



National Transportation Safety Board Aviation Accident Final Report

Location:	TAMPA, FL	Accident Number:	ATL98FA008
Date & Time:	10/27/1997, 1510 EST	Registration:	N69293
Aircraft:	Cessna 402B	Aircraft Damage:	Substantial
Defining Event:		Injuries:	3 Fatal, 1 Serious
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

The flight had departed runway 32, under IFR, from a local reliever airport 35 miles south of the destination, and was cleared to intercept the ILS approach for runway 36R. Instrument meteorological conditions existed with a low scattered cloud layer beneath the 900 foot broken clouds. Visibility was 8 miles. The flight never stabilized on the inbound course and glide slope. After acquiring the runway visually, about 3 miles from the airport, the airplane dove for the runway, subsequently touching down with the landing gear retracted. The left propeller incurred greater damage than the right propeller. The airplane began to go around, pitched up, then entered a steep left, descending turn that continued until impact with the ground.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's failure to follow the landing checklist and extend the landing gear for landing, and his failure to maintain VMC during a go-around. Factors were: the pilot's diverted attention due to a non-stabilized instrument approach and his lack of recent instrument experience.

Findings

Occurrence #1: WHEELS UP LANDING

Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings

1. (F) IFR PROCEDURE - IMPROPER - PILOT IN COMMAND
2. (F) LACK OF RECENT INSTRUMENT TIME - PILOT IN COMMAND
3. (C) CHECKLIST - NOT FOLLOWED - PILOT IN COMMAND
4. (F) DIVERTED ATTENTION - PILOT IN COMMAND
5. (C) GEAR EXTENSION - NOT PERFORMED - PILOT IN COMMAND
6. WHEELS UP LANDING - INADVERTENT - PILOT IN COMMAND

Occurrence #2: LOSS OF CONTROL - IN FLIGHT

Phase of Operation: GO-AROUND (VFR)

Findings

7. PROPELLER CONTROL - BLADE STRIKE
8. (C) AIRSPEED(VMC) - NOT MAINTAINED - PILOT IN COMMAND

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: DESCENT - UNCONTROLLED

Factual Information

HISTORY OF FLIGHT

On October 27, 1997, about 1510 eastern standard time, a Cessna 402B, N69293, collided with the ground during a go-around at the Tampa International Airport, Tampa, Florida. The airplane was operated by the pilot under the provisions of Title 14 CFR Part 91, and instrument flight rules. Instrument meteorological conditions prevailed. An instrument flight plan had been filed for the personal flight. The commercial pilot and two passengers were fatally injured, one passenger sustained serious injuries, and the airplane was substantially damaged. Origination of the flight was Sarasota, Florida, about 1451, on the same day.

At 2055 on October 26, 1997, the pilot contacted the St. Petersburg Automated Flight Service Station (AFSS) and requested an outlook weather briefing for the next day. The pilot stated he would depart Sarasota about 1000, pick up passengers at Tampa International Airport, proceed to Bowling Green, Kentucky, then continue to Danville, Illinois. The pilot contacted the AFSS again at 0614 on October 27 and requested a standard weather briefing for the same flight route. The pilot was informed of an approaching frontal passage for the Tampa, Florida area.

According to the passenger who was to be picked up at Tampa, about 0630 he and the pilot discussed the weather. The pilot elected to delay until about noon before departing Sarasota, because of the weather, and the lack of a necessity to make a hurried departure.

At 1445, N69293 contacted Sarasota Clearance Delivery and requested an instrument flight rules clearance to Tampa International Airport. According to the Air Traffic Control Chronological Summary of Flight, the pilot initially read back the clearance incorrectly. The controller reissued the clearance and the pilot read it back correctly.

The flight departed runway 32 at Sarasota, about 32 miles south of the Tampa Airport, and was cleared to intercept the localizer course for runway 36R at the Tampa Airport. During the approach, the controller at Tampa noted that the flight was aligned with the runway 36L localizer course, and issued vectors to the localizer course for 36R. The flight overshot the localizer course for 36R, and descended, prior to aligning with the localizer course.

