JR.	Report Date:	02/14/1994
Additional Participating Persons:	THOMAS E WERNER WILLIAM SNYDER LEWIS MASON JAMES R STABLEY		
Publish Date:			
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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The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).