

Air Safety Investigations Aircraft Incident/Accident Technical Report

Aircraft Incident/ Accident Information	Year: 1968	Make: Beechcraft	Model: 36
	Serial number: E-80		Registration: N999CJ
Location: Mountain Pass, CA		Date: 01-20-15	Time: 2002 PST
Aircraft Owner		Aircraft Operator	
Van M Pray Trustee [REDACTED]		Van Michael Pray [REDACTED]	
California City, CA 93504-0630		Henderson, CA 89077-8330	
Report Information			
Senior Air Safety Investigator: Paul E. Yoos		Report #: ASI-15-AF-T	Report date: 12-21-15

Airframe

Impact Sequence and Airframe Structure

The airplane collided with terrain in a left wing down attitude with the nose moving towards the left. The wing slid along the ground towards the southeast until the nose contacted the ground in about a 45 degrees nose down attitude. The airplane separated into a large number of small components. Refer to the wreckage diagram. Major structures observed were the outboard half of the right wing with an attached aileron, the cabin roof, the lower aft cabin and rear fuselage, and tail assembly without elevators.

The engine was separated from the fuselage. The engine crankshaft propeller mounting flange was separated and remained attached to the propeller.

There was no fire damage to the wreckage.

Airframe Systems

Flight Control System Information		
Control lock: Not engaged		
Flight Control Cable Continuity		
Ailerons: See below	Elevators: See below	Rudder: Established
Aileron tab: Not applicable	Elevator tab: See below	Rudder tab: Not applicable
Flap and Trim Positions		
Flap actuator: See below	Flap indicator: Not observed	Flap switch: Not observed
Elevator trim:	Actuator: Se below	Indicator: See below
Rudder trim:	Actuator: Not applicable	Indicator: Not applicable

Remarks:

The airplane was equipped with a dual control arm installed on the center control column. The cockpit pitch and roll control assembly components were observed separated and scattered around the debris field.

The rear elevator bell crank was observed with both arms separated; separated arms were not observed. The elevator mass weight (bob weight), which mounts behind the instrument panel, was observed in the debris field not attached to anything.

Only the right wing aileron bell crank with its arms separated was observed. The bell crank had been driven into its stops. No other aileron flight control cables or hardware were identified.

The rudder flight control cables were observed attached to the rudder bell crank; cables were continuous up to the cockpit and terminated in forward rudder bell crank attachment hardware. The forward rudder bell crank was not observed.

The flap motor separated from the flap drive assembly, which mounts on top of the landing gear actuator. The right flap drive cable was still attached to the drive assembly. The right flap drive cable remained in its drive housing, but the flap drive cable was not attached to a flap actuator. Both the left and right flap actuator extensions were measured. Both were found to be extended 1 ¾ inches, which is a flap retracted position.

A roll autopilot servo was observed in the debris field, and a pitch trim servo mount was observed in the rear fuselage wreckage. An electric pitch trim servo was observed in the rear fuselage wreckage.

Airframe Fuel System Condition, Controls, and Read Outs			
Fuel strainer screen: See below		Fuel strainer bowl: See below	
Main fuel tank gauge:	Left: Not observed		Right: Not observed
Fuel selector handle: Left	Fuel selector valve: Left		Fuel boost pump: See below
Firewall fuel shutoff: Not applicable			

Remarks:

The airplane was equipped with 40-gallon LEFT and RIGHT wing fuel tanks. It could not be determined whether the installed bladder wing tanks were baffled or non-baffled tanks.

The separated fuel selector valve was positioned to the LEFT WING tank. The fuel selector valve handle and sump assembly were separated. The separated sump was observed with the strainer screen trapped inside. The screen was not removed.

The separated Dukes electric fuel boost pump was observed. The engine control area mounted aux fuel pump switch was not observed.

Landing Gear System Condition and Controls			
Gear position:	Nose: See below	Left: See below	Right: See below
Actuator position:	Nose: Retracted	Left: Retracted	Right: Retracted
Landing gear selector: Undetermined		Emergency gear handle: Undetermined	
Environmental System Controls and Read Outs			
Cabin heater: Undetermined	Cabin vent: Undetermined	Defrost: Undetermined	
Air conditioner: Not applicable	Oxygen system: Not applicable	Oxygen quantity: Not applicable	
Icing System Information and Switches			
Certified into known icing? No		De-icing boots installed? No	
Pitot heat: Undetermined		Stall heat: Not applicable	
De-ice:	Surface: Not applicable	Propeller: Not applicable	Windshield: Not applicable
Anti-ice:	Surface: Not applicable	Propeller: Not applicable	Windshield: Not applicable
ELT Information			
Installed? Yes	Manufacturer: Emerging Lifesaving	Model: ELT406GPS	Type: TSO C126a
Serial number: 1103220130	Battery due date: 03-18-16	Armed: Undetermined	Activated: No

Remarks:

The landing gear actuator assembly was observed associated with a section of forward carry through structure. The landing gear actuator was in a landing gear retracted position.

The 406 MHz ELT was observed separated from its mounting plate, and the unit was fragmented.

Cabin and Equipment/Furnishings

Restraint System Information						
Seat	Occupied	Restraint type	Restraint used	Condition	Manufacturer	2nd seat stop
1	Yes	3-Point	Undt	Shoulder harness intact	See below	Not applicable
2	Yes	3-Point	Yes	See below	See below	Not applicable
3	No	3-Point	N/A	See below	See below	Not applicable
4	No	3-Point	N/A	See below	See below	Not applicable
5	No	3-Point	N/A	See below	See below	Not applicable
6	No	3-Point	N/A	See below	See below	Not applicable

Seat Condition Information					
Seat	Orientation	Feet intact	Back intact	Base intact	Rail intact
1	Forward facing	No	No	No	No
2	Forward facing	No	No	No	No
3	Forward facing	No	No	No	No
3	Forward facing	No	No	No	No
5	Forward facing	Yes	Yes	Yes	Not applicable
6	Forward facing	Yes	Yes	Yes	Not applicable

Remarks:

The airplane had seating for six people; three rows of two seats each row. The restraint belts had Beech manufactured tags.