Subsequently, the controller directed the flight to return to the minimum descent altitude and vectored the flight onto the 36R approach course. The controller also queried the pilot if he had the correct localizer frequency tuned, then provided the frequency to the pilot. The flight was descended to 1,600 feet, issued a heading to return to the 36R localizer course and advised to report the airport in sight. About three miles from the runway, the pilot was asked if the airport was in sight, to which the pilot replied negatively. The pilot was asked if he was on the localizer and the pilot responded affirmatively. A radio frequency change to the tower frequency was issued. The pilot did not contact the tower until after the local controller had made two transmissions to the flight. Ground witnesses observed the airplane in a rapid descent toward the runway. The local controller announced to the flight that the landing gear did not appear to be extended and directed a go-around. The local controller informed the flight that the airplane appeared to have contacted the runway and asked if all was well. The pilot replied that the airplane appeared to be OK. Subsequently, the airplane was observed to roll left and descend in a broad arc to impact with the ground.

PERSONNEL INFORMATION

The pilot received a commercial certificate with airplane single engine land rating on September 10, 1971. An instrument airplane rating was obtained on March 5, 1972, and a multi engine rating was obtained on July 26, 1972. A pilot log was not located, however, the pilot reported having 3,550 hours on his last request for a medical certificate, dated August 7, 1996, with 24 hours within the preceding six months. Family members reported he had flown at least 15 hours within the 90 days preceding the accident. The pilot had been flying N69293 since he purchased it in 1979. According to personnel at Sim Com International, Inc., the pilot was scheduled for the initial simulator training course in the Cessna 402 in February 1998.

The pilot held a current third class medical certificate issued on August 8, 1996. The pilot was initially denied the medical certificate because he was prescribed medication for blood pressure control. On April 21, 1997, his doctor submitted a letter to the Federal Aviation Administration (FAA) stating the pilot was in excellent condition. On June 27, 1997, the FAA validated his medical certificate. Additional information regarding the pilot is contained on page three of the Factual Report.

AIRCRAFT INFORMATION

N69293, a Cessna 402B was a seven seat, twin engine cabin class airplane. It was registered to Covington Foods, Incorporated, which was owned by the pilot. According to the airplane log, an annual inspection was completed on October 16, 1997. The last altimeter, static system, and transponder inspections recorded in the airplane log were dated November 11, 1992. The airplane log indicated that the airplane had 3616.6 hours total time in service, as of October 16, 1997, at a Hobbs meter reading of 2943.8 hours. According to the log, the airplane had 99.1 hours since the previous annual inspection. By reference to the hour meter at the accident site (2949.4 hours) the airplane had operated six hours since the last annual inspection. According to the engine logs, on October 16, 1997, both engines had 523.4 hours since remanufacture.

According to fuel records obtained from Jones Aviation in Sarasota, Florida, the airplane was fueled on October 19, 1997, with 54.2 gallons of 100LL gasoline. The records also indicated that the pilot paid for eight days of transient overnight parking. According to the fixed base operator, the 54.2 gallons filled the airplane to capacity, and the airplane had not flown since its refueling on the 19th.

The last weight and balance revision for the airplane was done on May 23, 1996, according to the airplane log. A copy of the last revision is attached.

Using the latest weight and balance revision, the Owner's Manual for the airplane, weights provided by the medical examiner's office, and the standard FAA passenger weight, the weight and balance of the airplane, at the time of the accident was calculated as follows:

Weight	Arm	Moment	Empty weight
4509.40	161.48	728180.11	Oil 49.00
	5600	Seat 1 and 2 396.00	
	5400	Seat 3 188.00	
	3400	Seat 6 170.00	
3700 Main tank fuel	600.00		91200 Aux
tanks fuel	378.00		60200 Weighed
luggage	Nose 100.00		7100 Bay A
309.00		80600	
Total	6699.40	1099080.11	

