



Aviation Investigation Final Report

Location:	Gulfport, Mississippi	Accident Number:	MIA02LA010
Date & Time:	October 17, 2001, 05:20 Local	Registration:	N943V
Aircraft:	Beech 58	Aircraft Damage:	Substantial
Defining Event:		Injuries:	3 None
Flight Conducted Under:	Part 135: Air taxi & commuter - Non-scheduled		

Analysis

The pilot stated that after the initial takeoff, the cabin door "came ajar." The flight returned and landed uneventfully where he closed the cabin door. The flight again departed and the cabin door "came ajar again." The flight returned and the airplane was landed, "...with the landing gear up." Postaccident examination of the airplane revealed the landing gear warning system was inoperative. The microswitch for the left throttle/gear warning system was shorted internally and the roller arm was bent backwards. The microswitch for the right throttle/gear warning system was not making contact with the throttle cam; buckling of the throttle attachment plate was noted. Manual operation of the microswitch of the right throttle/gear warning system would trip the circuit breaker. The left microswitch was removed from the circuit and manual activation of the microswitch of the right throttle/gear warning system activated the gear warning system. Examination of the cabin door revealed that when the cabin door was closed and latched, the outside door handle was extended away from the door approximately 1.5 inches; a rusted and broken spring was noted. Operational check of the door latch mechanism was accomplished revealing no binding noted; the door locked. The upper latch was found to go over center with the door latched and the aft latch bolt "...locked properly." The two rivets that secure the pin guide assembly to the door were found broken. There were no written discrepancies pertaining to the cabin door between May 25, 2000, and September 7, 2001. During that same time frame, one discrepancy related to the gear warning system was noted. The entry indicates that the throttle warning horn circuit breaker popped during descent to land prior to having the landing gear extended. Airworthiness Directive (AD) 97-14-15, effective date of September 2, 1997, applicable to the accident airplane, to prevent unintentional opening of the cabin side door and the utility door from the interior of the airplane, was complied with on October 4, 1997. The airplane had accumulated approximately 1,281 hours at the time of the accident since compliance. Further review of the maintenance records revealed that the airplane was inspected last in accordance with a 100-hour inspection that was signed off on September 17, 2001; the airplane had accumulated 38 hours since the inspection at the time of the accident. Review of the inspection guide for the airplane

indicates that the cabin door is inspected for security of attachment and the latching mechanism is checked for proper engagement and ease of operation.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The failure of the pilot to use the checklist resulting in a gear-up landing. Contributing factors in the accident were: 1) The inoperative landing gear warning system, 2) Inadequate preflight of the airplane by the pilot for his failure to assure that the cabin door was closed and latched before takeoff, and, 3) Distraction of the pilot due to the open door. Findings in the investigation were several discrepancies related to the cabin door.

Findings

Occurrence #1: MISCELLANEOUS/OTHER

Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings

1. DOOR - OPEN
2. (F) AIRCRAFT PREFLIGHT - INADEQUATE - PILOT IN COMMAND
3. (F) LANDING GEAR, GEAR WARNING SYSTEM - INOPERATIVE

Occurrence #2: WHEELS UP LANDING

Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings

4. (C) CHECKLIST - NOT FOLLOWED - PILOT IN COMMAND
5. (F) DIVERTED ATTENTION - PILOT IN COMMAND

Factual Information

On October 17, 2001, about 0520 central daylight time, a Beech 58, N943V, registered to and operated by Apollo Aviation Company, Inc., was landed gear-up at the Gulfport-Biloxi International Airport, Gulfport, Mississippi. Visual meteorological conditions prevailed at the time and an instrument flight rules (IFR) flight plan was filed for the 14 CFR Part 135 non-scheduled, domestic, passenger flight. The airplane was substantially damaged and there were no injuries to the airline transport-rated pilot or two passengers. The flight originated about 10 minutes earlier.

The pilot stated that after the initial takeoff, the cabin door "came ajar." The flight returned and landed uneventfully where he closed the cabin door. The flight again departed and the cabin door "came ajar again." The flight returned and the airplane was landed "...with the landing gear up."

