



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	Hilo, HI	<b>Accident Number:</b>	LAX00FA310
<b>Date &amp; Time:</b>	08/25/2000, 1735 HST	<b>Registration:</b>	N923BA
<b>Aircraft:</b>	Piper PA-31-350	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	1 Fatal, 8 Minor
<b>Flight Conducted Under:</b>	Part 135: Air Taxi & Commuter - Non-scheduled - Sightseeing		

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## Analysis

The pilot ditched the twin engine airplane in the Pacific ocean after experiencing a loss of engine power and an in-flight engine fire while in cruise flight. The flight was operating at 1,000 feet msl, when the pilot noticed a loss of engine power in the right engine. At the same time the pilot was noticing the power loss, passengers noted a fire coming from the right engine cowling. The pilot secured the right engine and feathered the propeller. He attempted to land the airplane at a nearby airport; however, when he realized that the airplane was unable to maintain altitude he elected to ditch the airplane in the ocean. Prior to executing the forced landing, the pilot instructed the passengers to don their life jackets and assume the crash position. After touchdown, all but one passenger exited the airplane through the main cabin and pilot doors. It was reported that the remaining passenger was frightened, and could not swim. One survivor saw the remaining passenger sitting in the seat with the seat belt still secured and the life vest inflated. The pilot and passengers were then rescued from the ocean via rescue helicopter and boat. Postaccident examination of the airplane revealed that the right engine's oil converter plate gasket had deteriorated and extruded from behind the converter plate, allowing oil to spray in the accessory section and resulting in the subsequent engine fire. The engine manufacturer had previously issued a mandatory service bulletin (MSB) requiring inspection of the gasket every 50 hours for evidence of gasket extrusion around the cover plate or oil leakage. Maintenance records revealed that the inspection had been conducted 18.3 hours prior to the accident. At the time of the accident, the right engine had accumulated 386.8 hours since its last overhaul, and gasket replacement. The MSB was issued one month prior to the accident, after the manufacturer received reports of certain oil filter converter plate gaskets extruding around the oil filter converter plate. The protruding or swelling of the gasket allowed oil to leak and spray from between the plate and the accessory housing. A series of tests were conducted on exemplar gaskets by submerging them in engine oil heated to 245 degrees F; after about 290 hours, the gasket material displayed signs of deterioration similar to that of the accident gasket. A subsequent investigation revealed that the engine manufacturer had recently changed gasket suppliers, which resulted in a shipment of gaskets getting into the supply chain that did not meet specifications. As a result of this accident, the engine manufacturer revised the MSB to require the replacement of the gasket every 50 hours. The FAA followed suit and issued an airworthiness directive to mandate the replacement of the

gasket every 50 hours.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: Deterioration and failure of the oil filter converter plate gasket, which resulted in a loss of engine power and a subsequent in-flight fire.

### Findings

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

#### Findings

1. 1 ENGINE - FAILURE,PARTIAL
2. (C) LUBRICATING SYSTEM,OIL GASKET - INADEQUATE
3. (C) MATERIAL INADEQUATE - SUPPLIER/DISTRIBUTOR OF PARTS
4. (F) INADEQUATE SURVEILLANCE,INADEQUATE PROCEDURE - MANUFACTURER
5. (C) LUBRICATING SYSTEM,OIL GASKET - DETERIORATED
6. (C) LUBRICATING SYSTEM,OIL GASKET - FAILURE
7. FLUID,OIL - LEAK
8. ENGINE COMPARTMENT - FIRE

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Occurrence #2: FORCED LANDING  
Phase of Operation: DESCENT - EMERGENCY

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Occurrence #3: DITCHING  
Phase of Operation: EMERGENCY LANDING

#### Findings

9. AIRCRAFT PERFORMANCE,ENGINE OUT CAPABILITY - EXCEEDED
10. ALTITUDE - NOT MAINTAINED

## Factual Information

### HISTORY OF FLIGHT

On August 25, 2000, at 1735 Hawaiian standard time, a Piper PA-31-350 twin engine airplane, N923BA, operated as Big Island Air flight number BI 57, was substantially damaged during an emergency ditching in the Pacific Ocean following a loss of engine power while in cruise flight. The pilot was attempting to land at the Hilo International Airport, Hilo, Hawaii, when the ditching occurred. One passenger received fatal injuries, while the commercial pilot and remaining 7 passengers received minor injuries. Big Island Air, Inc., was operating the airplane as a nonscheduled sightseeing tour under 14 CFR Part 135, when the accident occurred. The local flight originated from Kailua-Kona, Hawaii, at 1700, and was en route to the Hilo area with a planned return to Kona, without landing at Hilo. Visual meteorological conditions prevailed at the time of the accident and a visual flight rules flight plan was filed and activated.