Fuel burned	-120.00		-26000.00
Total	6579.40	163.11	1073180.11

Two golf bags, clubs, laptop computer and two personal bags found along the debris trail were calculated in the weight and balance as having been in the nose baggage area, while the remaining baggage found in the rear of the airplane was calculated as having been in Bay A. According to the Type Certificate Data Sheet, the maximum takeoff weight for the airplane is 6,300 pounds, and the maximum landing weight is 6,200 pounds. The center of gravity limits at 6,300 pounds is 150.8 to 159.7 inches aft of datum. Additional airplane information is contained in this report on page 2, under the section titled Aircraft Information.

METEOROLOGICAL INFORMATION

The meteorological report for Tampa International Airport on October 27, 1997, at 1520 was wind 360 degrees at three knots; visibility eight statute miles in light rain; sky 500 feet scattered, 900 feet broken, 3,000 feet overcast; temperature/dew point 22/21 degrees centigrade; and altimeter setting 29.91 inches of Hg. The remarks indicated that the rain began at 8 minutes past the hour and that the ceiling was 700 variable to 1100 feet. The hourly weather report prior to the accident, at 1456, indicated the wind was 300 degrees at three knots; visibility 10 statute miles; sky few clouds at 900 feet, broken clouds at 1,500 feet, and overcast clouds at 3,000 feet; temperature/dew point was 22/21 degrees centigrade; and the altimeter setting was 29.90 inches of Hg. Additional meteorological information is contained in this report on page 4, under the section titled Weather Information.

AIDS TO NAVIGATION

FAA Airways Facilities personnel inspected the Runway 36R Localizer signal monitors following the accident. The signal was found to be within the operating tolerances (Report Attached).

AIRPORT INFORMATION

Tampa International Airport, Tampa Florida, had an airport elevation of 27 feet. There were three runways, 09-27 that intersected with runway 36 Right/18 Left, and parallel runways 36 Right/18 Left and 36 Left/18 Right. Runway 36 Right was 8,300 feet long by 150 feet wide. The runway surface was asphalt/concrete and was grooved. It was equipped with a 4-box Visual Approach Slope Indicator on the left side and was serviced by an Instrument Landing System.

WRECKAGE AND IMPACT INFORMATION

Runway 36 Right was examined following the accident, in the vicinity where air traffic controllers stated they believed the airplane touched down. A Very High Frequency VHF whip antenna was found near the reported location, by airport police, that matched the color of the antenna stub on the airplane. Slash marks were found in the runway, located about 3,500 feet from the approach end of runway 36 Right. The slash marks continued for a total distance of about 66 feet.

The airplane impacted in an unused portion of the airport about 1/4 mile northwest of the departure threshold of runway 36R. The area was thickly grown with Palmetto plants that were three to five feet tall, and the soil was fine sand. The debris trail was about 45 yards long along a magnetic heading of 240 degrees. The debris trail led to the main wreckage, that came to rest adjacent to a service road. The service road proceeded north from the airport terminal,

between the parallel north runways. The entire debris trail exhibited burned and browned foliage, and burned soil.

The initial ground scar contained the left tip tank vent with no evidence of burning. Burned vegetation, and dirt, led to the remains of the left tip or main fuel tank. About 18 feet southwest of the initial ground scar, the left propeller was partially buried. One of the nose baggage doors and windshield material was found about 18 feet southwest of the left propeller. The right propeller was found, partially buried, about 9 feet southwest of the windshield material. The right tip or main fuel tank was found about 18 feet further southwest of the right propeller, broken into three main pieces. Burned soil and vegetation surrounded the right tip or main fuel tank debris.

Both propellers were found with the spinners down, into the soil. Both spinners were crushed directly aft and molded around the prop dome. The left propeller blade tips were curled, one aft and two forward. All three blades of the left propeller exhibited a patterned abrasion at the tip consistent with rotational contact with concrete. The blades of the right propeller exhibited a similar abrasion, to a lesser degree. All blades of both propellers exhibited extensive fine polishing of the leading edges along the length of their span.

