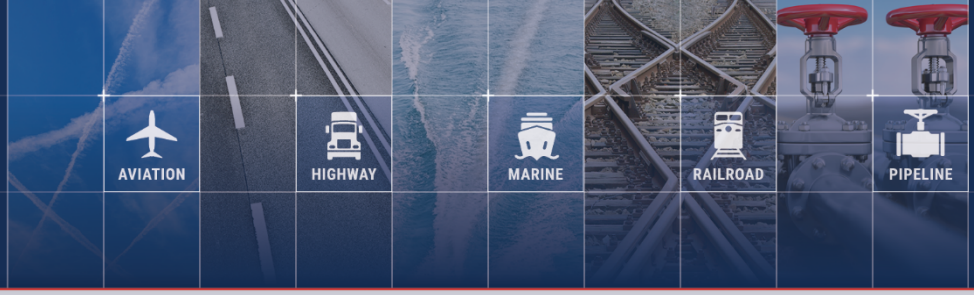

Aviation Investigation Final Report

Location:	ODESSA, Texas	**Accident Number:**	FTW95FA406
Date & Time:	September 28, 1995, 10:50 Local	**Registration:**	N5546N
Aircraft:	Martin Company B-26C	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	5 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

Witnesses observed the aircraft approximately 250 feet above the ground heading towards the southwest. As the aircraft passed overhead, the 'engines were sputtering.' Approximately 3/4 mile from the witnesses, the aircraft made a 'sharp' right turn, nosed down, and impacted the ground. The engines 'quit' prior to the aircraft turning right. According to the operator, the flight was in preparation for a flight evaluation for the pilot-in-command by an FAA inspector. The pilot reported to Departure Control that he would be 'working on stalls and steep turns,' and the pilot was instructed to 'maintain VFR at or above five thousand five hundred.' The pilot-in-command had accumulated approximately 500 hours in the B-26. Prior to the accident flight, he had flown the B-26 once since October 8, 1993. That flight was on September 26, 1995, for a duration of 30 minutes. Prior to the flight the fuel tanks were 'sticked' and the total fuel was approximately 720 gallons of 100 octane low lead avgas. Examination of the airplane and engines did not disclose any premishap discrepancies. Due to the extent of damage, flight control continuity could not be established.

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 maintain minimum airspeed for flight resulting in an inadvertent stall/spin. Factors were the loss of power for undetermined reasons, and the pilot's lack of recent flight experience in the aircraft.

Findings

Occurrence #1: LOSS OF ENGINE POWER
Phase of Operation: MANEUVERING

Findings
1. 2 ENGINES
2. (F) REASON FOR OCCURRENCE UNDETERMINED

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

Occurrence #3: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: EMERGENCY DESCENT/LANDING

Findings
3. (C) AIRSPEED - NOT MAINTAINED - PILOT IN COMMAND
4. (F) LACK OF RECENT EXPERIENCE IN KIND OF AIRCRAFT - PILOT IN COMMAND
5. STALL/SPIN - INADVERTENT - PILOT IN COMMAND

Occurrence #4: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: DESCENT - UNCONTROLLED

Factual Information

HISTORY OF FLIGHT

On September 28, 1995, about 1050 central daylight time, a Martin B-26C, N5546N, registered to American Airpower Heritage Flying Museum, and operated by the Confederate Air Force (CAF) as a Title 14 CFR Part 91 flight, was destroyed following a loss of control during a forced landing near Odessa, Texas. Visual meteorological conditions prevailed and a company flight plan was filed. The airline transport rated pilot-in-command, commercial rated copilot, pilot rated passenger and two non rated passengers received fatal injuries. The flight originated from Midland, Texas, about 14 minutes before the accident.

According to the operator, the flight was in preparation for a flight evaluation for the pilot-in-command by a FAA inspector. The pilot rated passenger was on board to observe flight operations in preparation to become a second-in-command in the B- 26.