The pilot reported that he was at 1,000 feet mean sea level (msl) near Laupahoehoe, Hawaii, when he felt the airplane yaw to the right, and noted that the right engine's manifold pressure had dropped to about 25 inches. He immediately switched from the right main fuel tank to the right auxiliary fuel tank and turned on the fuel boost pump. He then moved the throttles, propellers, and mixture controls full forward, and identified the right engine was not producing thrust. He shutdown the right engine by reducing the throttle to idle, bringing the mixture control into idle cutoff, and then by moving the propeller control into the feather position. He noted, however, that the right propeller continued to rotate intermittently after shutdown.

At the same time the pilot noted the power loss, at least two passengers indicated to him that a fire was visible through the louvers on the right engine cowling. The pilot announced that they were going to land at the Hilo International Airport (ITO), which was 23 miles ahead.

As the airplane deviated toward Hilo, the pilot noted that with the airspeed at blue line (Vyse) he was unable to maintain altitude. The airplane continued to descend between 100 and 50 feet per minute. He checked to ensure that the cowl flaps were closed on both engines, and noted that the left engine was producing 41.5 inches of manifold pressure with the left propeller in the full forward position.

Considering the distance to the airport, the pilot estimated that he would not be able to reach land or the airport. He then instructed the passengers to don their life vests and briefed them to prepare for ditching. He made MAYDAY distress calls to the ITO control tower and to the Honolulu Flight Service Station. He also set the transponder to squawk 7700.

About 250 feet msl and 5 miles from the airport, the pilot began configuring the airplane for ditching. He slowed the airplane and gradually added full flaps, keeping full power on the left engine. He felt the tail of the airplane touch the water; followed by a jolt that momentarily stunned him. When he fully regained his senses, the water in the cockpit was already chest high. He opened the left pilot door and noticed the right front seat passenger climbed across him and exited first.

After exiting, the pilot moved to the rear main cabin door (located on the left side of the cabin) to assist the passengers. The right front seat passenger remained by the left cockpit door to assist any passengers who might be using that exit.

A passenger reported that water pressure against the right emergency window exit prevented its use. The airplane began to take on water immediately upon landing. As the nose sank first, the airplane began a gradual roll to the right, disappearing below the water within 60 seconds. The pilot attempted to dive below the water to check for any remaining passengers but reported that the murky water restricted his vision.

The pilot signaled for the passengers to remain in a group and within about 15 minutes a Hilo fire department helicopter and rescue personnel were on the scene. One passenger was determined to be missing and an unsuccessful search was initiated. Subsequently, the missing passenger was located in the airplane.

The following day the airplane was located by U.S. Coast Guard sonar under 80 feet of water. The site was 3.1 miles from ITO and on a 123-degree magnetic bearing to the airport. The airplane was recovered on August 27, 2000, and secured in the Civil Air Patrol hangar at ITO.

#### PERSONNEL INFORMATION

The commercial pilot held ratings in single engine land, multiengine land, and instrument airplanes. He also held a flight instructor rating for single engine airplane. He was issued a first-class medical certificate on July 7, 2000, with no limitations. According to the Pilot/Operator Aircraft Accident Report that the pilot submitted, he reported having accumulated a total of 2,067 hours of flight time, of which 1,096 hours were accumulated in multiengine airplanes.

According to Big Island Air records, the pilot was hired on September 13, 1999, and underwent basic indoctrination, ground instruction, flight instruction, and general emergency training between September 15, and 21, 1999. The pilot passed the FAR Part 135 Airman Competency/Proficiency Check on September 21, 1999. The pilot accumulated approximately 465.3 hours in the PA-31-350 after he became a line pilot for Big Island Air.