The nose of the airplane was crushed aft, with the top of the airplane crushed aft along the longitudinal axis of the airplane exposing the pilots seats. The two pilot's seats, the left aft facing seat behind the left pilot's seat, and the right seat in the third row had damage consistent with having been occupied. The occupants' locations were confirmed by Tampa Airport police officers. Personal luggage that was not found along the debris trail was found in the rear baggage area of the airplane. The luggage was transported to the airport police station and weighed (see weight and balance data above). The remainder of the fuselage was connected and was not breached. The cabin door was open. Soot coated the left side of the fuselage from the wing leading edge to the trailing edge of the cabin door. There was heat bubbled paint and scorching of the exterior of the top of the cabin. Antennas on the belly had been ground off.

There was little impact damage to the vertical stabilizer. The right side of the vertical stabilizer exhibited non patterned sooting. The rudder and rudder tab were forced to the right with concurrent bending damage to the right sides of the rudder and vertical stabilizer, respectively. The top trailing edge, about 18 inches, of the rudder was bent sharply toward the left. The horizontal stabilizer was nearly separated from the fuselage, but remained in place. The elevator was forced down about 90 degrees.

The left tip or main fuel tank was separated from the wing and found along the debris trail, as stated above. The left wing between the tip tank rib and the engine was bent up and aft. There was general sooting and charring of the left wing upper surfaces. The landing gear supports were broken. The flaps were retracted and there were no scrapes on the underside of the flaps.

The left engine was separated from the wing and found inverted laying forward of the right wing. The left turbocharger was attached to the wing.

The right tip or main fuel tank was separated from the wing and found along the debris trail, as noted above. The right wing retained its shape but exhibited chordwise crippling along its span. The leading edge of the right wing was flattened chordwise, outboard of the engine. The right wing was sooted and charred at the tip and along the trailing edge starting about two feet outboard of the engine and continuing to the tip. The right engine remained attached to the wing by the cables only. It was laying partially on the wing leading edge with the accessory

section resting on the ground.

Both turbo chargers exhibited scraping of the turbine scroll. The right turbo charger also had evidence of scraping of the compressor scroll. The left turbo charger exhaust at the controller had circumferential blow out under the stack collar.

The emergency locator transmitter (ELT) signal was heard by air traffic personnel.

The left front seat, or pilot's seat, was burned on the front of the seat pan. The upper right hand corner of the seat was deformed aft. The back support structure was fractured. The seat rails were partially deformed and the seat was separated from the pedestal clevis. The shoulder harness and seat belt were stretched.

The right front seat was burned from forward center to the top right of the seat back. The seat rails were pulled out of the pedestal clevis. The shoulder harness was partially burned and the seat belt was stretched. The plastic collar on the belt interlock knob was partially melted and discolored brown.

Seat 1A was an aft facing seat. The right side of the seat back was bent forward. The seat pan legs collapsed and broke off toward the front of the airplane. The seat belt was stretched.

Seat 2B was a forward facing seat. The seat pan legs were broken toward the rear of the airplane. The seat belt was connected, stretched and cut by rescue personnel.

Examination of the landing gear gearbox revealed that the push rods were in the gear extended position. There was continuity of the flight controls from the cockpit to the flight control surfaces.

MEDICAL AND PATHOLOGICAL INFORMATION

A post mortem examination of the pilot was conducted by the Hillsborough County Florida Medical Examiner Department. Toxicological examinations of the pilot were conducted by the FAA Toxicology Research Laboratory. The examinations did not detect ethanol, drugs, cyanide, or carboxyhemoglobin.

TESTS AND RESEARCH

The engines, Continental TSIO-520-EB serial numbers 271205-R and 271203-R, left and right respectively, were shipped to the manufacturer's facility at Mobile, Alabama. They were disassembled and inspected on February 24, 1998. A report of the examination findings is attached. No internal mechanical failures of either engine was discovered.

