



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	MANSFIELD, OH	<b>Accident Number:</b>	ATL88FA052
<b>Date &amp; Time:</b>	12/03/1987, 2159 EST	<b>Registration:</b>	N500TS
<b>Aircraft:</b>	PIPER PA-60-600	<b>Aircraft Damage:</b>	Destroyed
<b>Defining Event:</b>		<b>Injuries:</b>	1 Serious
<b>Flight Conducted Under:</b>	Part 135: Air Taxi & Commuter - Non-scheduled		

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## Analysis

THE PILOT DEPARTED LOUISVILLE, KY REPORTEDLY WITH A KNOWN OIL LEAK IN THE RIGHT ENGINE AND WAS ON THE SECOND LEG OF AN ON-DEMAND AIR TAXI CARGO FLIGHT. ABOUT 14 MINUTES AFTER ENTERING MANSFIELD APPROACH CONTROL AIRSPACE, THE PILOT REQUESTED AND RECEIVED AN ALTITUDE CHANGE FROM 5,000 TO 3,000 FT BECAUSE HE 'WAS PICKING UP A LOT OF ICE.' AFTER ENTERING CLEVELAND APPROACH AIRSPACE HE REPORTED THE RIGHT ENGINE HAD FAILED AND REQUESTED TO RETURN TO MANSFIELD. THE PILOT WAS INFORMED OF MANSFIELD WEATHER. HE THEN INDICATED HE WANTED TO TRY CLEVELAND, THEN REPORTED HE COULD NOT MAINTAIN ALTITUDE AND WANTED TO GO TO MANSFIELD. THE PILOT WAS RECEIVING VECTORS FROM MANSFIELD FOR AN ASR APPROACH TO RUNWAY 23 AND AT ABOUT 1 1/2 MILES FROM THE THRESHOLD THE PILOT REPORTED HE WAS LOWERING THE LANDING GEAR. THE AIRCRAFT THEN DISAPPEARED FROM THE RADAR SCOPE. INVESTIGATION REVEALED IMPROPER WELD REPAIRS TO THE RIGHT ENGINE CASE AND SEPARATION OF THE NUMBER SIX CYLINDER FROM THE CASE DUE TO FATIGUE CRACKING IN THE THROUGH BOLTS AND STUDS.

## Probable Cause and Findings

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

## Findings

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Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - MECH FAILURE/MALF  
Phase of Operation: CRUISE - NORMAL

### Findings

1. 1 ENGINE - FAILURE,TOTAL
2. ENGINE ASSEMBLY,CRANKCASE - CRACKED
3. (C) MAINTENANCE,MAJOR REPAIR - IMPROPER - OTHER MAINTENANCE PERSONNEL
4. (C) ENGINE ASSEMBLY,OTHER - FATIGUE
5. (C) ENGINE ASSEMBLY,CYLINDER - SEPARATION
6. (F) OPERATION WITH KNOWN DEFICIENCIES IN EQUIPMENT - CONTINUED - PILOT IN COMMAND
7. (F) COMPANY-INDUCED PRESSURE - PILOT IN COMMAND

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Occurrence #2: IN FLIGHT COLLISION WITH OBJECT  
Phase of Operation: APPROACH - FAF/OUTER MARKER TO THRESHOLD (IFR)

### Findings

8. (F) OBJECT - TREE(S)
9. (F) WEATHER CONDITION - ICING CONDITIONS
10. (F) WEATHER CONDITION - BELOW APPROACH/LANDING MINIMUMS
11. (F) LIGHT CONDITION - DARK NIGHT
12. (C) IN-FLIGHT PLANNING/DECISION - DELAYED - PILOT IN COMMAND

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Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER  
Phase of Operation: DESCENT - UNCONTROLLED

## Factual Information

### Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	49, Male
<b>Airplane Rating(s):</b>	Multi-engine Land; Single-engine Land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	Seatbelt
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	Airplane Multi-engine; Airplane Single-engine; Instrument Airplane	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2 Valid Medical--no waivers/lim.	<b>Last FAA Medical Exam:</b>	07/08/1987
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	6870 hours (Total, all aircraft), 1170 hours (Total, this make and model), 6370 hours (Pilot In Command, all aircraft), 337 hours (Last 90 days, all aircraft), 7 hours (Last 24 hours, all aircraft)		

### Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	PIPER	<b>Registration:</b>	N500TS
<b>Model/Series:</b>	PA-60-600 PA-60-600	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	No
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	60500162
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	11/14/1987, AAIP	<b>Certified Max Gross Wt.:</b>	5500 lbs
<b>Time Since Last Inspection:</b>	67 Hours	<b>Engines:</b>	2 Reciprocating
<b>Airframe Total Time:</b>	5176 Hours	<b>Engine Manufacturer:</b>	LYCOMING
<b>ELT:</b>	Installed, activated, did not aid in locating accident	<b>Engine Model/Series:</b>	IO-540-K1J5
<b>Registered Owner:</b>	TRI-STAR	<b>Rated Power:</b>	290 hp
<b>Operator:</b>	AIR CONTINENTAL, INC.	<b>Operating Certificate(s) Held:</b>	On-demand Air Taxi (135)
<b>Operator Does Business As:</b>		<b>Operator Designator Code:</b>	DRNA

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument Conditions	Condition of Light:	Night/Dark
Observation Facility, Elevation:	MFD, 1297 ft msl	Distance from Accident Site:	1 Nautical Miles
Observation Time:	2150 EST	Direction from Accident Site:	230°
Lowest Cloud Condition:	Unknown / 0 ft agl	Visibility	0 Miles
Lowest Ceiling:	Obscured / 0 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	4 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	310°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	0° C / 0° C
Precipitation and Obscuration:			
Departure Point:	CINCINNATI, OH (LUK)	Type of Flight Plan Filed:	IFR
Destination:	CLEVELAND, OH (CLE)	Type of Clearance:	IFR
Departure Time:	2110 EST	Type of Airspace:	

## Airport Information

Airport:	MANSFIELD LAHM MUNICIPAL (MFD)	Runway Surface Type:	Asphalt
Airport Elevation:	1297 ft	Runway Surface Condition:	Dry
Runway Used:	23	IFR Approach:	ASR
Runway Length/Width:	6795 ft / 150 ft	VFR Approach/Landing:	None

## Wreckage and Impact Information

Crew Injuries:	1 Serious	Aircraft Damage:	Destroyed
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Serious	Latitude, Longitude:	

## Administrative Information

Investigator In Charge (IIC):	WALTER G STINER	Report Date:	12/27/1988
Additional Participating Persons:	ROBERT BOOB; VERO BEACH, FL JAMES R STABLEY; WILLIAMSPORT, PA GARY R KROMER THOMAS J DUDDY; WILLIAMSPORT, PA		
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 <a href="mailto:pubinquiry@ntsb.gov">pubinquiry@ntsb.gov</a> , or at 800-877-6799. Dockets released after this date are available at <a href="http://dms.nts.gov/pubdms/">http://dms.nts.gov/pubdms/</a> .		

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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](#).