Postaccident examination of the airplane by an FAA inspector revealed that the landing gear warning system did not operate when the throttles were retarded with the landing gear retracted. Examination of the gear warning system components revealed that the microswitch for the left throttle/gear warning system was shorted internally and the roller arm was bent backwards. The microswitch for the right throttle/gear warning system was not making contact with the throttle cam; buckling of the throttle attachment plate was noted. Manual operation of the microswitch of the right throttle/gear warning system would trip the circuit breaker. The left microswitch was removed from the circuit and manual activation of the microswitch of the right throttle/gear warning system activated the gear warning system. Examination of the cabin door revealed that when the cabin door was closed and latched, the outside door handle was extended away from the door approximately 1.5 inches; a rusted and broken spring (P/N 35-400031-1) was noted. Operational check of the door latch mechanism was accomplished revealing no binding noted; the door locked. The upper latch was found to go over center with the door latched and the aft latch bolt "...locked properly." The two rivets that secure the pin guide assembly (P/N 96-420033-5) to the door were broken. A copy of the FAA inspector statement, statement from the Director of Maintenance of the operator, and of the illustrated parts catalog for the cabin door are attachments to this report.

Review of the "Aircraft Discrepancy Record" sheets for the accident airplane that begin with an entry dated May 25, 2000, and end with an entry dated September 7, 2001, revealed no discrepancies pertaining to the cabin door. One discrepancy related to the gear warning system was noted; the entry was dated May 29, 2000. The entry indicates that the throttle warning horn circuit breaker popped during descent to land prior to having the landing gear extended. A copy of the Aircraft Discrepancy Record sheets are an attachment to this report.

Airworthiness Directive (AD) 97-14-15, with an effective date of September 2, 1997, applicable

to the accident airplane, indicates in the compliance section that the AD is to prevent unintentional opening of the cabin side door and the utility door from the interior of the airplane, which if not detected and corrected, could result in loss of control of the airplane. The AD, which is an attachment to this report, is a one-time inspection and was complied with on October 4, 1997. The airplane had accumulated approximately 1,281 hours at the time of the accident since compliance.

The airplane was inspected last in accordance with a 100-hour inspection that was signed off on September 17, 2001; the airplane had accumulated 38 hours since the inspection at the time of the accident. Review of the inspection guide for the airplane indicates that the cabin door is inspected for security of attachment and the latching mechanism is checked for proper engagement and ease of operation. Excerpts from the inspection guide and the maintenance records are attachments to this report.

Pilot Information

Certificate:	Airline transport; Flight instructor	Age:	41, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	Airplane single-engine	Toxicology Performed:	No
Medical Certification:	Class 1 Valid Medical—no waivers/lim.	Last FAA Medical Exam:	November 8, 2000
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	July 9, 2001
Flight Time:	5550 hours (Total, all aircraft), 2771 hours (Total, this make and model), 5015 hours (Pilot In Command, all aircraft), 120 hours (Last 90 days, all aircraft), 47 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Beech	Registration:	N943V
Model/Series:	58	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	TH-659
Landing Gear Type:	Retractable - Tricycle	Seats:	6
Date/Type of Last Inspection:	September 17, 2001 100 hour	Certified Max Gross Wt.:	5400 lbs
Time Since Last Inspection:	38 Hrs	Engines:	2 Reciprocating
Airframe Total Time:	7099 Hrs at time of accident	Engine Manufacturer:	Continental
ELT:	Installed, not activated	Engine Model/Series:	IO-520C
Registered Owner:	Apollo Aviation Company, Inc.	Rated Power:	285 Horsepower
Operator:		Operating Certificate(s) Held:	On-demand air taxi (135)
Operator Does Business As:		Operator Designator Code:	QAIA

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Dawn
Observation Facility, Elevation:	KGPT, 28 ft msl	Distance from Accident Site:	
Observation Time:	04:53 Local	Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	3 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	350°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.31 inches Hg	Temperature/Dew Point:	6°C / 4°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Gulfport, MS (KGPT)	Type of Flight Plan Filed:	IFR
Destination:	MEMPHIS, TN (MEM)	Type of Clearance:	IFR
Departure Time:	05:10 Local	Type of Airspace:	Class G

Airport Information

Airport:	Gulfport-Biloxi International KGPT	Runway Surface Type:	Asphalt;Concrete
Airport Elevation:	28 ft msl	Runway Surface Condition:	Dry
Runway Used:	32	IFR Approach:	Unknown
Runway Length/Width:	9002 ft / 150 ft	VFR Approach/Landing:	Full stop;Traffic pattern

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	2 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	3 None	Latitude, Longitude:	30.407222,-89.069999

Administrative Information

Investigator In Charge (IIC):	Monville, Timothy
Additional Participating Persons:	James H McGee; FAA FSDO; Jackson, MS
Original Publish Date:	September 9, 2002
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=53628

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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](#).