Both McCauley propellers were shipped to the manufacturer's facility at Dayton, Ohio. Both were model number 3AF32C504-C with serial numbers 960655 and 960648 left and right, respectively. The damage to both propellers was consistent and similar, with external impact marks and internal hub impact marks that were consistent with the propeller blades in a low pitch range. Both propellers were on the start latches. The pitch change rod in each propeller hub was broken off and exhibited a bending indentation about 2.484 inch extension of the rod from the rear hub face. The 2.484 inch extension was the expected extension of the rod with the propeller in the ground latch position.

Both turbochargers were forwarded to the manufacturer's facility in Phoenix, Arizona, for disassembly and inspection. The left turbocharger data tag indicated it was a Garrett AiResearch Part Number 406610-9025, serial number UER0131P. The right turbocharger data

tag indicated it was a Garrett Allied Signal part number 406610-9025, serial number VA-L0105.

According to the FAA inspector who observed the examination of the turbochargers, both had damage that was only attributable to impact. The turbine to compressor connecting shafts were bent and there was evidence of rotational scoring on the compressor and turbine housings. The remainder of the components, seals, and bearings looked "good."

ADDITIONAL INFORMATION

The wreckage was released to the owner's insurance representative Harry Brooks, Carson and Brooks Post Office Box 888525, 2300 Peachford Rd Suite 1200, Atlanta, GA 30338/30356.

Pilot Information

Certificate:	Commercial	Age:	66, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	Yes
Medical Certification:	Class 3 Valid Medical--w/ waivers/lim.	Last FAA Medical Exam:	08/07/1996
Occupational Pilot:	Last Flight Review or Equivalent:		
Flight Time:	3050 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N69293
Model/Series:	402B 402B	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	402B-0415
Landing Gear Type:	Retractable - Tricycle	Seats:	7
Date/Type of Last Inspection:	10/16/1997, Annual	Certified Max Gross Wt.:	6300 lbs
Time Since Last Inspection:	6 Hours	Engines:	2 Reciprocating
Airframe Total Time:	3622 Hours	Engine Manufacturer:	Continental
ELT:	Installed, activated, did not aid in locating accident	Engine Model/Series:	TSIO-520EB8
Registered Owner:	COVINGTON FOODS INC	Rated Power:	300 hp
Operator:	DONALD A. CLARK	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument Conditions	Condition of Light:	Day
Observation Facility, Elevation:	TPA, 27 ft msl	Distance from Accident Site:	1 Nautical Miles
Observation Time:	1520 EST	Direction from Accident Site:	180°
Lowest Cloud Condition:	Scattered / 500 ft agl	Visibility	8 Miles
Lowest Ceiling:	Broken / 900 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	3 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	360°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	23° C / 21° C
Precipitation and Obscuration:			
Departure Point:	SARASOTA, FL (SRQ)	Type of Flight Plan Filed:	IFR
Destination:	(TPA)	Type of Clearance:	IFR
Departure Time:	0000	Type of Airspace:	Class B

Airport Information

Airport:	TAMPA INTERNATIONAL (TPA)	Runway Surface Type:	Concrete
Airport Elevation:	27 ft	Runway Surface Condition:	Wet
Runway Used:	36R	IFR Approach:	ILS
Runway Length/Width:	8000 ft / 150 ft	VFR Approach/Landing:	Go Around

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Substantial
Passenger Injuries:	2 Fatal, 1 Serious	Aircraft Fire:	On-Ground
Ground Injuries:	N/A	Aircraft Explosion:	On-Ground
Total Injuries:	3 Fatal, 1 Serious	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC):	PRESTON E HICKS	Report Date:	11/06/1998
Additional Participating Persons:	DAVID I KING; ORLANDO, FL ALAN STONE; MIAMI, FL RICK SHEPPARD; ORLANDO, FL		
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 pubinquiry@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](#).