



# Aviation Investigation Final Report

<b>Location:</b>	CATALINA, California	<b>Accident Number:</b>	LAX87LA184
<b>Date &amp; Time:</b>	April 19, 1987, 19:00 Local	<b>Registration:</b>	N5596P
<b>Aircraft:</b>	PIPER PA-24-250	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	3 Minor, 1 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

## Analysis

JUST AFTER TAKEOFF, THE PLT STATED THAT HE HEARD A LOUD BANG. THE ACFT BEGAN TO VIBRATE SEVERELY WITH THE ENGINE DEVELOPING PARTIAL POWER. THE ACFT WOULD NOT CLIMB AND THE PLT WAS ABLE TO MAINTAIN 100 FPM DESCENT. UNABLE TO RETURN TO THE ARPT, THE PLT DITCHED THE ACFT IN THE OCEAN. INSPECTION OF THE PROPELLER BLADES EXHIBITED LEADING EDGE DAMAGE ALONG THE OUTBOARD 4-5 INCHES WITH SOME POLISHING OF THE CAMBERED SIDE. ONE BLADE WAS BENT FORWARD AND MISSING APRX 4 INCHES OF THE TIP. APRX ONE INCH FURTHER WAS A GOUGE ON THE LEADING EDGE. THE OTHER BLADE WAS BENT REARWARD. ON THE LEADING EDGE APRX 4 INCHES FROM THE TIP WAS A GOUGE AND CRACK APRX ONE INCH LONG. THE ENGINE CONTAINED A CONSIDERABLE AMOUNT OF RUST AND CORROSION FROM BEING IN CONTACT WITH SALT WATER. NO OTHER MECHANICAL FAILURE OR MALFUNCTIONS COULD BE NOTED.

## Probable Cause and Findings

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

### Findings

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION  
Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings

1. (C) PROPELLER SYSTEM/ACCESSORIES, BLADE - SEPARATION
2. (C) PROPELLER SYSTEM/ACCESSORIES, BLADE - PREVIOUS DAMAGE

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Occurrence #2: FORCED LANDING

Phase of Operation: DESCENT - EMERGENCY

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Occurrence #3: DITCHING

Phase of Operation: LANDING - FLARE/TOUCHDOWN

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Occurrence #4: ON GROUND/WATER COLLISION WITH OBJECT

Phase of Operation: LANDING - ROLL

Findings

3. (F) OBJECT - SUBMERGED OBJECT

## Factual Information

### Pilot Information

<b>Certificate:</b>	Airline transport; Commercial; Flight instructor	<b>Age:</b>	38, Male
<b>Airplane Rating(s):</b>	Single-engine land; Multi-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	Helicopter	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Airplane; Helicopter	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	Airplane multi-engine; Airplane single-engine	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 1 Valid Medical--no waivers/lim.	<b>Last FAA Medical Exam:</b>	April 30, 1986
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	3500 hours (Total, all aircraft), 275 hours (Total, this make and model)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	PIPER	<b>Registration:</b>	N5596P
<b>Model/Series:</b>	PA-24-250 PA-24-250	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	24-663
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	4
<b>Date/Type of Last Inspection:</b>	December 17, 1986 Annual	<b>Certified Max Gross Wt.:</b>	2800 lbs
<b>Time Since Last Inspection:</b>	11 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	3819 Hrs	<b>Engine Manufacturer:</b>	LYCOMING
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	O-540-A1A5
<b>Registered Owner:</b>	THOMAS ARMSTRONG	<b>Rated Power:</b>	250 Horsepower
<b>Operator:</b>		<b>Operating Certificate(s) Held:</b>	None
<b>Operator Does Business As:</b>		<b>Operator Designator Code:</b>	

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	LGB ,57 ft msl	<b>Distance from Accident Site:</b>	30 Nautical Miles
<b>Observation Time:</b>	19:00 Local	<b>Direction from Accident Site:</b>	34°
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	15 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	8 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	270°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	29 inches Hg	<b>Temperature/Dew Point:</b>	20°C / 3°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	CATALINA , CA (AVX )	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	TORRANCE , CA (TOA )	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	18:45 Local	<b>Type of Airspace:</b>	Class G

## Airport Information

<b>Airport:</b>		<b>Runway Surface Type:</b>	Water
<b>Airport Elevation:</b>	0 ft msl	<b>Runway Surface Condition:</b>	Water-calm
<b>Runway Used:</b>	0	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	0 ft / 0 ft	<b>VFR Approach/Landing:</b>	Forced landing

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	3 Minor	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	3 Minor, 1 None	<b>Latitude, Longitude:</b>	33.380451,-118.449806(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Eckrote, Debra
<b>Additional Participating Persons:</b>	ALFRED RUGGERI; LONG BEACH , CA
<b>Original Publish Date:</b>	March 10, 1988
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	
<b>Investigation Docket:</b>	<a href="https://data.ntsb.gov/Docket?ProjectID=25571">https://data.ntsb.gov/Docket?ProjectID=25571</a>

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](#).