The two shoulder harnesses for the pilot (left front) seat were not engaged with a seat belt buckle.

The two shoulder harnesses for the right front seat were engaged with the seat belt buckle. The seat belt attached to the tag side of the seat belt was absent.

The right or left side mounted positions for the other identified seats were not established.

Instrument Panel

Navigation Instruments							
Analog primary instruments				Autopilot type: See below			
Suction gage: Undetermined		Magnetic compass: Undetermined		Clock: Undetermined			
	Left side	Right side		Left side	Right side		
Airspeed:	Undetermined	Undt	Turn coordinator (airplane):	Undetermined	Undt		
Attitude (pitch):	Undetermined	Undt	Turn coordinator (ball):	Undetermined	Undt		
Attitude (roll):	Undetermined	Undt	Heading indicator:	Undetermined	Undt		
Altimeter:	Undetermined	Undt	Heading "bug":	Undetermined	Undt		
Altimeter setting:	Undetermined	Undt	Vertical speed indicator:	Undetermined	Undt		
Communication and Navigation Radios							
Radio	Control	Active frequency	Stand-by frequency	Radio	Control	Active frequency	Stand-by frequency
Com 1:	Undetermd	Undetermd	Undetermd	Com 2:	Undetermd	Undetermd	Undetermd
Nav 1:	Undetermd	Undetermd	Undetermd	Nav 2:	Undetermd	Undetermd	Undetermd
Obs 1:	Undetermd			Obs 2:	Undetermd		
Transponder:	Mode: Undetermd		Active code: Undetermd		Stand-by code: Undetermd		
Electrical Switch Positions							
Master battery: Undetermined		Master alternator: Undetermined		Avionics 1: Undetermined			
Stand-by battery: Undetermined		Alternator 2: Undetermined		Avionics 2: Undetermined			
Lighting Switch Positions							
Navigation: Undetermined		Rotating Beacon: Undetermined		Landing: Undetermined			
Taxi: Undetermined		Strobe: Undetermined		Instrument: Undetermined			
Wing Ice: Not applicable							
Ignition Switch Position							
Key: Undetermined				Ignition: Undetermined			

Remarks:

No instrument panel mounted instrument/gauge or switch position information was obtained.

Powerplant Description

Engine Instruments						
Hour meter:	Undetermd	Tach RPM:	Undetermd	Tach hours:	Undetermd	
Oil press:	Undetermd	Oil temp:	Undetermd	EGT:	Undetermd	
Fuel press:	Undetermd	Fuel flow:	Undetermd	Ammeter:	Undetermd	
				Voltmeter:	Not applicable	
Engine Control Positions						
	Cockpit	Engine		Cockpit	Engine	
Throttle:	Full forward	Undetermd	Cowl flaps:	Undetermd	Undetermd	
Mixture:	Undetermd	Undetermd	Carburetor heat:	Not applicable	Not applicable	
Propeller:	Full forward	Undetermd	Primer:	Undetermd		
Engine Condition						
Engine attached to airframe:			No	Propeller attached to engine:		
Engine compression:			See below	Valve train continuity:		
Vacuum pump drive shaft:			See below			
Engine Fuel System Condition						
Fuel pump drive shaft:			Undetermined	Carburetor inlet screen:		
Fuel distribution valve screen:			See below	Fuel injectors:		
Magneto Condition						
Left magneto attached:			No	Right magneto attached:		
Left magneto spark:			No	Right magneto spark:		
Spark Plug Condition (per Champion Check-A-Plug Card)						
	1	2	3	4	5	6
Top	Undetermined	Undetermined	Undetermined	Undetermined	Undetermined	Undetermined
Bottom	Undetermined	Undetermined	Undetermined	Undetermined	Undetermined	Undetermined

Remarks:

The engine was separated from the airframe, and the engine accessories were separated from the engine crankcase. The engine was found lying upright next to a small dirt mound containing desert vegetation approximately 545 feet from the initial impact crater. All cylinders remained attached and in place. The rear engine accessory components, magnetos, oil pump, and fuel pump were separated from the engine. The alternator face gear was exposed. The crankshaft was separated at the propeller hub. The engine driven alternator was separated. The propeller governor was separated, but it was found in the debris field with its housing fractured and with internals separated. The induction air system was separated and was not observed. The exhaust system was separated and not observed.

Continental Motors Final Report (attached) stated, "There were no pre-accident anomalies observed with the recovered/identified components that would have prevented the engine's ability to produce full, rated power."

Propeller

The constant speed 3-bladed propeller was found near the initial impact crater. All three blades remained attached to the damaged propeller hub, and each blade was marked with either an A, B or C to identify each blade for photographs. Blade A was the least damaged but with chord wise scratching across the face of the blade. Paint transfer was noted and several gouges were noted on the leading edge approximately 20 in. outboard of the propeller hub. Blade B displayed reverse bending along its length beginning approximately 6 in. from the propeller shank. Paint transfer was noted. The end of Blade C was separated approximately 22 in. from the blade shank. The separated outboard portion was not located. Deep scratching was evident across the blade face and a deep gouge was noted on the trailing edge approximately 12 in. from the blade shank. Rearward bending began approximately 12 in. from the blade shank. The propeller spinner was separated and not observed.

The propeller governor was separated from the engine, and the governor case was open, exposing the fly weight assembly.



Research & Testing

None