#### METEOROLOGICAL INFORMATION

At 1753, the Hilo, Hawaii, weather observation facility reported the wind from 080 degrees at 8 knots; visibility 10 statute miles; a few clouds at 2,300 feet agl; temperature 26 degrees Celsius; dew point 21 degrees Celsius; and an altimeter setting of 30.00 inches of mercury.

#### AIRCRAFT INFORMATION

The twin engine Piper Chieftain airplane was powered by two TEXTRON Lycoming 350-horsepower TIO-540-J2BD turbo-charged engines and two 3-bladed, constant-speed, full-feathering Hartzell propellers. The left engine (serial number RL-9827-61A) rotates clockwise and the right engine (serial number L-1650-68A) rotates counterclockwise as viewed from the pilot seat. Lycoming recommends an engine overhaul interval of 1,600 hours.

The propeller blade pitch is adjusted via the combination of nitrogen or air pressure, a spring, blade counterweights and governor-regulated oil pressure. The nitrogen or air pressure, spring and blade counterweight force are utilized to move the blades to the high pitch (decreased rpm) and feathered positions. The opposing governor-regulated oil pressure moves the blades to the low pitch (increased rpm) positions. Moving the propeller control lever aft decreases the propeller rpm as the propeller governor decreases the oil pressure to the hub, and the air pressure, spring, and blade counterweights move the propeller blades to the high pitch or, if selected, the feathered position.

The PA-31-350 Pilot Information Manual's (PIM) Emergency Procedures section supplies recommended procedures for coping with various types of emergencies. The recommended emergency procedures for an ENGINE FIRE IN FLIGHT are as follows:

"Fire wall fuel shutoff.....OFF  
Throttle.....Idle  
Propeller.....FEATHER  
Mixture.....Idle Cut-off  
Inoperative Engine.....Secure  
If fire persists, Airspeed.....Increase in attempt to blow out fire.  
Land at nearest suitable airport."

The ENGINE SECURING PROCEDURE (FEATHERING PROCEDURE) instructs the pilot to:

"Throttle.....close  
Propeller.....FEATHER (1000 RPM min.)  
Mixture.....IDLE CUT-OFF  
Cowl flaps.....close  
Air conditioner.....OFF  
Magneto switch.....OFF  
Emergency fuel pump.....OFF  
Fuel selector.....OFF (detent)  
Fuel boost pump CB.....pulled  
Alternator CB switch.....OFF  
Prop. Sync.....OFF  
Electrical load.....reduced  
Crossfeed.....if required."

The PIM also recommends that the pilot attain and maintain 106 knots for the best rate of climb with an engine inoperative and instructs pilots to bank the airplane approximately 5 degrees into the operative engine following an ENGINE FAILURE DURING FLIGHT (Above 76 KIAS).

Review of the accident flight's weight and balance data, supplied by the operator, indicated that they weighed the passengers and baggage and calculated a takeoff weight of 7,107 pounds and a center of gravity placement of 129.50 inches aft of datum. The operator listed the maximum takeoff weight as 7,368 pounds and indicated that the center of gravity limits at the takeoff weight was 126.50 inches aft of datum to 135.00 inches aft of datum.

The Piper Chieftain performance charts indicate that with a pressure altitude between sea level and 1,000 feet (1,500 feet to 2,700 feet density altitude) and a gross weight of 7,107 pounds, the airplane should have been able to maintain a climb of approximately 150 to 175 feet per

minute with one engine inoperative. The single engine climb performance chart stipulates that the operative engine be set at maximum climb power and the cowl flap should be open, and the inoperative engine should be feathered, the cowl flap closed, and the landing gear and flaps should be retracted. In addition, the performance chart stipulates that the pilot incorporate a 5-degree bank toward operative engine.

At the time of the accident, the aircraft had accumulated approximately 3,510.6 hours, and the engines had accumulated approximately 1,298.3 and 386.8 hours on the left and right engine respectively, since their last overhaul. The right engine underwent its last overhaul on March 10, 2000, at the Textron Lycoming overhaul facility in Williamsport, Pennsylvania.

The operator placed the accident airplane on an Approved Aircraft Inspection Program (AAIP), which consisted of eight inspections that were conducted at 50-hour intervals. At the 400-hour interval, the airplane would have undergone all eight phases of the AAIP. In each calendar year, the aircraft must complete all eight inspection phases. Therefore, if, at 1 year from the date of the first phase inspection, at least one complete cycle of phases 1 through 8 has not been completed, all remaining inspections would become due.