Witnesses reported the following information. The aircraft was approximately 250 feet above the ground heading southwest. As the aircraft passed over head, the "engines were sputtering." Approximately 3/4 mile from the witnesses, the aircraft made a "sharp" right turn, nosed down, and impacted the ground. A witness added that the engines "quit" prior to the aircraft turning right.

PERSONNEL INFORMATION

The airline transport rated pilot-in-command's log books could not be located; therefore, time flown in other than CAF aircraft could not be determined. The pilot-in-command normally retained the logs in his possession when flying. It is believed that the log books were destroyed by the post impact fire. According to CAF records the pilot-in-command had accumulated approximately 500 hours in the B-26. Prior to the accident flight, he had flown the B-26 once since October 8, 1993. That flight was on September 26, 1995, for a duration of 30 minutes. The pilot-in-command was a certificated airframe and powerplant mechanic.

According to CAF records the commercial rated copilot had accumulated approximately 165 hours in the B-26. His last flight in a B-26 occurred on March 7, 1994. The copilot was also a certificated airframe and powerplant mechanic.

AIRCRAFT INFORMATION

The B-26 "Marauder" is a twin-engine World War II aircraft. It was manufactured by the Glenn L. Martin Company, Omaha, Nebraska, and was delivered to the USAAF on May 24, 1943. Prior to the accident, the B-26 Marauder "Carolyn" was the only known flying Marauder in the world.

The aircraft went into maintenance on January 26, 1995 for an annual inspection. During the inspection, a crack in the lower forward spar of the left wing was found. The repair to the spar was completed on September 1, 1995. A compression check on both engines followed by a 15-20 minute run-up was completed on August 28, 1995. The inspection and repair were signed off on September 18, 1995, with the statement, "aircraft not returned to service." This statement was due to additional maintenance requirements. The maintenance was completed and the aircraft returned to service on September 26, 1995.

According to the operator, the aircraft had 300 gallons of fuel in the left wing tank when it returned from the spar repair on September 1, 1995. On September 22 or 23, 1995, 200 gallons of fuel was put into the right fuel tanks and both engines were operated. The aircraft was flown for 30 minutes on September 26, 1995. On the day of the accident, the aircraft's left and right fuel tanks were fueled with 150 gallons each. The fuel tanks were "sticked" and the total fuel was estimated at 720 gallons of 100 octane low lead avgas.

COMMUNICATIONS

After takeoff, the pilot of N5546N contacted Midland Departure Control. Departure Control asked the pilot if he would be working at or above "five thousand five hundred" and the pilot replied he would. The pilot also reported he would be "working on stalls and steep turns." At 1045.13 the pilot of N5546N was instructed to "maintain VFR at or above five thousand five hundred" and the pilot acknowledged the instructions. There was no further communication with the pilot. See the enclosed communication transcripts. The controller later noticed "N5546N's mode C indicated four thousand six hundred, but he thought the pilot had only inadvertently descended through his altitude instruction, and the aircraft was descending very slowly." Later the controller observed the aircraft data tag and primary target had dropped off the scope. At 1056.37, Departure Control called the pilot of N5546N, but got no reply.

WRECKAGE AND IMPACT INFORMATION

The aircraft wreckage was located approximately 12 nautical miles south of Odessa, Texas, at latitude 31 degrees 20.1 minutes north and longitude 102 degrees 17.3 minutes west. The initial ground scar was on a measured magnetic heading of 171 degrees. The engines were found next to their respective impact crater. The cockpit, fuselage, and engines were destroyed by a post impact fire. The right wing pitot tube was found stuck in the ground within the initial ground scar.

There were three slashes, corresponding to prop blades 21 inches apart within the initial scar, nineteen feet from the outer edge of the scar. The propeller hubs were attached to their respective engine crankshafts. See enclosed wreckage diagram.

Examination of the wreckage did not disclose any pre-mishap discrepancies. The left fuel selector was on the left main tank and the right fuel selector was on the right main tank. Due

to the extent of damage, flight control continuity could not be established. A review of the airframe and engine records did not reveal any anomalies or uncorrected maintenance defects.

