



National Transportation Safety Board Aviation Accident Final Report

Location:	ATLANTIC OCEAN, AO	Accident Number:	MIA93LA152
Date & Time:	07/10/1993, 1015 EDT	Registration:	N36L
Aircraft:	PIPER PA-31	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	2 Minor

Flight Conducted Under: Part 91: General Aviation - Personal

Analysis

THE FLIGHT DEPARTED WITH 1/2 FULL FUEL TANKS AND KNOWN PROBLEMS WITH THE ELECTRICAL SYSTEM. ABOUT 20 MINUTES INTO THE FLIGHT, THE ELECTRICAL SYSTEM FAILED. THE FLIGHT CONTINUED AND ABOUT 44 MINUTES LATER, GRAND TURK APPROACH CONTROL WAS CONTACTED USING A HAND HELD RADIO AND CLEARANCE TO LAND AT THE GRAND TURK AIRPORT WAS REQUESTED. THE CONTROLLER WAS ALSO ADVISED THAT THE AIRPLANE WAS LOW ON FUEL. THE CREW WAS ADVISED THAT THE FLIGHT WAS ABOUT 60 MILES EAST OF THE GRAND TURK AIRPORT AND THAT THE PROVIDENCIALES AIRPORT WAS 31 MILES NORTH OF THEIR POSITION. THE FLIGHT PROCEEDED DIRECT TO THE PROVIDENCIALES AIRPORT BUT A SHORT TIME LATER, THE LEFT ENGINE QUIT DUE TO FUEL EXHAUSTION FOLLOWED SHORTLY THEREAFTER BY THE RIGHT ENGINE. THE AIRPLANE WAS DITCHED AND THE OCCUPANTS WERE RESCUED. THE PILOT-RATED PASSENGER STATED THAT THE PILOT RESET THE ALTERNATORS AND VOLTAGE REGULATORS AFTER CONTACT WAS ESTABLISHED WITH THE APPROACH CONTROL FACILITY.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: TOTAL LOSS OF ENGINE POWER FROM BOTH ENGINES DUE TO FUEL EXHAUSTION AFTER THE PILOT BECAME LOST/DISORIENTED. CONTRIBUTING TO THE ACCIDENT WAS THE DELAY BY THE PILOT-IN-COMMAND TO EXECUTE THE EMERGENCY PROCEDURE BY RESETTNG THE ALTERNATORS AND VOLTAGE REGULATORS FOLLOWING TOTAL FAILURE OF THE ELECTRICAL SYSTEM. ALSO CONTRIBUTING TO THE ACCIDENT WAS THE OPERATION OF THE AIRPLANE BY THE PILOT-IN-COMMAND WITH KNOWN DEFICIENCIES IN EQUIPMENT.

Findings

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

Phase of Operation: CRUISE - NORMAL

Findings

1. ELECTRICAL SYSTEM - UNDETERMINED
2. (F) OPERATION WITH KNOWN DEFICIENCIES IN EQUIPMENT - INTENTIONAL - PILOT IN COMMAND

Occurrence #2: LOSS OF ENGINE POWER(TOTAL) - NONMECHANICAL

Phase of Operation: CRUISE - NORMAL

Findings

3. BECAME LOST/DISORIENTED - INADVERTENT - PILOT IN COMMAND
4. ALL ENGINES
5. (C) FLUID,FUEL - EXHAUSTION
6. (F) EMERGENCY PROCEDURE - DELAYED - PILOT IN COMMAND

Occurrence #3: FORCED LANDING

Phase of Operation: DESCENT - EMERGENCY

Occurrence #4: DITCHING

Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings

7. TERRAIN CONDITION - WATER

Factual Information

On July 10, 1993, about 1015 eastern daylight time, a Piper PA-31, N36L, registered to and operated by the Schaked Corporation, experienced total loss of power from both engines due to fuel exhaustion and was ditched about 18 nautical miles south of the Providenciales Airport, Turks and Caicos Islands, while on a personal flight. Visual meteorological conditions prevailed at the time and a VFR flight plan was filed. The airplane has not been recovered and is presumed to be destroyed. The airline transport-rated pilot and commercial pilot-rated passenger sustained minor injuries. The flight originated about 0900 from Cap Haitien, Haiti.

The day before the accident flight, the fuel tanks were filled and the airplane was then flown for about 2 hours. After landing, the pilot requested an auxiliary power unit (APU) for the following morning to jump start the engines due to electrical system problems.

The pilot further stated that during the airplane preflight, he visually determined that the fuel tanks were 1/2 full. The APU was used to start the engines and about 20 minutes after departure, the electrical system failed. The flight continued and about 44 minutes later, Grand Turk Approach Control was contacted using a hand held radio. A clearance to land was requested and the controller was advised that the airplane was low on fuel. The controller advised the crew that the flight was about 60 miles east of the airport and the Providenciales Airport was about 31 miles north of their position. The flight proceeded directly to that airport and shortly thereafter, the pilot stated that the left engine failed due to fuel exhaustion. About 5 minutes later, the right engine failed due to the same reason. The airplane was ditched and the occupants were rescued about 7 hours after the ditching.

According to the pilot-rated passenger, the pilot reset the alternators and voltage regulators after contact was established with the approach control facility.

Pilot Information

Certificate:	Airline Transport; Commercial	Age:	47, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	Airplane Single-engine; None	Toxicology Performed:	No
Medical Certification:	Class 1 Valid Medical--w/ waivers/lim.	Last FAA Medical Exam:	03/17/1993
Occupational Pilot:	Last Flight Review or Equivalent:		
Flight Time:	2027 hours (Total, all aircraft), 380 hours (Total, this make and model), 2011 hours (Pilot In Command, all aircraft), 150 hours (Last 90 days, all aircraft), 20 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	PIPER	Registration:	N36L
Model/Series:	PA-31 PA-31	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	31-10
Landing Gear Type:	Retractable - Tricycle	Seats:	8
Date/Type of Last Inspection:	Annual	Certified Max Gross Wt.:	6500 lbs
Time Since Last Inspection:	40 Hours	Engines:	2 Reciprocating
Airframe Total Time:		Engine Manufacturer:	LYCOMING
ELT:	Installed	Engine Model/Series:	TIO-540-A1A
Registered Owner:	SCHAKED CORP.	Rated Power:	310 hp
Operator:	SCHAKED CORP.	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	, 0 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	1015 EDT	Direction from Accident Site:	0°
Lowest Cloud Condition:	Scattered / 2500 ft agl	Visibility	0 Miles
Lowest Ceiling:	Unknown / 0 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	5 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	90°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	27° C
Precipitation and Obscuration:			
Departure Point:	CAP HAITIEN, OF (MTCH)	Type of Flight Plan Filed:	VFR
Destination:	GREAT INAGUA I., OF (MYIG)	Type of Clearance:	VFR
Departure Time:	0900 EDT	Type of Airspace:	Class G

Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Destroyed
Passenger Injuries:	1 Minor	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 Minor	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC): TIMOTHY W MONVILLE **Report Date:** 07/25/1994

Additional Participating Persons: ALAN NEMCIK; FORT LAUDERDALE, 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 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](#).