Review of the aircraft maintenance records revealed that the aircraft underwent inspection phase seven on August 21, 2000, or 18.3 hours prior to the accident. During the phase seven inspection, the engines underwent an oil change, which included the change of the oil filter. According to the operator's inspection criteria, the oil lines and fittings are to be examined for "leaks, security, chafing, dents, and cracks." In addition, the right engine was inspected in accordance with Lycoming Mandatory Service Bulletin (MSB) No. 543, which called for the examination of the oil filter converter plate and its gasket (part number LW-13388) every 50 hours.

Lycoming MSB No. 543 instructed the mechanic to visually inspect for evidence of oil leakage from the oil filter converter plate gasket and for evidence of the extrusion of the gasket every 50 hours. The MSB was issued on July 24, 2000, after the manufacturer received reports of certain oil filter converter plate gaskets extruding around the oil filter converter plate. The protruding or swelling of the gasket allowed oil to leak and spray from between the plate and the accessory housing. This condition resulted in a loss of engine oil and subsequent in-flight fire (NTSB Accident No. ANCOOIA063, accident date June 1, 2000). The MSB encompassed TIO-540-J2BD engine models that were new, remanufactured, or overhauled, and "were shipped [from the Lycoming factory] after January 1, 1998."

The Safety Board material's engineer assigned to ANCOOIA063, in conjunction with a material's engineer from Textron Lycoming, conducted a series of tests on new converter plate gaskets. A new converter plate gasket was subjected to Aeroshell 15W50 engine oil that was heated to 245 degrees F. After about 290 hours, the gasket material displayed signs of deterioration similar to that of the incident gasket.

Procurement personnel from Textron Lycoming contacted the manufacturer of the converter plate gaskets. A subsequent investigation revealed that the manufacturer had recently changed gasket suppliers, which resulted in variance from the required gasket specifications dictated by Textron Lycoming.

## WRECKAGE AND IMPACT INFORMATION

On August 28-30, 2000, a Safety Board investigator conducted a postaccident inspection of the airplane wreckage with a Federal Aviation Administration (FAA) inspector, and air safety investigators from Textron Lycoming and New Piper Aircraft. The airplane sustained extensive damage from the recovery process (as compared to an underwater video taken of the wreckage prior to its removal from the ocean). During the recovery process, the empennage separated from the airframe, the vertical stabilizer and rudder were crushed down, and the cockpit and cabin area sustained crushing damage in the downward direction and sections of the cabin structure were torn, exposing the interior. It was noted that the landing gear were retracted and the flaps were extended.

Investigators noted soot and fire damage extending on the bottom side of the right wing from the engine cowling area aft to the trailing edge of the flap and engine nacelle. The engine cowling was removed and it was noted that the fire damage concluded at the oil filter. A film of oil was noted over areas of the accessory section. A closer inspection of the oil filter converter plate (located behind the oil filter) revealed the extruded remains of the oil filter converter plate gasket. The oil filter was found safety wired and secure along with the converter plate. The oil filter and its converter plate were then removed. It was noted that a 3/16-inch area of the gasket material was missing. The missing section of gasket material was situated at the 9 o'clock position, as viewed looking at the rear of the engine. The remaining gasket material appeared swollen and was soft and spongy to the touch, similar to the gasket found in the ANCOOIA063 incident.

The right propeller remained attached to the right engine and investigators noted that while the blades were secure in their grips, the blade angles did not correspond to a feathered position. The propeller blades were cutoff near their hubs to facilitate shipment and were sent, along with the propeller governors, to the manufacturer's facility for further examination.

#### TESTS AND RESEARCH

The propellers were examined on October 16, 2000, under the supervision of an FAA inspector. There was zero air pressure in the right propeller cylinder, but it had been relieved during the propeller removal. Air pressure was applied to the cylinder and it held air for several minutes. The pitch change mechanism was intact and operable. The low pitch and feather stops were intact and unremarkable. The preload plates were intact and unremarkable and did not display any impact markings. The counterweights and blade pitch change knobs were intact on all three blades.

Both propellers and their respective governors displayed no internal or external problems that would have prevented their operation.