MEDICAL AND PATHOLOGICAL INFORMATION

Autopsies were performed by pathologist Randall E. Frost, M.D., at the University Medical Center, Lubbock, Texas. Toxicology findings were negative.

TEST AND RESEARCH

Both engines were examined on October 5, 1995 by the NTSB, and according to the Pratt and Whitney representative, no pre-mishap discrepancies were observed. However, the engines had extensive impact and thermal damage.

The propellers were examined on March 19, 1996, and no pre-mishap discrepancies were observed. Physical evidence revealed both propellers were transitioning to the feathered position at the time of the impact; however, they were not in the feather "locked" position.

FAR Part 61.58 requires a pilot-in-command proficiency check or flight check for type ratings every 12 months. Those pilots who have more than one type rating may alternate the proficiency check every other 12 months not to exceed a 24 month period. A pilot who is type rated in four aircraft would take a proficiency check in two aircraft the first 12 months, then the other two aircraft the following 12 months. The proficiency or flight check includes those maneuvers and procedures required for the original issuance of a type rating for the aircraft used in the check. The in-flight maneuvers according to Appendix A to part 61 are steep turns, approaches to stalls, specific flight characteristics that are peculiar to the airplane type, and powerplant failures. The stalls include one in the take off configuration, one in a clean configuration, and one in a landing configuration.

ADDITIONAL DATA

The aircraft wreckage was released to the owner.

Pilot Information

Certificate:	Airline transport; Flight instructor	**Age:**	77,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	Balloon; Glider	**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	Yes
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine; Glider; Instrument airplane	**Toxicology Performed:**	Yes
Medical Certification:	Class 2 Valid Medical--w/ waivers/lim	**Last FAA Medical Exam:**	September 15, 1994
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	
Flight Time:	21000 hours (Total, all aircraft), 500 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	Martin Company	**Registration:**	N5546N
Model/Series:	B-26C B-26C	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Experimental (Special)	**Serial Number:**	2253
Landing Gear Type:	Retractable - Tricycle	**Seats:**	5
Date/Type of Last Inspection:	September 18, 1995 AAIP	**Certified Max Gross Wt.:**	38200 lbs
Time Since Last Inspection:	1 Hrs	**Engines:**	2 Reciprocating
Airframe Total Time:	2716 Hrs	**Engine Manufacturer:**	P&W
ELT:	Installed, not activated	**Engine Model/Series:**	R-2800-99
Registered Owner:	AMER AIRPWR HERITAGE FLY MUSEU	**Rated Power:**	2000 Horsepower
Operator:		**Operating Certificate(s) Held:**	None
Operator Does Business As:	CONFEDERATE AIR FORCE	**Operator Designator Code:**	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:		**Distance from Accident Site:**	
Observation Time:		**Direction from Accident Site:**	
Lowest Cloud Condition:	Scattered / 12000 ft AGL	**Visibility**	29 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	13 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	170°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30 inches Hg	**Temperature/Dew Point:**	30°C / 18°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	MIDLAND (MAF)	**Type of Flight Plan Filed:**	None
Destination:		**Type of Clearance:**	None
Departure Time:	10:00 Local	**Type of Airspace:**	Class G

Airport Information

Airport:		**Runway Surface Type:**	
Airport Elevation:		**Runway Surface Condition:**	
Runway Used:	0	**IFR Approach:**	None
Runway Length/Width:		**VFR Approach/Landing:**	Forced landing

Wreckage and Impact Information

Crew Injuries:	2 Fatal	**Aircraft Damage:**	Destroyed
Passenger Injuries:	3 Fatal	**Aircraft Fire:**	On-ground
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	5 Fatal	**Latitude, Longitude:**	

Administrative Information

Investigator In Charge (IIC):	Wigington, Douglas
Additional Participating Persons:	JOHN E BOATWRIGHT; LUBBOCK , TX DAVID T WAHLQUIST; HARFORD , CT KIRK CHAMBERLAN; WINDSOR LOCKS , CT ERIC VANHOFF; MIDLAND , TX
Original Publish Date:	August 20, 1996
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=19254