#### SURVIVAL FACTORS

The airplane was configured with two forward facing seats in the cockpit and four sets (eight total) of forward facing passenger seats on either side of the cabin divided by an aisle that ran the length of the cabin. There were three exits in the aircraft; the main cabin entrance/exit door (located at the rear and left side of the cabin), the over wing emergency exit (located on the right side of the cabin), and the pilot door (located adjacent to the left side pilot seat in the cockpit).

According to the pilot, he briefed the passengers before they boarded the airplane by gathering them around the aft entry door of the airplane. He demonstrated the use of the airplane's seatbelts, the air sickness bags, emergency briefing cards, and the life vests (which were located

in the seat pocket in front of each seat). He also told them to keep their seatbelts "nice and tight," and added that they should read the briefing card regarding each exit location and its operation. He pointed out each exit and where they were located and how they operated.

The pilot reported having informed the passengers about how to don their life vests if an emergency ditching was required; however, he did not physically demonstrate the use of an actual life vest. He also stated that he informed the passengers to pull down on the red inflation tabs to inflate the vest and if that did not inflate the vest, the passengers should blow through the inflation tubes near the top of the vest. He added that he instructed the passengers that they should only inflate the life vests after they departed the airplane.

After the pilot started the engines, he informed the passengers that he would not be narrating the tour until they were at cruise altitude. He reported that he asked the passengers to review the emergency briefing card.

During the emergency, after the pilot realized that the airplane would not make it to the Hilo International Airport, he told the passengers that he wanted everyone to put on their life vests and wanted them to assume the crash positions. When the airplane touched down in the water (approximately 75 knots) the pilot felt the airplane's tail touch down in the water twice and then he felt the airplane slam into the water. He reported that he briefly "saw stars" and his vision went black for a short time. He reported that he had his lap belt and shoulder harness on for takeoff, but he released the shoulder harness during cruise flight and did not secure it prior to ditching the airplane.

After the airplane impacted the water, the pilot noticed water up to his chest. He immediately opened the pilot door and the passenger located in the right cockpit seat "flew past him" and exited through the door. The pilot released his seat belt and followed behind the passenger. The pilot then crossed over the left wing and assisted the passengers in opening the main cabin door. Once everyone (with the exception of the passenger located in the seat aft of the right cockpit seat, seat number 4) exited the airplane, the pilot kept everyone in a group in the water while they waited for rescue personnel. They then noticed that one of the passengers was missing; however, the airplane was already submerged and sinking underwater.

According to rescue effort logs, rescue personnel were informed of the distressed airplane at 1731, and were told that the airplane was headed for ITO. At 1737, rescue personnel were informed by the air traffic control personnel that the airplane would be ditching and the rescue units were diverted to the bay near Hilo. At 1746, a rescue helicopter offloaded two rescue personnel in the water near the survivors. Four of the passengers were rescued by helicopter, and the rest were rescued by boat at 1808. The pilot and passengers were taken to an onshore hazmat area where fuel and salt water were rinsed off with soap and water. They were then transported to the hospital for examination.

Five of the surviving passengers returned a Safety Board Survival Factors/Aircraft Passenger Questionnaire, which included a written statement section. One passenger did not return the questionnaire; however, he was interviewed by investigators. According to the five returned questionnaires, only one passenger reported having read the briefing card. The emergency section of the briefing card included information regarding the emergency exit locations and their operation. According to the emergency briefing card, the main cabin door, window exit, and pilot door all required persons to push out on the exit. A few of the passengers reported that the right side overwing window exit would not open due to the pressure of the water. Four



of the passengers exited through the main cabin door while four people (including the pilot) exited through the pilot's door.

One passenger reported donning her life vest over the headset that was provided for each of the passengers. Her husband, who was seated next to her, unplugged the headset because "the earphone wire was tangled in her life jacket." It was noted that the pilot did not brief the passengers to put the life vest on under the headset wires to prevent entanglement. The pilot stated that it was not standard operating procedure at Big Island Air to brief passengers regarding the headset and life jacket interface.

The husband of the passenger who died indicated that she "was not a swimmer" but he was. He added that after the airplane impacted the water, he looked at his wife and thought she looked frightened. The passenger seated in front of her said that he heard her inflate her life vest after they impacted the water. He added that once he exited the airplane he looked back and saw her sitting still, with her seatbelt still fastened, and her life vest inflated.

Review of videotape taken by aircraft recovery divers revealed that the aircraft cabin structure remained intact and displayed little or no damage. The main exit door was opened. The seats were intact and not damaged.

Life Jackets under the AAIP, are visually inspected every 30 days for physical damage and for 12-month certification date. Each life vest was to be returned to an FAA approved repair station for inspection and recertification each 12 months from the date of the last inspection marked on the life vest. It is not known when the last inspection on the life vests took place. After aircraft recovery, it was noted that one life jacket was found entangled with one of the passenger headset.

#### ADDITIONAL INFORMATION

On August 30, 2000, Textron Lycoming issued a revised MSB (MSB, No. 543A), which required the replacement of the oil filter converter plate gasket, every 50 hours. In addition, the updated MSB encompassed numerous Lycoming engine models that were suspected of having the faulty oil filter converter plate gasket installed.

On September 5, 2000, the FAA Burlington, Massachusetts, Certification Office, issued an emergency airworthiness directive (AD) requiring: "All Textron Lycoming 320, 360, 540, 541, and 720 series engines will be inspected in accordance with the Textron Lycoming's mandatory service bulletin (MSB) 543A, dated August 30, 2000, and Textron Lycoming's Service Instruction 1453, dated May 9, 1991, before further flight."

## Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	33, 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, Shoulder harness
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 1 Valid Medical--no waivers/lim.	<b>Last FAA Medical Exam:</b>	07/07/2000
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	09/21/1999
<b>Flight Time:</b>	2067 hours (Total, all aircraft), 465 hours (Total, this make and model), 1917 hours (Pilot In Command, all aircraft), 163 hours (Last 90 days, all aircraft), 64 hours (Last 30 days, all aircraft), 5 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Piper	<b>Registration:</b>	N923BA
<b>Model/Series:</b>	PA-31-350 PA-31-350	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	No
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	31-8252024
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	10
<b>Date/Type of Last Inspection:</b>	08/21/2000, AAIP	<b>Certified Max Gross Wt.:</b>	7000 lbs
<b>Time Since Last Inspection:</b>	18 Hours	<b>Engines:</b>	2 Reciprocating
<b>Airframe Total Time:</b>	3492.3 Hours as of last inspection	<b>Engine Manufacturer:</b>	Lycoming
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	TIO-540-J2BD
<b>Registered Owner:</b>	Tom Beard	<b>Rated Power:</b>	350 hp
<b>Operator:</b>	Big Island Air, Inc.	<b>Operating Certificate(s) Held:</b>	On-demand Air Taxi (135)
<b>Operator Does Business As:</b>	Big Island Air, Inc.	<b>Operator Designator Code:</b>	BIAA

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	ITO, 38 ft msl	Distance from Accident Site:	3 Nautical Miles
Observation Time:	1653 HST	Direction from Accident Site:	123°
Lowest Cloud Condition:	Scattered / 2300 ft agl	Visibility	10 Miles
Lowest Ceiling:	Broken / 3400 ft agl	Visibility (RVR):	
Wind Speed/Gusts:	12 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	80°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.08 inches Hg	Temperature/Dew Point:	26 °C / 21 °C
Precipitation and Obscuration:			
Departure Point:	Kailua-Kona, HI (KOA)	Type of Flight Plan Filed:	VFR
Destination:		Type of Clearance:	VFR
Departure Time:	1700 HST	Type of Airspace:	Class D

## Airport Information

Airport:	Hilo International (KOA)	Runway Surface Type:	Unknown
Airport Elevation:	38 ft	Runway Surface Condition:	Unknown
Runway Used:		IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	Forced Landing

## Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Substantial
Passenger Injuries:	1 Fatal, 7 Minor	Aircraft Fire:	In-Flight
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Fatal, 8 Minor	Latitude, Longitude:	19.716667, -155.033333

## Administrative Information

Investigator In Charge (IIC):	Robert R Crispin	Report Date:	04/17/2003
Additional Participating Persons:	Dennis L Noll; Federal Aviation Administration; Honolulu, HI Charles R Little; New Piper Aircraft; Chino Hills, CA Mark W Platt; Textron Lycoming; Van Nuys, CA		
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:pubinq@ntsb.gov">pubinq@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> .		

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

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](#).